

Finding Aid
to
Water Diversion Records and Wells
Kekaha Sugar Company Ltd.
and
Lihue Sugar Company Ltd.

1989

Kauai Historical Society

Lihue, Kauai, Hawaii

MS85

Water Diversion Records and Wells
Kekaha Sugar Company Ltd. and Lihue Sugar Company Ltd.

History

When Captain Cook arrived in Waimea in 1778 he noted the irrigation systems in use for taro, as well as some small plantings of sugar cane. By 1848 the Hawaiian monarchy was investing in sugar cane operations. With the trade agreement between Hawaii and the United States in 1876 came the first license to take waters from streams. The sugar cane companies throughout the islands invested heavily in building the structures and wells they need, the first without funding provided by the government. In 1884, there were 16 sugar plantations on Kauai and the growth of the sugar industry was just beginning.

Scope and Content

This collection includes documents related to two sugar companies on Kauai, Kekaha Sugar Company, Ltd. and the Lihue Plantation Company, Ltd. A few records from the East Kauai Water Company which supplied water to a small group of homesteaders are also included. The majority of the records of water diversion and wells are dated 1989. Supporting documents and maps date from the 1950s through 2001. A small group of Lihue Plantation records supply accounting data from 1990 to 2001 and includes usage by the East Kauai Water Company customers. Correspondence is very limited in this archive.

Water diversion reports require a variety of data – the date when the structure was constructed, composition, tax map key, location, elevation, capacity, flow, and use. Irrigation data for sugar includes the number of acres supplied and the supply method and whether it's drip, furrow sprinkler, etc. Water was used for other crops, golf courses, landscaping, cooling, and manufacturing as noted. A small number of photographs of diversions are included.

Reports on wells provide the sugar cane field number, casing diameter, depth, total depth of well, and chloride usage in addition to the general information for water diversion.

Throughout the collection are various maps used to indicate locations of water resources while at the same time showing camps, reservoirs, gauging stations, and town areas.

Two documents included in the Lihue portion of this collection involve the plantation's involvement in an electrical sub-station build at Ahukini landing and a document from the Territorial Highway Department entitled "Valuation of Growing Sugar Cane Land Condemnation 1958."

Additional information can be found in [Sugar Water: Hawaii's Plantation Ditches](#) by Carol Wilcox, University of Hawaii Press, c1996

These records came to the Kauai Historical Society on September 28, 2011 donated by Andy Bushnell. The records are open to research.

Kauai Historical Society Accession no. 2011.023

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1 Deed of gift, finding aid

2 Kekaha Sugar Company Ltd.

Water diversion documents: Registrations - 1989

<u>Stream Name</u>	<u>Diversion Name</u>	<u>Diversion System</u>	<u>Misc. Information</u>
	Kumuwela #1	Kokee Ditch	
	Kumuwela #2	Kokee Ditch	
	Kumuwela #3	Kokee Ditch	
	Kumuwela #4	Kokee Ditch	
	Kumuwela #5	Kokee Ditch	
	Mohini #2	Kokee Ditch	
	Mohini #3	Kokee Ditch	
Mohini	Mohini Intake	Kokee Ditch	includes photo
	Kukui Trail #1	Kekaha Ditch	
Waiakoali	Waiakoali Dam	Kokee Ditch	includes photo
Kawaikoi	Kawaikoi	Kokee Ditch	includes photo
Kauaikinana	Kauaikinana	Kokee Ditch	includes photo
Kokee	Kokee Stream	Kokee Ditch	includes photo
Kapue Valley	Kapue Valley Dam	Kokee Ditch	
Halemanu	Halemanu	Kokee Ditch	
Nawaimaka	Nawaimaka	Kokee Ditch	
Waimea River	Kikiaola Ditch Intake	Kikiaola Ditch	
Waimea River	Mauka Powerhouse Dam	Kehaka Ditch	includes photo
Koaie	Koaie	Kehaka Ditch	includes photo
Waimea River	Waihulu Dam	Kehaka Ditch	includes photo

3 Kekaha Sugar Company Ltd.

Wells registered by Kekaha Sugar Company Ltd. - 1989

<u>Well No.</u>	<u>Well Name</u>	<u>Source/Station Name</u>
0044-02	Kaunalewa	Kaunalewa sump
0044-03	Kaunalewa	Kaunalewa sump
0044-04	Kaunalewa	Kaunalewa sump
0044-10	Kaunalewa KS12	
0044-12	Kaunalewa KS11	
0044-13	Kaunalewa KS7	
0044-14	Kaunalewa KS8	
0044-15	Kaunalewa Shaft	
0045-01	Camp 2 KS 19	
0045-02	Hog farm	
0045-03	Camp 2 KS5	
0145-02	Camp 3	

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Kekaha Sugar Company Ltd. - continued

Wells registered by Kekaha Sugar Company Ltd. - 1989

<u>Well No.</u>	<u>Well Name</u>	<u>Source/Station Name</u>
0145-04	Camp2 KS13	
0145-05	Mana #1	Mana Wells
0145-06	Mana #2	Mana Wells
0145-07	Mana #3	Mana Wells
0145-08	Mana #4	Mana Wells
0145-09	Mana #5	Mana Wells
0145-10	Mana #6	Mana Wells
0145-11	Mana #7	Mana Wells
0145-12	Mana #8	Mana Wells
0145-13	Mana #9	Mana Wells
0145-14	Mana #10	Mana Wells
0145-16	Mana #12	
0145-22	Camp 2 KS3	
0145-23	Camp 2 KS4	
0145-24	Camp 2 KS6	
0245-02	Mana Shaft	
0345-04	Saki Mana Shaft	
0345-02	Saki Mana KS16	
0345-03	Saki Mana KS17	
5740-01	Waimea	
5842-01	Kekaha K59	
5842-02	Kekaha Shaft	
5842-03	Huluhulunui	
5842-04	Kekaha	
5943-01	Waiawa Shaft	
	Cane Carrier	
	Clarifier	
	Waimea Sandland	
	Kikiaola Drain (#381)	
	Field 102 Pump (#375)	
	Nohili Drain (Nos. 350,351,356)	
	Kawaiiele Drain (Nos. 346,347, 348)	
	Limaloa (Nos. 326,327)	
	Camp 3 (Nos. 318,319,372)	
	Mill Pond Recycle Pumps (Nos. 311,312, 313)	

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Kekaha Sugar Company Ltd.

Documents, Correspondence, Reports and Maps

[All items assigned a number in brackets to assist users]

- [4-1] Stream Diversion Works and Water Well Registration: June 7, 1989, list of 27 diversions, 39 wells and 8 pump stations
- [4-2] Water Salinity readings for various dates between Jan.1987 to Oct. 1988 at 25 sites
- [4-3] Mana Domestic Water Shaft diagram dated May 7, 1970, includes map of pump and camp; dated on second page : March 3, 1989
- [4-4] Kaunalewa Shaft, diagram, undated
- [4-5] Saki Mana section of shaft, with insert showing flow chart before and after grade change – date range 5/15 and 5/27, 1957
- [4-6] Diagram of new Kekaha Water Pumping System, dated Nov. 4, 1953
- [4-7] Table 1 – Wells and shafts on the Kekaha-Mana plain, registered 1989, 2 pages, second page undated – with changes to report
- [4-8] Pumpage Data Charts for the years 1983, 1984 and 1985. Monthly information for the following locations: Mana Pumps – Well 45; Waiawa Shaft #13; Mana Domestic Shaft 15; Kekaha Domestic Shaft 11; Kaunalewa Shaft #14; Saki Mana Shaft #16, and Huluhulunui Pump Irrig. Cumulative totals for months and years are provided for each document
- [4-9] Factory and condenser water supply and Huluhulunui Shaft, drawing - dated May 19, 1950
- [4-10] Diversion photographs – 16 images of dams, intakes, etc. on 2 pages, undated
- [4-11] Kekaha area maps – K1 and K2 showing Nohili Point to Kauhao on K1; K2 is of the Kekaha Quadrangle dated 1963. Each map shows where water features are located; maps for folded together
- [4-12] Kehaka Ditch Station – chart for the years 1979-1988 of water supplied in millions of gallons per month, with monthly and yearly totals
- [4-13] Kokee Ditch flows – monthly water supply by months from 1979 through Feb. 1989, with totals by month and year, in millions of gallons

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Kekaha Sugar Company Ltd.
Documents, Correspondence, Reports and Maps - continued

- [4-14] Kekaha Sugar Company : New water tunnel at Waiawa, diagram dated Nov. 30, 1934

- [4-15] New administrative rules to owners or operators of existing wells and existing stream diversion works – from the Commission on Water Resource Management effective May 27, 1988

- [4-16] Cover letter from Kekaha Sugar Company to Amfac dated March 22, 1989 conveying the registrations for 40 wells with supporting documents, and 12 registrations for stream diversion works, to the Department of Water and Land

- [4-17] Proposed easement on Main Cane Hall Road and water facilities around DeMello Reservoir – diagram dated Nov. 21, 2000

- [4-18] Water Resource Registration Map for Kekaha Sugar Company, Ltd.- 1989; locations identified : Nohili Drain, Kawaiele Drain; Camp 3; Limaloa; Mill Pond Recycle Pumps; Field 102 Pump; Kikiaola Drain; and Waimea Sandland.

- [4-19] Map showing Waihulu Dam; Koaie Dam; Kukui Trail #1; and Mauka Powerhouse Dam. Area shown: Puu Ka Pele on the north, the Forest Reserve Boundary on the east; Waimea Canyon in the center, undated

- [4-20] Kokee Ditch System Maps – 3 copies, notions differ on each. Noted on all are Camps 1 to 3 and 5 to 10; other highlighted features include diversions – some circled; one copy has penciled notations

- [4-21] Two-map view: meeting these two pieces together covers Waimea on the eastern edge; west to Kokole Point Coast Guard Res.; with the northern boundary of Nahamalu and east to Kapue Valley. Features wells, shafts and notes the upland cane fields

- [4-22] Saki Mana water features are noted on the lower portion of this map, which covers Nohili Point north and east past Polihale Heiau up to Makole. Map used is K1 in the USGS collection, 1959

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Lihue Plantation Company, Ltd.

Stream Diversion Registrations 1989: this group is stapled together, and listed in that order. A few additional records for this category, follow.

Stream Name: Hanalei tunnel outlet gage A, Diversion System: Hanalei & Kaapoko Intakes combine flow of intakes 1-6; Diversion System name:

Hanalei & Kaapoko :

Kaapoko Stream – 1 : Diversion system : Kaapoko intakes

Kaapoko Stream – 2 : Diversion system: Kaapoko intakes

Kaapoko Stream – 3 : Diversion system: Kaapoko intakes

Hanalei – 4 : Diversion: Hanalei intakes

Hanalei – 5 : Diversion: Hanalei intakes

Hanalei – 6 : Diversion: Hanalei intakes

Stable Storm Ditch Intake -7: (divert from North Fork Wailua River) Diversion structure name: Stable Storm Ditch Intake 7 & Gage B; Diversion system name: Stable Storm

South Fork Wailua River; Diversion structure name: Hanamaulu Intake Gage C; Diversion system name: Hanamaulu Ditch to 27 Res.

South Fork Wailua River; Diversion structure name: Upper Lihue Ditch Intake Gage D; Diversion system name: Upper Lihue Ditch

South Fork Wailua River; Diversion structure name: Hanamaulu Intake 9; Diversion system name: Hanamaulu Ditch Intake

South Fork Wailua River; Diversion structure name: Waiaka/Iliiliula Intake 8; Diversion system name: Hanamaulu Ditch Intake

North Wailua Ditch Below Waikoko Stream: Diversion structure name: USGS Gaging System 160601200; Diversion system name: Iliiliula North Wailua Ditch: includes three attachments providing discharge in cubic feet per second; for water years Oct. 1983-Sept. 1984; Oct. 1984-Sept. 1985; and October 1982-September 1983

South Branch North Fork Wailua River; Diversion structure name: Upper Wailua North Fork Diversion 10 on Exh. A; Diversion system name: Iliiliula North Fork Wailua Ditch

Waikoko Stream: Diversion structure name: Waikoko Intake 11 on Exhibit A; Diversion system name: Iliiliula North Wailua Ditch

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Lihue Plantation Company, Ltd.

Stream Diversion Registrations 1989: this group of is stapled together, and listed in that order (continued)

Iliiliula Stream Tributary; Diversion structure name: No. 12 on map attached to Exhibit A; Diversion system name: Iliiliula North Wailua Ditch

Iliiliula Stream Tributary; Diversion structure name: No. 13 on map attached as Exhibit A; Diversion system name: Iliiliula North Wailua Ditch

Iliiliula Stream Tributary; Diversion structure name: No. 14 on map attached as Exhibit A; Diversion system name: Iliiliula North Wailua Ditch

Iliiliula Stream Tributary; Diversion structure name: No. 15 on map attached as Exhibit A; Diversion system name: Iliiliula North Wailua Ditch

Waiaka Stream Tributary; Diversion structure name: No. 16 on map attached as Exhibit A; Diversion system name: Waiahi Iliiliula Ditch

Waiahi Stream Tributary; Diversion structure name: No. 17 on map attached as Exhibit A; Diversion system name: Waiahi Iliiliula Ditch

Waiahi Tributary; Diversion structure name: No. 18 on map attached as Exhibit A; Diversion system name: Waiahi Iliiliula Ditch

Waiahi Tributary; Diversion structure name: No. 19 on map attached as Exhibit A; Diversion system name: Wailua Ditch

Waiahi Tributary; Diversion structure name: No. 20 on map attached as Exhibit A; Diversion system name: South Intake Ditch

Waiahi Tributary; Diversion structure name: No. 21 on map attached as Exhibit A; Diversion system name: South Intake Ditch

Iliiliula Stream Tributary; Diversion structure name: No. 22 on map attached as Exhibit A; Diversion system name: North Intake Ditch

Waiaka Stream Tributary; Diversion structure name: No. 23 on map attached as Exhibit A; Diversion system name: North Intake Ditch

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Lihue Plantation Company, Ltd.

Stream Diversion Registrations 1989: this group of is stapled together, and listed in that order (continued)

Waiaka Stream Tributary; Diversion structure name: No. 24 on map attached as Exhibit A; Diversion system name: North Intake Ditch

Waiaka Tributary; Diversion structure name: No. 25 on map attached as Exhibit A; Diversion system name: North Intake Ditch

Waiahi Tributary; Diversion structure name: No. 26 on map attached as Exhibit A; Diversion system name: North Intake Ditch

South Fork Wailua River; Diversion structure name: Upper Lihue Ditch Intake 27; Diversion system name: Upper Lihue Ditch

Palikea Stream; Diversion structure name: Palikea Intake – 28; Diversion system name: Koloa Ditch system

Kamooloa Stream; Diversion structure name: Kamooloa Intake – 29; Diversion system name: Koloa / McBryde Ditch system

Papuua Stream; Diversion structure name: Papuua Reservoir Intake – 30; Diversion system name: Papuua Reservoir

Paohia Stream; Diversion structure name: Paohia Intake – 31; Diversion system name: Koloa / McBryde Ditch system

Paohia Stream; Diversion structure name: Papuua Reservoir Intake – 32; Diversion system name: Papuua Reservoir system

Kuia; Diversion structure name: Kuia Intake – 33; Diversion system name: Koloa / McBryde Ditch System

Pepeiaou; Diversion structure name: Pepeiaou Intake – 33; Diversion system name: Koloa / McBryde Ditch System

Halenanahu; Diversion structure name: Halenanahu Reservoir Intake – 34; Diversion system name: Halenanahu Reservoir

North Fork Wailua River; Diversion structure name: Wailua Ditch Intake; Diversion system name: Wailua Ditch/USGS Gaging Station 16069000

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Lihue Plantation Company, Ltd.
Stream Diversion Registrations 1989: this group of is stapled together,
and listed in that order (continued)

North Fork Wailua River: Diversion structure name: North Wailua Ditch
Intake; Diversion system name: North Wailua Ditch

Kapahi Ditch Gaging Station; Diversion structure name: USGS Station
16079000; Diversion system name: Kapahi Ditch

Kapaa Stream; Diversion Structure name: Kapahi Intake; Diversion system
name: Kapahi Ditch system

Makaleha Stream; Diversion structure name: Makaleha Ditch Intake;
Diversion system name: Makaleha Ditch USGS Gaging Station 16077000

Kapaa Stream Tributary; Diversion structure name: Kapaa Stream
Tributary Intake; Diversion system name: Makaleha Ditch to Mimino
Reservoir

Makaleha Stream; Diversion structure name: Makaleha Stream Intake;
Diversion system name: Makaleha Ditch to Mimino Reservoir

Mimino Stream; Diversion structure name: Mimino Stream Intake;
Diversion system name: Mimino Ditch/Reservoir

Kealia Ditch Gaging Station; Diversion structure name: Kealia Ditch;
Diversion System name: Kealia Ditch

Kealia Stream; Diversion structure name: Kealia Stream Intake;
Diversion System name: Kealia Ditch

Kealia Stream; Diversion structure name: Kawano Intake; Diversion
System name: Kawano Ditch System

Kealia Stream Tributary; Diversion structure name: Kaneha Reservoir

Anahola Ditch above Kaneha Gaging Station; Diversion structure name:
Upper Anahola Ditch; Diversion system name: Upper Anahola Ditch

Anahola River: Diversion structure name: Upper Anahola Intake;
Diversion system name: Upper Anahola Ditch

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Lihue Plantation Company, Ltd.

Stream Diversion Registrations 1989: this group of is stapled together, and listed in that order, followed by a few additional records(continued)

Lower Anahola Ditch near Kealia Gaging Station 16091000; Diversion structure name: Lower Anahola Intake; Diversion system name: Anahola Ditch

Anahola River; Diversion structure name: Lower Anahola Ditch Intake; Diversion system name: Anahola Ditch

Additional record:

Hanamaulu Stream; Diversion structure name: Manager's House (Burns' Estate); includes map

Exhibit A – as noted above and Exhibit B dated 1989. The records are stapled together, bracketed numbers added for easier use

- [1] North Fork Wailua River and all it's tributaries
- [2] Hanalei Stream and all it's tributaries
- [3] Anahola Stream and all it's tributaries
- [4] Konohiki Streams and all it's tributaries
- [5] Huleia Streams and all it's tributaries
- [6] Nawiliwili Steam and all it's tributaries
- [7] Hanamaulu Stream and all it's tributaries
- [8] South Fork Wailua River and all it's tributaries
- [9] Kapaa and Kealia Streams and all their tributaries

Stream Diversion location / potential stream diversion : Exhibits A & B, 1989; list if my tax map key numbers, 3 pages

East Kauai Water Company / potential stream diversion locations listed by tax map key, includes Exhibits A & B, dated 1989

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Lihue Plantation Company, Ltd.

Well Registrations 1989, stapled together in this order:

<u>State Well No.</u>	<u>Well Name</u>
1019-02	Aliomanu
1019-01	Aliomanu
1020-01	Moloaa Camp T H
0618-08	Kumukumu
0719-02	Homaikawaa Stream

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Lihue Plantation Company, Ltd.

Well Registrations 1989, stapled together in this order: (continued)

<u>State Well No.</u>	<u>Well Name</u>
0719-01	Homaikawaa Stream
5822-01	Sugar Mill (Mill Well)
1020-02	Moloaa Well 1
1020-03	Moloaa Well 2
0419-02	Kapaa Shaft
0419-03	Kapaa Water Tunnel
0020-01	Hanamaulu Shaft
0618-02	Kealia 1
0618-01	Kealia 2
0618-04	Kealia 3
0618-03	Kealia 4
0618-05	Kealia 7
0618-06	Kealia 6
0618-07	Kealia 5

Also included in this stapled set:

2 photocopies of drawings of camp residential areas, without locations

Map K-9 : Anahola Hawaii US Geological Survey 1963/State of Hawaii
Dept. of Land and Natural Resources, Division of Water and Land
Development, 1987

Map K-10 Hawaii US Geological Survey 1963/State of Hawaii
Dept. of Land and Natural Resources, Division of Water and Land
Development, 1987 - Hanamaulu Bay north to Kumukumu Stream

Map K-11 Lihue Hawaii US Geological Survey 1963/State of Hawaii
Dept. of Land and Natural Resources, Division of Water and Land
Development, 1987 – Ahukini Camp south to Kawaihoa Bay

Additional documents in this folder:

Moloaa Tunnel; with attached map

Lihue Plantation Company Exhibit A: 3 p. list of potential well sites;
followed by Exhibit B, dated 1989

Lihue Plantation Company Exhibit A: Lihue and Kawaihoa Districts, 1989

East Kauai Water Company – Potential well sites listed by Tax Map Key;
Exhibits A & B, 1989

Folder No.

Lihue Plantation Company, Ltd.

Water Supply Reports - monthly with quarterly summaries for various locations, which include East Kaua'i Water Company usage; for the years 1990-February 2001 ; all reports include accounting information

7 1990-1995 records complete

8 1996 - records have list of East Kaua'i Water Company Homesteaders

1997 - January to June summary report only; due to layoffs, furloughs
July to December, full monthly and quarterly reports

1998 - 2000 complete

2001 – January to June, monthly and quarterly reports only

9 Lihue Plantation Company, Ltd.

Documents, Correspondence, Reports and Maps

[All items assigned a number in brackets to assist users]

[1] Aerial photograph of Lihue Plantation, pieced together with tape: area covers coastline from just north of the Wailua Golf Course, south to Ahukini with the Pier visible, west showing Lihue area through Puhi, and north to Kapaia Reservoir, undated

[2] May 25, 1989 : Amfac listing of water use and well registrations for their companies, which include Kekaha Sugar Company, Ltd., and the Lihue Plantation Company Ltd., and the East Kaua'i Water Company – registrations submitted to the State Commission on Water Resource Management

[3] August 17, 1989 from Amfac - regarding the Hawaii Streams Assessment Project – listing all streams for Kekaha Sugar Company Ltd., and Lihue Plantation Company Ltd., with information on stream diversions; list continues with data from other Amfac properties in Hawaii

[4] February 9, 1998 Memorandum with attached Water Use Reporting Guidelines dated May 24, 1991; and February 1991 Lihue Plantation Report

[5] April 23, 1990 Amfac follow-up letter about a water use inquiry for a location in Moloaa – the Papaa stream used by Meadow Gold Dairies, includes map

[6] July 27, 1990 – Clarifications provided for several intakes and diversions on the Lihue Plantation Company's water registrations, dated on page 2

[7] Hawaiian Sugar Planters Association correspondence dated November 13, 1990 from the Commission on Water Resource Management regarding the Hawaiian Stream Assessment Report

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- 10 Lihue Plantation Company, Ltd.
 Kauai Electric – a division of Citizens Utilities Company correspondence beginning in 1992, to lease lands on which to construct the Ahukini Substation. Interaction between Lihue Plantation Company, Ltd, the County of Kaua'i and various other parties continue through 2000

- 11 Territory Highway Department, Territory of Hawaii document:
 Valuation of Growing Sugar Cane in Land Condemnation, 1958. Pages 3-14 outline how to evaluate cane lands which are needed for highway development, with exhibits on pages 16-23 providing forms and formulas for compensation of sugar properties

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