

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

December 8, 2017

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Hawaii and Kauai

Holdover of Revocable Permits for Water Use on the Islands of Hawaii and Kauai. See Exhibit 3 for list of Revocable Permits.

LEGAL AUTHORITY:

Section 171-58, Hawaii Revised Statutes (HRS), as amended.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

In accordance with the Exemption List for the Department of Land and Natural Resources, approved by the Environmental Council on June 5, 2015, the subject action is exempt from the preparation of an environmental assessment pursuant to Exemption Class 1, "Operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving negligible or no expansion or change of use beyond that previously existing.", Item 51, "Permits, licenses, registrations and rights-of-entry issued by the Department that are routine in nature, involving negligible impacts beyond that previously existing." See Exhibit 1 attached.

BACKGROUND:

At its meeting on December 11, 2015, Item D-14, as amended, the Board of Land and Natural Resources directed Land Division staff to submit revocable permit renewals by county over four meetings, with an explanation of why a revocable permit is the appropriate disposition and how the rent was set. At its meeting on June 24, 2016, Item D-7, the Board further approved the recommendations of the Department of Land and Natural Resources Revocable Permit Task Force, as amended, requesting all divisions to notate any non-compliance issues and pending litigation in each renewal request. In compliance with these directives, staff has presented the revocable permits for land uses by county over four separate meetings in 2016. However, staff omitted revocable permits for water use from the renewal requests because of the complex issues they present. At its meeting on November 10, 2016, under agenda item D-3, the Board approved the one year holdover of nine water revocable permits on the islands of Hawaii and Kauai pursuant to Section 171-58, HRS, as amended by Act 126 Session Laws of Hawaii 2016

(Act 126). Staff now brings those same water revocable permits for approval of a one year holdover through December 31, 2018.

REMARKS:

On July 1, 2016, Act 126 became law, amending Section 171-58, HRS. The amended section provides in part:

Where an application has been made for a lease under this section to continue a previously authorized disposition of water rights, a holdover may be authorized annually until the pending application for the disposition of water rights is finally resolved or for a total of three consecutive one-year holdovers, whichever occurs sooner; provided that the total period of the holdover for any applicant shall not exceed three years; provided further that the holdover is consistent with the public trust doctrine

A copy of the full text of Act 126 is attached as Exhibit 2.

By letter dated July 20, 2016, Land Division notified its current water permit holders on the islands of Hawaii and Kauai of the enactment of Act 126, and asked them to submit applications for water leases if they intended to seek a holdover of their water permits. In response, DLNR received eight applications for water leases from seven of its current water permittees. Additionally, Kauai Island Utility Cooperative (KIUC) has a pending application (received July 20, 2001) for an existing hydroelectric power project in Lihue, Kauai. KIUC is relying on its prior application for this use.

The list of revocable permits for water use on the islands of Hawaii and Kauai that staff recommends be held over for 2018 is attached as Exhibit 3. Included in the exhibit are the revocable permit numbers, permittee names, locations with tax map keys, State Land Use District of the land where the water source is situated, commencement date of the permit, land area, annual rent, and comments. Copies of the maps from the revocable permits to be renewed are attached as Exhibit 4. Staff reviews the nine water permits by island below, followed by a discussion of the public trust doctrine as it relates to the permits.

Hawaii

Of the nine water permits that are the subject of this submittal, five are located in Kau, Hawaii. Hawaiian Agricultural and Hutchinson Sugar Company, both subsidiaries of C. Brewer & Co., Ltd., developed a system of tunnels, flumes and ditches in Kau in the 1900s, using the water primarily for fluming sugarcane and for wash water in the mills. Beginning in the late 1990s, some of the tunnels and transportation systems were converted to provide water to farmsteads and diversified crop endeavors. Diversified agriculture, livestock pasturage, orchard and field crops have expanded within the Kau District since that time.

At its meeting of January 11, 2008, under agenda Item D-8, the Board approved the withdrawal of the irrigation water system from the Kau Forest Reserve (KFR) and the set-aside of the system, along with other irrigation systems located outside of the KFR, to the Agribusiness Development Corporation (ADC). The staff submittal identified approximately 30 tunnel sources and systems to be set-aside to ADC. The approved Board action required ADC to survey the tunnels and water systems so the State Surveyor could prepare the official CSF maps to be included with the set-aside.

ADC provided the survey maps and descriptions to Land Division in 2015. As Land Division continued to process the approved disposition, it consulted with the Division of Forestry and Wildlife (DOFAW) on the survey maps and the status of the withdrawal from the KFR. DOFAW advised Land Division that DOFAW was opposed to the withdrawal of the water system from the KFR, but would be agreeable to an easement in favor of ADC over the portions of the irrigation system located in the KFR.

To address DOFAW's concerns, staff prepared a draft Board submittal to rescind the Board's prior action of January 11, 2008, Item D-8, and authorize instead the grant of a perpetual non-exclusive easement to ADC for the irrigation systems located in and outside of the KFR. The draft Board submittal would also have transferred the existing water permits and irrigation infrastructure to ADC. When the draft submittal was circulated for agency review in June 2016, however, it was opposed by the Department of Hawaiian Home Lands (DHHL) and Office of Hawaiian Affairs (OHA). DHHL argued that the proposed action was an improper circumvention of Section 171-58, HRS, and ignored DHHL's need for water in Kau. OHA expressed concern about ADC's ability to properly manage the revocable permits and fulfill the public trust obligations inherent in water use.

A sixth water permit, Revocable Permit No. S-7463, is issued to Hawaii Electric Light Co., Inc. (HELCO) for hydroelectric power generation purposes on the Wailuku River in South Hilo, Hawaii. The permit requires all water used under the permit to be returned to the Wailuku River at convenient points. The hydroelectric facility and various water dispositions to allow it to operate have been in place for many decades. On August 15, 2017, Department staff attended a beneficiary consultation held by DHHL in regards to their water reservation. HELCO has submitted a draft environmental assessment which has been reviewed by Department staff and comments have been provided to HELCO.

Kauai

There are three water permits currently active on Kauai. RP S-7088 to Jeffrey S. Lindner allows for the use of water from State land in Kawaihau, Kauai, specifically from Moloaa Well No. 1. A portion of this water goes to the County of Kauai, a portion goes to the Moloaa Irrigation Cooperative (MIC), and a portion is used by Mr. Lindner on his private property. Staff understands that MIC provides water for both irrigation and domestic use. At the end of 2015, the Department of Health Safe Drinking Water Branch (SDWB) notified Mr. Lindner that SDWB was designating the system as a public water system

which requires that that water be chlorinated prior to reaching the first customer, MIC. This has increased the cost of operation to Mr. Lindner, who has applied for a water lease explaining that a long-term disposition is necessary to allow him to recover his costs. Additionally, MIC has also applied for a water lease from the same well. However, it appears that MIC does not have access over the adjacent public lands to access and deliver the water.

When the Board approved the permit to Mr. Lindner in 1996, the permit was supposed to be a temporary measure to allow the County of Kauai Department of Water (KDOW) time to conduct a feasibility study to determine the appropriateness of creating a new water system based on the Moloaa well. KDOW did not complete the feasibility study. At its meeting of September 24, 1999, Item D-4, the Board amended this condition and stated that in the event no government entity indicates an intention to operate a water system, a public auction sale of the water license was to be conducted by October 30, 2000. No auction has been conducted to date, in part because the water source is landlocked by Mr. Lindner's private lands. Recently, KDOW expressed some interest in acquiring this water source. However, because the well is landlocked, KDOW would need to negotiate the purchase of or otherwise acquire the water transmission facilities and an easement to maintain it on Mr. Lindner's land, which complicates the creation of a public water system here.

Revocable Permit No. S-7310 was issued in 2002 to the East Kauai Water Users' Cooperative (EKWUC) for irrigation purposes over a system that had previously been used for sugarcane plantations. The permit restricts the use of irrigation water to those agricultural lands presently served by the system, or that had been served in the past. On August 26, 2016, EKWUC submitted an application for a water lease.

Revocable Permit No. S-7340 was issued in 2003 to Kauai Island Utility Cooperative (KIUC) for water from the Blue Hole Diversion to operate two hydroelectric plants. KIUC requested a water lease from the Board at its meeting of December 10, 2004, Item D-26, but the Board took no action on the request. OHA requested a contested case hearing. OHA and KIUC entered into a memorandum of agreement dated November 9, 2006 whereby OHA agreed to withdraw its request for a contested case if KIUC committed to performing specified studies in connection with the use of surface water. OHA and KIUC have agreed on the scope of the studies and OHA has withdrawn its request, although KIUC continues to work on a cultural impact assessment for the project. KIUC is still intending to obtain a water lease, but is relying on its lease application submitted on July 20, 2001.

Since the 2017 holdover approval, members of the public have written to the Department expressing their concerns with this permit. The comments appear to focus on an alleged failure by KIUC to comply with various regulatory requirements to obtain a lease of water rights, the initial approval of the permit being based on a non-consumptive use which was incorrect, such consumptive use of the water being inconsistent with the public trust, and the diversion of water by KIUC resulting in a negative impact on the downstream environment. The commenters requested that the Board reconsider its approval of the

permit in light of their comments.

Staff seeks to clarify that in the prior approval of the holdover, it was noted in the submittal that the use of the water under the permit was consumptive, and the Board deemed the holdover appropriate under such circumstances. Additionally the purpose of the holdover is to allow the applicant to fulfill the regulatory requirements to obtain a water lease, such as compliance with Chapter 343, HRS. Any rights under the permit are short term and will terminate at the sunset of the holdover period unless the applicant fulfills its requirements and obtains a water lease. Also any request for a water lease will be considered by the Board in an open, sun-shined meeting.

Regarding the downstream impacts of the water use, the Commission on Water Resource Management (CWRM) is currently in the process of developing Interim Instream Flow Standards (IIFS). Once the IIFS is developed, any water diversion pursuant to either the current revocable permit or potential long term lease will be subject to the IIFS. While the potential downstream impacts certainly raise concerns, staff would recommend deferring to CWRM to address this issue from the IIFS. In developing the IIFS, CWRM will release a report regarding their recommendations that will be subject to public review and comment. In addition, approval of the IIFS by the Commission will be done in an open, sun-shined meeting where the public can testify. Staff further notes that the permit does not impose a specific volume limit on the amount of water KIUC can divert, except that it cannot exceed the average annual amount diverted for the period from years 1992 to 2002.

As far as whether the use of water under the permit is consistent with the public trust, staff notes that the permit limits the use of the water for the purpose of generating hydroelectric power with KIUC's two hydroelectric plants, and that KIUC is a Hawaii non-profit cooperative electric company. This issue discussed further in the following section.

Public Trust Doctrine

Title to water resources is held in trust by the State for the benefit of its people. Pursuant to *In re Water Use Permits*, 94 Hawaii 97, 9 P.3d 409 (2000), and *In re Wai'ola O Moloka 'i, Inc.*, 103 Hawai'i 401, 83 P.3d 664 (2004) the Hawaii Supreme Court has identified four public trust purposes with respect to water:

- Maintenance of waters in their natural state;
- Domestic water use of the general public, particularly drinking water;
- The exercise of Native Hawaiian and traditional and customary rights, including appurtenant rights; and
- Reservations for Hawaiian home lands.

Of these four purposes, domestic water use is implicated in three of the current revocable permits: RP Nos. S-7088 to Mr. Lindner, and S-7234 and S-7267, both to Wood Valley

Water and Farm Cooperative. The six remaining RPs are for agricultural use or hydroelectric power generation. With respect to the agricultural use of water, the Hawaii Constitution provides:

The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands.

Hawaii Constitution, Article XI, Section 3.

The public lands shall be used for the development of farm and home ownership on as widespread a basis as possible, in accordance with procedures and limitations prescribed by law.

Hawaii Constitution, Article XI, Section 10.

In staff's view, making irrigation water available to farmers and ranchers supports the long term viability and security of local agricultural operations and is critical to the State's compliance with the constitutional mandates of Article XI. It also allows for the local production of food, supporting the goal of food sustainability and food security for Hawaii. It may also translate into lower prices for consumers when produce does not have to be shipped to Hawaii from outside of the state. Any tension between identified public trust uses of water and the constitutional mandates above will be resolved in the process of issuing water leases, because section 171-58, HRS, requires the joint development of a water reservation to support current and future DHHL homestead needs.

The hydroelectric use of water allows utility companies to provide clean energy to domestic and commercial users. This method of energy production also supports Hawaii's Clean Energy Initiative, which sets goals for the state to achieve 100 percent clean energy by 2045 coming from locally generated renewable sources. Further, those hydroelectric projects that return water to the same stream or other body of water from which it was drawn are considered non-consumptive. Although hydroelectric projects are not an identified public trust use of State waters, the public trust concerns will be addressed in the processing of the water lease applications under Section 171-58, HRS.

Charging for Water

The rent or fee to charge for water use is another issue. Standard appraisal methodologies may not work well in establishing a charge for water. There are few comparables that an appraiser could look at, and other types of appraisal methodology are ill-suited for determining a cost to charge for consuming a resource. It is even more difficult to appraise the non-consumptive use of water involved in hydroelectric uses.

Land Division staff has met with DHHL, OHA and the Office of Environmental Quality Control (OEQC) regarding the processing of water lease applications. All agencies are

interested in devising a method of charging for the use of water in a way that will help to sustain the resource. On September 15, 2016, the agencies met with three economics professors from the University of Hawaii to discuss possible methodologies for valuing the water and assessing charges for its use. As Act 126 provides for the holdover of the revocable permits, the Board is recommended to maintain the rent at current amounts.

The parties holding the nine water permits covered by this submittal have all submitted applications for water leases as indicated in Exhibit 3. A review of the files shows the permittees are compliant with the permit terms including payment of rent, posting of liability insurance, and reporting on water usage where required. Attached as Exhibit 5 is a spreadsheet summarizing water usage reports. Staff notes that EKWUC had not been in compliance with the water usage reporting requirements under its permit. However, EKWUC worked with CWRM to implement a water usage reporting system, and has begun to submit water usage reports. Additionally, Edmund C. Olson, Trustee (RP 7432) has not been in full compliance in submitting water usage reports. According to the permittee, the reason is due to staff turnover. Staff recommends approval of the holdover of this permit. However, if the permittee fails to remedy this issue, staff will bring this matter before the Board for further action.

Staff believes that a one-year holdover of these permits is appropriate under Section 171-58, HRS and Act 126. Agency comments were not solicited from agencies other than CWRM for this action since the permits are limited term holdovers, and as all permit holders subject to this approval have applied for water leases there will be numerous opportunities for government agencies and general public to provide input.

RECOMMENDATION: That the Board:

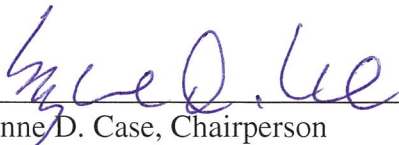
1. Find that the holdover of the revocable permits listed in Exhibit 3 is consistent with the public trust doctrine; and
2. Approve the holdover of the revocable permits listed in Exhibit 3 on a month-to-month basis for another one-year period through December 31, 2018, except for permits that are in arrears of rental payment for more than 60 days and/or have been approved for forfeiture by a separate Board action. Permits in arrears of rental for 60 days or more and/or approved by the Board for forfeiture shall not be renewed.

Respectfully Submitted,



Ian C. Hirokawa
Special Projects Coordinator

APPROVED FOR SUBMITTAL:



Suzanne D. Case, Chairperson



EXEMPTION NOTIFICATION

Regarding the preparation of an environmental assessment pursuant to Chapter 343, HRS and Chapter 11-200, HAR

Project Title: Holdover of Revocable Permits for Water Use on the Islands of Hawaii and Kauai.

Project / Reference No.: Not applicable

Project Location: Various locations on the Islands of Hawaii and Kauai

Project Description: Holdover existing revocable permits for a term of one year.

Chap. 343 Trigger(s): Use of State Land and Water

Exemption Class No.: In accordance with the Exemption List for the Department of Land and Natural Resources, approved by the Environmental Council on June 5, 2015, the subject request for issuance for right-of-entry is exempt from the preparation of an environmental assessment pursuant to Exemption Class 1, “Operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving negligible or no expansion or change of use beyond that previously existing.”

The holdover of existing revocable permits on State lands involves the continuation of existing uses on the lands. No change in use is authorized by the holdover.

Consulted Parties Commission on Water Resource Management

Recommendation: That the Board find this project will probably have minimal or no significant effect on the environment and is presumed to be exempt from the preparation of an environmental assessment.

EXHIBIT 1

Approved by the Governor
JUN 27 2016
on _____
HOUSE OF REPRESENTATIVES
TWENTY-EIGHTH LEGISLATURE, 2016
STATE OF HAWAII

ORIGINAL

ACT 126
H.B. NO. 2501
H.D. 2
S.D. 2
C.D. 1

A BILL FOR AN ACT

RELATING TO WATER RIGHTS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Section 171-58, Hawaii Revised Statutes, is
2 amended by amending subsection (c) to read as follows:
3 "(c) Disposition of water rights may be made by lease at
4 public auction as provided in this chapter or by permit for
5 temporary use on a month-to-month basis under those conditions
6 which will best serve the interests of the State and subject to
7 a maximum term of one year and other restrictions under the law;
8 provided that [any]:

9 (1) Where an application has been made for a lease under
10 this section to continue a previously authorized
11 disposition of water rights, a holdover may be
12 authorized annually until the pending application for
13 the disposition of water rights is finally resolved or
14 for a total of three consecutive one-year holdovers,
15 whichever occurs sooner; provided that the total
16 period of the holdover for any applicant shall not
17 exceed three years; provided further that the holdover
18 is consistent with the public trust doctrine;



1 (2) Any disposition by lease shall be subject to
2 disapproval by the legislature by two-thirds vote of
3 either the senate or the house of representatives or
4 by majority vote of both in any regular or special
5 session next following the date of disposition;
6 ~~[provided further that after]~~ and
7 (3) After a certain land or water use has been authorized
8 by the board subsequent to public hearings and
9 conservation district use application and
10 environmental impact statement approvals, water used
11 in nonpolluting ways, for nonconsumptive purposes
12 because it is returned to the same stream or other
13 body of water from which it was drawn, and essentially
14 not affecting the volume and quality of water or biota
15 in the stream or other body of water, may also be
16 leased by the board with the prior approval of the
17 governor and the prior authorization of the
18 legislature by concurrent resolution."

19 SECTION 2. The department of land and natural resources
20 shall prepare and submit annual reports to the legislature no
21 later than twenty days before the convening of each of the



1 regular sessions of 2017, 2018, 2019, and 2020. The reports
2 shall include:

3 (1) The status of applications to continue previously-
4 authorized dispositions of water rights;

5 (2) Actions taken on the applications during the fiscal
6 period of July 1, 2016, to November 30, 2016, fiscal
7 year 2016-2017, fiscal year 2017-2018, and fiscal year
8 2018-2019, respectively; and

9 (3) Any relevant recommendations for legislative action or
10 appropriation.

11 SECTION 3. Statutory material to be repealed is bracketed
12 and stricken. New statutory material is underscored.

13 SECTION 4. This Act shall take effect upon its approval,
14 and shall apply to applications for a lease to continue a
15 previously authorized disposition of water rights that are
16 pending before the board of land and natural resources on the
17 effective date of this Act or filed with the board of land and
18 natural resources on or after the effective date of this Act,
19 but prior to June 30, 2019; provided that:

20 (1) This Act shall be repealed on June 30, 2019, and
21 section 171-58(c), Hawaii Revised Statutes, shall be



H.B. NO. 2501
H.D. 2
S.D. 2
C.D. 1

1 reenacted in the form in which it read on the day
2 prior to the effective date of this Act; and
3 (2) Any holdovers first applied for under this Act prior
4 to June 30, 2019, may be reauthorized, as provided in
5 section 1 of this Act, beyond June 30, 2019.

APPROVED this 27 day of JUN, 2016

David Ige
GOVERNOR OF THE STATE OF HAWAII



Water Revocable Permits on Hawaii and Kauai as of September 2016

Doc No.	Permittee Name	Location	State Land Use District	Lease From	Lsed Area (acres)	Annual Rent	Comments
RP7054	KAPAPALA RANCH	Kau, Hawaii; (3) 9-8-1:13,9,10; 9-7-1:1	Conservation	10/13/1995	23,408.46	Greater of \$156 or \$5 per million gallons per year	This revocable permit overlies General Lease No. S-5374 to Kapapala Ranch, which results in the large acreage being stated in the "Lsed Area (acres)" column. The RP does not identify a separate land area for the RP by itself. Permittee applied for a water lease on 8/29/16 for watering livestock and wildlife (consumptive use).
RP7088	LINDER, JEFFREY S.	Kawaihau, Kauai; (4) 4-9-001:001	Conservation	10/1/1996	125	2,414.04	Permittee applied for a water lease on 9/1/16 for county water supply and irrigation purposes (consumptive use).
RP7234	WOOD VALLEY WATER & FARM COOP	Kau, Hawaii; (3) 9-7-001:001	Conservation	8/1/2000	0.006	Greater of \$156 or \$5 per million gallons per year	Permittee applied for a water lease on 8/24/16 for public drinking water, irrigation and livestock watering purposes (consumptive use). The water source is not currently developed.
RP7267	WOOD VALLEY WATER & FARM COOPERATIVE	Kau, Hawaii; (3) 9-7-001:001	Conservation	4/1/2004	0	265.2	Permittee applied for a water lease on 8/24/16 for public drinking water, irrigation and watering livestock purposes (consumptive use).
RP7310	EAST KAUAI WATER USERS COOP.	Kawaihau, Kauai; (4) 4-1, 2, 4, 6, 7, 8	Conservation	4/1/2002	6,700.00	Greater of \$156 or \$5 per million gallons per year	Permittee applied for a water lease on 8/26/16 for irrigation and other purposes (consumptive use).

Water Revocable Permits on Hawaii and Kauai as of September 2016

RP7340	KAUAI ISLAND UTILITY COOPERATIVE	Lihue, Kauai; (4) 3-9-001:001	Conservation	1/1/2003	0	37,320.00	Permittee applied for a water lease on 7/20/01 for hydroelectric power generation purposes. Use considered consumptive because water is not returned to the stream from which it was drawn.
RP7426	KUAHIWI CONTRACTORS, INC.	Kau, Hawaii; (3) 9-7-1:1,15	Conservation	11/1/2006	0	924	Permittee applied for a water lease on 8/3/16 for livestock watering purposes (consumptive use).
RP7432	EDMUND C. OLSON, TRUSTEE OF THE EDMUND C. OLSON TRUST No. 2	Kau, Hawaii; (3) 9-6-6; 9-6-7; 9-6-8; 9-7-1	Conservation	3/1/2007	1.82	Greater of \$156 or \$5 per million gallons per year	Permittee applied for a water lease on 8/9/16 for irrigation and livestock watering purposes (consumptive use).
RP7463	HAWAII ELECTRIC LIGHT CO., INC.	South Hilo, Hawaii; (3) 2-6-009	Conservation	12/1/2010	0	19,692.00	On 8/24/16, permittee submitted an application for a water lease and other necessary dispositions for hydroelectric power generation purposes (non-consumptive).

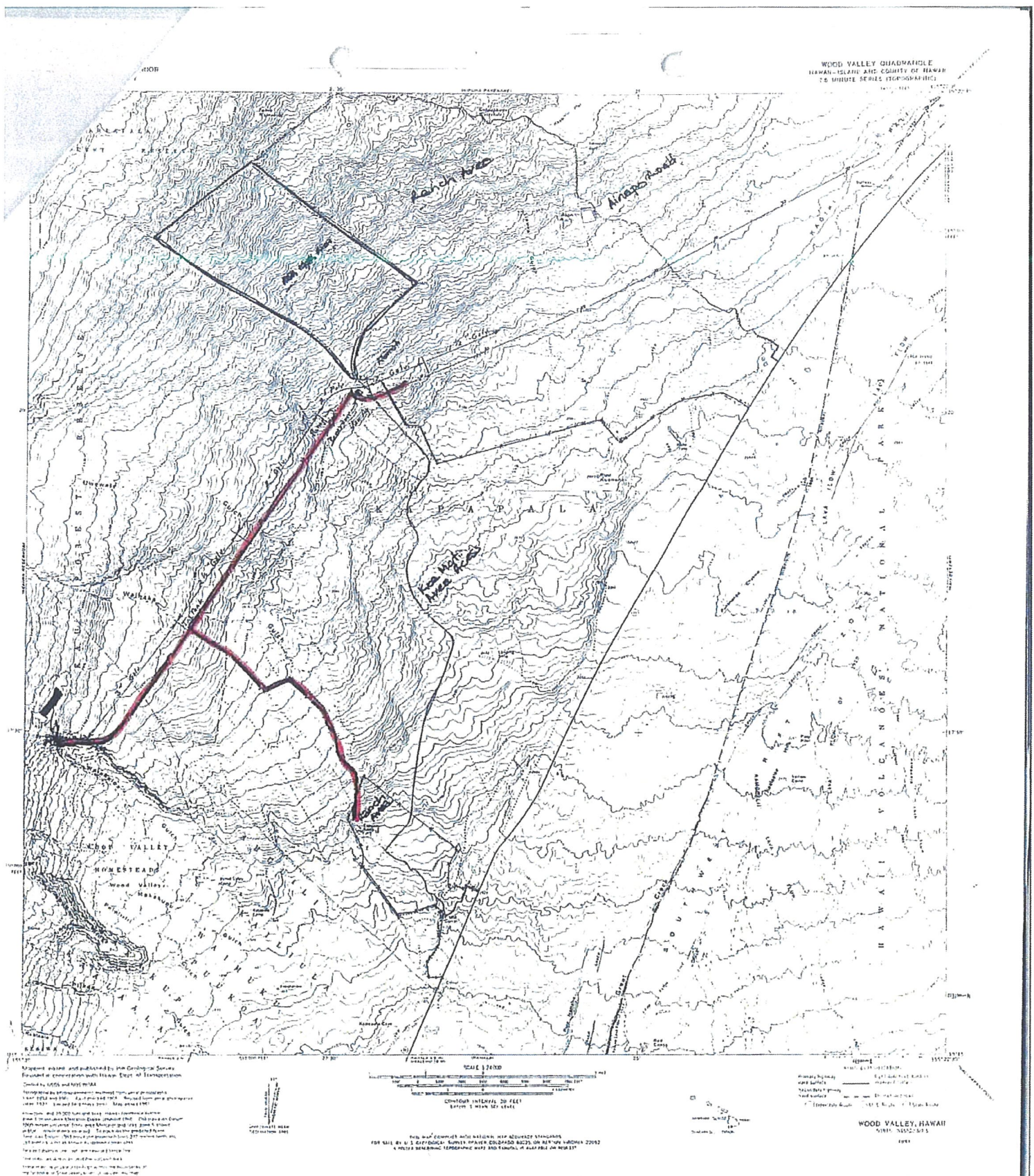


EXHIBIT 4

RP S-7054 – Kau, Hawaii



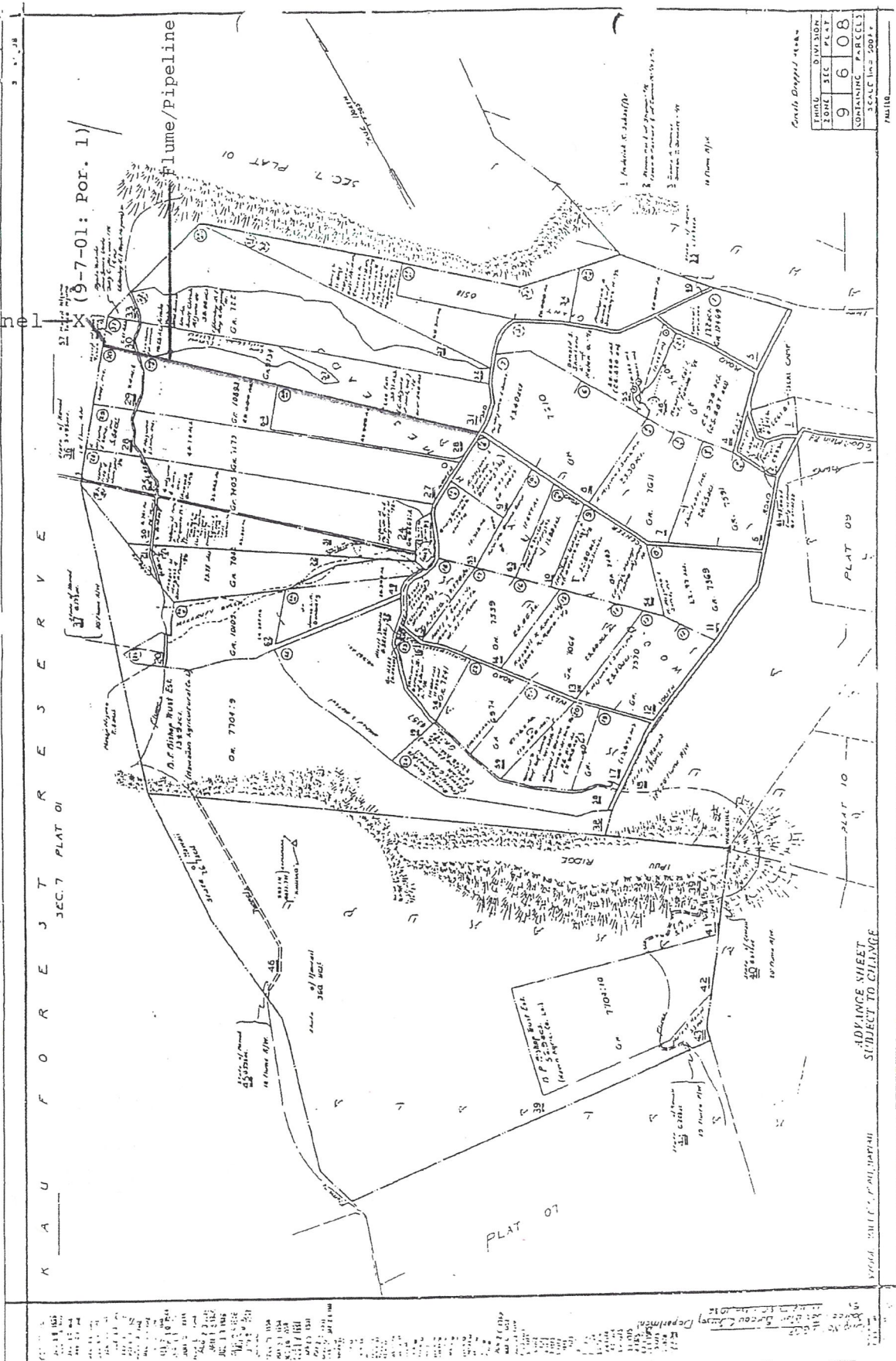
RP S-7088 – Kawaihau, Kauai

Weda Tunnel

K A U A U F O R E S T P L A T O I

(9-7-01: Por. 1)

Flume/Pipeline

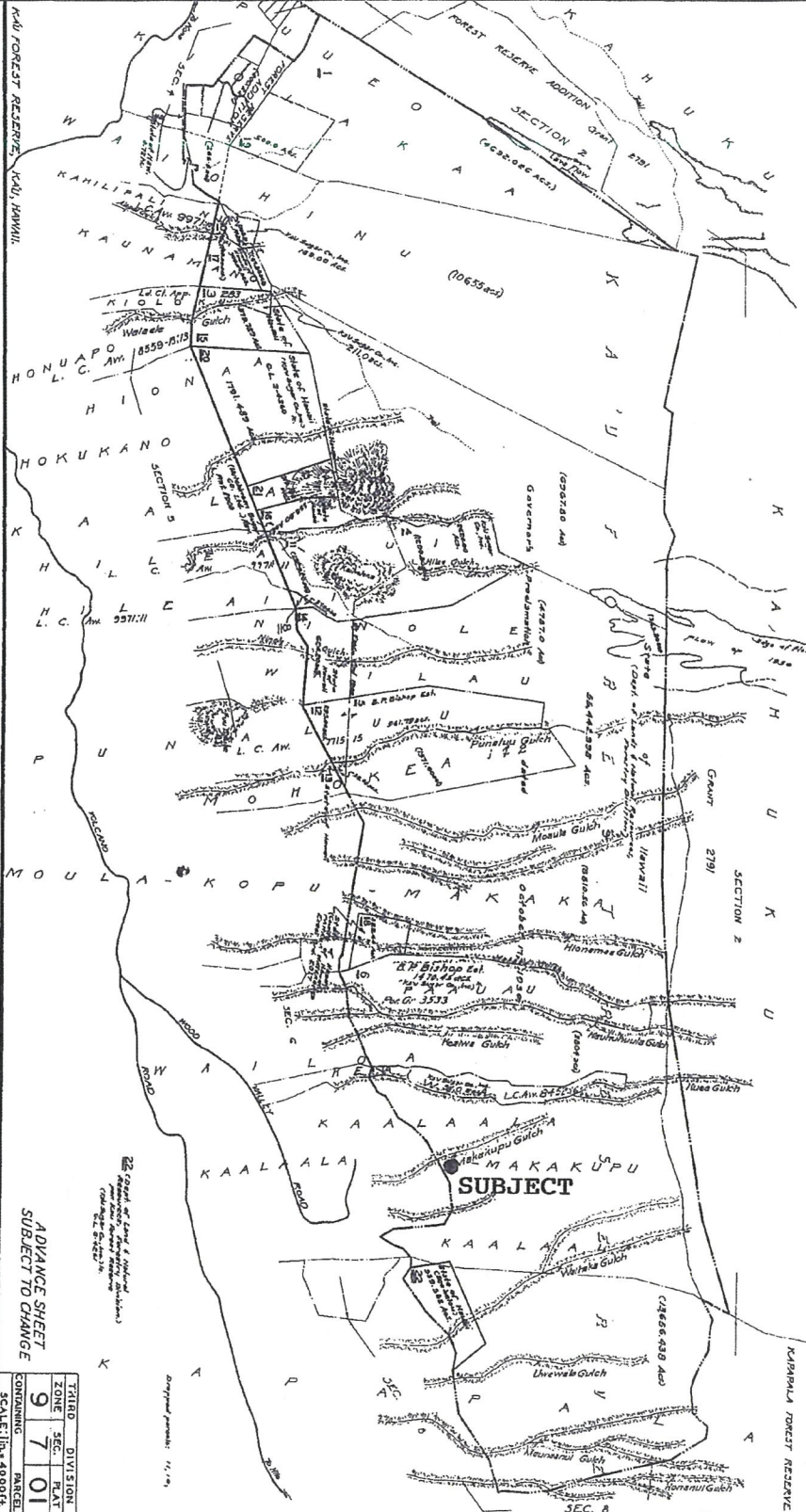


RP S-7234 - Kau, Hawaii

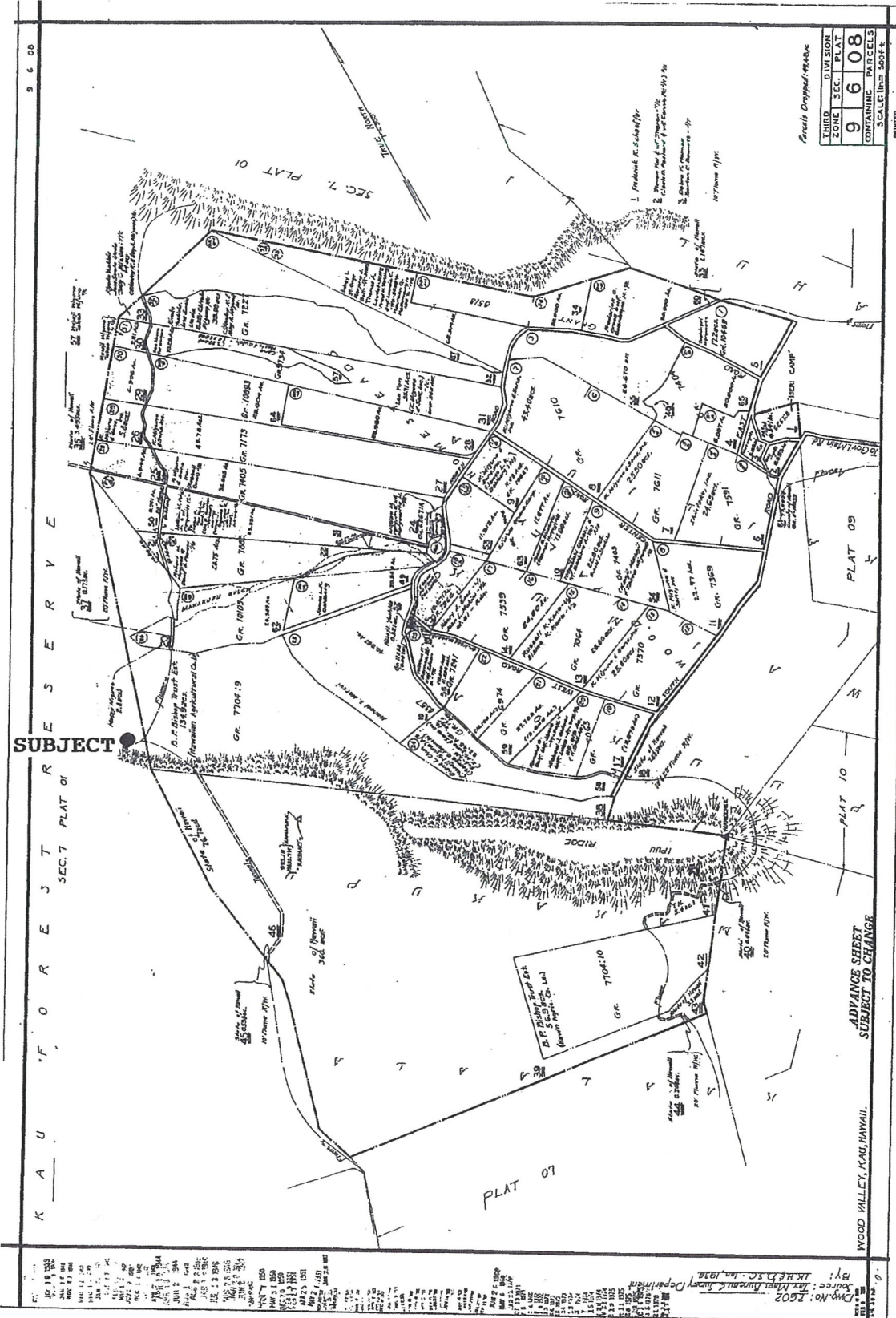
REDUCED/NOT TO SCALE

Dwg. No. P-51A
Source: Tax Maps Bureau Survey Department
By: L.H. H. August, 1958

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RP S-7267 - Kau, Hawaii



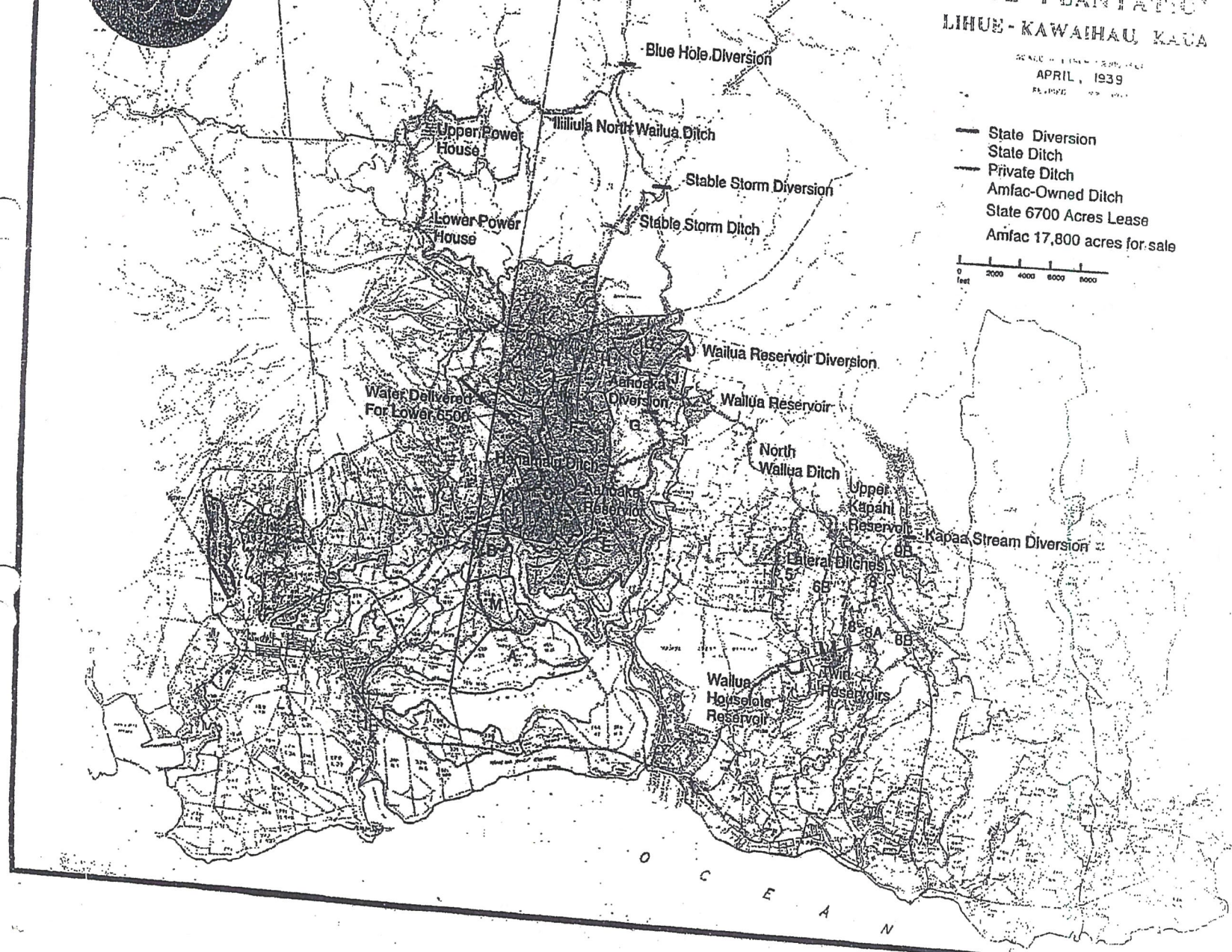
East Kauai Water Users' Cooperative: Proposed System Map

MAP OF THE
LIHUE PLANTATION
LIHUE - KAWAIHAU, KAUI

SCALE - 1" = 1 MILE
APRIL, 1939
REVISED 1977

- State Diversion
- State Ditch
- Private Ditch
- Amfac-Owned Ditch
- State 6700 Acres Lease
- Amfac 17,800 acres for sale

0 2000 4000 8000 16000
feet



RP S-7310 - Kawaihau, Kauai

Mount Waialeale



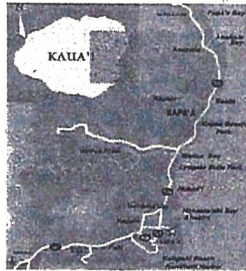
East Kauai Water System Map

MAP OF THE LIHUE PLANTATION LIHUE-KAWAIHAU, KAUAI

APRIL, 1939

— State Diversion
— State Ditch
— Private Ditches

0 2000 4000 6000 8000
Feet



Upper Hydro

Blue Hole Diversion

Iliiula North Wailua Ditch

Stable Storm Diversion

Stable Storm Ditch

Lower Hydro

State 5700 Acres

Wailua Reservoir Diversion

Aaioaka
Diversion

Wailua Reservoir

Hanalei Ditch

Aaioaka
Reservoir

North
Wailua Ditch

2.8 3

Upper
Kapahi
Reservoir

Kapaa Stream Diversion

Latera
Ditches

5
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8A

6B
6A

Wailua
Households
Reservoir

Kapaa 382

Kapaa 1400

Wailua River

Lihue Airport

Lihue

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RP S-7340 - Lihue, Kauai

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RP S-7426 – Kau, Hawaii

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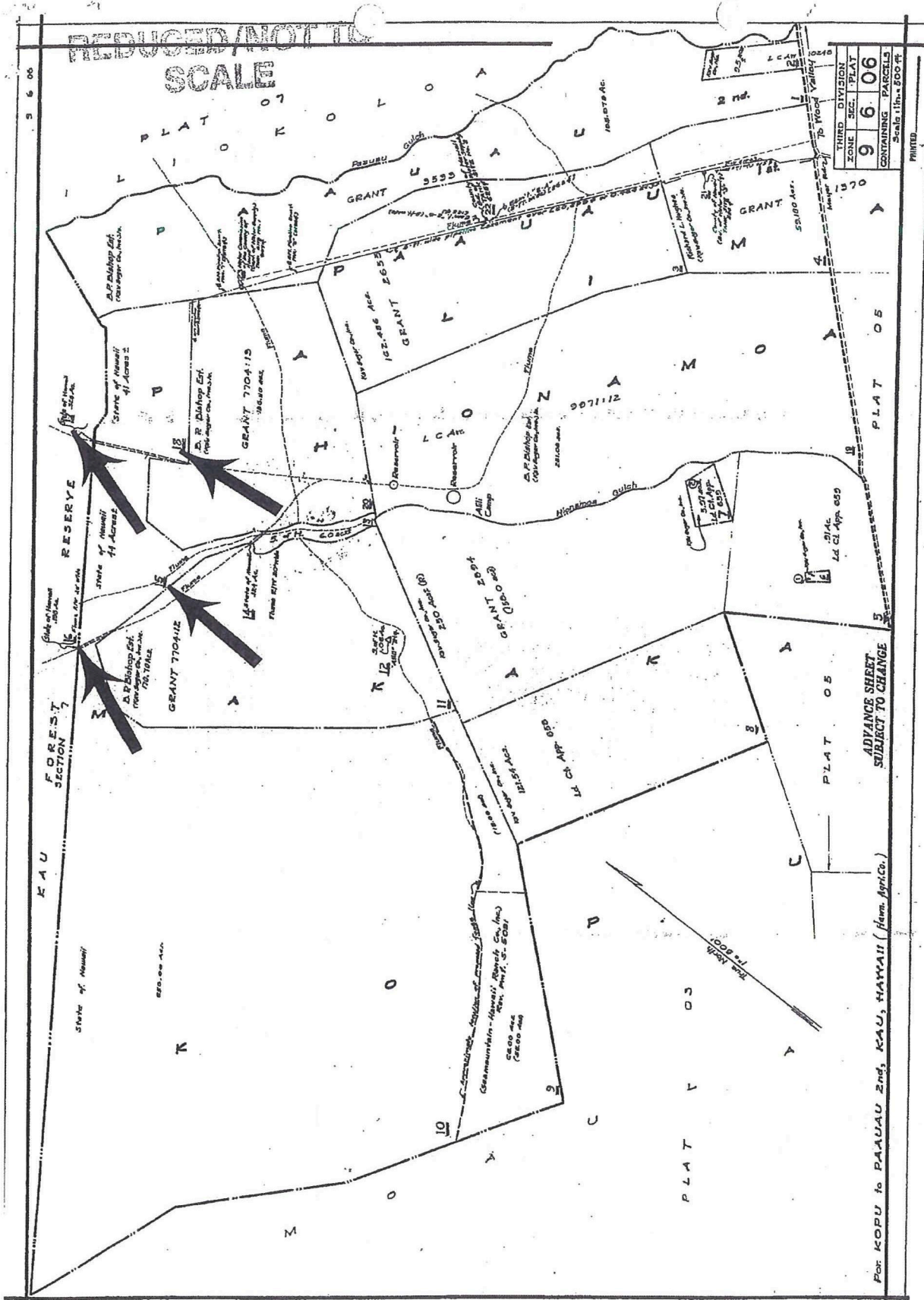
Scale 1 in. = 500 ft.

**ADVANCE SHEET
SUBJECT TO CHANGE**

FOR KOPU to PAUUAU 2nd, KAU, HAWAII (Haw. Agri.Co.)

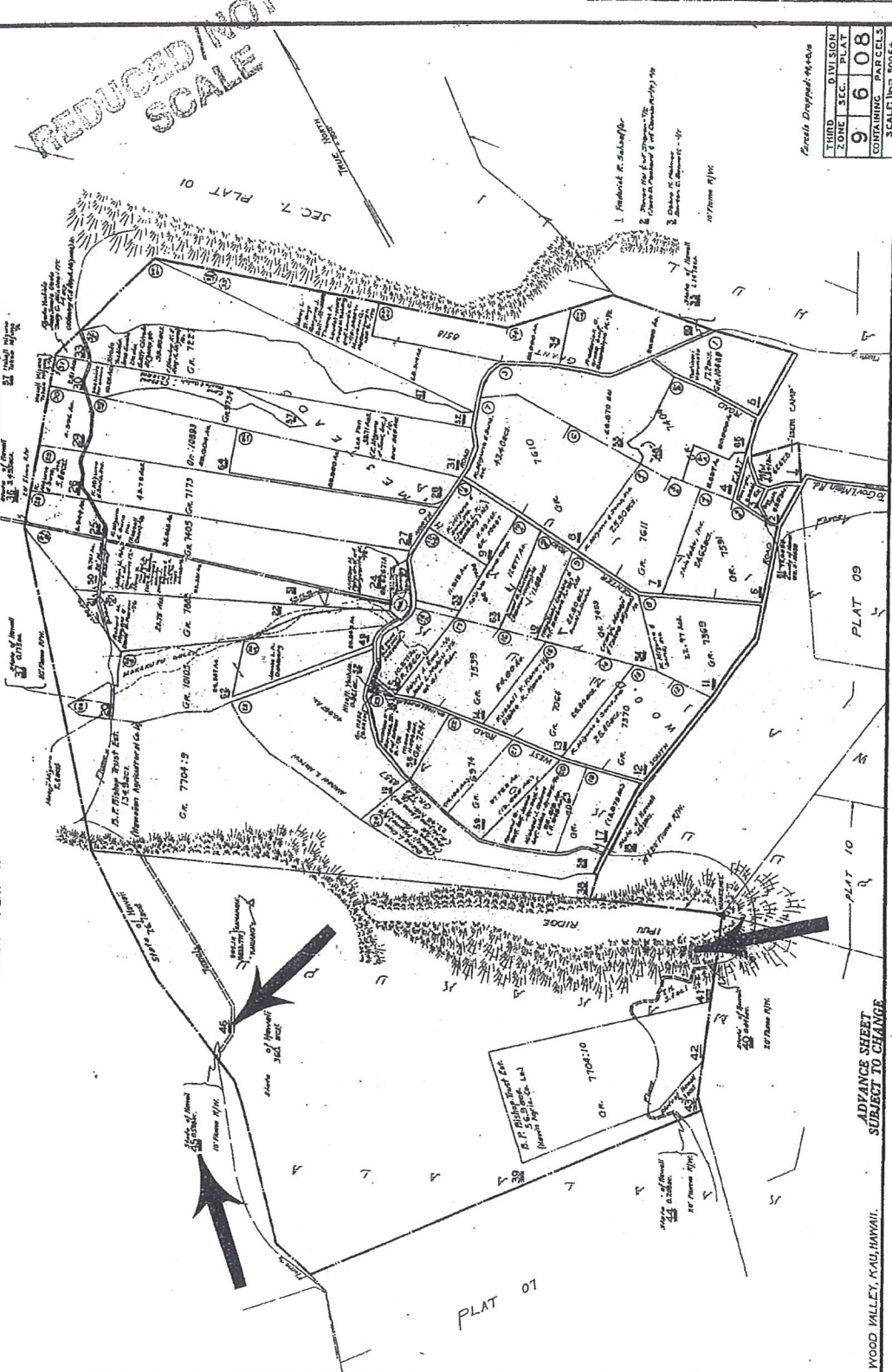
PRELIM. APPR'D.
Department of the
Attorney General

- RP S-7432 – Kau, Hawaii



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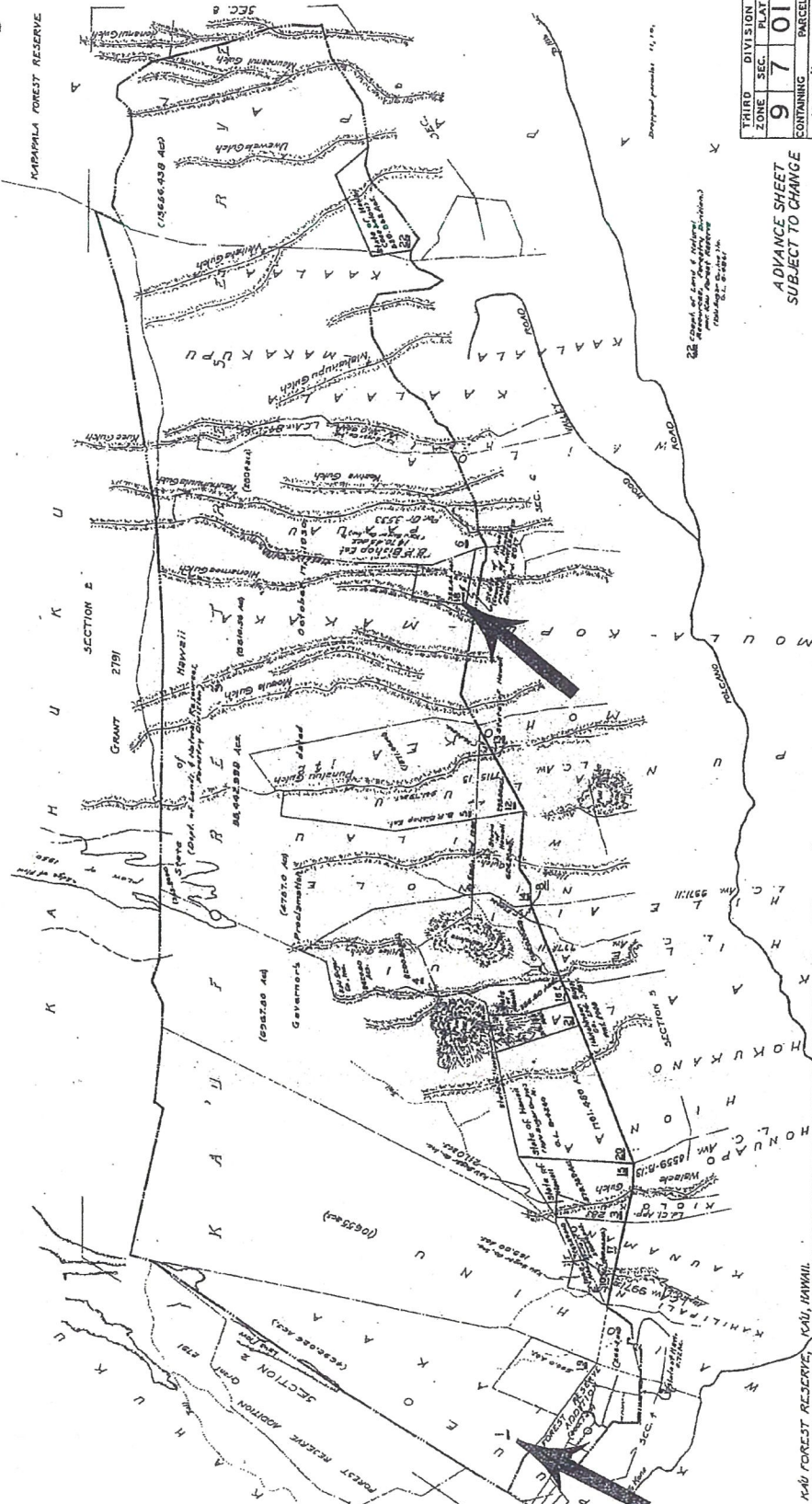


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SCALE	1 IN = 800 FT.

PRELIM. APPR'D.
Department of the
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THIRD DIVISION	ZONE	SEC.	PLAT	CONTAINING	PARCELS
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ADVANCE SHEET
SUBJECT TO CHANGE

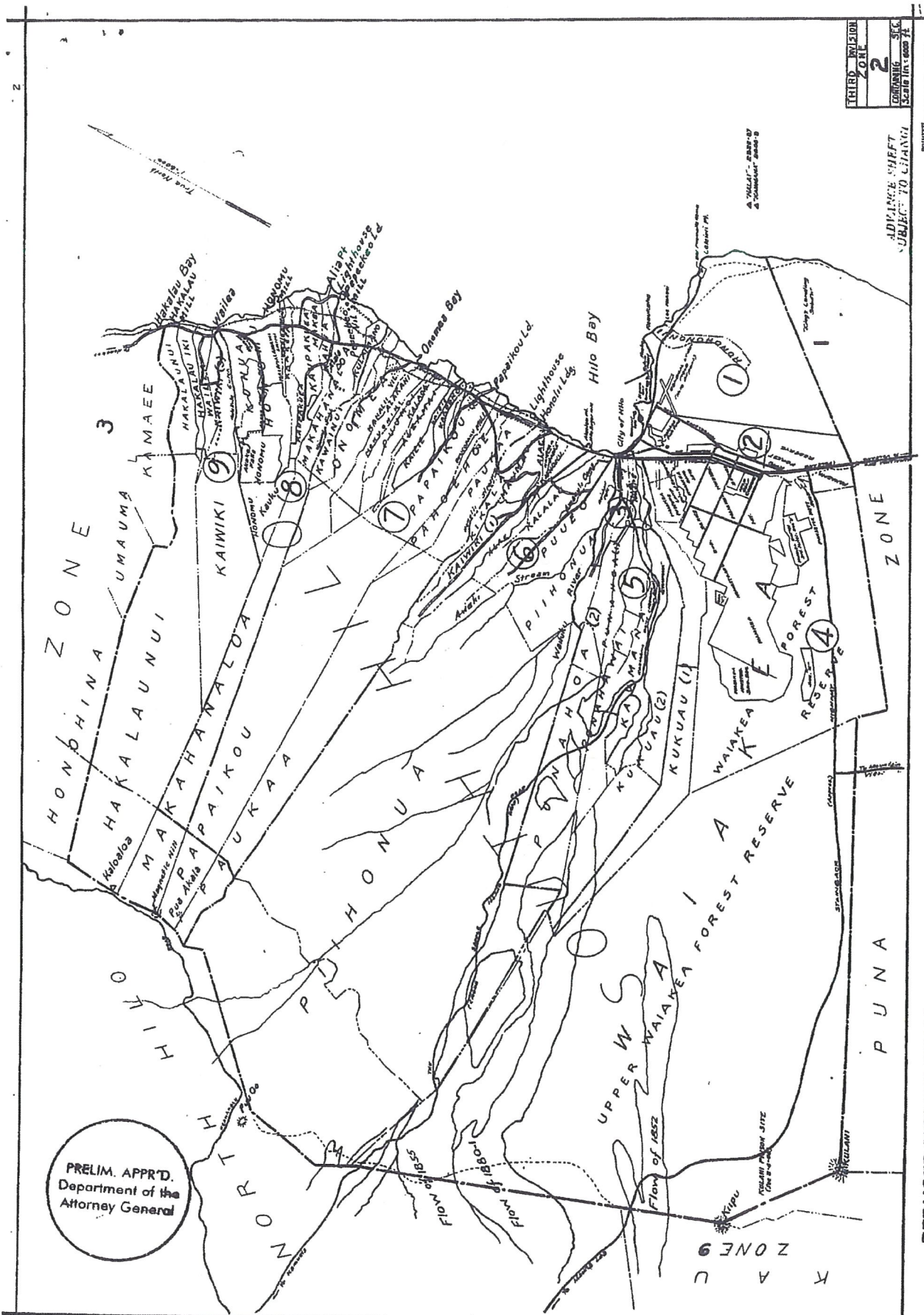
SCALE: 1 in. = 4000 ft.

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PRELIM. APPR'D.
Department of the
Attorney General

Source: U.S. Nat. Survey Department
By: L.S. H. - August, 1935

RP S-7432 - Kau, Hawaii



WATER PERMITS HAWAII AND KAUAI – SUMMARY OF WATER USAGE REPORTS

RP No.	Permittee	Source	Period of Use	Gallons Used	Gallons/Month	Gallons/Year
7054	Kapapala Ranch	Makakupu Tunnel, Kau, Hawaii	1/1/17-6/30/17	4,568,400	761,400	2017 = 4,568,400
			7/1/16-12/31/16	5,733,700	955,617	2016 = 10,847,500
			1/1/16-6/30/16	5,113,800	852,300	
			7/1/15-12/31/15	4,578,200	763,033	2015 = 10,311,100
			1/1/15-6/30/15	5,732,900	955,483	
			7/1/14-12/31/14	6,061,900	1,010,317	2014 = 10,681,800
			1/1/14-6/30/14	4,619,900	769,983	
			7/1/13-12/31/13	4,414,500	735,750	2013 = 9,051,200
			1/1/13-6/30/13	4,636,700	772,783	
			7/1/12-12/31/12	5,019,400	836,567	2012 = 9,959,600
			1/1/12-6/30/12	4,940,200	823,367	
			7/1/11-12/31/11	4,769,800	794,967	2011 = 9,975,400
			1/1/11-6/30/11	5,205,600	867,600	
			1/1/10-12/31/10	7,469,500	622,458	2010 = 7,469,500
			1/1/09-12/31/09	10,800,200	900,017	2009 = 10,800,200
			1/1/08-12/31/08	12,026,800	1,002,233	2008 = 12,026,800
7088	Lindner, Jeffrey S.	Molooa Well No. 1, Kawaihau, Kauai	No requirement in permit to report water usage.			
7234	Wood Valley Water and Farm Cooperative	Weda Tunnel, Kau, Hawaii	N/A – source not developed	None	None	None
7267	Wood Valley Water and Farm Cooperative	Noguchi Tunnel, Kau, Hawaii	7/5/17-10/5/17	7,797,100		2017 = 22,047,000
			4/5/17-7/5/17	7,797,100		
			1/5/17-4/1/17	6,452,800		
			10/1/16-1/4/17	4,728,800		2016 = 10,277,034
			7/1/16-10/1/16	3,770,500		
			10/2/15-7/1/16	2,660,600	296,289	2016 = 1,777,734
			10/10/14-10/1/15	6,150,000	512,500	2015 = 6,150,000
			11/25/13-10/9/14	5,888,655	560,824	2014 = 6,729,891
			12/30/12-11/24/13	792,350	66,029	2013 = 792,350
			11/19/11-12/29/12	7,137,695	594,808	2012 = 7,137,695
			9/22/10-11/18/11	6,897,500	492,679	2011 = 5,912,148
			10/8/09-9/21/10	6,823,150	593,317	2010 = 7,119,804

			6/5/09-10/7/09 12/13/08-6/6/09 5/13/08-12/12/08	5,146,600 4,092,395 4,722,555	1,286,650 711,721 674,651	2009 = 8,540,652 2008 = 8,095,809
7310	East Kauai Water Users' Cooperative	Kawaihau, Kauai	5/1/17-9/30/17 9/1/16-10/31/16	181,630,000 81,310,000*	36,326,000 40,655,000*	2017 = 181,630,000 2016 = 81,310,000*
7340	Kauai Island Utility Cooperative	Lihue, Kauai	See Exhibit 5-A attached.			
7426	Kuahiwi Contractors, Inc.	Mountain House Tunnel, Kau, Hawaii	1/1/17-8/31/17 1/1/16-12/31/16 1/1/15-12/31/15 1/1/14-12/31/14 1/1/13-12/31/13 1/1/12-12/31/12 1/1/11-9/30/11 7/14/10-11/10	14,878,800 33,749,000 43,515,500 44,338,000 38,331,000 24,533,000 9,586,680 8,431,300	1,859,850 2,789,917 3,626,292 3,694,833 3,194,250 2,044,417 1,065,187	2017 = 14,878,800 2016 = 33,749,000 2015 = 43,515,500 2014 = 44,338,000 2013 = 38,331,000 2012 = 24,533,000 2011 = 12,782,244
7432	Edmund C. Olson, Trustee	Noguchi & other ancillary tunnels, Kau, Hawaii	3/1/17-5/31/17*** 1/1/16-7/31/16 1/1/15-12/31/15 1/1/14-12/31/14 1/1/13-21/31/13 8/1/12-/9/30/12** 1/1/11-4/25/11**	1,178,565 2,723,620 4,353,647 22,810,930 30,241,050 9,184,900 19,875,000	392,855 389,089 362,804 1,900,911 2,520,088 4,592,450 4,416,666	2017 = 1,178,565 2016 = 2,723,620 2015 = 4,353,647 2014 = 22,810,930 2013 = 30,241,050
7463	Hawaii Electric Light Co., Inc.	Wailuku River, South Hilo, Hawaii	No requirement in permit to report water usage.			

*Estimated

**Data incomplete due to meter malfunction.

***Data incomplete due to staff turnover.

Period of Use	Gallons Used	Gallons/Month	Gallons/Year
Sep-17	251,777,600		
Aug-17	162,408,500		
Jul-17	211,953,900		
Jun-17	301,407,300		
May-17	498,971,600		
Apr-17	361,823,800		
Mar-17	160,989,300		
Feb-17	272,846,400		
Jan-17	306,989,900		
		281,018,700	2,529,168,300
Dec-16	295,666,200		
Nov-16	384,537,700		
Oct-16	371,305,200		
Sep-16	476,927,700		
Aug-16	597,374,700		
Jul-16	487,864,100		
Jun-16	557,869,000		
May-16	498,971,600		
Apr-16	425,574,100		
Mar-16	257,822,800		
Feb-16	218,973,300		
Jan-16	230,427,800		
		400,276,183	4,803,314,200

EXHIBIT "SA"

2-24 North Wailua Ditch below North Fork Wailua Stream; Kauai Island Utility Cooperative, KIUC

WUR ID	Start Date	End Date	Days Count	MG	Gallons	Mgd	CFS
1196	1/1/2016	1/31/2016	31	230.428	230427800	7.433	11.499
1195	12/1/2015	12/31/2015	31	476.26	476259800	15.363	23.767
1133	11/1/2015	11/30/2015	30	461.6	461600000	15.387	23.803
1128	10/1/2015	10/31/2015	31	173.1	173100000	5.584	8.638
1136	9/1/2015	9/30/2015	30	74.8	74800000	2.493	3.857
1130	8/1/2015	8/31/2015	31	292.1	292100000	9.423	14.577
1132	7/1/2015	7/31/2015	31	325	325000000	10.484	16.219
1127	6/1/2015	6/30/2015	30	254.7	254700000	8.49	13.134
1134	5/1/2015	5/31/2015	31	302.5	302500000	9.758	15.096
1131	4/1/2015	4/30/2015	30	396.7	396700000	13.223	20.456
1137	3/1/2015	3/31/2015	31	321.9	321900000	10.384	16.064
1129	2/1/2015	2/28/2015	28	206	206000000	7.357	11.381
1135	1/1/2015	1/31/2015	31	114.7	114700000	3.7	5.724
1055	12/1/2014	12/31/2014	31	273.012	273011600	8.807	13.624
1054	11/1/2014	11/30/2014	30	248.843	248843300	8.295	12.832
1053	10/1/2014	10/31/2014	31	359.652	359651600	11.602	17.948
1052	9/1/2014	9/30/2014	30	211.954	211953500	7.065	10.93
1051	8/1/2014	8/31/2014	31	227.645	227644700	7.343	11.36
1049	7/1/2014	7/31/2014	31	263.243	263243100	8.492	13.137
1050	6/1/2014	6/30/2014	30	338.7	338700000	11.29	17.466
1044	5/1/2014	5/31/2014	31	321.5	321500000	10.371	16.044
1039	4/1/2014	4/30/2014	30	358.8	358800000	11.96	18.502
1041	3/1/2014	3/31/2014	31	362.8	362800000	11.703	18.105
1028	2/1/2014	2/28/2014	28	248.249	248249000	8.866	13.716
1047	1/1/2014	1/31/2014	31	252.658	252658100	8.15	12.608
961	12/1/2013	12/31/2013	31	223.859	223858600	7.221	11.171
960	11/1/2013	11/30/2013	30	322.421	322421500	10.747	16.626
959	10/1/2013	10/31/2013	31	304.399	304398900	9.819	15.19
958	9/1/2013	9/30/2013	30	284.769	284769200	9.492	14.685
957	8/1/2013	8/31/2013	31	265.457	265457500	8.563	13.247
956	7/1/2013	7/31/2013	31	346.967	346967200	11.192	17.315
955	6/1/2013	6/30/2013	30	321.283	321282800	10.709	16.567
954	5/1/2013	5/31/2013	31	329.765	329765000	10.638	16.456
953	4/1/2013	4/30/2013	30	84.732	84732200	2.824	4.369
952	3/1/2013	3/31/2013	31	250.228	250228200	8.072	12.487
951	2/1/2013	2/28/2013	28	292.366	292365700	10.442	16.153
950	1/1/2013	1/31/2013	31	419.058	419058100	13.518	20.912
738	12/1/2012	12/31/2012	31	362.436	362436100	11.691	18.087
737	11/1/2012	11/30/2012	30	196.254	196254300	6.542	10.12
736	10/1/2012	10/31/2012	31	192.585	192584800	6.212	9.611
735	9/1/2012	9/30/2012	30	345.439	345439300	11.515	17.813
734	8/1/2012	8/31/2012	31	319.99	319990300	10.322	15.969
641	7/1/2012	7/31/2012	31	359.946	359946200	11.611	17.962
640	6/1/2012	6/30/2012	30	295.136	295135900	9.838	15.219

639	5/1/2012	5/31/2012	31	355.582	355582300	11.47	17.745
638	4/1/2012	4/30/2012	30	395.908	395908000	13.197	20.416
637	3/1/2012	3/31/2012	31	354.914	354914200	11.449	17.711
636	2/1/2012	2/29/2012	29	253.459	253459300	8.74	13.521
635	1/1/2012	1/31/2012	31	205.321	205320800	6.623	10.246
634	12/1/2011	12/31/2011	31	413.215	413214900	13.33	20.621
633	11/1/2011	11/30/2011	30	368.388	368388100	12.28	18.997
632	10/1/2011	10/31/2011	31	230.686	230685900	7.441	11.512
631	9/1/2011	9/30/2011	30	272.714	272713600	9.09	14.063
630	8/1/2011	8/31/2011	31	337.976	337975700	10.902	16.866
629	7/1/2011	7/31/2011	31	348.278	348278300	11.235	17.38
628	6/1/2011	6/30/2011	30	428.988	428988200	14.3	22.121
627	5/1/2011	5/31/2011	31	189.327	189327000	6.107	9.448
626	4/1/2011	4/30/2011	30	395.513	395512500	13.184	20.395
625	3/1/2011	3/31/2011	31	406.502	406502000	13.113	20.286
624	2/1/2011	2/28/2011	28	339.198	339198100	12.114	18.741
623	1/1/2011	1/31/2011	31	269.273	269272600	8.686	13.438
622	12/1/2010	12/31/2010	31	421.906	421905500	13.61	21.054
621	11/1/2010	11/30/2010	30	394.509	394509000	13.15	20.344
620	10/1/2010	10/31/2010	31	230.686	230685900	7.441	11.512
619	9/1/2010	9/30/2010	30	224.347	224347400	7.478	11.569
618	8/1/2010	8/31/2010	31	346.815	346814700	11.188	17.307
486	7/1/2010	7/31/2010	31	281.626	281626200	9.085	14.054
486	5/1/2010	5/31/2010	31	357.879	357878500	11.544	17.859
486	6/1/2010	6/30/2010	30	301.807	301806800	10.06	15.563
486	4/1/2010	4/30/2010	30	413.077	413077100	13.769	21.301
456	3/1/2010	3/31/2010	31	383.416	383415600	12.368	19.134
455	2/1/2010	2/28/2010	28	201.66	201659700	7.202	11.142
454	1/1/2010	1/31/2010	31	285.311	285311400	9.204	14.238
372	10/1/2008	10/31/2008	31	299.491	299490700	9.661	14.946
294	9/1/2008	9/30/2008	30	352.421	352421000	11.747	18.173
289	8/1/2008	8/31/2008	31	404.439	404438500	13.046	20.183
288	7/1/2008	7/31/2008	31	396.97	396969800	12.805	19.81
280	6/1/2008	6/30/2008	30	374.48	374479800	12.483	19.311
272	5/1/2008	5/31/2008	31	286.824	286824000	9.252	14.313
266	4/1/2008	4/30/2008	30	304.73	304730000	10.158	15.714
260	3/1/2008	3/31/2008	31	377.867	377866500	12.189	18.857
250	2/1/2008	2/29/2008	29	413.942	413942300	14.274	22.082
247	1/1/2008	1/31/2008	31	217.491	217491000	7.016	10.854
241	12/1/2007	12/31/2007	31	99.648	99648060	3.214	4.973
240	11/1/2007	11/30/2007	30	300.329	300328800	10.011	15.487
233	10/1/2007	10/31/2007	31	441.357	441357100	14.237	22.025
128	9/1/2007	9/30/2007	30	309.436	309435900	10.315	15.957
127	8/1/2007	8/31/2007	31	259.002	259001500	8.355	12.925
126	7/1/2007	7/31/2007	31	242.8	242800000	7.832	12.117
125	6/1/2007	6/30/2007	30	464.599	464599000	15.487	23.958
124	5/1/2007	5/31/2007	31	216.645	216644700	6.989	10.811

123	4/1/2007	4/30/2007	30	248.5	248500000	8.283	12.814
122	3/1/2007	3/31/2007	31	23.2	23200000	0.748	1.158
121	2/1/2007	2/28/2007	28	110.7	110700000	3.954	6.116
120	1/1/2007	1/31/2007	31	64.3	64300000	2.074	3.209
119	12/1/2006	12/31/2006	31	42	42000000	1.355	2.096
229	11/1/2006	11/30/2006	30	53.7	53700000	1.79	2.769
228	10/1/2006	10/31/2006	31	370.45	370450000	11.95	18.487
118	9/1/2006	9/30/2006	30	343.5	343500000	11.45	17.713
117	8/1/2006	8/31/2006	31	256.47	256470000	8.273	12.799
116	7/1/2006	7/31/2006	31	326.4	326400000	10.529	16.288
115	6/1/2006	6/30/2006	30	363	363000000	12.1	18.719