



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'ŌIHANA KUMUWAIWAI 'ĀINA
COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

July 15, 2025
Honolulu, O'ahu

REQUESTING APPROVAL TO PROCEED WITH THE DEVELOPMENT OF A
FIRST-GENERATION KEAUKOU AQUIFER SYSTEM AREA
GROUNDWATER ADAPTIVE MANAGEMENT PLAN
Keauhou Aquifer System Area, Island of Hawai'i

**BACKGROUND OF WATER AND LAND RELATED ISSUES IN THE KEAUKOU AQUIFER
SYSTEM AREA**

The Keauhou aquifer system underlies a region of deep historic and cultural significance and ecological value. For example, a report titled *The Spirit of Kaloko-Honokōhau* by the Honokōhau Study Advisory Commission published on May 18, 1974 (the "Spirit Report") describes the historic cultural practices in the area and was the basis for the establishment of the Kaloko Honokōhau National Historical Park (KHNHP) as a way to preserve these cultural practices and the resources that allow them to thrive.

The Keauhou region and its water resources are under continued development pressure. These factors have led to considerable controversy and uncertainty about the future of developing groundwater in the Keauhou aquifer system and its short- and long-term management. As described in greater detail below, Commission staff are proposing an adaptive management approach to ground water management in this region. Staff believe this approach is particularly appropriate based on the cultural and historic significance of Keauhou, the increased development pressure on the region, its complex hydrogeology, and the potential impacts of ground water withdrawals on the health of groundwater dependent ecosystems and traditional and customary practices of Native Hawaiians.

*Petition to Designate the Keauhou Aquifer System as a Ground Water Management Area, and
Commission Actions*

On September 13, 2013, the National Park Service submitted a petition to designate the Keauhou Aquifer System as a ground water management area. The petition is attached as Exhibit 1.

The basis for the petition was to protect the aquifer, recognizing its importance for public trust uses amidst the threats of growing water demand, declining rainfall, and rising sea levels. The petition cited the 1974 Spirit Report, which is attached as Exhibit 2.

On December 3, 2014, the Water Board of the County of Hawai‘i requested a Contested Case Hearing on the designation proceedings, stating that regulation by CWRM would result in impacts to the County of Hawai‘i Department of Water Supply’s system operations (including source development) as well as impacting land uses and creating burden to their existing customers. This request is attached as Exhibit 3.

Additionally, on December 5, 2014, RCFC Kaloko Heights, LLC requested a Contested Case Hearing on the designation proceedings, stating that designation will negatively impair their entitlement to water and affect their investment in water system improvements. This request is attached as Exhibit 4.

On March 25, 2015, the National Park Service submitted a petition for a declaratory order to determine if an area other than a hydrologic unit can be designated as a water management area as a way to minimize risks to non-consumptive public trust uses of water in the area of the Kaloko-Honokōhau National Historic Park.

On February 14, 2017, upon presentation of [a staff submittal](#), the Commission denied the petition for designation.

A compilation of the history Commission meetings, actions, orders, presentations, testimony, information, and other related processing of the petition to date is available on the Commission’s website at <http://dlnr.hawaii.gov/cwrn/groundwater/activities/keauhou/>.

While denying the NPS petition for the designation, the Commission stated that there was a need to protect the public trust needs and resource of both the Kaloko Honokōhau National Park and the larger community in the *Keauhou Aquifer System Area* (KASA). The Commission adopted the following actions as alternatives to designation, and the current status of each condition is summarized below.

1. The Commission will refer all well permit applications to the ‘Aha Moku system and Department of Hawaiian Home Lands for review for recommendations to protect traditional and customary practices that are exercised and may be affected by the proposed application. If traditional and customary practices are found in the proposed permit area that may be affected by the proposed action, special conditions will be suggested to mitigate impacts of the proposed well. If the well operator and land owner do not agree to the special conditions, then staff will present the applications to the Commission for decision making pursuant to Hawaii Revised Statutes (HRS) §174C-84 (f) and Hawaii Administrative Rules (HAR) §13-168-12(h).

To date, the only completed Well Construction and Pump Installation Permit that has been submitted in the Keauhou Aquifer System Area is the Ota Well application (State Well no. 8-3957-006), which was submitted on August 16, 2018. This was sent for review to the ‘Aha Moku Advisory Council and DHHL and comments were received.

Other well construction and/or pump installation permit applications have been submitted by various applicants, but were not deemed complete and therefore not routed to any agencies for review.

Queen Lili'uokalani Trust submitted an application for Well Construction and Pump Installation for a new well (State Well no. 8-3958-001) on May 28, 2025, but the application has not yet been accepted as complete and routed for agency review.

2. For new private production wells within the Ahupua'a of Kaloko, Honokōhau 1-3, or Kealakehe, as defined in the GIS coverages by State of Hawaii Office of Planning and the Office of Hawaiian Affairs (OHA) Kipuka Database, staff will encourage the applicant to install a deep monitor well beneath the thin basal lens into salt water between the new well and the Kaloko-Honokōhau National Historical Park (Park) if such a monitor well does not already exist.

The Ota Well is not located in the ahupua'a described above, so no deep monitor well was proposed as a condition. If any new production wells are applied for in the ahupua'a listed above, staff will encourage the applicant to install a deep monitor well into the underlying salt water as described above.

3. Staff will complete the remediation of Keopu Deep Monitor Well (Well No. 8-3858-001) and the construction of the new Keopu 2 Deep Monitor Well (Well No. 8-3858-002) to further explore the deep freshwater aquifer.

The Keopu 1 Deep Monitor Well (Well No. 8-3858-001) was sealed with grout from the former total depth of 1,310 feet below ground surface (bgs) to 900 feet bgs, sealing off the flow of fresh water from the deep confined aquifer in August 2016. Then between February and April 2019, perforations were made in the previous solid casing between 734.2 to 757.7 feet bgs and as a result, this well was converted to a conventional deep monitoring well.

The Keopu 2 Deep Monitor Well (Well No. 8-3858-002) was completed in August 2017 into the deep confined aquifer, allowing consistent monitoring.

4. Staff will provide for the conversion of the Kaloko Irrigation Well 1 (Well No. 8-4160-001) to a deep monitor well located due east and upgradient of the Kaloko-Honokōhau National Historical Park (Park). This well will be deepened to further explore the existence of the deep freshwater aquifer similar to the deep monitor wells of: (a) Kalaoa Keopu (Well No. 8-3858-001), and (b) Kamakana (Well No. 8-3959-001) and monitor changes due to pumpage in the area above the Park.

Deepening Kaloko Irrigation Well 1 (Well No. 8-4160-001) was not possible due to a number of factors, including access issues and the challenges of deepening an existing well. In order to monitor changes due to pumpage in the area above the Park, the Kaloko Deep Monitor Well was drilled, located on an existing Hawai'i Department of

Water Supply Tank Site and approximately a quarter mile mauka of the Kaloko Irrigation Well 1 site. The Kaloko Deep Monitor Well is anticipated to be completed in 2026.

5. Staff will continue to monitor pumpage, water levels, and chlorides through the monthly reporting program. Reporters who are delinquent in reporting will be brought to the Commission for enforcement and sanctions at the discretion of the Chairperson.

Staff continues to collect data provided by the well reporters and collect monitoring data through the quarterly monitoring program for the network of 13 monitoring wells located within the Keauhou Aquifer System Area. There are two wells that are not reporting their water use – the Sophie well (State Well No. 8-3257-003), which has a pump capacity of 25 gallons per minute, and the Keauhou-Robertson well (State Well No. 8-3558-001), which has a pump capacity of 40 gallons per minute. Staff has sent letters to these two users to obtain reporting compliance and achieve 100% compliance for well owners in the Keauhou Aquifer System Area.

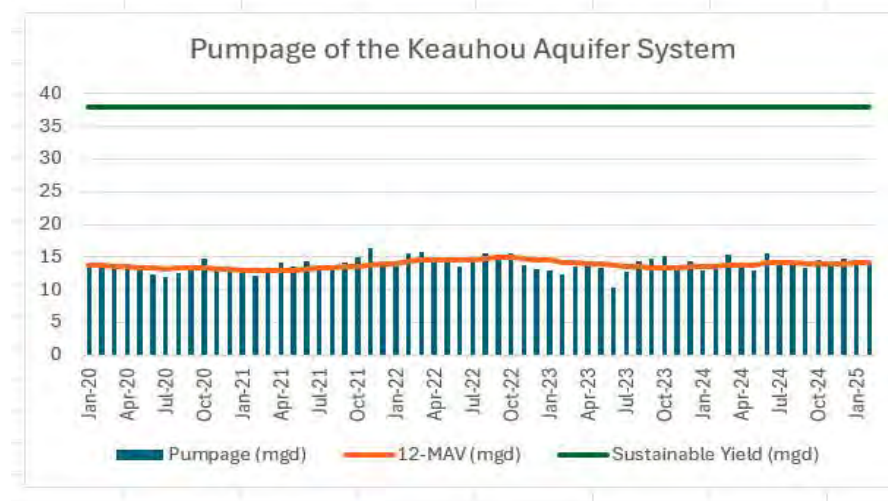
6. If authorized planned use reaches eighty percent (80%) of the Keauhou Aquifer System Area (KASA) sustainable yield (which currently equates to 30.4 mgd of 38 mgd), then the Commission will commence public informational meetings in the KASA in accordance with Hawaii Revised Statutes (HRS) §174C-44 & Hawaii Administrative Rules (HAR) §13-171-7.

Per the Water Code, HRS § 174C-3, “authorized planned use” is defined as “the use or projected use of water by a development that has received the proper state land use designation and county development plan/community plan approvals.” Despite this definition, there is no consensus about what methodology should be used to determine authorized planned use (APU) and how the counties should track APU for the purpose of anticipating future water demands. As of today, there is no coordinated effort between the Commission and the counties to compile a record of APU in the KASA. There is also no adopted Keauhou Water Use and Development Plan that includes recent development information for which water demands can be calculated. As a result, the Commission does not know if APU has reached the 80% threshold. In terms of pumpage, as of February 2025, ground water withdrawals in the KASA are 14.182 mgd, which represents roughly 37% of sustainable yield. Commission staff will continue to track water withdrawals to determine when the 30.4 mgd or 80% APU limit may become a reality. Commission staff are also engaged in discussions about APU and are considering changes to the Water Code and planning documents such as the county Water Use and Development Plans to better define APU and reconceptualize its utility in the planning and designation process.

7. If alternative water sources or future potable high-level sources in the southern portion of the KASA as defined in the Keauhou Water Use and Development Plan (KWUDP) for the Keauhou Region fail to materialize and actual rate of withdrawal based on a 12-month moving average reaches forty-five percent (45%) of the sustainable yield (which currently equates to 17.1 mgd of 38 mgd), the Commission will commence public informational meetings. The forty-five percent (45%) figure is one-half (½) of the ninety percent (90%)

criteria to be considered in designation proceedings and relates to the current well infrastructure that relies on the northern half of the KASA to meet water demands. It is prudent to spread pumping uniformly throughout an aquifer when data and analysis do not show otherwise. This encourages the implementation of the Keauhou Water Use and Development Plan (KWUDP).¹

Pumpage has not yet reached 45%.



Reporting compliance for production wells within the Keauhou Aquifer System Area is 94%, with 33 of 35 wells currently reporting their pumpage. The two non-reporting wells previously mentioned are the Sophie well (State Well No. 8-3257-003), which has a pump capacity of 25 gallons per minute, and the Keauhou-Robertson well (State Well No. 8-3558-001), which has a pump capacity of 40 gallons per minute. If pumped for 24 hours a day, these wells would produce 0.036 mgd and 0.058 mgd, respectively, for a total of 0.094 mgd. Adding this to the average pumpage as of February 2025, the total would be 14.276 mgd, about 37% of sustainable yield.

8. Staff will continue to work with and track the status of the U.S. Geological Survey (USGS) 3-D solute transport modelling efforts. Staff will organize a briefing to the Commission when results are published.

Staff answer: The USGS completed its report Numerical Simulation of Groundwater Withdrawal and Injection in Kaloko-Honokōhau National Historical Park, SIR 2021-

¹ The Keauhou Water Use and Development Plan (Keauhou WUDP) was never formally adopted by the Commission and remains a draft document. This condition was drafted prior to the County Council's decision to withdraw the plan and not proceed with adoption by ordinance. As a result, the Commission has not adopted this plan, and the Keauhou WUDP is not currently being implemented.

5004. The USGS gave a briefing on this report to the Commission at its April 20, 2021 regular meeting.

Additional documentation on the designation proceedings can be found on the Commission's website at <https://dlnr.hawaii.gov/cwrp/keauhou/>

Ground Water Dependent Ecosystems Symposium 1

On May 15, 2018, staff briefed the Commission on a proposal to conduct a [Symposium on Groundwater Dependent Ecosystems-Keauhou, Island of Hawai'i](#).

On November 8 and 9, 2018, the Commission hosted an Invitational Adaptive Management Symposium in partnership with UH 'Ike Wai and 'ohana members from the ahupua'a on which the Park is situated to explore the best available science about groundwater dependent ecosystems in Kona and the Park.

The symposium brought together 44 cultural experts and scientists who could provide:

- The best information from Native Hawaiian practitioners who live in the area and currently access KHNHP for traditional and customary practices or possess knowledge of historic uses and conditions of the area.
- The best inventory of the historic and current biota of KHNHP's anchialine pools, fishponds, and other in-shore flora and fauna, including their adaptive saltwater tolerances.
- The best data on water-level changes, salinity fluctuations, and long-term trends, including mean or median oscillations of salinity, basal and high-level Submarine Groundwater Discharge (SGD) outflows, seasonal tides, and other factors.

Information about the Symposium, including a report and summary of proceedings, can be found on the Commission's website at <https://dlnr.hawaii.gov/cwrp/keauhou/>. Comments were submitted by the National Park Service, among others, regarding the Symposium and its findings, and can also be found [on the Commission's website](#).

ADAPTIVE MANAGEMENT PLANNING AS A STRATEGY FOR GROUND WATER MANAGEMENT

What is Adaptive Management Planning?

The [Hawai'i Water Plan, Water Resource Protection Plan, 2019 Update](#) (WRPP 2019), adopts as Guiding Policy No. 4, "Apply adaptive management principles in the face of scientific uncertainty." The use of adaptive management planning to balance demands on groundwater resources is intended to better align the management strategies that the Commission uses for ground and surface water.

A groundwater Adaptive Management Plan (AMP) is a strategic approach used to ensure the sustainable use and protection of groundwater resources, while being flexible to adjust to changing conditions and new information. Groundwater is critical for many uses, including drinking water, irrigation, industrial

uses, groundwater dependent ecosystems, and Native Hawaiian traditional and customary practices. Effective groundwater management is essential for both environmental sustainability and human needs. However, the complexities of groundwater systems, including their variability over time, make managing these resources a challenge.

The core idea behind an AMP is to treat groundwater management as an evolving process. Instead of following a rigid planning approach, an AMP recognizes that uncertainties exist – such as how groundwater withdrawals may impact coastal and nearshore groundwater discharge, or how changes in climate may impact groundwater recharge. It proposes monitoring, data collection, and regular reassessment of management strategies based on any changing conditions. An adaptive management plan is also a learning process which can reduce the uncertainties and improve our understanding of the system being managed. This cycle of planning, monitoring, management, learning, and adjustment is intended so that resource management remains effective even as new information emerges.

The AMP framework typically involves several key elements:

- **Goal Setting and Objectives:** The first step in creating an AMP is defining clear, measurable objectives related to groundwater use and sustainability. These goals might include providing adequate water supply while preventing over-extraction, preserving groundwater dependent ecosystems (GDEs), and ensuring the protection of Native Hawaiian traditional and customary practices.
- **Modeling:** Groundwater conceptual models form the basis of hypotheses that are used to predict the impacts of various groundwater withdrawal scenarios and management strategies. Monitoring is designed to test hypotheses of how groundwater withdrawals may impact discharge of freshwater to the coastline. Future iterations of the AMP may include numerical groundwater models to simulate and test how groundwater behaves under different scenarios.
- **Monitoring and Data Collection:** Ongoing monitoring of groundwater characteristics and GDE-health indicators are essential for understanding the resource's status. This includes collecting data from wells and other hydrological sources, data from GDEs including key indicator species and coastal water quality, and any impacts to Native Hawaiian traditional and customary practices relying upon groundwater.
- **Management Actions and Triggers:** Based on the conceptual model, objectives, and monitoring results, a set of management actions is proposed. These could include restrictions on pumping rates, water conservation measures, or programs to enhance groundwater recharge. Actions should be designed to be flexible, with provisions for adjustment as new information is discovered. Monitoring triggers or thresholds should be established to initiate specific management actions.
- **Assessment and Feedback:** Learning and regular evaluation is vital to understanding whether the proposed hypotheses are valid and if management actions are achieving the desired outcomes. Monitoring data and periodic assessments of the groundwater and GDE health allows managers to make any necessary adjustments. If any proposed hypothesis or management action is found to be ineffective, it can be modified or replaced.

- **Stakeholder Involvement:** A successful adaptive management planning process often involves a broad range of stakeholders, including government agencies, developers, local communities, and public trust advocates. Involving these groups in the planning and decision-making process helps ensure that the plan reflects diverse interests and promotes cooperation.

The adaptive aspect of the AMP means that it is an iterative and evolving process. As conditions and system responses change, management strategies must also change. An AMP can be a practical and responsive tool for balancing the competing demands on groundwater resources, ensuring their long-term sustainability and health.

Why Keauhou?

As summarized briefly above, the Keauhou region is rich in history and culture. The impact of groundwater development on the health of ecosystems and traditional and cultural practices is a longstanding concern. And Keauhou's coast and groundwater resources have benefitted from substantial scientific study, providing a strong foundation for adaptive management.

Commission staff had already been collaborating with the National Park Service on an adaptive management plan for the Kaloko-Honokōhau National Historic Park consistent with the task identified in the WRPP 2019, Table 3-1 Action Plan; Task 1.7.2: Develop a pilot adaptive management plan for protecting ground water dependent ecosystems in cooperation with the National Park, U.S. Geological Survey (USGS), and University of Hawai'i (p. 63). This goal is further detailed in Appendix F of the WRPP 2019:

Based on the best available information, Commission staff should propose action triggers and develop a suite of possible management actions for consideration by the Commission. It is recommended that the Commission build on the work done by NPS to establish an adaptive management plan for the Kaloko-Honokōhau National Historical Park as a priority pilot project.

Staff intends to expand the study zone originally proposed by the Kaloko-Honokōhau National Historical Park to include the entire KASA in order to monitor and manage groundwater resources from a holistic regional perspective. The plan is intended to help address concerns about the impact of further groundwater development on groundwater resources, including impacts to cultural practices, and continue gathering answers to questions such as:

- What are the traditional and customary Native Hawaiian practices in the region that rely on groundwater?
- How does science provide a nexus between groundwater withdrawal and impacts to these cultural practices?
- How are the basal, high-level, and deep confined lenses connected, and how will withdrawal from one impact another?
- Who will pay for the cost of monitoring, remediation, and restoration, and how will this cost be equitably distributed?
- What are reasonable and actionable thresholds for further Commission action as it pertains to limiting groundwater withdrawal?

Multiple wells have been proposed within the Keauhou aquifer, including the Ota Well (State Well No. 8-3957-006) applied for by the Hawaii Housing Finance Corporation and Natural Energy Laboratory of Hawaii Authority; the QLT Mid-Level well, for which the Queen Lili‘uokalani Trust submitted an application on May 28, 2025, and two potential wells for which the DHHL has undertaken community outreach and prepared a Ka Pa‘akai Analysis.

Based on the anticipated increasing demand on groundwater resources in the entire KASA, staff feels that responsible management necessitates continual evaluation and re-evaluation that can start to answer the above questions, as well as updating policies based on the best available information at the time. One approach that addresses these issues is an adaptive management plan extending to the entire Keauhou Aquifer System Area. This pilot project can inform and shape strategies for other critical areas around the state, including the newly designated Lahaina Aquifer Sector Area.

Sustainable Yield and RAM

The proposed adaptive management plan is also intended to address some of the limitations of the Commission’s current approach for managing ground water: sustainable yield.

Sustainable yield is defined in HRS § 174C-3, as “the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the Commission.”

The Commission currently uses the Robust Analytical Model (RAM) and RAM 2 as the methodology to estimate sustainable yields across the State of Hawaii. RAM 2 refines RAM by using numerical modelling to estimate some aquifer parameters.

The advantages of the RAM methodology are that it:

- (1) allows for groundwater management based on scientific principles;
- (2) makes it simple and expeditious to estimate sustainable yields;
- (3) requires few data inputs;
- (4) is cost-effective; and
- (5) accounts for groundwater discharge to the coast.

Some limitations of the RAM methodology are that it:

- (1) assumes aquifer homogeneity (does not account for complex aquifer and hydrogeologic structures and features);
- (2) in its original form (RAM), assumes a sharp interface between fresh and salt water;
- (3) assumes equally-spaced withdrawals from the aquifer; and
- (4) does not specifically address the groundwater needs of groundwater dependent ecosystems and Native Hawaiian traditional and customary practices.

There appear to be several distinct aquifer formations within the Keauhou aquifer system area: a coastal basal aquifer; a confined high-level aquifer; and a coastal deep-confined aquifer underlying seawater. The current sustainable yield estimate is based on a single basal aquifer conceptual model. While it preserves approximately 50% of recharge to discharge to the coastline, the aquifer's sustainable yield does not explicitly account for the ground water discharge needs of GDEs.

Commission staff is considering reevaluating sustainable yields statewide based on updated estimates of future recharge, which was completed by USGS in its report, *Estimated Groundwater Recharge for Mid-Century and End-of-Century Climate Projections, Hawaiian Islands*, SIR 2023-5130. Part of this reevaluation will be to consider various recharge studies, alternative methodologies for estimating sustainable yield, including but not limited to, using numerical models, revised aquifer conceptual models, and combining analytical and numerical model findings. Staff will also evaluate available estimates of recharge, including future recharge.

Any update to the sustainable yield for the KASA will come after thorough evaluation by staff and other technical experts, and will not occur before the first generation of the Keauhou AMP is approved.

Ka Pa‘akai Analysis and Groundwater Dependent Ecosystems

In *Ka Pa‘akai o ka ‘Āina v. Land Use Commission*, the Hawai‘i Supreme Court recognized that the State has an obligation to protect Hawaiian traditional and customary practices to the extent feasible, and that the proponent of an action must show sufficient evidence that these types of practices are protected, if they exist in the location in question. This “Ka Pa‘akai framework” was created by the Court “to help ensure the enforcement of traditional and customary native Hawaiian rights while reasonably accommodating competing private development interests.” The Commission is obligated to conduct a “Ka Pa‘akai analysis” of a proposed action requiring CWRM approval independent of the entity proposing the action. This analysis should be used to inform any decision on the impact of the proposed action on traditional and customary practices.

In *Ka Pa‘akai o ka ‘Āina*, the Court required an assessment of the following:

- (1) “the identity and scope of ‘valued cultural, historical, or natural resources’ in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- (2) “the extent to which those resources -- including traditional and customary native Hawaiian rights -- will be affected or impaired by the proposed action;” and
- (3) “the feasible action, if any, to be taken ... to reasonably protect native Hawaiian rights if they are found to exist.”

In addition, traditional and customary practices of Native Hawaiians are a protected public trust use under the public trust doctrine as applied to water resources, and are also recognized and protected under the State Water Code, HRS § 174C-101. It is clear that GDEs are a critical part of traditional and customary Native Hawaiian practices in the Keauhou Aquifer System Area. This is documented by numerous sources, including the Spirit Report and testimony provided through the proceedings on the NPS’s petition for designation of Keauhou as a ground water management area.

GDEs rely on the inflow of fresh groundwater. Possible reduction in groundwater flow to these GDEs needs to be examined from a more holistic perspective. These GDEs are most likely impacted by upgradient pumping of all wells, making assessment of an individual well’s impact difficult.

Further complicating the determination of impacts of a single well, or even groups of wells, on any GDE is the understanding of the interconnectivity of the various aquifers. In other words, understanding the impact of pumpage within the high-level aquifer on anchialine ponds requires a better understanding of the contribution of the high-level aquifer to the thin brackish basal lens that is the source of water for these anchialine ponds.

There are also other potential influences on GDEs, such as contaminants (in the ground and on the surface), invasive species, and sea level rise.

Therefore, for the Commission to be able to assess impacts to cultural practices attributed to issuing well and pump permits, and to assess mitigative strategies for these impacts, staff is proposing a more strategic adaptive management approach that can help to better define the above unknowns for potential well applications.

KEAUHOU AQUIFER SYSTEM AREA ADAPTIVE MANAGEMENT PLAN

I. Objectives

Between now and November 30, 2025, CWRM will develop a robust first-generation model and plan for an updatable AMP for groundwater in the KASA. The overarching purpose of this AMP is to move the topic of impacts of KASA groundwater withdrawals on GDEs and Native Hawaiian traditional and customary practices from dialogue to applied, actionable science. Further, it is hoped that this plan will serve as a useful framework for AMPs in other areas of CWRM's jurisdiction. Specifically for Keauhou, the plan will be used to:

- a) Perpetuate a flow of fresh groundwater to GDEs sufficient that native biota and traditional and customary practices of Native Hawaiians can be sustained while allowing for other protected public trust uses and reasonable and beneficial uses of water;
- b) Help directly decide or indirectly inform management decisions regarding requests for future ground water withdrawals, including special conditions that may be attached to CWRM's pump installation permits and inform county water use and development planning for the Keauhou region;
- c) Establish initial monitoring indicators, a monitoring plan, potential triggers for management actions related to ecological and cultural thresholds, and plans for future monitoring;
- d) Set in place a plan that allows for learning and will be continually updated by CWRM into second- and third-generation plans as additional knowledge emerges.

II. Starting Points and Expert Groups

This first-generation AMP will build most immediately on (1) the 2017 symposium on Groundwater Dependent Ecosystems; (2) the draft proposal for an AMP submitted by the Kaloko-Honokōhau National Historical Park; (3) the peer reviewed bio-cultural research conducted by Gibson, Bremer, Burnett, Lui, and Smith; and (4) other materials filed before CWRM and research conducted since 2017 to be identified by experts and others.

Four work groups of three or four well regarded experts are being established with a CWRM point person helping to staff each. Adler and Sang will facilitate and write up and incorporate each group's findings and recommendations. The specific role of Working Group experts is to:

- a) identify a short and prioritized list of specific AMP baseline monitoring indicators;
- b) articulate the assumptions behind each recommended indicator;
- c) develop a monitoring plan;
- d) identify any specific additional pertinent research conducted since the 2017 symposium; and
- e) suggest a short list of critical future research efforts that will improve second and third-generations of the AMP.

The four expert groups are:

- **Native Hawaiian and 'Ohana Traditional and Customary Practices / Kilo**

- o Expert To be named
- o Expert To be named
- o Expert To be named

CWRM - Ciara Kahahane

- **Hydrology**

- o Donald Thomas, PhD, Geochemist, Director of the Center for the Study of Active Volcanoes University of Hawaii at Manoa
- o Heidi L. Kane, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey
- o Brytne Okuhata, PhD, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey

CWRM - Ryan Imata

- **Indicator Species**

- o Celia Smith - The Wilder Chair and Professor of Botany, School of Life Sciences, University of Hawai'i at Mānoa
- o Diamond Tachera - *Project Scientist I*, Mesoscale & Microscale Meteorology Laboratory, *Co-Principal Investigator*, NSF CoPe Rising Voices, Changing Coasts, NSF National Center for Atmospheric Research (NCAR)
- o Ryan Okano - Aquatic Biologist, DLNR, Division of Aquatic Resources
- o Troy Sakihara - Aquatic Biologist, DLNR, Division of Aquatic Resources

CWRM – Katie C Roth

- **Contamination and Pollution**

- o Jennifer Doi, Environmental Health Specialist, Hawaii Department of Health (DOH), Clean Water Branch
- o Christopher Shuler, Hydrologist, University of Hawaii, Water Resources Research Center

- Robert Whittier, Geologist, DOH, Safe Drinking Water Branch
- Expert to be named from County of Hawaii, Department of Environmental Management CWRM - Neal Fujii

Other data such as projected sea level rise and drought and rainfall estimations will also be incorporated into the AMP.

III. Advisory Committee and External Reviewer

The AMP project has an Advisory Committee to offer general counsel on both the process and the content of the AMP's development and help ensure a strong first-generation plan. Advisors will convene at least three times, either face-to-face or electronically before, during, and near the end of the project, to help ensure the AMP's clarity and robustness.

The following have agreed to serve on the committee:

- Leah Bremer - Institute for Sustainability and Resilience, UHERO, and Water Resources Research Center, University of Hawai'i at Mānoa
- Kā'eo Duarte - Kamehameha Schools; Vice President, 'Āina Pauahi
- Scot K. Izuka – United States Geological Survey (ret)
- Charles Young - Hawai'i Island 'Aha Moku

The project will also have an outside reviewer, Dr. Scott McCreary of Concur, Inc. (<https://www.concurinc.com>). McCreary has substantial experience with adaptive management plans and joint fact-finding on natural resource matters.

IV. Plan Phases and Key Activities

The project will take place in 4 flexible phases and be accomplished by the end of November 2025:

Phase IA - Project Planning and Preparation. Anticipated completion by June 15, 2025

Some key activities include: Development of a preliminary AMP outline for discussion with CWRM staff, advisors, and the outside reviewer. Begin preparation of a reasonable set of literature references to be attached to the draft AMP.

Phase IB – Community Engagement, Scoping, and Commission Approval. Anticipated completion by July 18, 2025.

Some key activities include: Establishment of four working groups composed of experts. Conduct outreach meetings to present the plan. Development of a schedule for public briefings with Commissioners.

Phase II - Expert Group Meetings. Anticipated completion by August 31, 2025.

Some key activities include: Hybrid or in-person meetings of the four expert Working Groups. Development of preliminary maps of the KASA to show features influencing GDEs. Meetings on Island of Hawai'i with Native Hawaiian and traditional and customary users, Hawai'i Department of Water Supply, Kaloko-Honokōhau National Historical Park, and others.

Phase III – Prepare First Draft AMP; Briefings for CWRM and the Public. Anticipated completion by September 30, 2025.

Some key activities include: Continuing consultations with project advisors, creation of a first draft AMP, and public briefings with CWRM Commissioners.

Phase IV - Prepare Revised AMP. Anticipated completion by November 30, 2025

Some key activities include: Incorporating feedback from CWRM Commissioners and the public into a further pre-publication AMP draft.

Barring unexpected delays, a first-generation AMP will be completed by November 30, 2025.

V. Outreach to Stakeholders and Community

One element of the AMP process critical to success is outreach and education. The Keauhou AMP will include outreach meetings and briefings to key stakeholders, interested organizations, and individuals. Planned invitees include but are not limited to:

- Hui Ola Ka Wai
- Natural Energy Lab of Hawaii Authority (NELHA)
- DLNR ‘Aha Moku (Hawai‘i / Moku o Keawe) Kaloko-Honokōhau National Historic Park
- Hui Kaloko-Honokōhau
- Hawaii Housing Finance Development Corporation (HHFDC)
- Department of Hawaiian Home Lands (DHHL)
- County of Hawaii Councilmembers
- Hawaii Department of Water Supply (HDWS)
- Queen Liliuokalani Trust (QLT)
- Stanford Carr Development
- Kona Hawaiian Civic Club
- Kohanaiki Shores LLC
- Kona Community Development Plan Action Committee
- Kona-Kohala Chamber of Commerce
- Senator Dru Kanuha
- Senator Tim Richards
- Representative Kirstin Kahaloa

The outreach meetings and briefings would include soliciting feedback from the participants. These may be one-on-one meetings, group meetings, or a large community meeting; in-person, virtual or hybrid format.

Commission staff will also present successive drafts of the Keauhou AMP to the Commission before it comes to the Commission for final approval, providing multiple opportunities for the public and the Commission to comment.

The Project Description and AMP Outline are attached as Exhibits 5 and 6.

VI. Act 189 and Ongoing Funding

Funding and direction for the first-generation AMP is coming from both state and federal funding sources. Ongoing operational needs for the next two years will be provided by [Act 189, Session Laws of Hawaii, 2025](#). Act 189 establishes a “Keauhou Aquifer System monitoring pilot project” under the Commission on Water Resource Management and requires the Commission, in collaboration with other agencies, to:

- Collect data from the monitoring wells installed in the Keauhou aquifer system;
- Monitor groundwater levels in the Keauhou aquifer system;
- Conduct water salinity tests in the Keauhou aquifer system;
- Monitor the impacts of groundwater pumping on the health of coastal ecosystems and traditional and customary practices within the Keauhou aquifer system;
- Initiate public information meetings to report on the data collected;
- Conduct community outreach to guide the management of groundwater resources in the Keauhou aquifer system;
- Integrate new and existing studies and research into a plan for the responsible management of groundwater resources in the Keauhou aquifer system; and
- Conduct other related activities as DLNR deems necessary to carry out the purposes of the pilot project.

Interim reports must be submitted to the legislature every six months with data on groundwater levels and water salinity. The Act also appropriates \$200,000 for the 2025-2026 and 2026-2027 fiscal years to be used for purposes of the pilot project.

Act 189 provides both ongoing funding and accountability for the Keauhou AMP project. As the Keauhou AMP develops, the Commission may recommend further legislation to implement the goals and refine the structure of the project.

RECOMMENDATION:

Staff recommends that the Commission approve the development of a first-generation Adaptive Management Plan for the Keauhou aquifer system area, as described above, and retain authority over the final approval of the plan.

Respectfully submitted,



CIARA W.K. KAHANE
Deputy Director

Exhibits:

1. National Park Service Petition to Designate the Keauhou Aquifer System as a Ground Water Management Area
2. The Spirit of Kaloko-Honokōhau (Honokōhau Study Advisory Commission, 1974)
3. Dec. 3, 2014 Hawai'i Department of Water Supply Contested Case Hearing Request.
4. Dec. 10, 2014 RCFC Kaloko Heights, LLC Contested Case Hearing Request
5. DRAFT Keauhou AMP Project Description dated July 2, 2025
6. DRAFT Keauhou AMP Outline dated July 2, 2025

APPROVED FOR SUBMITTAL:



DAWN N.S. CHANG
Chairperson



National Park Service
U.S. Department of the Interior

Kaloko-Honokōhau
National Historical Park

73-4786 Kanalani Street # 14
Kailua-Kona, Hawai'i 96740

808 329-6881 Phone
808 329-2597 Fax

Kaloko-Honokōhau

IN REPLY REFER TO:
L54 [2013-12]

September 13, 2013

William J. Ailā, Jr., Chairperson
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai'i 96809

Subject: Petition to Designate the Keauhou Aquifer System a Water Management Area

Dear Mr. Ailā:

I respectfully submit this petition to designate the Keauhou Aquifer System a Water Management Area. Thirty-five years ago, the Honokōhau Study Advisory Commission recognized that management of fresh water flowing underground from mauka areas was necessary to preserve and protect the spirit of Kaloko-Honokōhau for the enjoyment of residents, visitors, and future generations. This petition is submitted so that their vision may be fulfilled.

We must act now because the fresh water that sustains North Kona's residents and economy is threatened by growing water demand, declining rainfall, and rising sea level. Large-scale groundwater pumping, injection and desalinization in the Keauhou Aquifer System are imminent. Fresh water must be preserved for unique cultural and natural resources along the Kona Coast before any more water is allocated for consumptive uses.

Water for non-consumptive public trust uses has not yet been explicitly considered by the State of Hawai'i in its sustainable yield determinations or well permitting process. Designation proceedings, however, provide an opportunity to openly and transparently consider how much water is needed for traditional and customary Native Hawaiian practices and the maintenance of waters in their natural state.

Stewardship of water resources is an enduring responsibility shared by both of our agencies. I look forward to cooperating with you and your staff in the pursuit of this goal. Please contact me at (808) 329-6881 x1201 or Jeff Zimpfer at (808) 329- 6881 x1500 with any questions regarding this submittal.

Sincerely,

Tammy Ann Duchesne
Superintendent



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

PETITION
FOR
WATER MANAGEMENT AREA ACTION
for

☒ Ground Water ☐ Surface Water

Instructions: Please print in ink or type and send completed petition with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. For assistance, call the Regulation Branch at 587-0225.

1. PETITIONER

Firm/Name: National Park Service

Contact Person: Tammy A. Duchesne Phone: 808-329-6881 x1201

Address: 73-4786 Kanalani St., Suite #14, Kailua-Kona, HI 96740

2. PROPOSED WATER MANAGEMENT AREA(S)

Island: Hawaii

Aquifer Sector(s): Hualalai (809)

Aquifer System(s): Keauhou (80901)

Watershed(s): Keahole, Honokohau

3. PROPOSED ACTION (Check one only): ☒ DESIGNATION ☐ MODIFICATION ☐ RESCINDMENT

4. JUSTIFICATION FOR PROPOSED ACTION ON WATER MANAGEMENT AREA(S)

Please attach a sheet to state reasons why the above hydrologic unit(s) under item 2 should be designated as a ground and/or surface water management area(s) or the boundaries of an existing water management area(s) modified or rescinded. If petition is for water management area designation, please state which criteria specified by 13-171-7 and/or 13-171-8, HAR, are met and why (see back of form). If petition is for modifying or rescinding existing water management area boundaries, please establish your standing to petition (13-171-10 HAR). Complete and detailed explanations are encouraged.

Submitted by (print): CHRISTINE LEHNERTZ

Signature for Marmag

Acting
Title: Pacific West Regional Director

Date: 9/3/13

RELEVANT SECTIONS OF 13-171, HAR & 174C, HRS REGARDING WATER MANAGEMENT AREA PETITIONS

§13-171-3 Initiation by chairperson. The designation of a water management area by the commission may be initiated upon recommendation by the chairperson. In addition to this prerogative, it shall be the duty of the chairperson to make the recommendations from time to time when it is desirable or necessary to designate a water management area for the purposes stated in this chapter and there is data for a decision by the commission. [Eff. MAY 27 88] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-41)

§13-171-4 Initiation by petition. (a) The designation of a water management area by the commission may also be initiated by any interested person by written petition to the chairperson proposing the designation of a specified area and presenting the reasons for such designation. The petition for designation of a water management area shall be made on forms provided by the commission. It shall be the duty of the chairperson, after consultation with the appropriate county mayor and county water board, to act upon the petition by making a recommendation for or against the proposed designation to the commission within sixty days after receipt of the petition or additional time as may be reasonably necessary to determine whether there is factual data to warrant the proposed designation.

(b) Designated ground water areas established under chapter 177, HRS, the Ground Water Use Act, and remaining in effect at the effective date of this chapter shall continue as water management areas. [Eff. MAY 27 88] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-41)

§13-171-7 Ground water criteria for designation. In designating an area for ground water use regulation, the commission shall consider the following:

- (1) Whether an increase in water use or authorized planned use may cause the maximum rate of withdrawal from the ground water source to reach ninety percent of the sustainable yield of the proposed water management area;
- (2) That the rates, times, spatial patterns, or depths of existing withdrawals of ground water are endangering the stability or optimum development of the ground water body due to upconing or encroachment of salt water;
- (3) That the chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses;
- (4) Whether excessive preventable waste of water is occurring;
- (5) There is an actual or threatened water quality degradation as determined by the department of health;
- (6) Serious disputes respecting the use of ground water resources are occurring;
- (7) Whether regulation is necessary to preserve the diminishing ground water supply for future needs, as evidenced by excessively declining ground water levels; or
- (8) Whether water development projects that have received any federal, state, or county approval may result, in the opinion of the commission, in one of the above conditions.

Notwithstanding an imminent designation of a water management area conditioned on a rise in the rate of ground water withdrawal to a level of ninety percent of the area's sustainable yield, the commission, when such level reaches the eighty percent level of the sustainable yield, may invite the participation of water users in the affected area to an informational hearing for the purposes of assessing the ground water situation and devising mitigative measures. [Eff. MAY 27 88] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-44)

§13-171-8 Surface water criteria for designation. In designating an area for surface water use regulation, the commission shall consider the following:

- (1) Whether regulation is necessary to preserve the diminishing surface water supply for future needs, as evidenced by excessively declining surface water levels, not related to rainfall variations, or increasing or proposed diversions of surface waters to levels which may detrimentally affect existing instream uses or prior existing off stream uses;
- (2) Whether additions to or the diversions of stream waters are reducing the capacity of the stream to assimilate pollutants to an extent which adversely affects public health or existing instream uses; or
- (3) Whether serious disputes respecting the use of surface water resources are occurring.

[Eff. MAY 27 88] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-45)

§13-171-10 Modifying and rescinding designated areas. The modification of the boundaries or the rescinding of existing water management areas by the commission may be initiated by the chairperson or by a petition to the commission by any person with proper standing. The procedure for modifying the boundaries of an existing water management area or for rescinding an existing water management area shall be as provided in subchapter 2 for the designation of a water management area. [Eff. MAY 27 88] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-47)

Contents

1. Introduction.....	1
1.1 Establishment of the Commission on Water Resource Management.....	3
1.2 Establishment of Kaloko-Honokōhau National Historical Park.....	4
1.3 Cultural and Natural Public Trust Resources	6
1.4 Adverse Effects of Reduced Freshwater Discharge	11
1.5 Protecting Public Trust Resources in Kaloko-Honokōhau	17
1.51 Stewardship Responsibilities of the State.....	17
1.52 Stewardship Responsibilities of the National Park Service.....	20
2. Statutory Criteria for a Water Management Area.....	23
2.1 Sustainable Yield [HAR §13-171-7(1)]:.....	23
2.11 Sustainable Yield for the Keauhou Aquifer System.....	23
2.12 Reported Water Use and Future Water Demand in the Keauhou Aquifer System	25
2.13 Declining Rainfall and Rising Sea Level.....	28
2.2 Saltwater Intrusion [HAR §13-171-7(2) & HAR §13-171-7(3)]:	31
2.3 Waste [HAR §13-171-7(4)]:	37
2.4 Disputes [HAR §13-171-7(6)]:.....	38
2.41 Cumulative Impact Assessments	38
2.42 Significance of Saltwater Intrusion on Public Trust Resources	41
2.43 Source of Recharge to the Basal Groundwater System	43
2.5 Federal, State, County Approval [HAR §13-171-7(8)]:	47
3. Summary	48
4. Conclusions.....	51
5. References	53
Appendix A: Federally-protected species in Kaloko-Honokōhau National Historical Park.	58
Appendix B: Pumping capacity of permitted wells in the Keauhou Aquifer System	59
Appendix C: Water demand for proposed development in the area of Kaloko-Honokōhau.....	60
Appendix D: Existing and proposed desalination systems in the area of Kaloko-Honokōhau. ...	61
Appendix E: Record of groundwater development issues in the area of Kaloko-Honokōhau.	62

1. Introduction

The National Park Service (NPS) respectfully requests that William Ailā, the chairperson of the Commission on Water Resource Management (the Commission), accept this petition and formally recommend that the process for designating the Keauhou Aquifer System a “Ground Water Management Area” be continued. Designation is necessary so the Commission may regulate the location and pumpage of wells in the Keauhou Aquifer System for the protection of vital water-related public trust resources located within Kaloko-Honokōhau National Historical Park (the Park) and the remainder of the management unit for the benefit of present and future generations.

In Kaloko-Honokōhau, *“the dynamic thread that ties the environment together is water”* (Honokōhau Study Advisory Commission 1974). The coastal fishponds, anchialine pools, wetlands, tidepools, and nearshore marine waters are fed by fresh water from the Keauhou Aquifer System. Traditional and customary Native Hawaiian practices rely heavily on the quality and quantity of groundwater in Kaloko-Honokōhau (Maly & Maly 2002; Peterson & Orr 2005). Noting the connection between the natural and cultural resources in the Park, the State Land Use Commission found that *“any impacts to waters in the National Park would, in and of itself, be an impact to cultural resources”* (Docket A00-732, Finding of Fact 190).

Support for the stewardship of water-dependent cultural and natural resources transcends the boundaries of the Park. In 2010, citizens of Hawai‘i County voted to amend Article XIII, Section 13-29 of the County Charter to *“conserve and protect Hawai‘i’s natural beauty and all natural and cultural resources”* and to affirm that *“all public natural and cultural resources are held in trust by the county for the benefit of the people.”* In 2011, the Office of Hawaiian Affairs and the Association of Hawaiian Civic Clubs passed resolutions encouraging all stakeholders to actively work to protect cultural and natural resources that are dependent upon the Keauhou Aquifer. As noted by the Review Commission on the State Water Code, groundwater must be conserved for these non-consumptive public trust purposes before it is allocated to any other uses (State of Hawai‘i 1994).

If the chairperson does not recommend initiating designation proceedings and consequently, the Commission does not act to designate a water management area, new wells

will continue to be located near sensitive habitat for culturally important and rare native species, thereby imperiling traditional and customary Native Hawaiian rights and practices and other public trust resources that are vulnerable to changes in water supply. Waters that support fisheries, tourism, subsistence, and cultural heritage are at risk.

In support of its request, the NPS offers the following historical, legal, and scientific reasons for the Commission to exercise its constitutional obligation to actively manage the freshwater resources of the Keauhou Aquifer System. Initially, it should be noted that the Commission and the Park were both created to protect and perpetuate traditional and customary Native Hawaiian practices and the natural resources on which these practices depend. Thus, the Commission by giving careful and deliberate consideration to this petition can faithfully discharge its lawful duties, and thereby further its stewardship of the cultural and natural public trust resources of the state.

1.1 Establishment of the Commission on Water Resource Management

On November 7, 1978, citizens of the State of Hawai‘i ratified the amendment later codified as Article XI, Section 7 of the Hawai‘i Constitution calling for the establishment of what has become the Commission, *“a water resources agency which, as provided by law, shall set overall water conservation, quality and use policies; define beneficial and reasonable uses; protect ground and surface water resources, watersheds and natural stream environments; establish criteria for water use priorities while assuring appurtenant rights and existing correlative and riparian uses and establish procedures for regulating all uses of Hawaii’s water resources.”*

Some of the essential duties of the Commission arise from the public trust doctrine, a core element in Hawaiian constitutional law, appearing both in Article XI, Section 1 and Article XI, Section 7. In re Waiāhole Ditch Combined Contested Case Hearing, 9 P.3d 409, at 444 (2000) (“Waiāhole”). The doctrine requires that public trust purposes, such as traditional and customary Native Hawaiian practices and the maintenance of waters in their natural state, be safeguarded in the allocation and management of water resources by the state and its subdivisions for the benefit of its people. Waiāhole, 9 P.3d at 449-51.

Subsequent to the establishment of the Commission and the State Water Code [HRS §174C], the Hawai‘i Supreme Court (the Court) has issued opinions resolving a number of legal disputes regarding the allocation and management of water resources, thereby clarifying the duties of the Commission, particularly as they relate to the state’s public trust in water. Thus, the Commission must meaningfully consider the effects of groundwater withdrawals because it has an *“affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.”* Waiāhole, 9 P.3d at 453 (emphasis retained).

1.2 Establishment of Kaloko-Honokōhau National Historical Park

Along the western coastline of the Island of Hawai‘i lies the hot, rugged lava of Ka-loko, Hono-kō-hau. This seemingly barren and harsh landscape does not appear to be suitable for human existence, and yet, long before written history, the Hawaiian people built a thriving settlement upon the ‘a‘ā lava, which was to last well into the 19th century when the forces of western culture slowly brought an end to the Hawaiian way of life...the spirit of Ka-loko, Hono-kō-hau revealed itself to the ancient Hawaiians in another form which was, perhaps, the most critical factor in their decision to settle in the area. What they found scattered along the shoreline and among the jagged lava, were cool, brackish water springs. To the Hawaiians, the presence of these springs throughout the area was indication that there was enough of an underground water source to sustain the everyday needs of a settlement of people...The Hawaiian settlement at Ka-loko, Hono-kō-hau did not just survive. It thrived, because the ancient Hawaiians touched and understood the spirit, but did not disturb it. They nurtured the spirit tenderly, like a rare and precious plant, and it grew until it filled everything around it with its being. Their philosophy was a simple and effective one -- "provide for nature and it will provide." In this way they maintained the delicate balance that existed in their sacred relationship with nature. To misuse the natural resources at Ka-loko, Hono-kō-hau would bring upon them the wrath of their all-powerful gods Kine, Ku, Lono, and Kanaloa, and devastation to their land (Honokōhau Study Advisory Commission 1974).

National recognition of the cultural and historical importance of the area so well described above occurred in 1962 when the Honokōhau Settlement was designated a National Historic Landmark. Then in 1972, local Native Hawaiians who were concerned about proposals to develop the National Historic Landmark for urban and resort uses approached the Hawai‘i Congressional delegation about preserving Kaloko-Honokōhau as a part of the National Park System. The United States Congress directed the Secretary of the Interior to appoint an advisory commission of 15 people including prominent Native Hawaiian leaders to study the issue. The Honokōhau Study Advisory Commission (1974) produced “The Spirit of Ka-loko-Hono-kō-hau, a proposal for the establishment of a Ka-loko Honō-ko-hau National Cultural Park, Island of Hawai‘i, State of Hawai‘i,” often referred to as the “Spirit Report.” In the transmittal letter to the Secretary of the Interior, the Advisory Commission stated, “*we take special pleasure in presenting this study because perhaps for the first time Native Hawaiians have been able to tell their story and tell it in their own way.*”

On November 10, 1978, Congress established Kaloko-Honokōhau National Historical Park “*to provide a center for the preservation, interpretation, and perpetuation of traditional*

Native Hawaiian activities and culture, and to demonstrate historic land use patterns as well as to provide a needed resource for the education, enjoyment, and appreciation of such traditional Native Hawaiian activities and culture by local residents and visitors” [16 U.S.C. §396d(a)]. In creating Kaloko-Honokōhau National Historical Park, Congress required that the NPS administer the Park according to the laws applicable to all units of the National Park System and “in accordance with the guidelines” provided in the Spirit Report [16 U.S.C. §396d(c)].

Recognizing that urban and resort development threatened resources in Kaloko-Honokōhau, Congress also authorized the Secretary of the Interior “*to enter into agreements with other governmental entities and private landowners to establish adequate controls on air and water quality and the scenic and esthetic values of the surrounding land and water areas*” [16 U.S.C. §396d(d)(4)]. The federal government invested approximately \$70 million in public funds to acquire three of the four privately owned parcels within the authorized boundaries, so that the land and culture would live on in Kaloko-Honokōhau (Figure 1).



Figure 1. Annual Children’s Cultural Festival hosted by Kaloko-Honokōhau National Historical Park to connect fourth graders with traditional Hawaiian culture (NPS photos). The festival marks the start of the *Makahiki*.

1.3 Cultural and Natural Public Trust Resources

Kaloko-Honokōhau National Historical Park comprises over 500 acres of terrestrial ecosystems, including native coastal shrublands, three fishponds, more than 185 anchialine pools, and almost 600 acres of marine, intertidal and coral reef habitat (Figure 2). Approximately 25% of the Hawai‘i’s estimated anchialine pool resources are located within the Park, including two short stream segments where the seaward flow of brackish water can be readily observed. The State of Hawai‘i has indicated its intent to maintain Kaloko-Honokōhau’s water resources in pristine condition by classifying all of the Park’s inland waters as Class 1a, and marine waters as Class AA.

Cultural resources in Kaloko-Honokōhau include over 450 known archeological sites comprised of multiple *heiau*, burials, house sites, planters, modified anchialine pools, enclosures, and traditional Hawaiian fishponds and their associated wetlands (Figures 3 & 4). The interconnection between cultural and natural resources in the Park is exemplified by its water resources, which were used for aquaculture and historically provided fish and bait for Hawaiian families. Kaloko Fishpond, a 11-acre *loko kuapā* is one of the most significant cultural resources in Kaloko-Honokōhau (Figure 5). The fishpond is a spring-fed embayment that provides habitat for culturally important fish species; the restored *kuapā*, or seawall, is 800-ft long. ‘Aimakapā Fishpond, a 15-acre *loko i‘a*, and its wetland provide important foraging and breeding habitat for endangered native waterbirds and migratory waterfowl (Figure 6). ‘Ai‘ōpio Fishtrap is an enclosure modified by Hawaiians to trap fish at low tide (Figure 4).

Kaloko-Honokōhau is home to ten endangered or threatened plant and animal species protected under the Endangered Species Act; the anchialine pool resources support three species that are candidates for listing (Appendix A). The tidepools and coral reef support a variety of marine life and are inhabited by resident juvenile threatened green sea turtles and the endangered hawksbill sea turtle (Figures 7 & 8). The endangered Hawaiian monk seal is an occasional visitor to the marine waters and shoreline of the Park, along with endangered humpback whales and the recently listed false killer whale.

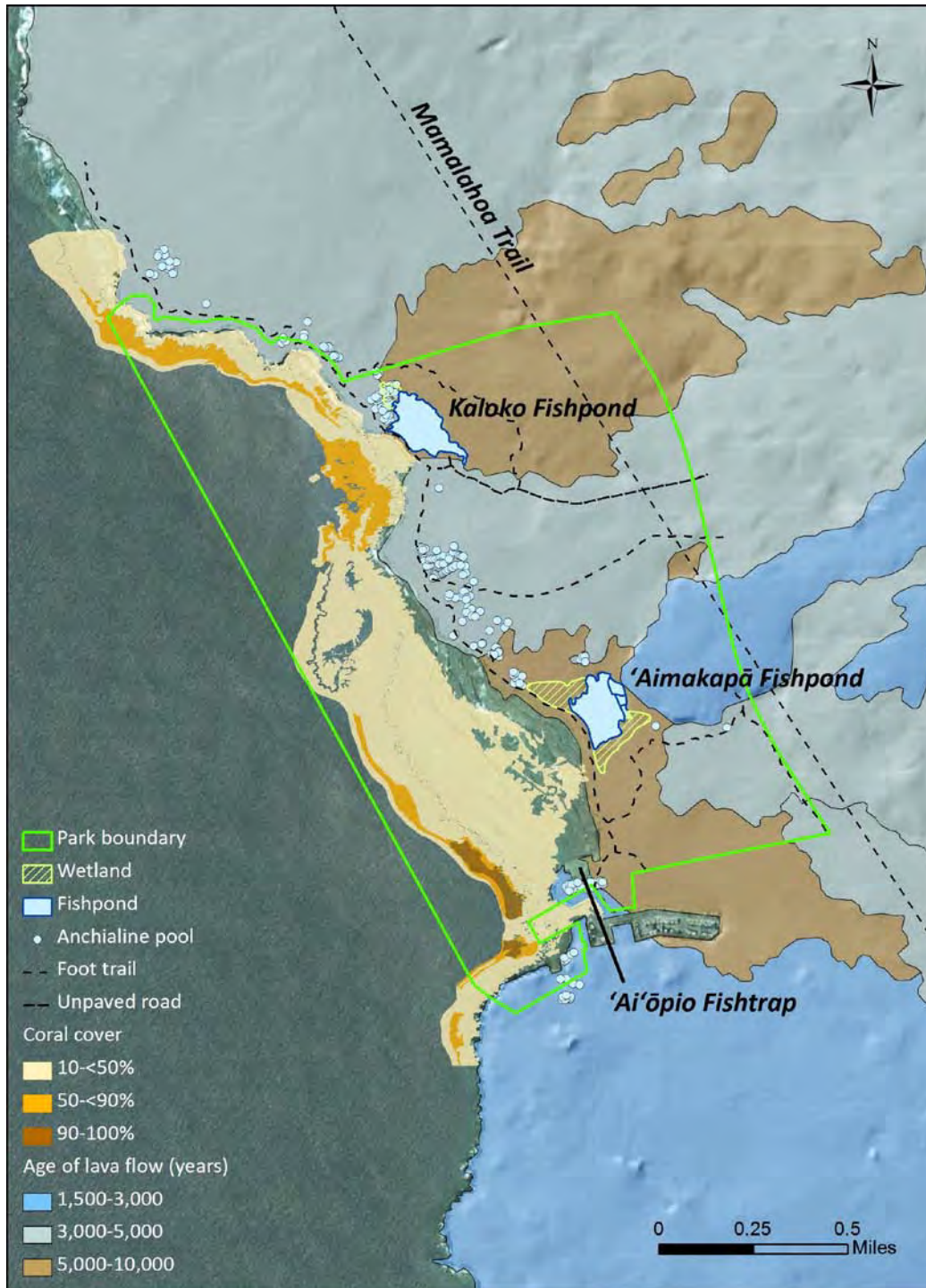


Figure 2. Cultural and natural resources in Kaloko-Honokōhau National Historical Park.



Figure 3. Kahinihini'ula anchialine pool with *ahu* in the background (NPS photo).



Figure 4. Pu'uoina Heiau overlooks 'Ai'ōpio fishtrap; Hualalai looms over the horizon (NPS photo).

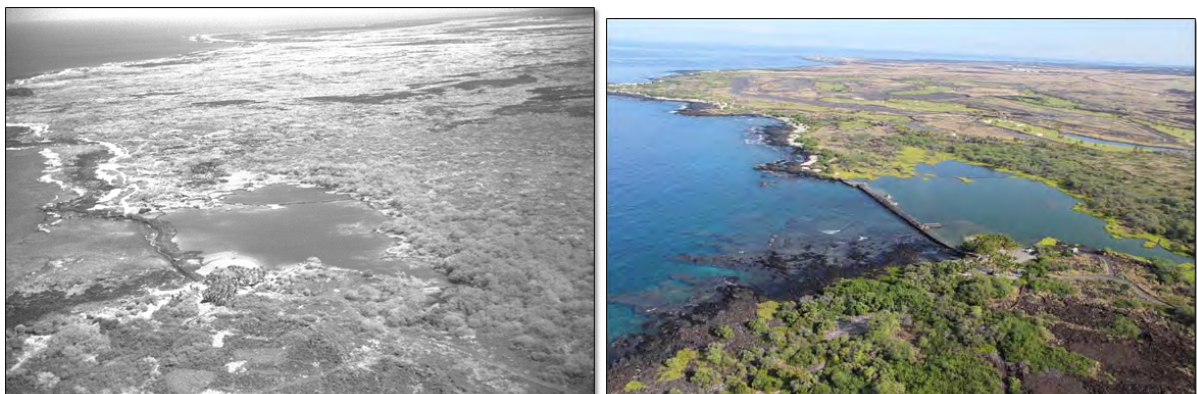


Figure 5. Aerial view of Kaloko Fishpond in 1977 (left) (photo by R.J. Shallenberger); restored kuapā at Kaloko Fishpond in 2012 (right) (NPS photo).



Figure 6. Aerial view of 'Aimakapā Fishpond (NPS photo).

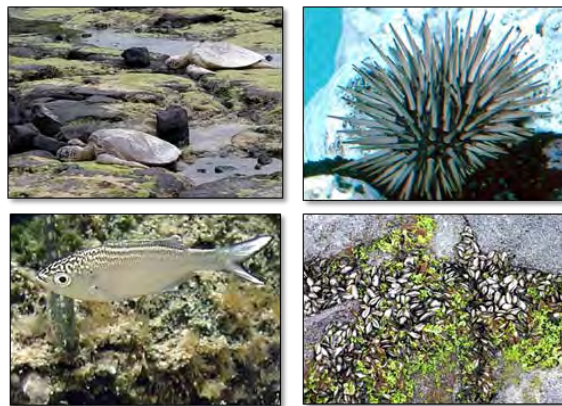


Figure 7. Marine life attracted to tidepools in Kaloko-Honokōhau National Historical Park. Clockwise from top left: *honu* or green sea turtles, *'ina kea* or sea urchin, shells and *limu* or seaweed, and *aholehole* or reticulated Hawaiian flagtail (NPS photos).

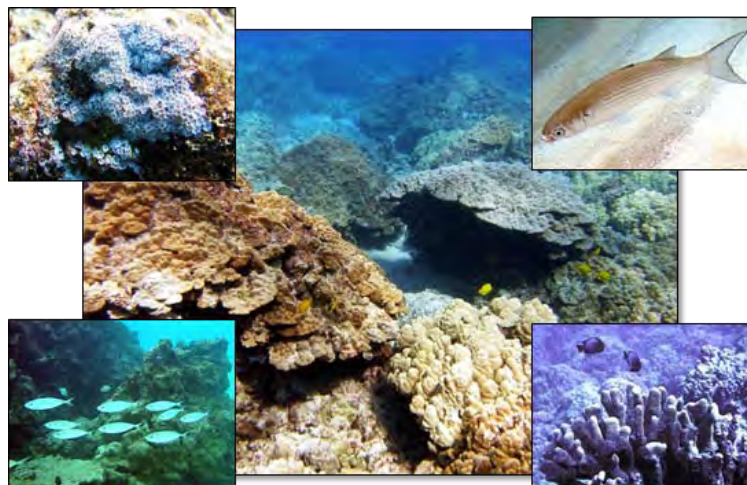


Figure 8. Marine life in the nearshore waters of Kaloko-Honokōhau National Historical Park. In the background is the coral reef; clockwise from top left are blue octocoral, *'ama'ama* or striped mullet, *pohaku* or finger coral, and *akule* or bigeye scad (NPS photos).

The NPS is working with *Makani Hou o Kaloko-Honokōhau*, the Park’s primary friends group and partner organization, to build the Cultural Center within the Park, a place where Hawaiians and others will be able to immerse in traditional Hawaiian activities and cultural practices. The NPS is actively restoring the natural and cultural functions of Kaloko Fishpond to operate as traditional and productive aquaculture for the community as part of the Cultural Center, and is restoring the wetlands of ‘Aimakapā Fishpond to benefit native and migratory waterbirds. Also underway is the Hawaiian Legacy program, which will support the preservation of traditional knowledge and artisan skills, including Hawaiian *uhau humu pohaku* – traditional Hawaiian dry-set masonry.

The coastal and marine ecosystems in Kaloko-Honokōhau and along the Kona Coast are a great economic asset for Hawai‘i. Whether stemming from tourism or other commercial activities such as fishing, marine resources provide significant economic value to their local communities. Coral-reef associated economic benefits along the Kona Coast were estimated to be about \$17 million annually, 45% of which was attributed to recreation and tourism (Cesar et al. 2002). For example, marine resources in the Park include diverse fish populations for shoreline and nearshore fishing and 15 day-use mooring buoys for recreational diving. The State Land Use Commission has recognized “*the economic value of this coastal National Park, providing such exquisite natural, recreational and cultural resources*” (Docket A00-732, Finding of Fact 156).

1.4 Adverse Effects of Reduced Freshwater Discharge

The adverse effects of reducing freshwater discharge to coastal areas have been documented in numerous peer-reviewed studies. A comprehensive analysis of the potential cumulative effects of groundwater withdrawals on the water resources of Kaloko-Honokōhau was completed by the U.S. Geological Survey (USGS). The USGS, using a numerical groundwater-flow model, estimated that about 6.48 Mgal/d of fresh groundwater discharged to the ocean within the Park when it was established in 1978 (Oki et al. 1999). The USGS also simulated the effects of groundwater use on freshwater discharge. They concluded that if all wells permitted prior to 1998 were pumped at their maximum rate, groundwater discharge at the coastline in the Park would be reduced to 47% of the 1978 rate and water levels would decline by about 0.6 ft (Oki et al. 1999) (Figure 9).

Maintaining the flow of groundwater to the coast is critical because fresher, colder, buoyant groundwater creates estuarine conditions for diverse aquatic ecosystems and cultural practices along the Kona Coast (e.g., Parrish et al. 1990; Johnson et al. 2008; Knee et al. 2008;

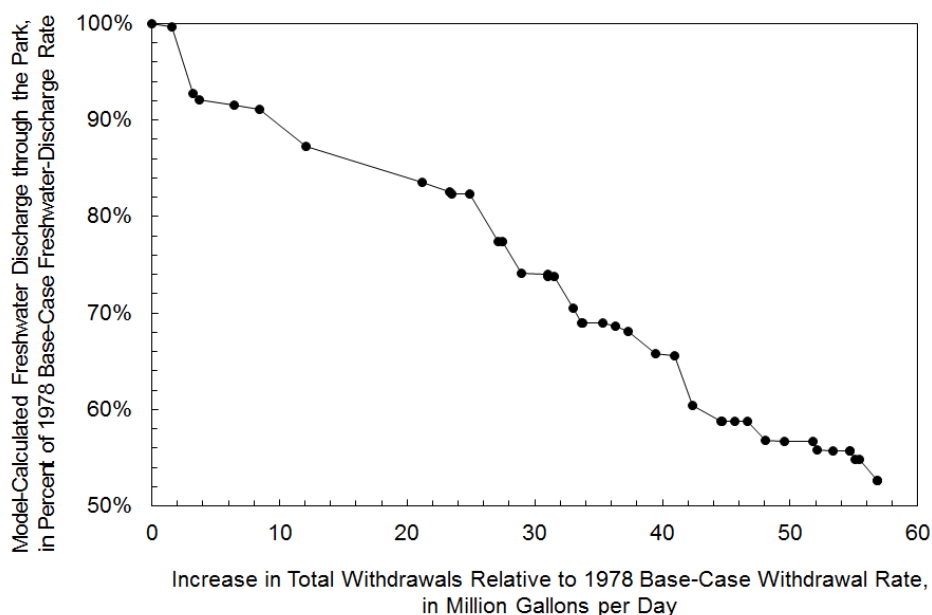


Figure 9. Reduction in model-calculated freshwater discharge through Kaloko-Honokōhau National Historical Park in excess of average 1978 withdrawal rates in western Hawaii (modified from Oki et al. 1999). Groundwater discharge is reduced as simulated withdrawals increase; wells upgradient of the park have the largest effect on discharge.

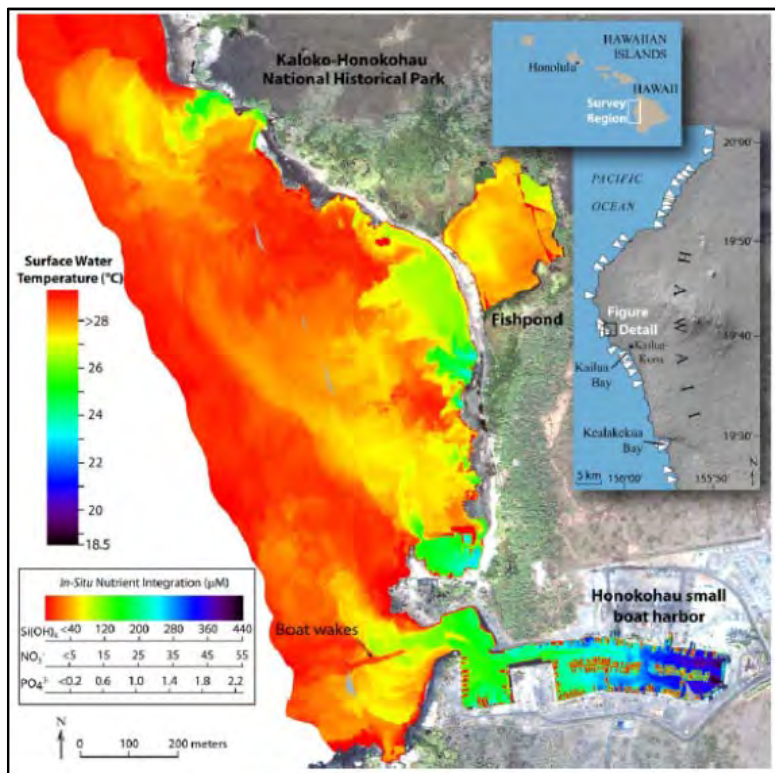


Figure 10. Sea-surface temperature map produced from August 2005 aerial infrared imaging in the vicinity of Kaloko-Honokōhau National Historical Park (from Johnson et al. 2008; Figure 1). White triangles in the inset indicate 31 major submarine groundwater discharge plumes identified by the University of Hawaii School of Ocean and Earth Sciences.

Beets et al. 2010; Grossman et al. 2010) (Figure 10). Traditional Native Hawaiian knowledge and experience as well as scientific research tell us that important keystone and indicator species are sensitive to changes in the salinity and temperature of this groundwater discharge.

Reducing the flow of fresh, clean water to Kaloko Fishpond could result in a loss of nursery habitat for the ‘ama‘ama or striped mullet (*Mugil cephalus*), one of two species of native mullet and a culturally significant estuarine species in Hawai‘i. “Traditional fishponds were located at sites which more than likely attracted great number of fingerlings since the areas provided a protective habitat and optimal growing conditions” (Nishimoto et al. 2007). The Commission has acknowledged that mullet as well as “aholehole and milkfish (*awa*) depend on a euryhaline or brackish water environment for the nursery stage of their life cycle” (Contested Case Hearing CCH-MO97-1, Finding of Fact 147). Because the NPS is working to restore Kaloko Fishpond for traditional aquaculture, maintaining optimal growing conditions is essential

to support these harvesting practices. The State of Hawai‘i is also working to protect essential nursery habitat for striped mullet fingerlings and juveniles, and found that traditional Hawaiian fishponds may need further protection (Nishimoto et al. 2007).

Excessive groundwater withdrawals may limit the productivity and distribution of *limu* or seaweeds as groundwater discharge to coastal waters along the Kona Coast decreases (Duarte et al. 2010). *Limu* were the third component of the traditional Hawaiian diet of fish and *poi*, and wide varieties were harvested in Kaloko-Honokōhau (Abbott 1984; Maly & Maly 2002; Peterson & Orr 2005). Laboratory studies indicate that the growth rate of an economically, ecologically, and culturally important species native to the Kona Coast, *limu manaua* (*Gracilaria coronopifolia*), increases as salinity decreases below that of seawater, or about 35 parts per thousand (ppt) total dissolved solids, with optimal conditions occurring at a salinity of about 27 ppt (about 80% seawater) (Amato 2009) (Figure 11a). Similar observations were made at a major harvest site on Moloka‘i, where severe drought conditions slowed the growth of one of the most prized species, *limu kohu* (*Asparagopsis taxiformis*) (Poepoe et al. 2001). The Commission also found that because “*limu frequently grows best in a mixture of seawater and freshwater,*” increased salinities may be detrimental to its growth on Moloka‘i (Contested Case Hearing CCH-MO97-1, Finding of Fact 144).

Native Hawaiians once utilized certain anchialine pools in Kaloko-Honokōhau for drinking water (e.g., Honokōhau Study Advisory Commission 1974; Maly & Maly 2002), but there is no potable water in the Park today. A 2008 – 2009 inventory indicates that the mean salinity of the Park’s anchialine pools is 15 ppt (about 43% seawater) (NPS 2013) (Figure 11). Some of the Park’s anchialine pools provide habitat for a native species of *pinao‘ula* – the orange-black Hawaiian damselfly (*Megalagrion xanthomelas*) (Figure 12). This endemic stream-dwelling species was once one of the most abundant damselflies in the Hawaiian Islands, but habitat loss through dewatering has contributed to its current status as a candidate for listing as endangered or threatened by the U.S. Fish and Wildlife Service. Laboratory studies indicate the eggs and naiads of the orange-black Hawaiian damselfly are sensitive to increased salinity and

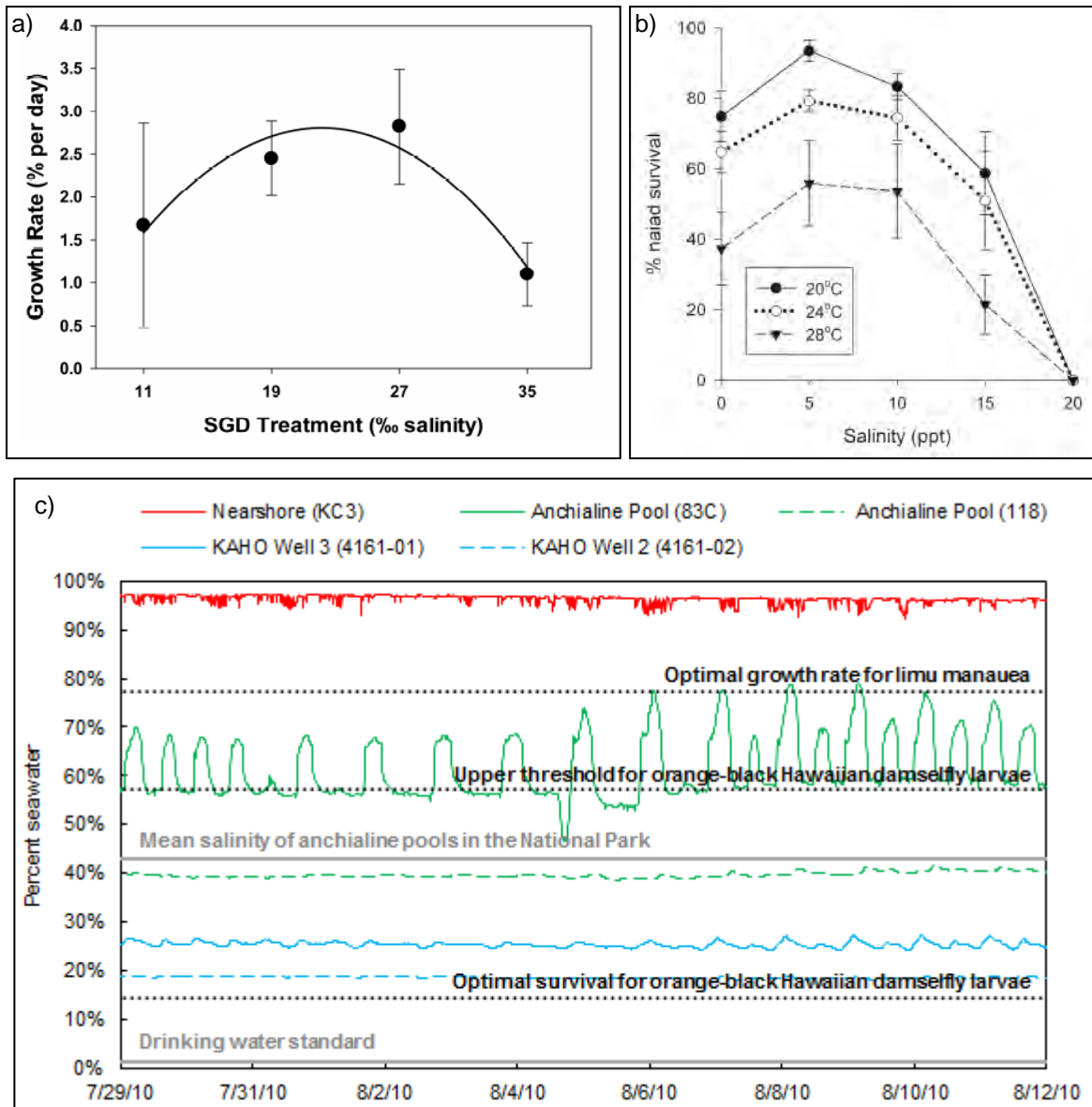


Figure 11. Freshwater discharge to inland and nearshore marine waters provides diverse habitat for native species along the Kona Coast. Although these fragile coastal ecosystems exist where salinity fluctuates due to the ocean tide, a long-term increase in salinity due to reduced freshwater flows will adversely affect the productivity and survival of culturally important and rare native species: a) pooled mean growth rate (mean \pm 1 standard deviation) for *limu manauaea* vs. salinity (parts per thousand) (SGD treatment = simulated submarine groundwater discharge) (Amato 2009); b) percent naiad survival (mean \pm standard error) vs. salinity (parts per thousand) for the candidate-endangered orange-black damselfly among three temperature levels (Tango 2010); c) continuous salinity-monitoring data from five sites in Kaloko-Honokōhau National Historical Park over one tidal cycle in 2010 (nearshore data courtesy of E. Grossman, USGS; anchialine pool data courtesy of D. Oki, USGS; well data downloaded from USGS (2013); mean salinity of anchialine pools from NPS (2013)).



Figure 12. Protected native species in Kaloko-Honokōhau National Historical Park. Clockwise from left is the *ae'o* or Hawaiian stilt (Pacific Island Parks photo), '*alae ke'oke'o* or Hawaiian coot (NPS photo), and the orange-black Hawaiian damselfly (Hawaii Biological Survey photo by D. Preston).

temperature, and that naiads exhibit a threshold response to salinity above 15 ppt, with no naiads surviving at 20 ppt (about 57% seawater) (Tango 2010) (Figure 11b). Increases in the salinity of anchialine pools or dewatering of pools may therefore adversely affect the ability of this candidate species to reproduce in Kaloko-Honokōhau.

Anchialine pools in Kaloko-Honokōhau also provide substantial habitat for '*ōpae 'ula* or the endemic shrimp *Halocaridina rubra*, which have profound cultural significance to Native Hawaiians who use them both as a food source and as bait for catching fish such as '*opelu* along the shore and in the nearshore waters (e.g., Maly & Maly 2002; Peterson & Orr 2005). Two species of Hawaiian anchialine pool shrimp found in the Park (*Metabetaeus lohena* and *Palaemonella burnsi*) are now candidates for listing.

In addition, anchialine pools and fishponds along the Kona Coast provide important feeding and breeding sites for the endangered *a'eo* or Hawaiian stilt (*Himantopus mexicanus knudseni*) and the endangered '*alae ke'oke'o* or Hawaiian coot (*Fulica alai*) (Figure 12). 'Aimakapā Fishpond is listed as a Core Wetland by the U.S. Fish & Wildlife Service in their Recovery Plan for Hawaiian Waterbirds (2011); the wetlands are maintained by subterranean sources of fresh groundwater. Avian botulism is the most prevalent disease affecting waterbirds. In 1994, an avian botulism outbreak at 'Aimakapā Fishpond decimated the endangered Hawaiian coot population in the pond; changes in physical and biotic factors, including salinity and

reduced freshwater influx, were identified as potential contributing factors (Morin 1996; Morin 1998). Saltwater intrusion and reduced freshwater discharge may adversely affect the food availability and integrity of coastal wetland habitat for Hawaiian waterbirds, and ultimately the long-term recovery of these species (U.S. Fish & Wildlife Service 2011).

The fishponds, anchialine resources, wetlands, tidepools, and coral reef along the Kona Coast depend upon fresh groundwater discharge to maintain their current salinity, temperature, nutrient concentration and residence time (e.g., Johnson et al. 2008; Knee et al. 2008; Beets et al. 2010; Grossman et al. 2010). The amount of groundwater that discharges to these coastal ecosystems in the Keauhou Aquifer System is a function of groundwater levels in the aquifer itself, and freshwater discharge will decrease with a decline in water levels. The health of these ecosystems are therefore susceptible to wells that capture groundwater that would otherwise discharge to coastal waters, yet cultural and environmental “uses” of groundwater discharge were not recognized in the County of Hawai‘i’s 2010 Water Use and Development Plan Update (WUDP) (Fukunaga & Associates, Inc. 2010), nor were they explicitly protected when the state determined the sustainable yield (SY) for the Keauhou Aquifer System.

Saltwater intrusion and species extinction are irreversible impacts. Without designation and active management of the freshwater resources of the Keauhou Aquifer System, future groundwater withdrawals will be located in areas that threaten the economic, cultural, and environmental utility of public trust resources. Proactive measures are essential for preventing otherwise unavoidable impacts to Hawai‘i’s vital coastal resources.

1.5 Protecting Public Trust Resources in Kaloko-Honokōhau

The Commission and the NPS have embraced *the precautionary principle* in their approach to managing the cultural and natural resources for which both agencies have an enduring responsibility. Given the abundant public trust resources in Kaloko-Honokōhau, their management is guided not only by the statutory mandate of the NPS, but also by NPS management policies that specify that the protection of natural resources prevail in decisions regarding activities that could potentially affect park resources.

1.51 Stewardship Responsibilities of the State

The Hawai‘i constitution, the Water Code, and the Hawai‘i Supreme Court have declared the protection of traditional and customary Native Hawaiian rights and practices, as well as the protection of fish and wildlife and the maintenance of ecological balance to be public trust purposes. Therefore, the Commission must consider the cumulative effects of its actions even when the established process, such as the issuance of well construction and pump installation permits, does not explicitly require an analysis of the effect of a proposed withdrawal on public trust resources.

Pursuant to the precautionary principle, when “*the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water,*” the Commission has a duty to designate a water management area [HRS §174C-41]. The designation of a water management area places the designated area under the Commission’s administrative control and allows the Commission to regulate “*withdrawals and diversions of ground and surface waters in the area to ensure reasonable-beneficial use of the water resources in the public interest*” [HRS §174C-41]. No person shall make any withdrawal of water in a designated water management area without first obtaining a water use permit from the Commission [HRS §174C-48]. A water management area therefore establishes the additional regulatory framework within which the Commission can take actions to effectively manage those resources entrusted to its care by the constitution and the Water Code.

In the absence of such designation, the Commission is powerless to protect the public interest in the state’s water resources. In the face of reasonably foreseeable threats to public trust resources, the lack of designation, coupled with the absence of effective and enforceable

management strategies, gravely undermines the ability of the Commission to faithfully discharge its duty as custodian of Hawai‘i’s water resources.

The absolute certainty of danger to the water resources of an area is not a prerequisite for designation. For in keeping with the intent of the precautionary principle, the Water Code only requires that the subject area’s water resources “*may be threatened*” by existing or proposed withdrawals or diversions of water. The Commission, in its landmark 1997 decision in the Waiāhole Ditch Combined Contested Case Hearing recognized that, as trustee of the state’s water resources, its duty to protect those resources required it when faced with “*scientific evidence [that] is preliminary and not yet conclusive regarding the management of fresh water resources which are part of the public trust*” to adopt “*precautionary principles*” to protect those resources. Conclusions of Law at 7. The Court endorsed the Commission’s adoption of the precautionary principle as a guidepost in the exercise of its statutorily-defined duties, noting that “*at minimum, the absence of firm scientific proof should not tie the Commission’s hands in adopting reasonable measures designed to further the public interest.*” Waiāhole, 9 P.3d at 467; reaffirmed In re Kukui (Molokai), Inc., 174 P.3d at 320, at 338 (2007).

The Court has also observed that the precautionary principle “*simply restates the Commission’s duty under the constitution and Code.*” Waiāhole, 9 P.3d at 467. As observed by former Commissioner Lawrence Miike in the recent decision regarding the adoption of amended instream flows for four streams on Maui, the Court’s approval of the Commission’s adoption of the precautionary principle converted what was a prudent agency policy into a legal mandate of the first order (Case Hearing CCH-MA06-01, p. 1 of dissenting opinion).

Furthermore, the statutory criteria set forth in the Water Code and its administrative rules as mandatory considerations for the designation of water management areas cannot be deemed as exclusive, for none of the criteria explicitly seek to safeguard traditional and customary Native Hawaiian rights and practices. For instance, the Commission has previously determined that a reduction in groundwater discharge to nearshore resources, such as *limu* – the gathering of which is recognized as a protected Native Hawaiian practice – may adversely impact the growth and availability of these resources (Contested Case Hearing CCH-MO97-1, Finding of Fact 144). The criteria for designation set forth in the Water Code [HRS §174C-44] completely ignores this

protected public trust purpose. Such an omission can be explained by recognizing that explicit listing of public trust purposes as criteria for designation would be superfluous as overarching constitutional and statutory provisions require their consideration by the Commission when contemplating the designation of water management areas.

Clearly, such considerations must be in the forefront whenever the Commission, either in response to a recommendation by the chairperson or in response to a petition, deliberates a possible designation, because the Commission is charged with taking “*the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decision-making process.*” Waiāhole, 9 P.3d at 456.

The Commission has in fact boldly advanced this initiative when in 1995 it denied a stream construction permit for the proposed Makaleha Stream Project on Kaua‘i. The denial was based upon the adverse effects of the proposed diversion on the Makaleha Springs and the associated endangered species, even though these public trust resources are not explicitly stated in the applicable statute – HRS §174C-93.

The initiative in considering, protecting, and advancing public rights in public trust resources can be taken by the chairperson of the Commission, who as head of the Board of Land and Natural Resources has public trust obligations that extend beyond the waters of the state to encompass all of the state’s natural resources. The importance of the chairperson’s obligation to safeguard the state water-resources trust is highlighted by the Code’s express authorization “*to make recommendations when it is desirable or necessary to designate an area and there is factual data for a decision by the commission*” (emphasis supplied) [HRS §174C-41(b)]. The statutory directive that permits the chairperson to recommend designation of a water management area when it is not obviously necessary, yet desirable from a water-resources management standpoint is clearly a nod by the legislature to the importance of the precautionary principle in protecting and preserving the state water-resources trust. Thus, when there is factual data available that, while not conclusory, is suggestive that public trust resources are threatened by current and reasonably foreseeable water uses, the chairperson is obliged by the constitution and the Water Code to recommend to the Commission, either on his own accord or in response to a petition, that a water management area be designated.

1.52 Stewardship Responsibilities of the National Park Service

As mandated by Congress, the NPS administers Kaloko-Honokōhau National Historical Park pursuant to the laws, regulations, and policies applicable to units of the National Park System. The fundamental law for national parks is the Organic Act, which requires the NPS “*to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations*” [16 U.S.C. §1]. In addition, the Park is managed under the provisions in the General Management Plan (NPS 1994) and the 1973 Endangered Species Act.

The Park’s General Management Plan was adopted in 1994 after almost two years of preparation including extensive public testimony regarding the future management, development, and use of the Park. The General Management Plan sets out the policies and actions to perpetuate the traditional use of Kaloko-Honokōhau’s cultural sites and features, to provide for cultural and natural resource protection, restoration, and management based on sound scientific data, and to provide quality visitor experience and education.

The NPS also applies the precautionary principle as recognized in Hawaiian case law by virtue of the following directive that is contained in the official Management Policies of the NPS: “*in cases of uncertainty as to the impacts of activities on park natural resources, the protection of natural resources will predominate. The Service will reduce such uncertainty by facilitating and building a science based understanding of park resources and the nature and extent of the impacts involved*” (NPS 2006).

The NPS is committed to advancing scientific and cultural understanding of how Kaloko-Honokōhau’s ecosystems function to inform resource management strategies. Since 1995, the NPS has obligated over \$800,000 to develop groundwater models to better understand effects of groundwater withdrawals on water resources in the Park, to ecological studies to better understand the role of groundwater discharge in providing suitable habitat for a variety of culturally and ecologically important species, and to geochemical studies to better understand freshwater flow paths in Kaloko-Honokōhau.

The NPS also seeks to collaborate with stakeholders to preserve public trust resources. Since 2005, the NPS has provided public comment on permit applications for 14 new wells in the Keauhou Aquifer System, provided public comment on the 2008 Water Resource Protection Plan (WRPP) and the 2010 Hawai‘i County WUDP, commented on 6 environmental assessments for infrastructure improvements at existing higher-elevation wells, commented on 6 environmental disclosure documents for new residential and commercial developments surrounding the Park, held 4 working group meetings with stakeholders, and participated in 9 meetings of the Kona Water Roundtable. Yet, these efforts are not enough – they have not resulted in actions that will preserve and protect groundwater-dependent cultural and natural resources from the adverse effects of groundwater withdrawals.

The Hawai‘i County General Plan Land Use Pattern Allocation Guide, Hawai‘i County Zoning, and the 2008 Kona Community Development Plan all indicate that Kaloko-Honokōhau National Historical Park will become a *kīpuka* – surrounded by urban development (Figure 13). With great foresight, the authors of the Spirit Report recognized the need for “*the establishment of a watershed management area based on specific water management criteria*” to preserve the integrity of Kaloko-Honokōhau’s water resources (Honokōhau Study Advisory Commission 1974). By taking precautionary action at this time, we can continue to work together to ensure that development occurs in a manner that is consistent with the spirit of Kaloko-Honokōhau.

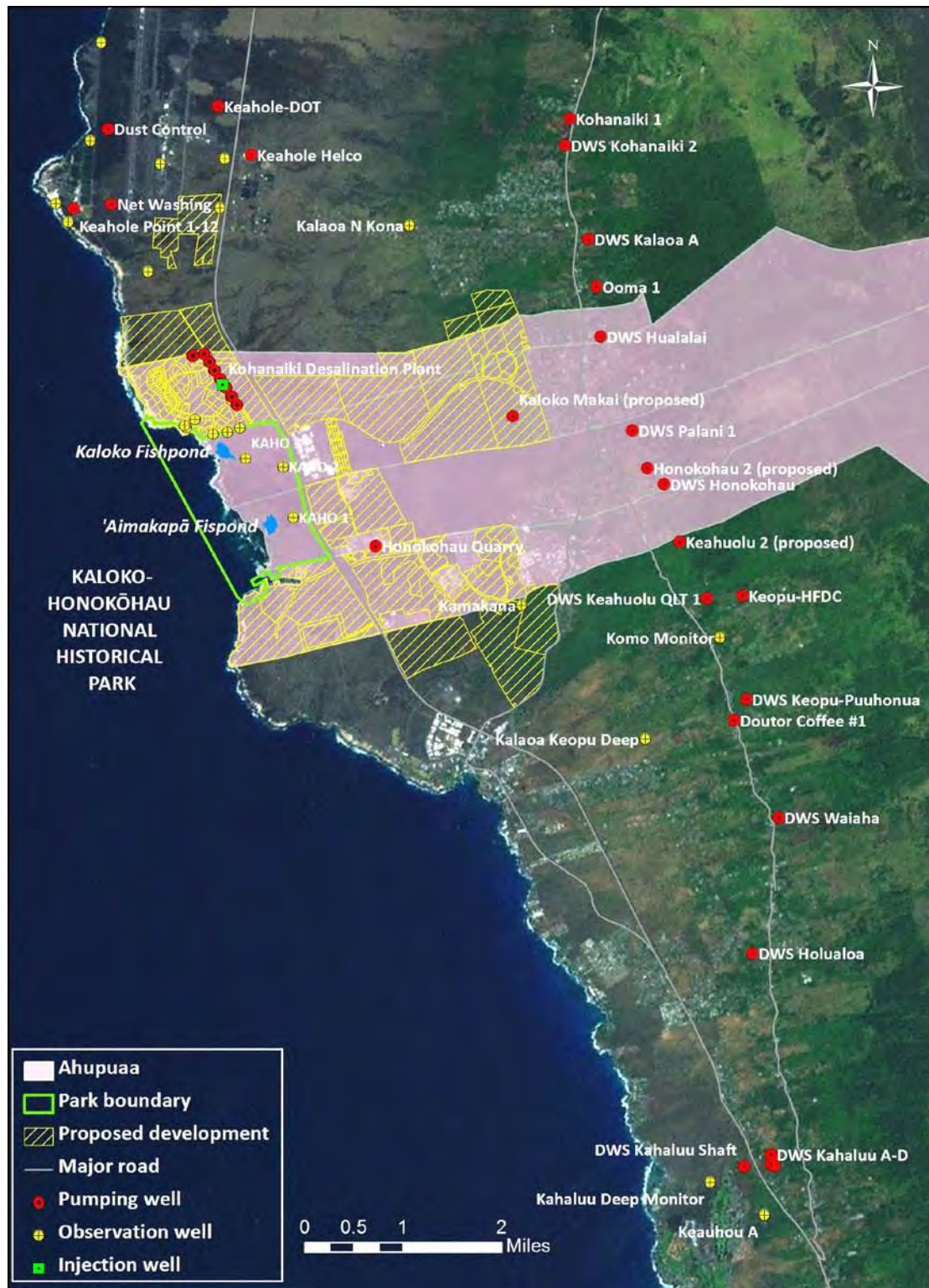


Figure 13. Existing and proposed wells and proposed development in the vicinity of Kaloko-Honokōhau National Historical Park. The white arrow indicates the only permitted potable water supply wells in the Keauhou Aquifer System when the Park was established in 1978.

2. Statutory Criteria for a Water Management Area

The following addresses six of the eight statutory criteria for designating a water management area for groundwater.

2.1 Sustainable Yield [HAR §13-171-7(1)]:

Whether an increase in water use or authorized planned use may cause the maximum rate of withdrawal from the ground water source to reach ninety per cent of the sustainable yield of the proposed water management area.

This criterion questions whether future water demands are sustainable. We address the development of the state-determined sustainable yield (SY), reported water use, and future water demand for the Keauhou Aquifer System. However, increasing groundwater withdrawals are only one of the complex environmental changes confronting Hawai‘i today. Truly sustainable practices with regard to water use involve choices, decisions, actions and ethics that will best achieve ecological and biological integrity and preserve human cultures, as well as protect the utility and quality of the groundwater source (NPS 2006). We therefore also describe why limiting withdrawals to the SY – or waiting for withdrawals to reach 90% of the SY – does not ensure the sustainability of groundwater-dependent cultural and natural resources for future generations.

2.11 Sustainable Yield for the Keauhou Aquifer System

The Water Code defines SY as “*the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the Commission*” [HRS §174C-3]. In 1990, the Commission set the SY for the Keauhou Aquifer System at 38 million gallons per day (Mgal/d) based upon the results of the Robust Analytical Model (RAM) (Mink 1981) and incomplete groundwater data (George A.L. Yuen and Associates, Inc. 1990).

The RAM methodology for determining the SY assumes there is a sharp interface between fresh water and underlying salt water, that pumping is uniformly distributed and optimally located, and “*that all groundwater is pumped from basal aquifers seaward of the high level zone*” (George A.L. Yuen and Associates, Inc. 1990). In reality, the Keauhou Aquifer System includes higher elevation groundwater as well as basal groundwater with a relatively

thick transition zone, and wells are not equally distributed. The simplifying assumptions and the lack of site-specific groundwater data led the Commission to caution that estimates of the SY “*should be used as a guide in planning rather than an inflexible constraint*” (George A.L. Yuen and Associates, Inc. 1990).

The following equation, which is the basis for RAM, was used to calculate the SY for the Keauhou Aquifer System (e.g., George A.L. Yuen and Associates, Inc. 1990):

$$\text{Sustainable Yield} = \text{Groundwater recharge} \times \left\{ 1 - \left(\frac{\text{Equilibrium head}}{\text{Initial head}} \right)^2 \right\}$$

The values for the parameters in the above equation were chosen to protect a theoretical well with a pre-development water level (initial head) between 4 and 10 ft above sea level from saltwater intrusion (George A.L. Yuen and Associates, Inc. 1990). For reference, groundwater levels in the Park’s observation wells average less than two feet above mean sea level (e.g., Oki et al. 1999). These data indicate that the Park is situated between this theoretical well and the ocean.

To limit saltwater intrusion and preserve the quality of water at this theoretical well, the Commission chose to limit water-level declines due to pumping to 25% of the initial head; the ratio of the post-development water level (equilibrium head) to initial head for the Keauhou Aquifer System is therefore 0.75 or 75% (George A.L. Yuen and Associates, Inc. 1990; Wilson Okamoto Corporation 2008b). This ratio represents the “impact” that the state is willing to accept to maximize consumptive use of groundwater in the aquifer system.

The 1990 WRPP set the SY for the Keauhou Aquifer System to 38 Mgal/d based upon this ratio and an estimated groundwater recharge of 87 Mgal/d (11 inches/year). The aquifer responds to withdrawals by reducing the rate of natural discharge; theoretically, limiting pumping to 38 Mgal/d allows a 44% reduction in groundwater discharge everywhere along the coastline of the Keauhou Aquifer System.

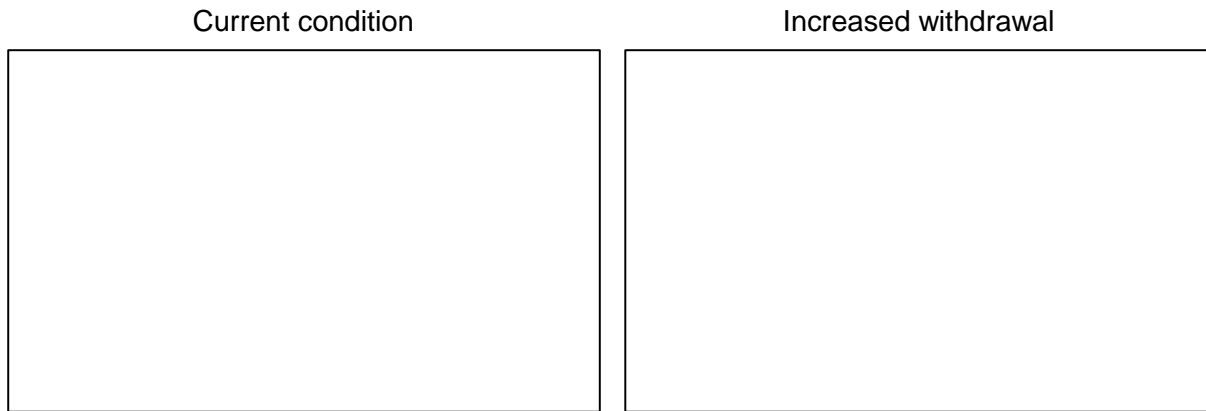


Figure 14. Hydrologic effects of groundwater withdrawals on non-drinking water resources (courtesy of S. Anthony, USGS, 2012). Water levels decline and the saltwater interface rises and moves inland.

While limiting pumping to 38 Mgal/d may protect the water quality at an inland well, it does not prevent saltwater intrusion at the coastline (Figure 14). The RAM methodology therefore leaves some areas of the aquifer system more vulnerable to saltwater intrusion (e.g., Meyer & Souza 1995; Oki & Meyer 2001). Kaloko-Honokōhau National Historical Park is located in a vulnerable area due to its proximity to the coast.

Aside from the specific value of the SY, it is essential to recognize that the RAM methodology for determining the SY does not explicitly consider the impacts of reducing groundwater discharge by 44% on traditional and customary Native Hawaiian rights and practices and other public trust resources along the Kona Coast.

Consequently, the impacts of reducing freshwater discharge to coastal areas through groundwater pumping, and the fact that it has not been factored into estimates of SY, was identified by the Commission as an emerging concern in the 2008 WRPP (Wilson Okamoto Corporation 2008b).

2.12 Reported Water Use and Future Water Demand in the Keauhou Aquifer System

The potential 24-hour production capacity of currently permitted pumping wells in the Keauhou Aquifer System accounts for 100% of the SY (Appendix A). Actual water use is not known because pumpage is not being reported for over two-thirds of the permitted production

wells in the aquifer system (State of Hawai‘i 2013). Reported water use in the Keauhou Aquifer System is only about 13 Mgal/d or 34% of the SY.

Because reported water use is only 34% of the SY, the Commission will continue to permit new withdrawals from the Keauhou Aquifer System. Such additional withdrawals will be necessary to support large-scale projects for up to 16,000 homes that are now planned or being built in North Kona ([Honolulu Star Advertiser, October 17, 2010, p. D1 and D8](#)). Water demand for these and other proposed developments in just the area of Kaloko-Honokōhau may be as high as 19 Mgal/d (Figure 1; Appendix B). All of the proposed developments shown on Figure 1 and listed in Appendix B are in areas designated for urban development or urban expansion in the Hawai‘i County General Land Use Pattern Allocation Guide and are within the Kona Urban Area defined by the 2008 Kona Community Development Plan.

Reported water use in the aquifer system (13 Mgal/d) and future water demand in the area of the Park (19 Mgal/d) combined are 32 Mgal/d. Future water demand throughout the Keauhou Aquifer System is likely higher because this estimate does not include unreported water use, future demand in other *ahupua‘a* in the aquifer system, or the full amount of water to be reserved for Department of Hawaiian Home Lands to carry out its federal mandate to enable Hawaiians to use the lands that were set aside for them in the Keauhou Aquifer System.

Future water demand throughout the aquifer system was estimated by the County of Hawai‘i Department of Water Supply in the 2010 WUDP. The 2010 WUDP includes estimates of long-term water demands based upon the Hawai‘i County General Plan Land Use Pattern Allocation Guide and Hawai‘i County Zoning. According to the 2010 WUDP, land-use based projections of water demand exceed the SY of the Keauhou Aquifer System by over 600% (Fukunaga & Associates, Inc. 2010) (Figure 15). This situation has been characterized by the Center for Island Climate Adaptation and Policy as an obvious “disconnect between Hawai‘i County’s land use vision and its water reality” (Wallsgrrove & Penn 2012).

Furthermore, despite the directive of the Hawai‘i County Charter to conserve and protect public trust resources, the County’s water demand projections do not consider the supply of water necessary to protect traditional and customary Native Hawaiian rights and practices, ecosystems, or endangered species that depend upon fresh groundwater discharge. The

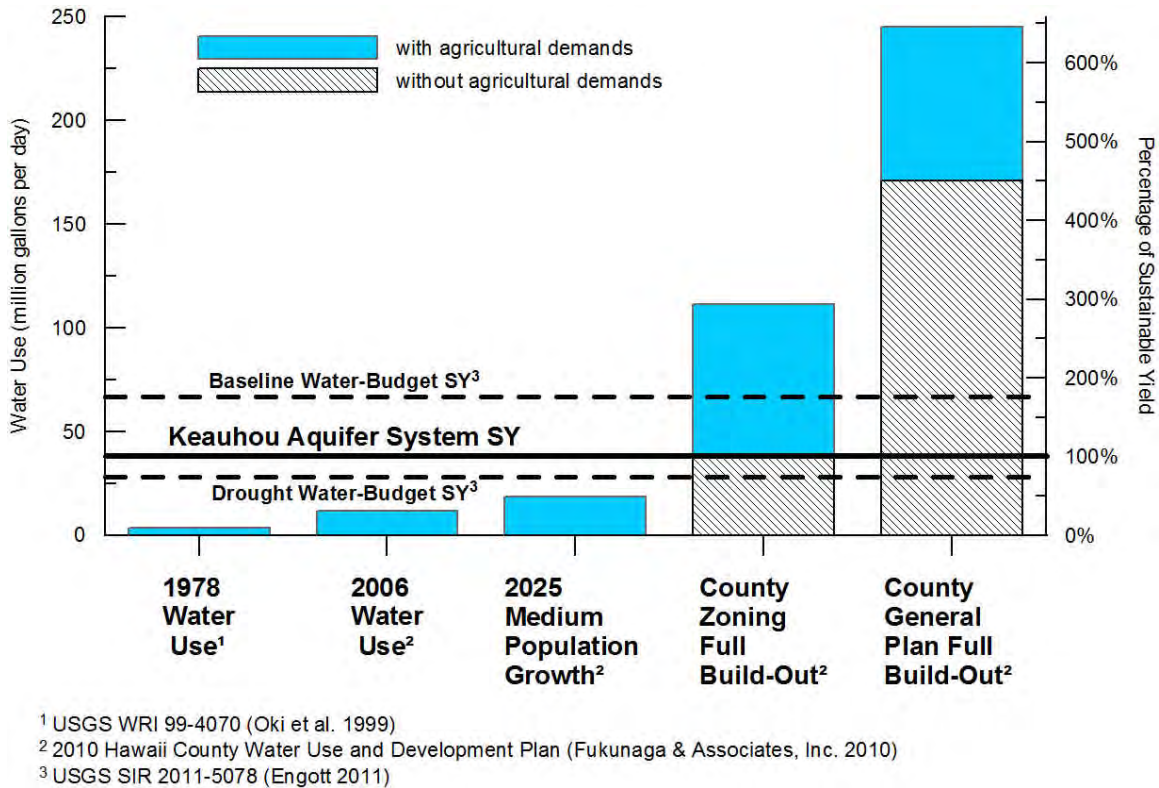


Figure 15. Water use and water-demand projections for the Keauhou Aquifer System. Engott (2011) used new estimates of groundwater recharge to recalculate the SY based upon baseline and drought conditions.

Commission’s well construction and pump installation permitting process likewise ignores these trust resources is insufficient to protect non-consumptive public trust uses of water under the scenario of increasing and potentially unsustainable water demand.

Given these facts, delaying the active management of groundwater until water use in the Keauhou Aquifer System is 90% of the SY (34 Mgal/d) promotes an imprudent “*crisis-oriented*” approach to water management (Chang 1987; State of Hawai‘i 1994). However, by identifying non-consumptive public trust uses of groundwater now, and protecting them in a designated water management area, the Commission can provide applicants for water-use permits with a clearer understanding of the amount of water available for future allocation. Thus, the Commission through careful and well-informed management of freshwater resources can create greater economic certainty in the Keauhou Aquifer System.

2.13 Declining Rainfall and Rising Sea Level

The sustainability of the Keauhou Aquifer System's freshwater supplies are also threatened by drought and climate change (State of Hawai'i 2011; Wallsgrove & Penn 2012). Rainfall has been declining over the past century in Hawai'i (Giambelluca et al. 2011) (Figure 16). The nearshore areas and coral reefs are most vulnerable to warmer, drier conditions (Keener et al. 2012).

The Commission's study of 1991 to 2002 water-level data indicated a slow decline of water levels in some of North Kona's higher elevation wells and an apparent relationship between water-level decline and climatic conditions (Bauer 2003; Wilson Okamoto Corporation 2008b). The 2011 USGS Water-Budget and Groundwater Recharge study indicates that the Drought Water-Budget Condition would lower the SY for the Keauhou Aquifer System to 28 Mgal/d (Engott 2011) (Figure 15).

In addition, sea level in Hawai'i has risen as much as 1 foot over the past century (NOAA 2013) (Figure 16). Rising sea level is expected to exacerbate saltwater intrusion into coastal groundwater and wells. Although sparse, salinity data for pools and ponds in Kaloko-Honokōhau may reflect the changing environmental conditions described above (Figure 16).

Over the past half-century, pumpage in the Keauhou Aquifer System has doubled while rainfall steadily declined and sea level rose (Figure 16). It is important to understand that the RAM methodology for determining the SY did not consider these trends in rainfall and sea level. In 2012, the State of Hawai'i passed Senate Bill 2745 encouraging state and county agencies to integrate climate adaptation policy into their long-term planning, and to consider traditional Native Hawaiian knowledge and practices in planning for the impacts of climate change for the benefit of future generations. A designated water management area is one forward-looking adaptive tool that the Commission can use to make a critical difference in Hawai'i's water future and adaptation to declining rainfall and rising sea level (Wallsgrove & Penn 2012).

Opinions on whether this criterion is met in the Keauhou Aquifer System will likely vary. Stakeholders will disagree over the definition of "authorized planned use" and whether the SY should be raised or lowered. These disagreements are, however, a distraction from the greater concern – that the use of a sustainable yield that does not recognize the potential adverse

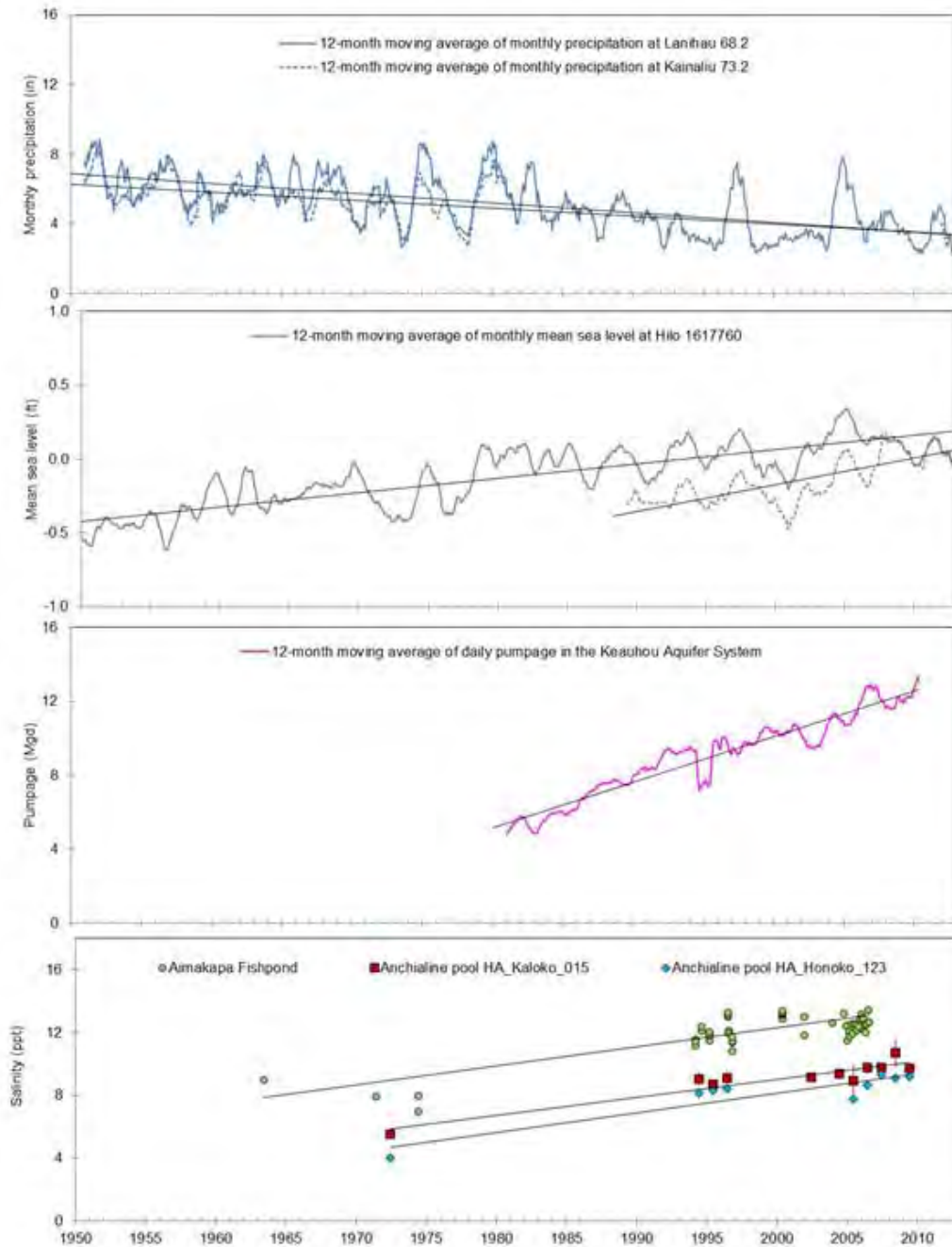


Figure 16. Twelve-month moving average and linear fits of monthly rainfall at two rain gauges in the Keauhou Aquifer System (<http://www.wrcc.dri.edu>), monthly mean sea level at two tide gauges in Hawaii (<http://tidesandcurrents.noaa.gov/index.shtml>), and reported average daily pumpage in the Keauhou Aquifer System (<http://hi.water.usgs.gov/recent/westhawaii/pumpage.html>); and average salinity and standard deviation with linear fits in two anchialine pools in the Park (Maciolek & Brock 1974; Brock & Kam 1997; NPS 2013) and salinity in Aimakapa Fishpond with linear fit (Sparks 1963; Kikuchi & Belshe 1971; Maciolek & Brock 1974; Brock & Kam 1997; Marine Research Consultants 2000; TNWRE 2002; Bienfang 2007; Knee et al. 2008).

effects of saltwater intrusion on coastal public trust resources and does not take into account changing environmental conditions, is not truly “sustainable” in the broader context of the term. The Commission has a duty to consider the cumulative and long-term effects of maximizing consumptive use of freshwater resources on public trust resources. A water management area provides the Commission with tools to maintain waters in their natural state and to determine what is reasonable, beneficial, and sustainable with regard to water use.

2.2 Saltwater Intrusion [HAR §13-171-7(2) & HAR §13-171-7(3)]:

That the rates, times, spatial patterns, or depths of existing withdrawals of ground water are endangering the stability or optimum development of the ground water body due to upconing or encroachment of salt water; and

That the chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses.

The spatial pattern of existing withdrawals is critical because pumping wells lower water levels and reduce the rate of natural discharge within their capture zones. The RAM methodology, however, does not account for the spatial pattern of wells – it assumes that wells are uniformly distributed and optimally located (e.g., Oki & Meyer 2001). In truth, “*positioning of development, that is, the location, depth, and pumping rates of wells is a choice made by those who manage development of a given aquifer*” (Meyer & Souza 1995).

The following information addresses how the spatial pattern of existing withdrawals has evolved in the Keauhou Aquifer System as a consequence of the encroachment of salt water in basal wells supplying the North Kona Water System, and why this evolution threatens to place a disproportionate stress on basal groundwater in Kaloko-Honokōhau.

By 1976, the Kahalu‘u Shaft (3557-05) and Kahalu‘u Wells A, B, C, and D (3557-01 to -04) were completed in the basal groundwater system of the Keauhou Aquifer; the wellfield is located about seven miles south of Kaloko-Honokōhau (Figure 13). Kahalu‘u Shaft is an inclined shaft connected to tunnels that skim the top of the basal lens and provide much of the drinking water for the North Kona System. Chloride concentrations at the Kahalu‘u wellfield have increased with pumpage (Figure 17) and the top of the transition zone (5000 microsiemens/centimeter or about 10% seawater) at the Kahalu‘u deep monitoring well has risen over 10 feet since 2000 (Figure 18).

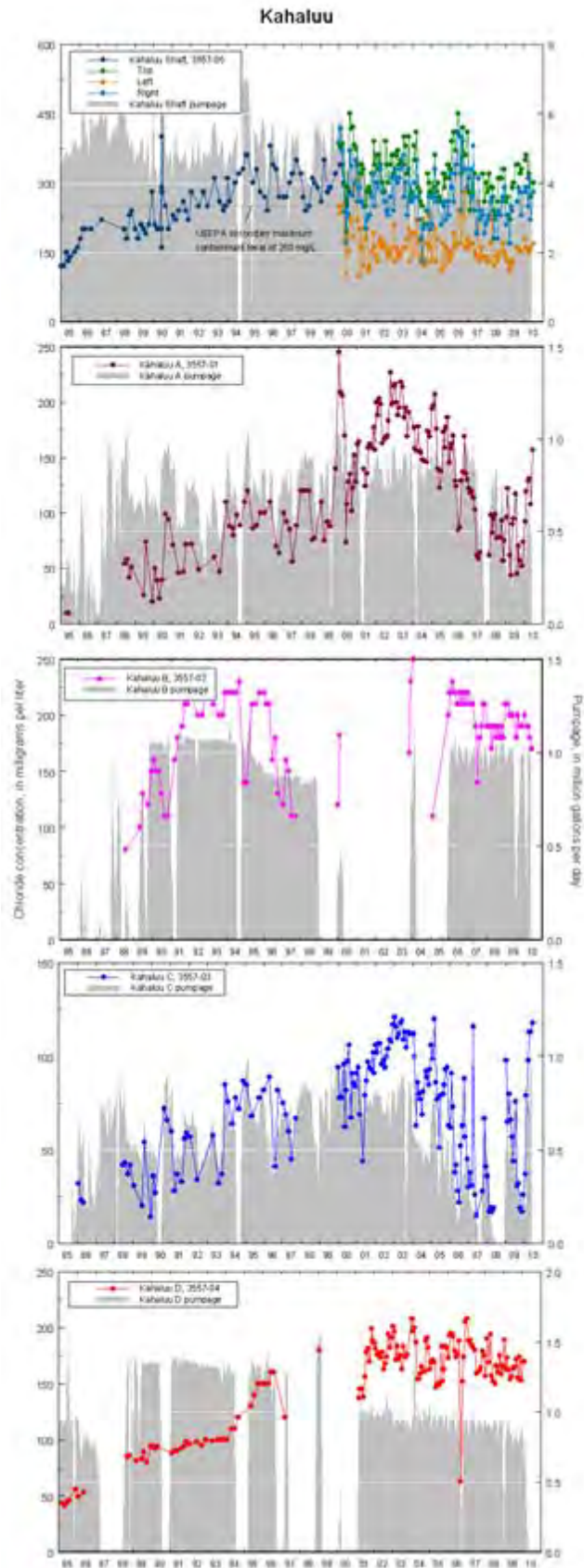


Figure 17. Chloride concentrations and monthly pumpage for the Kahaluu well field, 1985 to 2010. Please visit the following website for higher quality images of these charts:
<http://hi.water.usgs.gov/recent/westhawaii/chloride.html>.

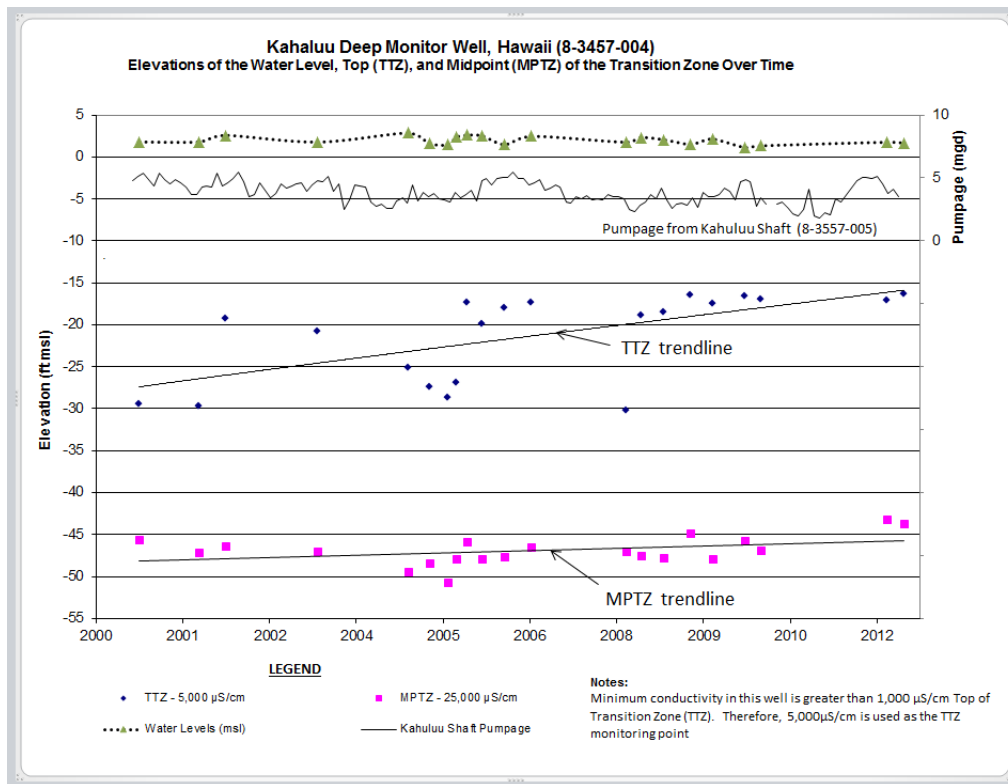


Figure 18. Elevations of the midpoint and top of the transition zone at Kahalu‘u Deep Monitor Well (3457-04) from 2000 to 2012 (*from* State of Hawaii 2013).

In 2004, the County of Hawai‘i Department of Water Supply notified the public that water from the Kahalu‘u Shaft and Wells and the Hōlualoa Well (3657-01) showed elevated levels of sodium and chloride. In 2011, sodium levels in drinking water from the Kahalu‘u wellfield were as high as 185 milligrams per liter (mg/L) (County of Hawai‘i 2011). As of January 2013, chloride levels in Kahalu‘u wellfield remained as high as 410 mg/L (County of Hawai‘i 2013). For reference, the U.S. Environmental Protection Agency recommends that sodium and chloride levels in drinking water not exceed 60 mg/L and 250 mg/L, respectively.

Saltwater intrusion in Kahalu‘u wellfield led to the development of higher-elevation water sources to improve the overall quality and taste of drinking water in North Kona (Wilson Okamoto Corp. 2008a; Geometrician Associates and Akinaka & Associates 2009; County of Hawai‘i 2011). By 1994, the Department of Water Supply had begun pumping high-level groundwater for the North Kona Water System. All seven of the higher-elevation wells operated by the Department [Keopu Pu‘uhonua (3957-01), Waiaha (3857-04), Kalaoa (4358-01), Hualalai

(4258-03), Honokōhau (4158-02), Keahuolu QLT No. 1 (4057-01), and Holualoa (3657-01)] are located closer to Kaloko-Honokōhau than the Kahalu‘u wellfield (Figure 13).

Thus, saltwater intrusion in the Kahalu‘u Shaft and Wells has resulted in higher rates of groundwater withdrawals within the four *ahupua‘a* of the Park. This increase in the number of pumping wells located in the vicinity of Kaloko-Honokōhau threatens public trust resources because groundwater withdrawals from wells directly upgradient of the Park will have a greater effect on freshwater discharge to coastal ecosystems within the Park (e.g., Oki et al. 1999).

The impact of the higher-elevation wells on water quality is not well understood in part because there are no wells between the Park and higher-elevation pumping wells dedicated to monitoring salinity or the movement of the transition zone. In the November 16, 2011, briefing to the Commission, Commission staff noted that only two wells were being monitored by the Commission in the Keauhou Aquifer System: Keauhou A (3457-02) & Kahalu‘u Deep (3457-04). These observation wells are located over seven miles south of Kaloko-Honokōhau (Figure 13).

By 2007, competition among large landowners and developers for higher-elevation groundwater renewed interest in developing basal groundwater. Five desalination facilities and a high-capacity well for aquaculture have been proposed in the coastal groundwater system within 2.5 miles of the Park (Appendix D). Equally alarming is that the 2010 WUDP recommended desalinating brackish groundwater upgradient from the Park as an alternative to meet growing water demand (Fukunaga & Associates, Inc. 2010). Large-scale desalination now appears imminent – the 2013 Kaloko Makai Draft EIS includes a proposal to withdrawal about 11 Mgal/d of brackish (30 ppt) groundwater directly upgradient of the Park and to dispose of the hypersaline (50 ppt) concentrate on-site (Wilson Okamoto Corporation and Ho‘okuleana LLC 2013).

In a November 21, 2011 letter to Chairman Ailā, Park Superintendent Kathleen Billings expressed concerns regarding the potential effects of the desalination of brackish groundwater near the Park. The Shores at Kohanaiki began operating their production wells, desalination plant, and injection well adjacent to the Park in November 2008 (Figure 13). This system is permitted to withdraw up to 3 Mgal/d of basal groundwater and 0.3 Mgal/d of higher elevation

groundwater to irrigate a golf course and common areas, and to re-inject up to 0.7 Mgal/d of by-product back into basal groundwater (Waimea Water Services, Inc. 2007). The Commission requires The Shores at Kohanaiki to measure chlorides on a monthly basis in eight observation wells within the project area and the State Department of Health requires quarterly reporting of standard water quality parameters for the Kohanaiki injection well (UH-2594). The injectant has an average chloride concentration of about 11,000 mg/L (about 60% seawater) and relatively high levels of nitrate nitrogen (Figure 19).

Monitoring data presented at the Kona Water Roundtable indicates that The Shores at Kohanaiki's activities are affecting groundwater on the boundary of the Park (Figure 19). At the September 2010 Kona Water Roundtable, the USGS reported that in July 2009, concentrations of nitrate-nitrogen in shallow groundwater from MW401 (4161-11) were over ten times higher than concentrations in the NPS headquarters tap water and shallow monitor wells; the cause of elevated nitrogen in MW401 was ascribed to "turf grow-in" at The Shores at Kohanaiki golf course (C. Hunt, USGS, Sept. 2010 Kona Water Roundtable). Information presented at the July 2012 Kona Water Roundtable indicated that declining chlorides in MW400 (4162-04) was due to an open irrigation valve on the golf course (S. Bowles, Waimea Water Services, July 2012 Kona Water Roundtable) (Figure 19).

Although desalination offers the potential to increase the supply of fresh water on the arid Kona Coast, decision-makers must take a careful look at the advantages and disadvantages of desalination when evaluating proposals for new facilities. The State of Hawai'i has already recognized "*the superior economic value*" of protecting existing high-quality groundwater as opposed to compensating for its degradation with expensive desalination plants (State of Hawai'i 2011).

Existing and planned withdrawals of brackish groundwater, as well as the disposal of saline water, endangers the stability of the coastal groundwater system. A water management area will provide the Commission with a framework to explicitly consider the spatial distribution of wells and the potential adverse effects of pumping basal groundwater and disposing saline concentrate on traditional and customary Native Hawaiian rights and practices and other public trust resources.

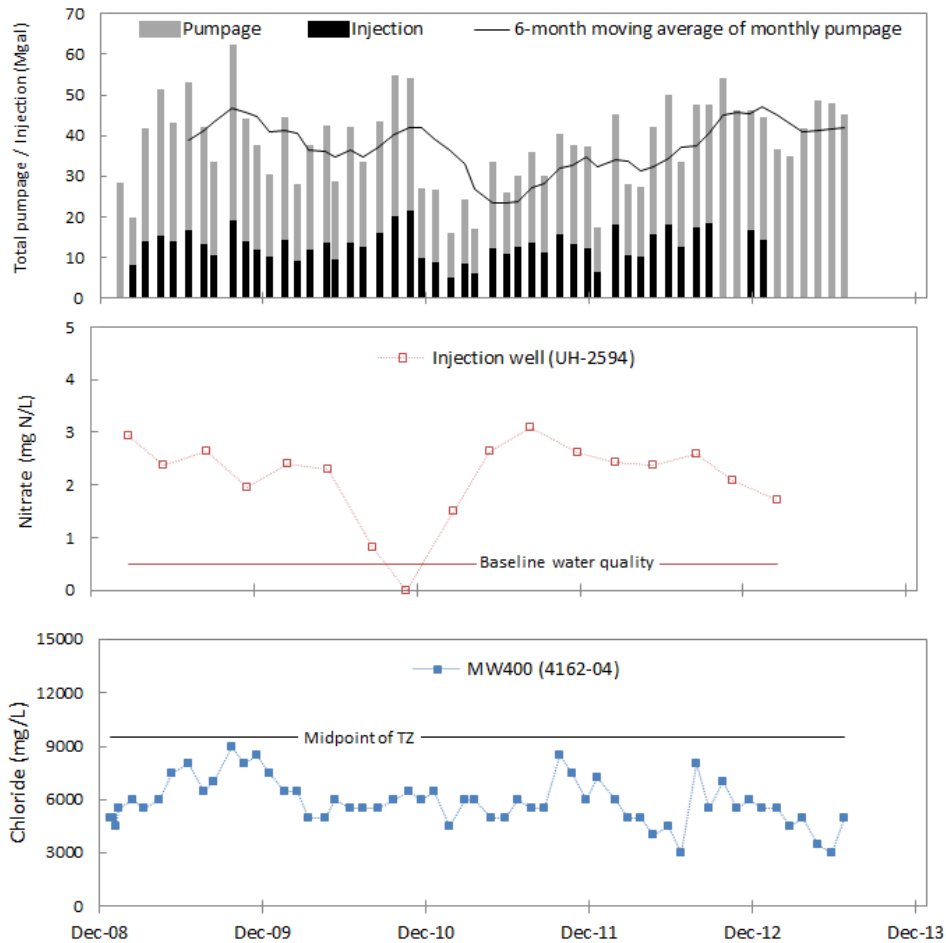


Figure 19. Monitoring data reported for The Shores at Kohanaiki wellfield: total monthly pumpage and injection, quarterly nitrate concentrations for the injection well, and monthly chloride concentrations for observation well MW400 located on the Kaloko-Honokōhau boundary, from December 2008 until June 2013. Decreasing chloride levels in MW400 in early 2012 were attributed to an open valve in the golf course irrigation system (S. Bowles, Waimea Water Services, July 2012 Kona Water Roundtable). Baseline receiving formation water quality was reported in Burns & Bowles (2008).

2.3 Waste [HAR §13-171-7(4)]:

Whether excessive preventable waste of water is occurring.

According to the County of Hawai‘i 2010 WUDP, water consumption in North Kona is 1000 gallons per day per single-family residential unit – 2.5 times higher than other areas of the county (Fukunaga & Associates, Inc. 2010). A permitting process that requires well owners or operators to show that such a rate is a reasonable-beneficial use of limited freshwater resources is needed to prevent waste and to conserve this vital resource.

2.4 Disputes [HAR §13-171-7(6)]:

Serious disputes respecting the use of ground water resources are occurring.

Since 2005, the NPS has commented on at least 26 issues with respect to the use of groundwater in the vicinity of Kaloko-Honokōhau (Appendix E). Responses to NPS comments suggest that serious water disputes in the Keauhou Aquifer System are occurring and cannot be resolved through working groups and roundtables, or through the environmental review and land-use planning and permitting processes.

The following summarizes three areas of serious dispute regarding the use of groundwater within the Keauhou Aquifer System: (1) cumulative impact assessments, (2) the significance of saltwater intrusion on ecosystems, and (3) the source(s) of recharge to the coastal groundwater system. In each case, we ask that the Commission consider its constitutional and statutory obligations in safeguarding the state’s water resources and the role of the precautionary principle in resolving these disputes.

2.41 Cumulative Impact Assessments

On May 30, 2007, Park Superintendent Geraldine Bell met with staff of the Commission and the USGS to discuss options for protecting water resources in Kaloko-Honokōhau from the cumulative effects of groundwater withdrawals. The issues discussed are described in more detail in the NPS’s follow-up letter to the deputy director of the Commission dated November 13, 2007. Commission staff suggested that the NPS try a “*working group*” approach to resolve disputes with water users. According to the 2008 WRPP, the Commission initiated this type of approach in the 1990’s to diffuse disputes in Kailua-Kona and to forestall the designation of the West Hawai‘i region as a water management area (Wilson Okamoto Corporation 2008b).

In 2008, the NPS held four working-group meetings with a diverse group of stakeholders. The stated purpose of the working group was to “*investigate opportunities to conserve and manage water resources for the protection of the cultural resources, ecosystems, and endangered species that depend upon groundwater and to provide for compatible human uses, as an alternative to state administrative control of groundwater withdrawals*” and to “*provide a forum for all stakeholders to share information and work toward mutually acceptable science-*

based water-management goals” (NPS letter dated Jan. 28, 2008). The dates and themes of the four meetings of the NPS groundwater working group were

- *February 27, 2008* – North Kona hydrology, goals, expectations
- *April 9, 2008* – Park visit, working group mission statement
- *July 23, 2008* – Goals, objectives, role in water management
- *November 3, 2008* – Monitoring, modeling

Stakeholder meetings revealed a significant obstacle to resolving disputes and managing groundwater for the protection of Park and public trust resources. Many stakeholders argued that any governmental management of groundwater withdrawals would constitute a “*taking*” of their private property rights for which they should be compensated.

At about the same time, the County of Hawai‘i Department of Water Supply formed the Kona Water Roundtable as an “*informal public forum to discuss scientific information on the status and use of water resources in Kona.*” NPS representatives attended the first organizational meeting of the Kona Water Roundtable and all eight subsequent public meetings. The dates and themes of the Kona Water Roundtable meetings were

- *February 21, 2008* – Organizational meeting
- *May 14, 2008* – Informational meeting
- *July 23, 2008* – Ecological significance of freshwater discharge in coastal areas
- *November 3, 2008* – Watersheds, recharge, geology, hydrology of Kona
- *July 22, 2009* – History, design, and use of injection wells
- *September 23, 2010* – Understanding our resource
- *March 29, 2012* – Water Use & Develop Plan Update, historic watershed stewardship, groundwater recharge, Kamakana deep well
- *July 11, 2012* – Keauhou Watershed, Rain Follows the Forest, deep monitor wells, waste water reuse, The Shores at Kohanaiki monitor wells
- *January 17, 2012* – History of Kaloko-Honokōhau, the importance of estuary habitat to native species, protecting water resources, water and law

The NPS also participated in the March 28, 2008, May 15, 2008, and August 2, 2011, meetings of a water professionals group convened by the Commission staff. Despite the beneficial exchange of information that these meetings provided, neither the NPS working-

group, the Kona Water Roundtable, nor the water professionals group has implemented a plan to analyze, monitor, and mitigate the cumulative effects of groundwater pumping in the Keauhou Aquifer System.

On June 14, 2010, Superintendent Billings and NPS staff met with Commission staff to inform them that the working group and roundtable, as well as NPS' efforts to address groundwater use on a case-by-case basis, had not been effective in producing cumulative impact assessments of groundwater development on cultural and natural resources in Kaloko-Honokōhau.

The cumulative effects of current and reasonably foreseeable future groundwater withdrawals from the Keauhou Aquifer System are therefore unknown. The NPS, in comments on environmental review documents, has therefore requested that public and private water developers consider the overall and cumulative effects of their proposed actions on the quality of the environment in their environmental disclosure documents, as required by HAR §11-200-12.

In most cases, the cumulative effects of increasing groundwater withdrawals were not addressed for new development projects or were deferred by the responsible entities to other agencies such as the Commission and the Department of Water Supply, or to the working groups and roundtables (e.g., Belt Collins Hawai'i Ltd. 2008; Yukie Ohashi Planning Consultant LLC 2008; Geometrician Associates LLC 2009; PBR Hawai'i & Associates, Inc. 2009). Although Findings of No Significant Impact were issued for these projects, the cumulative impacts of these projects on traditional and customary Native Hawaiian rights and practices and other public trust resources remain unquantified.

Some developers have attempted to quantify the direct and/or cumulative effects in response to NPS comments. One study for the proposed Kona Kai Ola project predicted that the direct effect of withdrawing 2.6 Mgal/d southeast of the Park would result in a 17% decline in groundwater flux through the Park (Oceanit 2007); this project did not move forward. The 2009 Final Environmental Assessment for Palani Well No. 1 (4158-03) (Geometrician Associates and Akinaka & Associates 2009) included the results of an analytical model developed to approximate the effects of groundwater use. The results of the model indicated that the cumulative impacts of pumping the Palani Well in combination with other high-level wells could

raise the salinity of groundwater within the Park by up to 80% over pre-development levels (TNWRE 2009). Despite the predicted significant adverse effects on the salinity of groundwater in Kaloko-Honokōhau, the Department of Water Supply issued a Finding of No Significant Impact for the Palani Well and the Commission approved the pump installation permit in 2011.

The Commission has an obligation to analyze the cumulative effects of issuing well construction and pump installation permits on public trust resources and to safeguard these resources from adverse impacts. The NPS has funded the USGS to develop a variable-density groundwater-flow model of the Keauhou, Kealahou, and Kaapuna Aquifer Systems, which will incorporate new information acquired since the 1999 USGS groundwater model (e.g., D. Oki, USGS, September 2010 Kona Water Roundtable; Engott 2011; D. Oki, USGS, September 19, 2012 meeting of the Commission). The model will evaluate the effects of decreased recharge and saline wastewater injection on coastal areas.

The model will be a useful tool for better understanding the potential response of the aquifer system to changing conditions, but a water management area is necessary for the model results to effectively inform management decisions regarding the location, depth and pumping rates of wells in the Keauhou Aquifer System. In designated water management areas, the Commission can require applicants for water use permits to assess direct and cumulative impacts of their proposed actions to ensure that public trust resources will not be harmed.

2.42 Significance of Saltwater Intrusion on Public Trust Resources

On March 20, 2012, Superintendent Billings and NPS staff met with the Commission staff to discuss the latest research on the potential impacts of groundwater withdrawals on culturally and environmentally important coastal ecosystems. On September 19, 2012, Superintendent Billings and NPS staff briefed the Commissioners on this topic. In general, there is some agreement among stakeholders that groundwater withdrawals from the Keauhou Aquifer System will reduce freshwater discharge to coastal areas, lowering water levels and increasing salinity. But there is uncertainty regarding the timing and magnitude of these impacts, and there are disputes regarding the severity of these impacts on traditional and customary Native Hawaiian rights and practices and other public trust resources along the Kona Coast.

Some water users and developers in the Keauhou Aquifer System assert that raising the salinity of groundwater discharging to anchialine pools, fishponds, and nearshore marine waters will not adversely affect these ecosystems because they are inhabited by species that have evolved to tolerate great variations in salinity (e.g., Wilson Okamoto Corporation 2008a; Geometrician Associates and Akinaka & Associates 2009; Wilson Okamoto Corporation 2009; Wilson Okamoto Corporation and Ho‘okuleana LLC 2011). For example, an environmental assessment for well infrastructure improvements in North Kona notes that although large changes in the quality of groundwater are to be expected with development, “*anchialine pond biota have evolved in an environment with high variability in nutrient and salinity concentrations so the biota are not sensitive to the changes*” (Wilson Okamoto Corporation 2008a).

Assertions that anchialine pool communities are not sensitive to changes in water quality are, however, in direct conflict with the results of controlled laboratory experiments on two rare Hawaiian anchialine pools species found in Kaloko-Honokōhau and elsewhere in the Keauhou Aquifer System. Laboratory studies on the orange-black damselfly (*Megalagrion xanthomelas*) and the Hawaiian anchialine pool shrimp *Metabetaeus lohena* determined that these two candidate species are sensitive to both temperature and salinity (Tango 2010; D. Foote, USGS, oral communication, Mar. 20, 2012 meeting with Commission staff).

Such factual data emphasizes the essential role of monitoring in managing for changing environmental conditions. The NPS has implemented an anchialine pool monitoring protocol to assess the status and trends over time in the abundance of anchialine pool fauna; the protocol includes the collection of water-quality data and these data are available online (NPS 2013). In 2007, the NPS began a program to monitor water levels and specific conductivity in the Park’s observation wells (Izuka et al. 2011). Data from July 2007 to January 2012 were reviewed and processed by the USGS and are available online (NPS 2012). During 2009-2010, the USGS took over the monitoring for the numerical groundwater modeling study and their data are also available online (USGS 2013). Data analysis and model results are expected to be published by the USGS in September 2014.

Although scientific research and monitoring data increase understanding of how coastal ecosystems function and respond to change, the significance of changes in water quality and quantity on the purposes and values of Kaloko-Honokōhau National Historical Park must be determined within the context of the 1916 Organic Act and the National Park's enabling legislation. The NPS relies on the highest quality scientific and scholarly processes to inform these determinations. In designated water management areas, the Commission can seek the best available information regarding the significance of changes in water quality and water quantity on public trust resources before approving new uses.

2.43 Source of Recharge to the Basal Groundwater System

An accurate conceptual model of the aquifer system is important because it is used by the Commission to issue well construction and pump installation permits and to guide monitoring programs. The generally accepted conceptual model of the Keauhou Aquifer System that has formed the basis for the Commission's management decisions thus far is described in reports such as the North Kona Water Master Plan (Fukunaga & Associates, Inc. 1995) and the USGS Water-Resources Investigations Report 99-4070 (Oki et al. 1999). According to this model, as much as 90% of the recharge to the basal groundwater system originates from the seaward flow of higher-elevation groundwater across an undefined low permeability geologic structure (Figure 20). Fresh groundwater not withdrawn by wells in the high water-level area is believed to flow down-gradient to the basal lens (Oki et al. 1999). Recharge to the basal system is reduced by pumping at higher-elevation wells (Fukunaga & Associates, Inc. 1995).

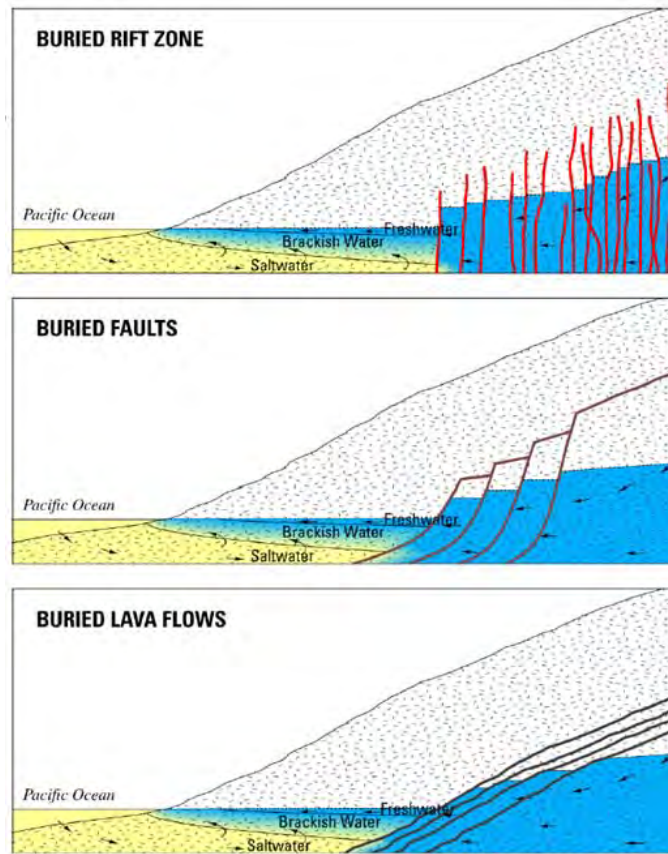


Figure 20. Schematic cross sections of the Keauhou Aquifer System depicting the coastal freshwater lens and likely geologic features associated with the high water-level area (>40 ft above mean sea level) (courtesy of S. Anthony, USGS, 2012).

Recently, an alternative conceptual model of the aquifer system was proposed by consultants and water users in North Kona. The model was described in response to NPS comments on the 2010 Environmental Assessment for the Laiopua Community Center (Geometrician Associates 2010):

Based on discussions with hydrologists Tom Nance and Steve Bowles, who have experience in many of the wells in the area, we respectfully disagree with the National Park's model of the hydrology in the area, although we fully understand that there is much still to be investigated. The State's deep monitor well (3858-01), about two miles south of Kealahou at 730 feet in elevation, hit potable water beneath the basal lens, suggesting that the subsurface feature creating the high level groundwater lies conformably within lava flows and is likely to be dense, poorly permeable flows. This also indicates that at least some of the high level potable water is not passing through the basal lens but is instead passing beneath it and discharging offshore. Two of the high level wells in the region (3957-05 and 4258-03), when drilled deeper, had water levels rise higher, again supporting

the concept of conformable poorly permeable lava flows being the feature creating the high level groundwater. There are no peer-reviewed publications documenting this, but the field results as described above are actually measured and indisputable results as opposed to numerical models. This information has been added to the EA (Letter from R. Terry – Geometrician Associates, LLC to K. Billings, NPS, dated Apr. 1, 2010).

At the September 23, 2010 Kona Water Roundtable, information was presented indicating that the Kamakana Well (3959-01) had been drilled to a depth of 1760 ft below sea level in the basal system and that fresh water was encountered below salt water (T. Nance, Tom Nance Water Resource Engineering, Sept. 2010 Kona Water Roundtable). According to the Well Construction and Pump Installation Permit application, the applicant planned to convert the well to a potable water-supply well if sufficient fresh water was encountered.

Although the extent of the newly discovered freshwater zone is not known, it is being targeted to supply potable water to large new developments in North Kona (Figure 21). The August 2013 Kaloko Makai Draft Environmental Impact Statement cites “*fresh or slightly brackish artesian groundwater which exists at depth below the basal lens and saline groundwater*” as the preferred alternative to supply potable water for up to 5000 homes, 3 schools, a hospital, and commercial and light industrial uses, directly upgradient of Kaloko-Honokohau National Historical Park (Wilson Okamoto Corporation and Ho‘okuleana LLC 2013) (Appendix C).

The alternative conceptual model may be supported by the results of the Hawai‘i Scientific Drilling Project on the eastern flank of the Island of Hawai‘i. The borehole Kahi Puka 1 (KP-1) has been drilled to a depth of over 11,000 ft and cased to about 9900 ft just south of Hilo Bay. Fluid samples collected from KP-1 indicate that fresh water exists below salt water at the Mauna Kea/Mauna Loa interface about 1050 ft below land surface, and that this freshwater body is actively being recharged by precipitation occurring at 7000 ft on the slopes of Mauna Kea (Thomas et al. 1996). In 2012, the NPS, the Commission, and the USGS jointly funded a study to further evaluate the connection between high-level and coastal groundwater systems in Kona using stable isotopes and other natural tracers. As of August 2013, two rounds of sampling have been completed and the USGS is awaiting the analytical results from several laboratories (S. Anthony, USGS, letter dated Aug. 26, 2013).

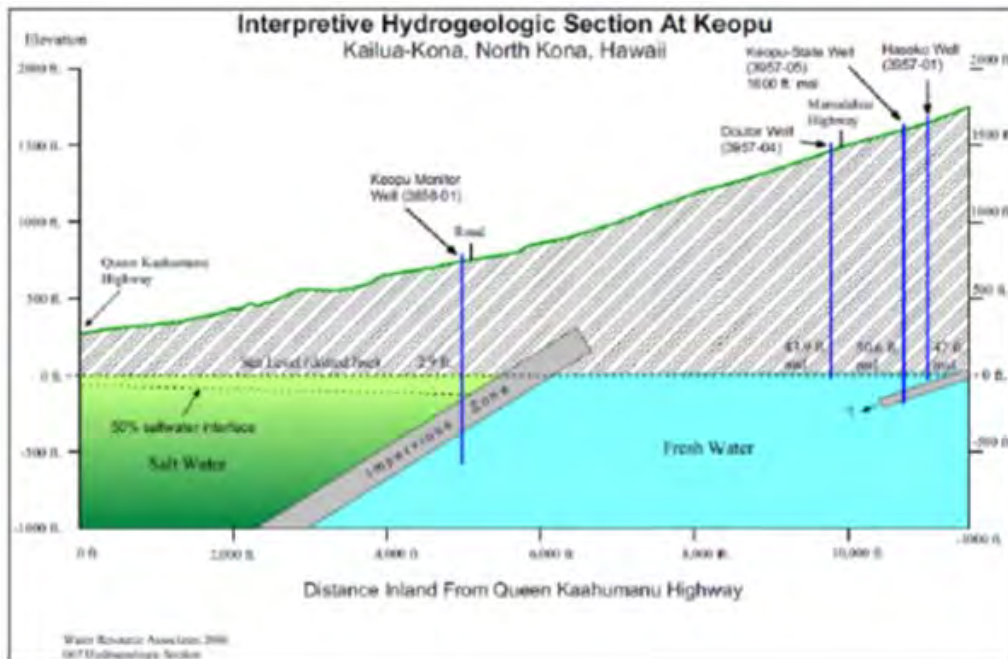


Figure 21. Alternative conceptual model of the Keauhou Aquifer System presented in the 2011 Kaloko Makai Draft Environmental Impact Statement (*from Wilson Okamoto Corporation and Ho'okuleana LLC 2011, Figure 3-6*).

The feasibility of developing one or more artesian freshwater zones below salt water for drinking water, however, is highly speculative, as is the assertion that wells tapping this zone will not reduce groundwater discharge to coastal ecosystems. At this time, the conceptual model the Commission will use to approve new wells in the aquifer system is uncertain. If the existing model is sufficient to approve new wells, then it must also be sufficient to deny new wells that threaten public trust resources. If the Commission accepts that hydrologic communication between high-level and basal groundwater is significantly less than previously believed, the SY of the coastal groundwater system should be reduced to account for the portion of recharge that does not discharge to the basal lens.

Therefore, the source and quantity of recharge to basal groundwater in the Keauhou Aquifer System is uncertain, yet has important implications for the management and allocation of freshwater resources. In designated water management areas, the Commission can require applicants for water use permits to provide supporting information in cases where the source of water to wells is uncertain or speculative, thereby ensuring that public trust resources are not harmed.

2.5 Federal, State, County Approval [HAR §13-171-7(8)]:

Whether water development projects that have received any federal, state, or county approval may result, in the opinion of the commission, in one of the above conditions.

All of the pumping wells and the residential and commercial development projects requiring additional groundwater withdrawals to meet their water demand listed in Appendix C are located within the Keauhou Aquifer System and have received or will require federal, state, or county approval. These projects have the potential to contribute to cumulative adverse effects on groundwater-dependent traditional and customary Native Hawaiian rights and practices and public trust resources in Kaloko-Honokōhau and along the Kona Coast.

3. Summary

The NPS urges Chairperson Ailā to recommend to the Commission that designation proceedings be initiated for the Keauhou Aquifer System on the basis of the legal rationale and factual data contained in this petition and set forth below because

- 1) The discharge of abundant and clean, fresh groundwater is necessary to maintain and perpetuate traditional and customary Native Hawaiian practices and other public trust resources in the Keauhou Aquifer System.
- 2) The maintenance of the natural rate of groundwater discharge and the natural fluctuation of water levels, salinity, temperature, and residence time in all inland and nearshore marine waters in Kaloko-Honokōhau National Historical Park are necessary to fulfill the specific purposes and values for which the Park was established, including but not limited to the propagation of flora and fauna traditionally and customarily used by Native Hawaiians.
- 3) The continued discharge of abundant and clean, fresh groundwater is essential to maintaining the state's current classification of the Park's inland waters as Class 1a and the Park's marine waters as Class AA.
- 4) Land-use based projections of water demand far exceed the state-determined sustainable yield of the Keauhou Aquifer System.
- 5) The determination of the sustainable yield for the Keauhou Aquifer System fails to explicitly consider drought conditions, climate change, or the quality and quantity of groundwater needed to preserve and perpetuate traditional and customary Native Hawaiian rights and practices and other public trust resources.
- 6) Limiting pumping to the sustainable yield without regulating the location of groundwater withdrawals will not protect traditional and customary Native Hawaiian rights and practices or other public trust resources that depend upon abundant and clean, fresh groundwater in the Park and along the Kona Coast.

- 7) Reducing the quantity of groundwater that discharges along the Kona Coast up to 44% as a result of reasonably foreseeable groundwater withdrawals would adversely affect the productivity and habitat of culturally important and rare native species, thereby imperiling traditional and customary Native Hawaiian rights and practices and other public trust resources.
- 8) Saltwater intrusion in the Kahalu‘u wellfield has led to an increase in groundwater withdrawals in the *ahupua‘a* of the Park, despite information that traditional and customary Native Hawaiian rights and practices and other public trust resources will be adversely affected by these withdrawals.
- 9) Competition for high-level groundwater has led to new proposals to develop basal groundwater at a time when the potential economic, cultural and environmental costs of desalinating brackish groundwater along the Kona Coast remain high.
- 10) Serious disputes regarding the direct and cumulative impacts of groundwater use on traditional and customary Native Hawaiian rights and other public trust resources that depend upon groundwater discharge in the Keauhou Aquifer System exist and are not resolvable through working groups or roundtables.
- 11) Serious disputes regarding the source of freshwater recharge to the basal groundwater system in the Keauhou Aquifer System exist and are not resolvable through the well construction and pump installation permitting process.
- 12) The state environmental-review process, the land-use planning process, working groups, water professionals groups, and roundtables have not and cannot sufficiently protect and preserve traditional and customary Native Hawaiian rights and practices and other public trust resources from the cumulative adverse effects of existing and reasonably foreseeable groundwater withdrawals in the Keauhou Aquifer System.
- 13) The Commission’s public trust responsibilities extend to the protection and preservation of those natural and cultural resources that were recognized in the congressional legislation establishing the Park and to the flora and fauna protected pursuant to the 1973 Endangered Species Act. Consequently, the Commission has a general affirmative duty

to take precautionary actions to safeguard those vital resources even in the face of scientific uncertainty, when such resources are threatened by existing and reasonably foreseeable future groundwater withdrawals.

- 14) The Commission cannot manage and allocate groundwater to ensure the protection of traditional and customary Native Hawaiian rights and practices and other public trust resources in an area that has not been officially designated a water management area.

4. Conclusions

This petition provides sufficient information to conclude that traditional and customary Native Hawaiian rights and practices and other public trust resources in Kaloko-Honokōhau and along the Kona Coast are threatened by reasonably foreseeable withdrawals of groundwater from the Keauhou Aquifer System.

Accepting this petition will allow the Commission to take the initiative in considering and protecting traditional and customary Native Hawaiian rights and practices and other public trust resources.

Initiating designation proceedings will allow the Commission to investigate disputes with a level of openness, diligence, and foresight commensurate with the high priority that traditional and customary Native Hawaiian rights and practices and public trust resources command under the laws of the State of Hawai‘i.

Designation of the Keauhou Aquifer System is necessary to ensure that optimal conditions exist for the fragile ecosystems that support coastal fisheries, traditional and customary subsistence fishing and shoreline gathering, recreational opportunities, and rare native species along the Kona Coast because

- Designated water management areas provide the Commission the authority to regulate the location and pumpage of wells in the Keauhou Aquifer System via a permitting system.
- Designated water management areas allow the transfer of water from one watershed to another and allow the Commission the authority to reserve water for conservation purposes.
- Designated water management areas provide the Commission with tools to ensure that the burden of proof with regard to adverse effects on traditional and customary Native Hawaiian rights and practices and public trust resources rests with the water user, and to evaluate whether mitigating measures such as improved water conservation and efficiency can be used to meet growing water demands in North Kona.

- Designation is consistent with the public interest as capital investments in water infrastructure may be placed at risk by potential future limits on groundwater development due to adverse effects on traditional and customary Native Hawaiian rights and practices and other public trust resources.

5. References

- Abbott, I.A., 1984. Limu, an Ethnobotanical Study of some Hawaiian Seaweeds. Pacific Tropical Botanical Garden, Lawai, Kauai, Hawai'i.
- Amato, D., 2009. The physiological effect of submarine groundwater discharge on the Hawaiian endemic edible alga *Gracilaria coronopifolia*. Master's thesis. University of Hawai'i at Manoa, Honolulu, Hawai'i.
- Bauer, G.R., 2003. A study of the ground-water conditions in North and South Kona and Kohala Districts, Island of Hawai'i, 1991-2002. PR-2003-01. State of Hawai'i Commission on Water Resource Management.
- Beets J., Brown, E. and A. Friedlander, 2010. Inventory of marine vertebrate species and fish-habitat utilization patterns in coastal water off four national parks in Hawai'i. Technical Report 168. Pacific Cooperative Studies Unit, University of Hawai'i at Manoa, Honolulu, Hawai'i.
- Belt Collins Hawai'i Ltd., 2008. Final Environmental Impact Statement, Keahuolu Affordable Housing Project, Kailua-Kona, North Kona, Island of Hawai'i, September 2008. Prepared for the State of Hawai'i Housing Finance & Development Corporation.
- Bienfang, P., 2007. Assess nutrient sources, fluxes, and water quality of ponds within the Kaloko-Honokohau National Historical Park, Final Report. Unpublished Report-2186087. Hawai'i-Pacific Islands Cooperative Ecosystem Studies Unit, University of Hawai'i at Manoa, Honolulu, Hawai'i.
- Brock, R.E. and A.K.H. Kam, 1997. Biological and water quality characteristics of anchialine resources in Kaloko-Honokohau National Historical Park. Cooperative National Park Resources Studies Unit Technical Report 112. University of Hawai'i at Manoa, Honolulu, Hawai'i.
- Burns, N.E., and S.P. Bowles, 2008. The Shores at Kohanaiki, Final Report, Underground Injection Control (UIC) Well, UIC Application No. UH-2594, June 11, 2008. Prepared for Kohanaiki Shores, LLC, Kailua-Kona, Hawai'i.
- Cesar, H., van Beukering, P., Pintz, S., and J. Dierking, 2002. Economic valuation of the coral reefs of Hawai'i, Final Report, December 23, 2002. Cesar Environmental Economics Consulting, Arnhem, The Netherlands.
- Chang, W.B.C., 1987. Water code development in Hawai'i: history and analysis, 1978-1987. Water Resources Research Center, University of Hawai'i at Manoa, Honolulu, Hawai'i.
- County of Hawai'i, 2011. 2011 North Kona Water System Annual Water Quality Report. Department of Water Supply, Hawai'i.
- County of Hawai'i, 2013. Chloride Results for Kona Wells, January 2013. Department of Water Supply web site. Available at <http://www.hawaiidws.org/7%20the%20water/ccrpage.htm> (accessed 8 March 2013).
- Duarte, K., Pongkijvorasin, S., Roumasset, J., Amato, D., and K. Burnett, 2010. Optimal management of a Hawaiian Coastal aquifer with nearshore marine ecological interactions. Water Resources Research, 46: W11545, doi:10.1029/2010WR009094.
- Engott, J.A., 2011. A water-budget model and assessment of groundwater recharge for the Island of Hawai'i. U.S. Geological Survey. Scientific Investigations Report 2011-5078.
- Fukunaga & Associates, Inc., 1995. North Kona Water Master Plan, Final Report. Report R-104. Prepared for the State of Hawai'i Department of Land and Natural Resources, Honolulu, Hawai'i.

- Fukunaga & Associates, Inc., 2010. Hawai‘i County Water Use and Development Plan Update, Hawai‘i Water Plan, Final Report, August 2010. Prepared for the County of Hawai‘i Department of Water Supply, Hawai‘i.
- Geometrician Associates and Akinaka & Associates, 2009. Palani Well No. 1 (State Well No. 4158-03), North Kona, Island of Hawai‘i, Final Environmental Assessment, October 2009. Prepared for Lanihau Properties, LLC, Honolulu, Hawai‘i.
- Geometrician Associates LLC, 2009. Final Environmental Assessment, Lokahi Ka‘u Affordable Apartments, January 2009. Prepared for Ho‘olehua Housing LP, Kailua, Hawai‘i.
- Geometrician Associates, 2010. Environmental Assessment, Laiopua Community Center, April 2010. Prepared for the County of Hawai‘i Office of Housing and Community Development.
- George A.L. Yuen and Associates, Inc., 1990. Hawai‘i Water Plan, Water Resources Protection Plan, Volumes I & II, June 1990. Prepared for the State of Hawai‘i Commission on Water Resource Management.
- Giambelluca T.W., Chen, Q., Frazier, A.G., Price, J.P., Chen, Y-L, Chu, P-S, Eischeid, J., and D. Delparte, 2011. The Rainfall Atlas of Hawai‘i. Available at <http://rainfall.geography.Hawai‘i.edu> (accessed 19 July 2012).
- Grossman, E.E., Logan, J.B., Presto, M.K., and C.D. Storlazzi, 2010. Submarine groundwater discharge and fate along the coast of Kaloko-Honokōhau National Historical Park, Island of Hawai‘i, Part 3, Spatial and temporal patterns in nearshore waters and coastal groundwater plumes, December 2003–April 2006. U.S. Geological Survey. Scientific Investigations Report 2010-5081.
- Honokōhau Study Advisory Commission, 1974. The Spirit of Ka-loko Hono-kō-hau, a proposal for the establishment of a Ka-loko Hono-ko-hau National Cultural Park, Island of Hawai‘i, State of Hawai‘i. National Park Service, Kailua-Kona, Hawai‘i.
- Izuka, S. K, J. A. Perreault, T. Jones, and K. Kozar, 2011. Protocol for long term groundwater-hydrology monitoring in American Memorial Park, Commonwealth of the Northern Mariana Islands, and Kaloko-Honokōhau National Historic Park, Hawai‘i: Version 1.0. Natural Resource Report. NPS/PACN/NRR—2011/472. National Park Service, Fort Collins, Colorado.
- Johnson, A. G., Glenn, C.R., Burnett, W.C., Peterson, R.N., and P.G. Lucey, 2008. Aerial infrared imaging reveals large nutrient-rich groundwater inputs to the ocean. *Geophysical Research Letters*, 35: L15606, doi:10.1029/2008GL034574.
- Keener, V. W., Marra, J. J., Finucane, M. L., Spooner, D., and M.H. Smith, editors, 2012. *Climate Change and Pacific Islands: Indicators and Impacts*. Report for The 2012 Pacific Islands Regional Climate Assessment. Washington, DC: Island Press.
- Knee, K., Street, J., Grossman, E., and A. Paytan, 2008. Submarine ground-water discharge and fate along the coast of Kaloko-Honokōhau National Historical Park, Island of Hawai‘i, Part 2, spatial and temporal variations in salinity, radium-isotope activity, and nutrient concentrations in coastal waters, December 2003–April 2006. U.S. Geological Survey. Scientific Investigations Report 2008-5128.
- Kikuchi, W. and J. Belshe, 1971. Examination and evaluation of fishponds on the leeward coast of the island of Hawai‘i, November 22, 1971. County of Hawai‘i Planning Commission.
- Maciolek, J. A., and R.E. Brock, 1974. Aquatic survey of the Kona coast ponds of Hawai‘i Island, April 1974. Sea Grant Advisory Report UNIHI-SEAGRANT-AR-74-04. Sea Grant College Program, University of Hawai‘i.

- Maly, K. and O. Maly, 2002. *He Wahi Mo'olelo 'Ohana no Kaloko me Honokōhau ma Kekaha o nā Kona* – A collection of family traditions describing customs, practices and beliefs of the families and lands of Kaloko and Honokōhau, North Kona, Island of Hawai'i, April 1, 2002. Kumu Pono Associates, Hilo, Hawai'i.
- Marine Research Consultants, 2000. An assessment of potential effects to the marine and pond environments in the vicinity of the Kaloko Industrial Park, phases III and IV, North Kona, Hawai'i. Appendix B in Final Environmental Impact Statement, Kaloko Industrial Park, Phases III & IV, Kaloko, North Kona, Hawai'i, October 2000. Prepared for Wilson Okamoto & Associates, Honolulu, Hawai'i.
- Meyer, W., and W.R. Souza, 1995. Factors that control the amount of water that can be diverted to wells in a high-level aquifer. Pages 207-216 in R. Hermann, W. Back, R.C. Sidle, and A.I. Johnson, editors. Water Resources and Environmental Hazards: Emphasis on Hydrologic and Cultural Insight in the Pacific Rim, Proceedings of the American Water Resources Association Annual Summer Symposium, June 1995. Honolulu, Hawai'i.
- Mink, J.F., 1981. Determination of sustainable yields in basal aquifers of Hawai'i. Pages 101-116 in F.N. Fujimura and W.B.C. Chang, editors. Groundwater in Hawai'i, a Century of Progress. Water Resources Research Center, University of Hawai'i at Manoa, Honolulu, Hawai'i.
- Morin, M. 1996. Response of a remnant population of endangered waterbirds to avian botulism. Transactions of the Western Section of the Wildlife Society, 32:23-33.
- Morin, M.P., 1998. Endangered waterbird and wetland status, Kaloko-Honokōhau National Historical Park, Hawai'i Island, June 1998. Technical Report 119. Cooperative National Park Resources Studies Unit, University of Hawai'i at Manoa, Honolulu, Hawai'i.
- National Oceanic and Atmospheric Administration (NOAA), 2013. Sea Levels Online website. Available at <http://tidesandcurrents.noaa.gov/sltrends/sltrends.html> (accessed 1 March 2013).
- National Park Service, 1994. General Management Plan/Environmental Impact Statement, Kaloko-Honokōhau National Historical Park, Hawai'i, July 1994.
- National Park Service, 2006. Management Policies 2006. U.S. Government Printing Office, Washington, DC. Available at <http://www.nps.gov/policy/mp2006.pdf>.
- National Park Service, 2012. Kaloko-Honokohau National Historical Park Observation Well Data, July 2007 to January 2012. Available at <https://irma.nps.gov/App/Reference/Profile/2193295> (accessed 22 February 2013).
- National Park Service, 2013. Pacific Island Network Anchialine Pool Database. Available at <https://irma.nps.gov/App/Reference/Profile/2192753> (accessed 30 January 2013).
- Nishimoto, R.T., Shimoda, T.E. and L.K. Nishiura, 2007. Mugilids in the Muliwai: a tale of two mullets. Pages 143-156 in N.L. Evenhuis and J.M. Fitzsimons, editors. Biology of Hawaiian Streams and Estuaries. Bishop Museum Bulletin in Cultural and Environmental Studies, vol. 3.
- Oceanit, 2007. Kona Kai Ola, Final Environmental Impact Statement, Volume 2-A: EISPN & EIS Comments and Responses, Kealahou, North Kona District, Island of Hawai'i, July 2007. Prepared for Jacoby Development, Inc., Atlanta, Georgia.
- Oki, D.S. and W. Meyer, 2001. Analytical versus numerical estimates of water-level declines caused by pumping, and a case study of the Iao Aquifer, Maui, Hawai'i. U.S. Geological Survey. Water-Resources Investigations Report 00-4244.

- Oki, D.S., Tribble, G.W., Souza, W.R., and E.L. Bolke, 1999. Ground-water resources in Kaloko-Honokōhau National Historical Park, Island of Hawai‘i, and numerical simulation of the effects of ground-water withdrawals. U.S. Geological Survey. Water-Resources Investigations Report 99-4070.
- Parrish, J.D., Smith, G.C., and J.E. Norris, 1990. Resources of the marine waters of Kaloko-Honokohau National Historical Park. Technical Report 74. Cooperative National Park Resources Studies Unit, University of Hawai‘i at Manoa, Honolulu, Hawai‘i.
- PBR Hawai‘i & Associates, Inc., 2009. O‘oma Beachside Village, Preliminary Final Environmental Impact Statement, North Kona, Hawai‘i, December 2009. Prepared for O‘oma Beachside Village LLC, Atascadero, California.
- Peterson, J.A. and M.K. Orr, 2005. *I ‘Ono Ke Kole, I‘a One Ke Kole – Sweet Conversation, Sweet-Tasting Fish: A Marine Ethnography of Kaloko-Honokōhau National Historical Park*, Kailua-Kona, Hawai‘i, October 2005. International Archaeological Research Institute, Inc., Honolulu, Hawai‘i.
- Sparks, A. K., 1963. Survey of the oyster potential of Hawai‘i. Honolulu, Division of Fish and Game.
- State of Hawai‘i, 1994. Review Commission on the State Water Code, Final Report to the Hawai‘i State Legislature, December 28, 1994. State of Hawai‘i Legislative Reference Bureau.
- State of Hawai‘i, 2011. The Rain Follows the Forest, *Hahai no ka ua i ka ululā`au*, A Plan to Replenish Hawai‘i’s Source of Water, Department of Land and Natural Resources, November 2011.
- State of Hawai‘i, 2013. 1st Annual Joint State Water Conference, January 14-18, 2013, Commission on Water Resource Management. Available at (http://www.state.hi.us/dlnr/cwrm/info_presentations.htm) (accessed 29 January 2013).
- Tango, L.K.K., 2010. The effect of salinity and temperature on survival of the orange-black Hawaiian damselfly, *Megalagrion xanthomelas*. Master’s Thesis, University of Hawai‘i at Hilo, Hawai‘i.
- Thomas, D.M., Paillet, F.L., and Conrad, M.E., 1996. Hydrogeology of the Hawai‘i Scientific Drilling Project borehole KP-1, 2. Groundwater geochemistry and regional flow patterns. *Journal of Geophysical Research*, 101(B5):11683-11694.
- Tom Nance Water Resources Engineering (TNWRE), 2002. Assessment of the potential impact on water resources of the proposed Kaloko-Honokohau Business Park in North Kona, Hawai‘i. Prepared for Lanihau Partners, LP, Honolulu, Hawai‘i.
- Tom Nance Water Resources Engineering (TNWRE), 2009. First order approximation of the impact on salinity of pumping inland high level aquifer wells, Memorandum, August 13, 2009. Appendix 7 in Palani Well No. 1 (State Well No. 4158-03), North Kona, Island of Hawai‘i, Final Environmental Assessment, October 2009. Prepared for Lanihau Properties, LLC, Honolulu, Hawai‘i.
- U.S. Fish & Wildlife Service, 2011. Recovery plan for Hawaiian Waterbirds, Second Revision, Region 1. U.S. Fish and Wildlife Service, Portland, OR.
- U.S. Geological Survey, 2013. National Water Information System data available on the World Wide Web (USGS Water Data for the Nation). Available at http://waterdata.usgs.gov/nwis/nwisman/?site_no=194053156013001&agency_cd=USGS http://waterdata.usgs.gov/nwis/nwisman/?site_no=194120156013501&agency_cd=USGS

- http://waterdata.usgs.gov/nwis/nwisman/?site_no=194125156015501&agency_cd=USGS
(accessed 23 January 2013).
- Waimea Water Services, Inc., 2007. Water development impacts for The Shores at Kohanaiki, Hawai‘i. Prepared for Rutter Development, Irvine, California.
- Wallsgrove, R., and D. Penn, 2012. Water Resources and Climate Change Adaptation in Hawai‘i: Adaptive Tools in the Current Law and Policy Framework. University of Hawai‘i, Center for Island Climate Adaptation and Policy, Honolulu, Hawai‘i.
- Wilson Okamoto Corporation and Ho‘okuleana LLC, 2011. Draft Environment Impact Statement, Kaloko Makai, Kaloko and Kohanaiki, North Kona, Island of Hawai‘i, July 2011. Prepared for SCD-TSA Kaloko Makai, LLC, Honolulu, Hawai‘i.
- Wilson Okamoto Corporation and Ho‘okuleana LLC, 2013. Second Draft Environment Impact Statement, Kaloko Makai, Kaloko and Kohanaiki, North Kona, Island of Hawai‘i, August 2013. Prepared for SCD-TSA Kaloko Makai, LLC, Honolulu, Hawai‘i.
- Wilson Okamoto Corporation, 2008a. Final Environmental Assessment, Hinalani Street 1.0-million gallon reservoir and transmission waterline, October 2008. Prepared for the County of Hawai‘i Department of Water Supply.
- Wilson Okamoto Corporation, 2008b. Water Resource Protection Plan, Hawai‘i Water Plan, June 2008. Prepared for the State of Hawai‘i Commission on Water Resource Management.
- Wilson Okamoto Corporation, 2009. Final Environmental Assessment (EA) and Finding of No Significant Impact, Kalaoa Water System Improvements, North Kona District, Island of Hawai‘i, March 2009. Prepared for Seascape Development LLC, Kailua-Kona, Hawai‘i.
- Yukie Ohashi Planning Consultant LLC, 2008. Waiaha Water Systems, (Transmission mains and reservoirs), North Kona, Hawai‘i, Final Environmental Assessment, (Finding of no significant impact), July 2008. Prepared for Waiaha Systems, LLC and Waiaha Systems II, LLC, Kailua-Kona, Hawai‘i.

Appendix A: Federally-protected species in Kaloko-Honokōhau National Historical Park.

Common Name	Species Name	Listing Category	Status in Park	Taxa
Hawaiian coot	<i>Fulica americana alai</i>	Endangered	Current	Birds
Hawaiian stilt	<i>Himantopus mexicanus knudseni</i>	Endangered	Current	Birds
<i>hala pepe</i>	<i>Pleomele hawaiiensis</i>	Endangered	Outplant	Flowering Plants
<i>lo'ulu</i>	<i>Pritchardia affinis</i>	Endangered	Restored	Flowering Plants
false killer whale	<i>Pseudorca crassidens</i>	Endangered	Current	Mammals
Hawaiian hoary bat	<i>Lasiurus cinereus semotus</i>	Endangered	Current	Mammals
Hawaiian monk seal	<i>Monachus schauinslandi</i>	Endangered	Current	Mammals
humpback whale	<i>Megaptera novaeangliae</i>	Endangered	Current	Mammals
hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Endangered	Current	Reptiles
<i>ko'oko'olau</i>	<i>Bidens micrantha ctenophylla</i>	Proposed Endangered	Outplant	Flowering Plants
green sea turtle	<i>Chelonia mydas</i>	Threatened	Current	Reptiles
anchialine pool shrimp	<i>Metabetaeus lohena</i>	Candidate	Current	Crustaceans
anchialine pool shrimp	<i>Palaemonella burnsi</i>	Candidate	Current	Crustaceans
orange-black Hawaiian damselfly	<i>Megalagrion xanthomelas</i>	Candidate	Current	Insects

Appendix B: Pumping capacity of permitted wells in the Keauhou Aquifer System

Well No.	Well Name	Year	Owner/user	Use Code	Pump Capacity (Mgal/d)	Note
4363-01	Keahole Point 1	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-02	Keahole Point 2	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-03	Keahole Point 3	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-04	Keahole Point 4	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-05	Keahole Point 5	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-06	Keahole Point 6	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-08	Keahole Point 8	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-09	Keahole Point 9	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-10	Keahole Point 10	1989	Uwajima Fisheries	AGRAQ	0.36	
4363-11	Keahole Point 11		Uwajima Fisheries	AGRAQ		
4363-12	Keahole Point 12		Uwajima Fisheries	AGRAQ		
3957-04	Doutor Coffee #1	2001	Doutor Coffee Co.	AGRCP	0.331	
4461-02	Keahole Helco	1993	HELCO	INDEL	0.72	
4060-01	Honokohau Quarry	1995	Honokohau Prop	INDMI	0.036	
4459-03	Hilu Hilu Irr 1		Hilu Hilu Dev. LLC	IRR	0.72	Well Permit Issued 1/14/04
4459-04	Hilu Hilu Irr 2		Hilu Hilu Dev. LLC	IRR	0.72	Well Permit Issued 1/14/04
4459-05	Hilu Hilu Irr 3		Hilu Hilu Dev. LLC	IRR	0.72	Well Permit Issued 1/14/04
3759-01	Kaneyoshi Irr	1999	Kaneyoshi Co Ltd	IRR	0.108	
4161-04	Kohanaiki 3	2007	Discovery Land Co.	IRRG	0.36	
4161-05	Kohanaiki 4	2007	Discovery Land Co.	IRRG	0.36	
4161-06	Kohanaiki 5	2007	Discovery Land Co.	IRRG	0.36	
4161-07	Kohanaiki 6	2007	Discovery Land Co.	IRRG	0.36	
4161-08	Kohanaiki 7	2007	Discovery Land Co.	IRRG	0.36	
4262-02	Kohanaiki 2	2007	Discovery Land Co.	IRRG	0.36	
4161-09	Kohanaiki 8	2010	Discovery Land Co.	IRRG	0.36	Permit approved 8/19/08
4262-01	Kohanaiki 1	2010	Kohanaiki Shores, LLC	IRRG	0.36	Permit approved 3/13/07
3457-01	Keauhou 1	1956	Kona Country Club	IRRG	0.864	
3357-01	Keauhou 2	1966	Kona Country Club	IRRG	1.008	
3457-03	Keauhou Irr 3	1985	Kona Country Club	IRRG	0.72	
3357-04	Keauhou-Kona C C	1990	Kona Country Club	IRRG	0.677	
3558-01	Keauhou-Robertson	2006		IRRLA	0.057	
4258-05	Lee		Elizabeth Lee	MUN	1.008	Permit approved 2/20/05
4258-06	Ooma 1		Wai O Kula, LLC	MUN	1.008	Pump Permit Issued 1/10/08
3957-01	Keopu-Puuhonua	1993	Haseko-Hawai'i	MUNCO	0.936	
3557-01	Kahaluu A	1959	Hawai'i DWS	MUNCO	1.008	
3557-02	Kahaluu B	1959	Hawai'i DWS	MUNCO	1.008	
3557-03	Kahaluu C	1969	Hawai'i DWS	MUNCO	1.008	
3557-04	Kahaluu D	1970	Hawai'i DWS	MUNCO	1.44	
3557-05	Kahaluu Shaft	1976	Hawai'i DWS	MUNCO	6.048	
3657-01	Holualoa	1983	Hawai'i DWS	MUNCO	0.72	
4358-01	Kalaoa A	1990	Hawai'i DWS	MUNCO	0.432	
4158-02	Honokohau	1991	Hawai'i DWS	MUNCO	2.016	
4458-02	Kohanaiki 2	1991	Hawai'i DWS	MUNCO		
4258-03	Hualalai	1993	Hawai'i DWS	MUNCO	1.512	
4057-01	Keahuola QLT 1	1994	Hawai'i DWS	MUNCO	1.44	
3857-04	Waiaha-DWS	2000	Hawai'i DWS	MUNCO	2.016	
4158-03	Palani 1	2007	Hawai'i DWS	MUNCO	1.44	Permit approved 9/6/2011
4559-01	Huehue Ranch 1	1985	Huehue Ranch	MUNPR	0.489	
4459-01	Huehue Ranch 2	1991	Huehue Ranch	MUNPR	0.821	
4459-02	Huehue Ranch 4	1992	Huehue Ranch	MUNPR	0.821	
4363-13	Net Washing	1987	Cyanotech Corp	OTH	0.115	
Total permitted pumping capacity in the Keauhou Aquifer System =					38 Mgal/d	Potential 24-hour production

Appendix C: Water demand for proposed development in the area of Kaloko-Honokōhau.

(TBD = to be determined).

Development Name	Water Demand (Mgal/d)	Proposed Water Source	Reference
The Shores at Kohanaiki	1.10 2.20	Keauhou high-level Keauhou basal	2003 Special management area use permit petition; Water Resources Bulletin
Kula Nei	0.12	Keauhou high-level	2007 Final EIS, Vol.I, Page 4-177; Water Resources Bulletin
Kealakehe Planned Community	4.75	Keauhou high-level	1990 Final EIS, Section 5.3
Keahuolu Housing	1.11	Keauhou high-level	2008 Final EIS; Keopu Well Draft EA
Kaloko Heights	0.86	TBD	LUC Decision & Order Docket A81-525, Page 10
West Hawai'i Business Park / Palani Ranch	1.36	Keauhou high-level	2003 Final EIS, Page 4-128; 2009 Palani Well No. 1 Draft EA, Page 1-8
Kaloko Industrial Park Phases III & IV	0.33	Keauhou basal	2000 Final EIS, Page 3-49; Palani Well No. 1 Final EA, App. 7
Honokohau Business Park	0.21	TBD	1991 LUC Decision & Order Docket A89-643, Page18
Lokahi Kau Affordable Apartments	0.10	Keauhou high-level	12-17-08 letter from R. Terry of Geometrician Associates, LLC to G. Bell of KAHO; Palani Well No. 1 Final EA, App. 7
Kaloko Transitional Housing	0.04	TBD	2009 Kaloko Housing Program Final EA, Page 12
Kaloko Makai	4.50	TBD	Kaloko Makai 2013 Draft EIS, Pages 2-31 - 2-61; 2010 WUDP, Page 2-12 (estimated from 2354 single-family units x 1000 gpd/unit; 2646 multi-family units x 400 gpd/unit; 200 resort units x 400 gpd/unit; 242 school, park, hospital, light industrial, infrastructure acres x 4000 gpd/acre; 14 commercial acres x 3000 gpd/acre)
Palamanui & UH Center at West Hawai'i	0.80 1.80	Keauhou high-level Keauhou basal	2004 Final EIS, Page 6-18; Palamanui Waterline, 343-foot Elevation Reservoir & Main Street Collector Road Extension Water Resources Bulletin
LaiOpua Community Center	0.02	Keauhou high-level	Letter dated April 1, 2010 from R. Terry of Geometrician Associates, LLC
BioEnergy Hawai'i	0.04	TBD	2010 EISPN, Page 34
Estimated future water demand in Kaloko-Honokōhau =	19	Mgal/d	

Appendix D: Existing and proposed desalination systems in the area of Kaloko-Honokōhau.

(TBD = to be determined).

Desalination System	Status	Distance from National Park	Proposed pumping/injection rate (Mgal/d)
Kona Kai Ola	Proposed 2007 Terminated 2009	Adjacent	TBD
The Shores at Kohanaiki	Operating since 2008	Adjacent	2.2 / 1.7
O'oma Beachside Village	Proposed 2009 Boundary amendment denied 2010	≈ 1 mile	1.8 / 1.0
BioEnergy Hawai'i	Proposed 2010	≈ 2 miles	0.04 / TBD
Kona Coast Shellfish	Proposed 2011	≈ 2.5 miles	1.08 / 0
Kaloko Makai	Proposed 2013	≈ 1 mile	≈ 10.9 / 4.9

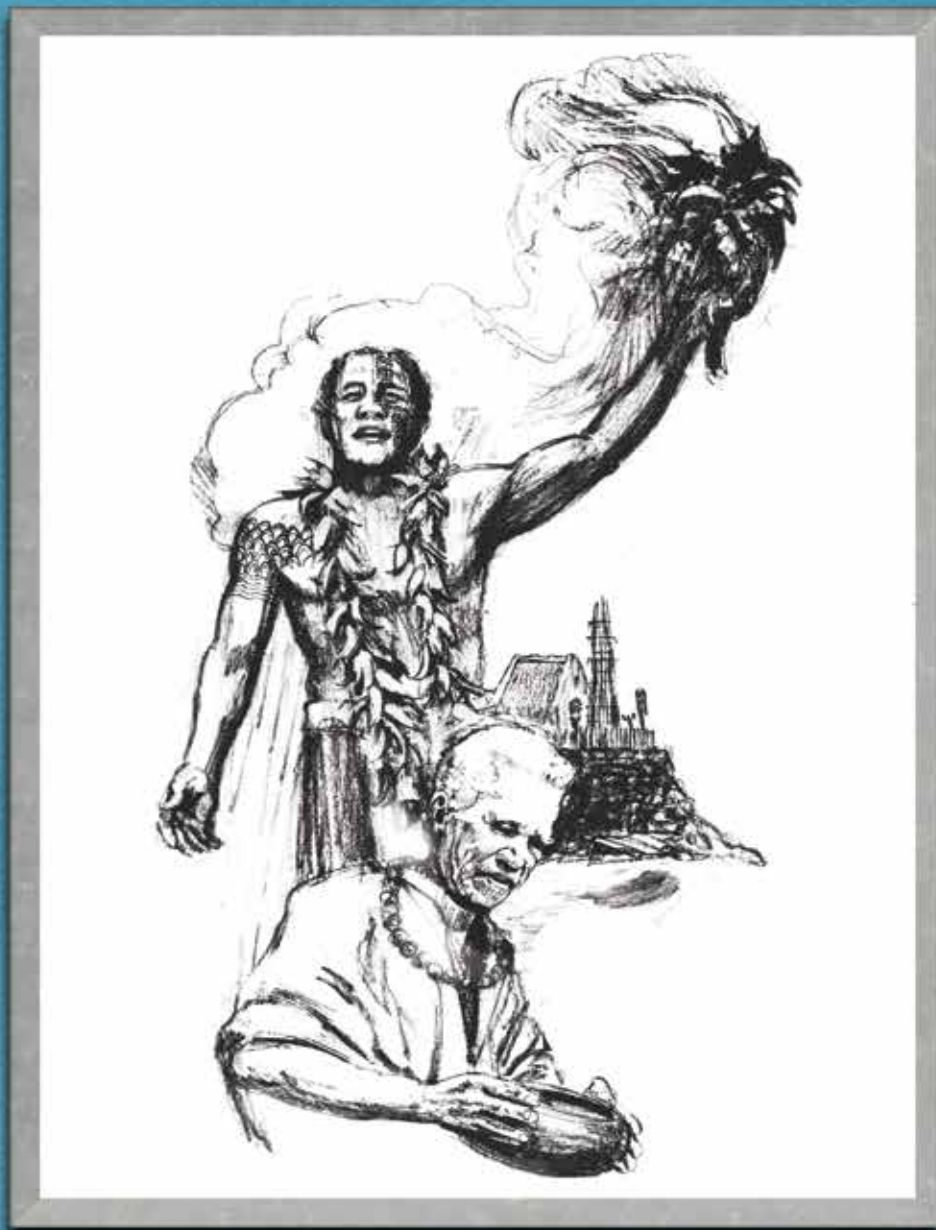
Appendix E: Record of groundwater development issues in the area of Kaloko-Honokōhau.

Summary of wells and residential and commercial development projects on which the NPS has commented with respect to the use of groundwater.

No.	Issue	NPS Comment	Response
1	The Shores at Kohanaiki Dust Suppression Well Construction/Pump Installation Application	9/23/05 letter to D. Nakano - CWRM	-
2	Kona Kai Ola Project EIS	8/18/06 letter to S. Condra - Jacoby Development, LLC 2/6/07 letter to S. Condra - Jacoby Development, LLC 12/5/07 letter to L. Thielen - DLNR	10/20/06 letter from J. Merz 7/23/07 letter from D. Vithanage -
3	Water Resource Protection Plan Update	1/10/07 letter to K. Kawahara - CWRM	8/14/08 letter from K. Kawahara
4	Kohanaiki 1-7 Well Construction/Pump Installation Application	3/7/07 letter to R. Hardy - CWRM 8/18/08 letter to R. Hardy - CWRM 9/2/08 letter to K. Kawahara - CWRM 1/28/09 letter to K. Kawahara - CWRM	7/15/08 letter from K. Kawahara Pump Installation Permit dated 9/19/08 -
5	O'oma Beachside Village EIS	6/7/07 letter to T. Whitten - PBR Hawai'i 7/3/08 letter to M. Moresco - Ooma Beachside Village, LLC	5/9/08 letter from T. Schnell 12/10/08 letter from T. Schnell
6	The Shores at Kohanaiki Water Development Impacts, SMA Use Permit No. 439, Condition 41	6/11/07 letter to C. Yuen - County of Hawai'i 6/29/07 letter to C. Yuen - County of Hawai'i	10/2/08 letter from C. Yuen
7	Keahuolu Affordable Housing Project EIS	8/21/07 letter to M. O'Leary - Belt Collins Hawai'i, Ltd. 4/8/08 letter to M. O'Leary - Belt Collins Hawai'i, Ltd.	2/12/08 letter from M. O'Leary 9/25/08 letter from L. Sichter
8	The Shores at Kohanaiki UIC Application No. UH-2594	9/18/07 letter to S. Yamada - DOH 7/25/08 letter to S. Yamada - DOH Letter dated 11/24/08 to S. Yamada - DOH	6/26/08 letter from S. Yamada 10/29/08 letter from S. Yamada UIC Permit No. UH-2594 dated 12/1/08
9	Kaloko Transitional Housing EA	12/21/07 letter to R. Terry - Geometrician Associates, LLC 12/4/08 letter to R. Terry - Geometrician Associates, LLC	- 1/26/09 letter from R. Terry
10	Ooma 1 Well Construction/Pump Installation Permit Application	3/14/08 letter to R. Hardy - CWRM	-
11	Kaloko Makai Project EIS	3/18/08 letter to A. Suwa - Wilson Okamoto Corp. 10/22/10 letter to E. Matsukawa - Wilson Okamoto Corp. 10/5/11 letter to E. Matsukawa - Wilson Okamoto Corp.	- - 7/25/2013 letter from E. Matsukawa

No.	Issue	NPS Comment	Response
12	Keopu-Puuhonua Well Construction/Pump Installation Permit Application	4/4/08 letter from C. Pettee to R. Hardy - CWRM	-
13	Waiaha Water Systems (Transmission Mains and Reservoirs) EA	4/7/08 letter from C. Pettee to Y. Ohashi - Waiaha System, LLC	7/2/08 letter from Y. Ohashi
14	Hina Lani St. 1.0-Million Gallon Reservoir and Transmission Waterline EA	4/7/08 letter from C. Pettee to G. Yorita - DWS	8/31/08 letter from J. Sagaguchi
15	Kalaoa Water Systems Improvements EA	5/23/08 letter from C. Pettee to E. Matsukawa - Wilson Okamoto Corp.	3/10/09 letter from E. Matsukawa
16	Palamanui Waterline and Reservoir EA	7/2/08 letter from C. Pettee to V. Shigekuni - PBR Hawai'i	7/10/08 letter from V. Shigekuni
17	Lokahi Ka'u Affordable Apartments EA	12/8/08 letter from G. Bell to R. Terry - Geometrician Associates, LLC	12/17/08 letter from R. Terry
18	Palani Well No. 1 EA and Pump Installation Application	5/8/09 letter from C. Pettee to R. Terry - Geometrician Associates 11/21/11 letter from B. Hansen to W. Aila - CWRM	10/5/09 letter from R. Terry 12/15/11 letter from W. Tam
19	Kamakana Well Construction / Pump Installation Application	11/18/09 letter from C. Pettee to K. Kawahara - CWRM	-
20	Keopu Well, Reservoir, and Water Transmission Lines Hienaloli 1-6, North Kona, Hawai'i EA	11/5/09 letter from C. Pettee to G. Koyama - Belt Collins Hawai'i Ltd.	2/25/10 letter from G. Koyama
21	Laiohua Community Center EA	3/18/10 letter from G. Bell to R. Terry - Geometrician Associates, LLC 8/3/10 letter from G. Bell to M. Chandler, U.S. HUD	4/1/10 letter from R. Terry 8/9/10 letter from C. Kuhui
22	Honokōhau 2 Well Construction/Pump Installation Permit Application	5/13/10 letter from C. Pettee to K. Kawahara - CWRM	-
23	BioEnergy Hawai'i Waste Conversion Facility EIS preparation notice	1/21/11 letter from K. Billings to G. Kaniho - BioEnergy Hawai'i	-
24	Hawai'i County Water Use & Development Plan Update	8/17/11 letter from K. Billings to W. Aila - CWRM 12/13/11 letter from K. Billings to W. Tam - CWRM	10/26/11 letter from W. Tam -
25	Desalination activities in N. Kona	11/21/11 letter from K. Billings to W. Aila - CWRM	-
26	Keauholu 2 Well Construction/Pump Installation Application	6/6/12 letter from B. Hansen to W. Tam - CWRM	-

The Spirit of
KA-LOKO HONO-KŌ-HAU



Celebrating 40 years

EXHIBIT 2

ENDURING LEGACY - CONTINUING KULEANA

*An Introduction by Fred Cachola for the second printing of "Spirit of Ka-loko, Hono-kō-hau",
a proposal for the establishment of a Ka-loko, Hono-kō-hau National Cultural Park,
Island of Hawai'i State of Hawai'i*

Forty years ago, fourteen native Hawaiians were asked to advise the Department of Interior about the desirability and feasibility of establishing a unit of the National Park System (NPS) at the Historic Landmark at Kaloko-Honokōhau, Kona. They were officially appointed to the "Honokōhau Study Advisory Commission, National Park Service, Department of Interior" in Public Law 92-346; with a modest budget, NPS staff support and a two year period to complete their study.

This seldom if ever happened in Hawai'i, and those being asked were very notable *kupuna* (elders) like Iolani Luahine, George Naope, Homer Hayes, Mauna Roy and others. At that time, in 1972, I was a young Hawaiian educator recently employed by the Kamehameha Schools. Asking native Hawaiians for their advice on perpetuating their dwindling cultural resources was indeed breaking new ground on the ancient *ʻāina* (lands) of Hawai'i. Furthermore, native Hawaiians were already dismayed at the lack of native Hawaiians employed at the Haleakalā and Hawai'i Volcanoes National Parks and disillusioned at how their rich cultural legacies were being interpreted and portrayed by non-Hawaiian rangers from the mainland... and primarily from a scientific rather than a cultural perspective. Consequently several members of the Study Advisory Commission were very skeptical about giving any advice to the feds or whether such advice would be seriously considered. I was among those skeptics.

However, the top NPS officials who met with us, Western Regional Director Howard Chapman and Hawai'i State Director, Robert Barrel, actively encouraged us to dig deep into our personal Hawaiian perspectives. . . to *kukakuka* (confer/discuss) with other Hawaiians at public meetings throughout the state and to tell our story and tell it in our own way. They carefully restrained themselves from any action or activity that could be deemed directive and diversionary from our Hawaiian *mana'o* (thoughts/feelings). They quickly approved the selections for our all-Hawaiian consultants, like artist Herb Kane, researchers/writers John Waihe'e III (yes, he later became our governor), Steve Morse, A'ala Roy, Joe Nahale; Planner, Richard Kapololu, and architect George Kekoolani... and among us from the Bishop Museum was the eminent Dr. Kenneth Emory. We couldn't have gathered a better group to *kokua* (help/support) our 2-year study.

So we plunged deeply into our Hawaiian souls and spirits... we met with *kupuna* on all the islands, we walked the ancient trails again at Kaloko-Honokōhau... slept under their night skies... relaxed in the cooling *eka* breezes... reveled in the traditional *mele* (songs), *oli* (chants) and *hula* (dances) of the Kona district... worshiped in the *heiau* (temple) and found strength in every pore of each *pohaku* (stone)... our thoughts filled the famous fishponds... we heard the booming voice of Kanakaleo nui and after a thorough immersion into our cultural consciousness we finally felt the SPIRIT of Kaloko-Honokōhau. We then envisioned a special place where Hawaiians could and would recapture, restore and relive the finest hours of their ancestors... a place that was primarily projected to be THE place for the rejuvenation of our rapidly diminishing traditional cultural beliefs and practices... and all of this firmly anchored with a unique Hawaiian Educational Live-In Cultural Center... this overall vision from the collective thoughts of Native Hawaiians was innovative, new, and never before expressed by any other group in Hawaii... or among indigenous American natives.

So with the writing skills of Park Planner Ronald Mortimer from the Western Regional Office, our vision poured into the 78 pages of this "Spirit Report"... and with great pride, Mauna Roy, Abbie Napeahi and I presented this report to the Department of Interior in May, 1974. It was truly a very proud moment not just for the three of us, or the 14-member advisory commission, but for all Hawaiians... because we knew that, perhaps for the first time, native Hawaiians were telling their story and telling it in their own way.

SPRIT OF HONO-KŌ-HAU

Our voices around the fire
spoke in soft harmony,
Bound by the spirit of Hono - kō - hau
to our kupuna
Who settled in the sacredness
of the living honua.

We walked the trails again
with our words;
Mauka-makai across our history
built upon the `a`ā;
Past the stone planters
where our culture grew.

Our thoughts filled the ponds
at high tide,
Through the mākāhā, they flowed
into our heritage
Born between land and sea
secured by the kuapā.

We found strength upon the heiau,
in every pore of each stone.
Buried beneath the grave mounds
was the life we worshipped;
To the spirit of Hono-kō-hau
we offered ourselves.

As burning embers lit the night,
we made our beds of sand.
The oli was sung and danced
below the shooting stars.
Kanakanaka would wake us;
guide our boats to sea.

Stephen Kāne-a-i Morse

THE HONOKOHAU STUDY ADVISORY COMMISSION
Kailua-Kona, Hawaii

May 18, 1974

The Secretary of the Interior
United States Department of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

In accordance with the mandate of Public Law 92-346, we respectfully submit to you a study entitled, The Spirit of Kaloko-Honokohau, relating to the feasibility and desirability of establishing, as part of the National Park System, the site of the Honokohau National Historic Landmark and adjacent waters.

The study referred to contains, but is not limited to, findings with respect to the historic, cultural, archaeological, scenic, and natural values of the resources involved and recommendations for preservation and interpretation of those resources, including the role of native Hawaiians relative to the management and performance of that preservation and interpretation and the providing to them of training opportunities in such management and performance.

We take special pleasure in presenting this study, because perhaps for the first time, native Hawaiians have been able to tell their story and tell it in their own way.

For this opportunity, we extend our sincere mahalo to the Congress of the United States, the Department of the Interior, the National Park Service, and the numerous other people who have contributed their kokua.

Me kealoha pumehana,

Homer A. Hayes Lapani Lealohi George L. Naepe
David A. Hayes Abbie Naepe Colonel Corbin D. Naepe
Kwai A. Lee Emily Keai Thomas
Nani Mary Bowman George Linschke Kenneth D. Emory
Henry K. Bernhard Pilipo Springer Fred C. C. C.

THE HONOKOHAU STUDY ADVISORY COMMISSION

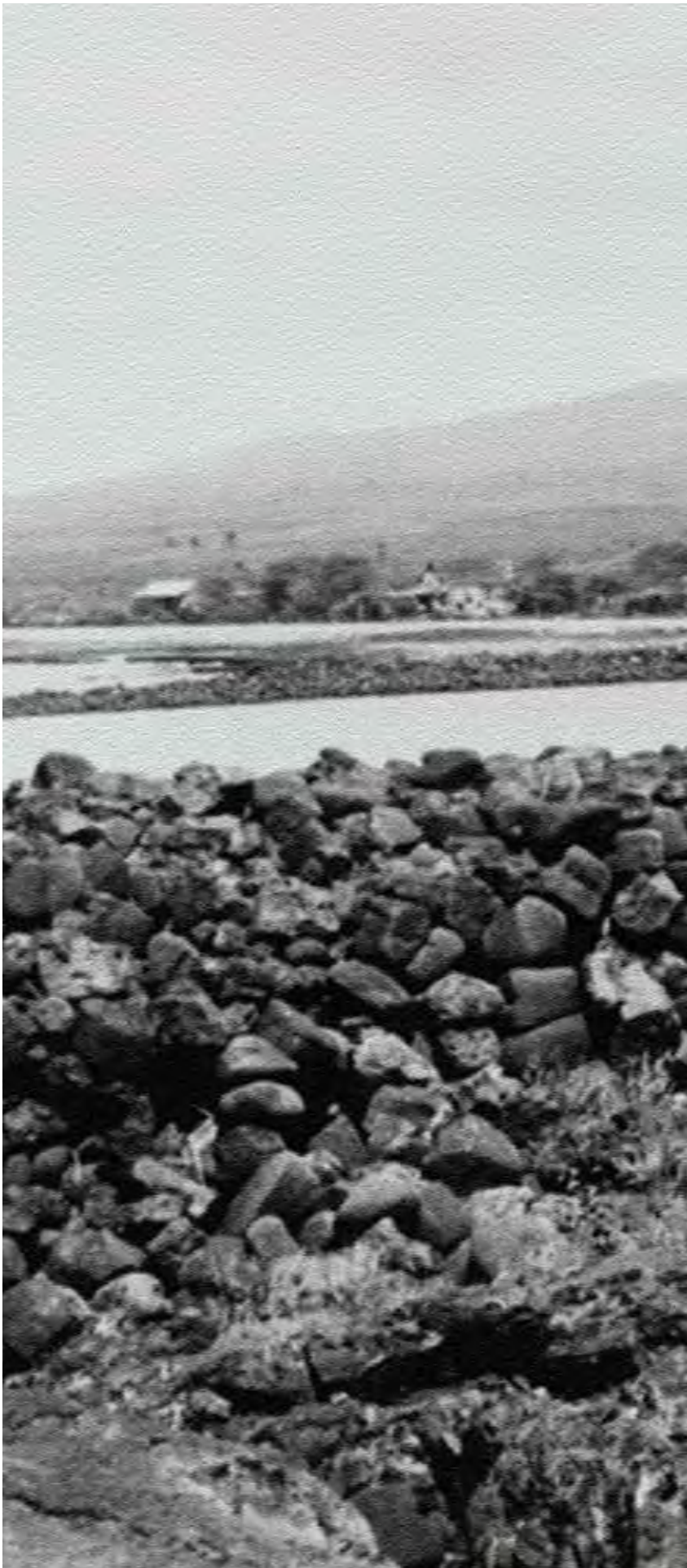
the spirit of KA-LOKO HONO-KŌ-HAU

a proposal for the establishment of a
Ka-loko Hono-kō-hau National Cultural Park
Island of Hawai'i
State of Hawai'i

prepared by: Hono-kō-hau Study Advisory Commission
National Park Service
Department of the Interior

table of contents

INTRODUCTION	1
THE SPRIRIT OF KA-LOKO, HONO-KŌ-HAU	
PAST	2
PRESENT	18
FUTURE	20
THE NATIONAL SPIRIT	22
RECOMMENDATIONS, PLAN	25
PRESERVATION	30
INTERPRETATION	38
MANAGEMENT	50
EMPLOYMENT POLICY	61
RESEARCH	65
GENERAL PLANNING CONSIDERATIONS	67
APPENDIXES	79



introduction

It is difficult to explain the real significance of Ka-loko, Hono-kō-hau through the medium of the written word. The written word is merely a symbol upon a piece of paper which has today become man's major form of communication. There is no question that it is unsurpassed as a means of transmitting information, but just sitting on a page, inanimate and unfeeling, how could it possibly begin to convey the feelings of a people who are trying to re-establish their identity and thus maintain their existence as a people? How could it effectively portray the determined efforts of these people to hang onto every bit of their culture and heritage that has not been bought, sold, misused, and lost? The answer is a simple one. It cannot.

Ancient Hawaiians passed on information of importance through an oral tradition. Children learned different skills like fishing and canoe-building by observing, doing, and listening. Through the *oli* (chants) genealogies were transmitted, and the *mele* (songs) often taught cultural values through musical stories. In this way, the transmitted information had meaning because it was alive.

In order to truly make Ka-loko, Hono-kō-hau live again, to have its real meaning come alive, its story would also have to be told orally. Unfortunately, because of the limitations of this study, it cannot be told in the traditional Hawaiian manner. However, this proposal will still attempt to tell a story, and thus, perhaps, it will be different from other proposals submitted to the Department of the Interior. It does not maintain the integrity of the Hawaiian language or oral tradition, and for this we ask the forgiveness of our *kupuna* who passed on their legacy. But, like a poem or a short story, it will try to convey a message that is alive.

Today, when Hawaiians have information of importance to pass on to other Hawaiians, they may "go talk story". It is our small way of carrying on the oral tradition of our ancestors. This proposal attempts to "talk story". It is a story of Ka-loko, Hono-kō-hau and we tell it proudly.

The Hono-kō-hau Study Advisory Commission

the spirit of Ka-loko, Hono-kō-hau

PAST

2

Along the western coastline of the Island of Hawai'i lies the hot, rugged lava of Ka-loko, Hono-kō-hau. This seemingly barren and harsh landscape does not appear to be suitable for human existence, and yet, long before written history, the Hawaiian people built a thriving settlement upon the 'a'ā lava, which was to last well into the 19th century when the forces of western culture slowly brought an end to the Hawaiian way of life.

Some people find it difficult to understand why the ancient Hawaiians chose to settle upon the inhospitable lava fields of Ka-loko, Hono-kō-hau. The reason was, perhaps, a spiritual one, for there was a spirit in Kal-oko, Hono-kō-hau. The Hawaiians who first came to the area felt its presence in every rock and tree, in the gentle waters of the shallow bays, and in the tradewinds that gently swept across the prehistoric lava flow. They touched the spirit and felt its *mana* (power).



The spirit of Ka-loko, Hono-kō-hau was its life, the life that flowed in its land and the water that washed upon its shore. Like Hawaiians who found its presence elsewhere, the people of Ka-loko, Hono-kō-hau let the spirit become part of their existence. They lived in such perfect harmony with it that they became a singular, total, and inseparable environment.



THE PHYSICAL SPIRIT

4

Perhaps only people like the ancient Hawaiians, who had long ago formed a spiritual identification with nature, could recognize that despite the inhospitable lava fields, Ka-loko, Hono-kō-hau had much to give. Only such people could perceive that there were sufficient physical resources to support and satisfy the needs of large populations if they were of the mind and spirit to stay and work with the land.

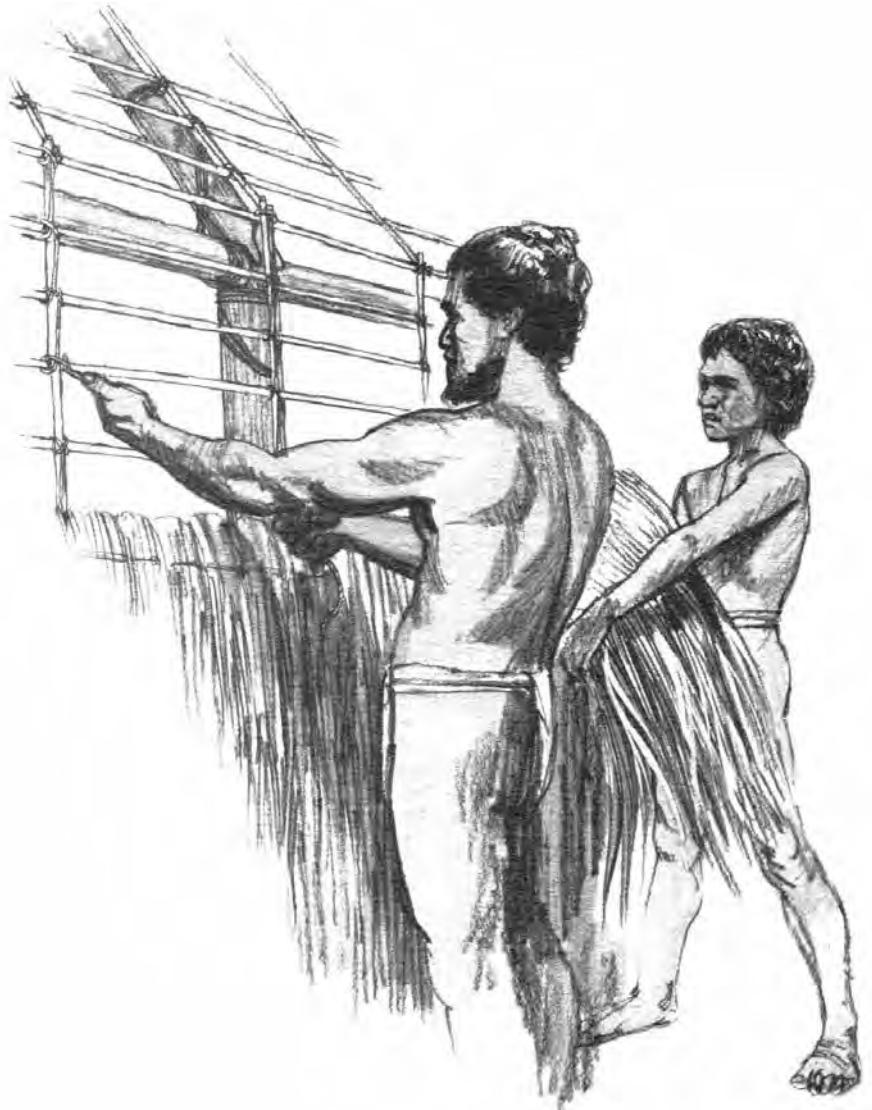
Ka-loko, Hono-kō-hau had calm seas and shallow landings which made it ideal for the Hawaiian canoes, which were important for transportation, recreation, and fishing. Fish and other marine life were plentiful along the shoreline and offshore waters, with *ōpelu*, *‘aku*, and *‘ahi* in the offshore deeps and migrating *akule* in the shallows providing more than ample catches for the population. However, seasonal deep-sea fishing was at times unpredictable, so using their practical engineering skills and the contours of the shallow bays at Ka-loko, Hono-kō-hau as natural

guides, the Hawaiians constructed fishponds and developed a simple, yet highly sophisticated and efficient system of fish farming that until this day has not been duplicated.



The native plant life which grew in the settlement area was sufficient to provide for many of the needs of the people. Plants such as the native *noni* and *'ilima* were used for medicinal purposes. The *pōhuehue* mat had several uses. When twisted into coils it was used to drive fish into nets, and when foods were scarce, the roots and stems could be cooked and eaten. The stringy land *kauna'oa* could make an effective fish net while the chemical makeup of the *'auhuhu* and *akia* plants were such that when crushed and strewn in the water, they had a tranquilizing effect on fish. The *'auhuhu* flower was also used to treat people, especially children, with respiratory problems, and the hard wood of the *milo* and *kou* trees was best for making *'umeke* (bowls), and other utensils.

Pili grass was used by the Hawaiians to make the thatched walls and roofs of their *hale mau'u* (grass shelters). The warm, pleasant climate of the region made it unnecessary for the Hawaiians to build elaborate shelters. Instead they were able to dwell upon the *pāhoehoe* and *'a'ā* flats in their *hale mau'u*, which were built only to break the exposure to sun, rain, and wind. The *hale mau'u* was functional, as well as easy to build, repair, and replace. More important, this was the only shelter Hawaiians ever needed in Ka-loko, Hono-kō-hau.



The physical location of Ka-loko, Hono-kō-hau made the settlement easy to manage. Situated on the lower portions of a sloping terrain, the settlement's activities were directed by *kahuna* chiefs, from a vantage point, such as the bluff overlooking the fishpond of 'Ai'makapā, where a commanding view of Ka-loko, Hono-kō-hau was available. Tradition has it that directions were issued by arm and *kapa* (tapa) flag signals to subordinates in both areas. In addition, the large platform *heaiu* at Maliu Point, known as Pu'u'oina, was reputed to be the base of operations for *kahuna* chiefs who governed Hono-kō-hau and the north Kona area. Its proximity to the ocean and the 'Ai'opio fish trap made it ideal for directing the fishing activities of the settlement.

But the spirit of Ka-loko, Hono-kō-hau revealed itself to the ancient Hawaiians in another form which was, perhaps, the most critical factor in their decision to settle in the area. What they found scattered along the shoreline and among the jagged lava, were cool, brackish water springs. To the Hawaiians, the presence of these springs through-out the area was indication that there was enough of an underground water source to sustain the everyday needs of a settlement of people.





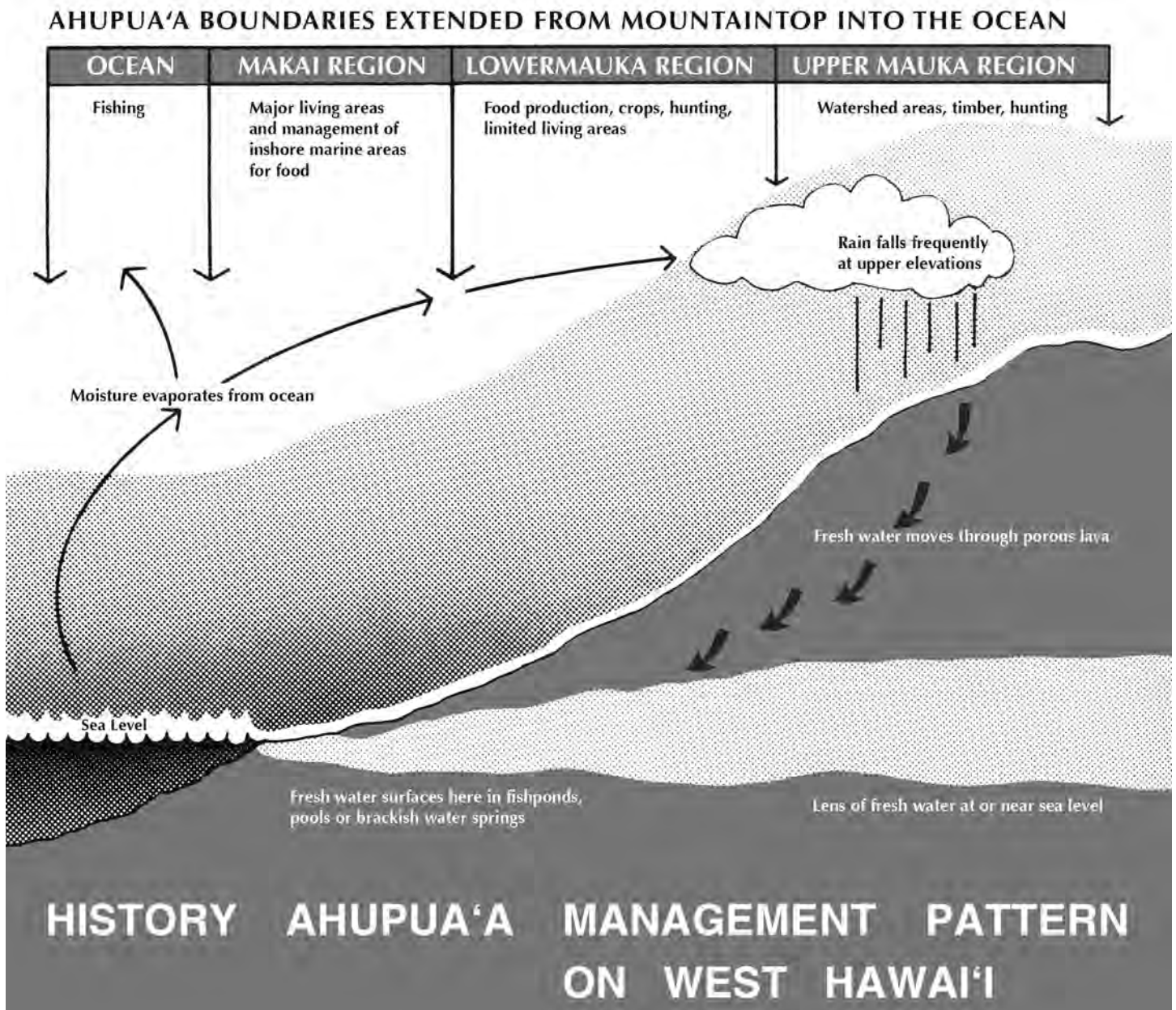
THE CULTURAL SPIRIT

The Hawaiian settlement at Ka-loko, Hono-kō-hau did not just survive. It thrived, because the ancient Hawaiians touched and understood the spirit but did not disturb it. They nurtured the spirit tenderly, like a rare and precious plant, and it grew until it filled everything around it with its being. Their philosophy was a simple and effective one -- “provide for nature and it will provide”. In this way they maintained the delicate balance that existed in their sacred relationship with nature. To misuse the natural resources at Ka-loko, Hono-kō-hau would bring upon them the wrath of their all-powerful gods Kāne, Ku, Lono and Kanaloa, and devastation to their land.

Thus the people of Ka-loko, Hono-kō-hau, like other Hawaiians of that time, observed their *kapu* system, a set of regulations and prohibitions governing almost every activity of life, religiously. They believed the *kapu* were directed by the gods through the *kahuna* chiefs who imposed them upon the people. Although seemingly rigid and perpetuated by strict enforcement, the *kapu* system had a purpose for the Hawaiians. Its edicts contained their respect for nature’s *mana* and the assurance of survival, for many of the *kapu* were designed to protect the land and conserve its resources which ultimately sustained their needs.

One very important *kapu* at Ka-loko, Hono-kō-hau was the one placed on the use of water. The brackish water pools were divided into different functions. Some were specifically for drinking, others for bathing or for washing dishes, utensils and clothes. Separating the functions of the pools was the people’s way of maintaining cleanliness and good health.

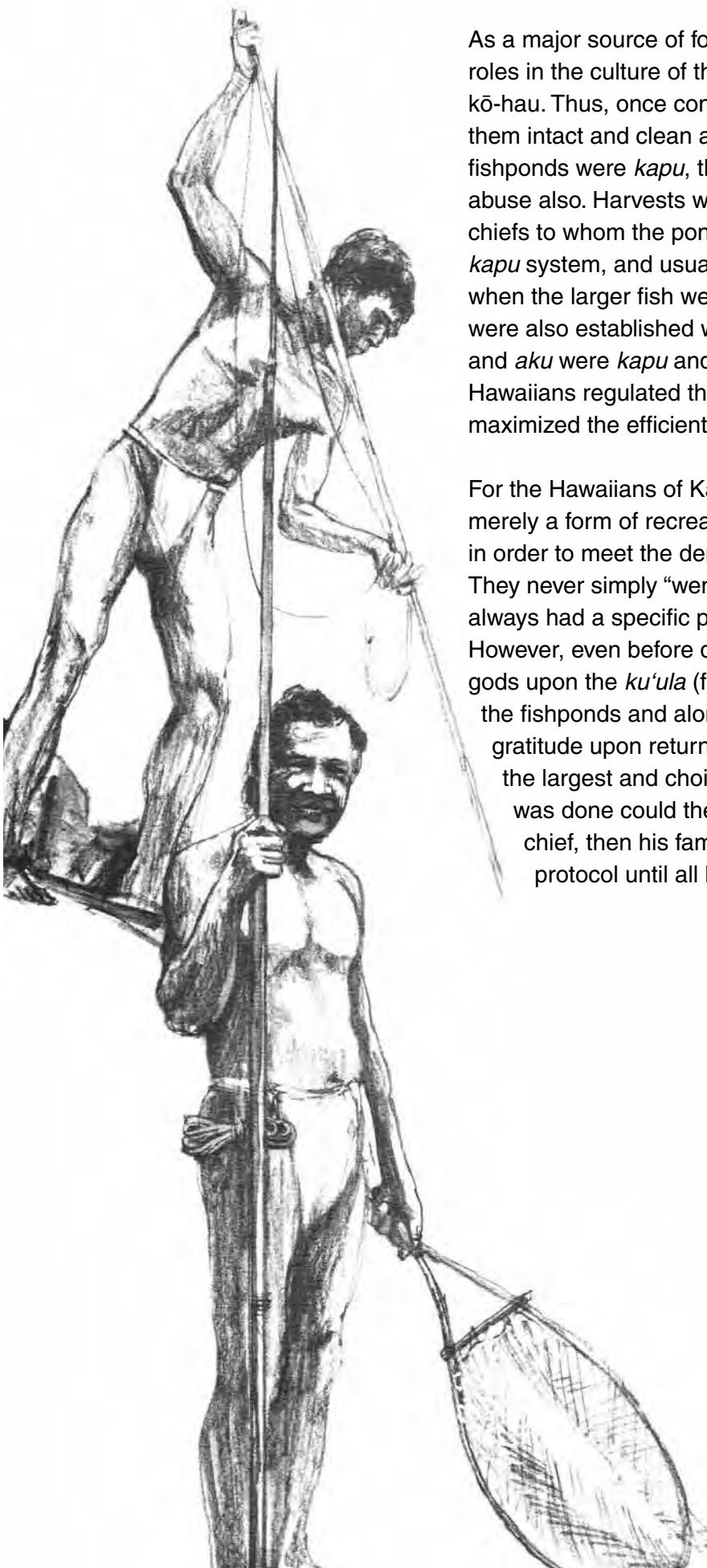
Water from these pools was also necessary to sustain the ingenious methods devised by the people who lived on the lava flats to grow supplementary crops such as sweet potatoes, gourds and medicinal plants and herbs upon the 'a'ā. These crops were often grown within the stone enclosures. To provide the moisture needed by these crops and to ensure protection to the root system in this porous environment, the Hawaiians made use of the husks of dried coconut. These husks were immersed in the available fresh or brackish water until the color darkened nearly to a shade of black. These soaked husks were then placed around the plant roots, providing a moist environment as well as protection from direct exposure to the sun and dehydration. A regular application of water maintained the desired growing conditions. The walls of the enclosure also provided support for the crawling vines and protection from the wind and afternoon heat.



The porous nature of the soil in the settlement area allowed the underground water source to flow evenly from the slopes of Mount Hualālai to the sea where it eventually evaporated into the sky, fell as rain upon the mountain slopes, and once again flowed underground to the sea. Because of their careful observation and respect for their environment, the Hawaiians knew well enough not to obstruct or interfere with this water cycle in any way which would jeopardize the continuation of this precious resource. As well as supplying the brackish water pools, the water source acted as a valuable underground aquifer for the fishponds.

The way Hawaiians constructed and used fishponds also demonstrated their total understanding and appreciation for the resources of Ka-loko, Hono-kō-hau. The Ka-loko and Ai'makapā ponds were once the largest and best along the Kona Coast of the Island of Hawai'i. The great *kuapā* (sea wall) of Ka-loko was built with large boulders. The Hawaiians constructed two openings known as *mākāhā* (sluice gate) within the wall so that as the tide began to flow in through the *mākāhā*, the fish could enter the pond. At full tide the *pani* (gate) of the *mākāhā* was then closed so that the fish could not escape when the tide receded. 'Ai'makapā operated much in the same manner except that the pond itself had formed behind a natural beach rather than being enclosed by a *kuapā*. The Hawaiians simply took the natural advantage afforded them and improved it for their own benefit.





As a major source of food supply, these ponds played important roles in the culture of the original inhabitants of Ka-loko, Hono-kō-hau. Thus, once constructed, great care was taken to keep them intact and clean and clear of overgrowth. At times the fishponds were *kapu*, thereby protecting them from human abuse also. Harvests were made at the direction of the ruling chiefs to whom the ponds belonged, within the constraints of the *kapu* system, and usually only in times of stress and need, or when the larger fish were too abundant in the ponds. Seasons were also established when certain ocean fish such as *opelu* and *aku* were *kapu* and could not be caught. In these ways, the Hawaiians regulated the flow and supply of different fish and maximized the efficient use of the ocean and fishponds.

For the Hawaiians of Ka-loko, Hono-kō-hau, fishing was not merely a form of recreation. It was a way of life they lived in order to meet the demands of an exacting environment. They never simply “went fishing”. When venturing forth, they always had a specific place and a certain catch of fish in mind. However, even before doing that, they sought the favor of their gods upon the *ku’ula* (fishing *heiau*) which were built around the fishponds and along the coastline. They expressed their gratitude upon return by offering and honoring their gods with the largest and choicest fish in their catch. Only after that was done could the daily catch be portioned out—first to the chief, then his family and retainers, and so on in line of protocol until all had shared. Their offerings were signs

of reverence for the powers that permitted and promoted the growth of their food and allowed them to secure it for their personal use and benefit.

With their simple tools, the Hawaiians of Ka-loko, Hono-kō-hau cultivated the land, built their dwellings, logged the forests, built their magnificent ocean-going *kaulua* (sailing double canoes) and *wa'a* (fishing and war canoes), made their *kapa* for clothing and all their fishing and farming equipment. They learned to use everything that nature had to offer - stone, wood, bark, sap, fiber, roots, leaves, marine plants, herbs, fruits, nuts, fish, fowl and animals. In the process they also learned to schedule their time so that there was a balance of activities. There was sufficient time for food production, for developing their unique forms of creative art such as their *mele* (songs), *oli* (chants), and *hula* (dances) and most important, time for their gods. The latter occupied a substantial amount, if not the greater part of time in all their activities. They provided for their gods, and in turn, the gods provided for the Hawaiians.





THE HUMAN SPIRIT

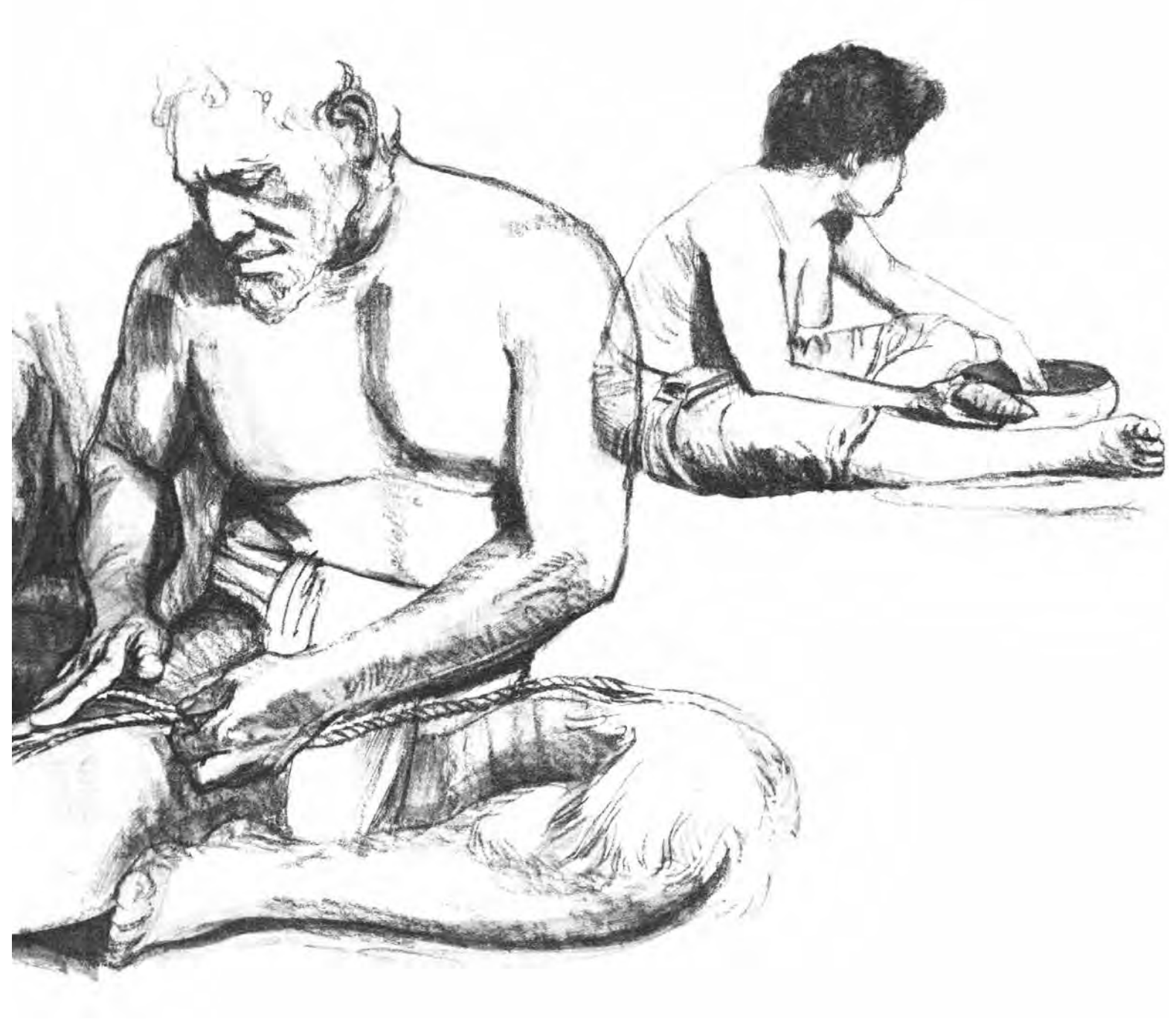
There was much more to the spirit of Ka-loko, Hono-kō-hau. The settlement thrived not only because of its physical resources, but also because of its human resources. The Hawaiians' spiritual identification with their land was matched by their sensitivity and close relationship to each other. From this sensitivity developed a socio-economic system based on sharing and mutual cooperation, a system that can best be described by the Hawaiian concept of *kōkua* (helping).



The Hawaiians built a system of trails in Ka-loko, Hono-kō-hau which was used by the people to travel and communicate with *‘ohana* (extended family) and friends within the *ahupua‘a* (basic land division reaching from mountain to sea). These trails also served as a vital lifelines, for it was the custom of Hawaiians living *makai* (seaward) to take fish, salt and *limu* (seaweed) to *‘ohana* and friends living *mauka* (toward the mountains). In return, the people *mauka* shared their products of taro, sweet potato and breadfruit. Sometimes fires were lit when one needed the other. The food was then prepared and taken to the origin of the fire. This form of sharing was basic to the Hawaiian way of life, and the trails provided the physical means to make it possible. It was not a matter of trading or bartering, but rather family or friends sharing with others when they “had plenty”.



This sharing concept extended beyond the borders of the *ahupua'a* as well. Trails leading along the coast and laterally in the *mauka* areas served as routes for transporting food and other items to members of the *'ohana* living in the neighboring *ahupua'a*.



THE GUARDIAN SPIRIT

The ancient Hawaiians lived, died, and were buried within the Ka-loko, Hono-kō-hau settlement. In their religious beliefs, Hawaiians made very little distinction between life and death. They faithfully believed that when their *kupuna* (ancestors) passed from this world they traveled to another dimension where they became *‘aumakua*, the spirit guardians of the *‘ohana*. Thus, the burial sites in the settlement were sacred. They were carefully tended to by the people, for any disturbance of the graves meant that the spirit of their *‘aumakua* would also be disturbed.

16



THE ROYAL SPIRIT

There is a mysterious, haunting quality about the burials in Ka-loko, Hono-kō-hau. Most of them are those of the *maka'āinana*, the common people who lived in the area. But, hidden within secret caves or lava tubes, in order to preserve their *mana*, are the bones of the high ranking *ali'i*.

The *ali'i*, the chiefs of various ranks, were those of purest blood and indisputable family seniority. They were considered closest in descent from the gods, and their *mana* and prestige stemmed from this descent. They treasured the lands with fishponds because the ponds were known to be a great source of food supply. Thus Ka-loko, Hono-kō-hau was extremely valuable to them because it had three fishponds. They often used the settlement for recreational and ceremonial purposes. Built upon the lava flats around the *'Ai'makapā* fishpond were large platforms, enclosed arenas, and a *hōlua* (toboggan slide) which were used during their stay.

Of all the *ali'i* associated with Ka-loko, Hono-kō-hau, the most famous is the great *mō'i* (king), Ka-mehameha I, who first united the Hawaiian Islands under one rule. The *mō'i* had moved his court to Kai-lua, not far from Ka-loko, Hono-kō-hau, and it is said his armies often used the settlement as a place to refresh themselves on their long marches. The major tie with Ka-mehameha, however, concerns the belief that after his death, his chiefly bones were placed in a hidden sepulchre somewhere in Ka-loko near those of other *ali'i*. To this day its exact location remains a closely guarded secret, protected by the Hawaiians' belief that his resting place is sacred and *kapu*.

Ka-loko is also believed to be the resting place of King Kahekili, ruler of Mau'i and purported by some to be the father of Ka-mehameha. Kahekili's sister, Kalola, and her daughter Keku'iapoiwa Liliha, the grandmother of Ka-mehameha III, are also said to be buried there in the same burial cave as Kahekili.

Ka-loko has always been considered *kapu-kapu* (very sacred, to be respected), and its fishpond is said to have a *mo'o*, a spirit guardian that lives within the pond and protects it and the fish from being abused.



PRESENT

18

The ancient Hawaiians of Ka-loko, Hono-kō-hau were a proud people, and they had much to be proud of. Their life was not easy, but because of their remarkable faith in their gods, in themselves, and in the spirit of Ka-loko, Hono-kō-hau, they were able to develop a way of life unsurpassed by any other group of people in the world.

Today, except for occasional use by fishermen, hikers and campers, most of Ka-loko, Hono-kō-hau lands are idle. But many of the physical, historical, and archeological features of the Ka-loko, Hono-kō-hau settlement remain intact. Archeologists of the Bishop Museum have found and identified approximately 234 sites which encompass almost every functional structure known to Hawaiian prehistory. The most significant sites include the fish ponds, *heiau*, *ku-ula* (image used to attract fish), house platforms, *holua*, trails, stone planters, canoe landings and shelters, assembly grounds, salt pans, petroglyphs, *papamu* (checkerboard), and burials. The large number of sites substantiates the fact that large populations of several hundred once occupied the settlement.

Although overgrown and in disrepair, the Ka-loko and 'Ai'makapā fishponds and the 'Ai'opio fish trap were the hub of the settlement's activities and a major source of food. They still represent the finest example of the ancient Hawaiian ability to adapt to their physical environment. Fishpond culture was of vast importance to the ancient Hawaiian way of life, and it can now regain much of that value by assisting modern man in adapting to his environment. Both Ka-loko and 'Ai'makapā are well stocked with fish, and 'Ai'makapā is a habitat for native and migratory birds, two of which, the *āe'o* (Hawaiian stilt) and *koloa* (Hawaiian duck), are on the endangered species list.

The Pu'u'oina *heiau*, also known as Hale o Mano, remains as the best example of a platform *heiau* in Kona. Its primitive beauty and durability are indications of the resourcefulness of the Hawaiians who built it.

Fish are still plentiful in offshore waters, and other sites such as the *hōlua* and stone planters are well preserved. The trails wind lazily through the lava, and the brackish water pools remain refreshingly cool. The graves are intact for the most part, but too many of them have been ransacked for artifacts they may have contained.

Ka-loko maintains its haunting secrets and its *kapu-kapu* atmosphere with the resting place of Ka-mehameha's bones still a mystery and a matter of conflicting documentation. Perhaps it should remain what it is--a mystery. One research source, speaking of Ka-mehameha's burial, stated:



It is in one sense prestigious that history guard the mystery and desired solemnity that the “loko hūnā” provides. If it can be accepted and respected by the Hawaiians, why then can others not be as accepting? Roy and Nahale, Oral History of Hono-kō-hau, (Na Mo’olelo Ha’i Waha ‘O Hono-kō-hau Ka-loko) unpublished research, Honolulu: Bernice Pauahi, Bishop Museum, January, 1974, p. 46)

However, the spirit of Ka-loko, Hono-kō-hau, the life of the land and sea, began to wither when it became merely a commodity to be bought and sold. Now it is in danger of extinction.

Because of its scenic beauty and proximity to the ocean and its recreational potential, Ka-loko, Hono-kō-hau is being threatened by encroaching urban and resort development. Landowners in the area have proposed a development plan in which the lands of Ka-loko and Hono-kō-hau are designed for resort and urban use.

FUTURE

20

Perhaps the spirit of Ka-loko, Hono-kō-hau has withered because the spirit of the Hawaiian people has withered; slowly eroded by the powerful forces of the west, introduced almost two hundred years ago by profit-seeking merchants and over-zealous missionaries; forces that devastated the Hawaiian population through epidemics, broke down the *kapu* system which provided the basic foundation of the Hawaiian culture, and replaced the Hawaiian system of land tenure with one so totally foreign to the Hawaiians that within matter of 50 years they found themselves practically landless in their own land.

The loss of their land and the disintegration of their culture has left the Hawaiian people virtually lifeless, without much of their identity. Their language and arts are perpetuated by only a diligent few, and except for major events, many Hawaiians know very little about their heritage. But perhaps the most tragic loss Hawaiians have suffered is the sensitivity and spiritual bond to each other which once brought the people of the Ka-loko, Hono-kō-hau settlement so close together.

Today, despite the pressures to assimilate into the now dominant western culture, Hawaiians desperately cling to that spirit so tenderly nurtured by their *kupuna* at Ka-loko, Hono-kō-hau. There is renewed interest among young and old Hawaiians to preserve their land and culture.

They are searching back for their roots, beyond the chaos of the 19th century, to the time when their *kupuna* were self-reliant and industrious; searching for the values which can give them the strength, self-confidence, and most importantly, pride they need to successfully overcome present challenges.



As their land continues to be abused, buried beneath high-rise buildings and concrete highways, Hawaiians are asking, "Are we to witness the continuing despoliation of our land and culture at the hands of so-called progress?"

For these reasons and countless others, the Hawaiians and other people of Hawai'i who share the Hawaiian cultural heritage feel that Ka-loko, Hono-kō-hau will help satisfy their great hunger for a renewal of those cultural and spiritual values that have come so close to extinction in recent decades. The preservation of Ka-loko, Hono-kō-hau as a national park would help renew these very important elements of the Hawaiian identity because it represents the traditional Hawaiian way of life.

Now there is an opportunity to restore the cultural identity that once existed. Preservation of these intangible resources will have an expanding impact that will not only touch the lives of all Hawaiians, but will also enlarge the horizons of people throughout the state, nation, and beyond. Thus, a national cultural park will become the focal point for exhibiting how this particular group of people coped with their own unique environment.

Currently, there is no physical facility in the State of Hawai'i that has been set aside solely for the purpose of perpetuating Hawaiian culture and arts, particularly one that is managed by native Hawaiians. Ka-loko, Hono-kō-hau could provide such a facility because it embodies an intergrated life style which was, at one time, found in countless communities through the islands of Hawai'i. What remains in this settlement area is not just a few token archeological representations of the Hawaiian culture, but the historic site of an entire community that existed as an entity within the boundaries of the *ahupua'a* but tied as well to adjacent communities of similar structures. It is a stage upon which the Hawaiian way of life was first performed centuries ago.

Developed as a living museum, Ka-loko, Hono-kō-hau would be a place where Hawaiians could personally and directly experience their ancestors' finest hour. If national parks are designed to preserve, then Ka-loko, Hono-kō-hau would be designed to preserve the values of a dying culture.

The land and culture would live again. As Hawaiians walked across Ka-loko, Hono-kō-hau, they could experience the presence of the spirit flowing through all of nature. They could stand upon the graves and offer silent worship to their *'aumakua*, and their *kupuna* who cultivated the spirit. And they, too, will have life again.

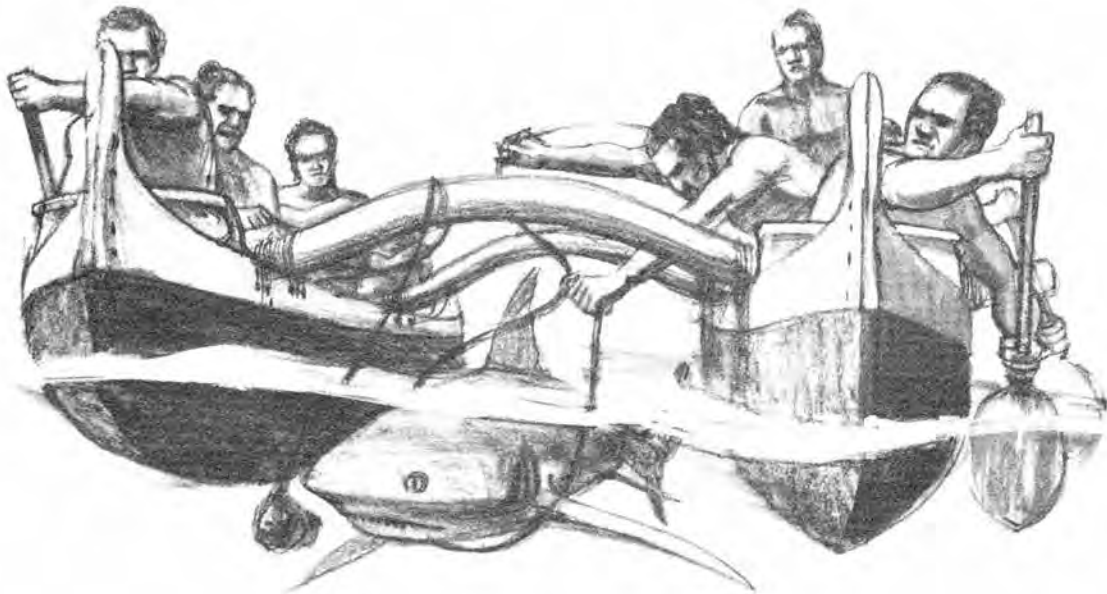
The alternative to this spiritual and physical restoration is the continuation of the classic pattern that has, for the past 200 years, threatened to erase those unique feelings that are Hawaiian, through destruction of more physical remains of his culture. The loss experienced by Hawaiians would be most dramatic, but the state and nation would also suffer since the total mosaic of cultures that make up our complex and diverse heritage would be further eroded.



As evidence of its national significance, Ka-loko, Hono-kō-hau was given a rank of “high value” in 1962 on the National Register of Historic Landmarks. These historic and cultural sites represent a civilization that flourished before the discovery of America. Failure to preserve the entire settlement will result in serious, if not total loss and destruction of an important historical and archeological complex, an area that is now threatened by encroaching urban resort development.

Ka-loko, Hono-kō-hau, preserved as a national park which is designed as a living museum of Hawaiian culture, would provide a unique destination point for visitors from the mainland United States and other parts of the world. It would provide the visitor not only a glimpse but the beginnings of understanding of a way of life that has become part of the American heritage.

But, the preservation of Ka-loko, Hono-kō-hau as a national cultural park has much greater importance for the United States and its people. First of all, there are valuable lessons that can be learned from ancient Hawaiian culture. In these times when many of our nation’s natural resources are becoming scarce, the interpretive opportunities that exist in Ka-loko, Hono-kō-hau can offer a fine example of how one group of people, the Hawaiians, lived in such harmony with their environment that there were always enough natural resources to provide for their physical needs. It is, perhaps, one of the best examples of man’s adaptation to, rather than domination of, nature.



With their ability to adapt, the Hawaiians devised ingenious methods of ocean fishing and fishpond farming, growing agricultural crops upon the porous 'a'ā and cultivating and using of medicinal plants and herbs, the effectiveness of which has been praised by modern day physicians. In addition, it presents an opportunity for the United States to further explore and demonstrate water transportation as evolved by the Hawaiians who had a type of craft capable of negotiating high seas while still being able to land on shore.

Secondly, Ka-loko, Hono-kō-hau is important to the nation because investigations in the course of this study have further substantiated the firm belief of the Hawaiian people that their national hero, King Ka-mehameha, is buried there. Ka-mehameha is world-recognized for his qualities of leadership, humanitarianism, wisdom and strength and has been rightfully honored nationally in the United States Statuary Hall by the United States Congress.

A third benefit the nation and the world can derive from the Hawaiian culture as practiced by those who lived at Ka-loko, Hono-kō-hau is an example in human relationships. The ancient Hawaiians, with their attitude of sharing and spirit of mutual cooperation can show how simple and uncomplicated life can be when people are sensitive to each other's needs. Ka-loko, Hono-kō-hau can be the medium through which this example can be demonstrated.

But perhaps the most important benefit the United States will derive from the preservation of Ka-loko, Hono-kō-hau is the knowledge that it has contributed actively to the preservation of a unique native American culture that has had strong and broad effect on our nation's conscience, attitudes, and lifestyle, but that was, nevertheless, on the verge of extinction because of the imposition of western values and concepts. The United States prides itself on being the land of the free, a heterogeneous society of many different people and cultures, and yet, cultural differences have not always been understood or accepted. The preservation of Ka-loko, Hono-kō-hau would provide the United States the opportunity to show that it does indeed accept and value cultural differences, and that it recognizes the role and contributions of native groups to American democracy.



“Ua mau ke ea o ka ‘āina i ka pono.”

“The life of the land is perpetuated
in righteousness.”

Kingdom of Hawai‘i
And State of Hawai‘i Motto

“Ke aloha o ko kākou ‘āina
Oia ka mana ku pa‘a.
Pānoanoa ka ‘āina
Mānoanoa ka po‘e.”

“The love of our land is the power
for us to stand fast.
Rare is the land
Many are the people.”

RECOMMENDATIONS PLAN

GENERAL

25

The Hono-kō-hau Study Advisory Commission and the U.S. Department of the Interior finds it feasible and desirable that the Ka-loko, Hono-kō-hau vicinity and adjacent waters be preserved by the United States for the benefit of the Hawaiian people and the nation.

RECOMMENDATIONS

1. An area comprising about 1300 acres of land and water area, to include the Hono-kō-hau National Historic Landmark and adjacent waters (hereinafter referred to as Ka-loko, Hono-kō-hau) be established as part of the National Park System.
2. The Ka-loko, Hono-kō-hau National Park complex be:
 - a) a center for reorientation and perpetuation of Hawaiian activities, culture and basic land use patterns; and
 - b) used for education, enjoyment, and appreciation by local residents and visitors.

GENERAL PARK PLAN

Boundaries

The proposed park boundary will include the entire *makai* (seaward) portions of the Hono-kō-hau and Ka-loko *ahupua'a* bounded on the *mauka* (mountain) side by the Queen Ka'ahu-manu Highway. It will also include shoreline areas within the *ahupua'a* of Ko-hānai-ki and Ke-ala-kehe lying between Wāwāhi wa'a and Noio Points.

On the south side, the park boundary will begin at Noio Point, follow the State's Conservation Zone Boundary toward the Hono-kō-hau Small Boat Harbor, and run across the mouth of the harbor. It will then extend 50 feet north, run parallel to and 50 feet from the northern border of the harbor until it is 400 feet past the *mauka* end of the harbor, at which point it will run parallel to the *mauka* border of the harbor to the north right-of-way of the harbor entrance road and then *mauka* along this right-of-way line to the west right-of-way line of the Queen Ka'ahu-manu Highway. From there it will follow that right-of-way line to the boundary line between the *ahupua'a* of Ka-loko and Ko-hānai-ki. From there the line will run *makai* along that boundary line to the state's coastal ownership line and then follow this line to the Wāwāhi wa'a Point.

In addition to the land boundaries, the ocean or offshore boundary will extend 300 feet out from Wāwāhi wa'a point and Noio Point and then stretch across in a line connecting these two points.

Developments

The Ka-loko, Hono-kō-hau park complex will be developed as a living museum of the Hawaiian culture. The facility would replicate, as nearly as possible, the prehistoric and phases of the historic Ka-loko, Hono-kō-hau settlement. The cultural programs conducted within the park will be based on the actual life activities performed by Hawaiians.

The park will be physically separated into appropriate use zones which will provide for (1) the preservation, stabilization and restoration of historic features, (2) living history demonstrations, (3) recreation use, (4) the education and training of native Hawaiians in traditional cultural pursuits, and (5) *kapu* (restricted) areas, such as the concentration of burials in Ka-loko, (6) intense watershed management and low density recreation, and (7) offshore water and marine life management.

The park is also intended to give the first time visitor a beginning comprehension and glimpse of the ancient Hawaiian culture and lifestyle through orientation sessions and guided tours of the various historical, archeological, and cultural sites with the settlement area.

Programs will be established to restore the native vegetation including medicinal plants and manage the offshore marine resources. The park will also be a center for the Hawaiian historical and cultural research films, and publications concerning Hawaiians and other groups of people within the South Pacific region.

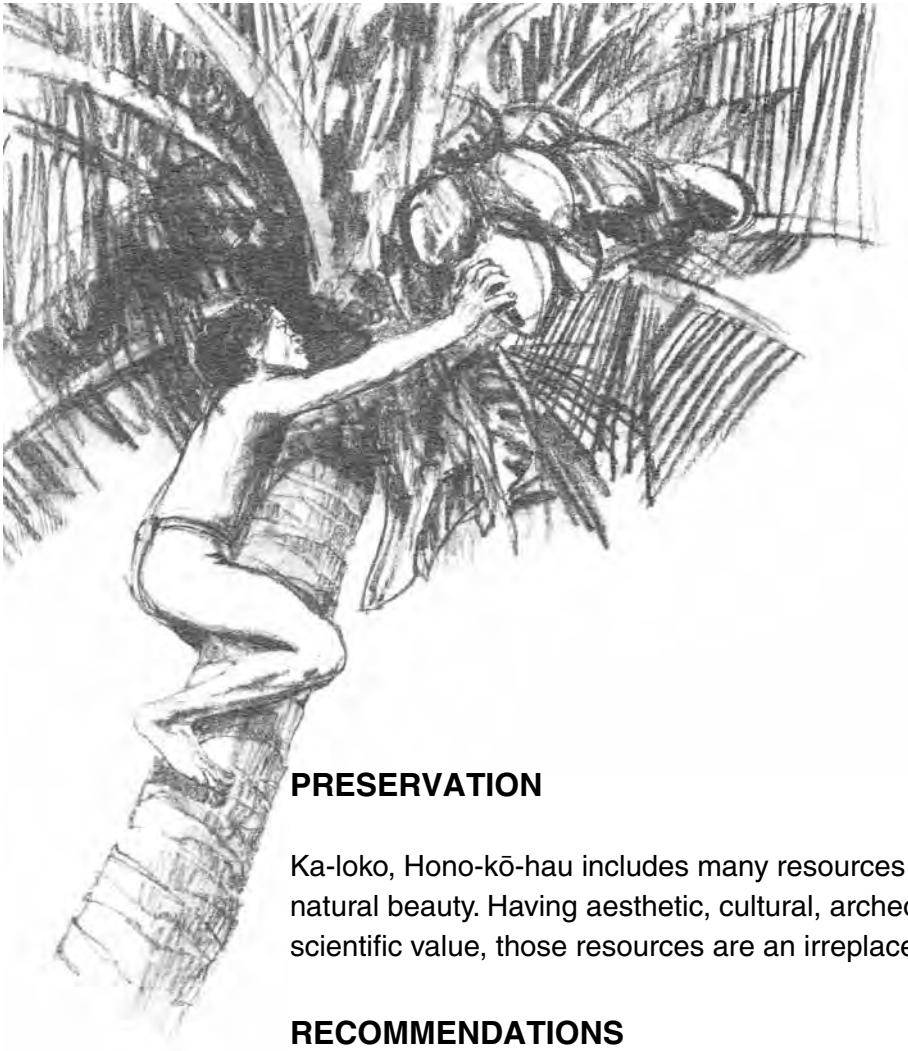
The proposed unit will be administered by the National Park Service, United States Department of the Interior, but the park staff will be composed of Hawaiians who have the skills and knowledge necessary to manage such a unique park complex.





PARK LANDS ZONES





PRESERVATION

Ka-loko, Hono-kō-hau includes many resources that give it identity and natural beauty. Having aesthetic, cultural, archeological, historic, and scientific value, those resources are an irreplaceable public trust.

RECOMMENDATIONS

1. The fishponds and their immediate surroundings should be restored, as nearly as possible, to the conditions that existed before the introduction of foreign influences.
2. A monitoring system should be established for water quality in offshore areas as well as inland water bodies such as springs, wells and fishponds.
3. The sites and structural remains of the early Hawaiian period and the historical period should be studied to determine their role in future development and use of the park.
4. The ancient Hawaiian burial sites should especially be preserved and their privacy and sacredness maintained.
5. The area's remnant Hawaiian ecosystems should be protected from further depreciation and competition by exotic plants and animals.
6. The natural environment should be preserved by protecting outstanding environmental and scenic features and by maintaining the ecological balance of the area.

PRESERVATION PLAN

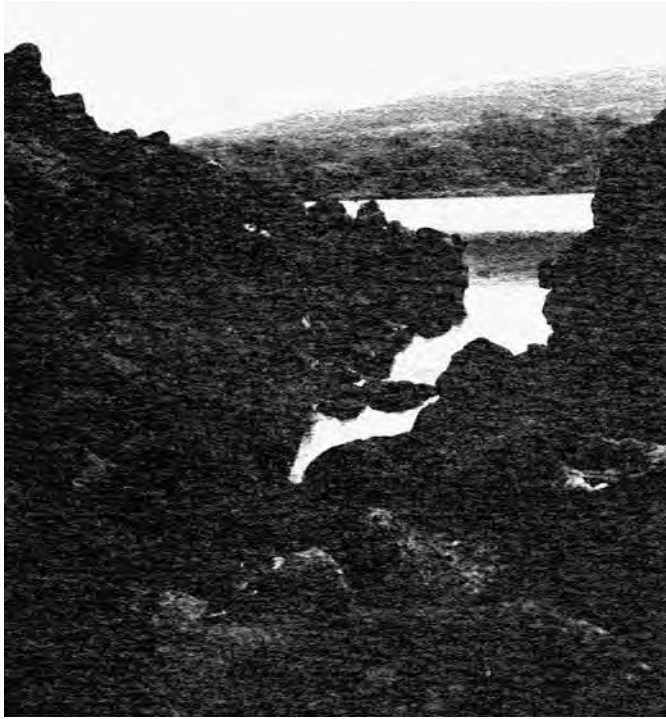
The majority of sites are clustered about the Ka-loko and 'Ai'makapā fishponds and shoreline, which indicates that these areas were the vital centers of activity in the prehistoric life of the Ka-loko, Hono-kō-hau settlement. The documented historical importance of the fishponds and ocean in the life of the settlement further supports the theory of these site complexes being the hub of settlement activity. Good water quality is essential to fishpond culture, and since the source is almost entirely in the rainy *mauka* areas, management of these and other lands adjacent to the park will have a direct impact on water resources within the park. Thus, cooperative planning efforts with the state, county, and private landowners is an important part of this proposal. Essentially this means re-establishment of many of the management practices used by early Hawaiians, a hierarchy of use density, ranging from concentrated living areas on the shoreline and around fishponds to the agricultural uses at the middle elevations and the use of *mauka* lands for watershed, hunting, and gathering of timber resources.

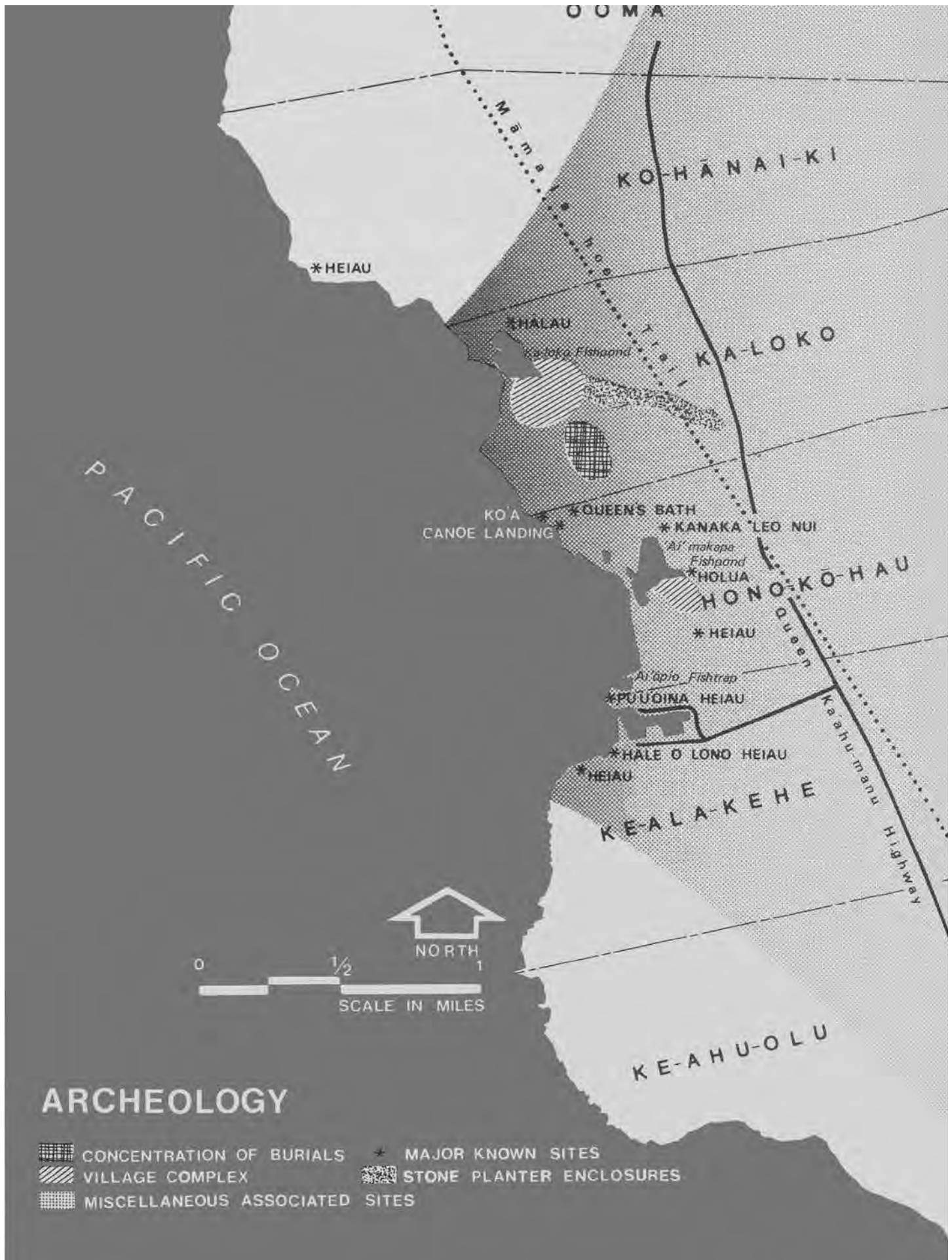


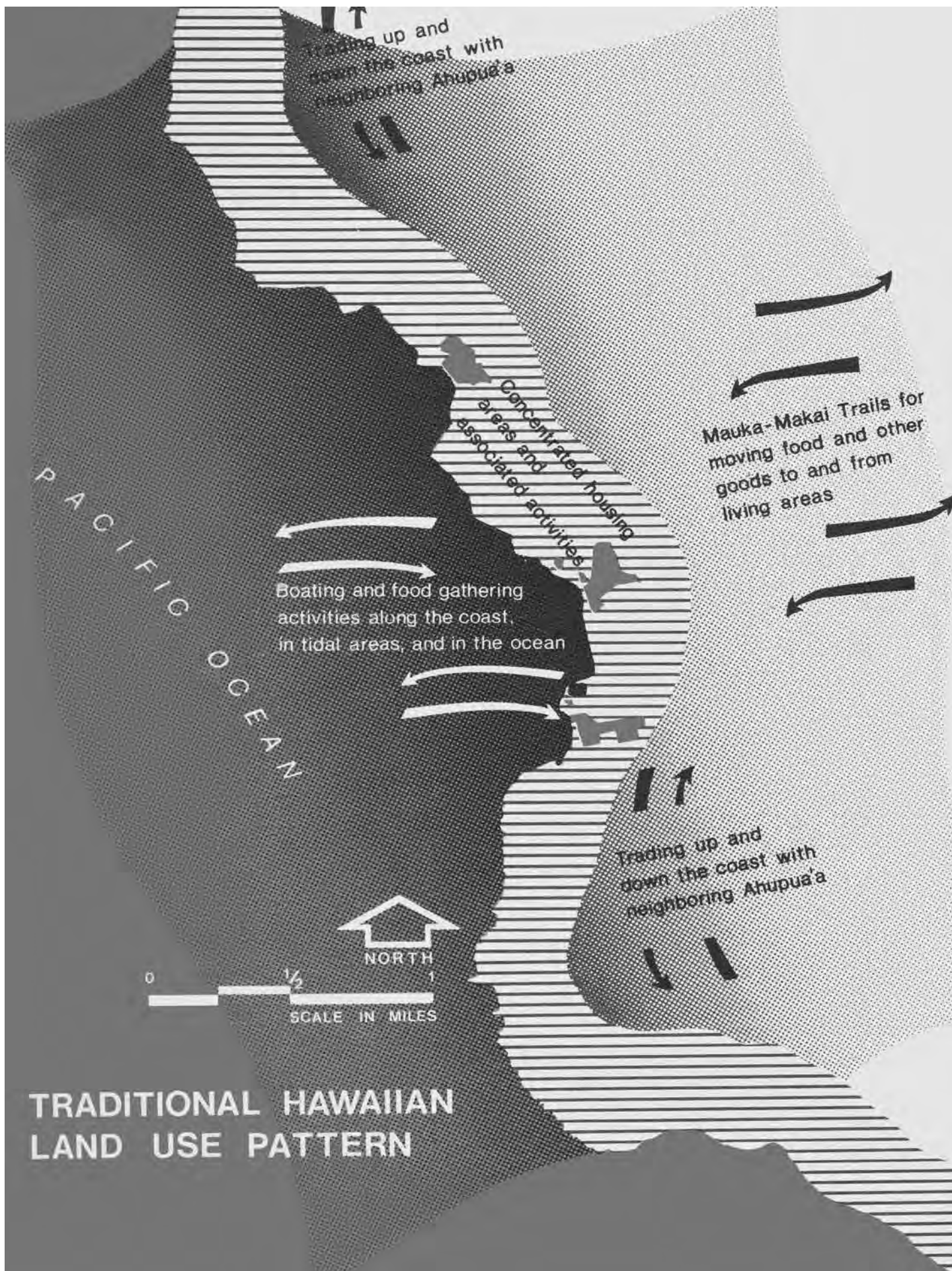
A program will be established to restore existing historic sites within these complexes as nearly as possible to their original appearance for the function they fulfilled. The fishponds, particularly 'Ai'makapā, were historically larger than they are today. Ka-loko will be cleaned of overgrowth and the *mākāhā* (sluice gates) rebuilt to allow the tides to flow evenly into and out of the pond. Its *kuapā*, the largest and thickest man-made sea wall on the Island of Hawai'i, is still somewhat intact but has been damaged over the years and will require repair. The overall intent of the program will be to make the fishpond and numerous surrounding sites, which were part of the fishpond culture, functional once again.

'Ai'makapā will be restored to the extent at which it will not have an adverse effect on the wildlife that presently inhabits the pond. Further historical research will be necessary to determine what place wildlife such as the *āe'o* (Hawaiian stilt), *ko'oa* (Hawaiian duck), and the *'alae-ke'oke'o* (Hawaiian coot) actually had in the fishpond during historic and prehistoric times.







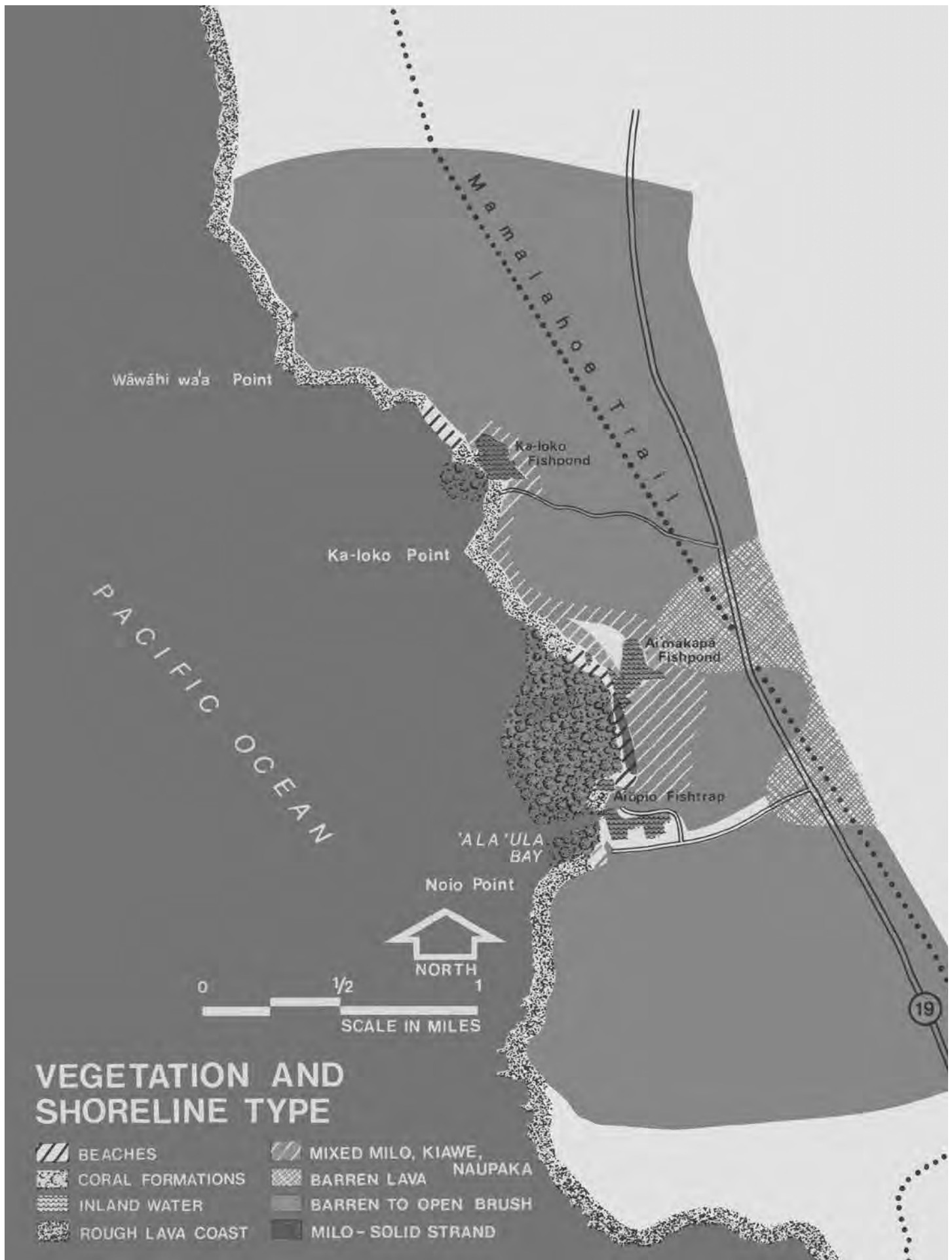


Sites such as the stone planters, salt pans, trails, petroglyphs, *papamu*, and the graves are not as impressive looking as the ponds or *hōlua*, but they each played a contributing part to the way of life of the settlement. The graves were especially important because of their religious meaning to the Hawaiian people. Therefore, these sites will also be preserved.

In order to further preserve and restore the historical integrity of the Ka-loko, Hono-kō-hau settlement area, a long-term plan will be designed to eradicate the exotic vegetation and animal life which now dominate the area. The park will then be replanted with native vegetation, such as the *noni* and *'ilima* plants and *hala*, *milo kou*, and coconut trees, all of which had functional uses and are still growing in Ka-loko, Hono-kō-hau.

In general, then, the preservation plan of the park is based on the historic-cultural importance of the settlement rather than on individual archeological or environmental features. When all these features are preserved and restored they will become what the Ka-loko, Hono-kō-hau settlement was -- the Hawaiian culture as it was.





INTERPRETATION

Ka-loko, Hono-kō-hau is more than just an archeological, historic, environmental or recreational asset. It is a priceless symbol of Hawaiian culture and heritage. The area vividly portrays the traditional Hawaiian relationship between man and nature. Ka-loko, Hono-kō-hau provides some of the last remaining physical evidence of a Hawaiian way of life that has been all but completely destroyed by the intrusion of western man and development.

While Hawaiians may be the initial beneficiaries of Ka-loko, Hono-kō-hau, people from the other parts of the nation and the world will also be recipients of the park's benefits. They will have an opportunity to view and participate in the remaking of a culture that took a thousand years to build. They will see how well man can live and has lived with the forces of nature. Perhaps they might even glimpse that aesthetic appreciation of the physical world which Hawaiians translated into personifications of natural phenomena and material objects to bind together men and spiritual forces into one total and inseparable environment. Thus, for Hawaiians, other local residents, and out-of-state visitors, alike, Ka-loko, Hono-kō-hau will truly be a special place.

RECOMMENDATIONS

1. The primary interpretive theme of Ka-loko, Hono-kō-hau will be the Hawaiian culture -- including the Hawaiian language, land and sea ethic, fishpond culture, family system, ancient chants, dances, crafts, and the important part religion played in these and other cultural activities.





2. Within the context of the primary theme, an interpretive program will be developed around three themes of significance.
 - a) The first theme will focus on the rejuvenation, perpetuation and understanding of Hawaiian culture and its attendant activities. It will emphasize the desire of the Hawaiian people to retain their cultural legacy through interpretation of and participation in cultural activities, and will create an awareness of the dignity, integrity, and importance of this segment of the nation's heritage both for Hawaiians and park visitors.
 - b) The second theme will be environmental, and will concentrate on how cultural values were put into practice by the Hawaiians in their use of available resources. Emphasis should be placed on Hawaiian land-sea use patterns, and on the important cultural uses of native plants and animals, especially those which had food, medicinal, and ceremonial purposes, that existed before the introduction of European influences.
 - c) The third theme will be a recreational one which encourages Hawaiians and park visitors to engage in some of the recreational activities that existed in ancient Hawai'i or are compatible with those activities.
3. Specific elements of the interpretative program would include cultural demonstrations, educational activities, stabilization and restoration of sites, fishpond management, interpretive exhibits, and publications which provide further insight into the cultural pursuits of the ancient Hawaiians.
4. The architectural theme for the park complex should retain the timeless, primeval quality of Ka-loko, Hono-kō-hau by blending in with the settlement area's surroundings.

INTERPRETATION PLAN

The interpretation of Hawaiian culture can best be accomplished by maintaining an informal atmosphere where traditional Hawaiian activities can take place. The openness and natural surroundings of Ka-loko, Hono-kō-hau as well as its numerous archeological sites, and the wealth of Hawaiian lore associated with the area, make it an ideal setting for demonstrating, teaching, and learning what is truly Hawaiian.

Cultural Demonstrations

Cultural demonstrations within the park complex will be designed to enable the park visitor to understand and appreciate the Hawaiian way of life as it was lived by ancient Hawaiians at Ka-loko, Hono-kō-hau. They will give visitors a close look at the land-sea ethic which the Hawaiians developed as a result of their harmonious relationship with all natural phenomena. Emphasis will be placed on the fishing activities and fishpond culture that formed the basis of the Hawaiians' subsistence economy and also on their social structure which revolved around the sharing and mutual cooperation of the *ōhana* (extended family system). More importantly, they will demonstrate a lifestyle woven together by deep religious beliefs and rigidly governed by the *kapu* system.





Interpreters will introduce visitors to the unique pageantry which was the ancient Hawaiian way of life. They will guide visitors into a world where a stone was not always just a stone, but sometimes the embodiment of a god; where a simple but highly efficient system of fish farming and breeding was developed with fishponds; where sweet potatoes and pumpkins were grown in the midst of lava flats; where people from the uplands and the seashore shared food products with each other and where the great *mōʻī* Ka-mehameha, lies buried in mystery. They will explain the deeply religious world of the ancient Hawaiians and how religion influenced every waking moment of their lives. Only then will park visitors be able to absorb and appreciate some of the significance of the archeological and historical sites they will be exposed to within the park.

Cultural demonstrations will be set up to allow the visitors the opportunity to participate as well as to observe. By the end of their stay in the park, they will understand the meaning of Ka-loko, Hono-kō-hau because they will have experienced it.

Cultural Education

42

An educational program would be established within the park to teach the values and traditions of the Hawaiian culture. An important segment of this educational program would involve a facility designed primarily for native Hawaiians and removed from any major public use area, where the dignity and integrity of the culture would be maintained. It would be an intimate personal experience extending over a period of one day or more, rather than being part of an exhibit open to the regular visitor.

Classes would be conducted outdoors or in a *hālau* (open shed). The *hālau* would be necessary to provide work space for canoe-building, hula instruction, and other activities which require work space under a protective shelter.

Instruction would be provided in basket weaving, *lau hala* plaiting, wood carving, feather work, musical instruments, nut crafts, and the making of fishing materials such as nets, hooks, ropes, lines, and sinkers.





Another part of this educational program would involve native Hawaiians actually learning to “live off the land” as their ancestors once did. They would learn to adapt to nature by learning how to utilize the natural resources of the land and sea. This program would include instruction in the ancient methods of net fishing, and growing agricultural crops and medicinal plants within the stone planters.

Stabilization and Restoration

A major program will be implemented to analyze and determine which archeological sites within the park should be restored, stabilized, or merely left alone. These determinations would be part of the overall interpretive concept that will complement the cultural demonstrations and assist in the educational program. For example, the restoration and operation of Ka-loko, and ‘Ai‘makapā fishponds as food producers would be a dominant cultural exhibit in the park. ‘Ai‘makapā would also double as a wildlife sanctuary which provides a major scenic and wildlife attraction for park visitors.



Recreation

Recreation would be an important asset to the complex. Certain sites can be restored for use in old Hawaiian games such as *'ulu maika* (a form of bowling or shuffle-board), *kōnane* (similar to checkers), or tug-of-war, and community organized events of competition can be scheduled.

The shoreline is an ideal recreational area for fishing, snorkeling, diving, camping, picnicking, and hiking. Recreational areas would be open to community use and not restricted as exclusive areas.

Interpretive Exhibits

Within the orientation center, but located so that it will most often be used by visitors returning from their park experience to their cars or buses, a museum area will contain certain artifacts and exhibits. These will be designed for browsing and should supplement the cultural experience. They may include such devices as murals of scenes from ancient Hawaiian life, artifacts that need indoor protection, and details of fish, vegetation, and cultural story elements.

On-site exhibits would be simpler, and the remote areas of the park will have few or no exhibits at all.

Publications

A variety of printed materials explaining certain Hawaiian cultural activities in detail will be made available to park visitors who wish a deeper understanding of Hawaiian culture, and what they have seen within the park.

Visitor Facilities and Architectural Theme

In order to most effectively portray for contemporary man the astonishingly simple yet highly creative culture of a people who had ultimately learned to live and work in total harmony with their bleak volcanic environment, the architectural character of the park building complex should possess a timeless quality by blending in with its rugged primeval surroundings. The resulting architectural theme will be a terrain-related organic architecture - a system of sheltered spaces seemingly "of the earth".

Wāwāhi wa'a Point

BEACH AND SHORELINE
RECREATION

FISHPOND CULTURE

HISTORIC AREA

LIVE-IN EDUCATION and
CULTURAL CENTER

FISHPOND
CULTURE

INTERPRETATION
ORIENTATION

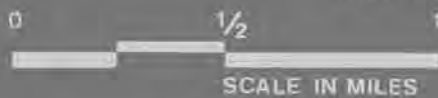
HONO-KŌ-HAU
BAY

HISTORIC
AREA
CULTURAL
ACTIVITIES

ACTIVITIES

MAINTENANCE

Noio Point

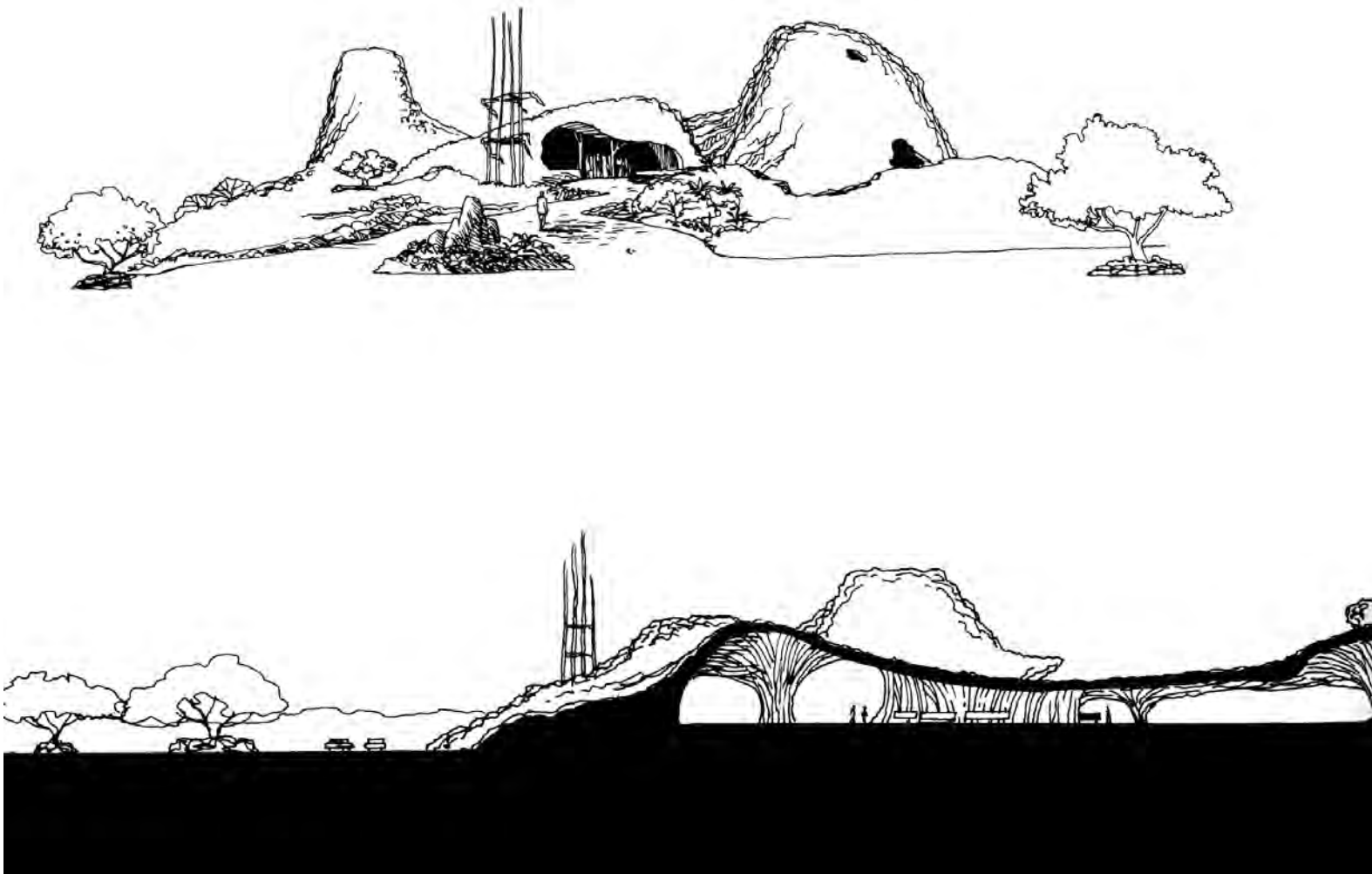


DEVELOPMENT CONCEPT

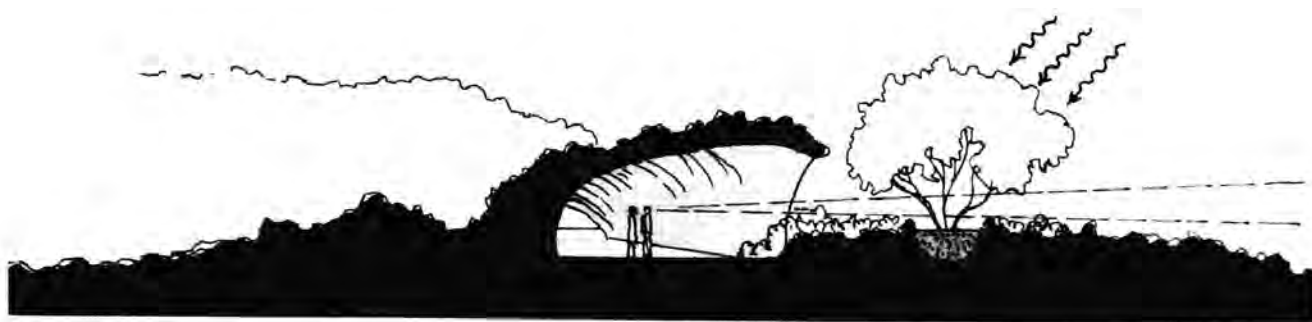
proposed KA-LOKO HONO-KŌ-HAU
NATIONAL CULTURAL PARK

The building site is in reality the edge of an ancient lava flow which ends abruptly at the inland banks of the 'Ai'makapā fishpond. Elevated approximately 40 feet above the pond, its jagged surface of loose clinker type lava slopes gradually downward toward the actual edge (roughly 20 feet above the pond) before dropping in a steep slope down to the banks of the pond. It is a natural promontory and was chosen primarily for the excellent view of the coastline, particularly the three historic fishponds, Ka-loko, 'Ai'makapā and 'Ai'ōpio. However, equally as vital is its location relative to the cool ocean breezes, a priceless commodity in an area where the average day is most often sunny, hot, and frequently humid.

Conceptually, the typical visitor will enter the park by motor vehicle, leave his modern day conveyance in a leveled off depression in the lava fields and climb a slightly ascending path toward a cave like opening that penetrates a cluster of rocky mounds. Upon entering he will immediately become aware that the mounds are a series of hollowed out caverns rather than masses of volcanic rubble. He will note that the spaces vary according to the function, visual effect, or visitor capacity.



The entrance area will be spacious and high-ceilinged. Leading from it, a passageway diminishing in height will reach out westward toward the sea and funnel in the cool day-time breezes. It will, at the same time, descend in the direction of the sea. Lighting within the structure will be afforded by natural sources particularly in the larger assembly areas. By now the visitor will have become so totally absorbed by the absence of anything contemporary that upon emerging from the corridor end (at this point more a lava tube than a building) he will in essence have spanned the time gap back into history. Perched some 20 feet above 'Ai'makapā Pond, he can then follow the descending trail into the fishing village below in much the same manner as a native Hawaiian would have done before the arrival of the white man.



The other authentically restored ancient Hawaiian structures will be handled under the direction of the Bernice Pauahi Bishop Museum. Several small and simple structures in the form of comfort stations and interpretive exhibits will be built at the level of the fishponds but generally hidden in lush native vegetation.

The park will be managed primarily for day use, but selected areas will be provided for short-term live-in accommodations which will encourage native Hawaiians to actively participate in in-depth cultural activities. A facility will be built for Hawaiian groups and organizations to utilize as headquarters, a place to hold meetings, or for ceremonial gatherings.

In addition, supporting facilities such as parking, food service (to be provided by a small concession and featuring Hawaiian foods), and transportation will be provided to help the visitor enjoy the full range of activities and events without destroying or diminishing the Hawaiian ethnic or historical integrity.



Visitor Use and Capacities

Several criteria have been used to project the visitor capacities for the proposed Ka-loko, Hono-kō-hau National Cultural Park. These criteria include (1) visitor use at Hawai'i Volcanoes and the City of Refuge, (2) accessibility, (3) the variety of facilities and activities the park will offer, and (4) the estimated number of Hawaiians who lived in the historic settlement at any one time.

49

Based on these considerations, the following is a preliminary estimate of visitor capacity with the Ka-loko, Hono-kō-hau complex:

1.	Capacity at any one time	250-350
2.	Daily capacity for the entire park	1,500
3.	Capacity for amphitheater with orientation center	200-250
4.	Daily capacity for core area and immediate vicinity only	1,500
5.	Capacity in more remote areas including those areas where native Hawaiians will be pursuing educational activities	500
6.	Projected annual visitation assuming capacity visitation for 300 days and 60 percent capacity the remaining times	500,000

It should be noted that the daily overall park capacity and the capacity for the core area are identical because it is assumed that all visitors will pass through the core area, which includes the orientation facilities.

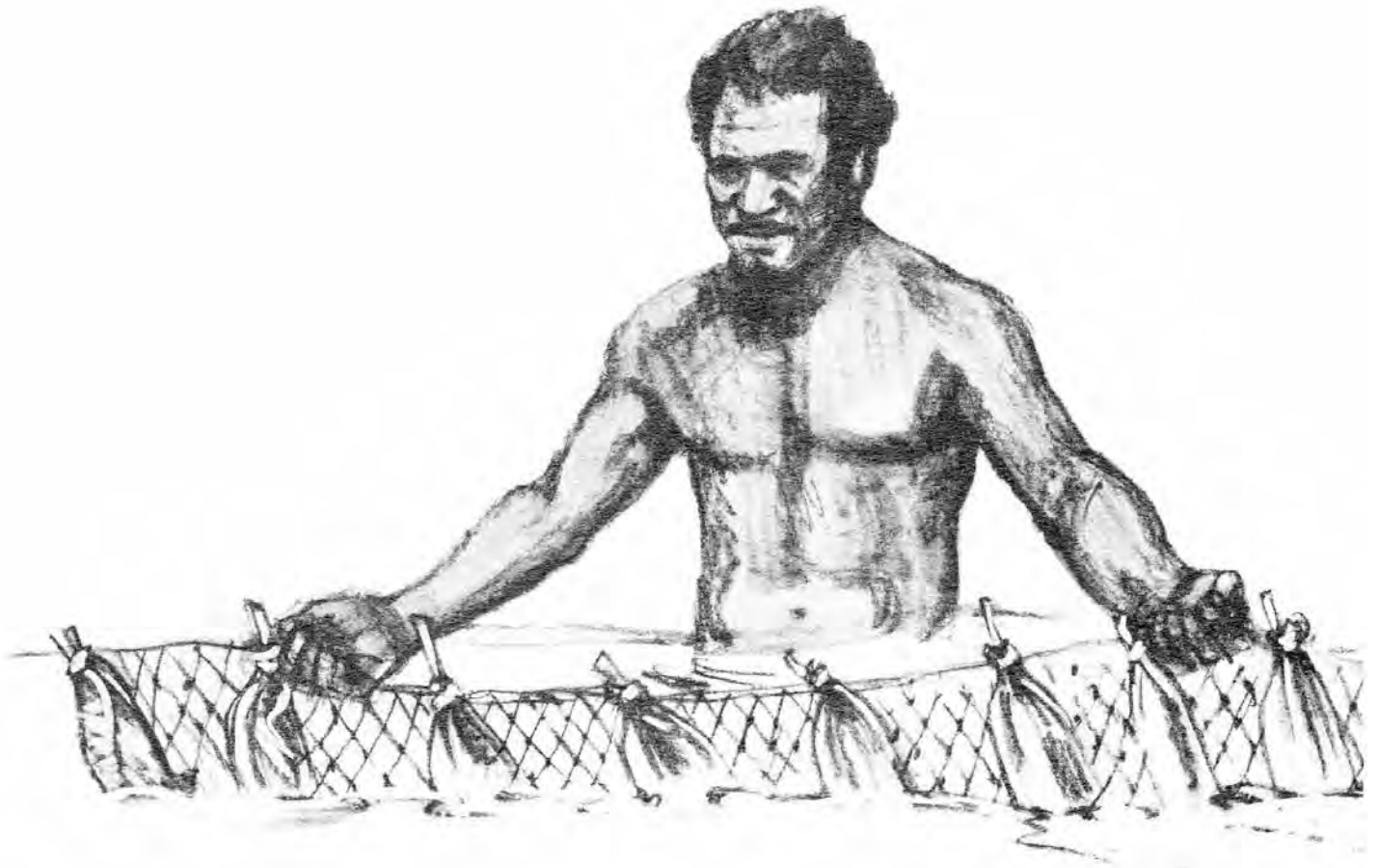
The average visitor stay within the park will be approximately 1½ hours. This figure assumes about 15 to 20 minutes for orientation, about 30 minutes for informal walks around the main orientation area and another 30 minutes for more formal programs. Some visitors will probably remain to visit the fishponds, the beach and shoreline areas, and for an intimate examination of the archeological sites. Native Hawaiians and others who may come to the park for educational or cultural pursuits will very likely stay several hours or overnight. This, however, would be a smaller number when compared to the total visitation, so the overall average stay would likely remain, therefore, at about 1½ hours.

MANAGEMENT

Ka-loko, Hono-kō-hau is a vital touchstone with the Hawaiian spirit. Constructive steps need to be taken to retain and further this cultural experience for Hawaiians and park visitors.

RECOMMENDATIONS

1. The general management of the Ka-loko, Hono-kō-hau complex should:
 - a. Insure that park programs and uses maintain the dignity and character of Hawaiian culture by involving Hawaiian people in all aspects of the park's management and interpretation;
 - b. Provide means to study and perpetuate all aspects of Hawaiian life, i.e., language, family system, dances, chants, traditional arts, and technology, etc;
 - c. While managing the park primarily for day use, provide select areas with authentic Hawaiian live-in accommodations for Hawaiians who wish to actively participate in the in-depth cultural pursuits; and
 - d. Cooperate with the other local, state, and Federal institutions in implementing the concept of a living cultural park.



2. A resource management plan for Ka-loko, Hono-kō-hau should:
 - a. Recognize the interdependence of all resources with the *ahupua'a* and not just those located within the proposed park boundary, and, therefore, be patterned after the *ahupua'a* concept as developed by the ancient Hawaiians;
 - b. Recognize the interrelationship of the *ahupua'a* of Ka-loko and Hono-kō-hau with the adjacent *ahupua'a* of Ko-hānai-ki and Ke-ala-kehe and with the cooperation of governmental agencies should include parts of these *ahupua'a*;
 - c. Include the management of the offshore coral reefs and waters to complement the early Hawaiian theme of the park and protect the shoreline and waters within the park boundary from pollution; and
 - d. Maintain air quality standards in the area.
3. The preservation and interpretation of the Ka-loko, Hono-kō-hau complex should be managed, to the greatest extent possible, by native Hawaiians. This should include but not be limited to:
 - a. Giving Hawaiians preferential treatment for any employment generated by park operations. As a corollary to the employment policy, civil service requirements for park positions should be restructured to better reflect the special qualities Hawaiians can contribute to a cultural park;
 - b. Providing training opportunities for the upgrading of Hawaiian park personnel as well as for members of the Hawaiian community interest in the operation, interpretation, and preservation of historic and cultural resources;



- c. Cooperating with Hawaiian groups in all phases of the park's operations. As part of this process, a statewide Hawaiian advisory council (Na Hoa pili o Ka-loko, Hono-kō-hau, see appendix for further information) should be established to advise on the management of the Ka-loko, Hono-kō-hau complex;
- d. Allowing local Hawaiian groups to utilize park facilities for appropriate headquarters, Hawaiian meetings, gatherings, etc., and
- e. Defining "Hawaiians" as any descendant of the race inhabiting the Hawaiian Islands prior to the year 1778.

MANAGEMENT PLAN

Ancient Hawaiians placed great value on every feature of nature and all things they produced and acquired from nature to sustain themselves. They understood that in order to survive in their island home, they had to live in close harmony with everything around them. This traditional Hawaiian relationship between man and his environment provides the key to the future management of the Ka-loko, Hono-kō-hau complex.

Any management plan for Ka-loko, Hono-kō-hau must recognize the impact the area's resources have on people and conversely the effect that human activity will have on these same resources. Therefore, it seems appropriate that the management plan focus on (1) the control of on-and off-site factors that affect park resources; (2) the role of Hawaiians in the management of park resources; and (3) the management of park resources to maximize the benefit visitors receive and yet minimize the adverse effects of visitor use.



RESOURCE CONTROL

The conceptual framework for resource control begins with the view that the environment is an inseparable totality. Out in the middle of the vast Pacific, the land, sea, and sky all functionally interrelate to form a home for man. The living land provides shelter and security; the encircling sea gives its bounty for harvest; and the majestic sky dominates the imagination and provides a limitless dome overhead. The dynamic thread that ties the environment together is water. Water rises from the sea, travels across the sky, falls on the mountains and rushes through the land back to the sea. The land, sea, and sky act as carriers for this valuable resource and make possible the settlement of man.

Hawaiians, perceiving the necessity of water on isolated islands, oriented their land-sea use patterns to the water cycle. *Ahupua'a*, land divisions running from the mountain to the sea, were established to the advantage of the natural functions of the environment. Crops were planted in the rainy *mauka* sections, while the people lived near the dry seashore. Each *ahupua'a* developed around a recognition that all of its elements were interdependent. What affected the *mauka* regions, affected the *makai*. What affected the neighboring *ahupua'a* affected it. What affected the land affected the fishponds and the sea. What affected the water cycle affected the total environment. This is the way it was and is at Ka-loko, Hono-kō-hau.

The Ka-loko, Hono-kō-hau complex is a small, fragile part of a larger environment which has influenced its history and affects it today. Therefore, any management plan must deal with both the on- and off-site factors that affect the area's resources.



On-site

The acquisition and development of Ka-loko, Hono-kō-hau by the National Park Service will allow direct management control over on-site resources. Among other things, this will enable the National Park Service to:

1. Control uses of park lands and adjacent waters;
2. Implement preservation and restoration projects, including
 - (a) the restoration and operation of the fishponds and other historic features; and
 - (b) the re-establishment of the area's endemic plant and animal species;
3. Provide for living history demonstrations, for recreation use, for education and training in traditional cultural pursuits, and other interpretive programs; and
4. Conduct additional research of park resources.

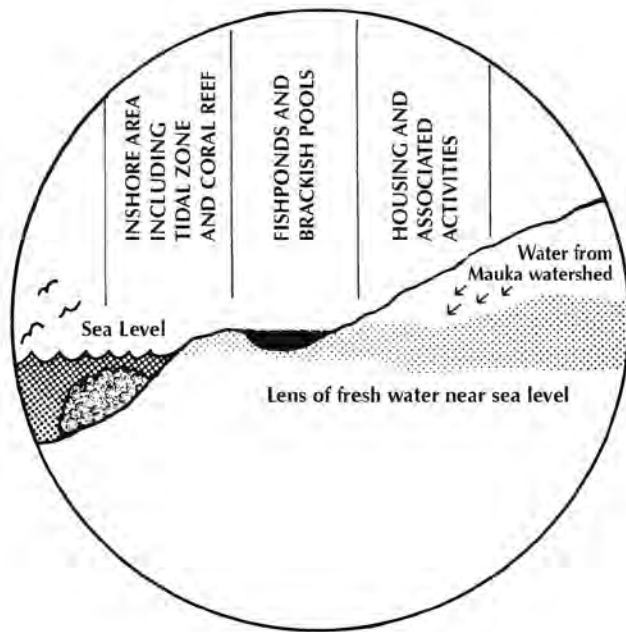
For adequate control of on-site resources, it is mandatory that sufficient acreage be acquired by the National Park Service to provide protective zones around park resources. It would make little sense to preserve Ka-loko pond if extensive development would then be allowed behind it. With the area's porous soils and underground water cycle, little time would be needed before Ka-loko would be destroyed. Therefore, an identifiable outer boundary for the Ka-loko, Hono-kō-hau complex would be the Queen Ka-'ahu-manu Highway.

In the control of on-site resources, definite criteria should be established by the National Park Service for evaluating, planning, and implementing any programs or projects. Specific attention must be given toward the types of land-sea uses that will be designated in the development of the park complex, especially with regard to water management criteria. Procedurally, the criteria that developed should be reviewed by Na Hoa pili o Ka-loko, Hono-kō-hau.

Two specific conditions of the on-site management plan will include

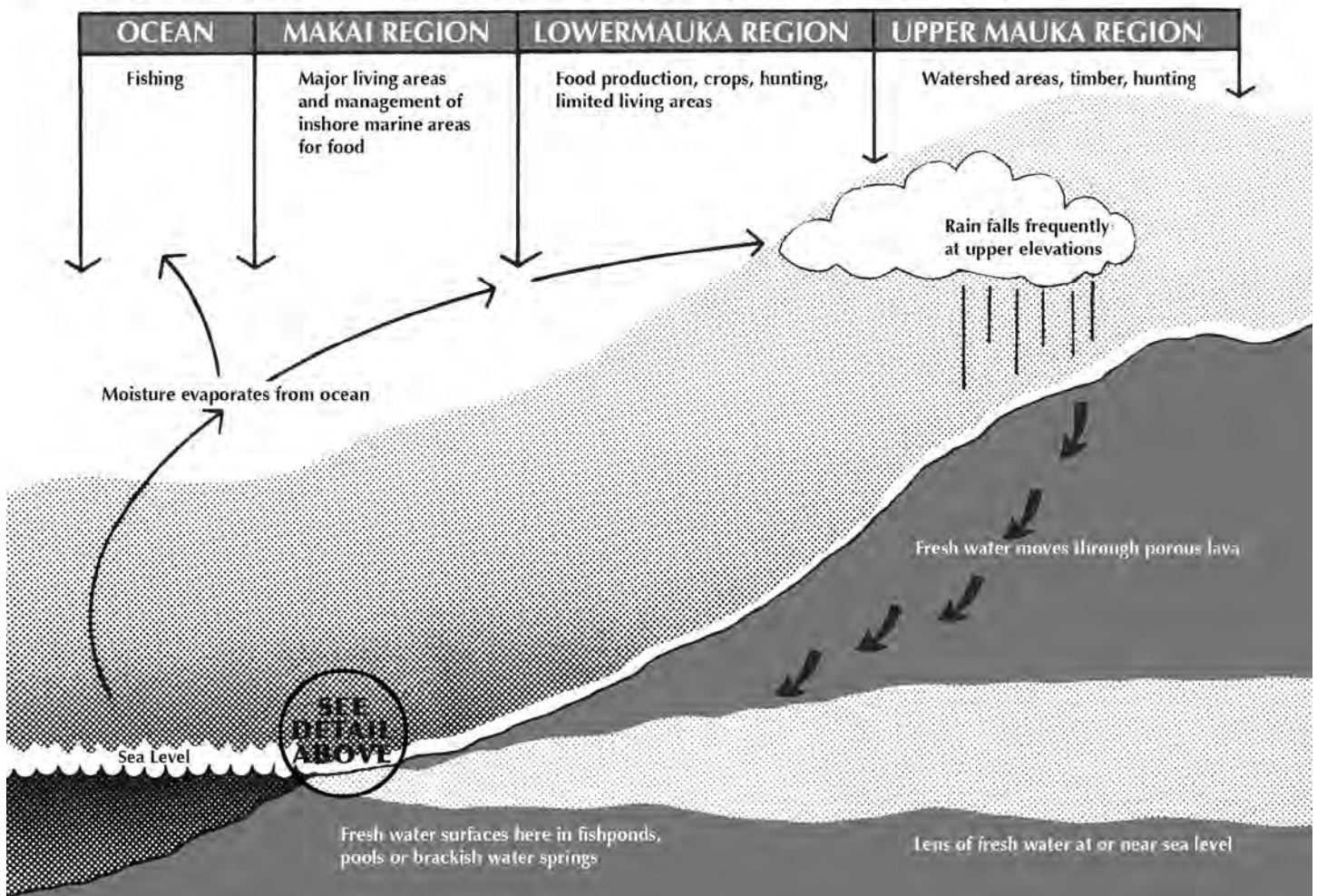
- (1) a provision allowing those families who now occupy leaseholds within the propose park complex to remain on their land for a specific period of time which will be determined through negotiation, and
- (2) a provision that there be no commercial fishing within park waters.

Fishing for recreation or for personal needs, however, will be encouraged. In addition, removal of coral or sand from the park beaches and water will be prohibited.



CRITICAL MANAGEMENT ZONE

AHUPUA'A BOUNDARIES EXTENDED FROM MOUNTAINTOP INTO THE OCEAN



HISTORY AHUPUA'A MANAGEMENT PATTERN ON WEST HAWAI'I

Off-site

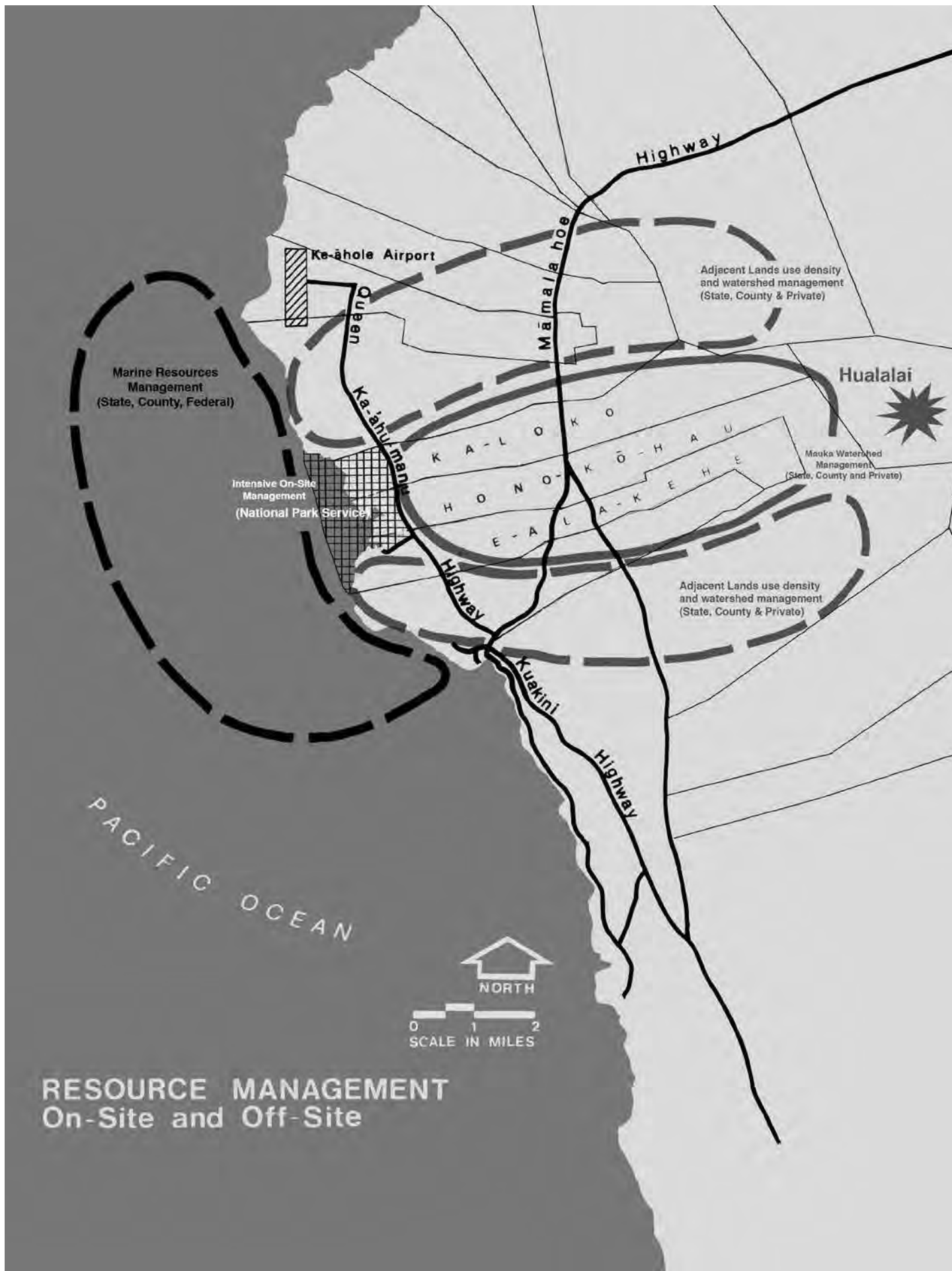
The *ahupua'a* concept should be used as the approach in securing off-site controls. The mental image of land units running from the mountain to the sea indicates the environmental interrelationships that result from such divisions and the types of off-site controls that are needed. Obviously, such controls will of necessity have to be less direct and more limited than those that are on-site. Nevertheless, if the integrity of Ka-loko, Hono-kō-hau is to be maintained, some controls are required.

It should be noted that the *ahupua'a* concept, while widely recognized for its value, is not utilized by either local government or private landowners. One of the basic reasons for this failure is the fact that after the end of the Hawaiian land tenure system and the introduction of private land ownership, land usage was for many years allowed to proceed in a laissez-faire fashion. The concept of land use control both in Hawai'i and the nation is a phenomenon of recent vintage. Therefore, the present day land ownership and development patterns haphazardly cut across *ahupua'a* lines. In establishment of off-site controls, the National Park Service will coordinate its efforts on two general levels: governmental and private.

On the governmental level, coordination should be developed with various Federal, state and county agencies. Federal action will be necessary if any kind of controls are established to protect the airways above the park and the outer limits of the sea boundary. State and county zoning will have to be secured to protect the land around Ka-loko, Hono-kō-hau.

The State Land Use Commission should be prevailed upon to keep much of the area around Ka-loko, Hono-kō-hau designated conservation. This type of action is especially necessary along the shoreline areas neighboring Ka-loko, Hono-kō-hau. Furthermore, since most of the land in the *ahupua'a* of Ke-ala-kehe is owned by the state, its use will have direct impact on Ka-loko, Hono-kō-hau. Finally, lands that are designated conservation or owned by the state in the area should be given special zoning limiting their uses to activities compatible to a cultural park.

The County General Plan and zoning ordinances of the area should limit the uses of the lands immediately surrounding Ka-loko, Hono-kō-hau to compatible activities. Lands further *mauka* should be restricted in density in order to preserve the integrity of the park and protect its water resources.







In conjunction with these governmental units, the National Park Service should develop a coordinated resource management plan, establishing allowable land-sea-air uses of the area. Important components of this plan would be (1) a basis for coordinating the taxation of real property in the area; (2) the establishment of a watershed management area based on specific water management criteria. Water management should deal with the uses of both surface and sub-surface waters.

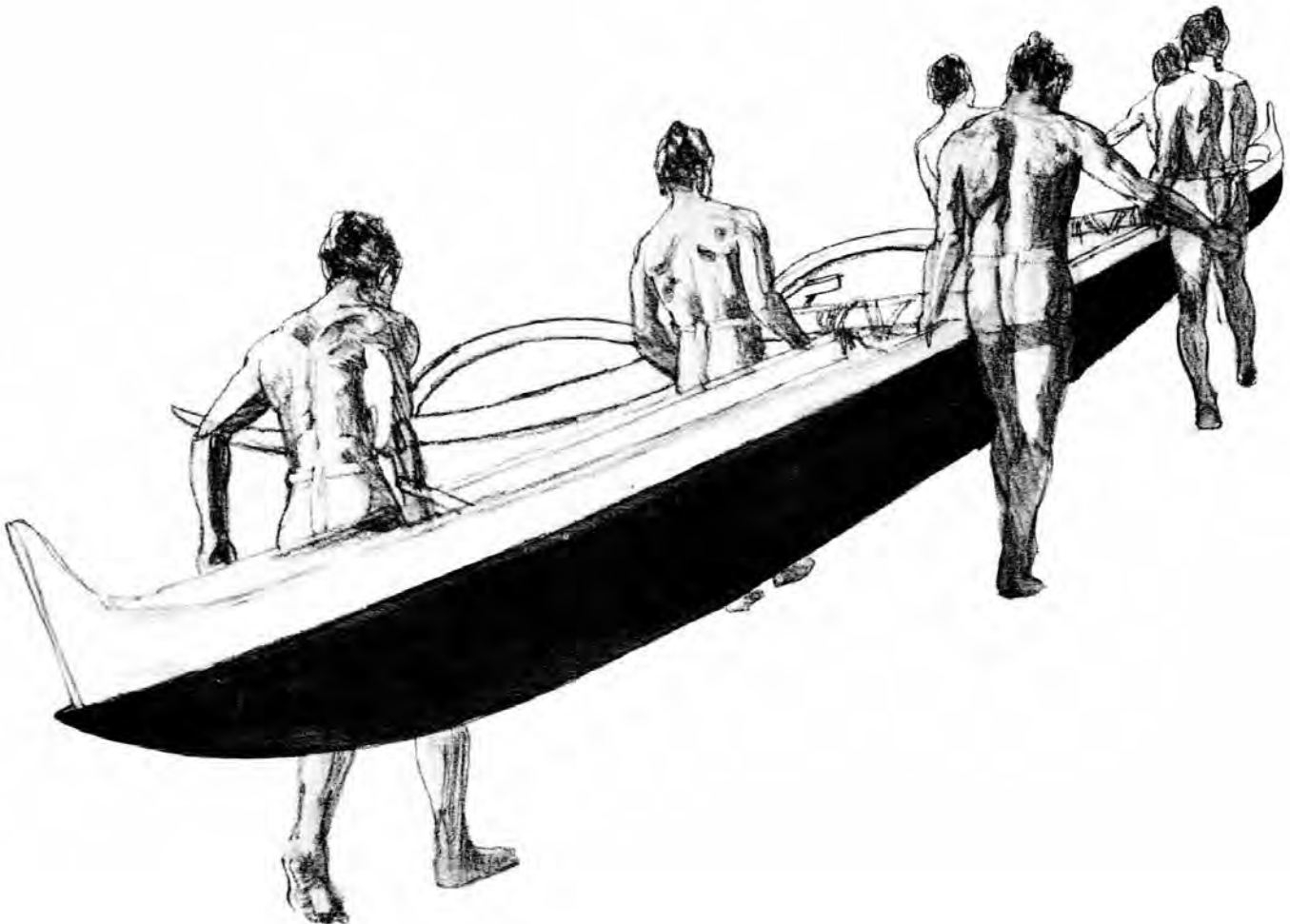
With private landowners, the National Park Service should seek to establish mutual interest agreements through private development covenants. These agreements would seek to limit the use of private lands to activities compatible to a cultural park. This limitation would be offset by the reciprocal benefit gained by the landowner in terms of the economic development that would accrue as a result of park development. Furthermore, these agreements may not have to be negotiated for receiving county zoning, variance, development, etc. approvals. Obviously, such a procedure would have to be worked out with the County Planning Commission. The National Park Service should develop a coordinated mutual agreement management plan. This plan should build upon the Resource Management Plan, using among other things, specific water management criteria.

Hawaiian Management

60

The rich environment of the Hawaiian Islands was entrusted to the people who settled and worked the land. Nature's resources were available for man's use; however, being fragile they could have been just as easily destroyed by him. The ancient Hawaiians wisely chose to live with, rather than attempt to dominate, nature. In turn, the land responded and gave its full measure to the people. It seems appropriate that the management of Ka-loko, Hono-kō-hau and its resource should be once again placed in the hands of Hawaiians and their descendants who cared for them so well.

While the Hawaiian community as a whole should and will be involved in park operations, the most direct way for the preservation and interpretation at Ka-loko, Hono-kō-hau to be managed by Hawaiians would be for them to become employees of the National Park Service. However, this opportunity should not be restricted to that site alone, for Hawaiians have a contribution to make throughout the National Park System in Hawai'i and nationwide.



KA-LOKO, HONO-KŌ-HAU EMPLOYMENT POLICY

It shall be the policy of the National Park Service, United States Department of the Interior, to give priority to Hawaiians for all employment opportunities created by the development and management of the Ka-loko, Hono-kō-hau complex. This policy is in agreement with Public Law 92-346, 92nd Congress H. R. 11774, July 11, 1972, which states:

“The Congress further believes that it is appropriate that the preservation of interpretation at that site be managed and performed by native Hawaiians, to the extent practical, and that training opportunities be provided such persons in management and interpretation of those cultural, historical, and archeological resources.”

It is the intent of this policy that preference in hiring and training be viewed as a required activity rather than an optional one. The National Park Service shall take affirmative action to ensure that Hawaiians are given maximum opportunities for employment in all phases of park operations.

The National Park Service shall develop and implement an affirmative action plan which identifies all employment to be generated by the Ka-loko, Hono-kō-hau complex and the hiring and training systems which will assure the placement of Hawaiians in these jobs on a preferential basis. The plan shall indicate the procedures (i.e. recruitment, selection, pre-employment and on-the-job training, upgrading, etc.) which will be used to implement this policy.

The National Park Service shall establish specific training programs to upgrade eligible, potential and interested employees. This upgrading will be designed to lead to greater responsibility and those employees so upgraded will be retained in higher level positions as such positions become available through staff turnover, expansion, or new program development.

The National Park Service shall insure that Hawaiians placed on full-time employment at the Ka-loko, Hono-kō-hau complex receive full civil service rights, including job security, seniority, fringe benefits, and opportunities for promotions. This policy recognizes that persons holding such positions should be allowed to become regular career service employees within the National Park System rather than have their occupational horizons limited only to the Ka-loko, Hono-kō-hau complex. However, this policy also recognizes that the traditional requirements of the merit system can be an effective barrier against the hiring of Hawaiians.

Therefore, to the greatest extent possible, the civil service requirements for park positions at Ka-loko, Hono-kō-hau shall be restructured to better reflect the special qualities Hawaiians can contribute to a cultural park.

The National Park Service shall make regular reports detailing the progress made in implementing this policy to Na Hoa pili o Ka-loko, Hono-kō-hau (the park's statewide Hawaiian advisory council).

The term "Hawaiian" as used in this policy means any descendant of the race inhabiting the Hawaiian Islands previous to the year 1778.

It should be noted that the definition of a "Hawaiian" in this policy differs from the definition in Public Law 92-346. As defined in the law, the term "Hawaiian" meant any descendant with not less than 50% of the blood of the race inhabiting the Hawaiian Islands previous to the year 1778. It was felt that setting a special percentage figure would be much too arbitrary at this point since it is not really certain what percentage of the 135,152 part-Hawaiians in the state (based on State of Hawai'i Department of Health RS Report, 1969-1971 statistics) are 50% or more Hawaiian. Even more important is the fact that setting such a percentage would have probably excluded many part-Hawaiians who would be interested and well-qualified because of their knowledge of Hawaiian culture.

Procedures for Preferential Hiring

Examples of activities the National Park Service may undertake to insure the preferential hiring of native Hawaiians as staff for the Ka-loko, Hono-kō-hau complex are as follows:

1. The National Park Service recruit qualified native Hawaiian candidates to fill staff positions or vacancies, utilizing ways and systems that reach out to Hawaiians.
2. The National Park Service will be required to consult with Na Hoa pili o Ka-loko, Hono-kō-hau before filling a position which it claims cannot be filled by a native Hawaiian.
3. The National Park Service can establish training and education programs by which native Hawaiian candidates for staff positions could be trained in a reasonable period of time, even if they could not otherwise qualify for the jobs without such training.
4. The National Park Service can develop specific training programs to qualify native Hawaiian staff for permanent civil service positions as they become available.
5. In-service and/or academic training should be offered to all native Hawaiian staff employed by the park.

Civil Service Requirements

The preferential hiring of native Hawaiians does, understandably, pose problems for the National Park Service whose hiring procedures are governed by civil service rules and regulations. However, civil service rules generally state that the personnel director can recruit in any way he sees fit in order to augment the official public announcements of position openings and examinations.

63

Even more important is the fact that the preferential employment of native Hawaiians for the Ka-loko, Hono-kō-hau National Cultural Park is not only consistent with the civil service concept of merit, but also enhances it. Native Hawaiians are probably the only people who can effectively interpret and demonstrate what the Hawaiian culture as lived at Ka-loko, Hono-kō-hau was all about. With their natural skills and easy-going personalities, they will make the park more genuine, not only for the Hawaiian people, but also for park visitors.

Job specifications for the park can be written for native Hawaiian preference by requiring “a practical knowledge of the Hawaiian culture”, together with “the ability to relate this knowledge to others in an effective Hawaiian manner”. Testing for these qualities becomes largely a matter of evaluating the life backgrounds and attitudes of those who apply. This kind of evaluation is a legitimate form of testing.

Any additional examinations should be of the oral or performance type which are relevant to the kind of skill the job requires. Few, if any, civil service rules or regulations actually require the personnel director to administer written examinations. In addition, examinations that are not relevant to the job are a violation of the merit principle.

Another means of preferential hiring of native Hawaiians is selective certification. Instead of referring the top people who passed the examination, the personnel director is permitted to go down the list to choose from all the successful examinees on the basis of special criteria, such as being native Hawaiian and knowledgeable of Hawaiian culture. Selective certification should be requested on the grounds that being native Hawaiian and having practical knowledge of the Hawaiian culture is necessary for servicing the park.

Furthermore, charges of “discrimination” can be answered by the argument that hiring native Hawaiians for park jobs is consistent with the merit principle in that the native Hawaiian and his knowledge of the Hawaiian culture is necessary for servicing the park.

Types of Park Employment

The kinds of jobs within the park complex will be broken down into two categories - permanent (full-time) and temporary (part-time or special short-term full-time).

Permanent positions will include administrative ones such as Superintendent, department heads, librarian, and clerical. Cultural interpreters-demonstrators will be hired full-time as well as security and maintenance personnel.

Temporary people will be needed in all personnel areas but particularly in interpretation. For example, work-study programs can be designed in which students, preferably native Hawaiians, from local high schools and colleges will be hired as park guides. All of the guides will have to undergo an intensive training program in Hawaiian culture which will enable them to intelligently guide visitors through the park complex. In addition, people with special proficiency in Hawaiian language, hula, chanting, fishing, canoe-building, and other crafts will be hired as special, short-term employees who can provide instruction in the cultural education programs

which will be conducted for native Hawaiians and others who are interested. Estimated staff requirements will be based essentially on the City of Refuge staff with much consideration given to the larger acreage and wider variety of facilities and programs at Ka-loko, Hono-kō-hau.





RESEARCH

The archeological, historical, and cultural surfaces of Ka-loko, Hono-kō-hau have only been scratched. A wealth of information remains hidden beneath the 'a'ā and in the hearts and minds of the Hawaiian people.

RECOMMENDATIONS

1. A Hawaiian Historical and Cultural Research Laboratory will be established within the Ka-loko, Hono-kō-hau park complex.
2. The park should contain a Library of Pacific Collections which would become a depository for tapes, films, and publications about the Hawaiian people and their culture as well as the people and cultures of other areas within the South Pacific region.

RESEARCH PLAN

Although archeological investigations have continued in Ka-loko, Hono-kō-hau since the 1930s, there remains a paucity of information regarding the social and economic history of this area. In addition, present information concerning the religious, genealogical, and mythical and legendary history is somewhat sketchy.

66

The establishment of a Hawaiian Historical and Cultural Research Laboratory at Ka-loko, Hono-kō-hau will provide the ways and means necessary to close the information gap that exists in this area. The laboratory, in coordination with the Bernice Pauahi Bishop Museum, the Hawai'i State Archives, the University of Hawai'i, and the Hawaiian Historical Society, will be a place to further study the historical activities of the people of Ka-loko, Hono-kō-hau and other locations on the Island of Hawai'i. Such research would include (1) further documentation of the history of land ownership within the *ahupua'a*, (2) care and use of fishponds, (3) the use of the coastline and sea as resources, (4) the religious significance of *heiau* and *ko'a*, (5) the history of Ka-loko Pond and surrounding land, (6), the genealogical backgrounds of people associated with the traditions of the region, (7) documenting correlations between archeological and natural features within the settlement, (8) the relationship between Ka-loko, Hono-kō-hau and North Kohala, as well as all Hawai'i (9) the changing religious orientation of the settlement inhabitants after the arrival of the white man, (10) the size of historic populations, and (11) the history of Hawaiian land use patterns.

In addition, studies would be conducted to determine what native plants and animals inhabited the area before foreign introductions, and what traditional ceremonies and cultural activities were performed in the settlement. These studies will directly benefit the cultural demonstration and educational programs of the park by providing them with historical information about Ka-loko, Hono-kō-hau.



The establishment of the Library of Pacific Collections in conjunction with the research laboratory will make the park a valuable information center. Staffed by a trained librarian, the library would be a tremendous asset to both children and adults who wish to learn more about Polynesian culture.

GENERAL PLANNING CONSIDERATIONS

SIGNIFICANT EVENTS PRECEDING THIS STUDY

67

- 1959: The Territory of Hawai'i issued a report recommending a "Hono-kō-hau Park" (including fishponds) to be developed as part of the 1961-1965 budget.
- 1962: A proposal for Hono-kō-hau National Historic Landmark was submitted by the National Park Service. The State Department of Land and Natural Resources released plans for a State Park at Hono-kō-hau including a small boat harbor, picnic areas, campgrounds, and protection of historic features.
- 1963: Hono-kō-hau Settlement was declared eligible for National Historic Landmark status.
- 1967: The State of Hawai'i accepted the bronze landmark plaque from the Federal Government.
- 1969-
- 1970: Prior to 1969, the entire Ka-loko, Hono-kō-hau area was part of a state conservation district. The State Land Use Commission, in two major decisions, changed the land-use designation of Ka-loko, Hono-kō-hau from conservation to urban. The County of Hawai'i, has, to date, however, maintained the area in open space zoning. This zone is generally described in the County General Plan to be used for parks, historic sites, forest and water reserves, and natural and scientific preserves.
- 1971: The State Department of Land and Natural Resources granted a conditional permit for recreation use of Ka-loko fishpond and for modification of the seawall.

The State Department of Transportation, Harbors Division issued a permit for dredging, removal of a portion of the seawall, and construction of a new cross wall.

U.S. Army, Corps of Engineers requested that the Advisory Council on Historic Preservation review the request for altering the seawall at Ka-loko and its effects on the historic landmark.

The Advisory Council recommended that action by the Kona Coast Company, owners of Ka-loko, be "held in abeyance" by the U.S. Army, Corps of Engineers.

- 1972: Public Law 92-346 was signed by the President.

PURPOSE OF PUBLIC LAW 92-346

This act authorized a study to determine the feasibility of creating a unit of the National Park System in the Ka-loko, Hono-kō-hau vicinity. A sum of \$50,000 was appropriated by the act to complete the study and print a report. The proposal is not to exceed 1,500 acres of land and water area.

68

The act also required that a Hono-kō-hau Study Advisory Commission be set up to assist the Department of the Interior in conducting the study. Appointments were made by the Secretary of the Interior of 15 commissioners, 13 of whom are Hawaiian or partly Hawaiian. The Commission will be abolished at the time the report and recommendations are submitted to Congress.

The Commission was required to operate under the requirements of Public Law 92-463 which outlines the responsibilities and uses for all Federal Advisory Commissions. Particularly important to the Hono-kō-hau Study is the cultural expertise provided by the commissioners. It was considered that evaluation of inherent resources and formulation of a proposal could only be accomplished with participation by and cooperation with the community of native Hawaiians.

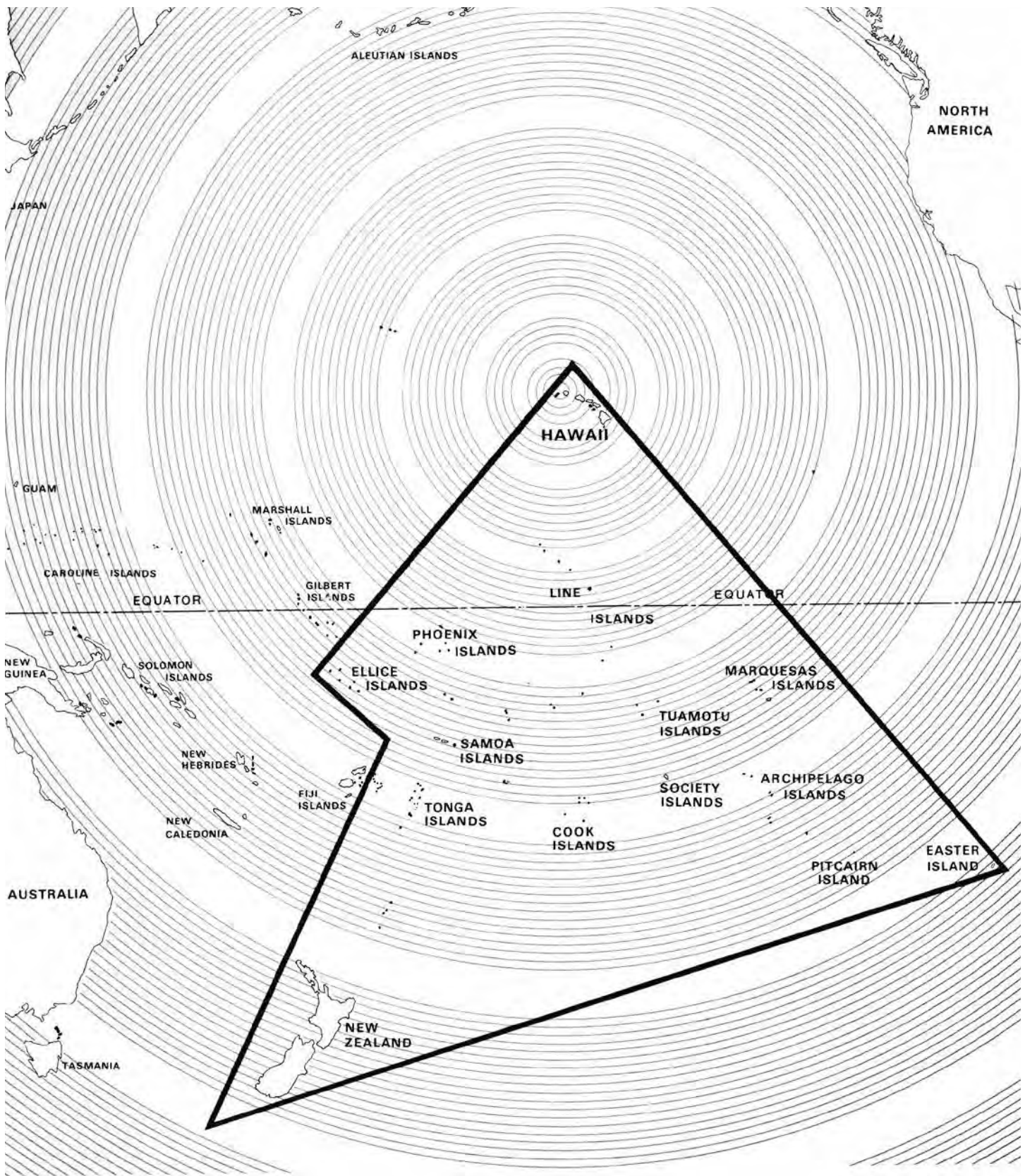
In addition, the act directed that no Federal Agency should, without prior approval of the Secretary of the Interior, take an action that would diminish the inherent resources of the site and its immediate surroundings until the Secretary's report is submitted to the President and Congress.

REGIONAL BACKGROUND

The scope of study and considerations for a Hawaiian cultural complex must encompass much of the Pacific Basin, for Hawaiian culture and attitudes have their roots in all of Polynesia. This is a vast area of the Pacific stretching from New Zealand in the south to Easter Island, the

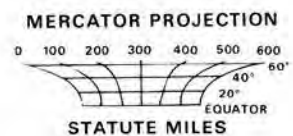
Marquesas, Tahiti, and finally to the northernmost point, Hawai'i itself. The language, and associated oral history, chants, dances, religion, fishing practices, and other elements that form the fabric of Hawaiian culture, can be traced to other parts of the far-flung Polynesian complex.





THE POLYNESIAN ISLANDS

SOURCE: KAMEHAMEHA SCHOOLS



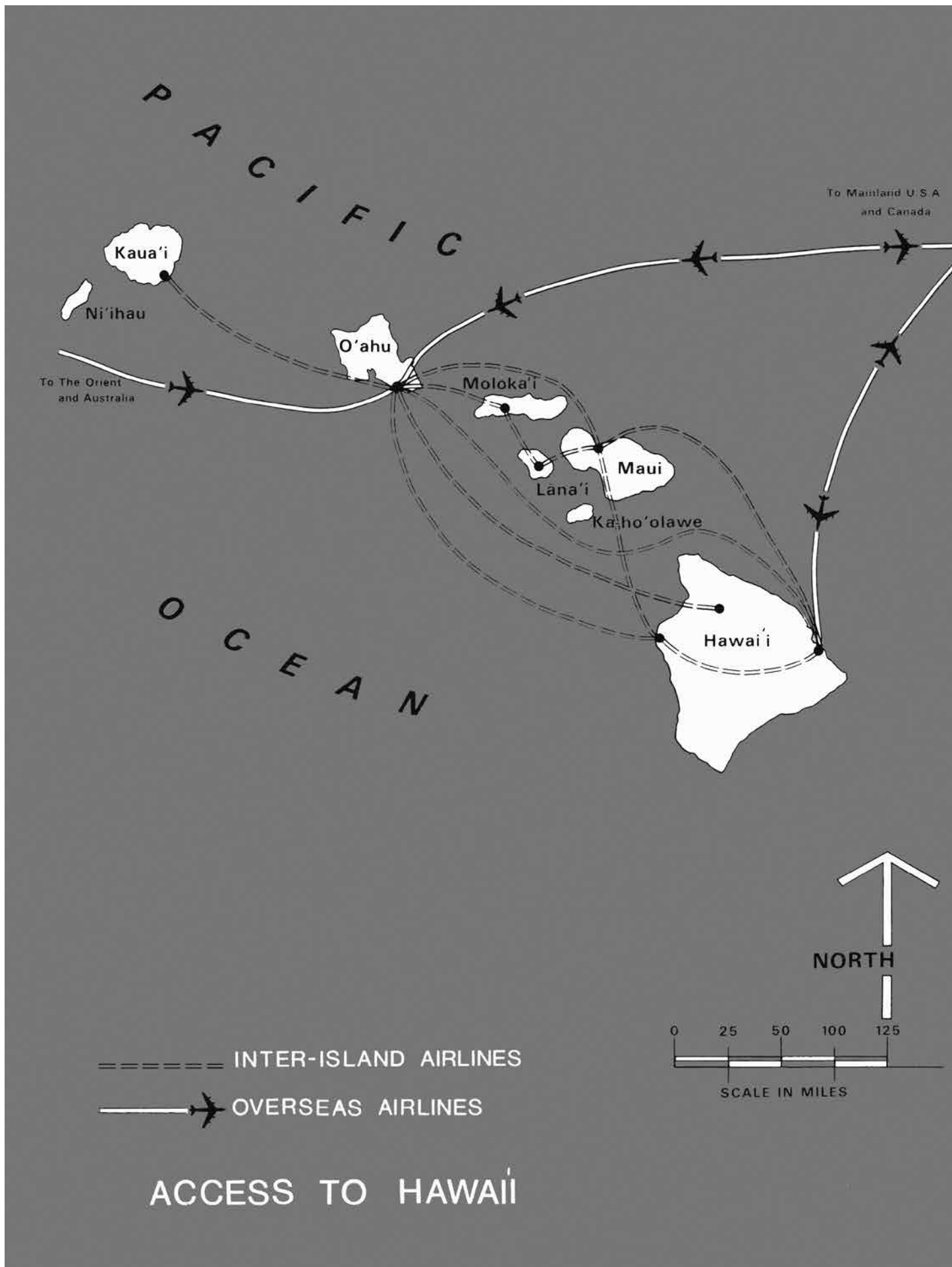
Other totally foreign cultures had their influence, too, although this occurred only in the past 200 years. Captain Cook first introduced Hawai'i to European cultural influences. Missionaries from New England followed in the early 19th century and their influence on the culture was to be the most profound as centuries-old religious practices were abolished in favor of the new religion and a vastly different social order. Missionaries and their descendants became businessmen as Hawai'i had more intimate contact with the outside world. Introduced diseases devastated the native Hawaiian population, and laborers were imported to work in the new pineapple and sugar plantations. Through this action, Chinese, Japanese, Portuguese, and Filipino attitudes and ideas became part of the mosaic of races, faces, and ideas that make up what Hawai'i is today. Finally, the visitors, mostly Caucasians from mainland U.S.A., have had their cultural and physical impact. Arriving by the millions each year, requirements for their entertainment, housing, and transportation produce a further impact on Hawai'i and its indigenous culture. Hawaiians and their culture thus can become a source of amusement and entertainment rather than a viable, living, and growing cultural entity. A major purpose of this proposal is to assist the Hawaiian in reversing that trend and provide a physical location where Hawaiian and visitor alike may become more aware of this unique part of our national heritage and assure that it maintains the dignity it deserves.

THE HAWAIIAN ISLANDS -- THE STATE

There are 132 islands, reefs, and shoals encompassed by the Hawaiian Archipelago. This is the State of Hawai'i and it is over 1,500 miles long. That area commonly referred to as Hawai'i, however, is the group of eight islands at the southeast end of this chain. All are mountains of volcanic origin whose bases are the floor of the Pacific Ocean. Kaua'i, on the north, is geologically the oldest, very deeply eroded, and most nearly exemplifies the popular image of a verdant tropical island. The Island of Hawai'i is almost entirely the product of relatively recent volcanic activity, is the largest of all the islands and is a classical example of a complex of shield volcanoes.

Prevailing trade winds produce much of the state's pleasant weather pattern. During most of the year they bring moisture-laden air from a northeasterly direction to the windward coasts and produce a perpetually moist atmosphere with its attendant dense vegetation, particularly at higher elevations. The lee side of the islands is dry, warm, and receives much of its rain from Kona weather -- warm tropical storms that occur generally from November through April.

Concentration of population is on O'ahu, with about 700,000. Hawai'i although much larger in area, currently supports only about 63,000.



HAWAI'I -THE ISLAND

In contrast to the metropolitan atmosphere on O'ahu, the Big Island of Hawai'i exhibits vast open spaces, large ranches, and extensive remote coastal areas. And it has the state's two nearly constantly active volcanoes, Mauna Loa and Kī-lau-ea. Hualālai, a third major volcano, erupted last in 1801. These flat, dome-shaped mountains form the major mass of the island with summits of from 8,000 feet elevation on Hualālai to nearly 14,000 on Mauna Kea. Kohala, a much older and more eroded volcano, forms the north end of the island.

Great contrasts occur here also. The green, moist, windward coast gives way to the cold high elevation of the central part of the island. This, in turn, contrasts with the warm Kona coast, where the greatest potential for new resort and recreation development exists.

North Kona is the heart of this resort complex. The coast from Kai-lua to Ke-au-hou is dotted with hotels and more are planned. Although there are few beaches, the weather is ideal with warm sunny days and cool nights. In addition to the tourist industry, coffee, grazing, and the macadamia nut industry provide the main economic base. Visitors usually arrive by air, via the major neighbor island terminal at Ke-āhole.

There is an overseas terminal at Hilo on the windward coast. Hilo is also the island's commercial and political center. Hotels and other facilities exist here but the predominant area that will support new resort construction will very likely be on Hawaii's west coast, specifically in the districts of South Kohala, North Kona, and South Kona.



PACIFIC OCEAN



ISLAND OF HAWAII

- NORTH KONA DISTRICT
- PROPOSED HIGHWAYS



KA-LOKO, HONO-KŌ-HAU

This complex of archeological, biological, and cultural resources, the subject of this study, lies just north of the existing resort complex that extends from Kai-lua to Ke-au-hou Bay. Moreover, the complex is within an area considered for potential expansion of visitor services and facilities. The proposal for a Ka-loko, Hono-kō-hau National Cultural Park placed the site in the context of continuing development on the lands surrounding it, especially the *ahupua'a* of Ka-loko, Hono-kō-hau, Ko-hānai-ki, and Ke-ala-kehe.

74



LAND USE ALLOCATION



PACIFIC OCEAN

KAI-LUA BAY



0 1 2
SCALE IN MILES

HONOKŌHAU

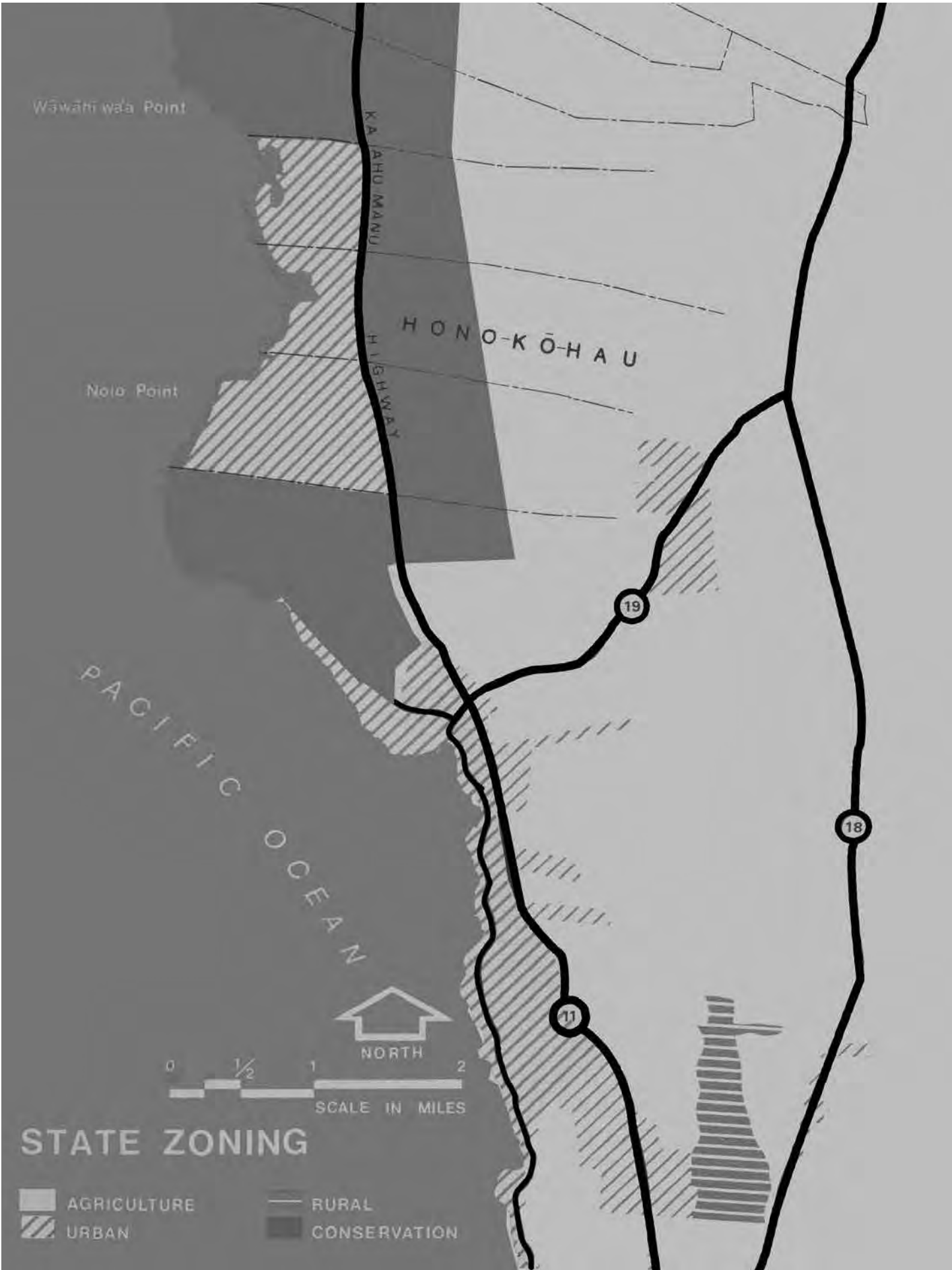
ECONOMIC RAMIFICATIONS AND SURROUNDING LAND USE

76

Although discussed separately here, this is an integral part of the planning and decision-making process. Land in Hawai'i is expensive and property along the coast in North Kona is especially valuable since it has had great potential for recreation and resort development. Moreover, the major alternative for use of the proposed park is for residential and resort purposes. The economic wisdom of major additional development such as this is subject to serious question, especially when the economy of the entire North Kona District is considered. Occupancy rates in many North Kona hotels are at or below that level considered profitable. Proposing a facility similar to those that already exist but are underused is of questionable benefit for the region, particularly when water and sewer services must be provided at some cost to the county.

A new facility, or one which adds a dimension to the experience of the Hawaiian and the visitor alike, provides an additional attraction and source of income for the region without creating a facility that will compete with those already existing. The two attached maps indicate the land use allocations in North Kona as currently assigned by the state and the county. State zoning divides all lands into four zones; urban, rural, agricultural and conservation. The conservation zone is administered by the state and the other three zones come under county jurisdiction. As indicated earlier in the report, the state, in 1970, changed the zoning in the *makai* areas of the *ahupua'a* of Ka-loko and Hono-kō-hau from conservation to urban. The County of Hawai'i, in its 1971 general plan, allocated all lands in North Kona in accordance with recommended potential uses, as shown on the attached map. It should be noted, however, that even with this land allocation as it is now shown, the current open space zoning for the Hono-kō-hau and Ka-loko lands must be changed before the development proposed by the landowners could proceed.

Perhaps most important to the future of urban-resort development and land use patterns in North Kona is the impact resulting from the Ka-loko, Hono-kō-hau National Park proposal. If visitation requires additional facilities, other land is available for these uses. At Hono-kō-hau and Ka-loko there is a unique opportunity to provide a new dimension to visitor experience and at the same time, help maintain the integrity of the Hawaiian culture. The combination of resources and opportunities for such a complex does not exist elsewhere in Hawai'i.





APPENDIXES

APPENDIX A REFERENCES

79

- Social Dynamics, Hawaii — October, 1973
Honokohau National Historic Landmark: Data Report.
Prepared for the Honokohau Study Advisory Commission
and the National Park Service.
- Lynette 'A'alaonana Roy — December, 1973
Na Mo'oelo Ha'i Waha 'o Honokohau-Kaloko. A study of
the traditional history of the Honokohau-Kaloko area
prepared for the Honokohau Study Advisory Commission
and the National Park Service.
- B. P. Bishop Museum — October, 1973
Honokohau National Historic Landmark: Digest of Relevant
Material Available at the B. P. Bishop Museum, with a
Listing of Archeological Sites, their Description and Location.
Prepared for the Honokohau Study Advisory Commission and
the National Park Service.
- Deborah F. Cluff, B. P. Bishop Museum — 1971
An Archeological Survey of the Seaward Portion of Honokohau
No. 1 and No. 2, North Kona, Hawaii Island. Prepared for
Lanihau Corporation.
- Marion Kelly, B. P. Bishop Museum — March, 1971
Kekaha: 'Aina Malo'o, Historical Survey and Background of
Kaloko and Kuki'o Ahupua'a, North Kona, Hawaii
- Robert C. Renger, B. P. Bishop Museum — November, 1970
Archeological Reconnaissance of Coastal Kaloko and Kuki'o I,
North Kona, Hawaii. Prepared for Huehue Ranch, Kona Coast
Company, Holualoa, Hawaii
- Kenneth P. Emory and Lloyd Soehren, B. P. Bishop Museum
November, 1971
Archeological and Historical Survey Honokohau Area, North
Kona, Hawaii. Prepared for Department of Land and Natural
Resources, State Parks Division, State of Hawaii.

APPENDIX B

PUBLIC LAW 92-346

HONOKOHAU NATIONAL HISTORICAL LANDMARK, HAWAII

PUBLIC LAW 92-346; 86 STAT. 457

[H. R. 11774]

An Act to authorize a study of the feasibility and desirability of establishing a unit of the national park system in order to preserve and interpret the site of Honokohau National Landmark in the State of Hawaii, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That:

The Congress finds the site of the Honokohau National Historical Landmark in the State of Hawaii encompasses unique and nationally significant cultural, historical, and archeological resources and believes that it may be the national interest for the United States to preserve and interpret those resources for the education and inspiration of present and future generations. The Congress further believes that it is appropriate that the preservation and interpretation at that site be managed and preformed by native Hawaiians, to the extent practical, and that training opportunities be provided such persons in management and interpretation of those cultural, historical, and archeological resources.

Sec. 2. (a) The Secretary of the Interior (hereinafter referred to as the “Secretary”) shall study the feasibility oand desirability of establishing as a part of the national park system an area, not to exceed one thousand five hundred acres, comprising the site of Honokohau National Historic Landmark and adjacent waters.

(b) As a part of such study other interested Federal agencies, and State and local bodies and officials shall be consulted, and the study shall be coordinated with other applicable planning activities.

Sec. 3. The Secretary shall submit to the President and the Congress within one year after the effective date of this Act, a report of the findings resulting from the study. The report of the Secretary shall contain, but not be limited to, findings with respect to the historic, cultural, archeological, scenic, and natural values of the resources involved and recommendations for preservation and interpretation of those resources, including the role of native Hawaiians relative to the managment and performance of that preservation and interpretation and the providing to them of training opportunities in such management and preformance.

Sec. 4 (a) There is hereby established a Honokohau Study Advisory Commission. The Commission shall cease to exist at the time of submission of Secretary’s report to the President and the Congress.

(b) The Commission shall be composed of fifteen members, at least ten of whom shall be native Hawaiians, appointed by the Secretary, as follows:

(1) Two members, one of whom will be appointed from recommendations made by each of the United States Senators representing the State of Hawaii, respectively;

(2) Two members, one of whom will be apporinted from recommendations made by each of the United Sates Representatives for the State of Hawaii, respectively;

(3) Five public members, who shall have knowledge and experience in one or more fields as they pertain to Hawaii, of history, ethnology, anthropology, culture, and folklore and including representatives of the Bishop Museum, the University of Hawaii, and the organizations active in the State of Hawaii in the conservation of resources, to be appointed from recommendations made by the Governor of the State of Hawaii;

(4) Five members to be appointed from recommendations made by local organizations representing the native Hawaiian people; and

(5) One member to be appointed from recommendations made by the mayor of the county of Hawaii.

(c) The Secretary shall designate one member to be Chairman. Any vacancy in the Commission shall be filled in the same manner in which the original appointment was made.

(d) A member of the Commission shall serve without compensation as such. The Secretary is authorized to pay the expenses resonably incurred by the Commission in carrying out its responsibility under this Act on vouchers signed by the Chairman.

(e) The Secretary or his designee shall consult with the Commission with respect to matters relating to the making of the study.

Sec. 5. During the period commencing with enactment of this Act and ending with submission of the Secretary's report to the President and the Congress and any necessary completion of congressional consideration of recommendations included in that report (1) no department or agency of the United States shall, without prior approval of the Secretary, assist by loan, grant license, or otherwise in the implementation of any project which, in the determination of the Secretary, would unreasonably diminish the value of cultural, historical, archeological, scenic, or natural resources relating to lands or waters having potential to comprise the area referred to in section 2(a) of this Act and (2) the Chief of Engineers, Department of the Army, shall not, without prior approval of the Secretary, undertake or assist by license or otherwise the implementation of any project which, in the determination of the Secretary, would diminish the value of the natural resources located within one-quarter mile of the lands and waters having potential to comprise that area.

Sec. 6. The term "native Hawaiian", as used in this Act, means any descendant of not less than one-half part of the blood of the races inhabiting the Hawaiian Islands previous to the year 1778.

Sec. 7. There are authorized to be appropriated not to exceed \$50,000 to carry out the provisions of this Act.

Approved July 11, 1972.

APPENDIX C
NA HOA PILI O KA-LOKO, HONO-KŌ-HAU
(THE FRIENDS OF KA-LOKO, HONO-KŌ-HAU)

AN ADVISORY COMMISSION
FOR THE
KA-LOKO, HONO-KŌ-HAU NATIONAL CULTURAL PARK
(Suggested language for Congressional action)

There is hereby established Na Hoa pili o Ka-loko, Hono-kō-hau, an Advisory Commission for the Ka-loko, Honokōhau National Cultural Park. The Commission shall be composed of nine members, appointed by the Secretary of the Interior, as follows:

1. All members shall be residents of the State of Hawai'i.
2. At least six members shall be Hawaiians.
3. All members shall be appointed from recommendations made by local organizations to include but not be limited to:

Aboriginal Lands of Hawaiian Ancestry
 Association of Hawaiian Civic Clubs
 Congress of Hawaiian People
 Council on Hawaiian Heritage
 Daughters and Sons of Hawaiian Warriors
 Daughters of Hawai'i
 Hale o Na Ali'i
 I Mua Hawaiian Uplift
 Ke Leo o Na Pua o Hawai'i
 Ke-au-kaha Pana-'ewa Community Association
 Nan-kuli Hawaiian Homesteaders
 Native Sons and Daughters
 Puna Hawaiian Organization
 Te Anaina o Ta Ho'omana Hawai'i Pono'i
 The Hawaiians
 The Ka'ahumanu Society
 The Order of Kamehameha
 Waimea Hawaiian Homestead Association

4. Initial appointment shall consist of two members appointed for a term of five years, two for a term of four years, two for a term of three years, and one for a term of one year. Thereafter, appointments shall be made for a term of five years. Members shall not serve more than one term consecutively, but may be reappointed after a three-year lapse.

The Secretary shall designate one member to be Chairman. Any vacancy in the Commission shall be filled in the same manner as defined in Section 4 above.

A member of the Commission shall serve without compensation as such. The Secretary is authorized to pay the expenses reasonably incurred by the Commission in carrying out its responsibilities under the Act on vouchers signed by the Chairman.

In addition to the Commission members defined above, the Superintendent of the Hono-kō-hau National Cultural Park, the National Park Service State Director, Hawai'i, a person appointed by the Governor of Hawai'i and a person appointed by the Mayor of the County of Hawai'i, shall serve as ex-officio, non-voting members of the Commission.

The purpose of the Commission shall be to advise the Director, National Park Service, with respect to the historical, archeological, cultural, and interpretive programs of the Ka-loko, Honokōhau National Cultural Park, its staffing and operation; with particular emphasis on the operation of the area by qualified Hawaiians and the quality of Hawaiian culture demonstrated and taught therein.

The Commission shall meet not less than twice a year. Interim meetings may be called by the Chairman with the concurrence of the Director of the National Park Service.

APPENDIX D
STUDY PARTICIPANTS

HONO-KŌ-HAU STUDY ADVISORY COMMISSION

Colonel Arthur Chun, Chairman
Kai-lua, Kona

Mr. David K. Roy, Executive Officer
Kai-lua, Kona

Mr. Homer A. Hayes, Acting Chairman
Honolulu

Rev. Henry K. Boshard
Kai-lua, Kona

Mr. Pilipo Springer
Kai-lua, Kona

Miss 'Io-lani Luahine
Kai-lua, Kona

Mr. George Pinehaka
Captain Cook, Hawai'i

Mr. Alike Cooper
Hilo, Hawai'i

Mr. Kwai Wah Lee
Hilo, Hawai'i

Mr. George Naope
Hilo, Hawai'i

Mrs. Robert (Abbie) Napeahi
Hilo, Hawai'i

Mr. Fred Cachola
Wai-'anae, O'ahu

Dr. Kenneth P. Emory
Honolulu

Ms. Nani Mary Bowman
Honolulu

Mrs. Franklin w. (Emily Ka'ai) Thomas
Honolulu

CONSULTANTS

John David Wai-he'e III, and assistants: Compilation of Basic Data

Richard Ka-pololū; Planner

George Ke-ko'o-lani, Jr.: Architect

Herb Ka-wai-nui Kāne: Artist

Stephen Kāne-a-i Morse: Writer

Lynette 'A'alaonaona Roy: Consultant on oral traditions
and cultural values

Bernice P. Bishop Museum: Archeological and Cultural
Resource Data

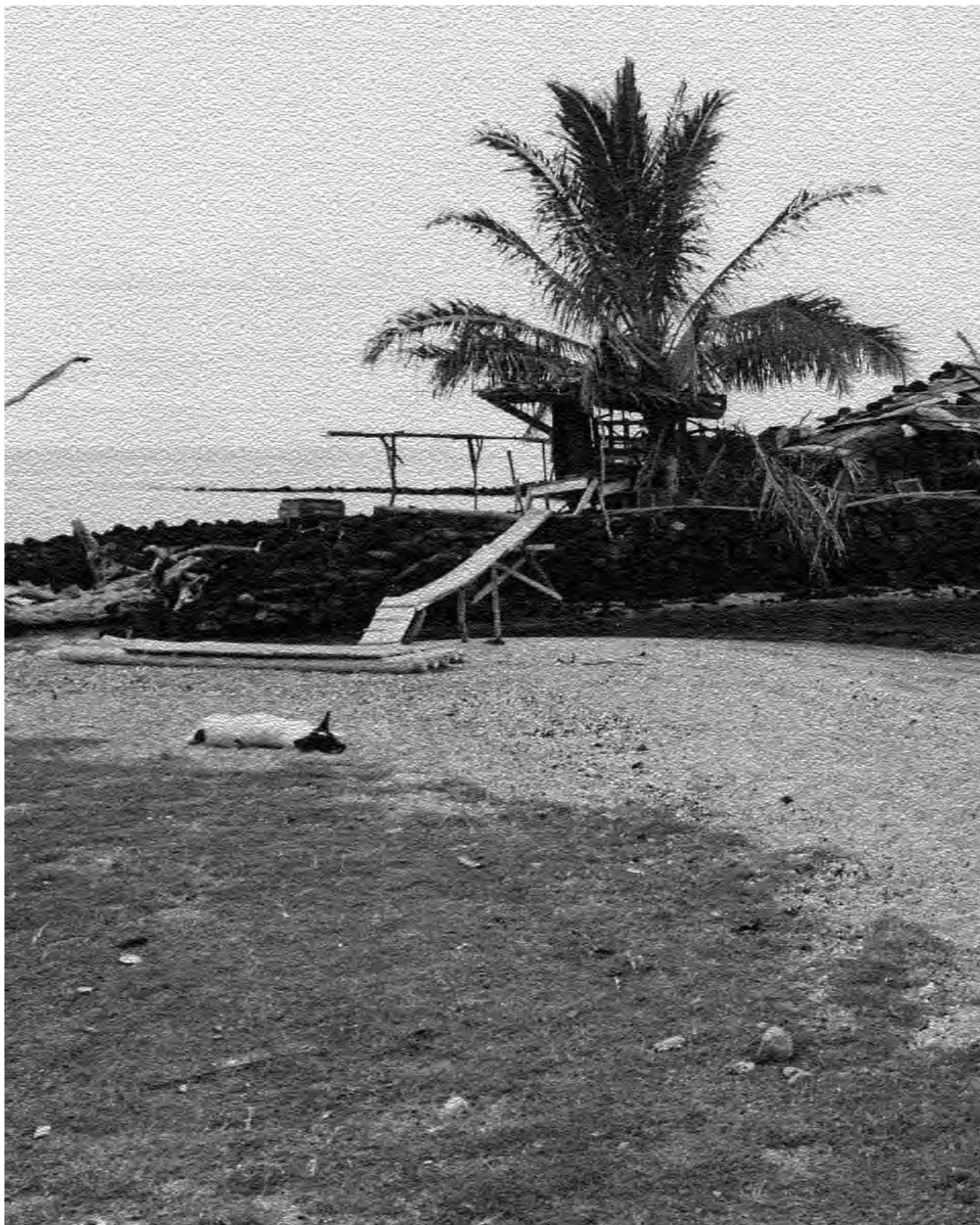
NATIONAL PARK SERVICE

Robert Barrel: Hawai'i State Director in Honolulu

Ronald Mortimore: Park Planner, Western Regional
Office, San Francisco, California

Graphic and photographic services were provided by the
Western Regional Office, 1974.
United States Department of the Interior/National Park Service

Reprinted at the request of Kaloko-Honokōhau National Historical Park
in celebration of the 40th Anniversary of this report, 2014.





Back cover

**PETITION REQUESTING A CONTESTED CASE HEARING BEFORE THE
COMMISSION ON WATER RESOURCE MANAGEMENT
AND APPLICATION TO INTERVENE AS A PARTY**

NOTE: THIS PETITION IS TO BE FILED IN PERSON OR MAILED AND POSTMARKED WITHIN 10 DAYS OF THE PUBLIC HEARING OR COMMISSION MEETING AT WHICH THE REQUEST FOR A CONTESTED CASE HEARING WAS MADE.

(Please submit an original and 3 copies, pursuant to HAR 13-167-25(c)).

IF MAILED, SEND TO: Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809
Phone: (808) 587-0225 Fax: (808) 587-0219

IF DELIVERED: Commission on Water Resource Management
1151 Punchbowl St., Rm. 227, Kalanimoku Bldg.
Honolulu, HI 96813

2014 DEC -3 AM 10:35

Please provide the following information:

(If there is not sufficient space to fully answer any of the items noted below, please use additional sheets of paper)

1. **NAME OF PETITIONER/APPLICANT:** The Water Board of the County of Hawaii, the Governing Board of the semi-autonomous Department of Water Supply of the County of Hawaii (hereinafter referred to as the "Water Board")
2. **ADDRESS:** 345 Kekuanaoa Street, Suite 20, Hilo, Hawaii 96720
PHONE: (808) 961-8050 **FAX:** (808) 961-8657
3. **ATTORNEY OR CONTACT PERSON:** Benjamin A. Kudo and Connie C. Chow, Attorneys for the Water Board.
4. **ADDRESS:** 999 Bishop Street, Suite 1400, Honolulu, Hawaii 96813
PHONE: (808) 539-0400 **FAX:** (808) 533-4945
5. **SUBJECT MATTER:** National Park Service's Petition to Designate the Keauhou Aquifer System as a Ground Water Management Area, filed September 13, 2013 (hereinafter the "NPS Petition").
6. **DATE OF PUBLIC HEARING/COMMISSION MEETING:** December 10, 2014, assuming the Commission deems the December 10, 2014 hearing to be a public hearing. If the December 10, 2014 hearing is not deemed a public hearing, then Petitioner Water

Board intends that this Petition requesting a contested case hearing be applied to any subsequent public hearing(s) scheduled by the Commission regarding the NPS Petition.

7. **WHAT IS THE LEGAL AUTHORITY UNDER WHICH THE PROCEEDING, HEARING OR ACTION IS TO BE HELD OR MADE (CITE APPLICABLE SECTION OF CONSTITUTION, STATUTES, OR ADMINISTRATIVE RULES):**

Hawaii Administrative Rules (“HAR”) Sections 13-171-1, et seq.; HAR Sections 13-167-1, et seq.

Hawaii Revised Statutes (“HRS”) Section 174C-1, et seq.; HRS Section 91-1, et seq.

HRS § 174C-9 Proceedings before the commission concerning water resources. All proceedings before the commission concerning the enforcement or application of any provision of this chapter or any rule adopted pursuant thereto, or the issuance, modification, or revocation of any permit or license under this code by the commission, shall be conducted in accordance with chapter 91. Hearing regarding particular water resources shall be conducted on the island where those water resources are located.

8. **ARE YOU HAWAIIAN?** Not applicable

9. **WHAT IS THE TAX MAP KEY OF THE PROPERTY ON WHICH YOU RESIDE?**

The Department of Water Supply operates out of its Kona base yard located on TMK No. (3) 7-8-006:067.

10. **WHAT IS THE TAX MAP KEY OF THE PROPERTY CONSIDERED IN THIS ISSUE?**

The properties considered in this issue are all the properties within the Keauhou Aquifer. A list of all known TMK Nos. within the Keauhou Aquifer is attached hereto as Exhibit “2” and incorporated herein.

11. **WHAT IS THE TAX MAP KEY OF THE PROPERTY OR PROPERTIES WHICH YOU OWN IN THE VICINITY OF THE PROPERTY CONSIDERED IN THIS ISSUE?**

A list of the TMKs for the properties owned by the County within the Keauhou Aquifer is found in Exhibit “3” attached hereto and incorporated herein. In addition, the Water Board has also been granted control over the State parcels identified in Exhibit “4” attached hereto and incorporated herein.

12. **WHAT, IF ANY, ACTIVITIES HAVE YOU ENGAGED IN ON THE PROPERTY CONSIDERED IN THIS ISSUE?**

The Water Board is the governing board of the Department of Water Supply (“DWS”) for the County of Hawaii. The DWS is the primary purveyor of potable water to the North Kona community and the water system not only provides water for consumptive purposes but also serves as the primary source for fire protection purposes. The North Kona water system also contains 358 agriculture services as well as 38 irrigation (or landscape meters). The DWS has also been involved with the planning and design of numerous projects from schools, state and county facilities, residential, commercial, and industrial developments which include affordable housing as well as medical facilities that the community has shown a need for in the North Kona area.

DWS operates out of its Kona Baseyard located on TMK 7-8-006:067 which 25 employees report to. The personnel from this baseyard cover the districts of North and South Kona and include 2 construction inspectors covering up to 3 additional districts (North and South Kohala as well as Kau). Besides the planning, design and construction of water system facilities on the properties at hand, the DWS continues to operate and maintain the facilities in order to provide continual potable water service to its customers. The water system within the Keauhou Aquifer consists of 12 sources, 68 tanks, and approximately 200 miles of transmission pipeline, servicing approximately 10,639 accounts, serving an estimated population of 28,725 people.

In order to provide reliable service to our customers, the DWS has to maintain all 12 of its sources in order to provide flexibility when pump and motors are non-operable. Storage tanks and booster pumps are also critical in providing operational flexibility and efficiency when considering non-operable sources as well as to handle fire flow or peak flow conditions. These facilities are often quite large and require separate parcels to be created for operations and maintenance purposes. DWS personnel do daily station checks for operational purposes including storage levels, chlorine residual (water quality purposes), and normal operation equipment. That being said, the DWS relies on providing water not only to its existing customers, but to future customers as well, and depends on projections for future use in several studies including rate studies.

13. WHAT IS THE NATURE AND EXTENT OF YOUR INTEREST THAT MAY BE AFFECTED?

The DWS is responsible for the control of water resources within the Keauhou Aquifer. The Water Board, as the governing board of DWS, has a legitimate interest in the Keauhou Aquifer as both: 1) a purveyor and regulator of water within the County of Hawaii, entrusted with the duty to allocate, control, preserve and provide water to the public, and 2) a landowner that owns multi-million dollars worth of improvements used to service an estimated 28,725 of its customers within the Keauhou Aquifer.

A. The Water Board for DWS has a legitimate interest in the proposed WMA designation of the Keauhou Aquifer as the County agency entrusted with the duty to allocate, control, and provide potable water to the people of the island of Hawaii.

As the county water board which has jurisdiction over the land and water in question, the Water Board has both the right, and a duty to the people of the County of Hawaii, to manage, control and operate the waterworks of the county and all property thereof, as well as the right and duty to adopt rules and regulations relating to the management, control, operation, preservation and protection of the waterworks of the county. See Hawaii County Charter Section 8-2. The designation of the Keauhou Aquifer as a water management area (“WMA”) will significantly affect the Water Board's jurisdiction over such lands and waters by restricting the use of water within the Keauhou Aquifer to only such uses that the Commission approves by permit.

The Water Board, as a representative of the people of the County of Hawaii, has a duty to allocate, control, and provide water, and to ensure that such water is not being unreasonably withheld or overly regulated when not necessary. The duty to protect water resources is not simply a duty to prevent over-use, but it is also a duty to protect water resources from over-regulation when regulation is not warranted. In similar situations, Hawaii courts have recognized the standing of groups that file legal actions on behalf of their membership. See e.g., Waianae Model Neighborhood Area Assn. v. City & County of Honolulu, 55 Haw. 40, 514 P.2d 861 (1973) (Where court allowed non-profit organization to sue on behalf of its members where the injury alleged was suffered by the membership in general and a favorable judicial decision would also remedy the injury suffered by the members individually). Here, the designation of the Keauhou Aquifer as a water management area would cause injury to all landowners and water users within the aquifer because all future and existing water uses within the aquifer would be subject to the added costs of obtaining water permits from the Commission. In addition to the cost for applying for a water permit, all such applications are potentially subject to contested case hearings which could ultimately cost more than the average citizen can afford to participate in.

Allowing the Water Board to proceed with a contested case hearing on this WMA designation now will prevent a multiplicity of suits by the existing and future water users within the Keauhou Aquifer—all of whom have an interest in such waters and in the regulations affecting their property. A favorable decision for the Water Board will also protect the interests of those landowners and water users that otherwise lack the means to challenge such a designation by the Commission.

B. The Water Board has a legitimate property interest in the Keauhou Aquifer as a landowner and water user within the aquifer and is the owner of a multi-million dollar water system and infrastructure which services its customers.

As both a landowner and water user in the area proposed for designation, the Water Board has a significant property interest in the designation. C.f. Town v. Land Use Commission,

55 Haw. 538, 524 P.2d 84 (1974). The Water Board holds title to or otherwise has been given control by the State to approximately 88 parcels within the Keauhou Aquifer. The County of Hawaii's construction budget for the past ten years for the Keauhou Aquifer, alone, has totalled more than 30 million dollars, and its budget for the Keauhou Aquifer for the next five years is anticipated to be in excess of 10 million dollars. These estimates do not include operation or maintenance costs of the systems within the aquifer. The County has spent a significant amount of money on equipment and infrastructure located within the Keauhou Aquifer. It has an interest in utilizing the water systems it expended significant sums to construct and operate. The County also has an interest in utilizing the water resources it has been entrusted with in order to provide potable water to its customers.

The practical implication of a WMA designation is that it will severely limit the Water Board's ability to complete its new source development, and to continue its maintenance and operation of existing sources for the benefit of its customers. The Water Board's inability to continue existing uses or to plan for future operations will result in a significant loss of income generated from its services to its customers. Its legitimate interest as a water provider will be injured if the Commission proceeds with the WMA designation. In addition, the added regulations and requirements that are imposed upon water management areas will affect land value within the aquifer as the added cost and burden of obtaining a water permit from the Commission will deter buyers from purchasing land from the existing landowners.

There are legitimate interests that are at stake in this WMA designation proceeding before the Commission. The Hawaii Supreme Court has set forth guiding tenants for purposes of determining standing. The Court has consistently held that "standing requirements should not be barriers to justice" Mahuiki v. Planning Com'n, 65 Haw. 506, 654 P.2d 874 (1982); Life of the Land v. Land Use Commission, 63 Haw. 166, 171, 623 P.2d 431, 438 (1981), and that "[o]ne whose legitimate interest is in fact injured by illegal action of an agency or officer should have standing because justice requires that such a party should have a chance to show that the action that hurts his interest is illegal." Mahuiki, at 512, 654 P.2d at 878 (quoting East Diamond Head Association v. Zoning Board of Appeals, 52 Haw. 518, 523 n.5, 479 P.2d 796, 799 n.5 (1971)).

The Water Board simply asks for a chance to present its argument as to why a WMA designation of the Keauhou Aquifer would hurt its legitimate interests, and why designation is currently unwarranted and illegal.

14. WHAT IS THE DISAGREEMENT, DENIAL, OR GRIEVANCE WHICH YOU ARE CONTESTING?

The Water Board contests the Commission's designation of the Keauhou Aquifer as a Water Management Area. There is no basis upon which a designation is warranted.

15. WHAT ARE THE BASIC FACTS AND ISSUES?

A. *Basic Facts*

On September 13, 2013, the National Park Service (“NPS”) filed its Petition to Designate the Keauhou Aquifer System as a Ground Water Management Area. In the NPS Petition, NPS argues that “designation is necessary . . . for the protection of vital water-related public trust resources located within Kaloko-Honokohau National Historical Park” NPS Petition at page 1. Throughout the Petition, NPS explains why a WMA designation for the area is important for the protection of the Park and resources within the Park. See NPS Petition at pages 1-21.

Shortly thereafter, on September 20, 2013, the Commission requested comments to the Petition from Mayor William P. Kenoi, County Council Chair J Yoshimoto, and Chair of the Board of Water Supply Arthur Taniguchi. The 60 day deadline for the Commission Chairperson to make a recommendation on whether or not to pursue designation was triggered and was set to expire on November 12, 2013.

On October 4, 2013, the Water Board requested additional time to submit comments to the Petition. Similar requests were made by Mayor Kenoi, Chair Yoshimoto and the Director of Planning of the County of Hawaii Duane Kanuha. On October 16, 2013, the Commission extended the review period through December 2014. During the extended period for review, the Commission scheduled site visits on September 17, 2014 and on October 9, 2014. Because the site visits did not provide the Water Board with sufficient opportunity to present all of the technical and scientific information gathered by the County that would be critical for the Commission’s consideration, the Water Board requested that the Commission schedule another meeting to allow the Water Board and other stakeholders and lineal descendents of the area to provide input on the NPS petition.

Rather than holding a meeting in the vicinity of the area proposed for designation, the Commission scheduled a meeting on November 19, 2014 on the island of Oahu and requested that the County of Hawaii Department of Water Supply present its information then. While the Manager-Chief Engineer, Deputy Manager and two employees of the Department of Water Supply were able to attend the meeting, the location of the meeting made it difficult for many landowners and water users who might be affected by the proposed designation to attend and provide input.

In its written response to the Commission’s requests for input on the Petition, as well as during the various meetings held by the Commission regarding the Petition, the Water Board and others have contested the designation of the Keauhou Aquifer as a WMA. Attached hereto and incorporated herein as Exhibit "1" is a copy of the Water Board's November 28, 2014 letter (excluding exhibits) detailing the relevant facts and addressing the criteria that the Commission must consider in designating a WMA. The exhibits to the Water Board’s November 28, 2014 letter will be provided upon request by the Commission.

As shown in the letter, there is **insufficient evidence** to warrant the designation of the Keauhou Aquifer as a ground water management area. HRS § 174C-44 sets forth the criteria that the Commission must consider when designating a WMA. None of the criteria is met nor is there any scientific evidence that the water resources in the area may be threatened by existing or proposed withdrawals or diversions of water. See HRS § 174C-41 (the Commission shall designate the area “when it can be reasonably determined, after conducting scientific investigations and research that the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water . . .”).

As discussed above, the Water Board as a representative of the people of the County of Hawaii, as well as individually as a landowner and water user in the Keauhou Aquifer, has a legitimate interest in protecting the Keauhou Aquifer from designation as a WMA. Accordingly, the Water Board files this Petition Requesting a Contested Case Hearing Before the Commission to prevent the designation of the Keauhou Aquifer as a WMA.

B. Issues

1. The Water Board is Entitled to a Contested Case Hearing on the NPS’ Petition for Water Management Area Action.

“A hearing on a contested matter may be requested by . . . any government agency or interested person.” Hawaii Administrative Rules (“HAR”) § 13-167-52. An “agency” means each state or county board . . . authorized by law to make rules . . .” HRS § 91-1. Hawaii County Charter Section 8-2 authorizes the Water Board to adopt rules and regulations relating to the management, control, operation, preservation and protection of the waterworks of the county. Thus, the Water Board is a government agency that is entitled to request a hearing on a contested matter.

A “contested case” is “a proceeding in which the legal rights, duties, or privileges of specific parties are required by law to be determined after an opportunity for an agency hearing.” HAR § 13-167-2; HRS § 91-1. The Petition filed by the NPS initiated a contested case. The proceeding before the Commission is one in which NPS seeks to have its legal rights, duties and privileges to the water resources surrounding and upon its property protected by the Commission’s act of designating the entire Keauhou Aquifer as a WMA. See NPS Petition at pages 1-21. In similar situations, the Hawaii Supreme Court has found that a proceeding that sought to have the legal rights, duties, or privileges of the applicant declared over the objections of other landowners in the area was obviously a contested case. See Mahuiki v. Planning Com’n, 65 Haw. 506, 513, 654 P.2d 874, 879 (1982).

Likewise, it is obvious this proceeding before the Commission is a contested case. The NPS filed its Petition with the Commission in order to have its legal rights, duties, or privileges to water for the Park preserved by WMA designation of the entire aquifer. The Petition has been met by the objections of other landowners in the Keauhou Aquifer. In essence, the NPS Petition

seeks a WMA designation in order to protect the water resources benefiting its property from over use by others within the Keauhou Aquifer. It is a request unique to NPS and its "mandate by Congress". See NPS Petition at page 20. Further, the Commission is required by law to make a determination on the NPS Petition after an agency hearing. "The chairperson, after consultation with the appropriate county council, county mayor, and county water board, shall act upon the petition by making a recommendation for or against the proposed designation to the commission within sixty days after receipt of the petition . . ." HRS § 174C-41. "After public hearing . . . The commission shall render its decision within ninety days after the chairperson's recommendation to the commission." HRS § 174C-46.

2. All Proceedings Before the Commission Concerning the Designation of a Water Management Area under HRS Chapter 174C are subject to a contested case hearing.

All proceedings before the commission concerning the application of any provision in HRS Chapter 174C shall be conducted in accordance with HRS Chapter 91. See HRS § 174C-9. The WMA designation proceeding here concerns the application of HRS §§ 174C-41, 42, 43, 44 and 46. In designating an area for water use regulation, the Commission must apply the criteria set forth in HRS § 174C-44. *Id.* Accordingly, the public hearing must be conducted in accordance with HRS Chapter 91, which sets forth the administrative procedures for contested cases. Likewise, HRS § 174C-12 provides that judicial review of orders of the commission under HRS Chapter 174C shall be governed by HRS Chapter 91.

3. There are insufficient facts or evidence to support a finding by the Commission that the Keauhou Aquifer should be designated a water management area.

HRS 174C-41 permits the commission to designate an area as a water management area "when it can be reasonably determined, after conducting scientific investigations and research, that the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water. . . ." Here, there is no evidence to support a finding that would warrant designation.

In designating an area for water use regulation, the commission must consider the criteria established under HRS 174C-44. As more thoroughly explained in the Water Board's letter dated November 28, 2014 to Chairman William J. Aila and the Commission members, the Keauhou Aquifer does not meet any of the criteria under HRS 174C-44 to warrant its designation as a WMA. Attached hereto as Exhibit "1A" is a copy of the Water Board's November 28, 2014 letter detailing the facts and addressing the criteria that the Commission must consider in designating a WMA.

Accordingly, the Water Board contests the designation of the Keauhou Aquifer as a WMA.

16. WHAT IS THE RELIEF THAT YOU SEEK OR THAT YOU DEEM YOURSELF ENTITLED?

The Water Board seeks a decision by the Commission that there is insufficient evidence to support the designation of the Keauhou Aquifer as a Water Management Area, and therefore the NPS Petition for designation of the Keauhou Aquifer as a ground water management area must be denied.

17. IDENTIFY ANY AND ALL OTHER PERSON WHO MAY OR WILL BE AFFECTED BY THE RELIEF WHICH YOU SEEK:

All landowners and water users within the Keauhou Aquifer. A list of known landowners within the Keauhou Aquifer is attached hereto as Exhibit "2".

APPLICATION TO INTERVENE AS A PARTY

1. THE NATURE OF APPLICANT'S STATUTORY OR OTHER RIGHT

See response to Question 13 above. Further, HAR § 13-167-54 provides that "All government agencies whose jurisdiction includes the land or water in question may be admitted as parties upon timely application." The Water Board is the governing board of the DWS whose jurisdiction includes the waters within the Keauhou Aquifer.

2. THE TAX MAP KEY NUMBER OF THE APPLICANT'S PROPERTY AS WELL AS THE PETITIONER'S PROPERTY. THE NATURE AND EXTENT OF APPLICANT'S INTEREST.

A list of the Water Board's properties is attached hereto as Exhibit "3".

To the best of our knowledge at this time, the TMK numbers for the National Park Service's properties are: (3) 7-4-008-010, (3) 7-4-008-025, (3) 7-3-009-002, and (3) 7-3-009-021.

3. THE EFFECT OF ANY DECISION IN THE PROCEEDING ON APPLICANT'S INTEREST.

See response to Question 13 above. The practical implication of a WMA designation is that it will severely limit the Water Board's ability to complete its new source development, and to continue its maintenance and operation of existing sources for the benefit of its customers. The Water Board's inability to continue existing uses or to plan for future operations will result in a significant loss of income generated from its services to its customers. Its legitimate interest as a water provider will be injured if the Commission proceeds with the WMA designation. In addition, the added regulations and requirements that are imposed upon water management areas will affect land value within the aquifer as the added cost and burden of obtaining a water permit from the Commission will deter buyers from purchasing land from the existing landowners.

4. THE DIFFERENCE IN THE EFFECT OF THE PROPOSED ACTION ON THE APPLICANT'S INTEREST AND THE EFFECTS OF THE PROPOSED ACTION ON THE GENERAL PUBLIC.

See response to Question 13.

As the county water board which has jurisdiction over the land and water in question, the Water Board has both the right, and a duty to the people of the County of Hawaii, to manage, control and operate the waterworks of the county and all property thereof, as well as the right and duty to adopt rules and regulations relating to the management, control, operation, preservation and protection of the waterworks of the county. See Hawaii County Charter Section 8-2. The role and interest of the Water Board differs from the general public in this respect because it is entrusted with the duty to manage, control, operate, preserve and protect the water and waterworks of the County of Hawaii for the benefit of the general public. It is more than simply a user of water within the Keauhou Aquifer, but it is also a purveyor of water to those within the aquifer.

If relevant, the application shall also address:

1. Other means available whereby applicant's interest may be protected.

None at this time.

2. The extent the applicant's interest may be represented by existing parties.

Applicant's interest is not represented by existing parties.

3. The extent the applicant's interest in the proceedings differs from that of the other parties.

The only other known party at this time is the Petitioner National Park Service who is requesting the WMA designation of the Keauhou Aquifer. The Water Board opposes designation. Unlike the Water Board, the NPS is not responsible to the people of the County of Hawaii for managing, controlling, and providing potable water for use. The Water Board and the NPS' interest differ in this proceeding.

4. The extent the applicant's participation can assist in development of a complete record.

The Applicant manages and operates the County water system within the Keauhou Aquifer. It has relevant information pertaining to the ground water criteria provided in HRS § 174C-44, which the Commission is obligated to consider when designating an area for water use regulation.

This information is necessary in order to complete the Commission's record.

5. The extent the applicant's participation will broaden the issue or delay the proceeding.

Not applicable.

6. How the applicant's intervention would serve the public interest.

See response to Question 13. The Water Board, as a representative of the people of the County of Hawaii, has a duty to allocate, control, and provide water, and to ensure that such water is not being unreasonably withheld or overly regulated when not necessary. The duty to protect water resources is not simply a duty to prevent over-use, but it is also a duty to protect water resources from over-regulation when regulation is not warranted. In similar situations, Hawaii courts have recognized the standing of groups that file legal actions on behalf of their membership. See e.g., Waianae Model Neighborhood Area Assn. v. City & County of Honolulu, 55 Haw. 40, 514 P.2d 861 (1973) (Where court allowed non-profit organization to sue on behalf of its members where the injury alleged was suffered by the membership in general and a favorable judicial decision would also remedy the injury suffered by the members individually). Here, the designation of the Keauhou Aquifer as a water management area would cause injury to all landowners and water users within the aquifer because all future and existing water uses within the aquifer would be subject to the added costs of obtaining water permits from the Commission. In addition to the cost for applying for a water permit, all such applications are potentially subject to contested case hearings which could ultimately cost more than the average citizen can afford to participate in.

Granting the Water Board's application to intervene will serve the public's interest by allowing the Water Board to protect and preserve the rights of the public to enjoy and use the


water within the Keauhou Aquifer without the added costs and burdens that are associated with obtaining a water permit and expensive contested case proceedings.

7. Any other information the commission may add or delete.

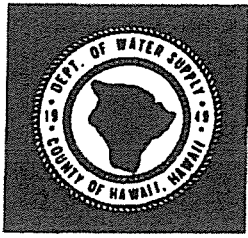
Not applicable.

The above-named person or agency hereby requests and petition the Commission on Water Resource Management for a Contested Case Hearing, and to be an intervenor in the matter described above.

BENJAMIN A KUDO
Name (Print)


Signature

12/3/14
Date



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8657

November 28, 2014

Mr. William J. Aila, Jr., Chairperson and Commissioners
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

Re: *Water Board and Department of Water Supply of the County of Hawai'i's Response to Kaloko-Honokōhau National Park Service Petition to Designate Keauhou Aquifer System Area (North Kona), Hawai'i as a Ground Water Management Area*

Dear Mr. Aila and Commissioners:

Thank you for allowing the Water Board of the County of Hawai'i ("Board") to comment on the Petition to Designate the Keauhou Aquifer System ("Petition") as a Ground Water Management Area, which was filed on September 13, 2013, by the National Park Service ("NPS"). **The Board respectfully opposes the Petition, as designation of the aquifer is not warranted.** We therefore urge you to NOT pursue the designation process.

I. INTRODUCTION

Since the Petition was filed, the Board has heard presentations and received testimony (written and/or oral) from the NPS, Commission on Water Resource Management ("Commission") staff, numerous representatives of stakeholders in the Kona community (public, private, and cultural), scientists in the fields of hydrology, hydrogeology, geochemistry, and biology as well as engineers, among others, as well as the Department of Water Supply's ("DWS") staff. Since 2008, the DWS has also been closely involved in formulating and continuing the Kona Water Round Table ("KWRT") meetings to address the water concerns in the region and specifically within the Keauhou Aquifer system. At these KWRT meetings, presentations were made by the NPS as well as professionals in the area of ground water hydrology, anchialine ponds or pools, ground water quality management and other pertinent professions and practitioners. At each of these meetings, numerous people have attended, including members of the Board, the Commission, United States Geological Survey ("USGS") staff, the NPS, as well as many stakeholders of North Kona. Based on the information received, the Board recognizes and believes that a strong and valid effort is in place to protect the ground water sustainability, which includes discharge into the near-shore waters, and that the scientific investigation and research does not justify designation.

...Water, Our Most Precious Resource...Ka Wai A Kāne...

The Department of Water Supply and Water Opportunities is a unit and employee of the County of Hawaii.

Exhibit "1"

Numerous scientists¹, including petitioner's own hydrologist, Paula Cutillo², stated there is **no evidence that current pumping has adversely impacted resources at the park or along the coast**. In fact, data from monitoring wells near or within the park indicate no increase in salinity and in some cases a decrease in salinity over the past 19 years. Rising sea level has an impact of shifting the basal lens inland; however, that does not equate to a threat to fresh water supply. It should also be noted that consumptive uses are also a public trust use of water.

The following are facts regarding why each of the criteria for designation is NOT MET.

II. CRITERIA NECESSARY FOR DESIGNATION TO PROCEED

- 1. Whether an increase in water use or authorized planned use may cause the maximum rate of withdrawal from the ground water source to reach ninety percent of the sustainable yield of the proposed water management area. [Hawai'i Revised Statutes ("HRS") § 174C-44(1)]***

Conclusion:

CRITERIA 1 IS NOT MET. Not only is the "authorized plan use" nowhere near the ninety percent mentioned in the statutes, but there is scientific evidence that the sustainable yield number utilized by the Commission is far less than the actual sustainable yield.

Discussion:

A. Water Use and Development Plan

Petitioner relies heavily on a misinterpretation of the Water Use and Development Plan of the County of Hawai'i ("WUDP"). The WUDP addresses a theoretical potential full build out based on the Land Use Pattern Allocation Guide ("LUPAG") map, which only considers theoretical full build out of the entire area without regard to time. The medium growth rate projections show that in 2025, it is estimated that the water use, including agricultural use, will be approximately 18.6 million gallons per day, or about 48.9% of the sustainable yield ("SY"), even if the SY of 38 million gallons per day ("mgd") is used.³

¹ See *Summary of Scientific Research on the Northern Section of the Keauhou Aquifer System*, prepared by Steve Bowles, Ph.D, Tom Nance, P.E., and Richard Brock, Ph.D. presented to the Kona Water Roundtable on July 30, 2014 attached as Exhibit "A".

² National Park Service, U.S. Department of the Interior, Water Resources Division presentation: *NPS Petition for Water Management Area Action: Scientific Overview*, presentation by Paula A. Cutillo, Ph.D. at the Kona Water Roundtable on August 27, 2014.

³ See *Hawai'i County Water Use and Development Plan Update* (August 2010) available at: <http://www.hawaiidws.org/7%20the%20water%20wudp.htm>

B. Sustainable Yield

The current SY of 38 mgd was based on a total estimated ground water recharge of 87 mgd, while recent studies by USGS⁴, reported to the Commission has shown that actual ground water recharge is estimated to be approximately 77% greater or approximately 154 mgd – four times the amount of the current SY.

As our consultant for the WUDP, Jon Nishimura, explained at the Commission on Water Resource Management meeting on November 19, 2014, the use of LUPAG and associated water demand was based on a **theoretical** full build-out scenario where every single square foot of area was developed to its theoretical maximum extent, was never intended to be a projection of actual water use. Growth projections were also made in the WUDP to use as a guide for future planning; and based upon the medium growth rate as the most likely to occur, it is estimated that in 2025, the water demand, including all agricultural use, will reach approximately 18.6 mgd (or 49% of SY) and further projecting that number out, it would be 25.2 mgd in 2045 (or 66% of SY), again assuming that SY is 38 mgd.

C. Authorized Planned Use

“‘Authorized Planned Use’ means the use or projected use of water by a development that has received the proper state land use designation and county development plan/community plan approvals.” *HRS § 174C-3*.

While the Commission has requested an abundance of data from the DWS, the statutory definition of Authorized Planned Use must be adhered to by the Commission. The following is the “Authorized Planned Use” as of writing this letter:

Water Commitments that have land use approvals from the County (i.e., zoning, subdivision, etc.)	1.14 mgd
Developer Agreements that have land use approvals from the County	1.21 mgd
Vacant Service Laterals that have been paid for and installed by previous developments but are not in use because a meter has not been installed, or in some cases because development plans have changed	1.10 mgd
Open Building Permits that fall outside of the above categories	.09 mgd
TOTAL	3.54 mgd

During the DWS’ truncated presentation after the October 9, 2014 site visits on the Big Island, the DWS included 1.99 mgd for “other private wells.” However, the Water Board and the DWS have no jurisdiction over private wells. The only non-DWS municipal wells

⁴ See excerpts from USGS Scientific Investigations Report 2011-5078, “A Water-Budget Model and Assessment of Groundwater Recharge for the Island of Hawai’i, attached as Exhibit “B” hereto (hereinafter “2011 USGS Groundwater Recharge Study”). A complete copy of the study is available at: <http://pubs.usgs.gov/sir/2011/5078/sir2011-5078.pdf>

whose developments have all land use authority for full build-out are at Kukio. At full build-out Kukio's use will be approximately 0.4533 more than its existing use (this number was calculated from information obtained from an employee of Kukio). The remainder of the 1.99 mgd was given to DWS staff by Commission staff. DWS has questioned this number. DWS does not have information on the location of these irrigation wells. Whether these wells are or would be considered for a development's "authorized plan use" is highly questionable. Additionally, the Commission should NOT calculate "authorized planned use" based upon pump capacity, because: (1) there are redundant sources within the system; (2) no well would be pumped 24 hours a day; and (3) the design of the pump capacity would be much greater than actual planned use.

D. Permitted Wells

Petitioner is attempting to alarm the Commission by claiming that there are 51 permitted wells for production and that less than one third are reporting pumpage to the Commission. However, what Petitioner fails to understand is that some permitted wells are not in production. DWS knows that at least 26 of the 51 permitted wells not owned by them are also not in production. DWS has 14 of the listed wells, is reporting pumpage on 12 of the wells and 2 of the wells cannot be reported because the wells are not in production yet. Additionally, as a practical matter, wells are generally not pumped to their capacity, and back-up wells are standard practice as the equipment requires quite a bit of maintenance and often requires replacement which could take several months to accomplish. Therefore, total pumping capacity is always significantly higher than what is actually being used.

E. Protecting Native Hawaiian Rights and Practices

Petitioner accuses both the Commission and DWS of not considering the supply of water necessary to protect the traditional and customary Native Hawaiian rights and practices. This is simply not true.

The SY determination considers many factors, including ground water discharge that may affect recreational as well as aquatic and wildlife habitat (USGS Circular 1186). Though the original model may not have accounted explicitly for these issues, the recent studies that are resulting in much higher SY numbers do.

2. *There is an actual or threatened water quality degradation as determined by the department of health. [HRS § 174C-44(2)]*

Conclusion:

CRITERIA 2 IS NOT MET. To the Board's knowledge, the Department of Health has not made any finding that there is an actual or threatened water quality degradation. See also discussion under Criteria 4.

3. *Whether regulation is necessary to preserve the diminishing ground water supply for future needs, as evidenced by excessively declining ground water levels. [HRS § 174C-44(3)]*

Conclusion:

CRITERIA 3 IS NOT MET. Overall recharge is 77% higher than what was used to determine the currently used SY of 38 mgd.

Discussion:

The Petition references the 2011 USGS Groundwater Recharge Study that addresses climate change and refers to Timm and others (2009) and their study on rainfall estimates for the late 21st century on the Big Island.

The 2011 USGS Groundwater Recharge Study projects a slight increase in precipitation for most of the Big Island, including Kona. This study also addresses the ground water recharge and estimates that the overall recharge is approximately 77% higher than what was used to determine the SY of 38 mgd. *See Exhibit "B"*. This section also states that the RAM methodology for determining SY did not consider these trends in rainfall and sea level. It should be pointed out that the 2011 USGS Groundwater Recharge Study does consider the climate change in determining overall recharge. Finally, the SY is not the only criteria that is being looked at by the many scientists who have come forth and shared information in determining potential impacts based on the ground water withdrawal.

4. *Whether the rates, times, spatial patterns, or depths of existing withdrawals of ground water are endangering the stability or optimum development of the ground water body due to upconing or encroachment of salt water. [HRS § 174C-44(4)]*

Conclusion:

CRITERIA 4 IS NOT MET. There is no evidence of any danger to the aquifer due to the existing withdrawals. As the Commission witnessed and heard at the site visit at the Kahalu'u Shaft on October 9, 2014, shaft pumpage is being reduced and will be relegated to use as a back-up source in the near future.

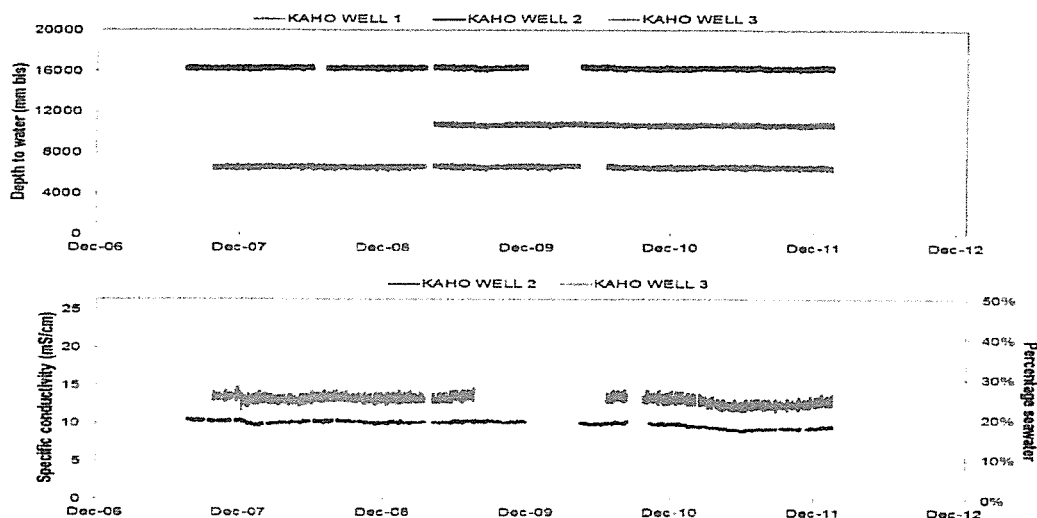
Discussion:

The Petition is inaccurate and misleading. Paragraph 4 on page 33 of the Petition states that "In 2011, sodium levels in drinking water from Kahalu'u well field were as high as 185 milligrams per liter (mg/L)..." and "As of January 2013, chloride levels in Kahalu'u well field remained as high as 410 mg/L..." THESE STATEMENTS ARE INCORRECT AND MISLEADING.

In 2011, the average sodium level in the Kahalu'u well field (Kahalu'u Wells A, B, C, and D) was approximately 80 mg/L (ppm). The report presumably extracted the 185 mg/L sodium result from the DWS' 2011 Consumer Confidence Report (aka Water Quality Report). This 185 mg/L result is actually a Kahalu'u Shaft sample, and not from the

Kahalu'u well field. Also, the average chloride concentration from the Kahalu'u Wells A, B, C, and D between January 2012 and December 2012 was approximately 138 mg/L (ppm) (See <http://www.hawaiidws.org/7%20the%20water/ccrpage.htm>). The Petition appears to total the chloride concentrations from the Kahalu'u wells, which is incorrect. DWS has already begun the process of reducing the pumpage of the Kahalu'u Shaft, as explained at the site visit on October 9, 2014, and the Kahalu'u Shaft will be relegated as a back-up source.

There is simply no evidence that any increase in the number of pumping wells located in the vicinity of Kaloko-Honokōhau would have an effect on freshwater discharge to coastal ecosystems within the Park. In fact, in the graphic shown below, which is from Paula Cutillo's presentation to the Commission on September 17, 2014, shows conductivity (an indication of salinity) at a stable level from 2007 through 2011.



5. *Whether the chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses. [HRS § 174C-44(5)]*

Conclusion:

CRITERIA 5 IS NOT MET. The DWS typically attempts to blend the Kahalu'u Shaft and Kahalu'u Well water sources with each other in order to dilute the chloride concentrations. In addition, where it is physically and hydraulically possible, the higher-elevation/lower-chloride sources are blended with the Kahalu'u Shaft and Kahalu'u Well water sources. The blending of water sources reduces the chloride levels in the water system and is done for the benefit of the community and water users, and the blending inherently increases the "value" of the water. The DWS has invested time and monies to develop additional higher-elevation/lower-chloride water sources in order to reduce the daily pumpage from the Kahalu'u Shaft and Kahalu'u Wells.

Discussion:

As documented, in the early 1990's Keauhou-Kamehameha Well 2 and Kalaoa Well were drilled at higher elevations, and a high-elevation water source was discovered with significantly lower chlorides. As additional high-elevation water sources were developed, the DWS would pump and transmit the lower-chloride water to customers in the vicinity of the high-elevation sources. Recently, due to the completion of new transmission waterlines, the DWS blends the Kahalu'u Shaft and the Kahalu'u Wells' water with these higher-elevation water sources in order to dilute and decrease the chloride concentrations, thereby increasing the aesthetic and overall "value" of the water. Recent water quality analyses for chlorides in the North Kona water system has shown that this high-elevation/lower chloride water is flowing to portions of the water system that were previously served by the Kahalu'u Shaft and Kahalu'u Wells. Thus, the "value" of the water has increased in these areas that now receive waters with lower chloride levels.

6. *Whether excessive preventable waste of ground water is occurring.*
[HRS §174C-44(6)]

Conclusion:

CRITERIA 6 IS NOT MET. The Petition inaccurately states the amount of single-family use. In addition, the DWS is a statewide leader in leak detection.

Discussion:

The Petition inaccurately states: "According to the County of Hawaii 2010 WUDP, water consumption in North Kona is 1000 gallons per day per single-family residential unit – 2.5 times higher than other areas of the county (Fukunaga & Associates, Inc. 2010)." The 1000 gallons per day (gpd) is per connection, which includes larger meters. The DWS has performed a recent assessment of average residential use rates in the area and has determined that accounts in typical residential subdivisions use an average of approximately 410 gpd. This is in line with what the DWS uses island-wide at 400 gpd average. *See Rules and Regulations of the Department of Water Supply, County of Hawai'i*, effective October 21, 2004 (as revised) ("DWS' Rules") available at: <http://www.hawaiidws.org/3%20about%20water/3d%20rules/Rules%20and%20Regulation%20Effective%2010-21-04.pdf>

The DWS also aggressively addresses waste and conservation.

An unaccounted water program has been in place at the DWS for over 20 years, and our leak detection program has been a statewide leader as evidenced by our participation with assisting the Honolulu Board of Water Supply in establishing its program. To date, DWS has installed thousands of data loggers which help to detect leaks, whether in the public water system or through customers' piping. Also, more reliable and accurate meters have been installed at our sources so that we can compare pumping and consumption more dependably. Telemetry equipment was also installed/replaced to ensure that pumps shut off when the tanks are full and do not overflow the tanks. The DWS has put in a substantial

effort in determining and minimizing unaccounted water, as we realize that reducing waste is important in keeping our resources sustainable in the long run.

Additionally, the DWS regularly collaborates with elementary through high school teachers to educate their students about water conservation and stewardship, both in the classroom and at our facilities. We also participate regularly in the annual statewide "Detect-a-Leak Week" campaign, where we work with local hardware stores to hand out free toilet tank leak detection tablets to customers island-wide.

7. *Serious disputes respecting the use of ground water resources are occurring. [HRS § 174C-44(7)]*

Conclusion:

CRITERIA 7 IS NOT MET. There are no disputes regarding the use of ground water resources except for this disputed Petition, which is unsupported by scientific facts.

Discussion:

NPS claims that it has commented on numerous "issues" with respect to ground water in the area, making it clear that NPS is the only entity which, irrespective of scientific data, is creating these "disputes".

We believe that NPS' "issues" are being addressed and that real efforts are being made, including the addition of monitoring wells to obtain additional information within the aquifer. In fact, the DWS is currently working on a monitoring plan for its high level sources, including a component to concurrently monitor a down gradient basal source. We intend to share this information with the Commission as it becomes available.

8. *Whether water development projects that have received any federal, state, or county approval may result, in the opinion of the commission, in one of the above conditions. [HRS § 174C-44(8)]*

Conclusion:

CRITERIA 8 IS NOT MET. See discussions above.

III. OTHER IMPORTANT CONSIDERATIONS

1. *No Adverse Effects on the NPS*

NPS relies on a ground water model and analysis done in 1999 and states: "... that if all permitted wells were pumped at their maximum rate, ground water discharge at the coastline in the Park would be reduced to 47% of the 1978 rate and water levels would decline by about 0.6 ft. (Oki et al. 1999)(Figure 9)."

There are more recent models and analyses done, and the results referred to in the above paragraph are no longer valid. The Board was not presented with any evidence that freshwater

discharge to the National Park was diminished or would be diminished in the foreseeable future as described in the 1999 study. As a matter of fact, a review of the conductivity data from 2008 to 2012 from two observation wells, KAHO 2 and KAHO 3, indicated conductivity levels have dropped slightly, indicating a slight increase of freshwater
(<https://irma.nps.gov/App/Reference/Profile/2193295>)

NPS makes repeated references to the EA for the Palani Ranch Well (Geometrician Associates LLC 2009). The EA addresses the cumulative pumping effects on salinity increase and thermal change at the NPS inland ponds as well as coastal waters. The EA specifically addresses the orange-black damselfly, and the one completed lab test (a total of 3 were to be done) showed that the predicted salinity increase and thermal change was insignificant to the habitat of the studied damselfly. The EA also addressed mullet and other native fish that have a wide range of tolerance for salinity and will not be impacted.

2. Protecting Public Trust Resources

The NPS vastly overstated the precautionary principle and omitted an essential part of the code. The Petition provides: "Pursuant to the precautionary principle, when 'the water resources in an area may be threatened by existing or proposed withdrawals or diversion of water' the Commission has a duty to designate a water management area [HRS § 174C-41]". What the Petition fails to include in its quotation is the following: "**When it can be reasonably determined, after conducting scientific investigations and research** that the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water, the commission shall designate the area . . ." The Petition's omission is not only glaring, but an indication of the Petitioner's lack of **any** scientific proof that ground water withdrawals or proposed withdrawals from the Keauhou Aquifer are affecting or will affect the Kaloko-Honokōhau National Historical Park. As a political subdivision of the State, DWS recognizes its duty to conserve and protect Hawai'i's natural resources. We further understand our obligation to promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. With this in mind, we also recognize that the waters of the State are held for the benefit of the citizens of the State, and that the people of the State are beneficiaries and have a right to have the waters protected for their use. The policies set forth in the Hawai'i State Constitution and in the State Water Code are what guide DWS when implementing its programs and policies concerning water resources within the County of Hawai'i. In furtherance of these policies, DWS remains active in its conservation efforts. To address the problems of supply and conservation of water, DWS has a rigorous leak detection program, and an active conservation education program, and also has dedicated \$150,000 of its budget for its unaccounted water program for equipment maintenance and replacement.

Although the DWS only provides potable water, if a customer wants a meter for irrigation/landscaping use, the DWS requires the customer execute an Irrigation Agreement/Master Landscape Water Meter Agreement, which, amongst other terms, authorizes the DWS to terminate or restrict the meters in its sole discretion. DWS may also limit or restrict water flow to all agricultural water uses in the event water service to domestic water uses is detrimentally impacted due to agricultural water use or a water shortage. *See* DWS' Rules.

Per DWS' Rules, water commitments are based on the availability of water. In determining the availability of water, DWS considers population, projections, environmental constraints, past water usage, zoning, land use districting, water system constraints, outstanding water commitments, capital

improvement program scheduling, undeveloped available water resources, regulatory requirements of ground water control areas, and any other significant factor, including public trust principles. *See* Rule 5, DWS' Rules.

DWS recognizes that adequate provision of water resources shall be made for the objectives set forth in the State Water Code. Although the priority of water uses has not been an issue, DWS is prepared and understands the State's policy to prioritize the provision of water resources for the "protection of traditional and customary Hawaiian rights", the "protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation."

DWS continues to work to protect and improve the quality of the waters within the County of Hawai'i, and through continual monitoring and maintenance of operations strives to protect existing water from contamination and to maintain a high standard of water quality. DWS works closely with the Commission in monitoring the pumpage of its wells, and voluntarily adjusts pumpage when prudent.

3. Designation is not Necessary

Petitioner's Petition centers around the premise that without designation, the Commission has no tools to manage the aquifer. This is simply not true. The Commission already has the tools and does not need to rely on a water management area. Some of the greatest tools are the components of the Hawai'i Water Plan, which includes the Commission's Water Resource Protection Plan, the State's Water Quality Plan, the State Water Projects Plan, the Agricultural Water Use and Development Plan, and the Counties' WUDPs. The Board would also like to take this opportunity to point out that the County of Hawai'i was the first to update its WUDP and is currently in the process of updating it once more, including the section on the Keauhou Aquifer System area.

Additionally, designation is NOT necessary for the Commission to regulate the location and pumpage of wells in the Keauhou Aquifer System. Existing well construction and pump installation permit processes allow opportunities for input. *See* Figure 1 attached hereto. In fact, through discussions with Commission staff regarding a well in Ka'u, the DWS has limited the pumping from that source.

The Board is convinced that water resources are protected by multiple layers of review and enforcement currently in place at the county, state and federal levels. The Board acknowledges the successes at nearby Kohanaiki and NELHA as primary examples of this. They have not only complied with laws and regulations, but have collaboratively worked with the community and area stakeholders to create successful ecosystems balanced with successful financial ventures.

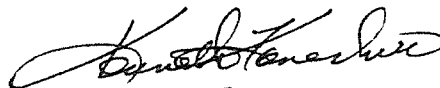
The Board believes there is and will continue to be an abundance of fresh ground water adequate to meet the needs of public trust resources for the foreseeable future. The Board echoes frustration heard within the community about the actual ability to perform Native Hawaiian practices within the Kaloko Honokōhau National Park ("Park") since it was established 36 years ago. The abundance of fresh ground water is likely to be more apparent with the proper maintenance and removal of invasive plant species within the Park. Perhaps the NPS should focus more effort and resources within the Park's boundaries prior to an exterior focus.

IV. CONCLUSION

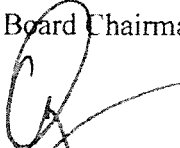
The Board, after a comprehensive assessment of the information available, finds that the Board must continue to work collaboratively with private entities, federal, state and county agencies, as well as the local community, in managing the development of the North Kona water system for the benefit of the community while collectively working to protect the Keauhou Aquifer as a public trust resource. Mr. William Tam, Water Commission Director, addressed designating all of Hawai'i as a water management area by warning against letting isolated conflicts drive designation. He states: "In areas not under stress, you don't need to permit everything right now because of a conflict. There's always the danger of the tail wagging the dog, of using a water conflict to get the zoning."⁵ It would appear to the Water Board that this particular petition could become an isolated conflict and designation would not be necessary to address the concerns of the NPS.

We propose to continue to work with the Commission, NPS and community stakeholders in making sound decisions that will be in the best interests of the community, county, and state, as well as help keep our natural public trust resources protected. We would not support a decision to designate the Keauhou Aquifer System, and therefore request again that you deny the petition.

Sincerely,



Water Board Chairman



Quirino Antonio, Jr., Manager-Chief Engineer

- c: Honorable William P. Kenoi, Mayor, Hawai'i County
Honorable David Ige, Governor-Elect of the State of Hawai'i
Hawai'i County Council Chairperson, Yoshiyoshi
Hawai'i County Council Chairperson-Elect, Dru Kanuha
Hawai'i County Council members (elect)
Senator Josh Green
Senator Mazie Hirono
Senator Lorraine Inouye
Senator Gilbert Kahele
Senator Russell Ruderman
Senator Brian Schatz
Representative Richard Creagan
Representative Tulsi Gabbard
Representative Nicole Lowen
Representative Mark Nakashima
Representative Richard Onishi
Representative Joy San Buenaventura
Representative Mark Takai

⁵ *Environment Hawai'i*. Volume 24, Number 10, April 2014

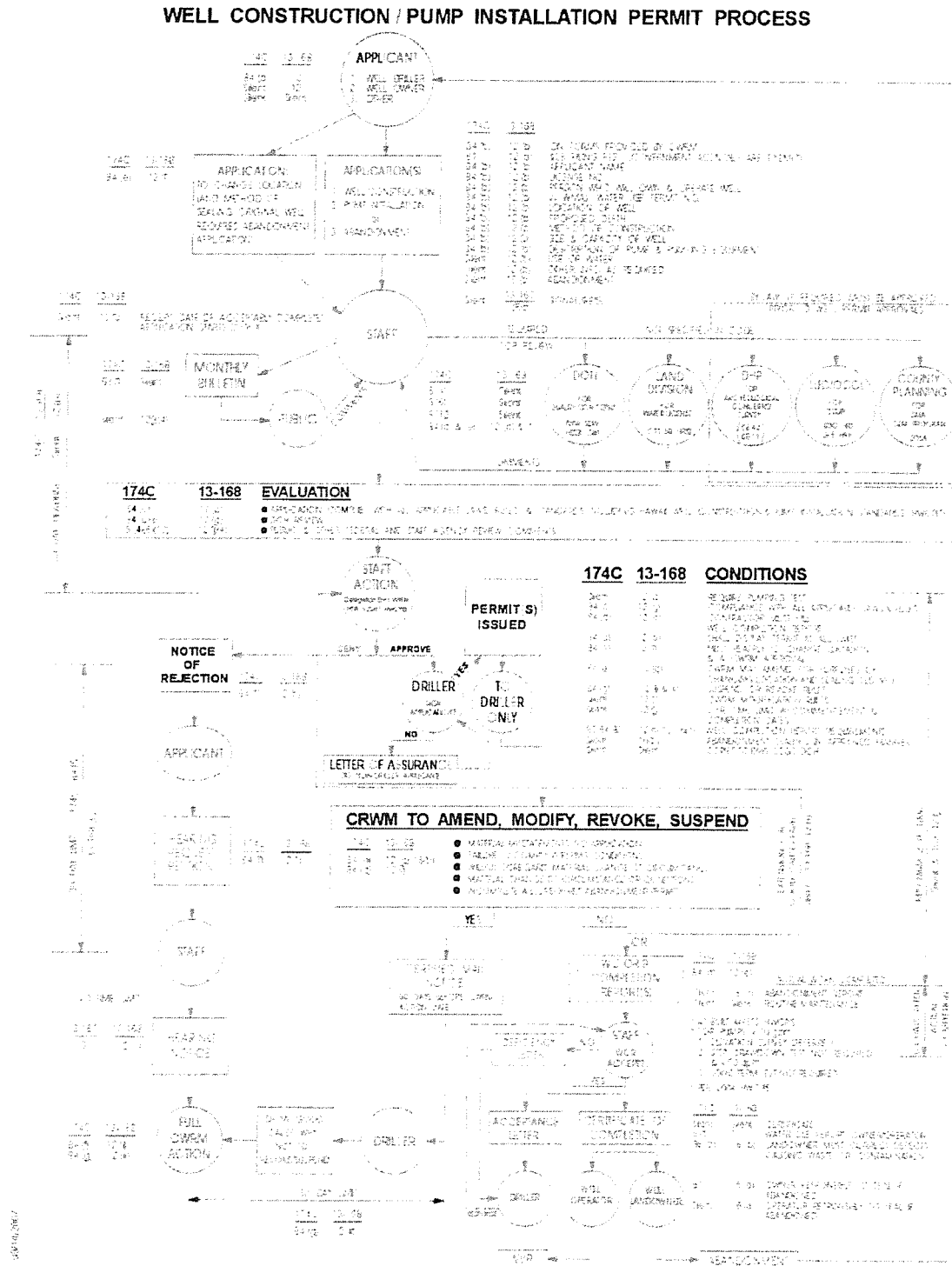


Figure 1

TMK	MajorOwner	BigstOwner	TaxAcres
372002001	Kamehameha Schools	Kamehameha Schools	7031.2
372005001	Palamaniui Global Holdings	other	725.202
372005002	Govt. State	Govt. State	821.503
372005003	Govt. State	Govt. State	40
372005004	Roman Catholic Church	other	1
372005005	GKK Makalei	other	0.02
372005007	Govt. State	Govt. State	38.3
372005008	Govt. State	Govt. State	2158
372005999	other	other	0
372006003	other	other	11.41
372006004	other	other	10.995
372006005	Govt. State	Govt. State	10.49
372006006	other	other	3.205
372006007	other	other	2.716
372006008	other	other	2.903
372006009	GKK Makalei	other	361.659
372006012	Govt. State	Govt. State	187.73
372006013	GKK Makalei	other	118.45
372006017	Govt. State	Govt. State	153.05
372006023	GKK Makalei	other	1.494
372006026	GKK Makalei	other	0.135
372006027	other	other	10.572
372006028	other	other	0.136
372006029	other	other	0.672
372006030	other	other	1.163
372006031	other	other	1.162
372006032	other	other	1.162
372006033	other	other	1.163
372006034	other	other	0.35
372006999	other	other	0
372007001	GKK Makalei	other	838.352
372007002	other	other	0.818
372007009	other	other	42.808
372007010	Govt. County of Hawaii	Govt. County	2.802
372007011	GKK Makalei	other	91.528
372007999	other	other	0
372008001	other	other	0.264
372008002	other	other	0.3047
372008003	other	other	0.3051
372008004	other	other	0.2401
372008005	other	other	0.281
372008006	other	other	0.2811
372008007	other	other	0.2909
372008008	other	other	0.383
372008009	other	other	0.2515
372008010	other	other	0.3467
372008011	other	other	0.3005
372008012	other	other	0.2558

TMK	MajorOwner	BigstOwner	TaxAcres
372008013	other	other	0.3683
372008014	other	other	0.3133
372008015	other	other	0.3216
372008016	other	other	0.3091
372008017	other	other	0.3871
372008018	other	other	0.3343
372008019	other	other	0.202
372008020	other	other	0.2606
372008021	other	other	0.3047
372008022	other	other	0.2887
372008023	other	other	0.3854
372008024	other	other	0.291
372008025	other	other	0.2606
372008026	other	other	0.2693
372008027	other	other	0.2468
372008028	other	other	0.2146
372008029	other	other	0.2314
372008030	other	other	0.2314
372008031	other	other	0.2135
372008032	other	other	0.2547
372008033	other	other	0.1936
372008034	other	other	0.1913
372008035	other	other	0.1923
372008036	other	other	0.1948
372008037	other	other	0.1985
372008038	other	other	0.202
372008039	other	other	2.95
372008040	other	other	0.1728
372008041	other	other	0.2192
372008999	other	other	0
372009001	other	other	0.3006
372009002	other	other	0.2984
372009003	other	other	0.2984
372009004	other	other	0.2984
372009005	other	other	0.2984
372009006	other	other	0.2984
372009007	other	other	0.2901
372009008	other	other	0.3575
372009009	other	other	0.434
372009010	other	other	0.3755
372009011	other	other	0.3156
372009012	other	other	0.3321
372009013	other	other	0.5143
372009014	other	other	0.2555
372009015	other	other	0.2966
372009016	other	other	0.3034
372009017	other	other	0.3105
372009018	other	other	0.3177

TMK	MajorOwner	BigstOwner	TaxAcres
372009019	other	other	0.3248
372009020	other	other	0.3337
372009021	other	other	0.3409
372009022	other	other	0.3516
372009023	other	other	0.3621
372009024	other	other	0.3641
372009025	other	other	0.3099
372009026	other	other	0.3099
372009027	other	other	0.3099
372009028	other	other	0.3099
372009029	other	other	0.3099
372009030	other	other	0.3099
372009031	other	other	0.3099
372009032	other	other	0.3364
372009033	other	other	0.1764
372009034	other	other	0.3099
372009035	other	other	0.3099
372009036	other	other	0.3099
372009037	other	other	0.3099
372009038	other	other	0.31
372009039	other	other	0.3099
372009040	other	other	0.3676
372009041	other	other	3.8891
372009042	other	other	0.1831
372015001	other	other	4.089
372015002	other	other	3.233
372015003	other	other	3.28
372015004	other	other	3.128
372015005	other	other	3.081
372015006	other	other	3.061
372015007	other	other	3.546
372015008	other	other	3.065
372015009	other	other	3.044
372015010	other	other	3.028
372015011	other	other	3.041
372015012	other	other	3.004
372015013	other	other	3.035
372015014	other	other	3.117
372015015	other	other	3.02
372015016	other	other	3.111
372015017	other	other	3.007
372015018	other	other	3.075
372015019	other	other	3.624
372015020	other	other	3.284
372015021	other	other	3.528
372015022	other	other	3.091
372015023	other	other	3.149
372015024	other	other	3.013

TMK	MajorOwner	BigstOwner	TaxAcres
372015025	other	other	3.035
372015026	other	other	3.264
372015027	other	other	3.223
372015028	other	other	3.217
372015029	other	other	3.032
372015030	other	other	3.032
372015031	other	other	3.095
372015032	other	other	3.194
372015033	other	other	3.035
372015034	other	other	3.076
372015035	other	other	3.076
372015036	other	other	3.155
372015037	other	other	3.0001
372015038	other	other	3.137
372015039	other	other	3.001
372015040	other	other	3.16
372015041	other	other	3.011
372015042	other	other	3.007
372015043	other	other	3.171
372015045	other	other	3.041
372015046	other	other	3.115
372015047	other	other	4.142
372015048	other	other	3.108
372015049	other	other	3.319
372015050	other	other	3.056
372015051	other	other	3.013
372015052	other	other	3.005
372015053	other	other	3.024
372015054	other	other	3.042
372015055	other	other	3.069
372015056	other	other	3.173
372015057	other	other	3.384
372015058	other	other	3.065
372015059	other	other	3.217
372015060	other	other	3.208
372015061	other	other	3.118
372015062	other	other	3.308
372015063	other	other	3.003
372015064	other	other	3.018
372015065	other	other	3.018
372015066	other	other	3.076
372015067	other	other	3.101
372015068	other	other	3.022
372015069	other	other	3.001
372015070	other	other	3.749
372015071	other	other	3.675
372015072	other	other	3.133
372015073	other	other	3.259

TMK	MajorOwner	BigstOwner	TaxAcres
372015074	other	other	3.175
372015075	other	other	3.068
372015076	other	other	3.359
372015077	other	other	3.006
372015078	other	other	3.006
372015079	other	other	3.004
372015080	other	other	3.049
372015081	other	other	3.044
372015082	Hiluhilu Development	other	0.82
372015083	Govt. County of Hawaii	Govt. County	1.192
372015084	Govt. County of Hawaii	Govt. County	0.694
372015085	Hiluhilu Development	other	0.5
372015086	Hiluhilu Development	other	8.131
372015087	other	other	0.714
372015088	other	other	2.46
372015089	other	other	1.151
372015090	other	other	1.111
372015091	other	other	0.904
372015092	other	other	1.446
372015093	other	other	0.78
372015094	other	other	1.133
372035001	GKK Makalei	other	1.035
372035002	GKK Makalei	other	1.01
372035003	GKK Makalei	other	1.01
372035004	GKK Makalei	other	1.017
372035005	GKK Makalei	other	1.001
372035006	GKK Makalei	other	1.11
372035007	GKK Makalei	other	1.16
372035008	GKK Makalei	other	1.162
372035009	GKK Makalei	other	1.128
372035010	GKK Makalei	other	1.166
372035011	GKK Makalei	other	1.145
372035012	GKK Makalei	other	1.146
372035013	GKK Makalei	other	1.145
372035014	GKK Makalei	other	1.145
372035015	GKK Makalei	other	1.049
372035016	GKK Makalei	other	1.065
372035017	GKK Makalei	other	1.158
372035018	GKK Makalei	other	1.131
372035019	GKK Makalei	other	1.136
372035020	GKK Makalei	other	1.133
372035021	GKK Makalei	other	1.176
372035022	GKK Makalei	other	1.091
372035023	GKK Makalei	other	1.073
372035024	GKK Makalei	other	1.294
372035025	GKK Makalei	other	1.148
372035026	GKK Makalei	other	1.351
372035027	GKK Makalei	other	1.161

TMK	MajorOwner	BigstOwner	TaxAcres
372035028	GKK Makalei	other	1.236
372035029	GKK Makalei	other	1.423
372035030	GKK Makalei	other	1.141
372035031	GKK Makalei	other	1.003
372035032	GKK Makalei	other	1.015
372035033	GKK Makalei	other	1.048
372035034	GKK Makalei	other	1.048
372035035	GKK Makalei	other	1.016
372035036	GKK Makalei	other	1.061
372035037	GKK Makalei	other	1.051
372035038	GKK Makalei	other	1.061
372035039	GKK Makalei	other	1.016
372035040	GKK Makalei	other	1.048
372035041	GKK Makalei	other	1.048
372035042	GKK Makalei	other	1.041
372035043	GKK Makalei	other	1.263
372035044	GKK Makalei	other	1.658
372035045	GKK Makalei	other	1.848
372035046	GKK Makalei	other	0.569
372035047	GKK Makalei	other	1.138
372035048	GKK Makalei	other	3.833
373001002	Govt. State	Govt. State	1252
373002001	other	other	7.532
373002002	other	other	7.881
373002003	other	other	11.637
373002004	other	other	0.994
373002005	other	other	0.5
373002006	other	other	1.5
373002007	other	other	0.91
373002008	other	other	4.231
373002009	other	other	23.324
373002010	other	other	14.89
373002011	Roman Catholic Church	other	1.92
373002012	other	other	1
373002013	other	other	4.768
373002014	other	other	7.241
373002015	other	other	22
373002016	other	other	7.58
373002017	Govt. State	Govt. State	24.03
373002020	other	other	19.327
373002021	other	other	16.35
373002022	other	other	16.99
373002023	other	other	8.002
373002024	other	other	21.228
373002025	other	other	15.865
373002026	other	other	4.751
373002027	other	other	10.648
373002029	Govt. County of Hawaii	Govt. County	0.1267

TMK	MajorOwner	BigstOwner	TaxAcres
373002030	other	other	5.094
373002031	other	other	1.122
373002032	other	other	1.049
373002033	other	other	1.043
373002034	other	other	1.07
373002035	other	other	1.07
373002036	other	other	1.08
373002037	other	other	1.08
373002038	other	other	1.001
373002039	other	other	1.001
373002040	other	other	1.001
373002041	other	other	1.074
373002042	other	other	1.073
373002043	other	other	1.002
373002044	other	other	1.174
373002045	other	other	1.651
373002999	other	other	0
373003005	other	other	1.0005
373003006	other	other	9.9
373003007	other	other	0.9876
373003008	other	other	8.44
373003010	other	other	8.2
373003011	other	other	5.941
373003013	other	other	1.115
373003015	other	other	0.663
373003018	other	other	1.151
373003020	other	other	2.54
373003021	other	other	0.889
373003023	other	other	0.591
373003024	other	other	0.754
373003025	other	other	1.056
373003026	other	other	1.212
373003027	Govt. State	Govt. State	0.099
373003032	other	other	0.4047
373003033	other	other	0.3005
373003034	other	other	0.2421
373003035	other	other	0.241
373003036	other	other	0.241
373003037	other	other	0.2366
373003038	other	other	0.2748
373003039	other	other	0.2303
373003040	other	other	0.241
373003041	other	other	0.1764
373003042	other	other	0.1808
373003043	other	other	1.352
373003044	other	other	1
373003045	other	other	1.001
373003046	other	other	1.003

TMK	MajorOwner	BigstOwner	TaxAcres
373003047	other	other	1
373003048	other	other	1.004
373003049	other	other	1.001
373003050	other	other	1.001
373003051	other	other	1.001
373003052	other	other	1.001
373003053	other	other	1
373003054	other	other	1.001
373003055	other	other	1.002
373003056	other	other	1
373003057	other	other	0.4143
373003058	other	other	1.1682
373003059	other	other	1.0014
373003060	other	other	1.1684
373003061	other	other	1.0017
373003062	other	other	1.0003
373003063	other	other	1.0019
373003064	other	other	1.0002
373003065	other	other	1.0122
373003066	other	other	1.2096
373003067	other	other	0.8639
373003999	other	other	0
373004001	other	other	1.904
373004002	Palamanui Global Holdings	other	10
373004003	other	other	10
373004004	other	other	1.478
373004005	Govt. State	Govt. State	1.44
373004006	other	other	10.02
373004007	other	other	6
373004008	other	other	46.579
373004010	other	other	1.5
373004011	other	other	4.985
373004012	other	other	5.9325
373004013	other	other	5.355
373004014	other	other	60.67
373004015	other	other	4.786
373004016	Govt. State	Govt. State	0.8
373004017	Govt. County of Hawaii	Govt. County	0.469
373004018	other	other	1.118
373004019	other	other	1.082
373004020	other	other	1.1
373004021	other	other	1.167
373004022	other	other	0.947
373004999	other	other	0
373005001	other	other	3.082
373005002	other	other	5.001
373005003	other	other	17.16
373005004	other	other	5.834

TMK	MajorOwner	BigstOwner	TaxAcres
373005006	other	other	8.277
373005009	other	other	35.493
373005013	other	other	3.282
373005014	other	other	0.207
373005015	other	other	3.992
373005016	other	other	1.75
373005017	other	other	1.404
373005018	other	other	2.88
373005019	other	other	2.36
373005020	other	other	0.211
373005021	Govt. State	Govt. State	0.387
373005025	other	other	0.401
373005027	other	other	0.911
373005028	other	other	0.385
373005029	other	other	4
373005030	other	other	3.147
373005031	other	other	4
373005032	other	other	3.2
373005033	other	other	3.148
373005035	other	other	1.121
373005036	other	other	1.121
373005037	other	other	1.131
373005038	other	other	1.079
373005039	other	other	1.125
373005040	other	other	1
373005041	other	other	1.038
373005042	other	other	1.048
373005043	other	other	1.437
373005044	other	other	1.114
373005045	other	other	1.371
373005046	other	other	1.15
373005047	other	other	1
373005048	other	other	1
373005049	other	other	1
373005050	other	other	1
373005051	other	other	1
373005052	other	other	1
373005053	other	other	1
373005054	other	other	1
373005055	other	other	1.121
373005056	other	other	1.121
373005057	other	other	1.121
373005058	other	other	1
373005059	other	other	1
373005060	other	other	1.008
373005061	other	other	1.022
373005062	other	other	1.168
373005063	other	other	1.109

TMK	MajorOwner	BigstOwner	TaxAcres
373005064	other	other	1
373005065	other	other	1
373005066	other	other	1
373005067	other	other	1
373005068	other	other	1
373005069	other	other	1.012
373005070	other	other	1.039
373005071	Govt. County of Hawaii	Govt. County	0.23
373005072	other	other	1.117
373005073	other	other	1.117
373005074	other	other	1.116
373005075	other	other	1.038
373005076	other	other	1.037
373005077	other	other	1.034
373005078	other	other	1.035
373005079	other	other	1.041
373005080	other	other	1.184
373005081	other	other	1.111
373005082	other	other	1.395
373005083	other	other	1.402
373005084	other	other	1.594
373005085	other	other	1.098
373005090	other	other	3.277
373005091	Govt. State	Govt. State	0.0019
373005092	other	other	6.005
373005093	other	other	1.001
373005094	other	other	1.001
373005095	other	other	0.6307
373005096	other	other	2.88
373005097	other	other	4.327
373005098	other	other	0.414
373005101	other	other	0.2221
373005102	Govt. County of Hawaii	Govt. County	0.3275
373005103	other	other	1.076
373005104	other	other	1
373005105	other	other	1
373005106	other	other	1
373005107	other	other	1
373005108	other	other	1.001
373005109	other	other	1.001
373005110	other	other	1.024
373005112	other	other	5.966
373005113	other	other	3.403
373005114	other	other	0.373
373005115	other	other	0.3853
373005116	other	other	0.35
373005117	other	other	0.3533
373005118	other	other	0.3504

TMK	MajorOwner	BigstOwner	TaxAcres
373005119	other	other	0.3512
373005120	other	other	5.198
373005121	other	other	5.015
373005122	other	other	6.407
373005123	other	other	6.057
373005124	other	other	0.4175
373005125	other	other	0.3761
373005126	other	other	0.4086
373005127	other	other	0.4866
373005128	other	other	0.4233
373005129	other	other	0.4331
373005130	other	other	0.4565
373005131	other	other	0.405
373005132	other	other	0.7423
373005133	other	other	0.4623
373005134	other	other	0.4688
373005135	other	other	0.4592
373005136	other	other	0.5387
373005137	other	other	0.4593
373005138	other	other	0.4592
373005139	other	other	0.4591
373005140	other	other	0.4591
373005141	other	other	0.4592
373005142	other	other	0.4592
373005143	other	other	0.4592
373005144	other	other	0.5113
373005145	other	other	0.4857
373005146	other	other	0.46
373005147	other	other	0.4592
373005148	other	other	0.4882
373005149	other	other	0.4874
373005150	other	other	0.5052
373005151	other	other	0.4592
373005152	other	other	0.4591
373005153	other	other	0.4907
373005154	other	other	0.4591
373005155	other	other	0.4592
373005156	other	other	0.4592
373005157	other	other	0.4695
373005158	other	other	0.5116
373005159	other	other	0.4592
373005160	other	other	0.9597
373005161	other	other	0.4591
373005162	other	other	0.463
373005163	other	other	0.5077
373005164	other	other	0.5067
373005166	other	other	0.3675
373005167	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
373005168	other	other	0.3444
373005169	other	other	0.3445
373005170	other	other	0.3479
373005171	other	other	0.3444
373005172	other	other	0.4843
373005999	other	other	0
373006001	other	other	5.005
373006002	Govt. State	Govt. State	11.94
373006003	Govt. State	Govt. State	4.391
373006004	other	other	4.992
373006016	other	other	1.141
373006019	other	other	2.125
373006020	other	other	14.625
373006021	other	other	24.079
373006022	other	other	10.388
373006023	other	other	22.304
373006024	other	other	6.815
373006026	other	other	3.13
373006028	Govt. State	Govt. State	0.151
373006033	other	other	5.025
373006034	other	other	6.548
373006035	other	other	3.008
373006036	other	other	3
373006037	other	other	3
373006038	other	other	3
373006039	other	other	3
373006040	other	other	3
373006041	other	other	3
373006042	other	other	4.045
373006043	other	other	0.158
373006044	other	other	6.815
373006045	other	other	13.62
373006046	other	other	17.95
373006047	Govt. State	Govt. State	0.899
373006999	other	other	0
373007005	other	other	3.86
373007006	other	other	4.176
373007007	other	other	3.9
373007008	other	other	2.416
373007009	other	other	1.065
373007010	other	other	0.736
373007011	other	other	0.541
373007012	other	other	0.65
373007013	other	other	0.173
373007014	other	other	0.61
373007015	Govt. State	Govt. State	0.02
373007016	other	other	0.951
373007018	other	other	0.8223

TMK	MajorOwner	BigstOwner	TaxAcres
373007019	other	other	0.476
373007020	other	other	1
373007021	other	other	0.359
373007022	other	other	0.2929
373007023	other	other	0.6463
373007024	other	other	1.535
373007025	other	other	0.326
373007026	other	other	0.51
373007027	other	other	5.297
373007028	other	other	2.354
373007029	other	other	0.49
373007030	other	other	1.08
373007031	other	other	2.5
373007034	other	other	0.549
373007035	other	other	1.47
373007036	other	other	9.574
373007038	other	other	44.905
373007039	other	other	39.42
373007040	other	other	2.02
373007041	other	other	2.05
373007042	other	other	14.8
373007043	other	other	6.286
373007044	other	other	1.12
373007046	other	other	1.4
373007047	other	other	0.3294
373007048	other	other	0.298
373007050	other	other	0.185
373007051	other	other	0.79
373007052	other	other	1
373007053	other	other	0.951
373007054	other	other	0.241
373007055	other	other	0.45
373007056	other	other	0.501
373007057	other	other	0.509
373007058	other	other	0.532
373007059	other	other	3.939
373007060	other	other	1.041
373007061	other	other	1.076
373007062	other	other	1.234
373007063	other	other	2.01
373007064	other	other	2.02
373007065	other	other	2.02
373007066	other	other	2.05
373007067	other	other	2.09
373007068	other	other	2.05
373007069	other	other	2.05
373007070	other	other	2.08
373007071	other	other	2.05

TMK	MajorOwner	BigstOwner	TaxAcres
373007072	other	other	2.05
373007073	other	other	2.06
373007074	other	other	2.02
373007075	other	other	2.09
373007076	other	other	2
373007077	other	other	2
373007078	other	other	2
373007079	other	other	2
373007080	Govt. County of Hawaii	Govt. County	4.06
373007081	other	other	1.029
373007082	other	other	1.001
373007083	other	other	1
373007084	other	other	1
373007085	other	other	1
373007086	other	other	1.004
373007087	other	other	1.237
373007088	other	other	1.067
373007089	Govt. County of Hawaii	Govt. County	0.715
373007090	other	other	1.29
373007091	other	other	1
373007092	other	other	1.093
373007093	other	other	1.098
373007094	other	other	1
373007095	other	other	1.063
373007096	other	other	1
373007097	other	other	1
373007098	other	other	1
373007099	other	other	1.045
373007100	other	other	1.034
373007101	other	other	1.003
373007102	other	other	1
373007103	other	other	1.001
373007104	other	other	1.001
373007105	other	other	1.19
373007106	other	other	1.067
373007107	other	other	1.092
373007108	other	other	1.154
373007109	other	other	1.07
373007110	other	other	1
373007111	other	other	1
373007112	other	other	1.072
373007113	other	other	1.071
373007114	other	other	1
373007115	other	other	1.001
373007116	other	other	1.08
373007117	other	other	1.004
373007118	other	other	1
373007119	other	other	1.082

TMK	MajorOwner	BigstOwner	TaxAcres
373007120	other	other	1.002
373007121	other	other	1.028
373007122	other	other	1
373007123	other	other	1.063
373007124	other	other	1.072
373007125	other	other	1
373007126	other	other	1.136
373007999	other	other	0
373008001	other	other	1.644
373008002	other	other	3.202
373008003	other	other	6.516
373008004	other	other	2.198
373008005	other	other	2.851
373008006	other	other	1.748
373008007	other	other	2.451
373008008	other	other	0.757
373008009	other	other	2.229
373008010	other	other	0.504
373008011	other	other	0.64
373008012	other	other	2.69
373008013	other	other	4.442
373008014	other	other	0.64
373008015	other	other	0.965
373008016	other	other	1.2
373008017	other	other	6.114
373008018	other	other	5.114
373008019	other	other	0.617
373008022	other	other	2.5
373008023	Govt. State	Govt. State	1.465
373008024	other	other	1.876
373008025	other	other	0.983
373008026	other	other	1.033
373008027	other	other	0.974
373008028	other	other	1.306
373008031	other	other	1.419
373008032	other	other	1
373008033	other	other	3.085
373008034	other	other	4.381
373008035	other	other	3.5
373008036	other	other	1.225
373008037	other	other	0.422
373008038	other	other	0.553
373008039	other	other	0.324
373008051	other	other	0.21
373008052	other	other	2.823
373008053	other	other	3.15
373008054	other	other	10.694
373008055	other	other	5.115

TMK	MajorOwner	BigstOwner	TaxAcres
373008056	other	other	5.114
373008057	other	other	3.349
373008058	other	other	3.021
373008059	other	other	5.114
373008060	other	other	1.605
373008061	other	other	3.673
373008062	other	other	3.606
373008063	other	other	1.674
373008064	other	other	4.881
373008065	other	other	3.517
373008066	other	other	3
373008067	other	other	1.08
373008069	other	other	1.531
373008070	other	other	3.115
373008071	other	other	10.257
373008072	other	other	2.688
373008073	other	other	3
373008074	other	other	3
373008075	other	other	6.75
373008076	other	other	5.303
373008077	other	other	1
373008079	other	other	1.32
373008080	other	other	1.005
373008081	other	other	1.002
373008082	other	other	1.021
373008083	other	other	1
373008084	other	other	1
373008085	other	other	1
373008086	other	other	1.002
373008087	other	other	1.008
373008088	other	other	1.003
373008089	other	other	1.004
373008090	other	other	1.21
373008091	other	other	1.024
373008092	other	other	1.004
373008093	other	other	1
373008094	other	other	1
373008095	other	other	3.149
373008096	other	other	1.206
373008097	other	other	3.019
373008098	other	other	1.0002
373008099	other	other	1.107
373008100	other	other	1.107
373008106	other	other	3.409
373008107	other	other	3
373008108	other	other	3.289
373008109	other	other	3.3
373008110	other	other	3.468

TMK	MajorOwner	BigstOwner	TaxAcres
373008111	other	other	3.393
373008112	other	other	4.951
373008113	other	other	1.057
373008114	other	other	1.034
373008115	other	other	1.013
373008116	other	other	1.029
373008117	other	other	1.045
373008118	other	other	1.004
373008119	other	other	1.028
373008120	other	other	1.037
373008121	other	other	1.17
373008122	other	other	3.227
373008123	other	other	3.806
373008124	other	other	1
373008125	other	other	1
373008126	other	other	1.771
373008127	other	other	3
373008128	Govt. County of Hawaii	Govt. County	0.404
373008129	other	other	2.305
373008130	other	other	3.196
373008131	other	other	3.233
373008999	other	other	0
373009002	Govt. Federal	Govt. Federal	249.5
373009004	other	other	217.566
373009005	Govt. State	Govt. State	903.789
373009007	other	other	45.667
373009008	Govt. State	Govt. State	44.97
373009011	other	other	2.003
373009013	other	other	144.548
373009014	other	other	11.707
373009016	other	other	7.752
373009017	SCD-TSA Kaloko Makai	other	224.43
373009018	other	other	92.857
373009019	other	other	193.9311
373009020	other	other	1.101
373009021	Govt. Federal	Govt. Federal	72.084
373009022	other	other	83
373009025	SCD-TSA Kaloko Makai	other	360.131
373009026	SCD-TSA Kaloko Makai	other	194.324
373009027	Govt. County of Hawaii	Govt. County	1.243
373009028	SCD-TSA Kaloko Makai	other	313.112
373009029	Govt. County of Hawaii	Govt. County	1.282
373009030	Govt. County of Hawaii	Govt. County	0.962
373009032	other	other	10.755
373009049	Govt. County of Hawaii	Govt. County	1.3875
373009055	Govt. County of Hawaii	Govt. County	8.016
373009056	other	other	0.783
373009057	other	other	31.277

TMK	MajorOwner	BigstOwner	TaxAcres
373009058	other	other	22.165
373009059	other	other	22.01
373009060	other	other	6.27
373009061	other	other	35.354
373009062	other	other	80.114
373009063	SCD-TSA Kaloko Makai	other	46.869
373009064	other	other	3.126
373009065	Govt. State	Govt. State	8.593
373009999	other	other	0
373009999	other	other	0
373010002	Govt. State	Govt. State	118.6
373010003	other	other	10.001
373010006	Govt. State	Govt. State	183.562
373010007	Govt. State DHHL	Govt. State DHHL	200
373010031	other	other	66.423
373010032	Govt. State	Govt. State	411.8
373010033	Govt. State	Govt. State	163.49
373010035	other	other	78.284
373010039	Govt. State DHHL	Govt. State DHHL	126.97
373010040	Govt. State DHHL	Govt. State DHHL	25.543
373010041	Govt. State DHHL	Govt. State DHHL	130
373010042	Govt. State	Govt. State	500
373010043	Govt. State	Govt. State	1.74
373010044	Govt. State	Govt. State	232.03
373010045	Govt. State	Govt. State	27.158
373010046	Govt. State	Govt. State	10.77
373010051	other	other	10.001
373010052	other	other	12.892
373010053	other	other	14.583
373010054	other	other	2.594
373010056	Govt. State	Govt. State	3.835
373010057	Govt. State	Govt. State	1.839
373010058	Govt. State	Govt. State	2.517
373010059	Govt. State	Govt. State	0.285
373010060	Govt. State	Govt. State	0.233
373010061	Govt. State	Govt. State	79.098
373010999	other	other	0
373011001	other	other	0.196
373011002	other	other	0.191
373011003	other	other	0.191
373011004	other	other	0.1848
373011005	other	other	0.1989
373011006	other	other	0.1993
373011007	other	other	0.1989
373011008	other	other	0.1972
373011009	other	other	0.2004
373011010	other	other	0.1953
373011011	other	other	0.2017

TMK	MajorOwner	BigstOwner	TaxAcres
373011012	other	other	0.2091
373011013	other	other	0.1963
373011014	other	other	0.1938
373011015	other	other	0.1939
373011016	other	other	0.2316
373011017	other	other	0.2126
373011018	other	other	0.2218
373011019	other	other	0.197
373011020	other	other	0.197
373011021	other	other	0.197
373011022	other	other	0.197
373011023	other	other	0.197
373011024	other	other	0.197
373011025	other	other	0.1965
373011026	other	other	0.2239
373011027	other	other	0.1945
373011028	other	other	0.1975
373011029	other	other	0.1982
373011030	other	other	0.1982
373011031	other	other	0.1982
373011032	other	other	0.1953
373011033	Govt. County of Hawaii	Govt. County	0.1896
373011034	other	other	0.219
373011035	other	other	0.213
373011036	other	other	0.2671
373011037	other	other	0.213
373011038	other	other	0.2062
373011039	other	other	0.2176
373011040	other	other	0.278
373011041	other	other	0.2019
373011042	other	other	0.2758
373011043	other	other	0.291
373011044	other	other	0.2029
373011045	other	other	0.1966
373011046	other	other	0.1978
373011047	other	other	0.1919
373011048	other	other	0.205
373011049	other	other	1.055
373011050	other	other	0.1847
373011051	other	other	0.1837
373011052	other	other	0.1837
373011053	other	other	0.1837
373011054	other	other	0.1837
373011055	other	other	0.1837
373011056	other	other	3.039
373011057	other	other	0.1854
373011058	other	other	0.1865
373011059	other	other	0.1888

TMK	MajorOwner	BigstOwner	TaxAcres
373011060	other	other	0.2206
373011061	other	other	0.1961
373011062	other	other	0.1854
373011063	other	other	0.1837
373011064	other	other	0.1837
373011065	other	other	0.1837
373011066	other	other	0.1837
373011068	other	other	1.863
373011069	other	other	0.2899
373011070	other	other	0.29
373011071	other	other	0.291
373011072	other	other	0.2932
373011073	other	other	0.2965
373011074	other	other	0.3068
373011999	other	other	0
373012001	other	other	0.1837
373012002	other	other	0.1837
373012003	other	other	0.1837
373012004	other	other	0.191
373012005	other	other	0.1956
373012006	other	other	0.2059
373012007	other	other	0.1902
373012008	other	other	0.1844
373012009	other	other	0.2009
373012010	other	other	0.2009
373012011	other	other	0.2009
373012012	other	other	0.2009
373012013	other	other	0.2
373012014	other	other	0.198
373012015	other	other	0.198
373012016	other	other	0.198
373012017	other	other	0.198
373012018	other	other	0.1964
373012019	other	other	0.1975
373012020	other	other	0.197
373012021	other	other	0.1859
373012022	other	other	0.1847
373012023	other	other	0.185
373012024	other	other	0.1856
373012025	other	other	0.1919
373012026	other	other	0.2008
373012027	other	other	0.1961
373012028	other	other	0.2073
373012029	other	other	0.2016
373012030	other	other	0.2012
373012031	other	other	0.197
373012032	other	other	0.1932
373012033	other	other	0.1969

TMK	MajorOwner	BigstOwner	TaxAcres
373012034	other	other	0.1992
373012035	other	other	0.1912
373012036	other	other	0.1901
373012037	other	other	0.185
373012038	other	other	0.185
373012039	other	other	0.185
373012040	other	other	0.185
373012041	other	other	0.1854
373012042	other	other	0.1928
373012043	other	other	0.2004
373012044	other	other	0.1935
373012045	other	other	0.2014
373012046	other	other	0.1848
373012047	other	other	0.187
373012048	other	other	0.185
373012049	other	other	0.185
373012050	other	other	0.185
373012051	other	other	0.185
373012052	other	other	0.185
373012053	other	other	0.185
373012054	other	other	0.185
373012055	other	other	0.1903
373012056	other	other	0.1955
373012057	other	other	0.1936
373012058	other	other	0.2126
373012999	other	other	0
373013001	other	other	0.1741
373013002	other	other	0.1848
373013003	other	other	0.1729
373013004	other	other	0.1766
373013005	other	other	0.1768
373013006	other	other	0.1723
373013007	other	other	0.1979
373013008	other	other	0.1833
373013009	other	other	0.1725
373013010	other	other	0.1722
373013011	other	other	0.1722
373013012	other	other	0.1722
373013013	other	other	0.1733
373013014	other	other	0.1722
373013015	other	other	0.1722
373013016	other	other	0.1723
373013017	other	other	0.1722
373013018	other	other	0.1722
373013019	other	other	0.1722
373013020	other	other	0.1722
373013021	other	other	0.1722
373013022	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
373013023	other	other	0.1722
373013024	other	other	0.2231
373013025	other	other	0.1988
373013026	other	other	0.2143
373013027	other	other	0.2031
373013028	other	other	0.1919
373013029	other	other	0.1808
373013030	other	other	0.1723
373013031	other	other	0.1761
373013032	other	other	0.1742
373013033	other	other	0.1722
373013034	other	other	0.1739
373013035	other	other	0.1723
373013036	other	other	0.173
373013037	other	other	0.1745
373013038	other	other	0.1734
373013039	other	other	0.1731
373013040	other	other	0.1731
373013041	other	other	0.1723
373013042	other	other	0.1724
373013999	other	other	0
373014001	other	other	0.1722
373014002	other	other	0.1722
373014003	other	other	0.1722
373014004	other	other	0.1722
373014006	other	other	0.1743
373014007	other	other	0.1735
373014008	other	other	0.1751
373014009	other	other	0.1891
373014010	other	other	0.2253
373014011	other	other	0.1727
373014012	other	other	0.1725
373014013	other	other	0.2087
373014014	other	other	0.1866
373014015	other	other	0.1864
373014017	other	other	0.1929
373014018	other	other	0.1837
373014019	other	other	0.1781
373014020	other	other	0.1854
373014021	other	other	0.1772
373014022	other	other	0.1939
373014023	other	other	0.1679
373014024	other	other	0.1776
373014025	other	other	0.1722
373014026	other	other	0.1724
373014027	other	other	0.1725
373014028	other	other	0.1951
373014029	other	other	0.1875

TMK	MajorOwner	BigstOwner	TaxAcres
373014030	other	other	0.1773
373014031	other	other	0.1911
373014032	other	other	0.1789
373014033	other	other	0.1864
373014034	other	other	0.1734
373014035	other	other	0.1726
373014037	other	other	0.1767
373014038	other	other	0.1771
373014039	other	other	0.1851
373014040	other	other	0.1965
373014041	other	other	0.2196
373014999	other	other	0
373015001	other	other	0.1732
373015002	other	other	0.1849
373015003	other	other	0.1781
373015004	other	other	0.1756
373015005	other	other	0.1736
373015006	other	other	0.1725
373015007	other	other	0.1766
373015008	other	other	0.1739
373015009	other	other	0.181
373015010	other	other	0.1801
373015011	other	other	0.1726
373015012	other	other	0.1727
373015013	other	other	0.1726
373015014	other	other	0.1728
373015015	other	other	0.1734
373015016	other	other	0.1728
373015017	other	other	0.1729
373015018	other	other	0.173
373015019	other	other	0.1727
373015020	other	other	0.1722
373015021	other	other	0.1722
373015022	other	other	0.1722
373015023	other	other	0.1766
373015024	other	other	0.2079
373015025	other	other	0.1767
373015026	other	other	0.1732
373015027	other	other	0.1751
373015028	other	other	0.1788
373015029	other	other	0.177
373015030	other	other	0.1753
373015031	other	other	0.1725
373015999	other	other	0
373016001	other	other	0.1722
373016002	other	other	0.2001
373016003	other	other	0.1887
373016004	other	other	0.1747

TMK	MajorOwner	BigstOwner	TaxAcres
373016005	other	other	0.2096
373016006	other	other	0.1806
373016007	other	other	0.177
373016008	other	other	0.1748
373016009	other	other	0.1737
373016011	other	other	0.1729
373016012	other	other	0.1734
373016013	other	other	0.1724
373016014	other	other	0.1914
373016015	other	other	0.1749
373016016	other	other	0.1743
373016017	other	other	0.2217
373016018	other	other	0.2004
373016019	other	other	0.2234
373016020	other	other	0.255
373016021	other	other	0.1803
373016022	other	other	0.1723
373016999	other	other	0
373017001	other	other	0.1931
373017002	other	other	0.1628
373017003	other	other	0.164
373017004	other	other	0.2121
373017005	other	other	0.2051
373017006	other	other	0.1912
373017007	other	other	0.1837
373017008	other	other	0.1853
373017009	other	other	0.1921
373017010	other	other	0.1702
373017011	other	other	0.4113
373017013	other	other	0.1714
373017014	other	other	0.1776
373017015	other	other	0.1686
373017016	other	other	0.214
373017017	other	other	0.2107
373017018	other	other	0.2075
373017019	other	other	0.2043
373017020	other	other	0.2011
373017021	other	other	0.1979
373017022	other	other	0.2767
373017023	other	other	0.992
373017024	other	other	0.992
373017025	other	other	1.467
373017026	other	other	0.744
373017027	other	other	1.491
373017028	other	other	0.509
373017029	other	other	0.7
373017030	other	other	0.603
373017031	Govt. State	Govt. State	0.099

TMK	MajorOwner	BigstOwner	TaxAcres
373017032	other	other	1.325
373017999	other	other	0
373018001	other	other	1
373018002	other	other	1
373018003	other	other	0.2719
373018004	other	other	0.2035
373018005	other	other	0.2041
373018006	other	other	0.1968
373018007	other	other	0.1919
373018008	other	other	0.894
373018009	other	other	4.25
373018010	other	other	1.038
373018011	other	other	0.1916
373018012	other	other	0.1895
373018013	other	other	0.1895
373018014	other	other	0.1895
373018015	other	other	0.1895
373018016	other	other	0.1895
373018017	other	other	0.1895
373018018	other	other	0.1895
373018019	other	other	0.1785
373018020	other	other	0.1986
373018021	other	other	0.1879
373018022	other	other	0.1881
373018023	other	other	0.1883
373018024	other	other	0.1885
373018025	other	other	0.1888
373018026	other	other	0.189
373018027	other	other	0.1892
373018028	other	other	0.19
373018029	other	other	1.604
373018031	other	other	1.205
373018032	other	other	1
373018033	other	other	1.859
373018034	other	other	1.3
373018999	other	other	0
373019001	other	other	3.91
373019002	other	other	0.1963
373019003	other	other	0.1926
373019004	other	other	0.214
373019005	other	other	0.2074
373019006	other	other	0.2114
373019007	other	other	0.1921
373019008	other	other	0.1888
373019009	other	other	0.2059
373019010	other	other	0.2279
373019011	other	other	0.5669
373019012	other	other	0.2316

TMK	MajorOwner	BigstOwner	TaxAcres
373019013	other	other	0.1989
373019014	other	other	0.1752
373019015	other	other	0.1805
373019016	other	other	0.2003
373019017	other	other	0.1976
373019018	other	other	0.215
373019019	other	other	0.1974
373019020	other	other	0.2009
373019021	other	other	3.104
373019022	other	other	0.06
373019023	other	other	0.804
373019024	other	other	1.139
373019025	other	other	0.267
373019026	Govt. State	Govt. State	0.027
373019027	other	other	3.5
373019028	other	other	4.07
373019029	other	other	0.33
373019030	other	other	4.211
373019999	other	other	0
373020001	other	other	0.2893
373020002	other	other	0.3209
373020003	other	other	0.3011
373020004	other	other	0.2833
373020005	other	other	0.3444
373020006	other	other	0.3116
373020007	other	other	0.305
373020008	other	other	0.2758
373020009	other	other	0.2532
373020010	other	other	0.3356
373020011	other	other	0.2864
373020012	other	other	0.2528
373020013	other	other	0.3851
373020014	other	other	0.3504
373020015	other	other	0.352
373020016	other	other	0.3399
373020017	other	other	0.5203
373020018	other	other	0.3444
373020019	other	other	0.3693
373020020	other	other	0.3868
373020021	other	other	0.3916
373021001	other	other	0.2766
373021002	other	other	0.2403
373021003	other	other	0.2435
373021004	other	other	0.2488
373021005	other	other	0.2435
373021006	other	other	0.2507
373021007	other	other	0.23
373021008	other	other	0.2472

TMK	MajorOwner	BigstOwner	TaxAcres
373021009	other	other	0.284
373021010	other	other	0.2972
373021011	other	other	0.2619
373021012	other	other	0.2654
373021013	other	other	0.2908
373021014	other	other	0.252
373021015	other	other	0.2542
373021016	other	other	0.239
373021017	other	other	0.2116
373021018	other	other	0.2387
373021019	other	other	0.2348
373021020	other	other	0.2443
373021021	other	other	0.2748
373022002	other	other	0.53
373022003	other	other	0.4073
373022004	other	other	0.461
373022005	other	other	0.4611
373022006	other	other	0.461
373022007	other	other	0.4615
373022008	other	other	0.4911
373022009	other	other	0.4748
373022010	other	other	0.4645
373022011	other	other	0.4236
373022012	other	other	0.4124
373022013	other	other	0.4265
373022014	other	other	0.4435
373022015	other	other	0.4375
373022016	other	other	0.4197
373022017	other	other	0.4014
373022018	other	other	0.3723
373022019	other	other	0.376
373022020	other	other	0.429
373022021	other	other	0.4503
373022022	other	other	0.4435
373022023	other	other	0.455
373022024	other	other	0.4655
373022025	other	other	0.4637
373022026	other	other	0.4667
373022027	other	other	0.4664
373022028	other	other	0.4732
373022029	other	other	0.4488
373022030	other	other	0.4378
373022031	other	other	0.4213
373022032	other	other	0.4136
373022033	other	other	0.416
373022034	other	other	0.416
373022035	other	other	0.416
373022036	other	other	0.421

TMK	MajorOwner	BigstOwner	TaxAcres
373022037	other	other	0.3896
373022038	other	other	0.3948
373022039	other	other	0.3949
373022040	other	other	0.3948
373022041	other	other	0.3948
373022042	other	other	0.3948
373022043	other	other	0.395
373022044	other	other	0.3989
373022045	other	other	0.408
373022046	Govt. County of Hawaii	Govt. County	0.4197
373022047	other	other	0.4363
373022048	other	other	0.4254
373022049	other	other	0.4249
373022050	other	other	0.4613
373022051	other	other	0.3444
373022052	other	other	0.349
373022053	other	other	0.3447
373022054	other	other	0.3447
373022055	other	other	0.4345
373022056	other	other	0.4392
373022057	other	other	0.4467
373022058	other	other	0.477
373022059	other	other	0.4612
373022060	other	other	0.4064
373022061	other	other	0.4069
373022062	other	other	0.4093
373022063	other	other	0.4213
373022064	other	other	0.4333
373022065	other	other	0.4224
373022066	other	other	0.4011
373022067	other	other	0.3949
373022068	other	other	0.3949
373022069	other	other	0.3949
373022070	other	other	0.3949
373022071	other	other	0.3949
373022072	other	other	0.3912
373022073	other	other	0.4022
373022074	other	other	0.3992
373022075	other	other	0.3993
373022076	other	other	0.4041
373022077	other	other	0.4193
373022078	other	other	0.4262
373022079	other	other	0.425
373022080	other	other	0.433
373022081	other	other	0.4176
373022082	other	other	0.424
373022083	other	other	0.4444
373022084	other	other	0.4543

TMK	MajorOwner	BigstOwner	TaxAcres
373022085	other	other	0.4531
373022086	other	other	0.4413
373022087	other	other	0.425
373022088	other	other	0.4132
373022089	other	other	0.3681
373022090	other	other	0.3746
373022091	other	other	0.3872
373022092	other	other	0.3998
373022093	other	other	0.4124
373022094	other	other	0.425
373022095	other	other	0.4305
373022096	other	other	0.4216
373022097	other	other	0.4244
373022098	other	other	0.4489
373022099	other	other	0.4657
373022100	other	other	0.4518
373022101	other	other	0.4534
373022102	other	other	0.4063
373022103	other	other	0.4716
373022104	other	other	0.4659
373022105	other	other	0.4253
373022999	other	other	0
373023001	other	other	0.4817
373023002	other	other	0.4936
373023003	other	other	0.5058
373023004	other	other	0.5181
373023005	other	other	0.5192
373023006	other	other	0.5112
373023007	other	other	0.5079
373023008	other	other	0.5127
373023009	other	other	0.5222
373023010	other	other	2.009
373023011	other	other	0.4936
373023013	other	other	0.4253
373023014	other	other	0.4546
373023015	other	other	0.4534
373023016	other	other	0.4627
373023017	other	other	0.472
373023018	other	other	0.4866
373023019	other	other	0.4826
373023020	other	other	0.4746
373023021	other	other	0.4378
373023022	other	other	0.6783
373023023	other	other	0.6446
373023024	other	other	0.6109
373023025	other	other	0.5747
373023026	other	other	0.3737
373023027	other	other	0.3573

TMK	MajorOwner	BigstOwner	TaxAcres
373023028	other	other	0.3539
373023029	other	other	0.3505
373023030	other	other	0.3564
373023031	other	other	0.3456
373023032	other	other	0.348
373023033	other	other	0.3472
373023034	other	other	0.3674
373023035	other	other	0.366
373023036	other	other	0.3843
373023037	other	other	0.4025
373023038	other	other	0.4636
373023039	other	other	0.4854
373023040	other	other	0.4595
373023041	other	other	0.4682
373023042	other	other	0.4769
373023043	other	other	0.4856
373023044	other	other	0.4943
373023045	other	other	0.4941
373023046	other	other	0.485
373023047	other	other	0.4759
373023048	other	other	0.4668
373023049	other	other	0.4576
373023050	other	other	0.447
373023051	other	other	0.457
373023052	other	other	0.4662
373023053	other	other	0.4761
373023054	other	other	0.4859
373023055	other	other	0.4954
373023056	other	other	0.4992
373023057	other	other	0.5023
373023058	other	other	0.5045
373023059	other	other	0.4971
373023060	other	other	0.4816
373023061	other	other	0.4644
373023062	other	other	0.5323
373023063	other	other	0.4408
373023064	other	other	0.4157
373023065	other	other	0.4054
373023066	other	other	0.3952
373023067	other	other	0.4069
373023068	other	other	0.3955
373023069	other	other	0.4009
373023070	other	other	0.3884
373023071	other	other	0.3759
373023072	other	other	0.3546
373023073	other	other	0.3593
373023074	other	other	0.364
373023075	other	other	0.3459

TMK	MajorOwner	BigstOwner	TaxAcres
373023076	other	other	0.3973
373023077	other	other	0.3814
373023078	other	other	0.3616
373023079	other	other	0.3418
373023080	other	other	0.3441
373023081	other	other	0.3405
373023082	other	other	0.3402
373023083	other	other	0.3491
373023084	other	other	0.3593
373023085	other	other	0.3695
373023086	other	other	0.3796
373023087	other	other	0.3899
373023088	Govt. County of Hawaii	Govt. County	0.4041
373023089	other	other	0.4316
373023090	other	other	0.4276
373023091	other	other	0.4396
373023092	other	other	0.4525
373023093	other	other	0.4727
373023094	other	other	0.502
373023095	other	other	0.5215
373023096	other	other	0.5501
373023097	other	other	0.4465
373023098	other	other	0.4736
373023099	other	other	0.4535
373023100	other	other	0.4222
373023999	other	other	0
373024001	other	other	5.689
373024002	other	other	5.668
373024003	other	other	21.942
373024004	other	other	3
373024005	other	other	3
373024006	other	other	3.006
373024007	other	other	3
373024008	other	other	21.992
373024009	other	other	3.1
373024010	other	other	3.292
373024011	other	other	3.005
373024012	other	other	3.04
373024013	other	other	0.998
373024015	other	other	3.188
373024016	other	other	3.001
373024017	other	other	1.79
373024018	other	other	2.037
373024019	other	other	0.161
373024020	other	other	0.948
373024021	other	other	8.187
373024022	other	other	10
373024023	other	other	4.998

TMK	MajorOwner	BigstOwner	TaxAcres
373024024	Govt. County of Hawaii	Govt. County	0.253
373024025	other	other	3
373024026	other	other	3
373024027	other	other	3.507
373024028	other	other	3.805
373024029	other	other	3.6
373024030	other	other	3.702
373024031	other	other	3
373024032	other	other	3
373024033	other	other	3
373024034	other	other	3
373024035	other	other	3
373024036	other	other	3.823
373024037	other	other	3.171
373024038	other	other	3.422
373024039	other	other	3.416
373024040	other	other	3.05
373024041	other	other	3
373024042	other	other	3
373024043	other	other	3
373024044	other	other	3
373024045	other	other	3.015
373024046	other	other	3.301
373024047	other	other	3
373024048	other	other	3
373024049	other	other	3
373024050	other	other	3.126
373024051	other	other	3.126
373024052	other	other	3.016
373024053	other	other	3
373024054	other	other	3
373024055	other	other	3.183
373024056	other	other	3
373024057	other	other	3.115
373024058	other	other	3
373024059	other	other	3.085
373024060	other	other	3
373024061	other	other	3
373024062	other	other	3.002
373024063	other	other	3.1
373024064	other	other	3.034
373024065	other	other	3
373024066	other	other	3
373024067	other	other	3
373024068	other	other	3
373024069	other	other	3.207
373024070	other	other	3.878
373024071	other	other	3.289

TMK	MajorOwner	BigstOwner	TaxAcres
373024072	other	other	3
373024073	other	other	3.075
373024074	other	other	3
373024075	other	other	3
373024076	other	other	3
373024077	other	other	3
373024078	other	other	3
373024079	other	other	3.214
373024080	other	other	3
373024081	other	other	3.227
373024082	other	other	3.226
373024083	other	other	3
373024084	other	other	3
373024085	other	other	3
373024086	other	other	3
373024087	other	other	0.698
373024088	other	other	3.1
373024089	other	other	3
373024090	other	other	3.196
373024091	other	other	3.27
373024092	other	other	3
373024093	other	other	3
373024094	other	other	3
373024095	other	other	3.598
373024096	other	other	3
373024097	other	other	3
373024098	other	other	3.001
373024099	other	other	3
373024100	other	other	3
373024101	other	other	3
373024103	other	other	3.296
373024104	other	other	3
373024105	other	other	3
373024106	other	other	3.3
373024107	other	other	3.535
373024108	other	other	3.4
373024109	other	other	3
373024110	other	other	3
373024111	other	other	0.795
373024112	other	other	3.014
373024113	other	other	3.706
373024114	other	other	3.131
373024115	other	other	3.008
373024116	other	other	3.008
373024117	other	other	3.006
373024118	other	other	3.013
373024119	other	other	3.09
373024120	other	other	3.109

TMK	MajorOwner	BigstOwner	TaxAcres
373024121	other	other	3.103
373024122	other	other	3.131
373024123	other	other	3.203
373024124	other	other	3.1
373024125	other	other	3.178
373024127	other	other	3.039
373024128	other	other	3.112
373024129	other	other	3.112
373024130	other	other	3.035
373024131	other	other	3.035
373024132	other	other	3.035
373024133	other	other	0.7422
373024134	other	other	5.272
373024135	other	other	5.13
373024136	other	other	5.065
373024137	other	other	5.284
373024138	other	other	5
373024139	other	other	6.05
373024140	other	other	1.484
373024141	other	other	3.005
373024142	other	other	3.08
373024143	other	other	3.141
373024144	other	other	3.408
373024145	other	other	3.052
373024146	other	other	3.043
373024147	other	other	0.392
373024999	other	other	0
373025001	other	other	21.203
373025002	other	other	21.296
373025003	other	other	21.272
373025004	other	other	5.002
373025005	other	other	3
373025006	other	other	0.988
373025007	other	other	3
373025008	other	other	5.001
373025009	other	other	5.001
373025010	other	other	6.237
373025011	other	other	5.102
373025012	other	other	21.353
373025013	other	other	5.141
373025014	other	other	5.001
373025015	other	other	3.006
373025016	other	other	3.467
373025017	other	other	18.105
373025018	Govt. County of Hawaii	Govt. County	0.336
373025019	other	other	3.004
373025020	other	other	3.096
373025021	other	other	3.193

TMK	MajorOwner	BigstOwner	TaxAcres
373025022	other	other	3.103
373025023	other	other	3.1
373025024	other	other	3.1
373025025	other	other	4.433
373025026	other	other	3.513
373025027	other	other	3.494
373025028	other	other	3.52
373025029	other	other	3.554
373025030	other	other	3.35
373025031	other	other	3.888
373025032	other	other	4.102
373025033	other	other	5.004
373025034	other	other	5.501
373025035	other	other	6.558
373025036	other	other	4
373025037	other	other	6.48
373025038	other	other	6.48
373025039	other	other	5.303
373025040	other	other	5.001
373025041	other	other	6.133
373025042	other	other	6.7
373025043	other	other	6.598
373025044	other	other	3.001
373025045	other	other	5.001
373025046	other	other	5.285
373025047	other	other	5.001
373025048	other	other	0.6719
373025049	other	other	3
373025050	other	other	3.259
373025051	other	other	3.002
373025052	other	other	3
373025053	other	other	3.309
373025054	other	other	3.737
373025055	other	other	5.332
373025056	other	other	6.237
373025057	other	other	5.332
373025058	other	other	5
373025059	other	other	5.248
373025060	other	other	6.572
373025061	other	other	5.802
373025062	other	other	6.604
373025063	other	other	5.802
373025064	other	other	3.15
373025065	other	other	3.213
373025066	other	other	3
373025067	other	other	3.818
373025068	other	other	4.051
373025069	other	other	0.2444

TMK	MajorOwner	BigstOwner	TaxAcres
373025070	other	other	6.604
373025071	other	other	6.604
373025072	other	other	5.001
373025999	other	other	0
373026001	other	other	20.895
373026002	other	other	10.331
373026003	other	other	21.095
373026004	other	other	7.067
373026005	other	other	10.15
373026006	other	other	20.471
373026007	other	other	20.756
373026008	other	other	21.033
373026009	other	other	10.495
373026010	other	other	21.033
373026011	other	other	10.237
373026012	other	other	10.147
373026013	other	other	11.374
373026014	other	other	25.718
373026015	other	other	10.275
373026016	other	other	10.348
373026017	other	other	20.913
373026018	other	other	22.146
373026019	other	other	33.461
373026022	other	other	20
373026023	other	other	20.029
373026024	other	other	20.406
373026025	Govt. County of Hawaii	Govt. County	0.318
373026026	other	other	10.331
373026027	other	other	10.495
373026028	other	other	10.147
373026029	other	other	13.059
373026030	other	other	10.151
373026031	other	other	15.412
373026032	other	other	10.773
373026033	other	other	10.237
373026034	other	other	10.1
373026999	other	other	0
373027001	other	other	22.405
373027002	other	other	22.11
373027003	other	other	22.665
373027004	other	other	22.123
373027005	other	other	20.254
373027006	other	other	21.695
373027007	other	other	20.254
373027008	other	other	21.947
373027009	other	other	22.518
373027010	other	other	10.982
373027011	other	other	11.19

TMK	MajorOwner	BigstOwner	TaxAcres
373027012	other	other	21.902
373027013	other	other	22.211
373027014	other	other	21.088
373027015	other	other	21.468
373027016	other	other	21.088
373027017	Govt. County of Hawaii	Govt. County	0.375
373027018	other	other	27.278
373027019	other	other	27.582
373027020	other	other	20.747
373027021	other	other	10.992
373027022	other	other	20.104
373027023	Govt. County of Hawaii	Govt. County	0.318
373027024	other	other	11.19
373027025	other	other	10
373027026	other	other	10.112
373027027	other	other	10.001
373027999	other	other	0
373028001	other	other	0.538
373028002	other	other	0.535
373028003	other	other	0.538
373028004	other	other	0.541
373028005	other	other	0.5441
373028006	other	other	0.5475
373028007	other	other	0.5543
373028008	other	other	0.5617
373028009	other	other	0.5735
373028010	other	other	0.596
373028011	other	other	0.6188
373028012	other	other	0.6395
373028013	other	other	0.4434
373028014	other	other	0.4378
373028015	other	other	0.4309
373028016	other	other	0.4241
373028017	other	other	0.4172
373028018	other	other	0.4103
373028019	other	other	0.4034
373028020	other	other	0.3965
373028021	other	other	0.3897
373028022	other	other	0.3828
373028023	other	other	0.3759
373028024	other	other	0.3727
373028025	other	other	0.3746
373028026	other	other	0.3759
373028027	other	other	0.3804
373028028	other	other	0.3849
373028029	other	other	0.3895
373028030	other	other	0.394
373028031	other	other	0.3985

TMK	MajorOwner	BigstOwner	TaxAcres
373028032	other	other	0.403
373028033	other	other	0.4075
373028034	other	other	0.4121
373028035	other	other	0.4166
373028036	other	other	0.4218
373028037	other	other	0.4357
373028038	other	other	0.4329
373028039	other	other	0.4329
373028040	other	other	0.433
373028041	other	other	0.4331
373028042	other	other	0.4331
373028043	other	other	0.4332
373028044	other	other	0.4332
373028045	other	other	0.4333
373028046	other	other	0.4334
373028047	other	other	0.4334
373028048	other	other	0.4381
373028050	other	other	0.6933
373028051	other	other	0.6933
373028052	other	other	0.6632
373028053	other	other	0.6632
373028054	other	other	0.6632
373028055	other	other	0.6632
373028056	other	other	0.6632
373028057	other	other	0.5969
373028058	other	other	0.4962
373028059	other	other	0.5155
373028060	other	other	0.5033
373028061	other	other	0.4911
373028062	other	other	0.4789
373028063	other	other	0.4666
373028064	other	other	0.4544
373028065	other	other	0.4832
373028066	other	other	0.4989
373028067	other	other	0.4707
373028068	other	other	0.4829
373028069	other	other	0.4951
373028070	other	other	0.5073
373028071	other	other	0.5195
373028072	other	other	0.5317
373028073	other	other	0.5289
373028074	other	other	0.5722
373028075	other	other	0.5489
373028076	other	other	0.5324
373028077	other	other	0.5159
373028078	other	other	0.4994
373028079	other	other	0.4829
373028080	other	other	0.4664

TMK	MajorOwner	BigstOwner	TaxAcres
373028081	other	other	0.4906
373028082	other	other	0.244
373028083	other	other	0.2508
373028084	other	other	0.2461
373028085	other	other	0.2449
373028086	other	other	0.2337
373028087	other	other	0.2313
373028088	other	other	0.2426
373028089	other	other	0.2339
373028090	other	other	0.2445
373028091	other	other	0.233
373028092	other	other	0.2297
373028093	other	other	0.2303
373028094	other	other	0.2454
373028095	other	other	0.2776
373028096	other	other	0.2635
373028097	other	other	0.2575
373028098	other	other	0.2338
373028099	other	other	0.2338
373028100	other	other	0.2643
373028101	other	other	0.241
373028102	other	other	3.984
373028104	other	other	7.998
373028999	other	other	0
373029001	other	other	0.2338
373029002	other	other	0.2308
373029003	other	other	0.2308
373029004	other	other	0.2308
373029005	other	other	0.2308
373029006	other	other	0.2308
373029007	other	other	0.2308
373029008	other	other	0.2308
373029009	other	other	0.4615
373029011	other	other	0.2308
373029012	other	other	0.2308
373029013	other	other	0.2308
373029014	other	other	0.2308
373029015	other	other	0.2308
373029016	other	other	0.2308
373029017	other	other	0.2334
373029018	other	other	0.2687
373029019	other	other	0.2652
373029020	other	other	0.2492
373029021	other	other	0.2388
373029022	other	other	0.2298
373029023	other	other	0.2461
373029024	other	other	0.3562
373029025	other	other	0.2496

TMK	MajorOwner	BigstOwner	TaxAcres
373029026	other	other	0.3017
373029027	other	other	0.2461
373029028	other	other	0.2298
373029029	other	other	0.4875
373029031	other	other	0.2707
373029032	other	other	0.2678
373029033	other	other	0.2406
373029034	other	other	0.2469
373029035	other	other	0.2469
373029036	other	other	0.2406
373029037	other	other	0.2772
373029038	other	other	0.2943
373029039	other	other	0.2666
373029040	other	other	0.2592
373029042	other	other	0.5
373029043	other	other	0.5001
373029044	other	other	0.5
373029045	other	other	0.5
373029046	other	other	0.5
373029047	other	other	0.5
373029048	other	other	0.8071
373029049	other	other	0.5
373029050	other	other	0.5
373029051	other	other	0.5
373029052	other	other	0.5001
373029053	other	other	0.5001
373029054	other	other	0.5
373029055	other	other	0.4941
373029056	other	other	0.4592
373029999	other	other	0
373030001	other	other	0.2366
373030002	other	other	0.2298
373030003	other	other	0.2298
373030004	other	other	0.2298
373030005	other	other	0.2298
373030006	other	other	0.2298
373030007	other	other	0.2298
373030008	other	other	0.2298
373030009	other	other	0.2298
373030010	other	other	0.2298
373030011	other	other	0.2298
373030012	other	other	0.2298
373030013	other	other	0.2298
373030014	other	other	0.2298
373030015	other	other	0.2298
373030016	other	other	0.235
373030017	other	other	0.2426
373030018	other	other	0.2355

TMK	MajorOwner	BigstOwner	TaxAcres
373030019	other	other	0.2358
373030020	other	other	0.2311
373030021	other	other	0.2398
373030022	other	other	0.2445
373030023	other	other	0.2507
373030024	other	other	0.2651
373030025	other	other	0.2778
373030026	other	other	0.2385
373030027	other	other	0.2358
373030028	other	other	0.2311
373030029	other	other	0.2311
373030030	other	other	0.2384
373030031	other	other	0.2366
373030032	other	other	0.2748
373030033	other	other	0.2487
373030034	other	other	0.2366
373030035	other	other	0.2384
373030036	other	other	0.2311
373030037	other	other	0.23
373030038	other	other	0.2342
373030039	other	other	0.2335
373030040	other	other	0.242
373030041	other	other	0.243
373030042	other	other	0.2322
373030043	other	other	0.2376
373030044	other	other	0.2334
373030045	other	other	0.2303
373030046	other	other	0.232
373030047	other	other	0.2296
373030048	other	other	0.2296
373030049	other	other	0.2296
373030050	other	other	0.2296
373030051	other	other	0.2296
373030052	other	other	0.2295
373030053	other	other	0.2296
373030054	other	other	0.2295
373030055	other	other	0.2296
373030056	other	other	0.2296
373030057	other	other	0.2296
373030058	other	other	0.2296
373030059	other	other	0.3065
373030060	other	other	0.23
373030061	other	other	0.2296
373030062	other	other	0.2309
373030063	other	other	0.2296
373030064	other	other	0.2305
373030065	other	other	0.2296
373030066	other	other	0.2305

TMK	MajorOwner	BigstOwner	TaxAcres
373030067	other	other	0.2295
373030068	other	other	0.2297
373030069	other	other	0.2301
373030999	other	other	0
373031001	other	other	0.2454
373031002	other	other	0.2395
373031003	other	other	0.2352
373031004	other	other	0.2636
373031005	other	other	0.2469
373031006	other	other	0.249
373031007	other	other	0.2432
373031008	other	other	0.2465
373031009	other	other	0.2366
373031010	other	other	0.2314
373031011	other	other	0.2342
373031012	other	other	0.2312
373031013	other	other	0.2412
373031014	other	other	0.2546
373031015	other	other	0.2414
373031016	other	other	0.2366
373031017	other	other	0.2333
373031018	other	other	0.2321
373031019	other	other	0.2309
373031020	other	other	0.2537
373031021	other	other	0.2421
373031022	other	other	0.2433
373031023	other	other	0.2411
373031024	other	other	0.2447
373031025	other	other	0.2328
373031026	other	other	0.236
373031027	other	other	0.2324
373031028	other	other	0.2346
373031029	other	other	0.2346
373031030	other	other	0.2405
373031031	other	other	0.2405
373031032	other	other	0.2412
373031033	other	other	0.2381
373031034	other	other	0.2324
373031035	other	other	0.2358
373031036	other	other	0.2554
373031037	other	other	0.2555
373031038	other	other	0.2834
373031039	other	other	0.275
373031040	other	other	0.2546
373031041	other	other	0.2334
373031042	other	other	0.2376
373031043	other	other	0.2322
373031044	other	other	0.2452

TMK	MajorOwner	BigstOwner	TaxAcres
373031045	other	other	0.265
373031046	other	other	0.2322
373031047	other	other	0.2376
373031048	other	other	0.2334
373031049	other	other	0.2319
373031050	other	other	0.233
373031051	other	other	0.2298
373031052	other	other	0.2846
373031053	other	other	0.2337
373031054	other	other	0.2503
373031055	other	other	0.2298
373031056	other	other	0.233
373031057	other	other	0.2319
373031058	other	other	0.2309
373031059	other	other	0.2296
373031060	other	other	0.2308
373031061	other	other	0.2395
373031062	other	other	0.2472
373031063	other	other	0.2478
373031064	other	other	0.297
373031065	other	other	0.2911
373031066	other	other	0.2475
373031067	other	other	0.2312
373031068	other	other	0.2502
373031069	other	other	0.2874
373031071	other	other	0.2545
373031072	other	other	0.2296
373031073	other	other	0.2552
373031074	other	other	0.2526
373031075	other	other	0.3115
373031076	other	other	0.2361
373031077	other	other	0.2361
373031078	other	other	0.2461
373031079	other	other	0.1921
373031080	other	other	0.2545
373031999	other	other	0
373032001	other	other	0.2438
373032002	other	other	0.2371
373032003	other	other	0.2371
373032004	other	other	0.2371
373032005	other	other	0.2371
373032006	other	other	0.2371
373032007	other	other	0.2456
373032008	other	other	0.2554
373032009	other	other	0.2649
373032010	other	other	0.2545
373032011	other	other	0.243
373032012	other	other	0.2397

TMK	MajorOwner	BigstOwner	TaxAcres
373032013	other	other	0.2743
373032014	other	other	0.2534
373032015	other	other	0.2319
373032016	other	other	0.2346
373032017	other	other	0.2346
373032018	other	other	0.2346
373032019	other	other	0.2364
373032020	other	other	0.2463
373032021	other	other	0.241
373032022	other	other	0.241
373032023	other	other	0.2452
373032024	other	other	0.2339
373032025	other	other	0.2375
373032026	other	other	0.2373
373032027	other	other	0.2314
373032028	other	other	0.2314
373032029	other	other	0.2314
373032030	other	other	0.2314
373032031	other	other	0.2314
373032032	other	other	0.2435
373032033	other	other	0.2348
373032034	other	other	0.2326
373032035	other	other	0.2306
373032036	other	other	0.2426
373032037	other	other	0.2588
373032038	other	other	0.2361
373032039	other	other	0.2306
373032040	other	other	0.2309
373032041	other	other	0.2296
373032042	other	other	0.2397
373032043	other	other	0.2488
373032044	other	other	0.244
373032045	other	other	0.252
373032046	other	other	0.2433
373032047	other	other	0.2309
373032048	other	other	0.2314
373032049	other	other	0.2334
373032050	other	other	0.2891
373032051	other	other	0.2714
373032052	other	other	0.2613
373032053	other	other	0.2481
373032054	other	other	0.2459
373032055	other	other	0.2334
373032056	other	other	0.2399
373032057	other	other	0.2319
373032058	other	other	0.2867
373032059	other	other	0.2355
373032060	other	other	0.2393

TMK	MajorOwner	BigstOwner	TaxAcres
373032061	other	other	0.2397
373032062	other	other	0.238
373032063	other	other	0.2362
373032064	other	other	0.2345
373032065	other	other	0.2323
373032066	other	other	0.2374
373032067	other	other	0.2324
373032068	other	other	0.2322
373032069	other	other	0.2356
373032070	other	other	0.2339
373032071	other	other	0.2446
373032072	Govt. County of Hawaii	Govt. County	0.2576
373032073	other	other	0.2746
373032074	other	other	0.2332
373032075	other	other	0.2503
373032076	other	other	0.2602
373032077	other	other	0.2892
373032078	other	other	0.2314
373032079	other	other	0.2314
373032080	other	other	0.2314
373032081	other	other	0.2314
373032082	other	other	0.2524
373032083	other	other	0.258
373032084	other	other	0.2637
373032999	other	other	0
373033001	other	other	0.243
373033002	other	other	0.243
373033003	other	other	0.243
373033004	other	other	0.243
373033005	other	other	0.243
373033006	other	other	0.243
373033007	other	other	0.243
373033008	other	other	0.243
373033009	other	other	0.243
373033010	other	other	0.243
373033011	other	other	0.243
373033012	other	other	0.243
373033013	other	other	0.243
373033014	other	other	0.243
373033015	other	other	0.243
373033016	other	other	0.243
373033017	other	other	0.243
373033018	other	other	0.243
373033019	other	other	0.243
373033020	other	other	0.243
373033021	other	other	0.243
373033022	other	other	0.2512
373033023	other	other	0.2645

TMK	MajorOwner	BigstOwner	TaxAcres
373033024	other	other	0.2732
373033025	other	other	0.2571
373033026	other	other	0.2359
373033027	other	other	0.2359
373033028	other	other	0.2359
373033029	other	other	0.2359
373033030	other	other	0.2359
373033031	other	other	0.2359
373033032	other	other	0.2359
373033033	other	other	0.2359
373033034	other	other	0.2359
373033035	other	other	0.2359
373033036	other	other	0.2359
373033037	other	other	0.2359
373033038	other	other	0.2359
373033039	other	other	0.2359
373033040	other	other	0.2359
373033041	other	other	0.2359
373033042	other	other	0.2359
373033043	other	other	0.2359
373033044	other	other	0.2354
373033045	other	other	0.2314
373033046	other	other	0.2371
373033047	other	other	0.2819
373033048	other	other	0.2649
373033049	other	other	0.2543
373033050	other	other	0.3055
373033051	other	other	0.3018
373033052	other	other	0.2528
373033053	other	other	0.2506
373033054	other	other	0.3184
373033055	other	other	0.2445
373033056	other	other	0.2428
373033057	other	other	0.2687
373033058	other	other	0.255
373033059	other	other	0.2472
373033060	other	other	0.2366
373033061	other	other	0.2367
373033062	other	other	0.2503
373033063	other	other	0.2901
373033064	other	other	0.2513
373033065	other	other	0.2718
373033066	other	other	0.2755
373033067	other	other	0.2527
373033068	other	other	0.2571
373033069	other	other	0.2345
373033070	other	other	0.2349
373033071	other	other	0.2742

TMK	MajorOwner	BigstOwner	TaxAcres
373033072	other	other	0.2364
373033073	other	other	0.278
373033074	other	other	0.2447
373033075	other	other	0.2297
373033076	other	other	0.291
373033077	other	other	0.2585
373033078	other	other	0.248
373033079	other	other	0.241
373033080	other	other	0.2348
373033081	other	other	0.2393
373033082	other	other	0.2309
373033083	other	other	0.2573
373033084	other	other	0.2507
373033085	Govt. State HFDC	Govt. State	0.2573
373033086	other	other	0.2551
373033087	other	other	0.2588
373033088	other	other	0.2698
373033089	other	other	0.2853
373033090	other	other	0.238
373033091	other	other	0.241
373033092	other	other	0.2396
373033093	other	other	0.2381
373033094	other	other	0.2325
373033095	other	other	0.2587
373033096	other	other	0.2635
373033097	other	other	0.3287
373033098	other	other	0.2332
373033099	other	other	0.2297
373033100	other	other	0.3429
373033101	other	other	0.3278
373033102	other	other	0.3045
373033103	other	other	0.2876
373033104	other	other	0.2826
373033105	other	other	0.2613
373033106	other	other	0.2617
373033107	other	other	0.2625
373033999	other	other	0
373034001	other	other	0.2311
373034002	other	other	0.2343
373034003	other	other	0.2348
373034004	other	other	0.2328
373034005	other	other	0.2403
373034006	other	other	0.2441
373034007	other	other	0.2359
373034008	other	other	0.2522
373034009	other	other	0.2812
373034010	other	other	0.2793
373034011	other	other	0.2457

TMK	MajorOwner	BigstOwner	TaxAcres
373034012	other	other	0.235
373034013	other	other	0.2296
373034014	other	other	0.232
373034015	other	other	0.2296
373034016	other	other	0.2627
373034017	other	other	0.0795
373034018	other	other	0.243
373034019	other	other	0.2302
373034020	other	other	0.2843
373034021	other	other	0.2474
373034022	other	other	0.248
373034023	other	other	0.2358
373034024	other	other	0.2308
373034025	other	other	0.2308
373034026	other	other	0.2354
373034027	other	other	0.2449
373034028	other	other	0.2468
373034029	other	other	0.2468
373034030	other	other	0.2468
373034031	other	other	0.2452
373034032	other	other	0.2378
373034033	other	other	0.2379
373034034	other	other	0.2359
373034035	other	other	0.2368
373034036	other	other	0.2354
373034037	other	other	0.2446
373034038	other	other	0.2378
373034039	other	other	0.2378
373034040	other	other	0.2378
373034041	other	other	0.2314
373034042	other	other	0.2314
373034043	other	other	0.2314
373034044	other	other	0.2314
373034045	other	other	0.2355
373034046	other	other	0.2296
373034047	other	other	0.2474
373034048	other	other	0.2308
373034049	other	other	0.2306
373034050	other	other	0.0755
373034051	other	other	0.2355
373034052	other	other	0.2489
373034053	other	other	0.2496
373034054	other	other	0.2413
373034055	other	other	0.2444
373034056	other	other	0.256
373034057	other	other	0.2318
373034058	other	other	0.2731
373034059	other	other	0.2385

TMK	MajorOwner	BigstOwner	TaxAcres
373034060	other	other	0.2362
373034061	other	other	0.2343
373034062	other	other	0.2367
373034063	other	other	0.2456
373034064	other	other	0.2538
373034065	other	other	0.2812
373034066	other	other	0.2492
373034067	other	other	0.2537
373034068	other	other	0.238
373034069	other	other	0.2559
373034070	other	other	0.241
373034071	other	other	0.241
373034072	other	other	0.241
373034073	other	other	0.241
373034074	other	other	0.241
373034075	other	other	0.241
373034076	other	other	0.241
373034077	other	other	0.2428
373034078	other	other	0.2467
373034079	other	other	0.2451
373034080	other	other	0.241
373034081	other	other	0.241
373034082	other	other	0.241
373034083	other	other	0.2533
373034999	other	other	0
373035001	other	other	0.2347
373035002	other	other	0.2344
373035003	other	other	0.2344
373035004	other	other	0.2344
373035005	other	other	0.2344
373035006	other	other	0.2344
373035007	other	other	0.2344
373035008	other	other	0.2344
373035009	other	other	0.2344
373035010	other	other	0.2344
373035011	other	other	0.2344
373035012	other	other	0.2352
373035013	other	other	0.2482
373035014	other	other	0.2806
373035015	other	other	0.2574
373035016	other	other	0.2625
373035017	other	other	0.2584
373035018	other	other	0.2755
373035019	other	other	0.2376
373035020	other	other	0.24
373035021	other	other	0.0407
373035022	other	other	0.2672
373035023	other	other	0.2497

TMK	MajorOwner	BigstOwner	TaxAcres
373035024	other	other	0.2362
373035025	other	other	0.253
373035026	other	other	0.268
373035027	other	other	0.2377
373035028	other	other	0.2362
373035029	other	other	0.2422
373035030	other	other	0.2425
373035031	other	other	0.235
373035032	other	other	0.2472
373035033	other	other	0.2425
373035034	other	other	0.2422
373035035	other	other	0.2395
373035036	other	other	0.2324
373035037	other	other	0.2324
373035038	other	other	0.2324
373035039	other	other	0.2451
373035040	other	other	0.2384
373035041	other	other	0.241
373035042	other	other	0.2481
373035043	other	other	0.2296
373035044	other	other	0.2296
373035045	other	other	0.2296
373035046	other	other	0.2296
373035047	other	other	0.2296
373035048	other	other	0.2296
373035049	other	other	0.2296
373035050	other	other	0.2296
373035051	other	other	0.2535
373035052	other	other	0.2675
373035053	other	other	0.2324
373035054	other	other	0.2324
373035055	other	other	0.2324
373035056	other	other	0.2492
373035057	other	other	0.2406
373035058	other	other	0.2346
373035059	other	other	0.2346
373035060	other	other	0.2346
373035061	other	other	0.2346
373035062	other	other	0.2346
373035063	other	other	0.2346
373035064	other	other	0.2346
373035065	other	other	0.2346
373035066	other	other	0.2346
373035067	other	other	0.2369
373035068	other	other	0.238
373035069	other	other	0.2375
373035070	other	other	0.2346
373035071	Govt. County of Hawaii	Govt. County	0.2366

TMK	MajorOwner	BigstOwner	TaxAcres
373035999	other	other	0
373036001	other	other	1.014
373036002	other	other	1.037
373036003	other	other	1.001
373036004	other	other	1
373036005	other	other	1
373036006	other	other	1
373036007	other	other	1
373036008	other	other	1.001
373036009	other	other	1
373036010	other	other	1
373036011	other	other	1.001
373036012	other	other	1
373036013	other	other	1.143
373036014	other	other	1.15
373036016	other	other	1.266
373036017	other	other	3.266
373036018	other	other	1
373036019	other	other	1
373036020	other	other	1.005
373036021	other	other	1.247
373036999	other	other	0
373037001	other	other	0.1955
373037002	other	other	0.1955
373037003	other	other	0.1955
373037004	other	other	0.1841
373037005	other	other	0.189
373037006	other	other	0.2141
373037007	other	other	0.2102
373037008	other	other	0.2591
373037009	other	other	0.2407
373037010	other	other	0.1977
373037011	other	other	0.197
373037012	other	other	0.194
373037013	other	other	0.1933
373037014	other	other	0.1933
373037015	other	other	0.1929
373037016	other	other	0.1929
373037017	other	other	0.1929
373037018	other	other	0.1929
373037019	other	other	0.1929
373037020	other	other	0.1929
373037021	other	other	0.1929
373037022	other	other	0.1929
373037023	other	other	0.1929
373037024	other	other	0.194
373037025	other	other	0.194
373037026	other	other	0.194

TMK	MajorOwner	BigstOwner	TaxAcres
373037027	other	other	0.194
373037028	other	other	0.194
373037029	other	other	0.194
373037030	other	other	0.194
373037031	other	other	0.194
373037032	other	other	0.194
373037033	other	other	0.194
373037034	other	other	0.194
373037035	other	other	0.2225
373037036	other	other	0.2781
373037037	other	other	0.2361
373037038	other	other	0.2327
373037039	other	other	0.2078
373037040	other	other	0.194
373037041	other	other	0.194
373037042	other	other	0.194
373037043	other	other	0.194
373037044	other	other	0.1937
373037045	other	other	0.1997
373037999	other	other	0
373038001	other	other	0.1925
373038002	other	other	0.194
373038003	other	other	0.194
373038004	other	other	0.194
373038005	other	other	0.2315
373038006	other	other	0.2648
373038007	other	other	0.3798
373038008	other	other	0.2487
373038009	other	other	0.2248
373038010	other	other	0.1947
373038011	other	other	0.194
373038012	other	other	0.194
373038013	other	other	0.1925
373038014	other	other	0.1925
373038015	other	other	0.194
373038016	other	other	0.194
373038017	other	other	0.2005
373038018	other	other	0.1946
373038019	other	other	0.1946
373038020	other	other	0.2047
373038021	other	other	0.194
373038022	other	other	0.194
373038023	other	other	0.194
373038024	other	other	0.1944
373038025	other	other	0.2438
373038026	other	other	0.2621
373038027	other	other	0.1828
373038028	other	other	0.2009

TMK	MajorOwner	BigstOwner	TaxAcres
373038029	other	other	0.2009
373038030	other	other	0.1784
373038031	other	other	0.194
373038032	other	other	0.194
373038033	other	other	0.1925
373038034	other	other	0.2059
373038035	other	other	0.1841
373038036	other	other	0.1841
373038037	other	other	0.1841
373038038	other	other	0.1848
373038039	other	other	0.1865
373038040	other	other	0.1865
373038041	other	other	0.1863
373038042	other	other	0.2121
373038043	other	other	0.193
373038044	other	other	0.1995
373038045	other	other	0.1988
373038046	other	other	0.1995
373038047	other	other	0.2523
373038048	other	other	0.2172
373038049	other	other	0.2034
373038050	other	other	0.1793
373038051	other	other	0.2739
373038052	other	other	0.2581
373038053	other	other	0.252
373038054	other	other	0.2275
373038055	other	other	0.194
373038056	other	other	0.194
373038057	other	other	0.1929
373038058	other	other	0.1929
373038059	other	other	0.1929
373038060	other	other	0.1929
373038061	other	other	0.1929
373038062	other	other	0.194
373038063	other	other	0.194
373038064	other	other	0.194
373038065	other	other	0.194
373038066	other	other	0.194
373038067	other	other	0.194
373038068	other	other	0.194
373038069	other	other	0.194
373038070	other	other	0.1806
373038071	other	other	0.2275
373038072	other	other	0.2239
373038073	other	other	0.2214
373038074	other	other	0.2075
373038075	other	other	0.1722
373038076	other	other	0.1851

TMK	MajorOwner	BigstOwner	TaxAcres
373038077	other	other	0.1851
373038078	other	other	0.1851
373038079	other	other	0.1851
373038080	other	other	0.1851
373038081	other	other	0.1851
373038082	other	other	0.185
373038083	other	other	0.1849
373038999	other	other	0
373039001	other	other	0.277
373039002	other	other	0.2589
373039003	other	other	0.2524
373039004	other	other	0.2815
373039005	other	other	0.2391
373039006	other	other	0.2318
373039007	other	other	0.243
373039008	other	other	0.2666
373039009	other	other	0.2986
373039010	other	other	0.3045
373039011	other	other	0.2314
373039012	other	other	0.2314
373039013	other	other	0.2314
373039014	other	other	0.2314
373039015	other	other	0.2314
373039016	other	other	0.2314
373039017	other	other	0.2314
373039018	other	other	0.2314
373039019	other	other	0.2314
373039020	other	other	0.2314
373039021	other	other	0.2314
373039022	other	other	0.2314
373039023	other	other	0.2314
373039024	other	other	0.2302
373039025	other	other	0.244
373039026	other	other	0.235
373039027	other	other	0.2618
373039028	other	other	0.2296
373039029	other	other	0.2296
373039030	other	other	0.233
373039031	other	other	0.238
373039032	other	other	0.2298
373039033	other	other	0.2298
373039034	other	other	0.2461
373039035	other	other	0.2648
373039036	other	other	0.2486
373039037	other	other	0.235
373039038	other	other	0.2327
373039039	other	other	0.2568
373039040	other	other	0.239

TMK	MajorOwner	BigstOwner	TaxAcres
373039041	other	other	0.2299
373039042	other	other	0.2296
373039043	other	other	0.2296
373039044	other	other	0.2362
373039045	other	other	0.2454
373039046	other	other	0.232
373039047	other	other	0.2345
373039048	other	other	0.2296
373039049	other	other	0.2296
373039050	other	other	0.2296
373039051	other	other	0.2349
373039052	other	other	0.2411
373039053	other	other	0.2395
373039054	other	other	0.232
373039055	other	other	0.2492
373039056	other	other	0.2481
373039057	other	other	0.2376
373039058	other	other	0.3307
373039059	other	other	0.2627
373039060	other	other	0.2567
373039061	other	other	0.2343
373039062	other	other	0.2435
373039063	other	other	0.232
373039064	other	other	0.2428
373039065	other	other	0.256
373039066	other	other	0.2537
373039067	other	other	0.2355
373039068	other	other	0.2522
373039069	other	other	0.2719
373039070	other	other	0.2528
373039071	other	other	0.2567
373039072	other	other	0.3017
373039073	other	other	0.2903
373039074	other	other	0.2695
373039075	other	other	0.2469
373039076	other	other	0.2318
373039077	other	other	0.2323
373039078	other	other	0.2297
373039079	other	other	0.2302
373039080	other	other	0.2462
373039081	other	other	18.247
373040001	other	other	0.2334
373040002	other	other	0.2314
373040003	other	other	0.2314
373040004	other	other	0.2314
373040005	other	other	0.2314
373040006	other	other	0.2314
373040007	other	other	0.2314

TMK	MajorOwner	BigstOwner	TaxAcres
373040008	other	other	0.2314
373040009	other	other	0.2314
373040010	other	other	0.2314
373040011	other	other	0.2314
373040012	other	other	0.2448
373040013	other	other	0.2466
373040014	other	other	0.2566
373040015	other	other	0.24
373040016	other	other	0.2313
373040017	other	other	0.2314
373040018	other	other	0.2314
373040019	other	other	0.2375
373040020	other	other	0.2296
373040021	other	other	0.2298
373040022	other	other	0.2457
373040023	other	other	0.2382
373040024	other	other	0.2427
373040025	other	other	0.2439
373040026	other	other	0.2354
373040027	other	other	0.2377
373040028	other	other	0.24
373040029	other	other	0.2493
373040030	other	other	0.2517
373040031	other	other	0.2541
373040032	other	other	0.2637
373040033	other	other	0.2663
373040034	other	other	0.2691
373040035	other	other	0.2306
373040036	other	other	0.2321
373040037	other	other	0.2321
373040038	other	other	0.2411
373040039	other	other	0.2829
373040040	other	other	0.2675
373040041	other	other	0.2648
373040042	other	other	0.255
373040043	other	other	0.2524
373040044	other	other	0.2498
373040045	other	other	0.2403
373040046	other	other	0.2379
373040047	other	other	0.2354
373040048	other	other	0.233
373040049	other	other	0.2305
373040050	other	other	0.2313
373040051	other	other	0.232
373040052	other	other	0.2321
373040053	other	other	0.2317
373040054	other	other	0.2314
373040055	other	other	0.2337

TMK	MajorOwner	BigstOwner	TaxAcres
373040056	other	other	0.2316
373040057	other	other	0.2301
373040058	other	other	0.2408
373040059	other	other	0.2296
373040060	other	other	0.2341
373040061	other	other	0.2437
373040062	other	other	0.2672
373040063	other	other	0.2297
373040064	other	other	0.2687
373040065	other	other	0.2449
373040066	other	other	0.264
373040067	other	other	0.241
373040068	other	other	0.2305
373040069	other	other	0.23
373040070	other	other	0.2654
373040071	other	other	0.2593
373040072	other	other	0.3128
373040073	other	other	0.2691
373040074	other	other	0.2888
373040075	other	other	0.2881
373040076	other	other	0.2767
373040077	other	other	0.2767
373040078	other	other	0.2337
373040079	other	other	0.2332
373040080	other	other	0.2327
373040081	other	other	0.2322
373040082	other	other	0.2384
373040999	other	other	0
373041001	other	other	0.2297
373041002	other	other	0.2447
373041003	other	other	0.2447
373041004	P. Kawananakoa	other	0.2309
373041005	other	other	0.2364
373041006	other	other	0.2558
373041007	other	other	0.2617
373041008	other	other	0.2524
373041009	other	other	0.2506
373041010	other	other	0.25
373041011	other	other	0.2919
373041012	other	other	0.2586
373041013	other	other	0.2464
373041014	other	other	0.2402
373041015	other	other	0.2359
373041016	other	other	0.233
373041017	other	other	0.233
373041018	other	other	0.233
373041019	other	other	0.233
373041020	other	other	0.233

TMK	MajorOwner	BigstOwner	TaxAcres
373041021	other	other	0.2296
373041022	other	other	0.2296
373041023	other	other	0.2296
373041024	other	other	0.2296
373041025	other	other	0.2296
373041026	other	other	0.2296
373041027	other	other	0.2358
373041028	other	other	0.2366
373041029	other	other	0.2486
373041030	other	other	0.2375
373041031	other	other	0.2365
373041032	other	other	0.236
373041033	other	other	0.2359
373041034	other	other	0.2417
373041035	other	other	0.2361
373041036	other	other	0.279
373041037	other	other	0.2352
373041038	other	other	0.2764
373041039	other	other	0.2515
373041040	other	other	0.2647
373041041	other	other	0.2854
373041042	other	other	0.2602
373041043	other	other	0.2388
373041044	other	other	0.2316
373041045	other	other	0.2342
373041046	other	other	0.2496
373041047	other	other	0.2826
373041048	other	other	0.2778
373041049	other	other	0.2342
373041050	other	other	0.2316
373041051	other	other	0.2299
373041052	other	other	0.2424
373041053	other	other	0.2783
373041054	other	other	0.2903
373041055	other	other	0.2884
373041056	other	other	0.2424
373041057	other	other	0.2299
373041058	other	other	0.233
373041059	other	other	0.233
373041060	other	other	0.233
373041061	other	other	0.233
373041062	other	other	0.233
373041063	other	other	0.233
373041064	other	other	0.233
373041065	other	other	0.233
373041066	other	other	0.233
373041067	other	other	0.2639
373041068	other	other	0.2626

TMK	MajorOwner	BigstOwner	TaxAcres
373041069	other	other	0.2518
373041070	other	other	0.2492
373041071	other	other	0.2599
373041999	other	other	0
373042001	other	other	0.233
373042002	other	other	0.233
373042003	other	other	0.233
373042004	other	other	0.233
373042005	other	other	0.233
373042006	other	other	0.233
373042007	other	other	0.233
373042008	other	other	0.233
373042009	other	other	0.233
373042010	other	other	0.233
373042011	other	other	0.233
373042012	other	other	0.2402
373042014	other	other	0.5104
373042015	other	other	0.2296
373042016	other	other	0.2296
373042017	other	other	0.2296
373042018	other	other	0.2296
373042019	other	other	0.2296
373042020	other	other	0.2296
373042021	other	other	0.2296
373042022	other	other	0.2296
373042023	other	other	0.2296
373042024	other	other	0.2296
373042025	other	other	0.2672
373042026	other	other	0.2466
373042027	other	other	0.2343
373042028	other	other	0.2955
373042029	other	other	0.2761
373042030	other	other	0.2466
373042031	other	other	0.2343
373042032	other	other	0.2343
373042033	other	other	0.2466
373042034	other	other	0.3007
373042035	other	other	0.3045
373042036	other	other	0.3074
373042037	other	other	0.2466
373042038	other	other	0.2343
373042039	other	other	0.2366
373042040	other	other	0.2425
373042041	other	other	0.2392
373042042	other	other	0.3031
373042043	other	other	0.3042
373042044	other	other	0.2412
373042045	other	other	0.2343

TMK	MajorOwner	BigstOwner	TaxAcres
373042046	other	other	0.2375
373042047	other	other	0.2916
373042048	other	other	0.2312
373042049	other	other	0.2297
373042050	other	other	0.2313
373042051	other	other	0.2297
373042052	other	other	0.2314
373042053	other	other	0.2328
373042054	other	other	0.233
373042055	other	other	0.233
373042056	other	other	0.233
373042057	other	other	0.233
373042058	other	other	0.233
373042059	other	other	0.233
373042060	other	other	0.233
373042061	other	other	0.233
373042999	other	other	0
373043001	Govt. State	Govt. State	1174.6
373043002	Govt. State	Govt. State	317.7
373043003	Govt. State	Govt. State	1916.446
373043005	Govt. Federal	Govt. Federal	10.255
373043006	Govt. State	Govt. State	0.1564
373043007	Govt. State	Govt. State	0.1291
373043008	Govt. State	Govt. State	0.1148
373043009	Govt. State	Govt. State	0.3092
373043010	other	other	0.0753
373043011	Govt. State	Govt. State	0.5142
373043012	Govt. State	Govt. State	0.0753
373043013	Govt. State	Govt. State	0.5211
373043014	Govt. State	Govt. State	0.3014
373043015	Govt. State	Govt. State	0.1148
373043016	Govt. State	Govt. State	0.1989
373043017	Govt. State	Govt. State	0.0364
373043018	other	other	0.0073
373043022	Govt. State	Govt. State	0.0078
373043023	Govt. State	Govt. State	0.0287
373043024	Govt. State	Govt. State	0.0287
373043025	Govt. State	Govt. State	0.0287
373043026	Govt. State	Govt. State	0.0287
373043027	Govt. State	Govt. State	0.0287
373043028	Govt. State	Govt. State	0.9183
373043029	other	other	0.0044
373043030	Govt. State	Govt. State	0.5973
373043031	Govt. State	Govt. State	0.0551
373043032	Govt. State	Govt. State	32.7856
373043033	Govt. State	Govt. State	0.1056
373043034	Govt. State	Govt. State	1.9189
373043035	other	other	0.0052

TMK	MajorOwner	BigstOwner	TaxAcres
373043037	Govt. State	Govt. State	0.0232
373043038	Govt. State	Govt. State	0.0166
373043040	other	other	0.039
373043041	Govt. State	Govt. State	2.102
373043042	Govt. State	Govt. State	166.278
373043044	other	other	0.0013
373043045	other	other	0.237
373043046	Govt. State	Govt. State	0.223
373043047	Govt. State	Govt. State	0.4556
373043048	other	other	0.7987
373043049	Govt. State	Govt. State	0.7138
373043050	Govt. State	Govt. State	3
373043051	Govt. State	Govt. State	3
373043052	Govt. State	Govt. State	0.0514
373043053	Govt. State	Govt. State	0.0593
373043054	Govt. State	Govt. State	0.2804
373043055	Govt. State	Govt. State	0.2296
373043056	Govt. Federal	Govt. Federal	4
373043057	Govt. State	Govt. State	0.4702
373043058	Govt. State	Govt. State	0.0197
373043059	Govt. State	Govt. State	0.0197
373043062	Govt. State	Govt. State	0.0209
373043063	Govt. State	Govt. State	90.067
373043064	Govt. State	Govt. State	0.0191
373043066	Govt. State	Govt. State	3.989
373043067	Govt. State	Govt. State	1
373043068	Govt. State	Govt. State	0.4624
373043069	Govt. State	Govt. State	0.0428
373043070	Govt. State	Govt. State	1.7647
373043071	Govt. State	Govt. State	3.68
373043072	Govt. State	Govt. State	8.599
373043073	Govt. State	Govt. State	189.712
373043074	Govt. State	Govt. State	4
373043075	Govt. State	Govt. State	4.476
373043076	Govt. State	Govt. State	5.461
373043077	Govt. State	Govt. State	6
373043078	Govt. State	Govt. State	30
373043079	Govt. State	Govt. State	11.417
373043080	Govt. State	Govt. State	17.49
373043081	Govt. State	Govt. State	3.084
373043082	Govt. State	Govt. State	83
373043083	Govt. State	Govt. State	4.894
373043084	Govt. State	Govt. State	20
373043085	Govt. State	Govt. State	13.701
373043086	Govt. State	Govt. State	10.001
373043087	Govt. State	Govt. State	9.874
373043088	Govt. State	Govt. State	21.485
373043089	Govt. State	Govt. State	60.221

TMK	MajorOwner	BigstOwner	TaxAcres
373043090	Govt. State	Govt. State	4.639
373043091	Govt. State	Govt. State	26.455
373043092	Govt. State	Govt. State	3.43
373043093	Govt. State	Govt. State	6.5
373043094	Govt. State	Govt. State	7.368
373043095	Govt. State	Govt. State	0.0054
373043096	Govt. State	Govt. State	0.004
373043097	Govt. State	Govt. State	0.004
373043098	Govt. State	Govt. State	1.068
373043099	Govt. State	Govt. State	2.147
373043100	Govt. State	Govt. State	9.531
373043101	Govt. State	Govt. State	7.116
373043102	Govt. State	Govt. State	6.216
373043103	Govt. State	Govt. State	2.0538
373043104	Govt. State	Govt. State	2.0538
373043105	Govt. State	Govt. State	0.1304
373043106	Govt. State	Govt. State	6.061
373043999	other	other	0
373044001	other	other	0.194
373044002	other	other	0.194
373044003	other	other	0.194
373044004	other	other	0.194
373044005	other	other	0.194
373044006	other	other	0.194
373044007	other	other	0.194
373044008	other	other	0.194
373044009	other	other	0.194
373044010	other	other	0.194
373044011	other	other	0.194
373044012	other	other	0.194
373044013	other	other	0.194
373044014	other	other	0.194
373044015	other	other	0.194
373044016	other	other	0.2208
373044017	other	other	0.2215
373044018	other	other	0.2597
373044019	other	other	0.2208
373044020	other	other	0.194
373044021	other	other	0.194
373044022	other	other	0.194
373044023	other	other	0.194
373044024	other	other	0.194
373044025	other	other	0.194
373044026	other	other	0.194
373044027	other	other	0.194
373044028	other	other	0.194
373044029	other	other	0.194
373044030	other	other	0.194

TMK	MajorOwner	BigstOwner	TaxAcres
373044031	other	other	0.194
373044032	other	other	0.194
373044033	other	other	0.194
373044034	other	other	0.194
373044035	other	other	0.194
373044036	other	other	0.194
373044037	other	other	0.194
373044038	other	other	0.194
373044039	other	other	0.194
373044040	other	other	0.194
373044041	other	other	0.194
373044042	other	other	0.194
373044043	other	other	0.194
373044044	other	other	0.194
373044045	other	other	0.194
373044046	other	other	0.194
373044047	other	other	0.194
373044048	other	other	0.1947
373044049	other	other	0.1969
373044050	other	other	0.2269
373044051	other	other	0.3146
373044999	other	other	0
373045001	other	other	0.194
373045002	other	other	0.194
373045003	other	other	0.194
373045004	other	other	0.1956
373045005	other	other	0.2176
373045006	other	other	0.198
373045007	other	other	0.1977
373045008	other	other	0.1977
373045009	other	other	0.1977
373045010	other	other	0.197
373045011	other	other	0.194
373045012	other	other	0.1933
373045013	other	other	0.1977
373045014	other	other	0.1977
373045015	other	other	0.1977
373045016	other	other	0.1977
373045017	other	other	0.1979
373045018	other	other	0.1961
373045019	other	other	0.1928
373045020	other	other	0.1928
373045021	other	other	0.2561
373045022	other	other	0.2406
373045023	other	other	0.1977
373045024	other	other	0.1977
373045025	other	other	0.1933
373045026	other	other	0.1933

TMK	MajorOwner	BigstOwner	TaxAcres
373045027	other	other	0.1977
373045028	other	other	0.1977
373045029	other	other	0.2406
373045030	other	other	0.2645
373045031	other	other	0.2195
373045032	other	other	0.1928
373045033	other	other	0.1928
373045034	other	other	0.1928
373045035	other	other	0.1999
373045036	other	other	0.1964
373045037	other	other	0.1927
373045038	other	other	0.1977
373045039	other	other	0.1977
373045040	other	other	0.1977
373045041	other	other	0.1977
373045042	other	other	0.1933
373045043	other	other	0.1995
373045044	other	other	0.2033
373045045	other	other	0.2061
373045046	other	other	0.2023
373045047	other	other	0.1986
373045048	other	other	0.1948
373045049	other	other	0.1965
373045050	other	other	0.2181
373045051	other	other	0.2136
373045052	other	other	0.1934
373045053	other	other	0.1926
373045054	other	other	0.1929
373045055	other	other	0.1929
373045056	other	other	0.1929
373045057	other	other	0.1929
373045058	other	other	0.1929
373045059	other	other	0.1929
373045060	other	other	0.1929
373045061	other	other	0.1929
373045062	other	other	0.1929
373045999	other	other	0
373046001	other	other	1.015
373046002	other	other	1
373046003	other	other	1
373046004	other	other	1
373046005	other	other	1
373046006	other	other	1
373046007	other	other	1
373046008	other	other	1
373046009	other	other	1
373046010	other	other	1
373046011	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
373046012	other	other	1
373046013	other	other	1.024
373046014	other	other	1.016
373046015	other	other	1.02
373046016	other	other	1.02
373046017	other	other	1
373046018	other	other	1
373046019	other	other	1
373046020	other	other	1
373046021	other	other	1.023
373046022	other	other	1.003
373046023	other	other	1.101
373046024	other	other	1.006
373046025	other	other	1.002
373046026	other	other	1.092
373046027	other	other	1.493
373046028	other	other	1.201
373046029	other	other	1.07
373046030	other	other	1.003
373046031	other	other	1.002
373046032	other	other	1
373046033	other	other	1
373046034	other	other	1
373046035	other	other	1.081
373046036	other	other	1
373046037	Govt. County of Hawaii	Govt. County	0.23
373046038	other	other	1.001
373046039	other	other	1
373046040	other	other	1.004
373046041	other	other	1.053
373046042	other	other	1.001
373046043	other	other	1.013
373046044	other	other	1
373046045	other	other	1
373046046	other	other	1
373046047	other	other	1
373046048	other	other	1
373046049	other	other	1
373046050	other	other	1
373046051	other	other	1.0077
373046052	other	other	1.129
373046053	other	other	1.272
373046054	other	other	1.245
373046055	other	other	1.152
373046056	other	other	1.08
373046057	other	other	1.128
373046058	other	other	1.002
373046059	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
373046060	other	other	1
373046061	other	other	1
373046062	other	other	1
373046063	other	other	1
373046064	other	other	1
373046065	other	other	1
373046066	other	other	1
373046067	other	other	1.001
373046068	other	other	1.01
373046069	other	other	1.038
373046070	other	other	1
373046071	other	other	1
373046072	other	other	1
373046073	other	other	1
373046074	other	other	1
373046075	other	other	1
373046076	other	other	1
373046077	other	other	1
373046078	other	other	1.155
373046079	other	other	1.15
373046080	other	other	1.115
373046081	other	other	1
373046082	other	other	1
373046083	other	other	1
373046084	other	other	1
373046085	other	other	1
373046086	other	other	1
373046087	other	other	1
373046088	other	other	1
373046089	other	other	1.025
373046090	other	other	1.034
373046091	other	other	1.2
373046092	other	other	1
373046093	other	other	1
373046094	other	other	1
373046095	other	other	1
373046096	other	other	1
373046097	other	other	1
373046098	other	other	1
373046099	other	other	1
373046100	other	other	1
373046101	other	other	1.005
373046102	other	other	1.001
373046103	other	other	1.272
373046104	other	other	1.003
373046105	other	other	1.0033
373046106	other	other	1
373046107	other	other	1.001

TMK	MajorOwner	BigstOwner	TaxAcres
373046108	other	other	1.001
373046109	other	other	1
373046110	other	other	1
373046111	other	other	1
373046112	other	other	1
373046114	other	other	1
373046115	other	other	1
373046116	other	other	1.011
373046117	other	other	1
373046118	other	other	1
373046119	other	other	1
373046120	other	other	1
373046121	other	other	1
373046122	other	other	1
373046123	other	other	1
373046124	other	other	1.01
373046125	other	other	1.085
373046126	other	other	1.035
373046127	other	other	1.035
373046128	other	other	1.035
373046129	other	other	1.035
373046130	other	other	1.035
373046131	other	other	1.035
373046132	other	other	1.035
373046133	other	other	1.051
373046134	other	other	1
373046135	other	other	1
373046136	other	other	1
373046137	other	other	1
373046138	other	other	1.01
373046139	other	other	1
373046140	other	other	1.118
373046141	other	other	1.016
373046142	other	other	1
373046143	other	other	1
373046144	other	other	1
373046145	other	other	1
373046146	other	other	1
373046147	other	other	1
373046148	other	other	1
373046149	other	other	1
373046150	other	other	1
373046151	other	other	1
373046152	other	other	1
373046153	other	other	1.06
373046154	other	other	1.026
373046156	other	other	0.338
373046999	other	other	0

TMK	MajorOwner	BigstOwner	TaxAcres
373047001	other	other	1
373047002	other	other	1.145
373047003	other	other	1.022
373047004	other	other	1.083
373047005	other	other	1.128
373047006	other	other	1.065
373047007	other	other	1.011
373047008	other	other	1.032
373047009	other	other	1
373047010	other	other	1.045
373047011	other	other	1.001
373047014	other	other	1
373047015	other	other	1
373047016	other	other	1.008
373047017	other	other	1
373047018	other	other	1.004
373047019	other	other	1
373047020	other	other	1.001
373047021	other	other	1
373047022	other	other	1
373047023	other	other	1.002
373047024	other	other	1.007
373047025	other	other	1.007
373047026	other	other	1.002
373047027	other	other	1
373047028	other	other	1
373047029	other	other	1.001
373047030	other	other	1.01
373047031	other	other	1.003
373047032	other	other	1.03
373047033	other	other	1.056
373047034	other	other	1.025
373047035	other	other	1.021
373047036	other	other	1.059
373047037	other	other	1.079
373047038	other	other	1.145
373047039	other	other	1.003
373047040	other	other	1.062
373047041	other	other	1.019
373047043	other	other	1.01
373047044	other	other	1.009
373047045	other	other	1.046
373047046	other	other	1.35
373047047	other	other	1.15
373047048	other	other	1.114
373047049	other	other	1.011
373047050	other	other	1.042
373047051	other	other	1.113

TMK	MajorOwner	BigstOwner	TaxAcres
373047052	other	other	1.124
373047053	other	other	1.009
373047054	other	other	1.083
373047055	other	other	1.006
373047056	other	other	1.006
373047057	other	other	1.408
373047058	other	other	1.404
373047059	other	other	1.02
373047060	other	other	1.259
373047061	other	other	1.399
373047062	other	other	1.005
373047063	other	other	1.01
373047064	other	other	1.015
373047065	other	other	1.088
373047066	other	other	1.061
373047067	other	other	1.061
373047068	other	other	1.061
373047069	other	other	1
373047070	other	other	1
373047071	other	other	1.018
373047072	other	other	1.018
373047073	other	other	1.033
373047074	other	other	1.05
373047075	other	other	1.036
373047076	other	other	1.055
373047077	other	other	1.016
373047078	other	other	1.018
373047079	other	other	1.015
373047080	other	other	1.014
373047081	other	other	1.033
373047082	other	other	1.236
373047084	other	other	1.181
373047085	other	other	1.043
373047086	other	other	1.015
373047087	other	other	1.032
373047088	other	other	1.037
373047089	other	other	1.041
373047090	other	other	1.036
373047091	other	other	1.048
373047092	other	other	1.051
373047093	other	other	1.004
373047094	other	other	1.002
373047095	other	other	1.006
373047096	other	other	1.002
373047097	other	other	1.005
373047098	other	other	1.003
373047099	other	other	1.003
373047100	other	other	1.003

TMK	MajorOwner	BigstOwner	TaxAcres
373047101	other	other	1.003
373047102	other	other	1
373047103	other	other	1.001
373047104	other	other	1.022
373047105	other	other	1
373047106	other	other	1
373047107	other	other	1
373047108	other	other	1.018
373047109	other	other	1.018
373047110	other	other	1
373047111	other	other	1
373047112	other	other	1.061
373047113	other	other	1.061
373047114	other	other	1.061
373047115	other	other	1.088
373047116	other	other	1.015
373047117	other	other	1.01
373047118	other	other	1.01
373047120	other	other	1
373047121	other	other	1
373047999	other	other	0
373048001	other	other	21.22
373048002	other	other	21.811
373048003	other	other	23.651
373048004	other	other	22.347
373048005	other	other	11.389
373048006	other	other	20.326
373048007	other	other	22.503
373048008	other	other	62.042
373048009	other	other	39.056
373048010	other	other	21.74
373048011	Govt. County of Hawaii	Govt. County	0.313
373048012	Govt. County of Hawaii	Govt. County	0.275
373048013	Govt. County of Hawaii	Govt. County	6.843
373048014	other	other	22.503
373048015	other	other	20.326
373048016	other	other	10
373048999	other	other	0
373049001	Govt. State	Govt. State	7.282
373049002	Govt. State	Govt. State	4.551
373049003	Govt. State	Govt. State	5.007
373049004	Govt. State	Govt. State	5.005
373049005	Govt. State	Govt. State	6.023
373049006	Govt. State	Govt. State	5.183
373049007	Govt. State	Govt. State	5.047
373049008	Govt. State	Govt. State	4.758
373049009	Govt. State	Govt. State	8.164
373049010	Govt. State	Govt. State	5.061

TMK	MajorOwner	BigstOwner	TaxAcres
373049011	Govt. State	Govt. State	4.758
373049012	Govt. State	Govt. State	5.047
373049013	Govt. State	Govt. State	4.736
373049014	Govt. State	Govt. State	5.272
373049015	Govt. State	Govt. State	5.111
373049016	Govt. State	Govt. State	5.421
373049017	other	other	5.11
373049018	Govt. State	Govt. State	5.906
373049019	Govt. State	Govt. State	5.015
373049020	Govt. State	Govt. State	5.015
373049021	Govt. State	Govt. State	5.015
373049022	Govt. State	Govt. State	5.015
373049023	Govt. State	Govt. State	5.027
373049024	Govt. State	Govt. State	5.027
373049025	Govt. State	Govt. State	5.027
373049026	Govt. State	Govt. State	5.055
373049027	Govt. State	Govt. State	5.534
373049028	Govt. State	Govt. State	6.697
373049029	Govt. State	Govt. State	5.027
373049030	Govt. State	Govt. State	5.027
373049031	Govt. State	Govt. State	5.027
373049032	Govt. State	Govt. State	5.013
373049033	Govt. State	Govt. State	5.013
373049034	Govt. State	Govt. State	5.013
373049035	Govt. State	Govt. State	5.452
373049036	Hawaii Electric	other	14.998
373049037	Hawaii Electric	other	0.645
373049038	Govt. State	Govt. State	4
373049999	other	other	0
373050001	other	other	1
373050002	other	other	1
373050003	other	other	1
373050004	other	other	1.5914
373050005	other	other	1.11
373050006	other	other	1.069
373050007	other	other	1
373050008	other	other	1
373050009	other	other	1
373050010	other	other	1
373050011	other	other	1
373050012	other	other	1
373050013	other	other	1
373050014	other	other	1
373050015	other	other	1
373050016	other	other	1
373050017	other	other	1
373050018	other	other	1
373050019	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
373050020	other	other	1
373050021	other	other	1
373050022	other	other	1
373050023	other	other	1
373050024	other	other	1
373050026	other	other	2
373050027	other	other	1
373050028	other	other	1
373050029	other	other	1
373050030	other	other	1
373050031	other	other	1
373050032	other	other	1.041
373050033	other	other	1
373050034	other	other	1.006
373050035	other	other	1.248
373050036	other	other	1
373050037	other	other	4.908
373051001	other	other	16.188
373051002	other	other	1.3663
373051003	other	other	1.3727
373051004	other	other	1.0008
373051005	other	other	1.0008
373051006	other	other	2.0015
373051008	other	other	1.0008
373051010	other	other	2.0015
373051011	other	other	1.0039
373051012	other	other	1
373051013	other	other	1
373051014	other	other	1
373051016	other	other	2
373051018	other	other	2.139
373051019	other	other	1.0001
373051020	other	other	1
373051021	other	other	1.0001
373051022	other	other	2.0011
373051023	other	other	1.0029
373051024	other	other	1.0008
373051025	other	other	1
373051026	other	other	1
373051027	other	other	1.0003
373051028	other	other	1.0009
373051029	other	other	1.0004
373051030	other	other	1.0003
373051031	other	other	1.0005
373051032	other	other	2.0074
373051033	other	other	1.0146
373051034	other	other	1.0017
373051035	other	other	1.026

TMK	MajorOwner	BigstOwner	TaxAcres
373051036	other	other	1
373051037	other	other	1
373051038	other	other	1
373051039	other	other	1
373051040	other	other	1
373051041	other	other	1.0001
373051042	other	other	1.0001
373051043	other	other	1.0001
373051044	other	other	1.0001
373051045	other	other	1.0504
373051046	other	other	1.0003
373051047	other	other	1
373051048	other	other	1
373051049	other	other	1
373051050	other	other	1
373051051	other	other	2.0002
373051053	other	other	1.0001
373051054	other	other	1.0001
373051055	other	other	2.0004
373051057	Hawaii Electric	other	0.3199
373051058	other	other	3.0407
373051060	other	other	60.69
373051061	other	other	2
373051065	other	other	1.3698
373051067	other	other	2.304
373051068	other	other	1.0043
373051069	other	other	1.0742
373051071	other	other	12.135
373051082	other	other	1.0087
373051084	other	other	1.3002
373051085	other	other	1.168
373051086	other	other	1.1969
373051087	other	other	1.0078
373051088	other	other	1.009
373051089	other	other	2.1496
373051091	other	other	1.1525
373051092	other	other	1.0616
373051093	other	other	1.0739
373051094	other	other	1.0617
373051095	other	other	1.0617
373051096	other	other	1.277
373051097	other	other	1.0617
373051099	other	other	2.097
373051100	other	other	1.742
373051103	other	other	1.183
373051104	other	other	1.23
373051105	other	other	1.23
373051106	other	other	1.194

TMK	MajorOwner	BigstOwner	TaxAcres
373051107	other	other	1.194
373051108	other	other	1.194
373051109	other	other	1.173
373051110	other	other	1.184
373051111	other	other	1.205
373051112	other	other	1.205
373051113	other	other	1.205
373051114	other	other	1.205
373051115	other	other	1.205
373051116	other	other	1.205
373051117	other	other	1.196
373051118	other	other	1.196
373051119	other	other	1.205
373051120	other	other	1.205
373051121	other	other	1.205
373051122	other	other	1.205
373051123	other	other	1.205
373051124	other	other	1.205
373051125	other	other	1.196
373051126	other	other	1.18
373051127	other	other	1.19
373051128	other	other	1.19
373051129	other	other	1.19
373051130	other	other	1.056
373051131	other	other	0.56
373051132	other	other	0.852
373051133	other	other	0.825
373051134	other	other	0.823
373051135	other	other	0.998
373051136	other	other	0.249
373051999	other	other	0
373052001	other	other	0.4599
373052002	other	other	0.4657
373052003	other	other	0.473
373052004	other	other	0.5815
373052005	other	other	0.5816
373052006	other	other	0.5816
373052007	other	other	0.4899
373052008	other	other	0.4591
373052009	other	other	0.4591
373052010	other	other	0.4591
373052011	other	other	0.4592
373052012	other	other	0.4591
373052013	other	other	0.4592
373052014	other	other	0.4895
373052015	other	other	0.4911
373052016	other	other	0.4885
373052017	other	other	0.5482

TMK	MajorOwner	BigstOwner	TaxAcres
373052018	other	other	0.5951
373052019	other	other	0.5404
373052020	other	other	0.4659
373052021	other	other	0.4652
373052022	other	other	0.4646
373052023	other	other	0.4646
373052024	other	other	0.4599
373052025	Govt. County of Hawaii	Govt. County	3.138
373052026	other	other	0.6318
373052027	other	other	0.7846
373052028	other	other	0.7837
373052029	other	other	0.7677
373052030	other	other	0.6504
373052031	other	other	1.5269
373052032	other	other	1.3822
373052033	other	other	1.8073
373052034	other	other	1.7044
373052035	other	other	1.3962
373052036	other	other	0.1616
373053001	other	other	0.2296
373053002	other	other	0.2296
373053003	other	other	0.2301
373053004	other	other	0.2319
373053005	other	other	0.2328
373053006	other	other	0.2547
373053007	other	other	0.2296
373053008	other	other	0.2328
373053009	other	other	0.2319
373053010	other	other	0.2299
373053011	other	other	0.2296
373053012	other	other	0.2296
373053013	other	other	0.2296
373053014	other	other	0.2296
373053015	other	other	0.2337
373053016	other	other	0.2341
373053017	other	other	0.2342
373053018	other	other	0.2554
373053019	other	other	0.2297
373053020	other	other	0.2319
373053021	other	other	0.2311
373053022	other	other	0.2302
373053023	other	other	0.2296
373053024	other	other	0.2296
373053025	other	other	0.2313
373053026	other	other	0.231
373053027	other	other	0.2338
373053028	other	other	0.233
373053029	other	other	0.236

TMK	MajorOwner	BigstOwner	TaxAcres
373053030	other	other	0.2614
373053031	other	other	0.2296
373053032	other	other	0.2323
373053033	other	other	0.2316
373053034	other	other	0.231
373053035	other	other	0.2296
373053036	other	other	0.2296
373053037	other	other	0.2296
373053038	other	other	0.2298
373053039	other	other	0.2298
373053040	other	other	0.23
373053041	other	other	0.2611
373053042	other	other	0.2296
373053043	other	other	0.2319
373053044	other	other	0.2323
373053045	other	other	0.2296
373053046	other	other	0.2317
373053047	other	other	0.2333
373053048	other	other	0.2409
373053049	other	other	1.033
373053050	other	other	0.4342
373053051	other	other	0.3487
373053052	other	other	0.3839
373053053	other	other	0.3575
373053054	other	other	0.0908
373053055	other	other	0.0872
373053056	other	other	0.0731
373053057	other	other	0.0831
373053058	other	other	0.2296
373053059	other	other	0.2541
373053060	other	other	0.2296
373053061	other	other	0.2553
373053062	other	other	0.2296
373053063	other	other	0.2589
373053064	other	other	0.2296
373053065	other	other	0.2618
373053066	other	other	1.062
373053999	other	other	0
373054001	other	other	0.2338
373054002	other	other	0.2341
373054003	other	other	0.2334
373054004	other	other	0.231
373054005	other	other	0.232
373054006	other	other	0.2296
373054007	other	other	0.2343
373054008	other	other	0.2442
373054009	other	other	0.2467
373054010	other	other	0.2385

TMK	MajorOwner	BigstOwner	TaxAcres
373054011	other	other	0.2316
373054012	other	other	0.2298
373054013	other	other	0.2387
373054014	other	other	0.2311
373054015	other	other	0.231
373054016	other	other	0.231
373054017	other	other	0.2309
373054018	other	other	0.2335
373054020	other	other	2.768
373054021	other	other	0.3444
373054022	other	other	1.348
373054023	other	other	0.3444
373054024	other	other	0.3444
373054025	other	other	0.3444
373054026	other	other	0.3445
373054027	other	other	0.6431
373054028	other	other	0.3444
373054029	other	other	0.3445
373054030	other	other	0.3451
373054031	other	other	0.1347
373054032	other	other	0.2872
373054033	other	other	0.2378
373054034	other	other	0.2298
373054035	other	other	0.2326
373054036	other	other	0.2493
373054037	other	other	0.2519
373054038	other	other	0.2541
373054039	other	other	0.2564
373054040	other	other	0.2586
373054041	other	other	0.2745
373054042	other	other	0.3436
373054043	other	other	0.2386
373054044	other	other	1.402
373054045	other	other	0.261
373054046	other	other	0.2392
373054047	other	other	0.2394
373054048	other	other	0.2392
373054049	other	other	0.2391
373054050	other	other	0.2665
373054051	other	other	0.411
373054052	other	other	0.3248
373054053	other	other	0.2335
373054054	other	other	0.44
373054055	other	other	0.4342
373054056	other	other	0.2982
373054999	other	other	0
373055001	other	other	1.182
373055002	other	other	1.511

TMK	MajorOwner	BigstOwner	TaxAcres
373055003	other	other	1.071
373055004	other	other	1.06
373055005	other	other	1.112
373055006	other	other	1.013
373055007	other	other	1
373055008	other	other	1.161
373055009	other	other	1.117
373055010	other	other	1.114
373055011	other	other	1.13
373055012	other	other	1.056
373055013	other	other	1.309
373055014	other	other	1.251
373055015	other	other	1.183
373055016	other	other	1.155
373055017	other	other	1.074
373055018	other	other	1.142
373055019	other	other	1.015
373055020	other	other	1.001
373055021	other	other	1.172
373055022	other	other	1.118
373055023	other	other	1.04
373055024	other	other	1.04
373055025	other	other	1.076
373055026	other	other	1.169
373055027	other	other	1.033
373055028	other	other	1.001
373055029	other	other	1.089
373055030	other	other	1
373055031	other	other	1
373055032	other	other	1.002
373055033	other	other	1.005
373055034	other	other	1.023
373055035	other	other	1.027
373055036	other	other	1
373055037	other	other	5.103
373056001	other	other	0.2724
373056002	other	other	0.2615
373056003	other	other	0.271
373056004	other	other	0.3067
373056005	other	other	0.2332
373056006	other	other	0.2409
373056007	other	other	0.2935
373056008	other	other	0.2644
373056009	other	other	0.2676
373056010	other	other	0.2694
373056011	other	other	0.2758
373056012	other	other	0.265
373056013	other	other	0.2712

TMK	MajorOwner	BigstOwner	TaxAcres
373056014	other	other	0.3014
373056015	other	other	0.2372
373056016	other	other	0.2331
373056017	other	other	0.2936
373056018	other	other	0.2672
373056019	other	other	0.2636
373056020	other	other	0.2786
373056021	other	other	0.2363
373056022	other	other	0.2861
373056023	other	other	0.2638
373056024	other	other	0.2716
373056025	other	other	0.3007
373056026	other	other	0.2388
373056027	other	other	0.2396
373056028	other	other	0.2978
373056029	other	other	0.2643
373056030	other	other	0.2706
373056031	other	other	0.2913
373056035	other	other	3.48
373056036	other	other	0.3881
373056037	other	other	0.3466
373056038	other	other	0.3444
373056039	other	other	0.3444
373056040	other	other	0.3466
373056041	other	other	0.3913
373056042	other	other	0.3944
373056043	other	other	0.3466
373056044	other	other	0.3444
373056045	other	other	0.3444
373056046	other	other	0.3466
373056047	other	other	0.3976
373056048	other	other	0.4008
373056049	other	other	0.3466
373056050	other	other	0.3444
373056051	other	other	0.3444
373056052	other	other	0.3466
373056053	other	other	0.404
373056054	other	other	3.539
373057001	other	other	0.2864
373057002	other	other	0.235
373057003	other	other	0.3469
373057004	other	other	0.3453
373057005	other	other	0.3444
373057006	other	other	0.2587
373057007	other	other	0.2624
373057008	other	other	0.2827
373057009	other	other	0.2314
373057010	other	other	0.3062

TMK	MajorOwner	BigstOwner	TaxAcres
373057011	other	other	0.3098
373057012	other	other	0.2318
373057013	other	other	0.2314
373057014	other	other	0.3102
373057015	other	other	0.4496
373057016	other	other	0.3694
373057017	other	other	0.3584
373057018	other	other	0.458
373057019	other	other	0.3803
373057020	other	other	0.4594
373057021	other	other	0.3528
373057022	other	other	0.4255
373057023	other	other	0.3903
373057024	other	other	0.3652
373057025	other	other	0.3466
373057026	other	other	0.3592
373057027	other	other	0.3874
373057028	other	other	0.2945
373057029	other	other	0.2644
373057030	other	other	0.2497
373057031	other	other	0.5362
373058001	other	other	1.262
373058002	other	other	5.116
373058007	other	other	1.007
373058008	other	other	1.007
373058009	other	other	1.01
373058010	other	other	1.01
373058011	other	other	1.01
373058012	other	other	1.01
373058013	other	other	1.01
373058014	other	other	1.01
373058015	other	other	1.01
373058016	other	other	1.01
373058017	other	other	1.01
373058018	other	other	1.01
373058019	other	other	1.626
373058020	other	other	1.06
373058021	other	other	1.06
373058022	other	other	1.06
373058023	other	other	1.06
373058024	other	other	1.06
373058025	other	other	1.009
373058026	other	other	1.009
373058027	other	other	1.009
373058028	other	other	1.009
373058029	other	other	1.009
373058030	other	other	1.013
373058031	other	other	1.01

TMK	MajorOwner	BigstOwner	TaxAcres
373058032	other	other	1.01
373058033	other	other	1.01
373058034	other	other	1.01
373058035	other	other	1.01
373058036	other	other	1.01
373058037	other	other	1.021
373058038	other	other	1.035
373058039	other	other	1.035
373058040	other	other	1.553
373058041	other	other	1.011
373058042	other	other	1.01
373058043	other	other	1.01
373058044	other	other	1.01
373058045	other	other	1.01
373058046	other	other	1.01
373058047	other	other	1.01
373058048	other	other	1.01
373058049	other	other	0.679
373058050	other	other	0.518
373058051	Govt. County of Hawaii	Govt. County	4.406
373058052	other	other	9.079
373058053	other	other	0.5285
373058054	other	other	0.5009
373058999	other	other	0
373059001	other	other	0.2309
373059002	other	other	0.231
373059003	other	other	0.2309
373059004	other	other	0.2296
373059005	other	other	0.2296
373059006	other	other	0.2296
373059007	other	other	0.2308
373059008	other	other	0.1862
373059009	other	other	0.2307
373059010	other	other	0.2309
373059011	other	other	0.2311
373059012	other	other	0.2312
373059013	other	other	0.2857
373059014	other	other	0.2362
373059015	other	other	0.2781
373059016	other	other	0.2654
373059017	other	other	0.3349
373059018	other	other	0.2312
373059019	other	other	0.2297
373059020	other	other	0.2378
373059021	other	other	0.2355
373059022	other	other	0.2333
373059023	other	other	0.2361
373059024	other	other	0.2319

TMK	MajorOwner	BigstOwner	TaxAcres
373059025	other	other	0.7788
373060001	other	other	0.2726
373060002	other	other	0.2729
373060003	other	other	0.2726
373060004	other	other	0.3914
373060005	other	other	0.3039
373060006	other	other	0.2299
373060007	other	other	0.234
373060008	other	other	0.2318
373060009	other	other	0.2307
373060010	other	other	0.2311
373060011	other	other	0.2996
373060012	other	other	0.2728
373060013	other	other	0.2543
373060014	other	other	0.244
373060015	other	other	0.2411
373060016	other	other	0.241
373060017	other	other	0.241
373060018	other	other	0.241
373060019	other	other	0.241
373060020	other	other	0.241
373060021	other	other	0.2411
373060022	other	other	0.244
373060023	other	other	0.3486
373060024	other	other	0.2352
373060025	other	other	0.2511
373060026	other	other	0.2583
373060027	other	other	0.2583
373060028	other	other	0.2583
373060029	other	other	0.2649
373060030	other	other	0.2977
373060031	other	other	0.2332
373060032	other	other	0.2737
373060033	other	other	0.2755
373060034	other	other	0.2755
373060035	other	other	0.2755
373060036	other	other	0.2813
373060037	other	other	0.2974
373060038	other	other	0.336
373060039	other	other	0.2307
373060040	other	other	0.2511
373060041	other	other	0.2755
373060042	other	other	0.2755
373060043	other	other	0.2659
373060044	other	other	0.2913
373060045	other	other	0.2629
373060046	other	other	0.3267
373060047	other	other	0.2857

TMK	MajorOwner	BigstOwner	TaxAcres
373060048	other	other	0.2806
373060049	other	other	0.2386
373060050	other	other	0.2543
373060051	other	other	7.594
373060052	other	other	0.2728
373060053	other	other	0.2996
373060054	other	other	0.3233
373060055	other	other	0.267
373060056	other	other	0.25
373060057	other	other	0.2715
373060058	other	other	0.2507
373060059	other	other	0.2609
373060060	other	other	0.3419
373060061	other	other	0.3167
373060062	other	other	0.2682
373060063	other	other	0.3155
373060064	other	other	0.5072
373060065	other	other	0.3514
373060066	other	other	0.2537
373060067	other	other	0.2308
373060068	other	other	0.2384
373060069	other	other	0.2319
373060070	other	other	0.2305
373060071	other	other	0.2337
373060072	other	other	0.2331
373060073	other	other	0.2877
373060074	other	other	0.2707
373060075	other	other	0.2522
373060076	other	other	0.2414
373060077	other	other	0.2701
373060078	other	other	0.2775
373060079	other	other	0.3206
373060080	other	other	0.2671
373060081	other	other	0.2864
373060082	other	other	0.2764
373060083	other	other	0.2755
373060084	other	other	0.2755
373060085	other	other	0.2477
373060086	other	other	0.2344
373060087	other	other	0.24
373060088	other	other	0.3006
373060089	other	other	0.2623
373060090	other	other	0.2485
373060091	other	other	0.2479
373060092	other	other	0.2479
373060093	other	other	0.2341
373060094	other	other	0.2441
373060095	other	other	0.3005

TMK	MajorOwner	BigstOwner	TaxAcres
373060096	other	other	0.277
373060097	other	other	0.2755
373060098	other	other	0.2755
373060099	other	other	0.2755
373060100	other	other	0.3064
373060101	other	other	0.2394
373060102	other	other	0.2404
373060103	other	other	0.2414
373060104	other	other	0.2424
373060105	other	other	0.2433
373060106	other	other	0.2444
373060107	other	other	0.2493
373060108	other	other	0.2816
373060109	other	other	0.341
373060110	other	other	0.2554
373060111	other	other	0.2413
373060112	other	other	0.2826
373060113	other	other	0.2405
373060114	other	other	0.2749
373060115	other	other	0.3049
373060116	other	other	0.4057
373060117	other	other	0.2296
373060118	other	other	0.2296
373060119	other	other	0.2296
373060120	other	other	0.2507
373060121	other	other	0.2334
373061001	other	other	0.3551
373061002	other	other	0.2328
373061003	other	other	0.2328
373061004	other	other	0.2328
373061005	other	other	0.2367
373061006	other	other	0.2512
373061007	other	other	0.2368
373061008	other	other	0.3139
373061009	other	other	0.3282
373061010	other	other	0.2904
373061011	other	other	0.2575
373061012	other	other	0.2452
373061013	other	other	0.2453
373061014	other	other	0.242
373061015	other	other	0.2381
373061016	other	other	0.2321
373061017	other	other	0.2625
373061018	other	other	0.2625
373061019	other	other	0.2464
373061020	other	other	0.2324
373061021	other	other	0.2324
373061022	other	other	0.2464

TMK	MajorOwner	BigstOwner	TaxAcres
373061023	other	other	0.2304
373061024	other	other	0.2403
373061025	other	other	0.2433
373061026	other	other	0.2403
373061027	other	other	0.2304
373061028	other	other	0.249
373061029	other	other	0.2403
373061030	other	other	0.2433
373061031	other	other	0.2403
373061032	other	other	0.249
373061033	other	other	0.249
373061034	other	other	0.2403
373061035	other	other	0.2433
373061036	other	other	0.2403
373061037	other	other	0.249
373061038	other	other	0.2788
373061039	other	other	0.2346
373061040	other	other	0.2374
373061041	other	other	0.2599
373061042	other	other	0.2371
373061043	other	other	0.2854
373061044	other	other	0.2493
373061045	other	other	0.3194
373061046	other	other	0.3641
373061047	other	other	0.2314
373061048	other	other	0.2314
373061049	other	other	0.2341
373061050	Govt. County of Hawaii	Govt. County	4
373061051	other	other	0.2304
373061052	other	other	0.3965
373061053	other	other	6.514
373061054	other	other	0.928
373061055	other	other	0.2403
373061056	other	other	0.2433
373061057	other	other	0.2403
373061058	other	other	0.2304
373061059	other	other	0.2464
373061060	other	other	0.2324
373061061	other	other	0.2324
373061062	other	other	0.2464
373061063	other	other	0.2624
373061064	other	other	0.2624
373061065	other	other	0.2431
373061066	other	other	0.2337
373061067	other	other	0.2451
373061068	other	other	0.2806
373061069	other	other	0.315
373061070	other	other	0.3091

TMK	MajorOwner	BigstOwner	TaxAcres
373061071	other	other	0.2357
373061072	other	other	0.3383
373061073	other	other	0.3641
373061074	other	other	0.2314
373061075	other	other	0.2314
373061076	other	other	0.2326
373062001	other	other	0.4024
373062002	other	other	0.3451
373062003	other	other	0.3482
373062004	other	other	0.441
373062005	other	other	0.419
373062006	other	other	0.4201
373062007	other	other	0.3914
373062008	other	other	0.3641
373062009	other	other	0.361
373062010	other	other	0.358
373062011	other	other	0.4653
373062012	other	other	0.5138
373062013	other	other	0.4898
373062014	other	other	0.4768
373062015	other	other	0.5458
373062016	other	other	0.4789
373062017	other	other	0.426
373062018	other	other	0.356
373062019	other	other	0.3553
373062020	other	other	0.3784
373062021	other	other	0.5659
373062022	other	other	0.3452
373062023	other	other	0.5889
373062024	other	other	0.4324
373062025	other	other	0.3491
373062026	other	other	0.5703
373062027	other	other	0.4444
373062028	other	other	0.3444
373062029	other	other	0.3444
373062030	other	other	0.4319
373062031	other	other	0.4656
373062032	other	other	0.241
373062033	other	other	0.241
373062034	other	other	0.241
373062035	other	other	0.241
373062036	other	other	0.4462
373062037	other	other	0.2583
373062038	other	other	0.2583
373062039	other	other	0.2583
373062040	other	other	0.2583
373062041	other	other	0.3075
373062042	other	other	0.3119

TMK	MajorOwner	BigstOwner	TaxAcres
373062043	other	other	0.3119
373062044	other	other	0.3119
373062045	other	other	0.4785
373062046	other	other	0.4247
373062047	other	other	0.4247
373062048	other	other	0.4247
373062049	other	other	0.4252
373062050	other	other	0.4251
373062051	other	other	3.2071
373062052	other	other	0.6896
373062053	other	other	21.931
373063001	other	other	20.673
373063002	other	other	5.73
373063003	other	other	5.566
373063004	other	other	1.375
373063005	other	other	8.619
373063006	other	other	68.8784
373063007	other	other	25.172
373063008	other	other	0.685
373063009	other	other	0.055
373063010	other	other	0.47
373063011	other	other	3.492
373063012	other	other	38.139
373063013	other	other	63.24
373063014	other	other	10.365
373063777	other	other	0
373064001	other	other	1.172
373064002	other	other	0.993
373064003	other	other	1.105
373064004	other	other	1.211
373064005	other	other	1.076
373064006	other	other	1.23
373064007	other	other	0.861
373064008	other	other	0.931
373064009	other	other	1.255
373064010	other	other	1.084
373064011	other	other	0.981
373064012	other	other	1.02
373064013	other	other	1
373064014	other	other	1.008
373064015	other	other	0.987
373064016	other	other	1.014
373064017	other	other	1.002
373064018	other	other	1.007
373064019	other	other	1.016
373064020	other	other	1.001
373064021	other	other	3.05
373064022	other	other	1.648

TMK	MajorOwner	BigstOwner	TaxAcres
373064023	other	other	0.753
373065001	other	other	1.001
373065002	other	other	0.992
373065003	other	other	1.065
373065004	other	other	1.027
373065005	other	other	1.078
373065006	other	other	1.2
373065007	other	other	1.1731
373065008	other	other	1.012
373065009	other	other	1.004
373065010	other	other	1.005
373065011	other	other	1.127
373065012	other	other	1.001
373065013	other	other	1.006
373065014	other	other	1.037
373065015	other	other	1.324
373065016	other	other	1.594
373065017	other	other	1.52
373065018	other	other	1.322
373065019	other	other	1.04
373065020	other	other	0.857
373065021	other	other	0.905
373065022	other	other	0.812
373065023	other	other	0.795
373065024	other	other	0.667
373065025	other	other	0.89
373065026	other	other	0.761
373065027	other	other	0.505
373065028	other	other	0.488
373065029	other	other	0.543
373065030	other	other	0.728
373065031	other	other	0.676
373065032	other	other	0.53
373065033	other	other	0.585
373065034	other	other	1.087
373065035	other	other	0.91
373065036	other	other	1.179
373065037	other	other	1.083
373065038	other	other	1.105
373065039	other	other	1.051
373065040	other	other	1
373065041	other	other	0.881
373065042	other	other	0.619
373065043	other	other	0.509
373065044	other	other	0.532
373065045	other	other	0.455
373065046	other	other	0.439
373065047	other	other	0.499

TMK	MajorOwner	BigstOwner	TaxAcres
373065048	other	other	0.481
373065049	other	other	0.495
373065050	other	other	0.496
373065051	other	other	0.484
373065052	other	other	0.521
373065053	other	other	0.539
373065054	other	other	0.496
373065055	other	other	3.134
373065059	other	other	0.792
373065060	other	other	1.071
373065061	other	other	0.957
373065062	other	other	0.916
373065063	other	other	1.042
373065064	other	other	5.995
373065065	other	other	0.135
373065066	other	other	1.485
373065067	other	other	0.751
373066001	other	other	11.876
373066002	other	other	9.482
373066003	other	other	5.356
373066004	other	other	7.211
373067001	other	other	8.693
373067002	other	other	6.052
373067003	other	other	6.89
373067004	other	other	4.092
373068001	other	other	10.984
373068002	other	other	7.844
373068003	other	other	11.357
373068004	other	other	9.024
374001001	Kamehameha Schools	Kamehameha Schools	514
374001002	Govt. State	Govt. State	2976.1
374001003	Govt. State	Govt. State	1608.5
374001004	Govt. State	Govt. State	1312
374001005	Kamehameha Schools	Kamehameha Schools	32.7
374001006	Kamehameha Schools	Kamehameha Schools	1.1
374001007	Govt. State	Govt. State	88.76
374002001	other	other	2.25
374002002	other	other	1.194
374002003	other	other	1.1
374002004	other	other	2.194
374002005	other	other	2.811
374002006	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1188.824
374002007	Govt. State	Govt. State	1232
374002008	Palani Ranch	Palani Ranch	576.404
374002009	Govt. County of Hawaii	Govt. County	0.253
374002010	other	other	2
374002011	other	other	26.107
374002012	Robert F. Greenwell	other	84.108

TMK	MajorOwner	BigstOwner	TaxAcres
374002013	other	other	3.5
374002014	other	other	1
374002015	Govt. County of Hawaii	Govt. County	1.197
374002016	Govt. County of Hawaii	Govt. County	0.429
374002017	Palani Ranch	Palani Ranch	343.924
374002018	Palani Ranch	Palani Ranch	589.255
374002020	other	other	67.008
374002021	Palani Ranch	Palani Ranch	1.24
374002999	other	other	0
374003001	other	other	158.853
374003002	other	other	2.6
374003003	other	other	18.591
374003004	other	other	0.2873
374003005	other	other	13.843
374003006	other	other	1
374003007	other	other	18.725
374003008	other	other	0.478
374003009	other	other	1.668
374003010	other	other	4.177
374003011	other	other	0.5
374003012	other	other	3.5
374003013	other	other	3.503
374003014	other	other	2.929
374003015	other	other	5.16
374003016	other	other	0.1857
374003017	other	other	0.1857
374003018	other	other	0.1924
374003019	other	other	0.1835
374003020	other	other	0.1835
374003021	other	other	0.1834
374003022	other	other	1
374003023	other	other	3
374003024	other	other	1
374003025	other	other	1.91
374003026	other	other	0.133
374003027	other	other	2.09
374003028	other	other	1.068
374003029	other	other	1
374003030	other	other	1.11
374003031	other	other	1.032
374003032	other	other	1.022
374003033	other	other	0.852
374003034	other	other	0.3444
374003035	other	other	1.15
374003036	other	other	1
374003037	other	other	2.364
374003038	other	other	2.364
374003039	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
374003040	other	other	1.151
374003041	other	other	1.217
374003042	other	other	1
374003043	other	other	1
374003044	other	other	3
374003999	other	other	0
374004001	other	other	20.979
374004002	other	other	5
374004003	other	other	6.277
374004004	other	other	7.19
374004014	other	other	4
374004015	other	other	1.003
374004016	other	other	0.2359
374004017	other	other	0.2
374004018	other	other	0.672
374004019	other	other	3.296
374004020	other	other	1.0694
374004021	other	other	12.47
374004022	other	other	0.15
374004023	other	other	0.4
374004024	other	other	0.04
374004025	other	other	8.06
374004026	other	other	0.42
374004027	other	other	5.11
374004028	other	other	6.12
374004029	other	other	3.81
374004030	other	other	4.782
374004031	other	other	2.8
374004032	other	other	6.466
374004033	other	other	4.201
374004034	other	other	0.6
374004035	other	other	3.857
374004036	other	other	5.327
374004037	other	other	4.51
374004038	other	other	21.68
374004039	other	other	5.001
374004040	other	other	1.762
374004041	other	other	2.027
374004043	other	other	2.35
374004044	other	other	1.554
374004047	other	other	0.3055
374004048	other	other	0.2346
374004049	other	other	0.2618
374004050	other	other	0.2618
374004051	other	other	1.113
374004052	other	other	1.113
374004053	other	other	1.113
374004054	other	other	1.113

TMK	MajorOwner	BigstOwner	TaxAcres
374004059	other	other	6.682
374004060	other	other	2.059
374004061	other	other	5.44
374004062	other	other	6.03
374004063	other	other	5.168
374004064	other	other	5.329
374004065	other	other	5.041
374004066	other	other	1.661
374004067	other	other	5.05
374004068	other	other	0.2411
374004069	other	other	0.2338
374004070	other	other	0.2355
374004071	other	other	0.2437
374004072	other	other	0.2414
374004073	other	other	0.0216
374004074	other	other	0.0199
374004075	other	other	0.189
374004076	other	other	5.949
374004077	other	other	1.001
374004078	other	other	1.001
374004079	other	other	1
374004080	other	other	1.001
374004081	other	other	1.0001
374004082	other	other	1.0003
374004083	other	other	1.0045
374004084	other	other	1.1368
374004085	other	other	1.001
374004086	other	other	1.022
374004087	other	other	1.09
374004088	other	other	1.114
374004089	other	other	1.003
374004090	other	other	1.001
374004091	other	other	7.149
374004092	other	other	2.001
374005001	other	other	12.06
374005002	other	other	64.989
374005003	other	other	0.997
374005004	other	other	15
374005006	Govt. County of Hawaii	Govt. County	0.997
374005007	other	other	20.407
374005999	other	other	0
374006001	Govt. State	Govt. State	1.501
374006002	other	other	8.64
374006003	other	other	10.95
374006004	other	other	0.027
374006005	other	other	0.05
374006006	other	other	26.291
374006007	other	other	1.2

TMK	MajorOwner	BigstOwner	TaxAcres
374006008	other	other	3.213
374006009	other	other	2.8433
374006010	other	other	2.3
374006011	other	other	2
374006012	other	other	29.337
374006014	other	other	1.42
374006015	other	other	10.95
374006016	Govt. County of Hawaii	Govt. County	0.382
374006017	other	other	1.018
374006018	other	other	1
374006019	other	other	1.051
374006020	other	other	1.002
374006021	other	other	5.072
374006022	other	other	5.341
374006023	other	other	1.109
374006024	other	other	1.067
374006025	other	other	1
374006026	other	other	1.001
374006027	other	other	1.003
374006028	other	other	1.008
374006029	other	other	1
374006030	other	other	1.05
374006031	other	other	1.005
374006032	other	other	1.034
374006033	other	other	0.326
374006034	other	other	5.143
374006035	other	other	5.316
374006036	other	other	5.085
374006037	other	other	5.087
374006038	other	other	0.534
374006039	other	other	1.08
374006040	other	other	1.128
374006041	other	other	1.108
374006042	other	other	1.108
374006043	other	other	1
374006044	other	other	0.933
374006045	other	other	0.9999
374006046	other	other	1.916
374006047	other	other	2.604
374006048	other	other	0
374006049	other	other	0
374006999	other	other	0
374007001	other	other	1.003
374007002	other	other	0.4507
374007003	other	other	3.5
374007004	other	other	4.648
374007005	other	other	1.71
374007007	other	other	1.166

TMK	MajorOwner	BigstOwner	TaxAcres
374007008	other	other	1.1237
374007009	other	other	1
374007010	other	other	2
374007011	other	other	1.085
374007012	other	other	1.025
374007013	other	other	1.04
374007014	other	other	1.032
374007015	other	other	1.177
374007016	other	other	1
374007017	other	other	1.015
374007018	other	other	1.345
374007019	other	other	1.38
374007020	other	other	1.169
374007021	other	other	1.097
374007022	other	other	1.459
374007023	other	other	1.159
374007024	other	other	1.139
374007025	other	other	1.119
374007026	other	other	1.127
374007027	other	other	1.128
374007028	other	other	1.116
374007029	other	other	1.121
374007030	other	other	1.14
374007031	other	other	1.444
374007032	other	other	1.474
374007033	other	other	1.17
374007034	other	other	1.124
374007035	other	other	1.152
374007036	other	other	1.006
374007037	other	other	1
374007038	other	other	1
374007039	other	other	1.284
374007040	other	other	1.233
374007041	other	other	1.204
374007042	other	other	1.206
374007043	other	other	1.078
374007044	other	other	1.086
374007045	other	other	1.086
374007046	other	other	1.086
374007047	other	other	1.086
374007048	other	other	1.086
374007049	other	other	1.089
374007050	other	other	1.006
374007051	other	other	1
374007052	other	other	1
374007053	other	other	1
374007054	other	other	1
374007055	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
374007056	other	other	1
374007057	other	other	1
374007058	other	other	1
374007059	other	other	1.011
374007060	other	other	1.001
374007061	other	other	1
374007062	other	other	1
374007063	other	other	1
374007064	other	other	1
374007065	other	other	1.089
374007066	other	other	1.098
374007067	other	other	1.383
374007068	other	other	1.002
374007069	other	other	1.004
374007070	other	other	1.151
374007071	other	other	1.649
374007072	other	other	1.196
374007073	other	other	1.112
374007074	other	other	1.002
374007075	other	other	3.174
374007077	Govt. County of Hawaii	Govt. County	0.28
374007078	Govt. County of Hawaii	Govt. County	0.326
374007079	other	other	1.539
374007080	other	other	1.06
374007081	other	other	1
374007082	other	other	1
374007083	other	other	1
374007084	other	other	1
374007085	other	other	1.002
374007086	other	other	1
374007087	other	other	1
374007088	other	other	1
374007089	other	other	1
374007090	other	other	1.054
374007091	other	other	1.088
374007092	Govt. County of Hawaii	Govt. County	0.328
374007093	other	other	1
374007094	other	other	1.08
374007095	other	other	1.015
374007096	other	other	1.022
374007097	other	other	1.002
374007098	other	other	1
374007100	other	other	1
374007101	other	other	1.6
374007102	other	other	1.044
374007103	other	other	1.067
374007104	other	other	1.086
374007105	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
374007106	other	other	1
374007107	other	other	1
374007108	other	other	0.721
374007109	Lanikai	Lanikai	2.1
374008001	Queen Liliuokalani Trust	Queen Liliuokalani Trust	639.74
374008002	Queen Liliuokalani Trust	Queen Liliuokalani Trust	865.799
374008003	Govt. State	Govt. State	117.987
374008005	Lanikai	Lanikai	319.254
374008010	Govt. Federal	Govt. Federal	234.731
374008011	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.17
374008013	other	other	170.886
374008020	other	other	2.823
374008021	Govt. State	Govt. State	0.919
374008025	Govt. Federal	Govt. Federal	59.2
374008027	Govt. County of Hawaii	Govt. County	2.857
374008028	Govt. County of Hawaii	Govt. County	0.3731
374008030	other	other	9.901
374008033	other	other	3.269
374008040	Govt. State	Govt. State	0.3054
374008041	Govt. State	Govt. State	7.25
374008042	Govt. State	Govt. State	4.0831
374008046	Govt. State	Govt. State	0.0941
374008047	other	other	265.12
374008050	Govt. State	Govt. State	0.0138
374008054	other	other	3.182
374008055	other	other	3.451
374008057	Lanikai	Lanikai	48.927
374008058	Govt. State	Govt. State	52.959
374008060	Palani Ranch	Palani Ranch	89.947
374008063	Queen Liliuokalani Trust	Queen Liliuokalani Trust	11.947
374008064	other	other	14.785
374008066	Hawaii Electric	other	1.598
374008071	Govt. State	Govt. State	218.45
374008072	Govt. State DHHL	Govt. State DHHL	200
374008073	Govt. State	Govt. State	40.458
374008074	other	other	13.412
374008075	Govt. State	Govt. State	0.4591
374008076	other	other	95.387
374008077	other	other	37.703
374008078	other	other	5.6
374008079	other	other	4.802
374008080	Queen Liliuokalani Trust	Queen Liliuokalani Trust	23.339
374008081	Lanikai	Lanikai	66.25
374008082	Lanikai	Lanikai	8.904
374008083	Lanikai	Lanikai	0.028
374008999	other	other	0
374009001	other	other	1.038
374009002	other	other	0.7236

TMK	MajorOwner	BigstOwner	TaxAcres
374009003	other	other	0.3371
374009004	Govt. County of Hawaii	Govt. County	0.3107
374009005	other	other	0.299
374009006	other	other	0.7624
374009007	other	other	0.2797
374009009	other	other	0.241
374009010	other	other	0.2754
374009011	other	other	0.2831
374009012	other	other	0.2408
374009013	other	other	0.2474
374009014	other	other	0.2513
374009015	other	other	0.2935
374009016	other	other	0.2607
374009017	other	other	0.2245
374009020	other	other	0.2787
374009021	other	other	0.2064
374009022	other	other	0.2286
374009025	other	other	0.1981
374009026	other	other	1.937
374009029	other	other	0.2291
374009030	other	other	0.2523
374009033	other	other	0.2365
374009034	other	other	0.3106
374009036	other	other	0.2228
374009037	other	other	0.2341
374009038	other	other	0.2546
374009039	other	other	0.194
374009040	other	other	0.2086
374009041	other	other	0.2401
374009042	other	other	0.2552
374009043	other	other	0.3258
374009044	other	other	0.2261
374009045	other	other	0.2745
374009046	other	other	0.2612
374009047	other	other	0.2126
374009048	other	other	0.3457
374009049	other	other	0.2114
374009050	other	other	0.2762
374009051	other	other	0.231
374009052	other	other	0.2616
374009053	other	other	0.5567
374009054	other	other	0.1722
374009056	other	other	0.3043
374009057	other	other	0.198
374009058	other	other	0.2567
374009059	other	other	0.2215
374009060	other	other	0.2207
374009061	other	other	0.1851

TMK	MajorOwner	BigstOwner	TaxAcres
374009062	other	other	0.2016
374009063	other	other	2.977
374009064	other	other	0.1911
374009065	other	other	0.1911
374009066	other	other	0.1923
374009067	other	other	0.1911
374009068	Govt. County of Hawaii	Govt. County	0.0482
374009071	other	other	0.3041
374009072	other	other	9.138
374009073	other	other	0.1784
374009078	other	other	0.2297
374009079	other	other	0.2296
374009080	other	other	0.2427
374009081	other	other	0.3711
374009082	other	other	0.3822
374009083	other	other	0.2427
374009084	other	other	0.2296
374009085	other	other	0.2297
374009086	other	other	0.2297
374009087	other	other	0.2296
374009088	other	other	0.2427
374009089	other	other	0.3856
374009090	other	other	0.4503
374009091	other	other	0.2776
374009092	other	other	0.2728
374009093	other	other	0.2295
374009094	Govt. County of Hawaii	Govt. County	0.659
374009095	other	other	0.2422
374009096	other	other	0.9502
374009097	other	other	0.1037
374009098	other	other	0.2301
374009099	other	other	0.2296
374009100	other	other	0.2413
374009101	other	other	0.1343
374009102	other	other	0.1867
374009103	other	other	0.1752
374009104	other	other	0.1723
374009105	other	other	0.19
374009106	other	other	0.0889
374009107	other	other	0.175
374009108	other	other	0.58
374009109	other	other	1
374009110	other	other	1
374009111	other	other	0.2296
374009112	other	other	0.341
374009999	other	other	0
374010001	Queen Liliuokalani Trust	Queen Liliuokalani Trust	2.211
374010002	Queen Liliuokalani Trust	Queen Liliuokalani Trust	2.046

TMK	MajorOwner	BigstOwner	TaxAcres
374010003	Queen Liliuokalani Trust	Queen Liliuokalani Trust	2.2424
374010004	Queen Liliuokalani Trust	Queen Liliuokalani Trust	2.637
374010005	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.55
374010006	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.463
374010007	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.199
374010008	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010009	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010010	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.1
374010011	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.097
374010012	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.012
374010013	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.17
374010014	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.7
374010015	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.823
374010016	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.777
374010017	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.819
374010018	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.692
374010020	Govt. County of Hawaii	Govt. County	1.0247
374010021	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.001
374010022	Hawaii Electric	other	6.086
374010023	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.014
374010024	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.017
374010025	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010026	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010033	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010034	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.101
374010035	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374010036	other	other	4.2516
374010037	other	other	0.2405
374010038	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.759
374010039	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.4039
374010040	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.203
374010041	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.222
374010042	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.19
374010043	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.355
374010044	Govt. County of Hawaii	Govt. County	1.0001
374010999	other	other	0
374011001	other	other	0.0842
374011002	other	other	0.0836
374011003	other	other	0.0803
374011004	other	other	0.0803
374011005	other	other	0.0803
374011006	other	other	0.0805
374011007	other	other	0.0805
374011008	other	other	0.0805
374011009	other	other	0.0809
374011010	other	other	0.0803
374011011	other	other	0.0803
374011012	other	other	0.0803

TMK	MajorOwner	BigstOwner	TaxAcres
374011013	other	other	0.0831
374011014	other	other	0.0843
374011015	other	other	0.0843
374011016	other	other	0.0962
374011017	other	other	0.0962
374011018	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.0843
374011019	other	other	0.0843
374011020	other	other	0.0843
374011021	other	other	0.0843
374011022	other	other	0.0938
374011023	other	other	0.0885
374011024	other	other	0.0921
374011025	other	other	0.0852
374011026	other	other	0.1082
374011027	other	other	0.0929
374011028	other	other	0.0867
374011029	other	other	0.0803
374011030	other	other	0.0803
374011031	other	other	0.0803
374011032	other	other	0.0804
374011033	other	other	0.0827
374011034	other	other	0.0803
374011035	other	other	0.0803
374011036	other	other	0.0803
374011037	other	other	0.0803
374011038	other	other	4.692
374011040	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.1393
374011041	other	other	0.024
374011999	other	other	0
374012001	other	other	0.0803
374012002	other	other	0.0803
374012003	other	other	0.0803
374012004	other	other	0.0803
374012005	other	other	0.0821
374012006	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.0821
374012007	other	other	0.0821
374012008	other	other	0.0803
374012009	other	other	0.0816
374012010	other	other	0.0868
374012011	other	other	0.0868
374012012	other	other	0.0857
374012013	other	other	0.0857
374012014	other	other	0.0862
374012015	other	other	0.0803
374012016	other	other	0.0809
374012017	other	other	0.0833
374012018	other	other	0.0927
374012019	other	other	0.0952

TMK	MajorOwner	BigstOwner	TaxAcres
374012020	other	other	0.0816
374012021	other	other	0.0853
374012022	other	other	0.1004
374012023	other	other	0.0966
374012024	other	other	1.522
374012025	other	other	1.305
374012026	other	other	2.282
374012999	other	other	0
374013001	other	other	0.1159
374013002	other	other	0.1159
374013003	other	other	0.1256
374013004	other	other	0.1302
374013005	other	other	0.134
374013006	other	other	0.1161
374013007	other	other	0.1159
374013008	other	other	0.1159
374013009	other	other	0.1189
374013010	other	other	0.1367
374013011	other	other	0.1148
374013012	other	other	0.1515
374013013	other	other	0.2336
374013014	other	other	0.1333
374013015	other	other	0.1171
374013016	other	other	0.1251
374013017	other	other	0.1176
374013018	other	other	0.1159
374013019	other	other	0.1159
374013020	other	other	0.1148
374013021	other	other	0.1307
374013022	other	other	0.1312
374013023	other	other	0.1255
374013024	other	other	0.1251
374013025	other	other	0.1245
374013026	other	other	0.1283
374013027	other	other	0.1159
374013028	other	other	0.1159
374013029	other	other	0.1166
374013030	other	other	0.1159
374013031	other	other	0.1159
374013032	other	other	0.1159
374013033	other	other	0.1152
374013034	other	other	0.1474
374013035	other	other	0.1572
374013036	other	other	0.1416
374013037	other	other	0.134
374013038	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.1445
374013039	other	other	0.1373
374013040	other	other	0.1333

TMK	MajorOwner	BigstOwner	TaxAcres
374013041	other	other	0.1149
374013042	other	other	0.1227
374013043	other	other	0.1208
374013044	other	other	0.1159
374013045	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.1159
374013046	other	other	0.1159
374013047	other	other	0.1159
374013048	other	other	0.1159
374013049	other	other	0.143
374013050	other	other	0.1439
374013051	other	other	0.1439
374013052	other	other	0.1439
374013053	other	other	0.1524
374013054	other	other	0.1425
374013055	other	other	0.1159
374013056	other	other	0.1159
374013057	other	other	0.1159
374013058	other	other	0.1159
374013059	other	other	0.1248
374013060	other	other	0.1216
374013061	other	other	0.1149
374013062	other	other	0.1171
374013063	other	other	0.1171
374013064	other	other	0.1287
374013065	other	other	0.1311
374013066	other	other	0.1397
374013067	other	other	0.1385
374013068	other	other	0.1149
374013069	other	other	0.128
374013070	other	other	0.1464
374013071	other	other	0.1385
374013072	other	other	0.127
374013073	other	other	0.1331
374013074	other	other	0.1302
374013075	other	other	0.1149
374013076	other	other	0.115
374013077	other	other	0.1367
374013078	other	other	0.1322
374013079	other	other	0.1159
374013080	other	other	0.1178
374013081	other	other	0.1258
374013082	other	other	0.1169
374013083	other	other	0.1282
374013084	other	other	0.1225
374013085	other	other	0.1232
374013086	other	other	0.1195
374013087	other	other	0.1241
374013088	other	other	0.115

TMK	MajorOwner	BigstOwner	TaxAcres
374013089	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.1235
374013090	other	other	0.1707
374013091	other	other	0.1602
374013092	other	other	0.1455
374013093	other	other	0.1223
374013094	other	other	0.1242
374013095	other	other	0.1173
374013096	other	other	0.1258
374013097	other	other	0.1243
374013098	other	other	0.1198
374013099	other	other	0.1169
374013100	other	other	0.1202
374013101	other	other	0.1314
374013102	other	other	0.121
374013103	other	other	0.1165
374013104	other	other	0.1199
374013105	other	other	0.1261
374013106	other	other	0.1318
374013107	other	other	0.1266
374013108	other	other	0.1292
374013109	other	other	0.1515
374013110	other	other	0.162
374013111	other	other	0.1346
374013112	other	other	0.168
374013113	other	other	0.1165
374013114	other	other	0.1372
374013115	other	other	0.1292
374013116	other	other	0.1273
374013117	other	other	0.1164
374013118	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.1235
374013119	other	other	0.1225
374013120	other	other	0.1267
374013121	other	other	0.1275
374013122	other	other	0.127
374013123	other	other	5.917
374013999	other	other	0
374014001	other	other	0.1743
374014002	other	other	0.1722
374014003	other	other	0.1968
374014004	other	other	0.1722
374014005	other	other	0.1722
374014006	other	other	0.1722
374014007	other	other	0.1722
374014008	other	other	0.1722
374014009	other	other	0.1989
374014010	other	other	0.1989
374014011	other	other	0.1722
374014012	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
374014013	other	other	0.1722
374014014	other	other	0.1722
374014015	other	other	0.1765
374014016	other	other	0.1867
374014017	other	other	0.1809
374014018	other	other	0.1803
374014019	other	other	0.1728
374014020	other	other	0.1771
374014021	other	other	0.2277
374014022	other	other	0.2562
374014023	other	other	0.2279
374014024	other	other	0.1929
374014025	other	other	0.1753
374014026	other	other	0.1722
374014027	other	other	0.1722
374014028	other	other	0.1722
374014029	other	other	0.1722
374014030	other	other	0.1989
374014031	other	other	0.1989
374014032	other	other	0.1722
374014033	other	other	0.1722
374014034	other	other	0.1722
374014035	other	other	0.1722
374014036	other	other	0.1722
374014037	other	other	0.1968
374014038	other	other	0.1722
374014039	other	other	0.1784
374014040	other	other	0.1743
374014041	other	other	0.1722
374014042	other	other	0.1722
374014043	other	other	0.1867
374014044	other	other	0.1722
374014045	other	other	0.1722
374014046	other	other	0.1923
374014047	other	other	0.1722
374014048	other	other	0.1989
374014049	other	other	0.2066
374014050	other	other	0.1793
374014051	other	other	0.1805
374014052	other	other	0.2177
374014053	other	other	0.2567
374014054	other	other	0.2047
374014055	other	other	0.1894
374014056	other	other	0.1722
374014057	other	other	0.1722
374014058	other	other	0.1784
374014059	other	other	0.1758
374014060	other	other	0.188

TMK	MajorOwner	BigstOwner	TaxAcres
374014061	other	other	0.2152
374014062	other	other	0.2138
374014063	other	other	0.1793
374014064	other	other	0.1819
374014065	other	other	0.1767
374014066	other	other	0.1738
374014067	other	other	0.1723
374014068	other	other	0.178
374014069	other	other	0.178
374014070	other	other	0.1766
374014071	other	other	0.1836
374014072	other	other	0.1969
374014073	other	other	0.2138
374014074	other	other	0.192
374014075	other	other	0.1866
374014076	other	other	0.2244
374014077	other	other	0.2333
374014078	other	other	0.2089
374014079	other	other	0.1732
374014080	other	other	0.2048
374014081	other	other	0.1832
374014082	other	other	0.1742
374014083	other	other	0.173
374014084	other	other	0.173
374014085	other	other	0.1729
374014086	other	other	0.1729
374014087	other	other	0.1729
374014088	other	other	0.1733
374014089	other	other	0.1932
374014090	other	other	0.2385
374014091	other	other	0.1725
374014092	other	other	0.2211
374014093	other	other	0.1762
374014094	other	other	0.1728
374014095	other	other	0.1744
374014096	other	other	0.1744
374014097	other	other	0.2206
374014098	other	other	0.2185
374014099	other	other	0.1828
374014102	other	other	0.175
374014103	other	other	0.1759
374014104	other	other	1.483
374014106	other	other	0.883
374014107	other	other	0.3439
374014108	other	other	0.8343
374014109	other	other	0.2605
374014110	other	other	0.2713
374014111	other	other	0.2697

TMK	MajorOwner	BigstOwner	TaxAcres
374014112	other	other	0.1949
374014113	other	other	0.2642
374014114	other	other	0.2755
374014115	other	other	0.117
374014116	other	other	0.4432
374014117	other	other	0.2356
374014118	other	other	0.9792
374014119	other	other	0.25
374014120	other	other	0.2532
374014121	other	other	0.2643
374014999	other	other	0
374015001	Queen Liliuokalani Trust	Queen Liliuokalani Trust	7.687
374015003	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015004	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015005	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015006	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.008
374015007	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.002
374015008	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.016
374015009	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.011
374015010	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015011	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015012	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374015013	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.403
374015014	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.982
374015015	Queen Liliuokalani Trust	Queen Liliuokalani Trust	5.069
374015016	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.479
374015017	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.733
374015018	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.427
374015020	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.667
374015021	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.636
374015022	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.6
374015023	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.001
374015024	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.001
374015999	other	other	0
374016001	other	other	0.18
374016002	other	other	0.1728
374016003	other	other	0.1858
374016004	other	other	0.1872
374016005	other	other	0.1722
374016006	other	other	0.1722
374016007	other	other	0.1722
374016008	other	other	0.1722
374016009	other	other	0.1722
374016010	other	other	0.1783
374016011	other	other	0.2383
374016012	other	other	0.2692
374016013	other	other	0.1919
374016014	other	other	0.1921

TMK	MajorOwner	BigstOwner	TaxAcres
374016015	other	other	0.2048
374016016	other	other	0.1726
374016017	other	other	0.1722
374016018	other	other	0.1722
374016019	other	other	0.1722
374016020	other	other	0.1722
374016021	other	other	0.1722
374016022	other	other	0.1722
374016023	other	other	0.1722
374016024	other	other	0.1722
374016025	other	other	0.1739
374016026	other	other	0.1734
374016027	other	other	0.1899
374016028	other	other	0.1834
374016029	other	other	0.1788
374016030	other	other	0.1885
374016031	other	other	0.1746
374016032	other	other	0.2368
374016033	other	other	0.2011
374016034	other	other	0.1827
374016035	other	other	0.1722
374016036	other	other	0.1722
374016037	other	other	0.1722
374016038	other	other	0.1722
374016039	other	other	0.1722
374016040	other	other	0.1722
374016041	other	other	0.1722
374016042	other	other	0.1722
374016043	other	other	0.1725
374016044	other	other	0.1827
374016045	other	other	0.269
374016046	other	other	0.1843
374016047	other	other	0.1784
374016048	other	other	0.1815
374016049	other	other	0.1936
374016050	other	other	0.1748
374016051	other	other	0.1722
374016052	other	other	0.1722
374016053	other	other	0.1722
374016054	other	other	0.1722
374016055	other	other	0.1722
374016056	other	other	0.1722
374016057	other	other	0.1748
374016058	other	other	0.2447
374016059	other	other	0.2414
374016060	other	other	0.2025
374016061	other	other	0.1922
374016062	other	other	0.1922

TMK	MajorOwner	BigstOwner	TaxAcres
374016063	other	other	0.1745
374016064	other	other	0.1978
374016065	other	other	0.1792
374016066	other	other	0.175
374016067	other	other	0.1938
374016068	other	other	0.19
374016069	other	other	0.1914
374016070	other	other	0.174
374016071	other	other	0.1736
374016999	other	other	0
374017001	other	other	0.291
374017002	other	other	0.2926
374017003	other	other	0.2926
374017004	other	other	0.2926
374017005	other	other	0.2926
374017006	other	other	0.2296
374017007	other	other	0.2296
374017008	other	other	0.2298
374017009	other	other	0.2298
374017010	other	other	0.23
374017011	other	other	0.2309
374017012	other	other	0.2309
374017013	other	other	0.2309
374017014	other	other	0.2296
374017015	other	other	0.2296
374017016	other	other	0.2296
374017017	other	other	0.2296
374017018	other	other	0.2296
374017019	other	other	0.2296
374017020	other	other	0.2296
374017021	other	other	0.2296
374017022	other	other	0.2296
374017023	other	other	0.2296
374017024	other	other	0.2296
374017025	other	other	0.2296
374017026	other	other	0.2296
374017027	other	other	0.2296
374017028	other	other	0.2298
374017029	Govt. State HHA	Govt. State	5.501
374017030	Govt. State HFDC	Govt. State	4.725
374017031	other	other	0.2297
374017032	other	other	0.2296
374017033	other	other	0.2296
374017034	other	other	0.2296
374017035	other	other	0.2332
374017036	other	other	0.2431
374017037	other	other	0.2431
374017038	other	other	0.2296

TMK	MajorOwner	BigstOwner	TaxAcres
374017039	other	other	0.2296
374017040	other	other	0.245
374017041	other	other	0.2463
374017042	other	other	0.2463
374017043	other	other	0.2463
374017044	other	other	0.2463
374017045	other	other	0.2463
374017046	other	other	0.245
374017047	other	other	0.2296
374017048	other	other	0.2296
374017049	other	other	0.2296
374017050	other	other	0.2296
374017051	other	other	0.2409
374017052	other	other	0.2317
374017053	other	other	0.2743
374017054	other	other	0.2926
374017055	other	other	0.1315
374017057	Govt. State HHA	Govt. State	5.489
374017058	Govt. State HHA	Govt. State	3.2604
374017060	Govt. State HFDC	Govt. State	10.283
374017999	other	other	0
374018001	other	other	0.1749
374018002	other	other	0.1722
374018003	other	other	0.1843
374018004	other	other	0.1734
374018005	other	other	0.2006
374018006	other	other	0.2237
374018007	other	other	0.1993
374018008	other	other	0.1791
374018009	other	other	0.1812
374018010	other	other	0.1735
374018011	other	other	0.1735
374018012	other	other	0.1735
374018013	other	other	0.1741
374018014	other	other	0.1826
374018015	other	other	0.2122
374018016	other	other	0.189
374018017	other	other	0.1788
374018018	other	other	0.1736
374018019	other	other	0.1722
374018020	other	other	0.1722
374018021	other	other	0.1722
374018022	other	other	0.1722
374018023	other	other	0.1722
374018024	other	other	0.1722
374018025	other	other	0.1722
374018026	other	other	0.1722
374018027	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
374018028	other	other	0.1722
374018029	other	other	0.1722
374018030	other	other	0.1722
374018031	other	other	0.1722
374018032	other	other	0.1722
374018033	other	other	0.1722
374018034	other	other	0.1722
374018035	other	other	0.1743
374018036	other	other	0.1743
374018037	other	other	0.1722
374018038	other	other	0.1722
374018039	other	other	0.1722
374018040	other	other	0.1722
374018041	other	other	0.1722
374018042	other	other	0.1722
374018043	other	other	0.1722
374018044	other	other	0.1722
374018045	other	other	0.1722
374018046	other	other	0.1722
374018047	other	other	0.1722
374018048	other	other	0.1722
374018049	other	other	0.1722
374018050	other	other	0.1722
374018051	other	other	0.1722
374018052	other	other	0.1722
374018053	other	other	0.1722
374018054	other	other	0.1722
374018055	other	other	0.1817
374018056	other	other	0.1792
374018057	other	other	0.1766
374018058	other	other	0.1722
374018059	other	other	0.1722
374018060	other	other	0.1722
374018061	other	other	0.1722
374018062	other	other	0.1722
374018063	Govt. State HFDC	Govt. State	0.1722
374018064	other	other	0.1722
374018065	P. Kawanana	other	0.1722
374018066	other	other	0.1722
374018067	other	other	0.1722
374018068	other	other	0.1722
374018069	other	other	0.1722
374018070	other	other	0.1722
374018071	other	other	0.1722
374018072	other	other	0.1722
374018073	other	other	0.1722
374018074	other	other	0.1722
374018075	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
374018076	other	other	0.1784
374018077	other	other	0.1743
374018078	other	other	0.1722
374018079	other	other	0.1722
374018080	other	other	0.1722
374018081	other	other	0.1722
374018082	other	other	0.1722
374018083	other	other	0.1722
374018084	other	other	0.1722
374018085	other	other	0.1722
374018086	other	other	0.1722
374018087	other	other	0.1722
374018088	other	other	0.1722
374018089	other	other	0.1722
374018090	other	other	0.1722
374018091	other	other	0.1722
374018092	other	other	0.1722
374018093	other	other	0.1722
374018094	other	other	0.1722
374018095	other	other	0.1722
374018096	other	other	0.1722
374018097	other	other	0.1753
374018098	other	other	0.1763
374018099	other	other	0.1731
374018100	other	other	0.1731
374018101	other	other	0.173
374018102	other	other	0.173
374018103	other	other	0.1729
374018104	other	other	0.1729
374018105	other	other	0.1728
374018106	other	other	0.1728
374018107	other	other	0.1727
374018108	other	other	0.1727
374018109	other	other	0.1726
374018110	other	other	0.1726
374018111	other	other	0.1725
374018112	other	other	0.1725
374018113	other	other	0.1725
374018114	other	other	0.1724
374018115	other	other	0.1724
374018116	other	other	0.1723
374018117	other	other	0.1722
374018118	other	other	0.1785
374018999	other	other	0
374019001	other	other	0.3076
374019002	other	other	0.3094
374019003	other	other	0.2354
374019004	other	other	0.2354

TMK	MajorOwner	BigstOwner	TaxAcres
374019005	other	other	0.2354
374019006	other	other	0.2354
374019007	other	other	0.2354
374019008	other	other	0.2343
374019009	other	other	0.2953
374019010	other	other	0.2331
374019011	other	other	0.2305
374019012	other	other	0.2314
374019013	other	other	0.2355
374019014	other	other	0.2747
374019015	other	other	0.2747
374019016	other	other	0.2355
374019017	other	other	0.2314
374019018	other	other	0.2305
374019019	other	other	0.2305
374019020	other	other	0.2314
374019021	other	other	0.2355
374019022	other	other	0.2747
374019023	other	other	0.2747
374019024	other	other	0.2355
374019025	other	other	0.2314
374019026	other	other	0.2305
374019027	other	other	0.2296
374019028	other	other	0.2296
374019029	other	other	0.2296
374019030	other	other	0.2296
374019031	other	other	0.2296
374019032	other	other	0.2296
374019033	other	other	0.2296
374019034	other	other	0.2296
374019035	other	other	0.2296
374019036	other	other	0.2296
374019037	other	other	0.2296
374019038	other	other	0.2296
374019039	other	other	0.2296
374019040	other	other	0.2296
374019042	Govt. State HHA	Govt. State	0.277
374019043	Govt. State HHA	Govt. State	4.072
374019044	Govt. State	Govt. State	29.681
374019999	other	other	0
374020001	Govt. State DHHL	Govt. State DHHL	1.244
374020002	Govt. State DHHL	Govt. State DHHL	10.752
374020003	Govt. State DHHL	Govt. State DHHL	7.579
374020004	Govt. State	Govt. State	35.774
374020005	Govt. State	Govt. State	21.453
374020006	Govt. State	Govt. State	27.067
374020007	Govt. State	Govt. State	190.547
374020009	Queen Liliuokalani Trust	Queen Liliuokalani Trust	11.737

TMK	MajorOwner	BigstOwner	TaxAcres
374020010	Queen Liliuokalani Trust	Queen Liliuokalani Trust	216.235
374020011	Queen Liliuokalani Trust	Queen Liliuokalani Trust	11.347
374020012	Queen Liliuokalani Trust	Queen Liliuokalani Trust	9.271
374020013	Queen Liliuokalani Trust	Queen Liliuokalani Trust	4.806
374020014	Queen Liliuokalani Trust	Queen Liliuokalani Trust	8.61
374020015	Queen Liliuokalani Trust	Queen Liliuokalani Trust	4.128
374020016	Govt. State	Govt. State	30.139
374020017	Govt. State	Govt. State	0.354
374020018	Govt. State	Govt. State	2.145
374020019	Hawaii Electric	other	0.23
374020020	Govt. State	Govt. State	1.87
374020021	Govt. State	Govt. State	10
374020022	Queen Liliuokalani Trust	Queen Liliuokalani Trust	220.9
374020023	Govt. State DHHL	Govt. State DHHL	14.804
374020024	Govt. State	Govt. State	1.256
374020025	Govt. State	Govt. State	7
374020026	Govt. County of Hawaii	Govt. County	0.404
374020027	Govt. County of Hawaii	Govt. County	5.665
374020028	Queen Liliuokalani Trust	Queen Liliuokalani Trust	25.903
374020029	Govt. County of Hawaii	Govt. County	10.789
374020999	other	other	0
374020999	other	other	0
374020999	other	other	0
374021001	Govt. State DHHL	Govt. State DHHL	14.502
374021002	Govt. State DHHL	Govt. State DHHL	2.069
374021003	Govt. State DHHL	Govt. State DHHL	26.238
374021004	Govt. State	Govt. State	48.848
374021005	Govt. State DHHL	Govt. State DHHL	26.564
374021007	Govt. State	Govt. State	2.022
374021008	Govt. State DHHL	Govt. State DHHL	11.6
374021010	Govt. State DHHL	Govt. State DHHL	5
374021011	Govt. State DHHL	Govt. State DHHL	13.388
374021012	Govt. State DHHL	Govt. State DHHL	56.216
374021013	Govt. State	Govt. State	2.782
374021014	Govt. State DHHL	Govt. State DHHL	53.423
374021015	Govt. State DHHL	Govt. State DHHL	46.581
374021016	Govt. State DHHL	Govt. State DHHL	27.834
374021019	Govt. State HHA	Govt. State	8.041
374021020	other	other	200.481
374021021	Govt. State DHHL	Govt. State DHHL	150
374021022	Govt. County of Hawaii	Govt. County	0.5845
374021023	Govt. State DHHL	Govt. State DHHL	26.392
374021024	other	other	0.335
374021025	Govt. County of Hawaii	Govt. County	0.323
374021026	Govt. County of Hawaii	Govt. County	0.36
374021027	Govt. County of Hawaii	Govt. County	0.017
374021028	other	other	1.749
374021029	other	other	2.427

TMK	MajorOwner	BigstOwner	TaxAcres
374021030	other	other	2.821
374021031	other	other	1.715
374021032	other	other	0.08
374021033	other	other	4.17
374021034	other	other	4.172
374021035	other	other	2.269
374021036	other	other	2.269
374021037	other	other	3.969
374021038	other	other	5.728
374021039	other	other	2.904
374021040	other	other	2.904
374021041	other	other	28.834
374021042	other	other	0.198
374021043	other	other	0.022
374021044	other	other	2.8146
374021045	other	other	0.6275
374021046	other	other	0.8751
374021999	other	other	0
374022001	Govt. State DHHL	Govt. State DHHL	0.1372
374022002	Govt. State DHHL	Govt. State DHHL	0.1376
374022003	Govt. State DHHL	Govt. State DHHL	0.1186
374022004	Govt. State DHHL	Govt. State DHHL	0.1191
374022005	Govt. State DHHL	Govt. State DHHL	0.1256
374022006	Govt. State DHHL	Govt. State DHHL	0.1461
374022007	Govt. State DHHL	Govt. State DHHL	0.1449
374022008	Govt. State DHHL	Govt. State DHHL	0.1501
374022009	Govt. State DHHL	Govt. State DHHL	0.2073
374022010	Govt. State DHHL	Govt. State DHHL	0.1829
374022011	Govt. State DHHL	Govt. State DHHL	0.1166
374022012	Govt. State DHHL	Govt. State DHHL	0.1173
374022013	Govt. State DHHL	Govt. State DHHL	0.1737
374022014	Govt. State DHHL	Govt. State DHHL	0.1616
374022015	Govt. State DHHL	Govt. State DHHL	0.1426
374022016	Govt. State DHHL	Govt. State DHHL	0.1387
374022017	Govt. State DHHL	Govt. State DHHL	0.1382
374022018	Govt. State DHHL	Govt. State DHHL	0.1382
374022019	Govt. State DHHL	Govt. State DHHL	0.1379
374022020	Govt. State DHHL	Govt. State DHHL	0.1379
374022021	Govt. State DHHL	Govt. State DHHL	0.1379
374022022	Govt. State DHHL	Govt. State DHHL	0.1379
374022023	Govt. State DHHL	Govt. State DHHL	0.1379
374022024	Govt. State DHHL	Govt. State DHHL	0.1379
374022025	Govt. State DHHL	Govt. State DHHL	0.1391
374022026	Govt. State DHHL	Govt. State DHHL	0.1396
374022027	Govt. State DHHL	Govt. State DHHL	0.1393
374022028	Govt. State DHHL	Govt. State DHHL	0.1391
374022029	Govt. State DHHL	Govt. State DHHL	0.1389
374022030	Govt. State DHHL	Govt. State DHHL	0.1458

TMK	MajorOwner	BigstOwner	TaxAcres
374022031	Govt. State DHHL	Govt. State DHHL	0.2303
374022032	Govt. State DHHL	Govt. State DHHL	0.1626
374022033	Govt. State DHHL	Govt. State DHHL	0.1576
374022034	Govt. State DHHL	Govt. State DHHL	0.2072
374022035	Govt. State DHHL	Govt. State DHHL	0.2197
374022036	Govt. State DHHL	Govt. State DHHL	0.1975
374022037	Govt. State DHHL	Govt. State DHHL	0.1377
374022038	Govt. State DHHL	Govt. State DHHL	0.1377
374022039	Govt. State DHHL	Govt. State DHHL	0.1377
374022040	Govt. State DHHL	Govt. State DHHL	0.1377
374022041	Govt. State DHHL	Govt. State DHHL	0.1377
374022042	Govt. State DHHL	Govt. State DHHL	0.1377
374022043	Govt. State DHHL	Govt. State DHHL	0.1377
374022044	Govt. State DHHL	Govt. State DHHL	0.1377
374022045	Govt. State DHHL	Govt. State DHHL	0.1377
374022046	Govt. State DHHL	Govt. State DHHL	0.1974
374022047	Govt. State DHHL	Govt. State DHHL	0.1905
374022048	Govt. State DHHL	Govt. State DHHL	0.1484
374022049	Govt. State DHHL	Govt. State DHHL	0.1424
374022050	Govt. State DHHL	Govt. State DHHL	0.1424
374022051	Govt. State DHHL	Govt. State DHHL	0.1378
374022052	Govt. State DHHL	Govt. State DHHL	0.1378
374022053	Govt. State DHHL	Govt. State DHHL	0.1378
374022054	Govt. State DHHL	Govt. State DHHL	0.1378
374022055	Govt. State DHHL	Govt. State DHHL	0.1378
374022056	Govt. State DHHL	Govt. State DHHL	0.1812
374022057	Govt. State DHHL	Govt. State DHHL	0.2087
374022058	Govt. State DHHL	Govt. State DHHL	0.1575
374022059	Govt. State DHHL	Govt. State DHHL	0.1975
374022060	Govt. State DHHL	Govt. State DHHL	0.219
374022061	Govt. State DHHL	Govt. State DHHL	0.2448
374022062	Govt. State DHHL	Govt. State DHHL	0.1377
374022063	Govt. State DHHL	Govt. State DHHL	0.1377
374022064	Govt. State DHHL	Govt. State DHHL	0.1377
374022065	Govt. State DHHL	Govt. State DHHL	0.1436
374022066	Govt. State DHHL	Govt. State DHHL	0.144
374022067	Govt. State DHHL	Govt. State DHHL	0.2136
374022068	Govt. State DHHL	Govt. State DHHL	0.1681
374022069	Govt. State DHHL	Govt. State DHHL	0.1639
374022070	Govt. State DHHL	Govt. State DHHL	0.1734
374022071	Govt. State DHHL	Govt. State DHHL	0.1486
374022072	Govt. State DHHL	Govt. State DHHL	0.2108
374022073	Govt. State DHHL	Govt. State DHHL	0.1651
374022074	Govt. State DHHL	Govt. State DHHL	0.1822
374022075	Govt. State DHHL	Govt. State DHHL	0.2149
374022076	Govt. State DHHL	Govt. State DHHL	0.1583
374022077	Govt. State DHHL	Govt. State DHHL	0.308
374022078	Govt. State DHHL	Govt. State DHHL	0.2047

TMK	MajorOwner	BigstOwner	TaxAcres
374022079	Govt. State DHHL	Govt. State DHHL	0.1907
374022080	Govt. State DHHL	Govt. State DHHL	0.1669
374022081	Govt. State DHHL	Govt. State DHHL	0.1761
374022082	Govt. State DHHL	Govt. State DHHL	0.1843
374022083	Govt. State DHHL	Govt. State DHHL	0.2012
374022084	Govt. State DHHL	Govt. State DHHL	0.1726
374022085	Govt. State DHHL	Govt. State DHHL	0.1722
374022086	Govt. State DHHL	Govt. State DHHL	0.2783
374022087	Govt. State DHHL	Govt. State DHHL	0.2287
374022088	Govt. State DHHL	Govt. State DHHL	0.1916
374022089	Govt. State DHHL	Govt. State DHHL	0.2346
374022090	Govt. State DHHL	Govt. State DHHL	0.2206
374022091	Govt. State DHHL	Govt. State DHHL	0.2069
374022092	Govt. State DHHL	Govt. State DHHL	0.204
374022093	Govt. State DHHL	Govt. State DHHL	0.2149
374022094	Govt. State DHHL	Govt. State DHHL	0.2227
374022095	Govt. State DHHL	Govt. State DHHL	0.1899
374022096	Govt. State DHHL	Govt. State DHHL	0.1866
374022097	Govt. State DHHL	Govt. State DHHL	0.1742
374022098	Govt. State DHHL	Govt. State DHHL	0.1606
374022099	Govt. State DHHL	Govt. State DHHL	0.1492
374022100	Govt. State DHHL	Govt. State DHHL	0.1588
374022101	Govt. State DHHL	Govt. State DHHL	0.2585
374022102	Govt. State DHHL	Govt. State DHHL	0.1168
374022103	Govt. State DHHL	Govt. State DHHL	0.3714
374022104	Govt. State DHHL	Govt. State DHHL	0.3961
374022105	Govt. State DHHL	Govt. State DHHL	0.3045
374022106	Govt. State DHHL	Govt. State DHHL	0.4393
374022107	Govt. State DHHL	Govt. State DHHL	5.2332
374023001	Govt. State DHHL	Govt. State DHHL	0.1423
374023002	Govt. State DHHL	Govt. State DHHL	0.1379
374023003	Govt. State DHHL	Govt. State DHHL	0.1456
374023004	Govt. State DHHL	Govt. State DHHL	0.1517
374023005	Govt. State DHHL	Govt. State DHHL	0.1515
374023006	Govt. State DHHL	Govt. State DHHL	0.1515
374023007	Govt. State DHHL	Govt. State DHHL	0.1515
374023008	Govt. State DHHL	Govt. State DHHL	0.2093
374023009	Govt. State DHHL	Govt. State DHHL	0.1969
374023010	Govt. State DHHL	Govt. State DHHL	0.1871
374023011	Govt. State DHHL	Govt. State DHHL	0.1736
374023012	Govt. State DHHL	Govt. State DHHL	0.1722
374023013	Govt. State DHHL	Govt. State DHHL	0.1722
374023014	Govt. State DHHL	Govt. State DHHL	0.1722
374023015	Govt. State DHHL	Govt. State DHHL	0.127
374023016	Govt. State DHHL	Govt. State DHHL	0.1238
374023017	Govt. State DHHL	Govt. State DHHL	0.1204
374023018	Govt. State DHHL	Govt. State DHHL	0.1165
374023019	Govt. State DHHL	Govt. State DHHL	0.1092

TMK	MajorOwner	BigstOwner	TaxAcres
374023020	Govt. State DHHL	Govt. State DHHL	0.1114
374023021	Govt. State DHHL	Govt. State DHHL	0.1163
374023022	Govt. State DHHL	Govt. State DHHL	0.1121
374023023	Govt. State DHHL	Govt. State DHHL	0.1124
374023024	Govt. State DHHL	Govt. State DHHL	0.1209
374023025	Govt. State DHHL	Govt. State DHHL	0.1203
374023026	Govt. State DHHL	Govt. State DHHL	0.1301
374023027	Govt. State DHHL	Govt. State DHHL	0.1551
374023028	Govt. State DHHL	Govt. State DHHL	0.14
374023029	Govt. State DHHL	Govt. State DHHL	0.1385
374023030	Govt. State DHHL	Govt. State DHHL	0.2612
374023031	Govt. State DHHL	Govt. State DHHL	0.1436
374023032	Govt. State DHHL	Govt. State DHHL	0.141
374023033	Govt. State DHHL	Govt. State DHHL	0.2085
374023034	Govt. State DHHL	Govt. State DHHL	0.2713
374023035	Govt. State DHHL	Govt. State DHHL	0.3446
374023036	Govt. State DHHL	Govt. State DHHL	0.1614
374023037	Govt. State DHHL	Govt. State DHHL	0.1858
374023038	Govt. State DHHL	Govt. State DHHL	0.1912
374023039	Govt. State DHHL	Govt. State DHHL	0.1966
374023040	Govt. State DHHL	Govt. State DHHL	0.1882
374023041	Govt. State DHHL	Govt. State DHHL	0.18
374023042	Govt. State DHHL	Govt. State DHHL	0.1949
374023043	Govt. State DHHL	Govt. State DHHL	0.178
374023044	Govt. State DHHL	Govt. State DHHL	0.1459
374023045	Govt. State DHHL	Govt. State DHHL	0.143
374023046	Govt. State DHHL	Govt. State DHHL	0.1394
374023047	Govt. State DHHL	Govt. State DHHL	0.1475
374023048	Govt. State DHHL	Govt. State DHHL	0.1475
374023049	Govt. State DHHL	Govt. State DHHL	0.1475
374023050	Govt. State DHHL	Govt. State DHHL	0.1475
374023051	Govt. State DHHL	Govt. State DHHL	0.1623
374023052	Govt. State DHHL	Govt. State DHHL	0.2168
374023053	Govt. State DHHL	Govt. State DHHL	0.1833
374023054	Govt. State DHHL	Govt. State DHHL	0.1661
374023055	Govt. State DHHL	Govt. State DHHL	0.2304
374023056	Govt. State DHHL	Govt. State DHHL	0.2344
374023057	Govt. State DHHL	Govt. State DHHL	0.141
374023058	Govt. State DHHL	Govt. State DHHL	0.2316
374023059	Govt. State DHHL	Govt. State DHHL	0.1488
374023060	Govt. State DHHL	Govt. State DHHL	0.1488
374023061	Govt. State DHHL	Govt. State DHHL	0.1488
374023062	Govt. State DHHL	Govt. State DHHL	0.1488
374023063	Govt. State DHHL	Govt. State DHHL	0.1488
374023064	Govt. State DHHL	Govt. State DHHL	0.1485
374023065	Govt. State DHHL	Govt. State DHHL	0.1926
374023066	Govt. State DHHL	Govt. State DHHL	0.1612
374023067	Govt. State DHHL	Govt. State DHHL	0.1865

TMK	MajorOwner	BigstOwner	TaxAcres
374023068	Govt. State DHHL	Govt. State DHHL	0.1501
374023069	Govt. State DHHL	Govt. State DHHL	0.1501
374023070	Govt. State DHHL	Govt. State DHHL	0.1501
374023071	Govt. State DHHL	Govt. State DHHL	0.1501
374023072	Govt. State DHHL	Govt. State DHHL	0.1501
374023073	Govt. State DHHL	Govt. State DHHL	0.1501
374023074	Govt. State DHHL	Govt. State DHHL	0.1501
374023075	Govt. State DHHL	Govt. State DHHL	0.1407
374023076	Govt. State DHHL	Govt. State DHHL	0.1444
374023077	Govt. State DHHL	Govt. State DHHL	0.1228
374023078	Govt. State DHHL	Govt. State DHHL	0.1404
374023079	Govt. State DHHL	Govt. State DHHL	0.1296
374023080	Govt. State DHHL	Govt. State DHHL	0.168
374023081	Govt. State DHHL	Govt. State DHHL	0.2014
374023082	Govt. State DHHL	Govt. State DHHL	0.161
374023083	Govt. State DHHL	Govt. State DHHL	0.1449
374023084	Govt. State DHHL	Govt. State DHHL	0.1378
374023085	Govt. State DHHL	Govt. State DHHL	0.1377
374023086	Govt. State DHHL	Govt. State DHHL	0.1377
374023087	Govt. State DHHL	Govt. State DHHL	0.138
374023088	Govt. State DHHL	Govt. State DHHL	0.2214
374023089	Govt. State DHHL	Govt. State DHHL	0.2134
374023090	Govt. State DHHL	Govt. State DHHL	0.1682
374023091	Govt. State DHHL	Govt. State DHHL	0.1966
374023092	Govt. State DHHL	Govt. State DHHL	0.2142
374023093	Govt. State DHHL	Govt. State DHHL	0.1515
374023094	Govt. State DHHL	Govt. State DHHL	0.1833
374023095	Govt. State DHHL	Govt. State DHHL	0.2619
374023096	Govt. State DHHL	Govt. State DHHL	0.1875
374023097	Govt. State DHHL	Govt. State DHHL	0.1926
374023098	Govt. State DHHL	Govt. State DHHL	0.1523
374023099	Govt. State DHHL	Govt. State DHHL	0.1469
374023100	Govt. State DHHL	Govt. State DHHL	0.1492
374023101	Govt. State DHHL	Govt. State DHHL	0.1423
374023102	Govt. State DHHL	Govt. State DHHL	0.1423
374023103	Govt. State DHHL	Govt. State DHHL	0.1423
374023104	Govt. State DHHL	Govt. State DHHL	0.1423
374023105	Govt. State DHHL	Govt. State DHHL	0.1434
374023106	Govt. State DHHL	Govt. State DHHL	0.1907
374023107	Govt. State DHHL	Govt. State DHHL	0.154
374023108	Govt. State DHHL	Govt. State DHHL	0.2421
374023109	Govt. State DHHL	Govt. State DHHL	0.2554
374023110	Govt. State DHHL	Govt. State DHHL	0.1708
374023111	Govt. State DHHL	Govt. State DHHL	0.1735
374023112	Govt. State DHHL	Govt. State DHHL	0.1704
374023113	Govt. State DHHL	Govt. State DHHL	0.1862
374023114	Govt. State DHHL	Govt. State DHHL	0.1712
374023115	Govt. State DHHL	Govt. State DHHL	0.1702

TMK	MajorOwner	BigstOwner	TaxAcres
374023116	Govt. State DHHL	Govt. State DHHL	0.2087
374023117	Govt. State DHHL	Govt. State DHHL	0.1666
374023118	Govt. State DHHL	Govt. State DHHL	0.2216
374023119	Govt. State DHHL	Govt. State DHHL	0.2419
374023120	Govt. State DHHL	Govt. State DHHL	0.2522
374023121	Govt. State DHHL	Govt. State DHHL	0.2316
374023122	Govt. State DHHL	Govt. State DHHL	0.1627
374023123	Govt. State DHHL	Govt. State DHHL	0.1774
374023124	Govt. State DHHL	Govt. State DHHL	0.1758
374023125	Govt. State DHHL	Govt. State DHHL	0.1722
374023126	Govt. State DHHL	Govt. State DHHL	0.7938
374023127	Govt. State DHHL	Govt. State DHHL	0.3008
374023128	Govt. State DHHL	Govt. State DHHL	5.3786
374024001	other	other	1.317
374024002	other	other	4.486
374024003	other	other	1.758
374024004	other	other	1.39
374024005	other	other	1.81
374024006	other	other	5.713
374024007	other	other	3.447
374024008	other	other	2.856
374024009	other	other	2.423
374024010	other	other	1.73
374024011	other	other	9.822
374024012	other	other	29.074
374024013	other	other	2.396
374024014	other	other	4.473
374024015	other	other	1.033
374024016	other	other	0.8402
374024017	other	other	12.283
374024999	other	other	0
374025001	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.316
374025002	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.543
374025003	Queen Liliuokalani Trust	Queen Liliuokalani Trust	2.59
374025005	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.446
374025007	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.414
374025010	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1
374025011	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.146
374025012	Govt. County of Hawaii	Govt. County	3.232
374025013	Queen Liliuokalani Trust	Queen Liliuokalani Trust	10.634
374025014	other	other	11.02
374025015	Queen Liliuokalani Trust	Queen Liliuokalani Trust	14.755
374025016	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.946
374025017	Queen Liliuokalani Trust	Queen Liliuokalani Trust	3.336
374025018	Queen Liliuokalani Trust	Queen Liliuokalani Trust	6.674
374025019	Queen Liliuokalani Trust	Queen Liliuokalani Trust	4.507
374025020	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.746
374025021	Queen Liliuokalani Trust	Queen Liliuokalani Trust	1.189

TMK	MajorOwner	BigstOwner	TaxAcres
374025022	Queen Liliuokalani Trust	Queen Liliuokalani Trust	0.7532
374026001	other	other	1.08
374026002	other	other	1.02
374026003	other	other	1
374026004	other	other	1
374026005	other	other	1.02
374026006	other	other	1
374026007	other	other	1
374026008	other	other	1
374026009	other	other	1.24
374026010	other	other	1.22
374026011	other	other	1.1
374026012	other	other	1.11
374026013	other	other	1
374026014	other	other	1.01
374026015	other	other	1.01
374026016	other	other	1
374026017	other	other	1.02
374026018	other	other	1
374026019	other	other	1
374026020	other	other	1.01
374026021	other	other	1.06
374026022	other	other	1.04
374026023	other	other	1
374026024	other	other	1
374026025	other	other	1
374026026	other	other	1.03
374026027	other	other	1.32
374026028	other	other	1
374026029	other	other	1
374026030	other	other	3.16
374026031	Govt. County of Hawaii	Govt. County	1
374026032	other	other	1.5
374026033	other	other	12.17
374026034	other	other	6.54
374026035	other	other	5.0022
374026036	other	other	5.0021
374027001	Govt. State DHHL	Govt. State DHHL	0.2405
374027002	Govt. State DHHL	Govt. State DHHL	0.1377
374027003	Govt. State DHHL	Govt. State DHHL	0.1433
374027004	Govt. State DHHL	Govt. State DHHL	0.1598
374027005	Govt. State DHHL	Govt. State DHHL	0.2138
374027006	Govt. State DHHL	Govt. State DHHL	0.2294
374027007	Govt. State DHHL	Govt. State DHHL	0.2018
374027008	Govt. State DHHL	Govt. State DHHL	0.195
374027009	Govt. State DHHL	Govt. State DHHL	0.1779
374027010	Govt. State DHHL	Govt. State DHHL	0.1473
374027011	Govt. State DHHL	Govt. State DHHL	0.1412

TMK	MajorOwner	BigstOwner	TaxAcres
374027012	Govt. State DHHL	Govt. State DHHL	0.1978
374027013	Govt. State DHHL	Govt. State DHHL	0.1731
374027014	Govt. State DHHL	Govt. State DHHL	0.138
374027015	Govt. State DHHL	Govt. State DHHL	0.147
374027016	Govt. State DHHL	Govt. State DHHL	0.1425
374027017	Govt. State DHHL	Govt. State DHHL	0.1387
374027018	Govt. State DHHL	Govt. State DHHL	0.1387
374027019	Govt. State DHHL	Govt. State DHHL	0.1387
374027020	Govt. State DHHL	Govt. State DHHL	0.1387
374027021	Govt. State DHHL	Govt. State DHHL	0.1387
374027022	Govt. State DHHL	Govt. State DHHL	0.2096
374027023	Govt. State DHHL	Govt. State DHHL	0.2312
374027024	Govt. State DHHL	Govt. State DHHL	0.1796
374027025	Govt. State DHHL	Govt. State DHHL	0.1544
374027026	Govt. State DHHL	Govt. State DHHL	0.1623
374027027	Govt. State DHHL	Govt. State DHHL	0.1673
374027028	Govt. State DHHL	Govt. State DHHL	0.1392
374027029	Govt. State DHHL	Govt. State DHHL	0.1377
374027030	Govt. State DHHL	Govt. State DHHL	0.1377
374027031	Govt. State DHHL	Govt. State DHHL	0.1388
374027032	Govt. State DHHL	Govt. State DHHL	0.138
374027033	Govt. State DHHL	Govt. State DHHL	0.1389
374027034	Govt. State DHHL	Govt. State DHHL	0.1399
374027035	Govt. State DHHL	Govt. State DHHL	0.1711
374027036	Govt. State DHHL	Govt. State DHHL	0.2642
374027037	Govt. State DHHL	Govt. State DHHL	0.161
374027038	Govt. State DHHL	Govt. State DHHL	0.1527
374027039	Govt. State DHHL	Govt. State DHHL	0.1381
374027040	Govt. State DHHL	Govt. State DHHL	0.1379
374027041	Govt. State DHHL	Govt. State DHHL	0.1381
374027042	Govt. State DHHL	Govt. State DHHL	0.1387
374027043	Govt. State DHHL	Govt. State DHHL	0.1379
374027044	Govt. State DHHL	Govt. State DHHL	0.1377
374027045	Govt. State DHHL	Govt. State DHHL	0.1377
374027046	Govt. State DHHL	Govt. State DHHL	0.1382
374027047	Govt. State DHHL	Govt. State DHHL	0.1423
374027048	Govt. State DHHL	Govt. State DHHL	0.1377
374027049	Govt. State DHHL	Govt. State DHHL	0.1377
374027050	Govt. State DHHL	Govt. State DHHL	0.1377
374027051	Govt. State DHHL	Govt. State DHHL	0.1379
374027052	Govt. State DHHL	Govt. State DHHL	0.1398
374027053	Govt. State DHHL	Govt. State DHHL	0.1594
374027054	Govt. State DHHL	Govt. State DHHL	0.2369
374027055	Govt. State DHHL	Govt. State DHHL	0.1379
374027056	Govt. State DHHL	Govt. State DHHL	0.1398
374027057	Govt. State DHHL	Govt. State DHHL	0.147
374027058	Govt. State DHHL	Govt. State DHHL	0.1378
374027059	Govt. State DHHL	Govt. State DHHL	0.1378

TMK	MajorOwner	BigstOwner	TaxAcres
374027060	Govt. State DHHL	Govt. State DHHL	0.1378
374027061	Govt. State DHHL	Govt. State DHHL	0.1378
374027062	Govt. State DHHL	Govt. State DHHL	0.1378
374027063	Govt. State DHHL	Govt. State DHHL	0.1383
374027064	Govt. State DHHL	Govt. State DHHL	0.1607
374027065	Govt. State DHHL	Govt. State DHHL	0.1595
374027066	Govt. State DHHL	Govt. State DHHL	0.1616
374027067	Govt. State DHHL	Govt. State DHHL	0.1638
374027068	Govt. State DHHL	Govt. State DHHL	0.166
374027069	Govt. State DHHL	Govt. State DHHL	0.1535
374027070	Govt. State DHHL	Govt. State DHHL	0.0413
374027071	Govt. State DHHL	Govt. State DHHL	0.1809
374027072	Govt. State DHHL	Govt. State DHHL	0.1801
374027073	Govt. State DHHL	Govt. State DHHL	0.1793
374027074	Govt. State DHHL	Govt. State DHHL	0.1556
374027075	Govt. State DHHL	Govt. State DHHL	0.2085
374027076	Govt. State DHHL	Govt. State DHHL	0.2442
374027077	Govt. State DHHL	Govt. State DHHL	0.1709
374027078	Govt. State DHHL	Govt. State DHHL	0.143
374027079	Govt. State DHHL	Govt. State DHHL	0.2051
374027080	Govt. State DHHL	Govt. State DHHL	0.1432
374027081	Govt. State DHHL	Govt. State DHHL	0.1381
374027082	Govt. State DHHL	Govt. State DHHL	0.1874
374027083	Govt. State DHHL	Govt. State DHHL	0.1994
374027084	Govt. State DHHL	Govt. State DHHL	0.1568
374027085	Govt. State DHHL	Govt. State DHHL	0.142
374027086	Govt. State DHHL	Govt. State DHHL	0.1378
374027087	Govt. State DHHL	Govt. State DHHL	0.1388
374027088	Govt. State DHHL	Govt. State DHHL	0.1385
374027089	Govt. State DHHL	Govt. State DHHL	0.138
374027090	Govt. State DHHL	Govt. State DHHL	0.138
374027091	Govt. State DHHL	Govt. State DHHL	0.1377
374027092	Govt. State DHHL	Govt. State DHHL	0.1378
374027093	Govt. State DHHL	Govt. State DHHL	0.1379
374027094	Govt. State DHHL	Govt. State DHHL	0.1776
374027095	Govt. State DHHL	Govt. State DHHL	0.1816
374027096	Govt. State DHHL	Govt. State DHHL	0.1578
374027097	Govt. State DHHL	Govt. State DHHL	0.1578
374027098	Govt. State DHHL	Govt. State DHHL	0.1586
374027099	Govt. State DHHL	Govt. State DHHL	0.1463
374027100	Govt. State DHHL	Govt. State DHHL	0.1435
374027101	Govt. State DHHL	Govt. State DHHL	0.1382
374027102	Govt. State DHHL	Govt. State DHHL	0.1697
374027103	Govt. State DHHL	Govt. State DHHL	0.1647
374027104	Govt. State DHHL	Govt. State DHHL	0.2013
374027105	Govt. State DHHL	Govt. State DHHL	0.28
374027106	Govt. State DHHL	Govt. State DHHL	0.2876
374027107	Govt. State DHHL	Govt. State DHHL	0.1697

TMK	MajorOwner	BigstOwner	TaxAcres
374027108	Govt. State DHHL	Govt. State DHHL	0.1675
374027109	Govt. State DHHL	Govt. State DHHL	0.1715
374027110	Govt. State DHHL	Govt. State DHHL	0.1496
374027111	Govt. State DHHL	Govt. State DHHL	0.1399
374027112	Govt. State DHHL	Govt. State DHHL	0.1387
374027113	Govt. State DHHL	Govt. State DHHL	0.216
374027114	Govt. State DHHL	Govt. State DHHL	0.2382
374027115	Govt. State DHHL	Govt. State DHHL	0.1651
374027116	Govt. State DHHL	Govt. State DHHL	0.167
374027117	Govt. State DHHL	Govt. State DHHL	0.1732
374027118	Govt. State DHHL	Govt. State DHHL	0.2282
374027119	Govt. State DHHL	Govt. State DHHL	4.468
375001001	other	other	30
375001002	other	other	0.83
375001003	other	other	0.255
375001004	other	other	5
375001005	other	other	9.695
375001006	other	other	26.898
375001007	other	other	3.141
375001008	other	other	25.161
375001009	other	other	30.506
375001010	other	other	31.048
375001011	other	other	15.069
375001012	other	other	3.67
375001013	other	other	1
375001014	other	other	1.483
375001015	other	other	67.14
375001016	other	other	1.3
375001017	other	other	1.503
375001018	other	other	52
375001019	Govt. State	Govt. State	6.89
375001020	other	other	25.006
375001021	other	other	5
375001022	Govt. State	Govt. State	17.49
375001023	other	other	1.85
375001024	other	other	1.125
375001026	other	other	1.868
375001027	other	other	5.86
375001028	other	other	1.0001
375001029	other	other	0.348
375001030	other	other	9.686
375001031	other	other	1.135
375001032	other	other	1.987
375001033	other	other	0.657
375001034	other	other	1.704
375001035	other	other	5.461
375001036	other	other	0.228
375001037	other	other	2.479

TMK	MajorOwner	BigstOwner	TaxAcres
375001038	other	other	2.686
375001039	other	other	1.815
375001040	other	other	5.284
375001041	other	other	2.892
375001042	other	other	1.892
375001043	other	other	1.204
375001044	other	other	10.15
375001045	other	other	1.127
375001047	other	other	1
375001048	other	other	1.629
375001049	other	other	1.063
375001050	other	other	1
375001051	other	other	1
375001052	other	other	7.296
375001053	other	other	5
375001054	other	other	0.2751
375001055	Govt. State	Govt. State	0.23
375001056	other	other	1.043
375001057	other	other	1.308
375001058	other	other	1.176
375001059	other	other	1.218
375001060	other	other	1
375001061	other	other	0.529
375001062	other	other	1.172
375001063	other	other	1.236
375001064	other	other	1.253
375001065	other	other	1.175
375001066	other	other	5.032
375001067	other	other	5
375001068	other	other	5
375001069	other	other	9.222
375001070	other	other	1.338
375001072	other	other	5.001
375001073	other	other	2.142
375001074	other	other	5.001
375001075	other	other	5.001
375001076	other	other	6.774
375001077	other	other	5.001
375001078	other	other	5.001
375001079	other	other	5.001
375001080	other	other	5
375001081	other	other	5
375001082	other	other	5.212
375001083	other	other	5
375001084	other	other	5
375001085	other	other	1.31
375001086	other	other	2.243
375001087	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
375001088	other	other	1.002
375001089	other	other	2
375001090	other	other	1
375001091	other	other	1.08
375001092	other	other	0.571
375001093	other	other	5.027
375001094	other	other	5.001
375001095	other	other	5.001
375001096	other	other	5.001
375001097	other	other	5.001
375001098	other	other	5.046
375001099	other	other	5.001
375001100	other	other	5.001
375001101	other	other	5.079
375001102	other	other	5.001
375001103	other	other	5.001
375001104	other	other	5.001
375001105	other	other	5.219
375001106	other	other	5.001
375001107	other	other	5.001
375001108	other	other	4.144
375001109	other	other	5
375001110	other	other	5.001
375001111	other	other	5.001
375001112	other	other	5.001
375001113	other	other	5.001
375001114	other	other	1
375001115	other	other	1.922
375001116	other	other	3.46
375001117	Govt. County of Hawaii	Govt. County	0.5
375001118	other	other	5.512
375001119	other	other	0.821
375001120	other	other	1.089
375001121	other	other	1.196
375001122	other	other	1
375001123	other	other	5.012
375001124	other	other	5.008
375001125	other	other	5.024
375001126	other	other	5.044
375001127	other	other	5.031
375001128	other	other	5.023
375001129	other	other	5.001
375001130	other	other	5.001
375001131	other	other	5.001
375001132	other	other	5.001
375001133	other	other	5.001
375001134	other	other	5.2
375001135	other	other	5.001

TMK	MajorOwner	BigstOwner	TaxAcres
375001136	other	other	5.001
375001137	other	other	5.001
375001138	other	other	5.17
375001139	other	other	5.053
375001140	other	other	5.219
375001141	other	other	5.128
375001142	other	other	5.173
375001143	other	other	5.341
375001144	other	other	5.363
375001145	other	other	5.197
375001146	other	other	5.348
375001147	other	other	5.312
375001148	other	other	5.001
375001149	other	other	5.001
375001150	other	other	5.024
375001151	other	other	5.108
375001152	other	other	5.155
375001153	other	other	5.137
375001154	other	other	5.442
375001155	other	other	5.001
375001156	other	other	5.001
375001157	other	other	5.001
375001158	other	other	5.003
375001159	other	other	5.159
375001160	other	other	5.748
375001161	other	other	6.495
375001162	other	other	10.587
375001163	other	other	1.153
375001164	other	other	1.647
375001165	other	other	2.265
375002001	other	other	6.6
375002002	other	other	3.537
375002003	other	other	5.063
375002004	other	other	4
375002005	other	other	2.42
375002006	other	other	2.61
375002007	other	other	5.001
375002008	other	other	2.15
375002009	other	other	1.98
375002010	other	other	1.45
375002011	other	other	4
375002012	other	other	7.96
375002013	other	other	12
375002014	other	other	5.721
375002015	other	other	1.956
375002016	other	other	2.4
375002017	other	other	3.6103
375002018	other	other	5.792

TMK	MajorOwner	BigstOwner	TaxAcres
375002019	other	other	1.231
375002020	other	other	2.364
375002021	other	other	6.79
375002022	other	other	2.09
375002023	other	other	2.2
375002024	other	other	13.415
375002025	other	other	0.15
375002026	other	other	0.36
375002027	other	other	7.961
375002028	other	other	2.744
375002029	other	other	2.892
375002030	other	other	6
375002031	other	other	1.331
375002032	other	other	2.422
375002033	other	other	5.012
375002034	other	other	1.571
375002035	other	other	7.947
375002036	other	other	0.44
375002037	other	other	0.864
375002038	other	other	12.27
375002039	other	other	7.92
375002040	other	other	1.488
375002041	other	other	19.04
375002042	other	other	7.74
375002043	other	other	5.1
375002044	other	other	1.37
375002045	other	other	3.354
375002046	other	other	6.769
375002047	other	other	5.263
375002048	other	other	5.001
375002049	other	other	10.052
375002050	other	other	5.012
375002051	other	other	16.233
375002052	other	other	5.278
375002053	other	other	8.477
375002054	other	other	5.3
375002055	other	other	10.016
375002999	other	other	0
375003001	other	other	107.047
375003004	other	other	37.75
375003005	other	other	69.36
375003006	other	other	13.153
375003007	other	other	8.775
375003008	other	other	68.136
375003009	other	other	31.264
375003010	other	other	127.595
375003011	other	other	0.6
375003012	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
375003013	other	other	1.25
375003014	other	other	1
375003015	other	other	3
375003016	other	other	1.063
375003017	other	other	2
375003019	other	other	5.083
375003020	Govt. County of Hawaii	Govt. County	0.341
375003021	other	other	0.178
375003022	other	other	7.056
375003023	other	other	129.321
375003024	other	other	18.667
375003025	other	other	2.707
375003026	other	other	1.111
375003027	other	other	13.92
375003028	other	other	1.123
375003029	other	other	1.117
375003030	other	other	0.482
375003031	other	other	0.4652
375003032	other	other	0.5145
375003033	other	other	1.347
375003034	other	other	0.966
375003999	other	other	0
375004001	other	other	1.145
375004002	other	other	1.462
375004006	other	other	4.055
375004007	other	other	19.547
375004009	other	other	1.959
375004010	Alexander & Baldwin	Alexander & Baldwin	9.4711
375004011	other	other	2.701
375004012	other	other	0.9281
375004013	other	other	2.6379
375004019	other	other	0.9559
375004020	other	other	2.5722
375004021	other	other	2.742
375004022	other	other	0.443
375004023	other	other	0.28
375004024	other	other	0.8523
375004025	Govt. County of Hawaii	Govt. County	0.0014
375004026	other	other	0.4504
375004027	Lanikai	Lanikai	0.4687
375004028	Lanikai	Lanikai	0.9969
375004029	other	other	0.706
375004031	other	other	2.394
375004033	Govt. County of Hawaii	Govt. County	0.052
375004034	Lanikai	Lanikai	0.3263
375004035	other	other	3.798
375004036	other	other	0.1925
375004038	Lanikai	Lanikai	1.383

TMK	MajorOwner	BigstOwner	TaxAcres
375004039	Lanihau	Lanihau	0.689
375004040	Lanihau	Lanihau	0.986
375004043	other	other	10.6878
375004045	other	other	2.48
375004046	other	other	2.356
375004047	other	other	0.2798
375004048	other	other	0.3427
375004049	other	other	0.4993
375004050	other	other	0.2036
375004051	other	other	0.2922
375004052	other	other	0.164
375004054	other	other	7
375004055	other	other	0.669
375004056	other	other	1.3198
375004058	other	other	1.4885
375004059	other	other	0.5087
375004060	other	other	0.5011
375004061	other	other	0.7957
375004062	other	other	0.8115
375004063	other	other	1.0001
375004064	other	other	0.258
375004999	other	other	0
375005001	other	other	0.2089
375005002	other	other	1.449
375005004	Govt. Federal	Govt. Federal	2.85
375005005	Lanihau	Lanihau	1.335
375005007	Govt. State	Govt. State	102.98
375005011	other	other	0.2134
375005012	other	other	10.333
375005013	other	other	0.1633
375005014	other	other	0.4363
375005015	other	other	0.5357
375005016	other	other	0.3109
375005017	other	other	0.2712
375005018	other	other	0.2505
375005019	other	other	0.2759
375005020	other	other	0.1828
375005021	other	other	0.201
375005022	other	other	0.3861
375005023	other	other	0.44
375005024	other	other	0.3038
375005025	other	other	0.2867
375005026	other	other	0.3264
375005027	other	other	0.3208
375005028	other	other	0.3193
375005029	other	other	0.3404
375005030	other	other	0.3901
375005031	other	other	0.3868

TMK	MajorOwner	BigstOwner	TaxAcres
375005032	other	other	0.4402
375005033	other	other	0.4299
375005034	other	other	0.5371
375005035	other	other	0.4255
375005036	other	other	0.3483
375005037	other	other	0.3167
375005038	other	other	0.3271
375005039	other	other	0.4431
375005040	other	other	0.3896
375005041	other	other	0.2552
375005042	other	other	0.226
375005043	other	other	0.1727
375005044	other	other	0.3785
375005045	other	other	0.5825
375005046	other	other	0.6046
375005047	other	other	0.2747
375005048	other	other	0.1628
375005049	other	other	0.2101
375005050	other	other	0.2432
375005051	other	other	1.4854
375005061	Lanikai	Lanikai	0.4361
375005062	Lanikai	Lanikai	4.366
375005063	other	other	4.994
375005064	other	other	0.056
375005066	Lanikai	Lanikai	0.479
375005067	Govt. County of Hawaii	Govt. County	0.0516
375005068	other	other	0.3444
375005072	Govt. State	Govt. State	0.2571
375005073	Govt. State	Govt. State	0.556
375005074	Govt. State	Govt. State	0.462
375005075	Lanikai	Lanikai	0.0066
375005079	Govt. State	Govt. State	0.1703
375005082	Govt. State	Govt. State	0.0257
375005083	Govt. State	Govt. State	14.082
375005084	other	other	3.839
375005085	Palani Ranch	Palani Ranch	2.33
375005086	Lanikai	Lanikai	0.881
375005087	Lanikai	Lanikai	1.132
375005088	Lanikai	Lanikai	2.322
375005089	Lanikai	Lanikai	3.153
375005090	Lanikai	Lanikai	2.54
375005091	Govt. County of Hawaii	Govt. County	0.056
375005092	other	other	0.1619
375005093	other	other	1.199
375005094	other	other	0.3446
375005095	other	other	0.3817
375005096	other	other	0.3593
375006001	other	other	1.2344

TMK	MajorOwner	BigstOwner	TaxAcres
375006002	Govt. State	Govt. State	0.2711
375006003	Govt. County of Hawaii	Govt. County	0.513
375006004	Govt. County of Hawaii	Govt. County	0.109
375006005	Govt. County of Hawaii	Govt. County	0.1408
375006008	Govt. County of Hawaii	Govt. County	0.275
375006009	other	other	0.298
375006010	other	other	0.2614
375006011	other	other	0.2277
375006012	other	other	0.2166
375006013	other	other	0.7665
375006014	other	other	0.3995
375006015	other	other	0.517
375006016	Lanikai	Lanikai	1.44
375006017	other	other	0.767
375006019	other	other	0.467
375006020	other	other	5.434
375006021	other	other	0.5028
375006022	Govt. State	Govt. State	0.31
375006024	other	other	0.804
375006025	other	other	0.547
375006027	Govt. County of Hawaii	Govt. County	0.033
375006028	other	other	0.1384
375006030	other	other	0.1629
375006031	other	other	0.6227
375006032	other	other	1.616
375006034	Govt. State	Govt. State	0.0412
375006035	Govt. County of Hawaii	other	0.2991
375006036	Govt. State	Govt. State	0.0269
375006037	Govt. State	Govt. State	0.0268
375006038	Govt. County of Hawaii	Govt. County	0.0064
375006039	Govt. State	Govt. State	1.4258
375006040	other	other	0.0561
375006041	Govt. County of Hawaii	Govt. County	0.084
375006042	other	other	0.0017
375006043	Govt. State	Govt. State	0.0472
375006045	Govt. State	Govt. State	0.0055
375006999	other	other	0
375007001	other	other	0.7603
375007002	other	other	0.3165
375007003	other	other	0.7421
375007004	other	other	2.0567
375007005	other	other	0.3506
375007007	other	other	0.3501
375007008	other	other	0.8389
375007009	other	other	1.3163
375007010	other	other	0.2406
375007011	other	other	0.0834
375007012	other	other	0.2405

TMK	MajorOwner	BigstOwner	TaxAcres
375007013	other	other	0.17
375007014	other	other	0.1682
375007016	other	other	0.2128
375007017	other	other	1.5502
375007018	other	other	0.81
375007019	other	other	0.2929
375007020	Govt. State	Govt. State	1.284
375007021	other	other	4.077
375007022	other	other	0.1434
375007023	other	other	0.3506
375007027	other	other	0.1731
375007028	other	other	0.11
375007029	other	other	0.8455
375007033	other	other	1.468
375007044	other	other	0.651
375007045	other	other	0.166
375007048	other	other	0.7009
375007049	other	other	0.3287
375007050	other	other	0.5974
375007058	Govt. State	Govt. State	0.225
375007059	Govt. State	Govt. State	0.0073
375007066	Govt. State	Govt. State	0.0212
375007067	Govt. State	Govt. State	0.0029
375007068	Govt. State	Govt. State	0.0473
375007069	Govt. State	Govt. State	0.2755
375007999	other	other	0
375008001	other	other	1.2047
375008003	other	other	2.3524
375008005	other	other	0.795
375008006	Roman Catholic Church	other	3.2
375008009	other	other	1.2004
375008010	Govt. State	Govt. State	3.2
375008011	other	other	0.3352
375008012	other	other	0.9311
375008013	Govt. State	Govt. State	1.75
375008014	other	other	0.5602
375008015	other	other	0.5
375008016	other	other	1.0547
375008017	other	other	0.2167
375008019	other	other	0.2624
375008020	other	other	0.7545
375008021	other	other	1.41
375008022	other	other	0.187
375008023	other	other	1.4914
375008025	Govt. County of Hawaii	Govt. County	0.097
375008026	Govt. County of Hawaii	Govt. County	0.0851
375008027	Govt. County of Hawaii	Govt. County	0.0606
375008028	other	other	0.3461

TMK	MajorOwner	BigstOwner	TaxAcres
375008029	other	other	0.8404
375008030	other	other	0.711
375008999	other	other	0
375009001	other	other	0.3182
375009002	other	other	0.8724
375009003	other	other	2.8525
375009004	other	other	1.18
375009007	other	other	2.184
375009008	other	other	1.3191
375009009	other	other	0.688
375009010	other	other	1.9092
375009011	other	other	1.0265
375009012	other	other	1.809
375009013	other	other	0.3854
375009014	Kamehameha Schools	Kamehameha Schools	0.282
375009015	Kamehameha Schools	Kamehameha Schools	0.025
375009016	other	other	0.1221
375009017	other	other	0.1027
375009018	other	other	0.344
375009019	other	other	0.18
375009020	Kamehameha Schools	Kamehameha Schools	0.5719
375009021	Kamehameha Schools	Kamehameha Schools	4.312
375009022	other	other	0.1769
375009023	other	other	1.172
375009025	other	other	2.994
375009026	Govt. State	Govt. State	0.5317
375009027	other	other	0.578
375009028	other	other	1.596
375009030	other	other	0.7655
375009031	other	other	1.1463
375009032	Govt. State	Govt. State	0.693
375009034	other	other	0.301
375009035	Govt. County of Hawaii	Govt. County	0.0645
375009037	Govt. County of Hawaii	Govt. County	0.035
375009039	other	other	0.5343
375009040	other	other	2.238
375009042	other	other	0.722
375009043	Govt. State	Govt. State	0.338
375009046	other	other	0.3133
375009047	other	other	0.5963
375009048	other	other	1.7337
375009053	Govt. State	Govt. State	0.618
375009054	other	other	2.952
375009055	other	other	7.872
375009056	other	other	1.286
375009057	Kamehameha Schools	Kamehameha Schools	6.87
375009059	other	other	0.3839
375009063	Kamehameha Schools	Kamehameha Schools	0.7

TMK	MajorOwner	BigstOwner	TaxAcres
375009064	Govt. State	Govt. State	0.0133
375009065	other	other	0.197
375009066	Govt. State	Govt. State	0.038
375009067	other	other	6.2797
375009999	other	other	0
375010001	other	other	9.298
375010003	other	other	40.342
375010004	other	other	5.002
375010005	Kamehameha Schools	Kamehameha Schools	54.709
375010006	Kamehameha Schools	Kamehameha Schools	15.4
375010007	other	other	3.953
375010008	other	other	15.019
375010010	Lanikai	Lanikai	3.086
375010011	other	other	1.4258
375010013	other	other	6.558
375010014	other	other	9.364
375010015	other	other	5.213
375010016	Govt. State	Govt. State	36.31
375010053	Govt. County of Hawaii	Govt. County	3.259
375010054	other	other	7.33
375010055	Govt. State	Govt. State	1.766
375010057	other	other	13.755
375010060	other	other	5.5371
375010061	other	other	9.262
375010064	other	other	1.824
375010066	other	other	14.533
375010067	other	other	1.28
375010068	other	other	1.261
375010069	other	other	1.258
375010070	other	other	1.26
375010071	other	other	1.519
375010072	other	other	1.97
375010073	other	other	2.643
375010074	other	other	2.642
375010075	other	other	1.156
375010076	other	other	5.225
375010077	other	other	5.394
375010078	other	other	11.334
375010079	other	other	5.317
375010080	other	other	5.191
375010081	other	other	5
375010082	other	other	5
375010083	other	other	0.183
375010084	other	other	3.058
375010085	other	other	56.597
375010086	other	other	9.663
375010088	other	other	5.386
375010089	other	other	6.223

TMK	MajorOwner	BigstOwner	TaxAcres
375010090	other	other	3.698
375010999	other	other	0
375011001	other	other	1.608
375011002	other	other	5.027
375011003	other	other	14.09
375011004	other	other	13.164
375011006	Govt. State	Govt. State	2.921
375011007	other	other	1.03
375011013	other	other	5.36
375011014	other	other	24.819
375011015	other	other	0.882
375011016	other	other	3.272
375011017	other	other	38.594
375011018	other	other	7.962
375011019	other	other	1.551
375011021	other	other	0.877
375011022	other	other	6.774
375011023	other	other	4.841
375011024	other	other	28.472
375011025	other	other	6
375011026	other	other	5.007
375011027	other	other	3.883
375011028	other	other	5.043
375011029	other	other	5.044
375011030	other	other	5.081
375011031	other	other	5.011
375011032	other	other	5.08
375011033	other	other	5.02
375011034	other	other	5.097
375011035	other	other	5.019
375011036	other	other	3.308
375011037	other	other	0.7363
375011038	other	other	6.578
375011999	other	other	0
375012001	Roman Catholic Church	other	1.94
375012002	other	other	2.64
375012003	other	other	1.219
375012004	other	other	3.65
375012005	other	other	6.232
375012006	other	other	10.57
375012007	other	other	5
375012008	other	other	10.518
375012009	other	other	1.044
375012010	Kamehameha Schools	Kamehameha Schools	50
375012011	other	other	2.9
375012012	other	other	9.24
375012013	other	other	9.525
375012015	other	other	6.378

TMK	MajorOwner	BigstOwner	TaxAcres
375012016	other	other	1
375012019	other	other	10.841
375012020	other	other	6.909
375012021	other	other	1.45
375012022	other	other	1.482
375012023	other	other	1.64
375012024	Kamehameha Schools	Kamehameha Schools	4.9
375012026	Kamehameha Schools	Kamehameha Schools	7.9
375012027	Kamehameha Schools	Kamehameha Schools	5.7
375012028	Kamehameha Schools	Kamehameha Schools	6.9
375012029	other	other	2.5
375012030	other	other	1.106
375012031	other	other	18.378
375012032	other	other	14.045
375012033	other	other	1.3
375012034	other	other	1.219
375012035	other	other	1.05
375012036	other	other	0.558
375012037	other	other	0.164
375012038	other	other	8.773
375012039	other	other	6.344
375012040	other	other	3.24
375012041	other	other	1
375012042	Govt. County of Hawaii	Govt. County	0.009
375012044	other	other	5.048
375012045	other	other	5.002
375012046	other	other	5.021
375012047	other	other	5.002
375012048	other	other	10.187
375012049	other	other	1.754
375012050	other	other	1
375012051	other	other	1
375012052	other	other	1
375012053	other	other	1
375012054	other	other	1.027
375012055	other	other	1.019
375012056	other	other	1.154
375012057	other	other	1
375012058	other	other	1
375012059	other	other	1
375012060	other	other	1
375012061	other	other	1
375012062	other	other	1
375012063	other	other	1
375012064	other	other	1
375012065	other	other	1
375012066	other	other	4.156
375012067	other	other	1.1

TMK	MajorOwner	BigstOwner	TaxAcres
375012068	other	other	1.1
375012069	other	other	1.1
375012070	other	other	1.1
375012071	other	other	1.1
375012072	other	other	1.1
375012073	other	other	1.317
375012074	other	other	1
375012075	other	other	1
375012076	other	other	1
375012077	other	other	1
375012078	other	other	1.026
375012079	other	other	1.027
375012080	other	other	1
375012081	other	other	1
375012082	other	other	1
375012083	other	other	1
375012084	other	other	1
375012085	other	other	1
375012086	other	other	1
375012087	other	other	1.018
375012088	other	other	1.003
375012089	other	other	1
375012090	other	other	1.002
375012091	other	other	1.001
375012092	other	other	1.014
375012093	other	other	1
375012094	other	other	1
375012095	other	other	1
375012096	other	other	1
375012097	other	other	1
375012098	other	other	1
375012099	other	other	1
375012100	other	other	1
375012101	other	other	1
375012102	other	other	1.008
375012103	other	other	1.007
375012104	other	other	1
375012105	other	other	1
375012106	other	other	1
375012107	other	other	1
375012108	other	other	1
375012109	other	other	1.003
375012110	other	other	1
375012111	other	other	1.005
375012112	other	other	1
375012113	other	other	1.029
375012114	other	other	1.018
375012115	other	other	1.02

TMK	MajorOwner	BigstOwner	TaxAcres
375012116	other	other	1.004
375012117	other	other	1
375012118	other	other	1.001
375012119	other	other	1
375012120	other	other	1.023
375012121	other	other	1.01
375012122	other	other	1
375012999	other	other	0
375013001	Kamehameha Schools	Kamehameha Schools	6.4
375013002	other	other	6.083
375013003	other	other	1.946
375013004	other	other	20
375013005	other	other	2.5
375013006	other	other	8.104
375013007	other	other	107.759
375013008	other	other	3
375013010	other	other	3.93
375013011	other	other	5
375013012	other	other	5.094
375013013	Govt. State	Govt. State	2.85
375013014	Kamehameha Schools	Kamehameha Schools	37
375013015	Kamehameha Schools	Kamehameha Schools	8.793
375013016	other	other	5.273
375013017	other	other	2.193
375013018	other	other	5.135
375013020	Kamehameha Schools	Kamehameha Schools	50.233
375013021	other	other	1.11
375013022	Govt. State	Govt. State	78.36
375013023	other	other	5.001
375013024	other	other	1.236
375013025	other	other	1.236
375013026	other	other	15.006
375013027	Govt. County of Hawaii	Govt. County	0.062
375013028	other	other	5.435
375013029	other	other	5.293
375013030	other	other	5
375013031	other	other	5.088
375013032	other	other	5.13
375013033	other	other	6.7
375013034	other	other	6.7
375013035	other	other	5
375013036	other	other	7.32
375013037	other	other	5.231
375013038	other	other	6.374
375013039	other	other	7.148
375013040	other	other	5.002
375013041	other	other	5
375013042	other	other	6.511

TMK	MajorOwner	BigstOwner	TaxAcres
375013043	other	other	5.001
375013044	other	other	5
375013045	other	other	5
375013046	other	other	5
375013047	other	other	5.079
375013048	other	other	5.387
375013049	other	other	5
375013050	other	other	5.16
375013051	other	other	5
375013052	other	other	5.139
375013053	other	other	5.237
375013054	other	other	5
375013055	other	other	5.001
375013056	other	other	5
375013057	other	other	5.001
375013058	other	other	5
375013059	other	other	5
375013060	other	other	5
375013061	other	other	5
375013062	other	other	5
375013063	other	other	5
375013064	other	other	5
375013065	other	other	5
375013066	other	other	5
375013067	other	other	5
375013068	other	other	5
375013069	other	other	5
375013070	other	other	5.095
375013071	other	other	5
375013072	other	other	5.262
375013073	other	other	5.192
375013074	other	other	15.613
375013075	other	other	54.185
375013999	other	other	0
375014001	other	other	129.127
375014002	other	other	34.096
375014003	other	other	50.6
375014004	other	other	0.842
375014005	other	other	1.54
375014006	other	other	1.358
375014008	Govt. State	Govt. State	363.64
375014009	other	other	1.001
375014010	other	other	0.75
375014011	other	other	0.555
375014012	other	other	0.06
375014016	Govt. State	Govt. State	0.985
375014017	other	other	39.53
375014018	other	other	1.489

TMK	MajorOwner	BigstOwner	TaxAcres
375014019	other	other	1.237
375014020	other	other	4.776
375014021	other	other	5.515
375014022	other	other	14.585
375014023	other	other	35.174
375014024	other	other	2.01
375014025	other	other	0.275
375014026	other	other	1.54
375014027	other	other	1.033
375014028	other	other	0.611
375014029	other	other	3.813
375014030	other	other	5.013
375014999	other	other	0
375015001	other	other	2.664
375015004	other	other	0.386
375015005	other	other	2.5
375015006	other	other	1.5
375015007	other	other	10.5
375015008	Govt. State	Govt. State	0.72
375015009	other	other	1
375015010	other	other	0.75
375015011	other	other	2.813
375015014	Govt. State	Govt. State	0.393
375015015	Govt. County of Hawaii	Govt. County	0.7953
375015016	other	other	1.981
375015017	other	other	1.066
375015999	other	other	0
375015999	other	other	0
375016001	other	other	2.362
375016004	other	other	5.001
375016005	other	other	1.509
375016006	other	other	2.534
375016007	other	other	7.027
375016008	other	other	2.246
375016010	other	other	3.766
375016011	other	other	3.81
375016012	other	other	1.325
375016013	other	other	0.811
375016014	other	other	1.336
375016015	other	other	5.005
375016016	other	other	5.005
375016017	other	other	5.005
375016018	other	other	3.854
375016019	other	other	2.019
375016020	other	other	0.516
375016022	other	other	1.5
375016023	other	other	1.8004
375016024	other	other	3.911

TMK	MajorOwner	BigstOwner	TaxAcres
375016025	other	other	28
375016026	other	other	5.015
375016028	other	other	7.947
375016029	other	other	5.005
375016031	other	other	18.99
375016032	other	other	1.764
375016033	other	other	1.328
375016034	other	other	1.436
375016035	other	other	49
375016036	other	other	5.756
375016037	other	other	5.127
375016038	other	other	2.322
375016040	other	other	4.492
375016041	other	other	2.097
375016043	other	other	1.684
375016044	other	other	1.077
375016045	other	other	5.6
375016047	other	other	1.599
375016048	other	other	1.055
375016049	other	other	13.12
375016050	other	other	9.46
375016051	other	other	0.64
375016052	other	other	1.718
375016053	other	other	6.274
375016054	other	other	5.001
375016055	other	other	2.563
375016056	other	other	0.489
375016058	other	other	1.429
375016059	other	other	5.504
375016060	other	other	5.001
375016061	other	other	6
375016062	other	other	4.901
375016063	other	other	1.764
375016064	other	other	6.049
375016065	other	other	1
375016066	other	other	1
375016067	other	other	1
375016068	other	other	1
375016069	other	other	1
375016070	other	other	0.333
375016071	other	other	1.186
375016072	other	other	1.851
375016073	other	other	1.941
375016074	other	other	1.656
375016075	other	other	3.47
375016076	other	other	1.428
375016077	other	other	1.292
375016078	other	other	1.521

TMK	MajorOwner	BigstOwner	TaxAcres
375016079	other	other	1.331
375016080	other	other	2.16
375016081	other	other	2.008
375016082	other	other	1.191
375016083	other	other	1.124
375016084	other	other	1.752
375016085	other	other	3.006
375016086	other	other	1.451
375016087	other	other	1.445
375016088	other	other	5.004
375016089	other	other	4.667
375016090	other	other	5.004
375016091	other	other	5.006
375016092	other	other	5.002
375016093	other	other	5.005
375016094	other	other	5.005
375016095	other	other	5.005
375016096	other	other	2.505
375016097	other	other	1.133
375016098	other	other	1.158
375016099	other	other	1.017
375016100	other	other	1.088
375016101	other	other	1.219
375016102	other	other	1.375
375016103	other	other	1.477
375016104	other	other	2.04
375016105	other	other	1.158
375016106	other	other	1.015
375016107	other	other	1.815
375016108	other	other	1.022
375016109	other	other	1.123
375016110	other	other	0.442
375016999	other	other	0
375017001	other	other	14.973
375017002	other	other	70.977
375017003	other	other	43.059
375017004	other	other	1.388
375017005	other	other	14
375017006	other	other	5.361
375017008	other	other	5.003
375017009	other	other	0.574
375017011	Govt. County of Hawaii	Govt. County	0.048
375017012	Govt. County of Hawaii	Govt. County	0.073
375017013	Govt. County of Hawaii	Govt. County	0.23
375017014	other	other	0.2344
375017015	Govt. County of Hawaii	Govt. County	0.23
375017019	other	other	14.872
375017020	other	other	0.2854

TMK	MajorOwner	BigstOwner	TaxAcres
375017022	other	other	10.939
375017023	other	other	14.915
375017024	other	other	0.792
375017025	other	other	0.8996
375017026	other	other	14.964
375017027	Govt. County of Hawaii	Govt. County	0.201
375017030	other	other	1.555
375017031	other	other	12.932
375017036	Govt. County	Govt. County	1.594
375017037	other	other	0.3029
375017038	other	other	6.787
375017039	other	other	2.022
375017040	other	other	14.682
375017041	other	other	14.707
375017042	other	other	14.437
375017043	other	other	14.968
375017044	other	other	23.738
375017045	other	other	9.399
375017046	other	other	13.236
375017047	other	other	11.44
375017048	other	other	5.762
375017049	other	other	5.069
375017050	other	other	1.14
375017051	other	other	1
375017052	other	other	1.157
375017053	other	other	1.082
375017054	other	other	5.136
375017055	other	other	8.223
375017056	other	other	4.179
375017057	other	other	2.903
375017058	other	other	2.051
375017059	other	other	4.937
375017999	other	other	0
375017999	other	other	0
375018001	other	other	0.4111
375018003	other	other	0.467
375018004	other	other	0.5281
375018005	other	other	0.7977
375018007	other	other	0.2838
375018008	other	other	18.925
375018010	other	other	0.255
375018011	other	other	1.753
375018012	other	other	2.4717
375018014	other	other	0.234
375018015	other	other	0.087
375018017	other	other	0.7071
375018019	other	other	0.5325
375018020	Govt. County of Hawaii	Govt. County	0.6753

TMK	MajorOwner	BigstOwner	TaxAcres
375018027	other	other	0.1422
375018028	other	other	2.7292
375018030	other	other	0.7305
375018033	other	other	0.2275
375018034	other	other	0.2092
375018035	other	other	0.2155
375018036	other	other	0.2266
375018037	other	other	0.2369
375018038	other	other	0.2378
375018039	other	other	0.2387
375018040	other	other	0.2416
375018041	other	other	0.4481
375018043	other	other	0.2597
375018044	other	other	0.2404
375018045	other	other	0.2576
375018046	other	other	0.2612
375018047	other	other	0.2605
375018048	other	other	0.2585
375018049	other	other	0.2471
375018050	other	other	0.2339
375018051	other	other	0.2208
375018052	other	other	0.2228
375018053	other	other	0.2265
375018054	other	other	0.2314
375018055	other	other	0.2282
375018056	other	other	0.2244
375018057	other	other	0.2116
375018058	other	other	0.1893
375018059	other	other	0.2388
375018062	other	other	0.152
375018063	other	other	0.488
375018064	other	other	0.25
375018065	other	other	0.2101
375018066	other	other	0.08
375018067	other	other	0.2425
375018068	other	other	0.163
375018069	other	other	0.17
375018070	other	other	0.19
375018071	other	other	3.082
375018075	other	other	0.3641
375018076	other	other	0.2425
375018077	other	other	0.1722
375018082	Gomes Family	other	0.785
375018086	other	other	0.232
375018088	Govt. County of Hawaii	Govt. County	0.98
375018089	other	other	0.261
375018090	other	other	0.2636
375018091	other	other	0.2556

TMK	MajorOwner	BigstOwner	TaxAcres
375018092	other	other	0.2407
375018094	other	other	1.0314
375018095	other	other	3
375018096	other	other	0.0178
375018097	other	other	0.2649
375018999	other	other	0
375018999	other	other	0
375019001	other	other	11.572
375019003	other	other	4.4898
375019004	other	other	0.1881
375019005	other	other	4.953
375019006	other	other	0.088
375019007	Govt. County of Hawaii	Govt. County	0.7312
375019008	other	other	0.19
375019009	other	other	0.26
375019010	other	other	0.3797
375019012	other	other	0.0531
375019016	other	other	0.0654
375019018	other	other	0.1724
375019019	other	other	0.314
375019020	other	other	0.1536
375019021	other	other	0.1515
375019022	other	other	0.1786
375019023	other	other	0.1006
375019024	other	other	0.0569
375019025	Govt. County of Hawaii	Govt. County	0.0579
375019026	other	other	0.2569
375019027	other	other	0.3168
375019028	other	other	0.2669
375019029	other	other	0.1956
375019030	other	other	0.349
375019031	other	other	0.1578
375019032	other	other	0.1504
375019036	Govt. County of Hawaii	Govt. County	0.048
375019038	other	other	17.709
375019039	other	other	0.515
375019040	other	other	5.502
375019041	other	other	5.017
375019043	other	other	5.496
375019044	other	other	12.66
375019046	other	other	1.921
375019047	other	other	0.88
375019048	other	other	4.167
375019049	other	other	29.147
375019050	other	other	12.544
375019051	other	other	0.9481
375019054	other	other	3.53
375019999	other	other	0

TMK	MajorOwner	BigstOwner	TaxAcres
375020001	other	other	10.441
375020003	other	other	0.2803
375020005	other	other	0.4049
375020007	other	other	3.843
375020011	other	other	2.587
375020014	other	other	7.6052
375020016	other	other	3.2705
375020017	other	other	0.6651
375020019	other	other	0.1722
375020020	other	other	0.465
375020021	other	other	1.195
375020022	other	other	4.2004
375020024	other	other	3.078
375020028	other	other	0.0329
375020029	other	other	0.3765
375020032	other	other	0.4357
375020033	other	other	0.3498
375020034	other	other	5.3275
375020035	other	other	0.1827
375020036	other	other	0.0927
375020037	other	other	0.2858
375020038	other	other	0.3906
375020039	other	other	0.214
375020040	other	other	0.193
375020041	other	other	0.1977
375020042	other	other	0.2023
375020043	other	other	0.2069
375020044	other	other	0.2522
375020045	other	other	0.4839
375020047	other	other	0.4203
375020049	other	other	0.2212
375020050	other	other	0.2065
375020051	other	other	0.2018
375020052	other	other	0.1972
375020053	other	other	0.1926
375020054	other	other	0.193
375020056	other	other	0.3516
375020060	other	other	0.1282
375020062	other	other	0.0198
375020066	other	other	0.2281
375020067	other	other	0.0244
375020068	other	other	5.0004
375020069	other	other	5.0005
375020070	other	other	5.0006
375020071	other	other	5.0362
375020072	other	other	5.1057
375020073	other	other	18.2538
375020076	other	other	5.001

TMK	MajorOwner	BigstOwner	TaxAcres
375020077	Govt. State	Govt. State	8.542
375020078	other	other	0.895
375020079	other	other	4.045
375020080	other	other	0.918
375020081	other	other	1.003
375020082	other	other	0.18
375020999	other	other	0
375021004	other	other	4.0355
375021007	other	other	4.1581
375021035	other	other	0.1842
375021037	other	other	0.0145
375021038	other	other	0.1136
375021039	other	other	2.2977
375021999	other	other	0
375022001	other	other	0.7564
375022003	other	other	0.1722
375022004	other	other	0.1722
375022005	other	other	0.6887
375022007	other	other	0.7283
375022009	other	other	0.6955
375022011	other	other	0.1728
375022012	other	other	0.1744
375022013	other	other	0.1744
375022014	other	other	0.1819
375022015	other	other	0.1735
375022016	other	other	0.2596
375022017	other	other	0.2895
375022018	other	other	0.5938
375022019	other	other	0.2117
375022020	other	other	0.1722
375022021	other	other	0.18
375022022	other	other	0.1721
375022027	other	other	0.1721
375022030	other	other	0.1722
375022033	other	other	0.1908
375022034	other	other	0.1722
375022035	other	other	0.1722
375022036	other	other	0.1722
375022037	other	other	0.1722
375022038	other	other	0.1722
375022039	other	other	0.1722
375022040	other	other	0.1722
375022041	other	other	0.3569
375022043	other	other	0.3456
375022045	other	other	0.1722
375022046	other	other	0.1722
375022047	other	other	0.3613
375022053	other	other	0.5165

TMK	MajorOwner	BigstOwner	TaxAcres
375022056	other	other	0.1922
375022058	other	other	0.3942
375022059	other	other	0.1908
375022060	other	other	0.3687
375022062	other	other	0.1722
375022063	other	other	0.1722
375022064	other	other	0.1722
375022065	other	other	0.3444
375022067	other	other	0.191
375022068	other	other	0.2407
375022069	other	other	0.1886
375022070	other	other	0.1889
375022071	other	other	0.1722
375022072	other	other	0.5935
375022075	other	other	0.2073
375022076	other	other	0.3884
375022078	other	other	0.1763
375022079	other	other	0.2028
375022080	other	other	0.209
375022081	other	other	0.1758
375022082	other	other	0.1974
375022083	other	other	0.1781
375022084	other	other	0.219
375022085	other	other	0.1747
375022086	other	other	0.1825
375022087	other	other	0.1768
375022088	other	other	0.1768
375022089	other	other	0.1829
375022090	other	other	0.1853
375022091	other	other	0.1728
375022092	other	other	0.1734
375022093	other	other	0.1812
375022094	other	other	0.1793
375022095	other	other	0.1823
375022096	other	other	0.1871
375022097	other	other	0.1834
375022098	other	other	0.191
375022099	other	other	0.1941
375022100	other	other	0.1937
375022101	other	other	0.1947
375022102	other	other	0.1924
375022103	other	other	0.1914
375022104	other	other	0.192
375022105	other	other	0.199
375022106	other	other	0.2282
375022107	other	other	0.1969
375022108	other	other	0.1763
375022109	other	other	0.1763

TMK	MajorOwner	BigstOwner	TaxAcres
375022110	other	other	0.1763
375022111	other	other	0.1763
375022112	other	other	0.1763
375022113	other	other	0.1763
375022114	other	other	0.1982
375022115	other	other	0.1825
375022116	other	other	0.1763
375022117	other	other	0.1763
375022118	other	other	0.1763
375022119	other	other	0.1763
375022120	other	other	0.1763
375022121	other	other	0.1763
375022122	other	other	0.1763
375022123	other	other	0.1763
375022124	other	other	0.1912
375022125	other	other	0.1968
375022126	other	other	0.181
375022127	other	other	0.2296
375022128	other	other	0.01
375022129	other	other	0.1737
375022130	other	other	0.1757
375022131	other	other	0.1818
375022132	other	other	0.1863
375022133	other	other	0.1803
375022134	other	other	0.1788
375022135	other	other	0.1796
375022136	other	other	0.1803
375022137	other	other	0.1781
375022138	other	other	0.1783
375022139	other	other	0.1785
375022140	other	other	0.1785
375022141	other	other	0.1868
375022142	other	other	0.2027
375022143	other	other	0.2214
375022144	other	other	0.2114
375022145	other	other	0.1785
375022146	other	other	0.1785
375022147	other	other	0.1783
375022148	other	other	0.1781
375022149	other	other	0.1803
375022150	other	other	0.1796
375022151	other	other	0.1788
375022152	other	other	0.1803
375022153	other	other	0.182
375022154	other	other	0.2159
375022155	other	other	0.1722
375022156	other	other	0.1722
375022157	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
375022158	other	other	0.1722
375022159	other	other	0.1722
375022160	other	other	0.1722
375022161	other	other	0.1722
375022162	other	other	0.1722
375022163	other	other	0.1722
375022164	other	other	0.1722
375022165	other	other	0.1722
375022166	other	other	0.1722
375022167	other	other	0.1722
375022168	other	other	0.1722
375022169	other	other	0.1722
375022170	other	other	0.18
375022171	other	other	0.1811
375022173	other	other	0.0271
375022175	Govt. State	Govt. State	0.1777
375022999	other	other	0
375023001	other	other	0.1729
375023002	other	other	0.1724
375023003	other	other	0.1722
375023004	other	other	0.1722
375023005	other	other	0.1797
375023006	other	other	0.1722
375023007	other	other	0.1722
375023008	other	other	0.1722
375023009	other	other	0.1784
375023010	other	other	0.203
375023011	other	other	0.1723
375023012	other	other	0.1722
375023013	other	other	0.1722
375023014	other	other	0.1722
375023015	other	other	0.1722
375023016	other	other	0.1722
375023017	other	other	0.1722
375023018	other	other	0.1775
375023019	other	other	0.2102
375023020	other	other	0.1759
375023021	other	other	0.1722
375023022	other	other	0.1722
375023023	other	other	0.1722
375023024	other	other	0.1722
375023025	other	other	0.1722
375023026	other	other	0.1748
375023027	other	other	0.1778
375023028	other	other	0.1727
375023029	other	other	0.1729
375023030	other	other	0.1722
375023031	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
375023032	other	other	0.1986
375023033	other	other	0.2091
375023034	other	other	0.197
375023035	other	other	0.2068
375023036	other	other	0.2089
375023037	other	other	0.1722
375023038	other	other	0.1722
375023039	other	other	0.1722
375023040	other	other	0.1722
375023041	other	other	0.1722
375023042	Govt. County of Hawaii	Govt. County	0.1722
375023043	other	other	0.1722
375023044	other	other	0.1722
375023045	other	other	0.1722
375023046	other	other	0.1722
375023047	other	other	0.1722
375023048	other	other	0.1722
375023049	other	other	0.1722
375023050	other	other	0.1722
375023051	other	other	0.1722
375023052	other	other	0.1722
375023053	other	other	0.1722
375023054	other	other	0.1722
375023055	other	other	0.1722
375023056	other	other	0.1729
375023057	other	other	0.1722
375023058	other	other	0.1722
375023059	other	other	0.1722
375023060	other	other	0.1722
375023061	other	other	0.1722
375023062	other	other	0.1722
375023069	Govt. County of Hawaii	Govt. County	0.235
375023999	other	other	0
375024001	other	other	91.392
375024002	other	other	6.471
375024003	other	other	6.645
375024004	other	other	5.306
375024005	other	other	5.754
375024006	other	other	0.705
375024007	other	other	1.843
375024008	other	other	3.259
375024009	other	other	3.851
375024010	other	other	1
375024011	other	other	1.053
375024012	other	other	1.327
375024013	other	other	1.285
375024014	other	other	1.225
375024015	other	other	1.198

TMK	MajorOwner	BigstOwner	TaxAcres
375024016	other	other	1.197
375024017	other	other	3.002
375024018	other	other	3.028
375024019	other	other	0.518
375024020	other	other	3.029
375024021	other	other	0.763
375024022	other	other	1.301
375024023	other	other	1.818
375024024	other	other	1.309
375024025	other	other	3
375024026	other	other	0.5567
375024028	other	other	1.173
375024029	other	other	3.016
375024030	other	other	3.047
375024031	other	other	3
375024032	other	other	3.137
375024033	other	other	3.024
375024034	other	other	3.352
375024035	other	other	3.321
375024036	other	other	3.427
375024037	other	other	3.174
375024038	other	other	1.028
375024039	other	other	1
375024040	other	other	1.029
375024041	other	other	1.018
375024043	other	other	1
375024044	other	other	1.136
375024045	other	other	1.019
375024046	other	other	1.029
375024047	other	other	1
375024048	other	other	1
375024049	other	other	1.007
375024050	other	other	1.041
375024051	other	other	1.026
375024052	other	other	1.083
375024053	other	other	1.037
375024054	other	other	1.033
375024055	other	other	1
375024056	other	other	1
375024057	other	other	0.335
375024058	other	other	0.265
375024059	other	other	0.495
375024060	other	other	0.457
375024061	other	other	0.47
375024062	other	other	0.431
375024063	other	other	1.088
375024064	other	other	1.095
375024065	other	other	1.139

TMK	MajorOwner	BigstOwner	TaxAcres
375024066	other	other	1.193
375024067	other	other	1.221
375024068	other	other	1.228
375024069	other	other	1.261
375024070	other	other	1.267
375024071	other	other	1.21
375024072	other	other	1.304
375024073	other	other	1.619
375024074	other	other	3
375024075	other	other	1.221
375024076	Govt. County of Hawaii	Govt. County	0.3781
375024077	other	other	3.003
375024078	other	other	3.039
375024079	other	other	3.069
375024999	other	other	0
375025001	other	other	0.591
375025002	other	other	0.5
375025003	other	other	0.5
375025004	other	other	0.5
375025005	other	other	0.508
375025006	other	other	0.557
375025007	other	other	0.557
375025008	other	other	0.507
375025009	other	other	0.537
375025010	other	other	0.503
375025011	other	other	0.584
375025012	other	other	0.535
375025013	other	other	0.557
375025014	other	other	0.65
375025015	other	other	0.546
375025016	other	other	0.551
375025017	other	other	0.572
375025018	other	other	0.507
375025019	other	other	0.513
375025020	other	other	0.5
375025021	other	other	0.5
375025022	other	other	0.501
375025023	other	other	0.505
375025024	other	other	0.504
375025025	other	other	0.509
375025026	other	other	0.514
375025027	other	other	0.532
375025028	other	other	0.51
375025029	other	other	0.513
375025030	other	other	0.508
375025031	other	other	0.501
375025033	other	other	0.501
375025034	other	other	0.0675

TMK	MajorOwner	BigstOwner	TaxAcres
375025035	other	other	0.614
375025036	other	other	0.666
375025037	other	other	1.098
375025038	other	other	0.504
375025999	other	other	0
375026001	other	other	0.1732
375026002	other	other	0.1725
375026003	other	other	0.1731
375026004	other	other	0.1727
375026005	other	other	0.1728
375026006	other	other	0.1727
375026007	other	other	0.1377
375026008	Govt. State	Govt. State	0.0009
375026009	Govt. State	Govt. State	0.0143
375026010	other	other	0.1769
375026011	other	other	0.1264
375026012	other	other	0.0514
375026013	other	other	0.2146
375026014	other	other	0.1884
375026015	other	other	0.1884
375026016	other	other	0.1894
375026017	other	other	0.197
375026018	other	other	0.2123
375026019	other	other	0.2034
375026020	other	other	0.2033
375026021	other	other	0.1963
375026022	other	other	0.1958
375026023	other	other	0.1913
375026024	other	other	0.2051
375026025	other	other	0.22
375026026	other	other	0.2115
375026027	other	other	0.2551
375026028	other	other	0.2013
375026029	other	other	0.1828
375026030	other	other	0.1779
375026031	other	other	0.182
375026032	other	other	0.2116
375026033	other	other	0.1978
375026034	other	other	0.1949
375026035	other	other	0.2119
375026036	other	other	0.2115
375026037	other	other	0.1767
375026038	other	other	0.2171
375026039	Govt. State	Govt. State	0.1146
375026040	Govt. State	Govt. State	0.0266
375026041	other	other	0.1783
375026042	other	other	0.2276
375026043	other	other	0.201

TMK	MajorOwner	BigstOwner	TaxAcres
375026044	other	other	0.2281
375026047	other	other	0.2218
375026050	Govt. State	Govt. State	0.0354
375026051	other	other	0.1753
375026052	other	other	0.1918
375026053	other	other	0.1987
375026054	other	other	0.2273
375026055	other	other	0.1851
375026056	other	other	0.1795
375026057	other	other	0.1782
375026058	other	other	0.1785
375026059	other	other	0.1858
375026060	other	other	0.1869
375026061	other	other	0.1953
375026062	other	other	0.2098
375026063	other	other	0.1823
375026064	other	other	0.1784
375026065	other	other	0.1734
375026066	other	other	0.1744
375026067	other	other	0.1858
375026068	other	other	0.001
375026069	other	other	0.001
375026072	other	other	0.001
375026999	other	other	0
375027001	other	other	0.204
375027002	other	other	0.1763
375027003	other	other	0.1763
375027004	other	other	0.1763
375027005	other	other	0.1763
375027006	other	other	0.1881
375027007	other	other	0.2233
375027008	other	other	0.1833
375027009	other	other	0.1824
375027010	other	other	0.1789
375027011	other	other	0.1757
375027012	other	other	0.1734
375027013	other	other	0.1792
375027014	other	other	0.2274
375027015	other	other	0.2104
375027016	other	other	0.1939
375027017	other	other	0.182
375027018	other	other	0.1865
375027019	other	other	0.1831
375027020	other	other	0.1807
375027021	other	other	0.1875
375027022	other	other	0.2277
375027023	other	other	0.2233
375027024	other	other	0.1794

TMK	MajorOwner	BigstOwner	TaxAcres
375027025	other	other	0.1965
375027026	other	other	0.2109
375027027	other	other	0.1929
375027028	other	other	0.1922
375027029	other	other	0.188
375027030	other	other	0.1879
375027031	other	other	0.1835
375027032	other	other	0.1815
375027033	other	other	0.1796
375027034	other	other	0.184
375027035	other	other	0.1831
375027036	other	other	0.1795
375027037	other	other	0.181
375027038	other	other	0.189
375027039	other	other	0.1844
375027040	other	other	0.1963
375027041	other	other	0.18
375027042	other	other	0.1795
375027043	other	other	0.1831
375027044	other	other	0.184
375027045	other	other	0.1796
375027046	other	other	0.1768
375027047	other	other	0.1883
375027048	other	other	0.176
375027049	other	other	0.1756
375027050	other	other	0.1798
375027051	other	other	0.1848
375027052	other	other	0.1876
375027053	other	other	0.2213
375027054	other	other	0.2002
375027055	other	other	0.1757
375027056	other	other	0.1801
375027057	other	other	0.1801
375027058	other	other	0.1772
375027059	other	other	0.1776
375027060	other	other	0.1762
375027061	other	other	0.001
375027062	other	other	0.001
375027063	other	other	0.001
375027064	other	other	0.001
375027999	other	other	0
375028001	other	other	0.1943
375028002	other	other	0.1745
375028003	other	other	0.1755
375028004	other	other	0.1803
375028005	other	other	0.1803
375028006	other	other	0.1755
375028007	other	other	0.1902

TMK	MajorOwner	BigstOwner	TaxAcres
375028008	other	other	0.2067
375028009	other	other	0.2226
375028010	other	other	0.2079
375028011	other	other	0.1929
375028012	other	other	0.2075
375028013	other	other	0.1829
375028014	other	other	0.1741
375028015	other	other	0.1786
375028016	other	other	0.1899
375028017	other	other	0.1791
375028018	other	other	0.1872
375028019	other	other	0.1898
375028020	other	other	0.2114
375028021	other	other	0.2045
375028022	other	other	0.1914
375028023	other	other	0.1742
375028024	other	other	0.1733
375028025	other	other	0.1742
375028026	other	other	0.1759
375028027	other	other	0.1759
375028028	other	other	0.1742
375028029	other	other	0.1742
375028030	other	other	0.1742
375028031	other	other	0.1858
375028032	other	other	0.2512
375028033	other	other	0.2066
375028034	other	other	0.2017
375028035	other	other	0.2004
375028036	other	other	0.1742
375028037	other	other	0.1733
375028038	other	other	0.1742
375028039	other	other	0.1751
375028040	other	other	0.1751
375028041	other	other	0.1742
375028042	other	other	0.1742
375028043	other	other	0.1742
375028044	other	other	0.1767
375028045	other	other	0.2137
375028046	other	other	0.1864
375028047	other	other	0.1821
375028048	other	other	0.1809
375028049	other	other	0.1744
375028050	other	other	0.1734
375028051	other	other	0.1744
375028052	other	other	0.1861
375028053	other	other	0.1754
375028054	other	other	0.1758
375028055	other	other	0.1757

TMK	MajorOwner	BigstOwner	TaxAcres
375028056	other	other	0.1752
375028057	other	other	0.1746
375028058	other	other	0.1745
375028059	other	other	0.1761
375028060	other	other	0.1755
375028061	other	other	0.177
375028062	other	other	0.1761
375028063	other	other	0.1766
375028064	other	other	0.1842
375028065	other	other	0.175
375028066	other	other	0.1906
375028067	other	other	0.2025
375028068	other	other	0.1723
375028069	other	other	0.1744
375028070	other	other	0.001
375028071	other	other	0.001
375028072	other	other	0.001
375028073	other	other	0.001
375028074	other	other	0.001
375028999	other	other	0
375029001	other	other	0.2392
375029002	other	other	0.1957
375029003	other	other	0.2019
375029004	other	other	0.2007
375029005	other	other	0.2027
375029006	other	other	0.1901
375029007	other	other	0.2088
375029008	other	other	0.2108
375029009	other	other	0.2311
375029010	other	other	0.1854
375029011	other	other	0.1926
375029012	other	other	0.1934
375029013	other	other	0.1902
375029014	other	other	0.1801
375029015	other	other	0.1791
375029016	other	other	0.19
375029017	other	other	0.2181
375029018	other	other	0.244
375029019	other	other	0.2505
375029020	other	other	0.2316
375029021	other	other	0.1956
375029022	other	other	0.1985
375029023	other	other	0.1749
375029024	other	other	0.1749
375029025	other	other	0.1749
375029026	other	other	0.1844
375029027	other	other	0.1916
375029028	other	other	0.2304

TMK	MajorOwner	BigstOwner	TaxAcres
375029029	other	other	0.2118
375029030	other	other	0.2118
375029031	other	other	0.2415
375029032	other	other	0.2521
375029033	other	other	0.3256
375029034	other	other	0.1949
375029035	other	other	0.2022
375029036	other	other	0.2068
375029037	other	other	0.198
375029038	other	other	0.2166
375029039	other	other	0.2278
375029040	other	other	0.2251
375029041	other	other	0.1939
375029042	other	other	0.222
375029043	other	other	0.2744
375029044	other	other	0.2368
375029045	other	other	0.1847
375029046	other	other	0.1961
375029047	other	other	0.2036
375029048	other	other	0.1981
375029049	other	other	0.1886
375029050	other	other	0.1884
375029051	other	other	0.2164
375029052	other	other	0.2195
375029053	other	other	0.2211
375029054	other	other	0.2125
375029055	other	other	0.278
375029056	other	other	0.2788
375029057	other	other	0.1993
375029058	other	other	0.2349
375029059	other	other	0.1837
375029060	other	other	0.2212
375029061	other	other	0.1821
375029062	other	other	0.1761
375029063	other	other	0.1738
375029064	other	other	0.173
375029065	other	other	0.1755
375029066	other	other	0.001
375029067	other	other	0.001
375029068	other	other	0.001
375029069	other	other	0.001
375029999	other	other	0
375030001	other	other	0.2253
375030002	other	other	0.1834
375030003	other	other	0.1753
375030004	other	other	0.1943
375030005	other	other	0.2112
375030006	other	other	0.201

TMK	MajorOwner	BigstOwner	TaxAcres
375030007	other	other	0.1866
375030008	other	other	0.177
375030009	other	other	0.1894
375030010	other	other	0.1788
375030011	other	other	0.1755
375030012	other	other	0.1778
375030013	other	other	0.1742
375030014	other	other	0.1864
375030015	other	other	0.1962
375030016	other	other	0.175
375030017	other	other	0.1798
375030018	other	other	0.176
375030019	other	other	0.1729
375030020	other	other	0.1758
375030021	other	other	0.2178
375030022	other	other	0.3061
375030024	other	other	3.009
375030025	other	other	3.4641
375030026	Govt. County of Hawaii	Govt. County	1.626
375030027	other	other	0.2615
375030028	other	other	0.1966
375030029	other	other	0.1729
375030030	other	other	0.173
375030031	other	other	0.1751
375030032	other	other	0.1758
375030033	other	other	0.1744
375030034	other	other	0.2119
375030035	other	other	0.1788
375030036	other	other	0.1775
375030037	other	other	0.1904
375030038	other	other	0.1929
375030999	other	other	0
375031002	other	other	0.265
375031003	Govt. State	Govt. State	3.471
375031004	other	other	0.1888
375031005	other	other	0.1759
375031006	other	other	0.1826
375031007	other	other	0.2013
375031008	other	other	0.1955
375031009	other	other	0.1726
375031010	other	other	0.1795
375031011	other	other	0.1758
375031012	other	other	0.179
375031013	other	other	0.2207
375031014	other	other	0.1828
375031015	other	other	0.1823
375031016	other	other	0.1738
375031017	other	other	0.1734

TMK	MajorOwner	BigstOwner	TaxAcres
375031018	other	other	0.1787
375031019	other	other	0.1742
375031020	other	other	0.1742
375031021	other	other	0.1824
375031022	other	other	0.1789
375031023	other	other	0.1924
375031024	other	other	0.183
375031025	other	other	0.1826
375031026	other	other	0.1873
375031027	other	other	0.2003
375031028	other	other	0.1805
375031029	other	other	0.1821
375031030	other	other	0.1837
375031031	other	other	0.1798
375031032	other	other	0.1813
375031033	other	other	0.1828
375031034	other	other	0.1843
375031035	other	other	0.1855
375031036	other	other	0.1821
375031037	other	other	0.1891
375031038	other	other	0.1933
375031039	other	other	0.2148
375031040	other	other	0.1831
375031041	other	other	0.182
375031042	other	other	0.1809
375031043	other	other	0.1797
375031044	other	other	0.184
375031045	other	other	0.1828
375031046	other	other	0.1815
375031047	other	other	0.1853
375031048	other	other	0.1905
375031049	other	other	0.1864
375031050	other	other	0.1749
375031051	other	other	0.1769
375031052	other	other	0.1779
375031053	other	other	0.178
375031054	other	other	0.1783
375031055	other	other	0.1904
375031056	other	other	0.1815
375031057	other	other	0.1842
375031058	other	other	0.1824
375031059	other	other	0.1787
375031060	other	other	0.1813
375031061	other	other	0.1932
375031062	other	other	0.1999
375031063	other	other	0.2417
375031064	other	other	0.1772
375031065	other	other	0.1788

TMK	MajorOwner	BigstOwner	TaxAcres
375031066	other	other	0.2129
375031067	other	other	0.18
375031999	other	other	0
375032001	other	other	0.356
375032002	other	other	0.3478
375032003	other	other	0.3444
375032004	other	other	0.4487
375032005	other	other	0.3457
375032006	other	other	0.348
375032007	other	other	0.3464
375032008	other	other	0.3527
375032009	other	other	0.3581
375032010	other	other	0.3575
375032011	other	other	0.3537
375032012	other	other	0.3537
375032013	other	other	0.3536
375032014	other	other	0.3536
375032015	other	other	0.3535
375032016	other	other	0.35
375032017	other	other	0.3518
375032018	other	other	0.3827
375032019	other	other	0.349
375032020	other	other	0.348
375032021	other	other	0.3499
375032022	other	other	0.3482
375032023	other	other	0.3482
375032024	other	other	0.3482
375032025	other	other	0.3514
375032026	other	other	0.3482
375032027	other	other	0.3466
375032028	other	other	0.3466
375032029	other	other	0.3466
375032030	other	other	0.3466
375032031	other	other	0.3466
375032032	other	other	0.3466
375032033	other	other	0.3466
375032034	other	other	0.3466
375032035	other	other	0.3466
375032036	other	other	0.3623
375032037	other	other	0.6164
375032038	other	other	0.3979
375032039	other	other	0.3846
375032040	other	other	0.3984
375032041	other	other	0.3676
375032042	other	other	0.357
375032043	other	other	0.3712
375032044	other	other	0.3795
375032045	other	other	0.374

TMK	MajorOwner	BigstOwner	TaxAcres
375032046	other	other	0.3859
375032047	other	other	0.3864
375032048	other	other	0.3715
375032049	other	other	0.3834
375032050	other	other	0.3679
375032051	other	other	0.369
375032052	other	other	0.3858
375032053	other	other	0.4008
375032054	other	other	0.349
375032055	other	other	0.3466
375032056	other	other	0.3561
375032057	other	other	0.3589
375032058	other	other	0.3676
375032059	other	other	0.354
375032060	other	other	0.3748
375032061	other	other	0.3553
375032062	other	other	0.3687
375032063	other	other	0.3445
375032064	other	other	0.3548
375032065	other	other	0.3632
375032066	other	other	0.3581
375032067	other	other	0.3524
375032068	other	other	0.3898
375032069	other	other	0.3501
375032070	other	other	0.3527
375032071	other	other	0.3543
375032072	other	other	0.3522
375032073	other	other	0.3551
375032074	other	other	0.3532
375032075	other	other	0.358
375032076	other	other	0.4694
375032077	other	other	0.3684
375032078	other	other	0.3668
375032079	other	other	0.3487
375032080	other	other	0.3469
375032081	other	other	0.3489
375032082	other	other	0.3445
375032083	other	other	0.3445
375032084	other	other	0.3489
375032085	other	other	0.3469
375032086	other	other	0.3487
375032087	other	other	0.3503
375032088	other	other	0.3502
375032089	other	other	0.3531
375032090	other	other	0.3466
375032091	other	other	0.3446
375032092	other	other	0.3444
375032093	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
375032094	other	other	0.349
375032095	other	other	0.3523
375032096	other	other	0.392
375032097	other	other	0.3668
375032098	other	other	0.3507
375032099	other	other	0.3504
375032100	other	other	0.3504
375032101	other	other	0.3504
375032102	other	other	0.3634
375032103	other	other	2.8696
375032999	other	other	0
375033001	other	other	0.3782
375033002	other	other	0.359
375033003	other	other	0.3599
375033004	other	other	0.3649
375033005	other	other	0.363
375033006	other	other	0.3747
375033007	Govt. County of Hawaii	Govt. County	0.715
375033009	other	other	0.3451
375033010	other	other	0.3478
375033011	other	other	0.3487
375033012	other	other	0.3487
375033013	other	other	0.3487
375033014	other	other	0.3467
375033015	other	other	0.3786
375033016	other	other	0.3575
375033017	other	other	0.3511
375033018	other	other	0.3479
375033019	other	other	0.3496
375033020	other	other	0.349
375033021	other	other	0.347
375033022	other	other	0.3458
375033023	other	other	0.3609
375033024	other	other	0.3625
375033025	other	other	0.3695
375033026	other	other	0.3829
375033027	other	other	0.3526
375033028	other	other	0.3526
375033029	other	other	0.3591
375033030	other	other	0.352
375033031	other	other	0.352
375033032	other	other	0.3444
375033033	other	other	0.3444
375033034	other	other	0.3444
375033035	other	other	0.3489
375033036	other	other	0.3485
375033037	other	other	0.3644
375033038	other	other	0.3445

TMK	MajorOwner	BigstOwner	TaxAcres
375033039	other	other	0.3451
375033040	other	other	0.3458
375033041	other	other	0.3461
375033042	other	other	0.3464
375033043	other	other	0.346
375033044	other	other	0.3482
375033045	other	other	0.3482
375033046	other	other	0.3482
375033047	other	other	0.3482
375033048	other	other	0.3482
375033049	other	other	0.3753
375033050	other	other	0.3635
375033051	other	other	0.3591
375033052	other	other	0.3817
375033053	other	other	0.3739
375033054	other	other	0.3867
375033055	other	other	0.3742
375033056	other	other	0.3867
375033057	other	other	0.3536
375033058	other	other	0.3476
375033059	other	other	0.3482
375033060	other	other	0.3482
375033061	other	other	0.3493
375033062	other	other	0.3522
375033063	other	other	0.4044
375033064	other	other	0.365
375033065	other	other	0.3522
375033066	other	other	0.3494
375033067	other	other	0.3482
375033068	other	other	0.3482
375033069	other	other	0.3476
375033071	other	other	0.3579
375033072	other	other	0.3529
375033073	other	other	0.3529
375033074	other	other	0.3546
375033075	other	other	0.3465
375033076	other	other	0.3472
375033077	other	other	0.3517
375033078	other	other	0.3524
375033079	other	other	0.3481
375033080	other	other	0.3473
375033081	other	other	0.3444
375033082	other	other	0.3444
375033083	other	other	0.3444
375033084	other	other	0.3469
375033085	other	other	0.3543
375033086	other	other	0.4409
375033087	other	other	0.3557

TMK	MajorOwner	BigstOwner	TaxAcres
375033088	other	other	0.3533
375033089	other	other	0.3854
375033090	other	other	0.3446
375033091	other	other	0.3494
375033092	other	other	0.3464
375033093	other	other	0.4902
375033094	other	other	0.3773
375033095	other	other	0.3471
375033096	other	other	0.3451
375033097	other	other	0.3447
375033098	other	other	0.3447
375033099	other	other	0.3445
375033100	other	other	0.3451
375033101	other	other	0.3451
375033102	other	other	0.3444
375033103	other	other	0.352
375033104	other	other	0.3551
375033105	other	other	0.3573
375033106	other	other	0.3482
375033107	other	other	0.3482
375033108	other	other	0.3482
375033109	other	other	0.3482
375033110	other	other	0.3512
375033111	other	other	0.3906
375033112	other	other	0.354
375033113	other	other	0.3477
375033114	other	other	0.3531
375033115	other	other	0.3611
375033116	other	other	0.3482
375033117	other	other	0.3482
375033118	other	other	0.3639
375033119	other	other	0.4882
375033120	other	other	0.4591
375033121	other	other	0.3466
375033122	other	other	0.3444
375033123	other	other	0.421
375033124	other	other	0.4072
375033125	other	other	0.4876
375033126	other	other	0.3786
375033127	other	other	0.3455
375033128	other	other	0.3494
375033129	other	other	0.3556
375033130	other	other	0.5981
375033131	other	other	0.3919
375033132	other	other	0.3611
375033133	other	other	0.3453
375033134	other	other	0.3453
375033135	other	other	0.3445

TMK	MajorOwner	BigstOwner	TaxAcres
375033999	other	other	0
375034001	other	other	1.1326
375034002	other	other	0.698
375034003	other	other	0.6181
375034004	other	other	0.6181
375034005	other	other	0.635
375034006	other	other	0.5797
375034007	other	other	0.6026
375034008	other	other	0.6553
375034009	other	other	0.7231
375034010	other	other	0.6582
375034011	other	other	0.5648
375034012	other	other	0.5446
375034013	other	other	0.6091
375034014	other	other	0.767
375034015	other	other	0.5689
375034016	other	other	0.5459
375034017	other	other	0.6691
375034018	other	other	0.6509
375034019	other	other	0.5901
375034020	other	other	0.6087
375034021	other	other	0.7422
375034022	other	other	0.7413
375034023	other	other	0.6007
375034024	other	other	0.6923
375034025	other	other	0.7234
375034026	other	other	5.546
375034027	other	other	0.3444
375034028	other	other	0.442
375034029	other	other	0.4986
375034030	other	other	0.6281
375034031	other	other	0.5424
375034032	other	other	0.5474
375034033	other	other	0.3468
375034034	other	other	0.3762
375034035	other	other	0.3444
375034036	other	other	0.3896
375034037	other	other	0.3877
375034038	other	other	0.3735
375034039	other	other	0.3444
375034040	other	other	0.3795
375034041	other	other	0.3444
375034042	other	other	0.3789
375034043	other	other	0.3444
375034044	other	other	1.1
375034045	other	other	0.3444
375034046	other	other	0.3444
375034047	other	other	0.385

TMK	MajorOwner	BigstOwner	TaxAcres
375034048	other	other	0.3444
375034049	other	other	0.3873
375034050	other	other	0.3444
375034051	other	other	0.3896
375034052	other	other	0.3445
375034053	other	other	0.3922
375034054	other	other	0.3444
375034055	other	other	0.4286
375034056	other	other	0.3444
375034057	other	other	0.4674
375034058	other	other	0.3444
375034059	other	other	0.4512
375034060	other	other	0.3444
375034061	other	other	0.3814
375034062	other	other	0.3444
375034063	other	other	0.38
375034064	other	other	0.4811
375034065	other	other	0.6378
375034066	other	other	0.4984
375034067	other	other	0.538
375034999	other	other	0
375035001	other	other	0.1706
375035002	other	other	0.1404
375035003	other	other	0.1342
375035004	other	other	0.2253
375035005	other	other	0.173
375035006	other	other	0.1427
375035007	other	other	0.402
375035009	other	other	0.2648
375035010	other	other	0.251
375035011	other	other	0.2081
375035012	other	other	0.262
375035013	other	other	0.1644
375035014	other	other	0.1472
375035015	other	other	0.1461
375035016	other	other	0.1628
375035017	other	other	0.1555
375035018	other	other	0.1851
375035019	other	other	1.0177
375035020	other	other	0.1067
375035021	other	other	1.4957
375035022	other	other	0.2203
375035999	other	other	0
375036001	other	other	0.4688
375036002	other	other	0.4274
375036003	other	other	0.3988
375036004	other	other	0.3995
375036005	other	other	0.3994

TMK	MajorOwner	BigstOwner	TaxAcres
375036006	other	other	0.3994
375036007	other	other	0.4611
375036008	other	other	0.4346
375036009	other	other	0.3469
375036010	other	other	0.3469
375036011	other	other	0.3466
375036012	other	other	0.3444
375036013	other	other	0.3707
375036014	other	other	0.1583
375036015	other	other	0.3245
375036016	other	other	0.3982
375036017	other	other	0.3602
375036018	other	other	0.3444
375036019	other	other	0.3444
375036020	other	other	0.3444
375036021	other	other	0.3832
375036022	other	other	0.382
375036023	other	other	0.3889
375036024	other	other	0.3857
375036025	other	other	0.3531
375036026	other	other	0.355
375036027	other	other	0.3799
375036028	other	other	0.3869
375036029	other	other	0.5734
375036030	other	other	0.3883
375036031	other	other	0.3739
375036032	other	other	0.363
375036033	other	other	0.367
375036034	other	other	0.4139
375036035	other	other	0.4244
375036036	other	other	0.1032
375036037	other	other	1.857
375036038	other	other	0.5655
375036039	other	other	0.4822
375036040	other	other	0.4735
375036041	other	other	0.4804
375036042	other	other	0.501
375036043	other	other	0.5142
375036044	other	other	0.6012
375036045	other	other	0.4592
375036046	other	other	0.4593
375036047	other	other	0.4593
375036048	other	other	0.4594
375036049	other	other	0.4593
375036050	other	other	0.4592
375036051	other	other	0.4592
375036052	other	other	1.0562
375036999	other	other	0

TMK	MajorOwner	BigstOwner	TaxAcres
375037001	other	other	0.1258
375037002	other	other	0.1675
375037003	other	other	0.1747
375037004	other	other	0.1412
375037005	other	other	0.1458
375037006	other	other	0.1153
375037007	other	other	0.1197
375037008	other	other	0.1229
375037009	other	other	0.1223
375037010	other	other	0.123
375037011	other	other	0.1256
375037012	other	other	0.1329
375037013	other	other	0.1171
375037014	other	other	0.2017
375037015	other	other	0.222
375037016	other	other	0.1171
375037017	other	other	0.1642
375037018	other	other	0.1649
375037019	other	other	0.1494
375037020	other	other	0.185
375037021	other	other	0.2188
375037022	other	other	0.1414
375037023	other	other	0.0595
375037024	other	other	2.1553
375037025	other	other	0.1344
375037026	other	other	0.1054
375037027	other	other	0.1054
375037028	other	other	0.1419
375037029	other	other	0.1388
375037030	other	other	0.1054
375037031	other	other	0.1307
375037032	other	other	0.0995
375037033	other	other	0.1154
375037034	other	other	0.1263
375037035	other	other	0.0937
375037036	other	other	0.1307
375037037	other	other	0.141
375037038	other	other	0.1473
375037039	other	other	0.1302
375037040	other	other	0.1194
375037041	other	other	0.1163
375037042	other	other	0.1185
375037043	other	other	0.1182
375037044	other	other	0.3715
375037045	other	other	0.0052
375037046	other	other	0.0052
375037999	other	other	0
375038001	other	other	0.1503

TMK	MajorOwner	BigstOwner	TaxAcres
375038002	other	other	0.1194
375038003	other	other	0.118
375038004	other	other	0.1178
375038005	other	other	0.1176
375038006	other	other	0.1174
375038007	other	other	0.117
375038008	other	other	0.1478
375038009	other	other	0.1676
375038010	other	other	0.1246
375038011	other	other	0.1627
375038012	other	other	0.1782
375038013	other	other	0.1054
375038014	other	other	0.1054
375038015	other	other	0.1361
375038016	other	other	0.1334
375038017	other	other	0.1334
375038018	other	other	0.137
375038019	other	other	0.1054
375038020	other	other	0.1054
375038021	other	other	0.137
375038022	other	other	0.1381
375038023	other	other	0.1566
375038024	other	other	0.1271
375038025	other	other	0.1278
375038026	other	other	0.1584
375038027	other	other	0.1361
375038028	other	other	0.1368
375038029	other	other	0.1374
375038030	other	other	0.1381
375038031	other	other	0.1388
375038032	other	other	0.1054
375038033	other	other	0.1633
375038034	other	other	0.1605
375038035	other	other	0.1054
375038036	other	other	0.1292
375038037	other	other	0.1266
375038038	other	other	2.084
375039001	other	other	0.1248
375039002	other	other	0.1261
375039003	other	other	0.1255
375039004	other	other	0.1248
375039005	other	other	0.1242
375039006	other	other	0.1235
375039007	other	other	0.1229
375039008	other	other	0.1223
375039009	other	other	0.1216
375039010	other	other	0.121
375039011	other	other	0.1203

TMK	MajorOwner	BigstOwner	TaxAcres
375039012	other	other	0.1927
375039013	other	other	0.1054
375039014	other	other	0.1054
375039015	other	other	0.1423
375039016	other	other	0.1369
375039017	other	other	0.168
375039018	other	other	0.1284
375039019	other	other	0.1709
375039020	other	other	0.2348
375039021	other	other	0.1182
375039022	other	other	0.1458
375039023	other	other	0.1679
375039024	other	other	0.1369
375039025	other	other	0.1877
375039026	other	other	0.1279
375039027	other	other	0.1276
375039028	other	other	0.1274
375039029	other	other	0.13
375039030	other	other	0.1321
375039031	other	other	0.1342
375039032	other	other	0.2217
375039033	other	other	0.1054
375039034	other	other	0.1054
375039035	other	other	0.1423
375039036	other	other	0.1369
375039037	other	other	0.1718
375039038	other	other	0.1235
375039039	other	other	0.1569
375039040	other	other	0.1369
375039041	other	other	0.1414
375039042	other	other	0.1054
375039043	other	other	0.1054
375039044	other	other	0.1695
375039045	other	other	0.1426
375039046	other	other	0.1101
375039047	other	other	2.424
375040001	other	other	1.004
375040002	other	other	1.015
375040003	other	other	1.026
375040004	other	other	1.086
375040005	other	other	1.005
375040006	other	other	1.001
375040007	other	other	1.004
375040008	other	other	1.003
375040009	other	other	1.003
375040010	other	other	1.006
375040011	other	other	1.005
375040012	other	other	1.012

TMK	MajorOwner	BigstOwner	TaxAcres
375040013	other	other	1.009
375040014	other	other	1.011
375040015	other	other	1.007
375040016	other	other	1.015
375040017	other	other	1.086
375040018	other	other	1.056
375040019	other	other	1.033
375040020	other	other	1.092
375040021	other	other	1.002
375040022	other	other	1.018
375040023	other	other	1.005
375040024	other	other	1.002
375040025	other	other	1.05
375040026	other	other	1.091
375040027	other	other	1.23
375040028	other	other	1.017
375040029	other	other	1.016
375040030	other	other	1.063
375040031	other	other	0.683
375040032	other	other	1.178
375040033	other	other	0.739
375040034	other	other	0.954
375040035	other	other	0.504
375040036	other	other	0.773
375040037	other	other	0.504
375040038	other	other	0.516
375040039	other	other	0.561
375040040	other	other	0.665
375040041	other	other	0.516
375040042	other	other	0.552
375040043	other	other	0.676
375040044	other	other	0.728
375040045	other	other	0.565
375040046	other	other	0.568
375040047	other	other	0.594
375040048	other	other	0.568
375040049	other	other	0.582
375040050	other	other	0.58
375040051	other	other	0.607
375040052	other	other	0.707
375040053	other	other	0.614
375040054	other	other	0.644
375040055	other	other	0.563
375040056	other	other	0.689
375040057	other	other	0.615
375040058	other	other	0.561
375040059	other	other	0.553
375040060	other	other	0.551

TMK	MajorOwner	BigstOwner	TaxAcres
375040061	other	other	0.525
375040062	other	other	0.47
375040063	other	other	0.467
375040064	other	other	0.471
375040065	other	other	0.419
375040066	other	other	1.537
375040067	other	other	1.151
375040068	other	other	0.746
375040069	other	other	0.588
375040070	other	other	0.655
375040071	other	other	0.598
375040072	other	other	0.544
375040073	other	other	0.816
375040074	other	other	0.594
375040075	other	other	0.597
375040076	other	other	0.597
375040077	other	other	0.755
375040078	other	other	0.531
375040079	other	other	0.569
375040080	other	other	0.592
375040081	other	other	0.77
375040082	other	other	0.71
375040083	other	other	0.513
375040084	other	other	0.528
375040085	other	other	0.528
375040086	other	other	0.513
375040087	other	other	0.71
375040088	other	other	0.713
375040089	other	other	0.517
375040090	other	other	0.531
375040091	other	other	0.519
375040092	other	other	0.562
375040093	other	other	0.599
375040094	other	other	0.554
375040095	other	other	0.502
375040096	other	other	0.502
375040097	other	other	0.47
375040098	other	other	0.694
375040099	other	other	3.406
375040100	other	other	3.033
375040101	other	other	11.764
375040999	other	other	0
375041001	other	other	0.1641
375041002	other	other	0.1635
375041003	other	other	0.1629
375041004	other	other	0.1948
375041005	other	other	0.1503
375041006	other	other	0.1503

TMK	MajorOwner	BigstOwner	TaxAcres
375041007	other	other	0.1377
375041008	other	other	0.1377
375041009	other	other	0.1377
375041010	other	other	0.1544
375041011	other	other	0.1563
375041012	other	other	0.143
375041013	other	other	0.1531
375041014	other	other	0.1491
375041015	other	other	0.1492
375041016	other	other	0.1492
375041017	other	other	0.1485
375041018	other	other	0.1615
375041019	other	other	0.1615
375041020	other	other	0.1582
375041021	other	other	0.16
375041022	other	other	0.16
375041023	other	other	0.1601
375041024	other	other	0.1687
375041025	other	other	0.1784
375041026	other	other	0.1597
375041027	other	other	0.1449
375041028	other	other	0.1433
375041029	other	other	0.2025
375041030	other	other	0.1747
375041031	other	other	0.1902
375041032	other	other	0.1605
375041033	other	other	0.1607
375041034	other	other	0.1607
375041035	other	other	0.1607
375041036	other	other	0.1633
375041037	other	other	0.1512
375041038	other	other	0.1664
375041039	other	other	0.2467
375041040	other	other	0.161
375041041	other	other	0.1626
375041042	other	other	0.1407
375041043	other	other	0.1498
375041044	other	other	0.1561
375041045	other	other	0.1558
375041046	other	other	0.1558
375041047	other	other	0.1558
375041048	other	other	0.1455
375041049	other	other	0.1613
375041050	other	other	0.1583
375041051	other	other	0.2061
375041052	Govt. County of Hawaii	Govt. County	6.835
375041053	other	other	0.8189
375041054	other	other	3.638

TMK	MajorOwner	BigstOwner	TaxAcres
375041055	other	other	0.1638
375041056	other	other	0.1649
375041057	other	other	0.1486
375041058	other	other	0.1395
375041059	other	other	0.159
375041060	other	other	0.1494
375041061	other	other	0.1809
375041062	other	other	0.14
375041063	other	other	0.1606
375041064	other	other	0.2041
375041065	other	other	0.1416
375041066	other	other	0.2374
375041067	other	other	0.1469
375041068	other	other	0.1404
375041069	other	other	0.1662
375041070	other	other	0.1449
375041071	other	other	0.162
375041072	other	other	0.1825
375041073	other	other	0.1607
375041074	other	other	0.1416
375041075	other	other	0.1529
375041076	other	other	0.1663
375041077	other	other	0.1397
375041078	other	other	0.2118
375041079	other	other	0.1386
375041080	other	other	0.2619
375041081	other	other	0.2246
375041082	other	other	0.2053
375041083	other	other	0.1696
375041084	other	other	0.1581
375041085	other	other	0.1503
375041086	other	other	0.1568
375041087	other	other	0.2225
375041088	other	other	0.1494
375041089	other	other	0.1595
375041090	other	other	0.14
375041091	other	other	0.2071
375041092	other	other	0.205
375041093	other	other	0.188
375041094	other	other	0.223
375041095	other	other	0.2216
375041096	other	other	0.1522
375041097	other	other	0.8091
375041098	other	other	0.164
375041099	other	other	0.1417
375041100	other	other	0.1603
375041101	other	other	0.1534
375041102	other	other	0.1823

TMK	MajorOwner	BigstOwner	TaxAcres
375041103	other	other	0.224
375041104	other	other	0.1682
375041105	other	other	0.1519
375041106	other	other	0.1669
375041107	other	other	0.155
375041108	other	other	0.2052
375041109	other	other	0.2081
375041110	other	other	0.1607
375041111	other	other	0.1785
375041112	other	other	0.2386
375041113	other	other	0.3691
375041114	other	other	0.5824
375041115	other	other	0.6988
375041999	other	other	0
375042001	other	other	0.1474
375042002	other	other	0.1377
375042003	other	other	0.1377
375042004	other	other	0.1377
375042005	other	other	0.1377
375042006	other	other	0.1377
375042007	other	other	0.1382
375042008	other	other	0.1402
375042009	other	other	0.1402
375042010	other	other	0.1378
375042011	other	other	0.1377
375042012	other	other	0.1777
375042013	other	other	0.1501
375042014	other	other	0.146
375042015	other	other	0.1395
375042016	other	other	0.1381
375042017	other	other	0.1381
375042018	other	other	0.1381
375042019	other	other	0.1381
375042020	other	other	0.1382
375042021	other	other	0.1378
375042022	other	other	0.1378
375042023	other	other	0.138
375042024	other	other	0.1393
375042025	other	other	0.1401
375042026	other	other	0.1378
375042027	other	other	0.1377
375042028	other	other	0.1377
375042029	other	other	0.1377
375042030	other	other	0.1377
375042031	other	other	0.1377
375042032	other	other	0.1377
375042033	other	other	0.1377
375042034	other	other	0.1444

TMK	MajorOwner	BigstOwner	TaxAcres
375042035	other	other	0.1473
375042036	other	other	0.1469
375042037	other	other	0.1469
375042038	other	other	0.1377
375042039	other	other	0.1377
375042040	other	other	0.1377
375042041	other	other	0.1377
375042042	other	other	0.1385
375042043	other	other	0.1394
375042044	other	other	0.1396
375042045	other	other	0.1534
375042046	other	other	0.1622
375042047	other	other	0.1394
375042048	other	other	0.1379
375042049	other	other	0.1377
375042050	other	other	0.1377
375042051	other	other	0.1377
375042052	other	other	0.1377
375042053	other	other	0.1377
375042054	other	other	0.1377
375042055	other	other	0.1377
375042056	other	other	0.1377
375042057	other	other	0.1394
375042058	other	other	0.1377
375042059	other	other	0.1377
375042060	other	other	0.1377
375042061	other	other	0.1377
375042062	other	other	0.1377
375042063	other	other	0.1561
375042064	other	other	0.1377
375042065	other	other	0.1377
375042066	other	other	0.138
375042067	other	other	0.1526
375042068	other	other	0.2376
375042069	other	other	0.1576
375042070	other	other	0.1444
375042071	other	other	0.1579
375042072	other	other	0.1701
375042073	other	other	0.1608
375042074	other	other	0.1492
375042075	other	other	0.1378
375042076	other	other	0.1379
375042077	other	other	0.1983
375042078	other	other	2.462
375042079	other	other	0.1423
375042080	other	other	0.1415
375042081	other	other	0.1415
375042082	other	other	0.1415

TMK	MajorOwner	BigstOwner	TaxAcres
375042083	other	other	0.1414
375042084	other	other	0.1414
375042085	other	other	0.1414
375042086	other	other	0.1414
375042087	other	other	0.1414
375042088	other	other	0.1412
375042089	other	other	0.142
375042090	other	other	0.177
375042091	other	other	0.1521
375042092	other	other	0.1606
375042093	other	other	0.1606
375042094	other	other	0.1605
375042095	other	other	0.1605
375042096	other	other	0.1431
375042097	other	other	0.1595
375042098	other	other	0.1595
375042099	other	other	0.1876
375042100	other	other	0.1377
375042101	other	other	0.1377
375042102	other	other	0.1378
375042103	other	other	0.1971
375042104	other	other	0.2197
375042105	other	other	0.1746
375042106	other	other	0.1464
375042107	other	other	0.1474
375042108	other	other	0.1458
375042109	other	other	0.1458
375042110	other	other	0.1458
375042111	other	other	0.1699
375042112	other	other	0.1699
375042113	other	other	0.1699
375042114	other	other	0.1699
375042115	other	other	0.1699
375042116	other	other	0.1699
375042117	other	other	0.1693
375042118	other	other	0.1722
375042119	other	other	0.1722
375042120	other	other	0.172
375042121	other	other	0.1724
375042122	other	other	0.1786
375042123	other	other	0.175
375042124	other	other	0.1576
375042125	other	other	0.1539
375042126	other	other	0.1592
375042127	other	other	0.1546
375042128	other	other	0.1673
375042129	other	other	0.1414
375042130	other	other	0.1651

TMK	MajorOwner	BigstOwner	TaxAcres
375042131	other	other	0.1492
375042132	other	other	0.157
375042133	other	other	0.1682
375042134	other	other	0.1724
375042135	other	other	0.4512
375042136	other	other	0.1976
375042137	other	other	0.1494
375042138	other	other	0.14
375042139	other	other	0.141
375042140	other	other	0.1433
375042141	other	other	0.1411
375042142	other	other	0.1789
375042143	other	other	0.1603
375042144	other	other	0.1485
375042145	other	other	0.1683
375042146	other	other	0.1508
375042147	other	other	0.1507
375042148	other	other	0.1754
375042149	other	other	0.149
375042150	other	other	0.2017
375042151	other	other	2.743
375043001	other	other	0.3257
375043002	other	other	0.3935
375043003	other	other	0.4684
375043004	other	other	0.4928
375043005	other	other	0.4937
375043006	other	other	0.6124
375043007	other	other	0.526
375043008	other	other	0.5361
375043009	other	other	0.488
375043010	other	other	0.5436
375043011	other	other	0.6025
375043012	other	other	0.4018
375043013	other	other	0.4108
375043014	other	other	0.3327
375043015	other	other	0.3833
375043016	other	other	0.3899
375043017	other	other	0.398
375043018	other	other	0.4522
375043019	other	other	0.4655
375043020	other	other	0.419
375043021	other	other	0.4745
375043022	other	other	0.428
375043023	other	other	0.4735
375043024	other	other	0.728
375043025	other	other	0.4075
375043026	other	other	0.4074
375043027	other	other	0.4034

TMK	MajorOwner	BigstOwner	TaxAcres
375043028	other	other	0.7907
375043029	Govt. County of Hawaii	other	0
375043030	Govt. County of Hawaii	Govt. County	0.3492
375043031	other	other	0.93
375043032	other	other	0.3992
375043033	other	other	0.3621
375043034	other	other	0.5029
375043035	other	other	0.4549
375043036	other	other	0.4512
375043037	other	other	0.536
375043038	other	other	0.3444
375043039	other	other	0.3444
375043040	other	other	0.3444
375043041	other	other	0.4525
375043042	other	other	0.3525
375043043	other	other	0.4679
375043044	other	other	0.4478
375043045	other	other	0.3701
375043046	other	other	0.3505
375043047	other	other	0.4144
375043048	other	other	0.3444
375043049	other	other	0.3444
375043050	other	other	0.3444
375043051	other	other	0.3444
375043052	other	other	0.3553
375043053	other	other	0.7666
375043054	other	other	0.203
375043055	other	other	0.151
375043056	other	other	0.163
375043057	other	other	0.1466
375043058	other	other	0.1523
375043059	other	other	0.1569
375043060	other	other	0.2261
375043061	other	other	0.1445
375043062	other	other	0.152
375043063	other	other	0.1797
375043064	other	other	0.1654
375043065	other	other	0.1653
375043066	other	other	0.1654
375043067	other	other	0.1654
375043068	other	other	0.1656
375043069	other	other	0.1732
375043070	other	other	0.189
375043071	other	other	0.1813
375043072	other	other	0.1606
375043073	other	other	0.1604
375043074	other	other	0.1626
375043075	other	other	0.1877

TMK	MajorOwner	BigstOwner	TaxAcres
375043076	other	other	0.1562
375043077	other	other	0.2303
375043078	other	other	0.2044
375043079	other	other	0.1621
375043080	other	other	0.1661
375043081	other	other	0.173
375043082	other	other	0.1607
375043083	other	other	0.1757
375043084	other	other	0.171
375043085	other	other	0.1625
375043086	other	other	0.1506
375043087	other	other	0.1418
375043088	other	other	0.1688
375043089	other	other	0.1742
375043090	other	other	0.1428
375043091	other	other	0.1423
375043092	other	other	0.1394
375043093	other	other	0.1466
375043094	other	other	0.1391
375043095	other	other	0.2123
375043096	other	other	0.1381
375043097	other	other	0.1918
375043098	other	other	0.1972
375043099	other	other	0.1588
375043100	other	other	0.1607
375043101	other	other	0.148
375043102	other	other	0.1388
375043103	other	other	0.1446
375043104	other	other	0.138
375043105	other	other	0.1473
375043106	other	other	0.1395
375043107	other	other	0.1591
375043108	other	other	0.1711
375043109	other	other	0.1564
375043110	other	other	0.1829
375043111	other	other	0.1535
375043112	other	other	0.167
375043113	other	other	0.2191
375043114	other	other	0.1473
375043115	other	other	0.1725
375043116	other	other	0.1726
375043117	other	other	0.141
375043118	other	other	0.2042
375043119	other	other	0.1756
375043120	other	other	0.1725
375043121	Govt. County of Hawaii	Govt. County	0.5699
375043122	other	other	0.1554
375043123	other	other	0.138

TMK	MajorOwner	BigstOwner	TaxAcres
375043124	other	other	0.1487
375043125	other	other	0.1378
375043126	other	other	0.1377
375043127	other	other	0.1382
375043128	other	other	3.045
375043129	other	other	0.0008
375043130	other	other	0.2289
375043131	other	other	0.1963
375043132	other	other	0.1894
375043133	other	other	0.1856
375043134	other	other	0.1832
375043135	other	other	0.2138
375043136	other	other	0.2394
375043137	other	other	0.2119
375043138	other	other	0.1834
375043139	other	other	0.1488
375043140	other	other	0.172
375043141	other	other	0.1633
375043142	other	other	0.1806
375043143	other	other	0.1469
375043144	other	other	0.1551
375043145	other	other	0.152
375043146	other	other	0.1491
375043147	other	other	0.1385
375043148	other	other	0.1605
375043149	other	other	0.2303
375043150	other	other	0.1491
375043151	other	other	0.1789
375043152	other	other	0.1437
375043153	other	other	0.1542
375043154	other	other	0.1414
375043155	other	other	0.1404
375043156	other	other	0.1378
375043157	other	other	0.1412
375043158	other	other	0.138
375043159	other	other	0.138
375043160	other	other	0.1379
375043161	other	other	0.1392
375043162	other	other	0.1379
375043163	other	other	0.1393
375043164	other	other	2.4133
375043165	other	other	0.0484
375043166	other	other	0.2172
375043167	other	other	0.1438
375043168	other	other	0.0857
375043999	other	other	0
375044001	other	other	0.6131
375044002	other	other	0.4941

TMK	MajorOwner	BigstOwner	TaxAcres
375044003	other	other	0.5504
375044004	other	other	0.6875
375044005	other	other	0.4608
375044006	other	other	0.4819
375044007	other	other	0.4598
375044008	other	other	0.4595
375044009	other	other	0.4856
375044010	other	other	0.4934
375044011	other	other	0.4592
375044012	other	other	0.4592
375044013	other	other	0.4592
375044014	other	other	0.5075
375044015	other	other	0.4592
375044016	other	other	0.6882
375044017	other	other	1
375044018	other	other	5.014
375044019	other	other	0.801
376001001	Waiono Meadows Ranch	other	500.734
376001002	Lanihau	Lanihau	3164.557
376001003	other	other	304.529
376001004	other	other	254.826
376001005	Lanihau	Lanihau	305.832
376001006	Lanihau	Lanihau	1116.791
376002001	other	other	42.024
376002002	other	other	56.789
376002003	other	other	3.5
376002004	other	other	3.51
376002005	other	other	3.51
376002006	other	other	3.25
376002007	other	other	19.17
376002008	other	other	16
376002009	other	other	19.17
376002010	other	other	9.75
376002011	other	other	7.64
376002012	other	other	9.61
376002013	other	other	9.74
376002015	other	other	47.81
376002017	other	other	12.729
376002018	other	other	12.77
376002019	other	other	9.56
376002020	other	other	16.13
376002021	other	other	17.7
376002024	other	other	65.16
376002025	other	other	34.836
376002026	other	other	60
376002027	other	other	60.004
376002028	other	other	80
376002029	other	other	60.004

TMK	MajorOwner	BigstOwner	TaxAcres
376002030	other	other	60
376002033	other	other	18.252
376002034	other	other	4
376002999	other	other	0
376003001	other	other	0.984
376003002	other	other	2
376003003	other	other	2.984
376003004	other	other	1.515
376003005	other	other	1.936
376003006	other	other	0.85
376003007	other	other	2.64
376003008	other	other	5.5
376003009	other	other	4.6
376003010	other	other	1.75
376003011	other	other	2
376003012	other	other	1.409
376003013	other	other	1.291
376003014	other	other	1.41
376003016	other	other	0.3807
376003017	other	other	0.818
376003018	other	other	0.875
376003019	other	other	0.932
376003020	Govt. County of Hawaii	Govt. County	2.87
376003021	other	other	2.194
376003022	other	other	1.136
376003023	other	other	0.48
376003024	other	other	0.92
376003025	other	other	1.016
376003026	other	other	0.062
376003027	other	other	0.12
376003028	other	other	0.1
376003029	other	other	0.086
376003030	other	other	3.168
376003031	other	other	0.2317
376003032	other	other	0.3269
376003033	other	other	0.2331
376003034	other	other	0.2722
376003035	other	other	0.2737
376003036	other	other	0.2363
376003037	other	other	2.12
376003038	other	other	1
376003039	other	other	2.448
376003040	other	other	1
376003041	other	other	1
376003042	other	other	1.301
376003043	other	other	1.236
376003044	other	other	3.434
376003045	other	other	4.225

TMK	MajorOwner	BigstOwner	TaxAcres
376003999	other	other	0
376004001	other	other	1.001
376004002	Govt. State	Govt. State	8.963
376004003	other	other	2.4888
376004004	other	other	0.86
376004005	Govt. County of Hawaii	Govt. County	0.1334
376004006	other	other	0.925
376004007	other	other	0.49
376004008	other	other	0.4702
376004009	other	other	0.1148
376004010	other	other	8.812
376004011	other	other	0.9
376004012	other	other	2.418
376004013	other	other	0.0848
376004014	other	other	0.207
376004015	other	other	0.4007
376004016	other	other	0.6
376004017	other	other	0.983
376004018	other	other	1.08
376004019	other	other	0.947
376004020	other	other	1
376004021	other	other	0.52
376004022	other	other	2.034
376004023	other	other	1.15
376004024	other	other	1.15
376004025	other	other	2.323
376004026	other	other	2.629
376004027	other	other	6.026
376004028	other	other	1.964
376004029	other	other	2.984
376004030	other	other	0.1016
376004031	other	other	1.34
376004033	other	other	0.6809
376004035	other	other	0.2741
376004036	other	other	0.1384
376004038	other	other	0.498
376004039	other	other	0.212
376004040	other	other	0.1633
376004041	other	other	0.908
376004042	other	other	0.879
376004043	other	other	1.722
376004044	other	other	2.755
376004045	other	other	2.984
376004046	other	other	2.394
376004047	other	other	0.4387
376004048	other	other	0.7771
376004049	other	other	1.124
376004050	other	other	1.009

TMK	MajorOwner	BigstOwner	TaxAcres
376004051	other	other	1.081
376004052	other	other	1.066
376004053	other	other	1.064
376004054	other	other	1.731
376004055	other	other	1
376004056	other	other	0
376004999	other	other	0
376005001	other	other	2.474
376005002	other	other	1.673
376005003	other	other	1.535
376005004	other	other	3.791
376005005	other	other	1.434
376005007	other	other	1.862
376005008	other	other	1.049
376005009	other	other	0.8
376005010	other	other	1.363
376005011	other	other	1.6129
376005012	other	other	1.0924
376005013	other	other	0.0736
376005014	other	other	0.2866
376005017	other	other	1.312
376005018	other	other	1.584
376005020	other	other	0.64
376005021	other	other	1.727
376005022	other	other	2.75
376005023	other	other	2.984
376005024	other	other	1.072
376005025	Govt. County of Hawaii	Govt. County	0.413
376005027	other	other	1.537
376005028	other	other	1.388
376005029	other	other	1.015
376005030	other	other	0.4239
376005031	other	other	1.014
376005032	other	other	2
376005033	other	other	1.628
376005034	other	other	0.7898
376005035	other	other	1.727
376005036	other	other	0.4649
376005037	other	other	0.474
376005038	other	other	0.3675
376005039	other	other	0.3444
376005040	other	other	0.0879
376005042	Govt. State	Govt. State	0.223
376005043	other	other	0.5493
376005044	other	other	2.155
376005045	Govt. State	Govt. State	0.1724
376005046	other	other	10.525
376005047	other	other	2.95

TMK	MajorOwner	BigstOwner	TaxAcres
376005048	other	other	3.004
376005049	other	other	1.628
376005050	other	other	3
376005051	other	other	1.89
376005052	other	other	0.477
376005053	other	other	0.4992
376005054	other	other	0.64
376005055	other	other	1.263
376005056	other	other	1.043
376005057	other	other	0.3802
376005058	other	other	0.3517
376005059	other	other	0.3513
376005060	other	other	1.188
376005061	other	other	0.428
376005062	other	other	0.462
376005063	other	other	0.4087
376005064	other	other	0.4068
376005999	other	other	0
376006001	Mauka Holualoa IV	other	1.083
376006002	other	other	0.43
376006003	other	other	4.973
376006004	other	other	2.883
376006005	other	other	2.18
376006007	other	other	2.03
376006008	other	other	0.515
376006009	other	other	2.509
376006010	other	other	5.84
376006011	other	other	0.88
376006013	other	other	3.591
376006014	other	other	1.236
376006015	Mauka Holualoa IV	other	1.01
376006016	C. Twigg-Smith	other	0.78
376006017	Mauka Holualoa IV	other	0.062
376006018	Govt. County of Hawaii	Govt. County	0.486
376006021	other	other	1.26
376006022	other	other	0.62
376006023	other	other	0.616
376006024	other	other	0.61
376006025	other	other	1.2
376006026	other	other	0.49
376006027	Mauka Holualoa IV	other	0.24
376006028	other	other	2.288
376006029	other	other	0.525
376006030	other	other	0.51
376006032	other	other	0.263
376006033	other	other	0.28
376006035	other	other	0.5
376006036	other	other	0.307

TMK	MajorOwner	BigstOwner	TaxAcres
376006037	other	other	1.716
376006038	other	other	1.285
376006039	C. Twigg-Smith	other	1.189
376006040	other	other	1
376006041	other	other	0.524
376006042	other	other	0.521
376006043	other	other	0.517
376006044	other	other	0.518
376006045	other	other	0.52
376006046	other	other	0.52
376006047	other	other	0.55
376006048	other	other	0.5
376006049	other	other	0.72
376006050	other	other	0.555
376006051	other	other	1.216
376006052	other	other	0.31
376006053	other	other	0.5
376006054	other	other	1.238
376006055	Mauka Holualoa IV	other	1.599
376006999	other	other	0
376007001	other	other	5.45
376007002	other	other	2.45
376007003	other	other	3.23
376007004	other	other	4.348
376007005	other	other	1.414
376007006	other	other	1.267
376007007	other	other	5.106
376007008	Roman Catholic Church	other	6.092
376007010	other	other	4.013
376007011	Govt. State	Govt. State	0.122
376007012	other	other	0.975
376007013	other	other	4.42
376007016	other	other	3.06
376007017	other	other	3.061
376007018	other	other	3.261
376007019	other	other	1.467
376007020	other	other	1
376007999	other	other	0
376008001	Hawaii Conf. Foundation	other	0.63
376008003	other	other	0.3766
376008004	other	other	0.3236
376008005	other	other	22.816
376008006	other	other	0.2334
376008007	other	other	0.208
376008008	other	other	5.884
376008009	other	other	1.6
376008010	other	other	7.5
376008012	other	other	10

TMK	MajorOwner	BigstOwner	TaxAcres
376008013	other	other	1.4
376008014	other	other	1.9
376008015	other	other	0.3755
376008016	other	other	1.62
376008017	other	other	0.52
376008018	other	other	1
376008019	other	other	0.082
376008020	other	other	1.405
376008021	other	other	0.1598
376008022	other	other	2.27
376008023	other	other	4.63
376008024	other	other	0.0548
376008028	other	other	3.043
376008029	other	other	0.2663
376008030	other	other	0.297
376008032	other	other	0.4659
376008033	other	other	1.002
376008034	other	other	1.003
376008035	other	other	1.273
376008036	other	other	1.026
376008037	other	other	1.075
376008038	other	other	1.428
376008039	other	other	1.346
376008040	other	other	2.151
376008999	other	other	0
376009001	other	other	0.5616
376009002	other	other	0.3444
376009003	other	other	5.822
376009004	other	other	0.231
376009005	other	other	0.97
376009006	other	other	5.62
376009007	other	other	1.288
376009008	other	other	2.183
376009009	other	other	2.5
376009010	other	other	0.5249
376009011	other	other	1.84
376009012	other	other	1.26
376009013	other	other	0.35
376009014	other	other	2.229
376009015	other	other	0.7
376009016	other	other	1.902
376009019	other	other	3.17
376009020	other	other	1.815
376009021	other	other	0.483
376009022	other	other	0.483
376009023	other	other	1.902
376009024	other	other	0.1071
376009025	other	other	0.673

TMK	MajorOwner	BigstOwner	TaxAcres
376009026	other	other	0.5538
376009027	other	other	1
376009028	other	other	2.258
376009029	other	other	0.3
376009030	other	other	0.3449
376009031	other	other	0.3421
376009032	other	other	0.2602
376009033	other	other	0.253
376009034	other	other	0.3124
376009035	other	other	0.3037
376009036	other	other	0.323
376009037	other	other	1.001
376009038	other	other	1.444
376009039	other	other	1.012
376009040	other	other	1.196
376009041	other	other	1.042
376009042	other	other	1.024
376009043	other	other	0.4188
376009044	other	other	1.257
376009045	other	other	1.171
376009046	other	other	1
376009047	other	other	1.181
376009999	other	other	0
376010002	other	other	0.79
376010003	other	other	0.796
376010004	other	other	1.74
376010005	other	other	2.313
376010006	other	other	0.9
376010007	other	other	1.69
376010008	other	other	0.906
376010009	other	other	1.6
376010010	other	other	1.55
376010011	other	other	2.12
376010012	other	other	0.83
376010013	other	other	1.04
376010014	other	other	3.3
376010015	other	other	0.44
376010016	other	other	1.53
376010017	other	other	1.436
376010018	other	other	0.2528
376010019	other	other	1.132
376010020	other	other	1.23
376010021	other	other	0.942
376010022	other	other	0.626
376010023	other	other	0.584
376010024	other	other	0.671
376010025	other	other	0.11
376010026	other	other	0.083

TMK	MajorOwner	BigstOwner	TaxAcres
376010027	other	other	1.444
376010028	other	other	0.726
376010029	other	other	0.527
376010030	other	other	0.666
376010031	other	other	0.082
376010032	other	other	0.672
376010033	other	other	0.626
376010034	other	other	0.647
376010035	other	other	0.618
376010036	other	other	0.824
376010037	other	other	0.752
376010038	other	other	0.765
376010039	other	other	0.538
376010040	other	other	0.538
376010041	other	other	0.72
376010043	other	other	0.661
376010044	other	other	0.904
376010045	other	other	0.543
376010046	other	other	0.538
376010047	other	other	0.4419
376010999	other	other	0
376011003	other	other	5
376011004	other	other	1.148
376011005	other	other	0.574
376011007	other	other	0.53
376011008	other	other	0.71
376011009	other	other	1.5
376011010	other	other	0.687
376011011	other	other	0.821
376011012	other	other	0.6586
376011013	other	other	2.043
376011014	other	other	2.072
376011015	other	other	0.504
376011016	other	other	0.524
376011017	other	other	1.136
376011018	other	other	2.4
376011019	other	other	3.766
376011020	other	other	0.894
376011021	other	other	0.437
376011022	other	other	0.501
376011023	other	other	0.501
376011024	other	other	0.501
376011025	other	other	0.5
376011026	other	other	0.5
376011027	other	other	0.5
376011028	other	other	0.502
376011029	other	other	3.112
376011030	other	other	0.585

TMK	MajorOwner	BigstOwner	TaxAcres
376011031	other	other	0.527
376011032	other	other	1.106
376011033	other	other	0.5
376011034	other	other	2.966
376011035	other	other	0.582
376011036	other	other	0.53
376011037	other	other	0.602
376011999	other	other	0
376012001	other	other	0.5
376012002	other	other	0.886
376012003	other	other	1.042
376012004	other	other	0.547
376012005	other	other	0.553
376012006	other	other	0.829
376012007	other	other	1.111
376012009	other	other	0.538
376012011	other	other	0.625
376012012	other	other	0.5
376012013	other	other	0.605
376012014	other	other	1.0014
376012015	other	other	5.087
376012016	Govt. County of Hawaii	Govt. County	2.461
376012017	other	other	0.568
376012018	other	other	0.5
376012019	other	other	0.5
376012020	other	other	0.5
376012021	other	other	0.5
376012022	other	other	0.514
376012023	other	other	0.513
376012024	other	other	0.5
376012025	other	other	0.5
376012026	other	other	0.5
376012027	other	other	0.501
376012028	other	other	0.5
376012029	other	other	0.502
376012030	other	other	1.242
376012031	other	other	0.56
376012032	other	other	0.5
376012033	other	other	0.532
376012034	other	other	0.5
376012035	other	other	0.518
376012036	other	other	0.5
376012037	other	other	0.5
376012038	other	other	0.503
376012039	other	other	0.504
376012040	other	other	0.501
376012041	other	other	0.534
376012042	other	other	0.52

TMK	MajorOwner	BigstOwner	TaxAcres
376012043	other	other	0.5006
376012044	other	other	0.53
376012045	other	other	0.523
376012046	other	other	0.536
376012047	other	other	0.524
376012048	other	other	0.5
376012049	other	other	0.527
376012050	other	other	0.5
376012051	other	other	0.514
376012052	other	other	0.506
376012053	other	other	0.5
376012054	other	other	0.1107
376012055	other	other	0.539
376012056	other	other	0.501
376012057	other	other	0.54
376012058	other	other	0.5
376012059	other	other	0.602
376012060	other	other	0.553
376012061	other	other	0.5
376012062	other	other	0.578
376012063	other	other	0.528
376012064	other	other	0.527
376012066	other	other	0.503
376012067	other	other	0.5
376012068	other	other	0.502
376012069	other	other	0.555
376012070	other	other	0.5
376012071	other	other	0.511
376012072	other	other	0.52
376012073	other	other	0.542
376012074	other	other	0.3328
376012075	other	other	0.5
376012076	other	other	0.559
376012077	other	other	0.5
376012078	other	other	0.5
376012079	other	other	0.5
376012080	other	other	0.5
376012081	other	other	0.5
376012082	other	other	0.5
376012083	other	other	0.5
376012084	other	other	0.5
376012085	other	other	0.5
376012086	other	other	0.5
376012087	other	other	0.5
376012088	other	other	0.5
376012089	other	other	0.5
376012090	other	other	0.5
376012091	other	other	0.525

TMK	MajorOwner	BigstOwner	TaxAcres
376012092	other	other	0.611
376012093	other	other	1.039
376012094	other	other	0.66
376012095	other	other	0.569
376012096	other	other	0.5002
376012097	other	other	0.544
376012098	other	other	0.5
376012099	other	other	0.5002
376012100	other	other	0.563
376012101	other	other	0.719
376012102	other	other	0.555
376012103	other	other	0.516
376012104	other	other	0.504
376012105	other	other	0.5
376012106	other	other	0.522
376012107	other	other	0.509
376012108	other	other	0.501
376012109	other	other	0.5
376012110	other	other	0.5
376012111	other	other	0.501
376012112	other	other	0.5
376012113	other	other	0.5
376012114	other	other	0.502
376012115	other	other	0.501
376012116	other	other	0.58
376012117	other	other	0.516
376012118	other	other	0.5461
376012119	other	other	0.5214
376012120	other	other	0.6435
376012121	other	other	0.5432
376012122	other	other	0.5186
376012123	other	other	0.5351
376012124	other	other	0.5356
376012125	other	other	0.6301
376012126	other	other	0.5521
376012127	other	other	0.5099
376012128	other	other	0.503
376012129	other	other	0.5001
376012130	other	other	0.5
376012131	other	other	0.5
376012132	other	other	0.5
376012133	other	other	0.5
376012134	other	other	0.5074
376012135	other	other	0.5
376012136	other	other	0.5503
376012137	other	other	0.5
376012138	other	other	0.5
376012139	other	other	0.5

TMK	MajorOwner	BigstOwner	TaxAcres
376012140	other	other	0.5
376012141	other	other	0.5
376012142	other	other	0.5
376012143	other	other	0.5
376012144	other	other	0.5087
376012145	other	other	0.9372
376012150	other	other	1.403
376012151	other	other	1.002
376012152	other	other	1
376012153	other	other	1
376012154	other	other	0.175
376012999	other	other	0
376013004	other	other	34.198
376013008	other	other	28.001
376013017	other	other	1.002
376013019	Kamehameha Schools	Kamehameha Schools	18.99
376013035	other	other	1.937
376013036	other	other	3.7976
376013041	other	other	0.737
376013999	other	other	0
376014001	other	other	1.8289
376014004	Govt. County of Hawaii	Govt. County	0.5486
376014005	other	other	0.2808
376014007	other	other	0.1402
376014008	other	other	0.1463
376014009	other	other	0.1073
376014010	other	other	0.1021
376014011	other	other	0.0505
376014013	other	other	0.3529
376014014	other	other	0.5363
376014016	other	other	0.1466
376014017	other	other	0.43
376014018	other	other	0.306
376014019	other	other	0.34
376014020	other	other	1.25
376014022	other	other	0.9134
376014024	other	other	0.1484
376014025	other	other	0.9567
376014026	other	other	0.5486
376014027	Govt. State	Govt. State	0.0124
376014028	other	other	0.963
376014029	other	other	0.0554
376014777	other	other	0
376014999	other	other	0
376015001	other	other	0.2181
376015002	other	other	0.25
376015003	other	other	0.052
376015005	other	other	1.56

TMK	MajorOwner	BigstOwner	TaxAcres
376015006	other	other	0.2296
376015007	Kamehameha Schools	Kamehameha Schools	2.0661
376015008	other	other	0.473
376015009	other	other	0.3709
376015010	other	other	0.3753
376015012	other	other	0.1385
376015013	other	other	0.1722
376015014	other	other	0.6597
376015015	other	other	0.1754
376015016	other	other	0.4065
376015017	other	other	1.0694
376015020	Kamehameha Schools	Kamehameha Schools	1.4
376015021	Kamehameha Schools	Kamehameha Schools	0.2617
376015023	other	other	4.608
376015033	other	other	0.642
376015999	other	other	0
376016001	Kamehameha Schools	Kamehameha Schools	6.867
376016012	other	other	0.25
376016013	Govt. State	Govt. State	0.2818
376016014	other	other	0.75
376016015	other	other	0.0127
376016017	other	other	0.3803
376016019	other	other	0.1868
376016020	other	other	0.1868
376016021	other	other	0.1868
376016022	other	other	0.1868
376016023	other	other	0.1868
376016024	other	other	0.1868
376016025	other	other	0.1868
376016026	other	other	0.1848
376016027	Dillingham	other	0.2224
376016030	other	other	0.2928
376016031	other	other	1.036
376016032	other	other	0.13
376016033	Govt. State	Govt. State	0.7665
376016999	other	other	0
376017001	other	other	0.1291
376017002	other	other	0.1951
376017003	other	other	0.1148
376017004	other	other	0.3042
376017005	other	other	0.1088
376017006	other	other	1.059
376017007	other	other	0.3357
376017008	other	other	0.1837
376017009	other	other	0.2755
376017010	other	other	0.1837
376017011	other	other	0.0918
376017012	other	other	0.1837

TMK	MajorOwner	BigstOwner	TaxAcres
376017013	other	other	0.1837
376017014	other	other	0.0949
376017015	other	other	0.0475
376017016	other	other	0.0918
376017017	other	other	0.0918
376017018	other	other	0.2403
376017019	other	other	0.4812
376017020	other	other	0.1984
376017021	other	other	0.1838
376017022	other	other	0.0906
376017023	other	other	0.0676
376017024	other	other	0.0712
376017025	other	other	0.0918
376017026	other	other	0.0918
376017027	other	other	0.865
376017028	other	other	0.76
376017030	other	other	0.419
376017032	other	other	0.6169
376017033	other	other	0.5664
376017035	other	other	0.0241
376017036	other	other	0.1827
376017037	other	other	0.2005
376017038	other	other	0.2392
376017039	other	other	0.2038
376017040	other	other	0.1249
376017041	other	other	0.3106
376017043	other	other	0.4431
376017044	other	other	0.0861
376017045	other	other	0.0723
376017046	other	other	0.1539
376017047	other	other	0.0629
376017048	other	other	0.1986
376017049	other	other	0.3506
376017050	other	other	0.0792
376017051	other	other	0.0831
376017052	other	other	0.1473
376017053	other	other	0.1273
376017054	other	other	0.0918
376017055	other	other	0.0918
376017056	other	other	0.0918
376017057	other	other	0.1837
376017058	other	other	0.2755
376017059	other	other	0.1837
376017060	other	other	0.1377
376017061	other	other	0.0459
376017062	other	other	0.0918
376017064	other	other	0.2802
376017065	other	other	0.2589

TMK	MajorOwner	BigstOwner	TaxAcres
376017066	other	other	0.2571
376017067	other	other	0.0918
376017068	other	other	0.1377
376017069	other	other	0.0918
376017071	other	other	0.188
376017072	other	other	0.045
376017073	other	other	0.2295
376017077	other	other	0.0918
376017078	other	other	0.2403
376017080	other	other	0.034
376017081	other	other	0.1721
376017083	Govt. County of Hawaii	Govt. County	0.19
376017084	Govt. State	Govt. State	0.0315
376017085	other	other	0.0924
376017086	other	other	0.0924
376017087	other	other	0.1848
376017088	other	other	0.1446
376017089	other	other	0.1446
376017090	other	other	0.1446
376017091	other	other	0.1832
376017092	other	other	0.1517
376017093	other	other	0.1191
376017094	other	other	0.1311
376017095	other	other	0.1311
376017096	other	other	0.1263
376017097	other	other	0.1263
376017098	other	other	0.1263
376017099	other	other	0.1263
376017100	other	other	0.1263
376017101	Govt. County of Hawaii	Govt. County	0.5117
376017102	other	other	0.2755
376017999	other	other	0
376018001	other	other	0.2213
376018002	other	other	0.232
376018003	other	other	0.239
376018004	other	other	0.2458
376018005	other	other	0.2509
376018006	other	other	0.2649
376018007	other	other	0.2703
376018008	other	other	0.2605
376018009	other	other	0.272
376018010	other	other	0.3679
376018011	other	other	0.3362
376018012	other	other	0.232
376018013	other	other	0.1934
376018014	other	other	0.1933
376018015	other	other	0.1933
376018016	other	other	0.1933

TMK	MajorOwner	BigstOwner	TaxAcres
376018017	other	other	0.1933
376018018	other	other	0.1932
376018019	other	other	0.1932
376018020	other	other	0.1932
376018021	other	other	0.1931
376018022	other	other	0.1931
376018023	other	other	0.1931
376018024	other	other	0.193
376018025	other	other	0.193
376018026	other	other	0.193
376018027	other	other	0.1941
376018028	other	other	0.2435
376018029	other	other	0.3041
376018030	other	other	0.2295
376018031	other	other	0.1934
376018032	other	other	0.1928
376018033	other	other	0.1928
376018034	other	other	0.1889
376018035	other	other	0.1974
376018036	other	other	0.1974
376018037	other	other	0.1974
376018038	other	other	0.1974
376018039	other	other	0.2201
376018040	other	other	0.2195
376018041	other	other	0.2095
376018042	other	other	0.2115
376018043	other	other	0.2028
376018044	other	other	0.1995
376018045	other	other	0.1895
376018046	other	other	0.1941
376018047	other	other	0.1855
376018048	other	other	0.1831
376018049	other	other	0.1947
376018050	other	other	0.1943
376018051	other	other	0.19
376018052	other	other	0.1841
376018053	other	other	0.1837
376018054	other	other	0.1837
376018055	other	other	0.1837
376018056	other	other	0.1927
376018057	other	other	0.1888
376018058	other	other	0.1922
376018059	other	other	0.1977
376018060	other	other	0.2027
376018061	other	other	0.1995
376018062	other	other	0.2038
376018063	other	other	0.2047
376018064	other	other	0.1848

TMK	MajorOwner	BigstOwner	TaxAcres
376018065	other	other	0.1842
376018066	other	other	0.1842
376018067	other	other	0.1843
376018068	other	other	0.189
376018069	other	other	0.1928
376018070	other	other	0.1928
376018071	other	other	0.1928
376018072	other	other	0.1928
376018073	other	other	0.273
376018074	other	other	0.1722
376018075	other	other	0.2376
376018076	other	other	0.2377
376018077	other	other	0.2773
376018078	other	other	0.2377
376018079	other	other	0.243
376018080	other	other	0.2514
376018081	other	other	0.2047
376018082	other	other	0.1984
376018083	other	other	0.1984
376018084	other	other	0.1984
376018085	other	other	0.186
376018086	other	other	0.1966
376018087	other	other	0.2275
376018088	other	other	0.2645
376018089	other	other	0.2376
376018090	other	other	0.2421
376018091	other	other	0.2776
376018092	other	other	0.2376
376018093	other	other	0.2376
376018094	other	other	0.2376
376018095	other	other	0.2376
376018096	other	other	0.2246
376018097	other	other	0.214
376018098	other	other	0.1928
376018099	other	other	0.1791
376018100	other	other	0.1791
376018101	other	other	0.1791
376018102	other	other	0.1791
376018103	other	other	0.2011
376018104	other	other	0.2011
376018105	other	other	0.2011
376018106	other	other	0.2204
376018107	other	other	0.1889
376018108	other	other	0.1928
376018109	other	other	0.1928
376018110	other	other	0.1928
376018112	other	other	0.2005
376018999	other	other	0

TMK	MajorOwner	BigstOwner	TaxAcres
376019001	other	other	0.2199
376019002	other	other	0.2311
376019003	other	other	0.2316
376019004	other	other	0.2251
376019005	other	other	0.2112
376019006	other	other	0.2097
376019007	other	other	0.2114
376019008	other	other	0.223
376019009	other	other	0.0388
376019010	other	other	0.2
376019011	other	other	0.1928
376019012	other	other	0.1928
376019013	other	other	0.1928
376019014	other	other	0.1928
376019015	other	other	0.1928
376019016	other	other	0.1928
376019017	other	other	0.1928
376019018	other	other	0.1947
376019019	other	other	0.1928
376019020	other	other	0.1928
376019021	other	other	0.1928
376019022	other	other	0.1928
376019023	other	other	0.1928
376019024	other	other	0.1928
376019025	other	other	0.1982
376019026	other	other	0.2079
376019027	other	other	0.1941
376019028	other	other	0.1941
376019029	other	other	0.1941
376019030	other	other	0.1941
376019031	other	other	0.1941
376019032	other	other	0.1941
376019033	other	other	0.1939
376019034	Govt. County of Hawaii	Govt. County	1.6292
376019035	other	other	0.2125
376019036	other	other	0.1946
376019037	other	other	0.1941
376019038	other	other	0.1929
376019039	other	other	0.2367
376019040	other	other	0.2376
376019041	other	other	0.2376
376019042	other	other	0.2376
376019043	other	other	0.1791
376019044	other	other	0.1791
376019045	other	other	0.1791
376019046	other	other	0.1858
376019047	other	other	0.3286
376019048	other	other	0.3286

TMK	MajorOwner	BigstOwner	TaxAcres
376019049	other	other	0.2096
376019050	other	other	0.2066
376019051	other	other	0.2066
376019052	other	other	0.2271
376019053	other	other	0.2405
376019054	other	other	0.1928
376019055	other	other	0.1928
376019056	other	other	0.1928
376019057	other	other	0.1928
376019058	other	other	0.1928
376019059	other	other	0.1928
376019060	other	other	0.2546
376019061	other	other	0.209
376019062	other	other	0.2011
376019063	other	other	0.2011
376019064	other	other	0.2011
376019065	other	other	0.2011
376019066	other	other	0.2011
376019067	other	other	0.1928
376019068	other	other	0.1928
376019069	other	other	0.1928
376019070	other	other	0.1928
376019071	other	other	0.1928
376019072	other	other	0.1928
376019073	other	other	0.1928
376019074	other	other	0.1928
376019075	other	other	0.1945
376019076	other	other	0.2268
376019077	other	other	0.226
376019078	other	other	0.226
376019079	other	other	0.2307
376019080	other	other	0.2293
376019081	other	other	0.225
376019082	other	other	0.2189
376019083	other	other	0.2185
376019084	other	other	0.2194
376019085	other	other	0.2205
376019086	other	other	0.2217
376019087	other	other	0.2224
376019088	other	other	0.219
376019089	other	other	0.216
376019090	other	other	0.2171
376019091	other	other	0.2096
376019092	other	other	0.1795
376019093	other	other	0.1767
376019094	other	other	0.1801
376019095	other	other	0.1774
376019096	other	other	0.1743

TMK	MajorOwner	BigstOwner	TaxAcres
376019097	other	other	0.2023
376019098	other	other	0.1722
376019099	other	other	0.2347
376019100	other	other	0.2447
376019999	other	other	0
376019999	other	other	0
376020001	other	other	0.1833
376020002	other	other	0.1824
376020003	other	other	0.1737
376020004	other	other	0.1737
376020005	other	other	0.1806
376020006	other	other	0.1781
376020007	other	other	0.1792
376020008	other	other	0.183
376020009	other	other	0.1976
376020010	other	other	0.1949
376020011	other	other	0.187
376020012	other	other	0.1731
376020013	other	other	0.1855
376020014	other	other	0.1722
376020015	other	other	0.1722
376020016	other	other	0.1722
376020017	other	other	0.1722
376020018	other	other	0.1724
376020019	other	other	0.1723
376020020	other	other	0.1733
376020021	other	other	0.2559
376020022	other	other	0.1901
376020023	other	other	0.2072
376020024	other	other	0.1954
376020025	other	other	0.1781
376020026	other	other	0.1753
376020027	other	other	0.189
376020028	other	other	0.1955
376020029	other	other	0.1834
376020030	other	other	0.1831
376020031	other	other	0.2032
376020032	other	other	0.1877
376020033	other	other	0.1775
376020034	other	other	0.2085
376020035	other	other	0.1992
376020036	other	other	0.1791
376020037	other	other	0.1829
376020038	other	other	0.1856
376020039	other	other	0.1827
376020040	other	other	0.1964
376020041	other	other	0.181
376020042	other	other	0.187

TMK	MajorOwner	BigstOwner	TaxAcres
376020043	other	other	0.1895
376020044	other	other	0.1769
376020045	other	other	0.1764
376020046	other	other	0.1839
376020047	other	other	0.1767
376020048	other	other	0.1754
376020049	other	other	0.1766
376020050	other	other	0.1818
376020051	other	other	0.1818
376020052	other	other	0.1925
376020053	other	other	0.1743
376020054	other	other	0.1768
376020055	other	other	0.1761
376020056	other	other	0.1844
376020057	other	other	0.1844
376020058	other	other	0.1765
376020059	other	other	0.1787
376020060	other	other	0.1772
376020061	other	other	0.1911
376020062	other	other	0.2002
376020063	other	other	0.1746
376020064	other	other	0.1841
376020065	other	other	0.1768
376020066	other	other	0.1768
376020067	other	other	0.1878
376020068	other	other	0.2009
376020069	other	other	0.1954
376020070	other	other	0.2002
376020071	other	other	0.189
376020072	other	other	0.1756
376020073	other	other	0.1735
376020074	other	other	0.1722
376020075	other	other	0.1874
376020076	other	other	0.1817
376020077	other	other	0.1856
376020078	other	other	0.1838
376020079	other	other	0.1894
376020080	other	other	1.911
376020081	other	other	1.2902
376020082	other	other	0.4716
376020083	other	other	0.7258
376020084	other	other	0.9441
376020086	other	other	1.617
376020999	other	other	0
376021005	other	other	0.959
376021006	other	other	11.066
376021007	other	other	3.916
376021013	other	other	0.578

TMK	MajorOwner	BigstOwner	TaxAcres
376021014	other	other	16.07
376021016	other	other	40.138
376021017	other	other	30.901
376021018	Govt. County of Hawaii	Govt. County	3.034
376021019	Govt. County of Hawaii	Govt. County	4.251
376021020	other	other	0.606
376021021	other	other	0.512
376021022	other	other	0.5
376021023	other	other	0.5
376021024	other	other	0.549
376021026	other	other	0.871
376021027	other	other	0.776
376021028	other	other	0.798
376021029	other	other	0.576
376021030	other	other	0.556
376021031	other	other	0.1694
376021999	other	other	0
376022001	other	other	0.3445
376022002	other	other	0.3882
376022003	other	other	0.3957
376022004	other	other	0.3476
376022005	other	other	0.3448
376022006	other	other	0.3598
376022007	other	other	0.374
376022008	other	other	0.3526
376022009	other	other	0.3462
376022010	other	other	0.3496
376022011	other	other	0.3445
376022012	other	other	0.3445
376022013	other	other	0.3445
376022014	other	other	0.3445
376022015	other	other	0.3445
376022016	other	other	0.3444
376022017	other	other	0.3444
376022018	other	other	0.3444
376022019	other	other	0.3444
376022020	other	other	0.3444
376022021	other	other	0.4357
376022022	other	other	0.3447
376022023	other	other	0.3786
376022025	other	other	0.3444
376022026	other	other	0.3447
376022028	other	other	0.3992
376022029	other	other	0.3444
376022030	other	other	0.3444
376022031	other	other	0.3463
376022032	other	other	0.3463
376022033	other	other	0.3481

TMK	MajorOwner	BigstOwner	TaxAcres
376022034	other	other	0.3444
376022035	other	other	0.3444
376022036	other	other	0.3739
376022037	other	other	0.349
376022038	other	other	0.3975
376022039	other	other	0.3555
376022040	other	other	0.3553
376022041	other	other	0.3553
376022042	other	other	0.3461
376022043	other	other	0.3444
376022044	other	other	0.3444
376022045	other	other	0.3444
376022046	other	other	0.3445
376022047	other	other	0.3444
376022049	other	other	0.3444
376022050	other	other	0.345
376022051	other	other	0.3989
376022052	other	other	0.3816
376022053	other	other	0.3444
376022054	other	other	0.3523
376022055	other	other	0.3444
376022056	other	other	0.3444
376022057	other	other	0.3444
376022058	other	other	0.3445
376022059	other	other	0.3444
376022060	other	other	0.3444
376022061	other	other	0.3444
376022062	other	other	0.3444
376022063	other	other	0.3445
376022064	other	other	0.3446
376022065	other	other	0.3446
376022066	other	other	0.3446
376022067	other	other	0.3446
376022068	other	other	0.3458
376022069	other	other	0.3473
376022070	other	other	0.4026
376022071	other	other	0.3483
376022072	other	other	0.3444
376022073	other	other	0.3809
376022074	other	other	0.407
376022075	other	other	0.3585
376022076	other	other	0.3682
376022077	other	other	0.3497
376022078	other	other	0.349
376022079	other	other	0.349
376022080	other	other	0.3444
376022081	other	other	0.3446
376022082	other	other	0.4608

TMK	MajorOwner	BigstOwner	TaxAcres
376022084	other	other	0.3444
376022085	other	other	0.3444
376022086	other	other	0.3444
376022087	other	other	0.3444
376022088	other	other	0.3444
376022089	other	other	0.3444
376022090	other	other	0.3445
376022091	other	other	0.4326
376022092	other	other	0.3708
376022093	other	other	0.3444
376022094	other	other	0.3444
376022095	other	other	0.3444
376022096	other	other	0.3444
376022097	other	other	0.3444
376022098	Govt. County of Hawaii	Govt. County	0.7047
376022999	other	other	0
376023001	other	other	0.2427
376023002	other	other	0.2365
376023003	other	other	0.2364
376023004	other	other	0.2364
376023005	other	other	0.238
376023006	other	other	0.2365
376023007	other	other	0.2296
376023008	other	other	0.2591
376023009	other	other	0.309
376023010	other	other	0.2356
376023011	other	other	0.233
376023012	other	other	0.233
376023013	other	other	0.233
376023014	other	other	0.2296
376023015	other	other	0.2385
376023016	other	other	0.2411
376023017	other	other	0.2407
376023018	other	other	0.2407
376023019	other	other	0.2491
376023020	other	other	0.2545
376023021	other	other	0.2339
376023022	other	other	0.2419
376023023	other	other	0.4065
376023024	other	other	0.2317
376023025	other	other	0.2296
376023026	other	other	0.2296
376023027	other	other	0.2296
376023028	other	other	0.2296
376023029	other	other	0.2296
376023030	other	other	0.2296
376023031	other	other	0.2304
376023032	other	other	0.3402

TMK	MajorOwner	BigstOwner	TaxAcres
376023033	other	other	0.4285
376023034	other	other	0.2307
376023035	other	other	0.2309
376023036	other	other	0.2311
376023037	other	other	0.265
376023038	other	other	0.2311
376023039	other	other	0.2333
376023040	other	other	0.2306
376023041	other	other	0.2296
376023042	other	other	0.2296
376023043	other	other	0.2701
376023044	other	other	0.2356
376023045	other	other	0.2338
376023046	other	other	0.2504
376023047	other	other	0.2372
376023048	other	other	0.2869
376023049	other	other	0.2869
376023050	other	other	0.3164
376023051	other	other	0.232
376023052	other	other	0.4132
376023053	other	other	0.249
376023054	other	other	0.2296
376023055	other	other	0.2296
376023056	other	other	0.29
376023057	other	other	0.23
376023058	other	other	0.2659
376023059	other	other	0.2513
376023060	other	other	0.2296
376023061	other	other	0.2296
376023062	other	other	0.2319
376023063	other	other	0.2296
376023064	other	other	0.2347
376023065	other	other	0.3384
376023067	other	other	0.3838
376023068	other	other	0.3791
376023069	other	other	0.2326
376023070	other	other	0.2343
376023071	other	other	0.2338
376023072	other	other	0.2486
376023073	other	other	0.2472
376023074	other	other	0.2561
376023999	other	other	0
376024001	other	other	0.2345
376024002	other	other	0.2296
376024003	other	other	0.2296
376024004	other	other	0.2296
376024005	other	other	0.2489
376024006	other	other	0.2297

TMK	MajorOwner	BigstOwner	TaxAcres
376024007	other	other	0.234
376024008	other	other	0.2419
376024009	other	other	0.2384
376024010	other	other	0.2338
376024011	other	other	0.2403
376024012	other	other	0.2566
376024013	other	other	0.2643
376024014	other	other	0.2296
376024015	other	other	0.2296
376024016	other	other	0.2296
376024017	other	other	0.2296
376024018	other	other	0.2633
376024019	other	other	0.2296
376024020	other	other	0.2296
376024021	other	other	0.2676
376024022	other	other	0.2296
376024023	other	other	0.2296
376024024	other	other	0.2308
376024025	other	other	9.903
376024026	other	other	0.9701
376024027	other	other	0.1718
376024028	other	other	0.103
376024029	other	other	0.9633
376024031	other	other	2.252
376024032	other	other	1.962
376024033	other	other	1.081
376024034	other	other	3.977
376024035	Hawaii Electric	other	1.53
376024036	other	other	0.3665
376024037	other	other	0.2417
376024038	other	other	0.2296
376024039	other	other	0.2296
376024040	other	other	0.2296
376024041	other	other	0.2296
376024042	other	other	0.2296
376024043	other	other	0.2296
376024044	other	other	0.2296
376024045	other	other	0.2296
376024046	other	other	0.234
376024047	other	other	0.2317
376024048	other	other	0.2296
376024049	other	other	0.2296
376024050	other	other	0.2296
376024051	other	other	0.232
376024052	other	other	0.2346
376024053	other	other	0.2296
376024054	other	other	0.2296
376024055	other	other	0.253

TMK	MajorOwner	BigstOwner	TaxAcres
376024056	other	other	0.2304
376024057	other	other	0.2513
376024058	other	other	0.2323
376024059	other	other	0.2296
376024060	other	other	0.2296
376024061	other	other	0.2296
376024062	other	other	0.2296
376024063	other	other	0.2329
376024064	other	other	0.2626
376024065	other	other	0.2296
376024066	other	other	0.2296
376024067	other	other	0.2296
376024068	other	other	0.2296
376024069	other	other	0.2296
376024070	other	other	0.2398
376024071	other	other	0.3745
376024072	other	other	0.492
376024073	other	other	0.2602
376024074	other	other	0.2453
376024075	other	other	0.2672
376024076	other	other	0.2321
376024077	other	other	0.3071
376024078	other	other	0.3647
376024079	other	other	0.1382
376024080	other	other	0.2296
376024081	other	other	0.2296
376024082	other	other	0.2296
376024083	other	other	0.2296
376024084	other	other	0.2306
376024085	other	other	0.2628
376024086	other	other	0.242
376024087	other	other	0.3124
376024088	other	other	0.2296
376024089	other	other	0.2296
376024090	other	other	0.2296
376024091	other	other	0.2296
376024092	other	other	0.2296
376024093	other	other	0.2296
376024094	other	other	0.2296
376024095	other	other	0.4024
376024096	other	other	0.2365
376024097	other	other	0.2309
376024098	other	other	0.2407
376024099	other	other	0.2588
376024100	other	other	0.3885
376024101	other	other	0.2296
376024102	other	other	0.2911
376024103	other	other	0.2676

TMK	MajorOwner	BigstOwner	TaxAcres
376024104	other	other	0.2296
376024105	other	other	0.2296
376024106	other	other	0.2296
376024107	other	other	0.2296
376024108	other	other	0.2296
376024109	other	other	0.2296
376024110	other	other	0.2296
376024111	other	other	0.2736
376024112	other	other	1.141
376024113	other	other	0.946
376024999	other	other	0
376024999	other	other	0
376025001	other	other	0.3227
376025002	other	other	0.2813
376025003	other	other	0.2322
376025004	other	other	0.2545
376025005	other	other	0.2325
376025006	other	other	0.2325
376025007	other	other	0.2325
376025008	other	other	0.2325
376025009	other	other	0.2325
376025010	other	other	0.2325
376025011	other	other	0.2325
376025012	other	other	0.1763
376025013	Govt. County of Hawaii	Govt. County	0.5153
376025014	other	other	0.2755
376025015	other	other	0.2755
376025016	other	other	0.2755
376025017	other	other	0.2755
376025018	other	other	0.2755
376025019	other	other	0.3288
376025020	other	other	0.2492
376025021	other	other	0.2586
376025022	other	other	0.2305
376025023	other	other	0.232
376025024	other	other	0.2317
376025025	other	other	0.2348
376025026	other	other	0.2451
376025027	other	other	0.2542
376025028	other	other	0.2296
376025029	other	other	0.2367
376025030	other	other	0.2348
376025031	other	other	0.2348
376025032	other	other	0.2348
376025033	other	other	0.2348
376025034	other	other	0.2348
376025035	other	other	0.2348
376025036	other	other	0.2348

TMK	MajorOwner	BigstOwner	TaxAcres
376025037	other	other	0.2348
376025038	other	other	0.2504
376025039	other	other	0.2319
376025040	other	other	0.2296
376025041	other	other	0.2296
376025042	other	other	0.2296
376025043	other	other	0.2296
376025044	other	other	0.2296
376025045	other	other	0.2296
376025046	other	other	0.2296
376025047	other	other	0.2296
376025048	other	other	0.232
376025049	other	other	0.2754
376025050	other	other	0.2296
376025051	other	other	0.2296
376025052	other	other	0.2296
376025053	other	other	0.2296
376025054	other	other	0.2296
376025055	other	other	0.2296
376025056	other	other	0.2685
376025057	other	other	0.2341
376025058	other	other	0.2297
376025059	other	other	0.2297
376025060	other	other	0.2297
376025061	other	other	0.2297
376025062	other	other	0.2297
376025063	other	other	0.2297
376025064	other	other	0.2297
376025065	other	other	0.2297
376025066	other	other	0.2374
376025067	other	other	0.252
376025068	other	other	0.2296
376025069	other	other	0.2296
376025070	other	other	0.2302
376025071	other	other	0.2986
376025072	Govt. County of Hawaii	Govt. County	0.7411
376025999	other	other	0
376026001	other	other	0.3464
376026002	other	other	0.3474
376026003	other	other	0.3463
376026004	other	other	0.3458
376026005	other	other	0.3621
376026006	other	other	0.3444
376026007	other	other	0.3451
376026008	other	other	0.3446
376026009	other	other	0.3703
376026010	other	other	0.5605
376026012	other	other	0.5085

TMK	MajorOwner	BigstOwner	TaxAcres
376026013	other	other	0.3482
376026014	other	other	0.3494
376026015	other	other	0.3511
376026016	other	other	0.348
376026017	other	other	0.3457
376026018	other	other	0.3457
376026019	other	other	0.3468
376026020	other	other	0.3818
376026021	other	other	0.3639
376026022	other	other	0.4385
376026023	other	other	0.3444
376026024	other	other	0.3888
376026025	other	other	0.3888
376026026	other	other	0.3888
376026027	other	other	0.3467
376026028	other	other	0.3467
376026029	other	other	0.3467
376026030	other	other	0.3589
376026031	other	other	0.3487
376026032	other	other	0.3495
376026033	other	other	0.3495
376026034	other	other	0.3504
376026035	other	other	0.6121
376026036	other	other	0.4152
376026037	other	other	0.3953
376026038	other	other	0.3525
376026039	other	other	0.3662
376026040	other	other	0.0849
376026041	Govt. County of Hawaii	Govt. County	6.028
376026042	other	other	0.3468
376026043	other	other	0.3444
376026044	other	other	0.3444
376026045	other	other	0.3444
376026046	other	other	0.3468
376026047	other	other	0.3444
376026048	other	other	0.3444
376026049	other	other	0.3565
376026050	other	other	0.3865
376026051	other	other	0.3587
376026052	other	other	0.3587
376026053	other	other	0.3706
376026054	other	other	0.3503
376026055	other	other	0.3673
376026056	other	other	0.3457
376026057	other	other	0.3457
376026058	other	other	0.3457
376026059	other	other	0.3457
376026060	other	other	0.3788

TMK	MajorOwner	BigstOwner	TaxAcres
376026061	other	other	0.3843
376026062	other	other	0.3941
376026999	other	other	0
376027001	other	other	1.4898
376027002	other	other	0.3449
376027003	other	other	0.3444
376027004	other	other	0.3846
376027005	other	other	0.4474
376027006	other	other	2.4244
376027007	other	other	0.3617
376027008	other	other	0.3776
376027009	other	other	0.3491
376027010	other	other	0.3445
376027011	other	other	0.3444
376027012	other	other	0.3444
376027013	other	other	0.3444
376027014	other	other	0.3444
376027015	other	other	0.3444
376027016	other	other	0.4174
376027017	other	other	0.3505
376027018	other	other	0.3458
376027019	other	other	0.3444
376027020	other	other	0.3444
376027021	other	other	0.3444
376027022	other	other	0.3444
376027023	other	other	0.3444
376027024	other	other	0.3444
376027025	other	other	0.3614
376027026	other	other	0.3772
376027027	other	other	0.3895
376027028	other	other	0.348
376027029	other	other	0.3625
376027030	other	other	0.345
376027031	other	other	0.3444
376027032	other	other	0.3444
376027033	other	other	0.3444
376027034	other	other	0.3444
376027035	other	other	0.3451
376027037	Govt. County of Hawaii	Govt. County	1.774
376027038	Govt. County of Hawaii	Govt. County	2.109
376027039	other	other	0.3533
376027040	other	other	0.3562
376027041	other	other	0.362
376027042	other	other	3.0489
376027043	other	other	0.3499
376027044	other	other	0.3614
376027045	other	other	0.3459
376027046	other	other	0.3459

TMK	MajorOwner	BigstOwner	TaxAcres
376027047	other	other	0.3673
376027048	other	other	0.3701
376027049	other	other	0.3639
376027050	other	other	0.3467
376027051	other	other	0.3444
376027052	other	other	0.3444
376027053	other	other	0.347
376027054	other	other	0.3569
376027055	other	other	0.3444
376027056	other	other	0.3444
376027057	other	other	0.3517
376027058	other	other	0.4736
376027059	other	other	0.6255
376027060	other	other	0.4441
376027061	other	other	0.3747
376027062	other	other	0.3546
376027063	other	other	0.3451
376027064	other	other	0.3444
376027065	other	other	0.3444
376027066	other	other	0.3444
376027067	other	other	0.3444
376027068	other	other	0.3445
376027069	other	other	0.3444
376027070	other	other	0.4547
376027071	other	other	0.348
376027072	other	other	0.3444
376027073	other	other	0.3444
376027074	other	other	0.3444
376027075	other	other	0.3444
376027076	other	other	0.3444
376027077	other	other	0.3444
376027078	other	other	0.3452
376027079	other	other	0.3453
376027080	other	other	0.3484
376027081	other	other	0.3444
376027082	other	other	0.3444
376027083	other	other	0.3444
376027084	other	other	0.3687
376027085	other	other	0.3688
376027086	other	other	0.3444
376027087	other	other	0.3444
376027088	other	other	0.3444
376027089	other	other	0.3444
376027090	other	other	0.3571
376027091	other	other	0.3967
376027092	other	other	0.368
376027093	other	other	0.3672
376027094	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
376027095	other	other	0.3444
376027096	other	other	0.3463
376027097	other	other	0.4402
376027098	other	other	0.4174
376027099	other	other	0.3449
376027100	other	other	0.3689
376027101	other	other	0.4174
376027102	other	other	0.3695
376027103	other	other	0.3457
376027105	Govt. County of Hawaii	Govt. County	1.645
376027106	other	other	0.3596
376027107	other	other	0.391
376027108	other	other	0.4007
376027109	other	other	0.4178
376027110	other	other	0.4828
376027111	other	other	0.3862
376027112	other	other	0.3917
376027113	other	other	0.4764
376027114	other	other	0.5746
376027115	other	other	0.5248
376027116	other	other	0.5248
376027117	other	other	0.5248
376027118	other	other	0.5248
376027119	other	other	0.5248
376027120	other	other	0.5248
376027121	other	other	0.6106
376027122	other	other	0.646
376027123	other	other	0.5836
376027124	other	other	0.9242
376027125	other	other	0.3489
376027126	other	other	0.396
376027127	other	other	0.3464
376027128	other	other	0.4259
376027129	other	other	0.3629
376027130	other	other	0.3587
376027131	other	other	0.4242
376027132	other	other	0.4628
376027133	other	other	0.3971
376027134	other	other	0.4109
376027135	other	other	0.4409
376027136	other	other	0.5559
376027137	other	other	0.5781
376027138	other	other	1.2079
376027139	other	other	0.4447
376027140	other	other	0.4083
376027141	other	other	0.3833
376027142	other	other	0.4565
376027143	other	other	0.7999

TMK	MajorOwner	BigstOwner	TaxAcres
376027144	other	other	0.4574
376027145	other	other	0.722
376027146	other	other	0.3679
376027147	other	other	0.3515
376027148	other	other	0.3624
376027149	other	other	0.3467
376027150	other	other	0.3593
376027999	other	other	0
376027999	other	other	0
377001001	D.R. Greenwell Trust	other	539.906
377001002	C. Twigg-Smith	other	531.694
377001004	other	other	139.85
377001010	D.R. Greenwell Trust	other	1534.797
377001011	D.R. Greenwell Trust	other	25.246
377001012	D.R. Greenwell Trust	other	25.257
377001013	D.R. Greenwell Trust	other	25.283
377001014	D.R. Greenwell Trust	other	25.345
377001015	D.R. Greenwell Trust	other	31.938
377001016	D.R. Greenwell Trust	other	33.949
377001017	D.R. Greenwell Trust	other	42.969
377001018	D.R. Greenwell Trust	other	982.298
377002002	other	other	1.8
377002007	other	other	1.5
377002008	other	other	0.647
377002009	other	other	21.283
377002010	other	other	0.37
377002014	other	other	1.09
377002015	other	other	1.538
377002016	other	other	2.034
377002017	other	other	0.807
377002018	other	other	1.34
377002019	other	other	1.34
377002020	other	other	0.863
377002021	other	other	4.201
377002022	other	other	6.678
377002023	other	other	5.4618
377002024	other	other	0.2777
377002025	other	other	2.977
377002026	Govt. State	Govt. State	0.0587
377002027	other	other	1
377002028	other	other	0.554
377002030	Govt. State	Govt. State	0.321
377002031	D.R. Greenwell Trust	other	0.1471
377002032	other	other	1
377002033	other	other	6.561
377002034	other	other	1
377002035	other	other	1
377002036	other	other	1.001

TMK	MajorOwner	BigstOwner	TaxAcres
377002999	other	other	0
377003003	other	other	43.896
377003004	Mauka Holualoa IV	other	0.17
377003007	other	other	1.75
377003008	other	other	0.5
377003009	other	other	0.9
377003010	other	other	0.626
377003011	other	other	1.1713
377003020	other	other	0.332
377003021	other	other	1.485
377003022	other	other	0.27
377003023	other	other	0.1528
377003027	other	other	0.926
377003028	other	other	0.4541
377003029	other	other	4.874
377003030	other	other	0.614
377003031	other	other	0.551
377003032	other	other	0.54
377003033	other	other	0.512
377003034	other	other	0.639
377003035	other	other	1.04
377003036	other	other	0.564
377003037	other	other	1.143
377003038	other	other	0.593
377003039	other	other	1.096
377003040	other	other	0.576
377003042	other	other	0.511
377003043	other	other	0.502
377003044	other	other	0.679
377003045	other	other	0.769
377003046	other	other	0.579
377003047	other	other	0.599
377003048	other	other	0.896
377003049	other	other	0.542
377003050	other	other	0.566
377003051	other	other	0.512
377003052	other	other	0.5
377003053	other	other	0.5
377003054	other	other	0.534
377003055	other	other	0.623
377003056	Govt. County of Hawaii	Govt. County	0.1697
377003057	other	other	0.583
377003058	other	other	0.586
377003059	other	other	0.614
377003060	other	other	0.548
377003061	other	other	0.818
377003062	other	other	0.695
377003063	other	other	0.735

TMK	MajorOwner	BigstOwner	TaxAcres
377003064	other	other	0.686
377003065	other	other	0.578
377003066	other	other	0.641
377003067	other	other	0.66
377003068	other	other	0.536
377003069	other	other	0.519
377003070	other	other	0.487
377003071	other	other	0.582
377003072	other	other	0.631
377003073	other	other	0.502
377003074	other	other	0.502
377003075	other	other	0.504
377003076	other	other	0.597
377003077	other	other	1.733
377003078	other	other	0.519
377003079	other	other	0.502
377003080	other	other	0.548
377003081	other	other	0.795
377003082	other	other	0.594
377003083	other	other	0.5
377003084	other	other	5.809
377003085	other	other	2.3
377003999	other	other	0
377004001	other	other	0.11
377004002	other	other	4.174
377004005	other	other	0.1469
377004007	other	other	0.433
377004008	other	other	0.4691
377004009	other	other	0.5214
377004011	Govt. State	Govt. State	16.399
377004012	Govt. State	Govt. State	10.04
377004015	other	other	0.1293
377004016	other	other	0.3011
377004017	Govt. County of Hawaii	Govt. County	0.024
377004018	other	other	0.274
377004019	Govt. County of Hawaii	Govt. County	0.1352
377004021	other	other	0.3283
377004022	other	other	2.69
377004025	other	other	0.7801
377004026	Govt. State	Govt. State	1.255
377004028	other	other	0.1427
377004029	Govt. County of Hawaii	Govt. County	0.176
377004031	other	other	0.1626
377004032	Govt. County of Hawaii	Govt. County	0.211
377004033	other	other	0.2298
377004035	Kamehameha Schools	Kamehameha Schools	16.149
377004037	other	other	11.412
377004039	other	other	0.209

TMK	MajorOwner	BigstOwner	TaxAcres
377004040	other	other	0.1722
377004041	Govt. State	Govt. State	0.16
377004042	Govt. State	Govt. State	0.21
377004043	other	other	41.458
377004044	other	other	0.1975
377004045	Govt. State	Govt. State	0.0113
377004046	other	other	0.1733
377004047	other	other	5.294
377004051	Govt. State	Govt. State	1.31
377004052	Govt. State	Govt. State	0.7
377004053	other	other	0.4734
377004054	other	other	0.0534
377004055	other	other	0.0956
377004056	other	other	5.24
377004057	other	other	3.158
377004058	other	other	2.335
377004060	other	other	1.31
377004061	other	other	4.768
377004062	other	other	4.871
377004063	other	other	8.814
377004064	other	other	5.277
377004065	other	other	5.157
377004066	other	other	5.013
377004067	other	other	5.167
377004068	other	other	5.328
377004069	other	other	6
377004070	other	other	6.458
377004071	other	other	5.366
377004072	other	other	7.864
377004073	other	other	4.796
377004074	other	other	0.903
377004075	other	other	0.278
377004076	other	other	0.326
377004077	other	other	5.232
377004078	M. Mallick	other	3.579
377004079	other	other	5.026
377004080	other	other	0.181
377004081	other	other	6.313
377004082	other	other	5.351
377004083	other	other	5.034
377004084	other	other	5.052
377004085	other	other	5.095
377004086	other	other	5.264
377004087	other	other	5.245
377004088	other	other	5.494
377004089	other	other	5.05
377004090	other	other	5.304
377004091	other	other	5.229

TMK	MajorOwner	BigstOwner	TaxAcres
377004092	other	other	5.13
377004093	other	other	5.062
377004094	other	other	5.259
377004095	other	other	0.154
377004096	other	other	0.1789
377004097	other	other	18.243
377004098	Govt. County of Hawaii	Govt. County	0.0216
377004099	other	other	0.1715
377004100	other	other	9.55
377004999	other	other	0
377004999	other	other	0
377005001	other	other	275.6
377005003	other	other	43.223
377005004	other	other	56
377005007	other	other	15
377006001	other	other	14.8
377006002	other	other	1.6
377006003	other	other	2.1
377006009	other	other	0.987
377006010	other	other	37
377006011	other	other	17.03
377006012	other	other	12.3
377006013	other	other	5.41
377006014	other	other	5.6
377006015	other	other	8.5
377006016	other	other	0.554
377006017	other	other	17
377006021	Dillingham	other	2.7
377006022	other	other	2.1
377006023	other	other	2
377006024	other	other	1.9
377006025	other	other	2.44
377006026	other	other	1.35
377006027	other	other	2.25
377006028	other	other	1.35
377006032	other	other	1.5
377006034	Govt. State	Govt. State	5.6
377006035	Govt. State	Govt. State	1
377006036	other	other	1.6
377006037	other	other	5.66
377006038	other	other	1.5
377006999	other	other	0
377007001	other	other	6.8
377007003	other	other	11.926
377007004	other	other	1.316
377007005	Pacific Rim Land	other	9.783
377007006	other	other	5.559
377007007	other	other	4

TMK	MajorOwner	BigstOwner	TaxAcres
377007008	other	other	2.334
377007009	other	other	6.653
377007010	other	other	5.105
377007011	other	other	5.33
377007012	other	other	0.521
377007013	other	other	1.023
377007014	other	other	1.079
377007015	other	other	1.016
377007016	other	other	0.385
377007017	other	other	2.077
377007018	other	other	1.085
377007019	other	other	0.641
377007020	other	other	0.647
377007021	other	other	5.004
377007022	other	other	0.225
377007023	other	other	1.13
377007024	other	other	4
377007025	other	other	3.936
377007026	other	other	0.35
377007028	other	other	1.18
377007029	other	other	3.001
377007030	other	other	5.14
377007031	other	other	1
377007032	Govt. State	Govt. State	0.802
377007038	other	other	1
377007039	other	other	1
377007040	other	other	1.215
377007041	other	other	27.316
377007042	other	other	1.006
377007043	other	other	17.474
377007044	other	other	0.831
377007045	other	other	1
377007046	other	other	5.001
377007047	other	other	5.275
377007048	other	other	1.389
377007049	other	other	1.198
377007050	other	other	1.112
377007051	other	other	1.171
377007052	other	other	3.635
377007053	other	other	1.254
377007054	other	other	1.031
377007055	other	other	0.264
377007056	other	other	5.134
377007057	other	other	5.019
377007058	other	other	5
377007059	other	other	5.042
377007060	other	other	5.075
377007061	other	other	5.022

TMK	MajorOwner	BigstOwner	TaxAcres
377007062	other	other	5.001
377007063	other	other	5.45
377007064	other	other	6.495
377007065	other	other	5.129
377007066	other	other	5.14
377007067	other	other	5.363
377007068	other	other	5.896
377007069	other	other	5
377007070	other	other	5.044
377007071	other	other	5.102
377007072	other	other	5.207
377007073	other	other	5.014
377007074	other	other	4.764
377007075	other	other	1
377007076	other	other	1
377007077	other	other	1
377007078	other	other	2
377007079	other	other	5.001
377007080	other	other	5.146
377007081	other	other	5.001
377007082	other	other	5.001
377007083	other	other	5.148
377007084	other	other	5.455
377007085	other	other	5.164
377007086	other	other	1
377007087	other	other	1
377007088	other	other	1.218
377007089	other	other	0.6
377007090	other	other	1.055
377007091	other	other	1.774
377007092	other	other	1
377007093	other	other	0.504
377007999	other	other	0
377008001	other	other	8.175
377008017	Govt. County of Hawaii	Govt. County	0.2894
377008018	other	other	0.267
377008019	other	other	0.3604
377008020	Govt. County of Hawaii	Govt. County	1.3017
377008021	other	other	10.617
377008022	other	other	1.1
377008023	other	other	10.7748
377008025	other	other	0.4001
377008026	Govt. County of Hawaii	Govt. County	1.177
377008029	other	other	13.332
377008030	other	other	11.481
377008031	Govt. County of Hawaii	Govt. County	4.525
377008035	Govt. County of Hawaii	Govt. County	0.0793
377008055	other	other	1.45

TMK	MajorOwner	BigstOwner	TaxAcres
377008056	other	other	0.317
377008061	other	other	3.666
377008062	other	other	5.29
377008064	Govt. County of Hawaii	Govt. County	0.085
377008093	Govt. County of Hawaii	Govt. County	0.0025
377008094	Govt. County of Hawaii	Govt. County	0.0677
377008098	other	other	0.217
377008099	other	other	11.133
377008100	Govt. County of Hawaii	Govt. County	0.1722
377008101	other	other	3.9915
377008102	other	other	0.193
377008105	other	other	14.929
377008106	Govt. State	Govt. State	0.4599
377008107	Govt. County of Hawaii	Govt. County	0.1175
377008109	other	other	0.749
377008110	other	other	1.161
377008111	other	other	0.73
377008112	other	other	0.0269
377008113	other	other	11.271
377008114	other	other	2.713
377008115	other	other	0.2122
377008119	other	other	0.163
377008120	other	other	19.597
377008121	other	other	11.415
377008122	Govt. County of Hawaii	other	0.403
377008123	Govt. County of Hawaii	other	1.384
377008124	other	other	10.352
377008125	other	other	1.487
377008126	other	other	4.144
377008999	other	other	0
377009001	other	other	0.257
377009002	other	other	0.2343
377009003	other	other	0.2371
377009004	other	other	0.4649
377009006	other	other	0.221
377009007	other	other	0.2096
377009008	other	other	0.371
377009009	other	other	0.2296
377009010	other	other	0.2296
377009011	other	other	0.2296
377009012	other	other	0.2296
377009013	other	other	0.2296
377009016	other	other	0.9183
377009018	other	other	0.2296
377009019	other	other	0.2296
377009020	other	other	0.2276
377009021	other	other	0.2216
377009022	other	other	0.2296

TMK	MajorOwner	BigstOwner	TaxAcres
377009023	other	other	0.2296
377009024	other	other	0.2296
377009025	other	other	0.2296
377009026	other	other	0.2296
377009027	other	other	0.2296
377009028	other	other	0.2296
377009029	other	other	0.2296
377009030	other	other	0.2296
377009031	other	other	0.2296
377009032	other	other	0.2296
377009033	other	other	0.2296
377009034	other	other	0.3604
377009035	other	other	0.2298
377009036	other	other	0.2947
377009037	other	other	0.2387
377009038	other	other	0.198
377009039	other	other	0.198
377009040	other	other	0.241
377009041	other	other	0.241
377009042	other	other	0.2927
377009043	other	other	0.2927
377009044	other	other	0.2927
377009045	other	other	0.2927
377009046	other	other	0.2927
377009047	other	other	0.2927
377009048	other	other	0.2927
377009049	other	other	0.2927
377009050	other	other	0.2927
377009051	other	other	0.2927
377009052	other	other	0.264
377009053	other	other	0.3593
377009054	other	other	0.2832
377009055	other	other	0.3046
377009056	other	other	0.7067
377009059	other	other	0.4231
377009060	other	other	0.3659
377009061	other	other	0.3696
377009062	other	other	0.3629
377009063	other	other	0.3504
377009064	other	other	0.3367
377009065	other	other	0.3221
377009066	other	other	0.2996
377009067	other	other	0.2835
377009068	other	other	0.2956
377009069	other	other	0.2973
377009070	other	other	0.2713
377009071	other	other	0.2748
377009072	other	other	0.22

TMK	MajorOwner	BigstOwner	TaxAcres
377009073	other	other	0.22
377009074	other	other	0.1979
377009999	other	other	0
377010001	other	other	0.001
377010002	other	other	0.412
377010004	other	other	0.208
377010005	other	other	0.1263
377010006	other	other	0.091
377010007	other	other	0.0928
377010008	other	other	0.423
377010009	other	other	0.2181
377010010	other	other	0.1736
377010011	other	other	0.1997
377010012	other	other	0.3571
377010013	other	other	0.2863
377010014	other	other	0.5623
377010016	other	other	0.1861
377010017	other	other	0.2917
377010019	other	other	0.1535
377010020	other	other	0.1396
377010021	other	other	0.1802
377010022	other	other	0.3986
377010024	other	other	0.1616
377010025	other	other	0.1806
377010026	other	other	0.448
377010029	other	other	2.0661
377010035	Govt. State	Govt. State	0.1
377010036	Govt. County of Hawaii	Govt. County	1.4848
377010037	other	other	0.2393
377010041	other	other	0.2154
377010042	other	other	0.1979
377010043	other	other	0.2002
377010044	other	other	0.2533
377010045	other	other	0.2564
377010046	other	other	0.2085
377010047	other	other	0.396
377010049	other	other	0.1722
377010050	other	other	0.1722
377010051	other	other	0.1722
377010052	other	other	0.2154
377010054	other	other	0.1788
377010055	other	other	0.3461
377010057	other	other	0.1731
377010058	other	other	0.1731
377010059	other	other	0.1759
377010060	other	other	0.1805
377010061	other	other	0.1827
377010062	other	other	0.1827

TMK	MajorOwner	BigstOwner	TaxAcres
377010063	other	other	0.1805
377010064	other	other	0.1759
377010065	other	other	0.1759
377010066	other	other	0.1806
377010067	other	other	0.1804
377010068	other	other	0.2078
377010069	other	other	0.1802
377010070	other	other	0.1748
377010071	other	other	0.2832
377010073	other	other	0.1538
377010076	other	other	0.0181
377010077	other	other	0.289
377010082	other	other	0.1995
377010083	other	other	0.2407
377010084	other	other	0.2382
377010999	other	other	0
377011001	other	other	0.2187
377011002	other	other	0.2438
377011003	other	other	0.243
377011004	other	other	0.2653
377011005	other	other	0.2197
377011006	other	other	0.2385
377011007	other	other	0.22
377011008	other	other	0.2165
377011009	other	other	0.2169
377011010	other	other	0.1947
377011011	other	other	0.2083
377011012	other	other	0.1899
377011013	other	other	0.1892
377011014	other	other	0.2296
377011015	other	other	0.2296
377011016	other	other	0.2296
377011017	other	other	0.2296
377011018	other	other	0.2296
377011019	other	other	0.2296
377011020	other	other	0.2296
377011021	other	other	0.2296
377011022	other	other	0.2296
377011023	other	other	0.2797
377011024	other	other	0.2716
377011025	other	other	0.2655
377011026	other	other	0.2569
377011027	other	other	0.2366
377011028	other	other	0.2081
377011029	other	other	0.2692
377011030	other	other	0.2122
377011031	other	other	0.1914
377011032	other	other	0.2532

TMK	MajorOwner	BigstOwner	TaxAcres
377011033	other	other	0.26
377011034	other	other	0.26
377011035	other	other	0.26
377011036	other	other	0.26
377011037	other	other	0.2296
377011038	other	other	0.2296
377011039	other	other	0.2296
377011040	other	other	0.2296
377011041	other	other	0.2296
377011042	other	other	0.2296
377011043	other	other	0.2296
377011044	other	other	0.2296
377011045	other	other	0.2296
377011046	other	other	0.1981
377011999	other	other	0
377012001	other	other	0.2624
377012002	other	other	0.2636
377012003	other	other	0.3567
377012004	other	other	0.3058
377012005	other	other	0.3936
377012006	other	other	0.3092
377012007	other	other	0.3266
377012008	other	other	0.3486
377012009	other	other	0.3004
377012010	other	other	0.2745
377012011	other	other	0.2223
377012012	other	other	0.2518
377012013	other	other	0.1892
377012014	other	other	0.2057
377012015	other	other	0.3377
377012016	other	other	0.2296
377012017	other	other	0.2296
377012018	other	other	0.2296
377012019	other	other	0.2296
377012020	other	other	0.4591
377012022	other	other	0.2296
377012023	other	other	0.2296
377012024	other	other	0.2296
377012025	other	other	0.2296
377012026	other	other	0.2348
377012027	other	other	0.1849
377012028	other	other	0.2296
377012029	other	other	0.2296
377012030	other	other	0.2296
377012031	other	other	0.2296
377012032	other	other	0.2296
377012033	other	other	0.2296
377012034	other	other	0.2296

TMK	MajorOwner	BigstOwner	TaxAcres
377012035	other	other	0.2296
377012036	other	other	0.2296
377012038	other	other	0.4674
377012999	other	other	0
377013001	other	other	0.2948
377013002	other	other	0.2755
377013003	other	other	0.2755
377013004	other	other	0.2755
377013005	other	other	0.2735
377013006	other	other	0.2276
377013007	other	other	0.2296
377013008	other	other	0.2296
377013009	other	other	0.2296
377013010	other	other	0.2296
377013011	other	other	0.2296
377013012	other	other	0.2296
377013013	other	other	0.2296
377013014	other	other	0.2296
377013015	other	other	0.2296
377013016	other	other	0.4416
377013018	other	other	0.2508
377013019	other	other	0.2296
377013020	other	other	0.2296
377013021	other	other	0.2296
377013022	other	other	0.2296
377013023	other	other	0.2296
377013024	other	other	0.2296
377013025	other	other	0.2296
377013026	other	other	0.2296
377013027	other	other	0.2296
377013028	other	other	0.2296
377013029	other	other	0.2276
377013030	other	other	0.2735
377013031	other	other	0.2755
377013032	other	other	0.2755
377013033	other	other	0.2755
377013034	other	other	0.2536
377013035	other	other	0.814
377013036	other	other	1.895
377013041	other	other	0.3765
377013042	other	other	0.3444
377013043	other	other	0.3444
377013044	other	other	0.3444
377013045	other	other	0.3444
377013046	other	other	0.3444
377013047	other	other	0.3444
377013048	other	other	0.3444
377013049	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
377013050	other	other	0.3444
377013051	other	other	0.3444
377013052	other	other	0.3444
377013053	other	other	0.3444
377013054	other	other	0.3444
377013055	other	other	0.4132
377013056	other	other	0.4132
377013057	other	other	0.2066
377013058	other	other	0.3122
377013059	other	other	0.1947
377013061	other	other	0.4057
377013062	other	other	0.3444
377013063	other	other	0.5166
377013065	other	other	0.6415
377013066	other	other	0.3865
377013067	other	other	0.3575
377013068	other	other	0.3575
377013069	other	other	0.0012
377013070	other	other	0.4591
377013071	other	other	0.5738
377013073	other	other	0.344
377013999	other	other	0
377014001	other	other	0.2427
377014002	other	other	0.23
377014003	other	other	0.24
377014004	other	other	0.25
377014005	other	other	0.28
377014006	other	other	0.1811
377014007	other	other	0.2217
377014008	other	other	0.2525
377014009	other	other	0.2853
377014010	other	other	0.2972
377014011	other	other	0.2882
377014012	other	other	0.2791
377014013	other	other	0.282
377014014	other	other	0.2974
377014015	other	other	0.2997
377014016	other	other	0.2891
377014017	other	other	0.2798
377014018	other	other	0.2718
377014019	other	other	0.2653
377014020	other	other	0.26
377014021	other	other	0.2665
377014022	other	other	0.2583
377014023	other	other	0.2685
377014024	other	other	0.2806
377014025	other	other	0.2292
377014026	other	other	0.2251

TMK	MajorOwner	BigstOwner	TaxAcres
377014027	other	other	0.2265
377014028	other	other	0.3075
377014029	other	other	0.371
377014030	other	other	0.243
377014031	other	other	0.4286
377014032	other	other	0.3492
377014033	other	other	0.3511
377014034	other	other	0.2734
377014035	other	other	0.2771
377014036	other	other	0.2497
377014037	other	other	0.2295
377014038	other	other	0.2706
377014039	other	other	0.2784
377014040	other	other	0.2823
377014041	other	other	0.3084
377014042	other	other	0.327
377014043	other	other	0.3281
377014044	other	other	0.304
377014045	other	other	0.2664
377014046	other	other	0.2858
377014047	other	other	0.2896
377014048	other	other	0.2981
377014049	other	other	0.311
377014050	other	other	0.2865
377014051	other	other	0.2475
377014052	other	other	0.1833
377014054	other	other	0.2455
377014055	other	other	0.2357
377014056	other	other	0.2354
377014999	other	other	0
377015001	other	other	0.2234
377015002	other	other	0.2121
377015003	other	other	0.2075
377015004	other	other	0.2097
377015005	other	other	0.2098
377015006	other	other	0.1722
377015007	other	other	0.1722
377015008	other	other	0.1722
377015009	other	other	0.1722
377015010	other	other	0.1722
377015011	other	other	0.1722
377015012	other	other	0.1722
377015013	other	other	0.1722
377015014	other	other	0.1722
377015015	other	other	0.1722
377015016	other	other	0.1722
377015017	other	other	0.1722
377015018	other	other	0.1909

TMK	MajorOwner	BigstOwner	TaxAcres
377015019	other	other	0.1976
377015020	other	other	0.2023
377015021	other	other	0.2025
377015022	other	other	0.2023
377015023	other	other	0.1834
377015024	other	other	0.1752
377015025	other	other	0.2037
377015026	other	other	0.2062
377015027	other	other	0.1722
377015028	other	other	0.1722
377015029	other	other	0.1722
377015030	other	other	0.1722
377015031	other	other	0.1722
377015032	other	other	0.1722
377015033	other	other	0.1722
377015034	other	other	0.1722
377015035	other	other	0.1722
377015036	other	other	0.1722
377015037	other	other	0.1722
377015038	other	other	0.1722
377015039	other	other	0.1906
377015040	other	other	0.1926
377015041	other	other	0.1986
377015042	other	other	0.1919
377015043	other	other	0.1883
377015044	other	other	0.1837
377015045	other	other	0.1934
377015046	other	other	0.1959
377015047	other	other	0.1722
377015048	other	other	0.1722
377015049	other	other	0.1722
377015050	other	other	0.1722
377015051	other	other	0.1722
377015052	other	other	0.1722
377015053	other	other	0.1722
377015054	other	other	0.1722
377015055	other	other	0.3444
377015057	other	other	0.1722
377015058	other	other	0.1722
377015059	other	other	0.1807
377015060	other	other	0.1862
377015061	other	other	0.1769
377015062	other	other	0.1922
377015063	other	other	0.1883
377015064	other	other	0.1722
377015065	other	other	0.1722
377015066	other	other	0.4441
377015068	other	other	0.8712

TMK	MajorOwner	BigstOwner	TaxAcres
377015071	other	other	0.5166
377015074	other	other	0.173
377015075	other	other	0.1722
377015076	other	other	0.1722
377015077	other	other	0.173
377015078	other	other	0.1729
377015079	other	other	0.7126
377015083	other	other	0.1722
377015084	other	other	0.1729
377015085	other	other	0.3525
377015087	other	other	0.3679
377015089	other	other	0.7011
377015093	other	other	0.5305
377015096	other	other	0.1768
377015999	other	other	0
377016001	other	other	0.1793
377016002	other	other	0.1792
377016003	other	other	0.1792
377016004	other	other	0.1792
377016005	other	other	0.1792
377016006	other	other	0.1792
377016007	other	other	0.1792
377016008	other	other	0.1792
377016009	other	other	0.1792
377016010	other	other	0.1792
377016011	other	other	0.1792
377016012	other	other	0.1792
377016013	other	other	0.1792
377016014	other	other	0.1792
377016015	other	other	0.1792
377016016	other	other	0.1792
377016017	other	other	0.1792
377016018	other	other	0.1792
377016019	other	other	0.1792
377016020	other	other	0.2188
377016021	other	other	0.2108
377016022	other	other	0.2109
377016023	other	other	0.2063
377016024	other	other	0.2062
377016025	other	other	0.2134
377016026	other	other	0.2061
377016027	other	other	0.1722
377016028	other	other	0.1722
377016029	other	other	0.1722
377016030	other	other	0.1722
377016031	other	other	0.1722
377016032	other	other	0.1722
377016033	other	other	0.1722

TMK	MajorOwner	BigstOwner	TaxAcres
377016034	other	other	0.1722
377016035	other	other	0.1722
377016036	other	other	0.1722
377016037	other	other	0.1722
377016038	other	other	0.1722
377016039	other	other	0.19
377016040	other	other	0.2057
377016041	other	other	0.1895
377016042	other	other	0.1862
377016043	other	other	0.1907
377016044	other	other	0.1952
377016045	other	other	0.2179
377016046	other	other	0.2112
377016047	other	other	0.1722
377016048	other	other	0.1722
377016049	other	other	0.1722
377016050	other	other	0.1722
377016051	other	other	0.1722
377016052	other	other	0.1722
377016053	other	other	0.1722
377016054	other	other	0.1722
377016055	other	other	0.1722
377016056	other	other	0.1722
377016057	other	other	0.1722
377016058	other	other	0.1722
377016059	other	other	0.2053
377016060	other	other	0.1987
377016061	other	other	0.2166
377016062	other	other	0.2221
377016063	other	other	0.2221
377016064	other	other	0.2255
377016065	other	other	0.2091
377016066	other	other	0.2115
377016067	other	other	0.1722
377016068	other	other	0.1722
377016069	other	other	0.1722
377016070	other	other	0.1722
377016071	other	other	0.1722
377016072	other	other	0.1722
377016073	other	other	0.1722
377016074	other	other	0.1722
377016075	other	other	0.1722
377016076	other	other	0.1722
377016077	other	other	0.1722
377016078	other	other	0.1722
377016079	other	other	0.1968
377016080	other	other	0.2009
377016081	other	other	0.2177

TMK	MajorOwner	BigstOwner	TaxAcres
377016082	other	other	0.2053
377016999	other	other	0
377017001	other	other	0.2067
377017002	other	other	0.1925
377017003	other	other	0.1914
377017004	other	other	0.3903
377017006	other	other	0.2006
377017007	other	other	0.193
377017008	other	other	0.1922
377017009	other	other	0.1916
377017010	other	other	0.1874
377017011	other	other	0.2551
377017012	other	other	0.178
377017013	other	other	0.1795
377017014	other	other	0.1767
377017015	other	other	0.2998
377017016	other	other	0.1726
377017017	other	other	0.176
377017018	other	other	0.1738
377017019	other	other	0.1723
377017020	other	other	0.1723
377017021	other	other	0.1726
377017022	other	other	0.2219
377017023	other	other	0.1722
377017024	other	other	0.1764
377017025	other	other	0.1725
377017026	other	other	0.2004
377017027	other	other	0.2183
377017028	other	other	0.2677
377017029	other	other	0.1725
377017030	other	other	0.1922
377017031	other	other	0.2865
377017032	other	other	0.2253
377017033	other	other	0.1879
377017034	other	other	0.1774
377017035	other	other	0.1723
377017036	other	other	0.1728
377017037	other	other	0.1754
377017038	other	other	0.2746
377017039	other	other	0.3079
377017040	other	other	0.1741
377017041	other	other	0.174
377017042	other	other	0.1758
377017043	other	other	0.1755
377017045	other	other	0.346
377017046	other	other	0.2135
377017047	other	other	0.2079
377017048	other	other	0.2071

TMK	MajorOwner	BigstOwner	TaxAcres
377017049	other	other	0.2556
377017050	other	other	0.2615
377017051	other	other	0.2425
377017052	other	other	0.2347
377017053	other	other	0.2029
377017054	other	other	0.1969
377017055	other	other	0.1804
377017056	other	other	0.1831
377017057	other	other	0.2547
377017058	other	other	0.068
377017061	other	other	0.1985
377017062	other	other	0.2113
377017063	other	other	0.245
377017064	other	other	0.2372
377017065	other	other	0.2533
377017066	other	other	0.2521
377017067	other	other	0.2305
377017068	other	other	0.2127
377017069	other	other	0.1917
377017070	other	other	0.1786
377017071	other	other	0.2117
377017072	other	other	0.1893
377017073	other	other	0.2079
377017074	other	other	0.2017
377017075	other	other	0.1994
377017076	other	other	0.2262
377017077	other	other	0.2255
377017078	other	other	0.2275
377017079	other	other	0.2138
377017080	other	other	0.2219
377017081	other	other	0.2779
377017082	other	other	0.2638
377017083	other	other	0.2296
377017084	other	other	0.2296
377017085	other	other	0.2152
377017086	other	other	0.2152
377017087	other	other	0.2152
377017088	other	other	0.2152
377017089	other	other	0.2152
377017090	other	other	0.2152
377017091	other	other	0.2152
377017092	other	other	0.2296
377017093	other	other	0.2305
377017094	other	other	0.1856
377017095	other	other	0.1859
377017999	other	other	0
377018001	other	other	0.1847
377018002	other	other	0.0225

TMK	MajorOwner	BigstOwner	TaxAcres
377018003	other	other	0.1777
377018004	other	other	0.1848
377018005	other	other	0.1811
377018006	other	other	0.2038
377018007	other	other	0.2209
377018008	other	other	0.2555
377018009	other	other	0.0427
377018010	other	other	0.2465
377018011	other	other	0.2005
377018012	other	other	0.177
377018013	other	other	0.2246
377018014	other	other	0.184
377018015	other	other	0.1973
377018016	other	other	0.197
377018017	other	other	0.1733
377018018	other	other	0.1921
377018019	other	other	0.206
377018020	other	other	0.1773
377018021	other	other	0.1743
377018022	other	other	0.175
377018025	other	other	0.2654
377018026	other	other	0.3482
377018027	other	other	0.2399
377018028	other	other	0.1778
377018029	other	other	0.1819
377018030	other	other	0.1845
377018031	other	other	0.2324
377018032	other	other	0.2323
377018033	other	other	0.3094
377018034	other	other	0.2698
377018035	other	other	0.2241
377018036	other	other	0.2692
377018037	other	other	0.2964
377018038	other	other	0.2408
377018039	other	other	0.2125
377018040	other	other	0.2133
377018041	other	other	0.1912
377018042	other	other	0.2496
377018043	other	other	0.1848
377018044	other	other	0.1851
377018045	other	other	0.2012
377018046	other	other	0.1687
377018047	other	other	0.174
377018999	other	other	0
377019001	other	other	0.2361
377019002	other	other	0.2362
377019003	other	other	0.2623
377019004	other	other	0.2724

TMK	MajorOwner	BigstOwner	TaxAcres
377019005	other	other	0.2639
377019006	other	other	0.2595
377019007	other	other	0.2538
377019008	other	other	0.3188
377019009	other	other	0.2379
377019010	other	other	0.2341
377019011	other	other	0.259
377019012	other	other	0.2313
377019013	other	other	0.2313
377019014	other	other	0.2312
377019015	other	other	0.2313
377019016	other	other	0.2318
377019017	other	other	0.2318
377019018	other	other	0.2605
377019019	other	other	0.2347
377019020	other	other	0.2608
377019021	other	other	0.2355
377019022	other	other	0.2354
377019023	other	other	0.2354
377019024	other	other	0.2559
377019025	other	other	0.2547
377019026	other	other	0.2435
377019027	other	other	0.2433
377019028	other	other	0.2954
377019029	other	other	0.2462
377019030	other	other	0.2579
377019031	other	other	0.2479
377019032	other	other	0.2479
377019033	other	other	0.2525
377019034	other	other	0.2508
377019035	other	other	0.2333
377019036	other	other	0.2507
377019037	other	other	0.2663
377019038	other	other	0.2687
377019039	other	other	0.2685
377019040	other	other	0.2712
377019041	other	other	0.2964
377019042	other	other	0.2363
377019043	other	other	0.2363
377019044	other	other	0.2363
377019045	other	other	0.2782
377019046	other	other	0.2783
377019047	other	other	0.241
377019048	other	other	0.2537
377019049	other	other	0.2538
377019050	other	other	0.2984
377019051	other	other	0.2348
377019052	other	other	0.2365

TMK	MajorOwner	BigstOwner	TaxAcres
377019053	other	other	0.2582
377019054	other	other	0.2407
377019055	other	other	0.2585
377019056	other	other	0.2414
377019057	other	other	0.2411
377019058	other	other	0.2377
377019059	other	other	0.2599
377019999	other	other	0
377020001	other	other	0.2302
377020002	other	other	0.2298
377020003	other	other	0.2298
377020004	other	other	0.2346
377020005	other	other	0.2346
377020006	other	other	0.2346
377020007	other	other	0.2346
377020008	other	other	0.2346
377020009	other	other	0.2346
377020010	other	other	0.2346
377020011	other	other	0.2346
377020012	other	other	0.2658
377020013	other	other	0.2296
377020014	other	other	0.2296
377020015	other	other	0.2296
377020016	other	other	0.2296
377020017	other	other	0.2296
377020018	other	other	0.2296
377020019	other	other	0.2296
377020020	other	other	0.2296
377020021	other	other	0.2296
377020022	other	other	0.2318
377020023	other	other	0.2296
377020024	other	other	0.2296
377020025	other	other	0.2296
377020026	other	other	0.2594
377020027	other	other	0.2306
377020028	other	other	0.2296
377020029	other	other	0.23
377020030	other	other	0.2297
377020031	other	other	0.2321
377020032	other	other	0.2376
377020033	other	other	0.234
377020034	other	other	0.2296
377020035	other	other	0.2296
377020036	other	other	0.2296
377020037	other	other	0.2296
377020038	other	other	0.2296
377020039	other	other	0.2296
377020040	other	other	0.2296

TMK	MajorOwner	BigstOwner	TaxAcres
377020041	other	other	0.2296
377020042	other	other	0.2296
377020043	other	other	0.2296
377020044	other	other	0.2304
377020047	other	other	0.2476
377020048	other	other	0.2416
377020049	other	other	0.2416
377020050	other	other	0.2416
377020051	other	other	0.2416
377020052	other	other	0.2305
377020053	other	other	0.2296
377020054	other	other	0.2296
377020055	other	other	0.2296
377020056	other	other	0.2298
377020057	other	other	0.2799
377020058	other	other	0.2316
377020059	other	other	0.2379
377020060	other	other	0.2354
377020061	other	other	0.2355
377020062	other	other	0.2355
377020063	other	other	0.2355
377020064	other	other	0.2355
377020065	other	other	0.2315
377020066	other	other	0.2315
377020067	other	other	0.2315
377020068	other	other	0.2296
377020069	other	other	0.2399
377020070	other	other	0.2296
377020072	other	other	0.232
377020073	other	other	0.2531
377020074	other	other	0.2305
377020075	other	other	0.2297
377020076	other	other	0.2297
377020077	other	other	0.2297
377020078	other	other	0.2297
377020079	other	other	0.2297
377020080	other	other	0.2297
377020081	other	other	0.2297
377020082	other	other	0.2297
377020083	other	other	0.2297
377020084	other	other	0.2305
377020085	other	other	0.2296
377020086	other	other	0.2624
377020087	other	other	0.2643
377020088	other	other	0.2296
377020089	other	other	0.2296
377020090	other	other	0.2694
377020091	other	other	0.2722

TMK	MajorOwner	BigstOwner	TaxAcres
377020092	other	other	0.2296
377020093	other	other	0.2296
377020094	other	other	0.2576
377020095	other	other	0.2296
377020096	other	other	0.2326
377020097	other	other	0.2297
377020098	other	other	0.2296
377020099	other	other	0.2296
377020100	other	other	0.2299
377020101	other	other	0.2296
377020102	other	other	0.2296
377020103	other	other	0.2347
377020104	other	other	0.2629
377020105	other	other	0.2296
377020106	other	other	0.0146
377020999	other	other	0
377021001	other	other	0.5214
377021002	other	other	0.3509
377021003	other	other	0.3444
377021004	other	other	0.3444
377021005	other	other	0.3444
377021006	other	other	0.3444
377021007	other	other	0.3444
377021008	other	other	0.3444
377021009	other	other	0.3444
377021010	other	other	0.3487
377021011	other	other	0.3664
377021012	other	other	0.3755
377021013	other	other	0.3466
377021014	other	other	0.3542
377021015	other	other	0.3541
377021016	other	other	0.3444
377021017	other	other	0.3444
377021018	other	other	0.3611
377021019	other	other	0.3686
377021020	other	other	0.3458
377021021	other	other	0.3456
377021022	other	other	0.3575
377021023	other	other	0.3835
377021024	other	other	0.3444
377021025	other	other	0.3447
377021026	other	other	1.0205
377021027	other	other	0.3455
377021028	other	other	0.3445
377021029	other	other	0.3663
377021030	other	other	0.4932
377021031	other	other	0.3444
377021032	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
377021033	other	other	0.3444
377021034	other	other	0.3444
377021035	other	other	0.3444
377021036	other	other	0.3444
377021037	other	other	0.3572
377021038	other	other	0.3444
377021039	other	other	0.4026
377021040	other	other	0.3448
377021041	other	other	0.3475
377021042	other	other	0.3455
377021043	other	other	0.3444
377021044	other	other	0.3444
377021045	other	other	0.3444
377021046	other	other	0.3444
377021047	other	other	0.4056
377021048	other	other	0.3446
377021049	other	other	0.4183
377021050	other	other	0.4205
377021051	other	other	0.3484
377021052	other	other	0.3619
377021053	other	other	0.3447
377021054	other	other	0.3444
377021055	other	other	0.3444
377021056	other	other	0.3449
377021057	other	other	0.3455
377021058	other	other	0.3444
377021059	other	other	0.3444
377021060	other	other	0.3568
377021061	other	other	0.3462
377021062	other	other	0.3444
377021063	other	other	0.3519
377021064	other	other	0.3455
377021065	other	other	0.3447
377021066	other	other	0.3447
377021067	other	other	0.3445
377021068	other	other	0.3801
377021069	other	other	0.4084
377021070	other	other	0.3452
377021071	other	other	0.3444
377021072	other	other	0.3444
377021073	other	other	0.3444
377021074	other	other	0.3444
377021075	other	other	0.3453
377021076	other	other	0.3679
377021077	other	other	0.3719
377021078	other	other	0.3473
377021079	other	other	0.3659
377021080	other	other	0.3444

TMK	MajorOwner	BigstOwner	TaxAcres
377021081	other	other	0.3462
377021082	other	other	0.397
377021083	other	other	0.346
377021084	other	other	0.3444
377021085	other	other	0.3445
377021086	other	other	0.3454
377021087	other	other	0.4121
377021088	other	other	0.3455
377021089	other	other	0.4229
377021090	other	other	0.3444
377021091	other	other	0.3683
377021092	other	other	0.3873
377021093	other	other	0.3444
377021094	other	other	0.3445
377021095	other	other	0.3444
377021096	other	other	0.3731
377021097	other	other	0.3839
377021098	other	other	0.3444
377021099	other	other	0.3514
377021100	other	other	0.4522
377021101	other	other	0.3518
377021102	other	other	0.3449
377021103	other	other	0.3462
377021104	other	other	0.3444
377021105	other	other	0.1706
377021999	other	other	0
377022001	other	other	0.2501
377022002	other	other	0.2464
377022003	other	other	0.254
377022004	other	other	0.241
377022005	other	other	0.242
377022006	other	other	0.2388
377022007	other	other	0.2393
377022008	other	other	0.2443
377022009	other	other	0.2698
377022010	other	other	0.2309
377022011	other	other	0.231
377022012	other	other	0.2314
377022013	other	other	0.2296
377022014	other	other	0.2638
377022015	other	other	0.2296
377022016	other	other	0.2302
377022017	other	other	0.2313
377022018	other	other	0.2298
377022019	other	other	0.2306
377022021	other	other	0.2296
377022022	other	other	0.2296
377022023	other	other	0.2296

TMK	MajorOwner	BigstOwner	TaxAcres
377022024	other	other	0.2329
377022025	other	other	0.2296
377022999	other	other	0
377023001	other	other	0.68
377023002	other	other	0.677
377023003	other	other	0.796
377023004	other	other	0.791
377023005	other	other	0.713
377023006	other	other	0.617
377023007	other	other	0.5
377023008	other	other	0.5
377023009	other	other	0.53
377023010	other	other	0.5
377023011	other	other	0.5
377023012	other	other	0.525
377023013	other	other	0.588
377023014	other	other	0.501
377023015	other	other	0.5
377023016	other	other	0.5
377023017	other	other	0.5
377023018	other	other	0.5
377023019	other	other	0.548
377023020	other	other	0.609
377023021	other	other	1.107
377023022	other	other	0.54
377023023	other	other	0.5
377023024	other	other	0.5
377023025	other	other	0.5
377023026	other	other	0.5881
377023027	other	other	0.5511
377023028	other	other	0.5001
377023029	other	other	0.9289
377023030	other	other	0.5033
377023031	other	other	0.5868
377023032	other	other	0.5
377023033	other	other	0.5848
377023034	other	other	0.5711
377023035	other	other	0.5
377023036	other	other	0.5
377023037	other	other	0.5647
377023038	other	other	0.5207
377023999	other	other	0
377024001	other	other	0.5463
377024002	other	other	0.3953
377024003	other	other	0.4258
377024004	other	other	0.4242
377024005	other	other	0.4065
377024006	other	other	0.3645

TMK	MajorOwner	BigstOwner	TaxAcres
377024007	other	other	0.3471
377024008	other	other	0.2313
377024009	other	other	0.232
377024010	other	other	0.2328
377024011	other	other	0.2484
377024012	other	other	0.2301
377024013	other	other	0.2303
377024014	other	other	0.2327
377024015	other	other	0.2539
377024016	Govt. State	Govt. State	0.009
377024017	other	other	0.4254
377025001	other	other	0.1723
377025002	other	other	0.1753
377025003	other	other	0.1722
377025004	other	other	0.1722
377025005	other	other	0.1722
377025006	other	other	0.1722
377025007	other	other	0.1722
377025008	other	other	0.1722
377025009	other	other	0.1722
377025010	other	other	0.1722
377025011	other	other	0.1722
377025012	other	other	0.1722
377025013	other	other	0.1722
377025014	other	other	0.1722
377025015	other	other	0.1725
377025016	other	other	0.1726
377025017	other	other	0.1826
377025018	other	other	0.176
377025019	other	other	0.2451
377025020	other	other	0.1724
377025021	other	other	0.1748
377025022	other	other	0.1748
377025023	other	other	0.1748
377025024	other	other	0.1748
377025025	other	other	0.1733
377025026	other	other	0.2003
377025027	other	other	0.1993
377025028	other	other	0.1768
377025029	other	other	0.2
377025030	other	other	0.182
377025031	other	other	0.2366
377025032	other	other	0.1975
377025033	other	other	0.2079
377025034	other	other	0.2331
377025035	other	other	0.1843
377025036	other	other	0.2116
377025037	other	other	0.1923

TMK	MajorOwner	BigstOwner	TaxAcres
377025038	other	other	0.1781
377025039	other	other	0.1722
377025040	other	other	0.1722
377025041	other	other	0.1722
377025042	other	other	0.1738
377025043	other	other	0.1738
377025044	other	other	0.1738
377025045	other	other	0.1722
377025046	other	other	0.2464
377025047	other	other	0.2084
377025048	other	other	0.2248
377025049	other	other	0.1829
377025050	other	other	0.1947
377025051	other	other	0.1722
377025052	other	other	0.1722
377025053	other	other	0.1722
377025054	other	other	0.1722
377025055	other	other	0.1722
377025057	other	other	0.1722
377025058	other	other	0.1722
377025059	other	other	0.1722
377025060	other	other	0.1722
377025061	other	other	0.1722
377025062	other	other	0.1722
377025063	other	other	0.1722
377025064	other	other	0.1722
377025065	other	other	0.1722
377025066	other	other	0.1722
377025067	other	other	0.1722
377025068	other	other	0.1722
377025069	other	other	0.1722
377025070	other	other	0.1722
377025071	other	other	0.1774
377025072	other	other	0.1747
377025073	other	other	0.1746
377025074	other	other	0.2042
377025075	other	other	0.2617
377025076	other	other	0.1998
377025077	other	other	0.2269
377025078	other	other	0.2463
377025079	other	other	0.2972
377025080	other	other	0.1745
377025081	other	other	0.1747
377025082	other	other	0.1745
377025083	other	other	0.1745
377025084	other	other	0.1745
377025085	other	other	0.1754
377025086	other	other	0.175

TMK	MajorOwner	BigstOwner	TaxAcres
377025087	other	other	0.1782
377025088	other	other	0.1805
377025089	other	other	0.1899
377025090	other	other	0.1817
377025091	other	other	0.1778
377025092	other	other	0.2368
377025093	other	other	0.2005
377025094	other	other	0.2591
377025095	other	other	0.1839
377025096	other	other	0.2091
377025097	other	other	0.2326
377025098	other	other	0.1865
377025099	other	other	0.1886
377025999	other	other	0
377026001	other	other	0.2191
377026002	other	other	0.2081
377026003	other	other	0.2077
377026004	other	other	0.216
377026005	other	other	0.2066
377026006	other	other	0.1949
377026007	other	other	0.2304
377026008	other	other	0.1973
377026009	other	other	0.2235
377026010	other	other	0.2204
377026011	other	other	0.2136
377026012	other	other	0.2042
377026013	other	other	0.1831
377026014	other	other	0.704
377026015	other	other	0.2839
377026016	other	other	0.2479
377026017	other	other	0.1863
377026018	other	other	0.2048
377026019	other	other	0.2217
377026020	other	other	0.2013
377026021	other	other	0.1846
377026022	other	other	0.1722
377026023	other	other	0.2098
377026024	other	other	0.1943
377026025	other	other	0.1836
377026027	other	other	0.2449
377026028	other	other	0.2623
377026029	other	other	0.1987
377026030	other	other	0.1983
377026031	other	other	0.1971
377026032	other	other	0.1953
377026033	other	other	0.1927
377026034	other	other	0.1895
377026035	other	other	0.1855

TMK	MajorOwner	BigstOwner	TaxAcres
377026036	other	other	0.1808
377026037	other	other	0.1759
377026038	other	other	0.1735
377026039	other	other	0.1773
377026040	other	other	0.1775
377026041	other	other	0.1913
377026042	other	other	0.1778
377026043	other	other	0.1745
377026044	other	other	0.1725
377026045	other	other	0.1722
377026046	other	other	0.1722
377026047	other	other	0.1722
377026048	other	other	0.1784
377026049	other	other	0.1753
377026050	other	other	0.1722
377026051	other	other	0.1722
377026052	other	other	0.1722
377026053	other	other	0.1723
377026054	other	other	0.1784
377026055	other	other	0.2161
377026056	other	other	0.1774
377026057	other	other	0.223
377026058	other	other	0.1796
377026059	other	other	0.1843
377026060	other	other	0.1893
377026999	other	other	0
377027001	other	other	0.7156
377027002	other	other	0.3844
377027003	other	other	0.4218
377027004	other	other	0.4456
377027005	other	other	0.3444
377027006	other	other	0.3444
377027007	other	other	0.4413
377027008	other	other	0.4489
377027009	other	other	0.4489
377027010	other	other	0.4491
377027011	other	other	0.4575
377027012	other	other	0.3697
377027013	other	other	0.3691
377027014	other	other	0.3691
377027015	other	other	0.3691
377027016	other	other	0.3661
377027017	other	other	0.3585
377027018	other	other	0.3616
377027019	other	other	0.3736
377027020	other	other	0.3857
377027021	other	other	0.6537
377027022	other	other	0.7273

TMK	MajorOwner	BigstOwner	TaxAcres
377027023	other	other	0.3564
377027024	other	other	0.3557
377027025	other	other	0.3629
377027026	other	other	0.3586
377027027	other	other	0.3511
377027028	other	other	0.599
377027029	other	other	0.7758
377027030	other	other	0.8118
377027031	other	other	0.438
377027032	other	other	0.3461
377027033	other	other	0.3511
377027034	other	other	0.3452
377027035	other	other	0.351
377027036	other	other	0.3449
377027037	other	other	0.3684
377027038	other	other	0.352
377027039	other	other	0.6773
377027041	other	other	0.7171
377027042	other	other	0.3578
377027043	other	other	0.3475
377027044	other	other	0.3445
377027045	other	other	0.3445
377027046	other	other	0.3444
377027047	other	other	0.3445
377027048	other	other	0.3445
377027049	other	other	0.3446
377027050	other	other	0.3478
377027051	other	other	0.3562
377027052	other	other	0.3507
377027053	other	other	0.3458
377027054	other	other	0.3559
377027055	other	other	0.345
377027056	other	other	0.3754
377027057	other	other	0.6831
377027058	other	other	0.7475
377027059	other	other	0.4037
377027060	other	other	0.3786
377027061	other	other	0.3446
377027062	other	other	0.3444
377027063	other	other	0.3456
377027064	other	other	0.3449
377027065	other	other	0.3518
377027066	other	other	0.3444
377027067	other	other	0.3447
377027068	other	other	0.4004
377027069	other	other	0.3953
377027070	other	other	0.3672
377027071	other	other	0.3736

TMK	MajorOwner	BigstOwner	TaxAcres
377027072	other	other	0.3468
377027073	other	other	0.3447
377027074	other	other	0.425
377027075	other	other	0.4246
377027076	other	other	0.4014
377027077	other	other	0.4845
377027078	other	other	0.9153
377027999	other	other	0
377028001	other	other	0.3489
377028002	other	other	0.3668
377028003	other	other	0.3444
377028004	other	other	0.3445
377028005	other	other	0.3946
377028006	other	other	0.3858
377028007	other	other	0.714
377028008	other	other	0.6223
377028009	Govt. County of Hawaii	Govt. County	0.369
377028010	other	other	0.3625
377028011	other	other	0.3527
377028012	other	other	0.391
377028013	other	other	0.3936
377028014	other	other	0.3936
377028015	other	other	0.3528
377028016	other	other	0.3921
377028017	other	other	0.348
377028018	other	other	0.3444
377028019	other	other	0.3444
377028020	other	other	0.3447
377028021	other	other	0.3444
377028022	other	other	0.3979
377028023	other	other	0.5104
377028024	other	other	0.4662
377028025	other	other	0.3514
377028026	other	other	0.3508
377028027	other	other	0.4166
377028028	other	other	0.3758
377028029	other	other	0.9155
377028030	other	other	0.5927
377028031	other	other	0.4342
377028032	other	other	0.491
377028033	other	other	0.6357
377028034	other	other	0.7497
377028035	other	other	0.4156
377028036	other	other	0.4728
377028037	other	other	0.4449
377028038	other	other	0.4272
377028039	other	other	0.3893
377028040	other	other	0.3851

TMK	MajorOwner	BigstOwner	TaxAcres
377028041	other	other	0.3598
377028042	other	other	0.3602
377028043	other	other	0.3757
377028044	other	other	0.4336
377028045	other	other	0.4156
377028046	other	other	0.3533
377028047	other	other	0.6672
377028048	other	other	0.546
377028049	other	other	0.3524
377028050	other	other	0.3444
377028051	other	other	0.3575
377028052	other	other	0.3543
377028053	other	other	0.3854
377028054	other	other	0.3585
377028055	other	other	0.3692
377028056	other	other	0.3999
377028057	other	other	0.3706
377028058	other	other	0.6302
377028059	other	other	0.3893
377028060	other	other	0.3917
377028061	other	other	0.3821
377028062	other	other	0.3724
377028063	other	other	0.3747
377028064	other	other	0.4017
377028065	other	other	0.3444
377028066	other	other	0.3444
377028067	other	other	0.3721
377028068	other	other	1.0714
377028069	other	other	1.0331
377028070	other	other	0.0584
377028999	other	other	0
377029001	other	other	0.3475
377029002	other	other	0.3539
377029003	other	other	0.5974
377029004	other	other	0.597
377029005	other	other	0.4635
377029006	other	other	0.3685
377029007	other	other	0.3543
377029008	other	other	0.4874
377029009	other	other	0.4191
377029010	other	other	0.5928
377029011	other	other	0.4375
377029012	other	other	0.3735
377029013	other	other	0.3716
377029014	other	other	0.3497
377029015	other	other	0.355
377029016	other	other	0.4
377029017	other	other	0.4505

TMK	MajorOwner	BigstOwner	TaxAcres
377029018	other	other	0.3889
377029019	other	other	0.4098
377029020	other	other	0.3546
377029021	other	other	0.4151
377029022	other	other	0.3522
377029023	other	other	0.3815
377029024	other	other	0.3764
377029025	other	other	0.3573
377029026	other	other	0.3648
377029027	other	other	0.3501
377029028	other	other	0.3562
377029029	other	other	0.4094
377029030	other	other	0.5101
377029032	other	other	0.4227
377029033	other	other	0.3701
377029034	other	other	0.392
377029035	other	other	0.469
377029036	other	other	0.3894
377029037	other	other	0.4793
377029038	other	other	0.4339
377029039	other	other	0.3607
377029040	other	other	0.3487
377029041	other	other	0.3517
377029042	other	other	0.3742
377029043	other	other	0.3638
377029044	other	other	0.3766
377029045	other	other	0.3844
377029046	other	other	0.4132
377029047	other	other	0.4075
377029048	other	other	0.4365
377029049	other	other	0.491
377029050	other	other	0.4107
377029051	other	other	0.3456
377029052	other	other	0.3609
377029053	other	other	0.3766
377029054	other	other	0.3855
377029055	other	other	0.4259
377029056	other	other	0.348
377029057	other	other	0.3556
377029058	other	other	0.4596
377029059	other	other	0.4646
377029060	other	other	0.3764
377029061	other	other	0.3878
377029062	other	other	0.3649
377029063	other	other	0.3458
377029064	other	other	0.364
377029065	other	other	1.242
377029066	other	other	0.5627

TMK	MajorOwner	BigstOwner	TaxAcres
377029067	other	other	0.5399
377029068	other	other	0.5507
377029069	other	other	0.6816
377029070	other	other	0.3511
377029071	other	other	0.7165
377029072	other	other	1.0038
377029073	other	other	0.3456
377029074	other	other	0.3492
377029075	other	other	0.6788
377029076	other	other	0.8294
377029999	other	other	0
378001003	Kamehameha Schools	Kamehameha Schools	62700
378001004	Kamehameha Schools	Kamehameha Schools	540
378001006	Kamehameha Schools	Kamehameha Schools	4093.87
378001007	Kamehameha Schools	Kamehameha Schools	23461
378001009	Wall Ranch	other	1088.44
378002001	Kamehameha Schools	Kamehameha Schools	437.28
378002002	other	other	3.3
378002003	other	other	2
378002006	Kamehameha Schools	Kamehameha Schools	230.55
378002007	Kamehameha Schools	Kamehameha Schools	9.9
378002008	Kamehameha Schools	Kamehameha Schools	24.9
378002009	Kamehameha Schools	Kamehameha Schools	10.5
378002010	Kamehameha Schools	Kamehameha Schools	117.1
378003001	Kamehameha Schools	Kamehameha Schools	7.24
378003002	Kamehameha Schools	Kamehameha Schools	6.22
378003003	Kamehameha Schools	Kamehameha Schools	5.8
378003004	Kamehameha Schools	Kamehameha Schools	11.13
378003005	Kamehameha Schools	Kamehameha Schools	6.3
378003006	Kamehameha Schools	Kamehameha Schools	6
378003007	Kamehameha Schools	Kamehameha Schools	6.5
378003008	Kamehameha Schools	Kamehameha Schools	14.47
378003009	Kamehameha Schools	Kamehameha Schools	23.3
378003010	Kamehameha Schools	Kamehameha Schools	7.7
378003011	Kamehameha Schools	Kamehameha Schools	5.11
378003012	Kamehameha Schools	Kamehameha Schools	13.59
378003013	Kamehameha Schools	Kamehameha Schools	4.89
378003014	Kamehameha Schools	Kamehameha Schools	6.35
378003015	Kamehameha Schools	Kamehameha Schools	6.38
378003016	Kamehameha Schools	Kamehameha Schools	11.6
378003017	Kamehameha Schools	Kamehameha Schools	17.7
378003018	Kamehameha Schools	Kamehameha Schools	5.92
378003019	Kamehameha Schools	Kamehameha Schools	4.7
378003020	Kamehameha Schools	Kamehameha Schools	5.08
378003021	Kamehameha Schools	Kamehameha Schools	13.45
378003022	Kamehameha Schools	Kamehameha Schools	13.63
378003023	Kamehameha Schools	Kamehameha Schools	19.17
378003024	Kamehameha Schools	Kamehameha Schools	13.09

TMK	MajorOwner	BigstOwner	TaxAcres
378003025	Kamehameha Schools	Kamehameha Schools	20.93
378003026	Kamehameha Schools	Kamehameha Schools	24.64
378003999	other	other	0
378004001	other	other	1
378004002	Kamehameha Schools	Kamehameha Schools	7.59
378004003	Kamehameha Schools	Kamehameha Schools	3.321
378004004	Kamehameha Schools	Kamehameha Schools	11.2
378004005	other	other	3.007
378004006	other	other	2.3
378004007	other	other	1.624
378004008	other	other	1.552
378004009	other	other	1.35
378004010	Kamehameha Schools	Kamehameha Schools	3.73
378004011	Kamehameha Schools	Kamehameha Schools	4.81
378004012	Kamehameha Schools	Kamehameha Schools	7.2
378004013	Kamehameha Schools	Kamehameha Schools	8.8
378004014	Kamehameha Schools	Kamehameha Schools	3.2
378004015	Kamehameha Schools	Kamehameha Schools	10.5
378004016	Kamehameha Schools	Kamehameha Schools	7.9
378004017	Kamehameha Schools	Kamehameha Schools	8.4
378004018	other	other	0.82
378004019	Kamehameha Schools	Kamehameha Schools	1.92
378004020	Kamehameha Schools	Kamehameha Schools	1.47
378004021	Kamehameha Schools	Kamehameha Schools	0.69
378004022	Kamehameha Schools	Kamehameha Schools	11.7
378004023	Kamehameha Schools	Kamehameha Schools	6.5
378004024	other	other	2
378004025	Kamehameha Schools	Kamehameha Schools	9.87
378004027	Kamehameha Schools	Kamehameha Schools	7.3
378004028	Kamehameha Schools	Kamehameha Schools	11.8
378004029	Kamehameha Schools	Kamehameha Schools	4
378004032	Kamehameha Schools	Kamehameha Schools	7.9
378004033	Kamehameha Schools	Kamehameha Schools	4.7
378004034	Kamehameha Schools	Kamehameha Schools	2.7
378004035	Kamehameha Schools	Kamehameha Schools	0.28
378004036	Kamehameha Schools	Kamehameha Schools	0.26
378004038	other	other	0.2
378004039	Kamehameha Schools	Kamehameha Schools	1.2
378004040	other	other	1.69
378004041	other	other	1.436
378004042	other	other	0.696
378004043	other	other	1.4
378004044	other	other	0.386
378004045	other	other	1.37
378004046	other	other	0.07
378004047	other	other	1.35
378004048	other	other	0.07
378004049	other	other	0.5

TMK	MajorOwner	BigstOwner	TaxAcres
378004050	other	other	0.5
378004051	other	other	1.58
378004053	other	other	0.97
378004054	Kamehameha Schools	Kamehameha Schools	0.179
378004055	Kamehameha Schools	Kamehameha Schools	1.64
378004056	other	other	0.386
378004057	other	other	0.466
378004058	other	other	0.195
378004059	other	other	0.8
378004060	other	other	0.59
378004061	Kamehameha Schools	Kamehameha Schools	7
378004062	Kamehameha Schools	Kamehameha Schools	6.7
378004063	Kamehameha Schools	Kamehameha Schools	6.1
378004064	Kamehameha Schools	Kamehameha Schools	5.9
378004065	Kamehameha Schools	Kamehameha Schools	4.7
378004067	Kamehameha Schools	Kamehameha Schools	9.5
378004068	Kamehameha Schools	Kamehameha Schools	9.4
378004069	Kamehameha Schools	Kamehameha Schools	8.9
378004070	Kamehameha Schools	Kamehameha Schools	7.9
378004071	Kamehameha Schools	Kamehameha Schools	0.7
378004072	Kamehameha Schools	Kamehameha Schools	4.74
378004073	Kamehameha Schools	Kamehameha Schools	3.23
378004074	Kamehameha Schools	Kamehameha Schools	14.9
378004075	Kamehameha Schools	Kamehameha Schools	19.5
378004076	other	other	0.696
378004077	other	other	1.32
378004078	Govt. State	Govt. State	0.279
378004079	other	other	0.88
378004080	other	other	0.81
378004999	other	other	0
378005001	Kamehameha Schools	Kamehameha Schools	26.1
378005002	Kamehameha Schools	Kamehameha Schools	1.1
378005003	Kamehameha Schools	Kamehameha Schools	2.32
378005004	Kamehameha Schools	Kamehameha Schools	9.82
378005005	Kamehameha Schools	Kamehameha Schools	5.447
378005006	Kamehameha Schools	Kamehameha Schools	53.29
378005008	Kamehameha Schools	Kamehameha Schools	3.3
378005009	Kamehameha Schools	Kamehameha Schools	1.009
378005010	Kamehameha Schools	Kamehameha Schools	1.16
378005011	Kamehameha Schools	Kamehameha Schools	0.332
378005012	other	other	0.22
378005013	Kamehameha Schools	Kamehameha Schools	0.69
378005014	Kamehameha Schools	Kamehameha Schools	1.27
378005015	other	other	2.18
378005016	Kamehameha Schools	Kamehameha Schools	0.202
378005017	other	other	0.521
378005018	other	other	0.4771
378005019	other	other	0.5

TMK	MajorOwner	BigstOwner	TaxAcres
378005020	other	other	1.049
378005021	Kamehameha Schools	Kamehameha Schools	1.7
378005022	Govt. County of Hawaii	Govt. County	5.058
378005023	other	other	4.7
378005025	Kamehameha Schools	Kamehameha Schools	1.421
378005026	other	other	3.048
378005027	Kamehameha Schools	Kamehameha Schools	27.75
378005028	Kamehameha Schools	Kamehameha Schools	3.4
378005029	other	other	6
378005031	other	other	0.18
378005032	Kamehameha Schools	Kamehameha Schools	0.22
378005033	other	other	0.531
378005034	other	other	1.819
378005035	other	other	2.27
378005037	Kamehameha Schools	Kamehameha Schools	10.9
378005038	Kamehameha Schools	Kamehameha Schools	9.1
378005039	Kamehameha Schools	Kamehameha Schools	8.1
378005040	Kamehameha Schools	Kamehameha Schools	0.065
378005041	other	other	2.452
378005042	other	other	0.813
378005043	Kamehameha Schools	Kamehameha Schools	0.253
378005044	Kamehameha Schools	Kamehameha Schools	4.03
378005045	Kamehameha Schools	Kamehameha Schools	3.771
378005046	Kamehameha Schools	Kamehameha Schools	4.14
378005047	other	other	1
378005048	Kamehameha Schools	Kamehameha Schools	6.78
378005049	Kamehameha Schools	Kamehameha Schools	0.316
378005050	other	other	1.647
378005051	Kamehameha Schools	Kamehameha Schools	11.42
378005052	Kamehameha Schools	Kamehameha Schools	8.51
378005053	Kamehameha Schools	Kamehameha Schools	1.05
378005054	other	other	0.702
378005055	other	other	0.508
378005056	other	other	0.557
378005057	other	other	0.5
378005058	other	other	0.5
378005059	other	other	0.5
378005060	other	other	0.5
378005061	other	other	0.521
378005062	other	other	0.5
378005063	other	other	0.897
378005064	other	other	0.808
378005999	other	other	0
378006001	other	other	1.5
378006002	other	other	3.33
378006003	other	other	4.44
378006004	other	other	0.438
378006005	other	other	0.24

TMK	MajorOwner	BigstOwner	TaxAcres
378006006	other	other	1.28
378006007	other	other	0.964
378006008	other	other	0.012
378006009	other	other	0.796
378006010	other	other	3.91
378006011	other	other	3.42
378006012	other	other	3.49
378006015	other	other	1.247
378006016	other	other	4
378006017	other	other	3.1
378006018	other	other	3.195
378006020	other	other	2.53
378006021	other	other	5.6
378006022	other	other	1.478
378006023	other	other	0.7
378006024	other	other	4.48
378006025	other	other	1.2
378006026	Kamehameha Schools	Kamehameha Schools	3.81
378006027	other	other	3.3
378006028	Kamehameha Schools	Kamehameha Schools	6.52
378006029	other	other	5.777
378006030	Kamehameha Schools	Kamehameha Schools	8.75
378006031	other	other	1.7
378006032	other	other	1.2
378006033	other	other	1.1
378006034	Kamehameha Schools	Kamehameha Schools	4.4
378006035	other	other	6.05
378006036	other	other	5.7
378006037	other	other	1.25
378006038	Kamehameha Schools	Kamehameha Schools	2.7
378006039	other	other	2.14
378006040	other	other	4.92
378006041	other	other	3.35
378006042	Kamehameha Schools	Kamehameha Schools	6.7
378006045	other	other	14.65
378006046	other	other	1.65
378006047	Kamehameha Schools	Kamehameha Schools	5
378006048	other	other	2.6
378006049	Kamehameha Schools	Kamehameha Schools	2.48
378006050	other	other	0.739
378006051	other	other	0.58
378006052	other	other	0.32
378006053	other	other	0.32
378006054	other	other	1.87
378006055	other	other	4.423
378006056	other	other	3.96
378006057	other	other	7.66
378006058	other	other	4.54

TMK	MajorOwner	BigstOwner	TaxAcres
378006059	other	other	4.75
378006060	Govt. County of Hawaii	Govt. County	0.08
378006061	other	other	0.812
378006062	other	other	0.195
378006063	other	other	0.506
378006064	other	other	5
378006065	other	other	11.992
378006067	Govt. County of Hawaii	Govt. County	3.398
378006068	other	other	0.325
378006069	other	other	1
378006999	other	other	0
378007003	other	other	3.455
378007004	Kamehameha Schools	Kamehameha Schools	0.17
378007005	Kamehameha Schools	Kamehameha Schools	0.157
378007007	other	other	2.85
378007011	Kamehameha Schools	Kamehameha Schools	2.5
378007015	other	other	1.06
378007021	Kamehameha Schools	Kamehameha Schools	0.986
378007022	Kamehameha Schools	Kamehameha Schools	1.35
378007023	other	other	1.7
378007024	Kamehameha Schools	Kamehameha Schools	0.463
378007025	Kamehameha Schools	Kamehameha Schools	0.4746
378007026	other	other	0.74
378007027	Kamehameha Schools	Kamehameha Schools	8.79
378007028	Govt. State	Govt. State	0.664
378007029	other	other	0.51
378007030	other	other	1.196
378007032	other	other	0.934
378007033	other	other	0.915
378007034	Kamehameha Schools	Kamehameha Schools	0.77
378007036	other	other	0.85
378007037	other	other	1.518
378007038	other	other	0.87
378007039	Kamehameha Schools	Kamehameha Schools	0.04
378007043	other	other	0.69
378007044	other	other	0.69
378007045	other	other	0.69
378007046	other	other	0.69
378007047	Kamehameha Schools	Kamehameha Schools	2.39
378007048	Kamehameha Schools	Kamehameha Schools	3.35
378007050	Hawaii Electric	other	2.535
378007053	Govt. County of Hawaii	Govt. County	1.51
378007056	Kamehameha Schools	Kamehameha Schools	6.44
378007057	Kamehameha Schools	Kamehameha Schools	3.55
378007058	Govt. State	Govt. State	0.352
378007059	Kamehameha Schools	Kamehameha Schools	0.516
378007060	other	other	2.409
378007061	Govt. State	Govt. State	0.973

TMK	MajorOwner	BigstOwner	TaxAcres
378007062	other	other	0.509
378007063	other	other	1.027
378007064	other	other	1.024
378007065	other	other	1.329
378007066	other	other	1.096
378007067	other	other	1
378007068	other	other	1.284
378007069	other	other	1
378007070	other	other	1.134
378007071	other	other	1.013
378007072	other	other	1.073
378007999	other	other	0
378008001	Kamehameha Schools	Kamehameha Schools	5
378008002	Kamehameha Schools	Kamehameha Schools	6.3
378008003	other	other	4.116
378008004	Hawaii Conf. Foundation	other	1
378008005	Kamehameha Schools	Kamehameha Schools	1.87
378008006	Kamehameha Schools	Kamehameha Schools	6.6
378008007	other	other	1.9
378008008	Kamehameha Schools	Kamehameha Schools	5.186
378008009	Kamehameha Schools	Kamehameha Schools	6
378008010	Kamehameha Schools	Kamehameha Schools	5.4
378008011	Kamehameha Schools	Kamehameha Schools	6.5
378008012	other	other	2.9
378008013	other	other	3.75
378008014	Kamehameha Schools	Kamehameha Schools	6.5
378008015	Kamehameha Schools	Kamehameha Schools	0.7
378008016	other	other	1.405
378008017	Kamehameha Schools	Kamehameha Schools	2.39
378008018	Kamehameha Schools	Kamehameha Schools	5
378008019	Kamehameha Schools	Kamehameha Schools	5.5
378008020	Kamehameha Schools	Kamehameha Schools	5.7
378008021	Kamehameha Schools	Kamehameha Schools	6
378008023	Kamehameha Schools	Kamehameha Schools	7.7
378008024	Kamehameha Schools	Kamehameha Schools	4.9
378008025	Kamehameha Schools	Kamehameha Schools	3.1
378008026	other	other	0.4
378008027	other	other	2.472
378008029	other	other	0.124
378008030	Kamehameha Schools	Kamehameha Schools	0.51
378008031	Kamehameha Schools	Kamehameha Schools	13.7
378008032	Kamehameha Schools	Kamehameha Schools	2.49
378008033	Kamehameha Schools	Kamehameha Schools	8.4
378008034	Kamehameha Schools	Kamehameha Schools	1.2
378008035	Kamehameha Schools	Kamehameha Schools	1.9
378008037	Kamehameha Schools	Kamehameha Schools	5.7
378008038	other	other	3.14
378008039	Kamehameha Schools	Kamehameha Schools	5.1

TMK	MajorOwner	BigstOwner	TaxAcres
378008040	Kamehameha Schools	Kamehameha Schools	1.35
378008041	Kamehameha Schools	Kamehameha Schools	6.5
378008042	Kamehameha Schools	Kamehameha Schools	0.3
378008043	Kamehameha Schools	Kamehameha Schools	1.458
378008045	other	other	1.958
378008050	other	other	1.8
378008051	other	other	1.57
378008052	other	other	2.56
378008053	other	other	2.6
378008054	Kamehameha Schools	Kamehameha Schools	4.3
378008055	Kamehameha Schools	Kamehameha Schools	3.232
378008056	Kamehameha Schools	Kamehameha Schools	2.5
378008057	Magoon Estate	other	1.9
378008058	Kamehameha Schools	Kamehameha Schools	1.75
378008061	other	other	1.439
378008062	Kamehameha Schools	Kamehameha Schools	5.4
378008063	other	other	1
378008064	Kamehameha Schools	Kamehameha Schools	5.2
378008065	Kamehameha Schools	Kamehameha Schools	4.126
378008066	Kamehameha Schools	Kamehameha Schools	4.4
378008067	other	other	2.3
378008068	Kamehameha Schools	Kamehameha Schools	5.8
378008069	Kamehameha Schools	Kamehameha Schools	5
378008070	Kamehameha Schools	Kamehameha Schools	5.5
378008072	Kamehameha Schools	Kamehameha Schools	6.2
378008074	Kamehameha Schools	Kamehameha Schools	9
378008075	Kamehameha Schools	Kamehameha Schools	2.8
378008076	other	other	1.132
378008077	other	other	2.449
378008078	other	other	1.25
378008079	Kamehameha Schools	Kamehameha Schools	0.3
378008080	Kamehameha Schools	Kamehameha Schools	0.2
378008081	other	other	0.394
378008082	other	other	0.791
378008083	Govt. State	Govt. State	0.191
378008999	other	other	0
378009001	Kamehameha Schools	Kamehameha Schools	5
378009002	Kamehameha Schools	Kamehameha Schools	5
378009003	Kamehameha Schools	Kamehameha Schools	7.7
378009004	Kamehameha Schools	Kamehameha Schools	1.9
378009005	other	other	1
378009007	Kamehameha Schools	Kamehameha Schools	5.58
378009008	Kamehameha Schools	Kamehameha Schools	5.06
378009009	Kamehameha Schools	Kamehameha Schools	5.42
378009010	other	other	0.75
378009011	Kamehameha Schools	Kamehameha Schools	5
378009012	Kamehameha Schools	Kamehameha Schools	2.2
378009013	Kamehameha Schools	Kamehameha Schools	3.2

TMK	MajorOwner	BigstOwner	TaxAcres
378009014	Kamehameha Schools	Kamehameha Schools	9.154
378009015	other	other	1.2
378009016	other	other	1.35
378009017	other	other	1.35
378009018	other	other	1.25
378009019	Kamehameha Schools	Kamehameha Schools	6.341
378009020	Kamehameha Schools	Kamehameha Schools	5.789
378009021	Kamehameha Schools	Kamehameha Schools	6.016
378009022	other	other	2.7
378009023	Kamehameha Schools	Kamehameha Schools	9
378009024	Kamehameha Schools	Kamehameha Schools	1.1
378009025	Kamehameha Schools	Kamehameha Schools	0.77
378009026	Kamehameha Schools	Kamehameha Schools	7.1
378009027	Kamehameha Schools	Kamehameha Schools	9.309
378009028	Kamehameha Schools	Kamehameha Schools	8.233
378009029	Kamehameha Schools	Kamehameha Schools	5.721
378009030	Kamehameha Schools	Kamehameha Schools	7.442
378009031	Kamehameha Schools	Kamehameha Schools	0.17
378009032	Kamehameha Schools	Kamehameha Schools	8.89
378009033	other	other	0.4898
378009034	Kamehameha Schools	Kamehameha Schools	5.134
378009035	Kamehameha Schools	Kamehameha Schools	5.176
378009036	other	other	5.043
378009037	Kamehameha Schools	Kamehameha Schools	8.065
378009038	Kamehameha Schools	Kamehameha Schools	6.014
378009039	Kamehameha Schools	Kamehameha Schools	5.13
378009040	Kamehameha Schools	Kamehameha Schools	12.5
378009041	other	other	0.945
378009043	Kamehameha Schools	Kamehameha Schools	5.776
378009044	Kamehameha Schools	Kamehameha Schools	5.152
378009045	Kamehameha Schools	Kamehameha Schools	5.13
378009046	other	other	2.2
378009047	other	other	2.3
378009048	other	other	0.6733
378009049	other	other	2.1
378009050	other	other	2.5
378009051	other	other	2.2
378009052	other	other	2.7
378009053	other	other	6.8
378009054	Govt. County of Hawaii	Govt. County	0.208
378009055	other	other	0.5598
378009056	other	other	0.7261
378009057	other	other	0.7943
378009058	other	other	0.6296
378009059	other	other	0.6133
378009060	other	other	0.6628
378009061	other	other	1.0343
378009062	other	other	0.8933

TMK	MajorOwner	BigstOwner	TaxAcres
378009063	other	other	0.6973
378009064	other	other	0.7725
378009065	other	other	0.7027
378009066	other	other	0.3474
378009067	Govt. State	Govt. State	0.2135
378009068	other	other	0.481
378009069	other	other	0.6377
378009070	Kamehameha Schools	Kamehameha Schools	10.5674
378009071	other	other	0.6888
378009072	other	other	0.6887
378009073	other	other	0.4481
378009074	other	other	0.3961
378009075	other	other	0.8659
378009076	Govt. State	Govt. State	0.148
378009077	Govt. State	Govt. State	0.519
378009078	Kamehameha Schools	Kamehameha Schools	6.371
378009079	Kamehameha Schools	Kamehameha Schools	7.664
378009080	Kamehameha Schools	Kamehameha Schools	5.45
378009081	Kamehameha Schools	Kamehameha Schools	7.74
378009082	Kamehameha Schools	Kamehameha Schools	2.348
378009999	other	other	0
378010001	Kamehameha Schools	Kamehameha Schools	0.45
378010002	Kamehameha Schools	Kamehameha Schools	288.281
378010003	other	other	42.94
378010004	Kamehameha Schools	Kamehameha Schools	42.551
378010006	Kamehameha Schools	Kamehameha Schools	327.893
378010007	Kamehameha Schools	Kamehameha Schools	2.7
378010009	Kamehameha Schools	Kamehameha Schools	20.6
378010015	Kamehameha Schools	Kamehameha Schools	7.12
378010016	Kamehameha Schools	Kamehameha Schools	6.22
378010017	Kamehameha Schools	Kamehameha Schools	3.99
378010020	Kamehameha Schools	Kamehameha Schools	4.731
378010022	Kamehameha Schools	Kamehameha Schools	0.47
378010026	Kamehameha Schools	Kamehameha Schools	3.33
378010027	Govt. State	Govt. State	0.1102
378010028	Govt. State	Govt. State	0.1102
378010029	Kamehameha Schools	Kamehameha Schools	37.821
378010030	Kamehameha Schools	Kamehameha Schools	254
378010032	other	other	4.879
378010033	other	other	4.921
378010034	other	other	55.551
378010035	Kamehameha Schools	Kamehameha Schools	30.331
378010036	other	other	45.21
378010037	other	other	0.7022
378010038	Kamehameha Schools	Kamehameha Schools	14.864
378010039	Kamehameha Schools	Kamehameha Schools	3.032
378010040	Kamehameha Schools	Kamehameha Schools	21.217
378010042	other	other	2.561

TMK	MajorOwner	BigstOwner	TaxAcres
378010044	Kamehameha Schools	Kamehameha Schools	25.239
378010046	other	other	6.81
378010047	other	other	3.205
378010049	Kamehameha Schools	Kamehameha Schools	0.3132
378010050	Kamehameha Schools	Kamehameha Schools	116.444
378010051	other	other	105.876
378010052	other	other	11.624
378010053	Kamehameha Schools	Kamehameha Schools	0.4224
378010054	Govt. State	Govt. State	1.26
378010055	other	other	5.772
378010056	Kamehameha Schools	Kamehameha Schools	0.747
378010057	Govt. County of Hawaii	Govt. County	0.475
378010058	other	other	11.256
378010059	Kamehameha Schools	Kamehameha Schools	1.723
378010060	Kamehameha Schools	Kamehameha Schools	7.25
378010061	Kamehameha Schools	Kamehameha Schools	7.88
378010062	Kamehameha Schools	Kamehameha Schools	6.64
378010063	Kamehameha Schools	Kamehameha Schools	6.98
378010065	Kamehameha Schools	Kamehameha Schools	33.906
378010066	Kamehameha Schools	Kamehameha Schools	28.471
378010068	other	other	12.846
378010070	Govt. State HHA	Govt. State	3.896
378010071	Govt. County of Hawaii	Govt. County	0.2557
378010072	Govt. State	Govt. State	0.3241
378010077	other	other	74.714
378010078	Kamehameha Schools	Kamehameha Schools	20.813
378010079	other	other	15.466
378010081	Kamehameha Schools	Kamehameha Schools	10.22
378010082	other	other	20.838
378010083	Kamehameha Schools	Kamehameha Schools	2.772
378010084	Kamehameha Schools	Kamehameha Schools	11.304
378010085	Hawaii Electric	other	1.668
378010086	Kamehameha Schools	Kamehameha Schools	0.6129
378010087	Kamehameha Schools	Kamehameha Schools	1.0763
378010089	other	other	2.548
378010090	Kamehameha Schools	Kamehameha Schools	3.686
378010091	other	other	3.726
378010092	other	other	5.75
378010093	other	other	13.366
378010094	Kamehameha Schools	Kamehameha Schools	10.375
378010095	Kamehameha Schools	Kamehameha Schools	5.441
378010096	Kamehameha Schools	Kamehameha Schools	13.89
378010097	Kamehameha Schools	Kamehameha Schools	16.3
378010099	Kamehameha Schools	Kamehameha Schools	0.029
378010100	Kamehameha Schools	Kamehameha Schools	42.254
378010101	other	other	51.058
378010102	other	other	0.5015
378010999	other	other	0

TMK	MajorOwner	BigstOwner	TaxAcres
378011008	other	other	0.4688
378011009	other	other	0.3798
378011010	other	other	0.3798
378011012	other	other	5.826
378011013	other	other	0.4218
378011014	other	other	0.3485
378011015	other	other	0.3484
378011016	other	other	0.3486
378011017	other	other	0.3981
378011018	other	other	0.52
378011019	other	other	0.377
378011020	other	other	0.3768
378011021	other	other	0.3899
378011022	other	other	0.3598
378011023	other	other	0.3966
378011024	other	other	0.3633
378011025	other	other	0.3484
378011026	other	other	0.3971
378011027	other	other	0.3867
378011028	other	other	0.3509
378011029	other	other	0.3805
378011030	other	other	0.3447
378011031	other	other	0.4111
378011032	MJCF Hall Family Trust	other	0.3457
378011033	other	other	0.385
378011034	other	other	0.3486
378011035	other	other	0.3472
378011036	other	other	0.3854
378011037	other	other	0.3585
378011038	other	other	0.3944
378011039	other	other	0.3783
378011040	other	other	0.3801
378011041	other	other	0.377
378011042	other	other	0.3474
378011043	other	other	0.3472
378011044	other	other	0.3736
378011045	other	other	0.3502
378011046	other	other	0.3488
378011047	other	other	0.3487
378011048	other	other	0.359
378011049	other	other	0.3461
378011050	other	other	0.3461
378011051	other	other	0.3461
378011052	other	other	0.3579
378011053	other	other	0.4107
378011054	other	other	0.3721
378011055	other	other	3.496
378012001	other	other	0.7317

TMK	MajorOwner	BigstOwner	TaxAcres
378012002	Hokukano Ranch	Hokukano Ranch	0.896
378012004	Kamehameha Schools	Kamehameha Schools	0.25
378012006	other	other	0.553
378012007	Kamehameha Schools	Kamehameha Schools	0.4
378012008	Govt. State	Govt. State	0.441
378012013	Kamehameha Schools	Kamehameha Schools	0.2297
378012014	Kamehameha Schools	Kamehameha Schools	0.3295
378012017	other	other	0.035
378012027	Kamehameha Schools	Kamehameha Schools	0.09
378012031	other	other	0.169
378012032	other	other	0.6629
378012033	Hawaii Conf. Foundation	other	0.253
378012034	other	other	0.1
378012035	other	other	0.6016
378012036	other	other	1.3888
378012037	other	other	1.5619
378012039	other	other	0.2654
378012040	other	other	0.27
378012041	other	other	0.2379
378012043	other	other	0.4046
378012045	Hawaii Conf. Foundation	other	0.5972
378012046	other	other	0.2356
378012047	Hawaii Conf. Foundation	other	0.232
378012048	Kamehameha Schools	Kamehameha Schools	0.37
378012050	other	other	0.607
378012051	other	other	0.5344
378012054	Kamehameha Schools	Kamehameha Schools	0.02
378012055	Govt. State	Govt. State	0.543
378012057	other	other	0.2296
378012058	Kamehameha Schools	Kamehameha Schools	2.121
378012061	Kamehameha Schools	Kamehameha Schools	0.071
378012062	other	other	0.2212
378012063	other	other	0.2005
378012065	Kamehameha Schools	Kamehameha Schools	0.6
378012069	other	other	0.4299
378012074	other	other	0.0489
378012075	other	other	0.1368
378012076	other	other	0.3122
378012077	other	other	0.2883
378012078	other	other	0.3232
378012079	other	other	0.4402
378012080	other	other	0.4165
378012081	other	other	0.0232
378012082	other	other	0.3763
378012083	other	other	0.4538
378012085	other	other	0.4197
378012086	other	other	0.3852
378012087	other	other	0.3106

TMK	MajorOwner	BigstOwner	TaxAcres
378012088	other	other	0.3375
378012089	other	other	0.3168
378012090	other	other	0.2669
378012091	Kamehameha Schools	Kamehameha Schools	0.0422
378012092	other	other	0.2322
378012093	other	other	0.2592
378012094	Kamehameha Schools	Kamehameha Schools	0.0247
378012096	Kamehameha Schools	Kamehameha Schools	0.016
378012098	Kamehameha Schools	Kamehameha Schools	1.0791
378012101	Kamehameha Schools	Kamehameha Schools	0.1222
378012103	Kamehameha Schools	Kamehameha Schools	0.01
378012105	other	other	0.0205
378012999	other	other	0
378013002	Kamehameha Schools	Kamehameha Schools	11.573
378013003	other	other	15.542
378013013	Kamehameha Schools	Kamehameha Schools	0.198
378013020	other	other	0.16
378013042	Govt. State	Govt. State	0.1276
378013043	Kamehameha Schools	Kamehameha Schools	10.828
378013999	other	other	0
378014001	Govt. County of Hawaii	Govt. County	4.233
378014003	Roman Catholic Church	other	0.17
378014004	Govt. County of Hawaii	Govt. County	0.1756
378014005	Govt. County of Hawaii	Govt. County	0.2514
378014006	other	other	0.2714
378014007	other	other	0.0671
378014008	other	other	0.2037
378014009	other	other	0.2324
378014010	other	other	0.0998
378014011	other	other	0.1602
378014012	other	other	0.06
378014013	other	other	0.3612
378014015	other	other	0.2296
378014016	other	other	0.213
378014019	other	other	0.375
378014020	other	other	0.1067
378014021	other	other	0.65
378014022	other	other	0.0984
378014023	other	other	0.03
378014024	other	other	0.1516
378014025	other	other	0.164
378014027	other	other	0.056
378014028	other	other	0.0177
378014029	other	other	0.1747
378014030	other	other	0.4
378014032	other	other	0.4432
378014033	other	other	0.33
378014034	other	other	0.55

TMK	MajorOwner	BigstOwner	TaxAcres
378014035	other	other	0.342
378014036	other	other	0.389
378014037	other	other	0.14
378014038	other	other	0.127
378014039	other	other	0.16
378014040	other	other	0.228
378014041	other	other	0.1244
378014043	other	other	0.22
378014044	other	other	0.14
378014045	other	other	0.8985
378014048	other	other	0.0522
378014049	Kamehameha Schools	Kamehameha Schools	0.16
378014050	other	other	0.1317
378014051	other	other	0.22
378014052	other	other	0.28
378014053	other	other	0.34
378014054	other	other	0.36
378014055	other	other	0.44
378014056	Kamehameha Schools	Kamehameha Schools	1.57
378014062	Kamehameha Schools	Kamehameha Schools	0.26
378014063	other	other	0.26
378014064	other	other	0.27
378014065	other	other	0.27
378014066	other	other	0.27
378014067	other	other	0.27
378014068	other	other	0.27
378014069	other	other	0.26
378014070	other	other	0.2583
378014071	other	other	0.26
378014072	other	other	0.26
378014074	other	other	0.0629
378014075	other	other	0.1929
378014076	other	other	0.3336
378014077	other	other	0.4526
378014078	other	other	0.229
378014079	other	other	0.2353
378014080	other	other	0.1723
378014081	other	other	0.2306
378014082	other	other	0.2104
378014083	other	other	0.1731
378014084	other	other	0.1508
378014085	other	other	0.4393
378014086	other	other	0.7797
378014088	other	other	0.3899
378014089	Kamehameha Schools	Kamehameha Schools	0.0259
378014090	other	other	0.7393
378014093	other	other	0.237
378014095	other	other	0.3313

TMK	MajorOwner	BigstOwner	TaxAcres
378014096	other	other	1.4056
378014097	other	other	0.076
378014999	other	other	0
378015001	other	other	0.624
378015002	other	other	1.06
378015003	other	other	0.581
378015004	other	other	1.25
378015005	other	other	1.35
378015006	other	other	0.555
378015007	other	other	0.557
378015008	other	other	0.59
378015009	other	other	1.18
378015010	other	other	1.27
378015011	other	other	0.63
378015012	other	other	1.23
378015013	other	other	1.14
378015014	other	other	0.58
378015015	other	other	0.6225
378015016	other	other	0.529
378015017	other	other	2.42
378015018	other	other	1.4
378015019	other	other	2.05
378015020	other	other	1.2
378015021	other	other	0.65
378015022	other	other	0.59
378015023	other	other	0.59
378015024	other	other	1.1
378015025	other	other	0.576
378015026	other	other	0.561
378015027	other	other	1.15
378015028	other	other	0.5
378015029	other	other	0.702
378015030	other	other	0.573
378015031	other	other	1.15
378015032	other	other	0.503
378015033	other	other	0.5
378015034	other	other	0.5
378015035	Kamehameha Schools	Kamehameha Schools	0.426
378015036	other	other	0.63
378015037	other	other	0.52
378015038	other	other	0.58
378015039	other	other	0.5
378015040	other	other	0.5
378015041	other	other	0.66
378015042	other	other	0.59
378015043	other	other	0.74
378015044	other	other	0.501
378015045	other	other	0.796

TMK	MajorOwner	BigstOwner	TaxAcres
378015046	other	other	0.546
378015047	other	other	0.65
378015048	other	other	0.503
378015049	other	other	0.856
378015050	other	other	0.5
378015051	other	other	0.5
378015052	other	other	1.24
378015053	other	other	0.526
378015054	other	other	0.645
378015055	other	other	0.5001
378015056	other	other	0.592
378015999	other	other	0
378016001	Kamehameha Schools	Kamehameha Schools	12
378016002	Kamehameha Schools	Kamehameha Schools	6.5
378016003	Kamehameha Schools	Kamehameha Schools	6.3
378016004	Kamehameha Schools	Kamehameha Schools	7.1
378016005	Kamehameha Schools	Kamehameha Schools	6.7
378016006	Kamehameha Schools	Kamehameha Schools	7
378016007	Kamehameha Schools	Kamehameha Schools	7.3
378016009	Kamehameha Schools	Kamehameha Schools	26.97
378016011	Kamehameha Schools	Kamehameha Schools	9.808
378016012	Kamehameha Schools	Kamehameha Schools	9.3
378016013	Kamehameha Schools	Kamehameha Schools	11.6
378016014	Kamehameha Schools	Kamehameha Schools	8.3
378016015	Kamehameha Schools	Kamehameha Schools	6.4
378016016	Kamehameha Schools	Kamehameha Schools	6.4
378016017	Kamehameha Schools	Kamehameha Schools	6.4
378016018	Kamehameha Schools	Kamehameha Schools	6.4
378016019	Kamehameha Schools	Kamehameha Schools	11
378016020	Kamehameha Schools	Kamehameha Schools	7.4
378016021	Kamehameha Schools	Kamehameha Schools	6.2
378016022	Kamehameha Schools	Kamehameha Schools	6.2
378016023	Kamehameha Schools	Kamehameha Schools	6.2
378016024	Kamehameha Schools	Kamehameha Schools	6.2
378016025	Kamehameha Schools	Kamehameha Schools	6.2
378016026	Kamehameha Schools	Kamehameha Schools	6.2
378016027	Kamehameha Schools	Kamehameha Schools	9.4
378016028	Kamehameha Schools	Kamehameha Schools	5.94
378016029	Kamehameha Schools	Kamehameha Schools	7.53
378016030	Kamehameha Schools	Kamehameha Schools	7.75
378016031	Kamehameha Schools	Kamehameha Schools	7.75
378016032	Kamehameha Schools	Kamehameha Schools	7.75
378016033	Kamehameha Schools	Kamehameha Schools	7.78
378016034	Kamehameha Schools	Kamehameha Schools	9.23
378016035	Kamehameha Schools	Kamehameha Schools	8
378016036	Kamehameha Schools	Kamehameha Schools	6.7
378016037	Kamehameha Schools	Kamehameha Schools	7
378016038	Kamehameha Schools	Kamehameha Schools	9.37

TMK	MajorOwner	BigstOwner	TaxAcres
378016039	Kamehameha Schools	Kamehameha Schools	6.42
378016040	Kamehameha Schools	Kamehameha Schools	48.61
378017001	other	other	0.745
378017002	other	other	0.5346
378017003	other	other	0.6057
378017004	other	other	5.016
378017006	other	other	0.6118
378017007	other	other	0.522
378017008	other	other	0.6981
378017009	other	other	0.3609
378017010	other	other	0.3062
378017011	other	other	0.3663
378017012	other	other	0.2354
378017013	other	other	0.2547
378017014	other	other	0.2475
378017015	other	other	0.2423
378017016	other	other	0.4394
378017017	other	other	0.4448
378017018	other	other	0.4843
378017019	other	other	0.4067
378017020	other	other	0.3979
378017021	other	other	0.418
378017022	other	other	0.2288
378017023	other	other	0.3003
378017024	other	other	0.2937
378017025	other	other	0.2806
378017026	other	other	0.2308
378017027	other	other	0.2075
378017028	other	other	0.2124
378017029	other	other	0.3002
378017030	other	other	0.2777
378017031	other	other	0.385
378017999	other	other	0
378018001	other	other	0.57
378018002	other	other	0.57
378018003	other	other	0.66
378018004	other	other	0.46
378018005	other	other	0.63
378018006	other	other	0.6284
378018007	other	other	0.75
378018008	other	other	0.56
378018009	other	other	0.82
378018010	other	other	1.87
378018011	other	other	0.6736
378018012	other	other	0.568
378018013	other	other	1.14
378018014	other	other	1.05
378018015	other	other	0.7326

TMK	MajorOwner	BigstOwner	TaxAcres
378018016	other	other	0.7177
378018017	other	other	0.63
378018018	other	other	0.5397
378018019	other	other	0.4597
378018020	other	other	0.4926
378018021	other	other	0.97
378018022	other	other	0.617
378018023	other	other	0.78
378018024	other	other	0.56
378018025	other	other	0.39
378018026	other	other	0.42
378018027	other	other	0.7244
378018028	other	other	0.671
378018029	other	other	0.57
378018030	other	other	0.4427
378018031	other	other	0.4591
378018032	other	other	0.3564
378018033	other	other	0.3444
378018034	other	other	0.4729
378018999	other	other	0
378019001	other	other	0.9129
378019002	other	other	0.6628
378019003	other	other	1.2076
378019004	other	other	0.6999
378019005	other	other	0.8255
378019006	other	other	1.0305
378019007	other	other	0.4873
378019008	other	other	0.4789
378019009	other	other	0.9547
378019010	other	other	0.8225
378019011	other	other	0.7381
378019012	other	other	0.7983
378019013	other	other	0.8906
378019014	other	other	0.95
378019015	other	other	0.593
378019016	other	other	0.7896
378019017	other	other	0.7946
378019018	other	other	0.7384
378019019	other	other	0.611
378019020	other	other	0.4651
378019021	other	other	0.6846
378019022	other	other	0.515
378019023	other	other	0.4842
378019024	other	other	0.5312
378019025	other	other	0.5447
378019026	other	other	0.725
378019027	other	other	0.534
378019028	other	other	0.4761

TMK	MajorOwner	BigstOwner	TaxAcres
378019029	other	other	0.5164
378019032	other	other	0.3685
378019033	other	other	2.001
378019999	other	other	0
378020001	other	other	0.2514
378020002	other	other	0.2376
378020003	other	other	0.2562
378020004	other	other	0.2579
378020005	other	other	0.2969
378020006	other	other	0.2365
378020007	other	other	0.2873
378020008	other	other	0.2378
378020009	other	other	0.2845
378020010	other	other	0.3013
378020011	other	other	0.231
378020012	other	other	0.08
378020013	Kamehameha Schools	Kamehameha Schools	1.895
378020014	other	other	0.2384
378020015	other	other	0.2343
378020016	other	other	0.2383
378020017	other	other	0.2502
378020018	other	other	0.2567
378020019	other	other	0.3431
378020020	other	other	0.2714
378020021	other	other	0.2509
378020022	other	other	0.2409
378020023	other	other	0.2448
378020024	other	other	0.2472
378020025	other	other	0.2309
378020026	other	other	0.2473
378020028	other	other	16.197
378020999	other	other	0
378021001	other	other	0.393
378021002	other	other	0.3957
378021003	other	other	0.4099
378021004	other	other	0.4197
378021005	other	other	0.4656
378021006	other	other	0.3692
378021007	other	other	0.3462
378021008	other	other	0.3453
378021009	other	other	0.4518
378021010	other	other	0.4013
378021011	other	other	0.3773
378021012	other	other	0.3444
378021013	other	other	0.3741
378021014	other	other	0.3632
378021015	other	other	0.3781
378021016	other	other	0.3655

TMK	MajorOwner	BigstOwner	TaxAcres
378021017	other	other	0.3713
378021018	other	other	0.3463
378021019	other	other	0.3449
378021020	other	other	0.3533
378021021	other	other	0.3446
378021022	other	other	0.3445
378021023	other	other	0.3444
378021024	other	other	0.3476
378021025	other	other	0.3581
378021026	other	other	0.3633
378021027	other	other	0.4029
378021028	other	other	0.3603
378021029	other	other	0.4353
378021030	other	other	0.4847
378021031	other	other	0.3648
378021032	other	other	0.3815
378021033	other	other	0.3444
378021034	other	other	0.3444
378021035	other	other	0.3444
378021036	other	other	0.3517
378021037	Kamehameha Schools	Kamehameha Schools	0.52
378021038	other	other	0.3461
378021039	other	other	0.3672
378021040	other	other	0.4214
378021041	other	other	0.3469
378021042	other	other	0.3445
378021043	other	other	0.3444
378021044	other	other	0.347
378021045	other	other	0.3829
378021046	other	other	0.4979
378021047	other	other	0.4705
378021048	other	other	0.3825
378021049	other	other	0.3641
378021050	other	other	0.3494
378021051	other	other	0.3733
378021052	other	other	0.3736
378021053	other	other	0.3878
378021054	other	other	0.4998
378021055	other	other	0.6021
378021056	other	other	0.5635
378021057	other	other	0.4669
378021058	other	other	0.4262
378021059	other	other	0.4121
378021060	other	other	0.4703
378021061	other	other	0.4998
378021062	other	other	0.4682
378021063	other	other	0.3974
378021064	other	other	0.3545

TMK	MajorOwner	BigstOwner	TaxAcres
378021065	other	other	0.3905
378021066	other	other	0.3518
378021067	other	other	0.4346
378021068	other	other	0.3497
378021069	other	other	0.3664
378021070	other	other	0.4294
378021071	other	other	0.3548
378021072	other	other	0.3608
378021073	other	other	0.362
378021074	other	other	0.3465
378021075	other	other	0.3444
378021076	other	other	0.3444
378021077	other	other	0.4128
378021078	other	other	0.3476
378021079	other	other	0.3919
378021080	other	other	0.3496
378021081	other	other	0.3973
378021082	other	other	0.423
378021083	other	other	0.377
378021084	other	other	0.7232
378021086	other	other	0.4233
378021088	other	other	9.8725
378021089	other	other	0.3447
378021090	other	other	0.3447
378021091	other	other	0.3502
378021092	other	other	0.3617
378021093	other	other	0.3467
378021094	other	other	0.3444
378021095	other	other	0.3444
378021096	other	other	0.3502
378021097	other	other	0.655
378021098	other	other	0.4142
378021099	other	other	0.3564
378021100	other	other	0.3486
378021101	other	other	0.3464
378021102	other	other	0.3461
378021103	other	other	0.3465
378021104	other	other	0.3989
378021105	other	other	0.3444
378021106	other	other	0.3444
378021107	other	other	0.3444
378021108	other	other	0.351
378021109	other	other	0.4567
378021110	other	other	0.483
378021111	other	other	0.5293
378021112	other	other	0.5112
378021113	other	other	0.4961
378021114	other	other	0.3736

TMK	MajorOwner	BigstOwner	TaxAcres
378021115	other	other	0.3823
378021116	other	other	0.3798
378021117	other	other	0.3618
378021118	other	other	0.3705
378021119	other	other	0.4269
378021120	other	other	0.3772
378021121	other	other	0.4141
378021122	other	other	0.3784
378021123	other	other	0.3449
378021124	other	other	0.4021
378021125	other	other	0.5153
378021126	other	other	0.3517
378021127	other	other	0.3444
378021128	other	other	0.3444
378021129	other	other	0.3607
378021130	other	other	0.3444
378021131	other	other	0.3642
378021132	other	other	0.3669
378021133	other	other	0.3656
378021134	other	other	0.4191
378021135	other	other	0.3523
378021136	other	other	0.3478
378021137	other	other	0.3478
378021138	other	other	0.3478
378022001	other	other	0.3466
378022002	other	other	0.3459
378022003	other	other	0.3459
378022004	other	other	0.3459
378022005	other	other	0.348
378022006	other	other	0.3633
378022007	other	other	0.3623
378022008	other	other	0.408
378022009	other	other	0.3512
378022010	other	other	0.3621
378022011	other	other	0.3747
378022012	other	other	0.3772
378022013	other	other	0.3732
378022014	other	other	0.3795
378022015	other	other	0.3558
378022016	other	other	0.3743
378022017	other	other	0.3948
378022018	other	other	0.4502
378022019	other	other	0.4124
378022020	other	other	0.3849
378022021	other	other	0.3846
378022022	other	other	0.3845
378022023	other	other	0.3845
378022024	other	other	0.3869

TMK	MajorOwner	BigstOwner	TaxAcres
378022025	other	other	0.3713
378022026	other	other	0.3673
378022027	other	other	0.3695
378022028	other	other	0.37
378022029	other	other	0.3678
378022030	other	other	0.3843
378022031	other	other	0.3843
378022032	other	other	0.3977
378022033	other	other	0.3912
378022034	other	other	0.3743
378022035	other	other	0.3459
378022036	other	other	0.3459
378022037	other	other	0.3783
378022038	other	other	0.3447
378022039	other	other	0.3905
378022040	other	other	0.363
378022041	other	other	0.353
378022042	other	other	0.3877
378022043	other	other	0.3903
378022044	other	other	0.3897
378022045	other	other	0.3593
378022046	other	other	0.3444
378022047	other	other	0.3501
378022048	other	other	0.3522
378022049	other	other	0.3722
378022050	other	other	0.3446
378022051	other	other	0.3475
378022052	other	other	3.7711
378022053	other	other	0.3444
378022054	other	other	0.3572
378022055	other	other	0.3444
378023001	other	other	0.1806
378023002	other	other	0.1464
378023003	other	other	0.149
378023004	other	other	0.1546
378023005	other	other	0.1536
378023006	other	other	0.1498
378023007	other	other	0.1459
378023008	other	other	0.177
378023009	other	other	0.1438
378023010	other	other	0.1341
378023011	other	other	0.1299
378023012	other	other	0.1478
378023013	other	other	0.1449
378023014	other	other	0.1494
378023015	other	other	0.1543
378023016	other	other	0.142
378023017	other	other	0.1951

TMK	MajorOwner	BigstOwner	TaxAcres
378023018	other	other	0.1632
378023019	other	other	0.1569
378023020	other	other	0.2091
378023021	other	other	0.1677
378023022	other	other	0.1695
378023023	other	other	0.19
378023024	other	other	0.1952
378023025	other	other	0.1877
378023026	other	other	0.1793
378023027	other	other	0.1891
378023028	other	other	0.218
378023029	other	other	0.1212
378023030	other	other	0.1423
378023031	other	other	0.1754
378023032	other	other	0.1754
378023033	other	other	0.1212
378023034	other	other	0.1423
378023035	other	other	0.2176
378023036	other	other	0.1433
378023037	other	other	0.1318
378023038	other	other	0.1304
378023039	other	other	0.1561
378023040	other	other	0.1365
378023041	other	other	0.1541
378023042	other	other	0.1478
378023043	other	other	0.0316
378023044	other	other	1.874
379001002	Hokukano Ranch	Hokukano Ranch	294.462
379001004	L.F. Bush	other	136.018
379001006	L.F. Bush	other	217.131
379001007	L.F. Bush	other	247.267
379001009	L.F. Bush	other	259.701
379001010	Hokukano Ranch	Hokukano Ranch	507.67
379001029	L.F. Bush	other	97.314
379001030	L.F. Bush	other	214.174
379002001	Wall Ranch	other	381.836
379002002	Mahealani Ranch	other	3.06
379002003	W.J Paris Sr. Tr.	other	482
379002004	other	other	125.75
379002005	MJCF Hall Family Trust	other	596.65
379002006	other	other	90.156
379002007	W.J. Paris Sr. Tr.	other	790.21
379002008	W.J. Paris Sr. Tr.	other	433.62
379002009	Wall Ranch	other	510.5
379002010	Mahealani Ranch	other	510.5
379002011	A.K.P. Smith	other	606.33
379002012	Wall Ranch	other	360
379002013	W.J Paris Sr. Tr.	other	202.4

TMK	MajorOwner	BigstOwner	TaxAcres
379002014	Wall Ranch	other	431.28
379002015	other	other	197.091
379002016	other	other	3.06
379002017	Mahealani Ranch	other	213.88
379002018	Govt. County of Hawaii	Govt. County	8.358
379002020	Govt. County of Hawaii	Govt. County	0.422
379002022	MJCF Hall Family Trust	other	34.07
379002023	other	other	197.09
379003001	other	other	0.1126
379003002	other	other	11.79
379003003	other	other	5.647
379003004	other	other	1.504
379003005	other	other	2.813
379003006	other	other	4.455
379003007	other	other	10.082
379003008	other	other	13.859
379003009	other	other	0.369
379003010	other	other	8.31
379003011	other	other	1.76
379003012	other	other	1.002
379003013	other	other	0.63
379003014	other	other	0.353
379003015	other	other	1.397
379003016	other	other	2.4
379003017	other	other	0.73
379003018	other	other	2.276
379003019	other	other	8.95
379003020	other	other	0.591
379003021	other	other	1.25
379003022	other	other	2.03
379003023	other	other	26.632
379003024	other	other	5.845
379003026	other	other	1.896
379003027	other	other	0.085
379003028	other	other	0.0857
379003029	other	other	2.8685
379003030	other	other	4.217
379003031	other	other	18.688
379003032	other	other	0.8466
379003033	other	other	7.662
379003034	other	other	0.1139
379003035	other	other	1.04
379003036	other	other	0.46
379003037	other	other	2.51
379003038	other	other	2.501
379003039	other	other	0.407
379003040	other	other	1.397
379003041	other	other	0.554

TMK	MajorOwner	BigstOwner	TaxAcres
379003042	other	other	0.2808
379003043	other	other	0.513
379003045	other	other	4.645
379003046	other	other	3.309
379003047	other	other	3.204
379003048	other	other	4.394
379003049	other	other	6.289
379003050	other	other	3.183
379003051	other	other	3
379003052	other	other	8.45
379003053	other	other	0.2965
379003054	other	other	1.21
379003055	other	other	0.3901
379003056	other	other	2.8772
379003057	other	other	1.58
379003058	other	other	1.174
379003059	other	other	1.078
379003060	Govt. State	Govt. State	0.222
379003061	other	other	0.5872
379003062	other	other	0.5872
379003063	other	other	0.5872
379003064	other	other	0.3276
379003065	other	other	0.795
379003066	other	other	0.35
379003067	other	other	26.159
379003068	other	other	18.501
379003069	other	other	18.688
379003070	other	other	3
379003071	other	other	5.123
379003072	other	other	5.371
379003073	other	other	5
379003074	other	other	1
379003075	other	other	1.065
379003076	other	other	1.135
379003077	other	other	0.2175
379003078	other	other	11.79
379003999	other	other	0
379004004	other	other	40
379004005	other	other	11.537
379004006	Roman Catholic Church	other	1.4
379004007	other	other	1.0004
379004008	other	other	1.776
379004009	other	other	2.952
379004010	other	other	4.07
379004012	other	other	1.556
379004013	other	other	1.315
379004014	other	other	2.95
379004015	other	other	3.479

TMK	MajorOwner	BigstOwner	TaxAcres
379004016	other	other	2.167
379004017	other	other	0.82
379004018	other	other	0.5
379004019	other	other	0.939
379004020	other	other	0.412
379004021	other	other	1.556
379004024	other	other	2.631
379004028	other	other	1.243
379004029	other	other	3.56
379004030	other	other	0.226
379004031	other	other	15.339
379004032	other	other	1
379004033	other	other	1
379004034	other	other	1
379004035	other	other	1
379004036	other	other	1
379004037	other	other	0.718
379004999	other	other	0
379005001	Wall Ranch	other	22.1
379005002	other	other	30.8
379005003	other	other	16.35
379005004	other	other	0.777
379005005	other	other	16.8
379005006	other	other	11.7
379005007	other	other	0.643
379005008	other	other	7.408
379005009	other	other	49.67
379005010	other	other	0.316
379005011	other	other	0.2
379005012	other	other	0.17
379005013	other	other	0.594
379005014	other	other	59.4
379005015	other	other	0.439
379005016	other	other	0.948
379005038	other	other	3
379005039	other	other	0.306
379005040	other	other	0.345
379005060	other	other	1
379005075	other	other	0.907
379005076	other	other	108.55
379005077	other	other	20.7
379005078	other	other	161.5
379005079	other	other	94.5
379005080	Wall Ranch	other	24.4
379005082	other	other	1.008
379005083	other	other	1
379005084	other	other	1.061
379005085	other	other	1

TMK	MajorOwner	BigstOwner	TaxAcres
379005086	other	other	1.043
379005087	other	other	16.123
379005088	other	other	0.169
379005999	other	other	0
379005999	other	other	0
379005999	other	other	0
379006003	other	other	39.996
379006004	other	other	13.444
379006005	A.K.P. Smith	other	12
379006007	Wall Ranch	other	19.6
379006009	Wall Ranch	other	13
379006010	other	other	3.25
379006011	other	other	3.45
379006012	Mahealani Ranch	other	2.14
379006013	other	other	3.45
379006019	Wall Ranch	other	49.4
379006021	other	other	0.0584
379006022	other	other	2.5
379006025	Wall Ranch	other	117
379006032	Wall Ranch	other	188
379006033	Wall Ranch	other	47.1
379006034	Wall Ranch	other	53.3
379006035	other	other	24.422
379006037	A.K.P. Smith	other	29
379006999	other	other	0
379006999	other	other	0
379007005	A.K.P. Smith	other	14.8
379007006	other	other	0.3403
379007007	other	other	3.78
379007008	other	other	10
379007009	other	other	23.05
379007010	other	other	19.882
379007012	other	other	1.061
379007035	other	other	0.988
379007037	other	other	0.2021
379007039	other	other	0.2142
379007040	other	other	0.1862
379007043	other	other	0.416
379007044	other	other	0.04
379007045	other	other	1.461
379007046	other	other	3.84
379007047	other	other	1.83
379007048	other	other	0.12
379007049	other	other	0.55
379007050	other	other	1.79
379007051	other	other	10
379007052	other	other	8.5
379007054	other	other	5.97

TMK	MajorOwner	BigstOwner	TaxAcres
379007055	other	other	2
379007058	other	other	0.1955
379007059	other	other	0.1953
379007060	other	other	0.1303
379007064	other	other	0.1767
379007068	other	other	0.457
379007070	other	other	0.5792
379007071	other	other	0.4308
379007072	other	other	10
379007999	other	other	0
379008001	other	other	10.63
379008002	other	other	12
379008003	other	other	30.57
379008004	Mahealani Ranch	other	30.341
379008006	Mahealani Ranch	other	1.559
379008007	Wall Ranch	other	3.98
379008008	other	other	5.028
379008010	Wall Ranch	other	40.022
379008011	Mahealani Ranch	other	3.233
379008013	other	other	2.18
379008014	other	other	2.5
379008015	other	other	0.478
379008016	other	other	0.2196
379008017	other	other	0.2196
379008018	other	other	0.3961
379008019	other	other	0.5319
379008020	other	other	2.372
379008021	other	other	0.24
379008022	other	other	2.646
379008023	other	other	0.601
379008024	other	other	0.287
379008025	other	other	0.7501
379008026	other	other	0.9747
379008027	other	other	1.115
379008999	other	other	0
379009007	other	other	7.25
379009008	other	other	2.141
379009009	other	other	0.2072
379009010	Govt. State	Govt. State	15.741
379009011	A.K.P. Smith	other	10.63
379009012	other	other	24.369
379009019	other	other	0.1722
379009021	other	other	0.287
379009022	other	other	0.7004
379009024	other	other	5.11
379009025	other	other	3.224
379009026	other	other	5
379009027	other	other	7.48

TMK	MajorOwner	BigstOwner	TaxAcres
379009028	other	other	6.99
379009029	other	other	1.81
379009030	other	other	4.5
379009031	other	other	3.15
379009033	other	other	1.543
379009037	other	other	0.2088
379009038	other	other	0.1074
379009040	other	other	7.1
379009044	Govt. County of Hawaii	Govt. County	0.057
379009045	Govt. County of Hawaii	Govt. County	1.08
379009046	other	other	0.275
379009047	Govt. County of Hawaii	Govt. County	3.376
379009048	other	other	6.6
379009050	other	other	0.099
379009051	Govt. County of Hawaii	Govt. County	0.586
379009054	other	other	2.1
379014001	other	other	0.1382
379014002	other	other	0.4449
379014003	other	other	1
379014004	other	other	1.744
379014006	other	other	0.1746
379014007	other	other	0.1746
379014008	other	other	0.1748
379014009	other	other	0.1732
379014010	other	other	0.1747
379014011	other	other	0.1747
379014012	other	other	0.1747
379014013	other	other	0.3115
379014014	other	other	0.4783
379014016	other	other	0.6142
379014019	other	other	0.1925
379014020	other	other	0.2735
379014021	other	other	0.2195
379014022	other	other	0.1741
379014023	other	other	0.1741
379014024	other	other	0.1741
379014025	other	other	0.1741
379014026	other	other	0.2913
379014027	other	other	0.1982
379014028	other	other	0.1958
379014029	other	other	0.1815
379014030	other	other	0.2011
379014031	other	other	0.2065
379014032	other	other	0.1811
379014033	other	other	0.1959
379014034	other	other	0.2065
379014035	other	other	0.2135
379014041	other	other	0.4449

TMK	MajorOwner	BigstOwner	TaxAcres
379014042	other	other	0.2213
379014043	other	other	0.2504
379014044	other	other	0.3067
379014045	other	other	0.4449
379014046	other	other	0.4449
379014047	other	other	0.2235
379014999	other	other	0
379015001	other	other	0.115
379015002	other	other	0.17
379015003	other	other	0.232
379015004	other	other	0.942
379015005	other	other	0.493
379015006	other	other	1.443
379015007	other	other	0.744
379015008	other	other	1.08
379015009	other	other	1.075
379015010	other	other	0.263
379015011	other	other	2.259
379015012	other	other	0.328
379015013	other	other	5.701
379015014	other	other	1.786
379015015	other	other	5.131
379015016	other	other	0.979
379015017	other	other	1.879
379015018	other	other	0.15
379015019	other	other	1.266
379015020	other	other	3.3
379015021	other	other	4
379015022	other	other	1.016
379015023	other	other	1.102
379015024	other	other	0.08
379015999	other	other	0
379016001	other	other	2.9
379016002	other	other	5.922
379016004	other	other	0.315
379016005	other	other	1
379016006	other	other	0.233
379016007	other	other	3.7
379016008	other	other	0.405
379016009	other	other	1.353
379016010	other	other	0.186
379016011	Govt. State	Govt. State	0.245
379016012	other	other	2.143
379016013	other	other	4.35
379016014	other	other	5.18
379016015	other	other	7.72
379016016	other	other	0.65
379016017	other	other	6.23

TMK	MajorOwner	BigstOwner	TaxAcres
379016018	Govt. State	Govt. State	1.91
379016019	Govt. State	Govt. State	0.125
379016999	other	other	0
379017001	other	other	1.102
379017002	other	other	1.73
379017003	other	other	0.175
379017004	other	other	0.183
379017005	other	other	0.201
379017006	other	other	0.489
379017007	other	other	3.963
379017008	other	other	0.25
379017009	Govt. State	Govt. State	5.458
379017010	Govt. State	Govt. State	0.101
379017011	other	other	0.465
379017012	other	other	2.76
379017013	other	other	2.335
379017014	other	other	2.186
379017015	other	other	1.035
379017016	other	other	2.814
379017017	other	other	7.65
379017018	other	other	3.241
379017019	other	other	3.08
379017020	other	other	0.459
379017021	other	other	0.442
379017022	Govt. State	Govt. State	3.142
379017023	other	other	1.317
379017024	other	other	1.103
379017025	other	other	1.316
379017999	other	other	0

TMK

372015083
372015084
373002029
373004017
373004022
373005071
373007089
373008128
373009027
373009029
373009030
373009049
373011033
373022046
373023088
373024024
373025018
373026025
373027017
373027023
373032072
373035071
373046037
373048011
373048012
373058049
373058050
374002009
374002015
374002016
374003034
374005006
374006016
374008028
374009004
374009094
374021022
374026031
375001115
375001117
375012042
375012105
375013027
375015015
375017011
375017012

TMK

375017015
375017027
375017036
375023069
375033007
375043030
375043121
375043121
376005025
376006018
377028009
378006060
378006067
378009054
378009054
378009076
378009077
378010027
378010028
378010057
379003060

TMK

373005021
373006003
373010043
373058050
374001007
374021007
374021013
375001055
375014016
375015008
376005042
376007011
377002026
377002030
377007032
378004078
378008083
378009067
379017010

**PETITION REQUESTING A CONTESTED CASE HEARING BEFORE THE
COMMISSION ON WATER RESOURCE MANAGEMENT**

NOTE: THIS PETITION IS TO BE FILED IN PERSON OR MAILED AND POSTMARKED WITHIN 10 DAYS OF THE PUBLIC HEARING OR COMMISSION MEETING AT WHICH THE REQUEST FOR A CONTESTED CASE HEARING WAS MADE.

(Please submit an original and 3 copies, pursuant to HAR 13-167-25(c)).

REFERENCE: Administrative Rules Chapter 13-167-54 Parties

IF MAILED, SEND TO: Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809
Phone: (808) 587-0225 Fax: (808) 587-0219

IF DELIVERED: Commission on Water Resource Management
1151 Punchbowl St., Rm. 227, Kalanimoku Bldg.
Honolulu, HI 96813

Please provide the following information:

(If there is not sufficient space to fully answer any of the items noted below, please use additional sheets of paper)

GENERAL INFORMATION

1. NAME: RCFC Kaloko Heights, LLC
2. ADDRESS: 10100 Santa Monica Blvd., Suite 1000
Los Angeles, California 90067
PHONE: (916) 952-5600 FAX: none
3. ATTORNEY OR CONTACT PERSON: Thomas L.H. Yeh, Esq., Law Offices of Yeh & Moore
4. ADDRESS: 85 W. Lanikaula Street
Hilo, Hawaii 96720
PHONE: (808) 961-0055 FAX: (808) 969-1531
5. SUBJECT MATTER: National Park Service's Petition to Designate the Keauhou Aquifer System
as a Ground Water Management Area, filed September 13, 2013
("NPS Petition").

PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

6. DATE OF PUBLIC December 10, 2014 and any subsequent public hearing(s)
scheduled by the Commission regarding the NPS Petition.

7. WHAT IS THE LEGAL AUTHORITY UNDER WHICH THE PROCEEDING, HEARING OR ACTION IS TO BE HELD OR MADE (CITE APPLICABLE SECTION OF CONSTITUTION, STATUTES, OR ADMINISTRATIVE RULES):

Amendment 14, U.S. Constitution
Article 1, Section 5, Hawaii Constitution
Hawaii Revised Statutes ("HRS") Sections 174C-1, et seq.
HRS Sections 91-1, et seq.
Hawaii Administrative Rules ("HAR") Sections 13-171-1, et seq.
HAR Sections 13-167-1, et seq.

HRS Section 174C-9 Proceedings before the commission concerning water resources.

All proceedings before the commission concerning the enforcement or application of any provision of this chapter or any rule adopted pursuant thereto, or the issuance, modification, or revocation of any permit or license under this code by the commission, shall be conducted in accordance with chapter 91. Hearings regarding particular water resources shall be conducted on the island where those water resources are located.

8. ARE YOU HAWAIIAN? Not Applicable

9. WHAT IS THE TAX MAP KEY OF THE PROPERTY ON WHICH YOU RESIDE?

Petitioner does not reside on but owns property within the Keauhou Acquiifer.

10. WHAT IS THE TAX MAP KEY OF THE PROPERTY CONSIDERED IN THIS ISSUE?

The properties considered in this issue are all the properties within the Keauhou Acquiifer. These are itemized in Exhibit "2" filed with the Petition for Contested Case filed by the Water Board of the County of Hawaii, filed on December 3, 2014.

11. WHAT IS THE TAX MAP KEY OF THE PROPERTY OR PROPERTIES WHICH YOU OWN IN THE VICINITY OF THE PROPERTY CONSIDERED IN THIS ISSUE?

TMK Nos: (3) 7-3-009:019, 032, 057, 058, 059, 060, 061 and 062.

PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

12. WHAT, IF ANY, ACTIVITIES HAVE YOU ENGAGED IN ON THE PROPERTY
CONSIDERED IN THIS ISSUE?

Petitioner and its predecessors have obtained land use entitlements for its property, including paid water facilities charges recognized by the County of Hawaii Department of Water Supply (DWS) for 1,494 residential units totaling the sum of \$8,217,000.00, and has made substantial on-site and off-site improvements to the water system, including the construction of a 1 million gallon reservoir. On site improvements include infrastructure improvements for a bulk lot subdivision in anticipation of commercial and residential development.

13. WHAT IS NATURE AND EXTENT OF YOUR INTEREST THAT MAY BE AFFECTED?

Petitioner and its predecessors have expended approximately 9 million dollars to secure water commitments and for water facilities charges, in reliance upon land use entitlements the subject property has received. The designation of a Water Management Area which covers Petitioner's property will negatively impair its entitlement to water and impose an additional administrative burden which will restrict the Petitioner's use of water to only those uses that the Commission may or may not approve by permit, thereby jeopardizing the integrity of the Petitioner's investments in facilities charges and infrastructure. Petitioner will be required to apply for a water use permit, a discretionary permit subject to denial and subject to judicial challenges. It could lose the substantial investments and value of the entitlements it has continued to perfect.

Petitioner has legitimate vested property interests in the Keauhou Aquifer as a landowner, user and is the owner of a multi-million dollar water tank and water system infrastructure, with paid in facilities charges for 1,464 units totaling \$8,217,000.00. The practical effect of a WMA designation will severely limit Petitioner's ability to develop its lands and provide housing opportunities, increase the cost of development, and severely impact obtaining a return on Petitioner's investment. Petitioner has an interest in challenging the proposed designation, and clearly has a concrete interest in the outcome, and an interest different from the public.

The discretionary approvals and vested property rights of Petitioner are as follows:

1. Phase I of the Kaloko Heights project, consisting of 213.472 acres of land, was reclassified from SLU Agriculture (A) to Urban (U) by the SLU Commission pursuant to LUC Docket No. A81-535. As part of this action, the SLUC also conditionally approved Phase II of project, consisting of 193.9311 acres.

PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

On December 10, 2012, the SLUC approved the Petitioner's request for a ten (10) year time extension, through January 20, 2023, to substantially complete the onsite and offsite improvements within Phase I and to apply for redistricting of Phase II.

The Kaloko Heights project area has been approved for incremental reclassification of the entire project area to the SLU Urban District and is in compliance with all of the requirements and conditions of the SLUC Docket No. A81-535.

2. The Kaloko Heights project has been determined to be consistent with the County General Plan's Land Use Pattern Allocation Guide (LUPAG) map which identifies the project area for a mix of Medium Density Urban and Low Density Urban uses. The project area is further identified as being with the Kona Urban Area on the Kona Community Development Plan's Official Kona Land Use Map.

The Kaloko Heights project is consistent with county development plan/community plan approvals.

3. On December 19, 1983, Change of Zone Ordinance No. 83-63 as amended by Ord. No 86-91 (REZ 461) was approved for the Kaloko Heights project area, allowing a mix of Single Family, Multiple Family, Neighborhood Commercial and Open zoned districts. The Ordinance approved the zoning in increments.

The zoning for Phase I, consisting of 213.472 acres, was effectuated by the securing of 1,494 water units for the overall development from the Kona Source Agreement II and other related activities related to water availability.

The zoning for Phase II, consisting of single family residential, was also approved conditioned upon the reclassification of this area to Urban.

The entire Kaloko Heights project area has been approved for condition zoning and is in compliance with all of the requirements and conditions of Change of Zone Ordinance 83-63 as amended by Ord. 86-91.

4. The Kaloko Heights project has received tentative subdivision approval for a bulk lot subdivision under Subdivision No. 05-000031 in Increment I, and tentative approval of a further subdivision of Parcels 57 and 61 under Subdivision No. 06-000495.
5. Kaloko Heights has paid facilities charges totaling \$8,217,000.00 for 1,494 water units from the County of Hawaii Department of Water Supply's (DWS) Kona Source Agreement II for the project. In order to secure these commitments, over \$9,000,000 in water commitment fees to the Department of Water Supply have been paid, and along with

PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

the completion of a 100,000-gallon reservoir as well as 8-inch transmission line within Hina Lani Road as part of the DWS regional infrastructure improvements. Construction drawings for the water system for Increment I have been approved, and Kaloko Heights is prepared to proceed to bonding of these system improvements.

In sum, all discretionary approvals required to move the Increment I development forward have been approved, and substantial investment has been made in reliance upon these approvals.

The current entitlements of Kaloko Heights, which include the paid in water facilities charges unquestionably qualify the proposed water uses as an “authorized planned use”. But the property interests of Kaloko Heights are far greater than the simple definition of an authorized planned use as contained in the State Water Code.

Under long recognized principles of constitutional law, and the vested rights and paid in investments made by Kaloko Heights and its predecessors constitute a concrete property right and more than a mere abstract need or desire for use of water from the Keauhou aquifer.

14. WHAT IS THE DISAGREEMENT, DENIAL, OR GRIEVANCE WHICH YOU ARE CONTESTING?

Petitioner contests the Commission’s designation of the Keauhou Aquifer as a Water Management Area, such a designation is unwarranted, and the procedures which the Commission has followed thus far are in violation of Chapters 91, 92 and 174C, HRS, and the Commission’s own rules.

15. WHAT ARE THE BASIC FACTS AND ISSUES?

See the statement of basic facts and issues in the Petition filed on December 3, 2014 by the Water Board of the County of Hawaii. In addition, from a procedural standpoint, the Commission has violated the State’s “Sunshine Law” (HRS Chapter 92) as alleged by the Hawaii Leeward Planning Conference in its OIP Complaint, and also acted outside the scope of its own rules by conducting the investigation which should have been only conducted by its Chairperson, and in doing so, violated Chapter 92. See Petitioner’s letter accompanying this Petition.

PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

16. WHAT IS THE RELIEF THAT YOU SEEK OR THAT YOU DEEM YOURSELF
ENTITLED?

Petitioner seeks a decision by the Commission that there is insufficient evidence to support the designation of the Keauhou Aquifer as a Water Management Area, and therefore the NPS Petition should be denied, and that the Commission's procedures be determined to be in violation of Chapters 91 and 92, HRS.

17. IDENTIFY ANY AND ALL OTHER PERSONS WHO MAY OR WILL BE AFFECTED
BY THE RELIEF WHICH YOU SEEK:

All landowners within the Keauhou Aquifer.

The above-named person hereby requests and petitions the Commission on Water Resource Management for a Contested Case Hearing in the matter described above.

Thomas L.H. Yeh, attorney
for RCFC Kaloko Heights, LLC
Name (Print)



Signature

12/5/2014

Date

(Draft as of: 7.2.25 ¹)

[illegible]

GDEs are unique communities of endemic plants and animals that rely on flows of fresh water. In West Hawai'i, GDEs are prominently found along the Kona coast and differ significantly from surface water ecosystems. Though not perfectly understood, it is

EXHIBIT 5

hypothesized that groundwater in the KASA moves down beneath the surface from three aquifer bodies: basal, high-level dike confined, and deep confined. At the coast, these waters feed springs, anchialine pools, fishponds, offshore seeps, near shore estuaries, and reef life. GDE features are important sites for biodiversity and Native Hawaiian cultural practices which include, among others, subsistence and ceremonial use.

Keauhou's coast has benefitted from substantial scientific study, providing a strong foundation for adaptive management. While a comprehensive inventory of all GDE features is an important future milestone, existing knowledge will support the development of a robust first-generation AMP. With current funding and timeline constraints, this AMP can serve as a strategic initial "blueprint" and launch point for meaningful action—articulating current assumptions about the conceptual model of the aquifers, establishing relevant indicators and a monitoring framework, identifying sentinel sites, and prioritizing key areas for continued research.

The initial Keauhou AMP is expected to be robust enough to help inform ground water permitting and pumping decisions, create a baseline monitoring plan, and be fully adaptive to changes as new information emerges and the plan is updated. We are being assisted in this effort by Peter S. Adler, PhD and Stephanie Sang of GUILD Consulting. Adler helped organize the initial GDE symposium in 2017.

I. Objectives

Between now and November 30, 2025, CWRM will develop a robust first-generation plan for an updatable AMP for groundwater in the KASA. The overarching purpose of this AMP is to move the topic of impacts of KASA groundwater withdrawals on GDEs and Native Hawaiian traditional and customary practices from dialogue to applied, actionable science. Further, it is hoped that this plan will serve as a useful framework for AMPs in other areas of CWRM's jurisdiction. Specifically for Keauhou, the plan will be used to:

- (1) Perpetuate a flow of fresh groundwater to GDEs sufficient that native biota and traditional and customary practices of Native Hawaiians can be sustained while allowing for other protected public trust uses and reasonable and beneficial uses of water;
- (2) Help directly decide or indirectly inform management decisions regarding requests for future ground water withdrawals, including special conditions that may be imposed on well operators;

- (3) Establish initial monitoring indicators, a monitoring plan, potential triggers for management actions related to ecological and cultural thresholds, and plans for future monitoring;
- (4) Set in place a plan that allows for learning and will be continually updated by CWRM into second and third-generation plans as additional knowledge emerges.

II. Starting Points and Expert Groups

This first-generation AMP will build most immediately on (1) the 2017 symposium on Groundwater Dependent Ecosystems ²; (2) the draft proposal for an AMP submitted by the Kaloko-Honokōhau National Historical Park ³; (3) the peer reviewed bio-cultural research conducted by Gibson, Bremmer, Burnett, Lui, and Smith⁴; and (4) other materials filed before CWRM and research conducted since 2017 to be identified by experts and others.

Four work groups of three or four well regarded experts are being established with a CWRM point person helping to staff each. Adler and Sang will facilitate and write up and incorporate each group's findings and recommendations. The specific role of Working Group experts is to:

- (a) identify a short and prioritized list of specific AMP baseline monitoring indicators;
- (b) articulate the assumptions behind each recommended indicator;
- (c) develop a monitoring plan;
- (d) identify any specific additional pertinent research conducted since the 2017 symposium; and
- (e) suggest a short list of critical future research efforts that will improve second and third-generations of the AMP.

The four expert groups are:

² https://files.hawaii.gov/dlnr/cwr/activity/keauhou/20181108-GDE_Symposium_Final.pdf

³ "Pilot Adaptive Management Plan For (1) Protecting Groundwater Dependent Ecosystems In Kaloko-Honokōhau National Historical Park and (2) Providing Water Security and Sustainability in the Keauhou Aquifer System Area, Hawai'i County, Hawai'i" December, 2022

⁴ "Biocultural Values of Groundwater Dependent Ecosystems in Kona, Hawai'i" by Veronica L. Gibson, Leah L. Bremer, Kimberly M. Burnett, Nicole Keaka Lui, and Celia M. Smith. *Ecology and Society*, 2022.

- **Native Hawaiian and 'Ohana Traditional and Customary Practices / Kilo**
 - Expert To be named
 - Expert To be named
 - Expert To be named
 - CWRM - Ciara Kahahane

- **Hydrology**
 - Donald Thomas, PhD, Geochemist, Director of the Center for the Study of Active Volcanoes University of Hawaii at Manoa
 - Heidi L. Kane, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey
 - Brytne Okuhata, PhD, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey
 - CWRM - Ryan Imata

- **Indicator Species**
 - Celia Smith - The Wilder Chair and Professor of Botany, School of Life Sciences, University of Hawai'i at Mānoa
 - Diamond Tachera - *Project Scientist I*, Mesoscale & Microscale Meteorology Laboratory, *Co-Principal Investigator*, NSF CoPe Rising Voices, Changing Coasts, NSF National Center for Atmospheric Research (NCAR)
 - Ryan Okano - Aquatic Biologist, DLNR, Division of Aquatic Resources
 - Troy Sakihara - Aquatic Biologist, DLNR, Division of Aquatic Resources
 - CWRM – Katie C Roth

- **Contamination and Pollution**
 - Jennifer Doi, Environmental Health Specialist, Hawaii Department of Health (DOH), Clean Water Branch
 - Christopher Shuler, Hydrologist, University of Hawaii, Water Resources Research Center
 - Robert Whittier, Geologist, DOH, Safe Drinking Water Branch
 - Expert to be named from County of Hawaii, Department of Environmental Management
 - CWRM - Neal Fujii

Other data such as projected sea level rise and drought and rainfall estimations will also be incorporated into the AMP.

III. Advisory Committee and External Reviewer

The AMP project has an Advisory Committee to offer general counsel on both the process and the content of the AMP's development and help ensure a strong first-generation plan. Advisors will convene at least three times, either face-to-face or electronically before, during, and near the end of the project, to help ensure the AMP's clarity and robustness.

The following have agreed to serve on the committee:

- Leah Bremer - Institute for Sustainability and Resilience, UHERO, and Water Resources Research Center, University of Hawai'i at Mānoa
- Kā'eo Duarte - Kamehameha Schools; Vice President, 'Āina Pauahi
- Scot K. Izuka – United States Geological Survey (ret)
- Charles Young - Hawai'i Island 'Aha Moku

The project will also have an outside reviewer, Dr. Scott McCreary of Concur, Inc. (<https://www.concurinc.com>). McCreary has substantial experience with adaptive management plans and joint fact-finding on natural resource matters.

IV. Plan Phases and Key Activities

The project will take place in 4 flexible phases and be accomplished by the end of November 2025:

Phase IA - Project Planning and Preparation. Anticipated completion by June 15, 2025
Some key activities include: Development of a preliminary AMP outline for discussion with CWRM staff, advisors, and the outside reviewer. Begin preparation of a reasonable set of literature references to be attached to the draft AMP.

Phase IB – Community Engagement, Scoping, and Commission Approval. Anticipated completion by July 18, 2025.
Some key activities include: Establishment of four working groups composed of experts. Conduct outreach meetings to present the plan. Development of a schedule for public briefings with Commissioners.

Phase II - Expert Group Meetings. Anticipated completion by August 31, 2025.
Some key activities include: Hybrid or in-person meetings of the four expert Working Groups. Development of preliminary maps of the KASA to show features influencing GDEs. Meetings on Island of Hawai'i with Native Hawaiian and traditional and customary users, Hawai'i Department of Water Supply, Kaloko-Honokōhau National Historical Park, and others.

Phase III – Prepare First Draft AMP; Briefings for CWRM and the Public. Anticipated completion by September 30, 2025.

Some key activities include: Continuing consultations with project advisors, creation of a first draft AMP, and public briefings with CWRM Commissioners.

Phase IV - Prepare Revised AMP. Anticipated completion by November 30, 2025

Some key activities include: Incorporating feedback from CWRM Commissioners and the public into a further pre-publication AMP draft.

Barring unexpected delays, a first-generation AMP will be completed by November 30, 2025.

Contacts:

Ciara Kahahane, Deputy Director
State of Hawai'i Commission on Water Resource Management
Dlnr.cwrn@hawaii.gov
(808) 587-0214

Peter S. Adler, PhD – Project Consultant
GUILD Consulting
padleraccord@gmail.com
(808) 683-2849

Stephanie Sang, MA – Administrative Assistant
GUILD Consulting
Tian.sang33@gmail.com
(808) 990-2205

(Draft as of: 7.2.25 ¹)

[illegible]

GDEs are unique communities of endemic plants and animals that rely on flows of fresh water. In West Hawai'i, GDEs are prominently found along the Kona coast and differ significantly from surface water ecosystems. Though not perfectly understood, it is

EXHIBIT 5

hypothesized that groundwater in the KASA moves down beneath the surface from three aquifer bodies: basal, high-level dike confined, and deep confined. At the coast, these waters feed springs, anchialine pools, fishponds, offshore seeps, near shore estuaries, and reef life. GDE features are important sites for biodiversity and Native Hawaiian cultural practices which include, among others, subsistence and ceremonial use.

Keauhou's coast has benefitted from substantial scientific study, providing a strong foundation for adaptive management. While a comprehensive inventory of all GDE features is an important future milestone, existing knowledge will support the development of a robust first-generation AMP. With current funding and timeline constraints, this AMP can serve as a strategic initial "blueprint" and launch point for meaningful action—articulating current assumptions about the conceptual model of the aquifers, establishing relevant indicators and a monitoring framework, identifying sentinel sites, and prioritizing key areas for continued research.

The initial Keauhou AMP is expected to be robust enough to help inform ground water permitting and pumping decisions, create a baseline monitoring plan, and be fully adaptive to changes as new information emerges and the plan is updated. We are being assisted in this effort by Peter S. Adler, PhD and Stephanie Sang of GUILD Consulting. Adler helped organize the initial GDE symposium in 2017.

I. Objectives

Between now and November 30, 2025, CWRM will develop a robust first-generation plan for an updatable AMP for groundwater in the KASA. The overarching purpose of this AMP is to move the topic of impacts of KASA groundwater withdrawals on GDEs and Native Hawaiian traditional and customary practices from dialogue to applied, actionable science. Further, it is hoped that this plan will serve as a useful framework for AMPs in other areas of CWRM's jurisdiction. Specifically for Keauhou, the plan will be used to:

- (1) Perpetuate a flow of fresh groundwater to GDEs sufficient that native biota and traditional and customary practices of Native Hawaiians can be sustained while allowing for other protected public trust uses and reasonable and beneficial uses of water;
- (2) Help directly decide or indirectly inform management decisions regarding requests for future ground water withdrawals, including special conditions that may be imposed on well operators;

- (3) Establish initial monitoring indicators, a monitoring plan, potential triggers for management actions related to ecological and cultural thresholds, and plans for future monitoring;
- (4) Set in place a plan that allows for learning and will be continually updated by CWRM into second and third-generation plans as additional knowledge emerges.

II. Starting Points and Expert Groups

This first-generation AMP will build most immediately on (1) the 2017 symposium on Groundwater Dependent Ecosystems ²; (2) the draft proposal for an AMP submitted by the Kaloko-Honokōhau National Historical Park ³; (3) the peer reviewed bio-cultural research conducted by Gibson, Bremmer, Burnett, Lui, and Smith⁴; and (4) other materials filed before CWRM and research conducted since 2017 to be identified by experts and others.

Four work groups of three or four well regarded experts are being established with a CWRM point person helping to staff each. Adler and Sang will facilitate and write up and incorporate each group's findings and recommendations. The specific role of Working Group experts is to:

- (a) identify a short and prioritized list of specific AMP baseline monitoring indicators;
- (b) articulate the assumptions behind each recommended indicator;
- (c) develop a monitoring plan;
- (d) identify any specific additional pertinent research conducted since the 2017 symposium; and
- (e) suggest a short list of critical future research efforts that will improve second and third-generations of the AMP.

The four expert groups are:

² https://files.hawaii.gov/dlnr/cwr/activity/keauhou/20181108-GDE_Symposium_Final.pdf

³ "Pilot Adaptive Management Plan For (1) Protecting Groundwater Dependent Ecosystems In Kaloko-Honokōhau National Historical Park and (2) Providing Water Security and Sustainability in the Keauhou Aquifer System Area, Hawai'i County, Hawai'i" December, 2022

⁴ "Biocultural Values of Groundwater Dependent Ecosystems in Kona, Hawai'i" by Veronica L. Gibson, Leah L. Bremer, Kimberly M. Burnett, Nicole Keaka Lui, and Celia M. Smith. *Ecology and Society*, 2022.

- **Native Hawaiian and 'Ohana Traditional and Customary Practices / Kilo**
 - Expert To be named
 - Expert To be named
 - Expert To be named
 - CWRM - Ciara Kahahane

- **Hydrology**
 - Donald Thomas, PhD, Geochemist, Director of the Center for the Study of Active Volcanoes University of Hawaii at Manoa
 - Heidi L. Kane, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey
 - Brytne Okuhata, PhD, Hydrologist, Pacific Islands Water Science Center, United States Geological Survey
 - CWRM - Ryan Imata

- **Indicator Species**
 - Celia Smith - The Wilder Chair and Professor of Botany, School of Life Sciences, University of Hawai'i at Mānoa
 - Diamond Tachera - *Project Scientist I*, Mesoscale & Microscale Meteorology Laboratory, *Co-Principal Investigator*, NSF CoPe Rising Voices, Changing Coasts, NSF National Center for Atmospheric Research (NCAR)
 - Ryan Okano - Aquatic Biologist, DLNR, Division of Aquatic Resources
 - Troy Sakihara - Aquatic Biologist, DLNR, Division of Aquatic Resources
 - CWRM – Katie C Roth

- **Contamination and Pollution**
 - Jennifer Doi, Environmental Health Specialist, Hawaii Department of Health (DOH), Clean Water Branch
 - Christopher Shuler, Hydrologist, University of Hawaii, Water Resources Research Center
 - Robert Whittier, Geologist, DOH, Safe Drinking Water Branch
 - Expert to be named from County of Hawaii, Department of Environmental Management
 - CWRM - Neal Fujii

Other data such as projected sea level rise and drought and rainfall estimations will also be incorporated into the AMP.

III. Advisory Committee and External Reviewer

The AMP project has an Advisory Committee to offer general counsel on both the process and the content of the AMP's development and help ensure a strong first-generation plan. Advisors will convene at least three times, either face-to-face or electronically before, during, and near the end of the project, to help ensure the AMP's clarity and robustness.

The following have agreed to serve on the committee:

- Leah Bremer - Institute for Sustainability and Resilience, UHERO, and Water Resources Research Center, University of Hawai'i at Mānoa
- Kā'eo Duarte - Kamehameha Schools; Vice President, 'Āina Pauahi
- Scot K. Izuka – United States Geological Survey (ret)
- Charles Young - Hawai'i Island 'Aha Moku

The project will also have an outside reviewer, Dr. Scott McCreary of Concur, Inc. (<https://www.concurinc.com>). McCreary has substantial experience with adaptive management plans and joint fact-finding on natural resource matters.

IV. Plan Phases and Key Activities

The project will take place in 4 flexible phases and be accomplished by the end of November 2025:

Phase IA - Project Planning and Preparation. Anticipated completion by June 15, 2025
Some key activities include: Development of a preliminary AMP outline for discussion with CWRM staff, advisors, and the outside reviewer. Begin preparation of a reasonable set of literature references to be attached to the draft AMP.

Phase IB – Community Engagement, Scoping, and Commission Approval. Anticipated completion by July 18, 2025.
Some key activities include: Establishment of four working groups composed of experts. Conduct outreach meetings to present the plan. Development of a schedule for public briefings with Commissioners.

Phase II - Expert Group Meetings. Anticipated completion by August 31, 2025.
Some key activities include: Hybrid or in-person meetings of the four expert Working Groups. Development of preliminary maps of the KASA to show features influencing GDEs. Meetings on Island of Hawai'i with Native Hawaiian and traditional and customary users, Hawai'i Department of Water Supply, Kaloko-Honokōhau National Historical Park, and others.

Phase III – Prepare First Draft AMP; Briefings for CWRM and the Public. Anticipated completion by September 30, 2025.

Some key activities include: Continuing consultations with project advisors, creation of a first draft AMP, and public briefings with CWRM Commissioners.

Phase IV - Prepare Revised AMP. Anticipated completion by November 30, 2025

Some key activities include: Incorporating feedback from CWRM Commissioners and the public into a further pre-publication AMP draft.

Barring unexpected delays, a first-generation AMP will be completed by November 30, 2025.

Contacts:

Ciara Kahahane, Deputy Director
State of Hawai'i Commission on Water Resource Management
Dlnr.cwrn@hawaii.gov
(808) 587-0214

Peter S. Adler, PhD – Project Consultant
GUILD Consulting
padleraccord@gmail.com
(808) 683-2849

Stephanie Sang, MA – Administrative Assistant
GUILD Consulting
Tian.sang33@gmail.com
(808) 990-2205

Preliminary Outline

7.2.25

KEAUHOU AQUIFER SYSTEM AREA GROUNDWATER ADAPTIVE MANAGEMENT PLAN

A First Generation Plan for Keauhou's
Groundwater Resources

Executive Summary

I. Introduction and Background Information

- What is an Adaptive Management Plan (AMP) and why it is needed
- What brought this effort about?
- AMP good practices
- Keauhou Aquifer System Area focus: coastal Groundwater Dependent Ecosystems (GDEs); first and future generation AMPs
- CWRM's authorities and obligations regarding protected public trust uses of water and maximizing reasonable and beneficial use of water
- How this plan was developed
 - Alignment and Meetings with CWRM Staff
 - Advisory Panel
 - Expert Groups
 - Stakeholder Consultations
 - Outside Reviewer
 - Updates and public briefings to CWRM

II. The Setting

- The Keauhou Aquifer System Area (KASA) described
- Key GDE features and indigenous aquaculture sites
 - Anchialine pools
 - Fishponds
 - Estuarian sites and near shore fisheries
 - Basal springs
 - Other
- Wells in KASA provide drinking water to the community and support other commercial and industrial activities. There are current and anticipated new well applications in KASA.
- Native Hawaiian traditional and customary practices dependent on groundwater exist in KASA.

- Other current or future protected public trust uses exist in KASA, including use by the Department of Hawaiian Home Lands.
- Foundational documents (an initial few; more to be added)

III. The Problem

- Starting assumptions
 - Fresh water is the foundation for both economic and environmental sustainability in West Hawai'i
 - Decisions regarding Keauhou GDEs will affect other decisions about freshwater withdrawals (new wells), which have implications for regional development
- Short and Long Term Threats
 - ⊖ Excessive withdrawals of groundwater
 - Contamination and pollution
 - Flooding, runoff and erosion
 - Sea level rise, wildfires, saltwater intrusion, altered precipitation patterns, droughts

IV. AMP Goals

- (1) Perpetuate a flow of fresh groundwater to GDEs sufficient that native biota and public trust obligations to Native Hawaiians can be sustained while allowing for protected public trust uses and reasonable and beneficial uses of water;
- (2) Help directly decide or indirectly inform management decisions regarding requests for future ground water withdrawals, including special conditions that may be imposed on well operators
- (3) Establish initial monitoring indicators, potential triggers for management actions related to biological and environmental thresholds; and an initial plan for an ongoing monitoring program.
- (4) Set in place a plan that will allow for learning about this system, to be continually updated by CWRM into successive plans as knowledge emerges.

V. Methodology

- Gather existing knowledge, information, and observations through updated literature and insights and information from stakeholders and rights-holders.
- Establish a working conceptual model for the KASA.
- Identify possible GDE sentinel sites for baseline monitoring.
- Through the Expert Groups, create a short and prioritized list of indicators to be tracked (Initial Priority Baseline Indicators).

- Establish initial monitoring procedures and plan a future monitoring program.
- Set proposed thresholds and triggers.

VI. Caveats and Uncertainties

- No complete inventory of all GDE features
- The precise sources and flow patterns of fresh water coming to the GDEs are unknown
- Incomplete GDE biota inventories
- Insufficient or contradictory current monitoring knowledge

VII. Expert Group Recommendations

- Native Hawaiian and 'Ohana Traditional and Customary Practices / Kilo
 - Participating Experts
 - Recommended Initial Priority Baseline Indicators
 - Assumptions behind the indicators
 - Specific research for a second generation AMP
- Hydrology
 - Participating Experts
 - Determine hydrologic boundaries and possible interactions between them.
 - Determine areas of discharge into onshore and nearshore environments.
 - Recommend monitoring to study impacts of well pumpage on the various aquifer bodies.
 - Specific research for a second generation AMP
- Indicator Species
 - Participating Experts
 - Recommended Initial Priority Baseline Indicators
 - Assumptions behind the indicators
 - Specific research for a second generation AMP
- Contamination and Pollution
 - Participating Experts
 - Identify sources of contaminants or pollution to the groundwater and coastal waters.

- Develop a hypothesis of the mechanisms of contamination and pollutant transport between the aquifers and the ocean.
- Recommended Initial Priority Baseline Indicators and a monitoring program
- Assumptions behind the indicators
- Specific research for a second generation AMP

VIII. Final Recommendations

- First generation sentinel sites
- First generation indicators and development of a baseline monitoring plan
- Initial management actions
- Setting the stage for the longer term

IX. Appreciations

Appendices

1. Participants and Persons Consulted and Meeting Notes
2. Literature Consulted