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SURFACE WATER SUPPLY *of* HAWAII

JULY 1, 1934, *to* JUNE 30, 1935

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CONTENTS

SCOPE OF WORK

This volume contains results of measurements of the flow of streams and ditches in the Territory of Hawaii during the year ending June 30, 1935. Since the beginning of stream-gaging work in Hawaii in 1910 records of flow of streams and ditches have been obtained at about 480 stations for periods ranging from a few months to 25 years. In addition hundreds of miscellaneous measurements have been made, and rather extensive studies of ground water have been made in Kau, Hawaii,[1] and on the islands of Oahu[2] and Maui.

In this volume are given the records of daily flow that were obtained at the 102 stations that were operated during the year ending June 30, 1935, and the results of miscellaneous measurements of stream flow made during that year. The results of ground-water studies will be published in bulletins of the Territorial Division of Hydrography. See "Publications" on page 7 for a record of surface water-supply papers pertaining to Hawaii.

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report are defined as follows:

"Second-feet" is an abbreviation for "cubic feet a second." A second-foot is the rate of discharge of water flowing in a channel having a cross-sectional area of 1 square foot and an average velocity of 1 foot a second.

An "acre-foot" is equivalent to 43,560 cubic feet and is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

In the Territory of Hawaii the unit most commonly used in measuring water is the "million gallons." This is used with two meanings--(1) to indicate a rate of flow and (2) to express an actual quantity of water. In the former sense "million gallons a day" is inferred, 1,000,000 gallons being taken as the unit of quantity and 24 hours as the unit of time. With this meaning the term is generally used in connection with pumping and irrigation. In the latter sense "million gallons" as an absolute quantity is used in the measurement of storage capacities of reservoirs.

The following convenient approximate relations exist between second-feet, million gallons a day, and acre-feet; 1 second-foot flowing 24 hours equals about 2 acre-feet; 1,000,000 gallons equals about 3 acre-feet or about 1.55 second-feet.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily discharge. The records of stage are obtained from water-stage recorders that give continuous records of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard text-books on the measurement of river discharge. Rating tables giving the discharge for any

1 Stearns, H. T., and Clark, W. O., Geology and water resources of the Kau District, Hawaii: U. S. Geological Survey Water-Supply Paper 616, 1930.
2 Stearns, H. T., and Vaksvik, K. N., Geology and ground-water resources of Oahu, Hawaii: T. H. Division of Hydrography Bull. 1, 1935.

stage are prepared from the discharge measurements. The application of the daily gage heights to these rating tables gives the discharge from which the daily, monthly, and yearly discharges are determined. Occasionally discharge is determined from a weir or a rating flume, using standard formulas, and for a few stations the high water discharge has been determined by the use of models.

The data presented in this report comprise, for each gaging station, a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off. Skeleton rating tables are published except for ditch stations. All rates of flow are expressed as million gallons a day.

The description of the station gives location, drainage area, records available, discharge corresponding to maximum and minimum recorded stages, average discharge if there has been more than 10 years of record, and, under "Remarks", notes on accuracy of the records, diversions that decrease the flow at the gage, and artificial regulation.

The table of daily discharge gives, in general, the discharge corresponding to the mean daily gage heights. But when, owing to sudden or rapid diurnal fluctuation, the discharge obtained from the rating table by applying the mean daily gage height would not be within 5 percent of the true mean, the mean has been obtained by averaging discharges for intervals during the day or by use of the discharge integrator.

In the table of monthly discharge the column headed "Maximum" gives the flow for the day when the total discharge was greatest. This does not correspond to the rate of flow at the crest of the flood. The maximum rate of flow is given in the station description under the heading "Extremes", and the corresponding stage is always taken from the water-stage recorder graph unless otherwise noted. Likewise, in the column headed "Minimum" the quantity given is the flow for the day when the total discharge was least. The columns headed "Mean" give the average flow in million gallons a day and cubic feet a second during the month. The "total in million gallons" is the sum of the daily flows, and the "total in acre-feet" is computed from the total monthly discharge in million gallons a day.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation, and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

A general statement under "Remarks" gives the accuracy of records, the terms "excellent", "good", "fair", or "poor", indicating that the record is probably accurate within 5, 10, 15, and 20 percent, respectively.

It should be borne in mind that the observations in each succeeding year may be expected to throw new light on data previously published.

Computations are carried to not more than three significant figures except that monthly and yearly total run-off (million gallons and acre-feet) above 10,000 is carried to four significant figures.

PUBLICATIONS

The following table gives by years the numbers of the papers on the surface-water supply of Hawaii published from 1903 to 1935, and, used in conjunction with the following list of stations maintained, provides a convenient index for finding the data for any station. The data for any particular station will be found in the reports covering the years during which the station was maintained except when publication is delayed, owing to undeveloped rating curves. Occasionally data are revised and republished in later papers. Miscellaneous discharge measurements made during any year at points other than regular gaging stations are published in the paper containing that year's data.

Numbers of water-supply papers containing data on the surface-water supply of Hawaii, 1903-35

Year	Number	Year	Number	Year	Number
1903.....	*77	1918-19.....	515	1926-27.....	655
1909-11†.....	318	1919-20.....	516	1927-28.....	675
1912†.....	336	1920-21.....	535	1928-29.....	695
1913†.....	373	1921-22.....	555	1929-30.....	710
1913-15.....	430	1922-23.....	575	1930-31.....	725
1915-16.....	445	1923-24.....	595	1931-32.....	740
1916-17.....	465	1924-25.....	615	1932-33.....	755
1917-18.....	485	1925-26.....	635	1933-34.....	770
				1934-35.....	795

*Water resources of Molokai, by Waldemar Lindgren.
†Calendar years; reports subsequent to Water-Supply Paper 373 cover the year beginning July 1 and ending June 30.

GAGING STATIONS MAINTAINED IN HAWAII

The following list comprises the gaging stations maintained in Hawaii by the United States Geological Survey and cooperating parties. The stations are arranged by stream basins and appear in systematic order for the several islands, tributaries of main streams being indicated by indention. The dates show the years or parts of years for which records are available. A dash following the date indicates that the station was being maintained June 30, 1935.

ISLAND OF KAUAI

Waimea River below Kekaha Ditch intake, near Waimea, 1921-
Waimea River near Waimea, 1910-19.
  Poomau River:
    Kawaikoi Stream near Waimea, 1909-17, 1919-
      Kaulkinana Stream near Waimea, 1919-25.
      Waiakoali Stream near Waimea, 1909-12, 1919-25.
    Mohihi Stream at elevation 3,500 feet, near Waimea, 1919-26.
    Mohihi Stream near Waimea, 1909-12.
  Waiahulu Stream near Waimea, 1916-18, 1925-
    Kokee Ditch near Waimea, 1926-
  Koaie Stream at elevation 3,700 feet, near Waimea, 1919-32.
  Koaie Stream near Waimea, 1916-18.
  Waialae River at elevation 3,700 feet, near Waimea, 1920-32.
  Waialae River near Waimea, 1910-16.
  Waialae River at elevation 800 feet, near Waimea, 1916-21.
  Kekaha Ditch at camp no. 1, near Waimea, 1910-15, 1917-
  Kekaha Ditch at flume no. 3, near Waimea, 1910-12.
  Kekaha Ditch at flume no. 4, near Waimea, 1916-17.
  Kekaha Ditch at siphon near Waimea, 1910-12.
  Kekaha Ditch at tunnel no. 12, near Waimea, 1910-14.
  Kekaha Ditch below tunnel no. 12, near Waimea, 1916-34.
  Waimea Ditch near Waimea, 1911-13, 1916-21.
  Kamenenune Ditch near Waimea, 1911-19.
  Makaweli River near Waimea, 1911-17.
    Halekua Stream near Waimea, 1912-13.
    Olokele River near Waimea, 1915-17.
      Olokele Ditch at tunnel no. 12, near Makaweli, 1904-17.
      Olokele Ditch at weir near Makaweli, 1912-17.
    Poowaiomahaihai Ditch near Waimea, 1911-13.
Hanapepe River above Hanapepe Falls, near Eleele, 1911-12.
Hanapepe River at Koula, near Eleele, 1910-16, 1917-21, 1926-

Hanapepe River at makai siphon near Eleele, 1929-32.
Hiloa Ditch near Eleele, 1911-15.
East Branch of Hanapepe River below Hanapepe Falls, near Eleele, 1911-12.
Hanapepe Ditch at Hanapepe Falls, near Eleele, 1911-15.
Hanapepe Ditch below intake, near Eleele, 1930-
Hanapepe Ditch at Koula, near Eleele, 1910-21, 1927-
Hanapepe Ditch below makai siphon near Eleele, 1929-32.
Gee Ditch at makai siphon near Eleele, 1929-32.
Hanapepe Ditch at weir near Hanapepe, 1910-17.
Manuahi Stream near Eleele, 1917-20.
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Hanamaulu River at Kapaia, near Lihue, 1911-14.
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South Fork of Wailua River near Lihue, 1911-
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Lihue Ditch near Lihue, 1910-19.
North Fork of Wailua River near Lihue, 1910-14.
North Fork of Wailua River at elevation 650 feet, near Lihue, 1914-
Hanalei Tunnel outlet near Lihue, 1932-
North Wailua Ditch near Lihue, 1932-
Kanaha Ditch near Lihue, 1910-
East Branch of North Fork of Wailua River near Lihue, 1912-
Uhau Iole Stream at elevation 750 feet, near Lihue, 1912.
Keahua Stream at elevation 750 feet, near Lihue, 1912.
Kawi Stream at elevation 750 feet, near Lihue, 1912.
Konohiki Stream at Makakualele weir (mauka), near Kapaa, 1911-13.
Kaehulua Stream at Kuhinoa (mule stable) weir, near Kapaa, 1911-13.
South Fork of Kaehulua Stream at Wainamuamu weir, near Kapaa, 1911-12.
North Fork of Kaehulua Stream at Kainaholo weir, near Kapaa, 1911-13.
Kapaa River near Kealia, 1910-20.
Akulikuli Spring near Kealia, 1911-13.
Kapahi Ditch near Kealia, 1909-
Tunnel Ditch at Kapahi, near Kapaa, 1909-11.
Kapaa Ditch at Kapahi, near Kapaa, 1909-11.
Pipe Ditch at Kapahi, near Kapaa, 1909-11.
Kealia Stream:
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Anahola River at elevation 1,140 feet, near Kealia, 1912.
Anahola River near Kealia, 1910, 1912-
Anahola River at Kiokala Dam, near Kealia, 1910-12.
Anahola Ditch above Kaneha Reservoir, near Kealia, 1914-
Anahola Ditch at Kiokala, near Kealia, 1909-14.
Anahola Ditch at makai weir near Kealia, 1909-11.
Ka Loko Ditch near Kilauea, 1932-
Puu Ka Ele Ditch near Kilauea, 1932-
Halaulani Stream near Kilauea, 1922-25.
Kalihiwai River near Hanalei, 1914-23.
Kalihiwai River near Kilauea, 1912-14.
Kalihiwai Ditch near Kilauea, 1934-
Hanalei River at elevation 625 feet, near Hanalei, 1914-
Hanalei River near Hanalei, 1911-19.
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Wainiha River, East Channel, near Wainiha, 1912-16.
Wainiha River, West Channel, near Wainiha, 1911-16.
Wainiha Canal at intake, near Wainiha, 1910-16.
Wainiha Canal at tunnel no. 18, near Wainiha, 1911.
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Kalalau Stream near Hanalei, 1931-

ISLAND OF OAHU

Puhawai Stream at Lualualei, near Waianae, 1930-
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Nuuanu Stream below reservoir no. 2 wasteway, near Honolulu, 1913-
Nuuanu Stream at Kuakini Street, near Honolulu, 1911-12.
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Maole Ditch, makai station, near Honolulu, 1917-23.
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Manoa Stream at College of Hawaii, near Honolulu, 1909-18.
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East Branch of Manoa Stream near Honolulu, 1913-21, 1925-
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  Pukele Stream near Honolulu, 1926-
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  Wong Leong's ditch near Kailua, 1912-16.
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    Makawao Spring near Kailua, 1914-16.
  Kaimi Stream near Kailua, 1912-16.
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  Kamakalepo Stream near Kailua, 1912-16.
  Pohakea Stream near Kailua, 1912-14.
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  South Branch of Kahanaiki Stream near Kailua, 1913-14.
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  Kahanaiki Ditch in Kailua Valley, near Kailua, 1912-13.
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  Ahlo Ditch near Kaneohe, 1914-16.
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  Piho Stream near Kaneohe, 1914-16.
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    Kuou Ditch near Kaneohe, 1914-16.
  Luluku Stream near Kaneohe, 1914-16.
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  Hop Tuck Ditch near Heeia, 1914-16.
  Lee Ditch near Heeia, 1914-16.
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ISLAND OF MOLOKAI

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ISLAND OF MAUI

(West Maui)

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(East Maui)

Oheo Stream at elevation 1,550 feet, near Kipahulu, 1927-29.
Oheo Stream below diversion dam near Kipahulu, 1931-
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  Koolau Ditch at Nahiku weir, near Nahiku, 1919-
  Koolau Ditch near Keanae, 1910-12, 1917-
  Koolau Ditch at Haipuaena, near Huelo, 1932-
  Koolau Ditch at Wahinepee, near Huelo, 1922-29
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Spreckels Ditch at Haipuaena weir, near Huelo, 1922-30.
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Honopou Stream below Haiku Ditch, near Huelo, 1932-
Wailoa Ditch at Honopou, near Huelo, 1922-
Halehaku Stream at dam near Huelo, 1910-11.
Halehaku Stream weir near Huelo, 1910-12.
Opana Stream near Huelo, 1910-12.
East Branch of Opana Stream at Haiku-uka boundary, near Kailiili, 1932-33.
Opana Ditch near Huelo, 1910-12.
New Hamakua Ditch at Naililihaele weir, near Huelo, 1910-12.
New Hamakua Ditch at Honopou, near Huelo, 1918-
New Hamakua Ditch at Halehaku weir, near Huelo, 1910-23.
New Hamakua Ditch at station no. 1, near Huelo, 1912.
New Hamakua Ditch at station no. 2, near Huelo, 1912.
New Hamakua Ditch at station no. 3, near Huelo, 1912.
New Hamakua Ditch at station no. 4, near Huelo, 1912.
New Hamakua Ditch at station no. 5, near Huelo, 1912.
Old Hamakua Ditch at Kailua, near Huelo, 1919-22.
Old Hamakua Ditch at Honopou, near Huelo, 1918-22.
Old Hamakua (Kauhikoa) Ditch at Opana weir, near Huelo, 1910-28.
Kaluanui Ditch at Puuomalei, near Hamakuapoko, 1910-12.
Lowrie Ditch at Honopou Gulch, near Huelo, 1930-
Haiku Ditch at Kapalalaea Gulch, near Huelo, 1930-
Lowrie Ditch at Opana weir, near Huelo, 1910-27.
Haiku Ditch at Peahi weir, near Huelo, 1910-14.
Haiku Ditch at Manawai Gulch, near Peahi, 1914-28.

ISLAND OF HAWAII

Hilo group:
81 stations at elevation 2,700 feet, in forest back of Hilo, 1911-13.
Waiakea Stream at middle flume house, near Mountain View, 1930-
Olaa flume at Kaumana, near Hilo, 1917-20.
Wailuku River at Pukamaui, near Hilo, 1923-28, 1929-
Wailuku River above Hilo Boarding School Ditch intake, near Hilo, 1928-
Wailuku River near Hilo, 1911-13, 1918-19.
Hilo Boarding School Ditch at intake, near Hilo, 1931-
Hilo Boarding School Ditch near Hilo, 1918-19.
Kapehu Stream at Piihonua, near Hilo, 1928-
Honolii River at Kaiwiki, near Hilo, 1911-13.
Honolii Stream near Hilo, 1924-32.
Honolii Ditch at Kaiwiki, near Hilo, 1911.
Kawainui River at Kawainui, near Pepeekeo, 1911-12.
4 stations at Piihonua, near Hilo, 1912.

Hamakua group:
- Waipio River below Koiawe, near Waipio, 1911-12.
- Waipio River below Waima, near Waipio, 1911-12.
- Waipio River at elevation 360 feet, near Waipio, 1901-2.
- New Hamakua Ditch at Waima Stream, near Waipio, 1912.
- Lower Hamakua Ditch at main weir, near Kukuihaele, 1910-20.
- Upper Hamakua Ditch at Puualala and Reservoir No. 3 weirs, near Kukuihaele, 1913-20.
- Kawainui Branch of Waipio River near Waipio, 1911-12.
- Kawainui Stream at elevation 2,120 feet, near Waipio, 1901-2.
- Kawainui Stream at elevation 1,435 feet, near Waipio, 1901-2.
- Kawainui Stream at elevation 775 feet, near Waipio, 1901-2.
- Branch No. 3 of Kawainui Stream at elevation 1,700 feet, near Waipio, 1901-2.
- Branch No. 2 of Kawainui Stream at elevation 1,405 feet, near Waipio, 1901-2.
- Alakahi Stream at elevation 1,200 feet, near Waipio, 1901-2.
- Alakahi Stream at elevation 730 feet, near Waipio, 1901-2.
- Koiawe Stream at elevation 610 feet, near Waipio, 1901-2.
- Waima Stream at elevation 790 feet. near Waipio, 1901-2.
- Waima Stream at elevation 385 feet, near Waipio, 1901-2.

Kohala group:
- Honokane Stream:
  - Awini Ditch at East Honokaneiki Gulch, near Niulii, 1927-
  - East Honokaneiki intake to Awini Ditch at East Honokaneiki Gulch, near Niulii, 1927-
  - East Branch of Honokane Stream at elevation 1,300 feet, near Honokane, 1901.
  - East Branch of Honokane Stream at elevation 770 feet, near Honokane, 1901.
  - West Branch of Honokane Stream at elevation 1,370 feet, near Honokane, 1901.
  - Kohala Ditch above Honokane Gulch, near Kohala, 1908-18.
  - Kohala Ditch at Awini weir, near Kohala, 1907-17.
  - Kohala Ditch at Pololu, near Niulii, 1927-
  - Kohala Ditch at Niulii weir, near Kohala, 1907-17.
  - Kehena Ditch at Honokane mauka, near North Kohala, 1912-13.
  - Kehena Ditch near Kohala, 1917-19, 1928-

Kau group:
- Waiohinu Springs, mauka station, near Naalehu, 1917-18.
- Waiohinu Springs, makai station, near Naalehu, 1917-18.

COOPERATION

The work during the year ending June 30, 1935, was done under cooperative agreement with the Territory of Hawaii through the commissioner of public lands.

Some of the data in this paper have been obtained in cooperation with the City and County of Honolulu and the city of Hilo. Assistance in collecting records was also rendered as follows: Island of Kauai--Kekaha Sugar Co., McBryde Sugar Co., East Kauai Water Co., Kilauea Sugar Co., and Lihue Plantation Co.; Island of Oahu--Board of Water Supply, City and County of Honolulu, and Wahiawa Water Co.; Island of Maui--Pioneer Mill Co. and East Maui Irrigation Co.; Island of Hawaii--Hilo Waterworks, Kohala Ditch Co., and Olaa Sugar Co.

Acknowledgment of records collected and furnished by individuals or corporations is made in connection with the description of each station affected.

DIVISION OF WORK

The data were collected and prepared for publication under direction of M. H. Carson, district engineer, Honolulu, Hawaii.

ISLAND OF KAUAI

Waimea River below Kekaha Ditch intake, near Waimea

Location.- Water-stage recorder, lat. 22°2'40", long. 159°38'35", in Waimea Canyon, 500 feet below Kekaha Ditch intake and 6½ miles northeast of Waimea. Altitude, 490 feet, by barometer.

Drainage area.- 45.0 square miles.

Records available.- July 1921 to June 1935.

Average discharge.- 10 years (1925-35), 36.6 million gallons a day (56.6 second-feet).

Extremes.- Maximum discharge during year, 7,190 million gallons a day (11,100 second-feet) Feb. 26 (gage height, 16.64 feet); no flow Mar. 23.
1921-35: Maximum discharge, 10,700 million gallons a day (16,600 second-feet) Dec. 24, 1927 (gage height, 20.40 feet); no flow occasionally, owing to regulation.

Remarks.- Records fair for medium stages; poor for all extremely high and low stages and for Aug. 1 to Sept. 9. Kokee Ditch and Kekaha Ditch divert above station, taking practically all the water at low and medium stages for irrigation near Waimea and Kekaha.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.2	0.1	0.1	0.3	0.1	0.2	37	51	121	0.7	0.4	0.08
2	.2	.1	2.0	.2	.1	.2	22	26	109	.7	.4	.10
3	.1	.1	.1	.2	.1	.2	67	13.5	41	.6	.3	.08
4	.1	.1	.1	.2	.2	.1	44	9.0	26	.7	89	.07
5	.1	.1	.1	2.2	15.5	.1	6.6	3.0	18.8	.8	70	.12
6	.2	.1	60	1.1	1.1	.1	1.8	.2	15.8	.8	2.2	.10
7	.1	.1	3.0	.2	.2	.1	251	.2	22	.8	.16	.10
8	9.6	.1	.1	.2	.2	.1	227	.2	13.6	1.4	.14	.09
9	19.5	.1	.1	.2	.1	.1	102	.2	15.5	102	.12	.08
10	.2	.1	.1	.1	47	.1	21	.1	5.0	15.4	.11	.08
11	.4	.1	1.4	.1	757	183	6.0	.1	3.4	1.1	.11	.13
12	27	.1	.5	.1	38	13	8.6	.1	270	.8	.10	.13
13	2.1	.1	.1	.2	1.4	.2	6.0	58	51	.9	.09	.12
14	3.9	.1	.1	.2	.9	.2	4.1	7.1	8.3	.8	.08	.12
15	13	.1	31	.2	.2	.1	.2	2.0	3.0	119	.08	.09
16	.2	.1	1.4	24	.2	.2	.2	.2	74	165	.08	.07
17	.1	.1	.1	15	.1	.1	134	.2	54	106	.07	.07
18	.1	.1	.1	2.0	.1	.1	94	.2	22.5	103	.07	.07
19	.1	.1	.2	.2	.1	.1	51	.2	79	8.1	.07	.07
20	.1	.1	.2	1.5	.1	.1	74	.1	21.5	.7	.07	.34
21	.1	.1	.2	129	.1	31	13.5	.1	5.1	.5	.06	.13
22	123	.1	.2	17.5	.2	60	266	3.3	1.5	.6	.06	.14
23	10	.1	.2	50	22	158	174	2.2	1.4	3.9	.05	.14
24	.2	.1	1.0	12.5	87	29	81	.3	3.9	.6	.05	.14
25	.1	.1	.2	.2	17	94	43	362	1.3	.4	.05	6.2
26	26	.1	.1	48	.3	310	17	1,090	141	.4	.05	8.8
27	27	.1	.1	29	37	111	64	618	48	.4	.05	88
28	.4	.1	.2	27	3.5	187	80	244	10.2	.4	.05	64
29	.1	.1	.2	.2	10	58	32	-	3.3	.4	.05	.16
30	.1	.1	.1	.2	6.1	8.4	75	-	1.7	.3	.06	.13
31	.1	.1	-	.1	-	.6	66	-	.9	-	.08	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	123	0.1	8.53	13.2	264	811
August	.1	.1	.10	.16	3.1	9.5
September	60	.1	3.44	5.32	103	317
October	129	.1	11.7	18.1	362	1,110
November	757	.1	34.9	54.0	1,050	3,210
December	310	.1	40.2	62.2	1,250	3,820
Calendar year 1934	827	.1	21.5	33.3	7,860	24,110
January	266	.2	66.7	103	2,070	6,350
February	1,090	.1	89.0	138	2,490	7,650
March	270	.9	38.5	59.6	1,190	3,660
April	165	.3	21.2	32.8	637	1,960
May	89	.05	5.30	8.20	164	504
June	88	.07	5.66	8.76	170	522
Fiscal year 1934-35	1,090	.05	26.7	41.3	9,750	29,920

Kawaikoi Stream near Waimea

Location.- Water-stage recorder, lat. 22°8'0", long. 159°37'15", at old trail crossing 12½ miles northeast of Waimea. Altitude, 3,420 feet, by barometer.

Drainage area.- 4.1 square miles.

Records available.- April 1909 to June 1935. July 1917 to July 1919 not published.

Average discharge.- 16 years (1919-35), 21.0 million gallons a day (32.5 second-feet).

Extremes.- Maximum discharge during year, 975 million gallons a day (1,510 second-feet) Feb. 26 (gage height, 8.57 feet); minimum, 1.6 million gallons a day (2.5 second-feet) June 19.

1909-35: Maximum discharge, 1,670 million gallons a day (2,580 second-feet) Dec. 13, 1924, and Aug. 3, 1931 (gage height, 12.11 and 11.49 feet respectively); minimum, 1.3 million gallons a day (2.0 second-feet) Sept. 15, 1921.

Highest known flood, 15.2 feet, Dec. 18, 1916 (discharge not determined).

Remarks.- Records good for ordinary stages; poor for extremely high stages. No diversions.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.4	1.1	2.4	26
1.5	1.8	2.8	46
1.6	3.2	3.2	76
1.7	5.0	3.6	112
1.9	9.0	4.0	160
2.1	15	4.6	236

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.0	24	1.8	9.0	5.4	12.5	43	22.5	74	6.0	4.6	2.9
2	6.6	18.6	20.5	12	4.8	8.0	41	12	47	5.4	4.5	2.4
3	6.0	14.5	10.6	4.6	4.3	6.4	54	9.3	21	4.8	4.1	2.6
4	5.4	10.5	5.4	3.0	4.5	5.2	25.5	8.0	15.5	23	106	26.5
5	5.4	7.2	15.4	30	73	4.5	12.5	7.4	12.5	16.5	55	27
6	5.9	6.0	36	17	15.6	4.1	27	6.6	11	10.1	16	10.2
7	10.7	5.0	9.8	10.8	7.6	3.7	124	6.2	13	9.7	8.4	4.8
8	7.2	4.5	6.0	4.8	5.6	3.4	98	5.8	19.2	52	6.6	3.6
9	7.2	4.1	4.8	3.4	5.3	3.2	38	5.4	17.1	51	5.8	3.2
10	5.4	3.7	3.5	2.9	48	18.3	17	5.0	9.6	15.5	5.2	2.8
11	10.2	3.6	33	2.6	218	156	13	4.6	49	8.4	4.8	6.4
12	24	3.4	15.3	2.3	29	20.5	11	8.7	147	9.0	4.5	5.0
13	21.5	3.2	8.5	2.2	20.5	9.3	9.3	75	22	11.5	5.2	2.9
14	34	3.2	7.7	2.2	15.4	7.0	8.2	9.9	13	11.2	4.6	2.1
15	17.9	3.0	4.1	3.4	9.3	6.0	7.4	6.8	12	96	4.1	1.8
16	7.6	2.8	3.0	14.9	7.6	5.4	6.6	27.5	72	53	3.7	1.7
17	5.8	2.6	2.9	9.9	6.6	4.6	34.5	12	29.5	59	3.6	1.7
18	6.0	2.6	2.9	4.5	5.8	4.3	36	7.2	16	53	3.4	1.7
19	19.5	2.4	2.8	3.0	5.2	4.1	44	5.6	19	14.5	3.2	7.9
20	12	4.6	2.4	19.8	5.0	3.7	36	5.0	13.5	12.5	2.9	14.8
21	6.0	6.3	2.2	70	6.7	7.0	13	26	9.6	11	2.9	9.3
22	21	3.4	2.1	19	19.6	92	63	24.5	8.4	27.5	2.9	7.2
23	12.5	2.6	2.9	13.3	31	50	46	17.6	8.0	25	2.8	4.1
24	8.6	2.3	6.5	9.2	19.1	25	29	9.9	7.8	9.9	2.4	2.9
25	17.9	2.2	3.2	30.5	10.8	51	15.5	196	7.2	8.2	2.4	7.6
26	16	2.1	4.4	69	6.6	77	11.5	222	15.9	7.2	2.3	23.5
27	11	1.9	7.6	54	5.8	64	31.5	150	13.4	6.6	2.2	45
28	6.6	1.8	3.4	29.5	10.8	48	19.9	75	7.8	6.0	2.4	21.5
29	5.4	2.2	2.3	15.7	51	20.5	11	-	6.6	5.4	4.3	9.0
30	6.1	1.9	19.4	8.6	16.3	18.1	28.5	-	6.2	5.0	4.6	5.0
31	33	1.8	-	6.6	-	31.5	32	-	6.4	-	5.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	34	5.4	11.9	18.4	370	1,140
August	24	1.8	5.10	7.89	158	485
September	36	1.8	8.35	12.9	250	768
October	70	2.2	15.7	24.3	488	1,500
November	218	4.3	22.5	34.8	674	2,070
December	156	3.2	25.0	38.7	774	2,380
Calendar year 1934	218	1.6	17.0	26.3	6,220	19,110
January	124	6.6	31.8	49.2	987	3,030
February	222	4.6	34.7	53.7	972	2,980
March	147	6.2	23.6	36.5	730	2,240
April	96	4.8	21.1	32.6	634	1,950
May	106	2.2	9.39	14.5	291	893
June	45	1.7	8.90	13.8	267	820
Fiscal year 1934-35	222	1.7	18.1	28.0	6,600	20,260

Kokee Ditch near Waimea

Location.- Water-stage recorder, lat. 22°6'25", long. 159°40'45", 1,000 feet west of road and 10⅛ miles north of Waimea. Altitude, 3,310 feet, by barometer.

Records available.- September 1926 to June 1935.

Extremes.- Maximum discharge during year, 64 million gallons a day (99 second-feet) Jan. 22 (gage height, 2.57 feet); no flow several times, when water was shut out of ditch.

1926-35: Maximum discharge, 73 million gallons a day (113 second-feet) Dec. 21, 1933 (gage height, 2.83 feet); no flow occasionally, when water was shut out of ditch just above weir.

Remarks.- Records excellent except those for July 1-16, Sept. 7 to Oct. 23, Feb. 24-25, which are poor. Kokee Ditch, at elevation 3,400 feet, diverts water from all streams tributary to Waimea River east of Mohihi Stream for irrigation near Kekaha. Regulated by head gates.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.1	23	4.1	10	7.7	18.2	35	24.5	44	15.8	9.7	7.0
2	11.1	19.9	19.4	13	6.9	12.0	27.5	23	36.5	14.7	9.9	6.4
3	10.1	17.0	12.3	10	6.2	9.9	36.5	21	23	14.2	9.5	6.4
4	9.4	14.7	8.1	9.0	5.8	8.4	30.5	19.5	27.5	25	33	13.0
5	9.2	10.1	7.3	30	34.5	7.6	18.2	18.2	23	24.5	48	32
6	9.2	8.8	36	19	20	6.9	24.5	17.0	22	18.2	24.5	15.1
7	13.9	7.6	12	12	10.5	6.6	53	15.8	23	19.5	14.7	9.5
8	25	7.0	9.0	9.0	7.9	6.1	57	14.7	26	27.5	12.2	7.9
9	15	6.6	7.0	7.4	7.4	5.6	44	14.2	30.5	35	11.4	7.7
10	11	6.2	6.0	6.4	14.0	7.8	24.5	13.3	22	18.2	10.5	7.4
11	10	6.0	30	5.6	57	57	19.5	12.6	21.5	18.2	9.9	10.9
12	25	5.8	15	5.0	37	30	17.0	12.9	50	17	9.5	9.9
13	20	5.6	9.0	4.5	23	14.7	14.7	50	33.5	19.5	9.7	7.2
14	35	5.6	8.0	4.3	20	11.1	13.3	21	29	15.8	9.4	6.1
15	20	5.5	7.6	6.0	13.3	9.5	12.2	14.7	26	44	8.8	5.6
16	13	5.4	7.0	16	11.1	8.6	11.4	34	35	43	8.2	5.4
17	9.4	5.1	6.4	11	9.5	7.9	32.5	22	22.5	44	7.9	5.4
18	8.1	4.9	5.8	6.0	8.6	7.4	43	15.8	18.2	43	7.9	5.4
19	18.8	4.9	5.4	5.0	7.9	7.0	36.5	12.9	23	24.5	7.7	6.7
20	15.9	5.7	5.0	25	7.7	6.7	44	12.0	26	21	7.6	19.5
21	9.5	9.9	4.5	54	8.4	9.0	24.5	29	24.5	18.2	7.4	12.4
22	21	6.2	4.2	25	17.0	34.5	42	30.5	22	23	7.2	12.2
23	17	5.2	5.0	18	32	48	49	24.5	21	32	7.0	8.1
24	12.9	4.9	10	13.6	21	30.5	26	17	21	18.2	6.7	6.9
25	16.3	4	6.0	22.5	15.8	43	24.5	45	19.5	15.8	6.6	8.4
26	19.5	4.5	8.0	53	9.4	53	24.5	53	24.5	14.0	6.4	21
27	15.8	4.2	12	33.5	8.6	39.5	27.5	48	27.5	12.9	6.4	35
28	10.1	4.2	7.0	36	11.4	30.5	23	46	21	12.0	6.4	31
29	8.2	4.4	6.0	19.5	50	15.8	23	-	18.2	11.4	7.7	13.8
30	8.1	4.2	20	12.2	22	11.1	30.5	-	17.0	10.7	7.6	9.4
31	30	4.1	-	9.2	-	15.8	32	-	17.0	-	9.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	35	8.1	15.2	23.5	471	1,440
August	23	4.1	7.48	11.6	232	711
September	38	4.1	10.2	15.8	305	936
October	54	4.3	16.5	25.5	511	1,570
November	57	5.8	17.1	26.5	512	1,570
December	57	5.6	18.7	28.9	580	1,780
Calendar year 1934	57	4.1	16.2	25.1	5,920	18,150
January	57	11.4	29.7	46.0	921	2,830
February	53	12.0	24.4	37.8	682	2,090
March	50	17.0	25.7	39.8	795	2,440
April	44	10.7	22.4	34.7	671	2,060
May	48	6.4	11.3	17.5	349	1,070
June	35	5.4	11.8	18.3	353	1,080
Fiscal year 1934-35	57	4.1	17.5	27.1	6,380	19,580

Waiahulu Stream near Waimea

Location.- Water-stage recorder, lat. 22°4'45", long. 159°39'15", in Waimea Canyon, half a mile above confluence with Koaie Stream and 8¾ miles north of Waimea. Altitude, 890 feet, by barometer.

Drainage area.- 20.0 square miles.

Records available.- February to October 1916, October 1917 to June 1918, May 1925 to June 1935.

Average discharge.- 10 years (1925-35), 26.5 million gallons a day (41.0 second-feet).

Extremes.- Maximum discharge during year, 1,280 million gallons a day (1,980 second-feet) Feb. 26 (gage height, 6.58 feet); minimum, 7.6 million gallons a day (11.8 second-feet) Aug. 30, 31, Sept. 1.
1916, 1917-18, 1925-35: Maximum discharge, 2,550 million gallons a day (3,950 second-feet) Dec. 24, 1927 (gage height, 9.92 feet); minimum, 5.2 million gallons a day (8.0 second-feet) Nov. 4, 1927.

Remarks.- Records good for ordinary stages; poor for high stages. Kokee Ditch diverts water above station for irrigation near Kekaha.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.9	7.0	1.4	30	2.7	179
1.0	10	1.6	45	3.0	232
1.1	14	1.8	62	3.4	311
1.2	18.5	2.1	94	3.6	405
1.3	24	2.4	133		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	11	10	e.2	10	8.6	11.5	38	28	66	12	9.7	8.5
2	10.5	10	11	11	8.6	11	16.5	17	54	11.5	9.7	8.5
3	10	10	11	10	8.5	10	35	14	25	11.5	9.4	8.5
4	9.7	10	9.7	9.1	e.5	9.4	22	13	17	11.5	96	12
5	9.7	9.7	8.8	11	43	9.1	13	12.5	14.5	13	42	14
6	9.7	9.4	15	13	13.5	8.8	12	11.5	14	12.5	15	10.5
7	9.4	9.4	11.5	11	10	8.5	134	11.5	15.5	11.5	11	9.4
8	20	8.8	9.7	9.4	9.1	8.2	121	11	18.5	17.5	10	9.1
9	11	e.5	8.8	8.8	8.5	8.2	31	11	22	82	9.7	9.1
10	9.7	8.5	8.8	8.8	10.5	8.2	14.5	11	15.5	28	9.4	9.7
11	9.7	8.5	16.5	8.5	353	179	12.5	10.5	38	12	9.4	10.5
12	11.5	8.5	16	8.5	21	20	12	10.5	256	11	9.4	9.7
13	11	8.5	9.7	9.1	11.5	11	11	68	39	11	9.4	9.1
14	14	8.2	11	8.8	12	9.7	10.5	13.5	16.5	11	9.4	9.1
15	13	8.2	9.4	9.4	10.5	9.1	10	11	14.5	90	9.1	8.8
16	10		9.4	15.5	9.1	8.8	9.7	11.5	79	36	9.1	8.8
17		*e.5	8.8	15.5	8.8	8.5	45	12.5	54	51	9.1	8.5
18			8.8	11	8.8	8.5	39	11	29	64	9.1	e.5
19			8.5	9.7	8.5	8.5	26	10.5	42	16	9.1	8.5
20	*9.5	8.6	8.2	10	8.5	8.5	60	10	21	12.5	9.1	9.1
21		12	8.5	52	8.2	e.2	17	10.5	16	11	9.1	10
22	13	9.4	8.8	14.5	8.5	81	118	13	14.5	11.5	8.8	9.1
23	14	8.5	9.4	11.5	11.5	29	89	12	14	17.5	e.8	8.8
24	10.5	8.8	9.1	13	14	15.5	51	11	13.5	12.5	8.8	e.5
25	9.7	8.8	9.1	10	13	23	26	235	13	11	8.8	8.2
26	10	8.5	8.5	37	10.5	78	16	391	36	10	8.8	10
27	13	8.2	8.5	37	10	42	44	296	23	10	8.8	14
28	10.5	8.5	8.5	28	12	71	38	103	16	9.7	8.8	27
29	9.4	8.2	8.2	12	23	28	18	-	14	9.7	8.8	11
30	9.1	7.9	8.2	10	15.5	21	26	-	13	9.7	8.8	9.7
31	9.1	7.9	-	9.4	-	23	31	-	12.5	-	8.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	20	-	10.8	16.7	336	1,030
August	12	7.9	8.89	13.8	276	845
September	16.5	8.2	9.85	15.2	296	907
October	52	8.5	14.3	22.1	442	1,360
November	353	8.2	23.6	36.5	707	2,170
December	179	8.2	25.3	39.1	784	2,410
Calendar year 1934	353	7.9	19.0	29.4	6,940	21,330
January	134	9.7	37.0	57.2	1,150	3,520
February	391	10	49.3	76.3	1,380	4,240
March	256	12.5	33.5	51.8	1,040	3,190
April	90	9.7	21.3	33.0	638	1,960
May	96	8.5	13.3	20.6	411	1,260
June	27	8.2	10.2	15.8	306	940
Fiscal year 1934-35	391	7.9	21.3	33.0	7,770	23,830

*Estimated.

Kekaha Ditch at camp no. 1, near Waimea

Location.- Water-stage recorder, lat. 22°2'35", long. 159°38'30", in Waimea Canyon, a quarter of a mile below lower intake and 6¼ miles northeast of Waimea. Altitude, 520 feet by barometer.

Records available.- November 1907 to June 1935.

Average discharge.- 16 years (1918-24, 1925-35), 37.4 million gallons a day (57.9 second-feet).

Extremes.- Maximum discharge during year, 64 million gallons a day (99 second-feet) Apr. 9 (gage height, 4.04 feet); minimum, 3.5 million gallons a day (5.4 second-feet) Mar. 7.

1907-35: Maximum discharge, 71 million gallons a day (110 second-feet) Apr. 25, 1928 (gage height, 4.33 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good for ordinary stages; fair for estimated periods. Diverts water from Waiahulu Stream and Koaie River 3 miles above lower intake for hydroelectric plant. Lower intake is on Waimea River 300 feet below power house and 1 mile below confluence with Waialae River. Regulated by head gates. Water used for irrigation in vicinity of Kekaha.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	43	34.5	24.5	41	27.5	43	3e	25.5	29.5	32	27.5	26.5
2	35.5	34.5	43	33	26.5	38	36.5	24.5	28.5	32	26.5	25.5
3	32	39	48	28.5	25.5	34.5	36.5	23.5	23.5	31	26.5	24.5
4	29.5	39	41	33	24.5	31	29.5	26.5	26.5	32	36.5	24.5
5	28.5	34.5	28.5	48	40	27.5	28.5	32	28.5	26.5	51	39
6	32	36.5	46	48	43	26.5	34.5	32	29.5	35.5	48	33
7	29.5	28.5	41	34.5	31	25.5	33	32	34	33	35.5	27.5
8	39	26.5	32	27.5	26.5	25.5	29.5	31	46	37	31	25.5
9	48	25.5	28.5	25.5	25.5	24.5	28.5	31	48	51	28.5	25.5
10	36.5	24.5	26.5	24.5	34.5	24.5	29.5	32	48	51	27.5	25.5
11	35.5	24.5	32	23.5	43	50	31	31	43	39	26.5	39
12	48	24.5	38	22.5	48	48	32	29.5	36.5	36.5	26.5	27.5
13	46	24.5	31	27.5	48	36.5	28.5	32	31	41	25.5	26.5
14	48	25.5	32	26.5	48	29.5	28.5	31	31	35.5	25.5	24.5
15	48	24.5	43	28.5	38	27.5	29.5	31	34.5	46	*25	22.5
16	39	23.5	38	53	33	26.5	29.5	33	48	51	*24	22.5
17	32	23.5	28.5	36.5	31	25.5	29.5	35.5	48	51	*24	22.5
18	29.5	23.5	33	35.5	28.5	24.5	31	33	39	51	*24	22.5
19	29.5	23.5	35.5	32	27.5	23.5	29.5	29.5	34.5	48	*24	22.5
20	32	28.5	28.5	43	27.5	24.5	28.5	28.5	41	43	*24	48
21	27.5	28.5	28.5	48	31	44	29.5	31	41	39	*23	36.5
22	42	24.5	32	51	31	43	29.5	34.5	41	41	*23	36.5
23	48	23.5	35.5	48	46	38	28.5	32	41	51	*23	31
24	41	23.5	46	49	48	36.5	31	32	41	41	*23	34.5
25	33	22.5	29.5	39	48	39	28.5	32	35.5	34.5	*23	33
26	38	22.5	26.5	51	46	38	26.5	28.5	29.5	32	*23	51
27	51	22.5	26.5	51	46	36.5	27.5	29.5	33	31	*23	51
28	46	22.5	25.5	51	48	35.5	23.5	29.5	33	28.5	*23	48
29	36.5	21.5	23.5	43	46	34.5	23.5	-	32	27.5	*26	43
30	31	21.5	26	34.5	46	38	25.5	-	32	27.5	*27	39
31	31	21.5	-	29.5	-	39	24.5	-	32	-	28.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	51	27.5	37.6	58.2	1,170	3,580
August	39	21.5	26.6	41.2	824	2,530
September	48	23.5	33.3	51.5	998	3,060
October	53	22.5	37.6	58.2	1,170	3,580
November	48	24.5	37.1	57.4	1,110	3,420
December	50	23.5	33.5	51.8	1,040	3,190
Calendar year 1934	53	11.5	35.1	54.3	12,800	39,300
January	38	23.5	29.7	46.0	920	2,820
February	35.5	23.5	30.5	47.2	853	2,620
March	48	23.5	36.1	55.9	1,120	3,440
April	51	26.5	38.5	59.6	1,160	3,550
May	51	23	27.5	42.5	853	2,620
June	51	22.5	32.0	49.5	958	2,940
Fiscal year 1934-35	53	21.5	33.3	51.5	12,180	37,350

*Estimated.

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Hanapepe River at Koula, near Eleele

Location.- Water-stage recorder, lat. 21°57'20", long. 159°33'15", just below junction with Manuahi Stream and 4 miles northeast of Eleele. Altitude, 150 feet by barometer.

Drainage area.- 18.8 square miles.

Records available.- May 1917 to January 1921, December 1926 to June 1935. August 1910 to December 1916 half a mile above present site and records not comparable.

Average discharge.- 11 years (1917-20, 1927-35), 52.8 million gallons a day (81.7 second-feet).

Extremes.- Maximum discharge during year, 2,340 million gallons a day (3,620 second-feet) Feb. 27 (gage height, 5.49 feet); minimum, 7.6 million gallons a day (11.8 second-feet) Nov. 22.

1910-21, 1926-35: Maximum discharge, at least 5,000 million gallons a day (7,740 second-feet) Dec. 18, 1916 (gage height not known, as station was destroyed by this flood); minimum, 7.5 million gallons a day (11.6 second-feet) Dec. 15, 16, 1926 (at present site).

Remarks.- Records good for ordinary stages and poor for estimated periods and extremely high stages. Hanapepe Ditch diverts water from river 3 miles above station for irrigation in vicinity of Makawell.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.2	10.8	1.0	64	2.0	238	3.2	700
.4	18	1.2	87	2.3	325		
.6	29	1.4	114	2.6	430		
.8	45	1.7	168	2.9	560		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	43	23	62	*17.2	14.4	21	26.5	20.5	133	19.4	13.4	13.4
2	29	31.5	138	*14.8	14.4	18.5	52	17.2	81	16.0	13.4	12.4
3	21	42	170	*14.4	14.4	17.2	94	16.0	63	15.2	13.4	12.7
4	17.2	19.5	37	*23	14.4	16.0	38.5	15.6	31	14.4	29.5	14.2
5	15.6	43	21	*41	17.2	15.2	26	15.2	21	13.7	45	21
6	21.5	22	64	*19.0	14.4	14.8	43	15.2	23.5	13.0	15.6	32.5
7	31	17.6	25.5	*14.8	13.7	14.4	135	14.8	40	13.0	13.4	26
8	223	16.4	23	*14.4	13.7	14.4	263	14.0	27	13.0	12.7	13.0
9	106	16.4	17.2	*14.0	13.7	14.4	129	13.7	23.5	16.8	13.0	12.7
10	64	15.6	15.6	*14.0	73	14.0	54	13.4	19.0	12.7	13.0	12.7
11	64	15.2	19.0	14.0	317	28	52	13.7	40	12.1	16.0	13.4
12	127	14.8	39.5	14.0	44	17.6	83	13.7	29.5	25	12.1	13.7
13	48	14.8	16.0	14.0	52	14.8	57	13.0	18.5	13.7	14.8	11.6
14	53	17.2	14.4	15.2	28.5	14.0	64	12.4	16.0	12.4	13.0	12.1
15	38	14.8	224	27.5	21.5	14.0	41	12.7	15.2	54	12.1	11.8
16	47	14.4	31	51	16.8	13.7	28	12.7	18.2	222	20	11.1
17	22.5	31	26	23.5	15.2	13.4	62	12.1	27	166	35	11.1
18	21	33	106	40	14.4	13.0	61	11.8	23	136	17.2	11.8
19	21.5	26	76	20.5	16.4	14.0	34	11.8	20.5	64	14.0	29
20	16.4	23	30.5	40	25	15.2	25.5	11.8	16.0	32	13.4	34
21	14.4	17.2	78	89	25.5	107	20.5	17.9	15.3	22	16.0	14.8
22	123	13.7	43	49	15.3	33	98	18.0	20	26	27	13.7
23	54	12.4	110	283	46	116	56	14.4	40	32.5	14.4	29
24	26.5	11.8	54	74	163	104	26.5	15.2	19.7	18.5	13.4	15.2
25	23.5	11.8	27	37.5	60	231	20.5	151	98	17.6	12.7	58
26	34	12.1	22	32	64	373	19.5	575	169	16.0	11.8	89
27	44	12.7	18.5	26	62	227	56	662	91	14.8	24	138
28	33.5	11.4	*16.0	22.5	162	186	32.5	290	54	15.6	14.8	66
29	22	11.4	*15.2	18.0	39	80	21.5	-	44	14.4	13.4	26
30	16.4	11.1	*29	16.0	25.5	48	58	-	40	13.7	18.0	29.5
31	18.5	11.4	-	15.2	-	31	27	-	36	-	15.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	223	14.4	46.4	71.8	1,440	4,420
August	43	11.1	19.0	29.4	588	1,810
September	224	14.4	52.3	80.9	1,570	4,810
October	283	14.0	35.8	55.4	1,110	3,400
November	317	13.7	47.2	73.0	1,420	4,350
December	373	13.0	59.8	92.5	1,850	5,690
Calendar year 1934	536	10.5	40.8	63.1	14,900	45,690
January	263	19.5	58.2	90.0	1,800	5,540
February	662	11.8	72.3	112	2,020	6,210
March	169	15.2	42.4	65.6	1,310	4,030
April	222	12.1	35.9	55.5	1,080	3,310
May	45	11.8	17.0	26.3	528	1,620
June	138	11.1	27.0	41.8	810	2,480
Fiscal year 1934-35	662	11.1	42.6	65.9	15,530	47,670

*Discharge determined from gage heights read twice daily.

Hanapepe Ditch below intake, near Eleele

Location.- Water-stage recorder, lat. 21°58'55", long. 159°32'5", 1 mile below intake and 7 miles northeast of Eleele. Altitude, 500 feet, by barometer.

Records available.- March 1930 to June 1935.

Extremes.- Maximum discharge during year, 35 million gallons a day (54 second-feet) Feb. 26 (gage height, 3.67 feet); no flow occasionally, when water was turned out of ditch.

1930-35: Maximum discharge, 41 million gallons a day (63 second-feet) Nov. 12, 1931 (gage height, 3.96 feet); no flow occasionally, owing to closing of head gates.

Remarks.- Records good except those for estimated periods, which are fair. Ditch diverts water from Hanapepe River for irrigation in vicinity of Makaweli.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	31	31	32.5	28	25	31	32.5	31	2.15	18.8	23.5	25
2	31	32.5	34	26.5	25	31	32.5	29.5	0	20.5	23.5	23.5
3	31	34	29	26.5	25	31	32.5	29.5	0	20.5	23.5	25
4	29.5	31	31	29.5	23.5	28	32.5	28	25	22	28	26.5
5	29.5	32.5	31	31	28	26.5	32.5	28	28	22	31	18.5
6	28.5	32.5	32.5	28	25	26.5	32.5	28	24.5	22	28	10.8
7	31	31	31	25	25	25	34	28	29.5	22	25	19.6
8	32.5	29.5	31	25	25	25	34	28	29.5	22	25	22
9	32.5	29.5	28	23.5	25	25	34	26.5	28	26.5	25	22
10	32.5	28	26.5	23.5	28	25	34	26.5	28	23.5	25	22
11	32.5	26.5	28	22	31	31	32.5	28	28	22	25	23.5
12	34	26.5	32.5	22	27	28	32.5	26.5	28	28	25	23.5
13	30.5	26.5	28	23.5	32.5	25	32.5	26.5	26.5	25	26.5	22
14	32.5	28	25	23.5	32.5	25	32.5	26.5	25	25	25	22
15	32.5	26.5	32.5	28	32.5	25	32.5	26.5	25	31	23.5	22
16	30.5	25	31	31	31	23.5	32.5	26.5	19.6	32.5	28	20.5
17	31	31	31	28	28	23.5	34	25	12.3	32.5	29.5	20.5
18	31	31	32.5	31	29.5	23.5	34	25	28	16.1	28	22
19	30.5	29.5	32.5	28	29.5	25	34	26.5	26.5	0	26.5	28
20	28	31	31	31	31	25	32.5	26.5	23.5	25	25	29.5
21	28	*28	32.5	32.5	29.5	32.5	32.5	19.9	25	28	28	26.5
22	26.5	†26.5	31	32.5	31	32.5	34	31	26.5	29.5	29.5	25
23	24	†25	32.5	34	32.5	31	32.5	28	29.5	29.5	26.5	28
24	31	*23.5	32.5	32.5	24.5	31	32.5	29.5	28	28	25	22
25	31	23.5	31	32.5	31	32.5	31	32.5	28	28	23.5	29.5
26	32.5	25	31	32.5	32.5	32.5	31	34	8.2	25	23.5	31
27	32.5	23.5	28	31	32.5	31	32.5	34	0	25	28	32.5
28	32.5	22	28	29.5	34	32.5	32.5	25	0	26.5	26.5	28
29	32.5	22	25	28	32.5	32.5	31	-	0	25	25	31
30	31	22	24.5	26.5	32.5	32.5	32.5	-	0	25	28	31
31	31	22	-	26.5	-	32.5	32.5	-	0	-	28	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	34	24	30.8	47.7	954	2,930
August	34	22	27.6	42.7	856	2,630
September	34	24.5	30.2	46.7	906	2,780
October	34	22	28.1	43.5	872	2,680
November	34	23.5	29.0	44.9	872	2,670
December	32.5	23.5	28.4	43.9	882	2,710
Calendar year 1934	34	0	25.7	39.8	9,370	28,780
January	34	31	32.7	50.6	1,020	3,110
February	34	19.9	27.9	43.2	780	2,390
March	29.5	0	18.8	29.1	582	1,790
April	32.5	0	24.2	37.4	726	2,230
May	31	23.5	26.2	40.5	811	2,490
June	32.5	10.8	24.4	37.8	733	2,250
Fiscal year 1934-35	34	0	27.4	42.4	9,990	30,660

*Partly estimated.

†Estimated.

Hanapepe Ditch at Koula, near Eleele

Location.- Water-stage recorder, lat. 21°57'10", long. 159°33'0", at first flume below siphon at Koula, 3 miles below intake and 4 miles north of Eleele. Altitude, 490 feet, by barometer.

Records available.- January 1910 to June 1921, March 1927 to June 1935.

Average discharge.- 18 years (1910-20, 1927-35), 25.9 million gallons a day (40.1 second-feet).

Extremes.- Maximum discharge during year, 35 million gallons a day (54 second-feet) Feb.27 (gage height, 3.07 feet); no flow occasionally, when head gates were closed for channel repairs.

1910-21, 1927-35: Maximum discharge, 36 million gallons a day (56 second-feet) Apr. 10, 1918, and Aug. 3, 1931 (gage height, 3.18 feet (former datum) and 3.05 feet (present datum), respectively); no flow occasionally, owing to closing of head gates.

Remarks.- Records good. Diverts water from Hanapepe River 3 miles above station for irrigation in vicinity of Makaweli. Regulated by head gates.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	26	26	24	21	19.8	24	26	26	0	18.3	19.8	21
2	26	26	26	21	19.8	22.5	26	24	0	19.8	19.8	19.8
3	24	26	22	21	19.8	22.5	28	24	0	19.8	19.8	19.8
4	24	24	24	22.5	19.8	21	28	22.5	24.5	19.8	22.5	21
5	24	26	24	24	21	21	26	22.5	28	19.8	26	14.6
6	23.5	24	10.5	22.5	19.8	21	28	22.5	24	19.8	22.5	.2
7	24	24	20.5	19.8	19.8	19.8	28	22.5	30	19.8	21	7.1
8	24	24	22.5	18.5	19.8	19.8	28	21	28	21	21	19.8
9	*21	22.5	21	18.5	19.8	19.8	28	21	28	24	21	18.5
10	26	21	19.8	18.5	22.5	19.8	28	21	26	21	21	18.5
11	28	21	21	17.3	23	22.5	28	22.5	26	19.8	21	19.8
12	28	21	24	18.5	17.6	21	28	21	28	24	21	19.8
13	*84	21	21	18.5	26	19.8	28	21	26	21	22.5	18.5
14	28	21	19.8	18.5	26	19.8	28	21	24	21	21	19.8
15	26	19.8	26	21	26	18.5	28	21	24	26	21	18.5
16	*24	19.8	24	24	24	18.5	28	21	19.3	28	24	18.5
17	26	24	24	22.5	22.5	18.5	28	21	12.0	30	26	18.5
18	*24	24	26	24	24	18.5	28	21	26	15.6	24	18.5
19	25	22.5	24	22.5	24	18.5	28	21	26	0	22.5	21
20	*24	22.5	24	24	24	19.8	28	21	22.5	22	21	24
21	24	22.5	24	26	11.2	26	26	15.8	22.5	26	22.5	22.5
22	*22.5	21	24	24	24	26	28	24	26	28	24	21
23	*19.8	19.8	26	28	26	26	28	22.5	28	26	21	22.5
24	26	18.5	24	28	12.5	26	28	24	26	26	19.8	22.5
25	26	18.5	24	26	24	26	26	28	26	24	19.8	24
26	26	18.5	24	26	24	26	26	26	10.0	22.5	19.8	28
27	26	18.5	22.5	26	24	26	28	33	0	21	24	28
28	26	17.3	21	24	26	26	26	18.6	0	22.5	22.5	25
29	*21	17.3	19.8	22.5	24	26	26	-	0	21	21	28
30	24	17.3	18.9	22.5	24	26	28	-	0	21	24	28
31	26	17.3	-	21	-	26	28	-	2.0	-	24	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	28	19.8	24.7	38.2	767	2,350
August	26	17.3	21.5	33.3	667	2,050
September	26	10.5	22.5	34.8	676	2,080
October	28	17.3	22.3	34.5	692	2,120
November	26	11.2	22.0	34.0	659	2,020
December	26	18.5	22.3	34.5	693	2,130
Calendar year 1934	29	1.6	21.0	32.5	7,660	23,500
January	28	26	27.5	42.5	852	2,610
February	33	15.8	22.5	34.8	630	1,930
March	30	0	18.2	28.2	563	1,730
April	30	0	21.6	33.4	648	1,990
May	26	19.8	22.0	34.0	681	2,090
June	28	.2	20.2	31.3	607	1,860
Fiscal year 1934-35	33	0	22.3	34.5	8,140	24,960

*Partly estimated.

South Fork of Wailua River near Lihue

Location.- Water-stage recorder, lat. 22°2'10", long. 159°22'55", a third of a mile above Wailua Falls and 5 miles north of Lihue. Altitude, 230 feet by barometer.

Drainage area.- 22.4 square miles.

Records available.- December 1911 to June 1935.

Average discharge.- 13 years (1921-24, 1925-35), 66.7 million gallons a day (103 second-feet).

Extremes.- Maximum discharge during year, 10,400 million gallons a day (16,100 second-feet) Oct. 18 (gage height, 7.95 feet); minimum, 1.9 million gallons a day (2.9 second-feet) May 26.
1911-35: Maximum discharge, 29,000 million gallons a day (44,900 second-feet) Jan. 16, 1920 (gage height, 11.25 feet); minimum, 1.2 million gallons a day (1.9 second-feet) May 3, 1926.

Remarks.- Records good except those for extremely high-stages, which are poor. Lihue Ditch and Hanamaulu Ditch divert water above station at elevations of 600 and 500 feet, respectively, for irrigation in the vicinity of Lihue.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.7	1.6	1.7	21.5	3.1	245
.9	2.8	1.9	34	3.5	400
1.1	5.0	2.1	51	4.0	665
1.3	8.4	2.4	86	4.5	1,010
1.5	13.5	2.7	140	5.0	1,580

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	30.5	4.6	30.5	28	56	66	61	3.9	202	22	2.6	2.2
2	32.5	4.8	166	6.0	66	60	91	3.5	120	7.8	2.6	4.2
3	5.7	6.4	58	4.9	65	29.5	125	3.5	119	7.1	2.4	2.3
4	4.0	5.0	5.7	6.0	61	9.3	69	3.5	96	7.6	19.2	2.2
5	4.5	17.4	3.1	67	65	6.2	56	3.4	34	6.5	39	4.3
6	3.9	6.8	2.7	40	31.5	9.2	60	3.4	19.1	6.2	7.5	7.4
7	99	4.0	2.7	39	7.0	4.9	199	3.3	219	5.8	3.3	15.1
8	272	3.5	2.7	24	5.8	4.8	355	3.2	76	6.5	2.9	5.8
9	104	3.2	2.6	5.6	4.8	4.8	188	2.9	79	6.2	3.2	22.5
10	76	3.0	2.4	4.6	78	4.6	111	2.9	70	5.6	2.6	35.5
11	50	3.6	7.4	4.4	802	11.1	102	3.0	80	5.0	2.5	23.5
12	217	3.8	341	4.5	140	5.9	138	3.2	130	5.6	2.3	23
13	46	3.2	70	4.3	168	4.4	102	3.3	80	5.3	2.3	16.6
14	84	3.1	43	21.5	120	4.0	212	2.9	66	4.9	2.4	5.1
15	52	3.4	157	54	89	4.0	120	2.9	61	5.2	2.3	2.7
16	151	3.4	34.5	104	60	4.0	88	2.9	58	28	2.4	2.3
17	12.9	11.3	15.3	88	69	9.2	100	2.6	49	21.5	5.2	2.4
18	5.9	5.3	89	1,180	63	3.6	89	2.5	34	34.5	9.2	2.6
19	5.4	3.9	166	114	71	3.1	72	2.4	10.9	6.4	4.0	2.9
20	5.0	3.6	24.5	105	141	3.0	68	2.4	10.6	27	2.7	4.2
21	4.5	3.3	176	138	78	27	59	2.5	40	27.5	2.5	3.3
22	61	2.9	91	100	82	3.4	102	2.3	58	20	3.0	3.0
23	15.1	2.6	142	368	120	133	83	2.4	64	7.0	3.1	2.6
24	8.0	2.4	76	130	204	87	24	2.4	64	4.5	2.4	2.9
25	5.0	2.2	16.3	63	119	153	6.5	129	149	3.9	2.2	13.3
26	11.5	2.4	8.4	133	53	236	5.0	493	187	3.4	2.0	21.5
27	78	2.2	6.2	120	20.5	223	12.2	1,450	108	2.8	2.2	48
28	9.3	2.2	5.3	100	148	165	20	396	65	2.7	2.2	14.9
29	5.9	2.1	4.8	86	88	63	5.6	-	55	2.5	2.1	3.7
30	4.8	2.0	95	65	48	68	27	-	39	2.6	2.2	3.1
31	4.4	2.0	-	42	-	63	7.0	-	46	-	2.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	272	3.9	47.4	73.3	1,470	4,510
August	17.4	2.0	4.18	6.47	130	398
September	341	2.4	61.5	95.2	1,850	5,660
October	1,160	4.3	105	162	3,250	9,970
November	802	4.8	104	161	3,120	9,590
December	236	3.0	48.2	74.6	1,500	4,590
Calendar year 1934	1,180	1.8	43.4	67.1	15,860	48,660
January	355	5.0	88.9	138	2,760	8,460
February	1,450	2.3	90.7	140	2,540	7,790
March	219	10.6	80.3	124	2,490	7,640
April	34.5	2.5	10.1	15.6	302	926
May	39	2.0	4.74	7.33	147	451
June	48	2.2	10.1	15.6	303	930
Fiscal year 1934-35	1,450	2.0	54.4	84.2	19,860	60,920

North Fork of Wailua River at elevation 650 feet, near Lihue

Location.- Water-stage recorder, lat. 22°3'50", long. 159°26'20", 1½ miles above intake of Kanaha Ditch and 7⅞ miles northwest of Lihue. Altitude, 650 feet, from topographic map.

Drainage area.- 6.6 square miles.

Records available.- August 1910 to June 1935.

Average discharge.- 14 years (1921-35), 49.7 million gallons a day (76.9 second-feet).

Extremes.- Maximum discharge during year, 2,170 million gallons a day (3,360 second-feet) Nov. 11 (gage height, 6.81 feet); minimum, 6.5 million gallons a day (10.1 second-feet) Aug. 12.

1910-35: Maximum discharge, 3,410 million gallons a day (5,280 second-feet) Dec. 24, 1927 (gage height, 8.46 feet); minimum, 4.8 million gallons a day (7.4 second-feet) Apr. 23, 1934.

Remarks.- Records good for ordinary stages and poor for high stages and estimated periods. Hanalei Tunnel discharges water into stream, and North Wailua Ditch and Stable Storm Ditch divert water from stream above station for irrigation in vicinity of Lihue.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

-0.4	7.2	.7	4e	2.0	198
-.2	11.8	.9	61	2.5	302
.1	21	1.2	89	3.0	436
.4	33	1.6	139		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	54	37.5	143	36	35	*50	54	25	109	*29	*9.0	22.5
2	46	37.5	113	32	35	43	73	23.5	†83	27	*9.0	25
3	37.5	48	114	43	32	37.5	82	23	*250	25.5	*8.0	23
4	33	35	45	65	31	35	48	23	*100	*24	*100	43
5	32	58	30	81	62	32.5	40	22.5	*70	*22	*150	45
6	54	43	32	43	35	31	46	22	*70	*20	*30	45
7	122	33	25.5	35	35	30	110	22	*150	*18	*20	45
8	180	33	31	32	31	28.5	126	21.5	*70	*25	*15	22.5
9	80	30	21.5	29.5	31.5	27.5	77	21.5	*60	*35	*20	14.9
10	81	27.5	34.5	28.5	147	36	54	22	*50	*25	*15	28.5
11	81	27	78	27	368	108	68	22	*45	*18	*13	35
12	102	18.7	170	27	79	40	58	24.5	*100	*13	12.1	28.5
13	74	13.2	71	29	122	32.5	43	47	*60	*11	13.5	26.5
14	74	12.4	46	27	89	29	97	18.1	*45	*9.0	12.1	26.5
15	73	11.8	147	56	66	27	46	8.7	*40	*15	11.1	25
16	164	35.5	46	51	51	27	35	10.8	56	*45	24	23.5
17	54	46	43	37.5	43	25.5	53	8.7	43	*60	39	13.7
18	46	28.5	113	253	43	25	37.5	8.3	37.5	*35	18.5	9.9
19	50	36.5	70	48	77	29	33	8.5	33	*20	14.3	22
20	35	44	51	61	106	28.5	30.5	8.5	29	*19	12.4	18.3
21	35	30	91	80	48	65	28	10.4	84	*18	16.5	10.8
22	100	19.3	48	48	*50	45	75	14.3	50	*35	26.5	9.9
23	54	15.8	86	218	*80	84	43	11.8	70	*25	11.8	24
24	37.5	11.1	58	76	*140	64	31.5	13.2	43	*20	10.4	10.1
25	45	9.0	†40	58	*90	129	27.5	92	59	*17	16.4	38.5
26	65	16.0	40	117	*80	137	26	334	82	*15	21.5	37
27	240	10.4	35	96	*50	132	37	411	51	*13	27	61
28	58	15.6	33	79	*90	113	26.5	194	37.5	*12	25	42
29	43	23.5	31.5	54	*150	69	24	-	*33	*11	24.5	33
30	43	23	80	46	*60	58	58	-	*30	*10	27.5	41
31	40	29.5	-	37.5	-	49	30	-	*30	-	24	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	240	32	72.0	111	2,230	6,850
August	58	9.0	27.7	42.9	859	2,640
September	170	21.5	65.6	101	1,970	6,040
October	253	27	62.9	97.3	1,950	5,990
November	368	31	78.6	122	2,360	7,240
December	137	25	53.8	83.2	1,670	5,120
Calendar year 1934	385	5.8	49.3	76.3	17,990	55,180
January	126	24	52.2	80.8	1,620	4,960
February	411	8.3	52.6	81.4	1,470	4,520
March	250	29	66.8	103	2,070	6,350
April	60	9.0	22.4	34.7	672	2,060
May	150	8.0	25.1	38.8	779	2,390
June	61	9.9	26.4	43.9	851	2,610
Fiscal year 1934-35	411	8.0	50.7	78.4	18,500	56,770

*Estimated.

†Partly estimated.

Hanalei Tunnel outlet near Lihue

Location.- Water-stage recorder, lat. 22°5'10", long. 159°28'15", at end of Hanalei Tunnel, 2¼ miles below intake on Kaapoko Stream and 9⅝ miles northwest of Lihue. Altitude, 1,210 feet, by Lihue Plantation Co. levels.

Records available.- July 1932 to June 1935.

Extremes.- Maximum discharge during year, 71 million gallons a day (110 second-feet) July 8 (gage height, 1.72 feet); no flow Apr. 19, owing to abnormal regulation.
1932-35: Maximum discharge, 75 million gallons a day (116 second-feet) Dec. 12, 1933 (gage height, 1.78 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good. Tunnel diverts water from Kaapoko Stream and Hanalei River and empties it into north branch of North Fork of Wailua River, from which it is later diverted and used for irrigation in vicinity of Lihue and Kapaa. Regulated by spillway and head gate.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	26.5	24	47	23.5	20.5	27	34.5	18.0	42	20.5	18.2	17.6
2	23.5	24	42	21	21	24.5	38	17.6	36.5	19.1	18.0	18.7
3	20.5	29.5	44	26	19.9	23	39	17.6	36.5	18.7	18.0	17.4
4	19.5	22.5	31.5	37	20.5	21.5	28	17.2	30	27.5	41	26
5	19.5	30	27	39	31	20.5	25	17.0	25	22.5	44	39
6	24.5	26	29	26.5	22	19.5	27.5	17.2	28	19.9	31	36.5
7	35	21.5	24.5	23	23.5	19.5	42	17.2	36.5	18.7	23.5	34.5
8	38	22.5	25	21	20.5	19.1	44	17.2	31.5	28	23	26.5
9	34.5	19.9	21.5	20.5	21.5	18.7	34	16.8	25	30	23.5	22.5
10	34.5	19.1	32	19.7	30	23	27.5	17.2	23	21.5	20.5	25.5
11	36.5	18.7	36.5	19.1	50	42	34.5	17.6	25.5	20.5	21.5	24
12	39	19.1	44	19.1	36.5	26	27.5	19.5	45	29.5	20.5	20.5
13	34.5	18.4	28.5	18.7	42	21.5	23.5	28.5	30	6.2	22.5	19.9
14	36.5	18.0	24	18.4	40	20.5	24	18.4	25	.47	20.5	20.5
15	34.5	18.0	36.5	27.5	32	19.5	21.5	17.6	24.5	.47	19.7	19.1
16	36.5	24.5	24.5	26	28.5	19.1	20.5	20.5	34.5	.47	31.5	18.4
17	26.5	33	24.5	22	24.5	18.7	27.5	18.0	26.5	.47	34.5	18.4
18	23.5	27.5	39	34.5	25	19.1	21.5	17.2	23.5	.36	23	19.0
19	28	32	29.5	22.5	34.5	21.5	20.5	17.2	22	.35	20.5	31.5
20	21	32	27	29.5	36.5	21.5	19.5	18.0	20.5	9.3	20.5	24
21	20.5	28.5	34.5	34.5	27.5	34.5	18.7	20.5	26	19.1	23.5	21
22	36.5	23.5	24.5	27	29	30	30	26	23.5	20.5	28.5	20.5
23	28.5	20.5	33	44	31.5	39	23.5	21	34.5	17.9	19.9	27
24	22	19.5	29	31	44	34.5	19.5	23.5	24	20.5	19.1	19.5
25	24.5	18.7	23.5	29	36.5	42	18.7	39	26	19.1	18.4	33
26	32	21.5	24.5	44	34.5	45	18.4	51	31.5	19.5	18.0	36.5
27	34.5	18.4	21.5	39	44	42	20.5	50	25.5	18.7	20.5	39
28	23	18.0	20.5	39	42	39	18.4	44	22	19.9	19.5	27.5
29	23.5	17.6	20.5	28.5	39	31	18.0	-	20.5	18.0	18.9	24.5
30	24.5	17.6	34.5	23.5	30.5	30	25	-	21.5	19.1	22	28
31	25.5	23.5	-	21.5	-	30	18.7	-	22.5	-	19.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	39	19.5	28.6	44.3	888	2,720
August	33	17.6	22.8	35.3	708	2,170
September	47	20.5	30.1	46.6	904	2,770
October	44	18.4	27.6	42.7	856	2,630
November	50	19.9	31.3	48.4	938	2,880
December	45	18.7	27.2	42.1	843	2,590
Calendar year 1934	50	.3	24.1	37.3	8,810	27,020
January	44	18.0	26.1	40.4	809	2,480
February	51	16.8	22.9	35.4	640	1,970
March	45	20.5	28.0	43.3	868	2,670
April	30	.35	16.2	25.1	487	1,490
May	44	18.0	23.3	36.1	723	2,220
June	39	17.4	25.2	39.0	756	2,320
Fiscal year 1934-35	51	.35	25.8	39.9	9,420	28,910

North Wailua Ditch near Lihue

Location.- Water-stage recorder, lat. 22°3'40", long. 159°27'55", 300 feet below intake diversion dam on the North Fork of Wailua River, 8 miles west of Wailua, and 8¾ miles northwest of Lihue. Zero of gage is 1,105.45 feet above mean sea level, by Lihue Plantation Co. levels.

Records available.- July 1932 to June 1935. Records from 1926 to June 1932 may be obtained from Lihue Plantation Co., at Lihue.

Extremes.- Maximum discharge during year, 59 million gallons a day (91 second-feet) Feb. 25 (gage height, 1.57 feet); no flow June 23, when water was shut out of ditch. 1932-35: Maximum discharge, that of Feb. 25, 1935; no flow occasionally, when water was shut out of ditch.

Remarks.- Records good. Regulated by gates. No diversions. Water used for power and irrigation in vicinity of Lihue.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	15.9	15.6	33.5	14.9	12.3	12.3	15.6	12.6	9.0	12.6	11.4	12.3
2	15.6	16.2	29	13.6	12.9	12.6	16.6	12.6	8.4	12.3	11.0	17.0
3	14.6	16.7	32	16.2	12.3	12.9	12.9	12.3	11.0	12.0	10.7	13.3
4	13.9	14.9	22.5	21.5	12.0	12.9	12.3	12.0	12.6	13.9	33.5	19.1
5	13.9	19.4	19.e	24.5	13.9	12.6	12.6	11.7	12.6	13.3	35	24
6	15.6	18.0	18.7	16.6	12.9	12.3	12.9	11.4	12.3	12.6	18.7	27
7	16.6	14.9	18.7	14.2	15.2	12.0	10.1	11.4	9.5	11.7	14.6	24.5
8	17.6	14.6	20	13.3	13.3	11.7	9.2	11.4	9.8	15.2	14.6	20
9	18.0	13.3	15.6	12.6	13.6	11.7	9.2	11.4	9.5	16.6	16.2	16.2
10	20	12.3	21.5	12.3	16.2	12.6	9.5	11.4	9.5	12.9	14.2	15.6
11	19.4	12.3	26.5	12.0	20.5	20.5	9.2	12.0	12.9	13.3	14.9	17.3
12	19.0	11.7	19.8	11.7	15.9	15.2	9.2	10.7	12.6	19.4	14.6	14.9
13	17.3	14.7	10.7	12.0	*13.9	13.3	9.2	12.3	12.3	13.6	15.6	13.6
14	17.3	13.6	13.6	11.4	*12.0	12.6	9.2	10.7	12.6	14.6	13.3	14.2
15	17.3	12.0	17.0	17.2	12.3	12.0	10.1	10.7	12.6	22.5	13.3	12.9
16	19.0	18.6	1e.0	16.6	12.9	12.0	12.6	11.0	12.6	30	23	12.3
17	16.2	24	18.0	15.9	12.6	11.7	12.6	10.4	11.7	30.5	24.5	12.3
18	15.9	21	21.5	12.0	12.6	11.7	12.6	10.4	12.6	22.5	17.0	13.3
19	18.0	23	18.4	12.6	13.6	12.9	12.6	10.4	12.4	16.2	15.9	21
20	14.9	21.5	16.2	12.9	13.3	13.9	12.6	10.7	12.3	15.9	15.6	16.6
21	14.9	18.4	15.2	13.3	12.6	20	12.3	12.0	12.3	16.2	17.3	13.9
22	27	14.9	14.9	12.9	12.9	17.3	12.6	15.2	11.7	18.4	19.8	13.6
23	23.5	13.6	16.6	14.9	12.9	14.2	12.0	12.3	15.2	15.6	14.2	13.5
24	18.0	12.9	16.2	13.3	12.0	12.6	12.0	14.6	12.0	14.6	12.9	13.3
25	20.5	12.3	15.6	12.9	10.7	12.6	12.6	22	12.6	14.9	12.6	23.5
26	27	14.2	15.6	12.9	12.6	10.7	12.6	27	10.7	12.6	12.0	20.5
27	22	12.3	14.2	12.6	13.3	10.4	13.9	12.6	10.7	12.3	16.2	33
28	19.8	12.0	13.9	12.6	12.9	9.8	12.9	9.0	12.6	14.2	13.9	19.4
29	17.3	11.7	13.3	12.3	12.3	9.2	12.3	-	12.6	12.0	13.3	17.3
30	16.6	11.4	17.3	12.3	12.3	9.5	14.1	-	12.6	12.3	17.3	22
31	16.2	15.0	-	12.3	-	14.2	12.6	-	12.6	-	14.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	27	13.9	18.0	27.9	559	1,710
August	24	11.4	15.5	24.0	479	1,470
September	33.5	10.7	16.8	29.1	564	1,730
October	24.5	11.4	14.1	21.8	436	1,340
November	20.5	10.7	13.3	20.6	399	1,220
December	20.5	9.2	12.9	20.0	400	1,230
Calendar year 1934	38	9.2	14.8	22.9	5,400	16,570
January	16.6	9.2	12.0	18.6	371	1,140
February	27	9.0	12.6	19.5	352	1,080
March	15.2	8.4	11.8	18.3	364	1,120
April	30.5	11.7	15.8	24.4	475	1,460
May	35	10.7	16.5	25.5	512	1,570
June	33	12.3	17.8	27.5	535	1,640
Fiscal year 1934-35	35	8.4	14.9	23.1	5,450	16,710

*Partly estimated.

Kanaha Ditch near Lihue

Location.- Water-stage recorder, lat. 22°3'50", long. 159°25'30", 750 feet below intake and 7 miles northwest of Lihue. Altitude, 540 feet by barometer.

Records available.- August 1910 to June 1935.

Average discharge.- 15 years (1916-22, 1926-35), 8.75 million gallons a day (13.5 second-feet).

Extremes.- Maximum discharge during year, 18.0 million gallons a day (27.9 second-feet) June 25 (gage height, 0.68 foot); no flow several times during year, when intake gate was closed.

1910-35: Maximum discharge recorded, 45 million gallons a day (70 second-feet) Dec. 24, 1927 (gage height, 3.22 feet, former site and datum); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good. Diverts water from North Fork of Wailua River for irrigation of sugarcane in vicinity of Lihue. Regulated by head gate.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.6	5.6	10.0	6.1	5.8	1.34	5.8	5.8	1.34	5.8	4.0	5.8
2	5.6	5.8	8.2	6.1	5.8	1.34	6.1	5.8	1.34	5.8	4.5	5.8
3	5.6	5.8	5.8	6.1	5.6	.98	6.1	5.8	1.34	6.1	6.1	5.8
4	5.6	5.6	5.8	6.1	5.6	.09	5.8	5.8	.87	6.1	5.6	5.8
5	5.3	5.6	5.8	6.1	5.8	2.6	5.8	5.8	.73	6.1	5.3	5.8
6	5.6	5.8	5.8	5.8	5.8	6.1	5.8	5.8	1.87	5.8	5.3	8.7
7	5.3	5.8	5.6	5.8	5.8	6.1	5.8	5.8	5.8	5.8	5.6	5.8
8	5.0	5.8	5.8	5.8	5.8	6.1	5.8	5.8	5.3	5.8	5.8	5.8
9	5.0	5.8	5.8	5.8	5.8	6.1	5.8	6.1	5.6	5.8	5.8	5.6
10	5.6	5.8	5.8	5.8	5.8	6.1	6.1	6.1	5.6	6.1	5.3	6.1
11	5.8	7.3	5.8	5.8	2.55	6.1	6.1	6.1	5.8	6.1	5.3	5.8
12	5.8	10.3	4.4	5.8	1.51	6.1	5.8	6.1	5.3	6.1	5.6	5.8
13	5.3	9.4	1.67	6.1	1.51	6.1	5.6	5.8	5.3	4.8	5.8	5.8
14	5.8	10.0	.73	6.1	1.34	6.1	5.8	5.3	5.8	4.0	5.6	5.8
15	5.6	10.0	1.18	5.8	1.14	6.1	5.6	3.8	5.8	5.0	5.6	5.8
16	5.6	10.3	3.2	5.8	1.18	6.1	6.1	5.0	6.1	6.1	5.8	5.8
17	5.6	13.1	5.8	5.9	1.02	6.1	6.1	3.55	5.6	5.6	5.3	5.0
18	5.6	13.8	5.8	5.6	.87	6.1	5.8	3.55	7.8	5.6	5.0	5.8
19	5.6	13.4	5.6	5.6	.87	6.1	5.6	3.55	5.8	5.8	5.6	8.7
20	5.3	10.7	5.6	6.4	.73	6.2	5.6	3.55	5.8	5.8	5.8	8.7
21	5.3	5.8	5.6	5.8	.60	6.3	5.8	4.8	5.8	5.6	5.6	6.7
22	5.6	5.8	5.3	5.8	.60	6.1	5.8	6.1	5.6	5.6	5.6	6.1
23	5.3	10.8	5.6	5.8	.60	6.1	5.6	5.3	5.8	5.6	.86	8.7
24	5.6	9.4	5.6	5.8	.87	5.8	5.8	5.0	5.8	5.8	2.3	6.1
25	5.6	7.8	5.8	5.8	.73	6.1	5.8	5.8	3.95	5.6	6.1	10.3
26	5.6	10.3	5.8	5.8	.60	6.1	5.8	5.6	1.32	5.6	5.3	10.3
27	5.6	9.7	5.8	5.6	.60	6.1	5.8	2.9	1.39	5.8	5.6	6.7
28	5.3	8.1	5.8	5.0	1.58	6.1	5.8	1.34	1.51	5.8	5.8	5.8
29	5.6	5.8	5.8	5.6	2.05	5.8	5.8	-	.89	4.8	.77	5.8
30	5.6	5.8	5.8	5.8	.71	5.8	5.8	-	2.9	4.3	3.9	5.6
31	5.6	5.8	-	5.8	-	5.8	5.8	-	6.1	-	5.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.8	5.0	5.51	8.53	171	524
August	13.8	5.6	8.09	12.5	251	770
September	10.0	.73	5.37	8.31	161	494
October	6.4	5.0	5.84	9.04	181	555
November	5.8	.60	2.64	4.08	79.3	243
December	6.3	.09	5.29	8.18	164	503
Calendar year 1934	13.8	.09	5.74	8.88	2,090	6,420
January	6.1	5.6	5.83	9.02	181	554
February	6.1	1.34	5.06	7.83	142	435
March	7.8	.73	4.19	6.48	130	399
April	6.1	4.0	5.62	8.70	169	517
May	6.1	.77	5.04	7.80	156	480
June	10.3	5.0	6.54	10.1	196	602
Fiscal year 1934-35	13.8	.09	5.43	8.40	1,980	6,080

East Branch of North Fork of Wailua River near Lihue

Location.- Water-stage recorder, lat. 22°4'10", long. 159°25'5", 1,200 feet above confluence with North Fork and 7⅛ miles northwest of Lihue. Altitude, 500 feet, by barometer.

Drainage area.- 6.2 square miles.

Records available.- July 1912 to June 1935.

Average discharge.- 15 years (1920-35), 31.7 million gallons a day (49.0 second-feet).

Extremes.- Maximum discharge during year, 1,802 million gallons a day (1,240 second-feet) Oct. 18 (gage height, 6.34 feet); minimum, 9.9 million gallons a day (15.3 second-feet) Feb. 19, 20.
1912-35: Maximum discharge, 3,340 million gallons a day (5,170 second-feet) Dec. 24, 1927 (gage height, 10.57 feet); minimum, 4.4 million gallons a day (6.8 second-feet) July 3, 13, 1926.

Remarks.- Records good except those for extremely high stages, which are poor. No diversions above station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.0	9.2	2.2	64
1.2	14.5	2.5	86
1.4	22	2.9	122
1.6	31	3.4	179
1.9	46		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	27.5	23.5	30	21.5	23	27.5	30	12.4	52	17.3	12.4	16.6
2	24.5	22	71	19.2	22	26	43	12.1	36	16.2	12.1	29
3	21	25.5	41	19.6	20.5	23.5	41	12.1	105	15.6	11.5	13.3
4	19.6	21	24.5	36	19.2	21	27.5	11.8	49	16.2	44	25.5
5	19.6	27.5	21	57	36	20	23.5	11.5	34	15.9	44	30.5
6	24	22	22.5	29	21	18.e	23	11.5	37	15.2	18.8	27
7	110	19.2	19.2	22.5	19.2	17.6	58	11.5	63	14.5	14.5	28
8	88	18.4	20.5	20.5	18.8	17.3	66	11.0	36	18.8	13.9	19.6
9	48	17.3	18.0	18.8	17.6	16.6	38.5	11.0	29	24	15.9	15.6
10	44	16.2	17.3	15.9	32.5	19.8	29.5	11.0	25.5	15.6	13.3	14.5
11	55	46	52	17.0	159	72	29	11.0	39.5	14.2	13.3	13.6
12	61	52	107	16.6	44	30.5	35	10.8	121	19.6	12.7	13.0
13	49	28.5	54	24	41	21.5	24.5	16.0	44	14.8	13.3	12.4
14	46	21	31	18.4	33.5	18.4	30.5	11.0	32.5	14.2	13.0	12.4
15	41	18.8	34	51	28	17.0	25	10.8	29.5	19.2	12.1	11.5
16	41	18.8	25.5	31	25	16.6	21.5	11.3	30.5	29	15.2	11.3
17	31.5	24	26	24.5	22	15.6	21.5	10.6	26	43	16.6	11.0
18	29	22.5	41	137	22.5	15.2	19.2	10.4	23	38	17.1	11.3
19	28.5	18.4	39	31.5	66	14.8	18.0	10.1	20.5	20	18.8	15.4
20	25	19.6	26	33.5	83	14.5	17.3	10.1	18.8	18.0	13.9	17.6
21	24	18.4	36	41	33.5	23	16.2	10.6	18.4	17.3	14.2	13.3
22	39.5	16.6	31	28	34	21	17.3	11.0	30	21	16.2	12.7
23	28	15.2	59	54	36.5	48	15.9	11.5	38	19.6	12.7	14.5
24	24.5	14.5	31.5	33	60	26	14.8	11.8	21	16.6	12.1	12.1
25	31.5	14.5	25	31.5	44	42	14.5	52	48	16.2	11.5	28
26	36	14.2	24.5	78	41	44	14.2	112	45	14.5	11.0	27
27	44	13.6	22	62	41	46	13.9	155	29	13.9	12.7	27.5
28	31.5	13.0	20.5	41	59	44	13.6	74	22.5	13.3	11.8	18.0
29	25	13.0	18.8	32.5	36.5	29	13.0	-	20	12.7	11.5	15.9
30	24	12.1	38	28	30.5	28.5	13.0	-	18.8	12.4	13.3	15.6
31	24	12.4	-	25	-	27.5	12.7	-	18.0	-	12.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	110	19.6	37.6	58.2	1,170	3,580
August	52	12.1	20.6	31.9	640	1,960
September	107	17.3	34.2	52.9	1,030	3,150
October	137	15.9	35.4	54.8	1,100	3,370
November	159	17.6	39.2	60.7	1,180	3,610
December	72	14.5	26.6	41.2	823	2,530
Calendar year 1934	213	7.0	26.2	40.5	9,580	29,350
January	66	12.7	25.2	39.0	781	2,400
February	155	10.1	23.8	36.8	666	2,040
March	121	18.0	37.4	57.9	1,160	3,560
April	43	12.4	18.6	28.8	557	1,710
May	44	11.0	15.7	24.3	486	1,490
June	30.5	11.0	17.8	27.5	534	1,640
Fiscal year 1934-35	159	10.1	27.7	42.9	10,130	31,040

Kapahi Ditch near Kealia

Location.- Water-stage recorder, lat. 22°6'0", long. 159°22'30", 500 feet below intake and 4½ miles west of Kealia. Altitude, 360 feet, by barometer.

Records available.- April 1909 to May 1914, May 1915 to June 1935.

Average discharge.- 17 years (1917-20, 1921-35), 7.30 million gallons a day (11.3 second-feet).

Extremes.- Maximum discharge during year, 174 million gallons a day (269 second-feet) Sept. 12 (gage height, 2.61 feet); no flow several days in January, when water was shut out of ditch.

1909-14, 1915-35: Maximum discharge, 233 million gallons a day (361 second-feet) Mar. 31, 1923 (gage height, 3.15 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good except those for extremely low stages and estimated period, which are poor. Diverts water from Kapaa River for irrigation in vicinity of Kapaa. Regulated by head gates.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.1	3.2	*25	7.8	5.4	0.4	0.55	2.65	0.35	0.25	2.4	6.0
2	5.7	2.9	*15	9.0	3.7	3.6	.4	2.65	.45	5.5	2.9	14.8
3	3.7	4.6	*15	6.8	.4	9.0	.55	2.4	.35	4.6	3.2	6.8
4	3.4	2.9	5.0	12.2	.4	8.0	.7	2.4	.35	3.75	38	25
5	3.6	4.0	5.2	5.9	6.2	4.0	.7	6.2	3.65	5.6	10.8	22
6	4.0	2.9	5.4	2.6	6.8	1.6	.7	6.8	8.3	5.2	7.3	18.3
7	3.4	2.6	3.7	1.5	5.2	.55	.4	6.8	.91	4.6	4.6	13.8
8	6.3	2.6	3.7	6.8	5.5	.55	.4	6.5	.72	5.6	4.0	9.2
9	6.9	2.6	3.4	8.2	4.3	.4	.3	4.6	.25	3.6	9.0	.73
10	9.1	2.6	3.9	6.2	2.4	.4	.02	2.4	.15	4.9	4.9	9.3
11	11.0	27	27	4.9	.6	11.0	.3	2.4	4.9	4.3	4.6	6.9
12	10.5	31	29	4.1	.4	14.2	1.1	3.95	.30	3.8	2.9	2.7
13	8.6	17.3	7.2	.7	7.0	6.3	1.1	8.6	.10	4.0	4.9	4.4
14	8.7	11.9	11.8	1.7	10.9	3.8	1.1	3.45	.15	.45	5.2	3.35
15	2.0	9.0	8.2	3.7	17.3	.15	1.1	3.45	.73	6.0	5.8	3.75
16	7.7	4.3	.35	4.5	6.7	.15	.6	4.4	.73	9.0	4.6	3.7
17	5.0	6.8	5.2	11.9	.4	2.1	1.1	2.4	.90	8.4	5.5	3.55
18	4.3	10.4	7.6	3.3	.3	6.7	.5	3.7	2.5	7.4	11.4	4.0
19	4.0	4.6	14.3	6.6	7.8	8.3	.5	2.1	2.2	2.4	15.4	11.2
20	3.2	5.2	9.0	1.3	9.7	8.4	1.1	2.4	3.5	6.0	6.0	7.2
21	3.2	4.9	10.3	1.3	5.2	15.0	.35	2.4	6.2	2.2	4.0	4.6
22	10.9	4.0	4.1	9.0	4.8	13.0	.25	2.4	5.3	6.9	4.0	3.7
23	4.0	3.2	1.1	11.1	3.7	7.6	2.4	2.9	1.81	4.3	2.65	6.4
24	3.7	2.9	9.9	9.7	.3	5.3	8.0	5.2	.58	2.9	2.4	3.45
25	7.4	3.4	5.6	9.0	.3	2.1	6.8	23	3.65	2.9	2.9	12.9
26	6.5	3.7	4.4	7.4	7.9	6.8	3.7	6.9	.45	2.4	2.1	6.5
27	7.6	3.4	7.1	2.6	8.3	3.0	2.6	.45	.35	2.4	2.1	6.9
28	5.5	3.2	7.6	1.3	5.5	.15	2.4	.35	.45	2.4	4.9	4.3
29	3.7	2.9	5.0	7.8	.3	.55	2.65	-	.35	2.9	3.15	4.6
30	3.4	2.4	.3	9.5	.95	.55	2.65	-	.35	2.4	4.9	5.9
31	5.1	2.6	-	6.2	-	.55	2.65	-	.35	-	4.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	11.0	2.0	5.72	8.85	177	544
August	31	2.4	6.29	9.73	195	598
September	29	.3	8.68	13.4	260	799
October	12.2	.7	5.95	9.21	185	567
November	17.3	.3	4.62	7.15	139	426
December	15.0	.15	4.72	7.30	146	449
Calendar year 1934	31	.15	5.34	8.26	1,950	5,980
January	8.0	.02	1.54	2.38	47.7	146
February	23	.35	4.42	6.84	124	380
March	8.3	.10	1.66	2.57	51.3	158
April	9.0	.25	4.24	6.56	127	390
May	38	2.1	6.15	9.52	190	585
June	25	.73	7.86	12.2	236	724
Fiscal year 1934-35	38	.02	5.15	7.97	1,880	5,770

*Estimated.

Anahola River near Kealia

Location.- Water-stage recorder, lat. 22°8'55", long. 159°21'20", immediately above Lower Anahola Ditch intake and 4½ miles northwest of Kealia. Altitude, 220 feet, by barometer.

Drainage area.- 5.5 square miles.

Records available.- August to November 1910, December 1912 to June 1935.

Average discharge.- 16 years (1919-35), 12.9 million gallons a day (20.0 second-feet).

Extremes.- Maximum discharge during year, 1,770 million gallons a day (2,740 second-feet) Sept. 12 (gage height, 5.96 feet); minimum, 3.25 million gallons a day (5.03 second-feet) Feb. 4.
1910, 1912-35: Maximum discharge, 1,820 million gallons a day (2,820 second-feet) Jan. 25, 1930 (gage height, 10.32 feet, former site and datum); minimum, 1.4 million gallons a day (2.2 second-feet) Sept. 12-13, 1923.

Remarks.- Records good for ordinary stages; poor for estimated periods and high stages. Anahola Ditch diverts water 3 miles above station for irrigation in vicinity of Kealia.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 24						Dec. 25 to June 30					
1.1	3.3	1.4	6.4	1.9	28	0.95	3.2	1.35	6.7	1.9	29.5
1.25	4.5	1.45	7.8	2.2	50	1.0	3.55	1.4	7.6	2.2	50
1.3	4.9	1.5	9.5	2.5	82	1.25	5.6	1.5	10.6	2.5	82
1.35	5.6	1.7	17.5	2.9	143	1.3	6.0	1.6	14.3	2.9	143

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.7	4.7	*50	6.9	7.2	7.2	*9.5	†4.5	27.5	6.2	4.1	3.8
2	5.1	4.4	*40	5.7	7.2	6.2	*15	4.4	19.2	5.8	3.9	13.8
3	4.8	6.6	*10	4.5	6.7	6.0	*20	4.3	48	5.6	3.8	4.4
4	4.6	4.7	*5.0	6.2	5.7	5.7	*10	4.2	17.9	9.3	17.3	11.6
5	4.6	12	5.4	17	12	5.4	*8.0	4.2	11.3	8.0	30.5	35
6	5.0	6.0	9.1	6.2	6.9	5.1	*10	4.2	10.9	6.1	8.0	22
7	45	4.8	4.7	4.9	5.6	5.0	*25	4.2	35.5	5.4	6.8	19.6
8	17.5	4.2	4.3	4.4	5.0	4.9	*35	4.1	14.8	6.2	7.1	9.8
9	8.0	*5.4	4.1	4.3	4.7	4.8	*20	3.9	12.1	7.8	10.8	6.7
10	7.8	*4.5	4.3	4.3	5.0	5.9	*10	3.85	10.2	5.6	6.2	6.1
11	14	*90	41	4.3	86	57	*11	3.85	9.9	4.9	5.5	6.0
12	12.5	*100	132	4.4	21	10.5	*9.0	3.85	42	4.9	5.1	5.6
13	9.3	*30	23	7.0	40	†5.6	*8.0	3.85	11.0	4.7	4.9	5.4
14	14	*15	9.9	5.3	23	†5.4	*25	3.55	8.9	4.6	4.8	5.2
15	8.7	*9.0	8.0	37	16.5	†5.3	*13	3.7	8.3	6.0	4.6	4.9
16	5.8	*6.0	6.7	14	13.5	5.1	*8.0	5.9	10.2	7.6	4.6	4.8
17	5.3	*8.0	6.7	12.5	12	5.0	*13	4.3	9.8	13.3	5.1	4.7
18	5.4	*9.0	14	41	12	4.9	*10	3.7	8.0	9.8	5.4	4.8
19	6.0	*7.0	9.3	11.5	17.5	4.9	*9.0	3.55	7.2	5.6	5.4	5.1
20	5.0	*6.6	6.2	11	26	14.8	*8.0	3.55	6.7	4.9	4.5	5.8
21	4.5	*6.2	10.5	13.5	9.9	*25	*7.0	3.5	6.2	4.8	4.4	5.0
22	8.6	*5.8	11	11	10.5	*18	*15	3.4	6.1	4.9	4.7	4.7
23	5.1	*5.6	71	10.5	11	*28	*13	3.4	7.6	5.4	4.2	4.9
24	4.4	*5.4	14	8.7	26	*20	*8.0	4.3	5.9	4.6	4.0	4.8
25	9.5	*5.2	9.1	7.8	13.5	*45	*7.0	26.5	21	4.8	3.85	6.1
26	8.4	*5.0	8.7	28	13.5	*50	*6.0	34.5	33.5	4.4	3.8	7.6
27	9.6	*4.8	8.0	33	8.7	*40	*10	137	11.8	4.2	3.9	6.8
28	6.4	*4.5	6.2	*20	16	*25	*6.0	18.0	8.3	4.0	3.9	5.4
29	4.7	*4.2	5.7	*14	25	*13	*5.0	-	7.2	3.9	3.85	5.1
30	4.5	*3.8	18	*10	8.3	*11	*4.6	-	6.8	4.2	3.8	4.5
31	4.8	*3.5	-	*8.0	-	*10	*4.5	-	6.7	-	3.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	45	4.4	8.54	13.2	265	812
August	100	3.5	12.6	19.5	392	1,200
September	132	4.1	18.5	28.6	556	1,710
October	41	4.3	12.2	18.9	377	1,160
November	86	4.7	15.9	24.6	476	1,460
December	57	4.8	14.8	22.9	460	1,410
Calendar year 1934	289	1.8	13.1	20.3	4,780	14,680
January	35	4.5	11.7	18.1	363	1,110
February	137	3.4	11.2	17.3	312	958
March	48	5.9	14.5	22.4	450	1,380
April	13.3	3.9	5.92	9.16	178	545
May	30.5	3.8	6.21	9.61	193	591
June	35	3.8	8.00	12.4	240	737
Fiscal year 1934-35	137	3.4	11.7	18.1	4,260	13,070

*Estimated.

†Partly estimated.

Anahola Ditch above Kaneha Reservoir, near Kealia

Location.- Water-stage recorder, lat. 22°8'0", long. 159°22'30", at point of discharge into Kaneha Reservoir, 5 miles northwest of Kealia. Altitude, 831 feet, by levels to Lihue Plantation Co. benchmark.

Records available.- May 1915 to June 1935.

Average discharge.- 12 years (1921-25, 1927-35), 3.68 million gallons a day (5.69 second-feet).

Extremes.- Maximum discharge during year, 56 million gallons a day (87 second-feet) Aug. 12 (gage height, 2.91 feet); minimum, 0.01 million gallons a day (0.02 second-foot) Oct. 17-19, Jan. 23, 24, when gates were closed.
1915-35: Maximum discharge recorded, 130 million gallons a day (201 second-feet) Jan. 16, 1921 (gage height, 6.25 feet, former site and datum); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good except those for estimated periods, which are poor. Diverts water from Anahola River to Kaneha Reservoir, where it is stored for irrigation. Regulated by wasteway gates.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.7	4.3	11.8	0.05	2.65	0.04	*0.06	1.71	0.06	2.85	†1.96	4.0
2	4.0	4.6	10.0	.04	3.8	.04	†.04	1.71	.04	2.45	†1.98	12.3
3	3.7	7.1	10.0	3.4	3.35	.06	.04	1.71	.04	2.25	*2.5	2.85
4	3.35	3.9	7.3	8.9	3.05	.06	.04	1.71	.04	8.9	*5.0	8.3
5	3.25	10.1	7.4	4.65	2.2	.06	.04	1.63	.04	6.5	12.6	17.7
6	5.1	5.0	7.1	.12	.04	1.95	.04	1.54	.06	3.15	4.7	14.5
7	8.6	3.7	4.5	.12	.02	3.05	.06	1.63	.06	2.55	3.7	12.4
8	8.0	3.35	4.1	2.1	.02	2.95	.06	1.63	.06	6.9	3.3	6.2
9	5.0	4.7	3.55	3.05	.02	2.75	.06	1.54	.06	7.5	6.2	4.3
10	7.0	3.35	5.2	2.95	.02	13.3	.06	1.54	.06	3.45	3.05	3.55
11	10.4	9.7	16.6	2.85	.06	3.85	.04	1.54	.06	2.65	2.75	3.25
12	8.2	8.5	13.3	3.05	.06	.16	.06	1.66	.06	3.55	2.55	2.95
13	10.1	3.25	6.0	5.1	.04	.09	.06	4.6	.09	2.65	2.35	2.65
14	6.3	4.3	6.7	3.25	.05	.09	.06	1.80	.09	2.45	2.25	2.45
15	1.46	5.4	7.0	4.1	.06	.06	.06	1.54	.09	7.6	2.15	2.36
16	5.2	4.3	4.9	.12	.06	*.06	.04	8.6	.06	13.3	3.3	2.25
17	4.8	5.2	4.3	.09	.06	*.06	.04	2.05	.06	18.4	5.8	2.15
18	4.7	5.5	8.8	.01	.06	*.06	.02	1.63	.04	5.3	5.5	2.35
19	5.2	3.7	5.9	.01	.06	*.05	.02	1.54	.04	1.22	3.6	5.2
20	4.4	4.8	4.9	.06	.09	*.05	.02	1.54	.04	3.55	2.45	5.3
21	3.45	4.5	8.3	.09	.09	*.05	.02	2.05	1.31	3.25	2.65	2.75
22	9.4	3.8	2.9	.12	.09	*.05	.02	1.98	5.6	4.1	4.7	2.25
23	4.6	3.35	.04	.12	.09	*.05	.01	2.35	9.9	6.2	2.45	2.75
24	3.7	2.95	.02	.12	.12	*.05	1.12	4.4	3.5	3.05	2.05	2.15
25	7.1	2.85	3.3	.09	.09	*10	2.05	13.5	7.7	3.8	1.89	8.2
26	8.6	2.65	6.8	.09	.09	*15	2.05	21.5	2.95	2.55	1.80	7.6
27	11.9	2.25	4.5	.09	.09	*2.5	1.98	7.5	.12	*2.2	2.45	8.1
28	9.4	2.15	3.7	.09	.09	*.25	1.80	.09	.09	*2.1	1.98	4.2
29	4.7	2.05	3.8	.09	.09	*.15	1.80	-	.09	*2.5	2.15	3.55
30	4.3	1.98	3.15	.09	.09	*.10	1.80	-	2.3	*2.1	2.35	2.85
31	4.6	2.15	-	.09	-	*.08	1.71	-	3.8	-	2.15	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	11.9	1.46	5.94	9.19	184	565
August	10.1	1.98	4.37	6.76	135	416
September	16.6	.02	6.20	9.59	186	570
October	8.9	.01	1.45	2.24	45.1	138
November	3.8	.02	.557	.862	16.7	51
December	15	.04	1.84	2.85	57.1	175
Calendar year 1934	17	.01	3.09	4.78	1,130	3,460
January	2.05	.01	.493	.763	15.3	47
February	21.5	.09	3.44	5.32	96.2	295
March	9.9	.04	1.25	1.93	38.6	118
April	18.4	1.22	4.63	7.16	139	427
May	12.6	1.80	3.37	5.21	104	320
June	17.7	2.15	5.38	8.32	161	495
Fiscal year 1934-35	21.5	.01	3.23	5.00	1,180	3,620

*Estimated.

†Partly estimated.

Ka Loko Ditch near Kilauea

Location.- Water-stage recorder, lat. 22°10'35", long. 159°23'0", 60 feet below junction of Ka Loko and Moloaa Ditches, 400 feet above Ka Loko Reservoir, and 3⅛ miles southeast of Kilauea. Altitude, 750 feet, from topographic map.

Records available.- August 1932 to June 1935.

Extremes.- Maximum discharge during year, 91 million gallons a day (141 second-feet) July 7 (gage height, 3.96 feet); minimum, 1.02 million gallons a day (1.58 second-feet) Dec. 2.
1932-35: Maximum discharge, 108 million gallons a day (167 second-feet) Jan. 2, 1933 (gage height, 4.41 feet); minimum, 0.19 million gallons a day (0.29 second-foot) May 24, 1933.

Remarks- Records excellent. Diverts water from Moloaa and Puu Ka Ele Streams, half a mile southeast and 1½ miles southwest of station, respectively. Regulated by wasteway gates. Water used for irrigation in vicinity of Kilauea.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.75	2.45	3.85	3.2	2.75	3.3	1.23	1.71	11.2	2.35	1.63	1.42
2	2.65	2.25	7.6	2.75	2.75	2.8	1.80	1.71	7.7	2.45	1.54	5.5
3	2.25	3.25	4.0	2.75	2.65	3.3	4.7	1.63	14.9	2.35	1.54	1.63
4	1.98	2.15	2.85	3.7	2.45	3.55	3.8	1.54	6.4	3.95	7.0	1.47
5	1.98	5.1	2.25	5.1	3.6	3.35	3.35	1.54	4.3	3.8	19.6	12.0
6	2.65	2.65	3.25	2.95	2.65	3.15	3.25	1.63	5.3	2.65	3.55	7.8
7	13.0	2.35	1.89	2.55	2.45	3.05	8.2	1.54	12.9	2.35	2.35	5.4
8	5.4	1.89	1.80	2.25	2.35	2.85	6.9	1.47	3.65	2.65	2.25	2.55
9	3.25	2.15	1.63	2.25	2.25	2.75	4.4	1.47	3.55	3.35	3.35	1.89
10	3.55	1.80	3.6	2.25	2.85	4.0	4.0	1.47	3.55	2.35	2.25	1.80
11	4.4	3.85	18.8	2.15	17.5	18.5	4.4	1.54	3.45	2.25	1.89	1.80
12	6.7	12.9	22.5	2.25	7.5	5.6	6.0	1.47	5.2	2.35	1.80	1.63
13	4.8	4.4	5.8	2.45	19.5	3.8	3.7	1.54	3.45	2.15	1.80	1.54
14	4.6	2.45	3.95	2.35	7.3	3.7	3.45	1.39	3.05	2.15	1.71	1.54
15	6.1	3.0	4.9	13.e	5.0	3.35	4.7	1.39	3.05	3.45	1.71	1.47
16	3.25	2.15	3.35	4.4	4.3	3.8	3.55	3.05	3.7	4.7	1.80	1.39
17	2.85	2.05	3.25	7.0	3.7	3.15	3.35	1.54	3.8	6.2	1.98	1.39
18	2.85	2.95	4.4	12.8	3.8	2.85	3.05	1.31	3.05	4.6	1.89	1.47
19	3.25	2.35	4.1	3.7	10.2	2.75	2.85	1.31	2.65	2.75	1.80	1.71
20	2.65	2.05	2.95	3.55	10.1	2.95	2.85	1.31	2.45	2.45	1.63	2.25
21	2.35	1.89	4.3	5.4	4.1	5.1	2.55	1.31	2.45	2.25	1.54	1.54
22	4.4	1.89	4.1	3.7	4.7	4.7	2.65	1.31	2.35	2.55	1.54	1.47
23	3.45	1.80	11.0	6.1	4.6	4.6	2.45	1.31	2.95	2.55	1.31	1.54
24	2.65	1.71	3.8	3.55	12.5	3.7	2.25	1.9e	2.25	2.05	1.25	1.47
25	5.4	1.71	3.35	3.05	6.5	4.4	2.15	6.9	11.5	1.98	1.23	1.71
26	4.3	1.54	3.95	5.8	5.9	3.6	2.15	16.6	9.9	1.80	1.23	2.7
27	3.5	1.54	3.15	7.7	4.3	3.45	2.15	27.5	4.3	1.71	1.31	2.95
28	5.3	1.47	2.75	6.3	6.4	2.65	1.98	6.9	3.05	1.63	1.47	1.80
29	2.75	1.47	2.65	4.4	4.6	1.89	1.98	-	2.65	1.63	1.39	1.47
30	2.25	1.39	6.5	3.35	2.25	1.47	1.80	-	2.55	1.80	1.39	1.47
31	2.65	1.54	-	3.05	-	1.31	1.89	-	2.45	-	1.47	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	13.0	1.9e	3.87	5.99	120	368
August	12.9	1.39	2.65	4.10	82.1	252
September	22.5	1.63	5.08	7.86	152	467
October	13.8	2.15	4.41	6.82	137	419
November	19.5	2.25	5.72	8.85	172	526
December	18.5	1.31	3.85	5.96	119	366
Calendar year 1934	41	.69	3.84	5.94	1,400	4,300
January	8.2	1.23	3.34	5.17	104	318
February	27.5	1.31	3.41	5.28	95.4	293
March	14.9	2.25	4.96	7.67	154	472
April	6.2	1.63	2.71	4.19	81.2	249
May	19.6	1.23	2.52	3.90	78.2	240
June	12.0	1.39	2.53	3.91	75.8	233
Fiscal year 1934-35	27.5	1.23	3.75	5.80	1,370	4,200

Puu Ka Ele Ditch near Kilauea

Location.- Water-stage recorder, lat. 22°11'5", long. 159°24'20", 100 feet above Puu Ka Ele Reservoir and 2 miles south of Kilauea. Altitude, 430 feet, by barometer.

Records available.- August 1932 to June 1935.

Extremes.- Maximum discharge during year, 29 million gallons a day (45 second-feet) July 7, Sept. 23 (gage height, 1.92 feet); minimum, 0.09 million gallons a day (0.14 second-foot) Mar. 9, owing to abnormal regulation.
1932-35: Maximum discharge, 32 million gallons a day (50 second-feet) June 4, 1934 (gage height, 2.05 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records excellent. Diverts water from Puu Ka Ele Stream 1 mile southwest of station. Regulated by wasteway gate 100 feet above station. No diversion. Water used for irrigation in vicinity of Kilauea.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.5	4.4	3.7	5.2	4.3	6.7	0.68	2.45	10.7	3.15	2.25	1.80
2	5.5	4.5	7.4	4.4	4.1	5.6	1.66	2.35	9.8	2.95	2.15	4.7
3	6.3	4.9	7.4	4.4	3.8	5.0	3.85	2.25	10.3	2.85	1.98	2.05
4	5.1	3.9	4.3	5.5	3.55	4.5	5.5	2.35	7.7	5.3	6.1	1.80
5	3.8	7.1	3.7	8.3	4.4	4.3	4.9	2.25	5.8	4.7	11.8	7.1
6	4.1	4.5	4.6	4.6	3.45	4.0	4.7	2.35	6.5	3.35	5.2	5.0
7	8.3	4.0	3.25	3.9	3.25	3.7	10.0	2.25	11.5	2.85	3.7	4.5
8	7.6	3.55	3.15	3.55	3.05	3.8	12.1	2.25	7.3	3.15	3.45	2.55
9	5.0	3.8	3.15	3.35	2.85	3.9	7.4	2.15	5.5	3.45	3.8	2.15
10	5.6	3.25	4.7	3.35	*2.85	5.0	5.9	2.15	5.2	2.75	3.15	1.98
11	5.5	4.8	12.8	3.05	*13.8	14.5	5.5	2.25	5.3	2.55	2.75	1.98
12	7.7	7.1	15.3	3.15	9.9	8.8	6.8	2.15	7.7	2.75	2.65	1.89
13	6.0	4.9	8.7	3.7	13.8	5.8	4.9	2.15	4.7	2.45	2.55	1.80
14	5.5	3.35	5.8	3.05	9.1	4.9	4.5	1.98	4.3	2.45	2.45	1.80
15	7.3	6.0	10.0	9.1	6.3	4.5	6.3	1.98	4.1	3.25	2.25	1.71
16	4.2	4.1	5.6	6.7	5.4	5.0	4.7	3.4	4.3	6.8	2.45	1.71
17	5.0	3.45	5.5	5.7	4.5	4.0	4.4	2.15	3.8	6.5	2.35	1.71
18	4.5	3.7	6.6	9.3	4.6	3.8	4.0	1.89	3.25	4.8	2.25	1.71
19	5.6	3.25	6.3	4.9	7.0	3.7	3.8	1.89	3.15	3.45	2.25	1.89
20	4.4	2.95	5.0	4.4	11.1	3.95	3.8	1.80	2.95	3.15	2.05	2.35
21	3.8	2.75	6.3	6.0	6.4	8.2	3.45	1.89	2.95	3.05	2.15	1.80
22	7.4	2.95	5.9	4.6	6.8	6.8	3.45	2.15	2.85	3.05	2.25	1.71
23	7.2	2.65	11.2	8.1	7.2	8.4	3.25	2.35	3.7	2.95	1.98	1.98
24	4.8	2.55	8.7	5.4	11.4	9.0	2.95	2.75	2.85	2.65	1.80	1.71
25	5.6	2.35	6.0	4.4	7.6	12.2	2.75	5.9	7.1	2.65	1.71	1.80
26	8.5	2.35	6.2	7.4	7.6	11.2	2.85	12.8	8.0	2.35	1.63	2.9
27	7.6	2.35	5.5	7.8	6.0	12.2	2.85	14.1	5.6	2.25	1.71	4.3
28	9.0	2.15	4.7	8.0	11.5	6.9	2.75	11.0	3.9	2.15	1.71	2.9
29	5.6	2.15	4.1	6.4	12.0	1.31	2.65	-	3.55	2.15	1.71	2.15
30	4.9	2.15	9.7	5.1	8.0	1.09	2.75	-	3.35	2.45	1.89	2.35
31	5.0	2.25	-	4.5	-	.81	2.65	-	3.25	-	1.80	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	9.0	3.8	5.87	9.08	182	558
August	7.1	2.15	3.68	5.69	114	350
September	15.3	3.15	6.51	10.1	195	599
October	9.3	3.05	5.40	8.36	167	513
November	13.8	2.85	6.85	10.6	206	631
December	14.5	.81	5.92	9.16	184	563
Calendar year 1934	19.5	.81	4.91	7.60	1,790	5,500
January	12.1	.68	4.44	6.87	138	423
February	14.1	1.80	3.48	5.38	97.4	299
March	11.5	2.85	5.51	8.53	171	525
April	6.8	2.15	3.28	5.07	98.4	302
May	11.8	1.63	2.84	4.39	87.9	270
June	7.1	1.71	2.53	3.91	75.8	233
Fiscal year 1934-35	15.3	.68	4.70	7.27	1,720	5,270

*Partly estimated.

Kalihiwai Ditch near Kilauea

Location.- Water-stage recorder, lat. 22°10'55", long. 159°25'55", 0.1 mile above Kalihiwai Reservoir and 2.4 miles southwest of Kilauea. Altitude, 410 feet, by barometer.

Records available.- June 1934 to June 1935.

Extremes.- Maximum discharge during period, 51 million gallons a day (79 second-feet) Sept. 12 (gage height, 2.73 feet); minimum, 0.01 million gallons a day (0.02 second-foot) Nov. 28, Dec. 4.
1934-35: Maximum discharge, that of Sept. 12, 1934; minimum, that of Nov. 28, Dec. 4, 1934.

Remarks.- Records good except those for Aug. 3-17, Oct. 3 to Nov. 1, Dec. 19 to Jan. 28, which are poor. Diverts low-water flow from most branches of Pohakuhonu Stream at intakes about 1 mile south of station. Diversion of flow to Kahililolo Stream 0.1 mile above station regulated by gates. Water discharges into Kalihiwai Reservoir, where it is stored for irrigation in vicinity of Kilauea.

Discharge, in million gallons, June 20 - 30, 1934

June 20	6.6	June 26	1.25
21	4.6	27	1.25
22	4.5	28	1.25
23	7.9	29	1.3
24	8.0	30	1.3
25	1.3		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.3	3.6	3.4	2.2	0.5	0.23	0.7	2.3	1.1	2.5	2.4	3.1
2	3.4	2.2	5.7	2.2	.46	.15	1.0	2.1	.96	2.4	2.4	4.2
3	4.5	3.5	5.8	2.2	.46	.12	3.5	2.1	.63	2.1	2.4	2.1
4	4.2	3.0	3.6	2.2	.46	.04	5.0	2.1	1.65	4.3	2.7	1.9
5	4.0	7.0	3.2	2.2	.46	.06	4.0	2.1	2.3	3.4	3.0	8.0
6	4.0	4.0	3.8	2.2	.46	.09	4.0	2.1	1.3	2.6	2.5	3.5
7	5.6	3.7	3.0	2.2	.41	2.1	1.5	2.0	.81	2.5	2.8	3.3
8	4.9	3.3	3.2	2.2	.32	3.4	1.0	2.0	.52	2.5	2.5	2.4
9	3.6	3.5	3.0	2.2	.27	3.3	.4	2.0	.46	2.8	2.5	2.2
10	3.9	3.1	2.9	2.2	.42	2.6	.3	2.1	.41	2.5	2.4	2.1
11	5.5	4.5	10	2.1	1.1	2.5	.3	2.1	.32	2.6	2.4	2.0
12	5.5	8.0	21	2.1	.81	1.2	.8	2.0	.52	2.6	2.5	1.9
13	1.25	4.0	4.1	2.1	.68	.75	.35	2.0	1.1	2.6	3.0	1.7
14	1.2	3.2	1.25	2.1	.75	.57	.3	1.9	1.55	2.6	2.5	2.1
15	1.5	6.0	1.1	2.1	.57	.52	.45	1.8	1.55	3.3	2.6	2.3
16	1.2	3.7	.52	2.1	.46	.46	.35	2.8	1.55	6.7	2.6	2.5
17	1.0	3.2	.32	2.1	.36	.32	1.0	2.1	2.3	7.3	2.5	2.8
18	.96	3.4	1.55	2.1	.32	1.3	3.5	1.9	3.2	5.2	2.1	3.0
19	1.75	3.0	2.3	2.1	.96	2.3	3.5	1.7	2.8	3.7	2.0	2.8
20	2.1	2.7	1.65	2.1	.75	2.5	3.4	1.7	2.6	3.9	2.0	2.3
21	2.3	2.6	1.35	2.1	.57	6.0	3.3	1.7	3.0	4.2	2.0	2.1
22	9.9	2.6	.88	2.1	.46	4.0	3.3	2.5	4.4	4.4	2.4	1.9
23	6.2	2.4	1.25	2.1	.41	3.0	3.0	2.7	5.2	4.2	2.1	2.0
24	4.7	2.2	.75	2.1	.27	2.5	2.8	4.7	3.3	3.4	1.9	1.9
25	4.3	2.2	.41	2.1	.19	3.0	2.7	10.5	3.2	3.2	1.8	2.2
26	9.8	2.1	.32	3.5	.12	2.5	2.7	25	5.2	3.0	1.8	3.4
27	1.7	2.1	1.5	4.0	.09	2.0	2.8	5.9	3.9	3.0	1.8	5.0
28	1.55	2.1	1.9	3.0	.06	1.5	2.5	1.4	3.5	2.8	1.8	3.4
29	1.25	2.0	2.1	2.8	.52	1.2	2.4	-	3.2	2.6	1.8	2.5
30	1.1	2.0	8.8	.8	.27	.9	2.4	-	2.8	2.6	1.9	2.4
31	.96	2.3	-	.5	-	.8	2.4	-	2.8	-	1.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	9.9	0.96	3.39	5.25	105	323
August	8.0	2.0	3.33	5.15	103	317
September	21	.32	3.36	5.20	101	309
October	4.0	.5	2.20	3.40	68.1	209
November	1.1	.06	.471	.729	14.1	43
December	6.0	.04	1.67	2.58	51.9	159
Calendar year						
January	5.0	.3	2.12	3.28	65.6	201
February	25	1.4	3.40	5.26	95.3	292
March	5.2	.32	2.20	3.40	68.1	209
April	7.3	2.1	3.38	5.23	102	311
May	3.0	1.6	2.29	3.54	70.9	218
June	8.0	1.7	2.77	4.29	83.0	255
Fiscal year 1934-35	25	.04	2.54	3.93	928	2,850

Hanalei River at elevation 625 feet, near Hanalei

Location.- Water-stage recorder, lat. 22°7'10", long. 159°28'5", 0.4 mile below confluence with Kaapoko Stream and 6¼ miles southeast of Hanalei. Altitude, 625 feet, from topographic map.

Drainage area.- 7.4 square miles.

Records available.- January 1914 to June 1935.

Average discharge.- 17 years (1918-35), 51.0 million gallons a day (78.9 second-feet).

Extremes.- Maximum discharge during year, 1,900 million gallons a day (2,940 second-feet) July 27 (gage height, 5.80 feet); minimum, 8.8 million gallons a day (13.6 second-feet) Aug. 30.

1914-35: Maximum discharge, 6,500 million gallons a day (10,100 second-feet) Jan. 16, 1921 (gage height, 7.50 feet, former site and datum); minimum, 5.8 million gallons a day (9.0 second-feet) Apr. 28, May 1-3, 1926.

Remarks.- Records good for ordinary stages; poor for extremely high stages. Hanalei tunnel has been diverting an average of about 20 million gallons a day from Kaapoko Stream and Hanalei River at points above 2 miles above station since 1925. Diverted water used for irrigation in vicinity of Lihue.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.5	7.9	1.0	26	2.1	124
.6	9.7	1.2	38	2.4	170
.7	12.4	1.5	61	2.7	227
.8	16.4	1.8	88	3.1	325

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	23	18.4	102	17.2	17.6	22.5	39	10.2	112	13.2	11.9	11.4
2	19.7	18.9	99	14.8	16.6	24	55	10.0	74	12.1	11.6	13.7
3	17.2	22.5	80	16.7	15.2	18.9	54	9.7	111	11.9	11.0	10.0
4	15.6	16.8	21	27.5	14.4	16.4	29.5	9.7	47	18.0	198	37
5	14.8	21	18.4	57	32.5	15.6	24	9.7	32.5	14.8	107	32
6	22.5	16.0	23	21	16.4	14.4	25.5	9.5	30	12.4	26	26
7	117	14.0	17.2	17.2	14.8	13.6	86	9.3	69	11.6	18.4	24
8	129	14.4	19.3	15.2	14.0	12.8	103	9.3	32	17.7	17.6	16.0
9	43	12.8	16.0	14.0	12.4	12.1	44	9.3	24.5	27.5	17.2	13.2
10	35	11.9	21	13.6	69	23.5	29.5	9.3	20.5	14.4	14.0	14.4
11	60	12.7	87	12.4	26.6	110	33	9.5	65	12.4	14.0	13.2
12	58	25	104	12.1	37.5	25	25.5	13.7	201	18.5	12.8	11.6
13	39.5	12.1	32.5	14.3	88	18.0	20	40	46	27.5	13.6	10.8
14	46	11.0	22.5	12.4	35.5	16.0	19.7	10.8	31.5	35	12.1	10.8
15	40	11.0	55	33.5	25	15.2	18.9	9.7	26	65	11.6	10.2
16	47	29	19.3	18.4	21.5	14.4	16.4	14.3	32.5	168	14.4	10.0
17	21.5	27	19.7	14.4	18.9	13.6	21	10.2	25	172	20.5	10.0
18	19.3	15.2	42	74	18.0	12.8	15.2	9.7	19.7	101	14.4	10.2
19	19.3	14.2	34	19.3	47	13.2	14.4	9.5	17.2	57	13.2	17.2
20	16.0	28.5	21.5	28.5	66	15.4	13.6	9.5	15.6	41	11.6	15.3
21	15.2	16.8	39	38.5	23	43	12.8	11.0	23.5	30	12.1	12.4
22	58	13.6	22	23	24.5	38	25	15.2	18.1	39.5	14.8	11.3
23	18.6	11.9	73	106	30	60	14.0	15.2	36.5	32	10.8	13.5
24	15.6	11.0	26.5	32	87	45	12.1	16.0	18.0	22.5	10.5	10.8
25	18.7	10.5	19.7	29	41	77	11.6	120	22.5	22.5	10.0	40
26	40	12.0	19.7	107	34.5	87	11.0	303	51	17.2	9.7	30.5
27	253	10.2	16.8	101	81	78	11.0	311	20	15.6	10.8	36
28	46	9.5	15.6	43	59	60	10.8	149	16.0	14.4	10.5	22
29	25.5	9.3	14.4	31	42	34	10.5	-	14.8	13.6	10.2	16.8
30	18.4	9.2	38	24	27	33	11.6	-	14.4	12.4	11.3	16.0
31	19.3	15.1	-	19.7	-	32.5	10.8	-	14.8	-	10.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	253	14.8	43.0	66.5	1,330	4,090
August	29	9.2	15.5	24.0	482	1,480
September	104	14.4	38.0	58.8	1,140	3,500
October	107	12.1	32.7	50.6	1,010	3,110
November	88	12.4	35.2	54.5	1,060	3,240
December	110	12.1	32.7	50.6	1,010	3,110
Calendar year 1934	372	7.2	31.6	48.9	11,540	35,430
January	103	10.5	26.7	41.3	828	2,540
February	311	9.3	41.9	64.8	1,170	3,600
March	201	14.4	41.3	63.9	1,280	3,930
April	172	11.6	35.7	55.2	1,070	3,290
May	198	9.7	22.3	34.5	692	2,120
June	40	10.0	17.5	27.1	526	1,620
Fiscal year 1934-35	311	9.2	31.8	49.2	11,600	35,630

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Hanakapiai Stream near Hanalei

Location.- Water-stage recorder, lat. 22°11'20", long. 159°35'50", 1⅛ miles above mouth of stream and 6 miles west of Hanalei. Altitude, 450 feet, by barometer.

Drainage area.- 2.6 square miles.

Records available.- December 1931 to June 1935.

Extremes.- Maximum discharge during year, 509 million gallons a day (788 second-feet) Nov. 28 (gage height, 4.40 feet); minimum, 2.9 million gallons a day (4.5 second-feet) Aug. 29-31.
1931-35: Maximum discharge, 1,480 million gallons a day (2,290 second-feet) June 4, 1934 (gage height, 6.59 feet); minimum, 2.5 million gallons a day (3.9 second-feet) Jan. 16-19, Mar. 12, 13, 21, 22, 1934.

Remarks.- Records good for ordinary stages; poor for high stages and for Mar. 2 to Apr. 20, May 29 to June 1. No diversions.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.4	2.8	1.5	23.5
.6	4.4	1.8	36
.8	6.7	2.1	54
1.0	10.0	2.4	78
1.2	14.5	2.8	121

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.7	8.4	3.2	7.8	4.3	8.6	25.5	7.9	37	6.4	4.6	4.1
2	4.2	15.2	7.3	6.0	4.0	6.5	27	5.6	22.5	5.6	4.5	4.1
3	4.0	8.4	5.5	4.2	3.8	5.3	27	5.2	10	3.4	4.4	4.1
4	3.8	5.7	3.6	4.1	8.4	5.0	12.7	4.7	9.0	7.0	76	4.1
5	3.8	5.3	12.1	16.7	46	4.6	7.4	4.6	8.0	6.0	36	19.8
6	7.2	4.4	12.2	8.7	8.6	4.3	13.8	4.4	7.4	5.2	10.4	7.9
7	5.7	4.0	5.5	5.9	5.5	4.1	59	4.3	9.6	5.2	6.7	5.9
8	4.4	3.7	4.6	4.6	4.6	4.0	46	4.2	8.4	9.0	5.7	5.3
9	4.4	3.5	4.0	4.0	4.6	4.0	16.2	4.1	7.0	19	5.4	5.0
10	3.8	3.4	5.2	3.9	16.1	27.5	8.4	4.1	7.0	13	5.1	5.0
11	7.8	3.4	9.4	3.7	113	97	6.7	4.0	15	10	4.8	5.3
12	9.6	3.3	6.5	3.4	14.5	12.6	6.3	15.5	60	7.0	4.7	4.7
13	9.2	3.2	4.8	3.4	10.6	6.7	5.6	23.5	20	6.0	5.1	4.4
14	19.2	3.2	4.3	3.4	7.8	5.4	5.0	5.6	12	7.2	4.7	4.2
15	9.1	3.2	3.7	5.2	5.7	4.8	5.7	5.4	8.8	24	4.6	4.1
16	5.2	3.2	3.4	5.2	5.1	4.6	5.1	15.9	30	16	4.5	4.0
17	4.3	3.1	3.5	4.3	4.6	4.2	16.9	6.1	23	11	4.4	4.1
18	4.1	3.0	3.5	3.5	4.3	4.0	14.8	4.8	16	8.0	4.4	4.1
19	6.9	3.0	3.4	4.2	4.0	4.0	22	4.5	12	7.0	4.3	7.7
20	5.2	3.7	3.2	10.9	4.0	4.5	13.2	4.5	10	6.6	4.2	7.4
21	4.0	4.0	3.2	26.5	5.3	14.7	6.5	11.7	8.6	6.2	4.2	5.8
22	18.2	3.2	3.2	9.1	13.6	47	26.5	12.8	7.8	11.2	4.3	5.5
23	6.8	3.0	3.5	7.9	18.7	21.5	12.2	8.9	7.0	9.2	4.2	5.1
24	5.1	3.0	3.9	5.5	15.0	15.1	10.0	7.8	6.2	6.1	4.1	4.5
25	6.8	3.0	3.2	14.6	7.6	29	6.3	105	6.2	5.5	4.0	6.2
26	6.1	3.0	8.9	40	5.5	27.5	5.3	106	20	5.7	4.0	13.7
27	4.6	2.9	5.3	36.5	4.7	36	8.8	94	15	5.7	4.1	20
28	4.0	2.9	3.6	15.6	83	20.5	6.2	32	11	5.0	4.2	10.0
29	3.8	2.9	3.4	9.3	60	9.1	5.0	-	8.8	4.7	4.2	6.1
30	3.8	2.9	15.1	5.9	13.5	10.4	25.5	-	7.6	4.6	4.2	5.2
31	10.5	2.9	-	4.7	-	29.5	13.1	-	7.0	-	4.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	19.2	3.8	6.46	10.0	200	615
August	15.2	2.9	4.13	6.39	128	393
September	15.1	3.2	5.41	8.37	162	498
October	40	3.4	9.31	14.4	289	886
November	113	3.8	16.9	26.1	506	1,550
December	97	4.0	15.5	24.0	482	1,480
Calendar year 1934	185	2.5	10.8	16.7	3,920	12,030
January	59	5.0	15.2	23.5	470	1,440
February	106	4.0	18.5	28.6	517	1,590
March	60	6.2	14.1	21.8	438	1,340
April	24	4.6	8.28	12.8	248	763
May	76	4.0	8.07	12.5	250	768
June	20	4.0	6.58	10.2	197	606
Fiscal year 1934-35	113	2.9	10.7	16.6	3,890	11,930

Hanakoa Stream near Hanalei

Location.- Water-stage recorder, lat. 22°11'0", long. 159°37'35", three-quarters of a mile above mouth and 7⅞ miles west of Hanalei. Altitude, 470 feet, by barometer.

Drainage area.- 1.1 square miles.

Records available.- December 1931 to June 1935.

Extremes.- Maximum discharge during year, 289 million gallons a day (447 second-feet) Nov. 28 (gage height, 4.20 feet); minimum, 0.23 million gallons a day (0.36 second-foot) Aug. 31, Sept. 1, 20-23.
1931-35: Maximum discharge, 443 million gallons a day (685 second-feet) June 4, 1934 (gage height, 4.96 feet); minimum, 0.17 million gallons a day (0.26 second-foot) Mar. 21, 22, 1934.

Remarks.- Records good for ordinary stages; poor for high stages and for Sept. 23 to Oct. 25, Dec. 9 to June 1. No diversions.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.0	0.23	1.6	9.7
1.05	.46	1.8	15.5
1.1	.81	2.0	24
1.15	1.30	2.2	34.5
1.2	1.89	2.4	47
1.3	3.35	2.7	71
1.4	5.1		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.20	1.89	0.27	1.1	1.00	3.9	6.0	4.5	25	0.9	1.4	0.5
2	1.10	3.35	1.37	.9	.90	2.75	6.4	2.5	7.0	.9	1.3	.46
3	1.00	1.63	.81	1.0	.81	1.89	6.8	1.7	20	.8	1.2	.46
4	.81	1.10	.40	1.5	.99	1.63	3.0	1.3	13	.9	25	7.4
5	.81	1.00	4.2	5.0	10.4	1.41	1.5	1.2	9.0	.8	7.0	3.5
6	1.37	.73	4.2	3.5	2.2	1.20	3.5	1.1	8.0	.8	2.0	1.20
7	1.22	.66	1.10	2.0	1.20	1.10	20	1.0	25	.7	1.5	.73
8	.81	.59	.73	1.2	1.00	1.00	16	.9	10	.8	1.3	.59
9	.81	.46	.52	1.0	1.10	1.0	6.0	.9	5.0	3.0	1.2	.59
10	.66	.46	.52	1.0	3.75	4.0	4.0	.9	4.0	1.2	1.1	.82
11	1.17	.46	3.4	.8	37	30	3.5	.9	9.0	1.0	1.0	.90
12	1.09	.40	1.42	.8	4.4	5.0	3.5	4.5	40	.9	.9	.59
13	1.86	.40	.81	.8	2.9	2.0	2.7	6.0	11	.8	1.0	.46
14	4.6	.35	.59	.8	2.2	1.5	1.5	2.0	6.0	.9	.9	.46
15	2.15	.35	.40	1.3	1.52	1.2	1.7	1.5	4.0	4.0	.9	.40
16	1.10	.35	.35	1.3	1.30	1.1	1.4	3.5	6.0	3.0	.8	.40
17	.81	.35	.35	1.0	1.10	1.0	4.5	2.0	3.5	2.5	.8	.40
18	.81	.31	.35	.8	1.00	1.0	6.0	1.5	2.5	2.0	.7	.40
19	2.75	.31	.31	1.5	.90	1.0	7.0	1.3	2.0	1.8	.7	.66
20	1.61	.74	.27	3.5	.90	1.1	2.5	1.2	1.5	1.6	.6	1.20
21	.81	.71	.27	9.0	1.30	4.0	1.5	3.0	3.5	1.4	.6	.73
22	3.75	.35	.27	2.5	3.45	15	6.0	3.5	1.4	5.0	.6	.81
23	1.52	.31	.3	2.2	5.4	5.0	2.5	3.0	6.0	4.0	.6	.59
24	1.10	.31	.3	1.3	3.5	3.5	2.0	2.5	1.5	2.5	.5	.46
25	1.30	.31	.3	3.5	1.89	6.0	1.7	60	2.0	2.0	.5	.73
26	1.20	.31	.e	11.5	1.41	6.0	1.6	70	12	2.2	.5	2.45
27	.90	.31	.5	12.5	1.20	10	3.0	50	3.0	2.2	.5	5.1
28	.73	.31	.4	5.1	49	4.0	1.9	20	1.6	2.0	.5	2.75
29	.66	.27	.3	2.75	41	2.0	1.6	-	1.2	1.8	.5	1.10
30	.59	.27	2.0	1.63	6.4	2.5	5.0	-	1.0	1.6	.5	.81
31	2.55	.27	-	1.20	-	7.0	3.5	-	1.0	-	.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	4.6	0.59	1.41	2.18	43.6	134
August	3.35	.27	.633	.979	19.6	60
September	4.2	.27	.927	1.43	27.8	85
October	12.5	.8	2.71	4.19	84.0	258
November	49	.81	6.37	9.86	191	587
December	30	1.00	4.19	6.48	130	398
Calendar year 1934	67	.20	3.25	5.03	1,190	3,640
January	20	1.4	4.45	6.89	138	423
February	70	.9	9.01	13.9	252	775
March	40	1.0	7.93	12.3	246	754
April	5.0	.7	1.80	2.79	54.0	166
May	25	.5	1.84	2.85	57.1	175
June	7.4	.40	1.26	1.95	37.6	116
Fiscal year 1934-35	70	.27	3.51	5.43	1,280	3,930

Kalalau Stream near Hanalei

Location.- Water-stage recorder, lat. 22°9'50", long. 159°38'15", 2 miles above mouth and 9 miles southwest of Hanalei. Altitude, 960 feet, by barometer.

Drainage area.- 1.6 square miles.

Records available.- November 1931 to June 1935.

Extremes.- Maximum discharge during year, 80 million gallons a day (124 second-feet) Nov. 28 (gage height, 3.17 feet); minimum unknown, owing to faulty gage-height record.
1931-35: Maximum discharge, 83 million gallons a day (128 second-feet) June 4, 1934 (gage height, 3.26 feet); minimum, 1.9 million gallons a day (2.9 second-feet) Dec. 10, 11, 1933.

Remarks.- Records good for ordinary stages; poor for high stages and for July 1-26, Aug. 6 to Sept. 11, Nov. 30 to Dec. 2, Dec. 11 to Mar. 8. No diversions.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.9	2.25	1.5	12.9
1.0	3.05	1.7	19.2
1.1	4.2	1.9	26
1.2	5.8	2.1	33.5
1.3	7.9		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.0	2.8	2.5	2.65	2.5	7.1	9.0	6.4	5.6	3.6	3.4	3.3
2	3.0	2.8	2.7	2.65	2.5	4.2	9.0	4.0	4.5	3.5	3.4	3.4
3	2.9	2.75	2.5	2.65	2.5	*3.4	10	3.1	5.8	3.4	3.4	3.4
4	2.9	2.65	2.5	2.55	2.5	3.15	5.0	3.0	4.5	3.75	7.2	4.4
5	2.9	*2.65	3.0	2.55	2.8	2.95	4.0	2.9	4.0	3.5	5.5	3.85
6	3.0	2.6	3.1	2.65	2.55	2.9	7.0	2.9	3.7	3.4	4.4	3.5
7	3.0	2.5	2.7	2.55	2.5	2.8	16	2.8	5.0	3.4	3.85	3.5
8	3.0	2.5	2.6	2.55	2.5	2.75	13	2.8	4.0	4.8	3.75	3.5
9	2.9	2.5	2.5	2.55	2.5	2.65	7.0	2.8	*3.5	6.4	3.6	3.5
10	2.9	2.5	2.7	2.5	2.65	3.1	5.6	2.8	3.5	4.5	3.5	3.85
11	3.1	2.5	3.0	2.5	7.6	8.0	4.5	2.8	5.2	3.95	3.4	3.75
12	3.1	2.5	*2.65	2.5	3.85	4.0	4.0	6.0	13.8	3.75	3.4	3.6
13	3.1	2.4	2.8	2.5	3.15	3.5	3.5	7.0	8.4	3.6	3.4	3.5
14	3.1	2.4	2.65	2.55	2.9	3.2	3.3	4.0	5.5	3.85	3.4	3.5
15	3.1	2.4	2.65	3.0	2.75	3.0	3.4	3.5	4.7	7.1	3.4	3.5
16	3.0	2.4	2.55	2.8	2.65	2.9	3.2	5.0	7.5	5.5	3.4	3.5
17	3.0	2.4	2.55	2.75	2.55	2.8	6.0	4.0	6.6	5.0	3.4	3.5
18	3.0	2.4	2.55	2.55	2.5	2.8	7.0	3.5	6.4	4.5	3.4	3.5
19	3.1	2.3	2.55	2.55	2.5	2.8	8.0	3.2	5.8	3.95	3.4	3.5
20	3.0	2.5	2.55	2.75	2.5	3.0	3.0	3.2	5.2	3.85	3.4	3.5
21	2.9	2.6	2.55	3.4	2.5	5.0	3.0	5.0	4.4	3.6	3.4	3.5
22	2.9	2.4	2.75	2.9	2.5	11	4.5	6.0	3.95	3.75	3.4	3.5
23	2.8	2.3	2.8	2.75	2.65	9.0	3.5	4.5	3.85	3.75	3.4	3.5
24	2.8	2.3	2.65	2.65	2.55	7.0	3.3	4.0	3.6	3.5	3.3	3.5
25	2.8	2.3	2.65	2.75	2.5	12	3.2	11	3.6	3.4	3.3	3.5
26	2.8	2.3	2.65	3.05	2.4	11	3.0	10	6.4	3.4	3.3	3.6
27	*2.75	2.3	2.65	3.45	2.4	14	3.5	9.0	5.5	3.4	3.3	3.75
28	2.75	2.3	2.55	3.4	19.7	8.0	3.2	5.0	4.5	3.4	3.3	3.75
29	2.65	2.3	2.65	2.9	*33.5	6.0	3.0	-	4.1	3.4	3.3	3.6
30	2.65	2.3	2.65	2.75	14.4	7.0	7.0	-	3.85	3.4	3.3	3.6
31	2.8	2.4	-	2.55	-	10	6.0	-	3.75	-	3.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.1	2.65	2.93	4.53	90.7	278
August	2.8	2.3	2.46	3.81	76.2	234
September	3.1	2.5	2.66	4.12	79.8	245
October	3.45	2.5	2.74	4.24	84.8	260
November	33.5	2.4	4.78	7.40	144	441
December	14	2.65	5.52	8.54	171	525
Calendar year 1934	33.5	2.0	3.72	5.76	1,360	4,170
January	16	3.0	5.64	8.73	175	536
February	11	2.8	4.65	7.19	130	400
March	13.8	3.5	5.18	8.01	161	493
April	7.1	3.4	4.01	6.20	120	369
May	7.2	3.3	3.63	5.62	113	346
June	4.4	3.3	3.58	5.54	107	329
Fiscal year 1934-35	33.5	2.3	3.98	6.16	1,450	4,460

*Partly estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

Measurements of streams and ditches on the island of Kauai at other than regular gaging stations are listed below:

Miscellaneous discharge measurements on Kauai, fiscal year July 1934 to June 1935

Date	Stream	Tributary to-	Locality	Discharge	
				Second-feet	Million gallons a day
Sept.10	Storm Ditch	Waikoko Stream	Stable Camp road near Lihue	20.0	12.9
Nov. 21	....do.....	....do.....	....do.....	1.33	.86
May 8	....do.....	....do.....	....do.....	24.6	15.9
22	....do.....	....do.....	....do.....	29.2	18.9
June 7	....do.....	....do.....	....do.....	43.6	28.2

Right Branch of North Fork of Kaukonahua Stream near Wahiawa

Location.- Water-stage recorder, lat. 21°31'15", long. 157°56'55", 200 feet upstream from intake of Wahiawa Water Co.'s tunnel, which is just below confluence of right and left branches of North Fork of Kaukonahua Stream and 8 miles northeast of Wahiawa. Altitude, 1,200 feet, from topographic map.

Drainage area.- 1.2 square miles.

Records available.- May 1913 to January 1933, February 1934 to June 1935.

Average discharge.- 16 years (1915-24, 1926-32, 1934-35), 7.87 million gallons a day (12.2 second-feet).

Extremes.- Maximum discharge during year, 942 million gallons a day (1,460 second-feet) Feb. 27 (gage height, 8.86 feet); minimum, 0.52 million gallons a day (0.80 second-foot) May 30, 31, June 4.
1913-35: Maximum discharge, 1,160 million gallons a day (1,790 second-feet) Jan. 1, 1933 (gage height, 9.63 feet); minimum, 0.09 million gallons a day (0.15 second-foot) Mar. 22, 1926.

Remarks.- Records good for ordinary stages and poor for high stages and estimated periods. No diversions above station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

2.6	0.30	3.4	15.4	5.0	205
2.8	1.35	3.6	28.5	5.6	300
3.0	3.4	4.0	70		
3.2	7.4	4.5	133		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	11.1	2.2	36	2.3	1.59	3.95	6.3	*1.2	85	1.29	0.75	3.45
2	6.0	5.9	16.3	2.05	3.75	3.15	2.85	*1.0	†14.5	1.23	.75	1.79
3	3.95	3.4	19.2	1.86	1.78	3.6	5.0	*1.0	*8.7	1.17	.66	.75
4	3.4	2.3	4.9	2.55	1.52	2.75	2.1	*1.0	†6.3	1.11	.44	.66
5	6.1	3.5	3.75	3.4	9.7	2.5	2.3	*.9	5.0	1.23	39.5	9.0
6	4.1	2.2	6.8	1.94	1.99	2.3	2.7	*.8	13.2	1.11	3.1	4.0
7	12.2	1.94	3.6	1.69	1.69	2.2	6.8	*.8	5.4	.87	1.87	1.57
8	21	1.94	2.65	1.44	3.2	2.05	6.9	*.7	3.75	.93	1.23	.99
9	3.75	1.78	11.9	1.35	1.52	1.94	3.9	*.7	3.0	1.05	1.23	.75
10	3.25	2.85	10.2	1.29	1.35	1.78	2.4	*.6	4.2	.87	1.29	.66
11	3.4	1.78	19.9	1.23	27.5	1.69	13.9	*.7	3.25	.75	.99	.66
12	8.8	1.78	30.5	1.17	37	1.60	3.2	*1.1	22	.75	.87	.75
13	6.2	1.60	3.95	1.17	47	1.52	2.3	*2.5	3.5	.75	.75	1.18
14	8.7	1.44	57	1.05	6.7	1.35	2.75	*1.0	2.75	.98	.70	1.49
15	16.2	1.29	15.4	.99	4.2	1.29	14.8	*.7	2.5	10.9	.70	3.0
16	4.3	4.5	5.0	.99	3.95	1.23	3.4	*.6	2.85	31.5	4.1	.99
17	3.4	6.5	4.8	.93	3.25	1.17	10.1	*.6	2.4	44	4.2	1.67
18	3.15	3.75	22	14.2	14.9	1.17	12.1	.62	2.05	7.2	9.6	1.29
19	6.4	13.0	4.6	1.74	21	1.17	3.15	.62	1.94	2.85	1.35	2.1
20	2.75	7.8	7.1	1.66	5.4	1.17	2.65	.62	1.78	2.2	3.05	†1.35
21	3.3	2.65	11.0	2.95	3.95	1.17	2.3	1.38	36	1.86	1.72	*1.1
22	18.2	2.05	24	8.2	4.2	1.23	†3.0	2.45	8.7	1.66	1.44	*.9
23	5.2	1.69	4.7	45	14.5	5.2	*2.8	1.52	8.2	2.05	.99	*1.5
24	3.0	1.52	3.5	3.65	26	20	*2.0	1.23	2.85	1.44	.81	*.8
25	4.1	1.35	3.15	2.6	17.1	16.5	*1.8	3.25	2.2	1.23	.70	*2.0
26	6.5	1.35	2.75	9.2	6.0	21	*1.7	51	5.3	1.17	.73	*15
27	8.1	1.29	2.5	3.5	10.9	3.75	*1.5	297	2.65	1.05	1.81	*20
28	3.25	1.17	2.3	5.3	7.5	5.2	*1.4	145	1.86	.93	.81	*3.0
29	3.25	1.17	2.2	2.4	4.6	2.5	*1.3	-	1.60	.87	.66	*6
30	2.65	.99	6.4	3.0	5.7	2.05	*1.4	-	1.44	.87	.57	*15
31	2.5	12.2	-	1.94	-	2.8	*1.4	-	1.35	-	.57	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	21	2.5	6.39	9.89	19e	608
August	13.0	.99	3.19	4.94	9e.9	303
September	57	2.2	11.6	17.9	347	1,070
October	45	.93	4.20	6.62	133	407
November	47	1.35	9.98	15.4	300	919
December	21	1.17	3.90	6.03	121	371
Calendar year 1934						
January	14.8	1.3	4.20	6.50	130	400
February	297	.6	18.6	28.8	521	1,600
March	85	1.35	8.59	13.3	266	817
April	44	.75	4.20	6.50	126	387
May	39.5	.44	2.84	4.39	87.9	270
June	20	.66	3.45	5.34	103	317
Fiscal year 1934-35	297	.44	6.66	10.3	2,430	7,470

*Estimated.

†Partly estimated.

Left Branch of North Fork of Kaukonahua Stream near Wahiawa

Location.- Water-stage recorder, lat. 21°31'10", long. 157°53'55", 100 feet upstream from intake of Wahiawa Water Co.'s tunnel, which is just below confluence of the right and left branches of North Fork of Kaukonahua Stream and 8 miles northeast of Wahiawa. Altitude, 1,200 feet, from topographic map.

Drainage area.- 1.5 square miles.

Records available.- May 1913 to June 1935.

Average discharge.- 18 years (1915-24, 1926-35), 11.5 million gallons a day (17.8 second-feet).

Extremes.- Maximum discharge during year, 3,500 million gallons a day (5,420 second-feet) Feb. 27 (gage height, 10.14 feet); minimum, 0.4 million gallons a day (0.6 second-foot) Feb. 19, 20.

1913-35: Maximum discharge, 5,400 million gallons a day (8,360 second-feet) Jan. 1, 1933 (gage height, determined from floodmark on well, 11.7 feet); minimum, less than 0.1 million gallons a day (0.2 second-foot) June 15, 1931.

Remarks.- Records good for ordinary stages and poor for high stages and estimated periods. No diversions above station.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Sept. 11				Sept. 12 to June 30					
1.7	1.0	2.2	14.5	0.8	0.3	1.8	16.3	4.0	238
1.8	2.3	2.4	26	1.0	1.2	2.0	23.5	4.5	352
1.9	4.2	2.6	40	1.2	3.2	2.5	48	5.0	488
2.0	6.7	2.8	57	1.4	6.3	3.0	86	5.5	660
				1.6	10.6	3.5	146		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	16.5	3.6	31.5	3.6	2.7	5.4	11.e	1.5	100	1.s	1.2	9.2
2	11.0	16.4	18.5	3.1	3.8	4.3	5.8	1.2	16.0	1.6	1.2	11.5
3	7.4	7.0	17.5	3.0	2.2	5.4	14.1	1.2	9.9	1.5	1.1	2.2
4	6.4	5.0	6.8	3.9	1.8	4.0	4.2	1.2	7.5	1.5	4.0	1.8
5	5.7	6.7	9.0	4.5	11.7	3.6	6.8	1.1	6.1	2.0	58	17.2
6	6.7	4.2	15.8	3.3	2.7	*3.0	6.3	1.0	9.9	1.5	5.9	7.3
7	23	3.8	5.9	2.7	2.1	†2.9	16.2	1.0	6.4	1.2	3.2	3.5
8	32.5	4.3	5.2	2.4	3.2	†2.7	14.3	.9	4.6	1.4	2.4	2.5
9	7.0	3.2	14.8	2.2	1.8	†2.6	7.4	.9	4.0	2.2	3.4	2.1
10	10.4	8.8	17.4	2.0	1.5	*2.4	4.3	.8	4.9	1.2	3.0	1.8
11	7.3	3.8	26.5	2.0	25	2.4	13.6	.9	4.3	1.1	1.8	1.8
12	17.2	4.0	57	1.9	36	2.2	4.8	1.4	24	1.0	3.0	2.3
13	11.0	11.0	6.3	2.2	59	2.0	3.8	3.7	4.6	1.0	2.0	3.3
14	11.2	3.4	25.5	1.7	9.7	1.9	4.9	1.2	3.6	4.3	1.4	8.5
15	23	3.1	11.2	1.4	5.8	1.7	4.0	.8	3.3	32	1.4	8.1
16	7.4	11.9	6.6	2.0	12.1	1.6	3.3	.6	4.0	35.5	9.5	2.7
17	6.2	11.2	12.1	1.3	6.1	1.5	14.0	.6	3.1	55	7.8	4.9
18	5.7	15.6	30	7.5	14.8	1.4	12.1	.5	2.8	12.6	10.4	3.6
19	9.1	6.9	7.5	3.0	15.7	1.3	*3.9	.4	2.7	5.6	2.8	5.3
20	5.7	8.1	8.1	3.4	19.7	1.4	†3.3	.5	2.4	4.2	3.9	4.6
21	6.2	4.7	18.6	6.0	5.8	1.8	3.0	5.2	17.1	3.3	2.8	3.0
22	27	3.6	27	12.5	9.9	4.4	5.3	6.6	15.0	3.8	3.9	2.9
23	14.0	3.2	6.9	30	24	15.3	4.5	5.5	7.3	4.9	2.1	3.6
24	5.4	2.9	5.3	9.9	39	21.5	2.7	5.1	3.6	2.7	1.7	2.7
25	6.4	2.9	4.6	5.3	16.0	21.5	2.4	41	3.4	2.3	1.4	5.0
26	9.3	2.7	4.8	13.2	8.4	17.6	2.2	65	6.3	2.1	1.5	18.1
27	9.3	2.7	4.0	5.4	8.8	9.8	2.1	630	4.5	1.8	8.0	32
28	5.4	2.2	3.6	6.8	7.1	14.9	2.0	128	2.6	1.5	1.8	6.8
29	6.2	2.3	3.5	3.5	6.0	4.9	1.7	-	2.3	1.4	2.0	11.9
30	4.2	2.0	10.0	3.6	9.1	3.8	1.8	-	2.0	1.4	1.7	21.5
31	4.2	16.5	-	2.7	-	7.3	1.s	-	2.0	-	1.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	32.5	4.2	10.6	16.4	328	1,010
August	16.5	2.0	6.05	9.36	188	576
September	57	3.5	14.0	21.7	422	1,290
October	30	1.3	5.03	7.78	156	479
November	59	1.5	12.4	19.2	372	1,140
December	21.5	1.3	5.69	8.80	176	542
Calendar year 1934	60	.1	9.42	14.6	3,440	10,550
January	16.2	1.7	6.08	9.41	188	578
February	630	.4	32.4	50.1	908	2,790
March	100	2.0	9.36	14.5	290	891
April	55	1.0	6.45	9.98	193	594
May	58	1.1	5.02	7.77	156	478
June	32	1.8	7.06	10.9	212	650
Fiscal year 1934-35	630	.4	9.83	15.2	3,590	11,020

*Partly estimated.

†Estimated.

Puhawai Stream at Lualualei, near Waianae

Location.- Duplex water-stage recorder, lat. 21°28'10", long. 158°8'0", in Lualualei Valley, 1 mile north of McCandless ranch house and 5 miles northeast of Waianae. Altitude, 600 feet, from topographic map.

Drainage area.- 0.6 square mile.

Records available.- September 1930 to June 1935.

Extremes.- Maximum discharge during year unknown, owing to faulty gage height record; minimum, 0.01 million gallons a day (0.02 second-foot) June 25-26.
1930-35: Maximum discharge, 60 million gallons a day (93 second-feet) Feb. 21, 1932 (gage height, 3.58 feet); minimum, 0.01 million gallons a day (0.02 second-foot) Dec. 19-20, 1931, Jan. 11, 1932, June 25-26, 1935.

Remarks.- Records good for ordinary stages; poor for estimated periods and high stages. Continuous rainfall records are obtained at station.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.08	0.07	0.22	0.13	*0.25	0.50	0.25	0.30	*0.9	0.34	0.25	0.21
2	.09	.07	.12	.13	*.25	.32	.22	.28	*.9	.32	.23	.25
3	.09	.08	.08	.13	.25	.28	.23	.26	*1.5	.32	.25	.31
4	.08	.07	.08	.14	.25	.28	.21	.28	*.9	.20	.25	.30
5	.08	.07	.07	.17	.26	.31	.21	.29	*.8	.16	.29	.29
6	.09	.07	.12	.18	.25	.26	.21	.31	*.7	.30	.26	.28
7	.10	.07	.08	.21	.23	.25	.25	.29	*.8	.29	.25	.28
8	.71	*.07	.07	.19	.25	.25	.25	.29	*.9	.29	.25	.29
9	.24	*.07	.07	.19	.25	.23	.23	.29	*.7	.30	.25	.30
10	.13	*.07	.08	.19	.26	.22	.21	.29	*.7	.29	.25	.30
11	.12	*.07	.12	.19	.31	.22	.23	*.3	*.7	.29	.23	.30
12	.12	*.07	.13	.20	.28	.22	.23	*.3	*.9	.29	.25	.28
13	.10	*.07	.12	2.0	.32	.22	.21	*.5	*.7	.28	.23	.26
14	.12	*.07	.19	.66	.26	.21	.22	*.3	*.5	.30	.23	.28
15	.13	*.07	.12	.52	.25	.21	.25	*.3	*.4	.32	.23	.29
16	.12	*.08	.10	.53	.25	.21	.25	*.4	.49	.29	.23	.25
17	.12	*.09	.10	.35	.25	.20	†1.78	*.3	.45	.30	.25	.25
18	.12	*.08	.10	.28	.25	.19	†1.2	*.3	.43	.28	.28	.25
19	.12	*.08	.10	.25	.23	.20	.53	*.3	.54	.26	.25	.25
20	.10	*.08	.10	.22	.25	.16	.39	*.3	.43	.26	.22	.25
21	.10	*.07	.12	.25	.25	.20	.32	*.3	.39	.25	.20	.25
22	.10	*.07	2.6	*.3	.23	.21	.38	*.3	.36	.25	.19	.25
23	.12	*.07	.79	*1.0	.25	.25	.36	*.4	.35	.25	.19	.25
24	.10	.09	.29	*.4	.25	.21	.32	*.3	.35	.25	.20	.25
25	.12	.10	.16	*.3	.23	.21	.29	*1.5	.43	.25	.21	.13
26	.12	.10	.12	*.4	.23	.23	.29	*.5	.64	.25	.18	.10
27	.10	.10	.12	*.3	.22	.25	.31	*3.5	.70	.25	.20	.28
28	.08	.10	.13	*.3	.23	.23	.31	*1.5	.46	.28	.18	.28
29	.07	.09	.13	*.3	.25	.22	.28	-	.39	.25	.18	.26
30	.07	.07	.13	*.25	.34	.22	.31	-	.36	.25	.19	.28
31	.07	.15	-	.25	-	.22	.32	-	.36	-	.20	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.71	0.07	0.126	0.195	3.91	12
August	.15	.07	.080	.124	2.48	7.6
September	2.6	.07	.225	.348	6.76	21
October	2.0	.13	.352	.545	10.9	33
November	.34	.22	.254	.393	7.63	23
December	.50	.16	.238	.368	7.39	23
Calendar year 1934	3.8	.04	.224	.347	81.9	253
January	1.78	.21	.356	.551	11.0	34
February	3.5	.26	.517	.800	14.5	44
March	1.5	.35	.617	.955	19.1	59
April	.34	.16	.274	.424	8.21	25
May	.29	.18	.227	.351	7.05	22
June	.31	.10	.260	.402	7.80	24
Fiscal year 1934-35	3.5	.07	.293	.453	107	328

*Estimated.

†Partly estimated.

Pearl Harbor Springs at Puukapu, near Pearl City

Location.- Water-stage recorder, lat. 21°23'20", long. 157°58'10", on left bank of stream near levee, two-fifths of a mile from Pearl City and 11½ miles northwest of Honolulu. Zero of gage is 0.002 foot above mean sea level.

Records available.- July 1931 to June 1935.

Extremes.- Not determined because extremes at gaging-station site are caused by changes in tidal backwater.

Remarks.- Records excellent except those for estimated periods, which are good. About a million gallons a day is occasionally diverted from stream. Surface run-off caused by floods not included in figures given below. Station incapacitated by flood of Feb. 27. Monthly totals Mar. to June determined by comparison with Pearl Harbor Springs at Kalauao, Waiau, and Kaluaoopu.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.5	3.7	*3.9	*3.3	3.5	5.0	5.4	5.3				
2	4.5	3.3	*3.9	*3.3	3.5	5.0	5.4	5.3				
3	4.4	3.1	*3.9	*3.3	3.4	5.1	5.4	5.3				
4	4.3	3.2	*3.9	*3.3	3.5	5.1	5.1	5.2				
5	4.4	3.6	*3.9	*3.3	3.5	5.0	5.3	5.2				
6	4.4	3.5	*3.8	*3.3	3.4	5.0	5.3	5.1				
7	4.4	3.4	*3.8	3.3	3.5	5.0	5.3	4.9				
8	4.3	3.5	*3.8	3.3	3.5	5.0	5.3	4.9				
9	4.2	3.5	*3.8	3.2	3.8	5.0	5.3	4.9				
10	4.3	3.5	*3.8	3.1	4.5	5.1	5.2	5.0				
11	4.2	3.6	*3.7	3.1	4.8	5.0	5.3	4.8				
12	4.0	3.7	*3.7	3.1	4.8	5.1	5.3	4.8				
13	3.8	3.6	*3.7	3.2	4.8	5.1	5.1	4.8				
14	3.9	3.5	*3.7	3.3	4.8	5.0	5.3	4.7				
15	3.9	3.4	*3.7	3.2	4.6	5.1	5.2	4.7				
16	3.7	3.5	*3.5	3.1	4.7	5.2	5.3	4.6				
17	3.8	3.5	*3.5	3.1	4.8	5.0	5.3	4.7				
18	3.8	3.7	*3.5	3.1	4.7	5.1	5.3	4.7				
19	3.6	3.7	*3.5	3.0	4.7	5.1	5.3	4.6				
20	3.7	3.6	*3.5	3.1	4.8	5.0	5.3	4.6				
21	3.9	3.5	*3.4	3.2	4.8	5.1	5.3	4.6				
22	3.7	3.5	*3.4	3.1	4.8	5.1	5.4	4.5				
23	3.6	3.6	*3.4	3.1	4.7	5.2	5.4	4.5				
24	3.7	3.7	*3.4	3.1	4.8	5.3	5.3	4.4				
25	3.9	3.7	*3.4	3.2	4.9	5.3	5.3	4.5				
26	3.9	3.9	*3.3	3.4	4.6	5.4	5.4	4.5				
27	3.8	3.9	*3.3	3.5	4.8	5.4	5.4	*4.6				
28	3.8	3.8	*3.3	3.6	4.8	5.4	5.4	*4.8				
29	3.8	3.8	*3.3	3.6	4.9	5.4	5.4	-				
30	3.7	3.9	*3.3	3.5	4.9	5.4	5.5	-				
31	3.6	*3.9	-	3.5	-	5.4	5.5	-				

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	4.5	3.6	3.98	6.16	124	379
August	3.9	3.1	3.59	5.55	111	342
September	3.9	3.3	3.60	5.57	108	331
October	3.6	3.0	3.25	5.03	101	309
November	4.9	3.4	4.39	6.79	132	404
December	5.4	5.0	5.14	7.95	159	489
Calendar year 1934	-	3.0	4.30	6.65	1,570	4,810
January	5.5	5.1	5.32	8.23	165	506
February	5.3	4.4	4.80	7.43	134	413
March	†5.5	*5.2	*5.46	*8.45	*169	*520
April	*5.5	*4.8	*5.17	*8.00	*155	*476
May	*4.8	*4.3	*4.66	*7.21	*145	*444
June	*4.3	*4.3	*4.30	*6.65	*129	*396
Fiscal year 1934-35	5.5	3.0	4.47	6.92	1,630	5,010

*Estimated.

†Partly estimated.

Pearl Harbor Springs at Loko Kukona, near Pearl City

Location.- Water-stage recorder, lat. 21°23'30", long. 157°58'0", on left bank of stream near levee half a mile from Pearl City and 11½ miles northwest of Honolulu. Zero of gage is 0.80 foot below mean sea level.

Records available.- June 1931 to June 1935.

Extremes.- Not determined because extremes at gaging-station site are caused by changes in tidal backwater.

Remarks.- Records excellent except those for estimated periods, which are good. No diversions. Surface run-off caused by floods not included in figures given below. Station destroyed by flood of Feb. 27. Monthly totals Mar. to June determined by comparison with Pearl Harbor Springs at Kalauao, Waiau, and Kaluaoopu.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.7	*2.5	2.8	3.0	2.7	2.7	3.1	3.0				
2	2.7	2.5	2.7	3.0	2.8	2.7	3.1	3.0				
3	2.5	2.5	2.7	*3.0	2.7	2.7	3.0	3.0				
4	2.5	2.5	2.7	*3.0	2.8	2.7	3.0	3.0				
5	2.5	2.5	2.7	3.0	2.8	2.8	3.0	3.0				
6	2.5	2.6	2.7	3.0	2.8	2.8	3.0	2.9				
7	2.5	2.6	2.7	2.9	2.9	2.8	3.0	2.9				
8	2.5	2.6	2.6	2.9	2.9	2.8	3.0	3.0				
9	2.5	2.6	2.5	2.8	2.8	2.8	3.0	3.0				
10	2.5	2.6	2.5	2.8	2.8	2.8	3.0	3.0				
11	*2.5	2.6	2.5	2.8	2.9	2.8	3.1	3.0				
12	†2.5	2.7	2.6	2.9	3.0	2.8	3.1	2.9				
13	†2.5	2.7	2.6	2.9	2.7	2.9	3.2	2.9				
14	†2.5	2.7	2.6	3.0	2.6	2.9	3.2	2.8				
15	†2.5	2.5	2.6	3.0	2.6	2.9	3.1	2.8				
16	†2.5	2.6	2.6	3.0	2.6	3.0	3.1	2.8				
17	†2.5	2.6	2.6	3.0	2.6	3.0	3.1	2.8				
18	†2.5	2.6	2.6	3.0	2.6	2.9	3.1	2.8				
19	†2.5	2.5	2.7	3.0	2.6	2.9	3.1	2.8				
20	†2.5	2.5	2.7	2.9	2.6	2.8	3.1	2.8				
21	†2.5	2.5	2.7	3.0	2.7	2.8	3.1	2.8				
22	†2.5	2.7	2.7	2.9	2.7	2.8	3.1	2.9				
23	†2.5	2.7	2.7	2.9	2.8	2.9	3.1	2.9				
24	†2.5	2.5	2.7	2.9	2.6	2.9	3.1	2.9				
25	†2.5	2.6	2.7	2.8	2.6	3.0	3.1	2.9				
26	†2.5	2.7	2.7	2.9	2.6	3.0	3.1	2.9				
27	†2.5	2.7	2.7	2.7	2.7	3.0	3.2	†2.9				
28	†2.5	2.7	3.0	2.7	2.7	3.0	3.1	†3.2				
29	†2.5	2.7	3.0	2.7	2.7	3.1	3.1	-				
30	†2.5	2.8	3.0	2.7	2.7	3.1	3.1	-				
31	†2.5	2.8	-	2.9	-	3.1	3.0	-				

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	2.7	2.5	2.51	3.88	77.9	239
August	2.8	2.5	2.61	4.04	80.9	248
September	3.0	2.5	2.69	4.16	80.6	247
October	3.0	2.7	2.90	4.49	90.0	276
November	3.0	2.6	2.71	4.19	81.4	250
December	3.1	2.7	2.88	4.46	89.2	274
Calendar year 1934	3.1	2.3	2.74	4.24	1,000	3,070
January	3.2	3.0	3.08	4.77	95.5	293
February	3.2	2.8	2.91	4.50	81.6	250
March	†3.3	†3.2	†3.29	†5.09	†102	†313
April	†3.3	†3.0	†3.18	†4.92	†95.4	†293
May	†3.0	†2.7	†2.90	†4.49	†89.9	†276
June	†2.7	†2.7	†2.70	†4.18	†81.0	†249
Fiscal year 1934-35	†3.3	2.5	2.86	4.43	1,050	3,210

*Partly estimated.
†Estimated.

Pearl Harbor Springs at Kaluaoopu, near Pearl City

Location.- Water-stage recorder, lat. 21°23'30", long. 157°57'55", on left bank of stream 0.2 mile below Kamehameha Highway, 1 mile from Pearl City, and 11.3 miles northwest of Honolulu. Zero of gage is 0.90 foot below mean sea level.

Records available.- August 1931 to June 1935.

Extremes.- Not determined because extremes at gaging-station site are caused by changes in tidal backwater.

Remarks.- Records good. No diversions. Surface run-off caused by flood not included in figures given below.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	16	16	15.5	16.5	17.5	18.5	20	20.5	19.8	20.5	18.6	18.2
2	16	16	16	18	17.5	18.5	20	20.5	19.8	20.5	18.6	18.2
3	16	16	16	*17	17.5	18.5	20	20.5	19.8	20.5	18.6	17.8
4	16.5	16	16	†16.5	17.5	18.5	19.8	20.5	19.8	20.5	18.5	17.4
5	16	16	16	16	17.5	18.5	19.8	20.5	19.8	19.8	18.6	17.4
6	16	16	16.5	16.5	17.5	18.5	19.8	20.5	19.5	19.8	18.6	17.8
7	16	16	16.5	17	17.5	18.5	19.8	20.5	19.8	19.8	18.6	17.8
8	16.5	15.5	16.5	16.5	17.5	19	19.8	20.5	19.8	19.8	18.6	18.2
9	16.5	15.5	16.5	16.5	17	19	19.8	19.8	20.5	19.8	18.6	18.2
10	16	15.5	16.5	16.5	17	19	19.8	19.8	20.5	19.8	18.6	17.8
11	16	15.5	16.5	16.5	17.5	19	19.8	19.8	20.5	19.8	18.6	17.8
12	16	15	17	16.5	17.5	19	19.8	19.5	20.5	19.8	18.6	17.8
13	16	15.5	16.5	16.5	17.5	19.5	19.8	19.5	20.5	19.8	18.6	17.8
14	16	15.5	16.5	17	18	19.5	19.8	19.5	20.5	19.8	18.6	17.8
15	16	15.5	16.5	16.5	18	19.5	19.5	19.5	20.5	19.8	18.6	17.8
16	16	15.5	16.5	16.5	18	19.5	19.8	19.5	20.5	19.5	18.6	18.2
17	16	16	16.5	16.5	18	19.5	19.8	19.8	20.5	19.5	18.6	18.2
18	16	16	16.5	16.5	18	19.5	19.8	19.8	20.5	19.5	18.6	18.2
19	16	16	16.5	16.5	18	19	19.8	19.8	20.5	19.5	18.2	18.2
20	16	16	16.5	16.5	18	19	19.8	19.8	20.5	19.5	18.2	18.2
21	16	16	16.5	17	18	19	19.8	19.8	20.5	19.5	18.2	18.2
22	16	16	16.5	16.5	18	19	20.5	19.8	20.5	19.5	18.6	17.8
23	16	*16	16.5	16.5	18	19	20.5	19.8	20.5	19.0	18.6	17.8
24	16	16	17	16.5	18	19.5	20.5	19.8	20.5	19.0	18.6	17.8
25	16	15.5	17	16.5	18	19.5	20.5	19.8	20.5	19.0	18.6	17.8
26	16	15.5	17.5	16.5	18	19.5	20.5	19.8	20.5	19.0	18.6	17.8
27	16	15.5	17	16.5	18	20	20.5	19.8	20.5	19.0	18.6	17.8
28	16	15.5	17	17.5	18	20	20.5	19.8	20.5	19.0	18.6	17.8
29	16	15.5	16.5	17	18	20	20.5	-	20.5	18.6	18.6	17.8
30	16	15.5	16.5	17	18	20	20.5	-	20.5	18.6	18.6	17.8
31	16	15.5	-	17	-	20	20.5	-	20.5	-	18.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	16.5	16	16.0	24.8	498	1,530
August	16	15	15.7	24.3	488	1,500
September	17.5	15.5	16.5	25.5	496	1,520
October	18	16	16.7	25.8	517	1,590
November	18	17	17.8	27.5	532	1,630
December	20	18.5	19.2	29.7	595	1,830
Calendar year 1934	20	15	17.7	27.4	6,450	19,800
January	20.5	19.5	20.0	30.9	621	1,910
February	20.5	19.5	19.9	30.8	558	1,710
March	20.5	19.5	20.3	31.4	630	1,930
April	20.5	18.6	19.6	30.3	588	1,800
May	18.6	18.2	18.5	28.6	575	1,760
June	18.2	17.4	17.9	27.7	537	1,650
Fiscal year 1934-35	20.5	15	18.2	28.2	6,640	20,360

*Estimated.
†Partly estimated.

Pearl Harbor Springs at Waiau, near Pearl City

Location.- Water-stage recorder, lat. 21°23'25", long. 157°57'40", on left bank of Waiau Stream, 0.2 mile below Kamehameha Highway, 1.1 miles from Pearl City, and 11.2 miles northwest of Honolulu. Zero of gage is 0.74 foot below mean sea level.

Records available.- May 1931 to June 1935.

Extremes.- Not determined because extremes at gaging-station site are caused by changes in tidal backwater.

Remarks.- Records excellent except those for estimated periods, which are fair. A small pumping plant diverts water above station for irrigation. Surface run-off caused by flood not included in figures given below.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.0	5.3	5.0	6.4	6.0	6.9	7.9	8.5	8.8	8.8	8.1	*6.5
2	6.0	5.1	5.0	†6.4	6.0	6.9	7.9	8.5	8.8	8.8	8.1	*6.5
3	6.0	5.1	5.0	*6.3	6.0	7.7	8.3	8.5	8.8	8.8	†7.9	*6.5
4	6.0	5.1	5.5	†6.2	6.4	7.5	8.3	8.5	8.8	8.8	*8	*6.5
5	6.0	5.1	5.3	6.2	6.2	7.5	8.5	8.3	9.0	8.7	*8	*6.5
6	6.0	5.1	5.3	6.5	6.2	7.5	8.5	8.3	9.0	8.7	*8	†6.5
7	6.0	5.0	5.3	6.5	6.2	7.7	8.5	8.1	9.0	8.7	*8	6.5
8	6.0	5.0	5.1	6.5	6.2	7.7	8.3	8.1	9.0	8.7	*8	6.5
9	6.2	5.0	5.5	6.4	6.2	7.7	8.3	8.1	9.0	8.7	*8	6.5
10	6.0	5.0	5.3	6.2	6.2	7.7	8.1	8.1	9.0	8.7	*8	6.5
11	6.0	5.0	5.7	6.0	6.2	7.7	8.1	8.1	9.0	8.5	*8	6.5
12	6.0	5.1	5.7	6.0	6.4	7.7	8.1	8.1	9.0	8.5	*7.5	6.5
13	6.0	5.1	5.8	6.0	6.4	7.9	8.1	7.9	9.0	8.5	*7.5	6.5
14	5.8	5.1	5.8	6.4	6.4	7.9	8.1	7.7	9.0	8.5	*7.5	6.5
15	5.8	5.1	6.0	6.4	6.4	7.9	7.9	7.5	9.0	8.5	*7.5	6.5
16	5.7	5.1	6.2	6.2	6.2	7.9	7.9	7.5	9.0	8.3	*7.5	6.5
17	5.5	5.1	6.0	6.2	6.2	7.9	8.1	7.7	9.0	8.3	*7.5	6.5
18	5.5	5.1	6.0	6.2	6.4	7.9	8.1	7.7	9.0	8.3	*7.5	6.4
19	5.5	5.1	6.0	6.2	6.4	7.9	8.1	7.7	9.0	8.3	*7.5	6.4
20	5.3	5.1	6.0	6.0	6.4	7.7	8.1	7.5	9.0	8.3	*7.5	6.4
21	5.5	5.1	6.0	6.4	6.4	7.7	8.1	7.5	9.0	8.5	*7.5	6.4
22	5.5	5.1	5.7	6.2	6.4	7.7	8.3	7.5	8.8	8.3	*7	6.4
23	5.3	5.1	6.4	6.2	6.4	7.9	8.3	7.5	8.8	8.3	*7	6.4
24	5.3	5.1	6.2	6.0	6.4	7.9	8.3	7.5	8.8	8.1	*7	6.4
25	5.3	4.0	6.4	6.0	6.4	8.1	8.3	7.5	8.8	8.1	*7	6.4
26	5.3	5.7	6.4	6.0	6.4	8.3	8.3	7.5	8.8	8.1	*7	6.2
27	5.5	4.8	6.4	5.0	6.4	8.3	8.3	7.7	8.8	8.1	*7	6.2
28	5.5	5.0	5.8	6.2	6.4	8.3	8.3	8.3	8.8	8.1	*7	6.2
29	5.3	5.0	6.5	6.2	6.5	8.3	8.3	-	8.8	8.1	*7	6.2
30	5.3	5.0	6.5	6.2	6.7	8.3	8.3	-	8.8	8.1	*7	6.2
31	5.3	4.6	-	6.0	-	8.1	8.5	-	8.8	-	*6.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.2	5.3	5.69	8.80	176	541
August	5.7	4.0	5.04	7.80	156	479
September	6.5	5.0	5.79	8.96	174	533
October	6.5	6.0	6.21	9.61	193	591
November	6.7	6.0	6.31	9.76	189	581
December	8.3	6.9	7.81	12.1	242	743
Calendar year 1934	9.5	4.0	6.86	10.6	2,500	7,680
January	8.5	7.9	8.21	12.7	254	781
February	8.5	7.5	7.91	12.2	221	679
March	9.0	8.8	8.91	13.8	276	848
April	8.8	8.1	8.44	13.1	253	777
May	8.1	6.5	7.50	11.6	233	714
June	6.5	6.2	6.42	9.93	193	591
Fiscal year 1934-35	9.0	4.0	7.02	10.9	2,560	7,860

*Estimated.
†Partly estimated.

Pearl Harbor Springs at Kalauao, near Aiea

Location.- Water-stage recorder, lat. 21°23'0", long. 157°56'50", on left bank of Kalauao Stream, a quarter of a mile below Honolulu Plantation pump no. 6, 1.1 miles from Aiea, and 9.7 miles northwest of Honolulu. Zero of gage is 1.10 feet below mean sea level.

Records available.- March 1931 to June 1935.

Extremes.- Not determined because extremes at gaging-station site are caused by changes in tidal backwater.

Remarks.- Records good except those for estimated periods, which are fair. When needed for irrigation of sugarcane, Honolulu Plantation pump no. 6 diverts about 7 million gallons a day when used as a high-lift pump or 9 million gallons a day as a low-lift pump. Surface run-off caused by flood not included in figures given below.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	17	10.5	10.5	10.5	10.5	18.5	19.5	20.5	20.5	18.7	13.4	*13.8
2	10.5	10.5	13.5	10.5	10.5	18.5	19.5	20.5	20.5	14.9	13.8	*16.8
3	12.5	9.7	15	10	11.5	18.5	19.5	20.5	21	16.8	16.4	*11.3
4	16.5	11.5	9.7	10	15.5	19	19.5	20.5	21	15.3	14.9	*11.3
5	10.5	12.5	9.4	13	11.5	19	19.5	15.3	21.5	16.4	18.4	*12.3
6	10.5	10	9.0	18.5	15.5	19	19.5	12.7	21.5	14.5	12.0	*12.3
7	12.5	9.7	9.0	16	10.5	19.5	19.5	13.4	21.5	13.7	12.0	†11.0
8	18	9.7	11.5	10.5	12	19.5	19.5	12.3	21.5	12.7	11.7	13.1
9	12	9.7	10.5	10	9.7	19.5	19.5	14.2	21.5	12.3	11.3	17.2
10	11.5	9.7	9.0	9.7	11.5	17.5	19.5	18.4	21.5	12.3	†11.7	11.3
11	10	9.7	16.5	9.7	17	16.5	19.5	12.7	21.5	13.8	*14.2	11.0
12	10	9.7	17	9.7	17	12	19.5	12.3	21	14.2	*18.0	11.0
13	10	9.4	17	12	15	11.5	19.5	12.3	21	15.3	*11.7	11.0
14	11	9.0	17.5	15	13.5	*12	18.0	†12.3	21	19.1	*11.7	10.7
15	15.5	9.0	17.5	10.5	11.5	*14	12.7	*12.3	21	12.3	*12.3	13.8
16	10	9.0	17.5	10.5	11.5	17	15.6	*13.2	19.5	12.3	*11.3	17.2
17	10	9.4	12.5	10	13	11.5	19.5	†16.4	19.5	13.8	*11.3	11.3
18	9.7	11.5	10.5	10.5	17	11.5	19.9	†12.0	17.2	15.3	*14.2	11.0
19	9.7	14	10.5	10.5	10.5	12	19.9	†11.7	15.6	19.1	*18.0	11.0
20	9.7	9.7	10.5	12	10.5	12	19.9	11.3	13.8	15.6	*11.3	12.7
21	11	9.4	10.5	16.5	10.5	12	19.9	13.4	13.8	13.7	*12.7	12.3
22	13	9.4	13	10.5	10.5	13.5	19.9	15.3	13.4	12.7	*11.3	14.2
23	10.5	8.7	18.5	10.5	10	18.5	19.9	16.0	16.4	12.3	*11.3	16.4
24	10.5	9.0	13	10.5	12.5	19	19.9	18.7	19.[illegible]	12.3	*11.3	11.3
25	11	11	10.5	10.5	18	19	20.5	16.0	13.[illegible]	12.3	*14.2	11.3
26	14	11.5	10.5	10.5	12	19.5	20.5	17.2	14.5	12.0	*16.4	12.3
27	12	9.0	10.5	11.5	11.5	19.5	20.5	19.5	18.4	15.3	*16.4	14.5
28	12.5	9.0	10.5	15.5	12.5	19.5	20.5	20.5	17.6	18.0	*14.5	15.3
29	14	9.0	13	10.5	17	19.5	20.5	-	20.5	12.3	*16.0	14.5
30	11	9.0	16.5	10.5	15	19.5	20.5	-	17.2	12.3	*14.2	18.0
31	11	9.0	-	10.5	-	19.5	20.5	-	21	-	*13.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	18	9.7	11.9	18.4	368	1,130
August	14	8.7	9.93	15.4	308	945
September	16.5	9.0	12.7	19.6	381	1,170
October	18.5	9.7	11.5	17.8	357	1,090
November	18	9.7	12.8	19.8	385	1,180
December	19.5	11.5	16.7	25.8	518	1,590
Calendar year 1934	22	8.7	14.3	22.1	5,210	15,980
January	20.5	12.7	19.4	30.0	602	1,850
February	20.5	11.3	15.4	23.8	431	1,320
March	21.5	13.4	19.0	29.4	588	1,810
April	19.1	12.0	14.7	22.7	442	1,360
May	18.4	11.3	13.6	21.0	421	1,290
June	18.0	10.7	13.0	20.1	391	1,200
Fiscal year 1934-35	21.5	8.7	14.2	22.0	5,190	15,940

*Estimated.
†Partly estimated.

Moanalua Stream near Honolulu

Location.- Duplex water-stage recorder, lat. 21°23'30", long. 157°51'10", 4¼ miles from mouth of stream and 5¾ miles north of Honolulu post office. Zero of gage is 339.12 feet above mean sea level.

Drainage area.- 3.2 square miles.

Records available.- June 1926 to June 1935.

Extremes.- Maximum discharge during year, 1,380 million gallons a day (2,140 second-feet) Feb. 27 (gage height, 9.09 feet); no flow for several months during year.
1926-35: Maximum discharge, 2,370 millions gallons a day (3,670 second-feet) Nov. 18, 1930 (gage height, 11.58 feet); no flow during dry weather.

Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. Water for domestic use diverted from stream 1 mile above station by means of a 2-inch pipe. Continuous records of rainfall are obtained at station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0	0	0.9	3.2
.2	.19	1.0	5.6
.4	.52	1.5	24
.6	.94	2.0	53
.7	1.06	2.5	93
.75	1.12	3.0	140
.8	1.47	4.0	244

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.14	0.04	0	*0	0	6.2	4.0	0.04	60	0.11	0	0
2	.09	.03	0	*0	0	2.2	1.10	.04	9.9	.07	0	0
3	.07	.02	0	*0	0	1.3	1.11	.03	5.1	.06	0	0
4	.06	.01	0	.02	0	.68	.72	.02	3.0	.05	0	0
5	.05	0	0	.01	0	.40	.38	0	1.90	.03	3.7	7.7
6	.04	0	0	.01	0	.21	.37	0	1.74	.01	.84	2.1
7	34	0	0	0	0	.12	2.35	0	1.37	.01	.06	.67
8	4.5	0	0	0	0	.08	1.11	0	1.29	0	.03	.08
9	1.1	0	0	0	0	.06	.78	0	1.08	0	.02	.04
10	.40	0	0	0	0	.04	.40	0	.47	0	0	.02
11	.15	0	*40	0	.76	*.03	3.1	0	.27	0	0	.01
12	.11	0	*4.0	0	20	*.02	1.33	0	11.0	0	0	0
13	.37	0	*2.0	0	12.5	*.02	.47	0	1.12	0	0	0
14	.25	0	*30	0	3.4	*.01	1.87	0	1.05	0	0	0
15	.22	0	*1.5	0	.97	.01	1.48	0	†.75	0	0	0
16	.15	0	*.04	0	.38	.01	1.16	0	.47	0	0	0
17	.09	0	*.02	0	.17	0	67	0	.32	1.46	0	0
18	.06	0	*.01	0	.14	0	39.5	0	.15	.96	0	0
19	.04	0	*.01	0	.11	0	5.1	0	5.0	.37	0	0
20	.04	.49	*0	0	.08	0	2.4	0	.40	.11	0	0
21	.04	.25	*0	0	.07	0	1.27	0	.12	.06	0	0
22	.03	.06	*0	0	.06	0	.77	0	.06	.04	0	0
23	.03	.05	*.10	0	.09	43	.56	0	.06	.04	0	0
24	.02	.04	*.04	0	3.0	3.0	.25	0	.27	.04	0	0
25	.01	.03	*.03	0	2.3	1.35	.12	0	1.45	.03	0	0
26	2.2	.01	*.03	0	1.7	4.2	.09	2.35	.78	0	0	0
27	.22	0	*.02	0	.84	3.0	.07	204	.32	0	0	0
28	.06	0	*.02	0	1.25	11.5	.06	95	.30	0	0	0
29	.05	0	*.01	0	2.0	1.6	.06	-	.27	0	0	0
30	.04	0	*0	0	17.5	.78	.05	-	.22	0	0	0
31	.04	0	-	0	-	.49	.04	-	.14	-	0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	34	0.01	1.44	2.23	44.7	137
August	.49	0	.033	.051	1.03	3.2
September	40	0	2.59	4.01	77.8	239
October	.02	0	.001	.002	.04	.1
November	20	0	2.24	3.47	67.3	207
December	43	0	2.59	4.01	80.3	246
Calendar year 1934	130	0	1.70	2.63	620	1,900
January	67	.04	4.49	6.95	139	427
February	204	0	10.8	16.7	301	925
March	60	.06	3.56	5.51	110	339
April	1.46	0	.115	.178	3.45	11
May	3.7	0	.150	.232	4.65	14
June	7.7	0	.354	.548	10.6	33
Fiscal year 1934-35	204	0	2.30	3.56	840	2,580

*Estimated.
†Partly estimated.

Kalihi Stream near Honolulu

Location.- Water-stage recorder, lat. 21°22'10", long. 157°50'25", at Kioi Pool, three-eighths of a mile upstream from Catholic Orphanage and 5 miles north of Honolulu post office. Zero of gage is 464.40 feet above mean sea level.
Drainage area.- 2.7 square miles.
Records available.- September 1913 to June 1935.
Average discharge.- 18 years (1916-20, 1921-35), 5.03 million gallons a day (7.78 second-feet).
Extremes.- Maximum discharge during year, 1,740 million gallons a day (2,690 second-feet) Feb. 27 (gage height, 11.02 feet); minimum, 1.05 million gallons a day (1.62 second-feet) Oct. 12, June 3, 4.
1913-35: Maximum discharge, 10,900 million gallons a day (16,900 second-feet) Nov. 18, 1930 (gage height, 13.81 feet); minimum, 0.06 million gallons a day (0.09 second-foot) Oct. 22, 1933.
Remarks.- Records good for ordinary stages; fair for high stages and estimated periods. Water for domestic use diverted from stream above station.

Revision of maximum extremes

Year ending June 30	Date	Gage height (feet)	Discharge: Million gallons a day	Discharge: Second-feet	Year ending June 30	Date	Gage height (feet)	Discharge: Million gallons a day	Discharge: Second-feet
1921	Jan. 16	*14.00	2,900	4,490	1927	May 16	9.90	1,220	1,890
1922	Oct. 3	*11.47	1,080	1,620	1928	Nov. 18	11.84	2,660	4,120
1923	Jan. 19	*13.90	2,750	4,250	1929	4	8.60	760	1,180
1924	Dec. 30	11.76	2,540	3,930	1930	Apr. 11	10.06	1,280	1,980
1925	Oct. 10	8.36	690	1,070	1931	Nov. 18	13.81	10,900	16,900
1926	Nov. 4	8.95	865	1,340	1932	Feb. 13	12.06	3,020	4,670

*Present datum.

Note.- During flood of Jan. 16, 1921, the control was widened considerably above gage height 6.0 feet, and no revision of maximums prior to that date has been attempted.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.0	2.0	4.0	2.8	2.3	6.6	6.0	2.35	81	*4.0	1.46	1.46
2	2.7	2.6	2.8	2.6	2.5	4.6	4.3	2.2	17.9	*3.5	1.37	1.28
3	2.5	3.4	2.3	2.5	2.1	4.3	6.1	2.1	11.0	*3.5	1.28	1.13
4	2.3	2.8	2.0	2.5	2.0	3.5	4.0	2.1	8.5	*4.5	1.55	2.7
5	2.1	2.5	2.0	2.3	4.3	3.4	3.8	2.0	7.0	*3.5	14.0	21
6	2.1	2.1	2.0	2.0	2.5	3.0	3.8	2.0	7.6	*3.0	5.2	8.3
7	28	2.0	1.9	2.0	2.1	2.7	14.3	1.91	7.6	*2.5	2.7	4.5
8	11.5	1.9	1.8	1.9	2.0	2.6	5.3	1.91	5.8	*2.5	2.2	3.0
9	5.4	1.8	1.8	1.8	1.9	2.3	3.8	1.91	5.1	*2.0	2.0	2.45
10	4.1	1.9	11.5	1.8	1.8	2.3	3.35	1.82	4.8	*1.8	1.82	2.2
11	3.7	1.7	60	1.8	12	2.3	6.8	1.82	4.3	*1.7	1.64	2.0
12	4.1	5.4	7.4	1.7	37	2.2	4.5	1.73	18.1	*1.6	1.64	1.91
13	3.8	2.3	4.8	2.5	26	2.1	3.65	1.82	5.8	1.55	1.55	1.82
14	3.2	2.0	28	2.2	10	2.0	7.7	1.64	4.8	1.55	1.46	2.0
15	6.6	1.8	11	2.4	6.1	1.9	4.9	1.55	4.3	1.91	1.46	2.0
16	4.3	2.0	6.3	2.1	5.4	1.8	5.3	1.82	4.3	1.91	2.55	1.64
17	3.4	2.0	5.1	1.8	4.3	1.8	54	1.55	3.8	8.8	2.2	1.91
18	3.1	2.5	9.0	1.8	4.6	1.8	46	1.46	3.65	4.5	2.0	1.73
19	2.8	2.8	4.6	1.7	5.1	1.7	9.3	1.46	14.4	2.6	1.82	1.55
20	2.6	9.5	5.1	1.6	3.7	1.8	7.0	1.46	4.6	2.0	1.73	1.91
21	2.6	4.8	6.5	1.8	3.2	1.9	5.6	1.82	4.0	1.82	1.55	1.64
22	2.7	3.1	4.9	1.9	3.4	1.8	5.6	1.82	3.8	2.0	1.46	1.55
23	2.6	2.6	5.8	7.3	6.5	63	5.1	1.91	3.5	1.82	1.37	1.46
24	2.2	2.3	4.6	2.5	8.5	6.5	4.1	1.82	†4.3	1.64	1.28	1.37
25	2.5	2.1	3.6	2.3	6.6	7.0	3.65	4.6	*15	1.64	1.28	1.46
26	7.6	2.0	3.7	4.0	5.1	7.6	3.35	8.8	*7	1.73	1.37	1.91
27	3.2	2.0	3.1	3.8	4.6	5.3	3.35	216	*5	1.55	1.46	2.65
28	2.7	1.8	3.0	5.3	5.0	5.1	3.1	90	*4.5	1.46	1.37	1.73
29	2.3	1.8	2.7	3.8	4.5	4.1	2.85	-	*4.5	1.46	1.28	1.73
30	2.2	1.7	4.4	3.0	8.7	3.7	3.0	-	*4.0	1.64	1.28	2.1
31	2.1	2.7	-	2.5	-	5.2	2.6	-	*4.0	-	1.28	-

Month	Million gallons a day: Maximum	Minimum	Mean	Second-feet (mean)	Total run-off: Million gallons	Acre-feet
July	28	2.1	4.32	6.68	134	411
August	9.5	1.7	2.64	4.08	81.9	251
September	60	1.8	7.19	11.1	216	662
October	7.3	1.8	2.58	3.99	80.0	246
November	37	1.8	6.46	10.0	194	595
December	63	1.7	5.35	8.28	166	509
Calendar year 1934	122	.7	4.87	7.54	1,780	5,450
January	54	2.8	7.94	12.3	246	756
February	216	1.46	13.0	20.1	363	1,120
March	81	3.5	9.16	14.2	284	871
April	8.8	1.46	2.52	3.90	75.7	232
May	14.0	1.28	2.15	3.33	66.6	204
June	21	1.13	2.80	4.33	84.1	258
Fiscal year 1934-35	216	1.13	5.46	8.45	1,990	6,120

*Estimated.
†Partly estimated.

Nuuanu Stream below reservoir no. 2 wasteway, near Honolulu

Location.- Water-stage recorder, lat. 21°20'55", long. 157°49'40", on Pali road in upper Nuuanu Valley, a quarter of a mile below reservoir no. 2 wasteway and 5 miles from Honolulu post office. Zero of gage is 631.71 feet above mean sea level.
Drainage area.- 3.4 square miles.
Records available.- October 1913 to June 1935.
Average discharge.- 16 years (1917-20, 1922-35), 5.45 million gallons a day (8.43 second-feet).
Extremes.- Maximum discharge during year, 1,050 million gallons a day (1,620 second-feet) Feb. 27 (gage height, 6.93 feet); minimum, 1.0 million gallons a day (1.6 second-feet) Dec. 20.
1913-35: Maximum discharge, 1,600 million gallons a day (2,480 second-feet) Jan. 16, 1921 (gage height, 8.74 feet, from floodmarks); minimum, 0.06 million gallons a day (0.09 second-foot) Sept. 10, 11, 1925.
Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. Reservoirs nos. 2, 3, 4 regulate flow; capacities are 21, 34 and 1,630 acre-feet, respectively. The Board of Water Supply diverts ground water from tunnels in drainage area.

Revision of maximum extremes

Year ending June 30	Date	Gage height (feet)	Discharge		Year ending June 30	Date	Gage height (feet)	Discharge	
			Million gallons a day	Second-feet				Million gallons a day	Second-feet
1922	Oct. 3	5.22	526	814	1929	Nov. 4	4.02	201	311
1923	Jan. 19	6.95	1,710	2,650	1930	Jan. 2	5.93	889	1,380
1924	Dec. 30	5.84	835	1,290	1931	Nov. 18	8.03	3,150	4,870
1925	Feb. 11	2.57	77	119	1932	Feb. 13	6.77	1,530	2,370
1926	June 14	2.27	56	87	1933	Jan. 31	6.11	1,010	1,560
1927	Mar. 5	6.47	1,280	1,980	1934	Apr. 26	4.50	277	429
1928	Nov. 19	6.07	980	1,520					

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.0	4.7	5.8	5.1	4.6	7.6	7.4	6.9	39	7.1	5.5	4.2
2	5.8	5.0	5.1	5.1	4.9	6.9	7.1	6.7	16.8	6.9	5.1	3.9
3	5.6	5.1	5.0	5.2	4.6	6.9	7.1	6.7	13.7	6.7	5.3	3.7
4	5.6	4.8	4.6	7.9	4.5	6.9	6.9	8.4	15.2	6.9	5.5	3.2
5	5.2	4.8	5.0	5.8	7.6	6.7	7.1	7.8	12.6	6.9	6.3	3.25
6	5.4	4.6	5.0	5.6	11	8.8	7.1	6.3	11.3	6.5	5.7	3.2
7	11	4.6	4.7	5.4	6.1	9.9	10.6	6.1	11.8	6.7	5.5	4.1
8	7.6	4.5	4.6	5.1	5.7	8.1	7.8	6.1	9.3	6.7	5.3	4.1
9	6.3	3.6	4.8	4.6	5.5	7.4	7.1	5.9	9.1	6.5	5.5	4.3
10	5.8	3.0	5.0	5.1	5.3	7.1	6.9	5.9	9.3	6.5	5.3	4.1
11	5.8	3.0	21	5.3	7.6	6.9	11.6	6.1	9.3	6.5	5.1	4.0
12	6.0	4.2	6.0	5.3	18.5	6.9	7.3	5.9	14.0	6.6	5.1	3.95
13	5.6	3.3	5.0	5.7	15	8.1	6.9	6.3	9.6	6.5	5.1	4.0
14	5.4	3.2	20	5.7	8.8	7.1	9.0	5.9	9.3	6.5	4.9	4.3
15	6.0	3.3	9.8	5.7	7.6	6.3	8.3	5.9	9.1	6.9	4.9	3.7
16	5.4	3.5	7.4	5.5	7.6	6.3	10.0	5.9	8.8	6.7	5.3	3.75
17	5.2	3.7	5.7	5.1	7.1	5.9	19.5	5.5	8.6	10.8	5.3	3.95
18	5.1	3.7	7.6	5.1	7.6	5.9	26.5	5.5	8.6	8.3	5.7	3.7
19	5.1	5.0	6.7	4.9	7.4	3.5	10.8	5.7	9.2	6.9	5.9	3.55
20	5.1	5.0	5.1	4.7	6.9	1.1	9.9	5.5	8.1	6.9	5.9	3.8
21	5.2	3.0	5.8	5.1	6.7	1.6	9.3	5.9	8.3	6.7	5.7	3.5
22	5.6	2.2	6.3	5.1	6.7	3.2	9.3	5.5	8.1	6.7	5.5	3.45
23	5.1	3.9	6.3	6.1	5.1	25	8.6	5.5	8.1	6.7	4.9	3.5
24	4.8	4.5	5.8	5.1	3.0	9.0	8.3	5.3	7.8	6.3	4.6	3.4
25	5.0	4.5	5.6	5.1	5.5	8.1	8.1	6.7	7.8	6.1	4.3	*3.5
26	6.9	4.6	5.6	5.3	6.3	8.1	7.8	8.1	8.1	6.1	4.0	*4.5
27	5.2	3.2	5.2	5.1	6.5	7.4	8.1	129	7.8	5.9	4.7	*5
28	5.1	3.3	5.2	5.1	6.7	9.2	7.8	69	7.6	5.9	4.6	*4.0
29	5.0	3.9	5.1	5.1	6.5	7.1	8.3	-	7.3	5.9	4.2	*3.6
30	5.0	5.4	5.8	4.9	8.3	7.1	9.1	-	7.1	5.9	3.9	*3.5
31	4.8	4.8	-	4.7	-	7.1	8.1	-	7.1	-	4.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	11	4.8	5.70	8.82	177	542
August	5.4	2.2	4.06	6.28	126	386
September	21	4.6	6.68	10.3	200	615
October	7.9	4.6	5.31	8.22	165	505
November	18.5	3.0	7.17	11.1	215	660
December	25	1.1	7.33	11.3	227	697
Calendar year 1934	53	1.1	5.30	8.20	1,940	5,940
January	26.5	6.9	9.28	14.4	288	883
February	129	5.3	12.9	20.0	360	1,100
March	39	7.1	10.6	16.4	328	1,010
April	10.8	5.9	6.74	10.4	202	621
May	6.3	3.9	5.12	7.92	159	487
June	5	3.2	3.82	5.91	114	351
Fiscal year 1934-35	129	1.1	7.02	10.9	2,560	7,860

*Estimated.

West Branch of Manoa Stream near Honolulu

Location.- Water-stage recorder, lat. 21°19'50", long. 157°48'15", 75 feet above lower highway and 4 miles northeast of Honolulu post office. Zero of gage is 290.84 feet above mean sea level, by levels of the Board of Water Supply.

Drainage area.- 1.1 square miles.

Records available.- August 1925 to June 1935. May 1913 to January 1921 at station 200 feet upstream.

Average discharge.- 16 years (1913-20, 1926-35), 2.91 million gallons a day (4.50 second-feet).

Extremes.- Maximum discharge during year, 1,300 million gallons a day (2,010 second-feet) Feb. 27 (gage height, 5.70 feet); minimum, 0.51 million gallons a day (0.79 second-foot) May 25, 26.
1913-21, 1925-35: Maximum stage, 10.4 feet Jan. 16, 1921, at former site and datum, from floodmarks (discharge, estimated, 2,100 million gallons a day or 3,250 second-feet); minimum discharge, about 0.05 million gallons a day (0.08 second-foot) Mar. 16, 22, 1926.

Remarks.- Records good for ordinary stages and fair for high stages and estimated periods. No diversions above station.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Feb. 27				Feb. 28 to June 30			
0.2	0.42	1.2	15	0.1	0.25	1.0	9.7
.4	1.3	1.4	22	.2	.52	1.2	15.8
.6	2.6	1.7	36	.4	1.70	1.4	23
.8	4.9	2.0	55	.6	3.2	1.7	37
1.0	8.9	2.4	88	.8	5.6	2.0	56

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.95	0.81	*3.4	*1.0	0.90	2.2	1.9	0.91	43	0.86	0.67	1.65
2	1.75	1.15	*1.2	*.9	.96	1.75	2.2	.86	9.9	.82	.62	1.01
3	1.1	1.7	*1.1	.77	.73	1.65	2.3	.81	6.1	.82	.55	.77
4	1.0	1.1	*1.0	.91	.65	1.35	1.65	.81	4.2	1.01	1.13	1.99
5	.91	.96	*.9	.86	1.35	1.3	1.4	.91	3.4	.96	7.e	6.0
6	1.05	.73	*.8	.73	.58	1.25	1.4	.81	3.65	.82	2.6	2.2
7	10.5	.69	*.7	.65	.54	1.15	6.2	.73	4.0	.72	1.30	1.35
8	5.3	.5e	*.7	.73	.54	1.1	3.0	.65	2.7	.72	1.06	1.06
9	2.2	.58	*.6	.69	.50	1.0	2.0	.62	2.3	.72	1.11	.86
10	1.6	.5e	*1.0	.62	.46	.96	1.6	.54	2.3	.62	1.11	.77
11	1.5	.97	*7	.62	7.1	.91	4.2	.62	2.0	.62	.77	.77
12	4.6	2.3	*1.5	.62	19	.86	1.85	.54	6.1	.72	.77	.77
13	2.1	.96	*1.0	2.8	14.5	.81	1.45	1.1	2.4	.62	.77	.82
14	1.75	.81	*8	2.0	4.2	.77	3.1	.62	2.0	.72	.72	1.60
15	2.7	*1.0	*2.0	1.15	2.1	.73	12	.54	1.85	1.01	.67	1.27
16	1.65	*1.5	*1.5	1.3	3.8	.65	3.8	.71	1.78	.96	2.15	.86
17	1.35	*1.1	*1.1	.86	2.7	.62	8.8	.46	1.64	11.2	1.46	1.46
18	1.15	*.9	*2.0	.86	3.1	.58	15	.42	1.58	4.3	.96	1.11
19	1.25	*.8	*1.3	.73	2.1	.58	3.5	.42	2.65	1.70	.77	.86
20	.96	*2.5	*1.4	1.2	1.75	.58	2.3	.54	1.52	1.23	.86	1.23
21	.96	*1.2	*1.8	1.2	2.0	.65	1.85	1.8	1.52	.96	.72	1.17
22	1.65	*1.0	*1.3	1.5	1.95	.62	2.1	1.05	1.46	1.01	.62	.91
23	1.1	*.9	*1.7	1.65	4.5	.75	1.8	1.3	1.52	1.01	.58	.82
24	.86	*.9	*1.4	1.0	7.0	1.55	1.4	1.15	1.23	.77	.58	.82
25	.86	*.8	*1.3	2.0	4.6	1.6	1.25	5.7	3.0	.77	.55	1.01
26	6.1	*.7	*1.1	2.8	2.7	2.2	1.2	8.9	2.05	.82	.51	2.4
27	1.6	*.6	*1.1	1.45	2.6	2.3	1.6	81	1.52	.77	.72	1.98
28	1.15	*.6	*1.0	1.5	3.7	4.3	1.2	42	1.23	.67	.67	1.40
29	1.0	*.5	*.9	1.05	2.3	2.1	.96	-	1.11	.62	.82	1.51
30	.96	*.5	*2.5	1.25	10	1.4	1.05	-	1.06	.77	.72	1.17
31	.91	*.6	-	.81	-	1.95	1.0	-	.96	-	1.60	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	10.5	0.86	2.05	3.17	63.5	195
August	2.5	.5	.968	1.50	30.0	92
September	8	.6	1.74	2.69	52.3	161
October	2.8	.62	1.17	1.81	36.2	111
November	19	.46	3.63	5.62	109	334
December	4.3	.56	1.30	2.01	40.2	123
Calendar year 1934	39	.12	1.83	2.83	670	2,050
January	15	.96	3.07	4.75	95.1	292
February	81	.42	5.58	8.63	156	480
March	43	.96	3.93	6.08	122	374
April	11.2	.62	1.31	2.03	39.3	121
May	7.8	.51	1.15	1.78	35.7	110
June	6.0	.77	1.39	2.15	41.6	128
Fiscal year 1934-35	81	.42	2.25	3.48	821	2,520

*Estimated.

East Branch of Manoa Stream near Honolulu

Location.- Water-stage recorder, lat. 21°19'50", long. 157°48'10", just below highway bridge 400 feet upstream from confluence with West Branch of Manoa Stream and 4 miles northeast of Honolulu post office. Zero of gage is 294.50 feet above mean sea level, by levels of the Board of Water Supply.

Drainage area.- 1.0 square mile.

Records available.- May 1913 to January 1921, August 1925 to June 1935.

Average discharge.- 16 years (1913-20, 1926-35), 2.95 million gallons a day (4.56 second-feet).

Extremes.- Maximum discharge during year, 332 million gallons a day (514 second-feet) Feb. 27 (gage height, 4.37 feet); minimum, 0.93 million gallons a day (1.44 second-feet) Nov. 9, 10.

1913-21, 1925-35: Maximum gage height, 10.4 feet Jan. 16, 1921, at former site and datum, determined from floodmarks (discharge, estimated, 2,000 million gallons a day or 3,090 second-feet); minimum discharge, 0.4 million gallons a day (0.6 second-foot) June 7, 8, 1926.

Remarks.- Records good for ordinary stages; fair for high stages and estimated periods. Water is diverted from stream about 1,500 feet above station by East Manoa Ditch.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Feb. 27				Feb. 28 to June 30			
0.2	0.52	1.2	9.4	0.2	0.31	1.2	10.9
.4	1.65	1.4	12.2	.4	1.85	1.4	14.8
.6	3.15	1.6	15.9	.6	3.55	1.6	19.5
.8	5.1	1.8	22	.8	5.6		
1.0	7.2			1.0	8.1		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.9	1.3	2.9	1.6	1.6	2.7	2.05	1.28	16.0	1.29	1.10	1.85
2	1.35	1.4	1.3	1.4	1.7	1.8	2.1	1.28	*9	1.29	1.10	1.71
3	1.25	1.7	1.3	1.3	1.45	2.0	1.79	1.22	*5	1.29	1.10	1.36
4	1.25	1.45	1.1	1.55	1.35	1.65	1.46	1.15	*4.0	1.66	1.85	3.05
5	1.15	1.45	1.1	1.6	2.-	1.65	1.40	1.15	*3.0	1.43	9.6	10.0
6	1.3	1.3	1.15	1.3	1.4	1.6	1.40	1.15	*3.2	1.29	3.75	4.0
7	6.6	1.25	1.1	1.3	1.3	1.55	3.05	1.15	*3.5	1.22	1.71	2.5
8	4.1	1.15	1.1	1.25	1.3	1.45	1.86	1.15	*2.5	1.22	1.50	1.85
9	2.2	1.15	1.05	1.15	1.25	1.4	1.53	1.09	*2.2	†1.22	1.43	1.71
10	1.95	1.45	2.6	1.1	1.0	1.4	1.40	1.22	*2.2	1.15	1.36	1.71
11	1.95	1.65	9.7	1.15	4.5	1.4	3.15	*1.3	*1.9	1.10	1.29	1.64
12	3.7	2.4	2.2	1.15	8.7	1.35	1.65	*1.2	*4.0	1.15	1.29	1.57
13	2.5	1.85	1.6	2.2	7.9	1.3	1.40	†1.22	†1.85	1.15	1.29	1.64
14	2.3	1.45	9.8	2.1	3.2	1.25	2.05	1.09	1.78	1.22	1.29	1.78
15	3.1	1.55	4.0	1.25	2.1	1.1	2.55	1.09	1.78	1.22	1.29	1.64
16	2.2	1.7	2.3	1.4	3.2	1.1	2.40	1.15	1.71	1.15	2.05	1.50
17	1.95	1.6	1.95	1.05	2.3	1.1	5.2	1.09	1.64	9.3	1.71	2.1
18	1.9	1.55	*3.0	1.05	2.2	1.1	6.4	1.03	1.64	2.65	1.36	1.71
19	1.95	1.3	*2.0	1.05	1.8	1.05	2.2	1.03	2.55	1.85	1.29	1.50
20	1.7	2.5	*2.1	1.35	1.6	1.05	1.86	1.15	1.57	1.64	1.22	1.64
21	1.8	1.6	*2.5	1.4	2.1	1.1	1.65	1.46	1.57	1.43	1.22	1.71
22	2.2	1.35	*2.0	1.25	1.8	1.05	1.86	1.28	1.57	1.57	1.22	1.57
23	1.9	1.15	*2.3	1.35	2.8	2.7	1.72	1.44	1.57	1.50	1.15	1.43
24	1.65	1.15	*2.0	1.15	4.0	1.6	1.59	1.46	1.50	1.43	1.15	1.43
25	1.8	1.1	*1.8	1.85	2.8	1.65	1.53	3.75	3.1	1.29	1.15	2.1
26	5.6	1.1	*1.7	3.9	2.0	1.65	1.53	5.2	2.1	1.22	1.15	3.45
27	2.4	1.1	*1.6	2.2	2.1	1.8	1.78	18.3	1.71	1.10	1.15	3.55
28	2.1	1.1	1.55	3.3	2.5	2.1	1.59	16.5	1.43	1.10	1.29	2.65
29	1.6	1.05	1.4	1.9	1.8	1.4	1.53	-	1.43	1.10	1.29	2.55
30	1.35	1.0	2.8	2.5	5.7	1.35	1.46	-	1.36	1.15	1.36	2.35
31	1.3	1.1	-	1.65	-	2.3	1.34	-	1.36	-	1.64	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.6	1.15	2.26	3.50	70.0	215
August	2.5	1.0	1.42	2.20	44.0	135
September	9.8	1.05	2.43	3.76	73.0	224
October	3.9	1.05	1.60	2.48	49.8	153
November	8.7	1.0	2.66	4.12	79.8	245
December	2.7	1.05	1.54	2.38	47.7	146
Calendar year 1934	39	.73	2.08	3.22	758	2,320
January	6.4	1.34	2.08	3.22	64.5	198
February	18.3	1.03	2.59	4.01	72.6	223
March	16.0	1.36	2.89	4.47	89.7	275
April	9.3	1.10	1.61	2.49	48.4	148
May	9.6	1.10	1.69	2.61	52.4	161
June	10.0	1.36	2.31	3.57	69.2	213
Fiscal year 1934-35	18.3	1.0	2.08	3.22	761	2,340

*Estimated.
†Partly estimated.

East Manoa Ditch near Honolulu

Location.- Water-stage recorder, lat. 21°19'50", long. 157°48'5", 150 feet east of lower highway and gaging station on East Branch of Manoa Stream and 4 miles northwest of Honolulu post office. Zero of gage is 317.09 feet above mean sea level, by levels of the Board of Water Supply.

Records available.- May 1915 to December 1916, January 1918 to January 1921, August 1925 to June 1935.

Extremes.- Maximum discharge during year, 11.5 million gallons a day (17.8 second-feet) July 7 (gage height, 1.67 feet); minimum, 0.08 million gallons a day (0.12 second-foot) Aug. 10, 14, 15.
1915-16, 1918-21, 1925-35: Maximum discharge, about 26 million gallons a day (40 second-feet) Jan. 16, 1921 (gage height, 2.27 feet, former datum); no flow Aug. 26, 1927.

Remarks.- Records good except those for estimated periods, which are fair. Water diverted from East Manoa Stream about a quarter of a mile above station by means of crude stone dam.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.25	0.68	0.88	*0.5	0.38	0.86	1.35	0.93	1.7	0.84	0.50	0.72
2	.88	.68	.64	.46	.38	1.1	1.3	.88	1.1	.84	.46	.68
3	.84	.93	.64	.43	.36	1.6	1.15	.88	1.05	.80	.46	.60
4	.88	.84	.57	.46	.36	1.05	.97	.93	.97	.84	.79	.69
5	.84	.84	.57	.46	.41	.93	.93	.84	.97	.84	1.93	1.11
6	.88	.64	.57	.43	.36	.76	.97	.84	1.0	.80	1.50	.88
7	1.6	.64	.53	.43	.36	.72	1.4	.88	1.05	.80	1.06	.72
8	.80	.62	.50	.43	.34	.64	1.15	.84	.93	.80	.93	.64
9	.57	.60	.50	.43	.67	.64	.97	.84	.93	.72	.88	.60
10	.53	.43	.64	.43	1.2	.60	.88	.84	.88	.68	.88	.57
11	.50	.18	1.15	.43	3.4	.64	1.4	.84	.88	.64	.84	.50
12	.46	.67	.68	.43	4.7	.53	1.1	.84	1.2	.64	.80	.50
13	.41	.76	.57	.50	4.3	.57	1.0	.91	.97	.60	.80	.50
14	.38	.45	1.2	.50	2.8	.60	1.1	.84	.97	.60	.80	.50
15	.38	.26	.76	.43	2.0	.68	1.2	.84	.97	.50	.80	.50
16	.36	.72	.60	.43	2.5	.80	1.35	.88	.97	.60	.93	.50
17	.34	.76	.53	.43	1.85	.68	1.6	.80	.93	1.25	.93	.53
18	.34	.72	.53	.41	2.0	.72	1.75	.80	.93	.72	.84	.50
19	.31	.80	.46	.38	1.35	.64	1.25	.80	1.1	.57	.76	.46
20	.31	1.05	.53	.38	1.25	.68	1.1	.84	.93	.53	.76	.46
21	.31	.88	*.6	.41	1.95	.76	1.05	.93	.93	.50	.72	.46
22	.31	.72	*.5	.38	1.6	.68	1.05	.88	.93	.57	.72	.43
23	.34	.64	*.6	.38	2.4	1.35	1.05	.88	.93	.53	.72	.43
24	.34	.64	*.5	.38	3.2	1.2	1.0	.88	.93	.50	.72	.43
25	.34	.60	*.5	.41	2.6	1.1	.88	1.15	1.1	.50	.68	.43
26	.41	.60	*.5	.50	2.1	1.1	.93	1.35	1.0	.50	.68	.46
27	.25	.57	*.5	.43	2.4	1.05	.97	1.8	.97	.50	.68	.46
28	.25	.53	*.5	.50	2.3	1.15	.93	1.95	.93	.46	.72	.41
29	.56	.53	*.5	.41	2.3	.97	.84	-	.88	.46	.68	.43
30	.90	.53	*.8	.43	1.95	.88	.84	-	.88	.46	.68	.41
31	.72	.53	-	.38	-	1.25	.98	-	.84	-	.68	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1.6	0.25	0.564	0.873	17.5	54
August	1.05	.18	.646	1.00	20.0	62
September	1.2	.46	.618	.956	18.6	57
October	.50	.38	.432	.668	13.4	41
November	4.7	.34	1.79	2.77	53.8	165
December	1.6	.53	.869	1.34	26.9	83
Calendar year 1934	4.7	.12	.800	1.24	292	897
January	1.75	.84	1.11	1.72	34.3	105
February	1.95	.80	.961	1.49	26.9	83
March	1.7	.84	.992	1.53	30.8	94
April	1.25	.46	.656	1.01	19.7	60
May	1.93	.46	.817	1.26	25.3	78
June	1.11	.41	.550	.851	16.5	51
Fiscal year 1934-35	4.7	.18	.932	1.29	304	933

*Estimated.

Pukele Stream near Honolulu

Location.- Water-stage recorder, lat. 21°19'15", long. 157°47'10", 200 feet upstream from Palolo belt-road bridge, five-eighths of a mile above confluence of Pukele and Waiomao Streams, and 4¾ miles east of Honolulu post office. Zero of gage is 344.78 feet above mean sea level, by levels of the Board of Water Supply.

Drainage area.- 1.2 square miles.

Records available.- June 1926 to June 1935. April 1912 to September 1913, just below Manoa Springs, above present site.

Extremes.- Maximum discharge during year, 296 million gallons a day (458 second-feet) Feb. 27 (gage height, 4.48 feet); minimum, 0.30 million gallons a day (0.46 second-foot) June 4.
. 1912-13, 1926-35: Maximum discharge, 805 million gallons a day (1,250 second-feet) Apr. 11, 1930 (gage height, 7.75 feet, present datum, from floodmarks); minimum 0.09 million gallons a day (0.14 second-foot) Dec. 7-13, 20-21.

Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. A 2-inch pipe diverts water from stream above station.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Nov. 30				Dec. 1 to June 30			
1.1	0.28	2.0	12.5	1.1	0.32	1.8	7.4
1.2	.60	2.2	19	1.2	.70	2.0	12.4
1.3	1.1			1.3	1.22	2.2	19.1
1.4	1.8			1.4	1.98	2.4	27
1.5	2.7			1.5	2.85	2.6	36
1.6	3.9			1.6	4.0	2.9	54
1.8	7.4			1.7	5.5		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.75	0.57	*0.9	†0.60	0.70	1.60	0.75	0.75	30.5	0.91	0.51	0.32
2	.70	.54	*.5	.60	.70	1.22	.80	.70	4.7	.86	.55	.32
3	.70	.50	*.5	.60	.65	1.64	.80	.62	2.75	.80	.51	.32
4	.65	.47	*.5	.60	.60	1.22	.86	.62	2.15	.75	.51	.86
5	.60	.44	*.4	.60	1.05	1.17	.91	.62	1.83	.70	2.9	6.1
6	.54	.44	*.4	.57	.60	1.12	.91	.51	1.75	.70	1.94	1.66
7	.62	.44	*.4	.57	.54	1.06	.91	.51	2.25	.70	.65	.96
8	1.55	.44	*.4	.54	.50	1.01	.91	.51	1.68	.66	.59	.62
9	.85	.41	*.4	.50	.50	.91	.86	.51	1.60	.66	.59	.62
10	.80	*.4	*.4	.50	.47	.86	.86	.51	1.60	.62	.59	.62
11	.80	*.6	*2.6	.47	5.5	.80	.91	.51	1.52	.62	.62	.62
12	.80	*.8	*.6	.47	17	.70	.80	.51	3.85	.62	.62	.62
13	.80	*.6	*.5	.44	9.1	.66	.75	.51	1.60	.62	.62	.59
14	.80	*.6	*2.0	.44	2.6	.62	.70	.47	1.45	.59	.62	.59
15	.80	*.6	*.8	.41	1.6	.59	1.89	.47	1.30	.59	.62	.55
16	.80	*.6	*.6	.60	1.3	.59	1.50	.47	1.22	.55	.59	.47
17	.80	*.5	*.6	.47	†1.4	.55	7.2	.51	1.22	2.5	.59	.43
18	.75	*.5	*.8	.47	†1.1	.51	12.2	.47	1.17	.94	.55	.43
19	.75	*.5	*.7	.47	1.1	.55	1.60	.47	1.40	.66	.51	.43
20	.70	*.9	*.8	.50	1.1	.55	1.12	.47	1.17	.66	.51	.40
21	.65	*.5	*1.0	.50	1.1	.55	1.06	.47	1.12	.70	.51	.40
22	.60	*.5	*.9	.50	1.05	.55	1.12	.47	1.06	.75	.51	.36
23	.60	*.4	*1.0	.47	1.25	.81	1.12	.47	1.01	.75	.51	.32
24	.57	*.4	*.8	.47	2.3	.59	1.06	.47	.91	.70	.51	.32
25	.57	*.4	*.7	.47	1.8	.55	1.01	1.00	1.65	.70	.47	.32
26	1.3	*.4	*.6	1.5	1.4	.59	1.01	5.3	.96	.66	.47	.32
27	.60	*.4	*.6	.75	1.15	.66	1.01	25	1.01	.62	.47	.32
28	.57	*.4	*.5	2.0	1.15	.70	.91	49	.91	.62	.43	.32
29	.57	*.4	*.5	.70	1.25	.70	.91	-	.91	.59	.40	.32
30	.57	*.4	*.9	.65	4.5	.75	.86	-	.91	.55	.40	.32
31	.57	*.4	-	.65	-	.75	.80	-	.96	-	.36	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1.55	0.54	0.733	1.13	22.7	70
August	.9	.4	.498	.771	15.4	47
September	2.6	.4	.743	1.15	22.3	68
October	2.0	.41	.615	.952	19.1	59
November	17	.47	2.19	3.39	65.6	201
December	1.64	.51	.811	1.25	25.1	77
Calendar year 1934	22	.12	.999	1.55	364	1,120
January	12.2	.70	1.55	2.40	48.1	148
February	49	.47	3.32	5.14	92.9	285
March	30.5	.91	2.52	3.90	78.1	240
April	2.5	.55	.745	1.15	22.4	69
May	2.9	.36	.652	1.01	20.2	62
June	6.1	.32	.696	1.08	20.9	64
Fiscal year 1934-35	49	.32	1.24	1.92	453	1,390

*Estimated.
†Partly estimated.

Waiomao Stream above Pukele Stream, near Honolulu

Location.- Water-stage recorder, lat. 21°19'10", long. 157°46'45", 300 feet west of road, 1 mile upstream from confluence of Waiomao and Pukele Streams, and 5 miles east of Honolulu post office. Zero of gage is 373.49 feet above mean sea level, by levels of the Board of Water Supply.

Drainage area.- 1.0 square mile.

Records available.- June 1926 to June 1935. April 1911 to December 1912 at highway bridge below present site.

Extremes.- Maximum discharge during year, 195 million gallons a day (302 second-feet) Feb. 27 (gage height, 4.43 feet); minimum, 0.03 million gallons a day (0.05 second-foot) May 4.
1911-12, 1926-35: Maximum discharge, 461 million gallons a day (713 second-feet) Apr. 11, 1930 (gage height, 6.27 feet); no flow in extremely dry weather.

Remarks.- Records good for ordinary and medium stages; poor for very high stages and and estimated periods. Board of Water Supply diverts ground water from tunnels in drainage area.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.0	0.02	1.5	1.70	2.2	15.2
1.1	.09	1.6	2.6	2.4	23
1.2	.26	1.7	3.8	2.6	32.5
1.3	.56	1.8	5.3	2.8	44
1.4	1.04	2.0	9.4		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.19	0.14	*0.6	*0.3	0.45	1.15	0.81	0.45	29	0.19	0.08	0.27
2	.17	.17	*.2	.17	.56	.69	.64	.45	4.4	.15	.05	.14
3	.14	.49	*.15	.15	.30	1.52	.56	.39	2.1	.14	.05	.09
4	.11	.28	*.12	.14	.26	.69	.33	.39	1.22	.25	.04	.76
5	.10	.26	*.09	.19	1.02	.52	.23	1.04	.83	.30	5.3	10.3
6	.11	.17	*.08	.17	.42	.39	.21	.33	.73	.19	4.9	5.7
7	6.6	.14	*.07	.12	.28	.33	.70	.19	1.54	.14	1.30	2.5
8	1.92	.10	*.06	.11	.23	.28	.45	.14	.78	.12	1.65	.94
9	.60	.08	*.05	.09	.19	.23	.33	.12	.52	.12	.69	.52
10	.39	.08	*.12	.07	.17	.19	.21	.11	.39	.10	.45	.36
11	.30	.06	*10	.06	6.7	.19	.52	.09	.33	.09	.28	.26
12	.77	.32	*1.0	.05	18.4	.15	.33	.08	4.9	.09	.21	.19
13	.78	.15	.5	.56	12.7	.14	.21	.22	1.09	.08	.17	.15
14	.48	.08	*10	.42	3.2	.12	.89	.12	.56	.07	.14	.21
15	.65	.06	*1.0	.26	1.35	.11	1.78	.09	.42	.08	.12	.21
16	.52	.12	*.7	.78	1.90	.10	1.98	.36	.48	.07	.53	.14
17	.39	.12	*.5	.26	1.10	.08	6.7	.14	.33	2.1	.70	.31
18	.33	.23	*.7	.19	.99	.06	15.9	.09	.28	.88	.33	.23
19	.33	.87	*.4	.14	.60	.06	2.15	.07	.74	.39	.19	.15
20	.26	1.10	*.6	.11	.45	.05	1.15	.07	.33	.23	.28	.23
21	.21	.56	*.7	.14	.30	.06	.69	.21	.38	.14	.19	.32
22	.36	.28	*.4	.15	.52	.06	.88	.28	.41	.22	.15	.21
23	.28	*.17	*.6	.28	1.10	.83	1.08	.28	.30	.17	.12	.14
24	.21	*.12	*.4	.15	1.73	.74	.48	.58	.28	.11	.10	.15
25	.23	*.11	*.3	.30	1.62	.60	.36	1.49	2.1	.09	.08	.12
26	1.44	*.09	*.2	4.0	1.06	.64	.28	5.8	1.23	.09	.08	.38
27	.48	*.07	*.16	1.7	.78	.45	.57	20	.86	.08	.12	.44
28	.26	*.07	*.14	3.9	.88	.45	.60	38	.42	.06	.10	.21
29	.19	*.06	*.12	1.56	1.04	.33	.30	-	.28	.05	.09	.20
30	.21	*.06	*.6	1.35	2.2	.26	.33	-	.23	.13	.08	.28
31	.17	*.10	-	.64	-	.48	.39	-	.23	-	.10	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.6	0.10	0.619	0.958	19.2	59
August	1.10	.06	.216	.334	6.71	21
September	10	.05	1.02	1.58	30.6	94
October	4.0	.05	.597	.924	18.5	57
November	18.4	.17	2.09	3.23	62.8	193
December	1.52	.05	.385	.596	12.0	37
Calendar year 1934	23	.01	.880	1.36	321	987
January	15.9	.21	1.36	2.10	42.0	129
February	38	.07	2.56	3.96	71.6	220
March	29	.23	1.86	2.88	57.7	177
April	2.1	.05	.231	.357	6.92	21
May	5.3	.04	.602	.931	18.7	57
June	10.3	.09	.870	1.35	26.1	80
Fiscal year 1934-35	38	.04	1.02	1.58	373	1,140

*Estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

Measurements of streams and ditches on the island of Oahu at other than regular gaging stations are listed below.

Miscellaneous discharge measurements on Oahu, fiscal year July 1934 to June 1935

Date	Stream	Tributary to-	Locality	Second-feet	Million gallons a day
Aug. 7	Pearl Harbor Springs.	Pacific Ocean.....	At 27-inch culvert 300 feet west of Waiau Railway station.	3.84	2.48
Oct. 8	....do.....	....do.....	....do.....	4.56	2.95
Nov. 20	....do.....	....do.....	....do.....	4.22	2.73
Dec. 18	....do.....	....do.....	....do.....	4.11	2.66
Jan. 11	....do.....	....do.....	....do.....	4.20	2.71
Mar. 14	....do.....	....do.....	....do.....	4.04	2.61
Apr. 17	....do.....	....do.....	....do.....	3.75	2.42
May 3	....do.....	....do.....	....do.....	4.53	2.93
June 6	....do.....	....do.....	....do.....	4.56	2.95
Aug. 7	....do.....	....do.....	At wooden culvert 10 feet west of Waiau Railway station.	0.607	0.392
Oct. 8	....do.....	....do.....	....do.....	.876	.566
Nov. 20	....do.....	....do.....	....do.....	.778	.503
Dec. 18	....do.....	....do.....	....do.....	.855	.553
Jan. 11	....do.....	....do.....	....do.....	.934	.604
Mar. 14	....do.....	....do.....	....do.....	.869	.562
Apr. 17	....do.....	....do.....	....do.....	.860	.556
May 3	....do.....	....do.....	....do.....	.764	.494
June 6	....do.....	....do.....	....do.....	.741	.479
Aug. 7	....do.....	....do.....	At ditch levee 1,000 feet west of Puukapu gaging station.	0	0
Oct. 8	....do.....	....do.....	....do.....	0	0
Nov. 20	....do.....	....do.....	....do.....	*.016	*.010
Dec. 18	....do.....	....do.....	....do.....	*.077	.050
Jan. 11	....do.....	....do.....	....do.....	*.005	*.003
Mar. 14	....do.....	....do.....	....do.....	*.155	*.100
Apr. 17	....do.....	....do.....	....do.....	*.016	*.010
May 3	....do.....	....do.....	....do.....	*.002	*.001
June 7	....do.....	....do.....	....do.....	*.008	*.005
Apr. 16	....do.....	....do.....	At Puukapu gaging station near Pearl City.	8.67	5.60
May 3	....do.....	....do.....	....do.....	8.54	5.52
June 7	....do.....	....do.....	....do.....	6.88	4.45

*Estimated.

Honokahau Stream near Honokahau

Location.- Water-stage recorder, lat. 20°57'45", long. 156°35'20", 1,000 feet above intake of Honokahau Ditch and about 5 miles southeast of Honokahau. Altitude, about 950 feet, by barometer.

Drainage area.- 4.2 square miles.

Records available.- March 1913 to September 1920, May 1922 to June 1935.

Average discharge.- 17 years (1916-20, 1922-35), 25.1 million gallons a day (38.8 second-feet).

Extremes.- Maximum discharge during year, 642 million gallons a day (993 second-feet) Feb. 25 (gage height, 5.20 feet); minimum, 10.2 million gallons a day (15.8 second-feet) Oct. 17, 18.
1913-20, 1922-35: Maximum discharge, 2,200 million gallons a day (3,400 second-feet) Feb. 13, 1924 (gage height, 7.92 feet); minimum, 6.2 million gallons a day (9.6 second-feet) June 30, 1926.

Remarks.- Records good except those for extremely high-stages and those determined from ditch records, which are poor. Discharges July 1-24, July 26 to Sept. 7, 10-13, Oct. 22-30, Jan. 5-11, determined from computations of records on ditch system below station. No diversions.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Apr. 17						Apr. 18 to June 30			
2.0	9.3	2.6	37	3.4	130	2.1	11.5	2.6	35
2.2	16.0	2.8	52	3.7	184	2.2	14.9	2.8	51
2.4	25	3.1	85	4.1	276	2.4	23.5	3.1	85

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	17.2	28.5	23	12.4	24.5	13.5	56	14.6	19.2	13.5	12.2	18.6
2	14.4	30.5	18.0	11.2	12.8	13.1	46	11.8	14.9	11.8	12.2	12.9
3	13.7	44	21	11.2	11.2	12.8	31	11.8	23	11.5	12.2	11.8
4	14.1	44	17.5	11.8	11.2	12.8	17.2	11.8	15.3	11.8	12.2	11.5
5	32.5	21	12.7	16.4	73	12.8	14.9	11.3	13.3	15.6	55	75
6	30	16.5	38	12.1	17.2	12.8	14.0	11.5	22.5	14.2	30	61
7	26	14.1	45	13.5	16.4	12.8	55	11.8	14.2	13.1	16.1	26
8	37	14.4	14.6	11.8	13.5	12.8	56	11.8	13.1	15.9	13.5	13.9
9	21	14.0	14.2	11.5	11.5	12.8	53	11.8	12.4	23.5	13.2	12.5
10	17.6	15.4	28.5	32	11.2	13.1	18.2	11.8	14.8	25	12.2	12.2
11	14.9	12.9	27	12.4	43	12.8	42	11.8	13.1	17.5	12.2	12.2
12	15.7	12.4	29.5	11.2	174	12.8	14.9	11.3	124	94	16.9	11.5
13	22.5	11.6	13.2	11.5	174	12.3	13.5	32.5	22.5	25	16.1	11.5
14	35	11.3	29.5	11.8	26	12.8	13.5	14.2	14.6	18.8	21.5	18.0
15	25.5	11.4	14.9	10.8	15.3	12.3	16.9	11.8	13.8	67	14.9	19.3
16	14.7	11.2	12.4	10.8	77	12.8	14.9	24	34.5	59	22.5	20.5
17	13.4	22.5	12.8	10.2	72	12.8	12.8	13.8	14.6	253	22.5	49
18	16.5	16.6	13.8	37.5	47	12.8	25	11.8	13.1	35	15.3	24.5
19	21.5	34	11.8	13.8	16.0	12.8	18.6	11.5	12.8	80	14.1	13.5
20	15.5	25	11.5	25	15.3	12.4	17.7	15.2	12.8	33	15.1	18.9
21	16.2	14.8	11.5	28	63	19.6	13.1	59	12.8	18.1	13.2	11.8
22	41	13.4	11.5	23	49	31.5	13.5	111	12.4	25.5	12.9	31.5
23	30	13.0	11.5	33.5	98	56	57	23.5	13.1	19.8	11.8	16.4
24	16.2	11.8	11.5	36.5	33.5	14.9	14.2	29.5	*29	15.3	11.5	27
25	18.5	11.4	11.5	31.5	29	17.9	12.4	248	*15.8	31.5	11.5	17.6
26	19.1	11.0	95	44	16.8	54	12.1	112	16.0	38	11.5	20.5
27	13.4	10.7	14.6	17.1	16.8	49	11.8	90	18.1	14.6	12.9	25.5
28	12.7	10.5	11.8	36.5	14.9	36	12.8	28.5	12.4	13.2	27	15.9
29	18.1	10.5	11.2	24.5	13.5	15.3	11.5	-	11.8	12.9	24	13.5
30	18.0	10.4	18.7	25.5	13.5	13.5	16.5	-	14.2	12.5	16.7	14.2
31	17.9	21.5	-	13.1	-	26.5	46	-	17.2	-	24.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	41	12.7	20.6	31.9	640	1,960
August	44	10.4	17.8	27.5	551	1,690
September	95	11.2	20.6	31.9	618	1,900
October	44	10.2	19.7	30.5	612	1,880
November	174	11.2	40.3	62.4	1,210	3,710
December	56	12.4	19.1	29.6	591	1,810
Calendar year 1934	-	7.0	25.5	39.5	9,300	28,550
January	57	11.5	24.9	38.5	772	2,370
February	248	11.5	35.0	54.2	980	3,010
March	124	11.8	19.7	30.5	612	1,880
April	253	11.5	34.7	53.7	1,040	3,190
May	55	11.5	17.3	26.8	537	1,650
June	75	11.5	21.6	33.4	648	1,990
Fiscal year 1934-35	253	10.2	24.1	37.3	8,810	27,040

*Partly estimated.

Honokawai Ditch near Lahaina

Location.- Water-stage recorder, lat. 20°56'0", long. 156°37'30", just below intake on Honokawai Stream, 2½ miles above Pioneer Mill Co.'s power house, and 7½ miles northeast of Lahaina. Altitude, about 1,900 feet, from topographic map.

Records available.- July 1912 to June 1935.

Average discharge.- 16 years (1919-35), 6.01 million gallons a day (9.30 second-feet).

Extremes.- See table of monthly discharge for maximum and minimum discharges during year.
1912-32: Maximum discharge, 76 million gallons a day (118 second-feet) Aug. 11, 1929 (gage height, 2.17 feet); no flow occasionally, when water is shut out of ditch.

Remarks.- Since July 1932 records of daily discharges furnished by Pioneer Mill Co. Diverts water for power and irrigation from Honokawai Stream just above station. Regulated by head gates at intake.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.6	5.4	3.5	2.5	2.55	2.55	11.5	2.9	2.95	2.6	2.5	3.5
2	2.55	10.1	3.0	2.35	2.5	2.55	9.4	2.55	2.7	2.6	2.55	2.7
3	2.5	10.3	3.55	2.25	2.3	2.55	7.1	2.55	3.45	2.6	2.55	2.65
4	2.45	4.2	2.55	2.3	2.3	2.55	3.0	2.5	2.75	2.6	2.55	2.55
5	6.1	2.6	3.1	2.65	9.3	2.55	2.7	2.5	2.65	2.6	3.25	9.4
6	3.5	2.45	6.9	2.55	2.65	2.55	2.7	2.55	4.2	2.6	4.0	5.6
7	3.45	2.4	16.4	2.4	2.55	2.55	27	2.55	2.8	2.6	2.6	3.4
8	16.7	2.55	2.6	2.35	2.55	2.55	17.2	2.55	2.65	2.6	2.55	2.65
9	2.65	2.3	2.55	2.25	2.4	2.6	11.5	2.5	2.55	3.9	2.55	2.6
10	2.65	2.35	4.7	4.5	2.3	2.55	2.85	2.55	2.65	4.1	2.55	2.6
11	2.5	2.35	3.45	2.7	4.7	2.55	13.2	2.5	2.6	3.3	2.55	2.6
12	2.65	2.3	4.9	2.3	21	2.55	2.85	2.5	21	15.9	4.3	2.6
13	3.5	2.3	2.4	2.3	23	2.55	2.75	4.1	4.1	4.0	3.6	2.6
14	5.2	2.25	3.7	2.3	3.3	2.55	2.55	2.75	2.65	3.7	4.6	3.45
15	2.95	2.25	2.55	2.3	2.55	2.95	2.75	2.55	2.6	13.5	9.2	4.0
16	2.4	1.68	2.35	2.3	22	2.55	2.7	3.25	3.15	12.2	4.6	5.8
17	2.3	3.15	2.35	2.3	15.8	2.55	2.55	2.6	2.8	25	3.25	14.7
18	2.6	2.8	2.25	3.25	9.8	2.55	5.3	2.55	2.6	5.4	3.0	6.8
19	2.85	11.8	2.3	6.3	2.65	2.55	4.2	2.55	2.6	17.2	2.8	3.15
20	2.5	3.0	2.3	3.35	2.6	2.55	3.2	2.6	2.6	8.1	2.8	4.1
21	6.5	2.6	2.3	8.2	15.0	4.1	2.55	16.2	2.6	3.55	2.9	2.7
22	12.8	2.55	2.3	9.2	10.8	6.7	2.6	24.5	2.6	7.4	3.0	8.1
23	8.6	2.5	2.3	6.2	24	9.7	12.5	5.9	2.6	3.6	2.55	4.1
24	2.7	2.35	2.25	7.8	9.1	2.7	2.7	9.8	2.6	2.7	2.6	7.3
25	2.55	2.2	2.2	9.8	6.0	3.35	2.55	33	2.6	3.45	2.6	4.7
26	2.95	2.2	19.5	6.1	3.1	15.4	2.55	16.2	2.85	5.0	2.6	5.8
27	2.4	2.2	2.9	2.55	3.0	12.0	2.55	20.5	3.35	2.55	2.65	7.8
28	2.3	2.25	2.45	3.35	2.75	9.2	2.6	4.1	2.6	2.55	6.8	3.6
29	2.85	2.25	2.35	2.6	2.6	2.8	2.55	-	2.6	2.55	5.4	3.0
30	2.85	2.25	2.55	2.55	2.7	3.85	-	-	2.6	2.5	4.4	3.25
31	3.6	3.6	-	2.5	-	5.4	13.0	-	2.55	-	2.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	16.7	2.3	4.03	6.24	125	383
August	11.8	1.68	3.40	5.26	105	324
September	19.5	2.2	3.95	6.11	118	364
October	9.8	2.25	3.75	5.80	116	357
November	24	2.3	7.26	11.2	218	668
December	15.4	2.55	4.05	6.27	126	385
Calendar year 1934	33	1.68	4.60	7.12	1,680	5,150
January	27	2.55	6.03	9.33	187	574
February	33	2.5	6.57	10.2	184	564
March	21	2.55	3.41	5.28	106	324
April	25	2.5	5.76	8.91	173	531
May	9.2	2.5	3.43	5.31	106	327
June	14.7	2.55	4.59	7.10	138	423
Fiscal year 1934-35	33	1.68	4.66	7.21	1,700	5,220

Olowalu Ditch near Olowalu

Location.- Water-stage recorder, lat. 20°49'40", long. 156°36'40", 114 feet above intake of pipe line to hydroelectric plant, 1¼ miles northeast of Olowalu, and 7 miles east of Lahaina. Prior to Jan. 22, 1932, at station 300 feet above present site. Jan. 23, 1932, to Oct. 7, 1933, discharge determined by three stations about 1,000 feet below present site. All records are comparable.

Records available.- August 1911 to June 1935.

Average discharge.- 17 years (1917-20, 1921-35), 4.67 million gallons a day (7.23 second-feet).

Extremes.- See monthly discharge table for maximum and minimum discharges during year. 1911-32: Maximum discharge, 18 million gallons a day (28 second-feet) Dec. 25, 1920 (gage height, 1.53 feet, former site and datum); no flow occasionally, when water was shut out of ditch.

Remarks.- Record of daily discharge furnished by Pioneer Mill Co. Intake in Olowalu Stream at elevation about 450 feet. Water used for power and irrigation. Regulated by head gates.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.4	3.5	3.55	3.0	3.9	5.1	1.65	*5.2	6.4	4.9	5.0	3.2
2	5.6	4.4	2.95	2.75	3.6	4.9	6.3	*6.2	*5.4	4.6	4.7	3.05
3	4.9	6.4	3.05	2.65	3.25	4.5	6.6	*5.6	*4.5	4.4	4.6	3.0
4	4.4	6.7	3.15	2.6	3.0	4.6	5.2	5.2	4.2	4.3	4.5	2.95
5	5.2	5.5	2.95	2.7	5.3	4.3	4.3	4.9	7.8	4.2	4.8	5.5
6	5.2	4.5	4.6	2.65	4.9	4.1	3.9	4.6	*6.0	4.0	5.0	8.2
7	5.3	3.95	7.2	2.55	4.2	3.9	6.9	4.4	*8.0	1.99	4.4	6.7
8	6.4	3.55	6.6	2.55	3.65	3.75	7.8	4.1	*6.6	3.95	4.2	4.7
9	6.3	3.4	5.0	2.4	3.4	3.65	8.3	3.9	*6.0	4.4	4.1	3.95
10	5.5	3.3	4.8	2.9	3.15	3.6	8.1	3.75	*5.8	4.8	3.9	3.6
11	4.7	3.2	5.3	2.85	3.5	3.5	7.8	3.65	5.7	4.6	3.8	3.35
12	4.5	3.1	5.1	2.5	7.2	3.35	7.2	3.6	*11	10.9	4.2	3.15
13	4.6	2.9	4.0	3.25	7.3	3.3	1.05	3.45	8.5	12.1	4.2	3.05
14	4.8	2.85	3.65	3.0	7.4	3.2	5.2	3.3	7.9	10.3	4.1	3.35
15	4.5	2.8	3.35	2.7	7.4	3.1	4.9	3.25	7.0	12.3	3.95	3.3
16	3.9	2.7	3.15	2.6	7.3	3.05	4.8	3.3	6.7	11.9	4.2	3.2
17	3.7	2.95	2.95	2.4	7.4	2.95	4.7	3.1	6.0	13.7	4.2	6.3
18	3.75	2.9	2.85	2.4	7.3	2.9	7.2	3.05	5.6	2.35	4.1	5.0
19	3.55	4.3	2.75	5.0	7.4	2.85	6.8	3.0	5.3	*10	3.7	3.9
20	3.35	5.9	2.7	3.3	7.2	2.9	7.3	3.15	5.2	*8.0	3.55	3.75
21	3.45	4.2	3.45	4.7	7.4	3.35	5.7	4.7	4.9	*6.0	3.45	3.25
22	4.6	3.65	3.0	4.4	8.1	3.6	*4.5	1.64	4.6	4.4	3.3	3.65
23	5.1	3.35	2.75	5.2	6.7	5.3	*4.5	6.7	4.6	6.4	3.25	4.0
24	4.2	3.05	2.65	5.8	8.6	3.55	*6.0	*8.0	5.5	7.0	3.2	3.9
25	3.85	2.9	2.5	6.1	8.5	3.25	*5.4	*11	6.3	7.2	3.1	3.65
26	3.65	2.65	6.0	7.2	8.2	6.1	*5.0	*9.0	7.8	8.8	3.15	4.0
27	3.4	2.75	5.4	5.8	7.5	5.4	5.0	*10	4.2	6.9	3.15	3.95
28	3.2	2.65	3.9	5.5	6.5	5.3	5.6	7.9	*4.0	6.1	4.0	3.8
29	3.55	2.55	3.25	4.8	5.9	4.1	4.6	-	*3.5	5.6	4.6	3.4
30	3.4	2.55	2.9	4.2	5.5	3.6	*4.4	-	*3.3	5.2	4.1	3.15
31	3.15	3.15	-	3.75	-	3.5	*4.2	-	*3.3	-	3.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.4	3.15	4.45	6.89	138	424
August	6.7	2.55	3.63	5.62	112	345
September	7.2	2.5	3.85	5.96	115	354
October	7.2	2.4	3.68	5.69	114	350
November	8.7	3.0	6.09	9.42	183	561
December	6.1	2.85	3.89	6.02	121	370
Calendar year 1934	8.9	1.7	4.31	6.67	1,570	4,830
January	8.3	1.65	5.51	8.53	171	524
February	11	1.64	5.02	7.77	141	432
March	11	3.3	5.86	9.07	182	557
April	13.7	1.99	6.78	10.5	203	624
May	5.0	3.1	4.00	6.19	124	381
June	8.2	2.95	4.00	6.19	120	368
Fiscal year 1934-35	13.7	1.64	4.72	7.30	1,720	5,290

*Estimated.

Oheo Stream below diversion dam near Kipahulu

Location.- Water-stage recorder, lat. 20°41'5", long. 156°4'10", below old diversion dam at elevation 1,550 feet, 2 miles northwest of Kipahulu, and 2½ miles above mouth.

Drainage area.- 5.8 square miles.

Records available.- December 1931 to June 1935. February 1927 to September 1929 at site 100 feet upstream, at old diversion dam.

Extremes.- Maximum discharge recorded during year, 1,780 million gallons a day (2,750 second-feet) July 6 (gage height, 10.59 feet); minimum, 0.01 million gallons a day (0.02 second-foot) Oct. 9, 10.
1927-29, 1931-35: Maximum discharge, 6,190 million gallons a day (9,580 second-feet) Jan. 4, 1933 (gage height, 11.95 feet); no flow during dry periods.

Remarks.- Records good for ordinary stages; poor for estimated periods and high stages. Discharge estimated Feb. 25 to Mar. 19. A new artificial control was installed on Feb. 27, 1934. Small quantity of water is diverted for domestic supply and livestock use.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.1	0.00	3.5	96
1.2	.02	4.0	142
1.4	.49	5.0	260
1.6	2.05	6.0	410
1.8	5.3	7.0	600
2.0	10.7	8.0	810
2.5	32	9.0	1,090
3.0	60		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	36	24	67	0.33	18.6	100	34	0.29	100	0.64	0.17	1.45
2	11.3	58	2.9	.18	4.4	51	24.5	.24	10	.06	.44	9.4
3	2.7	26	14.8	.52	.29	2.05	72	.24	25	.02	5.2	.92
4	1.35	7.0	13.9	.49	.18	1.27	13.3	.84	10	.28	.44	1.26
5	31.5	1.38	1.24	.28	.12	1.03	14.2	1.17	5.0	.07	.12	7.9
6	142	.83	102	.07	.07	.89	15.0	2.9	50	.02	.08	5.8
7	136	7.2	190	.03	2.65	.64	406	.85	15	.02	.04	10.7
8	42	49	16.6	.01	9.3	.54	342	.65	70	.01	.02	.49
9	10.6	1.10	8.0	.01	1.27	.40	219	.44	15	.02	.12	.10
10	6.8	2.4	65	.01	.18	.40	20.5	.26	6.0	.13	6.1	.02
11	3.5	51	111	.13	.08	.29	201	8.0	5.0	.68	.07	.02
12	10.0	166	41	.02	15.8	.24	15.2	31.5	500	28.5	.84	.02
13	5.5	10.7	3.95	.01	31.5	.18	17.0	4.1	100	10.2	3.9	.02
14	18.8	5.6	22	.01	2.2	.26	497	.76	25	19.0	15.6	.02
15	27.5	23.5	38	.01	.29	.15	182	.54	10	118	3.35	13.2
16	2.4	66	12.2	.01	31	.10	25.5	.49	5.0	89	11.4	.66
17	.96	31	56	.01	79	.07	6.0	.36	2.0	166	20.5	12.9
18	3.95	68	52	22.5	70	.05	49	.26	1.0	33.5	44	8.8
19	2.2	55	10.4	54	43	.24	5.3	.21	.4	99	2.85	2.75
20	.59	25	2.4	15.2	19	25.5	2.45	.24	.13	81	4.6	14.6
21	10.6	6.8	1.03	102	84	51	1.35	44	.26	12.2	2.0	.47
22	92	8.2	.83	78	199	36.5	19.2	116	.18	24	.49	.12
23	68	1.35	3.85	154	369	163	206	128	.13	15.4	.29	.55
24	5.4	.83	1.03	111	126	10.3	4.5	115	174	2.45	.15	.58
25	3.6	.64	.76	27	93	178	1.63	1,200	13.8	.98	.08	8.0
26	13.6	.49	70	74	61	284	.96	900	3.15	3.35	.05	27.5
27	19.8	.40	9.3	4.6	78	198	.76	800	.86	.40	.12	98
28	1.77	.29	1.03	1.63	19.7	211	.64	350	1.15	.24	3.3	15.8
29	6.6	.21	.54	.64	3.15	23	.49	-	.15	.13	19.9	24
30	9.1	.15	.36	.40	1.10	11.1	.59	-	.96	.10	11.0	43
31	22	113	-	.24	-	11.2	.49	-	8.8	-	.26	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	142	0.59	24.1	37.3	748	2,300
August	166	.15	26.2	40.5	811	2,490
September	190	.36	30.6	47.3	919	2,820
October	154	.01	20.9	32.3	647	1,990
November	369	.07	45.4	70.2	1,360	4,180
December	284	.05	43.9	67.9	1,360	4,180
Calendar year 1934	526	0	28.1	43.5	10,240	31,460
January	497	.49	77.3	120	2,400	7,360
February	1,200	.21	132	204	3,710	11,380
March	500	.13	37.4	57.9	1,160	3,550
April	166	.01	23.5	36.4	705	2,160
May	44	.02	5.08	7.86	157	483
June	98	.02	10.2	15.8	307	942
Fiscal year 1934-35	1,200	.01	39.1	60.5	14,280	43,840

Right Branch of Kahalawe Stream near Kipahulu

Location.- Water-stage recorder, lat. 20°41'5", long. 156°3'0", at old ditch intake 2 miles north of Kipahulu. Altitude, 1,100 feet.

Drainage area.- 0.1 square mile.

Records available.- February 1927 to June 1935.

Extremes.- Maximum discharge recorded during year, 376 million gallons a day (582 second-feet) Dec. 1 (gage height, 11.73 feet); minimum, 0.8 million gallons a day (1.2 second-feet) sometime between Mar. 21 and May 7.

1927-35: Maximum discharge, 612 million gallons a day (947 second-feet) Feb. 5, 1932 (gage height, 11.20 feet former datum); minimum, 0.15 million gallons a day (0.23 second-foot) Dec. 16, 1929.

Remarks.- Records good for ordinary stages; poor for high stages. No diversions. Data insufficient for making estimates Dec. 11 to Jan. 23, Mar. 21 to May 7, May 10 to June 14.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

8.1	0.5	8.8	13.0
8.2	1.0	9.0	20.5
8.3	2.0	9.2	30
8.4	3.6	9.4	42
8.6	7.8	9.6	56

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.2	3.0	6.5	2.0	4.0	17.6	-	1.1	5.0			-
2	3.8	6.8	2.0	1.6	1.8	6.0	-	1.1	5.4			-
3	2.0	5.4	3.1	2.4	1.6	2.2	-	1.3	6.3			-
4	1.7	3.6	4.0	2.2	1.6	1.8	-	12.0	2.6			-
5	7.8	2.4	1.7	2.0	2.4	1.6	-	5.1	2.2			-
6	4.1	2.0	5.4	1.5	1.8	1.5	-	6.7	7.1			-
7	7.4	2.2	8.9	1.4	3.7	1.4	-	2.7	4.8			-
8	4.2	2.2	2.7	1.3	5.3	1.3	-	1.8	11.5		0.9	-
9	2.7	1.7	3.5	1.3	3.0	1.2	-	1.6	4.8		1.4	-
10	2.7	2.2	9.0	1.4	1.7	1.2	-	1.4	3.1			-
11	2.7	6.6	13.3	3.2	1.5	-	-	4.1	2.2			-
12	2.9	7.7	4.7	1.4	6.7	-	-	4.4	15.8			-
13	2.7	2.4	2.6	1.4	6.1	-	-	1.5	2.6			-
14	5.7	2.4	4.8	1.4	2.4	-	-	1.1	2.1			-
15	6.9	3.6	4.8	1.2	2.0	-	-	1.1	1.8			2.0
16	2.6	13.5	2.9	1.3	7.2	-	-	1.1	1.6			1.5
17	1.8	5.7	4.0	1.1	8.1	-	-	.9	1.4			3.3
18	2.9	6.3	4.4	4.4	3.7	-	-	.9	-			3.6
19	2.4	6.0	3.1	3.3	3.1	-	-	.9	1.1			1.8
20	2.0	3.8	2.4	2.0	3.3	-	-	.9	1.1			4.2
21	3.4	2.7	2.1	6.1	6.9	-	-	2.0	-			1.3
22	8.7	3.1	2.8	2.9	10.4	-	-	2.6	-			1.1
23	5.4	2.2	7.7	12.4	14.3	-	-	3.6	-			1.6
24	2.4	2.0	2.7	7.3	7.0	-	1.5	1.8	-			1.6
25	2.7	2.0	2.1	5.4	7.7	-	1.4	23	-			1.4
26	3.3	1.7	4.7	7.8	4.0	-	1.3	28	-			2.6
27	2.1	1.6	2.6	2.6	4.8	-	1.2	31	-			3.3
28	2.0	1.6	2.0	2.1	3.5	-	1.2	29.5	-			1.5
29	2.6	1.5	1.8	1.8	2.6	-	1.2	-	-			2.8
30	2.2	1.4	1.7	1.7	2.2	-	1.7	-	-			2.9
31	2.6	13.9	-	1.6	-	-	1.2	-	-			-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	8.7	1.7	3.66	5.66	114	349
August	13.9	1.4	3.97	6.14	123	378
September	13.3	1.7	4.13	6.39	124	381
October	12.4	1.1	2.89	4.47	89.5	275
November	14.3	1.5	4.48	6.93	134	412
December 1-10	17.6	1.2	3.58	5.54	35.8	110
Calendar year						
January 24-31	1.7	1.2	1.34	2.07	10.7	33
February	31	.9	6.19	9.58	173	532
March	-	-	-	-	-	-
April	-	-	-	-	-	-
May	-	-	-	-	-	-
June 15-30	4.2	1.1	2.28	3.53	36.5	112
Fiscal year						

Makapipi Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'35", long. 156°5'55", 100 feet above highway crossing, 1¼ miles south of Nahiku, and 4⅘ miles southeast of Keanae post office.
Drainage area.- 5.0 square miles.
Records available.- July 1932 to June 1935.
Extremes.- Maximum discharge during year ending June 30, 1933, 596 million gallons a day (922 second-feet) Mar. 6 (gage height, 4.02 feet); no flow Nov. 20-23, Dec. 24-28.
Maximum discharge during year ending June 30, 1934, 530 million gallons a day (820 second-feet) Apr. 25 (gage height, 3.77 feet); no flow for several periods during year.
Maximum discharge during year ending June 30, 1935, unknown, owing to faulty gage-height record; minimum, 0.4 million gallons a day (0.6 second-foot) Oct. 19, 20.
Remarks.- Records good except those for periods estimated, which are poor. Koolau Ditch diverts water 1 mile above station at intake for irrigation in central Maui.

Rating tables, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

July 1, 1932, to May 9, 1934		May 10, 1934, to Mar. 30, 1935		Mar. 31 to June 30, 1935	
0	0.0	0.1	0.1	0.3	1.20
.2	.9	.2	.6	.5	5.8
.4	4.6	.4	3.8	.7	14.5
.6	12.0	.6	10.7	.9	29
.8	23.5	.8	22.5	1.0	41
1.0	45	.9	33	1.1	52
1.1	55	1.0	45	1.2	62
1.5	97	2.0	166	1.3	73
2.0	166	2.6	270		
2.6	270				

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.8	5.6	2.2	1.5	0.4	0.6	65	12.5	6.5	12.1	3.4	1.6
2	3.7	4.9	2.2	1.5	.4	.7	14.1	6.2	5.6	7.4	3.4	1.7
3	3.7	4.4	2.3	1.5	.3	.8	26	4.6	5.2	45	3.4	*1.7
4	3.4	3.9	2.3	1.3	.3	1.7	31.5	3.7	4.6	11.6	3.4	*1.6
5	3.4	3.4	2.3	1.3	.2	1.9	8.2	3.2	39	6.5	3.2	*1.6
6	3.2	3.2	2.3	1.2	.2	1.6	4.9	2.8	77	5.9	3.2	†1.6
7	3.2	2.8	2.3	1.2	.2	1.3	*3.0	2.3	106	5.9	3.2	1.6
8	3.0	2.8	2.3	1.2	.2	1.0	*2.0	2.0	69	5.6	3.2	1.5
9	3.0	2.3	4.6	.9	.2	.8	*1.6	2.5	24.5	5.2	3.0	1.5
10	2.8	2.3	3.9	.9	.2	.7	1.3	2.2	29.5	4.9	3.2	1.3
11	2.8	2.3	3.7	.8	.2	.6	.8	2.3	19.7	4.9	3.0	1.3
12	2.8	2.3	3.7	.8	.2	.5	.6	2.8	11.9	4.6	2.8	1.2
13	6.9	2.3	3.2	.8	.2	.6	.3	3.8	7.8	4.6	2.8	1.2
14	3.9	2.3	3.0	.8	.1	.5	.2	4.3	7.2	4.4	14.4	1.0
15	3.7	2.2	2.8	.8	.1	1.2	1.3	3.7	6.5	4.4	6.2	.9
16	4.6	2.2	2.5	.8	.1	.8	3.6	3.4	5.9	4.1	4.1	.9
17	4.6	2.3	2.3	.7	.1	.7	2.8	3.4	5.6	4.1	3.9	.8
18	5.2	2.3	2.3	.7	.1	.6	5.2	3.4	4.9	4.1	3.4	.8
19	5.6	2.3	2.2	.8	.1	.3	2.2	3.4	4.6	3.9	3.2	.8
20	5.6	2.2	2.0	.7	0	.3	1.9	3.9	4.4	3.9	3.2	.7
21	5.9	2.2	2.0	.7	0	.2	1.9	5.7	4.4	3.7	3.0	.7
22	31.5	2.2	1.9	.6	0	.2	3.0	6.2	4.1	3.7	2.8	.7
23	15.2	2.3	1.9	.6	0	.1	3.4	5.6	4.1	3.7	2.8	.6
24	25	2.5	1.7	.6	1.2	.1	3.0	4.9	4.1	3.4	2.5	.6
25	16.8	2.3	2.0	.6	.9	.1	2.3	4.9	4.1	3.4	2.3	.6
26	12.5	2.3	1.7	.6	.6	0	2.0	4.9	4.1	3.4	2.3	.6
27	10.7	2.3	1.7	.6	.6	0	1.9	5.6	3.9	3.4	2.2	.6
28	8.2	2.3	1.7	.6	.5	0	1.9	13.7	3.9	3.4	2.0	.6
29	7.2	2.3	1.6	.6	.5	.2	1.9	-	4.1	3.4	1.9	.6
30	6.5	2.3	1.6	.5	.6	.1	2.2	-	4.1	3.2	1.9	.6
31	6.2	2.3	-	.5	-	123	11.3	-	4.1	-	1.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	31.5	2.8	7.25	11.2	225	689
August	5.6	2.2	2.70	4.18	83.6	257
September	4.6	1.6	2.41	3.73	72.2	222
October	1.5	.5	.86	1.33	26.7	82
November	1.2	0	.29	.45	8.8	27
December	123	0	4.55	7.04	141	433
Calendar year						
January	65	.2	6.82	10.6	211	648
February	13.7	2.0	4.57	7.07	128	393
March	106	3.9	15.8	24.4	490	1,500
April	45	3.2	6.26	9.69	188	576
May	14.4	1.7	3.39	5.25	105	322
June	1.7	.6	1.05	1.62	31.5	97
Fiscal year 1932-33	123	0	4.69	7.25	1,710	5,250

*Estimated.
†Partly estimated.

Makapipi Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.6	0.3			0	33.5	0	10.6		0	3.4	10.2
2	.9	.3			0	1.1	0	.7		0	2.3	8.3
3	1.2	.3			0	.2	0	.2		* .8	9.5	7.1
4	1.2	.3			0	.1	0	0		*0	4.4	25
5	1.0	.3			0	0	0	0		*0	26.5	9.9
6	1.0	.5			0	0	0	0		*0	17.0	8.7
7	1.0	.5			0	0	0	0		*0	28	8.7
8	1.3	.4			0	0	0	0		*9	42	7.1
9	1.5	.4			0	0	0	0		*1.0	78	6.7
10	1.5	.3			0	0	0	0		*1.1	68	6.1
11	1.3	.2			0	0	0	0		1.3	46	6.1
12	1.2	.2			0	0	0	0		1.6	46	5.8
13	1.2	.2			0	0	0	0		1.7	17.7	5.8
14	1.0	.2			0	0	0	0		2.8	13.7	5.8
15	.8	.1			0	0	0	0		2.8	16.8	5.5
16	.8	.1			0	0	0	0		2.2	7.1	5.5
17	.7	.1			0	0	0	0		1.6	5.0	5.5
18	.6	0			0	0	0	0		1.0	3.8	6.1
19	.5	0			0	0	0	0		.8	3.6	7.3
20	.5	0			0	0	0	10.2		.6	3.4	10.4
21	.4	0			0	0	0	0		8.4	3.0	7.5
22	.3	0			0	0	0	0		13.0	3.0	7.1
23	.3	0			0	0	.6	0		5.2	3.2	6.7
24	.3	0			0	0	3.3	0		20.5	3.0	6.7
25	.2	0			23.5	0	0	0		267	3.2	6.4
26	.2	0			58	0	0	0		46	3.2	7.9
27	.2	0			0	0	0	0		20.5	3.4	9.1
28	.2	0			0	0	0	0		11.5	3.8	8.7
29	.2	0			0	0	0	-		6.8	3.8	9.9
30	.3	0			0	0	0	-		4.9	8.1	9.1
31	.3	0			-	0	15.8	-		-	12.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1.5	0.2	0.73	1.13	22.7	70
August	.5	0	.15	.23	4.7	14
September	0	0	0	0	0	0
October	0	0	0	0	0	0
November	58	0	2.72	4.21	81.5	250
December	33.5	0	1.13	1.75	34.9	107
Calendar year 1933	106	0	3.56	5.51	1,300	3,980
January	15.8	0	.64	.99	19.7	60
February	10.6	0	.78	1.21	21.7	67
March	0	0	0	0	0	0
April	267	0	14.4	22.3	432	1,330
May	78	2.3	15.9	24.6	493	1,510
June	25	5.5	8.02	12.4	241	739
Fiscal year 1933-34	267	0	3.70	5.72	1,350	4,150

*Estimated.

Makapipi Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.9	4.7	2.2	1.3	2.6	2.8	*3.0	3.8	52	4.7	4.4	3.0
2	6.7	5.0	2.2	1.2	2.4	2.4	*4.5	3.8	31	4.4	4.1	3.0
3	6.4	5.2	2.2	1.2	2.0	2.0	*6	3.8	20.5	4.4	3.85	2.8
4	5.8	6.7	2.2	1.1	1.7	1.8	*8	3.8	15.2	6.1	3.55	2.8
5	18.9	7.1	2.0	1.0	5.6	1.8	*5	3.8	11.7	6.2	4.1	5.6
6	72	6.7	2.2	1.0	2.8	1.7	*4.0	3.8	9.5	5.8	5.2	8.5
7	12.5	6.1	3.2	.8	2.4	1.7	*80	3.8	8.3	5.5	4.4	7.0
8	9.5	5.5	2.8	.8	1.8	1.7	*60	3.8	6.1	5.2	4.4	5.0
9	6.7	5.0	2.6	.8	1.6	1.7	*50	3.8	5.0	5.0	4.4	†4.1
10	6.1	5.0	2.8	.8	1.3	1.7	*30	3.8	4.4	4.7	4.4	*3.55
11	5.8	4.1	2.8	.7	1.2	1.7	*15	3.8	3.8	4.7	4.1	†3.3
12	5.2	3.8	2.8	.7	7.2	†1.7	*10	3.6	104	7.1	4.1	3.0
13	5.2	3.8	2.6	.6	22	*1.7	*8	3.8	21	5.0	4.1	2.8
14	5.0	3.6	2.4	.6	6.8	*1.7	*7	3.6	12.7	5.0	4.1	2.65
15	5.8	3.4	2.2	.6	4.1	*1.7	†5.8	3.6	10.7	10.8	4.1	2.65
16	5.0	3.4	2.0	.5	3.8	*1.7	5.2	3.6	11.2	9.3	4.1	2.45
17	5.0	3.2	1.8	.5	5.0	*1.8	4.7	3.4	9.5	64	4.1	2.45
18	5.0	3.2	1.8	.4	6.4	†2.2	4.1	3.4	7.9	26	4.1	2.3
19	4.7	3.0	1.7	.4	5.2	*2.4	3.6	3.2	6.4	28	3.85	2.1
20	4.7	2.8	1.7	.4	4.1	*2.5	3.4	3.0	5.8	22.5	3.85	2.1
21	4.7	2.8	1.6	.4	6.1	*2.5	3.4	3.2	5.2	13.1	3.85	1.92
22	5.0	2.6	1.6	.5	13.6	*2.7	3.4	3.4	5.0	10.2	3.85	1.92
23	5.5	2.6	1.4	1.2	39	*16	3.4	5.2	4.7	8.5	3.55	1.74
24	5.5	2.6	1.4	1.2	16.2	*3.5	3.2	5.2	4.7	7.8	3.55	1.74
25	5.5	2.6	1.6	1.2	9.1	*5	3.2	* 240	4.4	7.0	3.55	1.74
26	6.3	2.4	1.7	1.3	7.1	*20	3.4	*220	4.1	8.5	3.55	1.74
27	6.1	2.4	1.6	1.3	6.1	*17	3.4	196	3.6	6.6	3.3	1.92
28	5.8	2.4	1.6	1.7	5.2	*10	3.6	78	†3.6	6.2	3.3	1.92
29	5.5	2.4	1.4	1.8	4.1	*6	3.6	-	*3.8	5.5	3.3	1.92
30	5.0	2.4	1.4	2.2	3.4	*4.5	3.6	-	†4.0	4.7	3.3	1.92
31	5.0	2.4	-	2.4	-	*3.5	3.8	-	4.7	-	3.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	72	4.7	8.51	13.2	264	810
August	7.1	2.4	3.84	5.94	119	365
September	3.2	1.4	2.05	3.17	61.5	189
October	2.4	.4	.99	1.53	30.6	94
November	39	1.2	6.66	10.3	200	613
December	20	1.7	4.16	6.44	129	396
Calendar year 1934	267	0	5.51	8.53	2,010	6,170
January	80	3.0	11.5	17.8	355	1,090
February	240	3.0	29.4	45.5	824	2,530
March	104	3.6	13.0	20.1	404	1,240
April	64	4.4	10.4	16.1	312	959
May	5.2	3.3	3.93	6.08	122	373
June	8.5	1.74	2.99	4.63	89.6	275
Fiscal year 1934-35	240	.4	7.98	12.3	2,910	8,930

*Estimated.
†Partly estimated.

West Makapipi Spring near Nahiku

Location.- Water-stage recorder, lat. 20°48'20", long. 156°6'20", half a mile above highway, 1.7 miles south of Nahiku, and 4¾ miles southeast of Keanae post office. Prior to Dec. 12, 1934, at same site with datum 0.11 foot lower than that of present gage.
Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. June 1931 to June 1932.
Extremes.- Maximum discharge during year ending June 30, 1933, 2.19 million gallons a day (3.2 second-feet) Mar. 6 (gage height, 1.76 feet); no flow Dec. 4-31, Jan. 1-23.
Maximum discharge during year ending June 30, 1934, 2.0 million gallons a day (3.1 second-feet) May 31 (gage height, 1.74 feet); no flow several months during year.
Maximum discharge during year ending June 30, 1935, 32 million gallons a day (50 second-feet) Feb. 25 (gage height, 2.93 feet); minimum, 0.16 million gallons a day (0.25 second-foot) Nov. 10, 11.
Remarks.- Records good except those for estimated periods, which are fair. No diversions.

Rating tables, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

July 1, 1932, to Dec. 12, 1934		Dec. 13, 1934, to June 30, 1935	
0.1	0	0.3	0.33
.2	.06	.4	.53
.3	.17	.5	.72
.4	.32	.6	.85
.5	.50	.7	.94
.6	.70	1.2	1.32
.7	.85	1.4	1.48
1.2	1.26	1.5	1.66
1.4	1.38	1.6	1.92
1.5	1.45	1.7	2.35
1.6	1.60	1.8	3.0
1.7	1.86	2.0	5.1

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.94	0.48	0.90	0.43	0.15	0.03	0	0.32	1.23	1.39	1.06	0.54
2	.92	.46	.90	.41	.14	.03	0	.32	1.22	1.42	1.05	.52
3	.90	.46	.90	.39	.14	.02	0	.32	1.21	1.57	1.04	.50
4	.89	.46	.89	.37	.15	.02	0	.36	1.20	1.45	1.02	.48
5	.91	.46	.88	.36	.15	0	0	.37	1.25	1.40	1.00	.48
6	.94	.46	.86	.34	.14	0	0	.39	1.37	1.37	1.00	.48
7	.85	.46	.84	.32	*.14	0	0	.43	1.36	1.36	.98	.46
8	.78	.50	.82	.29	*.15	0	0	.45	1.31	1.34	.96	.45
9	.74	.52	.87	.28	.15	0	0	.50	1.24	1.33	.96	.43
10	.73	.54	.79	.26	.14	0	0	.56	1.25	1.32	.95	.43
11	.72	.56	.76	.26	.14	0	0	.62	1.22	1.31	.93	.41
12	.66	.58	.73	.26	.13	0	0	.68	1.20	1.30	.91	.39
13	.70	.64	.70	.24	.13	0	0	.76	1.17	1.28	.90	.37
14	.64	.70	.68	.24	.12	0	0	.84	1.15	1.27	.96	.37
15	.64	.73	.68	.23	.10	0	0	.88	1.13	1.26	.93	.36
16	.64	.76	.66	.23	.10	0	0	.91	1.13	1.25	.89	.36
17	.62	.80	.64	.22	.09	0	0	.96	1.12	1.23	.86	.34
18	.62	.82	.62	.20	.08	0	0	1.00	1.11	1.22	.84	.32
19	.60	.84	.60	.20	.07	0	0	1.03	1.11	1.20	.80	.30
20	.60	.85	.58	.18	.07	0	0	1.07	1.12	1.19	.78	.29
21	.60	.85	.54	.18	.06	0	0	1.13	1.13	1.18	.76	.28
22	.66	.87	.54	.17	.05	0	0	1.16	1.16	1.17	.73	.28
23	.62	.90	.52	.17	.05	0	.02	1.17	1.19	1.16	.72	.26
24	.66	.93	.52	.16	.07	0	.04	1.17	1.21	1.14	.70	.24
25	.60	.93	.52	.15	.07	0	.05	1.18	1.24	1.13	.66	.24
26	.58	.92	.50	.15	.05	0	.08	1.20	1.27	1.13	.64	.23
27	.54	.93	.48	.15	.05	0	.12	1.22	1.28	1.11	.62	.22
28	.54	.93	.46	.15	.04	0	.14	1.26	1.30	1.10	.62	.22
29	.52	.91	.45	.15	.04	0	.17	-	1.32	1.09	.60	.20
30	.52	.91	.45	.15	.03	0	.20	-	1.33	1.08	.58	.20
31	.50	.90	-	.15	-	.01	.26	-	1.34	-	.56	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.94	0.50	0.690	1.07	21.4	66
August	.93	.46	.712	1.10	22.1	68
September	.90	.45	.676	1.05	20.3	62
October	.43	.15	.240	.371	7.44	23
November	.15	.03	.100	.155	2.99	9.2
December	.03	0	.004	.006	.11	.3
Calendar year						
January	.26	0	.035	.054	1.08	3.3
February	1.26	.32	.795	1.23	22.3	68
March	1.37	1.11	1.22	1.89	37.9	116
April	1.57	1.08	1.26	1.95	37.8	116
May	1.06	.56	.839	1.30	26.0	80
June	.54	.20	.355	.549	10.6	33
Fiscal year 1932-33	1.57	0	.575	.890	210	645

*Partly estimated.

West Makapipi Spring near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.18	0.02				0.01				0	0	1.56
2	.20	.02				0				0	0	1.54
3	.20	0				0				0	0	1.54
4	.18	.01				0				0	0	1.65
5	.17	0				0				0	0	1.57
6	.17	.01				0				0	0	1.56
7	.16	0				0				0	0	1.54
8	.16	0				0				0	0	1.52
9	.15	0				0				0	.03	1.50
10	.15	0				0				0	.12	1.46
11	.14	0				0				0	.13	1.45
12	.13	0				0				0	.22	1.43
13	.13	0				0				0	.22	1.43
14	.12	0				0				0	.28	1.42
15	.10	0				0				0	.36	1.41
16	.10	0				0				0	.37	1.39
17	.09	0				0				0	.43	1.39
18	.08	0				0				0	.50	1.39
19	.08	0				0				0	.58	1.42
20	.07	0				0				0	.66	1.44
21	.07	0				0				0	.80	1.39
22	.06	0				0				0	.90	1.37
23	.06	0				0				0	.98	1.36
24	.05	0				0				0	1.06	1.34
25	.05	0				0				.01	1.13	1.34
26	.05	0				0				0	1.20	1.35
27	.04	0				0				0	1.25	1.35
28	.03	0				0				0	1.31	1.34
29	.03	0				0				0	1.34	1.33
30	.04	0				0				0	1.39	1.31
31	.03	0				0				-	1.45	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.20	0.03	0.105	0.162	3.27	10
August	.02	0	.002	.003	.06	.2
September	0	0	0	0	0	0
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	.01	0	.0003	.0005	.01	0
Calendar year 1933	1.57	0	.381	.589	139	426
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
April	.01	0	.0003	.0005	.01	0
May	1.45	0	.539	.834	16.7	51
June	1.65	1.31	1.44	2.23	43.1	132
Fiscal year 1933-34	1.65	0	.173	.268	63.2	193

West Makapipi Spring near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.28	1.20	0.86	0.43	0.20	0.41	1.02	1.36	†1.1	1.23	0.92	1.02
2	1.26	1.20	.84	.43	.18	.43	1.02	1.36	†1.1	1.23	.93	1.00
3	1.23	1.20	.84	.41	.18	.46	1.02	1.36	†1.1	1.22	.96	.99
4	1.21	1.22	.82	.39	.17	.50	1.00	1.36	†1.1	1.24	.98	.97
5	1.25	1.20	.80	.37	.22	.52	.97	1.36	†1.1	1.26	1.02	1.00
6	1.27	1.17	.79	.36	.18	.56	.96	1.35	†1.1	1.24	1.08	1.06
7	1.22	1.14	.85	.34	.18	.62	1.02	1.34	†1.1	1.22	1.09	1.03
8	1.20	1.13	.80	.32	.17	.68	1.00	1.33	†1.1	1.20	1.11	.97
9	1.19	1.10	.78	.32	.17	.74	1.00	1.31	†1.1	1.18	1.15	.94
10	1.18	1.08	.78	.30	.16	.80	.94	1.30	†1.1	1.18	1.17	.90
11	1.18	1.06	.74	.30	.16	.86	.94	1.28	†1.1	1.16	1.18	.89
12	1.19	1.04	.73	.29	.22	.90	.90	1.27	†1.5	1.18	1.20	.87
13	1.20	1.02	.70	.28	.26	.93	.88	1.26	†1.2	1.15	1.21	.85
14	1.22	1.00	.68	.26	.23	.96	.88	1.23	†1.1	1.14	1.22	.82
15	1.25	.99	.66	.24	.20	.98	.87	1.22	†1.1	1.18	1.22	.80
16	1.25	.98	.64	.24	.22	1.00	.87	1.22	†1.1	1.18	1.23	.78
17	1.25	.96	.64	.23	.23	1.01	.88	1.20	†1.1	1.30	1.22	.77
18	1.25	.96	.62	.22	.26	1.03	.91	1.18	†1.1	1.20	1.21	.74
19	1.25	.95	.60	.20	.24	1.04	.95	1.16	*1.18	1.16	1.20	.72
20	1.25	.94	.58	.20	.24	1.05	.99	1.14	1.20	1.14	1.20	.68
21	1.26	.93	.56	.20	.28	1.05	1.03	1.12	1.21	1.10	1.18	.66
22	1.27	.92	.56	.20	.32	1.07	1.08	1.11	1.23	1.06	1.18	.64
23	1.28	.91	.56	.22	.37	1.11	1.13	1.12	1.23	1.03	1.16	.62
24	1.28	.90	.54	.20	.37	1.08	1.18	1.11	1.24	1.00	1.15	.62
25	1.28	.90	.52	.20	.36	1.09	1.23	3.85	1.24	.98	1.13	.59
26	1.28	.90	.52	.18	.34	1.13	1.27	2.5	1.23	.99	1.11	.59
27	1.27	.89	.50	.18	.36	1.11	1.30	2.2	1.23	.96	1.10	.57
28	1.26	.88	.48	.18	.36	1.11	1.32	†1.5	1.23	.95	1.08	.57
29	1.24	.88	.46	.18	.37	1.08	1.34	-	1.23	.93	1.07	.55
30	1.22	.87	.45	.20	.39	1.06	1.36	-	1.23	.92	1.06	.53
31	1.21	.86	-	.20	-	1.03	1.36	-	1.24	-	1.03	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1.28	1.18	1.24	1.92	38.4	118
August	1.22	.86	1.01	1.56	31.4	96
September	.86	.45	.663	1.03	19.9	61
October	.43	.18	.267	.413	8.27	25
November	.39	.16	.253	.391	7.59	23
December	1.13	.41	.884	1.37	27.4	84
Calendar year 1934	1.65	0	.528	.817	193	590
January	1.36	.87	1.05	1.62	32.6	100
February	3.85	1.11	1.43	2.21	40.1	123
March	1.24	1.1	1.17	1.81	36.2	111
April	1.30	.92	1.13	1.75	33.9	104
May	1.23	.92	1.12	1.73	34.8	107
June	1.06	.53	.791	1.22	23.7	73
Fiscal year 1934-35	3.85	.16	.916	1.42	334	1,020

*Partly estimated.
†Estimated.

149347 O—37——5

Hanawi Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'35", long. 156°6'50", 200 feet above Koolau Ditch intake and trail, 1¾ miles southwest of Nahiku, and 4½ miles southeast of Keanae.

Drainage area.- 0.8 square mile.

Records available.- January 1914 to January 1916, November 1921 to June 1935.

Average discharge.- 13 years (1922-35), 11.9 million gallons a day (18.4 second-feet).

Extremes.- Maximum discharge during year, 1,160 million gallons a day (1,790 second-feet) Feb. 25 (gage height, 10.57 feet); minimum, 2.1 million gallons a day (3.2 second-feet) Sept. 25.
1914-16, 1921-35: Maximum stage from floodmarks, about 20 feet during flood of Jan. 18, 1916 (discharge not determined); minimum, 1.4 million gallons a day (2.2 second-feet) July 5, 8, 1926.

Remarks.- Records good for ordinary stages; poor for extremely high and low stages and for Nov. 4-9, June 10,11, 27-30. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.3	1.9	1.6	21	4.0	166
.5	3.4	2.0	34	4.5	216
.7	5.4	2.5	58	5.0	274
1.0	9.1	3.0	89	5.5	336
1.3	14.4	3.5	123		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.4	12.4	4.3	4.2	8.1	7.8	19.4	3.9	13.9	6.1	8.1	3.2
2	7.0	24	2.8	2.8	5.2	7.7	21.5	3.7	8.3	4.3	7.6	3.2
3	6.5	24.5	3.0	2.9	4.3	7.6	30	3.6	11.0	4.0	7.2	3.1
4	6.4	16.5	3.0	4.0	9.0	7.2	8.1	3.4	9.4	7.7	6.8	3.0
5	27.5	8.2	2.8	3.2	20	6.8	8.8	3.2	10.2	9.1	17.9	18.3
6	74	6.6	26	2.8	6.0	6.5	8.8	3.2	12.0	8.2	21.5	16.4
7	28.5	5.8	54	2.6	5.6	6.1	156	3.1	11.8	6.0	9.3	10.0
8	11.0	6.0	6.4	3.6	5.2	5.8	115	3.0	10.9	9.4	7.6	5.2
9	8.8	5.0	7.5	4.0	4.6	5.3	88	2.9	10.1	12.4	6.6	*4.1
10	8.3	5.0	7.7	8.7	*4.3	5.1	11.5	2.8	9.9	16.9	6.0	3.4
11	7.6	4.3	5.7	6.2	4.2	4.6	21.5	2.8	8.7	10.0	5.5	3.2
12	10.6	4.1	4.3	3.4	57	4.3	9.7	2.8	159	48	10.2	*3.0
13	8.6	4.0	3.6	2.8	75	4.1	9.1	5.8	23.5	14.4	10.3	2.9
14	17.9	3.8	3.7	2.7	12.8	3.9	9.4	3.4	9.6	13.1	10.9	2.8
15	9.0	3.8	3.2	2.5	7.9	3.7	9.6	2.8	9.6	41	7.1	3.6
16	6.7	3.8	2.9	2.4	24.5	3.6	9.7	5.0	11.3	28	6.0	3.2
17	6.2	3.6	4.3	2.3	18.0	3.5	9.6	3.4	7.8	121	5.2	9.4
18	9.1	3.6	4.5	2.5	14.9	3.2	9.7	2.8	6.5	52	4.7	5.1
19	7.0	3.8	3.4	9.9	8.2	3.4	8.8	2.7	6.0	61	4.3	4.1
20	5.4	3.5	3.0	5.9	8.3	3.3	8.3	3.8	5.5	48	4.2	4.6
21	9.7	3.3	2.7	14.6	45	9.0	7.8	22	5.3	16.8	4.0	3.2
22	13.6	3.1	2.5	13.2	62	20	7.3	68	4.8	25.5	3.8	3.0
23	21	3.0	2.3	10.3	109	51	6.8	58	4.6	14.9	3.6	3.0
24	8.3	2.9	2.2	12.1	30.5	10.9	6.4	92	4.7	8.7	3.4	4.7
25	7.4	2.8	2.2	12.0	11.6	15.7	5.9	320	4.3	14.4	3.2	5.9
26	6.4	2.8	45	7.0	9.6	77	5.6	253	4.1	29	3.2	6.1
27	5.5	2.7	5.6	6.4	8.8	68	5.2	220	4.1	10.8	3.2	12
28	5.1	2.6	3.5	6.8	8.1	52	4.8	43	4.3	9.6	4.8	7.0
29	5.2	2.5	2.9	6.4	7.7	10.3	4.6	-	3.9	9.0	5.6	6.0
30	7.8	2.5	3.35	10.7	7.8	6.5	4.3	-	5.2	8.4	5.0	7.0
31	14.1	4.7	-	6.6	-	6.6	4.1	-	9.1	-	3.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	74	5.1	12.2	18.9	378	1,160
August	24.5	2.5	5.97	9.24	185	568
September	54	2.2	7.61	11.8	228	701
October	14.6	2.3	5.98	9.25	186	569
November	109	4.2	20.1	31.1	603	1,850
December	77	3.2	13.9	21.5	430	1,320
Calendar year 1934	333	1.2	12.9	20.0	4,700	14,440
January	156	4.1	20.5	31.7	635	1,950
February	320	2.7	40.9	63.3	1,140	3,510
March	159	3.9	13.2	20.4	409	1,260
April	121	4.0	22.3	34.5	668	2,050
May	21.5	3.2	6.79	10.5	210	646
June	18.3	2.8	5.66	8.76	170	521
Fiscal year 1934-35	320	2.2	14.4	22.3	5,240	16,100

*Partly estimated.

Hanawi Stream below Government Road, near Nahiku

Location.- Water-stage recorder, lat. 20°49'15", long. 156°6'25", three-quarters of a mile southwest of Nahiku and 4 miles southeast of Keanae post office. Altitude, 500 feet, by barometer.
Drainage area.- 1.6 square miles.
Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. January 1927 to June 1932.
Extremes. Maximum discharge during year ending June 30, 1933, 840 million gallons a day (1,300 second-feet) Dec. 31 (gage height, 6.42 feet); minimum, 13.0 million gallons a day (20.1 second-feet) May 31, June 18.

Maximum discharge during year ending June 30, 1934, 763 million gallons a day (1,180 second-feet) Apr. 25 (gage height, 6.17 feet); minimum, 10.1 million gallons a day (15.6 second-feet) Mar. 21, 22, 27.

Maximum discharge during year ending June 30, 1935, unknown, owing to faulty gage-height record; minimum, 10.8 million gallons a day (16.7 second-feet) Sept. 4, 5.
Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. Entire flow of stream above station up to 25 million gallons a day is diverted by the East Maui Irrigation Co.'s ditch at 1,300-foot elevation for irrigation in central Maui.

Rating tables, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

July 1, 1932, to Apr. 23, 1935				Apr. 24 to June 30, 1935	
0.8	6.1	2.6	100	0.8	7.9
1.0	10.3	3.0	140	1.0	14.8
1.2	16.0	3.4	188	1.2	24.5
1.4	23	3.8	245	1.4	37.5
1.6	31.5	4.2	309		
1.8	42	4.6	380		
2.0	54	5.0	460		
2.2	67	5.4	552		

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	17.3	19.3	17.0	17.0	15.1	16.3	109	26	22.5	28	13.9	13.3
2	17.3	18.6	17.3	16.7	15.1	15.7	26	18.6	16.7	46	13.9	13.3
3	17.3	18.3	17.6	16.7	15.1	15.4	79	17.3	28	84	13.9	13.6
4	17.3	18.0	18.3	16.7	15.1	16.3	40	*17	16.3	16.0	13.9	13.6
5	*17	18.0	18.3	16.3	15.1	15.7	20	*17	72	15.1	13.9	13.6
6	*17	18.0	17.6	16.3	15.1	15.7	19.0	*17	161	14.5	14.2	13.6
7	*17	17.6	17.6	16.3	15.1	15.4	18.0	*17	483	14.5	13.9	13.6
8	*17	17.6	17.6	16.0	15.1	15.4	17.6	*17	173	14.2	13.9	13.6
9	*17	17.6	37.5	16.0	15.1	15.4	17.6	*19	34	14.2	13.9	13.6
10	*17	17.6	18.6	16.0	15.1	15.4	17.3	*17	42	14.2	13.9	13.6
11	*17	17.6	17.6	16.0	15.4	15.4	17.3	*17	23	*14	13.6	13.6
12	*17	17.6	17.3	16.0	15.4	16.0	17.0	*17	17.3	*14	13.6	13.6
13	*20	17.6	17.6	16.0	15.4	16.3	17.0	*17	15.4	*14	13.6	13.6
14	*18	17.3	17.3	16.0	15.4	15.4	16.7	*20	15.4	*14	22	13.6
15	*26	17.3	17.3	16.0	15.1	17.3	45	*17	15.1	*14	15.7	13.6
16	*20	17.3	17.3	16.0	15.4	15.7	51	*20	14.8	*14	14.5	13.6
17	*18	17.6	17.3	16.0	15.1	15.4	33.5	*19	14.8	*16	14.5	13.6
18	*30	17.6	17.3	16.0	15.1	15.4	21	*20	14.8	*14	14.5	13.6
19	*24	17.6	17.3	16.3	15.1	14.8	17.6	*24	14.8	*14	14.5	13.6
20	22.5	17.6	17.0	16.0	14.8	15.1	18.0	*26	14.8	*14	14.5	13.6
21	19.7	17.6	17.0	16.0	15.1	15.1	17.0	*30	14.8	*14	17.6	13.6
22	98	17.6	16.7	16.0	15.1	15.1	18.3	*22	15.1	*14	14.5	13.6
23	52	19.0	16.7	16.0	15.1	15.1	19.0	*20	19.4	*14	14.2	14.5
24	50	18.6	16.7	15.7	54	15.4	22.5	*20	20.5	*14	14.2	13.6
25	27	17.3	17.3	15.7	19.3	17.0	16.7	*22	14.8	*14	13.9	13.6
26	19.7	17.3	17.0	15.7	15.7	15.1	17.6	*24	17.0	13.6	13.9	13.6
27	19.3	17.3	16.7	15.7	15.7	15.1	17.6	*22	14.8	13.6	13.9	13.6
28	19.0	17.3	16.7	15.7	31.5	18.0	19.7	31	14.5	17.8	13.6	13.6
29	19.7	17.3	16.7	15.4	16.3	28	15.7	-	14.2	13.9	13.6	13.6
30	21.5	17.0	17.0	15.1	17.0	14.8	15.4	-	14.2	13.9	13.6	15.4
31	22.5	17.0	-	15.1	-	245	30	-	13.9	-	13.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	98	17	24.3	37.6	752	2,310
August	19.3	17.0	17.7	27.4	549	1,680
September	37.5	16.7	18.0	27.9	539	1,650
October	17.0	15.1	16.0	24.8	496	1,520
November	54	14.8	17.3	26.8	518	1,590
December	245	14.8	23.5	36.4	727	2,230
Calendar year						
January	109	15.4	26.7	41.3	827	2,540
February	31	17	20.4	31.6	571	1,750
March	483	13.9	44.6	69.0	1,380	4,240
April	84	13.6	18.2	28.2	546	1,670
May	22	13.3	14.4	22.3	447	1,370
June	15.4	13.3	13.7	21.2	410	1,260
Fiscal year 1932-33	483	13.3	21.3	33.0	7,760	23,810

*Estimated.

ISLAND OF MAUI

Hanawi Stream below Government Road, near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.9	14.2	†13.6	13.0	14.3	65	11.6	†45	10.8	11.1	12.7	33
2	14.8	14.2	†13.6	13.0	15.1	16.7	11.6	*18	10.8	10.8	12.5	38
3	14.5	14.2	†13.6	13.0	12.2	14.2	11.6	*15	10.8	77	25	15.1
4	*14	14.2	†13.6	12.7	12.2	13.8	11.6	*13	10.8	18.7	31.5	37.5
5	*14	14.2	†13.6	12.7	12.2	*13	11.6	*12	10.8	12.2	79	15.1
6	*14	14.5	†13.6	12.7	12.2	*13	11.6	*12	10.6	11.6	64	13.9
7	*14	14.2	†13.6	13.0	12.5	*13	11.6	*12	10.6	11.6	68	13.0
8	*14	14.2	†13.6	13.0	12.2	*13	11.6	*12	10.6	44	99	12.7
9	*14	14.2	†13.6	13.0	12.2	*13	11.6	*12	10.6	14.5	165	12.5
10	*14	13.9	†13.6	12.7	12.2	*13	11.4	*12	10.6	12.7	128	12.5
11	*14	13.9	†13.6	12.7	12.2	*13	11.6	*12	10.6	24	53	12.5
12	*14	13.9	13.6	13.0	11.9	*13	11.6	†11.4	10.6	13.0	54	12.5
13	*14	13.9	13.6	12.7	11.9	*12	11.6	11.1	10.3	12.2	23.5	14.8
14	*14	14.2	13.6	12.7	11.9	*12	11.6	11.1	10.3	15.7	20	13.0
15	*14	14.2	13.6	12.7	11.9	*12	11.6	11.1	10.3	15.4	31.5	12.5
16	*14	13.9	13.6	12.5	11.9	*12	11.6	11.1	10.3	12.5	17.6	12.5
17	†14.2	13.9	13.6	12.5	11.9	*12	11.6	10.8	10.3	11.9	13.9	13.3
18	13.9	13.9	13.3	12.5	11.9	†11.9	11.6	10.8	10.3	11.6	13.0	16.0
19	13.9	13.6	13.3	12.5	11.9	11.6	11.6	13.2	10.3	11.6	12.7	18.6
20	13.9	13.6	13.3	12.5	11.9	11.6	19.0	110	10.3	25	12.5	35.5
21	13.9	13.6	13.3	12.5	12.2	11.6	16.7	21	10.1	28	12.2	14.2
22	13.9	13.6	13.3	12.5	11.9	11.6	13.9	12.5	10.6	22	12.2	13.6
23	13.9	13.6	13.3	12.2	11.9	11.6	14.5	12.2	10.3	14.5	12.2	13.0
24	13.9	13.6	13.3	12.2	11.6	11.6	30	11.4	10.3	72	12.2	13.0
25	13.9	13.6	13.3	12.2	116	11.6	14.5	11.6	10.3	552	11.9	18.8
26	13.6	13.6	13.0	11.9	192	11.4	13.0	11.4	10.3	44	11.9	36.5
27	13.6	13.6	13.0	11.9	14.2	11.4	12.7	11.1	10.8	17.0	11.9	15.1
28	13.6	13.9	13.0	11.9	13.0	11.4	12.5	10.8	12.5	14.5	12.2	14.5
29	14.2	†13.6	13.0	11.9	12.5	11.4	11.9	-	12.2	15.1	11.9	14.8
30	14.5	†13.6	13.0	11.9	11.9	11.4	11.6	-	28.5	13.0	17.7	13.9
31	14.2	†13.6	-	11.6	-	11.4	41	-	11.1	-	41	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	14.8	13.6	14.0	21.7	434	1,330
August	14.5	13.6	13.9	21.5	431	1,320
September	13.6	13.0	13.4	20.7	403	1,240
October	13.0	11.6	12.5	19.3	388	1,190
November	192	11.6	21.8	33.7	654	2,010
December	65	11.4	14.0	21.7	435	1,340
Calendar year 1933	483	11.4	19.0	29.4	6,930	21,260
January	41	11.4	13.9	21.5	432	1,320
February	110	10.8	17.1	26.5	478	1,470
March	28.5	10.1	11.2	17.3	348	1,070
April	552	10.8	39.0	60.3	1,170	3,590
May	165	11.9	35.6	55.1	1,100	3,390
June	38	12.5	17.7	27.4	532	1,630
Fiscal year 1933-34	552	10.1	18.6	28.8	6,800	20,900

*Estimated.
†Partly estimated.

Hanawi Stream below Government Road, near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.6	12.5	11.1	12.2	14.2	13.6	17.1	12.5	*20	*14	14.1	13.7
2	13.0	15.1	11.1	11.9	13.6	13.3	17.6	12.5	*18	*14	14.1	13.7
3	12.7	15.5	11.1	11.9	13.6	13.0	20	12.5	*16	*14	14.1	13.7
4	12.5	14.8	11.1	11.6	13.6	13.0	14.2	12.5	*15	*15	13.7	13.3
5	34.5	13.6	11.1	11.6	37.5	12.7	13.9	12.5	*15	*14	22	30
6	107	13.0	14.3	11.6	14.5	12.7	13.6	12.5	*15	*14	26.5	20
7	25	12.7	35.5	11.9	13.6	12.7	255	12.5	*15	*14	14.4	18.6
8	16.0	12.5	11.9	11.9	13.0	12.7	111	12.5	*15	*14	14.4	16.1
9	13.9	12.5	11.9	11.9	13.0	12.5	69	12.5	*15	*16	14.4	15.2
10	13.0	12.5	12.7	11.9	12.7	12.5	15.7	12.5	*15	*14	14.1	15.2
11	12.7	12.2	12.5	11.9	12.7	12.5	20.5	12.7	*15	*14	14.1	14.8
12	12.7	12.2	12.2	11.6	50	12.5	14.8	12.7	*120	*20	14.4	14.8
13	12.2	11.9	12.2	11.6	70	12.5	14.2	13.0	*24	*16	14.4	14.8
14	15.4	11.6	11.9	11.6	20.5	12.5	15.0	12.5	*17	*15	14.4	14.4
15	12.7	11.6	11.9	11.6	14.2	12.5	14.2	12.5	*16	*36	14.1	14.4
16	12.2	11.6	11.6	11.6	19.5	12.5	13.9	13.0	*15	*30	14.1	14.4
17	12.2	11.6	11.6	11.6	16.6	12.7	13.6	12.5	*15	*100	14.1	14.4
18	12.7	11.6	11.6	11.6	17.0	12.7	13.6	12.5	*15	*50	14.1	14.4
19	12.2	11.6	11.6	11.9	15.1	12.7	13.3	12.5	*15	*70	13.7	14.1
20	11.9	11.4	11.6	11.9	14.5	12.7	13.3	12.5	*15	*44	13.7	14.1
21	12.2	11.4	11.6	12.7	45	13.0	13.3	14.8	*15	*26	14.1	14.1
22	12.7	11.4	11.6	13.0	44	17.5	13.0	48	*15	*20	13.7	14.1
23	15.1	11.4	11.6	13.9	110	63	13.0	38	*15	16.9	13.7	14.4
24	12.7	11.1	11.9	14.2	40	14.2	13.0	60	*15	14.8	13.7	14.4
25	12.7	11.4	11.9	13.9	19.0	16.4	13.0	*500	*15	17.3	13.7	14.4
26	12.7	11.1	27.5	13.3	15.4	55	15.0	*400	*14	26.5	13.7	14.4
27	12.7	11.4	12.5	13.0	14.8	52	13.0	†526	*14	14.4	14.1	18.9
28	12.2	11.1	12.2	13.3	14.2	38.5	12.7	28	*14	14.1	14.1	15.2
29	12.2	11.1	12.2	13.3	13.9	15.7	12.7	-	*14	14.1	14.1	14.4
30	12.5	11.1	12.2	14.2	13.6	14.5	12.7	-	*14	14.1	14.1	14.8
31	12.5	11.4	-	13.6	-	13.9	12.7	-	*14	-	13.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	107	11.9	17.0	26.3	528	1,620
August	15.5	11.1	12.1	18.7	376	1,150
September	35.5	11.1	13.2	20.4	396	1,210
October	14.2	11.6	12.4	19.2	384	1,180
November	110	12.7	24.6	38.1	739	2,270
December	63	12.5	18.3	28.3	568	1,740
Calendar year 1934	552	10.1	19.3	29.9	7,050	21,640
January	255	12.7	27.0	41.8	836	2,560
February	500	12.5	59.5	92.1	1,670	5,110
March	120	14	18.9	29.2	585	1,800
April	100	14	23.9	37.0	716	2,200
May	26.5	13.7	14.7	22.7	456	1,400
June	30	13.3	15.4	23.8	463	1,420
Fiscal year 1934-35	500	11.1	21.1	32.6	7,720	23,660

*Estimated.
†Partly estimated.

Kapaula Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'50", long. 156°7'5", 40 feet above intake to Koolau Ditch, 300 feet above ditch trail, 1¾ miles southwest of Nahiku, and 4 miles southeast of Keanae.

Drainage area - 0.2 square mile.

Records available.- November 1921 to June 1935.

Average discharge.- 13 years (1922-35), 10.4 million gallons a day (16.1 second-feet).

Extremes.- Maximum discharge during year, 1,560 million gallons a day (2,410 second-feet) Feb. 25 (gage height, 7.83 feet); minimum, 0.9 million gallons a day (1.4 second-feet) June 4, 5.
1921-35: Maximum discharge, that of Feb. 25, 1935; minimum, 0.2 million gallons a day (0.3 second-foot) Nov. 23-25, 1933.

Remarks.- Records good for ordinary stages, poor for extremely high and low stages and for estimated period Mar. 7-10. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.4	1.2	13.3	2.4	68
.5	1.1	1.4	18.6	2.8	106
.6	2.1	1.6	25	3.2	160
.8	4.8	1.8	32	3.7	252
1.0	8.6	2.0	41	4.2	368

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.8	14.9	3.0	4.4	8.5	3.2	22.5	1.9	9.1	4.9	3.3	1.8
2	4.0	25	1.7	2.1	3.8	2.9	23	1.8	5.2	2.8	3.2	1.5
3	3.2	23	2.0	2.0	2.7	2.7	27.5	1.8	9.2	2.1	3.2	1.3
4	2.9	16.9	2.1	3.3	13.0	2.6	9.9	1.7	5.0	6.9	3.1	1.0
5	22	6.6	1.8	2.5	47	2.5	9.7	1.7	3.9	9.5	15.9	33.5
6	89	4.0	32.5	1.9	10.3	2.5	10.7	1.7	4.0	7.2	25	20
7	17.9	3.4	48	1.8	5.7	2.5	122	1.7	3.8	4.4	8.6	9.0
8	9.2	3.9	6.2	3.0	3.3	2.3	67	1.6	3.6	8.6	6.8	3.4
9	6.2	2.9	6.3	3.8	2.7	2.3	57	1.6	3.4	14.4	4.8	2.6
10	5.4	3.1	8.1	8.0	2.3	2.2	8.2	1.5	3.2	17.8	3.6	2.0
11	5.2	2.5	4.8	6.5	2.2	2.1	17.4	1.5	*3.8	9.9	3.3	1.8
12	9.3	2.3	3.2	2.8	49	2.1	6.8	1.5	137	43	8.3	1.6
13	6.5	2.1	2.1	2.0	72	2.0	5.2	6.6	11.8	15.9	9.1	1.6
14	17.2	1.9	2.3	1.9	10.8	1.9	4.6	2.9	5.3	17.1	9.9	1.1
15	7.9	1.9	1.9	1.6	5.2	1.9	3.9	1.6	7.3	36	5.3	1.9
16	4.4	1.8	1.6	1.4	20	1.9	3.6	6.5	11.0	26	3.9	2.1
17	3.8	1.8	2.9	1.4	15.9	1.8	3.3	2.9	5.7	107	3.1	9.3
18	6.9	1.7	3.8	1.5	14.9	1.8	3.9	1.6	4.2	36	2.8	3.9
19	5.4	2.2	2.5	10.3	5.7	1.8	3.3	1.5	3.6	51	2.5	3.1
20	3.6	1.8	2.1	7.3	6.0	1.7	3.2	4.6	3.2	35.5	2.1	3.3
21	7.8	1.6	1.6	19.9	37.5	7.4	3.2	30	3.1	15.0	2.0	2.2
22	13.8	1.6	1.5	17.6	55	22	3.2	55	2.6	22.5	1.8	1.9
23	21	1.5	1.4	11.8	81	40	3.1	51	2.5	12.1	1.7	1.9
24	7.7	1.4	1.3	11.9	20.5	9.7	2.9	73	2.5	6.8	1.5	4.8
25	5.9	1.4	1.3	10.4	8.2	15.2	2.8	357	2.3	12.8	1.4	5.4
26	4.5	1.3	45	7.4	6.2	58	2.6	207	2.0	18.9	1.4	5.4
27	3.4	1.3	6.3	5.5	6.2	52	2.5	198	2.0	6.3	1.1	12.5
28	3.1	1.2	2.7	6.6	4.6	36.5	2.3	24.5	2.5	4.5	3.4	7.2
29	3.6	1.1	1.9	6.0	3.9	8.4	2.2	-	1.9	3.9	5.2	5.7
30	8.4	1.1	2.6	12.6	3.6	3.9	2.2	-	3.6	3.6	4.2	7.3
31	16.3	2.8	-	6.5	-	4.6	2.1	-	8.0	-	2.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	89	2.9	10.7	16.6	330	1,010
August	25	1.1	4.52	6.99	140	430
September	48	1.3	6.82	10.6	204	628
October	19.9	1.4	5.99	9.27	186	570
November	81	2.2	17.6	27.2	528	1,620
December	58	1.7	9.75	15.1	302	928
Calendar year 1934	323	.2	10.9	16.9	3,990	12,230
January	122	2.1	14.3	22.1	442	1,360
February	357	1.5	37.3	57.7	1,040	3,200
March	137	1.9	8.91	13.8	276	848
April	107	2.1	18.7	28.9	562	1,730
May	25	1.1	4.96	7.67	154	472
June	33.5	1.0	5.33	8.25	160	491
Fiscal year 1934-35	357	1.0	11.9	18.4	4,320	13,290

*Partly estimated.

Kapaula Stream below Government Road, near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°6'55", 3,000 feet below highway, 1.3 miles southwest of Nahiku, and 3.8 miles from Keanae post office. Altitude, 620 feet, by barometer.
Drainage area.- 0.5 square mile.
Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. March 1927 to June 1932.
Extremes.- Maximum discharge during year ending June 30, 1933, 468 million gallons a day (724 second-feet) Mar. 6 (gage height, 362 feet); minimum, 1.2 million gallons a day (1.9 second-feet) Nov. 10, 12-15, 19-23.
Maximum discharge during year ending June 30, 1934, 468 million gallons a day (724 second-feet) Nov. 25 (gage height, 3.62 feet); minimum, 1.2 million gallons a day (1.9 second-feet) several days in September and October.
Maximum discharge during year ending June 30, 1935, 782 million gallons a day (1,210 second-feet) Feb. 25 (gage height, 4.55 feet); minimum, 1.1 million gallons a day (1.7 second-feet) several days in August and January.
Remarks.- Records fair for ordinary stages, poor for high stages and estimated periods. Koolau Ditch diverts water 4,000 feet above station for irrigation in central Maui.

Rating table, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.7	0.7	11.4	1.6	74
.3	1.6	.8	15.6	1.8	97
.4	3.2	1.0	26	2.0	123
.5	5.3	1.2	39	2.4	186
.6	8.0	1.4	55	2.8	262

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.9	3.2	1.4	1.4	1.3	2.8	34	11.2	2.6	21.5	1.6	1.5
2	1.9	2.2	1.4	1.4	1.3	2.0	4.0	5.1	2.2	24	1.5	1.6
3	2.6	2.1	1.5	1.3	1.3	1.8	39.5	2.6	3.1	33.5	1.6	1.5
4	1.8	2.1	3.9	1.3	1.3	2.1	18.4	2.2	2.9	2.2	1.5	1.5
5	1.6	1.9	3.4	1.3	1.3	1.8	3.2	2.1	36.5	1.9	1.4	1.4
6	1.5	1.9	2.1	1.3	1.3	1.6	2.9	1.9	76	1.8	1.6	1.4
7	1.4	1.9	1.6	1.3	1.3	1.6	2.6	1.8	152	1.8	1.5	1.4
8	1.4	1.9	1.6	1.3	1.3	1.6	2.4	1.6	*24	1.6	1.5	1.4
9	1.4	1.9	24.5	1.3	1.3	1.6	2.2	12.8	*15	1.6	1.4	1.4
10	1.6	1.6	3.0	1.3	1.2	1.5	2.2	4.6	*20	1.6	1.6	1.4
11	2.1	1.8	1.9	1.3	1.3	1.5	2.1	2.4	*6	1.6	1.4	1.4
12	1.8	1.6	1.8	1.3	1.2	2.1	2.1	2.2	*3.0	1.6	1.4	1.4
13	34	1.6	1.5	1.3	1.2	2.2	1.9	3.0	2.7	1.6	1.4	1.4
14	3.6	1.6	1.4	1.3	1.2	1.8	1.9	12.2	2.7	1.5	9.7	1.4
15	22.5	1.6	1.4	1.3	1.2	3.7	23	2.9	2.1	1.5	4.1	1.4
16	3.8	1.4	1.4	1.3	1.4	1.9	26	2.6	2.1	1.5	2.1	1.4
17	2.4	1.6	1.4	1.3	1.3	1.8	17.5	2.4	2.1	1.5	1.9	1.4
18	10.5	1.4	1.4	1.3	1.3	1.6	15.1	2.2	1.9	1.5	1.8	1.3
19	3.1	1.5	1.5	1.6	1.2	1.6	2.7	3.0	1.9	1.5	1.6	1.3
20	12.4	1.5	1.4	1.5	1.2	1.5	2.4	9.5	1.8	1.5	2.3	1.3
21	9.2	1.4	1.4	1.4	1.2	1.5	*15	19.9	1.8	1.5	6.2	1.4
22	50	1.5	1.4	1.4	1.2	1.4	*12	5.6	1.9	1.5	1.8	1.4
23	21	3.3	1.4	1.4	1.2	1.4	11.0	2.7	14.2	1.5	1.8	2.2
24	23	2.4	1.4	1.4	44	1.6	9.2	2.2	5.7	1.5	1.8	1.5
25	12.6	1.6	2.1	1.3	6.8	4.3	6.2	2.1	3.4	1.4	1.8	1.5
26	3.9	1.6	1.5	1.3	1.6	1.6	5.7	2.4	6.5	1.4	1.8	1.4
27	2.4	1.5	1.4	1.3	4.6	1.5	8.5	2.4	2.1	1.4	1.5	1.4
28	2.6	1.5	1.4	1.3	19.0	13.8	9.8	5.0	1.8	5.3	1.5	1.4
29	5.1	1.5	1.4	1.4	4.4	8.6	2.9	-	1.6	1.8	1.5	1.6
30	13.0	1.4	1.4	1.4	8.7	1.6	2.4	-	1.6	1.9	1.5	5.0
31	13.0	1.4	-	1.4	-	112	12.9	-	1.5	-	1.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	50	1.4	8.68	13.4	269	826
August	3.3	1.4	1.79	2.77	55.4	170
September	24.5	1.4	2.48	3.84	74.3	228
October	1.6	1.3	1.35	2.09	41.7	128
November	44	1.2	3.94	6.10	118	362
December	112	1.4	6.05	9.36	187	575
Calendar year						
January	39.5	1.9	9.73	15.1	302	926
February	19.9	1.6	4.67	7.23	131	401
March	152	1.5	13.0	20.1	403	1,240
April	33.5	1.4	4.20	6.50	126	387
May	9.7	1.4	2.11	3.26	65.5	201
June	5.0	1.3	1.57	2.43	47.0	144
Fiscal year 1932-33	152	1.2	4.99	7.72	1,820	5,590

*Estimated.

Kapaula Stream below Government Road, near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.9	1.6	1.3	1.3	4.1	31	1.3	33	1.4	1.8	2.2	35.5
2	4.0	1.6	1.3	1.3	6.7	6.6	1.9	2.5	1.4	1.6	2.1	33
3	2.1	1.6	1.2	1.3	1.5	2.6	1.5	1.9	1.4	46	20	6.4
4	1.8	2.2	1.3	1.3	1.4	2.1	1.4	1.8	1.4	9.7	31.5	37
5	1.8	1.8	1.3	1.3	1.6	1.9	1.4	1.8	1.4	2.2	59	4.9
6	1.9	2.1	1.3	1.3	1.5	1.9	1.4	1.6	1.4	1.9	46	2.4
7	1.9	1.6	1.3	1.3	1.6	1.8	1.4	1.6	1.4	2.0	48	2.2
8	2.4	1.6	1.2	1.3	1.5	1.8	1.3	1.6	1.3	36	65	1.9
9	1.9	1.6	1.2	1.2	1.4	1.6	1.3	1.5	1.3	2.9	68	1.9
10	1.8	1.6	1.2	1.2	1.4	1.6	1.4	1.5	1.4	2.1	41	1.9
11	1.8	1.6	1.2	1.2	1.4	1.6	2.1	1.5	1.3	19.0	28	1.9
12	1.6	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.3	5.3	34.5	1.9
13	1.6	1.5	1.4	1.3	1.4	1.5	1.4	1.5	1.3	2.1	16.1	5.0
14	1.6	1.5	1.4	1.2	1.4	1.5	1.4	1.4	1.3	15.0	16.3	2.6
15	1.6	1.5	1.4	1.2	1.4	1.5	1.4	1.4	1.3	9.2	19.4	1.9
16	1.6	1.5	1.4	1.2	1.4	1.6	1.4	1.4	1.3	2.2	14.3	1.8
17	1.6	1.4	1.4	1.2	1.4	1.5	1.4	1.4	1.3	1.9	4.2	2.9
18	1.5	1.4	1.4	1.2	1.4	1.5	1.4	1.4	1.3	1.8	2.2	10.2
19	1.5	1.4	1.4	1.2	1.4	1.4	1.6	8.7	1.3	1.6	1.9	20.5
20	1.5	1.4	1.4	1.2	1.4	1.4	8.9	44	1.3	23.5	1.9	32
21	1.5	*1.4	1.4	1.2	1.3	1.4	2.2	2.8	1.3	32	1.8	2.9
22	1.4	*1.4	1.4	1.2	1.3	1.4	1.6	1.6	1.3	14.2	1.8	2.2
23	1.5	*1.4	1.4	1.2	1.3	1.4	7.9	1.4	1.4	4.2	2.1	2.2
24	1.5	*1.4	1.4	1.2	1.3	1.4	6.1	1.4	1.4	23	1.9	3.6
25	1.4	*1.4	1.4	1.2	96	1.4	2.4	1.4	1.3	261	1.8	18.5
26	1.5	*1.4	1.3	1.2	59	1.4	1.8	1.4	1.3	24.5	1.8	37.5
27	1.5	*1.4	1.3	1.2	1.6	1.4	1.6	1.5	1.7	18.5	1.6	13.5
28	1.4	*1.4	1.3	1.2	1.5	1.4	1.6	1.5	5.3	6.0	1.9	12.6
29	2.2	*1.4	1.3	1.2	1.4	1.4	1.5	-	7.4	4.5	1.8	15.2
30	1.9	1.4	1.3	1.2	1.4	1.3	1.5	-	25	2.6	6.5	3.7
31	1.6	1.3	-	1.2	-	1.3	43	-	2.9	-	26.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	4.0	1.4	1.77	2.74	54.8	168
August	2.2	1.3	1.53	2.37	47.3	145
September	1.4	1.2	1.33	2.06	39.9	122
October	1.4	1.2	1.24	1.92	38.3	118
November	96	1.3	6.76	10.5	203	622
December	31	1.3	2.68	4.15	83.1	255
Calendar year 1933	152	1.2	4.22	6.53	1,540	4,730
January	43	1.3	3.48	5.38	108	331
February	44	1.4	4.50	6.96	126	387
March	25	1.3	2.49	3.85	77.1	237
April	261	1.6	19.3	29.9	578	1,770
May	68	1.6	18.4	28.5	571	1,750
June	37.5	1.8	10.7	16.6	320	981
Fiscal year 1933-34	261	1.2	6.15	9.52	2,250	6,890

*Partly estimated.

Kapaula Stream below Government Road, near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.2	4.1	1.2	1.3	3.8	1.9	11.4	1.3	4.6	1.6	1.8	1.4
2	1.9	14.4	1.2	1.2	1.8	1.8	14.6	1.2	1.4	1.5	1.8	1.3
3	1.8	17.5	1.2	1.3	1.5	1.8	19.1	1.2	2.6	1.5	2.4	1.3
4	1.8	15.0	1.2	1.2	7.1	1.6	2.4	1.2	1.4	2.8	1.8	1.3
5	20	2.6	1.2	1.2	39	1.5	2.2	1.2	1.4	3.9	11.2	16.8
6	65	1.9	15.4	1.2	3.0	1.5	3.0	1.2	1.6	2.6	18.1	22.5
7	17.7	1.6	30	1.2	2.2	*1.5	97	1.2	1.4	1.9	3.4	6.8
8	5.7	1.6	2.1	1.2	1.9	*1.4	51	1.2	1.5	3.1	2.4	2.2
9	2.4	1.5	1.8	1.2	1.8	*1.4	40	1.1	1.5	4.0	2.1	1.9
10	2.2	1.6	2.4	1.4	1.8	*1.4	4.5	1.1	1.6	5.2	1.9	1.6
11	2.1	1.4	1.9	1.9	1.8	*1.4	16.4	1.1	1.6	3.1	1.8	1.6
12	2.9	1.4	1.8	1.3	38.5	*1.4	2.7	1.2	113	30.5	3.2	1.6
13	1.9	1.3	1.8	1.2	52	*1.3	2.1	2.5	8.8	7.2	3.1	1.6
14	4.7	1.3	1.6	1.2	5.7	*1.3	2.6	1.6	1.9	7.5	2.9	1.6
15	2.7	1.3	1.5	1.2	2.1	*1.3	1.9	1.2	2.1	32.5	1.9	1.5
16	1.8	1.2	1.5	1.2	16.3	*1.3	1.9	2.1	3.8	23.5	1.8	1.5
17	1.6	1.2	1.5	1.2	14.3	*1.3	1.8	1.5	2.1	86	1.6	2.1
18	1.6	1.2	1.5	1.2	12.0	*1.3	1.6	1.2	1.8	33.5	1.6	1.6
19	1.5	1.2	1.4	1.6	2.6	1.3	1.6	1.2	1.6	44	1.5	1.5
20	1.4	1.2	1.4	1.6	2.2	1.3	1.5	1.3	1.6	32	1.5	1.5
21	2.6	1.2	1.3	6.1	35	1.9	1.5	17.1	3.4	15.8	1.5	1.4
22	3.5	1.2	1.3	7.2	44	14.1	1.5	32.5	1.6	19.2	1.5	1.4
23	15.6	1.2	1.3	4.7	61	35	1.5	37.5	1.6	8.3	1.4	1.5
24	2.2	1.2	1.3	4.8	17.0	4.0	1.5	49	1.8	2.2	1.4	1.6
25	1.9	1.2	1.2	3.2	7.5	8.5	1.4	235	1.6	10.2	1.4	1.6
26	1.6	1.2	27.5	2.6	3.4	41	1.4	148	1.6	17.7	1.5	1.6
27	1.5	1.2	2.6	1.6	2.6	38	1.4	125	1.6	2.9	1.5	4.6
28	1.4	1.2	1.5	1.9	2.2	29	1.4	18	1.6	1.9	1.6	2.8
29	1.4	1.2	1.4	1.8	2.1	3.4	1.3	-	1.5	1.9	1.6	1.8
30	2.2	1.2	1.4	3.4	2.1	2.1	1.3	-	1.6	1.6	1.4	2.1
31	4.9	1.2	-	2.2	-	1.9	1.3	-	2.1	-	1.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	65	1.4	5.86	9.07	182	558
August	17.5	1.2	2.83	4.38	87.7	269
September	30	1.2	3.81	5.89	114	351
October	7.2	1.2	2.11	3.26	65.5	201
November	61	1.5	12.9	20.0	388	1,190
December	41	1.3	6.71	10.4	208	638
Calendar year 1934	261	1.2	7.74	12.0	2,830	8,660
January	97	1.3	9.51	14.7	295	905
February	235	1.1	24.6	38.1	689	2,110
March	113	1.4	5.72	8.85	177	544
April	86	1.5	13.7	21.2	410	1,260
May	18.1	1.4	2.71	4.19	84.0	258
June	22.5	1.3	3.12	4.83	93.6	287
Fiscal year 1934-35	235	1.1	7.65	11.8	2,790	8,570

*Partly estimated.

Koolau Ditch at Nahiku weir, near Nahiku

Location.- Water-stage recorder, lat. 20°48'55", long. 156°7'15", between Kapaula and Waiohue Streams, 3½ miles southwest of Nahiku and 4 miles southeast of Keanae.

Records available.- February 1919 to June 1935.

Average discharge.- 16 years, 19.6 million gallons a day (30.3 second-feet).

Extremes.- Maximum discharge during year, 60 million gallons a day (93 second-feet) Aug. 2 (gage height, 1.67 feet); no flow Mar. 21.
1919-35: Maximum discharge, 61 million gallons a day (94 second-feet) May 3 (gage height, 1.68 feet); no flow occasionally, when intake gates are closed.

Remarks.- Records excellent except those for extremely low stages, which are good. Regulated by spillways and gates. Koolau Ditch diverts water at elevation 1,200 feet from all streams between Makapipi and Alo. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	39.5	44	16.2	17.8	37	30	47	14.2	44	24	30	12.6
2	34.5	57	11.6	13.6	27	28	47	13.9	32	18.2	28	11.6
3	28	57	12.3	13.9	22.5	27	52	13.2	34.5	16.4	27	11.3
4	26.5	54	12.6	16.0	28	26	39.5	12.6	30	29	25.5	11.0
5	39	44	11.6	13.9	41	25	37	12.3	32	34.5	32	34
6	50	34.5	44	12.6	39.5	24	37	11.6	34.5	32	50	47
7	37	30	49	12.3	30	23	52	11.3	32	24	39.5	39.5
8	47	28	28	14.2	24	21.5	50	11.0	32	27	34.5	25
9	39.5	23.5	27.5	15.3	21.5	20.5	52	10.7	32	37	28	20
10	34.5	23.5	31.5	23.5	19.7	19.7	52	10.4	32	44	25	17.5
11	32	20.5	24.5	23	19.4	18.6	52	10.4	30	32	23.5	15.6
12	37	19.4	21	15.0	51	17.8	47	9.8	47	50	32	14.2
13	32	17.8	17.5	12.9	52	16.7	42	17.5	42	47	34.5	13.6
14	47	17.1	17.5	12.3	50	16.0	39.5	12.6	39.5	47	37	13.6
15	37	16.4	15.6	11.6	42	15.3	34.5	10.4	39.5	52	28	14.2
16	28	16.0	14.2	11.0	50	14.2	34.5	16.4	39.5	52	25	14.2
17	27	15.6	16.7	11.0	54	13.9	32	12.3	32	54	22	30
18	32	15.0	17.8	11.0	52	13.9	32	10.4	27.5	52	20.5	19.7
19	28	16.4	15.0	16.5	42	13.9	30	9.8	25	52	19.0	17.1
20	23.5	14.6	14.2	21	39.5	13.2	30	12.6	23.5	52	17.8	16.2
21	31.5	13.6	12.6	39.5	52	25	27.5	39.5	19.4	50	17.1	14.2
22	47	13.2	12.0	39.5	57	34.5	27	52	21	50	16.0	13.2
23	54	12.6	11.3	38.5	50	52	25	47	19.7	47	15.0	13.2
24	39.5	12.3	11.0	39.5	52	34.5	23.5	52	20	42	14.2	16.2
25	37	12.0	10.7	35	52	39.5	22	52	18.2	44	13.6	20
26	32	11.6	43	31	50	57	21	42	17.5	50	13.2	21.5
27	27	11.0	26	27	47	54	19.7	39.5	17.1	44	12.6	31
28	25	10.7	16.7	30	39.5	54	18.2	42	17.5	37	18.2	27
29	25	10.7	14.2	28	34.5	44	17.5	-	16.0	34.5	19.7	24.5
30	30	10.7	15.0	44	32	32	16.0	-	20.5	32	18.2	28
31	42	14.6	-	32	-	32	15.6	-	32	-	13.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	54	23.5	35.1	54.3	1,090	3,340
August	57	10.7	22.5	34.8	697	2,140
September	49	10.7	19.7	30.5	591	1,810
October	44	11.0	22.3	34.5	692	2,120
November	57	19.4	40.3	62.4	1,210	3,710
December	57	13.2	27.6	42.7	857	2,630
Calendar year 1934	57	5.1	27.3	42.2	9,980	30,610
January	52	15.6	34.6	53.5	1,070	3,290
February	52	9.8	21.8	33.7	609	1,870
March	47	16.0	29.0	44.9	899	2,760
April	54	16.4	40.2	62.2	1,210	3,700
May	50	12.6	24.2	37.4	750	2,300
June	47	11.0	20.4	31.6	611	1,870
Fiscal year 1934-35	57	9.8	28.2	43.6	10,290	31,540

Waiaaka Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°7'0", 3,000 feet below highway, 1½ miles west of Nahiku, and 3½ miles southeast of Keanae post office. Altitude, about 650 feet, by barometer.
Drainage area.- 0.1 square mile.
Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. March 1927 to June 1932.
Extremes.- Maximum discharge during year ending June 30, 1933, 73 million gallons a day (113 second-feet) Mar. 6 (gage height, 1.87 feet); minimum, 0.30 million gallons a day (0.46 second-foot) several days during October, November, April, May, and June.
Maximum discharge during year ending June 30, 1934, 23 million gallons a day (36 second-feet) Apr. 25 (gage height, 1.14 feet); minimum, 0.39 million gallons a day (0.60 second-foot) several days during October, December, and March.
Maximum discharge during year ending June 30, 1935, 40 million gallons a day (62 second-feet) Feb. 25 (gage height, 1.44 feet); minimum, 0.34 million gallons a day (0.53 second-foot) Feb. 14.
Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. No diversions.

Rating table, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.17	0.7	6.6
.3	.60	.8	9.3
.4	1.40	.9	12.7
.5	2.65	1.0	16.5
.6	4.4	1.2	26

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.54	0.86	0.34	0.39	0.30	0.54	10.3	1.29	0.86	1.01	0.39	0.39
2	.54	.79	.34	.39	.30	.54	2.7	1.64	.79	.77	.39	.49
3	.60	.72	.39	.39	.30	.54	6.0	.94	.72	4.5	.39	.39
4	.54	.72	.61	.39	.30	.81	6.8	.86	.72	.60	.34	.39
5	.49	.66	.64	.39	.30	.60	1.40	.79	4.6	.54	.30	.34
6	.49	.72	.39	.34	.34	.54	1.20	.79	10.7	.54	.39	.34
7	.54	.60	.39	.34	.34	.54	1.02	.72	3.0	.49	.34	.34
8	.49	.60	.44	.34	.30	.54	.94	.72	1.40	.49	.30	.34
9	.54	.60	1.93	.34	.30	.54	.86	.72	1.32	.49	.34	.34
10	.54	.60	.54	.30	.34	.44	.79	.72	1.82	.49	.39	.34
11	.66	.54	.49	.30	.34	.44	.72	.72	1.02	.44	.34	.34
12	.54	.54	.44	.30	.34	.75	.66	.72	.94	.44	.30	.34
13	.87	.54	.39	.30	.34	.79	.66	1.22	.86	.44	.30	.34
14	.66	.49	.39	.30	.34	.54	.66	1.10	*.8	.39	4.3	.34
15	1.36	.44	.39	.30	.34	1.34	.72	.86	*.7	.44	2.75	.34
16	.72	.49	.39	.30	.44	.66	.94	.86	*.6	.44	.54	.34
17	.66	.54	.39	.30	.34	.60	*.8	.79	*.5	.44	.60	.30
18	1.02	.49	.39	.34	.34	.54	*.8	.79	*.5	.39	.49	.30
19	.66	.44	.44	.44	.34	.54	*.8	1.02	*.5	.39	.49	.30
20	.97	.44	.39	.39	.34	.49	*.7	1.02	*.5	.39	.60	.30
21	1.30	.39	.39	.34	.34	.49	*.7	1.30	*.5	.39	.54	†.34
22	1.71	.39	.39	.34	.30	.49	*.7	1.02	*.5	.39	.49	*.7
23	.86	.44	.34	.34	.30	.49	*.7	.86	*.8	.34	.44	†.49
24	2.05	.44	.34	.34	.72	.60	*.7	.86	*.6	.34	.49	.49
25	.95	.44	.77	.34	.49	.60	*.7	.86	*.5	.34	.49	.49
26	.86	.39	.44	.34	.49	.49	*.7	.94	*.6	.34	.49	.49
27	.79	.44	.39	.34	.49	.49	*.7	.86	*.5	.34	.49	.49
28	.86	.44	.39	.34	.54	.49	*.8	1.58	*.5	.44	.44	.49
29	1.18	.39	.39	.34	.54	.49	*.7	-	.44	.44	.39	.60
30	1.10	.34	.39	.34	.60	.49	*.7	-	.44	.39	.44	.54
31	1.37	.34	-	.34	-	9.7	*.9	-	.39	-	.39	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	2.05	0.49	0.854	1.32	26.5	81
August	.86	.34	.525	.812	16.3	50
September	1.93	.34	.478	.740	14.3	44
October	.44	.30	.343	.531	10.6	33
November	.72	.30	.381	.589	11.4	35
December	9.7	.44	.875	1.35	27.1	83
Calendar year						
January	10.3	.66	1.53	2.37	47.5	146
February	1.64	.72	.949	1.47	26.6	82
March	10.7	.39	1.25	1.93	38.6	119
April	4.5	.34	.596	.922	17.9	55
May	4.3	.30	.625	.967	19.4	59
June	.7	.30	.402	.622	12.1	37
Fiscal year 1932-33	10.7	.30	.735	1.14	268	824

*Estimated.
†Partly estimated.

Waiaaka Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.60	0.54	0.44	0.44	0.66	4.9	0.44	1.37	0.44	0.54	0.86	1.38
2	.72	.66	.44	.44	.66	.79	.70	.66	.44	.49	.79	.94
3	.60	.60	.44	.44	.49	.94	.49	.60	.44	1.01	1.24	1.07
4	.54	.79	.44	.44	.49	.72	.44	.60	.49	.79	1.28	2.3
5	.60	.60	.44	.49	.56	.66	.44	.60	.44	.66	1.81	.94
6	.60	.91	.49	.49	.54	.60	.44	.60	.44	.60	1.59	.79
7	.60	.66	.49	.49	.54	.60	.44	.54	.44	.60	1.55	.72
8	.86	.60	.44	.49	.54	.60	.44	.49	.44	2.75	2.15	.72
9	.66	.60	.44	.49	.49	.60	.44	.49	.44	.86	3.45	.66
10	.60	.60	.44	.44	.49	.60	.49	.49	.49	.72	2.75	.66
11	.60	.60	.44	.39	.49	.54	.79	.49	.44	1.04	2.3	.66
12	.60	.60	.49	.49	.49	.54	.54	.49	.44	.86	7.0	.66
13	.60	.60	.49	.44	.49	.54	.54	.44	.39	.72	3.0	.72
14	.60	.54	.49	.44	.49	.54	.54	.44	.39	1.54	2.05	.72
15	.60	.54	.49	.44	.49	.54	.49	.44	.39	.94	1.56	.60
16	.60	.54	.49	.44	.49	.54	.49	.44	.39	.79	1.10	.60
17	.60	.54	.49	.44	.49	.49	.49	.44	.39	.72	1.02	.95
18	.54	.54	.49	.39	.49	.44	.49	.44	.39	.66	.94	.79
19	.54	.54	.49	.39	.49	.44	.60	.44	.39	.66	.86	1.06
20	.54	.54	.44	.39	.49	.44	.82	1.19	.39	.86	.72	1.08
21	.54	.54	.49	.39	.44	.44	.66	.54	.39	1.80	.66	.72
22	.54	.54	.49	.39	.44	.44	.60	.49	.39	1.62	.66	.79
23	.54	.49	.49	.39	.39	.44	1.10	.44	.44	.94	.72	.72
24	.60	.44	.49	.39	.39	.44	.94	.44	.44	.94	.72	.79
25	.54	.44	.49	.39	.54	.39	.98	.44	.39	7.8	.66	.86
26	.54	.44	.44	.39	.54	.39	.72	.44	.39	3.2	.66	1.44
27	.54	.44	.44	.39	.49	.44	.66	.44	.56	1.30	.66	.94
28	.54	.44	.44	.39	.49	.44	.66	.44	.60	1.10	.79	.79
29	.87	.44	.44	.44	.49	.44	.60	-	.79	1.02	.66	.94
30	.66	.44	.44	.44	.49	.44	.54	-	.60	.94	.66	.72
31	.60	.44	-	.44	-	.44	.72	-	.54	-	1.78	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.87	0.54	0.604	0.935	18.7	57
August	.91	.44	.556	.860	17.2	53
September	.49	.44	.465	.719	14.0	43
October	.49	.39	.430	.665	13.3	41
November	.66	.39	.502	.777	15.1	46
December	4.9	.39	.671	1.04	20.8	64
Calendar year 1933	10.7	.30	.715	1.11	261	802
January	1.10	.44	.604	.935	18.7	57
February	1.37	.44	.549	.849	15.4	47
March	.79	.39	.453	.701	14.0	43
April	7.8	.49	1.28	1.98	38.5	118
May	7.0	.66	1.50	2.32	46.6	143
June	2.3	.60	.891	1.38	26.7	82
Fiscal year 1933-34	7.8	.39	.710	1.10	259	794

Waiaaka Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.72	0.66	0.44	0.49	*1.2	0.72	0.94	0.44	*0.9	†0.49	0.57	0.44
2	.72	.79	.44	.49	*.7	.72	.94	.44	*.7	†.44	.54	.44
3	.66	1.14	.44	.49	*.7	†.66	.94	.44	*.5	.44	.60	.44
4	.66	.95	.44	.49	*1.0	.54	.79	.44	*.8	.86	.56	.44
5	1.63	.72	.44	.44	*3.0	.54	.72	.44	*.6	1.08	1.00	2.1
6	3.3	.66	.54	.49	*1.0	.54	.72	.44	*.6	.66	.99	1.90
7	3.7	.66	.88	.44	*.8	.54	5.6	.44	*.6	.60	.66	1.10
8	1.16	.66	*.54	†.44	*.6	.54	7.1	†.44	*.6	.60	.63	.82
9	.86	.60	*.49	†.44	*.6	.54	6.3	*.39	*.6	.54	.60	.79
10	.79	.72	*.49	†.44	*.6	.54	.94	*.39	*.6	.60	.60	.72
11	.72	.60	†.54	*.4	*.6	.49	3.7	*.39	*.6	.54	.60	.66
12	.79	.54	.54	*.4	*2.0	.49	.86	†.39	*10	.93	.60	.60
13	.82	.54	.54	*.4	*4.0	.44	.79	*.49	5.6	.66	.60	.60
14	.79	.52	.54	*.4	*1.5	.44	1.07	*.4	.79	.60	.60	.60
15	.92	.52	.49	*.4	*.8	.44	.72	*.4	.86	*1.5	.57	.54
16	.66	.52	.49	*.4	*1.2	.44	.66	*.4	.86	*.9	.60	.54
17	.66	.52	.54	*.4	*1.0	.44	.66	*.4	.72	3.2	.54	.60
18	.66	.52	.54	*.4	*.8	*.44	.60	*.4	.66	1.20	.54	.54
19	.66	.54	.49	*.4	*.7	†.44	.60	*.4	.60	*1.5	.54	.54
20	.60	.49	.54	*.4	*.7	.44	.60	*.4	.60	*1.1	.52	.54
21	.74	.49	.49	*.5	1.20	.49	.54	*2.0	.80	*1.0	.52	.49
22	.95	.44	.49	*1.5	.44	1.00	.54	*3.0	.54	*1.2	.52	.49
23	.94	.44	.49	*1.0	7.7	1.77	.49	*2.0	.54	*.9	.49	.49
24	.66	.44	.49	.83	4.9	.79	.49	*2.0	.80	*.8	.49	.54
25	.79	.42	.44	.66	1.20	.86	.44	*26	.54	*1.5	.49	.54
26	.66	.42	.69	.86	1.02	1.17	.44	*15	.54	*2.0	.49	.54
27	.66	.42	.54	*.6	1.02	1.12	.44	13.7	.49	*1.1	.49	.72
28	.60	.39	.49	*.6	†.79	3.75	.44	*3.0	.44	*.8	.54	.60
29	.60	.39	.49	*.6	†.72	2.25	.44	-	.44	*.8	.49	.57
30	.60	.39	.49	*.9	.72	.79	.44	-	.54	†.57	.49	.66
31	.66	.49	-	*.7	-	.82	.44	-	.60	-	.49	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.7	0.60	0.946	1.46	29.3	90
August	1.14	.39	.568	.879	17.6	54
September	.88	.44	.516	.798	15.5	48
October	1.5	.4	.555	.859	17.2	53
November	7.7	.6	1.44	2.23	43.2	133
December	3.75	.44	.813	1.26	25.2	77
Calendar year 1934	7.8	.39	.844	1.31	308	945
January	7.1	.44	1.30	2.01	40.4	124
February	26	.39	2.68	4.15	75.1	230
March	10	.44	1.10	1.70	34.0	104
April	3.2	.44	.970	1.50	29.1	89
May	1.00	.49	.579	.896	18.0	55
June	2.1	.44	.686	1.06	20.6	63
Fiscal year 1934-35	26	.39	1.00	1.55	365	1,120

*Estimated.
†Partly estimated.

Paakea Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°7'5", 3,000 feet below highway, 1½ miles west of Nahiku, and 3¼ miles southeast of Keanae post office. Altitude, 650 feet, by barometer.

Drainage area.- 0.5 square mile.

Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. March 1927 to June 1932.

Extremes.- Maximum discharge during year ending June 30, 1933, unknown, owing to faulty gage-height record; minimum, 2.1 million gallons a day (3.2 second-feet) sometimes during year.

Maximum discharge during year ending June 30, 1934, 123 million gallons a day (190 second-feet) Apr. 25 (gage height, 3.56 feet); minimum, 1.9 million gallons a day (2.9 second-feet) sometimes during year.

Maximum discharge during year ending June 30, 1935, unknown, owing to faulty gage-height record; minimum, 2.1 million gallons a day (3.2 second-feet) sometimes during year.

Remarks.- Records good for ordinary stages, poor for medium and high stages and for estimated periods. Koolau Ditch diverts all low flow for irrigation in central Maui.

Rating table, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

0.4	1.6	0.9	14.7	1.8	44
.5	3.0	1.0	18.0	2.0	52
.6	4.9	1.2	24	2.2	60
.7	7.4	1.4	30	2.5	72
.8	10.9	1.6	37		

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.5	3.0	2.2	2.3	2.2	3.2	*10	5.5	3.7	10.1	2.3	2.2
2	2.5	2.8	2.2	2.3	2.2	3.0	4.1	3.9	3.0	10.4	2.3	2.3
3	2.8	2.8	2.3	2.3	2.2	3.0	11.6	3.2	2.8	14.8	2.3	2.3
4	2.5	2.7	3.8	2.2	2.1	†3.6	11.1	3.0	2.8	3.0	2.2	2.2
5	2.2	2.7	3.2	2.2	2.1	*2.7	4.4	2.8	*10	2.8	2.2	2.2
6	2.2	2.7	2.7	2.2	2.2	†2.5	3.8	2.7	*40	2.7	2.2	2.2
7	2.2	2.5	2.5	2.2	2.1	2.5	3.4	2.7	*50	2.5	2.1	2.2
8	2.2	2.7	2.8	2.2	2.1	2.5	3.2	2.5	19.5	2.3	2.1	2.2
9	2.3	2.7	13.9	2.2	2.1	2.5	3.0	6.1	10.9	2.3	2.1	2.2
10	2.3	2.5	3.2	2.2	2.1	2.5	2.8	3.0	16.3	2.2	2.3	2.2
11	3.1	2.7	2.8	2.2	2.2	2.5	2.8	3.0	7.5	2.2	2.2	2.2
12	3.4	2.5	2.8	2.2	2.2	3.4	2.8	2.8	4.7	2.2	2.2	2.2
13	9.8	2.5	2.5	2.2	2.2	3.8	2.8	3.7	3.6	2.2	2.2	2.2
14	2.8	2.5	2.3	2.2	2.1	3.0	2.7	6.6	3.4	2.2	10.1	2.2
15	10.9	2.3	2.3	2.2	2.1	5.4	6.7	3.0	2.8	2.2	7.1	2.2
16	3.0	2.3	2.3	2.2	3.4	*3.0	10.9	3.0	2.8	2.3	2.8	2.2
17	2.8	2.7	2.3	2.2	2.3	*2.7	6.3	2.8	2.8	2.3	2.8	2.1
18	6.6	2.5	2.5	2.2	2.2	*2.5	5.7	3.0	2.7	2.2	2.7	2.1
19	3.4	2.5	2.5	2.5	*2.2	*2.5	3.2	3.4	2.7	2.2	2.5	2.1
20	4.5	2.5	2.3	2.3	*2.1	†2.5	3.2	7.2	2.7	2.2	2.8	2.1
21	5.1	2.3	2.3	2.2	*2.1	2.5	4.1	16.2	2.3	2.2	3.4	2.2
22	17.5	2.3	2.3	2.2	†2.1	2.5	3.6	6.8	2.7	2.2	*2.3	2.2
23	7.5	4.6	2.3	2.3	2.1	2.5	3.4	4.7	5.2	2.2	†2.3	2.8
24	13.5	2.7	2.3	2.2	18.0	3.1	3.4	4.5	3.1	2.2	2.3	2.3
25	3.9	2.5	3.4	2.2	3.3	4.7	3.0	5.2	3.0	2.2	2.2	2.3
26	3.4	2.5	2.7	2.2	2.8	2.8	2.7	4.9	3.2	2.2	2.2	2.2
27	3.2	2.3	2.3	2.2	2.8	2.8	2.7	3.2	2.8	2.2	2.2	2.2
28	3.2	2.3	2.3	2.2	5.6	3.4	2.7	7.9	2.3	4.7	2.2	2.2
29	3.6	2.3	2.3	2.2	3.2	3.4	2.7	-	2.5	2.7	2.2	2.9
30	5.2	2.2	2.3	2.2	3.4	2.5	2.8	-	2.5	2.5	2.2	5.4
31	5.2	2.2	-	2.2	-	*24	10.1	-	2.5	-	2.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	17.5	2.2	4.69	7.25	145	446
August	4.6	2.2	2.59	4.01	80.3	246
September	13.9	2.2	2.93	4.53	87.9	270
October	2.5	2.2	2.23	3.45	69.0	212
November	18.0	2.1	2.99	4.63	89.8	276
December	24	2.5	3.66	5.66	114	348
Calendar year						
January	11.6	2.7	4.70	7.27	146	447
February	16.2	2.5	4.55	7.04	127	391
March	50	2.3	7.31	11.3	226	695
April	14.8	2.2	3.35	5.18	101	309
May	10.1	2.1	2.75	4.25	85.2	261
June	5.4	2.1	2.35	3.64	70.5	216
Fiscal year 1932-33	50	2.1	3.68	5.69	1,340	4,120

*Estimated.
†Partly estimated.

Paakea Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1933 June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.6	†2.3	2.1	2.1	7.1	25.5	*2.2	8.0	2.1	2.5	3.0	9.5
2	3.9	2.5	2.1	2.1	5.2	3.3	*2.7	2.8	2.1	2.3	2.8	4.2
3	2.7	2.5	2.1	2.1	2.2	3.2	2.3	2.7	2.1	15.5	6.1	3.8
4	2.5	3.0	2.1	2.1	2.2	2.7	2.2	2.5	2.1	5.5	6.6	13.1
5	2.7	2.5	2.1	2.1	2.3	2.5	2.2	2.5	2.1	2.8	12.8	3.6
6	2.7	3.0	2.1	2.1	2.2	2.5	2.2	2.3	2.1	2.7	8.4	3.2
7	2.7	2.5	2.1	2.1	2.3	2.5	2.1	2.3	2.1	2.7	13.6	2.8
8	3.2	2.3	2.1	2.1	2.3	2.5	2.1	2.3	2.1	19.8	25	2.8
9	2.7	2.3	1.9	2.1	2.2	2.3	2.1	2.3	2.1	†3.4	34.5	2.7
10	2.5	2.3	1.9	2.1	2.2	2.3	2.6	2.3	2.1	†3.0	21	2.7
11	2.5	2.3	1.9	2.1	2.3	2.3	3.4	2.2	2.1	8.9	16.7	2.7
12	2.5	2.3	2.2	2.2	2.2	2.2	2.5	2.2	2.1	3.4	17.9	2.7
13	2.3	2.2	2.3	2.1	2.2	2.1	2.3	2.1	1.9	3.0	5.2	5.6
14	2.3	2.2	2.2	2.1	2.2	2.1	2.3	2.1	1.9	6.3	8.1	3.9
15	2.2	2.2	2.2	2.1	2.2	*2.1	2.3	2.1	1.9	3.7	6.1	2.7
16	2.2	2.2	2.2	2.1	2.1	*2.1	2.2	2.1	1.9	3.2	3.8	2.7
17	2.2	2.2	2.3	2.1	2.1	*2.1	2.2	2.1	2.1	2.8	3.2	3.8
18	2.2	2.2	2.2	2.1	2.1	*2.1	2.2	2.1	2.1	2.7	2.8	3.4
19	2.2	2.2	2.1	2.1	2.1	†2.1	3.2	2.1	1.9	2.7	2.7	7.9
20	2.3	2.2	2.1	2.1	2.1	*2.1	7.2	15.3	1.9	8.3	2.5	12.7
21	2.2	2.1	2.1	2.1	2.1	*2.1	3.0	3.8	1.9	13.9	2.5	3.0
22	2.2	2.1	2.1	2.1	2.1	*2.1	2.7	2.3	1.9	10.1	2.3	3.2
23	2.3	2.1	2.1	2.1	2.1	*2.1	6.0	2.3	2.2	3.6	2.7	2.7
24	2.5	2.1	2.1	2.1	2.1	*2.1	3.8	2.3	2.1	11.0	2.5	2.8
25	2.3	2.1	2.1	2.1	20	*2.1	3.4	2.2	2.1	59	2.5	3.8
26	2.3	2.1	2.1	2.1	13.8	*2.1	2.8	2.2	2.1	8.4	2.3	14.5
27	2.3	2.1	2.1	2.1	2.2	*2.3	2.7	2.1	3.3	4.3	2.3	5.0
28	2.3	2.1	2.1	2.1	2.1	*2.5	2.5	2.1	3.4	3.8	2.7	4.5
29	3.8	2.1	2.1	2.1	2.1	*2.2	2.5	-	3.8	3.4	2.3	4.2
30	2.8	2.1	2.1	2.1	2.1	*2.2	9.4	-	2.8	3.2	3.2	*2.8
31	†2.5	2.1	-	2.1	-	*2.2	8.0	-	2.5	-	12.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.9	2.2	2.54	3.93	78.6	241
August	3.0	2.1	2.27	3.51	70.5	216
September	2.3	1.9	2.11	3.26	63.3	194
October	2.2	2.1	2.10	3.25	65.2	200
November	20	2.1	3.42	5.29	102	315
December	25.5	2.1	3.05	4.72	94.6	290
Calendar year 1933	50	1.9	3.37	5.21	1,230	3,780
January	9.4	2.1	3.20	4.95	99.3	305
February	15.3	2.1	2.99	4.63	83.7	257
March	3.8	1.9	2.22	3.43	68.9	211
April	59	2.3	7.53	11.7	226	693
May	34.5	2.3	7.77	12.0	241	739
June	14.5	2.7	4.77	7.38	143	439
Fiscal year 1933-34	59	1.9	3.66	5.66	1,340	4,100

*Estimated.
†Partly estimated.

Paakea Stream near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.8	2.8	2.3	2.3	4.8	*2.5	4.8	2.1	8.8	2.5	2.3	2.2
2	2.7	4.9	2.2	2.3	3.2	*2.5	4.8	2.1	4.7	2.2	2.3	2.1
3	2.5	6.9	2.2	2.3	3.0	*2.3	3.6	2.1	4.0	2.2	2.3	2.1
4	2.5	7.7	2.2	2.3	3.0	†2.3	3.0	2.1	3.4	5.1	2.3	2.1
5	18.8	2.8	2.2	2.3	12.5	2.3	2.8	2.1	3.0	5.1	7.3	13.5
6	24	2.7	3.7	2.3	†2.8	2.3	2.8	2.1	3.2	2.8	7.7	11.2
7	6.8	2.7	12.6	2.3	2.8	2.3	26	2.1	3.0	2.7	2.8	4.8
8	7.6	2.7	2.7	†2.2	2.7	2.3	10.0	2.1	2.8	2.8	2.7	3.4
9	4.3	2.7	2.8	†2.1	2.7	2.3	11.1	2.1	2.7	2.5	2.5	3.0
10	4.0	2.8	2.8	3.0	2.7	2.3	3.6	2.1	2.7	2.7	2.5	2.8
11	3.8	2.5	2.5	2.3	2.7	2.3	10.2	2.1	2.5	2.5	2.3	2.5
12	3.6	2.5	2.7	2.2	6.5	2.3	3.6	2.1	31	10.0	3.4	2.5
13	3.4	2.3	2.5	2.2	12.5	2.2	3.2	2.3	3.2	2.8	2.5	2.5
14	3.2	2.2	2.5	2.2	5.1	2.1	†3.2	2.2	2.8	2.7	2.5	2.5
15	3.6	2.2	2.3	2.2	3.2	2.1	†2.7	2.1	3.0	8.2	2.3	2.3
16	2.5	2.2	2.3	2.2	8.8	2.1	2.7	2.5	3.0	5.0	2.5	2.3
17	2.5	2.2	2.5	2.2	7.5	2.1	2.5	2.2	2.7	34.5	2.3	2.8
18	2.7	2.2	2.5	2.2	†4.2	2.1	2.5	2.1	2.5	9.9	2.3	2.5
19	2.7	2.3	2.3	2.3	*3.0	2.2	2.5	2.1	2.5	10.3	2.3	2.3
20	2.5	2.2	2.3	2.2	†3.0	2.2	2.3	2.1	2.5	5.6	2.2	2.3
21	3.2	2.2	2.3	3.3	9.0	2.7	2.3	2.9	2.7	3.6	2.2	2.3
22	3.4	2.2	2.3	5.8	6.8	10.2	2.3	10.8	2.3	3.4	2.2	2.3
23	6.7	2.2	2.3	3.0	12.3	11.2	2.2	10.0	2.3	3.2	2.2	2.3
24	2.8	2.1	2.2	4.7	8.1	3.8	2.2	7.2	2.5	3.0	2.2	2.3
25	3.2	2.1	2.2	3.0	4.0	4.2	2.2	*70	2.3	5.4	2.2	2.5
26	2.8	2.1	12.2	3.0	3.6	11.8	2.2	*50	2.3	5.9	2.2	2.5
27	2.7	2.1	2.8	2.7	3.4	6.2	2.2	*40	2.3	2.7	2.2	4.3
28	2.7	2.1	2.5	3.0	†3.2	6.8	2.2	18.8	2.3	2.5	2.3	2.8
29	2.7	2.1	2.3	2.8	*3.0	3.4	2.1	-	2.2	2.5	2.5	2.7
30	2.7	2.1	2.3	4.0	*2.7	3.0	2.1	-	2.5	2.3	2.2	2.7
31	3.3	2.9	-	3.2	-	3.0	2.1	-	3.0	-	2.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	24	2.5	4.60	7.12	143	438
August	7.7	2.1	2.76	4.27	85.7	263
September	12.6	2.2	3.12	4.83	93.5	287
October	5.8	2.1	2.71	4.19	84.1	258
November	12.5	2.7	5.09	7.88	153	469
December	11.8	2.1	3.59	5.55	111	342
Calendar year 1934	59	1.9	4.20	6.50	1,530	4,700
January	26	2.1	4.26	6.59	132	405
February	70	2.1	9.02	14.0	252	775
March	31	2.2	3.89	6.02	121	370
April	34.5	2.2	5.22	8.08	157	481
May	7.7	2.2	2.71	4.19	83.9	257
June	13.5	2.1	3.28	5.07	98.4	302
Fiscal year 1934-35	70	2.1	4.15	6.42	1,510	4,650

*Estimated.
†Partly estimated.

Waiohue Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'5", long. 156°7'40", 200 feet above intake to Koolau Ditch, 300 feet above ditch trail, 2¾ miles southwest of Nahiku, and 3⅛ miles southeast of Keanae.

Drainage area.- 1.5 square miles.

Records available.- October 1921 to June 1935.

Average discharge.- 13 years (1922-35), 8.09 million gallons a day (12.5 second-feet).

Extremes.- Maximum discharge during year, 609 million gallons a day (942 second-feet) Feb. 25 (gage height, 6.16 feet); minimum, 2.5 million gallons a day (3.9 second-feet) Feb. 10, 12, 13, 19.
1921-35: Maximum discharge, that of Feb. 25, 1935; minimum, 1.4 million gallons a day (2.2 second-feet) Nov. 25, 1933.

Remarks.- Records good for ordinary stages; poor for extremely high and low stages and for period Oct. 16-26. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.6	2.2	1.2	11.1	2.4	78
.7	2.8	1.4	17.5	2.6	97
.8	3.7	1.6	25.5	2.8	121
.9	4.8	1.8	35	3.0	147
1.0	6.4	2.0	47	3.2	173
1.1	8.5	2.2	61		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.4	9.4	3.2	3.7	10.3	5.4	15.5	3.1	10.6	4.2	5.1	3.1
2	6.1	14.5	2.9	3.2	5.4	5.1	15.5	3.1	8.1	3.5	4.7	2.9
3	5.6	14.8	3.4	3.2	4.6	4.7	15.7	3.0	11.0	3.3	4.6	2.8
4	5.3	13.8	3.2	3.4	9.1	4.5	7.9	2.9	7.4	7.3	4.5	2.8
5	22	6.4	3.0	3.3	26	4.2	8.1	2.8	6.2	8.0	13.2	17.4
6	50	5.9	14.2	3.3	7.0	4.1	8.8	2.7	6.2	5.3	15.1	15.8
7	11.3	5.6	21	3.2	5.3	3.9	61	2.7	5.6	4.1	6.2	6.0
8	9.6	5.6	4.1	3.2	4.6	3.7	34	2.7	5.1	8.2	5.4	4.4
9	6.2	5.0	4.7	3.3	4.4	3.6	30.5	2.7	4.7	8.0	4.6	3.8
10	6.1	5.3	5.2	3.3	4.1	3.5	9.3	2.6	4.8	10.0	4.4	3.4
11	5.4	4.6	3.7	4.9	4.3	3.4	16.6	2.6	4.4	5.6	4.2	3.2
12	6.8	4.4	3.5	3.9	31	3.2	8.8	2.6	82	22.5	8.4	3.2
13	6.2	4.1	3.2	3.4	40	3.2	7.4	5.1	8.3	9.8	5.9	3.2
14	10.6	4.0	3.3	3.2	7.7	3.2	6.8	3.1	5.1	9.9	7.3	3.2
15	7.1	3.8	3.4	3.1	5.4	3.1	6.1	2.6	6.4	22.5	5.0	3.6
16	4.7	3.7	3.3	3.0	15.6	3.0	5.6	4.0	7.7	15.8	4.8	3.6
17	4.7	3.6	3.6	2.9	15.1	2.9	5.1	2.9	5.3	57	4.5	6.6
18	5.4	3.6	3.8	3.1	10.8	2.8	5.0	2.7	4.5	19.9	4.2	4.1
19	4.8	4.1	3.5	9.0	6.2	3.0	4.7	2.6	4.1	30.5	4.0	3.7
20	4.4	3.5	3.4	7.0	6.6	2.9	4.5	2.7	4.1	20.5	3.9	3.8
21	7.3	3.3	3.2	12	25	4.8	4.1	15.3	4.0	11.7	3.8	3.4
22	9.8	3.3	3.1	11	27	12.9	4.0	23.5	3.8	15.6	3.6	3.4
23	14.2	3.2	3.0	8.0	43	20	3.8	21	3.7	10.6	3.4	3.4
24	6.0	3.2	3.0	9.0	15.7	7.1	3.7	29.5	4.0	7.9	3.3	3.8
25	5.9	3.1	3.0	8.0	9.5	9.4	3.6	167	3.6	12.8	3.2	4.1
26	5.0	3.0	11.5	6.4	8.8	26	3.6	120	3.4	14.6	3.2	4.4
27	4.7	2.9	15.0	5.6	8.3	24.5	3.5	111	3.5	7.4	3.2	7.1
28	4.5	2.8	3.6	6.9	6.8	19.9	3.4	22	3.5	6.2	4.0	5.5
29	4.6	2.8	3.2	6.7	6.2	6.2	3.3	-	3.3	5.8	4.1	4.8
30	7.2	2.8	3.2	10.8	5.8	5.0	3.2	-	4.7	5.3	3.9	5.1
31	9.6	3.75	-	6.1	-	6.3	3.2	-	6.8	-	3.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	50	4.4	8.63	13.4	268	821
August	14.8	2.8	5.16	7.98	160	491
September	21	2.9	5.05	7.81	151	465
October	12	2.9	5.39	8.34	167	513
November	43	4.1	12.7	19.6	380	1,170
December	26	2.8	6.95	10.8	216	661
Calendar year 1934	171	1.5	8.16	12.6	2,980	9,140
January	61	3.2	10.2	15.8	316	971
February	167	2.6	20.3	31.4	568	1,740
March	82	3.3	7.93	12.3	246	755
April	57	3.3	12.5	19.3	374	1,150
May	15.1	3.2	5.13	7.94	159	488
June	17.4	2.8	4.85	7.50	146	447
Fiscal year 1934-35	167	2.6	8.63	13.4	3,150	9,670

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West Kopiliula Stream near Keanae

Location.- Water-stage recorder, lat. 20°40'10", long. 156°8'15", 600 feet above Koolau Ditch crossing and highway bridge and 3 miles southeast of Keanae post office.

Drainage area.- 3.9 square miles.

Records available.- January 1914 to September 1917, October 1921 to January 1935 (discontinued).

Average discharge.- 12 years (1922-34), 18.3 million gallons a day (28.3 second-feet).

Extremes.- Maximum discharge during period, 2,800 million gallons a day (4,330 second-feet) July 6 (gage height, 9.25 feet); minimum, 1.6 million gallons a day (2.5 second-feet) Aug. 30.
1914-17, 1921-35: Maximum discharge, that of July 6, 1934; minimum, 0.6 million gallons a day (0.9 second-foot) Sept. 15-17, 1917.

Remarks.- Records good for ordinary stages and poor for high stages. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.5	1.2	30.5	2.5	150
.4	2.3	1.4	43	3.0	230
.6	5.8	1.6	58	3.7	371
.8	11.5	1.8	74		
1.0	19.6	2.0	93		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.7	19.7	3.1	6.3	10.3	5.0	36.5					
2	8.4	36	2.1	3.2	5.8	4.4	35.5					
3	7.1	28	2.9	3.7	4.8	4.2	46					
4	6.6	19.7	2.2	4.7	13.1	3.8	19.2					
5	44	8.4	2.4	3.5	103	3.6	16.6					
6	225	6.6	55	3.0	16.4	3.4	21.5					
7	27	6.8	122	2.8	8.7	3.2	368					
8	10.6	6.1	9.5	4.9	6.6	3.0	224					
9	7.4	4.6	9.7	6.6	5.4	2.9	-					
10	6.8	5.0	9.0	13.1	4.6	2.8	-					
11	6.3	4.0	8.8	6.4	4.8	2.6	-					
12	10.3	3.8	4.4	3.6	143	2.4	-					
13	8.0	3.6	3.2	6.7	121	2.3	-					
14	16.8	3.5	3.5	4.4	16.0	2.2	-					
15	8.8	3.4	3.0	3.4	8.7	2.2	-					
16	6.1	3.2	2.8	2.9	31.5	2.1	-					
17	5.8	3.0	4.4	2.6	22	2.1	-					
18	10.5	2.9	4.6	3.4	14.3	2.1	-					
19	6.1	3.4	3.2	16.3	7.1	2.1	-					
20	5.0	2.6	2.9	9.2	8.1	2.3	-					
21	10.9	2.4	2.4	34.5	92	9.4	-					
22	14.5	2.3	2.3	26.5	93	32.5	-					
23	22	2.2	2.2	13.5	194	52	-					
24	7.9	2.1	2.1	15.6	39	11.0	-					
25	7.6	2.0	2.1	17.0	11.9	21	-					
26	5.6	1.9	77	9.3	9.0	137	-					
27	5.0	1.9	7.6	7.6	7.9	128	-					
28	4.4	1.9	3.8	9.0	6.3	76	-					
29	5.4	1.9	3.0	9.0	5.8	14.3	-					
30	11.1	1.9	5.6	15.3	5.2	6.6	-					
31	24	5.1	-	9.6	-	7.7	-					

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	225	4.4	17.9	27.7	556	1,710
August	36	1.9	6.42	9.93	199	610
September	122	2.1	12.2	18.9	367	1,130
October	34.5	2.6	8.95	13.8	278	852
November	194	4.6	34.0	52.6	1,020	3,130
December	137	2.1	17.9	27.7	554	1,700
Calendar year 1934	-	1.0	23.6	36.5	8,620	26,460
January 1-8	368	16.6	95.9	148	767	2,350
February						
March						
April						
May						
June						
The period					3,740	11,480

East Wailuaiki Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'5", long. 156°8'25", 1,000 feet above Koolau Ditch crossing and trail and 3 miles southeast of Keanae post office.

Drainage Area.- 3.7 square miles.

Records available.- December 1913 to October 1917, July 1922 to June 1935.

Average discharge.- 13 years (1922-35), 19.2 million gallons a day (29.7 second-feet).

Extremes.- Maximum discharge during year, 2,020 million gallons a day (3,130 second-feet) Feb. 25 (gage height, 8.79 feet); minimum, 2.8 million gallons a day (4.3 second-feet) Feb. 13.

1913-17, 1922-35: Maximum discharge, that of Feb. 25, 1935; minimum, 1.0 million gallons a day (1.6 second-feet) Oct. 22, 23, 1917, Aug. 1-2, 1922.

Flood of Dec. 24, 1921, may have reached a higher stage, but owing to destruction of station no data are available for this peak.

Remarks.- Records good for ordinary stages; poor for high stages. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.5	2.5	1.2	9.4	2.4	46	4.0	257
.6	3.2	1.4	13.2	2.8	77	4.5	363
.8	4.9	1.6	17.5	3.2	125	5.0	489
1.0	6.8	2.0	29	3.6	184	5.6	661

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	9.8	23	6.3	9.0	12.1	7.2	40	3.9	20	8.2	7.4	4.2
2	8.8	43	3.8	4.4	7.3	6.8	36.5	3.8	12.0	5.1	6.9	3.9
3	7.6	36.5	4.6	4.8	6.4	6.4	50	3.8	16.4	4.6	6.7	3.8
4	7.0	28	4.1	5.5	9.5	6.0	22	3.6	11.0	10.7	6.5	3.8
5	46	12.2	4.2	4.6	91	5.7	19.9	3.4	8.1	15.0	38.5	40
6	129	9.3	65	3.9	19.6	5.4	16.4	3.3	8.3	12.4	44	31.5
7	32	8.4	115	3.6	10.5	5.1	278	3.2	7.4	7.9	14.1	14.9
8	14.5	8.1	12.9	7.2	7.9	5.0	190	3.1	6.8	15.4	10.3	6.9
9	10.8	7.0	12.7	9.1	6.7	4.8	135	3.1	6.3	26.5	9.8	5.6
10	9.8	6.9	11.7	19.5	6.0	4.8	19.9	2.9	6.1	28.5	7.4	4.7
11	9.0	6.2	9.7	10.2	6.0	4.4	41	2.9	6.3	15.1	7.2	4.4
12	14.2	5.9	6.2	5.2	138	4.4	12.4	2.8	259	83	17.0	4.1
13	10.3	5.6	4.9	17.0	166	4.2	9.8	13.7	31.5	24	12.8	4.2
14	19.2	5.4	4.9	7.4	23	4.0	8.4	4.4	11.2	22.5	15.2	4.6
15	11.6	5.2	4.4	4.7	12.0	3.9	7.6	3.2	12.2	55	8.4	5.5
16	8.3	4.9	4.0	4.0	40	3.8	7.0	7.8	14.6	39.5	7.2	5.3
17	7.9	4.8	5.5	3.7	27	3.7	6.6	4.4	11.8	235	6.3	17.0
18	12.0	4.7	5.5	4.1	22	3.7	7.2	3.3	7.8	71	5.9	6.6
19	8.7	5.3	4.5	18.7	10.5	4.1	6.2	3.2	6.7	94	5.6	5.7
20	7.0	4.4	4.1	10.0	11.4	4.4	5.7	6.5	6.0	63	5.4	5.6
21	12.6	4.1	3.7	36.5	87	13.1	5.4	59	5.7	27.5	5.2	4.6
22	19.3	4.2	3.5	29	99	32.5	5.3	118	5.3	37.5	5.0	4.5
23	31	3.8	3.4	16.5	161	61	5.2	102	5.0	22.5	4.7	4.5
24	11.8	3.7	3.3	17.7	46	15.2	6.1	157	5.4	14.2	4.5	7.7
25	9.6	3.5	3.4	19.1	16.4	19.0	5.0	648	4.7	27.5	4.4	9.0
26	7.9	3.4	98	11.5	12.6	118	4.8	379	4.6	35.5	4.4	8.5
27	7.2	3.4	10.8	7.9	10.8	97	4.5	360	5.2	12.2	4.5	19.5
28	6.6	3.2	5.4	10.5	9.0	77	4.4	55	4.9	9.9	8.0	11.5
29	7.4	3.1	4.4	10.0	8.3	19.8	4.3	-	4.3	8.7	8.4	8.4
30	14.2	3.2	5.5	18.7	7.6	9.1	4.1	-	7.0	7.9	7.2	11.1
31	27.5	8.1	-	11.6	-	8.4	4.4	-	13.1	-	4.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	129	6.6	17.4	26.9	539	1,650
August	43	3.1	8.98	13.9	278	855
September	115	3.3	14.5	22.4	435	1,340
October	36.5	3.6	11.1	17.2	346	1,060
November	166	6.0	36.4	56.3	1,090	3,350
December	118	3.7	18.3	28.3	568	1,740
Calendar year 1934	698	1.2	21.6	33.4	7,880	24,180
January	278	4.1	31.4	48.6	972	2,980
February	648	2.8	70.2	109	1,960	6,030
March	259	4.3	17.2	26.6	535	1,640
April	235	4.6	34.7	53.7	1,040	3,190
May	44	4.4	9.80	15.2	304	932
June	40	3.8	9.05	14.0	272	834
Fiscal year 1934-35	648	2.8	22.9	35.4	8,340	25,600

West Wailuaiki Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'20", long. 156°8'35", 500 feet above Koolau Ditch crossing and trail bridge and 2¾ miles south of Keanae post office.

Drainage area.- 3.6 square miles.

Records available.- January 1914 to October 1917, November 1921 to June 1935.

Average discharge.- 13 years (1922-35), 25.0 million gallons a day (38.7 second-feet).

Extremes.- Maximum discharge during year, 3,430 million gallons a day (5,310 second-feet) Feb. 25 (gage height, 12.10 feet); minimum, 2.3 million gallons a day (3.6 second-feet) Feb. 12, 13.

1914-17, 1921-35: Maximum discharge (estimated), 4,500 million gallons a day (6,960 second-feet) Jan. 14, 1923 (gage height, from floodmarks, about 13.5 feet); minimum, 0.3 million gallons a day (0.5 second-foot) July 26, 1922.

Remarks.- Records good for ordinary stages; poor for extremely high stages and for Apr. 20 to May 20. No diversions. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Jan. 7

0.5	2.0		2.0	36		0.5	1.90		2.0	36	
.7	3.4		2.5	64		.7	3.35		2.5	64	
1.0	7.3		3.0	106		1.0	7.0		3.0	106	
1.3	13.7		3.5	174		1.3	12.3		3.5	174	
1.6	22		4.0	262		1.6	20.5		4.0	262	

Jan. 8 to June 30

2.0	36	4.5	375		
2.5	64	5.0	510		
3.0	106	5.7	730		
3.5	174	6.4	975		
4.0	262	7.1	1,230		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	11.1	27.5	7.7	12.3	13.0	7.0	44	3.6	26	11.0	7.6	4.5
2	9.9	46	3.4	5.9	8.9	6.5	44	3.4	13.3	6.2	7.2	4.2
3	8.5	39	4.0	6.2	7.5	5.9	56	3.4	16.4	5.1	6.8	4.0
4	7.3	29.5	4.1	7.0	7.3	5.5	28.5	3.2	11.9	10.3	6.6	3.8
5	41	14.7	3.8	5.9	89	5.2	22	3.2	9.3	16.4	40	47
6	141	10.7	62	5.0	23	5.0	24	3.0	8.8	14.8	45	38.5
7	33	9.7	128	4.5	13.2	4.7	317	3.0	9.1	11.1	15	17.8
8	16.5	9.3	17.1	8.8	10.3	4.5	199	2.8	7.2	19.1	11	9.4
9	11.5	7.3	14.5	9.6	7.9	4.3	151	2.8	6.8	34	10	7.2
10	9.9	6.7	15.6	20.5	6.8	4.1	22.5	2.6	6.2	36	7.6	5.8
11	9.3	5.9	11.1	13.0	6.9	3.8	26.5	2.6	6.2	19.4	7.4	5.0
12	13.2	5.5	8.1	6.7	183	3.5	12.8	2.4	300	61	18	4.7
13	13.1	5.0	6.3	46	148	3.4	10.5	10.6	38	30	14	4.3
14	27	4.6	6.0	11.8	28	3.3	9.1	4.6	12.6	30	16	4.7
15	13.9	4.4	5.1	6.7	14.7	3.1	8.1	2.8	12.6	59	9.0	5.8
16	9.3	4.1	4.7	5.6	45	3.0	7.5	7.4	16.5	47	7.6	5.1
17	8.3	3.8	6.3	4.9	31	2.8	6.7	5.4	12.9	354	6.6	16.2
18	12.0	3.7	7.0	5.4	23	2.8	8.9	3.4	9.6	81	6.2	7.3
19	8.9	4.1	5.5	21.5	12.3	3.2	7.2	3.1	7.2	99	6.0	6.6
20	7.1	3.3	4.9	13.7	12.5	3.4	6.2	7.5	6.4	60	5.8	6.6
21	12.8	3.1	4.4	44	109	11.5	5.6	66	5.8	30	5.1	5.1
22	20.5	3.1	4.1	33	95	37	5.3	134	5.3	40	4.7	4.7
23	31	3.1	3.7	20	169	47	5.0	102	5.0	25	4.4	4.7
24	13.0	3.0	3.6	20.5	44	15.0	4.8	178	5.3	15	4.2	9.0
25	11.1	2.9	3.6	27.5	18.5	24	4.7	1,200	4.7	30	4.1	10.7
26	9.3	2.8	101	15.8	14.0	122	4.4	601	4.4	35	4.0	9.3
27	7.9	3.0	17.0	11.5	11.5	110	4.2	437	5.0	13	4.3	18.2
28	7.0	2.8	7.5	14.2	9.7	75	4.0	71	5.4	11	8.4	14.0
29	8.1	2.5	5.9	12.5	8.9	22	3.9	-	4.4	9.0	9.4	10.7
30	17.8	2.5	6.8	19.1	7.7	10.9	3.8	-	6.6	8.2	8.8	13.0
31	30.5	7.3	-	15.3	-	10.7	3.9	-	15.1	-	5.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	141	7.0	18.7	28.9	581	1,780
August	46	2.5	9.06	14.0	281	862
September	128	3.4	16.8	26.0	503	1,540
October	46	4.5	14.6	22.6	452	1,390
November	183	6.8	39.3	60.8	1,180	3,620
December	122	2.8	18.4	28.5	570	1,750
Calendar year 1934	1,170	1.3	24.9	38.5	9,090	27,890
January	317	3.8	33.6	52.0	1,040	3,200
February	1,200	2.4	102	158	2,870	8,810
March	300	4.4	19.4	30.0	602	1,850
April	354	5.1	41.4	64.1	1,240	3,810
May	45	4.0	10.2	15.8	316	970
June	47	3.8	10.3	15.9	308	945
Fiscal year 1934-35	1,200	2.4	27.2	42.1	9,940	30,530

Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°50'20", long. 156°8'30", 500 feet below highway, 1.6 miles southeast of Keanae post office, and 3 miles northwest of Nahiku. Altitude, 620 feet, by barometer.
Drainage area.- 1.8 square miles.
Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. March 1927 to June 1932.
Extremes.- Maximum discharge during year ending June 30, 1933, 694 million gallons a day (1,070 second-feet) Dec. 31 (gage height, 5.98 feet); minimum, 0.21 million gallons a day (0.33 second-foot) Nov. 10, 15, 16, 21-23, Jan. 19-21.
Maximum discharge during year ending June 30, 1934, 967 million gallons a day (1,500 second-feet) Apr. 25 (gage height, 6.62 feet); minimum, 0.12 million gallons a day (0.19 second-foot) Oct. 10, 11, 12.
Maximum discharge during year ending June 30, 1935, 924 million gallons a day (1,430 second-feet) Feb. 25 (gage height, 6.48 feet); minimum unknown, owing to damaged control.
Remarks.- Records good except those for estimated periods, which are poor. All low flow available is diverted by Koolau Ditch about 1.5 miles above station.

Rating tables, 1932-35 (gage height, in feet, and discharge, in million gallons a day)

July 1, 1932, to Nov. 1, 1933				Nov. 2, 1933, to May 1, 1935				May 2 to June 30, 1935	
0.1	0.06	1.5	29	0.1	0.06	2.0	66	0.2	0.17
.2	.27	2.0	52	.2	.42	2.5	103	.3	.55
.3	.74	2.5	84	.3	1.17	3.0	157	.4	1.28
.4	1.55	3.0	130	.4	2.4	3.5	225	.5	2.35
.5	2.7	3.6	203	.7	8.2	4.0	305	.7	5.2
.7	5.9	4.2	293	1.0	16.7	5.0	510	1.0	11.4
1.0	12.5			1.5	37			1.4	23.5
								1.8	41

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.69	2.6	0.46	0.46	0.27	3.45	56	26.5	25.5	8.7	0.51	0.41
2	.79	1.65	.46	.46	.27	.82	e.4	2.75	1.04	26	.41	.69
3	1.84	1.36	1.22	.46	.25	.74	59	1.65	1.78	66	.66	.63
4	.63	1.28	e.7	.41	.25	1.11	12.e	1.36	3.5	1.91	.41	.51
5	.63	1.19	5.8	.41	.25	.74	3.0	1.28	71	1.19	.36	.46
6	.57	1.28	.96	.36	.27	.69	*2.0	1.19	110	.96	.46	.41
7	.57	1.04	.74	.36	.25	.63	*1.8	1.04	293	.89	.36	.36
8	.57	1.28	1.82	.36	.23	.57	*1.6	1.04	147	.82	.32	.32
9	.69	1.11	50	.36	.23	.63	*1.5	18.0	17.e	.74	.32	.32
10	.82	.96	1.87	.36	.23	.57	*1.4	13.4	24.5	.74	.46	.32
11	1.75	1.04	1.11	.32	.29	.57	*1.3	1.28	4.9	.63	.32	.29
12	1.44	.89	.96	.32	.25	2.55	*1.2	1.28	6.8	.57	.29	.29
13	34	.96	5.6	.32	.23	4.6	*1.1	15.3	4.5	.57	.27	.29
14	1.78	.82	.96	.29	.23	1.11	*1.1	86	3.75	.51	7.0	.27
15	39	.69	.82	.29	.21	13.9	*24	19.0	1.85	.63	1.26	.29
16	2.65	.69	.74	.32	6.9	1.55	*40	7.6	1.28	.51	.69	.27
17	1.73	1.19	.69	.32	.36	1.36	21	6.7	1.11	.62	.82	.29
18	22	.69	.82	.32	.25	1.19	13.6	7.6	1.04	.63	.69	.25
19	4.1	.63	.74	.69	.23	1.11	1.85	16.0	.96	.51	.57	.23
20	12.7	.69	.63	.51	.23	.89	1.65	18.9	.89	.46	1.92	.21
21	12.5	.63	.57	.36	.21	.82	1.55	21.5	.89	.41	7.4	.25
22	81	.57	.57	.57	.21	.74	11.9	6.7	1.04	.41	.57	.29
23	54	17.4	.57	.57	.21	.74	8.4	2.65	*15	.41	.51	4.8
24	46	1.14	.51	.46	76	2.7	*2.5	1.55	*5	.36	.46	.58
25	11.7	.57	1.86	.36	3.7	6.9	*1.2	4.7	*3.0	.32	.41	.51
26	3.8	.57	.82	.32	.69	.96	*1.2	6.2	7.7	.36	.41	.32
27	1.75	.57	.57	.29	7.8	.89	*2.0	1.28	.74	.36	.36	.27
28	1.98	.57	.51	.29	43	7.7	*2.5	16.3	.69	4.7	.36	.29
29	6.3	.69	.46	.32	6.5	20	*1.5	-	.69	.74	.36	.63
30	16.5	.51	.46	.36	10.0	.69	*1.4	-	.63	.74	.36	8.0
31	18.0	.46	-	.32	-	170	7.7	-	.57	-	.36	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	81	0.57	12.3	19.0	382	1,170
August	17.4	.46	1.47	2.27	45.7	140
September	50	.46	3.07	4.75	92.0	282
October	.69	.29	.385	.596	11.9	37
November	76	.21	5.33	8.25	160	491
December	170	.57	8.10	12.5	251	771
Calendar year						
January	59	1.1	9.55	14.8	296	909
February	86	1.04	11.0	17.0	309	948
March	293	.57	24.5	37.9	758	2,330
April	66	.32	4.09	6.33	123	376
May	7.4	.27	.963	1.49	29.9	92
June	8.0	.21	.768	1.19	23.0	71
Fiscal year 1932-33	293	.21	6.80	10.5	2,480	7,620

*Estimated.

Wailuanui Stream near Keanae

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.63	0.46	0.27	0.19	19.2	98	.37	75	0.67	0.99	2.1	55
2	8.1	.63	.29	.19	15.0	2.8	1.94	4.5	.60	.90	1.83	49
3	.74	.57	.25	.19	*2.0	5.65	1.04	1.71	.60	90	25.5	9.0
4	.63	3.3	.25	.21	*1.2	1.96	.60	1.49	.90	22.5	40	59
5	.63	.74	.27	*.2	*.9	1.38	.54	1.49	.82	3.55	95	4.2
6	.82	1.48	.36	*.2	*.7	1.17	.48	1.27	.67	1.38	70	2.1
7	.57	.82	.32	*.2	*.6	.99	.48	1.17	.60	1.27	108	1.71
8	2.2	.74	.27	*.2	.60	.90	.48	1.06	.54	77	112	1.49
9	.69	.74	.25	†.19	.37	.82	.42	1.06	.54	3.6	148	1.38
10	.69	.74	.25	.16	.32	.74	1.36	.99	.82	2.1	103	1.27
11	.63	.63	.27	.14	.32	.82	2.6	.90	.54	42	41	1.38
12	.51	.57	.46	.27	.28	.67	1.17	.82	.54	8.3	57	1.38
13	.51	.57	.36	.25	.28	.60	.82	.74	.42	2.1	14.5	16.6
14	.51	.46	.32	.19	.28	.60	.90	.67	.42	36.5	12.1	3.95
15	.51	.46	.25	.19	.24	.54	.74	.60	.42	96	22.5	1.38
16	.51	.41	.27	.16	.24	.60	.67	.60	.42	3.1	9.0	1.27
17	.46	.36	.32	.19	.24	.60	.54	.60	.42	1.96	2.8	6.3
18	.41	.46	.27	.19	.24	.54	.54	.60	.48	1.71	3.8	13.2
19	.36	.36	.23	.19	.24	.48	2.6	24	.37	1.71	1.83	24
20	.57	.36	.23	.16	.28	.48	20	134	.37	41	1.60	40
21	.41	.32	.25	.16	.32	.42	1.99	10.1	.32	59	1.49	2.05
22	.32	.32	.27	.19	.24	.54	1.08	.99	.32	13.3	1.27	2.1
23	.51	.29	.27	.19	.24	.54	15.5	.82	.67	5.2	1.71	2.9
24	.63	.29	†.23	.21	.24	.42	6.5	.74	.67	45	1.71	5.7
25	.46	.29	†.23	.16	38.5	.48	3.35	.74	.48	448	1.27	18.8
26	.46	.29	.21	.16	126	.42	1.83	.74	.37	72	1.17	58
27	.46	.27	.21	.16	6.3	.68	1.49	.74	2.35	15.2	.99	17.0
28	.36	.25	.21	.16	.42	.90	1.27	.67	11.9	4.3	3.15	18.9
29	3.7	.25	.19	.21	.37	.48	1.17	-	16.5	8.0	1.17	13.2
30	1.35	.25	.19	.25	.32	.42	1.17	-	47	4.2	6.0	2.5
31	.57	.25	-	.21	-	.37	45	-	10.5	-	36.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	8.1	0.32	0.965	1.49	29.9	92
August	3.3	.25	.578	.894	17.9	55
September	.46	.19	.267	.413	8.02	25
October	.27	.14	.190	.294	5.90	18
November	126	.24	7.22	11.2	216	664
December	98	.37	4.00	6.19	124	381
Calendar year 1933	293	.14	5.32	8.23	1,940	5,960
January	45	.42	3.76	5.82	117	358
February	134	.60	9.60	14.9	269	825
March	47	.32	3.30	5.11	102	314
April	448	.90	37.1	57.4	1,110	3,410
May	148	.99	29.9	46.3	928	2,850
June	59	1.27	14.5	22.4	435	1,330
Fiscal year 1933-34	448	.14	9.22	14.3	3,360	10,320

*Estimated.
†Partly estimated.

Wailuanui Stream near Keanae

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.96	5.7	2.15	0.67	5.0	*1.5	16.6	0.48	30.5	*0.6	1.71	0.45
2	1.60	20.5	.54	.54	2.1	*1.3	15.1	.48	15.1	*.5	.94	.40
3	1.38	24	.54	.60	1.71	*1.1	25	.42	18.0	*.5	1.02	.36
4	1.27	21.5	.90	.54	1.49	*1.0	4.5	.42	12.9	2.55	1.10	.36
5	50	1.94	.60	.67	55	.99	2.9	.42	9.7	7.8	17.2	39
6	65	1.38	33	.60	17.2	.90	1.71	.42	9.7	*1.0	2.65	27.5
7	20.5	1.27	74	.42	2.1	.90	189	.37	8.4	*.8	2.35	14.7
8	7.4	1.17	2.6	.42	1.71	.82	143	.37	12.5	1.79	1.28	2.1
9	2.7	.99	2.6	.48	1.49	.74	107	.37	14.1	4.3	1.02	1.55
10	2.1	1.84	3.5	5.0	1.49	.90	10.2	.32	8.0	6.3	.94	1.19
11	1.83	.99	1.27	1.47	1.77	.74	22	.32	1.38	2.6	.86	1.02
12	2.4	.90	1.17	.54	114	.74	2.55	.32	1.51	56	4.8	.94
13	1.60	.90	.90	5.0	154	.67	2.1	3.9	24.5	8.3	2.65	.86
14	9.1	.74	.90	.66	16.8	.67	1.96	.60	5.4	4.9	1.91	.79
15	5.4	.74	.74	.42	4.8	.60	1.60	.37	19.8	38	.86	.79
16	1.49	.67	.74	.42	24.5	.54	1.38	1.42	39	20	1.02	.72
17	1.38	.67	.74	.42	17.1	.54	1.27	.67	30	151	.79	3.0
18	1.46	.74	.74	.42	13.8	.54	1.17	.42	13.1	31	.72	.94
19	1.38	.67	.74	1.88	2.7	.54	1.08	.37	*.7	41	.66	.79
20	1.08	.74	.67	1.10	2.25	.60	.99	.37	*1.0	27.5	.60	.72
21	3.6	.54	.60	14.3	*6	3.8	.99	1.50	*1.2	1.71	.60	.66
22	7.8	.54	.54	15.7	*26	26	.90	69	*.8	7.7	.55	.55
23	22.5	.54	.54	7.5	*80	29	.82	41	*.7	4.5	.50	.55
24	2.3	.48	.48	6.5	*10	4.0	.74	41	*1.0	*1.5	.45	.55
25	2.6	.42	.54	5.6	*5	7.3	.74	267	*.8	11.8	.45	1.04
26	1.71	.42	55	2.55	*3.5	70	.74	276	*.8	25.5	.45	.86
27	1.38	.42	2.3	1.27	*3.5	61	.67	282	*.7	1.71	.50	3.1
28	1.27	.37	.67	2.15	*3.0	56	.67	86	*.6	1.60	.72	3.2
29	1.27	.37	.54	1.60	*2.5	7.1	.54	-	*.6	1.71	.79	1.46
30	2.2	.37	.54	7.1	*2.0	2.1	.54	-	*.5	1.71	.66	1.46
31	7.4	.74	-	2.45	-	1.96	.54	-	*2.0	-	.50	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	65	1.08	7.58	11.7	235	721
August	24	.37	3.01	4.66	93.3	286
September	74	.48	6.36	9.84	191	586
October	15.7	.42	2.87	4.44	89.0	273
November	154	1.49	19.4	30.0	583	1,790
December	70	.54	9.24	14.3	287	880
Calendar year 1934	448	.32	12.2	18.9	4,440	13,620
January	189	.54	18.0	27.9	559	1,720
February	282	.32	38.4	59.4	1,080	3,300
March	39	.5	9.19	14.2	285	875
April	151	.5	15.5	24.0	466	1,430
May	26.5	.45	2.42	3.74	75.1	230
June	39	.36	3.72	5.76	112	343
Fiscal year 1934-35	282	.32	11.1	17.2	4,060	12,430

*Estimated.

East Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'25", long. 156°8'40", 125 feet above Koolau Ditch intake, 250 feet above trail, and 2⅛ miles south of Keanae post office.

Drainage area.- 0.6 square mile.

Records available.- January 1914 to October 1917, November 1921 to June 1935.

Average discharge.- 13 years (1922-35), 5.66 million gallons a day (8.76 second-feet).

Extremes.- Maximum discharge during year, 831 million gallons a day (1,290 second-feet) Feb. 25 (gage height, 5.88 feet); minimum, 0.58 million gallons a day (0.90 second-foot) Feb. 11, 12.

1914-17, 1921-35: Maximum discharge, 1,050 million gallons a day (1,620 second-feet) Feb. 12, 1925 (gage height, 6.96 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Apr. 11, 1926.

Remarks.- Records good for ordinary stages; poor for high stages and for July 9-16, July 25 to Sept. 28, Nov. 3-21. No diversions. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Nov. 25						Nov. 26 to June 30			
0.30	0.5	.52	3.4	.70	6.0	0.3	0.44	1.3	35
.40	1.1	.54	3.7	1.0	17	.5	2.5	1.6	62
.48	1.8	.56	3.5	1.3	35	.7	6.5	2.1	124
.50	2.2	.58	3.4	1.6	62	1.0	17.0		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.4	7.0	2.0	2.1	4.9	2.1	7.8	0.94	5.8	2.4	2.25	1.28
2	3.05	16	1.2	1.56	2.7	1.82	7.5	.87	3.4	1.42	2.1	1.15
3	2.5	15	1.7	1.96	2.5	1.69	7.4	.67	5.3	1.28	1.96	1.15
4	2.25	16	1.6	1.96	2.3	1.69	3.4	.87	3.05	4.8	1.96	1.08
5	25	6.0	1.5	1.69	30	1.56	2.85	.87	2.5	7.7	12.2	19.0
6	33.5	4.0	3.5	1.28	7.0	1.56	4.1	.72	2.5	4.4	12.5	17.1
7	6.1	3.5	50	1.28	4.0	1.56	43	..72	2.35	2.5	4.0	6.8
8	5.4	3.5	6.0	1.42	3.0	1.56	16.5	.72	2.1	3.85	2.85	3.05
9	4.5	2.8	5.4	2.3	2.5	1.42	17.4	.72	1.96	6.6	2.35	2.35
10	4.0	2.6	5.4	6.1	2.2	1.28	4.1	.65	1.82	7.4	2.25	2.1
11	3.5	2.3	3.5	2.7	2.3	1.15	10.7	.58	1.56	3.9	2.1	1.82
12	5.0	2.1	2.7	1.69	60	1.08	3.4	.58	73	29.5	8.4	1.69
13	4.0	1.9	2.1	2.2	50	1.08	2.85	6.8	5.4	6.3	5.4	1.56
14	8.0	1.8	1.9	1.56	5.0	1.08	2.35	1.28	2.85	5.2	5.8	1.56
15	4.5	1.7	1.6	1.42	4.0	.94	2.1	.80	3.6	17.4	3.05	2.55
16	2.6	1.6	1.6	1.28	20	.87	1.96	3.1	3.95	12.1	2.7	2.1
17	2.5	1.6	2.1	1.08	13	.80	1.69	1.15	2.35	68	2.35	7.9
18	3.05	1.5	2.0	1.42	6.0	.80	1.69	.94	2.25	13.6	2.1	2.7
19	2.35	1.7	1.6	5.0	3.0	.87	1.56	.87	1.96	23	1.96	2.35
20	1.96	1.4	1.5	2.5	3.5	.94	1.42	2.35	1.69	14.2	1.82	2.25
21	4.4	1.3	1.5	9.7	12	4.2	1.28	10.5	1.69	6.1	1.82	1.82
22	5.8	1.3	1.3	10.0	14.4	10.8	1.28	23	1.56	7.8	1.56	1.82
23	13.0	1.2	1.2	14.2	35	13.7	1.15	22.5	1.42	5.4	1.56	1.96
24	4.2	1.1	1.1	6.7	10.4	3.5	1.15	17.3	1.56	3.75	1.42	2.85
25	3.7	1.0	1.1	5.6	5.8	5.0	1.15	113	1.28	13.0	1.28	3.4
26	3.2	1.0	30	3.4	3.6	17.6	1.08	115	1.28	12.8	1.28	3.2
27	2.8	1.0	4.0	2.85	3.2	12.7	1.08	116	1.42	3.95	1.42	6.8
28	2.6	.9	2.0	3.85	2.7	13.1	1.08	12.7	1.28	3.2	3.15	4.8
29	2.8	.8	1.82	4.0	2.5	3.95	1.01	-	1.15	2.85	2.85	3.75
30	4.5	.9	2.3	7.3	2.35	2.25	1.01	-	2.2	2.5	2.6	4.4
31	8.0	4.0	-	3.4	-	2.3	1.01	-	4.8	-	1.56	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	33.5	1.96	5.88	9.10	182	559
August	16	.8	3.50	5.42	108	333
September	50	1.1	4.84	7.49	145	446
October	14.2	1.08	3.66	5.66	114	348
November	60	2.2	10.7	16.6	320	982
December	17.6	.80	3.71	5.74	115	353
Calendar year 1934	181	-	6.68	10.3	2,440	7,480
January	43	1.01	5.03	7.78	156	479
February	116	.58	16.3	25.2	456	1,400
March	73	1.15	4.81	7.44	149	457
April	68	1.28	9.90	15.3	297	911
May	12.5	1.28	3.25	5.03	101	309
June	19.0	1.08	3.88	6.00	116	357
Fiscal year 1934-35	116	.58	6.19	9.58	2,260	6,930

West Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'40", long. 156°8'55", 150 feet above Koolau Ditch crossing and intake and 2¾ miles south of Keanae post office.

Drainage area.- 0.7 square mile.

Records available.- December 1913 to October 1917, July 1922 to June 1935.

Average discharge.- 13 years (1922-35). 9.27 million gallons a day (14.3 second-feet).

Extremes.- Maximum discharge during year, 1,100 million gallons a day (1,700 second-feet) Feb. 25 (gage height, 6.95 feet); minimum, 0.78 million gallons a day (1.21 second-feet) Feb. 12.

1913-17, 1922-35: Maximum discharge, 1,220 million gallons a day (1,890 second-feet) Jan. 14, 1923 (gage height, 7.70 feet); minimum, 0.2 million gallons a day (0.3 second-foot) July 16-21, 1922.

Remarks.- Records fair for ordinary stages; poor for extremely high stages and for Sept. 27 to Oct. 22, Nov. 12 to Dec. 4. No diversions. Water used to irrigate taro several miles below station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.5	0.72	1.0	7.2	1.8	50
.6	1.34	1.1	10.0	2.2	91
.7	2.2	1.2	13.2	2.6	137
.8	3.45	1.4	22	3.0	191
.9	5.1	1.6	34	3.6	287

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.5	8.6	2.7	2.8	6.8	3.2	14.4	1.22	15	3.6	3.3	1.77
2	4.8	16.4	1.51	2.3	4.3	2.9	13.8	1.22	7.8	2.3	3.1	1.60
3	3.95	15.4	2.15	2.6	3.8	2.7	18.2	1.22	8.8	2.05	2.8	1.60
4	3.45	15.8	2.0	2.6	3.45	2.5	12.2	1.22	5.7	5.9	2.7	1.60
5	22.5	6.8	1.83	2.3	31.5	2.3	8.6	1.22	4.4	9.1	16.0	19.1
6	29	4.9	25.5	2.1	9.0	2.2	8.e	1.09	4.1	5.5	19.8	19.8
7	16.9	4.3	51	1.9	5.5	2.1	138	1.03	3.6	3.8	7.2	10.1
8	8.2	4.4	7.6	3.0	4.6	2.05	93	1.03	3.1	5.7	5.5	4.3
9	5.5	3.3	6.6	4.5	3.6	1.77	64	.97	2.95	9.3	4.8	3.2
10	4.8	3.3	6.3	9.0	3.1	1.77	12.4	.91	2.6	10.8	3.6	2.6
11	4.4	2.8	4.6	3.5	3.25	1.68	13.5	.91	2.45	6.4	3.45	2.3
12	6.6	2.6	3.45	2.4	60	1.60	6.2	.91	103	31.5	8.9	2.1
13	4.9	2.45	2.6	3.0	54	1.51	4.9	7.3	20	10.1	6.2	2.05
14	9.3	2.2	2.45	2.3	7.0	1.43	4.1	1.81	6.8	9.4	6.7	2.05
15	6.1	2.1	2.1	2.0	5.0	1.43	3.6	1.15	6.3	21.5	4.1	2.8
16	3.e	2.05	2.05	1.8	22	1.28	3.2	3.8	6.4	17.0	3.45	2.4
17	3.6	1.94	2.7	1.7	18	1.28	2.8	1.86	4.9	89	3.1	8.0
18	4.6	1.86	2.6	2.0	8.0	1.28	4.3	1.34	3.8	34	2.8	3.2
19	3.45	2.15	2.1	9.0	4.5	1.43	2.8	1.28	3.2	36	2.6	2.6
20	2.95	1.77	1.94	5.0	5.0	1.51	2.6	2.75	2.95	29	2.3	2.45
21	5.6	1.60	1.86	18	35	5.5	2.2	15.1	2.7	13.2	2.3	2.05
22	7.2	1.60	1.68	15	40	14.1	2.05	42	2.3	14.4	2.2	2.15
23	13.6	1.43	1.60	8.6	60	13.6	1.77	30.5	2.2	10.3	2.05	2.2
24	5.7	1.34	1.51	8.9	15	5.4	1.77	54	2.45	7.0	1.94	3.3
25	5.1	1.34	1.51	8.6	8.0	8.1	1.77	274	2.1	14.4	1.86	4.3
26	4.1	1.28	29	5.8	6.0	42	1.68	206	1.86	14.2	1.77	3.8
27	3.45	1.28	5.0	4.8	5.0	40	1.51	184	2.05	6.2	1.86	7.1
28	3.2	1.28	2.5	5.9	4.5	33.5	1.43	38	2.05	4.8	3.7	5.2
29	3.6	1.15	2.3	5.4	4.0	10.5	1.43	-	1.68	4.1	3.8	4.3
30	5.5	1.22	2.6	9.2	3.5	5.1	1.34	-	2.7	3.8	3.1	5.1
31	9.2	4.5	-	5.9	-	4.8	1.43	-	5.8	-	1.86	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	29	2.95	7.11	11.0	221	677
August	16.4	1.15	3.97	6.14	123	378
September	51	1.51	6.11	9.45	183	563
October	18	1.7	5.22	8.08	162	497
November	60	3.1	14.8	22.9	443	1,360
December	42	1.28	7.11	11.0	221	677
Calendar year 1934	-	.6	9.11	14.1	3,320	10,200
January	138	1.34	14.5	22.4	450	1,380
February	274	.91	31.4	48.6	878	2,690
March	103	1.68	7.93	12.3	246	754
April	89	2.05	14.5	22.4	434	1,330
May	19.8	1.77	4.48	6.93	139	426
June	19.8	1.60	4.50	6.96	135	415
Fiscal year 1934-35	274	.91	9.96	15.4	3,640	11,150

Taro patch feeder ditch at Keanae

Location.- Water-stage recorder, lat. 20°51'40", long. 156°9'0", 100 feet southeast of highway bridge over Piinaaua Stream, 4¼ miles northwest of Nahiku, and 4⅔ miles southeast of Kailua.

Records available.- September 1934 to June 1935.

Extremes.- Maximum gage height during period, 2.86 feet (discharge greater than 17.8 million gallons a day or 27.5 second-feet) Feb. 25; minimum discharge, 0.05 million gallons a day (0.08 second-foot) Feb. 28.

Remarks.- Records fair except those for Nov. 29 to Dec. 13, Mar. 6-15, Apr. 18-25, which are poor. Water used for irrigation of taro in vicinity of Keanae.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1			2.35	2.2	2.5	2.7	3.0	2.2	0.08	1.77	2.65	2.4
2			2.15	2.2	2.3	2.7	3.1	2.1	.13	1.72	2.65	2.35
3			2.15	2.15	2.2	2.7	3.15	2.1	.19	1.91	2.6	2.35
4			2.15	2.15	2.2	2.6	2.8	2.1	.52	2.65	2.6	2.35
5			2.15	2.25	3.3	2.6	2.75	2.1	.85	2.9	2.9	2.75
6			2.9	2.2	2.75	2.6	2.75	2.15	1.1	2.75	3.0	2.95
7			3.25	2.2	2.55	2.5	4.2	2.2	1.2	2.7	2.65	2.75
8			2.5	2.2	2.4	2.5	3.8	2.2	1.1	2.8	2.65	2.55
9			2.4	2.2	2.35	2.5	3.6	2.2	1.0	3.0	2.6	2.5
10			2.55	2.6	2.25	2.4	2.95	2.2	.e	3.0	2.6	2.45
11			2.5	2.3	2.3	2.4	3.1	2.2	.7	2.8	2.6	2.4
12			2.3	2.2	3.85	2.3	2.85	2.2	1.0	3.35	2.65	2.4
13			2.2	2.6	3.9	2.3	2.8	2.3	1.7	2.7	2.65	2.4
14			2.15	2.2	2.2	2.3	2.75	2.2	1.5	2.6	2.6	2.4
15			2.1	2.15	2.15	2.3	2.65	2.2	1.4	2.95	2.55	2.4
16			2.05	2.1	3.0	2.25	2.6	2.25	1.30	2.9	2.5	2.35
17			2.05	2.1	3.0	2.25	2.6	2.2	1.26	3.9	2.5	2.5
18			2.05	2.1	2.95	2.25	2.55	2.15	1.18	3.0	2.5	2.25
19			2.0	2.15	2.75	2.2	2.5	2.15	1.14	3.2	2.5	2.25
20			2.0	2.15	2.7	2.2	2.45	2.15	1.10	2.8	2.45	2.25
21			1.96	2.75	3.6	2.5	2.4	2.8	1.46	2.8	2.45	2.2
22			1.91	2.75	3.5	2.85	2.35	3.6	1.58	2.8	2.4	2.2
23			1.91	2.65	4.2	3.1	2.35	3.3	1.58	2.8	2.4	2.2
24			1.91	2.6	3.3	2.7	2.35	3.65	1.58	2.9	2.4	2.25
25			2.0	2.8	2.95	2.75	2.3	4.9	1.54	3.0	2.4	2.25
26			3.95	2.55	2.9	3.5	2.25	.75	1.54	3.0	2.4	2.25
27			2.6	2.25	2.9	3.35	2.2	.54	1.54	2.8	2.4	2.45
28			2.3	2.4	2.85	3.3	2.15	.08	1.54	2.75	2.4	2.55
29			2.2	2.3	2.8	2.9	2.15	-	1.63	2.75	2.4	2.45
30			2.2	2.65	2.8	2.75	2.2	-	1.77	2.75	2.4	2.45
31			-	2.35	-	2.7	2.25	-	1.77	-	2.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	3.95	1.91	2.30	3.56	68.9	211
October	2.8	2.1	2.34	3.62	72.4	222
November	4.2	2.15	2.85	4.41	85.4	262
December	3.5	2.2	2.61	4.04	81.0	248
Calendar year						
January	4.2	2.15	2.71	4.19	83.9	257
February	4.9	.08	2.26	3.50	63.2	194
March	1.77	.08	1.19	1.84	36.8	113
April	3.9	1.72	2.79	4.32	83.8	257
May	3.0	2.4	2.54	3.93	78.8	242
June	2.95	2.2	2.41	3.73	72.4	222
The period						2,230

Koolau Ditch near Keanae

Location.- Water-stage recorder, lat. 20°49'55", long. 156°10'30", on west side of Keanae Valley, 2¾ miles southwest of Keanae post office.

Records available.- January 1910 to December 1912, November 1917 to June 1935.

Average discharge.- 17 years (1918-35), 61.7 million gallons a day (95.5 second-feet).

Extremes.- Maximum discharge during year, 174 million gallons a day (269 second-feet) Apr. 17 (gage height, 5.95 feet); no flow several days in February and March, when water was shut out of ditch.
1910-12, 1917-35: Maximum discharge, 175 million gallons a day (271 second-feet) Jan. 4, 1922 (gage height, 6.36 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good. Regulated by gates and spillways. Koolau Ditch diverts water at 1,200-foot elevation from all streams between Makapipi and Alo for power and irrigation in central Maui. No diversions above station except from several spillways.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	104	142	55	*70	*102	72	149	32.5	0	81	76	*37
2	93	149	30	*38	*73	66	142	30	0	50	72	*36
3	79	152	39.5	*42	*60	62	152	30	0	44	66	*35
4	69	152	38	*45	*70	59	145	30	0	95	66	*34
5	111	123	34	*40	*120	56	138	27.5	0	114	90	*110
6	128	93	141	*37	*130	53	126	26	0	116	149	*160
7	114	82	149	*35	*93	50	152	26	0	76	124	*125
8	130	82	102	*43	*72	47	156	25	0	93	100	*80
9	108	66	99	*56	*60	44	160	25	0	142	†89	*60
10	97	68	107	*94	*56	44	152	24	0	149	†69	*54
11	86	56	84	*74	*56	41	*152	22.5	0	122	66	*45
12	123	53	62	*43	*145	38	*125	22.5	0	150	97	*41
13	98	47	47	*78	*150	36.5	*98	85	0	152	110	*40
14	149	44	47	*52	*145	34	*44	36.5	0	149	123	*41
15	112	41	41	*37	*115	32.5	82	24	0	160	92	*50
16	79	41	38	†35	*135	31	76	64	0	156	69	*48
17	72	38	50	32.5	*150	31	69	37.5	0	168	59	*120
18	99	38	56	37.5	*140	30	76	25	0	154	56	*66
19	79	44	44	120	*110	32.5	†66	24	0	172	50	*54
20	62	38	38	*85	*110	32.5	*60	48	0	168	47	*54
21	88	32.5	38	*150	*145	81	*56	139	0	152	44	*43
22	138	32.5	32.5	*150	152	83	*54	152	0	152	41	*41
23	145	*32	30	*80	156	149	*52	152	0	149	38	*45
24	113	*32	30	*125	152	106	*50	156	22	126	36.5	*80
25	102	*30	30	*114	142	110	*46	83	47	134	35	*85
26	82	*30	130	*98	123	152	*40	0	44	156	34	*78
27	72	*32	92	*78	111	152	*42	0	47	126	35	*120
28	62	*30	†50	*96	93	156	*40	0	47	104	68	*114
29	69	*30	*40	*94	86	140	*38	-	41	89	77	*85
30	101	*30	*45	*140	76	93	*36	-	64	82	66	*100
31	138	*50	-	*98	-	84	*35	-	114	-	*40	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	149	62	100	155	3,100	9,520
August	152	30	61.6	95.3	1,910	5,860
September	149	30	60.6	93.8	1,820	5,580
October	150	32.5	74.7	116	2,320	7,110
November	156	56	111	172	3,330	10,210
December	156	30	70.9	110	2,200	6,750
Calendar year 1934	156	1.2	78.7	122	28,730	88,180
January	160	35	90.6	140	2,810	8,620
February	156	0	48.1	74.4	1,350	4,130
March	114	0	13.7	21.2	426	1,310
April	172	44	126	195	3,780	11,600
May	149	34	70.1	108	2,170	6,670
June	160	34	69.4	107	2,080	6,390
Fiscal year 1934-35	172	0	74.8	116	27,300	83,750

*Estimated.
†Partly estimated.

Honomanu Stream at Haiku-uka boundary, near Kailiili

Location.- Water-stage recorder, lat. 20°49'20", long. 156°12'15", at end of Haiku-uka boundary trail, 4¼ miles southeast of Kailiili.

Drainage area.- 2.4 square miles.

Records available.- October 1919 to February 1927, July 1932 to December 1934 (discontinued).

Extremes.- Maximum discharge during period, 391 million gallons a day (605 second-feet) Nov. 12 (gage height, 5.15 feet); minimum, 0.29 million gallons a day (0.45 second-foot) Aug. 30.
1919-27, 1932-34: Maximum discharge, 1,290 million gallons a day (2,000 second-feet) Jan. 14, 1923 (gage height, 9.93 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Oct. 7, 1932, Oct. 22, Nov. 25, 1933.

Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. No diversions above station.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1-5		July 6 to Dec. 17			
1.0	1.40	0.6	0.22	1.2	4.3
1.1	2.5	.7	.32	1.5	11.J
1.2	4.0	.8	.54	1.8	22
1.3	5.9	.9	.94	2.1	38
1.4	8.2	1.0	1.75	2.4	57
1.5	11.1			2.8	90

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.35	11.0	4.9	4.6	1.75	1.06						
2	2.3	15.4	.74	.94	1.57	.88						
3	2.25	11.7	1.51	.83	1.06	.78						
4	*2.0	8.0	1.91	1.20	1.00	.70						
5	*10	3.4	1.63	1.06	44	.63						
6	*25	2.1	57	1.12	7.2	.60						
7	22	1.75	85	7.4	4.8	.54						
8	9.6	1.75	4.3	2.1	2.45	.52						
9	3.7	1.29	2.4	2.35	1.29	.50						
10	1.93	1.06	3.8	8.0	1.00	.52						
11	1.65	.94	1.85	2.95	1.02	.47						
12	2.9	.83	1.75	1.20	90	.41						
13	3.95	.70	.94	10.7	72	.36						
14	13.2	.63	.74	2.15	10.1	.36						
15	3.5	.60	.66	1.12	3.2	.32						
16	1.85	.63	.60	.83	22	.31						
17	1.47	.57	1.02	.70	11.8	-						
18	4.8	.52	2.1	1.09	8.3	-						
19	2.9	9.6	1.00	9.4	2.35	-						
20	1.57	1.98	.66	3.75	2.25	-						
21	9.1	.78	.92	13.6	59	-						
22	12.4	.63	.70	5.5	51	-						
23	9.9	.54	.50	5.2	88	-						
24	2.45	.47	.45	4.6	14.8	-						
25	2.0	*.45	.52	20.5	3.7	-						
26	2.45	*.40	55	4.4	2.25	-						
27	1.93	*.35	4.3	2.1	1.93	-						
28	1.29	.32	1.29	3.05	1.57	-						
29	1.76	.30	.83	2.45	1.29	-						
30	9.1	.34	2.15	5.5	1.12	-						
31	9.7	3.8	-	3.05	-	-						

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	25	1.29	5.87	9.08	182	559
August	15.4	.30	2.67	4.13	82.8	254
September	85	.45	8.04	12.4	241	740
October	20.5	.70	4.30	6.65	133	410
November	90	1.00	17.1	26.5	514	1,580
December 1-16	1.06	.31	.560	.866	8.96	27
Calendar year						
January						
February						
March						
April						
May						
June						
The period						3,570

*Estimated.

Honomanu Stream near Keanae

Location.- Water-stage recorder, lat. 20°50'10", long. 156°11'20", 500 feet above Spreckels Ditch intake and trail bridge and 3 miles by trail northwest of upper Keanae.

Drainage area.- 3.3 square miles.

Records available.- November 1913 to June 1935.

Average discharge.- 19 years (1916-1935), 15.7 million gallons a day (24.3 second-feet).

Extremes.- Maximum discharge during year, 1,580 million gallons a day (2,440 second-feet) Feb. 25 (gage height, 8.98 feet); minimum, 0.7 million gallons a day (1.08 second-feet) Feb. 12, 13.
1913-35: Maximum discharge, that of Feb. 25, 1935; minimum, 0.08 million gallons a day (0.12 second-foot) Mar. 24, 1928.

Remarks.- Records good for ordinary stages; poor for high stages and for Aug. 8-24, Jan. 11-21, Mar. 8-23. No diversions. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Aug. 20				Aug. 21 to June 30					
0.5	0.9	1.2	9.1	1.6	0.65	2.6	26	3.6	114
.6	1.4	1.4	14.4	1.8	2.15	2.8	37.5	4.0	173
.7	2.0	1.6	21	2.0	5.2	3.0	52	4.4	247
.8	2.9	1.8	29	2.2	10.0	3.2	70	4.8	337
.9	4.0	2.0	39	2.4	16.8	3.4	90	5.2	435
1.0	5.4								

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.3	21	7.3	6.6	4.5	2.8	23.5	1.95	18.5	4.9	3.2	3.7
2	6.3	33.5	2.5	2.65	3.6	2.65	25.5	1.45	8.4	2.4	2.95	3.3
3	5.3	29.5	4.4	2.95	2.95	2.4	28.5	1.15	8.6	1.85	4.8	1.95
4	4.8	24.5	4.0	3.2	3.05	2.15	16.3	1.05	6.3	4.2	4.8	1.65
5	29	8.4	3.5	3.2	53	2.05	8.4	1.00	4.2	9.7	42	35.5
6	7.9	5.1	61	2.95	10.4	1.85	14.3	.95	4.3	7.8	28.5	43
7	30	4.4	76	7.9	6.4	1.85	197	.95	4.5	6.3	8.5	11.2
8	17.5	4.4	7.5	4.3	4.3	1.65	108	.90	4.0	17.2	12.0	4.8
9	8.6	3.5	7.2	5.2	3.05	1.55	74	.85	4.3	26	6.4	3.8
10	5.1	3.3	7.6	16.2	2.55	1.65	11.6	.80	3.5	26.5	4.3	2.8
11	4.4	2.9	4.8	4.3	4.0	1.45	20	.75	3.0	9.7	4.2	2.4
12	8.8	2.4	4.3	3.2	121	1.25	7.0	.75	90	58	10.7	2.15
13	7.6	2.2	2.95	17.1	98	1.10	4.5	6.4	14	15.7	8.1	1.95
14	27.5	2.0	2.65	4.8	15.6	1.05	3.8	3.7	5.0	15.4	9.7	2.15
15	8.1	1.9	2.15	3.05	6.3	1.00	3.4	1.35	8.0	33	5.6	2.8
16	4.6	1.8	2.05	2.95	29	1.00	3.2	7.2	10	36.5	4.5	3.55
17	3.8	1.7	2.8	2.3	18.1	.95	3.0	3.6	5.0	189	6.5	13.5
18	10.0	1.6	4.3	2.9	13.7	.95	3.5	1.65	3.5	50	8.5	5.6
19	6.2	5.0	2.8	15.6	5.0	.95	3.0	1.15	2.7	63	4.7	4.0
20	3.6	3.4	2.15	7.1	4.8	1.22	2.4	6.8	2.6	44	4.5	3.6
21	12.3	1.6	2.4	26	61	9.0	2.4	31	2.5	15.8	3.2	2.65
22	21	1.4	2.4	16.4	53	27	1.95	84	2.2	35.5	2.8	2.3
23	24.5	1.2	1.75	10.7	88	14.1	8.0	63	2.0	13.2	2.4	2.15
24	6.8	1.1	1.55	10.6	20.5	7.3	3.05	107	2.4	7.2	2.15	9.7
25	6.8	1.05	1.65	23.5	7.0	13.0	2.15	353	2.15	24	1.95	8.0
26	5.7	1.05	69	7.7	4.8	62	1.75	324	1.85	20	1.85	6.5
27	4.3	1.10	7.8	4.5	4.2	62	1.65	249	1.75	7.7	2.3	10.9
28	3.3	1.00	3.6	6.5	3.45	39	1.45	78	1.75	5.4	9.6	11.4
29	4.2	.90	2.8	5.4	3.2	9.6	1.35	-	1.55	4.3	8.2	6.6
30	12.2	.92	5.3	10.2	2.95	4.0	1.35	-	3.1	3.6	5.7	6.6
31	20.5	8.7	-	6.2	-	5.6	4.9	-	7.4	-	2.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	30	3.3	10.6	16.4	328	1,010
August	33.5	.90	5.89	9.11	183	560
September	76	1.55	10.3	15.9	310	952
October	26	2.3	7.94	12.3	246	755
November	121	2.55	21.9	33.9	657	2,020
December	62	.95	9.17	14.2	284	872
Calendar year 1934	496	.4	14.5	22.4	5,310	16,300
January	197	1.35	19.1	29.6	591	1,810
February	353	.75	47.6	73.6	1,330	4,090
March	90	1.55	7.71	11.9	239	734
April	189	1.85	25.3	39.1	758	2,330
May	42	1.85	7.34	11.4	227	698
June	43	1.65	7.34	11.4	220	676
Fiscal year 1934-35	353	.75	14.7	22.7	5,370	16,510

Haipuaena Stream near Huelo

Location.- Water-stage recorder, lat. 20°51'5", long. 156°11'30", 200 feet above inflow of Spreckels Ditch and 3¼ miles southeast of Kailua.

Drainage area.- 1.1 square miles.

Records available.- October 1913 to June 1935.

Average discharge.- 19 years (1916-35), 10.2 million gallons a day (15.8 second-feet).

Extremes.- Maximum discharge during year, 487 million gallons a day (754 second-feet) Feb. 25 (gage height, 5.63 feet); minimum, 0.9 million gallons a day (1.4 second-feet) Feb. 13.

1913-35: Maximum discharge, 582 million gallons a day (900 second-feet) Feb. 17, 1929 (gage height, 6.25 feet); minimum, 0.3 million gallons a day (0.5 second-foot) frequently during December 1919 and Oct. 27-29, 1933.

Remarks.- Records good for ordinary stages; poor for extremely high stages and for July 1-11, Dec. 15 to Jan. 21, Feb. 28, Mar. 1, Apr. 25, 26. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.7	1.0	6.9	2.2	34.5
.4	1.0	1.2	10.7	2.6	51
.5	1.5	1.4	15.7	3.0	115
.6	2.2	1.6	22	3.4	162
.8	4.0	1.9	34.5		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.0	14.4	6.6	5.8	6.2	3.6	20	1.8	17	3.8	3.2	2.9
2	5.6	22.5	2.6	2.5	4.0	3.2	21	1.4	6.6	2.3	2.9	2.6
3	5.2	23	3.7	2.8	3.4	2.9	22	1.4	7.6	2.0	3.2	2.0
4	4.7	19.7	3.8	2.8	3.0	2.7	15	1.3	5.5	4.9	3.4	1.8
5	21	8.3	3.1	2.8	39.5	2.5	8.0	1.2	4.1	10.6	29	26.5
6	7.0	5.5	42	2.4	9.4	2.4	13	1.2	4.5	6.4	22.5	35.5
7	20	4.5	53	3.8	5.6	2.1	100	1.2	4.4	4.5	6.7	9.3
8	14	4.5	6.9	3.1	4.4	2.1	70	1.1	4.0	10.8	6.3	4.8
9	7.6	3.6	7.8	2.8	3.4	2.0	50	1.1	4.3	8.8	4.6	3.6
10	5.0	3.4	7.6	12.2	2.9	2.1	11	1.0	3.3	20.5	3.4	2.8
11	4.2	3.0	5.3	5.3	3.5	1.8	20	1.0	2.9	8.3	3.3	2.6
12	7.3	2.8	4.5	2.8	75	1.6	8.0	.9	77	47	10.2	2.4
13	5.5	2.4	3.4	12.6	82	1.6	5.0	6.6	13.6	13.1	6.7	2.3
14	18.2	2.3	3.3	4.1	13.3	1.4	4.3	2.9	5.3	11.8	8.1	2.4
15	8.4	2.1	2.8	2.8	6.6	1.3	4.0	1.4	8.4	30	4.6	3.1
16	4.6	2.1	2.6	2.6	28	1.3	3.7	7.2	10.1	28.5	3.8	3.0
17	3.9	2.0	3.3	2.4	19.1	1.2	3.3	3.0	5.0	103	4.4	11.8
18	7.4	1.9	3.5	2.7	16.6	1.2	4.0	1.6	3.8	28	4.9	4.4
19	5.4	5.1	2.8	13.9	6.3	1.2	3.5	1.4	3.0	48	3.3	3.4
20	3.5	3.6	2.4	6.7	5.6	2.0	2.5	5.1	2.8	32	3.3	3.2
21	8.5	1.9	2.3	24.5	50	8.0	2.2	35	2.8	12.8	2.7	2.6
22	15.9	1.8	2.1	18.1	44	23	*1.9	60	2.4	25.5	2.4	2.4
23	19.7	1.6	2.0	11.3	70	12	7.0	49	2.3	10.5	2.2	2.5
24	7.6	1.4	1.9	12.5	22	7.0	2.4	68	3.0	6.4	2.0	6.3
25	7.7	1.4	1.9	16.8	8.7	12	1.8	151	2.4	18	1.9	6.6
26	6.1	1.3	59	7.9	6.4	50	1.6	120	2.1	14	1.8	5.5
27	4.6	1.4	8.3	4.6	5.3	52	1.6	*106	2.1	6.6	2.1	9.5
28	3.7	1.5	3.6	5.9	4.6	35	1.5	40	2.1	4.8	7.2	10.7
29	4.3	1.2	2.8	5.3	4.0	9.0	1.4	-	1.8	4.0	6.1	6.4
30	7.6	1.2	3.2	9.5	3.6	4.5	1.5	-	2.5	3.5	3.8	5.9
31	12.7	5.2	-	6.3	-	5.4	5.6	-	5.2	-	2.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	21	3.5	8.48	13.1	263	807
August	23	1.2	5.05	7.81	157	481
September	59	1.9	8.61	13.3	258	793
October	24.5	2.4	7.08	11.0	220	674
November	82	2.9	18.6	28.8	557	1,710
December	52	1.2	8.33	12.9	258	792
Calendar year 1934	239	.6	10.5	16.2	3,840	11,770
January	100	1.4	13.4	20.7	417	1,280
February	151	.9	24.0	37.1	673	2,060
March	77	1.8	7.16	11.1	222	681
April	103	2.0	17.7	27.4	530	1,630
May	29	1.8	5.57	8.62	173	530
June	35.5	1.8	6.29	9.73	189	579
Fiscal year 1934-35	151	.9	10.7	16.6	3,920	12,020

*Partly estimated.

Spreckels Ditch at Haipuaena, near Huelo

Location.- Water-stage recorder, lat. 20°51'20", long. 156°11'25", between Haipuaena and Puohokamoa Streams on Spreckels Ditch trail, 3½ miles southeast of Kailua.

Records available.- February 1930 to June 1935.

Extremes.- Maximum discharge during year, 103 million gallons a day (159 second-feet) June 5 (gage height, 4.57 feet); minimum, 0.4 million gallons a day (0.6 second-foot) Feb. 25.
1930-35: Maximum discharge, 139 million gallons a day (215 second-feet) Mar. 5, 1933 (gage height, 5.03 feet); no flow when water was turned out of ditch.

Remarks.- Records good. Regulated by gates and spillways. Spreckels Ditch diverts from all streams between Nuaailua and Kailua above Koolau Ditch east of Puohokamoa and below Koolau Ditch west of Puohokamoa. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	23.5	40	19.7	17.8	23.5	11.4	30.5	5.9	10.8	16.6	11.2	5.8
2	19.3	48	11.7	7.9	15.1	9.9	29	4.5	23.5	7.7	10.4	5.1
3	16.5	48	15.1	11.1	12.7	8.9	42	4.5	28.5	5.9	13.1	2.4
4	14.2	46	15.5	9.9	11.8	8.4	34	4.3	19.3	22.5	14.0	2.0
5	23.5	29	12.8	9.9	32	7.7	25	4.0	14.2	31.5	33.5	45
6	26	19.3	46	8.8	29	7.0	27	3.7	16.3	25.5	44	65
7	35.5	16.5	32	12.8	22	6.4	36	3.8	14.8	17.8	27	27
8	36.5	16.8	23.5	11.4	16.3	5.9	26.5	3.7	11.6	28.5	22.5	15.3
9	23.5	12.5	29	12.3	12.0	5.5	34	3.7	15.6	42	19.5	10.2
10	19.0	12.0	25	25.5	10.2	6.2	29	3.4	10.8	48	12.9	6.1
11	16.2	9.9	19.3	17.4	12.9	5.2	29.5	3.2	9.1	29	13.5	4.3
12	29	9.1	16.8	9.7	48	4.8	20.5	3.1	11.6	35	31	3.6
13	21.5	8.0	10.8	22	19.0	4.7	15.5	19.6	23.5	36	29	3.1
14	38	7.3	10.4	14.4	30.5	4.3	13.7	11.0	18.1	36	30	4.0
15	27.5	6.6	8.6	9.9	23.5	4.3	12.0	4.7	26	58	19.3	9.0
16	16.0	6.1	7.9	9.7	27	4.0	10.6	21.5	33.5	44	16.0	8.9
17	14.2	5.9	11.8	8.0	38	3.8	9.7	11.2	16.5	33.5	17.5	30
18	25	5.7	12.7	10.3	36	4.0	12.9	5.0	12.0	44	20.5	14.8
19	19.3	14.7	9.1	38	20.5	4.2	9.9	4.3	9.9	67	13.3	8.8
20	12.9	11.0	7.3	23.5	20.5	5.0	8.2	17.9	8.8	58	12.7	8.8
21	21	5.4	7.5	50	49	21.5	7.0	53	9.1	38	8.9	4.5
22	42	5.2	7.0	42	35	21.5	6.4	63	7.5	52	8.9	5.1
23	44	4.5	5.5	32	29.5	29	18.7	38	6.6	35	6.8	6.2
24	27	4.3	5.2	36	34	23	8.2	35	11.3	25	4.8	18.3
25	27	4.2	5.4	27	27	23.5	5.9	20.5	8.0	42	2.0	22
26	22	4.0	27.5	26	20.5	40	5.4	17.3	6.4	43	2.0	19.3
27	16.8	5.8	19.3	17.3	16.8	40	4.8	17.3	6.2	25	4.0	28.5
28	13.5	4.3	11.4	25	13.7	27.5	4.8	6.4	6.1	17.8	23.5	28
29	17.6	3.6	8.8	22	12.5	25	4.5	-	5.5	14.8	22	22
30	25.5	3.6	12.5	34	11.2	15.1	4.5	-	11.2	12.7	16.4	20.5
31	36	20.5	-	23.5	-	17.5	12.5	-	25	-	6.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	44	12.9	24.2	37.4	750	2,300
August	48	3.6	14.1	21.8	438	1,340
September	46	5.2	15.2	23.5	455	1,400
October	50	7.9	20.4	31.6	632	1,940
November	49	10.2	23.7	36.7	710	2,180
December	40	3.8	13.1	20.3	405	1,240
Calendar year 1934	61	2.7	18.8	29.1	6,860	21,050
January	42	4.5	17.4	26.9	538	1,650
February	63	3.1	14.1	21.8	394	1,210
March	33.5	5.5	14.1	21.8	437	1,340
April	67	5.9	33.1	51.2	992	3,040
May	44	2.0	16.7	25.8	516	1,580
June	65	2.0	15.1	23.4	454	1,390
Fiscal year 1934-35	67	2.0	18.4	28.5	6,720	20,610

Koolau Ditch at Haipuaena, near Huelo

Location.- Water-stage recorder, lat. 20°51'15", long. 156°11'15", 1,000 feet east of Puohokamoa Stream and 3½ miles southeast of Kailua. Mar. 20, 1933, to Mar. 21, 1935, gage datum 1.94 feet lower. Prior to that, datum 1.69 feet lower than at present.

Records available.- April 1932 to June 1935.

Extremes.- Maximum discharge during period ending June 30, 1933, 194 million gallons a day (300 second-feet) July 12 (gage height, 5.57 feet); no flow several days in February and March, when water was shut out of ditch.

Maximum discharge during year ending June 30, 1934, 166 million gallons a day (257 second-feet) Nov. 25 (gage height, 5.79 feet); minimum not determined, owing to faulty gage-height record.

Maximum discharge during year ending June 30, 1935, 184 million gallons a day (285 second-feet) Apr. 17; maximum gage height, 6.24 feet Feb. 24; no flow for several days in February and March, when water was shut out of ditch.

Remarks.- Records good except those for estimated periods, which are poor. Regulated by flood gates. No diversions. Water used for domestic supply and irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1931 to June 1932

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1										-	170	155
2										-	165	140
3										-	170	99
4										-	155	99
5										-	155	99
6										-	155	75
7										-	145	67
8										-	122	57
9										-	160	64
10										-	160	94
11										-	160	71
12										-	160	110
13										-	160	99
14										-	160	117
15										-	160	75
16										165	160	64
17										155	155	64
18										117	155	53
19										103	131	68
20										99	112	91
21										79	95	53
22										82	91	46
23										126	75	53
24										165	79	60
25										165	71	49
26										165	79	147
27										165	126	141
28										165	83	119
29										165	103	60
30										170	131	48
31										-	126	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July						
August						
September						
October						
November						
December						
Calendar year						
January						
February						
March						
April 16-30	170	79	139	215	2,090	6,400
May	170	71	133	206	4,130	12,670
June	155	46	84.6	131	2,540	7,790
The period	-	-	-	-	-	26,860

Koolau Ditch at Haipuaena, near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1932 to June 1933

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	50	155	28	24	16.8	124	149	113	12	67	64	31
2	68	126	29.5	24	15.7	83	123	104	42	122	43	49
3	120	103	113	25.5	14.6	76	112	81	53	122	62	55
4	50	99	150	24	14.6	64	120	89	*90	95	40	37.5
5	44	83	155	23	14.6	43	100	59	*70	67	35	35
6	38.5	87	74	22	14.6	37	71	56	*45	55	35	31
7	37	67	50	20.5	13.6	32.5	55	51	0	49	32.5	29
8	35.5	110	71	20.5	13.4	29.5	52	50	0	43	31	26
9	44	89	155	20.5	13.2	28	46	76	0	40	30	26
10	53	87	117	19.2	13.2	27	43	110	0	40	31	26
11	127	83	71	19.2	14.6	28	43	73	0	37.5	27.5	24
12	111	64	53	18.0	15.7	75	42	65	0	37.5	26	23
13	165	67	80	18.0	13.0	103	38.5	9.0	0	37.5	26	23
14	155	53	64	16.8	12.6	42	34	0	0	35	47	22
15	165	48	46	16.8	12.3	116	93	0	0	43	84	22
16	160	46	38.5	18.0	†46	48	128	0	0	37.5	52	22
17	145	107	37	18.0	†24	40	119	0	0	61	49	22
18	165	53	42	18.0	14.6	38.5	116	0	0	52	49	19.9
19	160	42	46	31	13.6	42	89	0	*5	37.5	35	18.8
20	165	43	37	24	13.2	29.5	82	0	*40	32.5	92	18.8
21	165	42	32.5	19.2	12.6	28	97	0	40	31	105	22
22	165	38.5	31	23	12.1	27	130	0	70	31	49	62
23	165	89	31	27	13.0	25.5	130	0	*90	†32.5	40	98
24	165	121	28	*22	125	82	124	0	*100	32.5	37.5	69
25	160	61	41	*18	122	†129	120	0	*75	30	35	74
26	160	40	38	†16.8	60	*75	119	0	26	30	32.5	40
27	150	38.5	28	16.8	125	†44	124	0	58	37.5	31	30
28	150	40	27	15.7	149	98	128	0	46	89	31	30
29	165	38.5	†27	16.8	158	†140	121	-	43	78	31	65
30	165	32.5	†27	20.5	162	†66	96	-	40	84	31	119
31	165	29.5	-	18.0	-	126	97	-	35	-	29	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	165	35.5	124	192	3,830	11,760
August	155	29.5	70.4	109	2,180	6,700
September	155	27	58.9	91.1	1,770	5,420
October	31	15.7	20.5	31.7	635	1,950
November	162	12.1	42.1	66.1	1,260	3,870
December	140	25.5	62.8	97.2	1,950	5,970
Calendar year						
January	149	34	94.9	147	2,940	9,030
February	113	0	33.4	51.7	936	2,870
March	100	0	31.3	48.4	969	2,970
April	122	30	52.9	81.8	1,590	4,870
May	105	26	43.3	67.0	1,340	4,120
June	119	18.8	39.0	60.3	1,170	3,590
Fiscal year 1932-33	165	0	56.4	87.3	20,570	63,120

*Estimated.
†Partly estimated.

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Koolau Ditch at Haipuaena, near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	73	35	19.9	17.8	30	111	14.0	139	23	84	99	140
2	131	40	23	17.8	97	67	49	96	22	73	84	140
3	77	46	19.9	16.8	24	76	30	52	23	115	135	120
4	61	102	18.8	16.8	17.8	40	17.8	43	35	135	139	140
5	73	46	19.9	16.8	21	32.5	15.8	40	30	110	†139	120
6	95	64	33	15.8	22	29	14.9	32.5	22	70	139	90
7	58	43	25	14.9	27	26	14.9	30	21	65	139	75
8	97	37.5	18.8	*21	26	24	14.0	27.5	21	139	139	64
9	55	37.5	17.8	14.9	17.8	23	14.0	30	19.9	103	139	55
10	58	40	17.8	14.9	18.8	23	89	27.5	26	67	139	55
11	61	32.5	16.8	14.9	15.8	22	81	25	19.9	123	†135	55
12	46	31	23	16.8	14.9	21	43	24	18.8	131	†135	50
13	58	29	74	14.9	14.9	18.8	27.5	23	18.8	99	131	80
14	49	27.5	35	14.9	14.0	18.8	27.5	22	18.8	123	131	90
15	43	29	23	14.0	14.0	17.8	23	21	18.8	†14	135	55
16	43	27.5	27.5	14.0	13.1	17.8	26	21	18.8	87	131	60
17	40	25	40	13.1	13.1	16.8	22	19.9	19.9	70	122	100
18	35	26	24	13.1	13.1	16.8	22	18.8	21	64	118	130
19	32.5	24	21	13.1	12.2	15.8	75	47	17.8	81	106	130
20	37.5	24	18.8	13.1	12.2	15.8	118	135	18.8	139	95	80
21	31	22	21	12.2	12.2	15.8	64	90	18.8	139	80	100
22	30	21	23	14.9	12.2	17.8	40	49	18.8	135	75	100
23	35	21	29	14.0	12.2	18.8	60	37.5	32	110	90	120
24	37.5	19.9	21	13.1	11.4	17.8	92	31	40	103	90	120
25	31	19.9	18.8	12.2	†43	16.8	61	29	†24	125	70	120
26	37.5	19.9	18.8	12.2	134	14.9	43	26	†19.9	91	67	140
27	35	18.8	17.8	12.2	49	25	35	25	56	131	64	140
28	30	17.8	17.8	13.1	35	39	31	23	135	127	109	140
29	67	17.8	17.8	13.1	26	16.8	29	-	135	122	80	140
30	71	19.9	17.8	14.9	23	14.9	26	-	131	122	100	120
31	375	19.9	-	13.1	-	14.0	56	-	†131	-	120	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	131	30	53.7	83.1	1,670	5,110
August	102	17.8	31.8	49.2	984	3,020
September	74	16.8	24.0	37.1	720	2,210
October	21	12.2	14.7	22.7	454	1,390
November	134	11.4	26.6	41.2	797	2,440
December	111	14.0	27.2	42.1	844	2,590
Calendar year 1933	149	0	39.5	61.1	14,410	44,210
January	118	14.0	41.1	63.6	1,280	3,910
February	139	18.8	42.3	65.4	1,180	3,640
March	135	17.8	37.9	58.6	1,180	3,610
April	139	14	103	159	3,100	9,500
May	139	64	112	173	3,480	10,660
June	140	50	102	158	3,070	9,420
Fiscal year 1933-34	140	11.4	51.3	79.4	18,760	57,500

*Partly estimated.
†Estimated.

Koolau Ditch at Haipuaena, near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	99	135	*54	*70	99	64	139	32.5	*0	75	72	39
2	88	139	*30	*37	70	61	131	31	*0	46	67	37
3	77	139	*40	*42	58	58	139	31	*0	41	63	35.5
4	67	139	*37	*45	66	55	131	31	*0	95	63	34
5	106	114	*35	40	111	52	122	29	*0	118	108	113
6	122	84	*130	37.5	121	49	114	27.5	*0	108	163	170
7	117	74	*135	35	88	46	137	27.5	*0	72	119	122
8	122	74	*100	43	70	46	139	26	*0	97	103	76
9	99	61	96	53	58	43	139	26	*0	146	85	59
10	88	62	100	90	55	43	131	25	*0	163	67	52
11	77	52	78	71	*54	40	135	24	*0	112	63	46
12	110	49	58	43	†135	37.5	114	24	*0	162	106	42
13	87	46	46	76	139	37.5	91	80	*0	152	108	41
14	135	43	46	52	135	35	84	39	*0	146	124	42
15	104	40	40	37.5	106	35	74	26	*0	169	80	52
16	74	*40	37.5	35	122	32.5	70	65	*0	175	67	49
17	67	*37	49	32.5	139	31	64	37.5	*0	175	59	127
18	91	*37	52	36.5	131	31	70	27.5	*0	169	55	67
19	75	*45	40	117	103	32.5	64	26	*0	175	52	55
20	58	*37	37.5	81	99	32.5	58	47	*0	169	48	55
21	81	*33	37.5	139	135	80	55	131	*0	146	48	44
22	131	*32	32.5	135	139	91	52	135	*0	157	42	42
23	*135	*30	31	73	139	135	52	135	.2	146	41	46
24	*110	*29	30	118	139	99	46	147	19.8	119	41	75
25	*100	*28	31	109	127	102	46	91	42	135	41	83
26	*80	*28	128	93	110	139	43	*0	41	157	39	76
27	*70	*29	84	74	103	139	40	*0	42	119	39	113
28	*60	*29	*50	94	88	139	37.5	*0	44	99	80	108
29	*70	*29	*40	84	77	122	37.5	-	39	85	77	85
30	*100	*29	*45	131	70	84	35	-	57	76	67	99
31	*127	*50	-	95	-	84	35	-	103	-	42	-

Month	Million gallons a day			Seoond-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	135	58	94.4	146	2,930	8,980
August	139	28	57.8	89.4	1,790	5,500
September	135	30	58.3	90.2	1,750	5,370
October	139	32.5	71.6	111	2,220	6,810
November	139	54	103	159	3,090	9,470
December	139	31	67.0	104	2,080	6,370
Calendar year 1934	140	14.0	74.3	115	27,150	83,270
January	139	35	84.7	131	2,620	8,060
February	147	0	47.2	73.0	1,320	4,060
March	103	0	12.5	19.3	388	1,190
April	175	41	127	196	3,800	11,670
May	163	39	71.9	111	2,230	6,840
June	170	34	69.5	108	2,080	6,400
Fiscal year 1934-35	175	0	72.1	112	26,300	80,720

*Estimated.
†Partly estimated.

Puohokamoa Stream near Huelo

Location.- Water-stage recorder, lat. 20°51'20", long. 156°11'25", just above Spreckels Ditch inflow and trail crossing and 3 miles southeast of Kailua. Prior to May 31, 1934, water-stage recorder 130 feet downstream with datum 10.30 feet lower than that of present gage.

Drainage area.- 2.6 square miles.

Records available.- December 1910 to June 1935.

Average discharge.- 18 years (1917-35), 21.0 million gallons a day (32.5 second-feet).

Extremes.- Maximum discharge recorded during year, 1,250 million gallons a day (1,930 second-feet) Feb. 26 (gage height, 7.09 feet); minimum, 2.4 million gallons a day (3.7 second-feet) Feb. 9.
1910-35: Maximum discharge, that of Feb. 26, 1935; minimum, 0.1 million gallons a day (0.2 second-foot) Nov. 17, 1929, former site and datum.

Remarks.- Records good for ordinary stages; poor for high stages and for Aug. 9-30, Nov. 13-20, Feb. 13-24, Mar. 28 to Apr. 28, June 30. Kula pipe line diverts small amount of water above station at elevation 4,300 feet for domestic supply and irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.7	1.5	1.0	7.5	1.8	63	2.7	205
.8	2.6	1.2	15.5	2.1	100	3.0	252
.9	4.6	1.5	36	2.4	147	3.1	268

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	16.6	33	13.6	12.7	13.7	8.6	38	4.9	33	9.0	9.3	6.9
2	14.6	54	6.0	5.8	9.7	7.5	43	3.8	18.8	7.0	8.6	6.6
3	12.0	52	9.1	6.6	8.2	7.2	44	3.6	19.9	6.0	9.3	5.2
4	10.7	44	9.3	6.3	7.5	6.6	24.5	3.4	15.1	10	9.3	4.6
5	57	20.5	7.5	6.6	82	6.0	17.7	3.0	12.0	20	78	58
6	25	14.6	75	5.8	22	5.8	18.3	2.8	12.0	15	46	79
7	28	13.3	105	6.3	14.6	5.2	202	2.8	10.7	10	18.2	25.5
8	32	12.4	16.6	7.5	12.0	5.2	110	2.6	9.3	30	16.7	12.9
9	18.2	10	16.8	6.6	9.3	4.9	86	2.4	9.3	50	12.9	9.7
10	12.7	9.0	16.6	28	7.9	4.9	21.5	7.5	7.5	50	10.0	7.5
11	11.5	8.0	12.4	11.9	8.2	4.6	33	13.8	6.9	25	9.3	6.6
12	17.7	7.0	11.1	6.6	160	4.2	16.0	5.2	188	90	23.5	5.8
13	23.5	6.6	7.9	19.2	90	4.0	12.9	13	29.5	40	18.5	5.5
14	44	6.2	7.2	9.7	35	3.6	11.5	7.0	13.3	35	22.5	5.8
15	23	5.8	6.0	7.9	15	3.4	9.7	4.5	17.2	60	13.3	7.5
16	13.7	5.6	5.8	6.0	50	3.4	8.9	14	22	70	10.7	7.4
17	11.5	5.4	6.9	5.5	35	3.2	8.2	9.0	11.1	200	12.1	30
18	19.8	5.4	7.9	5.8	20	3.0	10.5	4.5	8.9	80	13.7	12.0
19	14.6	14	6.3	30.5	15	3.2	8.2	4.0	7.2	90	9.7	8.6
20	10.4	11	5.5	16.4	14	3.6	6.9	20	6.3	70	8.9	7.9
21	21.5	6.0	5.5	50	96	16.5	6.0	70	6.0	35	7.2	6.3
22	37.5	5.0	4.9	38.5	86	51	5.5	130	4.9	60	6.6	6.0
23	46	4.5	4.4	27.5	140	30.5	15.8	100	6.0	30	5.8	6.6
24	19.1	4.2	3.8	29	45	15.6	6.9	110	5.8	15	5.5	13.5
25	19.5	4.2	3.8	34.5	20.5	22	5.2	174	5.1	40	5.2	16.0
26	16.6	4.0	132	19.8	15.1	93	4.6	267	4.2	35	4.9	14.2
27	12.4	4.2	17.6	12.9	12.9	84	4.4	254	5.9	15	5.5	26
28	9.7	4.4	8.6	14.6	11.1	57	4.2	75	5.0	25	18.6	23.5
29	11.5	3.7	6.6	12.9	10.0	20.5	4.0	-	4.5	40	17.8	16.0
30	17.0	3.5	7.8	20.5	9.3	12.0	4.4	-	5.4	10.7	11.5	15
31	32	11.6	-	15.0	-	15.8	11.4	-	13	-	6.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	57	9.7	21.3	33.0	659	2,020
August	54	3.5	12.7	19.6	393	1,210
September	132	3.8	18.2	28.2	548	1,680
October	50	5.5	15.7	24.3	487	1,490
November	160	7.5	35.8	55.4	1,080	3,300
December	93	3.0	16.6	25.7	516	1,580
Calendar year 1934	-	1.6	21.9	33.9	7,980	24,510
January	202	4.0	25.8	39.9	801	2,460
February	267	2.4	46.8	72.4	1,310	4,030
March	188	4.2	16.9	26.1	524	1,610
April	200	6.0	42.4	65.6	1,270	3,910
May	78	4.9	14.7	22.7	456	1,400
June	79	4.6	15.2	23.5	456	1,400
Fiscal year 1934-35	267	2.4	23.3	36.1	8,500	26,090

West Branch of Puohokamoa Stream at Haiku-uka boundary, near Kailiili

Location.- Water-stage recorder, lat. 20°49'55", long. 156°13'0", at trail crossing 500 feet above Haiku-uka boundary and 3¾ miles southeast of Kailiili.

Drainage area.- 0.5 square mile.

Records available.- March 1919 to July 1928, July 1932 to December 1934 (discontinued).

Average discharge.- 11 years (1919-28, 1932-34), 3.60 million gallons a day (5.57 second-feet).

Extremes.- Maximum discharge during period, 360 million gallons a day (557 second-feet) Nov. 13 (gage height, 7.72 feet); minimum, 0.37 million gallons a day (0.57 second-foot) Dec. 17.
1919-28, 1932-34: Maximum discharge, that of Nov. 13, 1934p minimum, 0.08 million gallons a day (0.12 second-foot) Dec. 22, 23, 1919.

Remarks.- Records good for ordinary stages; poor for high stages and for July 1-7, Aug. 16-28, Oct. 10 to Nov. 3, 15-20. Small amount of water diverted above station by Kula pipe line. Water used for irrigation in central Maui.

Rating table, July 1 to Dec. 18, 1934 (gage height, in feet, and discharge, in million gallons a day)

4.2	0.28	4.6	3.3	5.2	20
4.3	.58	4.7	5.2	5.4	30
4.4	1.07	4.8	7.4	5.6	43
4.5	1.94	5.0	13.1	5.9	68

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.0	6.1	2.45	1.86	1.3	0.75						
2	2.3	7.9	.65	.65	1.1	.75						
3	2.1	6.8	1.24	.65	.9	.65						
4	1.9	5.4	1.02	.65	.80	.61						
5	6.0	2.5	.87	.65	17.9	.61						
6	12	1.37	19.7	.65	3.45	.61						
7	11	1.07	29	1.27	2.3	.58						
8	6.3	.90	2.0	.88	1.54	.54						
9	3.4	.80	1.27	.95	1.21	.54						
10	1.94	.70	1.70	3.5	1.01	.50						
11	1.84	.58	.95	1.8	1.07	.50						
12	3.1	.54	.95	.9	28.5	.50						
13	2.8	.47	.75	2.0	61	.43						
14	10.2	.43	.70	1.1	6.6	.43						
15	2.7	.40	.65	.8	3.0	.43						
16	1.37	.4	.61	.7	20	.43						
17	1.14	.4	.70	.6	10	.37						
18	3.7	.35	.90	.6	7.0	-						
19	2.1	3.5	.70	6.0	1.9	-						
20	1.07	2.0	.61	2.5	1.7	-						
21	3.0	1.0	.58	6.0	27.5	-						
22	5.7	.7	.54	4.0	19.3	-						
23	5.6	.6	.50	3.5	33	-						
24	1.84	.5	.50	3.0	4.9	-						
25	1.45	.45	.50	9.0	1.64	-						
26	1.74	.4	28	3.0	1.21	-						
27	1.29	.4	2.45	1.6	1.21	-						
28	1.01	.35	.90	2.5	1.07	-						
29	1.14	.35	.75	1.8	.95	-						
30	3.4	.37	1.29	4.0	.85	-						
31	5.5	2.05	-	2.3	-	-						

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	12	1.01	3.60	5.57	112	343
August	7.9	.35	1.61	2.49	49.8	153
September	29	.50	3.45	5.34	103	317
October	9.0	.6	2.24	3.47	69.4	213
November	61	.80	8.80	13.6	264	810
December 1-17	.75	.37	.543	.840	9.23	28
Calendar year						
January						
February						
March						
April						
May						
June						
The period						1,860

Manuel Luis Ditch at Puohokamoa Gulch, near Huelo

Location.- Water-stage recorder, lat. 20°51'50", long. 156°11'0", in Puohokamoa Gulch, at lower portal of tunnel between Haipuaena and Puohokamoa Streams, 3 miles southeast of Kailua.

Records available.- December 1917 to June 1935.

Average discharge.- 16 years (1918-24, 1925-35), 6.19 million gallons a day (9.58 second-feet).

Extremes.- Maximum and minimum discharge not determined, owing to missing gage-height record.

1917-35: Maximum discharge, 116 million gallons a day (179 second-feet Jan. 14, 1923 (gage height, 4.93 feet); minimum, 0.05 million gallons a day (0.08 second-foot) Mar. 3, 1920.

Remarks.- Records good for low stages and fair above. Estimated periods poor. Manuel Luis Ditch is extension of Center Ditch and picks up water at elevation of 500 feet between Kolea and Waikamoi Streams. Regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	*1.8	8.6	2.5	*0.5	3.2	*1.0	*15	0.6	*10	0.8	0.8	0.7
2	*1.2	18.3	.7	*.4	1.5	*.9	*12	.5	*6.0	.5	.8	.7
3	*1.0	18.1	.5	*.3	1.2	*.8	*18	.5	*12	.4	.7	.6
4	*1.0	14.8	.7	*.3	1.1	*.7	*4.0	.4	*5.0	.7	.7	.6
5	*15	1.4	.5	*.4	17.2	*.7	*1.5	.4	*4.5	2.2	10.9	11.9
6	*11	.7	20	*.3	7.9	*.6	*1.1	.3	*4.0	1.3	12.6	21
7	*12	.7	21	*.2	1.6	*.6	*25	.3	*4.0	.3	1.9	6.6
8	*11	.7	1.6	*.2	1.3	*.6	*20	.2	*3.0	†.3	1.5	2.8
9	*1.6	.6	2.1	*.2	1.2	*.5	17.1	.3	*3.0	1.2	1.1	2.2
10	*1.4	1.7	2.4	*.8	1.0	*.6	2.9	.2	*2.5	2.3	1.2	1.6
11	*1.1	.7	1.0	*.9	1.5	*.5	10.7	.2	*2.0	.5	.9	1.3
12	*1.3	.5	.9	.3	21.5	*.5	1.6	.2	*25	16.1	2.1	1.2
13	*1.2	.5	.7	5.0	27	*.4	1.4	4.3	*20	2.2	1.7	1.0
14	*15	.5	.7	.4	10.4	*.3	1.2	.5	*5.0	1.6	2.0	1.0
15	*5.0	.4	.6	.3	2.1	*.3	1.2	.2	*9.0	9.8	1.2	1.0
16	*11	.4	*.6	.2	17.3	*.3	1.0	1.3	*15	8.2	1.5	1.0
17	*.9	.4	*.6	.2	18.7	*.2	1.0	.4	*5.0	27	1.0	2.6
18	1.0	.4	*.5	.2	*11	*.3	.9	.1	*4.5	11.1	.9	*2.0
19	1.0	.4	*.5	5.3	*1.5	*.3	.8	†.1	*4.0	16.8	.8	*1.1
20	.8	.4	*.5	.8	*.9	*.4	.7	†.1	*3.5	11.4	.8	*.9
21	4.2	.3	*.4	18.5	*15	*5.0	.8	17.6	*3.5	2.7	1.0	*.8
22	12.5	.3	*.4	11.1	*17	*13	.8	25	*3.0	3.8	.7	.7
23	14.4	.3	*.3	4.9	*20	*11	.7	13.4	*2.5	2.0	.7	.9
24	2.6	.4	*.3	7.5	16.3	*3.0	.7	25	*2.5	1.5	.6	1.1
25	3.6	.3	*.3	9.6	2.7	*9.0	.7	28	*2.0	4.3	.6	*2.5
26	1.4	.3	*20	2.1	1.7	*22	.7	†33.5	*1.0	5.8	.6	*1.5
27	1.0	.3	*3.5	1.0	1.5	*20	.7	†28	.6	1.5	.7	*3.5
28	1.0	.4	*.5	1.8	1.2	*21	.7	†26	.6	1.2	1.9	*20
29	.9	.4	*.4	1.5	1.2	*5.0	.7	-	.6	1.0	1.9	*12
30	2.0	.4	*.4	4.6	*1.1	*1.4	.7	-	.7	.9	1.2	*11
31	6.8	1.5	-	1.7	-	*1.5	.6	-	1.5	-	.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	15	0.8	4.70	7.27	146	447
August	18.3	.3	2.42	3.74	75.1	230
September	21	.3	2.64	4.39	85.1	261
October	18.5	.2	2.63	4.07	81.5	250
November	27	.9	7.56	11.7	227	696
December	22	.2	3.95	6.11	122	376
Calendar year 1934	27	.2	4.55	7.04	1,660	5,100
January	25	.6	4.67	7.23	145	445
February	33.5	.1	7.41	11.5	208	637
March	25	.6	5.34	8.26	166	508
April	27	.3	4.65	7.19	139	428
May	12.6	.6	1.80	2.79	55.7	171
June	21	.6	3.86	5.97	116	355
Fiscal year 1934-35	33.5	.1	4.29	6.64	1,570	4,800

*Estimated.
†Partly estimated.

Manuel Luis Ditch west of Puohokamoa Stream, near Huelo

Location.- Water-stage recorder, lat. 20°51'50", long. 156°11'0", 500 feet below intake in Puohokamoa Stream at lower portal of intake tunnel and 3 miles southeast of Kailua.

Records available.- February 1930 to August 1935 (discontinued).

Extremes.- Maximum discharge recorded during period, 77 million gallons a day (119 second-feet) Mar. 12 (gage height, 4.44 feet); minimum recorded, 0.22 million gallons a day (0.34 second-foot) Oct. 9.
1930-35: Maximum discharge, 82 million gallons a day (127 second-feet) Nov. 18, 1930 (gage height, 5.80 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Feb. 13, 1931.

Remarks.- Records fair except those for high and low stages and for estimated periods, which are poor. Manuel Luis Ditch is an extension of Center Ditch and picks up water at elevation of 500 feet between Kolea and Waikamoi Streams. Regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.6	*15	3.15	0.60	4.3	1.37	20.5	0.41	44	3.1	1.22	0.71
2	1.80	*30	.74	.41	1.80	1.28	17.8	*.40	10.2	2.45	1.14	.66
3	1.54	*30	.57	.41	1.37	1.20	26.5	*.40	28.5	2.2	1.14	.62
4	1.37	*25	.68	.41	1.20	1.12	5.1	*.35	9.3	2.7	1.00	.58
5	15.5	2.05	.67	.47	25	1.03	1.98	*.35	7.4	7.4	20	29
6	11.7	1.28	27	.35	9.2	.95	1.46	*.25	8.5	2.45	29.5	47
7	13.0	1.26	33	.26	1.98	.88	43	*.25	6.7	1.30	2.9	8.4
8	12.5	1.12	2.40	.26	1.54	.88	38	*.20	6.1	2.2	2.3	*3.0
9	1.80	1.03	2.45	.22	1.28	.81	34.5	*.25	6.2	14.3	1.70	*2.5
10	1.62	2.75	3.2	9.1	1.12	.68	5.2	*.15	5.4	8.1	1.62	*1.8
11	1.37	.95	1.37	1.05	1.76	.81	17.8	*.15	5.0	1.52	1.38	*1.5
12	1.62	.81	1.20	.35	33	.74	2.5	*.15	47	37	9.30	*1.4
13	1.47	.74	1.03	5.9	44	.74	1.98	*7.0	33	3.75	2.20	*1.2
14	17.2	.74	1.03	.47	13.9	.67	1.71	*1.0	8.0	2.0	2.65	*1.1
15	5.9	.67	.88	.30	2.65	.67	1.46	*.35	14.3	30	1.54	*1.1
16	1.20	.67	.81	.30	24	.60	1.37	*2.0	28.5	13.1	1.94	*1.1
17	1.12	.74	.81	.30	23	.53	1.12	*.60	6.6	57	1.38	*6.0
18	*1.2	.74	.74	.30	13.5	.53	1.20	*.25	5.8	30.5	1.22	*4.0
19	*1.3	.74	.67	5.6	2.25	.60	.95	*.20	5.5	55	.94	*1.4
20	*1.1	.67	.67	.97	1.98	.53	.68	*.15	5.0	43	.82	*1.2
21	*5.0	.60	.53	21	32	5.6	.88	*35	5.5	7.0	1.14	*1.1
22	*20	.67	.47	13.1	35.5	17.7	.81	*50	5.0	15.8	.82	1.00
23	*25	.60	.41	6.1	40	15.0	.74	*40	4.5	9.6	.71	1.38
24	*3.5	.60	.41	9.1	25	3.9	.67	*45	6.5	2.55	.66	2.3
25	*5.0	.60	.35	12.1	5.2	10.1	.67	*50	4.3	12.8	.66	3.25
26	*2.2	.53	33.5	2.8	3.05	35	.60	*60	3.1	17.4	.66	1.86
27	*1.5	.53	5.0	.95	2.45	30	.53	*50	2.9	2.35	.66	44
28	*1.3	.53	.67	2.25	1.88	34	.53	*45	2.75	1.86	2.1	2.6
29	*1.2	.47	.47	1.88	1.71	6.3	.47	-	2.55	1.54	2.1	2.8
30	*3.0	.41	.47	5.6	1.62	1.80	.47	-	3.4	1.38	1.46	2.45
31	*14	.91	-	2.1	-	2.15	.47	-	5.0	-	.76	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	25	1.1	5.76	8.91	179	548
August	30	.41	3.98	6.16	123	379
September	33.5	.35	4.19	6.48	126	386
October	21	.22	3.39	5.25	105	322
November	44	1.12	11.9	18.4	357	1,100
December	35	.53	5.75	8.90	178	547
Calendar year 1934	44	.2	6.30	9.75	2,300	7,070
January	43	.47	7.48	11.6	232	712
February	60	.15	13.9	21.5	390	1,200
March	47	2.55	10.9	16.9	336	1,030
April	57	1.30	13.0	20.1	391	1,200
May	29.5	.66	3.15	4.87	97.6	300
June	47	.58	5.90	9.13	177	543
Fiscal year 1934-35	60	.15	7.38	11.4	2,690	8,270

*Estimated.

Manuel Luis Ditch west of Puohokamoa Stream, near Huelo

(Continued)

Discharge, in million gallons, July 1 to Aug. 14, 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	*1.6	4.8										
2	*1.3	1.94										
3	*1.2	1.86										
4	*1.2	1.46										
5	*3.5	1.30										
6	*3.0	1.14										
7	*1.5	1.14										
8	*1.8	2.0										
9	*2.1	1.94										
10	*1.5	3.9										
11	*1.2	2.6										
12	*1.4	1.46										
13	*1.7	1.78										
14	*1.2	1.70										
15	*1.1	-										
16	.88	-										
17	.82	-										
18	.95	-										
19	2.1	-										
20	1.00	-										
21	.82	-										
22	.71	-										
23	1.07	-										
24	15.6	-										
25	46	-										
26	3.0	-										
27	3.05	-										
28	1.86	-										
29	2.35	-										
30	1.70	-										
31	2.2	-										

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	46	0.71	3.53	5.46	109	336
August 1-14	4.8	1.14	2.07	3.20	29.0	89
September						
October						
November						
December						
Calendar year						
January						
February						
March						
April						
May						
June						
Fiscal year						

*Estimated.

Spreckels Ditch at Wahinepee, near Huelo

Location.- Water-stage recorder, lat. 20°51'25", long. 156°11'20", between Puohokamoa and Alo Streams, 700 feet below intake at Puohokamoa Gulch, 2⅛ miles west of Keanae, and 3½ miles southeast of Kailua.

Records available.- May 1934 to June 1935. August 1928 to May 1934 at station 300 feet below.

Extremes.- Maximum discharge recorded during year, 97 million gallons a day (150 second-feet) Mar. 12 (gage height, 3.39 feet); no flow at times, owing to regulation.
1928-35: Maximum discharge, that of Mar. 12, 1935; no flow at times, owing to regulation.

Remarks.- Records good except those for estimated periods, which are poor. Intake is on Puohokamoa Stream just below intake of Koolau Ditch and for normal flows takes all water that passes Koolau Ditch intake. Water used for irrigation in central Maui. All records from May 12 to June 30, 1934, have been revised in this report.

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.5	0.1	0		5.5	19.5	0	35	0.1	15	*0.1	*5
2	15.5	.1	.1		9.2	6.8	.2	2.7	0	.7		
3	.2	.1	0		0	.5	0	.1	0	18.5	*22	
4	.2	7.3	0		0	.1	0	.1	.1	28		*3.2
5	.3	.1	0		.1	.1	0	.1	.1	6.3		
6	.4	.2	.1		.1	.1	0	.1	4.9	.1	*28	
7	.2	.1	.1		.1	.1	0	.1	4.2	.1		
8	2.3	.1	0		.1	.1	0	.1	0	30		
9	.2	.1	0		.1	0	0	.1	0	.9		*.1
10	.1	.1	0		.1	0	.3	.1	.1	.1	0	
11	.1	0	0		.1	0	4.6	.1	0	24		
12	.1	0	.1		0	0	.1	.1	0	11.5		
13	.2	0	1.7		0	0	.1	.1	0	.1		
14	.1	0	0		0	0	.1	0	0	22	*7	*.8
15	.1	0	0		0	0	.1	0	0	3.8		*.1
16	0	0	0		0	0	0	0	0	.1		†.1
17		0	.1		0	0	0	0	0	..1	*2.8	9.6
18	*0	0	0		0	0	0	0	0	.1		22.5
19		0	0		0	0	3.8	8.9	0	.1		18.6
20		0	0		0	0	10	32	0	34		35.5
21	*.1	0	.1		0	0	.1	7.1	0	34		.7
22	.1	0	.1		0	0	.1	.1	0	24		.7
23	.1	0	.1		0	0	10	.1	.1	.4		5.0
24	.1	0	.1		0	0	5.0	.1	.1	7.2	*.1	6.6
25	.1	0	.9		9.5	0	.2	.1	0	37		24.5
26	.1	0	0		17	0	.1	.1	0	22		40
27	4.9	0	0		.1	.1	.1	.1	6.2			10.6
28	.1	0	0		0	.1	.1	.1	22	*6		9.2
29	6.6	0	0		0	0	.1	-	22			18.2
30	4.8	0	0		0	0	.1	-	28		*2.2	2.2
31	.1	0	-		-	0	12	-	26	-		-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	15.5	0	1.22	1.89	37.7	116
August	7.3	0	.27	.42	8.3	25
September	1.7	0	.12	.19	3.5	11
October	0	0	0	0	0	0
November	17	0	1.40	2.17	42.0	129
December	19.5	0	.89	1.38	27.5	84
Calendar year 1933	32	0	1.68	2.60	612	1,880
January	12	0	1.52	2.35	47.2	145
February	35	0	3.12	4.83	87.5	269
March	28	0	3.67	5.68	114	350
April	37	.1	11.5	17.8	344	1,060
May	-	0	6.39	9.89	198	608
June	40	.1	7.53	11.7	226	694
Fiscal year 1933-34	40	0	3.11	4.81	1,140	3,490

*Estimated.
†Partly estimated.

Spreckels Ditch at Wahinepee, near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.60	13.3	3.1	0.61	15.4	0.09	15.1	0.09	16.4	*0.2	0.46	0
2	.46	31.5	.17	.06	2.05	.09	21	.06	1.70	*0	.46	0
3	.40	32	.17	.06	.17	.09	26.5	.06	2.4	*0	.46	0
4	.40	22.5	.22	.09	.17	.09	2.35	.06	1.01	*0	.46	0
5	13.9	.40	.17	.09	35.5	.06	.22	.09	.53	*20	32	33
6	4.0	.13	46	.06	2.1	.06	1.40	.17	.53	*3.0	48	59
7	14.8	.13	36	.13	.33	.03	66	.13	.40	*.2	4.6	9.9
8	17.3	.13	.64	.13	.17	.03	51	.06	.40	*.1	2.45	.40
9	.91	.13	13.5	.09	.13	.03	39.5	.06	.53	*10	.76	.20
10	.33	.23	.86	10.0	.13	.03	.78	.06	.40	*5.0	.53	.22
11	.33	.13	.29	.38	.31	.06	12.0	.06	.28	*.4	.53	.22
12	.68	.13	.22	.06	42	.06	.28	.06	.44	*25	18.7	.22
13	.37	.13	.09	7.0	44	.09	.22	6.6	9.1	*4.0	5.9	.17
14	24	.13	.06	.13	6.0	.09	.17	.13	.85	*1.5	6.7	0
15	6.8	.13	.06	.09	.40	.09	.13	.06	.64	*35	.66	.06
16	.28	.13	.06	.06	27	.09	3.05	1.76	5.6	*10	.66	.15
17	.28	.13	.06	.06	21.5	.06	.13	.09	.69	59	.90	15.2
18	3.4	.13	.03	.09	18.1	.06	.13	.06	9.7	51	.84	.26
19	.34	.26	.03	10.2	.28	.06	.13	.06	19.2	62	.46	0
20	0	.09	.03	.74	.17	.06	.13	.08	17.0	59	.46	.18
21	4.7	.06	.03	32.5	43	6.7	.09	39.5	17.5	23.5	.60	*0
22	25	.06	.03	19.1	40	25.5	.09	59	15.0	32.5	.53	*.1
23	*35	.06	.03	5.3	56	8.0	.44	30.5	13.6	16.5	.53	*.3
24	*1.0	.06	.03	10.4	24.5	1.01	.06	*50	12.3	1.50	.46	*.5
25	*2.0	.06	.03	16.4	.74	6.8	.06	*60	*11	25	.40	*1.0
26	*5.0	.09	38.5	1.34	.17	47	2.45	*70	*10	38.5	.09	†.17
27	.13	.09	.91	.22	.17	38	.06	*45	*9.0	1.39	.02	9.4
28	.09	.13	.06	.73	.13	26	.06	24.5	*8.0	.60	1.22	5.2
29	.09	.13	.06	.70	.13	.58	.06	-	*7.0	.46	3.6	.28
30	4.9	.09	.09	8.1	.09	.09	.06	-	*3.0	.40	.28	.17
31	13.3	1.06	-	.56	-	7.3	.09	-	*1.0	-	0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	55	0	5.83	9.02	181	555
August	32	.06	3.35	5.18	104	318
September	46	.03	4.72	7.30	142	434
October	32.5	.06	4.05	6.27	125	385
November	56	.09	12.7	19.6	381	1,170
December	47	.03	5.49	8.49	170	523
Calendar year 1934	56	0	5.81	8.99	2,120	6,510
January	66	.06	7.86	12.2	244	748
February	70	.06	13.9	21.5	388	1,190
March	19.2	.28	6.30	9.75	195	600
April	62	0	16.2	25.1	486	1,490
May	48	0	4.31	6.67	134	410
June	59	0	4.55	7.04	136	419
Fiscal year 1934-35	70	0	7.36	11.4	2,690	8,240

*Estimated.
†Partly estimated.

Waikamoi Stream above Wailoa Ditch, near Huelo

Location.- Water-stage recorder, lat. 20°51'45", long. 156°11'55", 500 feet above intake of Wailoa Ditch, a quarter of a mile above Spreckels Ditch trail, and 2⅝ miles southeast of Kailua.

Drainage area.- 4.4 square miles.

Records available.- January 1922 to June 1935.

Average discharge.- 13 years (1922-35), 15.2 million gallons a day (23.5 second-feet).

Extremes.- Maximum discharge during year, 2,760 million gallons a day (4,270 second-feet) Feb. 25 (gage height, 8.76 feet); minimum, 1.0 million gallons a day (1.6 second-feet) Aug. 29, 30.
1922-35: Maximum discharge, 4,660 million gallons a day (7,210 second-feet) Oct. 16, 1924 (gage height, 10.45 feet); minimum, 0.4 million gallons a day (0.6 second-foot) Nov. 16, 1929.

Remarks.- Records good for ordinary stages and poor for high stages. Haleakala ranch and Kula pipe lines divert small amounts of water above station. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.7	0.9	1.2	4.5	2.0	24	3.6	172
.8	1.3	1.4	7.6	2.4	44	4.0	241
.9	1.8	1.6	12.0	2.8	75	4.4	328
1.0	2.5	1.8	17.5	3.2	118	4.8	431

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.6	22	9.4	8.7	7.2	3.7	29	5.9	24	6.2	5.6	5.2
2	8.6	32.5	2.5	2.9	4.6	3.3	32	2.8	12.5	4.3	5.2	7.3
3	6.1	27	5.9	2.5	3.7	3.0	38.5	2.1	12.5	3.7	5.2	4.6
4	5.6	24	11.6	2.7	3.3	2.7	20.5	1.8	10.1	6.4	5.9	3.7
5	26.5	11.6	3.0	2.8	56	2.4	13.3	1.6	7.8	12.7	43	36.5
6	19.9	7.3	68	2.4	16.2	2.2	19.4	1.6	8.4	11.0	36	57
7	20.5	5.6	102	2.4	9.2	1.9	241	1.6	8.8	7.8	11.8	15.0
8	23.5	5.2	11.7	5.4	7.3	1.9	132	1.5	7.3	14.2	9.6	5.9
9	13.0	4.1	7.3	2.9	4.4	1.8	92	1.4	6.9	34	9.6	5.1
10	7.1	4.1	8.8	14.6	3.5	1.9	16.0	1.3	5.6	30.5	6.9	4.0
11	5.2	3.2	7.1	6.2	4.0	1.6	18.7	1.3	5.2	17.6	5.9	3.2
12	7.6	2.9	5.8	3.5	126	1.5	10.3	1.2	128	67	10.9	2.8
13	6.4	2.4	3.8	6.3	129	1.4	6.8	12.1	27.5	24	9.9	2.4
14	25.5	2.2	3.0	5.7	21	1.4	5.8	7.4	9.6	20.5	12.0	2.8
15	12.3	2.1	2.4	5.6	9.8	1.3	4.6	2.4	10.0	54	7.6	3.3
16	5.9	2.0	2.1	3.0	41	1.2	4.1	14.2	16.6	44	6.6	3.3
17	4.5	1.8	2.5	2.2	29	1.1	3.5	15.5	9.2	185	9.5	17.3
18	11.2	1.8	3.3	2.4	27	1.1	7.0	3.2	7.1	50	12.0	7.1
19	9.6	3.8	2.5	19.0	8.8	1.2	6.6	2.2	5.8	77	8.0	4.8
20	4.6	5.6	2.1	11.2	6.9	1.3	3.7	6.0	5.2	63	7.6	4.4
21	12.1	2.2	1.8	37	73	8.7	2.9	54	5.3	25.5	5.8	3.4
22	28.5	1.9	1.6	23	85	33	2.4	113	4.6	42	4.8	2.7
23	27.5	1.6	1.4	17.2	125	20	19.4	95	4.4	25	4.3	3.0
24	9.6	1.4	1.4	15.9	37	9.2	6.8	143	5.1	12.3	4.0	7.7
25	8.2	1.3	1.4	28.5	13.3	13.7	3.6	381	5.2	*22	3.7	11.7
26	7.9	1.2	78	13.8	9.0	83	2.4	246	4.3	26	3.5	10.3
27	5.3	1.2	13.5	8.2	7.3	79	2.1	196	4.4	12.3	3.7	16.6
28	4.3	1.1	4.1	8.8	5.8	55	2.2	67	4.3	8.6	10.4	18.1
29	4.9	1.1	2.7	7.8	4.8	15.0	1.9	-	3.8	7.3	13.3	11.8
30	11.0	1.1	2.7	9.8	4.2	6.8	4.5	-	4.3	6.1	8.8	11.4
31	21	4.4	-	8.8	-	8.2	21.5	-	6.8	-	5.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	28.5	4.3	12.0	18.6	373	1,140
August	32.5	1.1	6.12	9.47	190	582
September	102	1.4	12.4	19.2	373	1,150
October	37	2.2	9.46	14.6	293	900
November	129	3.3	29.4	45.5	882	2,710
December	83	1.1	11.9	18.4	370	1,130
Calendar year 1934	603	.8	16.3	25.2	5,940	18,220
January	241	1.9	25.0	38.7	774	2,380
February	381	1.2	49.4	76.4	1,380	4,250
March	128	3.8	12.3	19.0	380	1,170
April	185	3.7	30.7	47.5	920	2,820
May	43	3.5	9.58	14.8	297	911
June	57	2.4	9.75	15.1	292	897
Fiscal year 1934-35	381	1.1	17.9	27.7	6,520	20,040

*Partly estimated.

West Branch of Waikamoi Stream at Haiku-uka boundary, near Kaliiili

Location.- Water-stage recorder, lat. 20°50'0", long. 156°13'20", at Haiku-uka boundary trail, 3½ miles southeast of Kaliiili. Altitude, 3,000 feet.

Drainage area.- 3.5 square miles.

Records available.- May 1918 to June 1928, July 1932 to December 1934 (discontinued).

Average discharge.- 10 years (1920-28, 1932-34), 8.15 million gallons a day (12.6 second-feet).

Extremes.- Maximum discharge during period, 311 million gallons a day (481 second-feet) Nov. 12 (gage height, 3.53 feet); minimum, 0.4 million gallons a day (0.6 second-foot) Aug. 29, 30, Dec. 17.

1918-28, 1932-34: Maximum discharge, about 2,020 million gallons a day (3,130 second-feet) Dec. 6, 1918 (gage height, 9.85 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Nov. 18-25, 1933.

Remarks.- Records good for ordinary stages; poor for high stages and for July 1-7. At 5,300-foot elevation Haleakala ranch diverts a small amount of water. Water used for irrigation in central Maui.

Rating table, July 1 to Dec. 18, 1934 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.2	1.0	12.5
.5	.7	1.2	22
.6	1.6	1.5	40
.7	3.1	1.8	63
.8	5.4	2.1	93

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.6	13	3.7	3.9	1.4	1.2						
2	2.5	16.5	.7	1.0	1.2	1.2						
3	2.6	14	1.3	.8	.9	1.0						
4	2.3	11	1.6	.9	.8	1.0						
5	12	4.2	1.2	.9	31	.9						
6	30	2.5	56	.8	8.4	.8						
7	25	1.8	8.0	1.9	4.2	.7						
8	13.5	1.5	5.6	2.4	2.8	.6						
9	6.3	1.3	2.2	1.2	1.3	.6						
10	2.6	1.2	4.0	6.5	1.0	.6						
11	1.9	1.1	3.6	3.2	1.0	.6						
12	2.7	1.0	2.2	1.2	70	.6						
13	2.6	.8	1.4	1.8	70	.6						
14	13.5	.8	1.0	2.9	10	.5						
15	4.6	.7	.8	1.9	3.6	.5						
16	2.0	.6	.7	.9	22	.5						
17	1.5	.6	.8	.6	15	.4						
18	6.3	.6	1.3	.7	11.2	-						
19	4.2	4.0	.9	10.5	3.1	-						
20	1.5	4.6	.7	5.0	2.4	-						
21	8.5	2.6	.6	21	60	-						
22	15	2.5	.6	11.5	50	-						
23	13	2.4	.6	7.0	92	-						
24	3.4	1.6	.6	5.4	16	-						
25	2.2	.5	.5	18	5.4	-						
26	2.4	.4	47	7.1	3.6	-						
27	1.5	.4	3.9	3.3	2.6	-						
28	1.3	.4	1.3	3.1	2.0	-						
29	1.6	.4	.8	2.4	1.6	-						
30	7.6	.4	1.8	2.6	1.4	-						
31	11.5	2.3	-	3.0	-	-						

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	30	1.3	6.74	10.4	209	641
August	16.5	.4	3.09	4.78	95.9	294
September	56	.5	5.18	8.01	155	477
October	21	.6	4.31	6.67	134	410
November	92	.8	16.6	25.5	496	1,520
December 1-17	1.2	.4	.72	1.11	12.3	38
Calendar year						
January						
February						
March						
April						
May						
June						
The period						3,380

Alo Stream near Huelo

Location.- Water-stage recorder, lat. 20°51'50", long. 156°11'45", just above Spreckels Ditch inflow and trail crossing and 2½ miles southeast of Kailua.

Drainage area.- 0.2 square mile.

Records available.- December 1910 to June 1935.

Average discharge.- 24 years (1911-35), 5.01 million gallons a day (7.75 second-feet).

Extremes.- Maximum discharge during year, 206 million gallons a day (319 second-feet) Nov. 12 (gage height, 3.11 feet); minimum, 0.30 million gallons a day (0.46 second-feet) Nov. 12 (gage height, 3.11 feet); minimum, 0.30 million gallons a day (0.46 second-foot) Feb. 10.

1910-35: Maximum discharge, 1,600 million gallons a day (2,480 second-feet) Nov. 18, 1930 (gage height, 6.90 feet); minimum, 0.2 million gallons a day (0.3 second-foot) Nov. 22, 23, 1932.

Remarks.- Records good for ordinary stages, poor for high stages, and fair for Jan. 13-15. No diversions. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Nov. 12				Nov. 13 to June 30			
0.5	0.41	1.2	6.7	0.4	0.17	1.2	6.7
.6	.72	1.4	11.5	.6	.66	1.4	11.5
.8	1.77	1.6	18.6	.8	1.70	1.6	18.5
1.0	3.55	1.9	35	1.0	3.5	1.9	35
						2.2	60

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.35	5.2	1.73	1.52	6.4	1.40	7.2	0.45	4.9	1.14	1.40	0.88
2	2.5	7.3	1.02	.94	2.7	1.28	7.1	.42	3.0	.70	1.22	.70
3	1.92	6.8	1.49	1.48	2.05	1.10	5.5	.42	5.3	.66	1.22	.66
4	1.65	7.2	1.97	1.28	1.77	1.01	2.85	.39	2.75	6.3	1.01	.60
5	15.7	3.45	1.71	1.42	19.5	.97	2.55	.36	2.1	9.0	11.5	16.5
6	5.7	2.6	6.6	.90	3.85	.84	2.1	.36	2.75	2.6	8.9	18.9
7	5.1	2.3	13.5	.85	2.9	.79	20	.36	1.70	1.58	3.3	5.3
8	6.2	2.15	2.7	.85	1.99	.75	10.9	.36	1.46	1.76	2.75	3.6
9	3.0	1.65	5.0	.72	1.59	.66	10.5	.39	1.40	2.65	1.78	2.2
10	2.5	2.35	3.7	2.4	1.40	.79	3.5	.32	1.10	5.9	1.46	1.58
11	1.99	1.40	3.1	1.73	2.7	.60	8.5	.32	1.01	2.7	1.40	1.28
12	2.8	1.22	2.6	.90	30.5	.57	2.85	.32	48	1.61	6.2	1.10
13	2.35	1.07	1.59	3.9	30.5	.51	2.4	4.0	4.1	4.7	3.75	1.01
14	4.1	.98	1.46	1.71	5.1	.51	2.1	1.03	2.4	3.0	4.3	1.16
15	6.1	.90	1.16	1.28	3.0	.48	1.7	.45	4.2	15	2.45	1.81
16	1.84	.85	1.12	1.03	10.4	.45	1.40	3.6	5.6	12	2.55	2.3
17	1.65	.85	1.32	.85	10.2	.42	1.16	.93	2.1	60	1.70	7.0
18	2.05	.85	1.28	1.34	6.2	.42	1.73	.54	1.58	15	1.56	2.55
19	1.80	1.31	.98	5.5	3.0	.45	1.01	.48	1.34	25	1.22	1.70
20	1.34	1.05	.94	3.6	2.85	.48	.88	.75	1.10	20	1.10	2.2
21	4.6	.72	1.04	9.1	13.2	2.45	.79	5.7	1.52	6.0	1.22	1.16
22	7.5	.72	.90	12.0	11.2	10.6	.75	8.8	.97	12	.97	1.36
23	7.3	.63	.72	6.3	24.5	6.1	1.19	4.2	.84	7.0	.84	1.58
24	3.85	.60	.72	7.9	10.4	4.2	.70	6.1	1.84	4.0	.79	2.35
25	4.8	.60	.72	4.4	4.7	6.1	.60	52	1.01	7.0	.70	3.8
26	3.1	.53	15.1	3.7	3.4	15.8	.57	52	.79	8.4	.66	3.2
27	2.15	.50	2.8	2.9	2.95	10.4	.54	57	.79	3.1	.75	5.7
28	1.77	.41	1.40	4.9	2.3	8.0	.54	11.2	.66	2.4	3.6	4.0
29	2.2	.44	1.12	4.4	1.96	3.3	.48	-	.60	1.96	3.5	3.5
30	2.2	.51	1.75	7.0	1.64	2.2	.48	-	1.44	1.58	2.15	3.6
31	2.7	1.81	-	3.35	-	3.15	.57	-	2.75	-	.97	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	15.7	1.34	3.74	5.79	116	356
August	7.3	.41	1.90	2.94	59.0	181
September	15.1	.72	2.77	4.29	83.2	255
October	12.0	.72	3.23	5.00	100	307
November	30.5	1.40	7.50	11.6	225	690
December	15.8	.42	2.80	4.33	86.8	266
Calendar year 1934	85	.4	4.23	6.54	1,540	4,740
January	20	.48	3.33	5.15	103	317
February	57	.32	7.62	11.8	213	655
March	48	.60	3.58	5.54	111	341
April	60	.66	8.23	12.7	247	758
May	11.5	.66	2.48	3.84	76.9	236
June	18.9	.60	3.44	5.32	103	317
Fiscal year 1934-35	60	.32	4.18	6.47	1,520	4,680

Kaaiea Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'5", long. 156°12'15", 700 feet above Hamakua Ditch trail crossing, 2 miles southeast of Kailua, and 3½ miles southeast of Huelo.

Drainage area.- 0.5 square mile.

Records available.- December 1921 to June 1935.

Average discharge.- 13 years (1922-35), 4.75 million gallons a day (7.35 second-feet).

Extremes.- Maximum discharge during year, 283 million gallons a day (438 second-feet) Mar. 12 (gage height, 3.30 feet); minimum, 0.33 million gallons a day (0.51 second-foot) Dec. 17.

1921-35: Maximum discharge, 2,300 million gallons a day (3,560 second-feet) Nov. 18, 1930 (gage height, 7.93 feet); minimum, 0.3 million gallons a day (0.5 second-foot) July 17, 1922, Mar. 22, 1927, Nov. 16, 1929, Oct. 26, 1933.

Remarks.- Records good for ordinary stages; poor for high stages and for July 26 to Aug. 7, Aug. 24-31, Sept. 1-4, Oct. 26-29. No diversions. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Aug. 6				Aug. 7 to June 30					
0.4	0.4	0.8	7.6	0.2	0.26	0.6	4.0	1.0	15.2
.5	1.0	.9	12	.3	.60	.7	6.1	1.3	29.5
.6	2.2	1.0	17.5	.4	1.30	.8	8.7	1.6	49
.7	4.5	1.1	23	.5	2.4	.9	11.5	1.9	74

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.9	5.0	1.5	1.15	5.6	1.04	7.8	0.65	5.2	1.30	1.30	0.95
2	3.0	8.0	.90	.65	2.3	.88	7.9	.56	2.7	.81	1.12	.81
3	2.2	8.0	1.4	1.04	1.68	.81	6.6	.52	4.2	.70	1.12	.70
4	1.9	8.0	1.8	.88	1.39	.75	2.55	.52	2.3	5.0	1.12	.70
5	20	3.0	1.43	.81	21	.65	2.3	.48	1.80	10.5	13.0	17.4
6	7.0	2.4	11.0	.60	3.3	.60	1.91	.48	2.3	3.0	11.0	23.5
7	8.3	2.1	17.0	.52	2.3	.56	26.5	.48	1.58	1.58	3.15	5.8
8	7.4	1.91	2.65	.52	1.58	.52	11.9	.48	1.39	1.81	2.55	2.55
9	3.2	1.47	4.4	.53	1.30	.52	15.8	.48	1.47	3.3	1.80	1.80
10	2.8	2.0	3.15	3.3	1.12	.60	3.3	.44	1.12	7.2	1.39	1.30
11	1.9	1.39	2.15	1.26	1.50	.52	10.1	.44	1.04	3.2	1.30	1.12
12	2.6	1.20	2.25	.60	34.5	.48	2.7	.44	66	22	8.1	.95
13	1.9	1.12	1.20	3.6	45	.40	1.91	6.1	4.9	5.7	4.2	.88
14	4.3	1.04	1.12	.88	5.2	.40	1.80	1.35	2.15	4.2	4.9	1.04
15	5.4	.95	.95	.65	2.55	.40	1.58	.60	3.2	16.7	2.4	1.95
16	1.9	.88	.81	.56	13.6	.40	1.30	4.6	7.4	11.5	2.3	1.72
17	1.6	.95	1.20	.52	11.5	.37	1.12	1.32	2.0	54	1.68	8.0
18	1.9	.95	.95	1.14	7.0	.37	1.81	.70	1.47	10.0	1.58	2.3
19	1.8	1.72	.75	5.2	2.4	.40	1.04	.65	1.20	20	1.20	1.68
20	1.3	1.41	.70	3.4	2.15	.44	.88	1.04	1.04	13.1	1.12	1.80
21	3.85	.88	.65	9.9	14.8	2.35	.81	7.7	1.58	4.8	1.12	1.20
22	8.4	.81	.50	12.6	14.7	10.0	.75	14.5	.95	4.4	.95	1.12
23	9.9	.70	.55	6.9	28.5	6.8	1.53	10.2	.81	3.5	.88	1.68
24	4.3	.64	.56	7.3	11.2	4.5	.95	9.4	1.44	2.7	.81	2.35
25	4.8	.62	.56	3.9	3.8	6.4	.81	6.2	1.04	7.8	.70	3.65
26	3.0	.56	21.5	3.0	2.4	20	.70	65	.81	9.9	.70	3.3
27	2.0	.52	2.4	1.9	2.0	13.1	.65	67	.75	3.0	.70	7.1
28	1.7	.45	1.12	4.0	1.47	10.1	.65	12.6	.75	2.15	3.2	4.1
29	2.1	.45	.81	3.5	1.30	3.3	.60	-	.65	1.80	3.75	3.4
30	2.1	.50	1.27	7.4	1.12	1.80	.60	-	1.02	1.47	2.0	3.3
31	2.5	1.6	-	3.15	-	3.0	.88	-	2.65	-	1.04	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	20	1.3	4.16	6.44	129	396
August	8.0	.45	1.97	3.05	61.2	188
September	21.5	.56	2.91	4.50	87.3	268
October	12.6	.52	2.95	4.56	91.4	280
November	45	1.12	8.28	12.8	248	762
December	20	.37	2.98	4.61	92.5	284
Calendar year 1934	105	.37	4.72	7.30	1,720	5,290
January	26.5	.60	3.86	5.97	120	367
February	67	.44	7.68	11.9	215	660
March	66	.65	4.09	6.33	127	389
April	54	.70	7.90	12.2	237	728
May	13.0	.70	2.65	4.10	82.2	252
June	23.5	.70	3.60	5.57	108	332
Fiscal year 1934-35	67	.37	4.38	6.78	1,600	4,910

Oopuola Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'15", long. 156°12'30", between Kaaiea and Naiiiiihaele Streams, 100 feet above Wailoa Ditch intake, 300 feet above ditch trail, and 4 miles southeast of Huelo.

Drainage area.- 0.2 square mile.

Records available.- August 1930 to June 1935.

Extremes.- Maximum discharge during year, 179 million gallons a day (277 second-feet) Mar. 12 (gage height, 3.99 feet); minimum, 0.15 million gallons a day (0.23 second-foot) Feb. 10-13.
1930-35: Maximum discharge, 324 million gallons a day (501 second-feet) Jan. 18, 1932 (gage height, 5.12 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Mar. 28, 29, 1931.

Remarks.- Records good except those for estimated period, which are fair. No diversions. Water used for irrigation in central Maui.

Revision of maximum extremes

Year ending June 30	Date	Gage height (feet)	Discharge	
			Million gallons a day	Second-feet
1931	Nov. 18	4.24	231	357
1932	Jan. 18	5.12	324	501
1933	Dec. 31	4.98	317	490
1934	Apr. 25	4.28	240	371

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.69	2.5	0.98	0.55	3.45	0.55	2.9	0.22	2.2	0.40	0.55	0.45
2	1.02	2.7	.58	.33	1.28	.60	2.85	.20	1.28	.33	.45	.37
3	.80	2.35	.46	.37	.95	.60	2.35	.18	2.1	.29	.45	.37
4	.74	2.2	.66	.45	.74	.50	1.19	.18	1.19	1.44	.40	.40
5	8.1	1.10	.72	.37	7.3	.37	.95	.18	.95	4.9	5.4	10.5
6	3.2	.80	.44	.33	1.58	.37	.74	.18	1.40	1.02	4.0	11.8
7	2.75	.68	6.6	.29	1.19	.37	9.4	.18	.74	.55	1.28	2.9
8	2.15	.68	1.35	.29	.80	.33	4.9	.18	.68	.50	.95	1.38
9	1.19	.55	1.88	.22	.68	.33	4.7	.18	.68	.68	.68	1.02
10	1.02	1.32	1.40	.45	.55	.37	1.40	.15	.55	1.91	.60	.74
11	.80	*.50	1.51	.63	1.40	.29	5.0	.15	.50	.95	.50	.55
12	1.02	†.40	1.19	.33	12.9	.25	1.28	.15	19.7	4.6	2.05	.45
13	.80	†.37	.68	1.23	11.0	.22	1.02	2.35	2.0	2.05	1.38	.40
14	1.50	†.37	.68	.40	2.2	.22	.80	.50	1.02	1.68	1.90	.50
15	2.85	†.33	.55	.29	1.19	.22	.68	.22	1.67	5.0	.87	.68
16	.74	*.33	.45	.22	3.3	.20	.55	2.25	3.3	3.5	1.28	.89
17	.68	.33	.60	.22	5.1	.18	.40	.45	.95	14.8	.74	3.2
18	.87	.33	.45	.38	2.85	.18	.68	.29	.68	3.0	.74	1.02
19	.80	.33	.40	2.6	1.28	.20	.40	.25	.55	7.0	.60	.74
20	.50	.37	.33	1.84	1.19	.22	.37	.33	.50	4.1	.55	.87
21	1.99	.25	.29	3.9	5.1	1.22	.29	2.95	.55	1.68	.74	.50
22	3.35	.42	.25	5.0	4.7	5.1	.29	2.6	.45	1.38	.55	.45
23	3.15	.22	.22	2.8	10.5	2.8	.60	2.6	.40	1.28	.37	.80
24	1.10	.22	.22	3.35	5.5	1.82	.37	2.15	.79	1.10	.33	1.28
25	2.2	.22	.22	1.88	2.45	2.9	.29	24	.55	2.2	.33	1.50
26	1.36	.20	3.9	1.71	1.38	8.4	.25	23	.40	3.55	.33	1.40
27	.87	.20	.78	.87	1.02	4.5	.25	25.5	.37	1.02	.33	2.7
28	.74	.18	.40	3.05	.74	3.7	.25	5.1	.33	.87	1.30	1.25
29	.87	.15	.33	2.5	.68	1.58	.22	-	.29	.80	1.45	1.53
30	.95	.22	.67	3.3	.68	.95	.25	-	.40	.68	.87	1.19
31	1.15	.81	-	1.40	-	1.40	.33	-	1.24	-	.45	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	8.1	0.50	1.64	2.54	51.0	156
August	2.7	.15	.698	1.08	21.6	66
September	6.6	.22	.974	1.51	29.2	90
October	5.0	.22	1.34	2.07	41.6	128
November	12.9	.55	3.12	4.83	93.7	287
December	8.4	.18	1.32	2.04	40.9	126
Calendar year 1934	40	.14	1.72	2.66	627	1,920
January	9.4	.22	1.48	2.29	46.0	141
February	25.5	.15	3.45	5.34	96.7	297
March	19.7	.29	1.56	2.41	48.4	149
April	14.8	.29	2.44	3.78	73.3	225
May	5.4	.33	1.05	1.62	32.4	99
June	11.8	.37	1.73	2.68	51.8	159
Fiscal year 1934-35	25.5	.15	1.72	2.66	627	1,920

*Partly estimated.
†Estimated.

Nailiilihaele Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'30", long. 156°13'5", 200 feet above Wailoa Ditch intake, 700 feet above New Hamakua Ditch trail, and 1½ miles south of Kailua.

Drainage area.- 2.8 square miles.

Records available.- October 1913 to June 1918, August 1919 to June 1935.

Average discharge.- 14 years (1920-24, 1925-35), 20.2 million gallons a day (31.3 second-feet).

Extremes.- Maximum discharge during year ending June 30, 1934, 1,260 million gallons a day (1,950 second-feet) Apr. 25 (gage height, 6.45 feet); minimum, 1.4 million gallons a day (2.2 second-feet) Nov. 25.

Maximum discharge during year ending June 30, 1935, 1,210 million gallons a day (1,870 second-feet) Nov. 12 (gage height, 6.36 feet); minimum, 2.9 million gallons a day (4.5 second-feet) Feb. 10, 11, 12, 13.

1913-18, 1919-35: Maximum discharge, 1,800 million gallons a day (2,790 second-feet) May 1, 1916; maximum gage height, 10.74 feet Nov. 18, 1930; minimum, 0.45 million gallons a day (0.70 second-foot) July 14, 1920.

Remarks.- Records good for ordinary stages; poor for high stages and estimated periods. No diversions. Water used for irrigation in central Maui. All data from Dec. 20, 1933, to June 30, 1934, have been revised in this report.

Rating tables, 1933-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 19, 1933				Dec. 20, 1933, to June 30, 1935			
1.0	1.4	2.1	26	1.8	1.7	3.3	103
1.2	2.4	2.4	40	2.0	5.3	3.6	153
1.4	4.7	2.7	58	2.2	11.6	3.9	210
1.6	9.2	3.0	80	2.4	20.5	4.3	301
1.8	15	3.3	107	2.6	33	4.7	422
				2.8	48	5.1	562
				3.0	67		

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	19	8.4	3.1	2.3	29	100	2.2	86	4.0	12.0	16.7	38.5
2	32	9.2	3.0	2.2	23	12	13.8	15.4	3.8	9.5	15.0	54
3	15.5	11	2.8	2.1	4.7	18	7.0	9.8	3.8	113	54	25.5
4	12.5	29	2.7	2.2	3.1	8.0	4.0	8.8	11.0	39.5	59	110
5	15.5	10.5	3.6	2.5	3.1		3.0	9.2	8.1	19.6	91	21.5
6	20	14.5	8.7	2.3	3.2		2.8	7.0	4.5	11.6	59	15.e
7	12	9.8	5.7	2.3	2.8		2.6	6.4	3.e	10.6	106	13.3
8	21	8.2	3.4	2.8	2.7	*4.6	2.4	5.9	3.4	113	146	11.6
9	12	8.7	2.8	2.2	2.5		2.4	5.3	3.2	18.2	165	10.6
10	12	11	2.6	2.0	2.8		27	5.6	4.2	11.6	123	10.6
11	12	7.2	2.5	2.0	2.6		25	5.1	3.6	56	37	11.2
12	9.0	6.5	5.0	2.0	2.3		10.6	4.9	3.0	27	43	9.5
13	14	5.9	19	1.9	2.2		5.9	5.9	2.8	14.1	23.5	15.2
14	11.5	5.7	8.0	1.9	2.2		7.5	4.5	2.8	62	34.5	20.5
15	9.2	7.0	3.9	1.9	2.0		7.0	4.0	2.6	28	41	11.2
16	9.2	5.5	6.3	1.8	2.0	*3.2	7.3	4.0	3.0	15.4	24.5	10.6
17	8.4	4.9	11	1.8	1.9		5.6	3.8	3.4	12.9	17.2	27
18	7.2	5.5	4.4	1.8	1.8		5.1	3.6	3.4	11.2	15.4	41
19	7.0	4.6	3.4	1.8	1.8		23	14.2	3.0	11.6	22	48
20	9.2	4.6	3.1	1.7	1.8	2.3	32.5	94	2.6	87	15.0	84
21	6.5	4.0	3.9	1.7	1.6	2.3	12.0	20	2.4	79	12.0	17.7
22	6.3	3.7	4.7	2.7	1.6	3.2	8.1	8.1	2.4	53	10.6	20.5
23	9.0	3.6	5.8	2.2	1.6	3.2	27	6.4	7.1	20	20	23.5
24	8.4	3.3	4.0	1.9	1.5	2.6	17.3	5.6	9.5	140	20	25
25	6.3	3.2	3.0	1.8	90	2.6	12.9	5.1	4.7	552	12.9	42
26	9.5	3.1	2.8	1.6	65	2.3	9.2	4.9	3.2	48	11.2	89
27	8.2	3.0	2.6	1.6	6.7	3.5	7.5	4.5	30.5	30.5	9.8	30.5
28	6.1	2.9	2.5	1.8	4.4	8.9	6.7	4.2	39	21.5	17.7	42
29	27	2.9	2.4	1.8	3.6	3.0	6.1	-	38	26	12.0	40
30	19.5	3.1	2.4	2.1	3.1	2.4	5.6	-	16.7	20.5	10.6	20.5
31	9.5	3.0	-	1.9	-	2.3	81	-	28	-	35.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	32	6.1	12.4	19.2	384	1,180
August	29	2.9	6.89	10.7	214	655
September	19	2.4	4.64	7.18	139	427
October	2.8	1.6	2.02	3.13	62.6	192
November	90	1.5	9.22	14.3	277	849
December	100	2.3	7.56	11.7	234	719
Calendar year 1933	149	1.5	10.3	15.9	3,780	11,600
January	81	2.2	12.6	19.5	390	1,200
February	94	3.6	12.9	20.0	362	1,110
March	39	2.4	8.44	13.1	262	803
April	552	9.5	55.8	86.3	1,670	5,140
May	165	9.8	41.3	63.9	1,280	3,930
June	110	9.5	31.2	48.3	936	2,e70
Fiscal year 1933-34	552	1.5	17.0	26.3	6,210	19,080

*Estimated.

Nailiilihaele Stream near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	18.2	29	11.6	9.1	21	9.5	39	5.3	26.5	7.5	9.5	6.7
2	15.0	48	6.1	6.1	12.4	8.8	40	4.5	17.2	4.9	9.2	5.9
3	12.4	44	6.7	7.0	10.9	7.8	38	4.2	19.6	4.5	8.8	5.3
4	10.9	42	9.7	6.7	9.5	7.3	19.6	3.6	14.1	12.9	6.4	5.3
5	88	19.1	6.8	6.7	86	6.7	15.8	3.8	11.6	39	61	60
6	35	14.5	53	5.6	53	6.1	13.7	3.8	12.9	14.1	43	78
7	46	12.4	91	5.3	14.5	5.9	164	3.6	10.2	8.4	15.8	22
8	34.5	12.0	15.0	5.9	11.2	5.6	72	3.6	9.2	11.2	13.7	12.4
9	17.7	9.8	15.8	6.6	9.8	5.1	79	3.6	9.2	25.5	11.6	10.6
10	15.0	10.6	15.0	23	8.8	5.3	20.5	3.2	7.5	39	10.2	8.4
11	12.4	8.8	11.6	12.1	11.8	4.7	44	3.0	7.0	19.4	9.2	7.5
12	17.2	7.8	12.9	7.0	199	4.5	17.2	2.9	263	119	33.5	7.0
13	13.7	7.3	8.4	12.1	233	4.0	14.1	27.5	23.5	28.5	21.5	6.7
14	29	6.7	7.8	7.8	28.5	3.8	12.9	8.6	12.4	23.5	24.5	7.0
15	26	6.1	7.0	6.4	17.7	3.8	11.2	4.5	16.1	71	13.7	10.5
16	12.4	5.9	6.1	5.9	74	3.6	9.8	20.5	26	51	12.9	10.2
17	10.9	5.6	7.5	5.1	56	3.4	8.4	7.6	11.2	272	10.9	34.5
18	14.5	5.6	7.0	7.1	36.5	3.2	12.9	4.7	9.5	47	11.2	13.3
19	13.3	7.4	5.9	28.5	17.7	3.4	8.4	4.2	8.1	89	9.5	10.6
20	9.5	7.3	5.3	19.9	16.3	3.6	7.5	7.0	7.5	64	8.4	10.2
21	20	5.1	4.9	52	108	13.6	6.7	46	7.3	31	8.4	7.5
22	38.5	5.1	4.7	50	74	36	6.1	81	6.4	33	7.5	7.3
23	47	4.5	4.7	33.5	159	45	14.3	64	5.9	23.5	7.0	8.1
24	19.1	4.5	4.5	33.5	51	21	7.3	67	8.1	17.2	6.4	12.0
25	20.5	4.2	4.5	28.5	24.5	26	6.1	296	*9.0	34	6.1	16.3
26	18.3	4.0	120	19.4	18.6	98	5.3	262	*8.0	41	5.9	16.3
27	12.4	3.8	15.2	13.7	16.3	66	4.9	283	*7.0	16.7	6.1	30.5
28	10.9	3.6	8.1	23	13.3	50	4.9	62	*6.6	13.3	16.8	23
29	12.0	3.4	7.0	17.9	11.6	19.1	4.7	-	*6.0	11.6	18.8	17.2
30	13.7	3.4	16.0	28.5	10.6	13.3	5.6	-	5.6	10.6	12.4	16.3
31	23	7.5	-	16.7	-	18.0	10.1	-	10.6	-	7.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	88	9.5	22.2	34.3	687	2,110
August	48	3.4	11.6	17.9	359	1,100
September	120	4.5	16.7	25.6	500	1,530
October	52	5.1	16.5	25.5	511	1,570
November	233	8.8	47.2	73.0	1,410	4,340
December	98	3.2	16.5	25.5	512	1,570
Calendar year 1934	552	2.2	24.3	37.6	8,880	27,270
January	164	4.7	23.4	36.2	724	2,220
February	296	2.9	46.1	71.3	1,290	3,960
March	263	5.6	19.4	30.0	603	1,850
April	272	4.5	39.4	61.0	1,180	3,630
May	61	5.9	14.5	22.4	449	1,380
June	78	5.3	16.2	25.1	487	1,490
Fiscal year 1934-35	296	2.9	23.9	37.0	8,710	26,750

*Estimated.

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Kailua Stream at Haiku-uka boundary, near Kailiili

Location.- Water-stage recorder, lat. 20°50'10", long. 156°14'15", at trail crossing, 100 feet above Haiku-uka boundary and 2½ miles southeast of Kailiili. Prior to Feb. 23, 1923, water-stage recorder at same site with datum 3.58 feet lower than that of present gage.

Drainage area.- 0.8 square mile.

Records available.- July 1918 to June 1928, July 1932 to December 1934 (discontinued).

Average discharge.- 11 years (1919-28, 1932-34), 3.96 million gallons a day (6.13 second-feet).

Extremes.- Maximum discharge during period, 217 million gallons a day (336 second-feet) Nov. 13 (gage height, 5.02 feet); minimum unknown, owing to faulty gage-height record. 1918-28, 1932-34: Maximum discharge, 386 million gallons a day (597 second-feet) Oct. 16, 1924 (gage height, 7.83 feet); minimum, 0.01 million gallons a day (0.02 second-foot) Nov. 21, 22, 23, 1932, Oct. 13, 1933.

Remarks.- Records fair for ordinary stages; poor for high stages and for Aug. 21-31. No diversions above station. Water used for irrigation in central Maui.

Rating table, July 1 to Dec. 18, 1934 (gage height, in feet, and discharge, in million gallons a day)

0.55	0.01	0.75	1.15	1.40	23	3.00	101
.60	.04	.80	2.2	1.80	40	3.40	124
.65	.08	1.00	7.9	2.20	60		
.70	.35	1.20	15	2.60	80		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.78	4.5	0.32	0.45	0.19	0.19						
2	.78	65	.35	.10	.13	.13						
3	.60	70	1.35	.08	.10	.10						
4	.35	46	2.7	.10	.10	.08						
5	3.4	12.5	3.0	.10	17.5	.08						
6	10.5	3.0	66	.08	3.0	.08						
7	3.0	1.6	43	.06	.45	.08						
8	6.6	1.15	1.65	.13	.19	.08						
9	1.6	.78	.19	.13	.10	.06						
10	.35	.60	.25	2.1	.06	.08						
11	.19	.35	.25	.45	.05	.08						
12	.45	.35	.19	.13	61	.08						
13	.35	.19	.08	.25	114	.08						
14	4.6	.19	.06	.25	11	.08						
15	.78	.19	.05	.35	1.8	.06						
16	.19	.19	.05	.10	54	.05						
17	.13	.35	.05	.08	38	.05						
18	1.75	.60	.08	.08	21	-						
19	.60	2.6	.08	4.0	1.6	-						
20	.13	9.0	.05	2.2	.78	-						
21	2.2	2.2	.05	11	93	-						
22	6.4	.19	.05	5.3	69	-						
23	6.8	.08	.04	2.6	119	-						
24	.78	.05	.04	1.35	28	-						
25	.35	.05	.04	9.8	5.1	-						
26	.25	.05	34	2.8	2.5	-						
27	.19	.04	2.1	1.15	1.6	-						
28	.08	.04	.19	.78	.95	-						
29	.13	.06	.10	.60	.60	-						
30	1.1	.78	.13	.45	.35	-						
31	4.9	4.6	-	.35	-	-						

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	10.5	0.08	1.95	3.02	60.3	185
August	70	.04	7.33	11.3	227	697
September	66	.04	5.22	8.08	156	480
October	11	.06	1.53	2.37	47.4	145
November	119	.05	21.5	33.3	645	1,980
December 1-17	.19	.05	.085	.132	1.44	4.4
The period						3,490
January						
February						
March						
April						
May						
June						
Fiscal year						

Kailua Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'35", long. 156°13'25", above Wailoa Ditch intake, 1¼ miles southwest of Kailua, and 2⅝ miles south of Huelo.

Drainage area.- 3.0 square miles.

Records available.- December 1910 to June 1918, July 1919 to June 1935.

Average discharge.- 16 years (1919-35), 17.4 million gallons a day (26.9 second-feet).

Extremes.- Maximum and minimum discharges during year unknown, owing to missing gage-height record.

1910-18, 1919-35: Maximum discharge, 3,390 million gallons a day (5,250 second-feet) Nov. 18, 1930 (gage height, 8.61 feet); minimum, 0.07 million gallons a day (0.11 second-foot) June 27, 1921.

Remarks.- Records good for ordinary stages; poor for high stages and for July 1 to Aug. 10, Sept. 14-20, 25-30, Oct. 1, 2, Jan. 15-28, Feb. 13 to Mar. 17, Mar. 28-31, May 1-12, June 15-24, 26-30. No diversions above station. Water used for irrigation in central Maui.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 27				Dec. 28 to June 30			
1.7	1.2	3.0	43	1.8	2.0	3.0	47
1.8	2.3	3.3	63	1.9	3.3	3.3	70
2.0	5.5	3.7	95	2.0	4.9	3.6	95
2.2	10	4.1	137	2.2	9.4	3.9	128
2.4	16.5	4.5	195	2.4	15.6	4.3	186
2.7	29			2.7	28.5	4.7	265

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	11	24	7.5	6.0	8.6	6.1	32	8.0	30	2.7	6.4	4.3
2	10	40	3.6	4.5	6.3	5.9	32.5	4.6	20	2.5	5.8	4.6
3	9.0	36	3.55	*4.3	5.5	5.2	43	3.95	14	2.5	5.4	3.8
4	8.0	32	5.5	4.1	4.8	4.8	20.5	3.6	12	2.7	5.0	3.45
5	70	13	4.2	4.1	54	4.5	13.0	3.3	10	25	25	39.5
6	26	10	6.4	3.5	15.7	4.3	9.4	3.05	8.0	4.0	40	64
7	36	9.0	108	3.4	8.8	4.1	242	2.9	7.4	3.2	12	15.1
8	24	8.4	12.8	3.4	7.2	3.8	135	2.8	6.8	2.8	8.0	7.5
9	12	6.8	6.3	3.95	5.7	3.6	109	2.8	6.4	20	7.0	5.5
10	10	7.0	8.1	16.5	5.0	3.5	22	2.5	6.0	25	6.2	4.7
11	9.0	5.3	6.3	8.7	5.3	3.4	30.5	2.4	5.6	15	5.0	4.3
12	11	5.0	7.6	4.6	131	3.2	12.3	2.4	200	60	20	3.6
13	9.4	4.5	*5.2	4.9	193	2.9	9.4	20	20	16	*10.0	3.45
14	22	4.0	4.6	5.3	28.5	2.8	8.4	7.0	11	13	16.6	3.6
15	16	3.8	4.5	4.6	12.0	2.8	7.6	4.0	12	45	8.4	3.8
16	10	3.8	4.0	4.0	52	2.6	7.0	25	15	25	6.8	3.6
17	8.0	3.6	4.5	3.4	39.5	2.4	6.5	6.0	8.0	150	8.5	25
18	10	3.5	4.2	3.6	32	2.3	11	4.0	*6.4	35	9.7	9.0
19	9.0	3.85	3.8	18.8	12.2	2.2	7.0	3.0	5.5	70	6.8	6.0
20	7.0	5.2	3.6	12.6	10.0	2.3	5.6	7.0	4.9	40	6.4	5.6
21	15	3.6	*2.9	42	76	7.5	5.0	10	4.7	23	5.3	5.0
22	34	3.4	2.8	32.5	100	29	4.5	55	4.3	25	4.7	4.7
23	38	3.0	2.8	22	151	28	12	50	3.8	16	4.4	5.2
24	14	2.8	*2.8	21	52	15.4	7.0	60	4.1	13	3.8	7.0
25	15	2.6	3.5	26.5	19.0	15.5	5.0	250	4.3	23	3.6	9.2
26	13	2.8	90	8.7	13.0	81	4.6	210	3.45	26	3.45	12
27	8.4	2.6	15	9.5	10.5	80	4.3	230	*3.45	14	3.6	20
28	7.6	2.4	6.0	11.0	8.6	64	4.0	100	3.2	10	8.3	16
29	8.2	2.3	5.0	9.3	7.6	19.0	3.8	-	3.1	8.0	12.4	13
30	10	2.3	10	12.0	6.8	8.2	7.6	-	3.0	7.0	7.7	12
31	17	4.3	-	9.5	-	9.9	29.5	-	3.0	-	4.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	70	7.0	16.4	25.4	508	1,560
August	40	2.3	8.41	13.0	261	801
September	108	2.8	11.9	18.4	357	1,100
October	42	3.4	10.6	16.4	328	1,010
November	193	4.8	36.1	55.9	1,080	3,320
December	81	2.2	13.9	21.5	430	1,320
Calendar year 1934	765	1.1	18.1	28.0	6,600	20,270
January	242	3.8	27.5	42.5	851	2,610
February	250	2.4	38.7	59.9	1,080	3,320
March	200	3.0	14.5	22.4	449	1,380
April	150	2.5	24.1	37.3	724	2,220
May	40	3.45	9.07	14.0	281	863
June	64	3.45	10.8	16.7	324	996
Fiscal year 1934-35	250	2.2	18.3	28.3	6,670	20,500

*Partly estimated.

Hoolawaliilii Stream near Huelo

Location.- Water-stage recorder, lat. 20°53'15", long. 156°14'35", just above Wailoa Ditch intake, 2 miles west of Kailua, and 2 miles southwest of Huelo.

Drainage area.- Not determined.

Records available.- April 1911 to June 1935.

Average discharge.- 23 years (1911-15, 1916-35), 5.13 million gallons a day (7.94 second-feet).

Extremes.- Maximum discharge during year, 158 million gallons a day (244 second-feet) Feb. 25 (gage height, 3.89 feet); minimum, 1.31 million gallons a day (2.03 second-feet) May 28.

1911-35: Maximum discharge, 657 million gallons a day (1,020 second-feet) Nov. 18, 1930 (gage height, 6.74 feet); minimum, 0.2 million gallons a day (0.3 second-foot) June 8, 1926.

Remarks.- Records good for ordinary stages, poor for high stages, and fair for Sept. 13-25, Oct. 17-31, Dec. 25 to Jan. 3. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.3	0.75	1.8	8.7
1.4	1.50	2.0	15.0
1.5	2.7	2.2	23.5
1.6	4.2	2.5	38.5

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.8	3.9	1.74	1.74	4.4	3.6	7.0	1.86	9.3	1.86	2.7	2.1
2	4.0	4.8	1.74	1.50	3.6	3.45	6.4	1.86	6.7	1.86	2.7	1.98
3	3.6	4.6	1.74	1.50	3.3	3.0	7.0	1.86	6.0	1.74	2.45	1.98
4	3.3	5.8	1.74	1.50	3.15	2.85	6.2	1.74	4.8	1.86	2.35	1.86
5	9.3	4.2	1.74	1.50	12.0	2.7	3.9	1.74	4.8	3.2	6.6	8.3
6	5.6	3.75	2.95	1.50	5.0	2.7	3.6	1.74	4.4	2.35	6.9	12.0
7	5.8	3.45	8.8	1.62	4.2	2.45	16.5	1.74	3.75	2.1	3.6	5.6
8	5.9	3.3	3.15	1.50	3.9	2.35	11.8	1.62	3.45	1.86	3.15	4.2
9	4.4	3.0	2.7	1.40	3.3	2.35	11.8	1.62	3.15	1.98	3.0	3.75
10	4.0	3.15	2.7	1.82	3.0	2.35	6.7	1.50	3.0	2.85	2.7	3.45
11	3.6	2.85	2.45	1.86	4.0	2.1	10.6	1.50	2.7	2.45	2.7	3.15
12	3.6	2.7	2.45	1.62	19.8	2.1	5.8	1.50	29.5	6.4	3.75	3.0
13	3.3	2.45	2.3	1.62	24	1.98	5.0	3.45	7.2	3.75	3.5	2.7
14	3.45	2.45	2.3	1.62	9.8	1.86	4.2	1.98	5.2	3.3	3.6	2.7
15	4.0	2.35	2.2	1.50	6.4	1.86	3.9	1.62	4.6	7.8	3.0	2.85
16	3.15	2.35	2.2	1.50	9.1	1.86	3.45	3.4	4.8	5.0	3.0	2.7
17	3.0	2.35	2.1	1.5	10.1	1.74	3.3	2.1	3.75	22.5	2.7	4.2
18	3.0	2.1	2.1	1.6	8.9	1.74	3.45	1.86	3.45	8.7	2.7	3.0
19	2.7	2.2	2.0	2.1	6.2	1.74	3.0	1.74	3.15	13.6	2.7	2.7
20	2.6	2.1	2.0	2.0	5.4	1.86	2.7	1.74	2.85	11.0	2.6	2.6
21	3.4	1.98	1.9	3.0	9.3	2.2	2.6	3.3	2.85	6.7	2.6	2.45
22	4.8	1.98	1.8	4.0	10.5	3.2	2.45	5.4	2.6	5.6	2.45	2.35
23	5.2	1.86	1.7	3.3	19.4	7.2	3.0	4.4	2.45	4.6	2.35	2.35
24	3.75	1.86	1.6	3.5	12.8	3.4	2.45	5.6	2.6	4.0	2.2	2.85
25	3.75	1.74	1.6	4.5	8.2	4.5	2.2	37.5	2.45	4.4	2.1	2.85
26	3.75	1.74	5.0	3.0	6.4	11	2.1	36	2.35	5.2	2.1	3.15
27	3.15	1.74	2.45	3.0	5.4	7.0	1.98	38.5	2.35	3.75	2.1	4.2
28	3.0	1.62	1.98	4.5	4.8	6.6	1.86	16.3	2.1	3.45	2.35	3.6
29	3.0	1.50	1.74	3.5	4.2	5.0	1.86	-	2.1	3.15	2.6	3.75
30	2.85	1.50	1.86	5.4	3.75	4.0	1.98	-	2.1	3.0	2.45	3.6
31	3.7	1.74	-	4.7	-	3.5	2.35	-	2.1	-	2.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	9.3	2.6	3.98	6.16	123	379
August	5.8	1.50	2.68	4.15	83.1	255
September	8.8	1.6	2.42	3.74	72.7	223
October	5.4	1.40	2.42	3.74	74.9	230
November	24	3.0	7.81	12.1	234	719
December	11	1.74	3.36	5.20	104	320
Calendar year 1934	68	1.2	4.28	6.62	1,560	4,790
January	16.5	1.86	4.88	7.55	151	464
February	38.5	1.50	6.61	10.2	185	568
March	29.5	2.1	4.60	7.12	143	438
April	22.5	1.74	5.00	7.74	150	460
May	6.9	2.1	2.96	4.58	91.8	282
June	12.0	1.86	3.53	5.46	106	325
Fiscal year 1934-35	38.5	1.40	4.16	6.44	1,520	4,660

Hoolawanui Stream near Huelo

Location.- Water-stage recorder, lat. 20°53'15", long. 156°14'55", just above intake of Wailoa Ditch, 2 miles southwest of Kailua, and 2 miles southwest of Huelo. Altitude, 1,240 feet.

Drainage area.- Not determined.

Records available.- December 1910 to June 1935.

Average discharge.- 23 years (1911-15, 1916-35), 7.85 million gallons a day (12.1 second-feet).

Extremes.- Maximum discharge during year, 525 million gallons a day (812 second-feet) Feb. 25 (gage height, 3.19 feet); minimum, 1.05 million gallons a day (1.62 second-feet) Oct. 18.

1910-35: Maximum discharge, 584 million gallons a day (904 second-feet) Nov. 18, 1930 (gage height, 9.37 feet, former datum); minimum, 0.15 million gallons a day (0.23 second-foot) Oct. 25, 1917.

Remarks.- Records good for ordinary stages, poor for high stages and for July 1-25, Aug. 28, Oct. 1-3, 20-31, Nov. 1-16, Mar. 24-27, May 14-17. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.4	1.13	0.8	8.5	1.4	45
.5	2.15	.9	12.1	1.6	67
.6	3.6	1.0	16.6	1.8	95
.7	5.6	1.2	28.5	2.1	152

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	9.0	6.5	1.40	1.9	5.0	5.0	11.2	2.65	19.3	1.90	4.2	2.0
2	7.0	10.2	1.38	1.7	4.5	4.8	9.6	2.4	12.6	1.79	3.8	2.15
3	6.0	11.0	1.28	1.7	4.0	4.0	11.7	2.25	11.4	1.79	3.6	2.0
4	5.6	10.7	1.38	1.68	3.7	3.8	8.2	2.15	8.5	1.90	3.25	1.79
5	20	7.3	1.38	1.58	25	3.45	7.0	1.90	7.6	4.7	11.0	9.5
6	10	6.2	7.4	1.38	10	3.1	5.9	1.90	6.8	2.8	11.1	15.6
7	10	5.4	21	1.48	5.6	2.95	51	1.79	5.6	2.15	5.2	5.6
8	9.0	5.0	3.8	1.38	5.0	2.8	32.5	1.68	5.2	2.15	4.4	4.0
9	7.0	4.4	2.95	1.28	4.5	2.55	36.5	1.58	5.0	3.80	*4.2	3.6
10	6.0	4.4	2.8	2.85	6.0	2.65	14.8	1.48	4.2	6.8	3.6	3.1
11	5.4	4.0	2.55	2.6	8.0	2.4	17.0	1.38	4.0	4.8	3.25	2.95
12	5.0	3.6	2.55	1.58	20	2.15	9.6	1.38	75	28	7.0	2.8
13	4.8	3.25	2.15	1.38	50	2.15	7.9	6.3	14.2	8.2	*5.8	2.65
14	5.0	3.1	2.15	1.38	25	2.0	6.8	2.55	9.2	6.8	5.2	2.65
15	7.0	3.1	1.90	1.28	10	1.90	5.9	1.90	7.9	21	4.5	2.8
16	4.5	2.8	1.90	1.22	14	1.68	5.2	5.4	9.3	11.4	4.0	2.55
17	4.0	2.55	1.90	1.13	*17.7	1.68	4.8	2.55	6.2	76	3.7	5.8
18	4.0	2.4	1.79	1.30	17.9	1.68	5.4	1.90	*5.2	23.5	4.2	3.25
19	3.5	2.8	1.58	3.3	10.3	1.58	4.4	1.90	*4.4	33	3.6	2.8
20	3.5	2.4	1.58	2.7	8.5	1.58	4.0	2.0	4.2	31	3.25	2.65
21	6.0	2.15	1.48	10	22.5	2.25	3.45	8.7	4.0	16.6	3.1	2.15
22	8.0	2.0	1.38	9.0	33	5.8	3.25	27	3.6	13.9	2.95	2.15
23	8.5	1.90	1.38	6.0	57	10.2	6.5	24.5	*3.25	11.0	2.55	2.0
24	7.0	1.68	1.28	5.0	31	4.3	3.45	33	3.2	8.5	2.55	2.55
25	6.0	1.38	1.28	8.0	15.7	5.6	3.1	132	3.5	9.9	2.4	2.65
26	5.2	1.48	20.5	5.0	11.7	23.5	2.8	114	2.8	11.4	2.4	3.1
27	4.4	*1.38	4.2	6.0	8.9	15.7	2.55	105	2.6	7.0	2.4	5.3
28	4.0	1.33	*2.55	7.0	7.3	15.0	2.55	34.5	*2.4	5.9	3.1	5.3
29	4.0	*1.28	*2.0	6.0	6.2	8.9	2.4	-	2.4	5.2	3.6	4.2
30	3.8	1.28	2.15	8.0	5.4	6.2	2.95	-	2.25	4.6	2.8	4.0
31	5.7	1.58	-	6.0	-	5.6	4.6	-	2.25	-	2.4	-

Month	.Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	20	3.5	6.42	9.93	199	610
August	11.0	1.28	3.82	5.91	119	364
September	21	1.28	3.44	5.32	103	316
October	10	1.13	3.57	5.52	111	340
November	57	3.7	15.1	23.4	453	1,390
December	23.5	1.58	5.06	7.83	157	482
Calendar year 1934	248	1.0	7.81	12.1	2,850	8,740
January	51	2.4	9.58	14.8	297	911
February	132	1.38	18.8	29.1	526	1,610
March	75	2.25	8.32	12.9	258	792
April	76	1.79	12.2	18.9	367	1,130
May	11.1	2.4	4.16	6.44	129	396
June	15.6	1.79	3.79	5.86	114	349
Fiscal year 1934-35	132	1.13	7.76	12.0	2,830	8,690

*Partly estimated.

Honopou Stream near Huelo

Location.- Water-stage recorder, lat. 20°53'20", long. 156°15'5", just above Wailoa Ditch intake, 2⅜ miles southwest of Kailua, and 2¼ miles southwest of Huelo. Altitude, about 1,250 feet.

Drainage area.- 1.0 square mile.

Records available.- December 1910 to June 1935.

Average discharge.- 22 years (1911-14, 1916-35), 3.11 million gallons a day (4.81 second-feet).

Extremes.- Maximum discharge during year, 130 million gallons a day (201 second-feet) Feb. 25 (gage height, 3.06 feet); minimum (estimated), 0.01 million gallons a day (0.02 second-foot) several days in September and October.
1910-35: Maximum discharge, 1,220 million gallons a day (1,890 second-feet) Nov. 18, 1930 (gage height, 7.28 feet); minimum, 0.01 million gallons a day (0.02 second-foot) several days in 1933 and 1934.

Remarks.- Records good for ordinary stages, poor for high stages, and fair for Oct. 1-9, Dec. 21 to Jan. 7, Jan. 19-31, Feb. 1-5. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.38	0	0.7	2.55	1.4	16.5
.4	.10	.9	5.4	1.7	25
.5	.65	1.1	9.2	2.0	37
.6	1.45				

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.5	2.55	0.70	0.1	2.15	2.95	6.0	1.3	9.7	0.92	2.0	0.92
2	3.1	3.2	.64	.1	1.56	2.7	5.4	1.0	6.8	.84	1.89	.84
3	2.95	2.7	.64	.1	1.56	2.4	6.0	.9	6.1	.77	1.78	.64
4	2.7	*2.95	.57	.1	1.56	2.35	5.0	.9	4.6	.77	1.67	.84
5	8.0	2.1	.57	.1	8.7	2.2	3.5	.8	4.4	1.96	5.4	5.3
6	3.5	2.0	1.40	.1	2.95	2.1	3.0	.77	3.75	.92	4.2	6.9
7	3.7	2.0	5.4	.1	2.7	1.89	15	.77	3.1	.77	2.35	2.2
8	3.0	1.89	1.17	.1	2.35	1.78	10.7	.70	2.8	.70	2.0	1.78
9	2.95	1.67	.92	.1	2.1	1.67	10.2	.70	2.45	.77	1.89	1.56
10	2.7	1.78	.92	*.19	1.89	1.67	6.2	.64	2.2	1.35	1.84	1.45
11	2.45	1.56	.84	.25	2.4	1.56	9.0	.57	2.0	1.17	1.78	1.35
12	2.4	1.45	.77	.20	12.0	1.45	5.0	.57	22	4.1	2.95	1.25
13	2.1	1.45	.77	.25	24.5	1.35	4.4	2.2	6.2	2.35	2.2	1.25
14	2.2	1.45	.77	.30	9.9	1.25	3.65	.92	4.5	2.0	2.45	1.25
15	2.35	1.35	.77	.35	6.1	1.17	3.35	.64	3.9	5.6	1.89	1.35
16	1.76	1.35	.70	.35	7.6	1.17	2.95	2.55	3.75	3.2	1.89	1.25
17	1.67	1.35	.70	.37	8.2	1.08	2.8	.92	3.1	16.5	1.84	2.75
18	1.67	1.25	.64	.51	7.7	1.00	2.8	.77	2.7	7.1	1.78	1.45
19	1.56	1.35	.57	1.45	5.7	1.00	2.6	.70	2.35	11.3	1.56	1.17
20	1.45	1.35	.51	1.25	5.0	1.00	2.3	.77	2.2	9.6	1.45	1.17
21	2.05	1.08	.45	2.45	7.8	1.5	2.1	2.15	2.0	6.4	1.35	1.08
22	2.95	1.08	.40	3.15	8.6	2.5	2.0	3.2	1.78	5.2	1.25	1.00
23	2.95	1.00	.35	2.7	17.8	5.0	2.3	2.7	1.67	4.5	1.17	1.08
24	2.0	1.00	.30	2.75	12.8	2.5	1.9	3.9	1.78	3.75	1.08	1.56
25	2.1	.92	.25	1.89	7.9	4.5	1.7	29.5	1.56	4.1	1.08	1.35
26	2.1	.84	1.85	1.78	6.2	9.0	1.6	33	1.45	3.75	1.00	1.56
27	1.89	.77	.51	1.56	5.2	4.0	1.5	32	1.35	2.95	1.08	2.5
28	1.67	.70	.25	3.3	4.5	4.0	1.4	16.5	1.25	2.55	1.35	1.78
29	1.67	.64	.20	2.2	3.75	2.5	1.4	-	1.17	2.45	1.45	1.78
30	1.67	.70	*.10	2.2	3.35	1.5	1.5	-	1.08	2.2	1.17	1.67
31	2.65	.70	-	1.89	-	1.3	1.7	-	1.00	-	1.00	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	8.0	1.45	2.56	3.96	79.4	244
August	3.2	.64	1.49	2.31	46.2	142
September	5.4	.10	.821	1.27	24.6	76
October	3.3	.1	1.04	1.61	32.2	99
November	24.5	1.56	6.48	10.0	195	597
December	9.0	1.00	2.32	3.59	72.0	221
Calendar year 1934	61	.1	2.97	4.60	1,080	3,320
January	15	1.4	4.16	6.44	129	396
February	33	.57	5.07	7.84	142	436
March	22	1.00	3.71	5.74	115	353
April	16.5	.70	3.68	5.69	111	339
May	5.4	1.00	1.86	2.88	57.8	177
June	6.9	.84	1.74	2.69	52.2	160
Fiscal year 1934-35	33	.1	2.89	4.47	1,060	3,240

*Partly estimated.

Honopou Stream at Lowrie Ditch siphon, near Huelo

Location.- Water-stage recorder, lat. 20°54'50", long. 156°15'10", half a mile above Government Road and 1.7 miles west of Huelo.

Drainage area.- 2.0 square miles.

Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. April 1930 to June 1932.

Extremes.- Maximum discharge during year, 314 million gallons a day (486 second-feet) Mar. 12 (gage height, 2.93 feet); minimum, 0.06 million gallons a day (0.09 second-foot) Oct. 10.

1932-35: Maximum discharge, 730 million gallons a day (1,130 second-feet) Dec. 31, 1932 (gage height, 3.83 feet); minimum, 0.04 million gallons a day (0.06 second-foot) Oct. 31, 1933.

Remarks.- Records good for ordinary stages, fair for estimated periods, poor for high stages. Wailoa Ditch and New Hamakua Ditch divert most of flow above this station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.03	0.7	6.6
.2	.20	.8	9.3
.3	.60	.9	12.4
.4	1.38	1.0	17.0
.5	2.6	1.3	33.5
.6	4.3	1.6	57

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.26	0.16	0.13	0.09	0.29	0.36	0.23	0.18	1.83	0.13	0.11	0.09
2	.23	.15	.11	.09	.29	.36	.23	.18	.60	.11	.11	.09
3	.20	.15	.13	.09	.29	.29	.23	.18	.48	.11	.11	.09
4	.20	.15	.13	.09	.26	.29	.23	.20	.29	.11	.11	.09
5	6.6	.15	.13	.09	.56	.29	.29	.15	.79	.11	.13	1.98
6	.78	.15	.13	.09	.29	.29	.29	.15	.48	.11	.15	2.35
7	.26	.15	.70	.09	.26	.29	5.6	.15	.29	.11	.15	.20
8	.23	.15	*.18	.09	.23	.26	1.05	.15	.29	.11	.15	.18
9	.23	.15	†.18	.07	.20	.26	.75	.15	.26	.11	.15	.16
10	.20	.15	*.15	.07	.20	.23	.23	.15	.26	.11	.15	.18
11	.20	.15	.13	.07	.26	.23	†.53	.15	.20	.11	.15	.18
12	.20	.13	.13	.09	4.0	.23	†.44	.15	29	.11	.15	.15
13	.20	.13	.13	.09	10.6	.23	†.32	.15	.70	.11	.13	.18
14	.20	.13	.13	.09	.42	.20	*.32	.15	.40	.11	.11	.15
15	.23	.11	.13	.09	.29	.20	†.32	.15	.32	.15	.11	.15
16	.18	.11	.13	.09	.29	.20	†.32	.18	.29	.13	.11	.15
17	.15	.11	.13	.09	.29	.20	*.29	.18	.29	17.7	.11	.15
18	*.15	.11	.11	.09	.36	.20	.26	.18	.23	.95	.11	.15
19	†.15	.11	.11	.13	.32	.20	.29	.18	.20	7.1	.11	.15
20	†.16	.13	.11	.09	.32	.20	.29	.18	.15	5.9	.11	.15
21	†.16	.13	.11	.13	.32	.20	.26	.18	.15	.13	.07	.15
22	†.20	.13	.09	.15	.51	.23	.26	.18	.15	.13	.07	.15
23	*.23	.13	.09	.18	7.3	1.43	.26	.16	.15	.13	.07	.15
24	.20	.11	.09	.23	1.52	.23	.26	.18	.15	.13	.07	.15
25	.20	.11	.09	.15	.48	.23	.20	36	.13	.13	.07	.13
26	.18	.11	.11	.20	.44	.65	.20	40	.13	.13	.07	.15
27	.15	.11	.09	.13	.44	.32	.20	51	.13	.13	.09	.15
28	.15	.09	.09	.36	.40	.29	.20	10.1	.13	.13	.09	.15
29	.15	.09	.09	.50	.36	.26	.18	-	.13	.11	.09	.15
30	.15	.09	.09	.32	.36	.26	.20	-	.13	.11	.09	.15
31	.15	.09	-	.29	-	.23	.23	-	.13	-	.09	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.6	0.15	0.418	0.647	13.0	40
August	.15	.09	.126	.195	3.91	12
September	.70	.09	.138	.214	4.15	13
October	.50	.07	.143	.221	4.42	14
November	10.6	.20	1.07	1.66	32.2	99
December	1.43	.20	.301	.466	9.34	29
Calendar year 1934	99	.06	1.07	1.66	392	1,200
January	5.6	.18	.492	.761	15.3	47
February	51	.15	5.04	7.89	141	433
March	29	.13	1.25	1.93	38.9	119
April	17.7	.11	1.16	1.79	34.8	107
May	.15	.07	.109	.169	3.39	10
June	2.35	.09	.282	.436	8.47	26
Fiscal year 1934-35	51	.07	.846	1.31	309	949

*Partly estimated.

†Estimated.

Honopou Stream above Haiku Ditch, near Huelo

Location.- Water-stage recorder, lat. 20°55'5", long. 156°14'55", 150 feet below Government road and 1⅛ miles west of Huelo.

Drainage area.- 2.2 square miles.

Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. November 1926 to June 1932.

Extremes.- Maximum discharge during year, 138 million gallons a day (214 second-feet) Mar. 12 (gage height, 2.22 feet); minimum, 0.17 million gallons a day (0.26 second-foot) several days during year.

1932-35: Maximum discharge, 186 million gallons a day (288 second-feet) Mar. 6, 1933 (gage height, 2.48 feet); minimum, 0.08 million gallons a day (0.12 second-foot) Dec. 1-2, 1933.

Remarks.- Records good for ordinary stages, poor for high stages. Wailoa and New Hamakua Ditches divert most of flow above this station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.05	0.6	4.0
.2	.20	.8	8.8
.3	.59	1.0	16.3
.4	1.29	1.2	27
.5	2.4	1.5	48

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.88	0.40	0.26	0.20	0.69	0.69	0.81	0.40	4.3	0.32	0.32	0.26
2	.59	.49	.20	.20	.59	.64	.81	.40	2.0	.32	.29	.26
3	.54	.49	.20	.20	.54	.59	1.20	.40	1.39	.32	.29	.23
4	.49	.54	.23	.20	.49	.59	.88	.36	.95	.32	.29	.23
5	5.5	.49	.23	.23	1.17	.59	.75	.36	1.41	.32	.48	3.2
6	1.72	.40	.32	.20	.81	.59	.75	.36	1.29	.32	.54	4.5
7	.69	.36	1.32	.20	.64	.59	6.3	.36	.81	.32	.49	.95
8	.69	.32	.44	.17	.59	.59	2.8	.36	.81	.32	.49	.69
9	.64	.29	.32	.17	.54	.59	2.8	.32	.69	.32	.40	.59
10	.54	.32	.32	.20	.49	.54	1.69	.32	.69	.40	.36	.49
11	.49	.29	.26	.20	.64	.54	2.25	.32	.59	.40	.36	.44
12	.44	.29	.26	.17	4.0	.54	1.20	.32	26.5	.44	.36	.40
13	.40	.29	.23	.17	9.6	.54	.88	.47	1.71	.44	.36	.36
14	.44	.29	.23	.17	1.30	.54	.75	.40	1.11	.44	.40	.32
15	.59	.29	.17	.17	.81	.54	.69	.36	.95	.69	.36	.32
16	.44	.29	.17	.17	.88	.49	.69	.54	.95	.64	.32	.32
17	.40	.29	.26	.17	1.11	.36	.64	.40	.75	15.2	.32	.54
18	.40	.29	.23	.23	1.11	.36	.64	.32	.64	2.05	.29	.44
19	.36	.26	.23	.26	.81	.36	.59	.32	.59	7.3	.29	.36
20	.36	.29	.23	.29	.75	.41	.54	.32	.54	6.9	.29	.36
21	.36	.29	.23	.40	.88	.36	.49	.44	.40	.75	.29	.36
22	.44	.29	.23	.54	1.29	.50	.49	.64	.40	.75	.26	.32
23	.59	.29	.23	.69	7.6	2.1	.74	.59	.40	.75	.26	.32
24	.49	.29	.17	.81	2.55	.54	.54	.69	.40	.64	.23	.32
25	.44	.29	.17	.59	1.49	.59	.44	29	.40	.54	.23	.32
26	.44	.29	.23	.64	1.29	1.37	.44	39	.40	.54	.23	.32
27	.36	.23	.26	.49	1.11	.95	.40	46	.40	.49	.26	.40
28	.32	.20	.23	1.09	.81	1.11	.40	12.3	.40	.40	.26	.32
29	.32	.20	.23	1.12	.81	.95	.40	-	.40	.36	.29	.32
30	.29	.20	.17	.88	.75	.69	.40	-	.36	.32	.29	.32
31	.36	.26	-	.75	-	.64	.49	-	.36	-	.26	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.5	0.29	0.678	1.05	21.0	64
August	.54	.20	.316	.489	9.80	30
September	1.32	.17	.275	.425	8.26	25
October	1.12	.17	.386	.597	12.0	37
November	9.6	.49	1.54	2.38	46.1	142
December	2.1	.36	.661	1.02	20.5	63
Calendar year 1934	69	.09	.1.26	1.95	460	1,410
January	6.3	.40	1.06	1.64	32.9	101
February	46	.32	4.86	7.52	136	418
March	26.5	.36	1.71	2.65	53.0	163
April	15.2	.32	1.44	2.23	43.3	133
May	.54	.23	.328	.507	10.2	31
June	4.5	.23	.619	.958	18.6	57
Fiscal year 1934-35	46	.17	1.13	1.75	412	1,260

Honopou Stream below Haiku Ditch, near Huelo

Location.- Water-stage recorder, lat. 20°55'5", long. 156°14'50", an eighth of a mile below Government road and 1½ miles west of Huelo.

Drainage area.- 2.3 square miles.

Records available.- July 1932 to June 1935. Records at same site obtained by East Maui Irrigation Co. November 1926 to June 1932.

Extremes.- Maximum discharge during year, 282 million gallons a day (436 second-feet) Feb. 25 (gage height, 3.28 feet); minimum, 0.05 million gallons a day (0.08 second-foot) Sept. 8.

1932-35: Maximum discharge, 345 million gallons a day (534 second-feet) Dec. 31, 1932 (gage height, 3.43 feet); minimum, 0.02 million gallons a day (0.03 second-foot) Nov. 27, 1933.

Remarks.- Records good for ordinary stages, fair for estimated periods, poor for high stages. Wailoa, New Hamakua, and Haiku Ditches divert most of flow above this station.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.05	0.7	6.6
.2	.25	.8	9.3
.3	.75	.9	12.5
.4	1.55	1.0	17.0
.5	2.75	1.5	45
.6	4.4	2.0	87

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.90	1.76	0.62	0.56	0.82	0.69	11.7	0.56	7.6	0.82	0.69	0.56
2	.75	6.5	.62	.56	.69	.69	6.0	.62	1.12	1.04	.69	.56
3	.75	6.4	.56	.56	.62	.69	15.2	.62	1.12	1.04	.69	.56
4	.75	8.2	.56	.56	.62	.69	.22	.62	.97	1.04	.69	.56
5	16.1	.82	.56	.56	20.5	.69	.16	.62	1.04	1.98	9.9	19.7
6	10.3	.56	3.7	.56	2.1	.69	.16	.62	.69	.75	19.8	44
7	6.0	.62	20	.56	.46	.62	37	.75	.56	.69	.75	8.6
8	4.2	.62	.48	.56	.69	.62	42	.75	.56	.69	.90	.12
9	1.40	.62	.62	.52	.62	.62	52	.75	.52	.90	.82	.42
10	.75	.62	.62	.75	.62	.62	3.55	.75	.52	2.25	.75	.62
11	.69	.62	.62	.69	.62	.62	21.5	*.7	.42	1.27	.69	.62
12	.69	.62	.62	.56	24	.62	.29	*.7	.62	18.2	2.4	.56
13	.69	.62	.62	.56	52	.62	.19	*1.0	8.9	4.8	2.45	.56
14	1.04	.62	.69	.56	14.0	.62	.19	*.8	.16	.63	.90	.52
15	1.72	.62	.62	.52	.40	.62	.32	*.7	.16	23.5	.75	.52
16	.69	.62	.62	.52	17.1	.69	.75	*1.1	.16	8.8	.69	.52
17	.75	.62	.62	.56	27	.69	.75	*.8	.12	43	.62	1.57
18	.75	.62	.62	.56	18.7	.69	.75	*.6	.10	12.0	.62	.62
19	.69	.62	.62	.69	.62	.69	.75	.56	.10	41	.69	.56
20	.69	.62	.56	.75	.75	.69	.75	.56	.56	36	.62	.56
21	.69	.56	.56	4.4	21	.69	.75	2.05	.75	7.8	.62	.52
22	3.1	.56	.56	5.8	35	3.4	.69	15.5	.75	3.1	.62	.52
23	11.9	.56	.56	8.1	35.5	13.5	.69	7.2	.75	3.0	.62	.52
24	.75	.56	.56	6.3	33.5	.41	.62	16.5	1.04	.62	.62	.56
25	.75	.56	.56	.89	.74	1.43	.56	64	1.04	1.56	.62	.52
26	.82	.56	9.7	1.07	.48	28.5	.56	73	1.04	9.6	.62	.52
27	.62	.56	2.15	.52	.90	13.6	.56	87	1.04	.82	.62	.62
28	.56	.56	.56	.69	.82	20	.56	12.8	1.04	.75	.62	1.10
29	.56	.56	.56	.75	.82	2.4	.56	-	1.04	.69	.69	.52
30	.56	.56	.56	.82	.69	.19	.52	-	.90	.69	.62	.52
31	.69	.62	-	.82	-	.19	.52	-	.82	-	.56	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	16.1	0.56	2.30	3.56	71.3	219
August	8.2	.56	1.26	1.95	39.1	120
September	20	.48	1.70	2.63	50.9	156
October	8.1	.52	1.35	2.09	41.9	129
November	52	.40	10.4	16.1	312	959
December	28.5	.19	3.14	4.86	97.5	299
Calendar year 1934	151	.19	4.96	7.67	1,810	5,560
January	52	.16	6.48	10.0	201	616
February	87	.56	10.4	16.1	292	897
March	8.9	.10	1.17	18.1	36.2	111
April	43	.62	7.63	11.8	229	703
May	19.8	.56	1.71	2.65	52.9	162
June	44	.12	2.94	4.55	88.2	271
Fiscal year 1934-35	87	.10	4.14	6.41	1,510	4,640

*Estimated.

Wailoa Ditch at Honopou, near Huelo

Location.- Water-stage recorder, lat. 20°53'20", long. 156°15'5", 100 feet below intake at Honopou Stream, half a mile west of Lupi, and 2½ miles west of Kailua.

Records available.- November 1922 to June 1935.

Average discharge.- 12 years (1923-35), 110 million gallons a day (170 second-feet).

Extremes.- Maximum discharge during year, 170 million gallons a day (263 second-feet) Nov. 22 (gage height, 5.60 feet); minimum recorded, 42 million gallons a day (65 second-feet) Feb. 13.
1922-35: Maximum discharge, 173 million gallons a day (268 second-feet) Nov. 23, 1930 (gage height, 5.77 feet); minimum, 11 million gallons a day (17 second-feet) Feb. 12, 1932.

Remarks.- Records good except those for estimated periods, which are fair. Wailoa Ditch receives water from Koolau Ditch at Alo and from all streams between Alo and Halehaku at elevation of about 1,200 feet. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	166	166	116	127	162	*130	166	*75	*165	127	*130	79
2	162	166	74	79	146	*120	166	*64	*135	83	*125	79
3	150	166	72	87	126	*110	166	*60	*135	72	*120	68
4	138	166	106	90	123	106	166	*60	*105	134	*125	61
5	158	166	78	83	155	98	166	54	*92	158	*135	114
6	166	162	162	72	166	94	166	50	*100	158	*165	166
7	166	158	166	71	162	87	170	50	*84	134	*165	166
8	166	154	158	88	150	83	166	47	*70	139	*160	158
9	166	130	158	92	126	79	*165	47	*74	162	*155	134
10	162	131	156	126	110	79	*160	44	*60	162	*130	106
11	154	110	146	136	109	90	*165	44	*50	162	*115	90
12	162	102	138	87	166	68	*165	41	*165	166	*155	83
13	162	94	98	105	170	64	*165	108	*165	162	*165	79
14	166	87	94	111	166	61	*160	102	*100	162	*165	79
15	166	83	83	*80	*160	57	*145	54	*100	166	*155	106
16	154	79	75	*74	*170	57	*135	116	*150	162	*135	87
17	138	75	94	*70	*170	54	*130	102	*90	166	*120	162
18	162	75	102	70	170	54	*140	60	*80	166	142	146
19	154	96	83	162	166	57	*125	54	*70	*165	114	118
20	122	94	74	154	166	57	*110	97	*60	*165	106	114
21	142	68	72	166	170	117	*105	166	*54	*165	98	87
22	166	68	64	162	166	136	*100	166	*48	*165	90	79
23	166	61	57	162	*165	166	*145	166	*42	*165	83	94
24	162	57	57	166	*165	154	*100	†166	*40	*165	75	120
25	162	54	57	162	*165	*152	*88	*165	*82	*165	72	*160
26	162	50	149	162	*165	*160	*80	*165	*90	*165	68	*160
27	146	54	154	154	*165	*160	*76	*165	*82	*165	72	*165
28	130	50	106	162	*165	*165	*72	*165	*82	*165	134	162
29	138	47	83	162	*156	166	*70	-	72	*155	148	162
30	158	47	90	162	*140	162	*70	-	94	*145	138	158
31	162	102	-	1162	-	150	*120	-	158	-	88	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	166	122	156	241	4,830	14,830
August	166	47	101	156	3,120	9,570
September	166	57	104	161	3,120	9,590
October	166	70	121	187	3,750	11,500
November	170	109	155	240	4,660	14,300
December	166	54	106	164	3,290	10,110
Calendar year 1934	170	28	121	187	44,030	135,100
January	170	70	133	206	4,120	12,650
February	166	41	94.8	147	2,650	8,140
March	165	40	93.4	145	2,890	8,880
April	166	72	153	237	4,590	14,090
May	165	68	124	192	3,850	11,810
June	166	61	118	183	3,540	10,870
Fiscal year 1934-35	170	40	122	189	44,410	136,300

*Estimated.

†Partly estimated.

New Hamakua Ditch at Honopou, near Huelo

Location.- Water-stage recorder, lat. 20°53'30", long. 156°15'10", 600 feet below Honopou Stream crossing, 15 feet above tunnel portal, and 2½ miles west of Kailua.

Records available.- January 1918 to June 1935.

Average discharge.- 17 years (1918-35), 27.1 million gallons a day (41.9 second-feet).

Extremes.- Maximum discharge during year ending June 30, 1934, 106 million gallons a day (164 second-feet) Apr. 25 (gage height, 5.35 feet); minimum recorded, 0.1 million gallons a day (0.2 second-foot) Oct. 21.

Maximum discharge during year ending June 30, 1935, 104 million gallons a day (161 second-feet) Dec. 22 (gage height, 5.09 feet); minimum, 0.28 million gallons a day (0.43 second-foot) Oct. 18.

1918-35: Maximum discharge, 143 million gallons a day (221 second-feet) Feb. 27, 1932 (gage height, 5.90 feet); no flow when water was shut out of ditch.

Remarks.- Records good except those for estimated periods, which are poor. New Hamakua Ditch diverts water from streams between Waikamoi and Halehaku above Center and Lowrie Ditches. Regulated by gates and spillways. Water used for irrigation in central Maui. All data from Nov. 4, 1933, to June 30, 1934, have been revised in this report.

Discharge, in million gallons, fiscal year July 1933 to June 1934

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	22	0.7	0.4	0.3	9.9	71	.32	91	0.51	40	59	91
2	84	1.1	.4	.2	52	28	17.3	50	.51	17.7	22.5	91
3	29	1.0	.4	.2	.6	43	1.54	1.72	.51	50	89	85
4	6.3	56	.3	.3	.39	1.31	.55	1.45	2.4	89	96	96
5	9.1	1.5	.3	.3	.75	.87	.43	1.52	.92	79	101	84
6	54	15	1.5	.2	.80	.76	.28	1.31	.66	16.9	99	37.5
7	2.4	1.6	.8	.2	.39	.71	.26	1.13	.58	1.38	102	10.0
8	51	.8	.5	.2	.36	.62	.26	1.02	.51	88	103	2.15
9	3.6	.8	.3	.2	.36	.58	.26	.97	.43	73	103	1.93
10	1.7	1.3	.3	.3	.36	.58	47	.92	.36	8.0	103	2.4
11	5.2	.7	.3	.3	.32	.58	42	.87	.36	62	102	4.4
12	.7	.7	.7	.2	.32	.55	1.65	.82	.39	89	101	1.65
13	9.2	.6	38	*.2	.32	.55	.66	.82	.36	56	97	14.8
14	2.0	.6	3.4	*.2	.26	.51	.71	.76	.32	90	95	65
15	.7	.7	.5	*.2	.24	.47	.71	.71	.32	56	98	4.4
16	.7	.7	.5	*.2	.26	.47	.58	.76	.32	41	95	1.65
17	.6	.6	1.4	*.1	.26	.47	.51	.58	.32	7.2	83	51
18	.5	.6	.5	*.1	.21	.43	.47	.58	.32	2.5	65	87
19	.5	.6	.3	*.1	.21	.39	26.5	10.2	.28	12.8	67	91
20	.6	.5	.3	*.1	.21	.36	78	91	.26	85	52	95
21	.5	.5	.3	.1	.21	.36	17.8	59	.24	93	13.0	67
22	.5	.5	.5	.2	.21	.39	1.08	1.20	.26	97	2.5	67
23	.7	.4	.6	.3	.21	.39	15.0	.71	2.1	76	48	73
24	.9	.4	.7	.2	.21	.36	38	.62	3.1	52	50	87
25	.6	.3	.4	.2	24.5	.32	9.5	.62	.58	104	13.1	82
26	.5	.3	.3	.2	89	.28	1.31	.58	.36	103	1.85	99
27	.5	.3	.3	*.2	5.7	.38	1.08	.58	21	101	1.65	91
28	.4	.3	.3	*.2	.47	9.7	1.02	.58	87	98	49	92
29	27	.3	.3	*.2	.39	.43	.97	-	86	89	18.6	92
30	41	.4	.3	*.2	.39	.39	.87	-	85	91	32.5	80
31	.8	.4	-	1.0	-	.36	23.5	-	87	-	53	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	84	0.4	11.5	17.8	357	1,100
August	56	.3	2.91	4.50	90.2	277
September	38	.3	1.84	2.85	55.1	169
October	1.0	.1	.23	.36	7.1	22
November	99	.21	6.33	9.79	190	583
December	71	.28	5.34	8.26	166	508
Calendar year 1933	101	.1	10.6	16.4	3,870	11,880
January	78	.26	10.6	16.4	330	1,010
February	91	.58	11.5	17.8	322	988
March	87	.24	12.4	19.2	383	1,180
April	104	1.38	62.3	96.4	1,870	5,730
May	103	1.65	65.0	101	2,020	6,190
June	99	1.65	58.2	90.0	1,750	5,360
Fiscal year 1933-34	104	.1	20.6	31.9	7,540	23,120

*Estimated.

New Hamakua Ditch at Honopou near Huelo

(Continued)

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	55	87	23.5	17.1	47	*2.0	92	0.62	*35	7.9	1.25	*0.80
2	29.5	89	.92	.71	3.9	*1.8	87	†.58	*8.0	.76	1.18	*.70
3	8.3	89	1.06	.66	1.85	*1.7	91	*.58	*10	.71	1.13	*.70
4	5.2	89	3.1	.66	2.3	*1.6	87	†.58	*4.5	24	1.08	*.70
5	44	74	.71	.62	68	*1.5	75	.58	*9.0	60	39	*45
6	89	26	†75	.58	†82	*1.4	56	.55	*4.0	54	95	*90
7	85	3.9	94	.55	*40	*1.3	100	.55	*3.0	1.02	66	*80
8	94	8.0	49	.55	*8.0	*1.2	89	*.54	*2.5	12.3	25	*10
9	62	1.38	28	.51	*1.9	*1.1	69	*.54	*2.2	82	25	*3.0
10	25.5	8.4	52	16.5	*1.7	*1.0	59	*.50	*1.8	87	1.45	*2.0
11	5.2	1.45	8.3	38	*1.5	.92	64	*.45	*1.5	60	1.25	*1.8
12	56	1.18	9.3	.66	*90	.82	52	*.45	*90	85	20	*1.7
13	17.2	1.13	1.02	13.0	*94	.82	29	*35	*25	89	62	*1.6
14	84	1.13	1.02	16.5	*90	.76	8.5	*3.0	*4.0	87	74	*1.5
15	61	1.08	.97	.51	*70	.71	2.65	*.80	*3.5	98	12.0	*1.7
16	3.15	.97	.87	.39	*60	.62	2.25	*30	*3.0	93	2.05	*1.5
17	1.45	.97	.87	.32	*90	.58	1.93	*1.5	*2.5	101	3.2	*80
18	23	.97	.82	.36	99	.58	6.6	*.90	*2.3	101	4.4	6.6
19	25	4.2	.71	65	*64	.58	1.78	*.60	*2.1	101	1.02	1.72
20	1.38	3.05	.66	35.5	*45	2.1	1.72	*.60	*1.9	101	.97	1.72
21	7.6	.82	.66	88	*80	36.5	1.38	*80	*1.7	98	†1.02	1.45
22	89	.82	.62	89	*94	38	1.25	*94	*1.5	97	*7.0	1.38
23	89	.76	.62	75	*94	89	22.5	*90	*1.3	93	*1.0	1.45
24	59	.66	.58	85	*90	42	1.18	*96	*1.3	80	*.90	13.9
25	34	.58	.55	44	*90	52	1.02	*96	*1.2	63	*.80	48
26	33	.55	69	58	*66	98	.92	*96	*1.1	95	*.70	24.5
27	1.97	.51	43	6.4	*50	94	.92	*96	*1.0	73	*.70	63
28	1.31	.51	.82	55	*15	96	.87	*70	*.90	29	*17	66
29	1.56	.47	.62	27.5	*2.5	80	.71	-	.87	6.1	*40	48
30	19.3	.47	.58	85	*2.2	13.3	.85	-	1.41	1.38	*1.5	†53
31	77	.55	-	49	-	17.6	7.1	-	26.5	-	*.90	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	94	1.31	38.3	59.3	1,190	3,640
August	89	.47	16.1	24.9	499	1,530
September	94	.55	15.6	24.1	469	1,440
October	89	.32	28.1	43.5	871	2,670
November	99	1.5	51.5	79.7	1,540	4,740
December	98	.58	21.9	33.9	679	2,090
Calendar year 1934	104	.24	32.6	50.4	11,920	36,570
January	100	.71	32.7	50.6	1,010	3,110
February	96	.45	28.5	44.1	797	2,450
March	90	.87	8.21	12.7	255	781
April	101	.71	62.7	97.0	1,880	5,770
May	95	.70	16.4	25.4	508	1,560
June	90	.70	21.8	33.7	653	2,010
Fiscal year 1934-35	101	.32	28.4	43.9	10,350	31,790

*Estimated.

†Partly estimated.

Lowrie Ditch at Honopou Gulch, near Huelo

Location.- Water-stage recorder, lat. 20°54'55", long. 156°15'5", a quarter of a mile below Siphon across Honopou Stream and 1½ miles northwest of Kailua.

Records available.- February 1930 to June 1935.

Extremes.- Maximum discharge during year, 80 million gallons a day (124 second-feet) Feb. 27 (gage height, 5.03 feet); minimum, 0.2 million gallons a day (0.3 second-foot) Feb. 20.
1930-35: Maximum discharge, 86 million gallons a day (133 second-feet) Nov. 18, 1930 (gage height, 5.45 feet); no flow at times.

Remarks.- Records good except those for estimated periods, which are poor. Lowrie Ditch diverts water at elevation of 500 feet from all streams between Kailua and Halehaku Stream. Regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	49	56	*30	7.4	38	18.5	55	7.9	*30	6.3	10.3	*9.0
2	36.5	58	*15	5.7	21.5	17.6	49	7.4	*40	.9	10.3	*9.0
3	17.6	58	*9.0	5.7	14.0	14.9	58	7.4	*45	.9	10.3	*8.0
4	15.8	58	*7.0	5.6	12.4	14.0	52	7.4	*30	.9	9.0	*7.0
5	26	55	5.9	5.8	40	13.2	47	6.9	*20	22	26.5	*40
6	58	29	41	5.4	55	12.4	36.5	4.2	*25	39	55	*58
7	52	11.6	58	5.0	41	11.6	55	.7	*19	19.9	58	58
8	58	11.0	44	5.1	15.8	11.0	61	.6	*15	6.5	37.5	47
9	58	10.3	30	4.7	13.2	10.3	61	.6	*18	38.5	19.1	25.5
10	34	17.9	30	13.7	12.4	11.0	58	.6	*15	55	13.2	16.7
11	15.8	11.0	10.3	34.5	13.8	9.6	61	.6	*14	51	12.4	14.0
12	20.5	9.0	9.6	7.8	58	9.0	48	.6	*50	52	16.8	13.2
13	15.8	8.4	7.4	15.6	61	9.0	29	21	*40	55	52	12.4
14	48	8.4	8.4	12.5	58	8.4	36	29	*25	55	47	12.4
15	58	7.9	7.4	5.2	44	7.9	33.5	13.0	*30	55	14.0	12.8
16	30.5	7.9	6.9	4.7	52	7.9	17.6	31.5	*40	55	*16	11.6
17	11.6	7.4	7.4	4.3	58	7.4	16.7	16.2	*30	61	*13	44
18	13.2	7.4	6.9	5.0	58	7.4	17.6	2.7	*35	58	*11	33
19	20.5	7.4	6.5	24	43	7.9	14.0	.3	*18	58	*11	12.3
20	10.3	*7.0	6.5	40	44	7.4	13.2	.2	*13	61	*10	11.6
21	11.0	*7.0	6.1	50	52	18.0	12.0	37	*12	58	*11	10.3
22	55	*6.8	6.1	55	58	23.5	11.3	55	*11	58	*10	9.6
23	58	*6.6	5.9	55	61	58	18.3	55	*10	58	*9.0	9.6
24	52	*6.4	5.8	55	61	*35	10.6	58	*1.5	44	*9.0	11.6
25	29	*6.2	5.8	34	58	*45	9.6	61	*1.5	41	*8.0	18.5
26	35	*6.0	38	52	55	*54	9.6	61	*1.5	58	*8.0	13.0
27	11.6	*6.0	48	24	49	*60	9.0	*45	*1.5	36.5	*9.0	31
28	10.3	*6.0	20.5	34	41	*56	9.0	*35	*1.5	30	*35	48
29	11.6	*5.6	6.1	26.5	22.5	48	8.4	-	*1.5	26	*40	28.5
30	11.0	*5.4	6.1	52	20.5	24.5	8.4	-	6.0	11.0	*20	22.5
31	34	*20	-	37.5	-	28.5	10.3	-	11.6	-	*9.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	58	10.3	31.2	48.3	968	2,970
August	58	5.4	17.1	26.5	531	1,630
September	58	5.8	16.5	25.5	496	1,520
October	55	4.3	22.3	34.5	693	2,130
November	61	12.4	41.0	63.4	1,230	3,780
December	60	7.4	21.5	33.3	667	2,050
Calendar year 1934	67	2.0	26.4	40.8	9,650	29,620
January	61	8.4	30.2	46.7	936	2,870
February	61	.2	20.2	31.3	566	1,740
March	50	1.5	19.7	30.5	612	1,880
April	61	.9	39.0	60.3	1,170	3,590
May	58	8.0	20.0	30.9	620	1,900
June	58	7.0	21.9	33.9	658	2,020
Fiscal year 1934-35	61	.2	25.1	38.8	9,150	28,080

*Estimated.

Haiku Ditch at Kapalalaea Gulch, near Huelo

Location.- Water-stage recorder, lat. 20°55'25", long. 156°15'35", in open section of ditch just below tunnel between Honopou and Kapalalaea Gulches, 1⅝ miles northwest of Kailua.

Records available.- February 1930 to June 1935.

Extremes.- Maximum discharge recorded during year, 150 million gallons a day (232 second-feet) Jan. 7, Feb. 25, 27 (gage height, 5.65 feet); minimum, 0.25 million gallons a day (0.39 second-foot) Oct. 17.
1930-35: Maximum discharge, that of Jan. 7, Feb. 25, 27, 1935; no flow occasionally.

Remarks.- Records good except those for estimated periods, which are poor. Haiku Ditch diverts water at elevation of 250 feet from all streams between Kailua Stream and Maliko Gulch. Regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.7	28	*6.0	0.48	10.2	*2.7	63	1.40	36	3.35	1.10	0.70
2	1.50	66	*1.0	.42	2.85	*2.6	39	1.30	8.1	6.8	1.00	.65
3	1.20	67	*.6	.40	2.35	*2.5	91	1.30	7.4	8.5	1.20	.65
4	1.20	74	*.7	.38	2.25	*2.4	17.0	1.30	5.5	9.7	1.00	.65
5	17.7	14.9	*.6	.45	59	*2.3	4.2	1.20	19.6	33	26	44
6	54	1.60	*50	.38	36.5	*2.2	3.4	2.4	9.5	3.3	85	110
7	54	1.30	*60	.40	3.55	*2.1	64	6.0	5.6	1.50	15.5	60
8	40	1.20	*5	.38	2.0	*2.0	135	5.8	5.0	1.30	1.80	4.3
9	19.0	.95	*2.5	.35	1.80	*1.9	135	6.0	4.5	20.5	1.20	2.5
10	1.50	1.57	*3.5	8.8	1.70	*2.0	82	5.4	3.9	52	1.00	1.90
11	1.20	1.10	*1.0	4.1	3.05	*1.9	100	5.2	3.55	29	.95	1.70
12	1.30	1.10	.70	.50	81	*1.8	25.5	5.0	113	67	17.7	1.50
13	1.40	.95	.55	.42	135	*1.7	4.5	23.5	41	61	21.5	1.40
14	16.4	.95	.70	.45	85	*1.6	4.1	3.35	6.6	17.6	10.1	1.50
15	26	.95	.55	.32	5.9	*1.5	3.75	1.10	5.8	75	1.50	1.60
16	1.30	1.00	.48	.30	63	*1.5	2.95	10.6	11.2	83	1.20	1.50
17	1.00	1.00	.55	.28	110	*1.5	2.7	1.94	4.6	110	1.10	29
18	1.10	1.10	.50	.39	69	*1.4	2.95	2.9	5.6	91	1.10	2.6
19	1.10	1.10	.45	5.4	4.2	*1.5	2.5	5.2	3.75	110	1.20	1.50
20	1.20	1.10	.45	1.31	3.7	*1.4	2.35	5.4	2.65	110	1.30	1.40
21	2.0	1.00	.45	48	71	*40	2.25	48	2.7	78	1.30	1.30
22	48	1.00	.42	53	110	*60	2.1	91	2.35	47	1.30	1.40
23	70	.95	.40	47	*130	*50	2.85	63	2.85	55	1.20	1.50
24	4.5	.90	.38	47	*80	*15	1.90	91	11.7	2.7	1.10	2.35
25	2.5	.80	.38	16.6	*10	*30	1.90	135	10.4	18.2	.95	2.6
26	7.7	*.7	45	26	*5	*90	1.80	135	9.9	84	.80	2.6
27	.80	*.7	24.5	1.70	*4.5	*80	1.70	135	9.7	5.8	.80	6.5
28	.65	*.7	.70	8.0	*4.0	*90	1.60	84	6.8	1.50	.85	26.5
29	.80	*.7	.50	6.9	*3.5	36.5	1.60	-	8.5	1.30	2.55	1.80
30	.80	*.6	.50	11.9	*3.0	3.4	1.60	-	4.7	1.20	.80	1.80
31	2.65	*4.0	-	7.2	-	2.95	2.0	-	1.80	-	.70	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	70	0.65	12.6	19.5	390	1,200
August	74	.6	9.00	13.9	279	857
September	60	.38	6.97	10.8	209	642
October	55	.28	9.65	14.9	299	918
November	135	1.70	36.8	56.9	1,100	3,390
December	90	1.4	17.3	26.8	536	1,650
Calendar year 1934	135	.2	18.7	28.9	6,800	20,920
January	135	1.60	26.0	40.2	806	2,470
February	135	1.10	31.4	48.6	878	2,700
March	113	1.80	12.2	18.9	378	1,160
April	110	1.20	39.7	61.4	1,190	3,650
May	85	.70	6.61	10.2	205	629
June	110	.65	10.6	16.4	317	974
Fiscal year 1934-35	135	.28	18.1	28.0	6,590	20,240

*Estimated.

Waiakea Stream at middle flume house, near Mountain View

Location.- Water-stage recorder, lat. 19°38'25", long. 155°10'35", at middle flume house, 800 feet above Olaa Sugar Co.'s main flume and 7½ miles northwest of Mountain View.

Drainage area.- Large part of flow comes from three tunnels.

Records available.- September 1930 to June 1935.

Extremes.- Maximum discharge recorded during year, 140 million gallons a day (217 second-feet) July 7 (gage height, 4.65 feet); minimum recorded, 0.62 million gallons a day (0.96 second-foot) Feb. 21, 22.
1930-35: Maximum discharge, 149 million gallons a day (231 second-feet) July 21, 1931 (gage height, 4.70 feet); no flow when tunnels and stream dry up.

Remarks.- Records excellent for ordinary stages; poor for high stages and for May 23 to June 30. No diversions. Water is used for fluming sugarcane.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.52	2.4	8.2
.6	.97	2.5	9.5
.8	1.58	2.6	11.2
1.2	3.15	2.8	15.0
1.6	4.9	3.0	19.0
2.0	6.8	3.4	28.5
2.2	7.2	3.6	34
		3.7	37.5

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.7	9.5	2.3	14.0	9.8	18.1	20	2.95	28.5	3.15	11.2	2.1
2	8.7	9.5	2.0	13.1	8.7	18.0	17.0	2.7	26	2.95	9.5	2.1
3	8.2	9.5	1.89	12.2	8.7	16.0	16.0	2.5	23.5	2.75	8.2	2.0
4	7.7	9.5	1.75	10.4	8.2	15.0	16.0	2.35	19.0	2.65	7.2	1.9
5	6.8	9.5	1.61	8.7	9.6	13.1	15.0	2.05	18.0	2.75	6.8	1.8
6	6.8	8.7	1.96	7.7	8.2	12.2	14.0	1.85	17.0	2.5	6.1	10
7	14.7	8.2	3.8	7.2	8.2	11.2	16.0	1.75	16.0	2.35	5.6	9.0
8	5.4	8.2	2.65	6.8	7.7	9.5	23.5	1.58	15.0	2.4	4.9	8.1
9	5.6	7.2	4.3	5.9	7.7	8.2	30	1.58	13.1	2.65	4.6	7.4
10	5.6	6.8	4.6	5.6	6.8	7.2	31.5	1.32	12.2	4.8	4.4	7.0
11	5.4	6.8	9.2	4.9	6.8	6.8	31.5	1.19	11.2	4.4	4.0	6.2
12	5.4	6.3	8.2	4.4	6.1	6.1	27	1.44	12.3	8.4	3.8	5.6
13	5.2	5.9	7.7	4.2	6.4	5.4	23.5	1.28	10.4	8.2	3.55	5.2
14	4.9	5.4	7.2	4.0	6.8	4.6	20	1.11	8.2	8.2	3.8	4.5
15	4.9	5.2	7.2	3.8	7.2	4.2	18.0	1.05	7.7	8.2	3.35	4.5
16	4.6	4.6	7.2	3.55	7.2	3.8	15.0	.97	7.2	9.0	3.35	4.0
17	4.4	4.4	7.7	3.55	10.4	3.55	13.1	.90	6.8	18.0	3.55	3.7
18	4.0	4.4	7.7	3.55	11.2	3.35	12.2	.80	6.3	26	3.35	3.4
19	3.8	4.9	7.7	4.2	10.4	3.35	11.2	.72	5.9	33	3.15	3.0
20	3.35	4.2	7.2	3.8	9.5	3.35	9.5	.68	5.2	36	3.15	2.7
21	3.15	4.0	7.2	4.0	10.7	3.95	8.7	.64	4.6	34	2.95	2.5
22	3.15	3.8	6.8	5.6	14.0	3.15	7.7	6.7	4.4	36	2.75	2.3
23	3.35	3.55	6.8	7.2	14.0	5.9	7.2	16.0	4.2	36	2.6	2.1
24	8.4	3.35	6.3	8.2	15.0	4.0	6.8	25	4.9	33	2.4	1.9
25	5.7	3.35	6.1	7.7	18.3	7.1	5.9	20	4.2	28.5	2.4	1.7
26	7.7	3.15	14.3	7.7	18.0	16.0	5.2	31.5	4.2	23.5	2.3	1.5
27	8.2	2.95	12.2	7.7	19.0	18.0	4.6	31.5	4.0	19.0	2.2	1.6
28	8.2	2.75	13.1	7.7	18.0	19.0	4.2	31.5	3.55	17.0	2.2	1.8
29	8.2	2.5	15.0	7.7	18.0	22	3.8	-	3.35	14.0	2.4	1.7
30	8.7	2.4	16.0	10.5	17.0	25	3.55	-	3.15	12.2	2.8	1.8
31	8.2	2.5	-	10.0	-	22	3.15	-	3.15	-	2.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	14.7	3.15	6.36	9.84	197	605
August	9.5	2.4	5.58	8.63	173	531
September	16.0	1.61	6.92	10.7	208	637
October	14.0	3.55	6.95	10.8	216	661
November	19.0	6.1	10.9	16.9	328	1,010
December	25	3.15	10.3	15.9	319	979
Calendar year 1934	25	.01	6.53	10.1	2,380	7,310
January	31.5	3.15	14.2	22.0	441	1,350
February	31.5	.64	6.91	10.7	194	594
March	28.5	3.15	10.1	15.6	313	961
April	36	2.35	14.7	22.7	442	1,360
May	11.2	2.2	4.22	6.53	131	402
June	10	1.5	3.77	5.83	113	347
Fiscal year 1934-35	36	.64	8.42	13.0	3,080	9,440

Note.- Estimated average of 4.0 million gallons a day by-passed station July 1-25.

Wailuku River at Pukamaui, near Hilo

Location.- Water-stage recorder, lat. 19°42'45". long. 155°9'40", three-quarters of a mile above Hilo Boarding School Ditch intake and 4⅝ miles west of Hilo.

Drainage area.- 97.2 square miles.

Records available.- April 1923 to June 1928, July 1929 to June 1935.

Extremes.- Maximum discharge during year, 5,620 million gallons a day (8,700 second-feet) Jan. 8 (gage height, 10.50 feet); minimum, 4.0 million gallons a day (6.2 second-feet) June 26-27.
1923-28, 1929-35: Maximum discharge, 17,800 million gallons a day (27,500 second-feet) July 21, 1931; no flow when all water was diverted.

Remarks.- Records good for ordinary stages except those for July 3-7, which are poor. High-stage records poor. Hilo Waterworks diverts water for domestic use from pool at control. Regulated by this diversion.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

3.0	2.7	5.0	234
3.2	6.6	5.5	394
3.4	11.6	6.0	605
3.6	19.2	6.5	875
3.8	31.5	7.0	1,210
4.0	49	7.4	1,520
4.5	121		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	44	89	11.0	25.5	169	59	46	7.9	118	13.8	18.3	7.9
2	29	56	9.1	19.2	80	39.5	40	7.5	64	11.3	17.0	8.4
3	28	34	8.1	22.5	36.5	25.5	70	7.5	126	10.5	14.1	7.0
4	23	25	7.3	23.5	25	22	81	7.9	86	9.6	12.6	6.2
5	19	21.5	6.8	14.7	25.5	17.4	83	7.5	79	9.1	11.3	6.2
6	18	17.4	9.2	13.2	24.5	14.7	43	7.0	121	8.8	10.8	67
7	23	14.7	80	11.6	19.2	13.2	172	7.0	69	8.8	10.8	72
8	114	14.1	19.4	11.3	19.2	11.6	1,410	7.3	56	8.6	10.5	26.5
9	46	12.8	14.1	10.5	17.4	11.0	735	7.5	40	9.1	10.5	18.3
10	33	11.6	24.5	12.5	12.5	10.2	254	7.3	40	10.8	14.4	13.8
11	23.5	11.6	63	11.0	11.6	9.6	196	6.8	50	19.2	10.8	11.6
12	25.5	11.6	67	9.4	11.0	9.4	132	11.1	45	83	10.5	10.2
13	18.3	11.9	21.5	9.4	23	9.1	83	16.0	47	49	12.2	9.1
14	16.0	10.8	14.1	9.6	76	8.1	83	7.9	24.5	31.5	17.4	8.4
15	16.0	12.2	25	13.8	46	7.5	81	7.0	19.2	57	11.9	8.4
16	13.2	12.8	22	9.4	26	7.0	72	6.4	16.5	79	10.2	8.4
17	11.6	11.0	35	8.8	64	6.8	41	6.4	14.7	1,200	10.8	7.9
18	10.5	13.2	33	11.9	170	7.0	33	6.2	12.8	1,090	15.2	7.7
19	9.6	35	23.5	65	86	11.0	24	5.8	11.6	358	10.5	7.3
20	9.1	43	17.8	30	36.5	10.5	19.2	5.8	10.8	694	9.1	7.0
21	10.2	18.8	13.8	27.5	41	57	16.5	6.6	13.8	532	8.8	6.8
22	9.6	15.2	12.5	121	510	26	14.4	116	22	705	8.1	6.0
23	60	12.8	11.3	63	141	136	12.8	678	22.5	358	7.0	5.6
24	282	11.6	11.0	103	124	33	11.6	974	30.5	162	6.6	5.3
25	52	10.2	14.4	46	83	74	11.0	294	23	87	6.6	4.9
26	261	9.6	1,290	34.5	110	1,340	9.9	590	15.6	63	6.4	4.1
27	83	9.4	740	21.5	138	366	9.4	765	12.2	43	6.2	4.1
28	29.5	8.8	112	17.0	93	726	9.1	300	11.0	33	6.2	5.8
29	19.8	8.4	54	17.0	52	235	8.8	-	10.2	27	6.2	6.6
30	17.4	7.7	34.5	41	35.5	103	8.4	-	12.5	21.5	12.0	6.8
31	20.5	7.9	-	128	-	63	8.1	-	14.1	-	9.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	282	9.1	44.4	68.7	1,380	4,220
August	89	7.7	19.0	29.4	590	1,810
September	1,290	6.8	93.5	145	2,800	8,610
October	128	8.8	31.0	48.0	962	2,950
November	510	11.0	76.9	119	2,310	7,080
December	1,340	6.8	112	173	3,470	10,650
Calendar year 1934	1,340	0	47.9	74.1	17,510	53,720
January	1,410	8.1	123	190	3,820	11,720
February	974	5.8	138	214	3,880	11,900
March	126	10.2	40.0	61.9	1,240	3,800
April	1,200	8.6	193	299	5,790	17,780
May	18.3	6.2	10.7	16.6	333	1,020
June	72	4.1	12.5	19.3	375	1,150
Fiscal year 1934-35	1,410	4.1	73.8	114	26,950	82,690

Wailuku River above Hilo Boarding School Ditch intake, near Hilo

Location.- Water-stage recorder, lat. 19°42'55", long. 155°9'10", 1,000 feet above Hilo Boarding School Ditch intake, three-quarters of a mile west of Reservoir No. 1, and 4 miles West of Hilo.

Drainage area.-124.5 square miles.

Records available.- July 1928 to June 1935.

Extremes.- Maximum discharge during year, 6,810 million gallons a day (10,500 second-feet) Apr. 17 (gage height, 16.78 feet); minimum, 10.0 million gallons a day (15.5 second-feet) June 26, 27.

1928-35: Maximum discharge, estimated as 21,000 million gallons a day (32,500 feet) July 21, 1931; minimum, 1.1 million gallons a day (1.7 second-feet) Jan. 9, 1934.

Remarks.- Records good for ordinary stages; poor for high stages and for Dec. 30 to Jan. 20, May 9-20. Regulated by head gates. Hilo Waterworks diverts about 1 million gallons a day from pool at Pukamaui, three-quarters of a mile upstream, for domestic supply, and water passing station is used for power by Hilo Electric Co.

Rating tables, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

July 1-8				July 9 to June 30			
3.1	54	6.0	370	2.0	10	6.0	370
3.5	81	7.0	640	3.0	53	8.0	860
4.0	122	7.2	700	4.0	130	10.0	1,640
5.0	223			5.0	233	12.0	2,720

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	109	296	34.5	88	228	184	160	16.0	366	44	59	25.5
2	105	207	19.1	66	169	149	140	14.1	221	34	53	28.5
3	85	139	15.4	76	116	104	230	14.1	414	26.5	42	21
4	67	112	14.1	73	84	88	270	16.7	245	22.5	39	18.4
5	57	96	12.8	53	102	66	280	14.1	233	20.5	31	17.0
6	54	73	26.5	44	80	56	150	12.5	297	19.1	27.5	226
7	63	62	235	39	66	47	530	12.2	210	18.7	27.5	228
8	696	53	59	39	70	39	1,750	13.1	169	18.4	29.5	104
9	245	47	42	34	62	34	1,450	14.7	130	21.5	33	76
10	149	39	80	39	47	30.5	720	14.7	162	29	47	53
11	116	34	200	36.5	42	26.5	690	13.8	121	62	33	42
12	84	36.5	187	27.5	36.5	23.5	420	51	188	240	32	34
13	88	36.5	76	24	77	21.5	270	48	155	145	38	29
14	62	29.5	53	29.5	220	19.1	270	19.4	92	130	59	25.5
15	*50	42	79	45	139	17.4	270	14.7	70	179	37	29
16	*42	39	66	24	92	16.3	240	13.1	59	242	30	26
17	34	29	116	21	194	15.4	140	13.8	50	1,750	33	23.5
18	29.5	39	112	36.5	463	19.8	110	11.4	42	1,620	50	22
19	26	152	84	210	300	51	84	10.6	34	898	32	19.4
20	23.5	124	66	92	139	36.5	66	12.8	31.5	1,340	27	17.4
21	26	53	53	92	142	220	56	16.7	44	1,110	24	16.0
22	41	44	44	303	1,150	68	47	423	57	1,350	21.5	14.1
23	124	34	39	185	414	360	42	1,450	89	895	18.7	14.7
24	688	27.5	36.5	325	394	88	34	1,700	101	509	16.7	12.8
25	179	24	53	169	305	336	30.5	812	76	311	15.7	11.4
26	708	22	1,660	130	313	1,840	27.5	1,420	53	221	14.7	10.6
27	304	20	836	84	422	1,130	24.5	1,430	42	159	15.0	11.3
28	149	18.4	299	66	276	986	22.5	710	34	121	16.3	22.5
29	96	16.7	179	56	189	466	21	-	29	100	18.0	21
30	76	14.7	121	124	130	330	19.1	-	39	73	51	22
31	65	17.0	-	349	-	210	17.4	-	44	-	34	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	708	23.5	150	232	4,660	14,300
August	296	14.7	63.8	98.7	1,980	6,070
September	1,660	12.8	163	252	4,900	15,030
October	349	21	96.1	149	2,980	9,150
November	1,150	36.5	215	333	6,460	19,820
December	1,840	15.4	228	353	7,080	21,720
Calendar year 1934	1,840	1.2	125	193	45,690	140,200
January	1,750	17.4	277	429	8,580	26,340
February	1,700	10.6	297	460	8,310	25,510
March	414	29	126	195	3,900	11,960
April	1,750	18.4	390	603	11,710	35,930
May	59	14.7	32.4	50.1	1,010	3,080
June	228	10.6	40.7	63.0	1,220	3,750
Fiscal year 1934-35	1,840	10.6	172	266	62,790	192,700

*Partly estimated.

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Hilo Boarding School Ditch at intake, near Hilo

Location.- Water-stage recorder, lat. 19°43'0", long. 155°8'55", 200 feet below intake diversion dam on Wailuku River and 3⅝ miles northwest of Hilo.

Records available.- October 1931 to June 1935.

Extremes.- Maximum gage height during year, 4.66 feet (discharge greater than 21 million gallons a day or 32 second-feet) Apr. 17; minimum discharge, 6.5 million gallons a day (10.1 second-feet) Feb. 1, 2.
1931-35: Maximum discharge is beyond the measuring capacity of this station; no flow Nov. 23, 24, 1933, when water was shut out of ditch.

Remarks.- Records excellent up to maximum capacity of Parshall flume control which is 21 million gallons a day at gage height 2.5 feet. Above this stage the control is drowned by overflow from Wailuku River. Water is used for power by Hilo Electric Co.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	9.7	9.7	7.8	8.7	8.7	8.7	8.2	6.4	10.5	8.7	9.2	8.7
2	9.2	9.7	7.3	8.2	8.7	8.7	8.2	6.9	10.5	8.7	9.2	8.7
3	9.2	9.2	7.3	8.2	8.7	8.2	8.2	7.8	10.5	8.2	9.2	8.2
4	8.7	9.2	6.9	8.2	8.2	8.2	8.7	8.2	10.5	8.2	8.7	8.2
5	8.7	8.7	6.9	8.2	8.2	8.2	8.7	8.2	10	8.2	8.7	8.2
6	8.7	8.7	7.3	7.8	8.2	7.8	8.2	8.7	10.5	7.8	8.7	10
7	10	8.7	8.7	7.8	7.8	7.8	8.7	8.2	10	7.8	8.7	10
8	9.7	8.2	7.8	7.8	7.8	7.8	13+	8.7	10	7.8	8.7	9.7
9	9.2	8.2	7.8	7.8	7.8	7.3	11	9.2	9.7	7.8	8.7	9.7
10	9.2	7.8	8.2	7.8	7.8	7.3	9.7	9.2	9.7	8.2	9.2	9.2
11	8.7	7.8	8.2	7.8	7.3	7.3	9.7	8.7	9.7	9.2	8.7	9.2
12	8.7	7.8	8.7	7.3	7.3	6.9	9.2	10	9.7	10	8.7	8.7
13	8.2	7.8	8.2	7.3	7.3	6.9	9.2	10	10	10	8.7	8.7
14	8.2	7.8	7.8	7.3	8.2	6.9	8.7	8.7	9.7	9.7	9.2	8.7
15	8.2	7.8	8.2	7.8	8.2	6.9	8.7	8.2	9.2	10	8.7	8.7
16	8.2	8.2	8.2	7.3	7.8	6.4	8.7	7.8	9.2	10	8.7	8.7
17	7.8	7.8	8.2	7.3	8.2	6.4	8.2	8.2	9.2	14+	8.7	8.2
18	7.8	7.8	8.2	7.8	8.7	6.4	7.8	7.3	8.7	14+	9.2	8.2
19	7.8	8.2	8.2	8.7	8.2	7.3	7.8	7.3	8.7	12.5	8.7	8.2
20	7.8	8.7	7.8	8.7	7.8	6.9	7.8	7.8	8.7	13.5	8.7	7.8
21	7.8	8.2	7.8	8.2	7.8	8.2	7.8	8.2	8.7	12.5	8.7	7.8
22	7.8	8.2	7.8	9.2	9.7	7.8	7.3	11	9.2	13.5	8.2	7.8
23	8.7	7.8	7.8	8.7	8.7	8.7	7.3	14+	9.2	12	8.2	7.8
24	10	7.8	7.8	9.2	8.7	8.2	7.3	15+	9.7	11	8.2	7.3
25	9.2	7.8	7.8	8.7	8.7	8.2	6.9	12	9.2	10.5	7.8	7.3
26	11+	7.3	13.5+	8.7	8.7	13.5	6.9	13.5	9.2	10.5	7.8	6.9
27	9.7	7.3	10	8.2	8.7	11	6.9	13.5	8.7	10	7.8	7.3
28	9.2	7.3	9.2	8.2	8.2	10	6.9	12	8.7	10	7.8	8.2
29	9.2	7.3	9.2	7.8	8.2	9.2	6.9	-	8.2	9.7	7.8	8.2
30	8.7	6.9	8.7	8.2	8.2	9.2	6.9	-	8.7	9.7	8.7	8.2
31	9.2	7.3	-	9.2	-	8.7	6.9	-	8.7	-	8.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	11+	7.8	8.85	13.7	274	841
August	9.7	6.9	8.10	12.5	251	770
September	13.5+	6.9	8.24	12.7	247	759
October	9.2	7.3	8.13	12.6	252	774
November	9.7	7.3	8.22	12.7	246	756
December	13.5	6.4	8.10	12.5	251	770
Calendar year 1934	13.5+	1.35	7.88	12.2	2,880	8,830
January	13+	6.9	8.27	12.8	256	787
February	15+	6.4	9.45	14.6	265	812
March	10.5	8.2	9.45	14.6	293	899
April	14+	7.8	10.1	15.6	304	932
May	9.2	7.8	8.60	13.3	267	818
June	10	6.9	8.42	13.0	252	775
Fiscal year 1934-35	15+	6.4	8.65	13.4	3,160	9,690

Note.- Control was drowned by overflow from Wailuku River 4 to 5:15 p.m. July 26, 3:30 to 8:30 p.m. Sept. 26, 10 a.m. to 1:10 p.m. Jan. 8, 1 to 3 p.m. Feb. 23, 6:15 to 8:30 p.m. Feb. 24, 3:40 p.m. Apr. 17 to 2 a.m. Apr. 18.

Kapehu Stream at Piihonua, near Hilo

Location.- Water-stage recorder, lat. 19°43'15", long. 155°8'30", a quarter of a mile above confluence with Wailuku River and 3 miles west of Hilo. Prior to Jan. 15, 1931, water-stage recorder at same site with datum 6.00 feet lower than that of present gage.

Drainage area.- 4.9 square miles.

Records available.- November 1928 to June 1935.

Extremes.- Maximum discharge during year, 3,220 million gallons a day (4,980 second-feet) July 26 (gage height, 10.34 feet); minimum, 5.2 million gallons a day (8.0 second-feet) Feb. 19.
1928-35: Maximum discharge, 3,640 million gallons a day (5,630 second-feet) Aug. 12, 1930 (gage height, 9.98 feet, former datum); minimum, 1.2 million gallons a day (1.9 second-feet) Feb. 17, 1931.

Remarks.- Records good for low and medium stages; poor for extremely high stages and for July 28 to Sept. 14. Small diversions above station for fluming sugarcane. Water passing station is used for power by Hilo Electric Light Co.

Rating table, fiscal year 1934-35 (gage height, in feet, and discharge, in million gallons a day)

1.2	5.4	3.0	94
1.5	10.5	3.4	138
1.8	18.6	3.8	191
2.1	30.5	4.2	256
2.4	47	4.6	331
2.7	68		

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	38	80	18	21.5	51	57	34	10.5	72	12.6	21.5	11.4
2	30.5	64	12	17.7	34	38	32.5	9.7	50	10.7	20.5	12.8
3	25	50	10	18.6	27.5	32	54	9.9	94	10.1	18.0	10.3
4	23	40	9.0	18.0	24.5	28.5	50	11.2	54	9.5	17.0	9.9
5	20.5	34	7.4	14.2	33	25	59	9.1	44	9.1	15.5	9.9
6	21.5	29	11	12.8	28.5	23	38	8.2	47	8.7	14.2	72
7	86	25	60	12.6	25	20.5	83	7.6	46	8.5	14.2	61
8	37.5	23	25	13.3	23	18.6	221	7.5	38	8.7	14.2	33
9	25	21	17	11.4	21.5	18.3	179	8.2	34	9.5	15.5	27
10	24	20	20	14.4	18.6	17.4	85	7.6	29	11.4	20.5	22
11	20.5	18	60	12.8	17.4	15.5	80	7.8	27.5	21	13.3	19.3
12	23	17	54	12.8	16.7	14.4	54	16.8	60	94	13.9	17.4
13	19.3	17	25	13.6	31	13.6	41	16.2	54	44	14.4	16.1
14	17.7	15	16	13.6	48	13.1	47	7.1	30.5	38	21	15.0
15	16.7	22	18.0	15.0	34	12.3	46	6.7	25.5	44	15.0	16.4
16	15.0	21	16.1	12.3	27.5	11.4	35.5	6.5	22.5	61	14.4	14.2
17	13.6	14	29	12.1	55	11.4	28.5	6.4	20.5	314	15.8	14.2
18	12.6	25	21.5	16.4	90	12.6	27	6.2	18.0	217	21	12.8
19	11.9	40	20.5	56	52	16.4	25	5.8	15.8	144	14.7	11.6
20	11.2	27	17.7	26	34	16.4	23	6.1	14.4	210	13.9	10.5
21	12.3	18	16.1	26.5	43	51	21	6.8	16.7	181	13.1	9.9
22	17.4	15	14.7	54	164	18.3	19.3	101	14.7	194	12.1	9.5
23	24.5	14	12.6	38	72	58	17.4	214	17.7	150	11.2	11.2
24	131	12	12.3	82	77	21.5	15.5	275	27	85	10.3	8.9
25	25	12	17.0	38	67	61	15.0	152	18.0	58	9.7	8.3
26	279	11	199	32	64	243	14.2	268	13.6	47	9.3	8.2
27	76	10	106	25.5	73	161	13.3	203	11.6	35.5	9.7	9.1
28	40	9.6	44	23	54	131	13.1	126	10.7	31.5	10.3	10.5
29	30	9.0	30.5	21	41	72	12.8	-	10.5	28	10.7	11.0
30	25	8.4	25	38.5	33	50	12.3	-	13.1	24.5	23	9.3
31	40	11	-	74	-	38	11.4	-	13.9	-	13.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	279	11.2	38.5	59.6	1,190	3,660
August	80	8.4	23.6	36.5	732	2,250
September	199	7.4	31.5	48.7	944	2,900
October	82	11.4	25.7	39.8	796	2,450
November	164	16.7	46.0	71.2	1,380	4,240
December	243	11.4	42.6	65.9	1,320	4,050
Calendar year 1934	279	1.4	27.9	43.2	10,160	31,220
January	221	11.4	45.4	70.2	1,410	4,320
February	275	5.8	54.3	84.0	1,520	4,670
March	94	10.5	31.1	48.1	964	2,960
April	314	8.5	70.7	109	2,120	6,510
May	23	9.3	14.9	23.1	462	1,420
June	72	8.2	17.1	26.5	513	1,570
Fiscal year 1934-35	314	5.8	36.6	56.6	13,350	41,000

Awini Ditch at East Honokaneiki Gulch, near Niulii

Location.- Water-stage recorder, lat. 20°9'55", long. 155°43'10", on Awini Ditch at flume across East Honokaneiki Gulch, 4½ miles southeast of Niulii.

Records available.- October 1927 to June 1935.

Extremes.- Maximum discharge during year, 34 million gallons a day (53 second-feet) Jan. 9 (gage height, 3.76 feet); minimum, 0.07 million gallons a day (0.11 second-foot) Jan. 25.
1927-35: Maximum discharge, that of Jan. 9, 1935; no flow when ditch was dry or water was turned out.

Remarks.- Records fair. Awini Ditch diverts water at about elevation 2,000 feet from all streams between Waikaloa and Honokane. Regulated by head gates and spillways. Water used for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	9.3	25	3.2	9.3	10.6	1.21	9.9	13.9	17.6	12.5	11.2	17.6
2	6.9	22	2.45	6.0	7.6	3.65	16.9	8.7	13.9	8.2	9.9	16.2
3	5.6	23	2.05	4.5	5.1	5.4	25	7.6	15.4	6.3	9.3	11.2
4	5.0	24	1.99	3.8	4.1	5.0	24	6.3	13.9	5.6	9.9	8.2
5	13.4	18.4	1.82	3.8	12.0	4.5	17.6	5.3	13.2	11.2	9.3	10.4
6	22	16.2	2.65	4.3	22	4.3	23	4.8	15.4	20	24.5	12.3
7	15.4	11.2	17.6	4.6	16.2	3.95	29	4.5	13.9	19.2	27	11.4
8	17.6	9.9	8.7	7.5	9.3	3.7	33	6.4	11.2	12.5	23	7.1
9	11.2	8.7	7.2	12.9	6.2	3.6	27	20	9.3	22	16.9	11.8
10	8.7	10.6	16.9	24	5.1	3.3	15.4	9.3	8.2	24	16.2	9.3
11	7.2	7.6	9.8	17.6	4.5	3.15	11.8	6.3	7.2	24	16.9	8.2
12	6.0	6.3	15.4	8.7	4.3	2.9	8.7	5.8	18.9	29	23	7.6
13	5.4	5.4	6.9	6.8	27.5	2.75	4.1	13.3	22	25	23.5	7.6
14	5.4	4.8	8.7	5.6	27	2.55	5.3	19.2	14.6	23.5	23	7.3
15	5.0	4.5	9.9	4.6	24	2.35	10.6	9.9	16.2	25	17.6	8.2
16	4.3	3.95	8.7	3.9	27	2.3	10.6	13.1	20	25	14.6	10.6
17	3.8	3.65	14.3	3.35	24	2.1	8.2	22	9.9	27	19.2	20.5
18	3.5	3.35	17.6	3.4	10.7	1.93	19.6	11.8	10.6	25	16.9	16.2
19	3.5	3.15	7.6	4.1	4.7	1.82	16.2	8.7	9.3	22	13.9	9.9
20	3.5	4.5	5.2	10.6	2.75	1.82	16.9	8.7	12.5	13.9	18.4	11.8
21	8.2	4.4	3.7	6.9	5.0	8.2	13.2	19.2	17.6	13.2	15.4	9.3
22	8.2	3.65	2.9	5.9	5.6	8.2	10.6	23.5	11.8	8.7	17.6	7.0
23	14.9	3.5	2.5	9.9	5.1	5.9	12.5	25	9.9	5.4	13.9	6.5
24	25	3.3	2.1	8.7	4.0	4.0	6.4	27	9.3	3.65	12.5	6.0
25	15.4	2.7	2.5	7.8	2.75	3.0	1.36	21	7.6	3.35	9.3	6.4
26	9.3	2.35	17.4	11.2	3.0	17.8	5.6	27	7.5	3.2	7.6	10.6
27	6.8	2.05	22	5.2	2.1	24	6.7	27	7.6	2.55	6.2	8.2
28	5.7	2.55	16.9	6.4	1.77	24	6.0	25	9.9	8.3	8.7	6.1
29	5.0	2.1	10.6	14.0	1.39	22	5.5	-	9.3	13.2	18.4	7.4
30	9.2	1.88	7.5	20	1.25	16.2	5.9	-	11.8	11.8	11.8	6.9
31	20	1.93	-	19.2	-	9.9	12.5	-	11.8	-	18.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	25	3.5	9.37	14.5	290	891
August	25	1.88	7.96	12.3	247	757
September	22	1.82	8.56	13.2	257	788
October	24	3.35	8.53	13.2	265	812
November	27.5	1.25	9.55	14.8	287	880
December	24	1.21	6.63	10.3	205	631
Calendar year 1934	27.5	.05	9.70	15.0	3,540	10,870
January	33	1.36	13.5	20.9	419	1,290
February	27	4.5	14.3	22.1	400	1,230
March	22	7.2	12.5	19.3	387	1,190
April	29	2.55	15.1	23.4	454	1,390
May	27	6.2	15.6	24.1	484	1,490
June	20.5	6.0	9.93	15.4	298	914
Fiscal year 1934-35	33	1.21	10.9	16.9	3,990	12,260

East Honokaneiki intake to Awini Ditch at East Honokaneiki Gulch, near Niulii

Location.- Water-stage recorder, lat. 20°9'55", long. 155°43'15", on intake tunnel delivering water from East Honokaneiki Gulch to Awini Ditch on west side of gulch, 4½ miles southeast of Niulii.

Records available.- October 1927 to June 1935.

Extremes.- Maximum discharge during year, 5.5 million gallons a day (8.5 second-feet) Apr. 12 (gage height, 1.13 feet); no flow several days during August and September.
1927-35: Maximum discharge, 10.8 million gallons a day (16.7 second-feet) Mar. 27, Apr. 2, 1930 (gage height, 1.35 feet); no flow occasionally.

Remarks.- Records fair except those for Nov. 29 to Mar. 2, Mar. 13-27, which are poor. Regulated by head gates. Diverts water from East Honokaneiki Gulch to Awini Ditch for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.32	3.9	0	0.26	0.41	0	0.45	0.9	1.2	0.35	0.41	1.12
2	.22	2.45	0	.18	.20	.11	1.2	.35	.8	.22	.35	.58
3	.16	2.1	0	.12	.16	.16	2.2	.3	1.24	.18	.29	.32
4	.12	1.65	0	.10	.12	.12	2.1	.2	1.38	.16	.26	.20
5	1.11	.51	0	.10	1.90	.11	1.4	.15	1.07	.73	.24	1.08
6	1.92	.75	1.41	.18	2.1	.10	2.0	.12	.65	1.42	2.85	4.6
7	.97	.61	.81	.12	.68	.09	2.9	.11	.44	1.11	2.25	2.15
8	.75	.35	.35	.12	.58	.07	3.4	.2	.44	.51	1.03	.72
9	.38	.26	.80	1.53	.26	.06	2.5	1.6	.61	2.25	.68	.44
10	.29	.24	1.68	2.6	.18	.05	1.0	.4	1.28	3.6	.65	.32
11	.24	.22	.82	1.21	.14	.04	.7	.2	2.45	3.8	.68	.24
12	.16	.18	1.35	.41	.14	.03	.45	.17	1.44	5.0	2.1	.20
13	.12	.16	.29	.26	2.7	.03	.11	.7	1.8	3.7	2.35	.20
14	.12	.12	.88	.20	3.8	.02	.15	1.4	.8	2.15	1.28	.18
15	.12	.12	.72	.16	1.70	.02	.5	.45	1.1	3.0	.87	.16
16	.10	.10	.41	.14	1.70	.01	.5	.7	1.6	2.8	.85	.14
17	.10	.08	1.85	.10	.70	.01	.35	1.8	.5	3.1	1.15	2.65
18	.08	.06	1.39	.08	.29	0	1.5	.7	.5	2.6	.80	.81
19	.06	.05	0	.14	.22	0	1.1	.35	.45	2.5	.61	.29
20	.06	.05	.10	.72	.24	0	1.3	.3	.7	1.65	.97	.41
21	.08	.05	.10	.32	.29	.3	.7	1.4	1.3	.51	1.20	.24
22	1.04	.05	.06	.24	.26	.3	.5	2.1	.7	.44	.79	.18
23	3.0	.04	.04	.51	.32	.2	.7	2.2	.5	.41	.38	.16
24	.87	.02	.04	.32	.26	.1	.2	2.5	.4	.35	.44	.12
25	.38	.02	.05	.41	.26	.04	.12	1.7	.3	.32	.22	.12
26	.22	.02	3.7	.48	.24	1.2	.18	2.5	.3	.32	.18	.14
27	.20	.02	1.38	.20	.26	2.1	.22	2.5	.3	.26	.12	.18
28	.20	.01	.74	.20	.29	2.1	.2	2.2	.51	.52	.35	.14
29	.18	.01	.44	.32	.02	1.7	.17	-	.38	.58	1.44	.16
30	1.03	0	.29	1.08	0	1.0	.2	-	.38	.48	2.5	.16
31	2.15	0	-	1.24	-	.5	.6	-	.38	-	.94	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.0	0.06	0.540	0.836	16.8	51
August	3.9	0	.458	.709	14.2	44
September	3.7	0	.657	1.02	19.7	60
October	2.6	.08	.453	.701	14.0	43
November	3.8	0	.681	1.05	20.4	63
December	2.1	0	.341	.528	10.6	32
Calendar year 1934	6.0	0	.843	1.30	308	943
January	3.4	.11	.955	1.48	29.6	91
February	2.5	.11	1.01	1.56	28.2	87
March	2.45	.3	.835	1.29	25.9	79
April	5.0	.16	1.50	2.32	45.0	138
May	2.85	.12	.943	1.46	29.2	90
June	4.6	.12	.614	.950	18.4	56
Fiscal year 1934-35	5.0	0	.745	1.15	272	834

Kohala Ditch at Pololu, near Niulii

Location.- Water-stage recorder, lat. 20°10'20", long. 155°44'15", on open section of ditch in Pololu Valley just below boundary between Bishop Estate land of Honokane and Territorial land of Pololu Stream, 2½ miles above mouth of Pololu stream and 4 miles south of Niulii.

Records available.- August 1927 to June 1935.

Extremes.- Maximum discharge during year, 64 million gallons a day (99 second-feet) Jan. 7 (gage height, 3.87 feet); no flow Feb. 27.
1927-35: Maximum discharge, 76 million gallons a day (118 second-feet) Dec. 2, 1932 (gage height, 4.33 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records good. Discharge estimated Jan. 30, 31. Regulated by head gates. Kohala Ditch receives the flow of Awini Ditch and diverts at about elevation 1,200 feet from all streams west of Honokane. Water is used for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	20	58	12.7	18.2	20	8.9	19.1	35.5	28	24	23	32.5
2	18.2	42	11.8	15.4	14.3	10.8	27	22	27	20	22	28
3	16.3	35.5	11.2	13.6	13.6	12.7	56	19.1	27	17.4	21	24
4	15.4	42	11.0	12.7	12.7	12.7	49	17.2	26	16.5	21	20
5	21	31	10.3	11.8	24.5	12.7	44	15.4	28	22	20	22
6	35.5	26	10.4	12.7	42	11.8	26	14.5	30	32.5	43	53
7	27	22	40	12.7	27	11.8	56	14.5	26	31	53	30
8	26	20	20	15.4	20	11.6	49	16.3	23	25	41	21
9	22	18.2	16.3	24	15.4	11.3	26	31	22	39	31	25
10	19.1	20	28	49	14.5	11.2	23	20	20	46	29	23
11	17.2	17.2	19.1	31	13.6	10.8	15.4	17.2	19.2	48	30	21
12	16.3	16.3	27	20	12.7	10.6	14.5	16.3	29	56	39	20
13	15.4	14.5	17.2	17.2	52	10.4	12.7	32.5	34.5	46	48	19.2
14	15.4	14.5	17.2	15.4	51	10.3	12.7	38	29	36.5	46	19.2
15	14.5	13.6	19.1	14.5	40	10.3	23	23	29	43	34.5	20
16	13.6	13.6	17.2	12.7	47	10.1	26	35.5	32.5	46	29	23
17	13.6	12.7	23	12.7	49	9.9	20	42	23	43	34.5	48
18	13.6	12.7	28	12.7	35.5	9.9	31	25	23	34.5	31	34.5
19	13.6	11.8	18.2	13.6	13.6	9.6	32	20	22	34.5	26	24
20	12.7	13.6	16.3	20	10.8	9.1	33.5	21	23	39	30	25
21	16.3	13.6	12.7	16.3	29	13.6	28	32	31	36.5	27	22
22	18.2	12.7	11.8	16.3	31	16.3	23	54	24	31	28	19.2
23	25	12.7	11.5	20	20	14.5	33.5	54	22	28	26	16.3
24	54	12.7	11.0	18.2	16.3	12.7	19.1	54	22	18.3	24	17.4
25	29	11.8	10.6	16.3	11.8	11.2	13.6	42	20	15.6	21	18.3
26	21	11.8	33.5	20	14.5	34.5	18.2	47	20	14.1	20	23
27	18.2	11.5	44	15.4	10.6	47	18.2	8.2	20	13.0	19.2	20
28	16.3	11.6	26	14.5	9.8	56	17.2	29	22	19.2	21	18.3
29	15.4	11.8	22	17.2	9.2	42	16.3	-	21	25	31	18.3
30	19.2	11.5	17.2	18.2	8.7	26	18	-	23	24	41	18.3
31	35.5	11.6	-	26	-	20	35	-	23	-	30	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	54	12.7	20.5	31.7	636	1,950
August	58	11.5	19.0	29.4	588	1,810
September	44	10.3	19.2	29.7	576	1,770
October	49	11.8	17.9	27.7	554	1,700
November	52	8.7	23.0	35.6	690	2,120
December	56	8.9	16.5	25.5	510	1,570
Calendar year 1934	61	3.8	22.3	34.5	8,150	25,040
January	56	12.7	27.0	41.8	836	2,570
February	54	8.2	28.4	43.9	796	2,440
March	34.5	19.2	24.8	38.4	769	2,360
April	58	13.0	30.9	47.8	927	2,840
May	53	19.2	30.3	46.9	940	2,890
June	53	17.4	24.2	37.4	726	2,230
Fiscal year 1934-35	58	8.2	23.4	36.2	8,550	26,250

Kehena Ditch near Kohala

Location.- Water-stage recorder, lat. 20°7'25", long. 155°45'5", at old Honokane weir, near head of West Branch of Honokanenui Gulch and 8½ miles southeast of Kohala. Prior to Oct. 19, 1932, water-stage recorder at same site with datum 0.14 foot lower than that of present gage.

Records available.- December 1917 to November 1919, April 1928 to June 1935.

Extremes.- Maximum discharge during year, 50 million gallons a day (77 second-feet) Jan. 23 (gage height, 1.23 feet); no flow Dec. 20, 21.
1917-19, 1928-35: Maximum discharge, 86 million gallons a day (133 second-feet) Jan. 27, 1918 (gage height, 2.16 feet, former datum); no flow during dry periods.

Remarks.- Records good. Regulated by several gates above station. Intake on Honokanenui Stream 2 miles above station, at elevation of about 4,200 feet. No diversions. Water used for irrigation in vicinity of Hawi.

Discharge, in million gallons, fiscal year July 1934 to June 1935

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.65	37	4.2	2.2	1.47	0.70	4.0	25.5	8.6	0.50	0.70	3.5
2	.80	18.2	1.04	.80	1.04	.60	14.6	6.7	3.75	.50	.70	2.6
3	.50	12.3	.70	.60	.60	.50	37	3.5	3.75	.40	.60	1.65
4	.31	19.3	.70	.50	.31	.40	32	2.2	3.3	.25	.60	.80
5	2.6	6.5	.70	.60	8.3	.31	19.8	1.65	4.3	.40	.50	.60
6	5.1	3.5	2.45	.70	19.2	.31	6.5	1.32	6.2	1.47	15.4	19.9
7	5.2	2.2	27	.50	5.6	.31	40	1.19	3.5	.24	21.5	11.6
8	3.7	2.0	4.5	.50	1.81	.25	41	1.32	2.2	1.65	9.9	2.8
9	1.19	1.32	4.4	8.1	.80	.25	37	9.3	1.19	7.9	3.75	1.32
10	.92	1.81	11.0	23	.50	.20	19.7	2.8	1.19	20	2.6	.70
11	.70	1.79	3.3	8.5	.31	.20	5.1	1.81	.92	19.3	4.4	.50
12	.80	2.4	6.2	2.4	.25	.15	1.65	1.32	29.5	34.5	19.3	.40
13	.60	1.81	1.65	1.19	29	.15	.70	9.7	24	31	16.6	.31
14	.70	.70	1.04	.80	24	.15	.70	13.4	5.6	20	23.5	.50
15	.70	.60	1.04	.60	12.5	.10	6.3	3.05	3.75	26.5	6.2	6.0
16	.60	.40	1.04	.50	24	.10	4.2	14.5	3.05	24.5	4.2	8.5
17	.40	.40	10.0	.31	35	.10	1.81	14.2	2.0	34	5.9	35
18	.31	.31	5.3	.31	24.5	.10	19.2	3.05	1.32	35	4.5	11.0
19	.31	.31	2.0	.76	4.5	.10	8.3	1.81	.92	36	2.2	4.2
20	.31	.80	.92	6.5	2.2	.02	14.5	4.8	.80	38	2.2	5.3
21	2.5	.80	.50	3.75	29.5	1.24	6.2	12.7	.70	36	1.32	2.2
22	4.8	.50	.40	7.6	28.5	2.0	3.05	37	.60	30	1.65	1.32
23	7.8	.60	.20	7.6	19.2	1.19	29	29.5	.60	27	1.47	1.04
24	28	.50	.15	4.0	11.5	.80	11.3	40	.70	9.3	1.32	.80
25	4.1	.25	.25	2.4	12.6	.50	3.75	31	.60	5.6	.92	6.3
26	1.32	.25	18.2	2.8	11.4	28.5	2.2	36	.80	7.3	.60	10.6
27	.70	.15	2.1	.92	3.05	27	1.47	31.5	.70	2.8	.50	5.6
28	.50	.25	10.6	.70	1.81	37.5	2.0	19.7	.60	1.81	4.0	2.8
29	.50	.15	2.9	.60	1.19	21	1.81	-	.50	1.32	8.5	4.2
30	7.1	.15	1.32	.92	.92	7.0	27	-	.50	.92	18.7	3.3
31	19.3	1.97	-	1.47	-	3.3	35	-	.50	-	4.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	28	0.31	3.36	5.20	104	319
August	37	.15	3.85	5.96	119	366
September	27	.15	4.19	6.48	126	386
October	23	.31	2.97	4.60	92.1	283
November	35	.25	10.5	16.2	316	968
December	37.5	.02	4.36	6.75	135	414
Calendar year 1934	45	0	5.86	9.07	2,140	6,570
January	41	.70	14.1	21.8	437	1,340
February	40	1.19	12.9	20.0	361	1,110
March	29.5	.50	3.76	5.82	117	356
April	38	.24	15.1	23.4	454	1,390
May	23.5	.50	6.10	9.44	189	580
June	35	.31	5.18	8.01	155	477
Fiscal year 1934-35	41	.02	7.14	11.0	2,610	7,991

MISCELLANEOUS DISCHARGE MEASUREMENT

The following discharge measurement was made on Awini Ditch (tributary to Kohala Ditch) at Honokane weir, near Niulii:

Jan. 17, 1935: Discharge, 8.85 million gallons a day (10.8 second-feet).

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