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SURFACE WATER SUPPLY of HAWAII

JULY 1, 1935, *to* JUNE 30, 1936

NATHAN C. GROVER, Chief Hydraulic Engineer
MAX H. CARSON, District Engineer

Prepared in cooperation with the
TERRITORY OF HAWAII

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CONTENTS

	Page
Scope of work	1
Definition of terms	1
Explanation of data	1
Accuracy of field data and computed results	2
Publications	3
Records of discharge collected by agencies other than the Geological Survey	3
Cooperation	5
Division of work	6
Gaging-station records	7
Island of Kauai	7
Waimea River below Kekaha Ditch intake, near Waimea	7
Kawaikoi Stream near Waimea	8
Kokee Ditch near Waimea	9
Waiahulu Stream near Waimea	10
Kekaha Ditch at camp 1, near Waimea	11
Hanapepe River at Koula, near Eleele	12
Hanapepe Ditch below intake, near Eleele	13
Hanapepe Ditch at Koula, near Eleele	14
South Fork of Wailua River near Lihue	15
North Fork of Wailua River at elevation 650 feet, near Lihue	16
Hanalei Tunnel outlet near Lihue	17
North Wailua Ditch near Lihue	18
Kanaha Ditch near Lihue	19
East Branch of North Fork of Wailua River near Lihue	20
Kapahi Ditch near Kealia	21
Anahola River near Kealia	22
Anahola Ditch above Kaneha Reservoir, near Kealia	23
Ka Loko Ditch near Kilauea	24
Puu Ka Ele Ditch near Kilauea	25
Kalihiwai Ditch near Kilauea	26
Hanalei River at elevation 625 feet, near Hanalei	27
Hanakapiai Stream near Hanalei	28
Hanakoa Stream near Hanalei	29
Kalalau Stream near Hanalei	30
Miscellaneous discharge measurements	31
Island of Oahu	32
Right Branch of North Fork of Kaukonahua Stream near Wahiawa	32
Left Branch of North Fork of Kaukonahua Stream near Wahiawa	33
Puhawai Stream at Lualualei, near Waianae	34
Pearl Harbor Springs at Puukapu, near Pearl City	35
Pearl Harbor Springs at Loko Kukona, near Pearl City	36
Pearl Harbor Springs at Kaluaoopu, near Pearl City	37
Pearl Harbor Springs at Waiau, near Pearl City	38
Pearl Harbor Springs at Kalauao, near Aiea	39
Moanalua Stream near Honolulu	40
Kalihi Stream near Honolulu	41
Nuuanu Stream below reservoir 2 wasteway, near Honolulu	42
West Branch of Manoa Stream near Honolulu	43
East Branch of Manoa Stream near Honolulu	44
East Manoa Ditch near Honolulu	45
Pukele Stream near Honolulu	46
Waiomao Stream above Pukele Stream, near Honolulu	47
Kahaluu Stream near Heeia	48
Waihee Stream near Heeia	49
Miscellaneous discharge measurements	50
Island of Maui	51
Honokahau Stream near Honokahau	51
Honokawai Ditch near Lahaina	52
Olowalu Ditch near Olowalu	53
Oheo Stream below diversion dam near Kipahulu	54
Right Branch of Kahalawe Stream near Kipahulu	55
Makapipi Stream near Nahiku	56
West Makapipi Spring near Nahiku	57
Hanawi Stream near Nahiku	58
Hanawi Stream below Government Road, near Nahiku	59
Kapaula Stream near Nahiku	61
Kapaula Stream below Government Road, near Nahiku	62
Koolau Ditch at Nahiku weir, near Nahiku	63
Waiaaka Stream near Nahiku	64
Paakea Stream near Nahiku	65
Waiohue Stream near Nahiku	66
West Kopiliula Stream near Keanae	67
East Wailuaiki Stream near Keanae	68
West Wailuaiki Stream near Keanae	69
Wailuanui Stream near Keanae	70
East Wailuanui Stream near Keanae	71
West Wailuanui Stream near Keanae	72
Taro patch feeder ditch at Keanae	73
Koolau Ditch near Keanae	74
Honomanu Stream near Keanae	75
Haipuaena Stream near Huelo	76
Spreckels Ditch at Haipuaena weir, near Huelo	77
Koolau Ditch at Haipuaena, near Huelo	78
Puohokamoa Stream near Huelo	79

Gaging-station records--Continued.
Island of Maui--Continued. Page
Manuel Luis Ditch at Puohokamoa Gulch, near Huelo..... 80
Spreckels Ditch at Wahinepee, near Huelo..... 81
Waikamoi Stream above Wailoa Ditch, near Huelo..... 82
Alo Stream near Huelo..... 83
Kaaiea Stream near Huelo..... 84
Oopuola Stream near Huelo..... 85
Nailiilihaele Stream near Huelo..... 86
Kailua Stream near Huelo..... 87
Hoolawaliilii Stream near Huelo..... 88
Hoolawanui Stream near Huelo..... 89
Honopou Stream near Huelo..... 90
Honopou Stream at Lowrie Ditch siphon, near Huelo..... 91
Honopou Stream above Haiku Ditch, near Huelo..... 92
Honopou Stream below Haiku Ditch, near Huelo..... 93
Wailoa Ditch at Honopou, near Huelo..... 94
New Hamakua Ditch at Honopou, near Huelo..... 95
Lowrie Ditch at Honopou Gulch, near Huelo..... 96
Haiku Ditch at Kapalalaea Gulch, near Huelo..... 97
Island of Hawaii..... 98
Waiakea Stream at middle flume house, near Mountain View..... 98
Wailuku River at Pukamaui, near Hilo..... 99
Wailuku River above Hilo Boarding School Ditch intake, near Hilo..... 100
Hilo Boarding School Ditch at intake, near Hilo..... 101
Kapehu Stream at Piihonua, near Hilo..... 102
Awini Ditch at East Honokaeiki Gulch, near Niulii..... 103
East Honokaeiki intake to Awini Ditch at East Honokaeiki Gulch, near Niulii. 104
Kohala Ditch at Pololu, near Niulii..... 105
Kehena Ditch near Kohala..... 106
Index..... 107

SURFACE WATER SUPPLY OF HAWAII, JULY 1, 1935, to JUNE 30, 1936

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, 1936. 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 26 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] Maui, Molokai, and Lanai.

In this volume are given the records of daily flow that were obtained at stations that were operated during the year ending June 30, 1936, 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 3 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 textbooks 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. Geol. 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. Stearns, N. D., Annotated bibliography and index of geology and water supply of Oahu, Hawaii: T. H. Division of Hydrography Bull. 3.

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 run-off in million gallons" is the sum of the daily flows, and the "Total run-off in acre-feet" is computed from the total monthly discharges 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 are 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 1936, 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 that station was maintained, unless, owing to undeveloped rating curves, publication has been postponed. Occasionally data are revised and republished in later papers. Miscellaneous discharge measurements made during any year at points other than regular gaging stations are included in the data published for that year.

Numbers of water-supply papers containing data on the surface-water supply of Hawaii, 1903-36

Year	Number	Year	Number	Year	Number
1903.....	*77	1919-20.....	516	1928-29.....	695
1909-11†.....	318	1920-21.....	535	1929-30.....	710
1912†.....	336	1921-22.....	555	1930-31.....	725
1913†.....	373	1922-23.....	575	1931-32.....	740
1913-15.....	430	1923-24.....	595	1932-33.....	755
1915-16.....	445	1924-25.....	615	1933-34.....	770
1916-17.....	465	1925-26.....	635	1934-35.....	795
1917-18.....	485	1926-27.....	655	1935-36.....	815
1918-19.....	515	1927-28.....	675		

*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.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations in the Territory of Hawaii at which records of discharge were collected by agencies other than the Geological Survey during the fiscal year July 1935 to June 1936. The records for these stations are not contained in the publications of the Geological Survey.

Records of discharge collected by agencies other than the Geological Survey

ISLAND OF KAUAI

Stream	Location	Period	Operated by
Anahola Ditch, Lower.....	Near Government Road near Anahola.	1925-36	East Kauai Water Co.
East Lawai Ditch.....	Near Government Road near Kalaheo.	1924-36	McBryde Sugar Co.
Eleele Ditch.....	Near Government Road near Kalaheo.	1924-36	Do.
Hanalei Ditch.....	Above Kalihiwai Reservoir, near Kilauea.	1923-36	Kilauea Sugar Plantation Co.
Hanamaulu Ditch.....	Below intake, near Hanamaulu.	1925-36	Lihue Plantation Co.
Hanapepe Ditch.....	At Makaweli Plantation boundary near Makaweli.	1926-36	Hawaiian Sugar Co.
Hanapepe Field Ditch.....	Below Hanapepe River intake near Eleele.	1924-36	McBryde Sugar Co.
Hanapepe Stream.....	At tidewater near Eleele.	1924-36	Do.
Kamooloa Ditch.....	Near Koloa boundary, near Koloa.	1924-36	Do.
Kapaia River Diversion to field 8 reservoir.	Near Hanamaulu.....	1928-36	Lihue Plantation Co.
Kapaia River Diversion to field 29.	Near Lihue.....	1927-36	Do.
Lawai Stream.....	Half a mile above cannery near Kalaheo.	1924-36	McBryde Sugar Co.
Lihue Lower Ditch.....	Below intake, near Lihue.	1925-36	Lihue Plantation Co.

Records of discharge collected by agencies other than the Geological Survey--Continued.

ISLAND OF KAUAI--Continued

Stream	Location	Period	Operated by
Lihue Upper Ditch.....	Below intake, near Lihue.	1925-36	Lihue Plantation Co.
Lumahai Stream.....	Near Hanalei, at altitude about 600 feet.	1934-36	McBryde Sugar Co.
Makaleha Ditch.....	Near Mimino Reservoir, near Kealia.	1925-36	East Kauai Water Co.
Olokele Ditch.....	At power-house near Makaweli.	1926-36	Hawaiian Sugar Co.
Stable Storm Ditch.....	At Stable Camp road crossing near Lihue.	1931-36	Lihue Planatation Co.
Storm Ditch.....	Above Kalaheo-Lihue main highway near Koloa.	1926-36	Koloa Sugar Co.
Tunnel Ditch, Old.....	Above confluence with main Koloa Ditch, near Koloa.	1925-36	Do.
Wahiawa Stream.....	Above Alexander Reservoir, near Kalaheo.	1924-36	McBryde Sugar Co.
Wahiawa Stream, East Branch.	....do.....	1929-36	Do.
Waiahi River.....	Above Lihue Ditch intake, near Lihue.	1925-36	Lihue Plantation Co.
Wailua Ditch.....	Near flume 4 near Kapaa.	1922-36	East Kauai Water Co.
Wainiha Stream.....	Near Hanalei, altitude about 96C feet.	1927-36	McBryde Sugar Co.
West Lawai Ditch.....	Near camp 12 near Kalaheo.	1924-36	Do.

ISLAND OF OAHU

*Alewa Heights Spring.....	Below reservoir 3.....	1932-36	Board of Water Supply City and County of Honolulu.
*Booth Springs.....	In Pauao Valley, at altitude 685 feet.	1929-36	Do.
Helemano Ditch.....	About 3 miles below Upper Helemano Reservoir.	1933-36	Waialua Agricultural Co.
*Hering Springs.....	In Makiki Valley, at altitude 970 feet.	1925-36	Board of Water Supply City and County of Honolulu.
*Kahuawai Springs.....	In Pauao Valley, at altitude, 618 feet.	1923-36	Do.
*Kalihi Tunnels.....	At diversion, st altitude, 650 feet.	1926-36	Do.
Kamanamui Ditch.....	In Kawailoa Gulch about 500 yards above third siphon from Government Road.	1934-36	Waialua Agricultural Co.
Kipapa Stream.....	At altitude 375 feet...	1917-36	Waiahole Water Co.
*Mekiki Springs.....	In Makiki Valley, at altitude 350 feet.	1926-36	Board of Water Supply City and County of Honolulu.
*Manoa Tunnels.....	Upper Manoa Valley.....	1925-36	Do.
*Nuuanu Tunnels.....	At Lower Luakaha.....	1926-36	Board of Water Supply, City and County of Honolulu.
*Nuuanu Tunnel 3.....	At overflow, in upper Nuuanu Valley.	1931-36	Do.
*Palolo Tunnel.....	Upper Palolo Valley....	1926-36	Board of Water Supply City and County of Honolulu.
Wahiawa Reservoir outlet.	About 1,200 feet below dam.	1906-09 1912-36	Wahiawa Water Co.
Waiahole Stream.....	At altitude 250 feet...	1919-36	Waiahole Water Co.
Waiahole Tunnel.....	At adit 8.....	1916-36	Do.
Waiawa Stream.....	At altitude 750 feet...	1917-36	Do.
Waikakalau Stream.....	At altitude 750 feet...	1917-36	Do.

ISLAND OF MAUI (East Maui)

Banana Spring.....	Near east wall of Keanae Valley at altitude 700 feet.	1933-36	E.M.I. Co., Ltd.
Hanawi Stream.....	In low-water channel of Hanawi Gulch near Nahiku, at altitude 650 feet.	1933-36	Do.
Hanawi Spring upper Highlevel.	On east side of pali in Hanawi Gulch near Nahiku at altitude 675 feet.	1932-36	Do.
Hanawi Spring lower Highlevel.	On east side of pali in Hanawi Gulch near Nahiku at altitude 575 feet.	1932-36	Do.
Makapipi Ditch.....	At west edge of Makapipi Gulch near Nahiku, at altitude 1,300 feet.	1933-36	Do.

*Published in Biennial Reports of Honolulu Sewer & Water Commission and of the City and County of Honolulu, Board of Water Supply.

Records of discharge collected by agencies other than the Geological Survey--Continued.

ISLAND OF MAUI (East Maui)--Continued.

Stream	Location	Period	Operated by
Oheo Spring.....	In Keanae Valley along Belt road, 3/4 mile east of Keanae P. O., at altitude 200 feet.	1933-36	E.M.I. Co., Ltd.

ISLAND OF MAUI (West Maui)

Everett Ditch.....	Below intake, near Wailuku.	1935-36	Wailuku Sugar Co.
Iao Pipe Line.....	....do.....	1933-36	County of Maui.
Iao-Waikapu Ditch.....	At lower end of tunnels near Wailuku.	1923-36	Wailuku Sugar Co.
Kama Ditch.....	Below intake near Wailuku.	1933-36	Do.
Manienia Ditch.....	...do.....	1923-36	Do.
North Waiehu Ditch.....	Near end of Waiehu Camp road, near Wailuku.	1922-36	Do.
South Waikapu Ditch.....	Above first lateral, near Waikapu.	1935-36	Do.
South Waikapu Ditch.....	Below tunnel sections near Waikapu.	1923-36	Do.
Sprekels Ditch.....	Below intake, near Waihee.	1931-36	Do.
Waihee Ditch.....	....do.....	1922-36	Do.

ISLAND OF HAWAII

Kohala Ditch.....	At Awini weir in Honokane, near Niulii.	†1917-36	Kohala Ditch Co.
Kohala Ditch.....	At Niulii weir, near Niulii	†1917-36	Do.
Pololu Inlet 1.....	At Pololu, near Niulii..	1929-36	Do.
Polulu Inlet 2.....	....do.....	1929-36	Do.
Waiapuka Stream.....	Above Kohala Ditch near Niulii.	1929-36	Do.
Waipuhi Stream.....	Above Kohala Ditch near Halawa.	1933-36	Do.
Makapala Stream.....	....do.....	1929-36	Do.
Waipunalau Stream.....	....do.....	1929-36	Do.
Mountain House Tunnel....	6.0 miles north of Wichinu.	1927-36	Hutchinson Sugar Plantation Co.
Plantation Springs Tunnel	8.7 miles north of Naalehu.	1927-36	Do.
Shirakura Tunnel 20.....	In Moaula Gulch at altitude 4,650 feet, 6.5 miles from Pahala.	1929-36	Hawaiian Agricultural Co.
Domestic supply tunnel 16.	3.8 miles from Pahala, at altitude 2,800 feet.	1926-36	Do.
Tanaka Tunnel 15.....	In Hionamoa Gulch at altitude 3,000 feet, 3.4 miles from Pahala.	1926-36	Hawaiian Agricultural Co.
Double Arch Tunnel 11....	In Piikea Gulch at altitude 4,150 feet, 5.35 miles from Pahala.	1926-36	Do.
Mud Flow Tunnel 2.....	In Piikea Gulch at altitude 3,750 feet, 4.8 miles from Pahala.	1926-36	Do.
Noguchi Tunnel 19.....	5.3 miles from Pahala, at altitude 3,500 feet.	1928-36	Do.
Makakupu Tunnel 13.....	In Waiakaloa Gulch at altitude 3,750 feet, 6.1 miles from Pahala.	1926-36	Do.
Upper Hamakua Ditch and Reservoir 3 Weir.	Near Honokaa at base of Puu Lala.	‡1907-12, 1921-36	Hawaiian Irrigation Co.
Lower Hamakua Ditch.....	At main weir near Kukuihaele.	†1921-36	Do.
Honokaape Ditch.....	At Kukuihaele Village..	1923-36	Do.

†Records for some earlier years published in Water-Supply Papers of U. S. Geological Survey.
‡Records for 1913-20 published in Water-Supply Papers of U. S. Geological Survey.
Note.- Records not published unless otherwise indicated.

COOPERATION

The work during the year ending June 30, 1936, was done under cooperative agreement with the Territory of Hawaii through the commissioner of public lands and the City and County of Honolulu Board of Water Supply. Assistance in collecting records was rendered also on the island of Kauai by the Kekaha Sugar Co., Ltd., the McBryde Sugar Co. Ltd., the East Kauai Water Co. Ltd., the Kilauea Sugar Co. Ltd., and the Lihue Plantation Co. Ltd.; on the island of Oahu by the Wahiawa Water Co. Ltd.; on the island of Maui by the Pioneer Mill Co. Ltd., and the East Maui Irrigation Co. Ltd., and on the island of Hawaii by the City of Hilo Waterworks, the Kohala Ditch Co. Ltd., and the Olaa Sugar Co. Ltd.

Acknowledgment of records collected by individuals or corporations is made in connection with the description of each station for which such records were furnished.

DIVISION OF WORK

The data were collected and prepared for publication under the 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°02'40", 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 1936.
Average discharge.- 11 years (1925-36), 37.9 million gallons a day (58.6 second-feet).
Extremes.- Maximum discharge during year, 4,350 million gallons a day (6,730 second-feet) Dec. 9 (gage height, 13.80 feet), from rating curve extended above 350 million gallons a day; minimum, 0.02 million gallons a day (0.03 second-foot) Aug. 18, Sept. 24.
1921-36: Maximum discharge, 10,700 million gallons a day (16,600 second-feet) Dec. 24, 1927 (gage height, 20.40 feet), from rating curve extended above 350 million gallons a day; no flow occasionally, owing to regulation.
Remarks.- Records fair for medium stages; poor for all extremely high and low stages and for Dec. 2-9, Mar. 2, 5-12. Kokee Ditch and Kekaha Ditch divert above station, taking practically all the water at low and medium stages for irrigation near Waimea and Kekaha.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 9						Dec. 10 to June 30							
3.9	0	4.7	2.8	6.5	114	3.7	0.06	4.5	5.0	6.0	79	8.0	460
4.0	.05	5.0	6.9	7.0	212	3.8	.16	5.0	17.5	6.5	133	9.0	820
4.2	.30	5.5	21	8.0	460	4.0	.58	5.5	42	7.0	212	10.0	1,300
4.4	.80	6.0	53	9.0	820	4.2	1.66						

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.13	1.92	0.04	7.2	0.05	37	151	589	595	0.24	0.12	0.10
2	.09	.10	.05	2.05	.06	32	820	1,300	1,150	.13	1.54	.10
3	.08	17.1	.05	.26	.06	30	400	916	284	.13	.25	.10
4	.11	.54	.04	.18	.06	28	784	1,070	*121	.13	.10	.09
5	.08	.07	.04	1.91	.06	26	193	585	60	.13	.10	.09
6	.09	.04	173	.59	.05	23	127	325	35	.13	66	.09
7	.11	.04	20.5	.20	.05	80	104	193	22	.13	171	.09
8	42	.04	.12	.14	.05	50	63	133	15	.11	150	.09
9	1.02	.04	.07	.14	.05	500	56	84	12	.10	229	.09
10	2.9	.04	.05	10.0	.08	*660	48	67	10	.10	156	.08
11	39	1.58	.08	51	.57	*159	49	52	250	.10	22.5	.08
12	3.5	5.9	.05	18.4	.92	*60	39	44	100	.10	8.5	.08
13	.09	.06	.04	14.6	.08	28.5	35	37	44	54	.15	.08
14	.05	25.5	.04	5.1	.06	22.5	35	33	18.2	8.30	3.55	.08
15	.04	.10	.05	.21	.06	9.7	44	29.5	8.8	.15	2.85	.07
16	.04	.04	.05	.21	.05	2.65	207	32.5	16.2	14.8	40	.07
17	.04	.04	.05	.16	.87	2.1	105	25.5	55	28	50	.07
18	.04	.02	.04	.15	59	1.03	93	29	54	.87	41	.07
19	.04	.02	.04	.13	197	3.95	76	26.5	240	.13	62	.07
20	.04	77	.04	.12	7.0	1.26	52	22.5	59	.11	19.5	.07
21	.03	70	.04	.12	.16	.62	41	18.7	8.4	.10	1.92	.08
22	.02	.14	.03	33.5	.09	.58	35.5	41	.73	.09	6.0	.08
23	.02	.08	.02	14.0	.06	.58	14.3	100	.15	.09	22.5	.08
24	.02	.05	.02	.13	.06	.58	8.8	88	.14	.09	50	.08
25	.04	.05	.02	.10	.04	.58	6.8	68	.13	.09	66	.38
26	.04	.05	.04	.08	.04	.62	5.5	46	.13	.10	26.5	78
27	.04	.04	264	.09	.04	5.5	4.6	39.5	.13	.11	.37	108
28	.05	.04	480	.09	.04	3.8	6.4	23	.13	.11	.11	37
29	.05	.04	108	.07	159	3.0	4.1	95	.12	.11	.10	.77
30	.06	.04	19.3	.05	190	4.6	68	-	.12	.11	.10	.13
31	.05	.04	-	.05	-	11.3	56	-	.13		.10	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	42	0.02	2.90	4.49	89.9	276
August	77	.02	6.48	10.0	201	616
September	480	.02	35.5	54.9	1,070	3,270
October	51	.05	5.19	8.03	161	494
November	197	.04	20.5	31.7	616	1,890
December	660	.58	57.7	89.3	1,790	5,490
Calendar year 1935	1,090	.02	29.2	45.2	10,650	32,680
January	820	4.1	120	186	3,730	11,450
February	1,300	18.7	211	326	6,110	18,760
March	1,150	.12	102	158	3,160	9,700
April	54	.09	3.63	5.62	109	334
May	229	.10	38.6	59.7	1,200	3,680
June	108	.07	7.54	11.7	226	694
Fiscal year 1935-36	1,300	.02	50.4	78.0	18,460	56,650

*Partly estimated.

Kawaikoi Stream near Waimea

Location.- Water-stage recorder, lat. 22°08'00", 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 1936. July 1917 to July 1919, not published.

Average discharge.- 17 years (1919-36), 21.0 million gallons a day (32.5 second-feet).

Extremes.- Maximum discharge during year, 1,380 million gallons a day (2,140 second-feet) Dec. 9 (gage height, 10.30 feet), from rating curve extended above 200 million gallons a day; minimum, 2.0 million gallons a day (3.1 second-feet) Aug. 18, 19.

1909-36: 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, respectively), from rating curve extended above 200 million gallons a day; 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 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.4	1.5	1.7	5.4	2.4	26	3.6	112	5.0	300
1.5	2.5	1.9	9.5	2.8	46	4.0	160	5.5	380
1.6	3.8	2.1	15.2	3.2	76	4.6	236		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.8	23	3.4	5.1	2.5	62	22.5	146	228	15.1	37.5	8.2
2	3.3	9.7	12.3	4.1	2.3	14.9	156	173	324	7.1	42	7.3
3	3.2	16.2	4.0	3.5	3.4	9.8	42	119	98	5.2	11.9	6.7
4	3.0	7.9	2.8	3.3	5.6	9.1	91	178	71	4.6	7.3	6.0
5	2.8	4.4	3.8	3.2	4.9	6.9	23	97	50	5.7	5.8	5.4
6	5.1	3.3	54	3.0	4.3	6.2	16.5	60	25	24	69	5.1
7	6.5	2.8	15.1	2.8	3.2	18.3	14.9	27	22.5	8.2	117	4.e
8	26	2.5	6.7	2.5	2.8	9.5	11.7	18.8	23	5.4	93	4.4
9	17.4	2.4	4.6	2.5	2.5	155	9.5	15.2	14.9	4.4	153	4.1
10	27	2.3	3.4	31.5	2.6	181	19.9	13.1	11.9	3.7	73	3.7
11	25	2.4	4.3	32	4.5	42	13.2	10.8	145	3.2	40	3.8
12	8.6	2.5	3.4	22	7.5	20	8.4	9.3	44	2.9	21.5	6.7
13	4.9	2.4	2.9	19.2	3.8	23.5	7.1	8.2	23	77	18.8	4.0
14	3.8	3.3	7.7	8.8	2.9	15.2	7.1	7.1	14.9	24	25	9.5
15	3.3	3.0	9.9	5.2	2.5	11.1	8.0	6.4	12.2	34	16.5	6.3
16	18.6	2.3	4.3	4.1	2.4	8.6	44	5.8	19.1	57	36.5	3.7
17	8.3	2.1	4.4	3.7	5.8	7.3	19.1	5.e	40	40	53	2.8
18	4.3	2.0	5.1	3.5	29.5	6.5	18.4	5.4	33	23	55	3.3
19	3.5	2.6	4.2	3.2	98	31.5	13.4	5.4	129	17.5	45	15.2
20	3.7	79	6.9	2.9	17.4	11.7	8.0	5.1	25	9.1	25.5	6.5
21	3.2	21.5	4.9	2.9	6.9	9.5	6.5	4.3	16.8	6.5	42	3.4
22	3.0	6.0	3.5	2.9	4.9	11.1	5.8	4.6	12.2	5.4	29.5	2.4
23	3.0	4.0	2.6	5.0	4.0	16.5	4.9	9.1	10.3	4.8	40	2.0
24	2.5	4.6	2.4	3.4	3.4	6.9	4.4	11.4	9.3	4.3	69	2.0
25	5.5	3.7	4.0	3.2	3.4	5.2	4.1	8.4	8.2	4.0	73	2.2
26	6.8	2.9	9.2	3.4	3.2	4.8	3.7	25	7.3	6.6	32	49
27	12.3	3.3	32.5	22	2.9	5.8	13.9	16.2	7.3	7.1	18.8	50
28	4.9	2.8	75	5.4	16.4	5.2	11.0	5.6	7.5	5.2	14.0	8.8
29	3.2	2.4	24	3.5	142	4.3	5.1	62	6.2	7.7	11.7	9.9
30	3.7	2.6	7.7	3.0	101	3.8	32	-	5.4	25	9.8	4.9
31	12.7	2.5	-	2.5	-	4.7	35.5	-	27	-	9.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	27	2.5	7.84	12.1	243	745
August	79	2.0	7.50	11.6	232	713
September	75	2.4	11.0	17.0	329	1,010
October	32	2.5	7.20	11.1	223	685
November	142	2.3	16.6	25.7	496	1,520
December	181	3.8	23.5	36.4	726	2,230
Calendar year 1935	222	1.7	16.8	26.0	6,130	18,820
January	156	3.7	22.0	34.0	681	2,090
February	178	4.3	36.7	56.8	1,060	3,260
March	324	5.4	47.5	73.5	1,470	4,510
April	77	2.9	14.9	23.1	448	1,370
May	153	5.8	41.8	64.7	1,300	3,970
June	50	2.0	8.40	13.0	252	774
Fiscal year 1935-36	324	2.0	20.4	31.6	7,460	22,880

Kokee Ditch near Waimea

Location.- Water-stage recorder, lat. 22°06'25", long. 159°40'45", 1,000 feet west of road and 10½ miles north of Waimea. Altitude, 3,310 feet, by barometer.

Records available.- September 1926 to June 1936.

Extremes.- Maximum discharge during year, 64 million gallons a day (99 second-feet) Feb. 2 (gage height, 2.58 feet); no flow several times, when water was shut out of ditch. 1926-36: 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. Kokee Ditch at altitude 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.0	26.5	3.4	8.4	4.1	50	29	46	30.5	27.5	39.5	14.5
2	6.1	11.1	12.5	6.6	3.8	26	32	46	36.5	17.0	41	13.6
3	5.8	17.0	6.0	5.5	4.8	15.8	17.0	27.5	50	14.7	19.5	11.8
4	5.8	12.2	4.4	5.1	7.9	13.6	22	*11.8	53	14.0	13.8	12.0
5	5.5	6.9	4.6	4.8	6.2	10.5	15.8	15.1	48	13.8	12.0	11.4
6	6.2	5.4	29.5	4.9	6.1	9.2	23.5	21	35	29	35	10.7
7	9.7	4.6	25	4.5	4.8	23	27.5	15.8	43	17.0	53	10.3
8	25.5	4.2	9.4	4.2	4.2	17.0	26	24	43	14.2	53	10.1
9	16.6	4.1	6.7	3.8	4.2	13.4	23	30.5	35	12.9	57	9.7
10	30.5	3.9	5.1	9.5	4.5	41	26	38	30.5	12.0	57	9.4
11	26	3.9	5.2	33.5	6.1	35	23	35	46	11.4	48	9.2
12	14.2	3.9	5.2	30.5	10.9	27.5	18.2	32	29	10.9	30.5	11.1
13	8.2	3.8	4.4	29	6.6	26	17.0	29	38	41	26	9.4
14	6.6	4.1	5.6	15.8	5.1	21	15.8	27.5	32	32	32	12.4
15	5.6	4.8	13.1	9.0	4.5	15.8	15.8	26	27.5	33.5	23	11.4
16	13.0	4.1	7.0	6.9	4.2	13.1	29.5	24.5	30.5	50	36.5	9.0
17	12.5	3.7	5.5	6.0	4.1	11.6	30.5	23	46	48	48	8.2
18	6.6	3.4	8.6	5.5	24.5	10.5	27.5	22	39.5	27.5	48	8.1
19	5.6	3.2	5.8	5.1	46	31	24.5	22	36.5	27.5	44	15.8
20	5.6	35.5	6.6	4.8	21	15.8	17.0	21	26.5	17.0	33.5	11.6
21	5.2	31.5	6.2	4.5	11.6	13.8	14.7	18.2	32	13.8	41	8.4
22	4.9	9.2	4.9	4.4	7.9	11.6	14.2	19.5	26	11.5	36.5	7.7
23	4.9	6.1	3.9	7.6	6.4	24	13.3	24.5	23	11.6	38	7.4
24	4.4	6.0	3.6	5.6	5.6	11.8	12.4	26	22	11.1	44	7.0
25	6.4	5.4	3.6	5.1	5.2	9.7	11.8	23	19.5	10.7	46	7.2
26	7.1	4.5	10.9	4.9	5.1	9.0	11.4	25.5	18.2	13.1	38	31.5
27	12.6	4.5	28	24	4.6	9.9	17.4	30.5	18.2	14.2	27.5	37
28	7.9	4.4	50	9.4	9.7	9.5	19.3	21	18.2	12.0	21	15.8
29	5.2	3.8	34.5	6.0	53	8.6	12.2	22.5	17.0	14.5	18.2	14.0
30	5.2	3.8	13.1	4.8	46	8.4	32	-	15.8	24.5	17.0	10.1
31	5.9	3.8	-	4.4	-	8.6	38	-	27.5	-	15.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	30.5	4.4	9.43	14.6	292	897
August	35.5	3.2	8.04	12.4	249	765
September	50	3.4	11.1	17.2	332	1,020
October	33.5	3.8	9.16	14.2	284	872
November	53	3.8	11.3	17.5	339	1,040
December	50	8.4	17.8	27.5	552	1,690
Calendar year 1935	57	3.2	15.9	24.6	5,820	17,850
January	38	11.4	21.2	32.8	657	2,020
February	46	11.8	25.8	39.9	748	2,300
March	53	15.8	32.0	49.5	993	3,050
April	50	10.7	20.3	31.4	608	1,870
May	57	12.0	35.3	54.6	1,090	3,360
June	37	7.0	12.2	18.9	366	1,120
Fiscal year 1935-36	57	3.2	17.8	27.5	6,510	20,000

*Partly estimated.

Waiahulu Stream near Waimea

Location.- Water-stage recorder, lat. 22°04'45", 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 1936. July 1918 to November 1920, fragmentary and unreliable (not published).
Average discharge.- 11 years (1925-36), 27.2 million gallons a day (42.1 second-feet).
Extremes.- Maximum discharge during year, 1,420 million gallons a day (2,200 second-feet) Dec. 9 (gage height, 6.97 feet), from rating curve extended beyond 400 million gallons a day; minimum, 7.0 million gallons a day (10.8 second-feet) Nov. 26-29.
1916, 1917-18, 1925-36: Maximum discharge, 2,550 million gallons a day (3,950 second-feet) Dec. 24, 1927 (gage height, 9.92 feet), from rating curve extended beyond 400 million gallons a day; minimum, 5.2 million gallons a day (8.0 second-feet) Nov. 4, 1927.
Remarks.- Records good for ordinary stages; poor for high stages and for Nov. 17-28, Dec. 2-7, 28, 29, Jan. 6-20. Kokee Ditch diverts water above station for irrigation near Kekaha.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 9

0.9	7.0	1.6	45	2.4	133
1.0	10	1.8	62	2.7	179
1.2	18.5	2.1	94	3.0	232
1.4	30				

Dec. 10 to June 30

0.9	6.6	1.6	40	3.5	327
1.0	9.5	2.0	75	4.0	454
1.2	17.0	2.5	137	4.5	600
1.4	27	3.0	221		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.8	10	8.2	10.5	8.2	6.2	36	295	478	15.0	15.0	10.5
2	8.5	10.5	8.2	9.7	7.9	25	505	550	570	13.3	18.0	10.5
3	8.5	10.5	9.1	8.8	8.2	17	185	454	203	12.9	13.7	10.9
4	8.5	11	8.5	8.5	8.5	13	223	600	90	12.6	11.5	10.2
5	8.5	9.7	8.5	8.8	8.2	11	74	418	77	12.6	10.5	10.2
6	8.5	9.1	26	8.8	8.2	10	30	230	26	12.6	40	9.8
7	8.5	8.5	21	8.5	7.9	15	22	120	21.5	12.6	130	9.5
8	9.7	8.2	11	8.5	7.9	12	19	80	19.5	12.6	112	9.5
9	10.5	8.2	9.7	8.5	7.9	*79	17	40	19.0	12.2	200	9.5
10	9.7	8.2	9.1	20	8.8	428	15	30	17.5	11.9	112	9.5
11	12	8.5	8.5	30	11	75	14	25	204	11.5	24.5	9.5
12	11.5	8.2	9.1	34	11	21	13	22.5	55	11.5	16.6	9.5
13	9.7	8.5	8.8	22	9.4	15.8	12	20	23	55	13.3	9.5
14	9.1	8.5	8.8	15	9.1	15.0	12	18.5	17.5	17.0	13.3	9.5
15	8.8	9.1	9.7	11	8.5	12.9	13	17.5	16.6	15.0	13.3	9.5
16	10	8.8	10	9.7	8.5	12.2	45	16.6	16.6	23	13.7	9.5
17	9.7	8.5	10.5	9.4	15	11.5	30	17.0	23.5	31.5	28.5	9.2
18	8.8	8.5	10	9.1	30	11.2	22	16.2	22	14.5	29	8.9
19	8.5	8.2	9.7	8.8	100	14.9	19	15.4	204	14.1	31	8.9
20	8.8	62	9.4	8.5	25	11.9	17	15.0	50	12.6	15.8	8.9
21	8.5	26	9.1	8.5	15	11.5	15.4	14.5	18.0	11.9	15.4	8.9
22	8.2	11	9.1	10	12	11.2	15.0	27	15.8	11.2	15.0	8.9
23	7.9	9.4	8.8	17	10	11.5	13.7	29.5	15.4	11.2	16.2	8.9
24	7.9	8.8	8.5	9.7	9	11.5	12.6	30	14.5	11.2	32	8.9
25	7.9	8.5	8.5	8.8	8	11.2	12.2	24	14.1	10.9	62	8.9
26	8.5	8.5	9.1	8.8	8	11.2	11.9	37.5	14.1	11.9	29.5	27
27	8.5	8.2	51	14	8	10.5	11.9	27.5	14.1	11.9	13.7	31.5
28	9.1	8.2	196	11	20	10	11.9	18.5	13.3	11.5	11.9	13.3
29	8.8	8.2	36	9.4	127	10	11.9	93	13.3	12.2	11.2	10.2
30	8.5	8.2	14	8.5	104	11.5	30.5	-	13.3	12.2	10.9	9.5
31	8.2	8.2	-	8.5	-	16.6	36.5	-	14.1	-	10.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	12	7.9	8.99	13.9	279	855
August	62	8.2	11.2	17.3	346	1,060
September	196	8.2	18.8	29.1	564	1,730
October	34	8.5	12.0	18.6	372	1,140
November	127	7.9	21.0	32.5	630	1,930
December	428	10	32.3	50.0	1,000	3,070
Calendar year 1935	428	7.9	22.2	34.3	8,120	24,900
January	505	11.9	48.6	75.2	1,510	4,620
February	600	14.5	114	176	3,300	10,130
March	570	13.3	74.6	115	2,310	7,100
April	55	10.9	15.0	23.2	450	1,380
May	200	10.5	35.2	54.5	1,090	3,350
June	31.5	8.9	11.0	17.0	329	1,010
Fiscal year 1935-36	600	7.9	33.3	51.5	12,180	37,380

*Partly estimated.

Kekaha Ditch at camp 1, near Waimea

Location.- Water-stage recorder, lat. 22°02'35", 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 1936.

Average discharge.- 17 years (1918-24, 1925-36), 36.5 million gallons a day (56.6 second-feet).

Extremes.- Maximum discharge during year, 69 million gallons a day (107 second-feet) May 8; maximum gage height, 4.12 feet Aug. 21; minimum, 1.6 million gallons a day (2.5 second-feet) Dec. 9.

1907-36: 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 except those for Jan. 26 to Mar. 12, which were computed from twice-daily readings on camp no. 1 weir furnished by Kekaha Sugar Co., and are fair. Diverts water for hydroelectric plant from Waiahulu Stream and Koale River 3 miles above lower intake. 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	39	48	21.5	33	24.5	48	22.5	15	28	36	48	36
2	28.5	36.5	39	33	24.5	48	23.5	12	28	34	51	31.5
3	27.5	53	28.5	32	25.5	46	25.5	20	43	31.5	38.5	30.5
4	35.5	43	24.5	29.5	25.5	36.5	24.5	27	43	31.5	30.5	29.5
5	28.5	29.5	25.5	32	24.5	32	32	23	43	34	29.5	27.5
6	36.5	25.5	44	43	23.5	29.5	3.1	20	50	34	43	27.5
7	46	23.5	51	36.5	23.5	46	2.2	19	51	34	53	26
8	48	22.5	38	29.5	22.5	48	6.2	19	51	31.5	53	26
9	48	21.5	29.5	25.5	22.5	34.5	4.2	19	51	30.5	51	25
10	48	21.5	25.5	27.5	28.5	29	4.2	19	51	29.5	51	25
11	51	36.5	44	51	38	29.5	4.3	19	51	28.5	51	25
12	48	43	51	51	36.5	29.5	4.4	19	51	27.5	51	26
13	36.5	29.5	25.5	43	29.5	29.5	4.3	19	51	41	46	25
14	29.5	48	24.5	36.5	26.5	29.5	3.9	19	51	48	48	24
15	27.5	35.5	41	35.5	25.5	29.5	4.0	19	51	48	48	25
16	24.5	26.5	29.5	31	25.5	31	4.0	19	51	51	51	24
17	26.5	23.5	33	31	35.5	29.5	3.2	11	51	51	51	23
18	25.5	22.5	29.5	28.5	51	29.5	4.2	11	51	43	51	23
19	24.5	22.5	26.5	27.5	51	29.5	6.0	20	51	38.5	51	23
20	27.5	46	26.5	26.5	48	29.5	6.0	20	51	34	51	24
21	26.5	53	25.5	25.5	41	29.5	6.0	20	51	29.5	51	24
22	24.5	43	24.5	31	33	28.5	6.0	23	48	28.5	51	23
23	25.5	29.5	22.5	48	28.5	28.5	25	28	46	27.5	51	23
24	23.5	27.5	22.5	39	26.5	27.5	27.5	23	43	27.5	51	24
25	29.5	27.5	23.5	31	26.5	26.5	27.5	23	43	28.5	53	29.5
26	27.5	25.5	33	28.5	26.5	27.5	27	28	41	34	51	31.5
27	28.5	24.5	36.5	41	25.5	32	27	28	36	34	48	38.5
28	31	23.5	33	34.5	25.5	31	32	28	36	36	41	41
29	26.5	22.5	36.5	28.5	48	31	27	28	34	38.5	38.5	36
30	35.5	21.5	35.5	26.5	48	31	17	-	34	38.5	34	28.5
31	27.5	21.5	-	25.5	-	29.5	17	-	34	-	31.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	51	23.5	32.7	50.6	1,010	3,110
August	53	21.5	31.5	48.7	978	3,000
September	51	21.5	31.0	48.0	931	2,860
October	51	25.5	33.6	52.0	1,040	3,200
November	51	22.5	31.4	48.6	941	2,890
December	48	26.5	32.8	50.7	1,020	3,120
Calendar year 1935	53	21.5	32.3	50.0	11,780	36,170
January	32	2.2	13.9	21.5	431	1,320
February	28	11	20.6	31.9	598	1,840
March	51	28	45.0	69.6	1,400	4,280
April	51	27.5	35.3	54.6	1,060	3,250
May	53	29.5	46.7	72.3	1,450	4,450
June	41	23	27.5	42.5	826	2,530
Fiscal year 1935-36	53	2.2	31.9	49.4	11,680	35,850

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 1936. August 1910 to December 1916, half a mile above present site (records not comparable).

Average discharge.- 12 years (1917-20, 1927-36), 52.3 million gallons a day (80.9 second-feet).

Extremes.- Maximum discharge during year, 5,270 million gallons a day (8,150 second-feet) Sept. 27 (gage height, 8.34 feet), from rating curve extended above 2,500 million gallons a day; minimum, 9.7 million gallons a day (15.0 second-feet) Apr. 12.
1910-21, 1926-36: Maximum discharge, that of Sept. 27, 1935; minimum, 7.5 million gallons a day (11.6 second-feet) Dec. 15, 16, 1926.

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

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.1	8.0	1.2	87	2.9	560
.2	10.8	1.4	114	3.2	700
.4	18	1.7	168	3.5	860
.6	29	2.0	238	4.0	1,170
.8	45	2.3	325	4.5	1,510
1.0	64	2.6	430		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	18.0	60	45	*31	13.0	92	58	54	17.2	12.1	12.4	23
2	16.4	46	71	*22.5	13.0	31.5	147	158	145	11.8	12.7	16.8
3	35	177	24	23	13.7	31.5	148	140	48	11.1	11.1	15.6
4	18.0	89	22	25.5	13.7	42	427	124	18.5	11.4	10.5	14.4
5	25.5	31	20	18.5	13.7	39	216	50	16.8	12.1	12.1	13.4
6	28.5	21.5	743	30	13.4	36.5	109	29	13.7	11.8	67	13.0
7	27	18.0	129	20.5	13.7	53	67	21.5	13.0	11.1	55	12.7
8	135	16.4	45	16.4	14.0	17.2	53	19.0	64	10.5	45	12.4
9	36	18.5	28.5	14.8	14.4	195	53	17.6	57	10.5	50	12.4
10	42	19.1	78	†16	15.6	205	57	17.2	25.5	10.5	28.5	12.1
11	167	225	87	†18	17.2	125	30.5	16.0	30	10.5	14.8	12.4
12	58	69	34	20.5	16.4	64	18.5	16.0	92	10.0	14.5	13.0
13	28.5	62	23	88	16.0	37.5	19.0	15.2	71	48	13.4	11.4
14	22.5	115	32	37	17.6	25	32	15.2	38	16.0	33	11.4
15	19.5	36	25	21.5	17.6	20	27	14.4	80	12.7	84	11.4
16	17.6	24	17.6	18.8	17.2	19.8	129	14.4	54	25.5	250	11.1
17	16.4	20.5	19.7	16.8	60	15.6	96	14.8	86	17.2	114	11.1
18	23.5	19.0	43	15.2	124	15.2	108	15.6	202	12.7	94	11.1
19	32	16.0	23.5	13.7	524	14.4	72	14.8	170	11.8	80	16.6
20	34.5	173	16.0	13.7	65	14.0	54	13.0	47	11.4	47	11.4
21	19.5	149	14.8	13.4	29	13.7	48	12.7	27	11.1	33.5	11.1
22	34	42	15.4	31	19.5	13.0	43	83	19.5	11.1	28.5	11.1
23	15.2	40	16.2	14.8	15.2	12.7	38.5	60	16.8	11.1	78	11.8
24	23.5	35	29	13.0	13.4	12.4	33	139	15.6	10.8	66	27.5
25	25	24	34.5	13.0	15.2	11.8	33	37.5	14.8	10.8	58	12.4
26	17.2	19.0	†20	12.7	11.8	12.1	29.5	19.5	16.2	11.8	32.5	96
27	44	17.6	†1,210	12.4	10.8	14.0	17.6	16.8	14.8	12.4	21	230
28	16.8	16.0	†325	12.4	10.2	13.4	17.2	15.2	13.0	12.1	36.5	61
29	213	15.2	*126	14.0	27.5	13.7	16.4	14.8	13.0	14.4	20.5	22
30	72	14.8	*50	12.7	136	13.4	85	-	12.4	12.4	16.8	16.0
31	36	14.8	-	12.7	-	29	27	-	12.4	-	48	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	213	15.2	42.5	65.8	1,320	4,040
August	225	14.8	53.0	82.0	1,640	5,040
September	1,210	14.8	112	173	3,370	10,330
October	88	12.4	20.8	32.2	644	1,970
November	524	10.2	43.4	67.1	1,300	4,000
December	205	11.8	40.4	62.5	1,250	3,840
Calendar year 1935	1,210	10.2	46.8	72.4	17,070	52,410
January	427	16.4	74.5	115	2,310	7,090
February	158	12.7	40.6	62.8	1,180	3,620
March	202	12.4	47.2	73.0	1,460	4,490
April	48	10.0	13.6	21.0	407	1,250
May	250	10.5	48.0	74.3	1,490	4,570
June	230	11.1	25.5	39.5	766	2,350
Fiscal year 1935-36	1,210	10.0	46.8	72.4	17,140	52,590

*Partly estimated.
†Estimated.

Hanapepe Ditch below intake, near Eleele

Location.- Water-stage recorder, lat. 21°58'55", long. 159°32'05", 1 mile below intake and 7 miles northeast of Eleele. Altitude, 500 feet, by barometer.

Records available.- March 1930 to June 1936.

Extremes.- Maximum discharge during year, 35 million gallons a day (54 second-feet) Sept. 27 (gage height, 3.67 feet); no flow occasionally, when water was turned out of ditch.

1930-36: 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 July 12, Aug. 21, Oct. 10, Feb. 8 to Mar. 3, which are fair. Ditch diverts water from Hanapepe River for irrigation in vicinity of Makaweli.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	28	32.5	31	32.5	23.5	32.5	31	28	24	25	26.5	32.5
2	26.5	32.5	32.5	31	25	32.5	31	31	29	25	26.5	31
3	29.5	32.5	32.5	31	23.5	25	31	29.5	29	25	25	31
4	29.5	32.5	31	32.5	23.5	3.75	32.5	29.5	*28	25	23.5	29.5
5	29.5	32.5	31	29.5	23.5	1.45	32.5	28	26.5	25	26.5	28
6	31	31	34	31	23.5	1.58	32.5	26.5	25	25	32.5	28
7	31	31	34	31	22	12.2	32.5	25	23.5	23.5	32.5	28
8	32.5	29.5	34	31	22	25	10.8	24	31	23.5	32.5	26.5
9	32.5	31	34	28	23.5	25	1.66	23	31	23.5	32.5	26.5
10	32.5	29.5	32.5	29.5	25	31	5.7	23	29.5	23.5	32.5	26.5
11	*32.5	32.5	34	*31	23.5	31	26.5	23	31	23.5	29.5	28
12	32	32.5	32.5	31	23.5	29.5	25	23	32.5	23.5	26.5	26.5
13	*31	32.5	32.5	34	22	29.5	25	23	32.5	31	29.5	25
14	31	32.5	34	32.5	23.5	29.5	28	23	31	29.5	32.5	26.5
15	29.5	32.5	34	31	25	28	28	23	32.5	26.5	32.5	26.5
16	28	32.5	32.5	31	25	28	19.7	23	31	32.5	34	25
17	28	31	32.5	31	28	26.5	0	23	31	29.5	32.5	25
18	29.5	31	32.5	29.5	32.5	26.5	0	24	31	25	32.5	25
19	31	29.5	32.5	28	34	25	0	24	32.5	23.5	34	31
20	31	32.5	31	28	32.5	25	0	23	32.5	23.5	32.5	25
21	29.5	32.5	31	26.5	32.5	25	0	23	32.5	23.5	34	25
22	*13.2	32.5	29.5	31	31	25	0	26	31	23.5	34	25
23	31	32.5	31	28	28	25	1.38	29	31	23.5	32.5	25
24	28	32.5	31	26.5	28	25	.55	29	29.5	23.5	32.5	29.5
25	29.5	32.5	31	25	29.5	25	0	29	28	23.5	34	26.5
26	29.5	32	32.5	25	26.5	25	6.3	27	28	26.5	34	32.5
27	31	*31	32.5	23.5	26.5	26.5	18.0	25	28	25	32.5	32.5
28	29.5	29.5	32.5	23.5	26.5	26.5	18.0	24	26.5	26.5	32.5	32.5
29	31	28	32.5	22	29.5	25	19.3	24	26.5	26.5	32.5	32.5
30	32.5	28	34	23.5	31	25	28	-	25	25	31	29.5
31	32.5	28	-	23.5	-	26.5	23.5	-	25	-	32.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	32.5	13.2	29.8	46.1	923	2,830
August	32.5	28	31.4	48.6	972	2,980
September	34	29.5	32.4	50.1	972	2,980
October	34	22	28.8	44.6	892	2,740
November	34	22	26.4	40.8	794	2,440
December	32.5	1.45	24.1	37.3	748	2,300
Calendar year 1935	34	0	27.3	42.2	9,950	30,530
January	32.5	0	16.4	25.4	508	1,560
February	31	23	25.4	39.3	736	2,260
March	32.5	23.5	29.2	45.2	905	2,780
April	32.5	23.5	25.3	39.1	759	2,330
May	34	23.5	31.2	48.3	968	2,970
June	32.5	25	28.0	43.3	842	2,580
Fiscal year 1935-36	34	0	27.4	42.4	10,020	30,750

*Partly estimated.

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Hanapepe Ditch at Koula, near Eleele

Location.- Water-stage recorder, lat. 21°57'10", long. 159°33'00", 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 and March 1927 to June 1936.

Average discharge.- 19 years (1910-20, 1927-36), 25.8 million gallons a day (39.9 second-feet).

Extremes.- Maximum discharge during year, 34.5 million gallons a day (53.5 second-feet) Sept. 28 (gage height, 3.05 feet); occasionally no flow, when head gates were closed for channel repairs.

1910-21, 1927-36: Maximum discharge, 36 million gallons a day (56 second-feet) Apr. 10, 1918 (gage height, 3.18 feet), and Aug. 3, 1931, (gage height, 3.05 feet); occasionally no flow, due 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	26	26	24	30	19.8	28	26	26	22.5	22.5	21	28
2	24	26	28	30	19.8	28	28	30	28	21	22.5	26
3	26	26	26	28	19.8	16.9	28	30	28	21	19.8	26
4	24	26	24	30	19.8	0	30	30	26	21	19.8	24
5	26	26	24	26	18.5	0	30	28	26	22.5	21	24
6	26	24	28	26	19.8	0	30	26	22.5	21	28	24
7	28	24	30	28	18.5	9.5	30	24	22.5	21	28	22.5
8	30	22.5	28	26	18.5	24	10.7	22.5	28	21	28	22.5
9	28	24	28	24	18.5	22.5	0	21	30	21	28	21
10	28	24	28	24	19.8	33	3.2	21	28	21	28	21
11	28	23	28	26	19.8	30	18.3	21	30	19.8	24	21
12	28	26	28	26	19.8	19.4	24	21	30	19.8	19.7	21
13	26	26	26	28	18.5	24	24	21	30	26	24	21
14	26	26	28	28	19.8	24	26	21	30	26	18.4	21
15	24	26	28	26	19.8	22.5	26	21	28	22.5	28	21
16	22.5	26	26	26	19.8	19.4	19.4	21	22	26	30	19.8
17	21	26	26	26	21	22.5	0	21	30	24	28	19.8
18	24	26	26	24	28	22.5	0	22.5	30	21	22.5	19.8
19	24	26	26	22.5	30	21	0	22.5	33	19.8	24	22.5
20	24	28	26	22.5	30	21	0	21	30	19.8	28	19.8
21	22.5	26	24	22.5	30	21	0	21	30	19.8	28	18.5
22	7.3	26	24	26	26	21	0	24	30	19.8	28	18.5
23	24	26	24	24	24	21	1.5	28	28	18.5	28	19.8
24	26	26	24	22.5	22.5	21	3.6	28	28	18.5	28	22.5
25	26	26	26	21	24	21	3.1	28	26	19.8	28	19.8
26	26	26	26	21	22.5	21	6.5	26	26	21	28	26
27	26	26	25	21	22.5	21	17.3	22.5	26	21	28	26
28	24	24	30	21	21	21	17.3	22.5	24	21	28	26
29	26	26	30	18.8	24	21	17.3	22.5	24	21	28	24
30	28	22.5	30	19.8	28	19.8	26	-	22.5	19.8	26	22.5
31	26	22.5	-	19.8	-	21	22.5	-	22.5	-	28	-

Month	Million gallons a day			Second-feet	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	30	7.3	25.0	38.7	775	2,380
August	28	22.5	25.3	39.1	784	2,410
September	30	24	26.6	41.2	799	2,450
October	30	18.8	24.7	38.2	764	2,350
November	30	18.5	22.1	34.2	664	2,040
December	33	0	19.9	30.8	618	1,900
Calendar year 1935	33	0	23.0	35.6	8,380	25,740
January	30	0	15.1	23.4	469	1,440
February	30	21	23.9	37.0	694	2,130
March	33	22	27.1	41.9	842	2,580
April	26	18.5	21.3	33.0	638	1,960
May	30	18.4	25.7	39.8	797	2,440
June	28	18.5	22.3	34.5	669	2,050
Fiscal year 1935-36	33	0	23.3	36.1	8,510	26,130

South Fork of Wailua River near Lihue

Location.- Water-stage recorder, lat. 22°02'10", long. 159°22'55", one-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 1936. December 1911 to November 1918 at site a third of a mile upstream.
Average discharge.- 14 years (1921-24, 1925-36), 66.1 million gallons a day (102 second-feet).
Extremes.- Maximum discharge during year, 8,420 million gallons a day (13,000 second-feet) Sept. 27 (gage height, 7.46 feet); minimum, 2.3 million gallons a day (3.6 second-feet) July 7.
1911-36: Maximum discharge, 29,000 million gallons a day (44,900 second-feet) Jan. 16, 1920 (gage height, 11.25 feet), from rating curve extended above 10,000 million gallons a day; minimum, 1.2 million gallons a day (1.9 second-feet) May 3, 1928.
Remarks.- Records good except those for extremely high stages, which are poor. Lihue Ditch and Hanamaula Ditch divert water above station at elevations of 600 feet and 500 feet, respectively, for irrigation in the vicinity of Lihue.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

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

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.0	63	5.4	85	25.5	174	74	51	130	4.2	17.2	24.5
2	3.2	68	73	72	26	75	160	149	328	3.8	24	5.4
3	2.8	243	6.4	72	27.5	58	68	71	155	3.8	19.8	4.9
4	2.9	90	4.3	94	26	50	273	54	76	3.8	5.4	4.4
5	2.8	19.0	4.2	45	17.2	45	140	19.2	54	3.8	3.9	3.4
6	2.7	12.9	791	61	4.9	39	86	12.4	41	3.9	12.4	3.7
7	2.4	8.0	194	63	3.6	92	65	4.9	27	3.8	34.5	3.3
8	17.3	5.0	111	53	3.3	51	47	4.4	91	3.7	25	3.0
9	4.2	5.3	85	53	3.3	215	38	16.3	82	5.7	56	3.0
10	3.1	4.8	102	60	3.3	538	49	11.4	32	4.2	54	2.7
11	52	227	200	126	3.7	298	50	4.4	13.4	3.7	21.5	3.05
12	7.0	77	83	78	3.5	152	37	3.8	75	3.6	5.6	3.2
13	10.5	85	68	198	3.4	111	35	3.7	83	14.0	3.9	2.7
14	108	94	70	94	3.3	86	42	3.7	54	7.0	4.4	2.7
15	35	13.0	63	64	3.4	76	60	3.8	78	4.9	23.5	2.5
16	7.4	5.6	27	59	3.7	68	312	3.6	54	5.2	206	2.5
17	5.9	4.6	7.3	59	143	57	398	3.8	48	4.6	115	2.6
18	11.3	11.1	12.6	50	158	50	190	3.6	267	3.9	111	2.85
19	5.8	6.8	7.1	46	849	46	111	3.6	645	19.4	90	3.2
20	5.4	92	6.2	43	134	46	78	3.5	165	11.2	69	2.9
21	4.6	229	6.2	47	73	30.5	69	3.4	97	3.6	46	2.7
22	5.6	29	5.8	322	52	39.5	60	5.9	76	3.1	37	2.7
23	4.4	29	33.5	79	48	22	55	20.5	68	3.1	79	2.9
24	3.8	52	37	60	35.5	16.4	49	18.6	63	2.9	81	2.9
25	4.5	60	174	52	38	23	26	18.9	30.5	3.0	55	3.4
26	4.6	15.0	97	47	13.1	15.2	25.5	47	47	4.8	25	21.5
27	21	6.9	968	44	13.2	13.1	27	54	40	4.6	6.4	12.9
28	5.8	5.9	322	40	9.8	32.5	14.8	63	12.0	3.5	21	9.8
29	207	5.3	165	37	47	30.5	6.9	147	26.5	5.0	8.7	3.0
30	61	5.2	111	35.5	298	30	50	-	14.6	17.0	5.2	2.5
31	18.1	4.9	-	33.5	-	39	38	-	5.3	-	45	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	207	2.4	20.6	31.9	637	1,960
August	243	4.6	50.9	78.8	1,580	4,840
September	968	4.2	128	198	3,840	11,780
October	322	33.5	73.3	113	2,270	6,970
November	849	3.3	69.1	107	2,070	6,360
December	538	13.1	84.5	131	2,620	8,040
Calendar year 1935	1,450	2.0	59.1	91.4	21,560	66,150
January	398	6.9	88.2	136	2,730	8,390
February	149	3.4	28.0	43.3	811	2,490
March	645	5.3	96.1	149	2,980	9,140
April	19.4	2.9	5.63	8.71	169	518
May	206	3.9	42.3	65.4	1,310	4,020
June	24.5	2.5	5.03	7.78	151	463
Fiscal year 1935-36	968	2.4	57.9	89.6	21,170	64,970

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

Location.- Water-stage recorder, lat. 22°03'50", long. 159°26'20", 1⅛ miles above intake of Kanaha Ditch and 7¾ miles northwest of Lihue. Altitude, 650 feet, from topographic map.

Drainage area.- 6.6 square miles.

Records available.- August to December 1910 and September 1914 to June 1936. December 1910 to September 1914 at site 300 feet below confluence of main and east branches (records not comparable).

Average discharge.- 15 years (1921-36), 49.5 million gallons a day (76.6 second-feet).

Extremes.- Maximum discharge during year, 1,500 million gallons a day (2,320 second-feet) Sept. 27 (gage height, 5.73 feet); minimum unknown, owing to water surface dropping below intake; minimum daily-discharge (estimated), 1.6 million gallons a day (2.5 second-feet) May 23-25, 28.

1910-36: Maximum discharge, 3,410 million gallons a day (5,280 second-feet) Dec. 24, 1927 (gage height, 8.46 feet), from rating curve extended above 600 million gallons a day and slope measurement of 2,250 million gallons a day; minimum unknown, owing to water surface dropping below intake; minimum daily discharge, that of May 23-25, 28, 1936.

Remarks.- Records good for ordinary stages; poor for low and high stages and periods for which discharge has been estimated. Since 1925 Hanalei Tunnel has discharged water into river, and North Wailua Ditch and Stable Storm Ditch have diverted water above station for irrigation in vicinity of Lihue.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

-0.8	1.4	+0.1	21	0.9	61	2.0	198
-.6	3.8	.4	33	1.2	89	2.5	302
-.4	7.2	.7	48	1.6	139	3.0	436
-.2	11.8						

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	27	65	41	43	24.5	92	43	104	154	27	40	33
2	26	100	39.5	35	23.5	54	164	172	291	23.5	38.5	29.5
3	45	178	37	53	23.5	48	66	84	113	23	26	30
4	31	72	30	66	23	37.5	162	69	69	16.4	23.5	27
5	37.5	48	28.5	37.5	23	30.5	101	48	54	11.1	27	13.2
6	37.5	35	397	40	22	28	61	35	43	16.4	72	8.3
7	33	33	102	33	22	71	51	30.5	37.5	9.9	61	7.4
8	52	31	58	30	22	31	40	28	62	9.2	72	7.9
9	35	35	43	27.5	21.5	117	30.5	26.5	69	12.1	74	6.8
10	37.5	43	87	72	21.5	236	37.5	25	51	9.6	59	6.3
11	69	174	72	89	21.5	167	28.5	24.5	51	*7.0	37.5	11.2
12	71	60	46	54	21.5	84	25	23.5	84	†6.3	29.5	9.4
13	46	82	37.5	129	21	61	32.5	23.5	89	46	36	6.1
14	49	86	43	51	21	46	42	23	79	33	48	8.0
15	35	40	37.5	46	21	37.5	64	22	100	22	105	6.5
16	31.5	35	33	37.5	21	35	115	22	65	28.5	139	5.6
17	30.5	41	35.5	35	60	31.5	114	22	65	35	94	5.1
18	30.5	33	44	30.5	90	29.5	58	22	143	27	89	6.1
19	40	31.5	37.5	27.5	272	30.5	43	14.1	260	24	84	15.6
20	38	117	30.5	27	58	27	37.5	8.7	84	22	58	6.5
21	28	161	28.5	29.5	40	26	32	9.2	58	21.5	54	5.2
22	30.5	51	27	104	32.5	25.5	29.5	19.4	48	*7.8	46	6.3
23	26.5	46	28	37.5	28	24.5	27	11.6	40	†1.6	65	5.9
24	29.5	66	66	31.5	27	23.5	26	15.7	37.5	†1.6	61	18.2
25	28.5	40	110	29	32.5	23	25	17.9	33	†1.6	51	6.3
26	35	35	48	28	25	22.5	24	23	30.5	*18.7	40	20
27	43	33	205	31	29	23	32.5	22.5	29	*3.6	33	43
28	27	32	97	26.5	30.5	22	25.5	45	27	†1.6	61	16.9
29	150	18.6	69	25.5	78	22	24	94	26	*15.4	37.5	9.0
30	65	11.6	51	24.5	150	21.5	41	-	25	33	32.5	6.7
31	54	10.6	-	24	-	33	24.5	-	36	-	54	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	150	26	42.5	65.8	1,320	4,050
August	178	10.6	59.5	92.1	1,840	5,660
September	397	27	67.0	104	2,010	6,170
October	129	24	43.7	67.6	1,350	4,160
November	272	21	43.5	67.3	1,310	4,010
December	236	21.5	50.3	77.8	1,560	4,790
Calendar year 1935	411	8.0	46.2	71.5	16,850	51,730
January	164	24	52.5	81.2	1,630	4,990
February	172	8.7	37.4	57.9	1,090	3,330
March	291	25	75.9	117	2,350	7,220
April	46	1.6	17.2	26.6	515	1,580
May	139	23.5	56.4	87.3	1,750	5,360
June	43	5.1	12.9	20.0	387	1,190
Fiscal year 1935-36	397	1.6	46.7	72.3	17,110	52,510

*Partly estimated.
†Estimated.

Hanalei Tunnel outlet near Lihue

Location.- Water-stage recorder, lat. 22°05'10", long. 159°28'15", at end of Hanalei Tunnel, 2¼ miles below intake on Kaapoko Stream and 9¾ miles northwest of Lihue. Altitude, 1,210 feet, by Lihue Plantation Co. levels.

Records available.- July 1932 to June 1936.

Extremes.- Maximum discharge during year, 59 million gallons a day (91 second-feet) Aug. 21 (gage height, 1.52 feet); no flow Mar. 28, when water was shut out of ditch. 1932-36: 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	26.5	36.5	29.5	20.5	16.8	36.5	23.5	34.5	39	19.1	31.5	23.5
2	23.5	39	26	19.5	16.8	28	34.5	39	44	17.6	29.5	21.5
3	28	47	21	26.5	17.6	26	28.5	36.5	36.5	17.2	21.5	21.5
4	23.5	32	19.1	27	16.8	22	36.5	34.5	32	16.8	19.9	19.9
5	27	35	18.7	22	16.8	20.5	36.5	26.5	28	20.5	23.5	19.5
6	27	22	48	23	16.4	19.5	34.5	22.5	24	26	34.5	19.1
7	24.5	20.5	36.5	19.9	16.0	25.5	28.5	19.9	21.5	18.4	36.5	18.4
8	32	19.9	28	19.5	16.0	19.1	23.5	18.7	32	17.2	36.5	18.4
9	24	22	23.5	18.7	16.0	25	20.5	18.0	30.5	21	36.5	17.6
10	28.5	25	30	29	16.0	42	24.5	17.6	27	18.0	36.5	17.2
11	39	44	34.5	32	16.0	39	19.9	17.6	29.5	16.8	29	19.5
12	32	31	25.5	27.5	16.0	34.5	18.7	17.2	36.6	16.8	24	18.7
13	*25	34.5	22.5	36.5	16.0	28.5	22	16.8	36.5	39	27	17.2
14	*26	34.5	24.5	26	15.6	24	26.5	16.8	34.5	34.5	32	19.1
15	*22	23.5	22	21.5	15.6	22	34.5	16.4	36.5	30	36.5	17.6
16	*19	22	20.5	20.5	15.6	20.5	34.5	16.0	32	32	39	16.8
17	19.5	23.5	25.5	19.9	27.5	19.9	28.5	16.0	32	28.5	39	16.4
18	19.5	20.5	26	19.5	39	19.1	24.5	16.0	39	23.5	39	18.4
19	25	20.5	25.5	18.7	42	21	20.5	16.0	42	21.5	36.5	25
20	23.5	42	21.5	18.0	30	19.1	19.5	15.6	34.5	19.1	34.5	17.6
21	18.7	44	19.9	18.0	23.5	18.4	18.7	16.4	26.5	18.4	34.5	16.8
22	19.9	27	18.7	33.5	19.9	18.4	18.0	18.0	23	18.0	30	16.8
23	18.0	26.5	23	22	19.1	18.0	17.6	17.6	21.5	17.6	34.5	17.2
24	19.5	34.5	25	19.5	19.5	17.6	17.6	19.5	20.5	17.2	36.5	26
25	19.9	23.5	31	18.7	20.5	17.2	17.2	16.0	19.1	16.8	32	18.0
26	25.5	21.5	24	18.7	18.0	17.2	16.8	16.0	18.4	27	27	26.5
27	28.5	21	36.5	20.5	19.5	17.2	21	15.6	18.4	19.5	23.5	36.5
28	19.5	20.5	34.5	18.0	23	16.8	18.0	20	14.2	18.0	31.5	24.5
29	39	19.9	26	17.6	36.5	16.4	17.6	27.5	17.6	19.1	25	19.5
30	32	19.5	22	17.2	39	16.0	21.5	-	17.2	28.5	23	18.0
31	36.5	18.4	-	16.8	-	20.5	17.2	-	24.5	-	32	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	39	18.0	25.5	39.5	792	2,430
August	47	18.4	28.1	43.5	871	2,670
September	48	18.7	26.3	40.7	789	2,420
October	36.5	16.8	22.1	34.2	686	2,110
November	42	15.6	21.2	32.8	637	1,950
December	42	16.0	22.8	35.3	705	2,160
Calendar year 1935	51	.35	24.0	37.1	8,760	26,890
January	36.5	16.8	23.9	37.0	741	2,270
February	39	15.6	20.6	31.9	599	1,840
March	44	14.2	28.7	44.4	888	2,730
April	39	16.8	21.8	33.7	654	2,010
May	39	19.9	31.4	48.6	972	2,980
June	36.5	16.4	20.1	31.1	603	1,850
Fiscal year 1935-36	48	14.2	24.4	37.8	8,940	27,420

North Wailua Ditch near Lihue

Location.- Water-stage recorder, lat. 22°03'40", long. 159°27'55", 300 feet below intake diversion dam on North Fork of Wailua River, 8 miles west of Wailua and 8½ 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 1936. Records from 1926 to June 1932 obtained by Lihue Plantation Co., Lihue.

Extremes.- Maximum discharge during year, 56 million gallons a day (87 second-feet) July 29 (gage height, 1.52 feet); minimum, 5.4 million gallons a day (8.4 second-feet) Sept. 7.

1932-36: Maximum discharge, 59 million gallons a day (91 second-feet) Feb. 25, 1935 (gage height, 1.57 feet); 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	14.9	17.6	21	9.8	10.7	9.8	14.2	15.2	15.6	11.0	21	15.2
2	13.6	14.6	19.3	12.0	10.7	9.5	13.3	12.3	9.4	10.7	15.3	13.9
3	22	13.4	20	13.6	10.7	9.5	9.5	9.4	7.3	11.0	13.9	14.9
4	17.1	12.3	14.6	14.2	10.4	10.4	10.4	9.5	9.2	10.7	12.9	13.3
5	20	13.9	14.2	12.9	10.4	12.6	10.1	10.1	10.1	11.7	16.2	12.6
6	19.8	15.2	18.2	12.6	10.4	12.9	9.5	12.9	12.0	12.6	19.4	12.6
7	19.1	14.2	8.7	12.3	10.1	12.6	9.5	12.9	12.3	11.0	17.0	12.0
8	26.5	14.2	12.0	12.6	10.1	12.3	10.1	12.3	13.6	10.7	18.0	12.3
9	17.7	16.2	12.3	12.3	10.1	12.3	12.6	12.0	12.0	12.6	18.4	11.7
10	19.4	16.6	13.6	12.9	10.7	9.5	13.3	11.4	9.8	11.4	17.0	11.4
11	28.5	22	13.6	12.6	10.7	9.2	12.9	11.4	9.8	10.7	15.9	15.3
12	21	18.9	12.9	12.3	10.1	9.5	12.6	11.0	10.1	10.7	14.2	13.3
13	17.3	19.8	12.6	13.9	10.1	9.5	13.6	10.7	9.2	32.5	15.9	11.7
14	20.5	15.9	12.9	12.6	10.4	10.4	12.9	10.7	9.2	22	17.3	12.9
15	16.2	15.6	12.6	12.6	10.1	12.6	12.6	10.4	9.5	18.0	19.8	12.0
16	14.6	15.9	13.3	12.6	9.8	12.6	10.4	10.4	9.5	19.4	16.1	11.0
17	16.6	16.2	17.6	12.6	12.6	12.6	9.5	11.4	9.8	14.9	14.2	10.7
18	16.2	15.6	17.0	12.6	15.6	12.3	10.1	11.0	9.8	13.6	15.9	12.3
19	23.5	14.9	17.3	12.3	12.0	12.0	9.5	11.0	9.2	12.0	16.6	17.6
20	21	15.9	13.9	12.0	12.3	12.0	10.4	10.1	9.2	11.4	15.9	11.7
21	14.9	16.2	13.3	12.0	12.6	11.7	12.6	12.0	9.5	10.7	15.9	11.0
22	16.9	15.6	13.3	13.0	12.3	11.4	12.6	20	10.4	11.0	15.9	12.4
23	14.9	15.6	15.3	12.0	12.3	11.0	12.3	13.9	12.3	10.7	16.1	12.3
24	17.6	16.6	21	12.6	12.0	10.7	12.0	16.4	12.3	10.4	16.6	18.0
25	15.2	15.2	22.5	12.0	11.7	10.7	11.7	11.7	12.3	10.7	16.2	12.0
26	18.0	14.9	15.9	11.7	11.7	11.0	11.4	12.4	12.3	21.5	15.6	18.6
27	19.4	13.6	10.6	11.7	12.0	11.4	11.4	11.0	12.3	13.5	14.6	29
28	13.6	13.3	10.1	11.4	12.0	10.7	11.0	15.8	12.0	13.2	21	17.0
29	30.5	12.6	9.5	11.0	12.6	10.7	11.4	13.9	11.4	13.3	18.0	12.9
30	17.3	12.6	9.8	10.7	10.7	9.5	13.9	-	11.4	16.2	15.6	12.3
31	18.7	12.0	-	10.7	-	12.9	11.4	-	12.3	-	21	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	30.5	13.6	18.8	29.1	582	1,790
August	22	12.0	15.4	23.8	477	1,460
September	22.5	8.7	14.6	22.6	439	1,350
October	14.2	9.8	12.3	19.0	380	1,170
November	15.6	9.8	11.3	17.5	338	1,040
December	12.9	9.2	11.2	17.3	346	1,060
Calendar year 1935	35	8.4	14.2	22.0	5,170	15,880
January	14.2	9.5	11.6	17.9	359	1,100
February	20	9.4	12.2	18.9	353	1,080
March	15.6	7.3	10.8	16.7	335	1,030
April	32.5	10.4	13.7	21.2	410	1,260
May	21	12.9	16.8	26.0	520	1,600
June	29	10.7	13.8	21.4	414	1,270
Fiscal year 1935-36	32.5	7.3	13.5	20.9	4,950	15,210

Kanaha Ditch near Lihue

Location.- Water-stage recorder, lat. 22°03'50", long. 159°25'30", 750 feet below intake and 7 miles northwest of Lihue. Altitude, 540 feet, by barometer.

Records available.- August 1910 to May 1913 and September 1932 to June 1936. May 1913 to July 1921, at staff gage 450 feet upstream, July 1921 to March 1926, at recorder 650 feet downstream, March 1926 to September 1932, at recorder 1,650 feet downstream.

Average discharge.- 16 years (1916-22, 1926-36), 8.50 million gallons a day (13.2 second-feet).

Extremes.- Maximum discharge during year, 18.0 million gallons a day (27.9 second-feet) Apr. 13 (gage height, 0.68 foot); no flow Sept. 6, 7, when intake gate was closed.
1910-36: 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.6	8.8	5.9	5.3	5.3	5.0	5.0	5.4	4.8	5.3	3.45	5.0
2	5.6	13.1	5.0	5.3	5.3	5.0	4.8	5.0	2.1	5.3	5.3	5.3
3	5.6	10.6	4.8	5.3	5.3	5.0	5.0	4.8	.73	5.3	5.3	5.3
4	5.6	5.0	4.8	5.3	5.3	5.0	5.3	5.0	.60	4.8	5.3	5.3
5	5.3	5.0	5.0	5.3	5.3	5.0	5.0	5.0	.47	4.8	5.3	5.0
6	5.3	5.3	3.9	5.3	5.3	5.0	5.0	5.0	.47	5.3	5.3	5.0
7	5.3	5.3	.33	5.3	5.3	5.3	5.0	5.0	.36	4.3	5.0	4.8
8	5.0	5.3	1.55	5.3	5.3	5.3	5.3	5.0	2.1	4.0	5.3	5.0
9	5.3	5.0	5.3	5.3	5.0	5.3	5.0	5.0	5.0	4.8	5.3	4.8
10	5.3	5.0	5.3	5.3	5.0	4.8	5.0	5.0	5.3	5.3	5.3	4.5
11	5.3	5.3	4.8	5.0	5.0	4.8	5.0	5.0	5.3	3.2	5.3	4.8
12	5.3	5.6	5.3	5.0	5.0	5.0	3.2	5.0	5.3	1.69	5.3	4.8
13	5.0	5.8	5.3	5.6	5.0	5.0	.03	5.0	5.3	5.4	5.3	4.5
14	5.0	5.8	5.6	5.0	5.0	5.3	3.75	5.0	5.3	5.0	5.3	5.3
15	5.3	5.3	5.0	5.6	5.3	5.3	4.8	3.0	5.3	5.0	5.0	4.5
16	5.3	5.3	5.6	5.3	5.3	5.3	1.63	5.0	5.3	5.0	5.0	3.55
17	5.3	5.0	5.6	5.3	5.0	5.3	.63	5.0	5.3	4.8	5.0	3.3
18	5.3	4.8	5.6	5.3	5.0	5.3	4.3	5.0	5.6	5.0	5.0	4.0
19	5.3	5.0	5.3	5.3	4.8	5.3	5.3	4.0	1.52	5.0	5.0	5.6
20	5.0	5.0	5.3	5.3	4.8	5.3	5.3	3.55	.60	5.0	5.0	4.0
21	5.3	5.0	5.3	5.3	4.8	5.3	5.0	3.8	.73	5.3	5.0	3.3
22	5.3	5.0	5.3	5.3	4.8	5.3	5.0	4.5	.60	2.9	5.0	4.0
23	5.3	5.0	5.0	5.0	5.0	5.3	5.0	4.5	.60	1.18	5.0	4.0
24	5.3	5.0	5.0	5.3	5.3	5.0	5.0	4.8	.47	1.18	5.3	5.0
25	5.3	5.0	4.8	5.3	5.3	5.0	5.0	5.3	2.1	1.18	5.0	4.3
26	5.0	5.3	5.0	5.3	5.0	5.0	5.0	4.8	5.3	4.2	5.0	5.5
27	5.0	5.3	5.0	5.3	5.3	5.0	4.8	4.8	5.3	3.8	5.0	5.3
28	5.3	5.3	5.3	5.3	5.0	5.3	4.8	4.8	5.3	2.25	5.0	5.0
29	5.0	5.3	5.0	5.3	5.0	5.0	5.0	4.8	5.3	4.6	5.0	5.0
30	5.0	5.0	5.3	5.3	5.0	5.0	5.0	-	5.3	5.6	5.3	4.5
31	5.0	5.0	-	5.3	-	5.0	5.0	-	5.3	-	5.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.6	5.0	5.25	8.12	163	500
August	13.1	4.8	5.73	8.87	178	545
September	5.9	.33	4.88	7.55	146	449
October	5.6	5.0	5.28	8.17	164	502
November	5.3	4.8	5.10	7.89	153	470
December	5.3	4.8	5.12	7.92	159	487
Calendar year 1935	13.1	.33	5.30	8.20	1,940	5,940
January	5.3	.03	4.48	6.93	139	426
February	5.4	3.55	4.82	7.46	140	429
March	5.6	.36	3.32	5.14	103	316
April	5.6	1.18	4.22	6.53	126	388
May	5.3	3.45	5.09	7.88	158	484
June	5.6	3.3	4.68	7.24	140	430
Fiscal year 1935-36	13.1	.03	4.83	7.47	1,770	5,430

East Branch of North Fork of Wailua River near Lihue

Location.- Water-stage recorder, lat. 22°04'10", long. 159°25'05", 1,200 feet above confluence with North Fork and 7⅜ miles northwest of Lihue. Altitude, 500 feet, by barometer.

Drainage area.- 6.2 square miles.

Records available.- May 1934 to June 1936. July 1912 to September 1914, at staff gage 725 feet downstream; December 1914 to May 1934, at recorder 75 feet upstream.

Average discharge.- 16 years (1920-36), 31.3 million gallons a day (48.4 second-feet).

Extremes.- Maximum discharge during year, 994 million gallons a day (1,540 second-feet) Mar. 19 (gage height, 6.98 feet), from rating curve extended above 500 million gallons a day; minimum, 10.8 million gallons a day (16.7 second-feet) several days in February and June.

1912-36: Maximum discharge, 3,340 million gallons a day (5,170 second-feet) Dec. 24, 1927 (gage height, 10.57 feet), from rating curve extended above 500 million gallons a day; 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 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.0	9.2	1.9	46	2.9	122
1.2	14.5	2.2	64	3.4	179
1.4	22	2.5	86	4.0	262
1.6	31				

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.9	29	20.5	23.5	53	56	14.8	19.2	78	15.2	18.8	17.9
2	13.0	39	28	21	20	29	28.5	36	191	13.9	20	16.6
3	16.6	71	16.6	25	15.9	27	21.5	20.5	74	13.6	13.0	15.7
4	13.9	30	14.5	24	15.2	22.5	*100	17.0	38.5	13.3	12.1	14.8
5	14.5	21.5	14.2	19.2	14.5	20	21.5	15.2	31.5	13.0	11.8	13.9
6	17.3	18.4	143	18.0	13.9	18.4	21	14.2	23.5	13.9	25.5	13.6
7	15.2	16.2	44	17.6	13.3	25.5	18.8	13.9	20.5	12.7	31.5	13.3
8	15.2	15.6	29	16.6	13.0	19.2	16.6	13.6	24	12.4	44	13.0
9	15.9	15.6	23.5	15.9	12.7	74	15.6	13.3	20.5	14.5	59	13.0
10	16.6	15.2	40	25.5	12.4	186	16.2	13.0	20	12.7	47	12.4
11	33	33	37.5	23	12.4	94	15.2	12.7	20.5	12.1	24	13.0
12	35	20	23.5	23	12.1	49	13.9	12.4	31	11.8	18.4	13.0
13	21	26	20.5	81	11.8	38.5	14.2	12.1	29	42	18.8	11.8
14	17.3	24	20	29	11.5	32	18.0	11.8	27	21.5	21	13.0
15	15.6	16.6	20.5	35	11.5	28	20.5	11.5	22.5	16.6	20	12.4
16	14.2	16.2	18.0	26.5	11.5	24	89	11.5	21.5	21.5	46	11.5
17	13.6	15.6	17.3	21.5	51	22.5	98	11.0	21	21	41	11.3
18	13.9	14.2	22	19.6	43	21	38.5	11.0	42	15.9	46	12.1
19	14.8	14.2	17.6	18.0	146	20	26.5	11.0	198	14.2	36	17.1
20	15.6	49	16.2	17.3	35.5	18.0	24	11.0	52	12.7	31.5	12.1
21	13.6	74	15.6	24	25	17.3	21	10.8	36	12.1	28	11.2
22	15.9	25.5	14.2	46	20.5	17.0	19.6	11.5	29.5	11.8	24	11.0
23	13.0	27.5	23	21	18.0	16.2	18.0	12.1	25.5	11.5	33.5	13.2
24	13.6	29.5	62	19.2	17.0	15.6	17.3	15.9	25	11.0	32	21.5
25	14.5	21	91	17.6	17.0	14.5	16.6	12.7	21	11.0	28	12.7
26	15.6	18.0	36	17.0	15.2	13.9	15.9	14.0	19.6	18.4	23	19.3
27	27.5	17.3	80	18.4	15.9	13.9	18.4	13.3	18.4	14.5	20	21.5
28	13.9	16.2	36	15.9	16.2	13.3	15.9	11.0	17.3	11.8	30	13.6
29	22.5	15.2	30	15.2	41	13.0	14.5	42	16.6	11.5	21	12.4
30	18.8	14.8	29	14.5	86	12.7	21.5	-	15.9	13.6	18.4	11.5
31	18.8	13.9	-	14.2	-	12.4	14.5	-	15.9	-	22.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	35	13.0	17.2	26.6	534	1,640
August	74	13.9	24.9	38.5	773	2,370
September	143	14.2	33.4	51.7	1,000	3,080
October	81	14.2	23.3	36.1	723	2,220
November	146	11.5	26.7	41.3	802	2,460
December	186	12.4	31.8	49.2	984	3,020
Calendar year 1935	186	10.1	24.7	38.2	9,000	27,630
January	100	13.9	26.6	41.2	826	2,530
February	42	10.8	15.0	23.2	435	1,340
March	198	15.9	39.6	61.3	1,230	3,760
April	42	11.0	15.1	23.4	452	1,390
May	59	11.8	27.9	43.2	866	2,660
June	21.5	11.0	14.0	21.7	419	1,290
Fiscal year 1935-36	198	10.8	24.7	38.2	9,040	27,760

*Partly estimated.

Kapahi Ditch near Kealia

Location.- Water-stage recorder, lat. 22°06'00", 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 1936.

Average discharge.- 18 years (1917-20, 1921-36), 7.12 million gallons a day (11.0 second-feet).

Extremes.- Maximum discharge during year, 86 million gallons a day (133 second-feet) Sept. 6 (gage height, 1.63 feet); occasionally no flow, when water was shut out of ditch.

1909-14, 1915-36: Maximum discharge, 233 million gallons a day (361 second-feet) Mar. 31, 1923 (gage height, 3.15 feet); occasionally no flow, when water was shut out of ditch.

Remarks.- Records good for ordinary stages, poor for Mar. 28 to Apr. 1, Apr. 27 to May 1, (determined by general comparison with nearby streams), and for extremely low stages. Diverts water from Kapaa River for irrigation in vicinity of Kapaa. Regulated by head gates.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.9	10.5	5.6	0.31	0.45	0.90	1.08	3.5	0.45	6.0	21	4.3
2	3.7	11.7	6.7	.27	7.6	.73	13.2	.35	.25	5.1	6.1	4.0
3	5.7	11.0	4.0	1.52	5.9	.58	3.35	3.9	.73	3.45	.58	4.9
4	2.9	5.9	44	2.9	5.5	.58	.90	.45	.73	3.45	5.6	4.0
5	4.0	5.6	4.3	1.40	4.6	.73	.90	.45	.73	4.5	3.7	3.7
6	5.6	3.7	21.5	3.05	4.0	.90	.90	.45	.58	10.2	5.7	4.0
7	2.65	4.0	.73	3.15	4.0	.45	.90	4.2	.58	3.7	8.7	2.65
8	3.7	2.9	.73	3.7	3.7	.45	.90	3.05	.58	2.9	14.3	5.3
9	2.65	2.65	.90	4.0	3.7	.45	.90	.73	2.05	2.15	14.2	3.7
10	4.0	3.55	.90	3.9	3.9	.35	.90	5.1	4.0	.73	.68	3.7
11	5.2	3.95	.73	8.9	2.95	.58	.90	2.65	5.9	2.45	15.8	6.5
12	11.2	4.9	.90	6.8	2.4	1.27	.90	2.65	5.2	2.65	7.9	6.3
13	4.0	4.9	.58	.35	2.1	1.08	5.2	2.4	4.8	20.5	7.7	4.9
14	2.7	3.45	.58	.25	4.8	1.08	4.9	2.4	2.85	13.7	3.65	4.0
15	2.65	3.15	.58	.35	5.3	1.08	7.8	2.4	.58	14.0	7.6	3.7
16	2.4	3.45	6.4	.35	4.3	.90	2.1	2.4	6.2	10.1	12.0	2.9
17	2.9	2.9	5.9	.35	.25	.90	.35	2.65	4.3	5.5	6.4	2.4
18	3.15	2.1	5.3	.35	10.2	.73	.25	3.45	8.5	.58	6.1	5.3
19	3.8	3.45	4.7	.35	2.45	.90	.25	2.65	2.2	1.96	1.32	9.7
20	5.4	17.1	4.6	.25	7.5	.90	.25	2.4	.90	6.2	3.5	3.45
21	2.1	16.5	1.55	.25	9.3	.90	.25	2.4	1.27	2.9	12.7	2.65
22	7.3	6.1	1.65	.15	.73	.90	4.9	2.4	1.27	2.65	12.5	2.4
23	2.4	9.1	5.6	.15	2.1	6.5	4.0	3.1	1.08	3.15	12.5	3.15
24	3.5	9.4	9.7	.45	2.1	7.6	4.0	2.65	7.5	4.0	.58	7.1
25	3.2	.45	6.1	1.08	2.1	7.2	.73	4.1	2.7	4.3	9.9	2.9
26	3.15	3.25	5.3	.73	2.1	7.6	.73	4.2	1.08	22	11.4	8.0
27	14.3	3.05	1.4	.90	1.9	7.6	2.45	3.7	2.4	.6	7.4	14.4
28	1.72	4.2	.45	.90	1.9	7.2	3.15	2.65	1.0	5.0	8.7	6.8
29	7.1	3.45	.45	.90	5.8	7.2	2.9	1.50	2.0	10	6.5	7.2
30	3.7	3.15	.45	.73	.90	5.4	4.0	-	.9	20	4.9	5.9
31	3.7	2.9	-	.58	-	1.08	3.15	-	8.0	-	4.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	14.3	1.72	4.33	6.70	134	412
August	17.1	.45	5.56	8.60	172	529
September	21.5	.45	3.76	5.82	113	346
October	8.9	.15	1.59	2.46	49.3	151
November	10.2	.25	3.81	5.89	114	351
December	7.6	.35	2.41	3.73	74.7	229
Calendar year 1935	38	.02	3.93	6.08	1,430	4,400
January	13.2	.25	2.48	3.84	77.0	236
February	5.1	.35	2.58	3.99	74.9	230
March	8.5	.25	2.62	4.05	81.3	250
April	22	.58	6.48	10.0	194	597
May	21	.58	7.87	12.2	244	749
June	14.4	2.4	5.00	7.74	150	460
Fiscal year 1935-36	22	.15	4.04	6.25	1,480	4,540

Anahola River near Kealia

Location.- Water-stage recorder, lat. 22°08'55", long. 159°21'20", just 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, April 1934 to June 1936. December 1912 to April 1934, at site an eighth of a mile upstream.

Average discharge.- 17 years (1919-36), 12.8 million gallons a day (19.8 second-feet).

Extremes.- Maximum discharge recorded during year, 1,280 million gallons a day (1,980 second-feet) Mar. 19 (gage height, 5.38 feet), from rating curve extended above 200 million gallons a day; minimum, 2.85 million gallons a day (4.41 second-feet) Aug. 18.

1910, 1912-36: Maximum discharge, 1,820 million gallons a day (2,820 second-feet) Jan. 25, 1930 (gage height, 10.32 feet, former site and datum), from rating curve extended above 300 million gallons a day; minimum, 1.4 million gallons a day (2.2 second-feet) Sept. 12, 13, 1923.

Remarks.- Records good for ordinary stages, poor for Oct. 28 to Dec. 4, Dec. 6 to Jan. 17 by general comparison with nearby streams and for high stages. Anahola Ditch diverts water 3 miles above station for irrigation in vicinity of Kealia.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.9	2.85	1.25	5.6	1.35	6.6	1.45	7.7	1.7	16.5	2.2	50	2.9	143
1.1	4.3	1.3	6.0	1.4	7.1	1.5	8.5	1.9	28	2.5	81	3.4	254

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.5	12.3	6.6	6.4	25	30	9.0	10.2	43	7.3	26.5	6.4
2	4.3	8.5	9.5	5.6	9.0	15	18	38	99	5.9	27	6.1
3	4.4	10.8	5.0	5.2	7.0	8.0	8.0	11.6	33	5.6	12.7	6.3
4	4.2	5.0	3.5	5.4	6.0	6.6	70	8.8	11.7	5.4	10.7	5.8
5	3.9	4.0	3.35	4.7	5.6	5.7	18	7.8	10.7	38.5	9.1	5.6
6	3.85	3.6	104	4.5	5.2	5.2	10	5.9	7.8	37	17.3	5.4
7	3.85	3.4	13.0	4.4	5.0	10	8.0	5.4	7.2	10.1	16.5	5.3
8	3.85	3.25	7.0	4.5	4.8	7.0	6.0	5.1	7.4	7.9	44	5.5
9	3.6	3.25	5.7	4.2	4.7	20	4.5	5.0	6.1	11.0	42	5.1
10	3.9	3.25	8.5	5.3	4.5	100	6.0	4.9	5.8	9.8	21	4.9
11	10.1	4.3	8.4	5.4	4.5	40	7.0	4.8	6.8	7.6	13.1	6.4
12	19.6	4.0	4.7	7.7	4.4	25	5.2	4.7	10.4	7.3	11.1	6.3
13	6.5	5.0	4.3	50	4.3	15	4.5	4.5	7.9	86	10.7	4.9
14	4.9	4.0	4.2	7.8	4.1	11	6.0	4.5	6.7	13.6	10.7	6.0
15	4.1	3.25	4.4	7.7	3.9	9.2	10	4.4	5.4	10.4	9.1	5.4
16	3.8	3.2	4.7	6.2	3.9	8.2	25	4.3	5.1	19.2	16.2	4.8
17	3.6	3.2	4.5	5.6	8.0	7.3	30	4.2	4.9	13.4	22.5	4.6
18	3.55	3.0	3.9	5.3	25	6.8	16.0	4.1	21.5	8.8	13.1	5.4
19	3.85	3.05	3.9	4.9	100	6.2	11.4	4.4	239	8.1	11.4	11.1
20	4.3	12.0	3.7	4.9	15	5.8	9.8	4.2	18.7	7.6	10.1	6.1
21	3.8	12.7	3.55	6.8	7.0	5.5	8.5	4.1	11.7	7.3	10.1	4.8
22	3.85	4.5	3.5	10.2	5.0	5.3	7.7	4.4	10.1	7.2	14.3	4.8
23	3.5	4.1	17.4	5.7	4.5	5.0	7.1	5.0	8.5	6.8	14.4	4.6
24	3.5	6.4	9.3	5.0	4.3	4.9	6.1	5.0	24	6.2	10.7	4.7
25	4.3	4.0	33	4.9	4.1	4.8	5.9	5.2	9.1	6.0	9.8	4.4
26	4.9	3.4	8.8	4.8	3.9	4.7	5.6	7.5	7.9	60	7.9	5.2
27	5.6	3.35	7.9	4.8	4.1	4.6	5.6	6.9	7.9	19.6	7.4	7.3
28	3.85	3.35	7.4	5.6	4.3	4.5	5.5	4.4	7.3	12.2	7.7	4.7
29	3.85	3.2	6.9	4.7	10	4.4	5.2	10.8	6.9	14.6	7.3	4.5
30	3.9	3.15	7.1	4.5	50	4.3	5.4	-	6.3	24.5	6.9	4.3
31	4.1	3.05	-	4.3	-	4.2	4.9	-	12.6	-	6.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	19.6	3.5	4.83	7.47	150	460
August	12.7	3.0	4.95	7.66	154	471
September	104	3.35	10.6	16.4	318	975
October	50	4.2	7.00	10.8	217	666
November	100	3.9	11.6	17.9	347	1,070
December	100	4.2	12.7	19.6	394	1,210
Calendar year 1935	137	3.0	9.08	14.0	3,320	10,170
January	70	4.5	11.3	17.5	350	1,070
February	38	4.1	6.90	10.7	200	614
March	239	4.9	21.6	33.4	670	2,060
April	86	5.4	16.2	25.1	485	1,490
May	44	6.8	14.8	22.9	458	1,410
June	11.1	4.3	5.56	8.60	167	512
Fiscal year 1935-36	239	3.0	10.7	16.6	3,910	12,010

Anahola Ditch above Kaneha Reservoir, near Kealia

Location.- Water-stage recorder, lat. 22°08'00", long. 159°22'30", at point of discharge into Kaneha Reservoir and 5 miles northwest of Kealia. Altitude, 831 feet, (Lihue Plantation Co. benchmark).

Records available.- June 1934 to June 1936. May 1915 to December 1921, at site 1,800 feet upstrm. December 1921 to June 1934, at site 1,700 feet upstream.

Average discharge.- 13 years (1921-25, 1927-36), 3.60 million gallons a day (5.57 second-feet).

Extremes.- Maximum discharge during year, 48 million gallons a day (74 second-feet) Dec. 9 (gage height, 2.65 feet); no flow Dec. 25, 26, when gates were closed.
1915-36: 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 July 2-12, June 25, 26, 28-30, which were determined by comparison with seven nearby streams, and 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.55	11.8	12.0	0.06	6.3	0.06	0.02	4.8	14.3	3.9	1.67	3.8
2	2.5	9.0	9.1	.06	1.32	.04	.02	6.8	3.75	2.65	.12	3.45
3	3.5	12.5	5.4	.06	6.3	.04	.04	.06	.12	2.35	.06	3.55
4	2.7	5.5	3.15	.06	1.95	.02	.09	.06	.09	2.25	1.13	3.15
5	3.0	3.55	2.75	.06	2.1	.02	.04	.04	.09	9.7	3.45	2.85
6	3.5	2.85	12.5	.06	2.25	.84	.04	.04	.06	5.2	10.0	2.75
7	2.4	2.55	.06	.06	1.98	2.65	.04	1.42	2.75	2.95	1.46	2.65
8	3.0	2.35	.04	.06	2.05	2.45	.04	1.89	3.5	3.25	.16	2.75
9	2.3	2.65	.06	.06	1.80	5.2	.04	1.71	2.85	6.2	.09	2.45
10	3.0	2.35	.04	.09	1.71	.19	.04	1.63	3.8	4.9	.06	2.25
11	6.0	8.6	.06	.09	5.4	.12	.02	1.54	6.0	3.05	.75	3.0
12	10	3.95	.06	.09	3.3	.04	.02	1.47	6.2	2.85	4.3	3.9
13	4.9	5.3	.06	.09	1.98	.02	.02	1.47	4.6	5.7	5.2	2.25
14	3.25	4.1	2.85	.06	1.71	.02	1.54	1.39	3.55	.12	5.0	3.65
15	2.75	2.45	3.4	.09	1.71	.02	5.1	1.39	3.45	1.49	6.2	3.05
16	2.35	2.25	.76	.09	6.9	.02	1.34	1.31	3.8	5.6	2.4	2.35
17	2.25	2.25	2.8	.06	3.0	.01	.04	1.31	3.45	1.86	.16	2.05
18	2.35	2.05	2.95	.06	.04	.01	.06	1.31	3.7	.12	.12	3.4
19	2.55	2.45	3.25	.06	.04	.02	.09	1.39	3.0	.09	.09	13.3
20	3.25	15.1	2.85	.06	.04	.02	.09	1.31	.09	2.65	.09	4.2
21	2.25	12.9	2.65	.06	.06	.02	.09	1.23	.09	3.45	11.5	2.65
22	3.75	7.0	2.35	.06	.06	.02	.09	1.31	.09	3.25	13.7	2.45
23	2.15	5.5	8.1	.04	.06	.02	.06	1.76	.09	3.15	13.3	2.25
24	2.05	10.6	9.2	.04	.04	.02	.06	3.1	.09	2.85	11.5	3.5
25	3.75	3.8	2.85	.04	.04	.01	1.61	2.2	.09	2.65	9.8	2.5
26	5.8	3.15	.06	.06	.04	.01	2.15	5.0	.09	6.6	6.2	5.0
27	5.7	3.15	.06	.06	1.49	.01	2.15	2.9	.04	1.61	5.0	9.1
28	2.25	3.35	.06	.06	2.75	.01	2.15	1.63	.04	4.4	3.1	3.0
29	2.95	2.75	.06	.06	4.7	.01	1.98	6.3	.04	8.1	1.47	3.2
30	3.3	2.55	.06	1.20	.09	.02	2.15	-	1.63	7.1	3.6	2.0
31	6.7	2.25	-	1.54	-	.02	1.80	-	8.2	-	5.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	10	2.05	3.51	5.43	109	334
August	15.1	2.05	5.18	8.01	161	493
September	12.5	.04	2.99	4.63	89.6	275
October	1.54	.04	.148	.229	4.60	14
November	6.9	.04	2.04	3.16	61.2	188
December	5.2	.01	.386	.597	12.0	37
Calendar year 1935	21.5	.01	2.72	4.21	992	3,040
January	5.1	.02	.743	1.15	23.0	71
February	6.8	.04	1.99	3.08	57.8	177
March	14.3	.04	2.73	4.22	84.6	260
April	9.7	.09	3.67	5.68	110	338
May	13.7	.06	4.09	6.33	127	389
June	13.3	2.0	3.55	5.49	106	327
Fiscal year 1935-36	15.1	.01	2.58	3.99	946	2,900

Ka Loko Ditch near Kilauea

Location.- Water-stage recorder, lat. 22°10'35", long. 159°23'00", 60 feet below junction of Ka Loko and Moloaa Ditches, 400 feet above Ka Loko Reservoir, and 3½ miles southeast of Kilauea. Altitude, 750 feet, from topographic map.

Records available.- August 1932 to June 1936.

Extremes.- Maximum discharge during year, 97 million gallons a day (150 second-feet) Dec. 10 (gage height, 4.13 feet); minimum, 0.63 million gallons a day (0.98 second-foot) June 22.

1932-36: 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.31	2.3	1.81	2.55	6.2	9.0	2.55	3.75	9.7	2.45	8.1	2.95
2	1.23	2.45	3.2	2.05	2.75	3.45	3.85	10.2	13.8	2.05	6.2	2.95
3	1.23	7.0	1.98	2.35	6.6	3.05	3.35	4.9	5.6	1.71	3.7	3.25
4	1.23	2.35	1.47	2.25	3.2	2.75	18.2	4.0	2.95	1.98	3.35	3.05
5	1.16	1.54	1.31	1.89	2.05	2.35	3.45	3.25	2.95	16.4	3.05	2.85
6	1.16	1.31	24	1.89	1.71	2.15	2.15	2.35	2.15	12.2	6.2	2.75
7	1.16	1.23	5.4	1.80	1.71	1.98	2.15	1.98	2.05	3.7	5.4	2.75
8	1.23	1.23	3.35	1.89	1.71	1.98	2.25	1.89	2.65	2.95	10.9	2.75
9	1.16	1.16	2.55	1.63	1.80	13.6	2.15	1.80	1.89	3.7	8.8	2.65
10	1.31	1.16	3.5	2.1	1.71	63	2.35	1.80	2.05	4.1	5.8	2.55
11	3.95	1.80	3.7	1.80	5.0	15.1	2.05	1.71	2.25	2.75	3.8	2.95
12	4.7	1.54	2.35	4.7	3.0	7.6	1.89	1.63	4.7	2.55	3.25	2.95
13	2.6	2.55	2.05	13.4	1.89	6.0	2.05	1.54	3.35	10.8	3.25	2.35
14	1.71	1.80	1.98	2.95	1.80	4.9	2.75	1.54	2.45	4.0	3.55	2.55
15	1.23	1.16	1.98	2.15	1.63	4.3	2.85	1.54	1.89	3.25	3.7	2.35
16	1.09	1.16	1.89	1.89	4.2	3.7	12.2	1.54	1.80	5.2	10.0	2.15
17	1.09	1.23	2.05	1.63	10.5	3.45	25.5	1.54	1.80	4.0	8.8	2.05
18	1.02	1.09	1.89	1.63	6.7	3.25	4.3	1.54	6.0	2.95	6.6	2.25
19	1.63	1.09	1.80	1.54	10.6	4.6	3.25	1.71	35.5	2.65	5.8	4.1
20	1.89	3.6	1.71	1.47	3.8	3.05	1.47	1.54	5.9	2.55	4.9	2.15
21	1.31	3.8	1.71	5.2	2.75	2.85	1.47	1.47	3.8	2.45	5.4	1.16
22	1.23	2.05	1.63	6.0	2.25	6.1	2.65	1.39	3.25	2.35	5.4	1.63
23	1.09	1.89	5.2	2.25	1.89	3.9	2.55	1.54	2.85	2.35	5.6	1.98
24	1.23	2.75	3.5	1.80	1.71	2.75	2.35	1.80	11.9	2.25	5.2	1.98
25	1.71	1.63	13.1	1.63	1.54	2.45	2.25	1.63	3.45	2.25	5.1	1.80
26	1.54	1.39	3.45	1.98	1.63	2.35	2.15	2.15	2.95	16.8	3.8	1.98
27	2.65	1.47	2.95	2.15	1.63	2.25	2.15	1.89	2.85	5.6	3.35	3.55
28	1.39	1.31	2.95	1.54	1.71	2.15	1.98	1.39	2.55	3.45	4.4	1.80
29	1.54	1.31	2.55	1.54	4.2	2.05	1.89	2.75	2.35	5.2	3.35	1.80
30	1.39	1.23	2.65	1.54	13.9	2.05	1.98	-	2.25	7.9	3.05	1.71
31	1.23	1.23	-	1.47	-	2.25	1.80	-	3.55	-	3.15	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	4.7	1.02	1.59	2.46	49.4	152
August	7.0	1.09	1.90	2.94	58.9	181
September	24	1.31	3.66	5.66	110	337
October	13.4	1.47	2.60	4.02	80.7	248
November	13.9	1.54	3.73	5.77	112	343
December	63	1.98	6.14	9.50	190	584
Calendar year 1935	63	1.02	3.26	5.04	1,190	3,650
January	25.5	1.47	4.00	6.19	124	380
February	10.2	1.39	2.34	3.62	67.8	208
March	35.5	1.80	4.94	7.64	153	470
April	16.8	1.71	4.75	7.35	143	437
May	10.9	3.05	5.26	8.14	163	500
June	4.1	1.16	2.46	3.81	73.7	226
Fiscal year 1935-36	63	1.02	3.62	5.60	1,330	4,070

Puu Ka Ele Ditch near Kilauea

Location.- Water-stage recorder, lat. 22°11'05", 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 1936.

Extremes.- Maximum discharge during year, 32 million gallons a day (50 second-feet) Dec. 9 (gage height, 2.05 feet); no flow Jan. 20-25.
1932-36: Maximum discharge, 32 million gallons a day (50 second-feet) June 4, 1934, and Dec. 9, 1935 (gage height, 2.05 feet); no flow occasionally, when water was shut out of ditch.

Remarks.- Records excellent except those for Sept. 30, Oct. 1, 5-10, Nov. 3, 4, 12, 13, 17-20, which were determined by comparison with records of Ka Loko and Kalihiwai Ditches, and are fair. 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.89	4.0	3.15	3.5	6.6	10.6	3.8	5.4	7.5	3.45	8.6	3.9
2	2.15	4.3	4.1	3.05	4.1	4.9	4.6	11.3	13.8	3.15	6.2	3.7
3	1.98	12.2	3.7	4.9	6.8	5.0	4.4	7.0	6.7	2.95	4.5	3.8
4	1.80	5.1	3.05	4.0	4.0	4.5	6.3	6.3	3.8	2.95	4.0	3.45
5	1.71	3.7	2.85	3.5	*3.35	3.9	5.8	4.9	4.0	4.5	3.7	3.25
6	1.71	3.15	17.6	3.0	2.95	3.55	4.4	2.45	3.05	2.05	7.2	3.05
7	1.71	2.95	8.9	2.6	2.85	3.35	4.9	.04	2.95	3.6	7.3	2.95
8	1.63	2.75	5.5	2.4	2.75	3.25	4.1	.04	4.9	4.1	10.6	2.95
9	1.54	2.65	4.6	2.4	2.75	8.2	3.8	1.79	3.8	4.3	9.9	2.85
10	1.89	2.65	5.8	4.0	2.65	14.9	3.8	2.75	5.4	4.9	7.4	2.75
11	4.9	4.3	5.6	3.25	2.85	12.8	3.55	2.75	4.3	3.7	5.4	2.95
12	5.9	3.55	4.0	6.6	0	10.3	3.35	2.65	6.3	3.45	4.5	3.05
13	3.8	4.7	3.7	12.7	1.6	7.6	3.35	2.55	5.6	9.4	4.4	2.85
14	2.65	5.2	3.7	5.2	2.35	6.2	3.7	2.55	4.1	4.9	4.9	3.05
15	2.05	3.05	3.45	3.9	2.25	5.4	3.8	2.45	3.55	4.0	5.8	2.75
16	1.80	3.15	3.25	3.55	3.05	5.1	3.6	2.35	3.25	5.1	14.7	2.55
17	1.80	2.85	3.25	3.35	11	4.9	3.5	2.25	3.15	4.9	10.9	2.55
18	1.80	2.65	3.05	3.25	8.0	4.6	.04	2.25	6.3	3.9	9.1	2.65
19	3.7	2.65	3.05	3.05	11	5.5	.01	2.55	9.7	3.45	8.3	3.8
20	3.7	6.2	2.85	2.85	6.0	4.4	0	2.25	5.2	3.15	7.7	2.75
21	2.25	8.1	2.85	3.75	4.7	4.0	1.62	2.15	4.0	2.95	7.0	2.45
22	2.25	5.0	2.45	7.8	4.1	5.9	2.85	2.15	.06	2.95	6.7	2.55
23	1.89	4.5	3.35	3.7	3.7	9.1	2.65	2.15	.65	2.85	8.3	2.85
24	2.15	6.0	3.5	3.15	3.45	4.0	2.65	2.55	2.45	2.75	8.1	3.25
25	2.55	4.1	7.6	2.95	3.7	3.7	2.65	2.35	.09	2.75	7.3	2.55
26	2.35	3.45	4.4	3.45	3.25	3.45	2.95	2.15	1.21	9.4	5.8	3.35
27	3.9	3.55	4.6	3.8	3.15	3.35	3.05	2.15	2.45	6.0	5.1	5.0
28	2.35	3.25	5.6	2.85	3.05	3.25	3.05	1.98	1.80	3.8	6.4	2.95
29	6.2	3.15	4.9	2.65	5.6	3.35	2.85	2.05	3.05	5.2	4.7	2.85
30	3.45	2.95	4.5	2.65	13.5	3.25	2.95	-	3.35	7.3	4.3	2.55
31	2.75	2.85	-	2.45	-	3.45	2.75	-	4.4	-	4.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.2	1.54	2.65	4.10	82.2	252
August	12.2	2.65	4.15	6.42	129	395
September	17.6	2.45	4.63	7.16	139	426
October	12.7	2.4	3.88	6.00	120	369
November	13.5	0	4.50	6.96	135	415
December	14.9	3.25	5.67	8.77	176	539
Calendar year 1935	17.6	0	3.97	6.14	1,450	4,450
January	6.3	0	3.25	5.03	101	309
February	11.3	.04	2.97	4.60	86.2	265
March	13.8	.06	4.22	6.53	131	402
April	9.4	2.05	4.26	6.59	128	392
May	14.7	3.7	6.87	10.6	213	654
June	5.0	2.45	3.06	4.73	92.0	282
Fiscal year 1935-36	17.6	0	4.18	6.47	1,530	4,700

*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 1936.

Extremes.- Maximum discharge during year, 51 million gallons a day (79 second-feet) Sept. 6 (gage height, 2.72 feet); minimum, 0.12 million gallons a day (0.19 second-foot) Jan. 25, 26.

1934-36: Maximum discharge, 51 million gallons a day (79 second-feet) Sept. 12, 1934 (gage height, 2.73 feet) and that of Sept. 6, 1935; minimum, 0.01 million gallons a day (0.02 second-foot) Nov. 28 and Dec. 4, 1934.

Remarks.- Records good except those for July 5-14, Nov. 22, 23, Dec. 16-27, Jan. 1-4, 10-23, Jan. 29 to Feb. 12, May 5, 6, which were determined by comparison with records for Puu Kaele and Ka Loko Ditches and are poor. Diverts low-water flow from most branches of Pohakuhonu Stream about 1 mile south of station. Diversion of flow to Kahililolo Stream, 0.1 mile above station, regulated by gates. Discharges into Kalihiwai Reservoir, where it is stored for irrigation in vicinity of Kilauea.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.35	4.0	4.1	2.55	1.71	0.95	2.3	2.0	8.0	0.52	6.7	3.45
2	2.35	4.6	4.8	2.45	1.63	1.54	2.5	15	21.5	.52	7.0	3.45
3	2.35	13.7	3.25	2.45	1.71	2.05	2.2	6.0	7.7	.52	3.9	3.45
4	2.15	4.4	2.75	2.35	1.71	1.71	1.3	5.0	1.02	.57	2.3	3.35
5	2.0	3.15	2.65	2.05	1.71	1.39	.75	4.0	2.0	.88	1.6	3.15
6	2.0	2.65	27	1.89	1.71	1.16	.57	3.5	2.85	1.09	1.2	3.05
7	2.0	2.45	9.2	1.89	1.63	2.3	.57	3.2	3.05	.75	1.02	2.85
8	1.8	2.45	5.4	1.89	1.63	2.45	.57	2.9	4.0	.68	1.02	2.75
9	2.0	2.45	4.4	1.89	1.63	1.31	.57	2.7	.75	.57	.95	2.65
10	2.2	2.45	5.7	3.8	1.63	1.09	.56	2.5	.81	.63	.88	2.65
11	6.0	4.6	5.5	2.75	1.47	1.09	.56	2.4	.81	.52	.81	2.75
12	7.0	3.55	3.9	2.9	1.63	1.09	.54	2.3	1.09	.52	.68	2.65
13	3.5	6.7	3.55	6.9	1.63	1.02	.52	2.25	1.02	.88	.63	2.45
14	3.0	6.4	3.45	2.95	1.54	.95	.54	2.15	.95	.68	.63	2.45
15	2.45	3.45	3.25	2.45	1.54	.75	.60	2.05	.81	.63	.63	2.45
16	1.98	3.25	2.95	2.35	2.4	.70	.80	2.05	2.35	.81	1.16	2.25
17	1.98	2.95	2.75	2.15	12.6	.66	.72	1.98	2.25	.81	1.09	2.15
18	1.98	2.85	2.45	*2.15	14.7	.62	.64	1.98	1.78	.63	1.02	2.35
19	3.45	2.75	2.45	*2.2	11.4	1.0	.60	2.15	2.25	2.25	1.02	4.1
20	3.15	8.7	2.35	*2.2	.75	.66	.56	1.98	.75	2.95	1.02	2.55
21	2.35	10.8	2.35	*2.2	.46	.58	.54	1.89	4.4	2.65	1.02	2.15
22	2.35	5.8	2.15	*2.2	.25	2.5	.54	1.89	5.2	2.45	.95	2.15
23	2.15	4.7	2.35	*2.2	1.4	3.5	.52	2.05	4.6	2.35	.88	2.65
24	2.45	10.1	2.35	*2.2	1.02	2.5	.27	2.45	4.1	2.25	.88	4.1
25	2.55	4.6	3.05	*2.2	1.02	2.4	.23	2.05	.81	2.15	.81	2.55
26	2.45	3.55	2.45	*2.2	1.09	2.3	1.54	1.80	.75	4.2	2.5	4.2
27	3.95	3.45	2.45	*2.2	1.02	2.3	1.70	1.71	.75	2.65	4.0	8.4
28	2.25	3.05	3.25	*2.2	.95	2.25	.88	1.71	.68	2.45	2.8	3.25
29	4.6	2.85	4.1	1.54	.88	2.25	.86	1.63	1.99	3.7	3.25	2.85
30	2.45	2.65	3.45	1.54	.95	2.35	.84	-	2.85	4.9	4.0	2.85
31	2.45	2.45	-	1.71	-	2.25	.82	-	1.50	-	4.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	7.0	1.8	2.76	4.27	85.7	263
August	13.7	2.45	4.56	7.06	142	434
September	27	2.15	4.33	6.70	130	398
October	6.9	1.54	2.41	3.73	74.6	229
November	14.7	.25	2.51	3.88	75.4	231
December	3.5	.58	1.60	2.48	49.7	152
Calendar year 1935	27	.25	2.85	4.41	1,040	3,190
January	2.5	.23	.862	1.33	26.7	82
February	15	1.63	2.94	4.55	85.3	262
March	21.5	.68	3.01	4.66	93.4	287
April	4.9	.52	1.57	2.43	47.2	145
May	7.0	.63	1.95	3.02	60.4	186
June	8.4	2.15	3.07	4.75	92.1	283
Fiscal year 1935-36	27	.23	2.63	4.07	962	2,950

*Partly estimated.

Hanalei River at elevation 625 feet, near Hanalei

Location.- Water-stage recorder, lat. 22°07'10", long. 159°28'05", 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 1936. January 1914 to July 1921, at site 300 feet downstream.
Average discharge.- 18 years (1918-36), 49.7 million gallons a day (76.9 second-feet).
Extremes.- Maximum discharge during year, 2,100 million gallons a day (3,250 second-feet) Dec. 9 (gage height, 6.00 feet), from rating curve extended above 200 million gallons a day; minimum, 7.7 million gallons a day (11.9 second-feet) Feb. 28.
1914-36: Maximum discharge, 6,500 million gallons a day (10,100 second-feet) Jan. 16, 1921 (gage height, 7.50 feet, former site and datum), from rating curve extended above 200 million gallons a day; 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. Since 1925 Hanalei tunnel has been diverting an average of about 20 million gallons a day from Kaapoko Stream and Hanalei River at points about 2 miles above station. Diverted water used for irrigation in vicinity of Lihue.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Sept. 6

0.6	9.7	1.2	38	2.4	170
.7	12.5	1.5	61	2.7	227
.8	16.5	1.8	88	3.1	325
1.0	26	2.1	124		

Sept. 7 to June 30

0.6	8.1	1.2	35	2.4	152
.7	11.0	1.5	55	2.7	207
.8	14.5	1.8	79	3.1	308
1.0	23.5	2.1	110		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.2	36	30.5	16.2	47	64	10.7	53	199	13.1	23.5	17.1
2	12.4	61	27	14.5	12.8	25	52	140	288	10.7	26	15.4
3	23.5	115	16.4	16.6	11.0	23.5	18.4	33	73	10.4	16.6	14.9
4	14.0	31.5	14.8	16.6	10.4	18.8	92	33	36	9.8	14.5	13.8
5	14.4	21.5	15.6	14.2	10.4	16.6	75	17.9	29.5	12.5	14.5	12.8
6	16.8	18.4	259	16.0	9.3	15.4	27	14.5	21.5	19.3	58	12.8
7	15.6	16.4	41	12.8	9.0	17.9	17.1	12.8	18.8	11.4	46	12.0
8	18.4	15.2	25.5	11.7	9.0	20	14.2	11.7	34	10.1	67	12.0
9	19.7	15.2	20.5	11.0	8.7	169	12.4	11.0	29.5	12.8	85	11.0
10	20.5	15.2	51	46	8.7	275	14.5	10.7	22	10.4	54	10.7
11	43	106	28	47	8.7	122	12.4	10.4	23.5	9.6	26	11.0
12	44	22.5	19.3	22.5	8.4	42	11.0	9.8	45	9.6	20.5	10.7
13	21.5	32	16.6	69	8.1	29.5	11.7	9.6	41	124	20	9.8
14	17.6	46	18.4	21	8.4	23	17.2	9.3	33	26	22.5	10.7
15	15.6	18.4	17.1	16.6	8.4	19.3	44	9.0	48	20.5	51	9.8
16	14.4	16.8	14.5	15.8	8.4	17.1	57	9.0	28.5	30	92	9.3
17	13.6	16.4	17.8	15.4	75	15.4	29	8.7	27.5	28.5	90	9.3
18	13.6	14.0	19.6	13.8	86	14.2	19.3	8.7	81	18.8	75	10.1
19	14.8	15.2	14.9	12.4	191	13.8	15.4	8.4	246	15.8	55	15.4
20	14.4	108	13.4	12.4	31	12.4	13.4	8.1	44	13.8	38.5	9.6
21	12.1	124	12.4	12.0	21	11.7	12.4	8.1	29	13.1	37.5	8.7
22	13.2	29	11.7	57	16.6	12.0	11.7	8.1	23.5	12.8	32	8.4
23	11.3	31.5	28.5	13.4	14.5	11.0	11.0	9.8	19.7	12.0	46	11.4
24	12.1	36	35.5	11.7	13.8	10.1	10.7	13.6	22.5	11.7	36	31
25	12.4	22	79	11.0	13.4	9.8	10.1	9.0	16.6	11.4	33	11.0
26	16.0	19.7	22.5	11.0	12.0	9.6	9.8	9.0	14.5	31.5	25	24
27	30.5	18.0	68	14.1	12.0	9.3	23.5	8.4	13.8	15.8	21	55
28	12.4	16.8	31	10.4	16.2	9.0	12.0	15.0	12.8	13.1	70	13.4
29	59	15.6	21	9.8	68	9.0	10.1	92	11.7	13.4	20.5	10.7
30	21.5	14.8	18.4	9.6	109	8.7	15.0	-	11.4	24	17.1	9.3
31	28.5	13.6	-	9.3	-	9.6	10.1	-	25	-	33.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	59	11.3	19.7	30.5	610	1,870
August	124	13.6	34.9	54.0	1,080	3,320
September	259	11.7	33.6	52.0	1,010	3,100
October	69	9.3	19.1	29.6	591	1,810
November	191	8.1	28.9	44.7	866	2,660
December	275	8.7	34.3	53.1	1,060	3,260
Calendar year 1935	311	8.1	29.6	45.8	10,780	33,120
January	92	9.8	22.6	35.0	700	2,150
February	140	8.1	20.7	32.0	602	1,850
March	288	11.4	50.6	78.3	1,570	4,820
April	124	9.6	19.2	29.7	576	1,770
May	92	14.5	40.9	63.3	1,270	3,890
June	55	8.4	14.0	21.7	421	1,290
Fiscal year 1935-36	288	8.1	28.3	43.8	10,360	31,790

Hanakapiai Stream near Hanalei

Location.- Water-stage recorder, lat. 22°11'20", long. 159°35'50", 1½ 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 1936.

Extremes.- Maximum discharge during year, 1,780 million gallons a day (2,750 second-feet) Dec. 9 (gage height, 7.20 feet), from rating curve extended above 60 million gallons a day: minimum, 2.9 million gallons a day (4.5 second-feet) Nov. 15, 16.
1931-36: Maximum discharge, that of Dec. 9, 1935; 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. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	2.8	1.2	14.5	2.4	78
.6	4.4	1.5	23.5	2.8	121
.8	6.7	1.8	36	3.0	151
1.0	10.0	2.1	54	3.5	248

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.7	14.9	10.3	4.3	3.1	30	5.0	30.5	107	7.9	22	5.2
2	4.6	7.4	9.2	4.0	3.1	7.8	24	33	180	5.1	25.5	5.1
3	4.5	10.0	5.0	3.9	8.0	6.3	7.8	34	37	4.5	8.0	5.0
4	4.2	6.2	4.3	3.7	5.6	6.1	22	72	36.5	4.2	6.0	4.7
5	4.2	5.0	5.0	3.5	5.4	4.6	6.2	33.5	19.4	13.0	5.7	4.6
6	5.1	4.5	41	3.5	4.0	4.2	4.8	11.7	9.1	18.2	63	4.6
7	5.3	4.2	9.5	3.4	3.5	4.4	4.6	7.4	13.4	6.5	41	4.4
8	10.5	4.1	6.0	3.4	3.4	4.1	4.1	5.5	12.8	5.1	61	4.4
9	9.2	4.0	5.0	3.3	3.4	163	4.0	5.9	7.2	4.6	78	4.4
10	14.6	4.0	5.0	21	3.2	205	5.5	4.7	6.2	4.4	31	4.2
11	22.5	4.4	5.5	7.7	3.2	25.5	4.5	4.4	54	4.1	15.1	4.5
12	7.4	4.1	4.4	6.1	3.7	9.1	3.8	4.0	20.5	4.2	9.1	4.6
13	5.5	4.2	4.2	6.1	3.2	8.4	3.7	3.9	10.2	57	8.4	4.1
14	5.0	5.2	5.0	4.6	3.0	6.2	4.0	3.7	7.0	14	10.0	4.8
15	4.5	4.1	5.6	4.0	2.9	4.7	4.0	3.6	6.6	15.9	12.5	4.2
16	35	3.9	4.4	3.7	2.9	4.6	15.5	3.5	8.1	41	32	3.9
17	8.6	3.8	4.2	3.6	3.6	4.4	7.0	3.5	16.5	19.2	27.5	3.7
18	6.3	3.7	4.1	3.5	12.4	4.3	5.0	3.5	17.8	8.6	26.5	3.9
19	5.5	3.7	3.9	3.4	51	56	4.4	15.5	94	7.0	18.9	8.7
20	3.1	19.4	3.8	3.3	9.8	8.2	4.0	5.2	13.0	5.5	13.2	4.7
21	4.7	6.7	3.9	3.3	5.5	6.1	3.7	4.1	8.6	5.0	24	4.0
22	5.0	4.8	3.7	3.4	4.3	25.5	3.7	3.7	6.2	4.7	20.5	3.9
23	4.5	4.4	3.6	3.3	3.8	10.8	3.4	4.1	5.4	4.5	21	3.9
24	4.5	4.1	3.5	3.4	3.6	5.7	3.2	5.2	5.4	4.4	38.5	5.4
25	5.4	4.2	4.3	3.9	3.6	5.0	3.2	4.5	4.8	4.2	34.5	4.3
26	5.5	4.0	4.7	4.5	3.4	4.5	3.2	19.2	4.6	4.7	14.5	29.5
27	7.6	4.4	9.5	7.0	3.3	4.3	3.9	7.6	6.8	4.6	9.1	35
28	5.0	4.2	175	3.9	6.0	4.1	3.9	4.4	5.0	4.5	7.2	7.2
29	4.7	4.0	7.8	3.3	47	4.0	3.2	31.5	4.4	6.2	6.3	7.4
30	4.6	4.0	5.0	3.2	40	4.0	6.5	-	4.1	16.2	5.9	7.2
31	10.1	3.8	-	3.2	-	4.0	5.2	-	22	-	5.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	35	4.2	7.55	11.7	234	718
August	19.4	3.7	5.46	8.45	169	520
September	41	3.5	6.96	10.8	209	641
October	21	3.2	4.59	7.10	142	437
November	51	2.9	8.63	13.4	259	795
December	205	4.0	20.8	32.2	645	1,980
Calendar year 1935	205	2.9	10.4	16.1	3,780	11,600
January	24	3.2	6.03	9.33	187	574
February	72	3.5	12.9	20.0	373	1,150
March	180	4.1	24.3	37.6	754	2,310
April	57	4.1	10.3	15.9	309	948
May	78	5.6	22.6	35.0	702	2,150
June	35	3.7	6.72	10.4	202	618
Fiscal year 1935-36	205	2.9	11.4	17.6	4,180	12,840

Hanakoa Stream near Hanalei

Location.- Water-stage recorder, lat. 22°11'00", long. 159°37'35", three-quarters of a mile above mouth and 7½ miles west of Hanalei. Altitude, 470 feet, by barometer.

Drainage area.- 1.1 square miles.

Records available.- December 1931 to June 1936.

Extremes.- Maximum discharge during year, 283 million gallons a day (438 second-feet) probably Mar. 1 (gage height, 4.17 feet); minimum, 0.31 million gallons a day (0.48 second-foot) Nov. 3.

1931-36: Maximum discharge, 443 million gallons a day (685 second-feet) June 4, 1934 (gage height, 4.96 feet), from rating curve extended above 30 million gallons a day; minimum, 0.17 million gallons a day (0.26 second-foot) Mar. 21, 22, 1934.

Remarks.- Records good for ordinary stages; those for Dec. 10-14, Dec. 16 to Mar. 10 (computed on basis of records for Hanakapiai and Kalalau Streams), and those for high stages are poor. No diversions.

Rating table, fiscal year 1935-36 (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	3.0	101

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.59	2.85	0.89	0.81	0.35	12.3	1.2	12	56	2.35	5.7	1.52
2	.52	1.00	2.0	.66	.35	2.75	8.6	10	90	1.30	9.0	1.30
3	.52	1.63	.59	.59	2.5	2.05	2.3	11	16	1.00	2.35	1.30
4	.46	1.00	.46	.52	1.30	1.41	7.8	38	15	1.00	1.52	1.10
5	.46	.66	.73	.46	1.30	1.10	1.7	11	6.6	4.8	1.30	1.10
6	.59	.59	9.6	.52	.81	1.00	1.2	4.0	2.9	3.35	30.5	1.00
7	.66	.46	2.2	.46	.52	1.00	1.0	2.2	4.4	1.52	23.5	1.00
8	2.3	.46	1.00	.40	.46	.90	.6	1.8	4.2	1.10	36	1.00
9	1.98	.46	.73	.40	.59	*47	.6	1.9	2.1	1.00	46	.90
10	4.1	.40	.66	5.6	.46	55	1.4	1.3	1.9	.90	17.4	.81
11	5.3	.46	.81	2.3	.52	8.2	.9	1.2	32.5	.81	7.8	1.00
12	1.76	.46	.59	1.10	.81	4.0	.6	1.0	9.3	.81	4.2	.90
13	1.10	.40	.52	1.52	.46	2.5	.5	.9	4.2	18.3	3.7	.73
14	.81	.52	.66	.90	.46	2.0	.7	.8	2.6	4.2	3.7	.90
15	.66	.40	1.00	.59	.35	*1.76	.7	.7	2.2	6.0	4.0	.81
16	14.5	.35	.59	.46	.35	1.41	5.4	.7	2.6	15.2	9.3	.66
17	3.0	.35	.52	.46	.63	1.2	2.0	.6	6.2	7.2	9.0	.66
18	1.52	.35	.59	.46	2.75	1.0	1.5	.6	6.4	3.35	9.4	.66
19	1.10	.35	.46	.40	19.5	27	1.2	5.0	50	2.35	6.8	1.20
20	.90	6.1	.46	.40	2.9	4.0	1.0	1.6	8.0	1.63	4.2	.90
21	.73	1.10	.46	.35	1.30	1.6	.8	1.0	4.6	1.30	8.1	.73
22	.81	.66	.40	.40	.90	9.4	.8	.8	3.05	1.10	6.4	.73
23	.66	.46	.40	.40	.73	3.6	.6	1.0	2.2	1.10	8.8	.73
24	.59	.46	.40	.52	.59	1.5	.4	1.6	1.63	1.00	16.8	1.00
25	.81	.40	.51	.66	.59	1.2	.4	1.2	1.52	1.00	17.0	.66
26	.66	.35	.81	.73	.52	.9	.4	6.6	1.30	1.10	6.7	8.3
27	1.10	.46	3.4	2.45	.46	.8	.8	2.2	2.5	1.00	3.7	10.4
28	.66	.52	8.3	.66	1.80	.7	.9	1.2	1.30	1.10	2.9	1.41
29	.52	.40	3.0	.46	18.9	.7	.5	10	1.10	1.20	2.2	1.63
30	.52	.40	1.20	.40	17.5	.6	1.8	-	1.00	2.15	1.76	1.20
31	1.02	.35	-	.35	-	.6	1.3	-	6.7	-	1.63	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	14.5	0.46	1.64	2.54	50.9	156
August	6.1	.35	.800	1.24	24.8	76
September	9.6	.40	1.46	2.26	43.9	135
October	5.6	.35	.851	1.32	26.4	81
November	19.5	.35	2.69	4.16	80.7	248
December	55	.6	6.43	9.95	199	611
Calendar year 1935	70	.35	3.32	5.14	1,210	3,720
January	8.6	.4	1.60	2.48	49.6	152
February	38	.6	4.55	7.04	132	405
March	90	1.00	11.3	17.5	350	1,070
April	18.3	.81	3.01	4.66	90.2	277
May	46	1.30	10.0	15.5	311	956
June	10.4	.66	1.54	2.38	46.2	142
Fiscal year 1935-36	90	.35	3.84	5.94	1,400	4,310

*Partly estimated.

62706 O—38——3

Kalalau Stream near Hanalei

Location.- Water-stage recorder, lat. 22°09'50", 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 1936.

Extremes.- Maximum discharge during year, 164 million gallons a day (254 second-feet) Dec. 9 (gage height, 3.06 feet), from rating curve extended above 20 million gallons a day: minimum, 2.25 million gallons a day (3.48 second-feet) Nov. 15-17, 24-28.
1931-36: Maximum discharge, that of Dec. 9, 1935; minimum, 1.9 million gallons a day (2.9 second-feet) Dec. 10, 11, 1933.

Remarks.- Records good for ordinary stages; those for Dec. 10-15, Dec. 19 to Jan. 23, May 28-31 (computed on basis of records for Hanakoa and Hanakapiai Streams), and those for high stages are poor. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.9	2.25
1.0	3.15
1.1	4.4
1.2	6.1
1.4	10.5
1.6	17.0
2.0	37
2.5	81

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.75	3.35	2.65	2.55	2.3	7.2	4.0	5.0	68	3.25	3.15	3.35
2	3.75	3.35	2.65	2.55	2.3	4.0	24.5	10.3	80	3.05	3.5	3.35
3	3.6	3.35	2.65	2.65	2.95	3.15	12.0	14.4	25	2.95	3.15	3.35
4	3.6	3.35	2.65	2.65	2.55	2.75	2.15	26	11.7	2.85	3.05	3.25
5	3.6	3.25	2.65	2.55	2.5	2.55	9.8	22.5	8.8	3.5	3.05	3.25
6	3.75	3.05	2.95	2.55	2.4	2.5	6.3	10.9	5.8	3.15	6.1	3.25
7	3.75	3.05	2.75	2.55	2.4	2.5	4.6	8.3	4.9	2.95	10.2	3.25
8	3.75	3.05	2.55	2.5	2.4	2.4	3.85	5.8	4.3	2.95	15.0	3.15
9	3.75	3.05	2.55	2.5	2.4	13.2	3.5	5.1	3.75	2.95	25	3.15
10	3.85	3.05	2.55	2.75	2.4	37.5	3.05	4.3	3.35	2.85	22.5	3.15
11	3.75	3.05	2.55	2.75	2.4	10.0	2.65	4.0	11.6	2.85	9.3	3.25
12	3.75	3.05	2.65	2.65	2.4	3.6	2.65	3.6	6.5	2.85	6.3	3.15
13	3.5	3.05	2.65	2.75	2.4	3.05	2.55	3.5	4.9	4.5	5.2	3.15
14	3.5	3.05	2.65	2.55	2.3	2.95	2.5	3.35	4.0	3.05	4.7	3.15
15	3.5	3.05	2.55	2.5	2.25	2.75	2.5	3.35	3.6	3.25	4.7	3.15
16	3.85	3.05	2.55	2.5	2.25	2.65	4.3	3.35	3.35	4.6	4.7	3.15
17	3.6	3.05	2.55	2.5	2.4	2.65	3.5	3.5	3.5	4.6	4.4	3.25
18	3.6	2.95	2.55	2.5	2.4	2.55	3.9	3.5	3.6	3.6	4.4	3.25
19	3.6	2.95	2.55	2.4	4.2	12.6	2.95	4.7	19.0	3.25	4.3	3.15
20	3.5	4.1	2.55	2.4	2.85	4.9	2.5	3.5	8.3	3.05	4.0	3.25
21	3.5	2.95	2.55	2.4	2.5	3.75	2.4	3.35	5.4	2.95	4.3	3.25
22	3.5	2.85	2.55	2.4	2.4	7.6	2.4	3.5	4.3	2.95	4.3	3.25
23	3.5	2.85	2.55	2.4	2.3	7.0	2.4	3.6	3.75	2.95	4.6	3.15
24	3.5	2.85	2.55	2.4	2.25	4.1	2.4	4.1	3.35	2.95	5.8	3.25
25	3.5	2.85	2.55	2.4	2.25	3.5	2.5	5.9	3.15	3.05	8.6	3.5
26	3.6	2.75	2.55	2.5	2.25	3.15	2.5	8.9	3.05	3.15	8.1	3.8
27	3.6	2.75	3.05	2.5	2.25	3.15	2.55	8.8	4.0	3.15	5.9	3.6
28	3.5	2.75	4.6	2.5	2.4	3.05	2.5	7.9	3.15	3.35	4.7	3.15
29	3.35	2.75	3.5	2.4	4.7	2.95	2.5	23.5	2.95	3.35	4.0	3.15
30	3.35	2.75	2.75	2.4	6.1	2.85	3.15	-	2.85	3.15	3.75	3.15
31	3.35	2.75	-	2.3	-	3.25	2.85	-	4.0	-	3.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.85	3.35	3.60	5.57	112	342
August	4.1	2.75	3.04	4.70	94.1	289
September	4.6	2.55	2.72	4.21	81.6	250
October	2.75	2.3	2.51	3.88	77.9	239
November	6.1	2.25	2.66	4.12	79.8	245
December	37.5	2.4	5.64	8.73	175	536
Calendar year 1935	37.5	2.25	3.91	6.05	1,430	4,370
January	24.5	2.4	4.88	7.55	151	464
February	26	3.35	7.53	11.7	218	670
March	80	2.85	10.5	16.2	324	994
April	4.6	2.85	3.24	5.01	97.0	298
May	25	3.05	6.59	10.2	204	627
June	3.8	3.15	3.26	5.04	97.6	300
Fiscal year 1935-36	80	2.25	4.68	7.24	1,710	5,250

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 1935 to June 1936

Date	Stream	Diverting from	Locality	Discharge	
				Second-feet	Million gallons a day
July 14	Kokee Ditch	Waimea River Basin	Just below intake from Waiakoali Stream	7.38	4.77
June 5	do	do	50 feet above confluence with intake from Kawaikoi Stream	3.24	2.09

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 1936.
Average discharge.- 17 years (1915-24, 1926-32, 1934-36), 7.72 million gallons a day (11.9 second-feet).
Extremes.- Maximum discharge recorded during year, 433 million gallons a day (670 second-feet) Jan. 17 (gage height, 6.35 feet), from rating curve extended above 20 million gallons a day; minimum, 0.22 million gallons a day (0.34 second-foot) Nov. 13, 14, 15.
1913-36: Maximum discharge, 1,160 million gallons a day (1,790 second-feet) Jan. 1, 1933, (gage height, 9.63 feet), from rating curve extended above 120 million gallons a day; minimum, 0.09 million gallons a day (0.15 second-foot) Mar. 22, 1926.
Remarks.- Records good for ordinary stages, those for July 1-15, Aug. 8-12, Dec. 22, 24-29, Feb. 12 (computed on basis of records for Left Branch of North Fork of Kaukonahua Stream), are fair, and those for high stages are poor. No diversions above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Feb. 14				Feb. 15 to June 30			
2.5	0.10	3.2	7.4	2.6	0.30	3.4	14.1
2.6	.30	3.4	15.4	2.8	1.35	3.6	23
2.8	1.35	3.6	28.5	3.0	3.4	4.0	50
3.0	3.4	4.0	70	3.2	7.3	4.4	91
		4.5	133				

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.2	4.0	18.3	1.11	0.62	1.23	0.26	1.47	2.8	1.78	20	2.4
2	3.1	18.3	3.6	1.05	.52	.99	.24	11.3	7.4	1.23	12.5	2.1
3	4.2	6.0	3.3	21	.48	.75	.24	2.35	6.8	1.05	2.65	7.3
4	3.2	3.4	2.05	2.75	.62	.66	.26	1.05	1.60	1.18	2.05	3.8
5	13	2.5	5.4	1.78	.52	.62	.30	1.78	1.23	4.9	6.8	10.9
6	6.8	2.2	54	1.52	.44	.57	.88	.87	1.23	6.2	12.2	3.8
7	3.8	2.1	5.5	1.35	.34	1.26	1.52	.62	.99	2.35	3.25	2.5
8	4.1	3.5	3.25	1.23	.30	.81	.81	.52	1.17	1.35	6.3	2.75
9	3.9	2.5	2.75	1.05	.30	.62	4.4	.44	16.0	1.58	3.5	2.05
10	10	11	43	.99	.28	9.1	.70	.39	4.4	3.7	3.55	1.86
11	20	9.0	6.2	.99	.28	3.1	.39	*.34	2.2	2.2	2.2	1.86
12	4.0	4.0	7.0	2.1	.26	1.11	.28	.39	4.2	1.35	1.94	2.05
13	3.5	10.3	3.25	2.75	.24	1.70	.30	*.39	3.0	17.0	1.78	1.78
14	2.7	4.4	3.25	18.6	.26	1.76	.87	.39	2.4	8.6	14.5	4.9
15	2.0	2.75	2.65	2.7	12.6	.93	11.4	.34	1.94	2.5	55	2.3
16	2.4	11.3	8.2	1.52	.95	.70	4.6	.34	2.7	6.8	68	3.15
17	2.3	3.4	59	1.23	111	.57	38	.34	5.6	11.8	10.9	2.7
18	9.5	2.85	6.4	1.17	6.2	.52	2.6	.34	84	2.75	7.1	6.9
19	25	2.4	4.4	1.05	4.7	.48	1.35	.44	48	2.05	5.4	17.5
20	3.4	3.25	3.5	.93	2.05	.44	.99	.39	6.5	1.86	4.6	18.6
21	2.4	4.1	3.5	1.05	1.69	.39	.75	2.05	4.3	1.52	4.4	5.5
22	2.1	2.3	2.85	1.35	1.29	.34	.66	1.36	3.4	1.29	3.65	3.65
23	1.94	2.05	2.5	.93	1.11	*.34	.57	.81	2.85	2.05	3.15	3.7
24	3.3	13.3	2.2	1.19	1.38	.34	.48	3.0	2.65	1.44	2.85	4.7
25	7.0	2.65	2.05	1.11	1.27	.52	.39	11.5	2.3	1.29	3.0	3.9
26	3.2	2.1	1.86	.87	.93	.52	.34	2.8	2.4	1.23	2.65	13.2
27	2.85	1.86	1.69	.75	.81	.48	.30	3.1	1.94	1.11	2.4	23.5
28	2.1	1.94	*1.60	.66	1.23	.44	.30	.87	1.78	.99	7.5	4.8
29	18.5	1.94	*1.35	.62	1.81	.39	.30	2.2	1.69	.87	2.75	4.5
30	3.2	1.78	1.23	.57	2.45	*.28	.82	-	1.44	9.2	2.3	3.25
31	2.8	1.86	-	.52	-	.28	.70	-	1.29	-	5.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	25	1.94	5.82	9.00	180	554
August	18.3	1.78	4.68	7.24	145	445
September	59	1.23	8.86	13.7	266	816
October	21	.52	2.47	3.82	76.5	235
November	111	.24	5.23	8.09	157	482
December	9.1	.28	1.04	1.61	32.2	99
Calendar year 1935	297	.24	5.73	8.87	2,090	6,420
January	38	.24	2.45	3.79	76.0	233
February	11.5	.34	1.80	2.79	52.2	160
March	84	.99	7.43	11.5	230	706
April	17.0	.87	3.44	5.32	103	317
May	68	1.78	9.16	14.2	284	871
June	23.5	1.78	5.80	8.97	174	534
Fiscal year 1935-36	111	.24	4.85	7.50	1,780	5,450

*Partly estimated.

Left Branch of North Fork of Kaukonahua Stream, near Wahiawa

Location.- Water-stage recorder, lat. 21°31'10", long. 157°56'55", 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 1936.

Average discharge.- 19 years (1915-24, 1926-36), 11.3 million gallons a day (17.5 second-feet).

Extremes.- Maximum discharge during year, 1,230 million gallons a day (1,900 second-feet) Nov. 17 (gage height, 6.74 feet) from rating curve extended above 35 million gallons a day; minimum, 0.3 million gallons a day (0.5 second-foot) Feb. 18.

1913-36: Maximum discharge, 5,400 million gallons a day (8,360 second-feet) Jan. 1, 1933 (gage height, 11.7 feet, from floodmark on well), from rating curve extended above 15 million gallons a day; 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; those for Oct. 23-27 were computed on basis of records for Right Branch of North Fork of Kaukonahua Stream and are fair. No diversions above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.8	0.3	1.8	16.3
1.0	1.2	2.0	23.5
1.2	3.2	2.5	48
1.4	6.3	3.0	86
1.6	10.6	3.5	146

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.2	9.2	25.5	2.2	0.8	2.5	0.4	3.4	8.8	3.6	27.5	4.3
2	5.1	29	6.5	2.6	.7	2.0	.4	17.4	17.4	1.9	19.7	4.0
3	7.2	11.7	4.6	39.5	.6	1.4	.4	4.4	13.4	1.5	4.5	6.8
4	5.4	7.3	3.3	5.5	1.2	1.1	.4	1.8	3.3	1.6	4.0	5.3
5	21	5.3	16.0	4.2	.8	1.0	.5	2.9	2.4	7.5	16.6	11.3
6	12.0	4.6	37.5	3.1	.6	1.0	1.7	1.4	2.6	11.0	27	7.1
7	6.5	4.3	7.3	2.7	.5	2.7	2.4	.9	1.7	4.0	6.3	4.4
8	7.0	7.8	4.6	2.4	.5	1.5	1.9	.7	2.4	2.3	13.9	5.4
9	5.6	4.5	4.3	2.1	.5	1.0	9.2	.5	14.1	1.9	7.3	3.3
10	21.5	14.6	29.5	2.0	.4	8.0	1.9	.5	8.0	7.1	7.7	3.0
11	31	12.1	6.9	2.5	.4	7.8	.8	.4	3.9	5.0	4.5	3.0
12	8.2	6.1	10.9	4.4	.3	2.3	.5	.4	7.4	2.3	3.9	3.9
13	6.3	15.5	4.8	4.5	.3	4.3	.5	.3	7.9	18.3	3.6	2.8
14	5.3	7.6	6.7	20.5	.4	5.4	1.5	.3	4.2	12.3	26.5	6.9
15	4.5	4.8	4.0	4.4	15.3	2.1	10.1	.3	3.0	5.1	68	3.5
16	8.1	10.7	9.6	2.7	1.8	1.2	7.8	.3	4.6	17.6	55	4.8
17	5.8	4.9	35	2.3	120	1.1	52	.3	13.0	16.5	18.5	4.2
18	16.0	4.8	10.6	2.2	10.4	1.0	4.7	.3	70	4.5	16.8	8.1
19	38.5	3.8	5.6	2.1	12.6	1.0	2.2	.4	46	3.5	9.4	19.7
20	8.3	7.3	4.3	1.9	3.8	.8	1.4	.3	7.7	3.0	7.7	27
21	5.3	8.1	6.3	5.3	2.9	.8	1.0	.4	5.4	2.7	6.7	8.4
22	4.6	4.8	5.0	4.6	2.3	.7	.9	1.0	4.5	2.4	6.3	5.4
23	6.8	3.6	3.6	1.6	1.9	.7	.8	1.6	3.8	3.2	5.3	5.4
24	13.2	18.0	3.2	1.8	6.2	.6	.6	2.7	3.5	2.4	5.3	8.5
25	16.6	4.5	3.0	1.7	2.7	.7	.6	15.0	3.1	2.4	5.6	6.2
26	7.3	3.6	2.8	1.3	1.6	.7	.5	3.3	9.2	2.1	4.6	18.1
27	8.2	3.2	2.7	1.1	1.3	.7	.4	7.9	3.0	1.7	4.3	19.6
28	5.2	3.2	2.6	*.9	2.2	.7	.4	1.4	2.5	1.6	8.0	7.1
29	18.5	3.5	2.4	.8	2.5	.5	.5	6.4	2.2	2.0	4.5	4.7
30	7.0	3.0	2.3	.8	6.4	.4	2.0	-	2.0	13.4	3.8	5.1
31	7.7	3.5	-	.7	-	.4	1.7	-	2.0	-	7.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	38.5	4.5	10.7	16.6	331	1,020
August	29	3.0	7.58	11.7	235	721
September	37.5	2.3	9.05	14.0	271	833
October	39.5	.7	4.34	6.71	134	413
November	120	.3	6.73	10.4	202	620
December	8.0	.4	1.81	2.80	56.1	172
Calendar year 1935	630	.3	8.70	13.5	3,180	9,760
January	52	.4	3.55	5.49	110	338
February	17.4	.3	2.65	4.10	76.9	236
March	70	1.7	9.13	14.1	283	868
April	18.3	1.6	5.48	8.48	164	505
May	68	3.6	13.2	20.4	410	1,260
June	27	2.8	7.58	11.7	227	698
Fiscal year 1935-36	120	.3	6.83	10.6	2,500	7,680

*Partly estimated.

Puhawai Stream at Lualualei, near Waianae

Location.- Water-stage recorders, lat. 21°28'10", long. 158°08'00", 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 1936.

Extremes.- Maximum discharge during year, 12.1 million gallons a day (18.7 second-feet) Sept. 17 (gage height, 2.50 feet in 6-inch flume and 2.58 feet in 4-foot flume); minimum, 0.02 million gallons a day (0.03 second-foot) Sept. 4.

1930-36: 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: those for Oct. 2-9, 13, 14, Nov. 3 to Dec. 19, Jan. 16-30 (estimated on basis of rainfall records and records for all stations in Kaukonahua and Moanalua Valleys), and those for high stages are poor. Continuous rainfall records are obtained at station.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.25	0.13	0.31	*0.05	0.08	0.20	0.06	0.12	0.10	0.10	0.08	0.08
2	.25	.14	.29	.90	.10	.17	.06	.57	.10	.09	.08	.10
3	.25	.13	.28	.40	.09	.15	.07	.19	.10	.09	.08	.10
4	.25	.13	.15	.25	.08	.13	.06	.12	.10	.10	.08	.10
5	.26	.13	.20	.17	.08	.12	*.06	.16	.09	.10	.08	.10
6	.25	.13	.59	.14	.08	.12	*.06	.12	.09	.10	.09	.10
7	.25	.20	.32	.12	.07	.40	*.06	.10	.09	.09	.09	.10
8	.25	.25	.26	.10	.07	.30	*.05	.10	.09	.08	.09	.10
9	.25	.25	.26	.09	.07	.20	*.06	.10	.09	.09	.09	.10
10	.25	.25	.30	.09	.07	.17	*.06	.10	.09	.09	.09	.10
11	.30	.25	.28	.12	.11	.14	*.06	.10	.10	.09	.07	.10
12	.26	.25	.25	.89	.09	.11	.06	.10	.10	.09	.07	.10
13	.26	.25	.25	2.05	.10	.10	.06	.09	.10	.10	.07	.10
14	.26	.26	.25	2.3	.11	.15	.06	.08	.10	.09	.07	.10
15	.26	.26	.25	2.25	.25	.13	*.05	.08	.10	.09	.09	.10
16	.40	.26	.15	1.36	.15	.11	.06	.08	.10	.09	.08	.10
17	.28	.26	.96	.69	2.5	.11	2.0	.08	.10	.09	.07	.09
18	.23	.25	.28	.39	1.0	.10	.50	.08	.10	.09	.07	.09
19	.13	.25	.09	.23	.70	.09	.30	.20	.12	.09	.06	.12
20	.10	.25	.07	.16	.25	.09	.20	.13	.10	.08	.06	.12
21	.10	.25	.06	.22	.20	.09	.15	.10	.10	.08	.06	.10
22	.10	.25	.09	.15	.17	.10	.13	.10	.10	.08	.06	.10
23	.10	.25	.07	.13	.15	.10	.12	.10	.10	.08	.06	.09
24	.10	.25	.05	.15	.13	.09	.12	.10	.12	.09	.06	.09
25	.10	.25	.05	.15	.12	.13	.11	.39	.10	.10	.07	.09
26	.12	.25	.05	.12	.11	.10	.11	.34	.10	.10	.06	.09
27	.12	.25	.06	.12	.11	.13	.10	.17	.10	.10	.07	.10
28	.10	.26	.08	.10	.15	.07	.10	.13	.10	.09	.09	.09
29	.10	.26	.08	.10	.20	.07	.09	.12	.10	.09	.08	.08
30	.10	.26	*.07	.09	.30	.07	.14	-	.10	.08	.06	.08
31	.10	.25	-	.08	-	.06	.12	-	.10	-	.06	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.40	0.10	0.198	0.306	6.13	19
August	.26	.13	.228	.353	7.06	22
September	.96	.05	.215	.333	6.45	20
October	2.3	.05	.457	.707	14.2	43
November	2.5	.07	.256	.396	7.69	24
December	.40	.06	.132	.204	4.10	13
Calendar year 1935	3.5	.05	.310	.480	113	349
January	2.0	.05	.169	.261	5.24	16
February	.57	.08	.147	.227	4.25	13
March	.12	.09	.099	.153	3.08	9.5
April	.10	.08	.091	.141	2.72	8.3
May	.09	.06	.074	.114	2.29	7.0
June	.12	.08	.097	.150	2.91	8.9
Fiscal year 1935-36	2.5	.05	.181	.280	66.1	204

*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 1936.

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

Remarks.- Records excellent except those for Apr. 8, 9, 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 repaired Nov. 19, 1935.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.9	2.15
2.0	2.95
2.1	3.9

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1					-	3.7	3.5	3.4	3.4	2.8	3.15	2.95
2					-	3.7	3.6	3.4	3.4	2.8	3.15	2.95
3					-	3.6	3.6	3.5	3.4	2.8	3.05	2.95
4					-	3.6	3.5	3.5	3.3	2.8	3.05	2.95
5					-	3.6	3.5	3.5	3.3	2.8	3.05	2.95
6					-	3.6	3.5	3.5	3.3	2.8	3.05	2.95
7					-	3.6	3.5	3.4	3.3	2.8	3.05	3.05
8					-	3.6	3.4	3.5	3.25	3.05	3.05	3.05
9					-	3.7	3.4	3.5	3.25	3.05	3.05	2.95
10					-	3.6	3.4	3.5	3.25	3.05	3.05	2.95
11					-	3.6	3.4	3.4	3.25	3.05	3.05	2.95
12					-	3.6	3.4	3.4	3.25	3.05	3.05	2.95
13					-	3.6	3.4	3.4	3.25	*3.1	3.05	2.95
14					-	3.7	3.4	3.4	3.15	*3.1	3.05	2.95
15					-	3.7	3.4	3.5	3.15	3.15	2.95	2.95
16					-	3.5	3.4	3.7	3.15	3.15	2.95	2.9
17					-	3.4	3.4	3.7	3.15	3.15	3.05	2.9
18					-	3.4	3.5	3.7	3.15	3.15	3.05	2.95
19					3.7	3.4	3.5	3.8	3.15	3.15	3.15	2.95
20					3.7	3.4	3.4	3.7	3.15	3.15	3.15	2.95
21					3.7	3.4	3.4	3.6	3.15	3.15	3.05	2.95
22					3.7	3.4	3.4	3.6	3.15	3.15	3.05	2.95
23					3.7	3.4	3.3	3.7	3.05	3.15	3.05	2.95
24					3.9	3.4	3.3	3.7	3.05	3.15	3.05	2.95
25					3.8	3.5	3.3	3.6	2.95	3.15	3.05	2.9
26					3.7	3.5	3.4	3.6	2.95	3.15	2.95	2.95
27					3.7	3.5	3.4	3.6	2.9	3.15	2.95	2.9
28					3.8	3.4	3.3	3.5	2.8	3.15	2.95	2.9
29					3.8	3.4	3.3	3.3	2.8	3.15	2.95	2.9
30					3.7	3.5	3.4	-	2.8	3.15	2.95	2.9
31					-	3.5	3.4	-	2.8	-	2.95	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July						
August						
September						
October						
November 19-30	3.9	3.7	3.74	5.79	44.9	138
December	3.7	3.4	3.53	5.46	110	336
Calendar year						
January	3.6	3.3	3.42	5.29	106	325
February	3.8	3.3	3.54	5.48	103	315
March	3.4	2.8	3.14	4.86	97.4	299
April	3.15	2.8	3.05	4.72	91.4	281
May	3.15	2.95	3.04	4.70	94.2	289
June	3.05	2.9	2.94	4.55	88.4	271
The period					735	2,250

*Interpolated.

Pearl Harbor Springs at Loko Kukona, near Pearl City

Location.- Water-stage recorder, lat. 21°23'30", long. 157°58'00", 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 1936.

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

Remarks.- Records excellent except those for Dec. 8-16, 26-31, Jan. 1, which were computed on basis of records for all Pearl Harbor Springs stations and are good. No diversions. Surface run-off caused by floods not included in figures given below. No records July 1 to Nov. 26, 1935.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

2.1	1.75
2.2	2.55
2.3	3.4

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1					-	2.95	2.9	2.7	2.55	2.7	2.45	2.6
2					-	2.95	*2.95	2.7	2.55	2.8	2.45	2.7
3					-	2.95	2.95	2.8	2.55	2.8	2.45	2.6
4					-	2.95	2.95	2.7	2.55	2.8	2.55	2.6
5					-	2.95	2.95	2.8	2.55	2.8	2.55	2.7
6					-	2.95	2.95	2.8	2.55	2.7	2.55	2.7
7					-	2.95	2.95	2.8	2.55	2.7	2.6	2.6
8					-	2.9	2.8	2.8	2.55	2.7	2.8	2.6
9					-	3.0	2.9	2.8	2.55	2.7	2.8	2.6
10					-	2.9	2.95	2.8	2.55	2.7	2.8	2.6
11					-	2.9	2.95	2.8	2.55	2.7	2.8	2.45
12					-	2.9	2.95	2.8	2.55	2.7	2.7	2.45
13					-	2.9	2.95	2.8	2.55	2.8	2.7	2.45
14					-	2.9	2.9	2.8	2.55	2.7	2.7	2.45
15					-	2.9	2.9	2.8	2.55	2.7	2.6	2.45
16					-	2.9	2.9	2.8	2.55	2.7	2.7	2.45
17					-	*2.9	2.95	2.8	2.55	2.7	2.7	2.4
18					-	2.9	2.95	2.7	2.55	2.7	2.7	2.4
19					-	2.8	2.9	2.7	2.55	2.7	2.7	2.4
20					-	2.8	2.8	2.6	2.55	2.7	2.7	2.45
21					-	2.8	2.8	2.55	2.6	2.7	2.7	2.45
22					-	2.9	2.8	2.55	2.6	2.7	2.7	2.55
23					-	2.9	2.7	2.55	2.6	2.7	2.7	2.45
24					-	2.9	2.6	2.55	2.6	2.7	2.7	2.4
25					-	2.95	2.7	2.55	2.6	2.7	2.6	2.4
26					2.95	2.9	2.7	2.55	2.6	2.7	2.6	2.4
27					2.95	2.9	2.7	2.55	2.6	2.7	2.6	2.4
28					2.95	2.9	2.7	2.55	2.6	2.6	2.55	2.4
29					2.95	2.9	2.7	2.45	2.7	2.55	2.55	2.4
30					2.95	2.9	2.7	-	2.7	2.55	2.6	2.4
31					-	2.9	2.7	-	2.7	-	2.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July						
August						
September						
October						
November 26-30	2.95	2.95	2.95	4.56	14.8	45
December	3.0	2.8	2.91	4.50	90.1	277
Calendar year						
January	2.95	2.6	2.85	4.41	88.2	271
February	2.8	2.45	2.69	4.16	78.2	240
March	2.7	2.55	2.58	3.99	79.9	245
April	2.8	2.55	2.70	4.18	81.1	249
May	2.8	2.45	2.64	4.08	81.9	251
June	2.7	2.4	2.50	3.87	74.9	230
The period					589	1,810

*Partly 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, a fifth of a 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 1936.

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

Remarks.- Records good except those for Dec. 4-17, which were computed on basis of records for all Pearl Harbor Springs stations and are fair. No diversions. Surface run-off caused by flood not included in figures given below.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.7	16.6
1.8	20.5
1.9	25

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	17.8	17.8	18.6	19.0	19.8	20.5	19.0	19.5	19.5	21.5	19.0	17.8
2	17.8	17.8	18.2	19.0	19.8	21	19.0	19.5	19.5	21.5	19.5	17.8
3	*17.8	17.8	17.8	19.0	19.8	21	19.0	19.5	19.5	20.5	19.8	17.8
4	*17.8	17.8	17.8	19.0	19.8	21	19.0	19.5	19.5	19.8	19.8	17.8
5	*17.8	17.8	17.8	19.0	19.8	21	19.0	19.5	19.5	19.5	19.5	17.8
6	*17.4	17.8	17.8	18.6	19.8	21	19.0	19.5	19.0	19.0	19.0	17.8
7	*17.4	17.8	18.2	18.6	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
8	*17.0	17.8	18.2	18.6	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
9	*17.4	17.8	18.6	18.6	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
10	*17.8	17.8	18.6	18.6	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
11	*18.2	17.8	18.6	18.6	19.8	20	18.6	19.5	19.0	19.0	18.6	17.8
12	*18.6	17.8	18.6	19.0	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
13	*18.2	17.8	19.0	19.5	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
14	*18.6	17.8	19.0	19.5	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
15	*18.6	17.8	19.5	19.8	19.8	20	19.0	19.5	19.0	19.0	18.6	17.8
16	*18.6	17.8	19.5	19.8	19.8	19	19.0	19.5	19.0	19.0	18.6	17.8
17	18.6	17.8	19.5	19.8	20.5	19	19.0	19.5	19.0	19.0	18.6	17.8
18	18.6	17.8	19.5	19.8	20.5	19.0	19.0	19.5	19.0	18.6	18.6	17.8
19	18.2	17.8	18.6	19.8	19.8	19.0	19.0	19.5	19.0	18.6	18.6	17.8
20	18.2	17.8	18.6	19.8	19.5	19.0	19.0	19.5	19.0	18.6	18.6	17.8
21	18.6	17.8	18.6	19.8	19.5	19.0	19.0	19.5	19.0	18.2	18.6	17.8
22	18.6	17.8	18.6	20.5	19.5	19.0	19.5	19.5	19.0	18.2	18.2	17.8
23	18.2	17.8	18.6	20.5	19.5	19.0	19.0	19.5	19.0	18.2	18.2	17.8
24	18.2	17.8	18.6	20.5	19.5	19.0	18.6	19.5	19.0	18.2	18.2	17.8
25	18.2	17.8	18.6	19.8	19.0	19.0	19.0	19.8	19.0	18.2	18.2	17.8
26	18.2	17.8	18.6	19.8	19.0	19.0	19.0	19.8	19.0	18.6	18.2	17.8
27	18.2	17.8	19.0	19.8	19.0	19.0	19.0	19.5	19.0	18.6	17.8	17.8
28	18.2	17.8	19.0	19.8	19.0	19.0	19.0	19.5	19.0	18.6	17.8	17.8
29	18.2	17.8	19.0	19.8	19.5	19.0	19.0	19.5	19.5	18.6	17.8	17.2
30	18.2	17.8	19.0	19.8	19.5	19.0	19.5	-	20.5	18.6	17.8	17.4
31	17.8	17.8	-	19.8	-	19.0	19.5	-	21.5	-	17.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	18.6	17.0	18.1	28.0	561	1,720
August	17.8	17.8	17.8	27.5	552	1,690
September	19.5	17.8	18.7	28.9	560	1,720
October	20.5	18.6	19.5	30.2	603	1,850
November	20.5	19.0	19.7	30.5	590	1,810
December	21	19.0	19.7	30.5	610	1,870
Calendar year 1935	21	17.0	19.1	29.6	6,980	21,420
January	19.5	18.6	19.0	29.4	590	1,810
February	19.8	19.5	19.5	30.2	566	1,740
March	21.5	19.0	19.2	29.7	596	1,830
April	21.5	18.2	19.0	29.4	571	1,750
May	19.8	17.8	18.6	28.8	576	1,770
June	17.8	17.2	17.8	27.5	533	1,640
Fiscal year 1935-36	21.5	17.0	18.9	29.2	6,910	21,200

*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, one-fifth of a 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 1936.

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

Remarks.- Records excellent except those for Oct. 8-10, 13-18, Dec. 3-18, which were computed on basis of records for all Pearl Harbor Springs stations and are fair. A small pumping plant diverts water above station for irrigation. Surface run-off caused by flood not included in figures given below.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.9	4.3
2.0	6.0
2.1	7.9
2.2	9.9

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.2	6.0	5.1	5.8	7.3	7.5	7.5	7.5	7.3	6.7	6.2	6.2
2	6.2	6.0	5.1	5.7	7.3	7.5	7.5	7.5	7.3	6.9	6.2	6.2
3	6.2	6.0	5.1	5.7	7.3	7.4	7.3	7.7	7.3	6.7	6.4	6.2
4	6.4	6.0	5.1	5.8	7.5	7.4	7.3	7.7	7.3	6.9	6.4	6.0
5	6.4	6.0	5.1	6.0	7.5	7.4	7.3	7.7	7.3	6.7	6.2	6.0
6	6.4	6.0	5.3	6.0	7.3	7.2	7.3	7.7	7.1	6.7	6.2	6.0
7	6.4	6.0	5.5	6.0	7.3	7.2	7.1	7.7	7.1	6.5	6.2	6.2
8	6.4	6.0	5.7	5.8	7.1	7.2	7.1	7.7	7.3	6.7	6.2	6.0
9	6.4	6.0	6.0	5.8	6.9	7.2	6.9	7.7	7.3	6.7	6.0	6.0
10	6.4	6.0	6.0	6.0	7.3	7.2	6.9	7.5	7.3	6.7	6.2	6.0
11	6.4	6.0	6.0	6.0	7.3	7.2	6.9	7.5	7.1	6.7	6.2	6.0
12	6.4	6.0	6.0	6.2	7.1	7.2	6.9	7.5	6.9	6.7	6.2	6.0
13	6.4	6.0	6.2	6.4	7.1	7.2	6.9	7.5	6.9	6.7	6.2	6.0
14	6.4	6.0	6.0	6.6	7.1	7.2	6.9	7.5	6.9	6.7	6.0	6.0
15	6.5	5.7	6.0	6.6	7.1	7.2	6.7	7.5	7.3	6.5	5.8	6.0
16	6.5	5.5	6.0	6.6	7.3	7.1	6.7	7.5	7.3	6.5	6.0	6.0
17	6.5	5.5	6.2	6.8	7.5	7.1	6.7	7.5	7.1	6.5	6.0	5.8
18	6.4	5.5	6.0	6.8	7.5	7.1	6.9	7.3	7.1	6.5	6.0	5.8
19	6.4	5.7	6.0	6.9	7.5	7.1	7.1	7.1	7.1	6.5	6.2	5.8
20	6.4	5.5	5.7	6.9	7.5	7.1	7.1	7.1	7.1	6.5	6.2	5.8
21	6.4	5.5	5.7	7.1	7.5	6.9	6.9	7.1	7.1	6.5	6.2	6.0
22	6.4	5.5	5.8	7.1	7.7	7.3	6.9	7.3	8.0	6.4	6.0	6.0
23	6.4	5.5	5.8	7.1	7.5	7.3	6.9	7.5	8.6	6.4	6.0	6.0
24	6.4	5.5	5.8	7.5	7.7	7.1	6.9	7.5	6.9	6.2	6.0	6.0
25	6.2	5.5	5.7	7.5	7.7	7.5	6.9	7.3	6.7	6.4	6.0	6.0
26	6.2	5.5	5.7	7.3	7.5	7.3	7.1	7.3	6.7	6.4	6.0	6.0
27	6.2	5.5	5.7	7.5	7.5	7.1	7.1	7.1	6.7	6.4	6.0	5.8
28	6.2	5.5	5.7	7.5	7.5	7.1	6.9	7.1	6.7	6.2	6.0	6.0
29	6.4	5.3	5.7	7.3	7.7	7.5	6.9	7.1	6.7	6.2	6.0	5.8
30	6.2	5.5	5.7	7.3	7.5	7.5	7.3	-	6.7	6.2	6.0	5.7
31	6.2	5.3	-	7.3	-	7.5	7.3	-	6.7	-	6.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.5	6.2	6.35	9.82	197	604
August	6.0	5.3	5.73	8.87	178	545
September	6.2	5.1	5.71	8.83	171	526
October	7.5	5.7	6.61	10.2	205	629
November	7.7	6.9	7.39	11.4	222	680
December	7.5	6.9	7.25	11.2	225	690
Calendar year 1935	9.0	5.1	7.20	11.1	2,630	8,060
January	7.5	6.7	7.04	10.9	218	669
February	7.7	7.1	7.44	11.5	216	662
March	8.6	6.7	7.13	11.0	221	678
April	6.9	6.2	6.54	10.1	196	602
May	6.4	5.8	6.10	9.44	189	581
June	6.2	5.7	5.98	9.25	179	550
Fiscal year 1935-36	8.6	5.1	6.60	10.2	2,420	7,420

Pearl Harbor Springs at Kalauao, near Aiea

Location.- Water-stage recorder, lat. 21°23'00", long. 157°56'50", on left bank of Kalauao Stream, a quarter of a mile below Honolulu Plantation pump 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 1936.

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

Remarks.- Records good except those for Mar. 5, 6, May 7-12, 14-17, June 11-25, which were computed on basis of records for all Pearl Harbor Springs stations and are fair. When used for irrigation of sugarcane, Honolulu Plantation pump 6 diverts about 7 million gallons a day 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.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.9	8.1
2.0	11.3
2.2	18.7
2.3	23

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.1	12.7	15.3	11.7	11.0	19.5	20.5	20.5	18.7	12.3	14.2	12.7
2	14.2	12.7	10.3	11.7	14.2	13.8	16.0	21	14.5	12.7	14.5	11.0
3	16.4	15.3	11.7	17.2	17.2	13.4	15.3	20.5	16.0	13.1	17.6	12.0
4	18.0	16.4	11.3	18.0	17.6	13.4	16.8	20.5	16.0	13.1	12.0	12.3
5	12.7	11.0	11.7	18.4	13.7	13.4	18.7	20.5	16	19.5	11.0	10.7
6	16.0	12.3	13.1	18.4	12.7	13.1	13.8	20.5	16	19.5	12.0	14.2
7	17.6	12.3	17.6	13.8	12.3	19.1	14.9	20.5	16.4	19.5	12	16.0
8	12.3	12.3	17.6	10.7	13.8	20.5	15.3	20.5	19.5	19.9	12	10.0
9	13.1	12.0	18.0	10.7	18.7	20.5	12.3	20.5	15.6	19.5	14	10.0
10	13.4	14.5	18.0	10.7	19.5	21	13.1	20.5	15.6	19.5	17	11.3
11	13.8	17.2	18.0	12.3	18.0	21	14.2	18.7	15.6	16.8	13	12
12	13.4	10.7	18.0	18.0	13.1	21	18.7	13.4	15.6	18.0	12	11
13	16.4	12.3	18.0	18.7	12.7	17.2	13.4	13.1	12.7	13.4	11.3	11
14	19.1	12.0	18.0	18.7	12.3	17.2	13.1	13.1	13.1	14.2	11	12
15	20.5	12.3	16.8	19.1	19.5	19.9	13.1	16.0	19.5	14.2	11	10
16	20.5	11.7	11.0	18.7	19.9	13.8	16.4	18.7	14.5	14.5	12	10
17	15.6	13.1	13.1	18.7	19.9	13.4	20.5	13.1	13.8	14.2	17	10
18	14.2	15.6	13.4	19.1	20.5	13.1	20.5	13.1	15.6	16.0	13.4	11
19	13.4	10.0	12.3	19.1	20.5	13.1	20.5	13.4	15.6	19.1	12.0	11
20	15.6	12.0	11.3	19.1	20.5	13.1	16.4	13.4	14.5	12.7	16.0	12
21	17.6	11.7	14.5	19.5	20.5	14.9	15.6	16.0	16.0	14.2	15.6	16
22	12.0	10.7	15.6	19.5	20.5	18.4	14.2	15.6	17.6	14.2	15.3	13
23	13.4	9.4	10.7	19.5	20.5	13.4	13.1	20.5	13.1	12.3	16.4	12
24	13.1	12.0	11.0	17.6	20.5	13.4	13.1	17.2	14.5	12.7	16.8	12
25	13.1	15.3	10.7	12.7	14.9	19.9	14.9	17.2	14.2	18.0	12.6	12
26	13.1	10.3	11.3	14.2	14.2	15.6	16.4	13.1	12.0	18.4	10.7	11.7
27	15.6	10.7	10.7	18.0	14.5	15.3	13.4	15.3	14.2	13.8	10.0	13.4
28	17.2	9.7	14.5	12.0	19.5	15.3	13.4	15.3	13.1	13.4	10.7	17.2
29	11.7	12.0	13.1	11.3	14.2	19.9	13.4	15.6	19.1	12.7	10.7	11.3
30	11.7	12.0	10.7	11.3	14.9	17.6	15.6	-	14.5	11.0	12.0	10.7
31	12.7	14.2	-	11.0	-	19.9	20.5	-	12.3	-	16.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	20.5	11.7	14.9	23.1	460	1,410
August	17.2	9.4	12.5	19.3	386	1,190
September	18.0	10.3	13.9	21.5	417	1,280
October	19.5	10.7	15.8	24.4	489	1,500
November	20.5	11.0	16.7	25.8	502	1,540
December	21	13.1	16.6	25.7	514	1,580
Calendar year 1935	21.5	9.4	15.5	24.0	5,640	17,330
January	20.5	12.3	15.7	24.3	487	1,490
February	21	13.1	17.1	26.5	497	1,530
March	19.5	12.0	15.3	23.7	475	1,460
April	19.9	11.0	15.4	23.8	462	1,420
May	17.6	10.0	13.3	20.6	412	1,260
June	17.2	10.0	12.0	18.6	360	1,100
Fiscal year 1935-36	21	9.4	14.9	23.1	5,460	16,760

Moanalua Stream near Honolulu

Location.- Duplex water-stage recorder, lat. 21°23'30", long. 157°51'10", 4¼ miles from mouth of stream and 5¼ 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 1936.
Average discharge.- 10 years (1926-36), 2.43 million gallons a day (3.76 second-feet).
Extremes.- Maximum discharge during year, 295 million gallons a day (456 second-feet) Sept. 16 (gage height, 4.44 feet) from rating curve extended above 40 million gallons a day based on weir formulas; no flow for several months during year.
1926-36: Maximum discharge, 2,370 million gallons a day (3,670 second-feet) Nov. 18, 1930 (gage height, 11.58 feet), from rating curve extended above 40 million gallons a day based on weir formulas; no flow during dry weather.
Remarks.- Records good for ordinary stages; those for Oct. 22 to Dec. 19, Apr. 15, 16 (computed on basis of records for adjacent streams), and those for high stages are poor. 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 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.0	0.00	.75	1.12
.2	.19	.8	1.47
.4	.52	.9	3.2
.6	.94	1.0	5.6
.7	1.06	1.5	24

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0		0	0	0	0	0		0	0	2.75	0
2	0		0	4.0	0	0	0		0	0	6.7	0
3	0		0	7.6	0	0	0		0	0	1.28	0
4	0		0	2.2	0	0	0		0	0	.83	0
5	0		0	1.18	0	0	0		0	0	.44	0
6	0		9.4	2.0	0	0	0		0	6.5	2.25	0
7	0		1.52	.98	0	.5	0		0	5.2	1.05	0
8	0		.34	.27	0	.4	0		0	.64	1.49	0
9	0		.09	.09	0	.3	0		0	.08	1.09	0
10	0		1.44	.06	0	.06	0		0	.49	.83	0
11	0		.95	.04	0	.04	0		0	.06	.44	0
12	0		.30	1.50	0	.03	0		0	.01	.19	0
13	0		.09	.55	0	.02	0		0	1.26	.09	0
14	0		.06	1.83	0	.4	0		0	5.3	.07	0
15	0		.04	1.06	1.5	.3	0		0	3.0	1.63	0
16	0		14.9	.60	.5	.2	.55		0	4.5	7.6	0
17	0		12.5	.24	.2	.09	.33		0	5.2	1.21	0
18	0		2.4	.11	.1	.06	.24		0	1.25	1.01	0
19	.04		1.06	.09	.5	.04	.03		2.25	.54	.66	0
20	.09		.55	.07	.2	.03	.01		.46	.21	.38	4.5
21	.04		.25	.05	.1	.02	.01		.07	.09	.30	1.36
22	.03		.21	.04	.06	.01	0		.04	.06	.13	.34
23	.01		.12	.03	.04	0	0		.04	.05	.07	.08
24	0		.06	.02	.03	0	0		.04	.04	.06	1.10
25	0		.01	.02	.02	0	0		.03	.05	.04	.63
26	0		0	.01	.01	0	0		.03	.04	.04	2.75
27	0		0	0	0	0	0		.02	.04	.02	5.2
28	0		0	0	0	0	0		0	.03	.02	1.16
29	0		0	0	0	0	0		0	.02	.01	.68
30	0		0	0	0	0	0		0	.31	.01	.25
31	0		-	0	-	0	0		0	-	0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.09	0	0.007	0.011	0.21	0.6
August	0	0	0	0	0	0
September	14.9	0	1.54	2.38	46.3	142
October	7.6	0	.795	1.23	24.6	76
November	1.5	0	.109	.169	3.26	10
December	.5	0	.081	.125	2.50	7.7
Calendar year 1935	204	0	1.77	2.74	646	1,990
January	.55	0	.038	.059	1.17	3.6
February	0	0	0	0	0	0
March	2.25	0	.096	.149	2.98	9.1
April	6.5	0	1.17	1.81	35.0	107
May	7.6	0	1.05	1.62	32.7	100
June	5.2	0	.602	.931	18.0	55
Fiscal year 1935-36	14.9	0	.456	.706	167	511

Kalihi Stream near Honolulu

Location.- Water-stage recorder, lat. 21°22'10", long. 157°50'25", at Kioi Pool, three-eights 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 1936.
Average discharge.- 19 years (1916-20, 1921-36), 4.95 million gallons a day (7.66 second-feet).
Extremes.- Maximum discharge during year, 466 million gallons a day (721 second-feet) Sept. 16 (gage height, 7.38 feet), from rating curve extended above 220 million gallons a day by test on model of station site; minimum, 0.78 million gallons a day (1.21 second-feet) Feb. 28, 29, Mar. 7, 8,
1913-36: Maximum discharge, 10,900 million gallons a day (16,900 second-feet) Nov. 18, 1930 (gage height, 13.81 feet), from rating curve extended above 220 million gallons a day by test on model of station site; minimum, 0.06 million gallons a day (0.09 second-foot) Oct. 22, 1933.
Remarks.- Records good for ordinary stages and fair for high stages; those for Nov. 1-21, Nov. 23 to Dec. 28, May 21 to June 24 were computed on basis of records for streams from the Waiomao to the Kalihi and are poor. Water for domestic use diverted from stream above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.8	0.60	1.4	8.7	2.3	30.5
1.0	2.2	1.7	14.8	2.6	40
1.2	5.1	2.0	22	3.0	54

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.73	2.6	2.65	2.0	2.0	1.3	1.21	1.28	0.90	1.37	49	2.8
2	1.55	6.0	1.82	33.5	5.0	1.2	1.21	1.37	1.46	1.13	15.9	2.2
3	1.46	3.65	1.73	19.5	2.5	1.1	1.21	1.55	1.73	1.05	8.1	2.7
4	1.37	2.7	1.55	8.7	3.3	1.0	1.13	1.73	.97	1.05	5.8	2.5
5	3.6	2.35	5.1	6.4	2.1	1.0	1.21	1.28	.90	6.0	4.9	7.0
6	1.91	2.1	19.0	4.5	1.9	1.1	1.28	1.13	.84	22	10.8	5.0
7	1.64	2.0	5.6	3.65	1.7	4.0	1.21	1.13	.78	14.4	6.3	3.0
8	1.55	2.35	3.1	3.0	1.6	2.0	1.13	1.05	.84	5.4	8.0	2.5
9	1.46	2.0	2.7	2.7	1.6	1.1	1.46	1.05	1.02	4.9	6.6	2.2
10	3.3	9.1	8.9	2.7	1.7	4.5	1.21	1.05	.90	4.3	5.6	2.0
11	6.9	4.3	4.6	2.7	2.0	2.5	1.05	.97	1.05	3.0	4.6	7.0
12	3.35	2.7	3.25	6.2	1.7	1.5	1.05	.97	1.21	2.45	3.8	10
13	2.95	2.7	2.6	4.0	1.5	3.5	1.13	.97	1.21	12.0	3.5	4.5
14	4.8	2.6	2.6	7.3	2.0	6.0	1.05	.90	1.05	11.3	3.8	8.0
15	3.0	2.2	2.35	4.9	8.0	3.0	1.88	.84	.97	5.4	16.1	5.0
16	2.2	2.2	21.5	3.8	3.5	2.5	8.3	.90	.97	7.6	14.9	4.5
17	2.0	1.91	20	3.1	2.5	2.1	6.1	.84	1.34	9.6	7.4	3.0
18	2.9	1.82	5.8	2.85	2.0	1.9	3.25	.84	5.1	5.4	5.8	2.5
19	9.3	1.73	3.8	2.7	4.5	1.7	2.0	2.0	6.1	4.0	5.3	7.0
20	3.25	1.82	3.25	2.45	2.5	1.7	1.64	1.21	2.85	3.25	4.8	20
21	2.45	1.91	3.25	2.45	7.0	1.6	1.46	.97	1.91	3.0	4.5	6.0
22	2.1	1.91	3.0	2.25	1.73	1.5	1.46	.90	1.64	2.6	3.5	4.5
23	2.0	1.93	2.6	2.0	1.4	1.3	1.28	1.05	1.46	3.0	3.3	3.5
24	3.25	3.42	2.35	2.0	1.5	1.2	1.21	.90	1.37	2.95	3.0	4.5
25	4.5	1.82	2.1	1.91	1.5	3.0	1.13	.90	1.28	3.25	2.6	4.0
26	2.85	1.64	2.1	1.82	1.4	2.0	1.13	.84	3.45	2.6	2.4	10.4
27	2.45	1.46	2.2	1.73	1.3	1.6	1.05	.84	2.2	2.35	2.5	7.8
28	2.1	1.46	2.0	1.73	1.1	1.3	1.05	.84	1.46	2.2	3.5	4.5
29	3.25	1.46	1.91	1.64	1.2	1.21	.97	.84	1.28	4.3	3.0	3.65
30	2.45	1.46	1.82	1.55	1.5	1.21	2.65	-	1.28	10.4	2.5	3.25
31	2.7	2.25	-	1.55	-	1.21	1.82	-	1.21	-	2.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	9.3	1.37	2.91	4.50	90.3	277
August	9.1	1.46	2.57	3.98	79.6	244
September	21.5	1.55	4.84	7.49	145	446
October	33.5	1.55	4.75	7.35	147	452
November	8.0	1.1	2.44	3.78	73.2	225
December	6.0	1.0	1.99	3.08	61.8	190
Calendar year 1935	216	1.0	4.71	7.29	1,720	5,280
January	8.3	.97	1.77	2.74	54.9	169
February	2.0	.84	1.07	1.66	31.1	96
March	6.1	.78	1.64	2.54	50.7	156
April	22	1.05	5.41	8.37	162	498
May	49	2.4	7.25	11.2	225	669
June	20	2.0	5.18	8.01	156	477
Fiscal year 1935-36	49	.78	3.49	5.40	1,280	3,920

Nuuanu Stream below reservoir 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 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 1936.
Average discharge.- 17 years (1917-20, 1922-36), 5.38 million gallons a day (8.32 second-feet).
Extremes.- Maximum discharge during year, 79 million gallons a day (122 second-feet) Sept. 18 (gage height, 2.60 feet); minimum, 1.49 million gallons a day (2.26 second-feet) Mar. 31.
1913-36: Maximum discharge, 1,600 million gallons a day (2,480 second-feet) Jan. 16, 1921 (gage height, 8.74 feet, from floodmarks), from rating curve based on weir formulas: minimum, 0.06 million gallons a day (0.09 second-foot) Sept. 10, 11, 1925.
Remarks.- Records good for ordinary stages; those for July 1-10, Aug. 8-23 (computed on basis of records for streams between the Waiomao and the Kalihi, and those for high stages are poor. Reservoirs 2, 3, and 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.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.6	1.70
.8	2.7
1.0	3.8
1.1	4.9
1.2	6.9
1.5	16

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.5	3.5	3.3	4.4	4.6	4.5	3.45	2.6	2.15	2.0	12.2	6.1
2	4.3	4.2	3.2	6.8	5.9	4.1	3.4	2.6	2.75	1.85	7.1	6.1
3	4.1	3.65	3.2	11.7	5.1	4.0	3.3	2.7	2.15	1.85	5.7	6.3
4	4.0	3.4	3.1	6.5	5.1	3.75	3.25	2.6	1.95	1.95	5.3	6.7
5	4.5	3.25	3.0	5.7	4.8	3.5	3.25	2.45	2.0	3.65	5.3	7.1
6	4.3	3.25	11.5	5.7	4.6	2.7	3.2	2.4	2.0	4.0	8.5	6.1
7	4.2	3.2	5.3	5.5	4.6	3.5	3.15	2.25	1.95	3.6	6.1	5.9
8	4.0	3.5	4.6	5.3	4.6	2.8	3.05	2.2	2.0	2.9	6.5	5.7
9	3.8	3.3	4.4	5.1	4.6	2.8	3.1	2.2	2.0	2.75	6.1	5.5
10	3.8	5.0	6.2	5.1	4.6	3.8	3.0	2.15	1.70	2.65	5.9	5.5
11	4.2	4.0	5.3	5.1	4.6	3.1	2.9	2.15	1.75	2.3	5.5	6.1
12	3.7	3.9	4.6	5.9	4.4	7.7	2.9	2.1	1.80	2.15	5.3	5.9
13	3.5	4.5	4.4	9.0	4.4	4.8	2.9	2.1	1.95	5.0	5.3	5.7
14	4.7	4.0	4.4	11.6	4.4	4.5	2.85	2.05	1.90	6.3	5.9	5.9
15	3.8	3.9	4.4	6.5	5.7	4.0	3.0	2.05	2.05	3.6	13.7	5.7
16	3.45	3.8	9.2	6.1	4.8	3.9	4.5	2.05	1.90	4.8	15.3	5.5
17	3.4	3.7	15.0	6.1	6.1	3.75	3.8	2.05	2.2	4.5	8.3	5.3
18	3.45	3.7	6.5	5.9	5.3	3.7	2.85	2.1	7.1	3.5	7.8	5.3
19	5.5	3.5	5.7	5.7	5.9	3.7	2.7	2.35	4.0	3.3	7.3	5.7
20	3.7	3.4	5.3	5.7	4.8	3.6	2.6	2.15	2.7	3.2	7.3	8.8
21	3.5	3.3	5.3	5.7	4.6	3.55	2.6	2.05	2.5	3.1	7.3	6.5
22	3.4	3.3	5.7	5.5	4.4	3.55	2.6	2.05	2.35	3.3	7.1	5.9
23	3.3	3.3	4.9	5.5	4.4	3.5	2.55	2.05	2.3	3.25	6.9	5.5
24	3.65	3.75	4.9	5.5	4.4	3.5	2.5	2.0	2.3	3.25	6.9	5.9
25	3.9	3.4	4.9	5.1	4.3	3.95	2.5	2.1	2.15	3.45	6.9	5.5
26	3.45	3.3	4.9	4.9	4.2	3.6	2.45	2.0	2.35	3.3	7.9	5.5
27	3.5	3.3	4.9	4.9	4.2	3.7	2.45	1.90	2.4	3.15	5.8	5.5
28	3.3	3.25	4.8	4.9	4.1	3.6	2.5	1.90	2.1	3.1	6.7	5.3
29	3.7	3.2	4.6	4.8	4.4	3.6	2.35	1.90	1.90	3.2	6.5	5.3
30	3.3	3.2	4.6	4.8	4.4	3.5	3.35	-	1.90	4.0	6.3	5.5
31	3.55	3.2	-	4.6	-	3.45	2.7	-	1.85	-	6.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.5	3.3	3.85	5.96	119	367
August	5.0	3.2	3.59	5.55	111	341
September	15.0	3.0	5.40	8.36	162	497
October	11.7	4.4	5.99	9.27	186	570
November	6.1	4.1	4.74	7.33	142	437
December	7.7	2.7	3.80	5.88	118	361
Calendar year 1935	129	2.7	6.27	9.70	2,290	7,020
January	4.5	2.35	2.96	4.58	91.7	281
February	2.7	1.90	2.18	3.37	63.2	194
March	7.1	1.70	2.33	3.61	72.1	221
April	6.3	1.85	3.30	5.11	99.0	304
May	15.3	5.3	7.26	11.2	225	691
June	8.8	5.3	5.91	9.14	177	544
Fiscal year 1935-36	15.3	1.70	4.29	6.64	1,570	4,810

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 Board of Water Supply levels.
Drainage area.- 1.1 square miles.
Records available.- August 1925 to June 1936. May 1913 to January 1921 at station 200 feet upstream.
Average discharge.- 17 years (1913-20, 1926-36), 2.84 million gallons a day (4.39 second-feet).
Extremes.- Maximum discharge during year, 275 million gallons a day (425 second-feet) Aug. 10 (gage height, 3.49 feet) from rating curve extended above 35 million gallons a day by test on model of station site; minimum, 0.36 million gallons a day (0.56 second-foot) Jan. 12, 13.
1913-21, 1925-36: 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), from rating curve extended above 40 million gallons a day; minimum discharge, about 0.05 million gallons a day (0.08 second-foot) Mar. 16, 22, 1926.
Remarks.- Records good for ordinary stages; those for Sept. 7-18, Nov. 1-19, (computed on basis of records for all streams from the Waiomao to the Kalihi), and those for high stages are fair. No diversions above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.25	0.8	5.6
.2	.62	1.0	9.7
.4	1.70	1.2	15.8
.6	3.2	1.4	23

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.06	2.8	1.85	0.91	1.0	0.72	0.47	0.72	0.47	0.47	10.7	1.23
2	.91	4.1	1.01	4.7	3.0	.58	.47	.67	4.1	.47	4.2	1.06
3	.86	2.6	1.01	14.0	1.2	.55	.47	.84	.91	.47	2.3	1.65
4	.77	1.92	.86	4.5	1.2	.51	.47	.82	.58	.47	1.58	1.58
5	4.2	1.52	1.99	3.2	1.0	.51	.47	.67	.51	1.84	1.40	3.1
6	1.92	1.32	20	1.92	.9	.47	.51	.58	.74	2.7	9.3	2.75
7	1.40	1.23	2.5	1.58	.8	1.69	.51	.55	.55	1.99	4.5	1.46
8	1.23	2.6	2.0	1.40	.7	.62	.47	.55	.51	.77	5.3	1.29
9	1.11	1.29	1.9	1.35	.7	.58	.55	.55	.81	1.21	3.7	1.01
10	2.9	13.7	5.0	1.46	.8	2.45	.44	.51	.47	1.27	2.5	.96
11	3.2	4.1	2.5	2.0	.9	1.06	.40	.51	.51	.86	2.0	1.55
12	1.70	2.45	1.6	3.2	.8	.77	.40	.51	.78	.62	1.70	1.35
13	1.84	4.1	1.4	2.15	.7	2.2	.40	.51	.86	8.0	1.58	.96
14	3.55	2.6	1.6	3.35	1.0	2.55	.58	.47	.67	5.2	1.98	2.2
15	1.64	1.92	1.3	2.3	3.0	1.29	.99	.47	.58	2.5	13.2	1.29
16	1.23	1.92	3.0	2.2	1.5	.96	1.66	.47	.55	5.2	10.3	1.72
17	1.39	1.52	7.0	2.45	1.0	.82	7.2	.47	1.41	5.0	4.6	1.23
18	2.75	1.40	2.5	2.45	1.0	.72	1.23	.47	5.6	2.4	4.2	1.72
19	5.4	1.29	*1.78	1.90	2.5	.55	.86	.63	3.65	1.64	2.9	4.9
20	2.2	1.40	1.52	.86	*1.06	.55	.72	.55	1.70	1.35	2.7	7.6
21	1.52	1.46	1.98	.82	.91	.55	.72	.47	1.11	1.17	2.6	3.55
22	1.29	1.35	4.2	.82	.77	.55	.62	.44	.86	1.11	2.15	2.15
23	1.23	1.29	1.52	.77	.62	.55	.62	.44	.67	1.38	2.45	1.70
24	3.35	2.3	1.35	.72	.77	.55	.58	.44	.62	1.06	1.92	1.70
25	3.65	1.29	1.23	.67	.62	1.77	.58	.44	.55	1.29	1.85	1.52
26	2.6	1.11	1.11	.77	.55	.82	.55	.40	1.40	1.01	1.58	1.70
27	2.6	1.01	1.35	.86	.55	.67	.51	.36	.83	.91	1.58	2.1
28	1.70	1.01	1.17	.86	.55	.58	.71	.36	.58	.86	1.92	1.74
29	3.6	.96	1.06	.86	.81	.55	.51	.36	.55	1.16	1.46	3.05
30	2.15	.91	.96	.82	1.11	.51	2.2	-	.51	2.85	1.29	1.92
31	3.85	1.60	-	.82	-	.47	.96	-	.51	-	1.40	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.4	0.77	2.22	3.43	68.8	211
August	13.7	.91	2.26	3.50	70.1	215
September	20	.86	2.61	4.04	78.2	240
October	14.0	.67	2.15	3.33	66.7	205
November	3.0	.55	1.07	1.66	32.0	98
December	2.55	.47	.894	1.38	27.7	85
Calendar year 1935	81	.42	2.28	3.53	833	2,560
January	7.2	.40	.898	1.39	27.8	85
February	.84	.36	.525	.812	15.2	47
March	5.6	.47	1.10	1.70	34.2	105
April	8.0	.47	1.91	2.96	57.2	176
May	13.2	1.29	3.58	5.54	111	340
June	7.6	.96	2.06	3.19	61.7	189
Fiscal year 1935-36	20	.36	1.78	2.75	651	2,000

*Partly 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 1936.
Average discharge.- 17 years (1913-20, 1926-36), 2.89 million gallons a day (4.47 second-feet).
Extremes.- Maximum discharge during year, 81 million gallons a day (125 second-feet) Aug. 10 (gage height, 2.70 feet), from rating curve extended above 11 million gallons a day by test on model of station site; minimum, 0.72 million gallons a day (1.11 second-feet) Apr. 2, 3.
1913-21, 1925-36: Maximum gage height, 10.4 feet, Jan. 16, 1921, at former site and datum, from floodmarks (discharge, estimated, 2,000 million gallons a day or 3,090 second-feet), from rating curve extended above 37 million gallons a day; minimum discharge, 0.4 million gallons a day (0.6 second-foot) June 7, 8, 1926.
Remarks.- Records good for ordinary stages; those for Dec. 23, 24, May 15 to June 22, (computed on basis of records for streams from the Waiomao to the Kalihi), and those for high stages are fair. Water is diverted about 1,500 feet above station by East Manoa Ditch.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Apr. 5

0.2	0.61	1.0	8.1
.4	1.65	1.2	10.9
.6	3.55	1.4	14.8
.8	5.6		

Apr. 6 to June 30

0.2	0.52	1.0	7.2
.4	1.65	1.2	9.4
.6	3.15	1.4	12.2
.8	5.1	1.6	15.9

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.4	3.55	2.05	1.36	1.52	1.57	1.50	1.57	1.04	0.88	13.0	1.4
2	2.25	4.2	1.22	3.95	3.8	1.43	1.43	1.50	3.3	.77	4.2	1.2
3	2.15	2.9	1.22	10.1	1.50	1.43	1.43	1.78	1.22	.77	1.86	1.5
4	2.1	2.4	1.04	3.1	1.79	1.36	1.43	1.78	.93	.77	1.46	1.5
5	3.8	2.15	2.35	2.15	1.29	1.29	1.43	1.50	.88	2.45	1.47	3.0
6	2.15	2.1	12.5	1.71	1.22	1.36	1.43	1.43	1.04	4.3	6.1	2.0
7	1.93	2.1	2.85	1.64	1.15	2.65	1.50	1.43	.88	3.35	2.6	1.5
8	1.78	4.1	1.85	1.57	1.15	1.43	1.50	1.43	.83	1.03	4.5	1.4
9	1.71	2.35	1.71	1.50	1.15	1.43	1.71	1.36	.88	2.5	2.6	1.2
10	2.55	7.7	4.4	1.57	1.22	3.25	1.43	1.29	.88	1.86	1.86	1.1
11	3.0	3.95	2.15	2.3	1.36	1.71	1.36	1.29	.99	1.22	1.46	1.6
12	2.0	2.55	1.71	3.0	1.22	1.43	1.29	1.29	1.10	.98	1.28	1.4
13	2.0	3.1	1.57	1.96	1.22	3.0	1.50	1.29	1.15	9.4	1.22	1.1
14	4.2	2.0	1.71	2.9	1.43	2.85	1.57	1.29	.99	6.1	1.34	2.0
15	2.5	*1.50	1.50	1.62	3.25	1.71	2.4	1.29	.88	1.93	11	1.5
16	2.15	*1.43	3.65	1.36	1.64	1.57	3.7	1.29	.99	3.0	8.0	1.7
17	2.35	1.36	6.8	1.56	1.50	1.57	8.1	1.29	1.37	4.4	4.5	1.4
18	3.1	1.22	2.15	1.36	1.50	1.50	2.35	1.29	2.95	1.71	3.5	2.0
19	5.1	1.15	1.85	1.36	3.1	1.50	1.78	1.64	2.05	1.53	3.0	4.5
20	2.65	1.29	1.85	1.29	1.57	1.57	1.57	1.43	1.22	1.40	2.5	7.0
21	2.1	1.29	2.35	1.29	1.50	1.50	1.50	1.43	1.04	1.34	2.3	4.0
22	1.93	1.15	4.0	1.22	1.57	*1.50	1.57	1.36	.99	1.22	2.1	2.5
23	1.78	1.21	1.85	1.22	1.50	1.50	1.50	1.29	.93	1.34	2.5	1.93
24	4.1	2.25	1.78	1.29	1.64	1.50	1.50	1.22	.93	1.21	1.8	1.93
25	4.2	1.15	1.71	1.29	1.57	*2.85	1.43	1.22	.93	1.17	1.7	1.79
26	2.75	1.10	1.57	1.29	1.50	1.71	1.43	1.22	1.67	.98	1.5	2.25
27	3.1	1.10	1.64	1.22	1.43	1.50	1.43	1.10	1.09	.98	1.5	2.25
28	2.15	1.04	1.43	1.15	1.36	1.50	2.6	.83	.88	.98	2.0	1.65
29	3.1	1.10	1.36	1.15	1.71	1.50	1.43	.88	.88	1.73	1.8	1.65
30	2.35	1.04	1.36	1.15	1.93	1.50	3.6	-	.83	4.2	1.5	1.46
31	4.7	1.84	-	1.15	-	1.50	2.0	-	.83	-	1.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.1	1.71	2.71	4.19	84.1	258
August	7.7	1.04	2.17	3.36	67.4	207
September	12.5	1.04	2.51	3.88	75.2	231
October	10.1	1.15	1.96	3.03	60.8	187
November	3.8	1.15	1.64	2.54	49.3	151
December	3.25	1.29	1.73	2.68	53.7	165
Calendar year 1935	18.3	1.03	2.16	3.34	787	2,420
January	8.1	1.29	1.95	3.02	60.4	185
February	1.78	.83	1.35	2.09	39.0	120
March	3.3	.83	1.18	1.83	36.6	112
April	9.4	.77	2.18	3.37	65.5	201
May	13.0	1.22	3.15	4.87	97.8	300
June	7.0	1.1	2.05	3.17	61.4	188
Fiscal year 1935-36	13.0	.77	2.05	3.17	751	2,300

*Partly estimated.

East Manoa Ditch near Honolulu

Location.- Water-stage recorder, lat. 21°19'50", long. 157°48'05", 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 Board of Water Supply levels.

Records available.- May 1915 to December 1916, January 1918 to January 1921, August 1925 to June 1936.

Average discharge.- 10 years (1926-36), 0.77 million gallons a day (1.19 second-feet).

Extremes.- Maximum discharge during year, 7.6 million gallons a day (11.8 second-feet) Mar. 2 (gage height, 1.28 feet); minimum, 0.06 million gallons a day (0.09 second-foot) Feb. 27.

1915-16, 1918-21, 1925-36: 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 that were estimated, 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.38	0.43	0.93	0.64	0.50	0.36	0.29	0.18	0.76	0.46	3.9	0.88
2	.36	.46	.64	.83	.60	.34	.29	.18	1.55	.43	1.99	.80
3	.38	.38	.72	1.25	.46	.34	.29	.20	1.10	.43	1.45	.97
4	.38	*.38	.64	.88	.50	.34	.27	.20	.60	.46	1.20	.88
5	.46	†.34	.82	.68	.41	.31	.27	.16	.53	.98	1.20	1.28
6	.38	*.29	2.3	.64	.41	.27	.27	.16	.73	2.6	1.99	1.30
7	.38	.29	.97	.60	.41	.37	.27	.16	.53	2.35	1.50	1.01
8	.38	.36	.76	.60	.41	.27	.27	.16	.50	.93	1.92	.97
9	.38	.31	.76	.60	.41	.27	.29	.16	.53	1.55	1.60	.84
10	.41	.46	1.06	.60	.41	.40	.29	.14	.43	1.60	1.45	.80
11	.43	.29	.80	.64	.41	.29	.27	.14	.46	1.01	1.20	1.15
12	*.38	.25	.68	.72	.38	.27	.27	.14	.53	.72	1.06	1.30
13	.38	.27	.64	.64	.38	.36	.29	.14	.53	5.3	1.01	1.01
14	.41	.27	.64	.72	.38	.36	.29	.14	.50	3.4	1.08	1.30
15	.34	.29	.60	.60	.53	.29	.38	.14	.46	1.66	2.35	1.11
16	.31	.53	.72	.57	.38	.27	.49	.14	.50	1.90	1.99	1.25
17	.31	.64	1.41	.57	.36	.27	.61	.12	.68	2.55	1.50	1.11
18	.34	.60	.72	.53	.36	.27	.29	.12	1.55	1.45	1.45	1.16
19	.38	.60	.60	.53	.53	.27	.25	.12	1.20	1.11	1.20	1.58
20	.31	.64	.64	.46	.36	.27	.22	.10	.72	.97	1.06	2.4
21	.31	60	.76	.46	.36	.27	.20	.08	.60	.93	.93	1.60
22	.31	.60	.97	.46	.36	.27	.20	.08	.53	.88	.76	1.28
23	.36	.60	.76	.46	.36	.27	.20	.08	.53	1.11	.76	1.16
24	.46	†1.0	.72	.46	.36	.27	.20	.08	.53	.84	.80	1.11
25	.50	†.80	.68	.46	.36	.36	.20	.08	.50	1.06	.88	1.01
26	.43	†.80	.68	.46	.36	.31	.18	.08	.67	.80	.88	1.11
27	.43	†.74	.72	.46	.36	.29	.18	.18	.68	.80	.97	1.06
28	.38	†.72	.68	.46	.36	.29	.25	.41	.50	.76	1.11	.97
29	.46	.60	.64	.50	.38	.29	.18	.44	.50	1.30	.93	.93
30	.41	.60	.64	.50	.38	.29	.33	-	.46	2.15	.84	.88
31	.46	.84	-	.50	-	.29	.22	-	.46	-	.93	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.50	0.31	0.387	0.599	12.0	37
August	1.0	.25	.515	.797	16.0	49
September	2.3	.60	.810	1.25	24.3	75
October	1.25	.46	.596	.922	18.5	57
November	.60	.36	.408	.631	12.2	38
December	.40	.27	.303	.469	9.39	29
Calendar year 1935	2.3	.25	.674	1.04	246	756
January	.61	.18	.274	.424	8.50	26
February	.44	.08	.156	.241	4.51	14
March	1.55	.43	.656	1.01	20.4	62
April	5.3	.43	1.42	2.20	42.5	130
May	3.9	.76	1.35	2.09	41.9	129
June	2.4	.80	1.14	1.76	34.2	105
Fiscal year 1935-36	5.3	.08	.668	1.03	244	751

*Partly estimated.
†Estimated.

62796 O—38——4

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 Board of Water Supply levels.
Drainage area.- 1.2 square miles.
Records available.- June 1926 to June 1936. April 1912 to September 1913, above present site and just below Mahoe Springs.
Average discharge.- 10 years (1926-36), 1.37 million gallons a day (2.12 second-feet).
Extremes.- Maximum discharge recorded during year, 70 million gallons a day (108 second-feet) Sept. 6 (gage height, 3.14 feet), from rating curve extended above 8 million gallons a day by test on model of station site; minimum, 0.16 million gallons a day (0.25 second-foot) Jan. 10, 11.
1912-13, 1926-36: Maximum discharge, 805 million gallons a day (1,250 second-feet) Apr. 11, 1930 (gage height, 7.75 feet, from floodmarks), from rating curve based on weir formulas; minimum, 0.09 million gallons a day (0.14 second-foot) Dec. 7-13, 20, 21, 1933.
Remarks.- Records good for ordinary stages; those for Jan. 12-30, Apr. 19 to May 14 (computed on basis of records for all streams between the Waiomao and the Kalihi, and those for high stages are poor. A 2-inch pipe diverts water from stream above station.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Dec. 7

1.0	0.12	1.4	1.98	1.8	7.4
1.1	.32	1.5	2.85	1.9	9.7
1.2	.70	1.6	4.0	2.0	12.4
1.3	1.22	1.7	5.5		

Dec. 8 to June 30

1.0	0.08	1.4	1.76	1.8	7.4
1.1	.28	1.5	2.7	1.9	9.7
1.2	.60	1.6	3.9	2.0	12.5
1.3	1.10	1.7	5.5		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.30	0.82	0.36	0.32	0.36	0.40	0.20	0.34	0.54	0.31	8.0	0.70
2	.30	1.55	.32	3.45	.81	.40	.20	.34	1.67	.28	4.0	.65
3	.28	.75	.32	5.6	.40	.40	.18	.31	.31	.28	1.5	.65
4	.30	.70	.32	1.73	.40	.40	.18	.42	.26	.26	1.0	.60
5	.37	.66	.32	.62	.40	.40	.18	.38	.24	1.41	.8	.92
6	.32	.62	8.2	.62	.40	.36	.18	.34	.24	3.12	1.0	.70
7	.32	.62	9.2	.66	.40	.54	.18	.34	.24	3.85	.9	.70
8	.32	.70	.55	.70	.40	.26	.18	.34	.24	.50	1.0	.60
9	.32	.62	.51	.70	.40	.26	.18	.31	.24	.49	.9	.60
10	.30	1.99	1.04	.70	.40	.26	.16	.31	.26	.68	1.0	.57
11	.30	1.88	.66	.66	.40	.26	*.16	.31	.26	.50	.8	1.07
12	.30	.75	.66	1.20	.40	.26	.16	.28	.24	.50	.7	1.39
13	.32	.70	.66	.70	.36	.26	.16	.28	.24	6.9	.7	.60
14	1.17	.80	.66	.91	.36	.24	.5	.26	.24	5.7	1.0	.76
15	.40	.70	.62	.66	.94	.24	1.0	.26	.24	1.36	11.0	.60
16	.40	.70	.84	.66	.32	.24	2.0	.24	.24	1.68	6.6	.60
17	.40	.70	1.43	.62	.32	.24	5.0	.22	.24	3.45	2.3	.60
18	.36	.66	.66	.62	.32	.24	.8	.22	.60	1.23	1.91	.57
19	.62	.62	.59	.59	.36	.26	.5	.22	.56	1.0	1.50	1.44
20	.43	.59	.59	.59	.36	.26	.45	.22	.38	.8	1.30	8.9
21	.40	.59	.59	.55	.36	.24	.4	.22	.34	.7	1.23	2.25
22	.40	.51	1.22	.51	.36	.24	.35	.20	.31	.6	1.23	.95
23	.40	.47	.59	.47	.40	.24	.35	.20	.34	.7	1.10	.85
24	.63	.43	.51	.43	.40	.22	.3	.20	.34	.6	1.10	.90
25	.62	.43	.51	.43	.40	.22	.3	.20	.34	.7	1.05	.90
26	.43	.43	.47	.43	.43	.22	.25	.20	.34	.6	1.00	1.18
27	.43	.40	.43	.43	.43	.22	.25	.20	.34	.6	.95	1.48
28	.47	.40	.43	.40	.43	.22	.35	.20	.34	.6	.90	.95
29	.43	.40	.40	.40	.40	.22	.25	.20	.34	1.0	.80	1.14
30	.47	.36	.36	.40	.40	.20	.45	-	.34	2.0	.75	.90
31	1.02	.36	-	.40	-	.20	.38	-	.34	-	.72	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1.17	0.28	0.436	0.675	13.5	42
August	1.99	.36	.707	1.09	21.9	67
September	9.2	.32	1.13	1.75	34.0	104
October	5.6	.32	.876	1.36	27.2	83
November	.94	.32	.417	.645	12.5	38
December	.54	.20	.278	.430	8.62	26
Calendar year 1935	49	.20	1.10	1.70	400	1,230
January	5.0	.16	.522	.808	16.2	50
February	.42	.20	.268	.415	7.76	24
March	1.67	.24	.361	.559	11.2	34
April	6.9	.26	1.41	2.18	42.4	130
May	11.0	.7	1.89	2.92	58.7	180
June	8.9	.57	1.16	1.79	34.7	107
Fiscal year 1935-36	11.0	.16	.789	1.22	289	885

*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 Board of Water Supply levels.
Drainage area.- 1.0 square mile.
Records available.- June 1926 to June 1936. April 1911 to December 1912, at highway bridge below present site.
Average discharge.- 10 years (1926-36), 1.22 million gallons a day (1.89 second-feet).
Extremes.- Maximum discharge during year, 78 million gallons a day (121 second-feet) Oct. 2 (gage height, 3.28 feet), from rating curve extended above 5 million gallons a day by test on model of station site; minimum, 0.01 million gallons a day (0.02 second-foot) Feb. 29.
1911-12, 1926-36: Maximum discharge, 461 million gallons a day (713 second-feet) Apr. 11, 1930 (gage height, 6.27 feet), from rating curve based on weir formulas; no flow in extremely dry weather.
Remarks.- Records good for ordinary and medium stages; those for Dec. 29, 30, Apr. 23 to May 1 (computed on basis of records for all streams from the Pukele to the Kalihi) and those for very high stages are poor. Board of Water Supply diverts water from tunnels in drainage area.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.0	0.02	1.5	1.70
1.1	.09	1.6	2.6
1.2	.26	1.7	3.8
1.3	.56	1.8	5.3
1.4	1.04	2.0	9.4

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.15	1.40	0.58	0.19	0.12	0.11	0.04	0.23	1.28	0.28	9.0	0.33
2	.11	2.15	.21	4.5	.75	.07	.03	.15	2.05	.12	8.0	.26
3	.10	1.04	.23	7.8	.30	.05	.07	.48	1.12	.09	2.2	.39
4	.08	.83	.12	2.85	1.19	.05	.04	.61	.48	.08	1.10	.33
5	.70	.36	.29	1.18	.36	.04	.03	.23	.33	2.1	.78	1.16
6	.28	.23	7.2	.78	.26	.03	.03	.14	.45	7.6	3.85	.78
7	.15	.21	1.24	.42	.19	.94	.03	.11	.33	9.4	1.85	.36
8	.12	.92	.56	.30	.17	.23	.03	.09	.19	2.1	3.4	.33
9	.09	.45	.56	.21	.12	.12	.21	.08	.15	1.76	2.2	.21
10	.19	1.19	1.70	.17	.12	.78	.14	.07	.11	1.70	1.28	.19
11	.64	2.1	.80	.67	.15	.36	.06	.05	*.10	.88	.78	1.36
12	.26	.56	.39	1.42	.11	.19	.04	.04	.19	.48	.56	2.7
13	.19	.56	.26	.73	.10	.56	.06	.03	.28	8.3	.39	.64
14	2.55	.48	.30	1.20	.17	1.14	.10	.03	.21	8.6	.33	1.35
15	.78	.26	.21	.64	1.46	.36	.44	.03	*.12	1.94	9.1	.73
16	.36	.21	.69	.42	.48	.19	1.86	.03	.12	1.15	6.4	.64
17	.30	.15	1.63	.82	.36	.12	7.3	.02	.48	4.0	1.94	.42
18	.26	.12	.48	.36	.30	.10	1.28	.03	1.24	1.28	1.72	.36
19	1.27	.11	.28	.28	.70	.11	.60	.16	1.17	.78	1.10	2.65
20	.42	.12	.21	.21	.28	.09	.33	.17	.59	.45	.73	9.1
21	.23	.11	.19	.15	1.18	.07	.21	.09	.28	.30	.66	2.45
22	.17	.09	1.29	.14	.17	.05	.17	.07	.26	.23	.45	1.04
23	.14	.08	.30	.11	.12	.07	.12	.05	.17	.20	.42	.60
24	.81	.26	.17	.10	.14	.05	.11	.05	.15	.17	.33	.78
25	1.29	.09	.14	.08	.14	.45	.09	.04	.12	.16	.33	.73
26	.52	.07	.11	.07	.10	.21	.07	.03	.63	.14	.28	.90
27	.52	.06	.16	.06	.09	.12	.06	.02	.76	.13	.30	1.49
28	.28	.05	.12	.05	.08	.07	.17	.02	.28	.13	.45	.60
29	.71	.05	.08	.03	.08	.06	.09	1.03	.15	.15	.42	.90
30	.45	.05	.07	.03	.11	.06	1.01	-	.12	1.0	.30	.45
31	1.58	.34	-	.02	-	.05	.64	-	.11	-	.33	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	2.55	0.08	0.506	0.783	15.7	48
August	2.15	.05	.474	.733	14.7	45
September	7.2	.07	.686	1.06	20.6	63
October	7.8	.02	.838	1.30	26.0	80
November	1.46	.08	.330	.511	9.90	30
December	1.14	.03	.223	.345	6.90	21
Calendar year 1935	38	.02	.868	1.34	317	971
January	7.3	.03	.499	.772	15.5	47
February	1.03	.02	.144	.223	4.18	13
March	2.05	.10	.452	.699	14.0	43
April	9.4	.08	1.86	2.88	55.7	171
May	9.1	.28	1.97	3.05	61.0	187
June	9.1	.19	1.14	1.76	34.2	105
Fiscal year 1935-36	9.4	.02	.760	1.18	278	853

*Partly estimated.

Kahaluu Stream near Heeia

Location.- Water-stage recorder, lat. 21°26'20", long. 157°51'05", 40 feet above intake of Libby Ditch, half a mile above forest-reserve boundary, and 3.5 miles northwest of Heeia post office. Zero of gage is 357.22 feet above mean sea level, by Wright, Harvey & Wright Engineering Co. levels.

Drainage area.- 0.4 square mile.

Records available.- October 1935 to June 1936.

Extremes.- Maximum and minimum uncertain due to loss of records.

Remarks.- Records good except those for Jan. 9-23, Feb. 22 to Mar. 11, which were computed on basis of records for Waihee Stream and are fair. No diversion above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.2	1.38
.3	2.65
.4	4.2
.5	6.0
.6	8.0
.7	10.2

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1				-	3.2	3.2	3.35	3.85	2.8	2.8	7.0	2.8
2				-	3.35	3.2	3.35	4.0	2.9	2.8	3.7	2.9
3				-	3.2	3.2	3.35	4.2	3.1	2.8	3.2	2.9
4				-	3.2	3.2	3.35	4.2	3.0	2.8	3.05	2.9
5				-	3.2	3.2	3.35	4.2	3.0	4.3	3.05	3.05
6				-	3.2	3.2	3.35	4.3	3.0	5.4	3.35	2.9
7				-	3.2	4.6	3.35	4.3	3.0	4.6	3.2	2.65
8				-	3.2	3.55	3.35	4.3	3.0	3.05	3.2	2.65
9				-	3.2	3.35	3.5	4.3	3.0	3.05	3.35	2.65
10				-	3.55	3.55	3.5	4.2	3.0	2.9	3.35	2.5
11				-	3.35	3.35	3.4	4.2	2.9	2.8	3.35	2.9
12				-	3.35	3.2	3.4	4.2	2.9	2.8	3.35	2.9
13				-	3.55	3.2	3.4	4.0	2.9	2.9	3.35	2.8
14				4.1	3.55	3.2	3.3	4.0	2.9	2.9	3.35	2.8
15				4.3	3.95	3.2	3.3	3.85	2.9	2.9	3.35	2.65
16				3.7	3.35	3.2	4.5	3.85	2.9	2.8	3.2	2.65
17				3.55	3.7	3.35	8.0	3.85	2.9	3.05	3.05	2.8
18				3.55	3.55	3.35	4.0	3.7	3.2	2.9	2.9	2.8
19				3.55	3.55	3.55	3.5	3.7	3.2	2.8	2.9	2.9
20				3.55	3.35	3.55	3.4	3.7	3.05	2.8	2.9	3.2
21				3.35	3.35	3.7	3.3	3.55	2.9	2.8	2.9	2.9
22				3.35	3.35	3.7	3.2	3.5	2.9	2.8	2.9	2.8
23				3.2	3.35	3.7	3.1	3.5	2.9	3.35	2.9	2.8
24				3.8	3.35	3.85	3.05	3.5	2.9	3.4	2.9	2.65
25				3.35	3.35	3.85	3.05	3.6	2.9	3.2	2.9	2.65
26				3.35	3.35	3.85	3.05	3.4	2.9	3.05	2.9	2.8
27				3.35	3.35	3.7	3.2	3.2	2.9	3.05	2.9	2.9
28				3.35	3.2	3.7	3.2	3.0	2.9	3.05	3.55	2.9
29				3.35	3.2	3.55	3.35	3.0	2.9	3.2	2.9	2.9
30				3.35	3.2	3.35	3.7	-	2.9	3.55	2.9	2.9
31				3.3	-	3.35	3.7	-	2.8	-	2.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	-	-	-	-	-	-
October 14-31	4.3	3.2	3.52	5.45	63.4	195
November	3.95	3.2	3.36	5.20	101	309
December	4.6	3.2	3.47	5.37	108	331
Calendar year						
January	8.0	3.05	3.55	5.49	110	337
February	4.3	3.0	3.83	5.93	111	341
March	3.2	2.8	2.95	4.56	91.4	280
April	5.4	2.8	3.15	4.87	94.6	290
May	7.0	2.8	3.25	5.03	101	309
June	3.2	2.5	2.82	4.36	84.5	259
The period					865	2,650

*Partly estimated.

Waihee Stream near Heeia

Location.- Water-stage recorder, lat. 21°27'05", long. 157°51'35", 70 feet above intake of Kihe Ditch, 120 feet below forest reserve boundary, and 4.1 miles northwest of Heeia post office. Zero of gage is about 193 feet above mean sea level.

Drainage area.- 1.1 square miles.

Records available.- December 1935 to June 1936.

Extremes.- Maximum discharge during period, unknown; minimum, 4.9 million gallons a day (7.6 second-feet) Jan. 24, 25.

Remarks.- Records good. No diversions above station.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	4.7
.5	6.8
.6	9.1
.7	11.6
.8	14.5
.9	17.5
1.0	20.5
1.1	24
1.2	27.5

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1						-	5.5	5.9	5.1	5.9	20	5.9
2						-	5.5	6.1	5.3	5.9	8.4	6.1
3						-	5.7	6.1	5.5	5.7	6.4	6.2
4						-	5.7	6.1	5.3	5.9	5.9	6.2
5						-	5.7	6.1	5.3	14.0	5.7	7.8
6						-	5.7	6.1	5.3	11.7	6.1	6.4
7						-	5.7	6.1	5.3	10.6	5.7	6.1
8						5.7	5.7	6.1	5.3	6.9	5.7	6.1
9						5.5	6.4	6.1	5.3	6.4	5.7	5.9
10						5.5	5.7	6.1	5.3	6.1	5.5	5.9
11						5.1	5.7	6.1	5.5	5.9	5.5	6.8
12						5.1	5.7	6.1	5.3	5.9	5.5	6.4
13						5.3	5.7	6.1	5.3	6.4	5.5	6.1
14						5.1	5.7	6.1	5.3	6.4	5.5	5.9
15						5.1	5.7	6.1	5.3	6.1	6.1	5.9
16						5.1	8.5	6.1	5.3	5.9	5.9	5.9
17						5.1	27	6.1	5.3	7.0	5.5	5.7
18						5.1	6.9	6.1	8.0	5.9	5.3	5.7
19						5.1	5.7	6.1	6.9	5.5	5.1	6.4
20						5.3	5.5	6.1	5.9	5.5	5.1	7.5
21						5.3	5.3	6.1	5.7	5.5	5.3	6.2
22						5.3	5.1	6.1	5.7	5.5	5.3	5.9
23						5.3	5.1	6.1	5.5	6.4	5.5	5.7
24						5.3	4.9	6.1	5.9	6.4	5.5	5.7
25						5.5	4.9	7.7	5.9	6.1	5.5	5.7
26						5.5	5.1	6.2	6.1	5.9	5.7	5.7
27						5.5	5.1	5.7	6.1	5.7	5.7	5.9
28						5.5	5.3	5.5	6.1	5.5	6.4	5.5
29						5.5	5.3	5.3	6.1	5.7	6.1	5.7
30						5.5	6.1	-	6.1	6.2	5.9	5.7
31						5.5	5.7	-	5.9	-	5.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	-	-	-	-	-	-
October	-	-	-	-	-	-
November	-	-	-	-	-	-
December 8-31	5.7	5.1	5.32	8.23	128	392
Calendar year						
January	27	4.9	6.36	9.84	197	605
February	7.7	5.3	6.09	9.42	177	542
March	8.0	5.1	5.68	8.79	176	541
April	14.0	5.5	6.62	10.2	198	609
May	20	5.1	6.22	9.62	193	592
June	7.8	5.5	6.09	9.42	183	560
The period					1,250	3,840

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 1935 to June 1936

Date	Stream	Tributary to-	Locality	Discharge	
				Second-feet	Million gallons a day
July 12	Pearl Harbor Springs.	Pacific Ocean.....	At 27-inch culvert 300 feet west of Waiau Railway station.	4.55	2.94
Aug. 15	....do.....	....do.....	....do.....	3.41	2.20
Sept. 27	....do.....	....do.....	....do.....	4.52	2.92
Oct. 24	....do.....	....do.....	....do.....	5.35	3.46
Nov. 21	....do.....	....do.....	....do.....	4.02	2.60
Dec. 18	....do.....	....do.....	....do.....	3.87	2.50
Feb. 7	....do.....	....do.....	....do.....	4.16	2.69
Mar. 6	....do.....	....do.....	....do.....	3.61	2.33
Apr. 23	....do.....	....do.....	....do.....	3.85	2.49
May 25	....do.....	....do.....	....do.....	3.54	2.29
July 15	....do.....	....do.....	At wooden culvert 10 feet west of Waiau railway station.	.522	.337
Aug. 15	....do.....	....do.....	....do.....	.513	.332
Sept. 27	....do.....	....do.....	....do.....	.575	.372
Oct. 24	....do.....	....do.....	....do.....	.667	.431
Nov. 21	....do.....	....do.....	....do.....	.880	.569
Dec. 18	....do.....	....do.....	....do.....	.583	.377
Feb. 7	....do.....	....do.....	....do.....	.648	.419
Mar. 6	....do.....	....do.....	....do.....	.669	.432
Apr. 23	....do.....	....do.....	....do.....	.538	.349
May 25	....do.....	....do.....	....do.....	.466	.301
July 19	....do.....	....do.....	At ditch levee 1,000 feet west of Puukapu gaging station.	.950	.614
Aug. 9	....do.....	....do.....	....do.....	.810	.524
Sept. 23	....do.....	....do.....	....do.....	.960	.620
Oct. 28	....do.....	....do.....	....do.....	.684	.442
Nov. 26	....do.....	....do.....	....do.....	.282	.182
Jan. 2	....do.....	....do.....	....do.....	.489	.316
Feb. 7	....do.....	....do.....	....do.....	.336	.217
Mar. 6	....do.....	....do.....	....do.....	.765	.494
Apr. 23	....do.....	....do.....	....do.....	.231	.149
May 25	....do.....	....do.....	....do.....	.196	.127
Oct. 28	....do.....	....do.....	New ditches about 600 feet west of Puukapu gaging station.	1.96	1.27
Nov. 26	....do.....	....do.....	....do.....	1.83	1.18
Jan. 2	....do.....	....do.....	....do.....	3.21	2.07
Feb. 7	....do.....	....do.....	....do.....	2.50	1.62
Mar. 6	....do.....	....do.....	....do.....	1.55	1.00
Apr. 23	....do.....	....do.....	....do.....	.624	.403
May 25	....do.....	....do.....	....do.....	1.22	.789
Oct. 28	....do.....	....do.....	At Loko Kukona gaging station.	3.49	2.25
July 19	....do.....	....do.....	At Puukapu gaging station	6.51	4.21
Aug. 16	....do.....	....do.....	....do.....	6.32	4.08
Sept. 24	....do.....	....do.....	....do.....	5.67	3.66

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 1936.

Average discharge.- 18 years (1916-20, 1922-36), 24.7 million gallons a day (38.2 second-feet).

Extremes.- Maximum discharge during year, 958 million gallons a day (1,480 second-feet) Jan. 17 (gage height, 5.95 feet), from rating curve extended above 150 million gallons a day; minimum, 6.9 million gallons a day (10.7 second-feet) Jan. 6, Feb. 28.
1913-20, 1922-36: Maximum discharge, 2,200 million gallons a day (3,400 second-feet) Feb. 13, 1924 (gage height, 7.92 feet), from rating curve extended above 100 million gallons a day; minimum, 6.2 million gallons a day (9.6 second-feet) June 30, 1926.

Remarks.- Records excellent for ordinary stages and poor for high stages. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.9	6.4	2.2	14.9	2.8	51
2.0	8.7	2.4	23.5	3.1	85
2.1	11.5	2.6	35	3.5	147

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.5	24	14.1	8.7	18.6	9.5	7.3	21	11.6	15.6	85	14.2
2	12.5	15.3	10.7	8.7	8.7	8.7	7.3	27.5	27.5	12.9	70	13.5
3	12.9	17.4	10.7	26	8.5	8.7	7.3	20.5	28	10.1	16.1	18.4
4	11.8	12.5	9.5	21.5	12.8	8.5	7.1	21.5	29	12.0	17.4	29
5	35	11.5	21.5	9.8	9.5	8.2	7.1	11.8	22	9.8	33.5	22.5
6	16.2	10.9	58	9.5	9.0	8.2	10.5	9.3	36	38	51	15.3
7	12.2	10.9	16.3	9.3	9.0	8.0	10.8	8.5	13.5	36.5	30	15.6
8	11.5	20.5	11.2	9.3	8.7	7.8	11.0	8.0	16.6	15.7	69	19.2
9	12.5	13.9	15.1	9.3	8.2	11.6	7.6	7.6	20.5	54	41	12.5
10	12.9	16.8	40	9.8	8.2	8.5	7.3	7.3	15.8	17.3	39.5	12.2
11	13.9	12.5	19.8	11.2	8.2	8.5	7.3	7.6	18.5	16.5	16.9	12.2
12	11.8	14.7	36	10.1	8.2	8.5	7.3	7.6	77	10.1	12.5	13.5
13	12.9	27	11.2	9.3	7.8	8.5	7.6	7.6	19.5	51	11.5	12.9
14	11.2	17.2	18.1	9.3	9.5	8.5	9.6	7.3	9.5	48.5	48	25.5
15	10.9	14.0	10.7	9.0	21	8.5	37	7.3	8.7	16.4	72	23
16	10.9	15.1	20.5	8.7	10.4	8.5	10.4	7.1	34.5	31	121	21
17	12.9	18.6	30.5	10.3	64	8.5	72	7.1	99	55	71	27
18	24.5	15.4	11.8	11.2	38.5	8.5	9.3	7.1	79	53	68	15.7
19	22.5	12.9	10.1	9.3	33	8.2	8.2	7.1	66	13.5	22	13.2
20	12.2	11.5	10.4	9.5	41	8.2	7.8	7.3	14.9	10.4	42	17.1
21	11.2	11.2	11.5	19.9	10.4	8.2	7.8	54	10.9	9.8	27.5	69
22	10.9	12.5	9.8	9.3	9.3	8.2	7.6	9.0	10.9	9.5	21	46
23	12.2	16.0	9.5	8.7	8.7	11.0	7.3	7.6	9.3	9.5	24	13.9
24	54	19.9	9.5	8.5	16.1	8.2	7.3	8.7	9.8	9.3	15.3	12.5
25	65	10.9	9.3	8.2	9.8	7.8	7.3	10.1	9.8	9.3	14.2	14.2
26	16.5	10.4	9.0	8.0	8.7	7.6	7.3	7.3	11.2	9.3	14.6	36.5
27	27	10.1	9.0	8.0	8.7	7.6	7.1	7.1	9.0	9.0	32.5	18.9
28	15.3	10.1	8.7	8.0	18.5	7.6	8.0	8.9	8.7	8.7	16.4	14.9
29	32.5	10.7	8.7	8.0	13.5	7.6	9.6	7.8	8.5	9.0	13.5	22.5
30	14.9	11.5	8.7	8.0	10.7	7.3	12.7	-	8.5	29	19.7	13.9
31	27	37	-	16.0	-	7.3	15.7	-	8.5	-	28	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	65	10.9	18.7	28.9	581	1,780
August	37	10.1	15.3	23.7	473	1,450
September	58	8.7	16.0	24.8	480	1,470
October	26	8.0	10.7	16.6	330	1,010
November	64	7.8	15.2	23.5	457	1,400
December	11.6	7.3	8.40	13.0	260	799
Calendar year 1935	253	7.3	19.6	30.3	7,170	22,000
January	72	7.1	11.5	17.8	358	1,100
February	54	7.1	11.6	17.9	337	1,030
March	99	8.5	24.3	37.6	752	2,310
April	55	8.7	21.3	33.0	640	1,960
May	121	11.5	37.6	58.2	1,160	3,570
June	69	12.2	20.5	31.7	616	1,890
Fiscal year 1935-36	121	7.1	17.6	27.2	6,440	19,770

Honokawai Ditch near Lahaina

Location.- Water-stage recorder, lat. 20°56'00", long. 156°37'30", just below intake on Honokawai Stream, 2½ miles above Pioneer Mill Company's power house, and 7½ miles northeast of Lahaina. Altitude, about 1,900 feet, from topographic map.

Records available.- July 1912 to June 1936. July 1912 to December 1917, half a mile downstream on old ditch line, November 1918 to May 1921, at site 1½ miles downstream. Staff gage was used from July 1912 to November 1918.

Average discharge.- 17 years (1919-36), 5.88 million gallons a day (9.10 second-feet).

Extremes.- Maximum daily discharge during year, 25.5 million gallons a day (39.5 second-feet); Mar. 17; minimum, 2.25 million gallons a day (3.48 second-feet), Apr. 28-30. 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. Flow regulated by head gates at intake.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.75	4.7	3.0	2.45	2.55	2.4	2.4	4.8	2.35	2.5	4.6	2.45
2	2.75	2.95	2.55	2.4	2.55	2.35	2.4	6.4	5.2	2.8	6.5	2.4
3	2.75	2.65	2.3	2.5	2.55	2.4	2.4	4.5	7.0	2.4	2.45	2.4
4	2.7	2.55	2.45	4.0	2.55	2.45	2.4	5.4	5.8	2.4	3.3	3.4
5	9.8	2.6	2.85	2.5	2.65	2.4	2.4	2.85	6.2	2.5	5.3	2.65
6	3.9	2.6	15.1	2.45	2.55	2.4	2.75	2.5	9.0	3.35	12.6	2.4
7	2.9	2.6	3.65	2.45	2.55	2.45	2.65	2.5	2.95	3.8	7.5	2.4
8	2.6	2.8	2.6	2.45	2.55	2.5	2.6	2.45	5.7	2.55	19.3	2.5
9	2.75	2.8	3.15	2.45	2.6	2.5	2.4	2.4	5.6	6.7	6.9	2.55
10	2.9	2.8	8.6	2.45	2.6	2.5	2.4	2.35	5.0	2.7	6.4	2.55
11	3.4	2.8	3.05	2.5	2.6	2.45	2.35	2.35	4.9	2.8	2.75	2.55
12	2.6	3.3	8.0	2.55	2.55	2.45	2.3	2.35	16.2	2.4	2.55	2.55
13	2.6	13.6	2.6	2.45	2.55	15.2	2.35	2.35	5.3	5.2	2.4	2.35
14	2.55	4.0	3.05	2.45	2.5	7.1	2.35	2.35	2.55	4.6	5.9	3.55
15	2.55	2.6	2.65	2.45	3.45	2.95	10.3	2.35	2.45	3.4	12.2	3.5
16	2.55	2.75	2.65	2.45	2.75	2.45	3.3	2.35	10.4	7.4	20.5	3.4
17	2.65	2.6	4.7	2.45	13.9	2.45	7.0	2.35	25.5	14.3	14.3	4.1
18	6.7	3.0	2.75	2.45	11.7	2.45	2.6	2.35	18.7	10.5	12.8	2.65
19	5.2	2.65	2.55	2.5	12.9	2.45	2.5	2.3	12.0	2.6	4.2	2.4
20	2.85	2.65	2.55	2.55	6.5	2.55	2.4	2.3	3.25	2.45	11.4	2.35
21	2.8	2.65	2.5	3.9	2.6	2.45	2.35	9.9	2.5	2.4	4.4	14.1
22	2.6	2.9	2.45	2.7	2.5	2.45	2.35	2.45	2.45	2.35	2.75	9.5
23	2.7	3.95	2.45	2.55	2.45	2.45	2.35	2.45	2.4	2.3	4.7	2.8
24	12.5	5.0	2.45	2.55	3.15	2.45	2.35	2.45	2.35	2.25	2.9	2.35
25	17.4	3.2	2.45	2.55	2.55	2.45	2.35	2.4	2.35	2.3	2.7	2.8
26	3.6	2.6	2.45	2.55	2.5	2.45	2.35	2.4	2.35	2.35	2.55	11.6
27	5.5	2.6	2.45	2.55	2.45	2.45	2.35	2.4	2.35	2.3	5.1	4.1
28	3.55	2.55	2.45	2.55	4.2	2.45	2.35	2.4	2.35	2.25	2.8	2.9
29	7.6	2.55	2.45	2.55	3.05	2.45	2.35	2.4	2.3	2.25	2.8	4.5
30	3.1	2.55	2.45	2.55	2.65	2.4	3.2	-	2.3	2.25	3.3	2.85
31	4.2	3.8	-	2.55	-	2.4	3.6	-	2.35	-	6.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	17.4	2.55	4.35	6.73	135	414
August	13.6	2.55	3.33	5.15	103	317
September	15.1	2.3	3.51	5.43	105	323
October	4.0	2.4	2.60	4.02	80.4	247
November	13.9	2.45	3.84	5.94	115	354
December	15.2	2.35	3.02	4.67	93.7	288
Calendar year 1935	33	2.3	4.18	6.47	1,530	4,690
January	10.3	2.3	2.91	4.50	90.2	277
February	9.9	2.3	3.06	4.73	88.6	272
March	25.5	2.3	5.87	9.08	182	559
April	14.3	2.25	3.68	5.69	110	339
May	20.5	2.4	6.59	10.2	204	627
June	14.1	2.35	3.75	5.80	113	346
Fiscal year 1935-36	25.5	2.25	3.88	6.00	1,420	4,360

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.

Records available.- August 1911 to June 1936. August 1911 to January 1932, at site 300 feet upstream. January 1932 to October 1933, discharge determined by three stations about 1,000 feet below present site. All records are comparable.

Average discharge.- 16 years (1917-20, 1921-36), 4.61 million gallons a day (7.13 second-feet).

Extremes.- Maximum daily discharge during year, 9.2 million gallons a day (14.2 second-feet), Mar. 19; minimum, 1.60 million gallons a day (2.48 second-feet), Jan. 5, 12-14.

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. since January 1932. Intake in Olowalu Stream at elevation about 450 feet. Water used for power and irrigation. Flow regulated by head gates.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.05	5.4	2.75	2.15	2.25	1.96	1.69	2.75	2.2	3.0	7.5	4.4
2	2.95	4.1	2.45	2.15	1.98	1.88	1.68	4.6	3.35	2.95	9.0	4.2
3	2.9	3.9	2.45	2.75	1.95	1.83	1.68	5.5	4.7	2.75	7.5	3.95
4	2.75	3.5	2.25	4.7	2.25	1.81	1.63	6.3	5.9	2.75	6.2	4.3
5	3.95	3.15	2.45	2.8	2.15	1.83	1.60	4.6	6.1	4.1	5.1	3.9
6	3.05	2.95	5.1	2.75	2.0	1.79	1.76	3.5	7.3	3.1	6.1	3.65
7	2.8	2.85	5.0	2.65	1.91	1.82	1.71	2.9	5.0	3.5	7.1	4.1
8	2.7	3.35	3.05	2.3	1.80	1.83	1.73	2.55	3.95	3.0	9.0	4.8
9	2.6	3.15	2.85	2.25	1.86	1.79	1.68	2.3	4.1	5.9	8.9	3.8
10	2.65	4.3	3.1	2.4	1.84	1.79	1.71	2.2	3.4	5.5	8.9	3.45
11	2.7	4.25	3.1	2.25	2.05	1.72	1.61	2.15	4.5	4.5	8.8	3.4
12	2.7	3.55	5.2	2.4	2.25	1.69	1.60	2.1	8.4	3.55	7.2	3.85
13	2.7	4.5	3.25	2.35	1.91	3.45	1.60	2.05	8.4	5.8	5.8	3.45
14	2.6	4.3	3.3	2.5	1.90	4.0	1.60	2.0	5.6	8.4	7.2	4.3
15	2.55	3.35	2.75	2.8	2.4	2.8	2.05	2.45	4.2	5.9	8.4	3.75
16	2.5	3.05	2.8	2.7	2.25	2.25	2.1	3.15	4.6	6.8	8.9	3.9
17	2.75	2.95	3.25	2.25	3.75	2.05	4.9	2.95	9.1	8.9	9.0	4.7
18	2.8	2.8	2.8	2.15	5.9	1.99	2.7	2.9	9.1	8.9	9.0	3.85
19	3.2	2.65	2.35	2.1	4.4	1.96	2.15	3.05	9.2	8.2	8.9	3.4
20	2.6	2.55	2.4	2.15	4.2	1.92	1.93	3.0	8.9	6.0	8.9	3.2
21	2.4	2.55	2.35	2.4	2.95	1.90	1.85	5.5	8.7	4.8	8.9	8.2
22	2.3	2.5	2.3	2.25	2.5	1.93	1.82	2.9	6.9	4.1	8.2	7.1
23	2.3	2.45	2.25	2.1	2.25	1.89	1.76	2.45	5.4	3.75	7.6	7.0
24	2.45	2.5	2.2	2.05	3.05	1.82	1.71	2.35	5.0	3.4	6.5	5.5
25	6.0	2.35	2.35	2.1	2.3	1.98	1.67	2.4	4.6	3.75	5.9	5.0
26	5.2	2.3	2.25	2.05	2.1	2.0	1.66	2.15	4.6	3.35	5.4	7.6
27	4.4	2.2	2.85	1.96	2.0	1.86	1.72	2.05	3.8	3.1	5.4	8.1
28	3.9	2.15	2.45	1.93	2.25	1.79	1.72	1.97	3.4	2.95	5.8	6.7
29	4.7	2.2	2.2	1.94	2.35	1.74	1.65	1.95	3.25	2.85	4.9	5.8
30	4.3	2.2	2.15	1.91	2.1	1.72	3.0	-	3.1	3.05	5.0	5.4
31	4.4	2.15	-	1.96	-	1.71	5.9	-	2.95	-	5.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	6.0	2.3	3.19	4.94	98.8	303
August	5.4	2.15	3.10	4.80	96.2	295
September	5.2	2.15	2.87	4.44	86.0	264
October	4.7	1.91	2.36	3.65	73.2	225
November	5.9	1.80	2.50	3.87	74.8	230
December	4.0	1.69	2.02	3.13	62.5	192
Calendar year 1935	13.7	1.64	3.92	6.07	1,430	4,400
January	5.9	1.60	2.05	3.17	63.6	195
February	6.3	1.95	2.99	4.63	86.7	266
March	9.2	2.2	5.47	8.46	170	521
April	8.9	2.75	4.62	7.15	139	425
May	9.0	4.9	7.30	11.3	226	694
June	8.2	3.2	4.82	7.46	145	444
Fiscal year 1935-36	9.2	1.60	3.61	5.59	1,320	4,050

Oheo Stream below diversion dam near Kipahulu

Location.- Water-stage recorder, lat. 20°41'05", long. 156°04'10", 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 1936. February 1927 to September 1929, at old diversion dam, 100 feet upstream.

Extremes.- Maximum discharge recorded during year, 1,240 million gallons a day (1,920 second-feet) Mar. 19 (gage height, 8.70 feet), from rating curve extended above 400 million gallons a day; no flow Dec. 22, 24, 26-30.

1927-29, 1931-36: Maximum discharge, 6,190 million gallons a day (9,580 second-feet) Jan. 4, 1933 (gage height, 11.95 feet), from rating curve extended above 450 million gallons a day; no flow during dry periods.

Remarks.- Records good for ordinary stages; poor for high stages. Small quantity of water is diverted for domestic use and for livestock.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.1	0	1.8	5.3	3.5	98
1.2	.02	2.0	10.7	4.0	149
1.4	.49	2.5	29.5	5.0	285
1.6	2.05	3.0	58	6.0	470

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.2	21.5	0.12			-	0.01	1.35	0.54	0.21	0.01	1.63
2	2.4	16.6	1.02			-	.01	.83	.06	.12	.02	.90
3	15.4	8.4	8.0			-	.01	1.44	2.1	13.6	.01	6.8
4	3.9	2.0	.54			0.02	28.5	14.5	14.4	165	.02	24
5	43	.59	4.5			.01	30	.70	35.5	52	12.7	67
6	51	.40	-			.01	54	.44	67	23	48	13.9
7	15.6	.36	-			.01	16.4	.29	2.55	5.3	34	1.71
8	45	.63	-			.01	8.1	.18	63	.89	68	.64
9	22	.26	-			.01	16.9	.13	93	7.5	8.0	.40
10	9.2	15.2	-			29	2.0	.07	73	10.4	3.5	.24
11	5.6	42	-			7.5	.12	.07	12.1	1.23	.36	.12
12	3.85	1.73	-			.11	.06	.05	57	.36	.13	.06
13	13.1	16.8	-			1.86	7.0	.02	23	.26	.07	.01
14	.89	14.3	-			35	1.01	.02	27.5	.24	6.5	-
15	.59	.55	-			2.7	224	.01	6.6	.13	98	-
16	.40	13.9	-			.05	104	.01	16.5	.57	152	-
17	.33	.70	-			.02	85	.01	74	12.7	60	-
18	16.8	.29	-			.02	10.3	.01	158	23	43	-
19	70	.24	-			.01	1.79	.01	317	1.00	23	-
20	4.3	.21	-			.01	.64	.01	17.8	.24	54	-
21	.70	3.6	-			.01	.59	.02	87	.15	15.6	-
22	.44	44	-			0	.36	.02	16.1	.10	8.0	-
23	.49	49	-			0	.21	.02	3.7	.05	29	-
24	45	82	-			0	.08	.01	1.44	.01	12.2	-
25	88	6.2	-			.01	.04	.02	24	.01	17.2	-
26	11.1	1.09	-			0	.14	.02	11.8	.01	4.1	-
27	24	.59	-			0	19.4	.02	2.2	.01	2.45	-
28	24.5	.36	-			0	78	.01	.83	.01	.89	-
29	142	.24	-			0	2.8	.03	.64	.01	.49	-
30	14.9	.36	-			.01	104	-	.44	.01	.36	-
31	3.6	.26				.01	5.4	-	.33	-	6.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	142	0.40	22.1	34.2	684	2,100
August	82	.21	11.1	17.2	344	1,060
September 1-5	8.0	.12	2.84	4.39	14.2	44
October	-	-	-	-	-	-
November	-	-	-	-	-	-
December 4-31	35	0	2.73	4.22	76.4	234
Calendar year						
January	224	.01	25.8	39.9	801	2,460
February	14.5	.01	.701	1.08	20.3	62
March	317	.06	39.0	60.3	1,210	3,710
April	165	.01	10.6	16.4	318	976
May	152	.01	22.8	35.3	708	2,170
June 1-13	67	.01	9.03	14.0	117	360
Fiscal year						

Note.- Data insufficient to compute discharge Sept. 6 to Dec. 3, June 14-30.

Right Branch of Kahalawe Stream near Kipahulu

Location.- Water-stage recorder, lat. 20°41'05", long. 156°03'00", 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 1936.

Extremes.- Maximum discharge during year, 152 million gallons a day (235 second-feet) Jan. 28 (gage height, 10.50 feet), from rating curve extended above 30 million gallons a day; minimum, 0.4 million gallons a day (0.6 second-foot) Nov. 26.
1927-36: Maximum discharge, 612 million gallons a day (947 second-feet) Feb. 5, 1932 (gage height, 11.20 feet, former datum), from rating curve extended above 20 million gallons a day: minimum, 0.15 million gallons a day (0.23 second-foot) Dec. 16, 1929.

Remarks.- Records good for ordinary stages; those for Sept. 30 to Oct. 18, Dec. 17-20, Jan. 11-20, Mar. 3-7 (computed on basis of records for Hanawi, Kapaula, and Waiohue Streams), and those for high stages are poor. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

8.0	0.2	8.4	3.6
8.1	.5	8.6	7.8
8.2	1.0	8.8	13.0
8.3	2.0	9.0	20.5

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.0	6.2	1.2	1.1	1.3	0.6	0.6	1.5	5.1	0.9	3.4	3.0
2	1.5	4.3	3.5	1.1	1.0	.7	.5	1.3	1.5	.9	4.9	1.7
3	2.3	3.6	2.3	1.5	.8	.8	.6	1.9	12	.9	1.1	2.1
4	1.5	2.2	1.2	3.5	.7	.7	.6	4.3	2.5	7.7	1.5	4.2
5	2.9	1.8	5.0	1.5	.8	.7	.6	1.3	10	7.9	1.6	9.0
6	3.7	1.7	7.4	1.4	.7	.6	1.8	1.1	12	11.3	5.5	4.4
7	1.7	1.7	2.2	1.3	.8	.6	.8	1.1	2.0	2.0	3.3	1.8
8	1.5	3.6	1.5	1.3	.9	.6	3.9	1.1	1.1	1.2	5.6	1.6
9	1.6	2.1	1.8	1.3	.8	.6	9.8	1.0	1.9	1.5	1.7	1.4
10	1.5	9.0	5.2	1.2	.7	1.3	2.3	.9	2.9	1.6	2.5	1.4
11	2.0	3.2	2.7	1.2	1.4	.8	.7	.9	1.1	1.1	1.3	1.3
12	3.1	2.0	3.0	1.2	1.0	.7	.7	.9	5.0	.9	1.1	1.2
13	3.1	2.6	1.6	1.1	1.5	1.4	1.2	.9	2.7	.9	1.1	1.1
14	1.3	2.3	2.7	1.1	*2.6	4.2	.8	.9	1.6	1.4	3.0	1.1
15	1.1	1.7	1.6	1.1	2.6	1.0	15	.8	1.0	1.1	9.4	1.1
16	1.1	2.4	2.7	1.1	6.6	.7	8.0	.8	1.6	1.9	9.0	1.1
17	2.4	1.4	4.3	1.1	16.7	.7	2.5	.8	2.9	3.1	7.1	1.3
18	2.7	1.3	1.7	1.1	5.2	.7	2.0	.7	5.2	2.9	6.3	1.1
19	6.5	1.2	1.5	1.1	2.4	.6	1.5	.7	19.6	2.6	2.7	1.0
20	1.6	1.5	1.4	1.4	2.1	.6	1.3	.7	2.6	1.1	6.1	1.0
21	1.3	1.9	1.4	3.5	.6	.6	1.2	.8	6.2	1.0	3.1	3.5
22	1.2	6.1	4.0	1.2	.5	.6	1.1	1.6	3.9	1.0	2.9	1.2
23	1.4	6.1	1.6	1.1	.5	.6	1.0	2.2	2.1	.9	2.7	1.2
24	5.5	4.0	1.4	1.0	.5	.6	.9	.9	1.6	.9	2.2	1.1
25	7.4	1.7	5.8	.9	.5	.6	.9	.9	6.1	.9	2.2	1.1
26	2.5	1.4	3.6	.9	.4	.6	.9	.8	3.1	.9	1.7	1.7
27	5.1	1.4	3.1	.9	.5	.5	8.8	.8	1.5	.8	2.7	3.8
28	3.0	1.3	1.2	.9	.6	.5	19.5	.8	1.3	.8	1.7	1.1
29	8.4	1.2	1.1	.8	.7	.5	1.7	1.7	1.2	.8	1.5	1.4
30	3.2	1.4	1.1	.8	.6	.8	16.4	-	1.1	.8	1.4	1.0
31	2.4	1.6	-	1.1	-	.8	2.2	-	1.0	-	1.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	8.4	1.1	2.79	4.32	86.5	265
August	9.0	1.2	2.71	4.19	83.9	257
September	7.4	1.1	2.63	4.07	78.8	242
October	3.5	.8	1.28	1.98	39.8	122
November	16.7	.4	1.87	2.89	56.0	172
December	4.2	.5	.82	1.27	25.3	78
Calendar year						
January	19.5	.5	3.54	5.48	110	337
February	4.3	.7	1.18	1.83	34.1	105
March	19.6	1.0	3.98	6.16	123	379
April	11.3	.8	2.06	3.19	61.7	189
May	9.4	1.1	3.29	5.09	102	313
June	9.0	1.0	1.97	3.05	59.0	181
Fiscal year 1935-36	19.6	.4	2.35	3.64	860	2,640

*Partly estimated.

Makapipi Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'35", long. 156°05'55", 100 feet above highway crossing, 1¼ miles south of Nahiku and 4¾ miles southeast of Keanae post office.

Drainage area.- 5.0 square miles.

Records available.- June 1930 to June 1936. June 1930 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 653 million gallons a day (1,010 second-feet) Apr. 6 (gage height, 4.21 feet), from rating curve extended above 100 million gallons a day by test on model of station site; no flow at times during several months.

1932-36: Maximum discharge, that of Apr. 6, 1936; no flow occasionally, during dry weather.

A higher stage may have been reached on Feb. 25, 1935.

Remarks.- Records good except those for Mar. 31 to Apr. 5, which are poor. Koolau Ditch diverts water 1 mile above station for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0	0	0.6	9.7	1.2	62
.2	.30	.8	20.5	1.5	97
.4	3.0	1.0	41	2.0	166

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.92	3.0	0.84	0.22	0.13	0.08	0		0	0.10	15.1	3.0
2	1.92	3.0	1.11	.22	.07	0	0		0	.03	13.5	3.0
3	1.92	2.3	.93	.25	0	0	0		0	0	9.3	2.8
4	1.74	1.92	.93	.66	.69	0	0		0	.50	3.0	3.0
5	1.74	1.56	1.02	.57	.30	0	0		0	.15	2.45	3.0
6	1.56	1.11	3.85	.57	.25	0	0		0	127	2.65	2.8
7	1.56	1.02	2.3	.48	.22	0	0		0	27	3.8	3.0
8	1.56	.93	1.92	.30	.20	0	0		0	11.1	5.2	3.0
9	1.56	.84	1.56	.30	.15	0	0		0	19.8	5.8	2.65
10	1.56	.84	1.74	.28	.10	0	0		0	5.2	7.4	2.65
11	1.56	.84	1.74	.25	.04	0	0		0	2.45	6.2	2.65
12	1.56	.75	1.92	.22	.01	0	0		0	1.56	5.2	2.65
13	1.56	.84	1.74	.20	0	0	0		0	.84	4.4	2.65
14	1.20	.84	1.74	.15	15.7	0	0		0	4.1	3.85	2.65
15	1.20	.84	1.56	.12	1.20	0	0		.05	1.38	4.4	2.65
16	1.11	.84	1.38	.10	.75	0	0		.12	.93	7.0	2.65
17	1.02	.75	1.11	3.15	10.5	0	17.6		.20	.84	8.5	2.65
18	1.02	.66	1.02	1.75	15.0	0	.75		1.20	12.8	9.3	2.65
19	1.02	.66	.93	.66	4.2	0	.30		4.4	2.1	8.1	2.65
20	.93	.57	.84	.48	9.8	0	.12		4.1	1.56	7.4	2.65
21	.84	.88	.75	.30	2.45	0	0		2.65	1.20	7.0	2.65
22	.84	1.65	.66	.28	1.74	0	0		2.45	1.02	6.6	2.65
23	.66	1.11	.57	.25	1.56	0	0		1.92	.75	5.8	2.65
24	.66	1.11	.48	.20	1.56	0	0		1.74	.48	5.8	2.8
25	.75	1.02	.39	.18	1.11	0	0		10.4	.28	5.2	2.8
26	.93	1.02	.30	.12	.75	0	0		6.9	.20	4.4	3.3
27	1.11	.93	.30	.08	.57	0	0		1.74	.12	4.1	3.3
28	1.20	.84	.28	.04	.30	0	0		1.02	.03	3.65	3.3
29	1.56	.75	.25	0	.25	0	0		.57	0	3.55	3.55
30	1.74	.75	.22	0	.18	0	0		.25	2.25	3.3	3.55
31	2.3	.75	-	.03	-	0	0		.15	-	3.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	2.3	0.66	1.35	2.09	41.8	128
August	3.0	.57	1.13	1.75	34.9	107
September	3.85	.22	1.15	1.78	34.4	106
October	3.15	0	.400	.619	12.4	38
November	15.7	0	2.33	3.61	69.8	214
December	.08	0	.003	.005	.08	.2
Calendar year 1935	240	0	6.30	9.75	2,300	7,030
January	17.6	0	.605	.936	18.8	58
February	0	0	0	0	0	0
March	10.4	0	1.29	2.00	39.9	122
April	127	0	7.53	11.7	226	693
May	15.1	2.45	5.98	9.25	185	569
June	3.55	2.65	2.86	4.43	86.0	264
Fiscal year 1935-36	127	0	2.05	3.17	749	2,300

West Makapipi Spring near Nahiku

Location.- Water-stage recorder, lat. 20°48'20", long. 156°06'20", half a mile above highway, 1.7 miles south of Nahiku, and 4¾ miles southeast of Keanae post office.

Records available.- June 1931 to June 1936. June 1931 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 1.25 million gallons a day (1.93 second-feet) June 17 (gage height, 1.11 feet); no flow several months during year.
1932-36: Maximum discharge, 32 million gallons a day (50 second-feet) Feb. 25, 1935 (gage height, 2.93 feet), from rating curve extended above 1.5 million gallons a day by weir formulas; no flow during dry weather.

Remarks.- Records good. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.33
.4	.53
.5	.72
.6	.85
.7	.94
.9	1.09
1.1	1.24

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.51	0.21	0.20	0.14	0.07					0	0.26	1.02
2	.49	.18	.20	.14	.06					0	.28	1.04
3	.49	.18	.20	.15	.06					0	.26	1.06
4	.45	.17	.20	.15	.07					0	.27	1.09
5	.45	.16	.22	.15	.06					0	.30	1.11
6	.45	.16	.26	.14	.06					0	.37	1.15
7	.43	.15	.24	.12	.05					0	.41	1.17
8	.43	.15	.22	.12	.05					0	.47	1.19
9	.41	.15	.22	.12	.05					0	.51	1.20
10	.39	.15	.24	.11	.05					0	.55	1.20
11	.37	.15	.22	.11	.05					0	.57	1.21
12	.35	.15	.22	.11	.04					0	.57	1.22
13	.33	.15	.22	.11	.04					0	.59	1.23
14	.32	.15	.22	.10	.08					0	.61	1.23
15	.32	.15	.21	.10	.06					0	.64	1.23
16	.28	.15	.21	.10	.04					0	.73	1.23
17	.28	.15	.21	.12	.06					0	.77	1.23
18	.27	.15	.21	.14	.07					0	.78	1.22
19	.27	.15	.20	.11	.05					0	.78	1.21
20	.24	.15	.20	.10	.06					0	.80	1.20
21	.24	.16	.18	.10	.04					0	.81	1.20
22	.22	.16	.18	.10	.02					0	.82	1.19
23	.22	.16	.18	.09	0					0	.84	1.18
24	.21	.16	.17	.09	0					0	.86	1.17
25	.21	.16	.17	.09	0					0	.88	1.16
26	.21	.16	.16	.08	0					0	.89	1.15
27	.21	.17	.16	.08	0					0	.91	1.14
28	.20	.17	.15	.08	0					.02	.93	1.12
29	.20	.17	.15	.08	0					.05	.96	1.11
30	.20	.18	.15	.06	0					.15	.97	1.09
31	.20	.18	-	.07	0					-	1.00	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	.51	.20	0.318	0.492	9.85	30
August	.21	.15	.161	.249	4.99	15
September	.26	.15	.199	.308	5.97	18
October	.15	.06	.108	.167	3.36	10
November	.08	0	.040	.062	1.19	3.7
December	0	0	0	0	0	0
Calendar year 1935	3.85	0	.621	.961	227	695
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
April	.15	0	.007	.011	.22	.7
May	1.00	.26	.658	1.02	20.4	63
June	1.23	1.02	1.16	1.79	34.9	107
Fiscal year 1935-36	1.23	0	.221	.342	80.9	247

Hanawi Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'35", long. 156°06'50", 200 feet above Koolau Ditch intake and trail, 1¾ miles southwest of Nahiku, and 4½ miles southeast of Keanae post office.

Drainage area.- 0.8 square mile.

Records available.- January 1914 to January 1916, November 1921 to June 1936.

Average discharge.- 14 years (1922-36), 11.6 million gallons a day (17.9 second-feet).

Extremes.- Maximum discharge during year, 336 million gallons a day (520 second-feet) Apr. 6 (gage height, 5.50 feet), from rating curve extended above 150 million gallons a day; minimum, 1.2 million gallons a day (1.9 second-feet) Feb. 19.

1914-16, 1921-36: Maximum stage, from floodmarks, about 20 feet during flood of Jan. 18, 1916 (discharge not determined); minimum discharge, 1.4 million gallons a day (2.2 second-feet) July 5, 8, 1926.

Remarks.- Records good for ordinary stages; those for July 1-8, Aug. 24 to Sept. 10, Feb. 23 to Mar. 17, and those for extremely high and low stages are poor. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.8	0.5	3.4	1.3	14.4	2.5	58
.2	1.3	.7	5.4	1.6	21	3.0	89
.3	1.9	1.0	9.1	2.0	34	3.5	123

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	.3	10.7	6.0	2.1	3.8	2.6	1.7	1.5	7.0	5.2	34	7.0
2	4.0	5.6	5.2	2.1	2.0	2.8	1.6	1.4	6.0	7.1	24.5	6.6
3	4.9	4.8	4.5	4.6	1.9	2.5	1.6	1.4	5.0	5.9	12.1	6.4
4	3.5	4.1	5.0	10.9	2.3	2.2	1.6	1.4	20	28	20.5	6.8
5	6.6	3.8	12	3.8	2.2	2.0	2.0	1.3	25	5.1	10.4	6.6
6	7.0	3.4	22	3.2	2.4	2.0	2.8	1.3	30	101	24	5.9
7	4.5	3.4	8.0	3.0	2.0	2.0	2.5	1.3	6.0	31	32.5	5.4
8	5.4	3.8	5.0	2.6	2.0	1.9	2.0	1.3	13	17.6	37	5.1
9	5.6	4.1	6.0	2.5	2.1	2.1	1.8	1.2	15	25.5	20	4.8
10	4.8	5.1	5.2	2.3	1.9	2.0	1.8	1.2	10	8.4	26	4.6
11	4.2	4.0	6.9	2.2	1.9	2.0	1.7	1.2	11	7.2	12.5	4.4
12	3.4	6.8	8.5	2.1	1.8	1.9	1.6	1.2	32	6.2	9.9	4.8
13	3.2	5.2	5.4	2.1	1.7	2.2	1.6	1.2	12	13.3	8.1	4.5
14	2.8	5.2	6.7	2.0	31.5	4.7	1.7	1.2	7.0	20	13.0	4.2
15	2.8	4.0	4.8	1.9	6.4	3.2	8.9	1.2	6.0	8.4	13.4	4.8
16	2.6	3.8	3.8	1.9	3.5	2.2	4.1	1.2	20	15.1	16.4	5.2
17	2.6	3.4	3.6	5.8	44	2.1	38.5	1.2	35	17.6	37.5	5.4
18	2.8	3.2	3.2	5.4	67	2.0	3.8	1.2	17.6	56	30	4.5
19	5.0	3.3	3.0	2.5	30.5	2.2	2.8	1.9	15.6	11.1	20.5	4.2
20	3.1	3.4	3.0	2.2	54	3.5	2.5	1.6	7.7	8.1	43	4.7
21	2.6	7.4	2.8	2.4	6.7	2.8	2.2	5.8	26	7.2	30	16.2
22	2.5	13.3	2.6	2.5	4.1	2.2	2.1	*1.6	6.9	6.6	15.4	6.2
23	2.9	10.8	2.5	2.1	3.3	2.1	2.0	1.5	6.0	6.2	17.6	4.8
24	12.6	7.0	7.0	2.0	4.0	2.0	1.9	1.4	5.3	6.1	12.3	5.9
25	43	5.0	3.6	1.9	3.0	1.9	1.8	1.4	24.5	5.8	13.3	12.5
26	9.8	4.5	2.5	1.9	2.5	1.8	1.7	1.3	8.6	5.6	10.5	44
27	8.6	4.0	2.3	1.8	2.4	1.8	1.7	1.3	7.5	5.6	10.2	38
28	5.8	3.5	2.2	1.7	3.8	1.7	1.7	1.2	5.5	5.4	8.3	19.3
29	7.0	3.3	2.2	1.7	4.0	1.7	1.5	1.2	4.6	6.1	7.8	8.9
30	5.6	3.5	2.2	1.7	2.6	1.7	1.5	-	4.1	27.5	7.6	5.8
31	6.6	10	-	10.4	-	1.7	1.5	-	3.9	-	7.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	43	2.5	6.13	9.48	190	583
August	13.3	3.2	5.27	8.15	163	501
September	22	2.2	5.26	8.14	158	484
October	10.9	1.7	3.07	4.75	95.3	292
November	67	1.7	10.0	15.5	301	925
December	4.7	1.7	2.24	3.47	69.5	213
Calendar year 1935	320	1.7	11.5	17.8	4,210	12,940
January	38.5	1.5	3.43	5.31	106	326
February	5.8	1.2	1.49	2.31	43.1	132
March	35	3.9	13.0	20.1	404	1,240
April	101	5.1	16.0	24.8	480	1,470
May	43	7.6	18.9	29.2	586	1,800
June	44	4.2	8.92	13.8	268	821
Fiscal year 1935-36	101	1.2	7.82	12.1	2,860	8,790

*Partly estimated.

Hanawi Stream below Government Road, near Nahiku

Location.- Water-stage recorder, lat. 20°49'15", long. 156°06'25", 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.- January 1927 to June 1936. January 1927 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 1,900 million gallons a day (2,940 second-feet) Apr. 6 (gage height, 5.84 feet), from rating curve extended logarithmically above 183 million gallons a day; minimum, 8.2 million gallons a day (12.7 second-feet) Feb. 25, 26.

1932-36: Maximum discharge, that of Apr. 6, 1936; minimum, that of Feb. 25, 26, 1936.

Remarks.- Records good for ordinary stages; those for Feb. 25, 26, Mar. 1 to Apr. 22, 1936, and those for high stages are poor. Entire flow of stream above station up to 25 million gallons a day is diverted by the East Maui Irrigation Co.'s ditch at altitude 1,300 feet for irrigation in central Maui.

Rating table, Apr. 24, 1935, to June 30, 1936 (gage height, in feet, and discharge, in million gallons a day)

0.8	7.9	1.4	37.5	2.0	100	3.0	300
1.0	14.8	1.6	54	2.2	129	3.5	465
1.2	24.5	1.8	75	2.5	183	4.0	665

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	11.8	11.5
2	13.0	15.1	11.1	11.9	13.6	13.3	17.6	12.5	18	14	11.8	11.5
3	12.7	15.5	11.1	11.9	13.6	13.0	20	12.5	16	14	11.8	11.5
4	12.5	14.8	11.1	11.6	13.6	13.0	14.2	12.5	15	15	11.5	11.1
5	34.5	13.6	11.1	11.6	37.5	12.7	13.9	12.5	15	14	19.2	26.5
6	107	13.0	14.3	11.6	14.5	12.7	13.6	12.5	15	14	23.5	17.3
7	25	12.7	35.5	11.9	13.6	12.7	255	12.5	15	14	12.2	16.1
8	16.0	12.5	11.9	11.9	13.0	12.7	111	12.5	15	14	12.2	13.7
9	13.9	12.5	11.9	11.9	13.0	12.5	69	12.5	15	16	12.2	13.0
10	13.0	12.5	12.7	11.9	12.7	12.5	15.7	12.5	15	14	11.8	13.0
11	12.7	12.2	12.5	11.9	12.7	12.5	20.5	12.7	15	14	11.8	12.6
12	12.7	12.2	12.2	11.6	50	12.5	14.8	12.7	120	20	12.2	12.6
13	12.2	11.9	12.2	11.6	70	12.5	14.2	13.0	24	16	12.2	12.6
14	15.4	11.6	11.9	11.6	20.5	12.5	15.0	12.5	17	15	12.2	12.2
15	12.7	11.6	11.9	11.6	14.2	12.5	14.2	12.5	16	36	11.8	12.2
16	12.2	11.6	11.6	11.6	19.5	12.5	13.9	13.0	15	30	11.8	12.2
17	12.2	11.6	11.6	11.6	16.6	12.7	13.6	12.5	15	100	11.8	12.2
18	12.7	11.6	11.6	11.6	17.0	12.7	13.6	12.5	15	50	11.8	12.2
19	12.2	11.6	11.6	11.9	15.1	12.7	13.3	12.5	15	70	11.5	11.8
20	11.9	11.4	11.6	11.9	14.5	12.7	13.3	12.5	15	44	11.5	11.8
21	12.2	11.4	11.6	12.7	45	13.0	13.3	14.8	15	26	11.8	11.8
22	12.7	11.4	11.6	13.0	44	17.5	13.0	48	15	20	11.5	11.8
23	15.1	11.4	11.6	13.9	110	63	13.0	38	15	16.9	11.5	12.2
24	12.7	11.1	11.9	14.2	40	14.2	13.0	60	15	12.6	11.5	12.2
25	12.7	11.4	11.9	13.9	19.0	16.4	13.0	500	15	14.4	11.5	12.2
26	12.7	11.1	27.5	13.3	15.4	55	13.0	400	14	25.5	11.5	12.2
27	12.7	11.4	12.5	13.0	14.8	52	13.0	*326	14	12.2	11.8	16.4
28	12.2	11.1	12.2	13.3	14.2	38.5	12.7	28	14	11.8	11.8	13.0
29	12.2	11.1	12.2	13.3	13.9	15.7	12.7	-	14	11.8	11.8	12.2
30	12.5	11.1	12.2	14.2	13.6	14.5	12.7	-	14	11.8	11.8	12.2
31	12.5	11.4	-	13.6	-	13.9	12.7	-	14	-	11.5	-

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	11.8	23.4	36.2	701	2,150
May	23.5	11.5	12.4	19.2	385	1,180
June	26.5	11.1	13.1	20.3	394	1,210
Fiscal year 1934-35	500	11.1	20.7	32.0	7,570	23,180

Note.- Above records supersede those published in Water-Supply Paper 795.

Hanawi Stream below Government Road, near Nahiku

(Continued)

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb,	Mar.	Apr.	May	June
1	12.6	14.4	12.6	10.8	11.1	10.5	9.5	9.5	9.8	10.1	51	10.5
2	12.2	13.0	12.2	10.8	10.5	10.5	9.5	9.5	9.5	10.1	39.5	10.5
3	12.2	12.6	12.2	11.1	10.5	10.5	9.5	9.2	9.5	10.1	14.4	10.5
4	11.8	12.6	12.2	14.0	12.2	10.5	9.5	9.2	12.8	27.5	16.1	10.5
5	12.2	12.6	13.0	12.2	11.1	10.5	9.5	8.9	17.8	9.5	11.1	10.5
6	12.2	12.6	24	11.5	10.8	10.5	9.5	8.9	37	374	14.0	10.5
7	12.2	12.6	13.0	11.1	10.5	10.5	9.5	8.9	9.2	49	25.5	10.5
8	12.6	12.2	13.0	11.1	10.5	10.5	9.5	8.9	13.6	18.6	31.5	10.1
9	12.6	12.2	12.6	11.1	10.5	10.5	9.5	8.9	13.6	37.5	15.2	10.1
10	12.6	12.2	13.0	10.8	10.5	10.8	9.5	8.9	11.1	13.0	24.	10.1
11	12.2	12.2	13.0	10.8	10.5	10.5	9.5	8.9	9.5	11.5	12.6	10.1
12	12.2	12.2	13.0	10.8	10.5	10.1	9.2	8.9	23	11.1	11.5	10.1
13	12.2	12.2	12.6	10.8	10.5	10.5	9.2	8.9	10.1	12.5	11.1	9.8
14	11.8	12.2	12.6	10.8	123	10.5	9.2	8.9	10.1	18.0	11.1	9.8
15	11.8	12.2	12.2	10.8	13.0	10.5	10.5	8.9	10.1	10.8	11.5	9.8
16	11.8	12.2	11.8	10.8	11.8	10.5	9.5	8.9	13.3	10.8	13.7	9.8
17	11.8	11.8	11.8	18.8	62	10.1	102	8.9	23	11.1	29.5	9.8
18	11.8	11.8	11.8	12.6	108	10.1	11.1	8.9	14.5	58	28	9.8
19	11.8	11.8	11.5	11.1	30	10.1	10.5	8.9	14.7	10.8	18.3	9.8
20	11.8	11.8	11.1	11.1	80	10.1	10.1	8.9	12.6	10.5	33.5	10.1
21	11.8	13.3	11.1	11.1	12.6	10.1	10.1	8.9	31	10.1	23.5	12.8
22	11.8	15.5	11.1	10.8	11.8	10.1	10.1	8.5	11.5	9.5	12.6	10.5
23	11.8	13.0	11.1	10.8	11.5	9.8	10.1	8.5	11.1	9.5	13.0	10.5
24	16.3	13.0	13.1	10.8	11.1	9.8	9.8	8.5	10.8	9.5	11.1	10.5
25	46	12.6	11.1	10.8	11.1	9.5	9.5	8.2	29	9.5	11.1	10.8
26	13.0	12.2	11.1	10.8	11.1	9.5	9.5	8.2	11.8	9.5	11.1	33
27	13.0	12.2	11.1	10.8	11.1	9.5	9.5	8.5	10.8	9.5	10.8	29.5
28	12.6	12.2	11.1	10.8	11.1	9.5	9.5	8.5	10.5	9.5	10.5	15.0
29	13.0	12.2	11.1	10.5	11.1	9.5	9.5	8.5	10.5	9.2	10.5	10.8
30	12.6	12.2	11.1	10.5	10.8	9.5	9.5	-	10.1	23.5	10.5	10.8
31	13.0	12.6	-	15.2	-	9.5	9.5	-	10.1	-	10.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	46	11.8	13.5	20.9	417	1,280
August	15.5	11.8	12.5	19.3	388	1,190
September	24	11.1	12.4	19.2	372	1,140
October	18.8	10.5	11.5	17.8	356	1,090
November	123	10.5	22.7	35.1	681	2,090
December	10.8	9.5	10.1	15.6	315	965
Calendar year 1935	500	9.5	19.4	30.0	7,100	21,760
January	102	9.2	12.7	19.6	392	1,200
February	9.5	8.2	8.83	13.7	256	786
March	37	9.2	14.3	22.1	442	1,360
April	374	9.2	27.8	43.0	834	2,560
May	51	10.5	18.0	27.9	558	1,710
June	33	9.8	11.9	18.4	357	1,100
Fiscal year 1935-36	374	8.2	14.7	22.7	5,370	16,470

Kapaula Stream near Nahiku

Location.- Water-stage recorder, lat. 20°48'50", long. 156°07'05", 40 feet above Koolau Ditch intake, 300 feet above ditch trail, 1¾ miles southwest of Nahiku, and 4 miles southeast of Keanae post office.

Drainage area.- 0.2 square mile.

Records available.- November 1921 to June 1936.

Average discharge.- 14 years (1922-36), 10.1 million gallons a day (15.6 second-feet).

Extremes.- Maximum discharge during year, 373 million gallons a day (577 second-feet) Apr. 8 (gage height, 4.22 feet), from rating curve extended above 200 million gallons a day; minimum, 0.3 million gallons a day (0.5 second-foot) Feb. 19, 29.
1921-36: Maximum discharge, 1,560 million gallons a day (2,410 second-feet) Feb. 25, 1935 (gage height, 7.83 feet); 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. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.4	0.8	4.8	1.4	18.6	2.0	41
.5	1.1	1.0	8.6	1.6	25	2.4	68
.6	2.1	1.2	13.3	1.8	32	2.8	106

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.3	10.2	4.8	1.1	3.9	2.1	0.7	0.7	5.3	2.7	32.5	3.4
2	2.6	3.8	3.8	1.3	1.4	1.8	.6	.6	6.7	6.0	23	3.3
3	3.1	2.9	2.7	4.1	1.1	1.9	.6	.6	10.1	3.0	9.0	3.1
4	2.3	2.5	3.0	11.8	1.7	1.5	.6	.6	18.6	18.3	19.1	4.2
5	6.1	2.1	9.3	3.4	1.6	1.3	1.0	.6	22	3.3	8.9	4.6
6	6.4	1.9	21	2.6	1.7	1.2	1.6	.6	26	94	20.5	4.4
7	3.3	1.9	6.9	2.1	1.4	1.1	2.8	.5	4.4	28	30	3.1
8	5.0	2.4	3.4	1.6	1.2	1.0	1.1	.5	12.3	15.6	34.5	2.7
9	4.4	2.4	3.6	1.5	1.3	1.1	1.2	.5	13.0	22.5	20.5	2.6
10	3.6	3.6	3.4	1.4	1.1	1.2	1.0	.5	8.3	4.6	26	2.5
11	2.9	2.7	5.6	1.2	1.0	1.0	.8	.5	6.4	3.9	13.0	2.3
12	2.1	5.5	8.2	1.2	.9	1.0	.8	.5	29	2.6	9.3	2.9
13	1.9	3.9	3.8	1.0	.8	1.2	.8	.5	10.8	9.6	6.6	2.8
14	1.7	3.6	6.2	1.0	33	3.7	.9	.4	4.2	19.8	12.6	2.3
15	1.5	2.5	3.3	1.0	5.5	2.1	8.7	.4	2.5	7.2	13.9	2.8
16	1.4	2.3	2.5	1.0	2.6	1.4	4.2	.4	16.5	14.8	15.6	3.4
17	1.4	1.9	2.2	7.5	30.5	1.2	42	.4	32.5	21.5	30.5	4.2
18	1.7	1.7	1.9	4.8	49	1.0	2.7	.4	18.2	45	27	3.1
19	3.8	1.7	1.8	1.6	25	1.1	1.6	1.1	15.7	9.1	18.6	2.7
20	2.1	1.7	1.8	1.4	43	2.4	1.2	1.0	8.1	4.6	35.5	3.1
21	1.6	7.4	1.7	1.4	5.8	1.6	1.0	6.3	17.9	3.6	24	14.5
22	1.4	9.9	1.6	1.3	2.8	1.1	1.0	1.1	7.6	3.3	14.3	5.7
23	1.8	9.8	1.5	1.1	2.1	1.1	1.0	.6	5.5	3.2	15.9	3.3
24	12.1	6.2	11.5	1.0	2.9	1.0	.8	.5	4.5	3.2	11.3	5.8
25	40	2.7	2.8	1.0	2.1	.9	.8	.5	15.8	2.6	12.4	11.1
26	9.6	2.3	1.6	1.0	1.8	.8	.8	.4	10.1	2.5	9.3	46
27	7.3	1.9	1.5	1.0	1.5	.9	.7	.4	5.8	2.2	7.8	30.5
28	4.2	1.8	1.3	1.0	3.2	.8	.6	.4	4.2	2.1	5.3	20
29	5.5	1.6	1.3	.9	3.4	.8	.6	.4	2.7	2.8	4.4	8.5
30	3.6	1.8	1.2	.9	2.3	.8	.6	-	2.1	25.5	3.9	4.2
31	5.3	8.0	-	9.2	-	.8	.6	-	1.9	-	4.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	40	1.4	4.94	7.64	153	470
August	10.2	1.6	3.70	5.72	115	352
September	21	1.2	4.17	6.45	125	384
October	11.8	.9	2.34	3.62	72.4	222
November	49	.8	7.85	12.1	236	723
December	3.7	.8	1.32	2.04	40.9	126
Calendar year 1935	357	.8	9.26	14.3	3,380	10,380
January	42	.6	2.69	4.16	83.4	256
February	6.3	.4	.76	1.18	21.9	67
March	32.5	1.9	11.3	17.5	351	1,080
April	94	2.1	12.9	20.0	387	1,190
May	35.5	3.9	16.8	26.0	519	1,590
June	46	2.3	7.10	11.0	213	654
Fiscal year 1935-36	94	.4	6.33	9.79	2,320	7,110

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Kapaula Stream below Government Road, near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°06'55", 3,000 feet below highway; 1.3 miles southwest of Nahiku and 3.8 miles southeast of Keanae post office. Altitude, 620 feet, by barometer.

Drainage area.- 0.5 square mile.

Records available.- March 1927 to June 1936. March 1927 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 328 million gallons a day (507 second-feet) Apr. 6 (gage height, 3.10 feet), from rating curve extended above 70 million gallons a day; minimum, 1.2 million gallons a day (1.9 second-feet) Feb. 12-16, 27-29.

1932-36: Maximum discharge, 782 million gallons a day (1,210 second-feet) Feb. 25, 1935 (gage height, 4.55 feet), from rating curve extended above 70 million gallons a day; minimum, 1.1 million gallons a day (1.7 second-feet) several days in August 1934 and January 1935.

Remarks.- Records good for ordinary stages; poor for high stages. Koolau Ditch diverts water 4,000 feet above station for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.7	.6	8.0	1.2	39
.3	1.6	.7	11.4	1.4	55
.4	3.2	.8	15.6	1.6	74
.5	5.3	1.0	26	1.8	97

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.6	5.7	1.9	1.3	2.5	1.4	1.3	1.3	2.4	1.6	37.5	1.5
2	1.5	1.9	1.9	1.5	1.5	1.4	1.3	1.3	1.8	1.6	29	1.5
3	1.6	1.8	1.6	2.1	1.4	1.4	1.3	1.3	2.7	1.5	7.4	1.5
4	1.6	1.6	1.6	8.0	2.3	1.4	1.2	1.2	7.4	11.6	12.7	1.6
5	1.8	1.6	4.7	2.2	1.8	1.4	1.2	1.2	10.8	1.6	3.8	1.8
6	1.8	1.5	18.0	1.6	1.6	1.3	1.2	1.2	12.9	85	18.8	1.5
7	1.5	1.5	3.1	1.5	1.5	1.3	1.3	1.2	2.6	32.5	26	1.4
8	1.5	1.5	1.9	1.5	1.4	1.3	1.3	1.3	5.5	17.1	33	1.3
9	1.6	1.5	1.9	1.4	1.4	1.4	1.3	1.2	8.5	19.1	21.5	1.4
10	1.8	1.6	2.2	1.4	1.4	1.4	1.3	1.2	3.0	2.9	28.5	1.4
11	1.6	1.4	3.4	1.4	1.4	1.4	1.2	1.2	2.1	1.6	9.9	1.4
12	1.6	1.6	3.7	1.4	1.4	1.4	1.2	1.2	18.1	1.4	4.0	1.6
13	1.6	1.8	1.9	1.4	1.4	1.5	1.2	1.2	4.0	8.6	2.2	1.4
14	1.5	1.5	1.8	1.4	32.5	1.5	1.3	1.2	2.6	18.6	5.6	1.4
15	1.5	1.5	1.6	1.3	3.0	1.4	2.6	1.2	2.4	2.9	9.8	1.4
16	1.5	1.4	1.6	1.3	2.1	1.4	1.6	1.2	10.7	8.0	17.1	1.5
17	1.5	1.4	1.6	8.9	25	1.4	36	1.2	29.5	19.5	30	1.6
18	1.5	1.4	1.5	4.6	41	1.4	1.9	1.2	18.4	36.5	29.5	1.5
19	1.6	1.4	1.5	1.6	21.5	1.4	1.6	1.4	14.0	4.9	20.5	1.4
20	1.4	1.3	1.5	1.6	34	1.4	1.5	1.3	4.2	2.2	34	1.5
21	1.4	2.3	1.5	1.5	3.0	1.4	1.4	1.6	12.1	2.1	26	6.4
22	1.4	6.5	1.4	1.5	2.1	1.6	1.4	1.3	2.8	1.9	14.6	1.8
23	1.5	2.6	1.4	1.5	1.9	1.5	1.4	1.2	1.9	1.9	15.0	1.5
24	5.6	1.8	5.0	1.4	1.9	1.4	1.4	1.2	2.1	1.6	6.6	1.4
25	27	1.5	1.8	1.4	1.8	1.4	1.4	1.2	13.0	1.4	6.5	2.3
26	4.1	1.5	1.5	1.4	1.6	1.4	1.3	1.2	5.2	1.4	2.8	29
27	2.5	1.5	1.4	1.4	1.6	1.4	1.3	1.2	2.1	1.4	1.9	22.5
28	1.9	1.4	1.4	1.4	1.6	1.4	1.3	1.2	2.6	1.4	1.8	10.1
29	2.1	1.4	1.4	1.3	1.5	1.3	1.3	1.2	2.4	1.4	1.6	1.9
30	1.8	1.4	1.4	1.4	1.5	1.3	1.3	-	2.2	25.5	1.6	1.6
31	2.1	1.9	-	6.0	-	1.3	1.3	-	1.5	-	1.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	27	1.4	2.68	4.15	83.0	255
August	6.5	1.3	1.89	2.92	58.7	180
September	18.0	1.4	2.57	3.98	77.1	237
October	8.9	1.3	2.18	3.37	67.6	207
November	41	1.4	6.62	10.2	199	609
December	1.6	1.3	1.40	2.17	43.3	133
Calendar year 1935	235	1.1	6.24	9.65	2,280	6,980
January	36	1.2	2.50	3.87	77.6	238
February	1.6	1.2	1.24	1.92	36.0	110
March	29.5	1.5	6.82	10.6	212	649
April	85	1.4	10.6	16.4	319	978
May	37.5	1.6	14.9	23.1	461	1,410
June	29	1.3	3.60	5.57	108	332
Fiscal year 1935-36	85	1.2	4.76	7.36	1,740	5,340

Koolau Ditch at Nahiku weir, near Nahiku

Location.- Water-stage recorder, lat. 20°48'55", long. 156°07'15", between Kapaula and Waiohue Streams, 3½ miles southwest of Nahiku, and 4 miles southeast of Keanae post office.

Records available.- February 1919 to June 1936.

Average discharge.- 17 years (1919-36), 19.7 million gallons a day (30.5 second-feet).

Extremes.- Maximum discharge during year, 58 million gallons a day (90 second-feet) Jan. 17 (gage height, 1.61 feet); no flow May 10.
1919-36: 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. Flow regulated by spillways and gates. Ditch diverts water at elevation 1,200 feet from nearly all streams from the Makapipi west to the Alo. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	21	39.5	21.5	9.3	15.2	12.9	7.1	6.8	17.4	19.4	52	27
2	17.8	27	21	9.3	9.0	12.3	6.8	6.6	19.0	24	50	25
3	19.7	24	17.5	15.1	8.1	12.3	7.1	6.6	18.6	19.6	47	24.5
4	17.1	21	18.0	28.5	11.5	11.0	6.8	6.3	32	37	47	27
5	25	19.4	31	17.1	10.4	10.7	7.9	6.1	31.5	19.7	42	27
6	26	17.5	44	14.2	10.4	9.8	9.8	5.9	34.5	42	50	24
7	19.7	16.4	32	12.3	9.5	9.5	9.8	5.9	14.2	52	52	21.5
8	23.5	17.8	24.5	11.0	9.0	9.5	8.4	5.6	28	47	52	21
9	22	17.8	24	10.1	9.0	9.8	8.1	5.6	34.5	42	50	19.7
10	21	21	24.5	9.8	8.1	9.5	8.1	5.6	27	34.5	50	18.6
11	19.0	17.8	28	9.5	7.9	9.3	7.1	5.6	24	32	50	18.2
12	16.4	25	24.5	9.3	7.6	8.7	6.8	5.6	44	26	44	19.7
13	15.3	22.5	25	8.7	7.3	9.5	6.8	5.6	39.5	36	37	18.2
14	14.2	22	28	8.7	22.5	15.3	7.1	5.4	27.5	50	47	17.1
15	13.6	18.6	22	8.4	25	11.6	26	5.4	21	39.5	50	18.2
16	12.9	17.8	19.4	8.1	15.6	9.5	15.6	5.4	31	47	50	19.7
17	12.6	15.6	17.8	16.6	35.5	9.0	40	5.1	52	47	52	22
18	13.6	14.6	16.0	20.5	42	8.7	17.1	5.1	52	50	52	18.2
19	18.6	15.0	15.0	11.3	44	9.5	12.9	6.6	50	44	52	17.5
20	13.9	14.2	14.2	10.1	44	12.0	11.3	6.6	42	37	52	18.2
21	12.3	24	13.6	10.4	32	9.8	10.1	15.7	42	32	52	37
22	11.3	32	12.6	9.8	25	8.7	9.5	6.8	37	27.5	50	25
23	12.6	34.5	12.3	9.3	21	8.7	9.3	5.6	32	26	50	21
24	27.5	28	18.0	8.4	21	8.1	8.7	5.4	30	24	47	23.5
25	47	21	13.9	8.1	17.5	7.9	8.4	5.4	34	22	47	34.5
26	34.5	19.0	11.3	8.1	15.3	7.6	8.1	4.9	44	21	44	50
27	32	17.1	10.7	8.1	14.2	7.3	7.9	4.9	32	20	42	50
28	26	16.0	10.1	7.9	17.5	7.3	7.3	5.1	26.5	19.4	34.5	47
29	32	15.3	9.8	7.3	17.1	7.3	7.3	5.1	22	21.5	32	37
30	26	15.3	9.5	7.3	14.2	7.3	7.1	-	19.4	50	30	28
31	30	28	-	17.8	-	7.1	6.8	-	17.8	-	30	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	47	11.3	21.1	32.6	654	2,010
August	39.5	14.2	21.1	32.6	655	2,010
September	44	9.5	19.7	30.5	590	1,810
October	28.5	7.3	11.3	17.5	350	1,080
November	44	7.3	18.2	28.2	546	1,680
December	15.3	7.1	9.60	14.9	298	913
Calendar year 1935	54	7.1	22.6	35.0	8,240	25,290
January	40	6.8	10.4	16.1	321	985
February	15.7	4.9	6.08	9.41	176	541
March	52	17.4	31.5	48.7	976	3,000
April	52	19.4	33.6	52.0	1,010	3,100
May	52	30	46.3	71.6	1,440	4,410
June	50	17.1	25.8	39.9	775	2,380
Fiscal year 1935-36	52	4.9	21.3	33.0	7,790	23,920

Waiaaka Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°07'00", 3,000 feet below highway, 1½ miles west of Nahiku, and 3¾ miles southeast of Keanae post office. Altitude, about 650 feet, by barometer.

Drainage area.- 0.1 square mile.

Records available.- March 1927 to June 1936. March 1927 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 69 million gallons a day (107 second-feet) Jan. 17 (gage height, 1.82 feet), from rating curve extended above 1 million gallons a day by formula for V-notch weirs; minimum, 0.34 million gallons a day (0.53 second-foot) Jan. 27 to Feb. 2, Feb. 12-19.

1932-36: Maximum discharge, 73 million gallons a day (113 second-feet) Mar. 6, 1933 (gage height, 1.87 feet), from rating curve extended above 1 million gallons a day by formula for V-notch weirs; minimum, 0.30 million gallons a day (0.46 second-foot) several days during October, November, 1933, April, May, June, 1934.

Remarks.- Records good for ordinary stages; poor for high stages and for June 25-30. No diversions.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.17	.5	2.65
.3	.60	.6	4.4
.4	1.40	.7	6.6
		.8	9.3

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.54	1.12	0.54	0.44	0.75	0.49	0.39	0.34	0.94	0.54	3.35	0.60
2	.54	.72	.60	.50	.49	.49	.39	.34	.54	.54	1.83	.54
3	.60	.66	.54	.71	.49	.49	.39	.39	.44	.57	1.10	.54
4	.54	.60	.54	.88	.94	.44	.39	.39	.44	.75	.94	.60
5	.76	.60	.85	.86	.66	.44	.39	.39	.49	.54	.86	.70
6	.66	.54	1.56	.60	.66	.44	.44	.39	.49	7.8	1.02	.54
7	.60	.54	.66	.60	.54	.44	.39	.39	.44	3.35	1.02	.54
8	.60	.54	.66	.49	.54	.44	.39	.39	.44	3.95	1.02	.54
9	.60	.54	.66	.49	.49	.44	.44	.39	.54	9.3	1.14	.49
10	.66	.66	.81	.49	.44	.44	.39	.39	.49	6.2	2.05	.49
11	.60	.54	.66	.49	.44	.44	.39	.39	.49	1.02	1.10	.49
12	.60	.69	.75	.44	.44	.44	.39	.34	4.4	.86	.94	.54
13	.60	.66	.60	.44	.44	.49	.39	.34	3.05	.94	.86	.49
14	.60	.60	.66	.44	1.39	.49	.39	.34	.60	1.10	.86	.49
15	.54	.54	.60	.44	.89	.49	.55	.34	.60	.86	1.08	.49
16	.54	.60	.60	.44	.66	.44	.44	.34	.60	.79	1.50	.49
17	.54	.54	.60	1.77	.97	.44	2.7	.34	.72	.90	1.33	.61
18	.54	.49	.54	.83	.80	.44	.54	.34	.94	.86	1.30	.54
19	.60	.54	.54	.60	.79	.49	.44	.45	1.10	.79	1.02	.49
20	.49	.44	.54	.54	.99	.44	.39	.39	.86	.72	1.02	.49
21	.49	.61	.54	.54	.79	.44	.39	.39	.94	.72	.94	.66
22	.49	.92	.49	.54	.66	.57	.39	.39	.79	.86	.94	.54
23	.54	.71	.49	.49	.66	.47	.39	.39	.72	.60	1.07	.49
24	.65	.60	.49	.49	.66	.39	.39	.39	.79	.60	.86	.49
25	.86	.54	.49	.49	.60	.39	.39	.39	.72	.60	.79	.6
26	.66	.54	.49	.49	.54	.39	.39	.39	.75	.54	.66	2.0
27	.79	.49	.49	.49	.54	.39	.34	.39	.66	.54	.66	1.5
28	.66	.49	.49	.49	.54	.39	.34	.39	.66	.49	.66	.7
29	.86	.49	.49	.44	.54	.39	.34	.39	.60	.49	.60	.6
30	.66	.49	.44	.44	.49	.39	.34	-	.60	1.93	.60	.6
31	.86	.60	-	.72	-	.39	.34	-	.54	-	.60	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.86	0.49	0.622	0.962	19.3	59
August	1.12	.44	.601	.930	18.6	57
September	1.56	.44	.614	.950	18.4	56
October	1.77	.44	.584	.904	18.1	56
November	1.39	.44	.661	1.02	19.8	61
December	.57	.39	.444	.687	13.8	42
Calendar year 1935	26	.39	.891	1.38	325	996
January	2.7	.34	.473	.732	14.7	45
February	.45	.34	.377	.583	10.9	34
March	4.4	.44	.851	1.32	26.4	81
April	9.3	.49	1.65	2.55	49.6	152
May	3.35	.60	1.09	1.69	33.7	103
June	2.0	.49	.629	.973	18.9	58
Fiscal year 1935-36	9.3	.34	.716	1.11	262	804

Paakea Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'25", long. 156°07'05", 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.- March 1927 to June 1936. March 1927 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 188 million gallons a day (291 second-feet) Apr. 6 (gage height, 4.71 feet), from rating curve extended above 25 million gallons a day; minimum, 1.8 million gallons a day (2.8 second-feet) Feb. 18, 19.
1932-36: Maximum discharge, that of Apr. 6, 1936; minimum, that of Feb. 18, 19, 1936.

Remarks.- Records good for ordinary stages; poor for medium and high stages. Koolau Ditch at altitude of about 1200 feet diverts all low flow for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	1.6	.8	10.9	1.4	30	2.2	60
.5	3.0	.9	14.7	1.6	37	2.5	72
.6	4.9	1.0	18.0	1.8	44		
.7	7.4	1.2	24	2.0	52		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.5	4.9	2.7	2.1	3.2	2.5	2.2	2.2	4.8	2.2	27	2.5
2	2.3	3.0	2.8	2.3	2.5	2.3	2.2	2.1	2.8	2.3	18.3	2.3
3	2.5	2.8	2.3	5.2	2.5	2.3	2.2	2.1	2.3	2.3	4.9	2.3
4	2.3	2.7	2.3	6.7	3.4	2.3	2.2	2.1	2.3	4.3	4.3	2.5
5	2.8	2.7	5.9	3.2	2.8	2.3	2.2	2.1	2.3	2.5	3.4	2.8
6	2.7	2.5	9.1	2.5	2.8	2.3	2.2	2.1	2.3	49	5.1	2.3
7	2.5	2.3	3.0	2.5	2.7	2.3	2.2	2.1	2.2	18.5	6.5	2.3
8	2.5	2.3	2.8	2.3	2.7	2.3	2.2	2.1	5.0	8.4	5.4	2.2
9	2.5	2.5	2.8	2.3	2.5	2.3	2.2	2.1	4.4	14.4	5.5	2.2
10	2.5	2.7	3.0	2.2	2.5	2.3	2.3	2.1	2.5	4.9	8.1	2.2
11	2.5	2.5	4.6	2.2	2.5	2.3	2.2	2.1	2.3	3.6	3.8	2.2
12	2.5	2.8	3.2	2.2	2.2	2.3	2.2	2.1	10.7	3.2	3.4	2.5
13	2.5	2.7	2.7	2.2	2.2	2.3	2.1	2.1	3.6	5.2	3.2	2.3
14	2.3	2.5	2.7	2.2	14.7	2.5	2.1	2.1	2.5	8.4	4.2	2.3
15	2.3	2.5	2.5	2.2	3.6	2.5	3.6	2.1	2.3	3.4	4.9	2.2
16	2.3	2.5	2.5	2.2	3.0	2.3	2.3	2.1	3.2	3.2	7.9	2.3
17	2.3	2.3	2.5	10.6	11.2	2.3	17.3	2.1	10.4	4.8	9.3	2.7
18	2.3	2.3	2.5	3.8	7.6	2.3	2.8	1.8	9.3	9.6	6.9	2.3
19	2.5	2.3	2.5	2.8	3.5	2.5	2.7	2.0	5.4	3.2	4.5	2.3
20	2.3	2.2	2.5	2.7	6.4	2.5	2.3	1.9	3.4	3.0	6.9	2.3
21	2.3	4.2	2.2	2.5	3.2	2.3	2.3	3.3	4.2	2.8	4.0	4.8
22	2.3	4.4	2.2	2.5	2.8	2.7	2.3	1.9	3.0	2.7	4.1	2.7
23	2.3	3.2	2.2	2.5	2.8	2.5	2.3	1.9	3.0	2.7	3.8	2.3
24	4.7	2.8	2.5	2.5	2.7	2.2	2.3	1.9	3.0	2.7	3.2	2.3
25	9.2	2.7	2.2	2.3	2.7	2.2	2.3	1.9	7.1	2.5	3.0	3.2
26	2.8	2.5	2.2	2.3	2.5	2.2	2.3	1.9	3.2	2.5	2.7	6.2
27	3.0	2.5	2.2	2.3	2.5	2.2	2.2	1.9	2.7	2.3	2.8	4.8
28	2.7	2.5	2.1	2.3	2.5	2.2	2.2	1.8	2.5	2.2	2.7	3.0
29	3.2	2.5	2.1	2.2	2.5	2.2	2.2	1.8	2.3	2.3	2.7	2.8
30	2.8	2.5	2.1	2.2	2.5	2.2	2.2	-	2.3	22	2.5	2.7
31	3.2	3.2	-	6.8	-	2.2	2.2	-	2.2	-	2.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	9.2	2.3	2.82	4.36	87.4	268
August	4.9	2.2	2.77	4.29	86.0	264
September	9.1	2.1	2.90	4.49	86.9	267
October	10.6	2.1	3.06	4.73	94.8	291
November	14.7	2.2	3.71	5.74	111	341
December	2.7	2.2	2.33	3.61	72.1	221
Calendar year 1935	70	2.1	3.79	5.86	1,380	4,240
January	17.3	2.1	2.79	4.32	86.5	265
February	3.3	1.8	2.06	3.19	59.8	184
March	10.7	2.2	3.85	5.96	120	367
April	49	2.2	6.70	10.4	201	617
May	27	2.5	5.74	8.88	178	546
June	6.2	2.2	2.73	4.22	81.8	251
Fiscal year 1935-36	49	1.8	3.46	5.35	1,270	3,880

Waiohue Stream near Nahiku

Location.- Water-stage recorder, lat. 20°49'05", long. 156°07'40", 200 feet above Koolau Ditch intake, 300 feet above ditch trail, 2¼ miles southwest of Nahiku, and 3½ miles southeast of Keanae post office.

Drainage area.- 1.5 square miles.

Records available.- October 1921 to June 1936.

Average discharge.- 14 years (1922-36), 7.92 million gallons a day (12.3 second-feet).

Extremes.- Maximum discharge during year, 435 million gallons a day (673 second-feet) Nov. 14 (gage height, 5.00 feet), from rating curve extended above 75 million gallons a day; minimum, 1.5 million gallons a day (2.3 second-feet) Feb. 18, 19.
1921-36: Maximum discharge, 609 million gallons a day (942 second-feet) Feb. 25, 1935 (gage height, 6.16 feet), from rating curve extended above 75 million gallons a day; minimum, 1.4 million gallons a day (2.2 second-feet) Nov. 25, 1933.

Remarks.- Records excellent for ordinary stages; those for Aug. 8 to Sept. 10, Dec. 15-27, June 24-30, and those for extremely high and low stages are poor. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.5	1.6	1.0	6.4	1.8	35
.6	2.2	1.1	8.5	2.0	47
.7	2.8	1.2	11.1	2.2	61
.8	3.7	1.4	17.5	2.4	78
.9	4.8	1.6	25.5	2.6	97

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.1	9.1	6.0	2.7	3.1	3.2	2.1	1.8	5.7	4.1	25.5	5.1
2	3.9	5.0	4.5	2.7	2.5	3.1	2.0	1.8	4.6	4.8	16.9	4.7
3	4.6	4.8	4.0	6.1	2.4	3.1	2.0	1.8	3.6	4.8	6.4	4.6
4	3.8	4.4	4.5	7.5	3.1	2.9	2.0	1.8	7.4	11.2	10.6	5.5
5	5.6	4.1	9.0	4.1	2.7	2.8	2.3	1.8	8.2	4.2	7.4	6.0
6	4.8	3.9	15	3.2	2.7	2.7	2.7	1.8	10.2	82	13.8	4.6
7	4.2	3.9	7.0	3.0	2.4	2.6	2.6	1.7	2.9	19.4	17.2	4.2
8	4.7	4.0	5.0	2.8	2.4	2.6	2.3	1.7	7.4	11.7	18.4	4.0
9	4.7	4.5	5.4	2.7	2.3	2.7	2.7	1.8	7.4	16.4	14.4	3.7
10	4.5	5.0	4.5	2.7	2.2	2.7	2.5	1.8	4.1	5.9	17.3	3.6
11	4.2	4.5	6.9	2.7	2.2	2.6	2.1	1.7	4.3	5.8	10.1	3.5
12	3.9	5.4	6.0	2.6	2.1	2.6	2.1	1.7	15.1	5.4	8.3	4.4
13	3.7	4.5	4.6	2.6	2.1	3.0	2.0	1.7	6.8	10.5	7.2	3.8
14	3.5	4.2	4.8	2.6	21	3.5	2.0	1.7	4.6	13.7	11.9	3.5
15	3.4	4.0	4.1	2.5	3.7	2.9	5.3	1.6	4.1	6.4	12.6	3.8
16	3.3	3.9	3.8	2.5	2.7	2.7	2.8	1.6	10.8	10.3	16.2	4.6
17	3.2	3.7	3.8	10.3	14.8	2.6	23	1.6	21	14.3	19.6	4.8
18	3.6	3.5	3.5	3.6	19.2	2.5	2.7	1.6	14.0	24	17.5	3.8
19	4.4	3.6	3.4	2.8	11.3	2.7	2.4	2.7	10.5	7.0	12.9	3.5
20	3.5	3.7	3.3	2.7	18.3	3.0	2.2	2.0	6.4	5.9	19.5	4.1
21	3.2	7.0	3.2	2.7	3.9	2.8	2.1	4.5	11.4	5.6	14.8	9.1
22	3.1	9.0	3.2	2.6	3.2	2.6	2.0	1.9	5.9	5.3	11.1	5.8
23	3.5	7.0	3.1	2.5	2.9	2.5	1.9	1.7	7.2	5.3	12.4	4.1
24	8.8	6.0	6.3	2.4	3.2	2.4	1.9	1.7	6.4	4.8	9.5	5.0
25	20.5	5.0	3.2	2.4	3.0	2.3	1.9	1.6	12.9	4.6	10.2	9.0
26	5.7	4.7	3.0	2.3	3.0	2.3	1.9	1.6	7.1	4.4	7.9	20
27	5.3	4.2	2.9	2.3	3.1	2.3	1.8	1.6	6.5	4.1	7.4	15
28	4.6	3.8	2.8	2.3	3.5	2.1	1.8	1.6	5.0	4.0	6.2	11
29	5.6	3.7	2.7	2.3	3.5	2.1	1.7	1.6	4.7	5.5	5.9	7.0
30	4.6	3.9	2.7	2.3	3.3	2.1	1.7	-	4.4	25.5	5.6	4.5
31	6.0	7.0	-	8.2	-	2.1	1.7	-	4.2	-	5.8	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	20.5	3.1	4.92	7.61	152	468
August	9.1	3.5	4.87	7.54	151	463
September	15	2.7	4.74	7.33	142	436
October	10.3	2.3	3.38	5.23	105	321
November	21	2.1	5.19	8.03	156	478
December	3.5	2.1	2.65	4.10	82.1	252
Calendar year 1935	167	2.1	7.12	11.0	2,600	7,970
January	23	1.7	2.91	4.50	90.2	277
February	4.5	1.6	1.84	2.85	53.5	164
March	21	2.9	7.57	11.7	235	721
April	82	4.0	11.2	17.3	337	1,030
May	25.5	5.6	12.3	19.0	380	1,170
June	20	3.5	5.88	9.10	176	541
Fiscal year 1935-36	82	1.6	5.63	8.71	2,060	6,320

West Kopiliula Stream near Keanae

Location.- Water-stage recorder, lat. 20°40'10", long. 156°08'15", 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 1936. January 1914 to September 1917, October 1921 to December 1930 at site 300 feet downstream, February 1934 to January 1935 at top of falls 50 feet upstream.

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

Extremes.- Maximum discharge during period, 606 million gallons a day (938 second-feet) Apr. 6 (gage height, 4.13 feet), from rating curve extended above 100 million gallons a day; minimum, 0.74 million gallons a day (1.14 second-feet) Feb. 18.
1914-17, 1921-36: Maximum discharge, 2,800 million gallons a day (4,330 second-feet) July 8, 1934 (gage height, 9.25 feet), from rating curve extended above 100 million gallons a day; minimum, 0.6 million gallons a day (0.9 second-foot) Sept. 15-17, 1917.

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

Rating table, Dec. 9 to June 30, 1936 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.60	1.2	25
.4	1.30	1.4	37
.6	4.2	1.7	60
.8	8.9	2.0	92
1.0	15.7	2.5	165

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1						-	1.30	1.23	9.1	8.7	32	6.1
2						-	1.30	1.23	10.9	11.0	26.5	5.7
3						-	1.30	1.42	16.9	7.7	12.7	5.5
4						-	1.30	1.09	35	29.5	29	7.1
5						-	2.25	1.02	46	7.9	12.0	7.3
6						-	3.0	.95	68	148	30	5.2
7						-	2.25	.88	10.4	43	44	4.4
8						-	1.54	.95	21	26	50	4.4
9						*2.5	2.3	.95	15.8	32	32	4.0
10						*2.5	1.78	.88	14.4	10.8	43	3.5
11						*2.5	1.23	.88	15.8	8.4	22	3.5
12						*2.25	1.09	.88	47	6.8	15.0	6.1
13						3.35	1.09	1.02	17.2	17.8	12.0	3.95
14						6.1	1.42	.95	7.9	25.5	18.3	3.2
15						3.2	11.8	.88	5.9	12.0	16.9	4.2
16						2.25	3.45	.88	26	26	19.6	4.8
17						2.15	49	.81	49	37	43	4.7
18						1.90	3.5	.81	22.5	72	33.5	3.7
19						2.65	2.5	3.85	17.2	16.6	27	3.2
20						5.3	2.25	1.78	13.0	10.8	54	3.9
21						2.5	2.0	9.2	34.5	8.6	37.5	19.0
22						2.15	1.78	1.23	15.9	7.3	19.6	6.9
23						2.15	1.66	.95	11.7	7.6	24.5	3.85
24						1.90	1.42	.95	9.8	6.3	15.7	9.6
25						1.90	1.42	.95	21.5	5.9	18.6	18.0
26						1.78	1.42	.88	13.8	5.5	13.5	85
27						1.78	1.30	.88	14.2	5.0	12.0	45
28						1.66	1.30	.88	9.2	4.8	9.5	26.5
29						1.54	1.16	.88	7.3	7.0	8.4	12.3
30						1.54	1.16	-	6.3	31.5	7.6	7.3
31						1.30	1.09	-	5.2	-	7.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July						
August						
September						
October						
November						
December 9-31	6.1	1.30	2.47	3.82	56.8	174
Calendar year						
January	49	1.09	3.59	5.55	111	342
February	9.2	.81	1.38	2.14	40.1	123
March	68	5.2	19.9	30.8	618	1,900
April	148	4.8	21.6	33.4	647	1,990
May	54	7.6	24.1	37.3	747	2,290
June	85	3.2	10.9	16.9	328	1,010
The period						7,830

*Estimated.

East Wailuaiki Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'05", long. 156°08'25", 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 1936.

Average discharge.- 14 years (1922-36), 18.7 million gallons a day (28.9 second-feet).

Extremes.- Maximum discharge during year, 510 million gallons a day (789 second-feet) Apr. 6 (gage height, 5.30 feet); minimum, 1.2 million gallons a day (1.9 second-feet) Feb. 19, 29.

1913-17, 1922-36: Maximum discharge, 2,020 million gallons a day (3,130 second-feet) Feb. 25, 1935 (gage height, 8.79 feet), from rating curve extended above 100 million gallons a day; 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 than that given above but owing to destruction of station on that day no data are available for this peak.

Remarks.- Records good for ordinary stages: those for Apr. 19, 21-27 (computed on basis of records for nearby streams), and those for high stages are poor. No diversions. Water used for irrigation in Central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.3	1.0	.6	2.8	1.2	9.5	2.0	31.5	3.2	114
.4	1.5	.8	4.4	1.4	13.3	2.4	50	3.6	159
.5	2.1	1.0	6.6	1.6	18.2	2.8	78	4.0	215

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.5	15.6	7.2	2.7	7.6	4.0	1.8	2.0	13.7	9.7	54	7.4
2	5.4	6.4	6.4	3.2	2.7	3.8	1.8	2.2	16.5	12.9	38	7.0
3	6.1	6.0	4.8	9.9	2.4	3.8	1.7	2.6	16.8	7.6	13.3	6.6
4	5.0	5.1	10.2	19.4	3.6	3.3	1.8	1.9	39.5	29.5	34.5	8.1
5	9.9	4.6	23	5.0	3.3	3.0	2.9	1.8	51	7.2	12.7	8.5
6	9.0	4.3	28.5	5.3	4.4	2.9	4.0	1.6	71	163	38	6.6
7	6.2	4.3	10.0	4.3	3.1	2.9	2.7	1.6	10.6	58	55	5.9
8	7.8	5.3	6.5	3.4	2.6	2.8	2.1	1.6	26.5	30	66	5.9
9	7.5	6.6	6.5	3.2	2.5	3.0	3.0	1.5	18.8	41	38	5.8
10	6.7	6.6	6.4	3.0	2.4	2.9	2.8	1.6	15.2	11.1	55	5.3
11	6.0	4.5	12.6	3.0	2.4	3.0	1.9	1.5	16.6	8.5	23	5.2
12	5.2	11.2	11.9	2.8	2.4	2.7	1.7	1.6	52	7.0	15.6	8.7
13	4.7	7.3	6.6	2.7	2.1	3.8	1.7	1.6	16.9	24	11.9	6.5
14	4.4	6.0	9.2	2.6	34	6.6	2.0	1.4	7.6	35	22.5	5.2
15	4.2	4.8	6.1	2.4	6.9	4.0	15.9	1.4	5.9	12.5	20.5	6.1
16	4.1	4.5	5.0	2.4	4.3	2.7	3.6	1.4	39	30.5	25	6.6
17	4.2	4.0	4.7	12.2	43	2.6	57	1.4	69	46	57	7.1
18	4.7	4.0	4.2	13.6	89	2.4	4.3	1.3	27	*93	48	5.6
19	7.8	4.2	4.2	3.7	55	3.2	2.8	5.3	18.2	16.9	33.5	5.2
20	4.1	4.1	4.0	3.2	88	7.2	2.4	2.8	11.1	*10.2	67	5.6
21	3.7	14.9	3.8	3.1	13.8	3.4	2.2	15.8	29.5	8.0	52	29
22	3.6	15.2	3.6	2.8	7.4	2.5	2.1	2.1	15.4	7.0	25	9.6
23	4.9	17.7	3.4	2.6	5.5	2.5	2.0	1.6	11.9	*7.0	29.5	6.0
24	29	8.9	9.5	2.4	6.5	2.2	1.9	1.6	10.0	6.0	18.2	11.4
25	77	5.2	4.4	2.3	4.5	2.1	1.8	1.6	35	5.6	19.6	24
26	14.9	4.8	3.3	2.2	4.0	2.1	1.8	1.4	17.0	5.2	14.4	98
27	11.8	4.2	3.1	2.2	4.0	2.0	1.8	1.4	15.5	5.0	12.9	53
28	7.8	4.0	2.9	2.1	7.0	2.0	1.7	1.3	9.2	4.9	10.2	33.5
29	7.6	4.1	2.8	2.1	6.1	2.0	1.7	1.4	6.6	7.0	9.2	13.3
30	6.1	4.2	2.7	2.1	4.5	1.9	1.7	-	5.5	52	8.5	8.4
31	9.1	23.5	-	18.4	-	1.8	1.7	-	4.9	-	8.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	77	3.6	9.52	14.7	295	905
August	23.5	4.0	7.29	11.3	226	694
September	28.5	2.7	7.25	11.2	218	667
October	19.4	2.1	4.85	7.50	150	461
November	89	2.1	14.2	22.0	425	1,300
December	7.2	1.8	3.07	4.75	95.1	292
Calendar year 1935	648	1.8	17.8	27.5	6,490	19,920
January	57	1.7	4.46	6.90	138	424
February	15.8	1.3	2.29	3.54	66.3	203
March	71	4.9	22.7	35.1	703	2,160
April	163	4.9	25.4	39.3	761	2,340
May	67	8.5	30.2	46.7	937	2,870
June	98	5.2	13.8	21.4	415	1,270
Fiscal year 1935-36	163	1.3	12.1	18.7	4,430	13,590

*Graph estimated for part of day.

West Wailuaiki Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'20", long. 156°08'35", 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 1936.
Average discharge.- 14 years (1922-36), 24.2 million gallons a day (37.4 second-feet).
Extremes.- Maximum discharge during year, 636 million gallons a day (984 second-feet) Jan. 17 (gage height, 5.42 feet), from rating curve extended above 500 million gallons a day; minimum, 1.19 million gallons a day (1.84 second-feet) Feb. 17-19.
1914-17, 1921-36: Maximum discharge (estimated), 4,500 million gallons a day (6,960 second-feet) Jan. 14, 1923 (gage height, from floodmarks, about 13.5 feet), from rating curve extended above 500 million gallons a day; minimum, 0.3 million gallons a day (0.5 second-foot) July 28, 1922.
Remarks.- Records good for ordinary stages; those for Oct. 17 to Nov. 1, Jan. 29 to Feb. 17, Feb. 21 to Mar. 13 (computed on basis of records for nearby streams), and those for extremely high stages are poor.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1 to Mar. 5

0.3	1.03	1.3	12.3
.4	1.35	1.6	20.5
.5	1.90	2.0	36
.7	3.35	2.5	64
1.0	7.0	3.0	106

Mar. 6 to June 30

0.7	4.0	2.0	40
.9	6.4	2.5	73
1.2	12.0	3.0	121
1.5	20	4.0	270

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	8.3	14.9	9.6	2.85	8.0	5.4	1.57	1.9	16	15.3	65	6.9
2	6.8	7.5	8.1	3.35	*3.35	4.9	1.52	2.2	18	17.2	42	6.4
3	7.2	6.7	6.0	9.2	2.95	4.9	1.46	2.5	19	12.9	17.0	6.0
4	6.1	5.6	7.1	19.2	4.2	4.2	1.46	1.9	45	33.5	41	7.2
5	10.2	5.1	16.7	5.3	4.3	3.9	2.05	1.8	56	10.3	14.3	7.5
6	10.0	4.7	34.5	13.6	5.4	3.75	2.9	1.6	80	205	42	5.8
7	7.2	4.4	12.3	7.4	4.2	3.55	2.05	1.5	11	74	61	5.2
8	8.3	5.3	7.8	4.3	3.9	3.35	1.79	1.4	22	37.5	86	6.1
9	8.3	6.5	7.2	3.75	4.2	3.55	2.1	1.4	19	43	46	7.4
10	7.5	6.4	6.6	3.75	3.35	3.35	2.6	1.4	16	14.1	68	5.2
11	7.2	4.8	11.8	3.75	3.1	3.35	1.68	1.3	17	10.3	29	4.8
12	6.0	10.1	12.4	3.25	3.1	3.1	1.52	1.4	56	8.4	19.4	7.4
13	5.8	6.7	7.8	3.1	2.8	4.0	1.46	1.3	20	29.5	14.3	6.2
14	5.0	6.4	10.5	2.95	34	6.4	1.46	1.3	*10.7	39	22.5	4.9
15	4.5	4.9	7.6	2.8	8.2	4.3	16.1	1.2	8.4	16.7	20	5.5
16	4.5	4.7	6.2	*2.7	6.2	3.25	4.0	1.2	52	37.5	23.5	5.6
17	4.3	4.1	5.6	13	33	2.95	75	1.2	76	72	60	6.4
18	4.7	3.8	4.9	14	103	2.8	5.6	1.19	27	92	54	5.1
19	7.6	4.2	4.8	4.5	57	3.5	3.55	4.8	19.7	20.5	36.5	4.7
20	4.5	4.3	4.4	3.7	106	7.8	2.85	*2.65	14.3	12.7	82	5.0
21	3.9	12.2	4.0	3.4	18.6	4.3	2.5	15	30	9.9	66	29
22	3.65	17.3	3.9	3.3	10.1	3.25	2.3	2.5	16.4	8.4	27	10.2
23	4.3	16.4	3.55	3.1	7.6	3.2	2.1	1.9	14.8	8.8	34	6.3
24	24	9.4	4.8	2.8	8.3	2.8	1.90	1.7	12.5	7.7	21	18.3
25	79	6.2	3.9	2.7	6.2	2.65	1.64	1.5	62	6.6	23.5	26
26	18.3	5.6	3.65	2.6	5.3	2.55	1.74	1.4	26.5	6.1	17.0	123
27	13.3	4.7	3.35	2.6	5.3	2.4	1.84	1.3	26.5	5.5	13.6	53
28	8.8	4.2	3.1	2.5	7.1	2.35	1.79	1.3	14.0	5.2	10.5	41
29	8.3	4.3	2.95	2.4	8.1	2.1	1.7	1.3	9.1	6.8	9.3	17.0
30	7.2	4.4	2.95	2.4	6.0	1.84	1.6	-	7.5	53	8.4	9.9
31	8.9	24	-	19	-	1.62	1.6	-	6.6	-	8.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	79	3.65	10.1	15.6	314	963
August	24	3.8	7.41	11.5	230	705
September	34.5	2.95	7.60	11.8	228	700
October	19.2	2.4	5.59	8.65	173	532
November	106	2.8	16.1	24.9	483	1,480
December	7.8	1.62	3.59	5.55	111	342
Calendar year 1935	1,200	1.62	21.7	33.6	7,920	24,310
January	75	1.46	4.96	7.67	154	471
February	15	1.19	2.17	3.36	63.0	193
March	80	6.6	26.7	41.3	829	2,540
April	205	5.2	30.6	47.3	919	2,820
May	86	8.0	34.9	54.0	1,080	3,320
June	123	4.7	15.1	23.4	453	1,390
Fiscal year 1935-36	205	1.19	13.8	21.4	5,040	15,460

*Partly estimated.

Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°50'20", long. 156°08'30", 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.- March 1927 to March 1936 (discontinued). March 1927 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during period, 596 million gallons a day (922 second-feet) Nov. 14 (gage height, 5.63 feet), from rating curve extended above 90 million gallons a day; minimum, 0.17 million gallons a day (0.26 second-foot) Feb. 18, 19.

1932-36: Maximum discharge, 967 million gallons a day (1,500 second-feet) Apr. 25, 1934 (gage height, 6.62 feet), from rating curve extended above 30 million gallons a day by standard Hofmann weir curve to 90 million gallons a day; minimum, 0.12 million gallons a day (0.19 second-foot) Oct. 10, 11, 12, 1933.

Remarks.- Records good except those for Oct. 21-29, which are poor. All low flow available is diverted by Koolau Ditch about 1.5 miles above station.

Rating table, July 1, 1935, to Mar. 31, 1936 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.17	1.0	11.4	3.0	130
.3	.55	1.4	23.5	3.5	190
.4	1.28	1.7	36	4.0	260
.5	2.35	2.0	51	4.5	350
.7	5.2	2.5	84		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.02	8.6	0.94	0.40	2.45	0.79	0.32	0.45	13.8			
2	.86	1.46	1.02	.63	.72	.72	.28	.32	13.0			
3	.94	1.28	.86	4.65	.60	.72	.28	.64	8.5			
4	.79	1.10	.60	21	2.0	.66	.28	.32	18.1			
5	1.69	.94	8.4	4.1	1.19	.60	.40	.32	24			
6	1.28	.79	24	3.45	1.19	.55	.45	.28	54			
7	.86	.79	2.75	.94	.86	.55	.36	.28	14.0			
8	.94	.79	1.19	.86	.72	.55	.32	.28	24.5			
9	1.27	.79	1.46	.72	.66	.55	.32	.28	26			
10	1.10	1.46	1.76	.72	.60	.60	.45	.28	17.8			
11	1.02	.79	3.15	.66	.55	.50	.32	.28	12.4			
12	.94	1.26	5.0	.60	.60	.45	.28	.28	51			
13	.86	.94	1.10	.55	.55	.60	.28	.28	27.5			
14	.72	.92	1.19	.50	41	.86	.28	.25	17.3			
15	.72	.72	.94	.55	14.8	.66	4.0	.25	12.8			
16	.66	1.08	.79	.55	2.65	.50	.72	.22	23			
17	.66	.72	1.02	14.6	18.5	.45	34.5	.22	66			
18	.72	.60	.72	7.1	32.5	.45	1.19	.19	41			
19	.94	.66	.66	.86	20	.55	1.02	2.55	31.5			
20	.66	.60	.66	*.72	48	.60	.66	.74	21			
21	.60	.86	.60	.72	2.75	.45	.55	6.7	22.5			
22	.55	.86	.55	.72	1.55	.40	.55	.50	19.7			
23	.66	5.9	.55	.66	1.28	1.85	.55	.40	19.5			
24	8.8	1.10	.60	.66	1.28	.45	.50	.55	18.5			
25	33.5	.86	.55	.60	1.10	.40	.45	.79	42			
26	4.1	.79	.50	.60	.94	.36	.40	.86	11.1			
27	2.1	.72	.45	.55	.94	.36	.40	.94	5.9			
28	1.10	.66	.45	.50	1.10	.36	.45	.94	3.0			
29	1.46	.66	.40	.45	.94	.32	.40	1.19	2.6			
30	1.10	.66	.40	.50	.79	.32	.36	-	* 2.6			
31	1.51	5.9	-	13.5	-	.32	.36	-	-			

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	33.5	0.55	2.39	3.70	74.1	227
August	8.6	.60	1.46	2.26	45.3	139
September	24	.40	2.11	3.26	63.3	194
October	21	.40	2.70	4.18	83.6	257
November	48	.55	6.76	10.5	203	622
December	1.85	.32	.565	.874	17.5	54
Calendar year 1935	282	.32	8.38	13.0	3,060	9,390
January	34.5	.28	1.67	2.58	51.7	159
February	6.7	.19	.744	1.15	21.6	66
March 1-30	66	2.6	22.2	34.3	665	2,040
April	-	-	-	-	-	-
May	-	-	-	-	-	-
June	-	-	-	-	-	-
The period						3,760

*Partly estimated.

East Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'25", long. 156°08'40", 125 feet above Koolau Ditch intake, 250 feet above trail, 2½ miles south of Keanae post office.

Drainage area.- 0.6 square mile.

Records available.- November 1921 to June 1936. January 1914 to October 1917, at site 500 feet upstream.

Average discharge.- 14 years (1922-36), 5.58 million gallons a day (8.63 second-feet).

Extremes.- Maximum discharge during year, 495 million gallons a day (766 second-feet) Nov. 14 (gage height, 4.20 feet), from rating curve extended above 120 million gallons a day; minimum, 0.51 million gallons a day (0.79 second-foot) Feb. 18.
1914-17, 1921-36: Maximum discharge, 1,050 million gallons a day (1,620 second-feet) Feb. 12, 1925 (gage height, 6.96 feet), from rating curve extended above 120 million gallons a day; minimum, 0.1 million gallons a day (0.2 second-foot) Apr. 11, 1926.

Remarks.- Records good for ordinary stages and poor for high stages: those estimated are fair. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.44	1.0	17.0
.4	1.15	1.3	35
.5	2.5	1.6	62
.7	6.5	2.0	110

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.05	8.7	2.7	1.08	2.35	1.96	0.97	0.94	7.8	+4.5	30	2.85
2	2.5	3.4	2.5	1.93	1.28	1.82	.80	.98	7.5	+4.0	17.2	2.85
3	3.2	3.2	2.25	5.7	1.15	1.82	.80	1.15	4.7	*3.45	5.8	2.7
4	2.5	2.85	5.9	11.1	2.1	1.69	.80	.80	7.2	+6.5	7.7	2.35
5	5.0	2.35	11.4	2.7	1.96	1.69	.94	.80	7.3	+4.5	5.2	2.25
6	3.95	2.25	14.4	2.25	2.5	1.56	1.28	.72	7.0	82	12.8	1.82
7	2.7	2.1	4.4	1.82	1.69	1.56	1.01	.65	2.85	19.5	14.8	1.82
8	3.6	2.7	3.05	1.69	1.42	1.56	.94	.65	13.9	10.1	14.4	1.82
9	3.75	3.6	2.85	1.69	1.28	1.56	1.47	.65	7.9	14.5	10.4	1.82
10	3.4	3.2	2.85	1.42	1.15	1.42	1.42	.65	4.5	*3.6	13.9	1.56
11	3.4	2.35	7.7	1.42	1.15	1.42	1.01	.65	4.0	*2.25	5.6	1.56
12	2.5	6.3	5.8	1.28	1.28	1.42	.94	.65	14.7	*1.42	4.5	3.55
13	2.5	3.95	3.4	1.15	1.15	1.82	.94	.72	5.9	8.6	4.1	2.25
14	2.25	3.2	3.95	1.08	25	3.0	2.25	.65	3.4	11.2	8.7	1.69
15	2.1	2.5	2.85	1.08	3.05	1.96	4.8	.65	2.7	†9.0	8.4	2.1
16	2.1	2.35	2.5	1.08	2.25	1.56	2.25	.58	8.7	6.8	14.3	2.65
17	1.96	2.1	2.35	12.1	20.5	1.42	25	.58	27	9.6	21	3.65
18	2.1	2.1	2.1	5.2	16.8	1.42	1.82	.51	11.6	19.3	16.1	2.35
19	3.4	2.1	2.1	1.69	12.4	1.56	1.56	3.9	*6.0	*4.1	9.2	2.25
20	1.96	1.96	1.96	1.82	20	2.85	1.15	1.56	+4.0	+3.6	12.2	2.55
21	1.82	6.8	1.82	1.56	3.75	1.42	1.15	9.0	+5.4	+3.05	11.3	10.7
22	1.69	5.8	1.82	1.28	2.7	1.15	1.08	1.15	+4.5	*2.5	7.7	5.8
23	2.1	8.0	1.42	1.15	2.25	1.28	1.08	.94	5.4	*1.96	6.8	2.85
24	10.9	3.95	1.56	1.08	2.7	1.15	1.01	.87	4.0	+1.69	4.5	3.4
25	21.5	2.7	1.42	1.08	2.25	1.01	.94	.80	*27	+1.56	3.95	9.7
26	6.0	2.35	1.28	1.08	2.1	1.01	.94	.80	5.0	+1.42	3.4	14.5
27	4.8	2.25	1.28	1.08	1.96	.94	.94	.72	4.3	1.82	2.85	15.1
28	3.4	1.96	1.28	1.01	3.1	.94	.87	.72	*2.85	1.69	2.85	6.6
29	3.6	1.96	1.15	.94	2.35	.94	.87	.72	*2.7	2.6	2.85	4.6
30	3.05	1.82	1.28	.94	2.1	.87	.80	-	*2.7	35	2.85	3.2
31	4.5	10.6	-	13.7	-	.80	.80	-	+2.5	-	2.85	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	21.5	1.69	3.91	6.05	121	372
August	10.6	1.82	3.60	5.57	111	342
September	14.4	1.15	3.38	5.23	101	311
October	13.7	.94	2.72	4.21	84.2	258
November	25	1.15	4.96	7.52	146	447
December	3.0	.80	1.50	2.32	46.6	143
Calendar year 1935	116	.58	5.17	8.00	1,880	5,790
January	25	.80	2.02	3.13	62.5	192
February	9.0	.51	1.18	1.83	34.2	105
March	27	2.5	7.26	11.2	225	691
April	82	1.42	9.39	14.5	282	865
May	30	2.85	9.30	14.4	288	884
June	15.1	1.56	4.10	6.34	123	377
Fiscal year 1935-36	82	.51	4.44	6.87	1,620	4,990

*Graph estimated for part of day. †Estimated.

West Wailuanui Stream near Keanae

Location.- Water-stage recorder, lat. 20°49'40", long. 156°08'55", 150 feet above Koolau Ditch crossing and intake and 2¼ miles south of Kaenae post office.

Drainage area.- 0.7 square mile.

Records available.- December 1913 to October 1917, July 1922 to June 1936.

Average discharge.- 14 years (1922-36), 9.02 million gallons a day (14.0 second-feet).

Extremes.- Maximum discharge during year, 300 million gallons a day (464 second-feet) Nov. 14 (gage height, 3.67 feet), from rating curve extended above million gallons a day; minimum, 0.61 million gallons a day (0.94 second-foot) Feb. 18-19.
1913-17, 1922-36: Maximum discharge, 1,220 million gallons a day (1,890 second-feet) Jan. 14, 1923 (gage height, 7.70 feet), from rating curve extended above 100 million gallons a day; minimum, 0.2 million gallons a day (0.3 second-foot) July 16-21, 1922.

Remarks.- Records fair for ordinary stages; those for Dec. 11-21, Dec. 27 to Jan. 28, Feb. 4-20 (computed on basis of records for nearby streams), and those for extremely high stages are poor. No diversions. Water used several miles below station to irrigate taro.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.5	0.72	0.8	3.45	1.1	10.0	1.6	34	2.6	137
.6	1.34	.9	5.1	1.2	13.2	1.8	50	3.0	191
.7	2.2	1.0	7.2	1.4	22	2.2	91	3.6	287

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.45	8.4	3.3	1.51	3.2	2.2	1.0	1.22	8.8	5.7	27.5	3.3
2	2.95	3.8	3.2	2.6	1.68	2.1	.9	1.34	7.8	5.1	18.3	2.95
3	3.3	3.8	2.7	6.6	1.43	2.1	.9	5.4	6.4	4.6	8.0	2.8
4	2.8	3.3	4.8	11.0	3.15	1.94	.9	1.5	11.4	7.8	11.5	3.8
5	5.2	2.95	10.1	3.3	2.65	1.77	1.1	1.3	22	3.6	7.2	4.6
6	4.4	2.7	14.2	10.0	3.1	1.77	1.5	1.2	38.5	76	14.9	2.95
7	3.1	2.6	5.3	3.65	2.05	1.68	1.2	1.1	6.4	27	18.1	2.6
8	3.9	3.2	3.6	2.2	1.77	1.60	1.1	1.0	15.1	14.2	25	2.6
9	4.1	4.0	3.3	1.94	1.60	1.68	1.7	1.0	10.0	17.8	17.2	2.7
10	3.8	3.6	3.3	1.86	1.43	1.60	1.6	.9	6.9	6.2	22	2.2
11	3.6	2.7	6.6	1.77	1.43	1.5	1.1	.9	6.9	4.8	11.6	2.1
12	2.95	6.4	6.9	1.68	1.43	1.4	1.0	.9	23.5	3.95	8.6	4.0
13	2.7	3.95	3.95	1.51	1.34	1.7	1.0	1.1	10.6	10.7	6.8	2.7
14	2.3	3.6	4.6	1.43	20	2.7	2.0	1.0	5.7	12.5	11.0	2.05
15	2.2	2.95	3.2	1.34	3.45	1.8	9.0	1.0	4.4	5.9	10.6	2.6
16	2.3	2.8	2.8	1.34	23	1.5	3.0	.9	13.2	10.3	15.0	2.95
17	2.2	2.3	2.8	13.6	18.6	1.4	35	.8	32.5	15.3	23	4.2
18	2.45	2.2	2.3	5.0	26.5	1.3	3.5	.7	16.2	31	20	2.7
19	3.8	2.2	2.3	2.2	20	1.5	2.5	5.0	11.6	8.6	14.0	2.45
20	2.2	2.2	2.2	2.65	37	3.0	2.0	2.0	7.2	5.5	20.5	2.7
21	2.05	7.1	2.05	2.1	8.0	1.7	2.0	9.5	9.4	4.4	18.6	12.2
22	1.94	6.1	1.94	1.77	4.8	1.43	1.8	1.22	7.4	3.6	11.9	6.0
23	2.3	7.7	1.77	1.68	3.6	1.79	1.7	.97	9.4	4.3	12.4	3.3
24	10.2	4.3	1.86	1.43	3.8	1.28	1.6	.84	6.8	3.2	8.9	4.8
25	23.5	2.95	1.77	1.43	2.8	1.22	1.5	.78	29.5	2.95	8.6	10.9
26	7.3	2.7	1.68	1.34	2.6	1.22	1.3	.72	13.5	2.6	6.8	33
27	5.7	2.3	1.60	1.34	2.45	1.1	1.2	.72	9.8	2.3	6.2	17.7
28	3.95	2.2	1.43	1.28	4.2	1.1	1.1	.68	5.5	*2.2	4.9	10.8
29	4.1	2.2	1.43	1.22	3.1	1.1	.97	.72	4.1	3.05	4.4	6.8
30	3.6	2.1	1.88	1.22	2.6	1.0	1.03	-	3.45	30.5	4.3	4.3
31	4.9	9.5	-	12.6	-	.9	1.03	-	2.95	-	4.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	23.5	1.94	4.30	6.65	133	409
August	9.5	2.1	3.83	5.93	119	365
September	14.2	1.43	3.63	5.62	109	334
October	13.6	1.22	3.37	5.21	105	321
November	37	1.34	7.09	11.0	213	653
December	3.0	.9	1.62	2.51	50.1	154
Calendar year 1935	274	.9	8.25	12.8	3,010	9,230
January	35	.9	2.81	4.35	87.2	268
February	9.5	.68	1.60	2.48	46.4	142
March	38.5	2.95	11.8	18.3	367	1,130
April	76	2.2	11.2	17.3	336	1,030
May	27.5	4.3	13.0	20.1	402	1,230
June	33	2.05	5.62	8.70	169	518
Fiscal year 1935-36	76	.68	5.83	9.02	2,140	6,550

*Graph estimated for part of day.

Taro patch feeder ditch at Keanae

Location.- Water-stage recorder, lat. 20°51'40", long. 156°09'00", 100 feet southeast of highway bridge over Piinaaua Stream, 4¼ miles northwest of Nahiku, and 4¾ miles southeast of Kailua.

Records available.- September 1934 to June 1936.

Extremes.- Maximum discharge during year, 5.6 million gallons a day (8.7 second-feet) Mar. 25 (gage height, 1.27 feet), from rating curve extended above 17.8 million gallons a day; minimum, 1.30 million gallons a day (2.00 second-feet) Mar. 27.
1934-36: Maximum discharge, 19.4 million gallons a day (30.0 second-feet) Feb. 25, 1935 (gage height, 2.86 feet), from rating curve extended above 17.8 million gallons a day; minimum, 0.05 million gallons a day (0.08 second-foot) Feb. 28, 1935.

Remarks.- Records good except those for Sept. 15, Nov. 22 to Dec. 1, Feb. 26, which are poor. Water used in vicinity of Keanae for irrigation of taro.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.35	2.8	2.2	2.25	2.35	2.2	2.1	2.0	2.15	2.35	3.5	2.6
2	2.25	2.6	2.15	2.25	2.15	*2.15	2.1	1.91	2.15	2.45	3.2	2.55
3	2.25	2.5	2.3	2.35	2.1	2.15	2.1	1.91	2.15	2.25	2.8	2.5
4	2.15	2.4	2.35	2.75	2.35	2.15	2.1	1.91	2.25	2.6	2.95	2.55
5	2.35	2.35	2.8	2.45	2.2	2.15	2.05	1.91	2.35	2.2	2.75	2.55
6	2.3	2.35	3.15	2.3	2.2	2.15	2.05	1.87	2.5	3.65	3.1	2.5
7	2.2	2.35	2.6	2.2	2.15	2.15	2.05	1.77	2.0	3.2	3.25	2.45
8	2.25	2.4	2.35	2.15	2.15	2.15	2.0	1.72	2.1	3.15	3.3	2.4
9	2.35	2.4	2.35	2.2	2.1	2.15	2.0	1.67	2.3	3.25	3.1	2.35
10	2.25	2.45	2.3	2.25	2.1	2.2	2.0	1.67	2.25	2.9	3.2	2.25
11	2.2	2.4	2.45	2.2	2.05	2.2	2.0	1.67	2.0	2.65	2.9	2.25
12	2.2	2.4	2.65	2.2	2.05	2.2	2.0	1.63	2.8	2.6	2.8	2.3
13	2.15	2.25	2.3	2.2	2.05	2.2	2.0	1.63	2.15	2.8	2.8	2.55
14	2.15	2.35	*2.3	2.15	2.6	2.2	1.96	1.63	2.05	3.0	2.85	2.7
15	2.2	2.25	2.3	2.15	2.3	2.2	2.15	1.63	2.0	2.65	2.85	2.65
16	2.35	2.35	*2.3	2.15	2.15	2.2	2.0	1.63	2.4	2.85	2.95	2.65
17	2.35	2.25	2.3	2.45	2.5	2.2	2.95	1.63	3.15	3.1	3.3	2.75
18	2.35	2.25	2.3	2.55	3.15	2.15	2.1	1.58	2.7	3.35	3.25	2.65
19	2.35	2.25	2.25	2.2	2.85	2.15	2.00	1.63	2.5	2.75	3.15	2.65
20	2.3	2.25	2.3	2.2	3.2	2.15	2.00	1.63	2.25	2.65	3.3	2.65
21	2.3	2.45	2.3	2.15	2.45	2.15	1.96	2.1	2.05	2.6	3.3	3.1
22	2.3	2.55	2.25	2.15	2.3	2.15	1.96	1.82	2.05	2.5	3.0	2.7
23	2.3	2.55	2.25	2.15	2.2	2.2	1.96	1.82	2.2	2.5	3.15	2.5
24	2.6	2.35	2.25	2.15	2.3	2.15	1.96	1.77	2.25	2.5	2.95	2.4
25	3.4	2.15	2.25	2.15	2.2	2.15	1.91	*1.77	2.8	2.4	2.95	2.8
26	2.8	2.15	2.25	2.15	2.2	2.15	1.91	1.77	1.72	2.4	2.85	3.4
27	2.65	2.15	2.25	2.15	2.1	2.1	1.91	*1.77	1.91	2.4	2.8	3.3
28	2.55	2.15	2.25	2.15	2.3	2.1	1.91	1.77	2.4	2.4	2.8	3.1
29	2.55	2.15	2.25	2.2	2.2	2.1	1.87	1.77	2.35	2.4	2.75	2.7
30	2.5	2.15	2.25	2.2	2.2	2.1	1.91	-	2.3	3.3	2.75	2.65
31	2.55	2.55	-	2.5	-	2.1	1.91	-	2.25	-	2.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.4	2.15	2.38	3.68	73.8	226
August	2.8	2.15	2.35	3.64	73.0	224
September	3.15	2.15	2.35	3.64	70.6	217
October	2.75	2.15	2.25	3.48	69.7	214
November	3.2	2.05	2.31	3.57	69.2	212
December	2.2	2.1	2.16	3.34	66.9	205
Calendar year 1935	4.9	.08	2.31	3.57	842	2,580
January	2.95	1.87	2.03	3.14	62.9	193
February	2.1	1.58	1.76	2.72	51.0	156
March	3.15	1.72	2.27	3.51	70.5	216
April	3.65	2.2	2.73	4.22	81.8	251
May	3.5	2.7	3.01	4.66	93.3	286
June	3.4	2.25	2.64	4.08	79.2	243
Fiscal year 1935-36	3.65	1.58	2.35	3.64	862	2,640

*Partly estimated.

Koolau Ditch near Keanae

Location.- Water-stage recorder, lat. 20°49'55", long. 156°10'30", on west side of Keanae Valley and 2-3/4 miles southwest of Keanae post office.

Records available.- January 1910 to December 1912 (staff gage), November 1917 to June 1936.

Average discharge.- 18 years (1918-36), 61.7 million gallons a day (95.5 second-feet).

Extremes.- Maximum discharge during year, 157 million gallons a day (243 second-feet) Mar. 25 (gage height, 5.53 feet); no flow Apr. 8-10, when water was shut out of ditch. 1910-12, 1917-36: 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 except those for July 1-3, 6-31, Dec. 20-25, Mar. 7-16, Apr. 27, 28, which were computed on basis of records for Koolau Ditch at Haipuaena and are fair. Regulated by gates and spillways. Koolau Ditch diverts water at 1,200 foot elevation from nearly all streams from the Makapipi west to the Alo for power and irrigation in central Maui. No diversions above station except from several spillways.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	65	116	54	26	58	38	18.0	19.0	80	78	141	66
2	58	72	62	32	26	36.5	17.0	21	102	105	129	62
3	64	66	50	52	22.5	36.5	17.0	35	94	61	128	59
4	65	56	46	94	43	31	17.0	18.0	138	126	117	75
5	83	50	107	58	41	29	22.5	17.0	121	69	117	80
6	80	47	138	60	44	27.5	33	16.0	140	126	138	59
7	60	44	97	44	30	26	26	15.0	113	152	141	56
8	72	56	66	32.5	25	25	21	15.0	100	60	145	56
9	76	62	66	30	25	27.5	23.5	15.0	105	0	141	53
10	72	66	66	29	22.5	26	26.5	15.0	96	18.7	145	50
11	72	50	80	31	20	26	18.0	15.0	90	83	138	47
12	58	96	105	26	21	24	17.0	14.0	140	69	125	68
13	50	76	72	25	19.0	35.5	17.0	15.0	120	99	108	56
14	45	66	91	24	48	60	18.2	14.0	80	138	125	50
15	42	50	62	22.5	62	35	99	14.0	64	111	132	53
16	42	50	53	21	43	25	46	14.0	100	138	134	60
17	42	41	50	46	125	24	101	13.0	149	141	141	70
18	46	38	44	75	149	22.5	48	13.0	145	145	138	53
19	70	41	41	36.5	145	29.5	32.5	25	142	132	134	50
20	45	41	38	37.5	149	57	27.5	31.5	119	100	138	56
21	40	85	36.5	32.5	109	40	24	80	116	83	138	119
22	37	106	34	27.5	72	26	22.5	21	112	69	134	83
23	43	111	32.5	25	56	47	21	16.0	101	72	134	59
24	94	86	53	22.5	66	26	20	16.0	101	66	134	88
25	140	53	38	22.5	47	23	19.0	17.0	107	56	134	117
26	110	50	32.5	21	41	20	18.0	14.0	139	56	123	141
27	100	41	30	21	41	20	18.0	14.0	118	53	115	141
28	76	38	27.5	20	64	19.0	18.0	13.0	93	50	90	134
29	80	38	26	20	52	19.0	17.0	14.0	69	*58	83	114
30	68	38	29.5	19.0	44	18.0	17.6	-	59	136	76	78
31	88	102	-	58	-	18.0	17.0	-	53	-	79	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	140	37	67.2	104	2,080	6,390
August	116	38	62.3	96.4	1,930	5,930
September	138	26	57.6	89.1	1,730	5,300
October	94	19.0	35.2	54.5	1,090	3,350
November	149	19.0	57.0	88.2	1,710	5,250
December	60	18.0	29.6	45.8	918	2,820
Calendar year 1935	172	0	60.5	93.6	22,070	67,760
January	101	17.0	27.7	42.9	858	2,630
February	80	13.0	19.3	29.9	560	1,720
March	149	53	107	166	3,310	10,150
April	152	0	88.4	137	2,650	8,130
May	145	76	126	195	3,900	11,950
June	141	47	75.1	116	2,250	6,910
Fiscal year 1935-36	152	0	62.8	97.2	22,990	70,530

*Partly 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 Keanae post office.

Drainage area.- 3.3 square miles.

Records available.- November 1913 to June 1936.

Average discharge.- 20 years (1916-36), 15.3 million gallons a day (23.7 second-feet).

Extremes.- Maximum discharge during year, 258 million gallons a day (399 second-feet) Jan. 17 (gage height, 4.45 feet), from rating curve extended above 30 million gallons a day; minimum, 0.44 million gallons a day (0.68 second-foot) Jan. 12-14.

1913-36: Maximum discharge, 1,580 million gallons a day (2,440 second-feet) Feb. 25, 1935 (gage height, 8.98 feet), from rating curve extended above 30 million gallons a day; minimum, 0.08 million gallons a day (0.12 second-foot) Mar. 24, 1928.

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

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.5	0.35	2.4	16.8
1.6	.65	2.6	26
1.8	2.15	2.8	37.5
2.0	5.2	3.0	52
2.2	10.0	3.2	70

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.0	8.7	6.0	2.35	4.3	2.15	0.56	3.05	9.6	17.9	36.5	4.8
2	3.2	4.8	5.9	1.65	1.45	1.75	.53	26.5	15.9	13.9	19.6	5.4
3	2.95	5.2	4.0	6.7	1.10	1.65	.50	19.1	20.5	12.0	10.3	4.7
4	2.65	4.2	4.3	21.5	1.86	1.35	.50	38.5	23	14.6	22	5.6
5	6.7	2.95	15.7	7.2	4.9	1.15	.53	3.95	33.5	5.2	7.2	8.6
6	7.5	2.55	20.5	7.8	5.2	1.05	.75	1.65	48	60	30.5	5.8
7	3.8	2.3	7.9	4.0	3.05	1.00	.59	1.25	6.6	35	37	6.1
8	4.3	4.3	4.0	2.4	1.95	.95	.56	1.00	13.0	16.9	47	6.2
9	4.3	4.2	3.3	1.95	1.25	1.00	.62	.85	11.8	24.5	27.5	3.3
10	4.2	4.0	2.95	1.65	1.05	.95	.85	.75	15.6	7.2	38	2.8
11	3.3	3.45	9.1	2.05	.90	.95	.56	.75	11.6	4.8	17.6	2.4
12	5.0	7.7	8.4	2.15	.95	.85	.47	.70	34	4.0	11.2	4.7
13	4.3	4.8	4.2	1.45	.80	1.44	.44	.75	10.0	22	7.2	4.7
14	2.8	6.0	6.3	1.15	8.4	4.0	1.33	.65	4.8	24.5	14.0	2.8
15	2.3	3.3	4.0	1.05	2.7	2.7	10.5	.62	4.0	9.5	13.9	3.8
16	3.3	3.6	3.2	1.00	2.05	1.15	7.6	.59	33	15.0	17.7	4.3
17	3.6	4.6	3.8	19.1	20.5	.95	42	.59	39.5	*8.7	41	5.4
18	3.05	4.0	3.05	10.1	56	.80	2.8	.59	13.0	*7.2	30.5	3.3
19	8.1	2.8	2.55	3.3	28.5	1.25	1.45	2.2	15.6	*6.7	22.5	2.8
20	3.2	3.05	3.05	2.65	53	7.4	1.05	2.15	9.5	†5.9	44	2.9
21	2.15	10.5	3.8	1.95	7.6	2.6	.85	11.5	7.0	5.2	39.5	27.5
22	1.95	8.7	3.4	1.65	3.8	1.35	.75	1.85	6.1	4.3	13.8	8.0
23	2.15	9.1	2.15	1.35	2.65	1.05	.65	4.4	14.3	4.3	19.0	4.0
24	23	5.0	1.75	1.10	3.2	.90	.62	5.2	8.5	4.7	11.0	14.7
25	46	3.2	1.55	1.05	2.3	.75	.59	4.3	45	3.6	15.4	16.5
26	8.7	2.8	1.35	.95	1.85	.65	.59	1.75	11.8	4.5	9.0	52
27	7.5	2.15	1.15	.90	1.75	.62	.56	1.10	12.8	3.3	7.0	26
28	4.7	1.95	1.10	.85	3.25	.62	.56	1.00	6.9	2.95	5.9	17.6
29	4.3	2.3	1.05	.80	4.5	.59	.50	.95	4.8	2.65	5.6	8.0
30	4.2	3.45	1.82	.80	2.8	.56	.65	-	4.0	24	4.5	4.8
31	5.2	22.5	-	11.6	-	.56	.95	-	3.45	-	4.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	46	1.95	6.21	9.61	192	590
August	22.5	1.95	5.10	7.89	158	485
September	20.5	1.05	4.71	7.29	141	434
October	21.5	.80	4.01	6.20	124	381
November	56	.80	7.79	12.1	234	717
December	7.4	.56	1.44	2.23	44.7	137
Calendar year 1935	353	.56	11.7	18.1	4,260	13,080
January	42	.44	2.63	4.07	81.5	250
February	38.5	.59	4.77	7.38	138	424
March	48	3.45	16.0	24.8	497	1,530
April	60	2.65	12.5	19.3	375	1,150
May	47	4.5	20.3	31.4	631	1,940
June	52	2.4	8.98	13.9	270	827
Fiscal year 1935-36	60	.44	7.89	12.2	2,890	8,860

*Estimated. †Graph estimated for part of day.

Haipuaena Stream near Huelo

Location.- Water-stage recorder, lat. 20°51'05", 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 1936.

Average discharge.- 20 years (1916-36), 10.1 million gallons a day (15.6 second-feet).

Extremes.- Maximum discharge during year, 221 million gallons a day (342 second-feet) Jan. 17 (gage height, 3.85), from rating curve extended above 160 million gallons a day; minimum, 0.8 million gallons a day (1.2 second-feet) Jan. 14.
1913-36: Maximum discharge, 582 million gallons a day (900 second-feet) Feb. 17, 1929 (gage height, 6.25 feet), from rating curve extended above 160 million gallons a day; minimum, 0.3 million gallons a day (0.5 second-foot) frequently during December 1919 and Oct. 27-29, 1933.

Remarks.- Records excellent for ordinary stages; those Sept. 30 to Oct. 15 (which were computed on basis of records for nearby streams) and those for high stages are poor. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.7	0.8	4.0	1.6	22
.4	1.0	1.0	6.9	1.9	34.5
.5	1.5	1.2	10.7	2.2	51
.6	2.2	1.4	15.7		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.8	9.0	4.5	1.8	4.0	2.5	1.0	2.4	9.1	10.8	37	4.0
2	3.3	4.8	4.8	2.1	1.8	2.1	1.0	12.1	13.8	12.1	21.5	3.9
3	3.4	4.8	3.3	6.0	1.5	2.1	1.0	11.0	13.2	7.9	9.6	4.0
4	3.0	3.7	4.1	20	2.2	1.8	.9	20.5	18.6	12.5	19.1	5.0
5	7.0	2.9	13.7	6.0	3.9	1.7	1.0	3.2	24	4.0	7.7	7.4
6	6.9	2.7	21	7.0	3.9	1.6	1.4	2.0	30	43	28	4.9
7	3.7	2.6	8.6	3.5	2.6	1.5	1.2	1.4	6.3	30	32.5	4.0
8	4.6	4.4	4.1	2.5	2.0	1.4	1.1	1.3	14.8	15.1	37	5.0
9	4.8	3.3	3.8	2.0	1.6	1.5	1.0	1.2	14.2	22.5	24	3.1
10	4.1	3.4	3.4	1.7	1.5	1.4	1.8	1.2	13.6	6.7	30	2.8
11	3.6	2.8	9.6	3.5	1.4	1.4	1.1	1.2	10.6	4.4	14.4	2.5
12	4.3	5.7	9.5	3.0	1.4	1.3	.9	1.2	31.5	3.7	9.8	4.4
13	3.8	5.0	4.3	2.2	1.4	1.8	.9	1.2	10.8	15.9	6.6	4.3
14	2.8	4.9	5.5	1.9	8.2	3.7	1.1	1.2	5.3	21.5	15.2	2.8
15	2.5	3.0	3.7	1.8	2.8	2.7	12.1	1.0	4.0	7.4	16.1	3.4
16	2.8	3.0	3.0	*1.5	2.3	1.6	9.1	1.0	23.5	22.5	23.5	4.0
17	3.5	2.5	3.4	16.3	14.0	1.4	35.5	.9	39	27.5	39	6.0
18	3.2	3.1	2.8	11.1	44	1.2	3.1	.9	15.0	41	30	3.4
19	6.7	2.5	2.4	3.3	24.5	1.7	2.1	3.9	16.1	10.0	22	2.9
20	3.1	2.4	2.4	2.6	42	5.6	1.7	2.7	10.1	5.5	38	2.9
21	2.5	7.2	2.7	2.3	7.5	2.4	1.5	12.9	6.1	4.3	33.5	26.5
22	2.3	7.7	2.4	2.0	4.1	1.8	1.4	2.1	5.3	3.7	13.8	10.3
23	2.6	8.3	1.9	1.8	3.2	1.9	1.4	3.8	12.7	3.7	18.0	4.6
24	17.1	4.8	1.7	1.6	3.7	1.4	1.2	5.0	7.8	3.5	10.1	10.7
25	39.5	3.0	1.6	1.5	2.8	1.4	1.2	3.5	25	3.0	13.4	17.2
26	9.0	2.8	1.6	1.4	2.4	1.2	1.1	1.8	10.8	3.2	8.2	47
27	7.2	2.4	1.4	1.4	2.3	1.2	1.1	1.5	11.5	2.6	6.4	27
28	4.8	2.2	1.4	1.4	3.2	1.2	1.0	1.4	8.2	2.4	4.9	19.5
29	4.4	2.3	1.4	1.2	4.2	1.2	1.0	1.4	4.0	4.0	4.4	9.0
30	4.3	2.6	2.2	1.2	2.9	1.1	1.1	-	3.4	29.5	3.9	5.2
31	5.1	16.6	-	6.6	-	1.1	1.2	-	3.0	-	4.4	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	39.5	2.3	5.80	8.97	180	551
August	16.6	2.2	4.40	6.81	136	419
September	21	1.4	4.54	7.02	136	418
October	20	1.2	3.94	6.10	122	375
November	44	1.4	6.78	10.5	203	624
December	5.6	1.1	1.80	2.79	55.9	172
Calendar year 1935	151	.9	8.32	12.9	3,040	9,320
January	35.5	.9	2.97	4.60	92.2	283
February	20.5	.9	3.62	5.60	105	322
March	39	3.0	13.5	20.9	419	1,290
April	43	2.4	12.8	19.8	384	1,180
May	39	3.9	18.8	29.1	582	1,790
June	47	2.5	8.59	13.3	258	791
Fiscal year 1935-36	47	.9	7.31	11.3	2,670	8,220

*Partly estimated.

Spreckels Ditch at Haipuaena weir, near Huelo

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

Records available.- April 1922 to June 1936. February 1930 to October 1935 at site 100 feet upstream.

Average discharge.- 13 years (1922-29, 1930-36), 14.1 million gallons a day (21.8 second-feet).

Extremes.- Maximum discharge during year, 117 million gallons a day (181 second-feet) Oct. 17 (gage height, 4.75 feet); minimum, 0.66 million gallons a day (1.02 second-feet) Feb. 17-19.

1922-36: 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 excellent. Flow regulated by gates and spillways. Ditch diverts water from all streams between the Nuaailua and the Kailua--east of the Puohokamoa from those above Koolau Ditch, west of the Puohokamoa from those below Koolau Ditch. About 4 million gallons a day is diverted to East Maui Irrigation Co.'s hydroelectric plant at Kolea Gulch. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	12.7	26.5	14.4	2.4	10.3	5.4	0.87	6.2	19.9	18.3	63	11.0
2	8.9	14.0	15.9	2.8	2.1	3.85	.80	19.4	27.5	24.5	41	10.7
3	10.6	15.1	10.2	20	1.40	3.5	.80	22.5	26	16.1	25.5	10.4
4	7.3	10.6	5.8	32	5.9	2.35	.80	34.5	34	25.5	37	15.4
5	22	6.6	28.5	19.0	12.3	2.0	.94	5.6	42	10.4	23.5	18.5
6	24	5.2	46	19.4	11.6	1.64	1.92	2.0	45	60	49	13.3
7	11.4	4.7	23.5	9.2	6.1	1.40	1.10	1.20	16.0	49	52	10.0
8	15.8	13.9	10.8	4.3	2.8	1.40	1.01	1.01	30.5	30.5	60	12.9
9	18.1	9.7	10.6	3.4	1.64	1.64	1.86	1.01	27	37.5	43	7.2
10	14.8	11.8	9.7	2.6	1.40	1.64	2.65	1.01	25.5	16.2	48	5.7
11	11.4	7.7	21	5.1	1.30	2.1	.94	1.01	21	11.0	31.5	4.6
12	13.4	17.4	25	3.7	1.30	1.76	.73	1.01	49	8.4	25.5	14.0
13	12.9	16.5	13.1	2.1	1.20	5.0	.66	1.01	24.5	27.5	18.8	11.6
14	6.6	16.9	18.2	1.6	16.5	14.0	1.34	.94	12.6	40	31.5	6.7
15	4.8	8.0	9.7	1.6	7.7	6.3	25	.80	9.2	21	33.5	11.4
16	7.5	8.4	7.0	1.3	4.2	1.76	17.2	.80	33	41	44	12.4
17	10.0	6.1	9.0	21	29.5	1.40	41	.73	56	46	63	16.8
18	9.6	7.9	5.4	22	59	1.20	6.6	.73	30	54	52	9.2
19	23	5.4	3.8	7.9	46	3.1	2.6	5.7	32.5	25.5	39	7.5
20	8.4	5.7	4.2	5.8	62	14.7	1.76	7.3	21.5	14.7	60	8.0
21	4.8	19.7	5.6	3.8	18.7	5.4	1.52	24.5	15.8	11.0	49	43
22	3.7	22.5	4.8	*2.5	9.5	2.3	1.30	3.6	13.0	8.9	30.5	23.5
23	7.1	26	2.4	*2.0	6.7	3.2	1.10	7.4	24	10.1	35	12.2
24	36.5	15.9	1.7	*2.5	10.2	1.30	1.01	10.0	19.6	10.1	26.5	23
25	69	7.5	1.6	*1.7	5.2	1.20	.94	8.0	32.5	7.7	29	31.5
26	25	6.4	1.5	1.40	3.85	1.10	.94	2.0	23.5	8.9	23.5	61
27	22	4.3	1.3	1.30	3.85	1.01	.94	1.40	21.5	6.1	20.5	44
28	15.3	3.1	1.2	1.20	9.4	1.01	.87	1.30	14.4	4.6	14.7	33
29	15.1	3.2	1.2	1.20	11.4	.94	.80	1.20	8.9	10.3	13.3	22
30	13.1	5.5	3.1	1.10	7.5	.87	.94	-	7.0	52	11.0	13.3
31	17.8	32	-	16.4	-	.87	1.01	-	6.1	-	13.3	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	69	3.7	15.6	24.1	483	1,480
August	32	3.1	11.7	18.1	364	1,120
September	46	1.2	10.5	16.2	316	970
October	32	1.10	7.17	11.1	222	682
November	62	1.20	12.4	19.2	371	1,140
December	14.7	.87	3.08	4.77	95.3	293
Calendar year 1935	69	.87	14.2	22.0	5,180	15,900
January	41	.66	3.93	6.08	122	374
February	34.5	.73	6.00	9.28	174	534
March	56	6.1	24.8	38.4	769	2,360
April	60	4.6	23.6	36.5	707	2,170
May	63	11.0	35.7	55.2	1,110	3,400
June	61	4.6	17.5	27.1	524	1,610
Fiscal year 1935-36	69	.66	14.4	22.3	5,260	16,130

*Estimated.

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Koolau Ditch at Haipuaena, near Huelo

Location.- Water-stage recorder, lat. 20°51'15", long. 156°11'15", 1,000 feet above intake from Puohokamoa Stream and 3½ miles southeast of Kailua.

Records available.- April 1932 to June 1936.

Extremes.- Maximum discharge during year, 200 million gallons a day (309 second-feet) Nov. 18 (gage height, 5.11 feet); minimum, 13.4 million gallons a day (20.7 second-feet) Feb. 19.
1932-36: Maximum discharge, that of Nov. 18, 1935; no flow when water was shut out of ditch.

Remarks.- Records good except those for Dec. 14-25, Jan. 21 to Feb. 7, Mar. 28 to Apr. 2, Apr. 8-10, May 9-15, which were computed on basis of records for Koolau Ditch at Keanae and are fair. Regulated by floodgates. No diversions. Water used for domestic supply and irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	67	124	72	31	64	44	20.5	21	100	84	175	72
2	59	76	67	35.5	32.5	41	20.5	24	123	110	163	67
3	67	67	55	58	28	42	19.4	37	119	67	135	63
4	55	59	56	112	47	37	19.4	21	157	146	135	80
5	92	55	119	67	50	34	26.5	20	140	76	124	94
6	89	50	157	63	52	32.5	37	19	157	144	169	67
7	63	50	103	50	35.5	31	31	18	85	175	175	59
8	76	62	72	39	32.5	31	26.5	*18.1	121	62	*175	59
9	80	59	72	35.5	31	32.5	26	*16.8	126	4	170	55
10	67	67	72	34	28	32.5	32.5	*16.8	109	25	170	50
11	67	55	88	35.5	26.5	32.5	22	16.8	100	89	170	48
12	59	95	113	31	26.5	28	20.5	16.8	169	80	160	72
13	52	76	76	29.5	25	37	19.4	16.8	140	115	130	59
14	46	72	94	29.5	64	62	20.5	15.6	85	169	150	50
15	44	52	67	28	67	38	114	14.5	67	119	160	55
16	44	52	55	26.5	50	29	56	14.5	115	163	169	63
17	44	46	55	51	137	28	120	14.0	175	169	175	81
18	48	42	48	92	169	27	55	13.8	157	175	175	55
19	76	44	48	42	163	33	39	40	157	140	163	50
20	46	44	44	42	169	62	*32.5	33	124	103	175	55
21	41	88	42	37	113	45	29	99	113	89	175	146
22	39	113	41	34	76	30	27	26.5	113	76	157	96
23	46	118	39	31	63	50	25	22	113	76	157	63
24	107	89	54	29.5	67	30	23	23.5	108	72	146	101
25	169	59	44	28	52	27	22	22	119	63	152	135
26	119	55	37	26.5	46	25	22	18.1	146	59	130	169
27	108	48	34	25	46	23.5	21	16.8	124	55	119	169
28	80	44	32.5	25	62	23.5	21	15.6	102	52	99	152
29	89	46	31	23.5	64	22	20	16.8	72	62	89	124
30	72	46	34	23.5	48	22	21	-	62	169	80	85
31	94	122	-	72	-	22	20	-	56	-	85	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	169	39	71.1	110	2,200	6,770
August	124	42	66.9	104	2,080	6,370
September	157	31	64.0	99.0	1,920	5,900
October	112	23.5	41.5	64.2	1,290	3,950
November	169	25	64.5	99.8	1,930	5,940
December	62	22	34.0	52.6	1,050	3,230
Calendar year 1935	175	0	62.8	97.2	22,900	70,380
January	120	19.4	32.6	50.4	1,010	3,100
February	99	13.8	23.0	35.6	668	2,050
March	175	56	118	183	3,650	11,210
April	175	4	99.6	154	2,990	9,170
May	175	80	149	231	4,610	14,140
June	169	48	83.1	129	2,490	7,650
Fiscal year 1935-36	175	4	70.8	110	25,890	79,480

*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.

Drainage area.- 2.6 square miles.

Records available.- December 1910 to June 1936. December 1910 to June 1913 from staff gage at site 550 feet downstream, June 1913 to May 1934 from recorder at site 500 feet downstream.

Average discharge.- 19 years (1917-36), 20.7 million gallons a day (32.0 second-feet).

Extremes.- Maximum discharge recorded during year, 502 million gallons a day (777 second-feet) Jan. 17 (gage height, 4.28 feet); minimum, 1.8 million gallons a day (2.8 second-feet) Jan. 13.

1910-36: Maximum discharge, 1,250 million gallons a day (1,930 second-feet) Feb. 26, 1935 (gage height, 7.09 feet), from rating curve extended above 500 million gallons a day; 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. 25-31, Nov. 17, Jan. 16-18, Mar. 14-20. Kula Pipe Line diverts small amount of water above station at elevation 4,300 feet for domestic use.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.7	1.5	1.0	7.5	1.8	63
.8	2.6	1.2	15.5	2.1	100
.9	4.6	1.5	36		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	10.7	23	12.6	6.0	7.1	6.3	*2.6	4.9	19.4	20.5	80	10.7
2	8.9	12.0	12.8	4.9	3.8	4.6	*2.5	9.6	27	28	48	11.5
3	8.2	12.4	9.3	26	3.2	4.6	*2.4	22	26	18.0	23	10.4
4	7.2	10.0	9.9	39.5	4.6	4.2	*2.3	34	37.5	28	46	12.9
5	16.5	7.5	33	15.6	9.2	3.6	*2.2	6.0	44	11.1	19.9	16.5
6	16.9	6.9	47	17.2	7.5	3.6	*2.8	3.8	55	92	59	11.5
7	10.0	6.9	19.3	8.9	5.5	3.6	*2.4	3.4	14.2	62	79	8.9
8	11.1	11.7	10.4	6.0	5.2	3.4	*2.3	3.0	34	34.5	82	10.4
9	11.1	8.2	8.9	5.5	4.6	3.4	*2.0	2.6	33	50	53	7.5
10	10.4	8.6	8.6	4.9	4.0	3.2	3.8	2.5	27	16.6	64	6.6
11	9.3	6.9	23	7.5	3.4	3.0	2.8	2.5	19.0	12.4	32	6.0
12	10.4	14.2	24	6.0	3.0	3.4	2.4	2.5	64	10.0	24.5	10.2
13	9.7	12.7	11.1	4.6	2.8	4.6	1.9	2.5	24.5	32	17.2	10.1
14	6.3	12.6	14.2	4.2	12.7	9.3	3.8	2.4	14	45	34.5	6.6
15	6.0	7.5	9.3	4.0	5.5	7.5	34.5	2.4	11	18.8	35.5	8.9
16	6.3	7.2	7.9	3.8	4.6	4.2	25	2.3	30	52	53	10.0
17	8.6	5.8	8.2	48	35	3.2	45	2.2	70	57	87	14.9
18	8.2	6.6	6.9	27	80	3.0	7.0	2.2	35	94	69	8.2
19	17.2	6.0	6.3	7.9	47	4.0	5.5	7.7	37	24	53	6.9
20	7.9	6.0	6.0	6.0	94	15.7	4.2	6.9	25	15.1	81	6.9
21	6.0	18.2	6.3	5.5	11.1	7.5	3.4	31.5	16.0	12.0	76	60
22	5.5	18.6	5.8	4.6	8.6	4.2	2.8	4.8	13.7	10.0	34.5	22.5
23	6.3	19.6	4.9	4.2	7.5	5.3	2.6	9.4	26.5	9.7	43	11.1
24	40	12.4	4.4	4.0	7.2	*3.4	2.4	8.7	19.8	9.3	27.5	18.5
25	81	7.0	4.4	3.6	6.0	*3.3	2.4	7.4	53	8.2	31	41
26	26.5	6.0	4.2	3.6	5.2	*3.2	2.4	4.0	26.5	8.9	21	85
27	17.2	5.6	4.0	3.4	5.2	*3.1	2.4	3.2	26.5	6.9	17.7	59
28	12.9	5.2	4.0	3.4	5.8	*3.0	2.3	3.0	16.6	6.3	14.2	42
29	12.4	5.0	3.8	3.2	6.6	*2.9	2.2	2.8	11.1	8.7	12.9	22
30	12.0	8.0	10.3	3.2	6.9	*2.8	2.2	-	9.3	64	11.1	13.3
31	13.3	25	-	9.1	-	*2.7	2.4	-	8.2	-	12.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	81	5.5	14.0	21.7	434	1,330
August	25	5.0	10.4	16.1	323	992
September	47	3.8	11.4	17.6	341	1,050
October	48	3.2	9.72	15.0	301	925
November	94	2.8	13.8	21.4	413	1,270
December	15.7	2.7	4.51	6.98	140	429
Calendar year 1935	267	2.4	18.6	28.8	6,770	20,810
January	45	1.9	5.96	9.22	185	567
February	34	2.2	6.90	10.7	200	614
March	70	8.2	28.2	43.6	874	2,680
April	94	6.3	28.8	44.6	865	2,650
May	87	11.1	43.3	67.0	1,340	4,120
June	85	6.0	19.0	29.4	570	1,750
Fiscal year 1935-36	94	1.9	16.4	25.4	5,990	18,380

*Partly estimated.

Manuel Luis Ditch at Puohokamoa Gulch, near Huelo

Location.- Water-stage recorder, lat. 20°51'50", long. 156°11'00", in Puohokamoa Gulch at lower portal of tunnel between Haipuaena and Puohokamoa Streams and 3 miles southeast of Kailua.

Records available.- December 1917 to June 1936.

Average discharge.- 17 years (1918-24, 1925-36), 5.97 million gallons a day (9.24 second-feet).

Extremes.- Maximum discharge during year, 38.5 million gallons a day (59.6 second-feet) Jan. 17 (gage height, 2.51 feet), from rating curve extended above 10 million gallons a day by weir and submerged-orifice formulas; minimum, 0.2 million gallons a day (0.3 second-foot) Feb. 16-19, 27-29.

1917-36: Maximum discharge, 116 million gallons a day (179 second-feet) Jan. 14, 1923 (gage height, 4.93 feet), from rating curve extended above 10 million gallons a day by weir and submerged-orifice formulas; minimum, 0.05 million gallons a day (0.08 second-foot) Mar. 3, 1920.

Remarks.- Records good for low stages and fair for high stages; those for July 1-22, July 28 to Aug. 12, Oct. 5-30, Nov. 6 to Dec. 14, June 15-30 are poor. Manuel Luis Ditch is extension of Center Ditch and picks up water at elevation of 500 feet between Kolea and Waikamoi Streams. Flow regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.0	3.0	0.9	0.4	2.4	0.8	0.4	1.1	4.7	1.3	24	0.8
2	.7	1.4	1.1	.8	.7	.8	.4	.9	2.6	2.3	16.8	.8
3	.8	1.5	1.1	6.2	.6	.7	.3	1.5	1.6	1.4	5.0	.7
4	.8	1.1	1.2	7.7	1.9	.6	.3	2.7	3.3	3.8	4.8	2.4
5	2.0	.9	5.4	5.0	2.2	.6	.4	.5	6.1	1.0	2.7	1.7
6	2.2	.8	9.0	2.0	1.5	.6	.6	.4	9.1	18.7	6.1	1.0
7	1.0	.8	2.0	1.3	1.2	.5	.5	.3	1.7	23	8.7	.8
8	1.1	1.4	1.5	1.1	.9	.5	.4	.3	5.6	10.8	12.4	.8
9	1.5	.9	1.8	.9	.7	.6	.4	.3	4.3	12.3	7.4	.7
10	1.0	2.5	1.8	.8	.5	1.0	.5	.3	1.9	4.6	9.9	.7
11	.9	1.5	3.4	.7	.4	.7	.3	.3	2.4	3.0	3.2	.7
12	1.2	1.3	2.6	.7	.4	.6	.3	.3	11.8	2.0	2.5	1.6
13	1.1	1.5	1.4	.7	.3	.9	.3	.3	3.8	5.8	1.8	1.0
14	1.0	1.5	1.8	.6	2.0	1.5	.5	.2	1.8	6.4	4.1	.7
15	.7	.8	1.2	.6	.9	.8	4.2	.2	1.3	2.2	5.4	1.2
16	1.0	1.5	1.0	.5	.7	.6	1.9	.2	6.8	4.9	11.9	1.4
17	.9	.8	1.1	1.2	5.0	.5	12.2	.2	12.5	8.0	14.8	1.8
18	.8	.7	.9	7.0	10	.5	1.4	.2	6.7	13.6	12.7	1.0
19	1.5	.7	.8	3.0	8.0	.7	1.0	2.3	8.7	2.6	4.2	.8
20	.9	.7	.7	1.5	9.0	.8	.8	.8	4.4	1.8	10.3	.9
21	.7	3.8	.7	1.1	5.0	.6	.7	4.4	3.0	1.4	8.7	4.5
22	.5	2.4	.6	.9	3.0	.5	.7	.5	2.3	1.2	3.3	3.5
23	.8	2.9	.6	.8	2.0	3.4	.7	.4	6.4	1.3	3.3	3.0
24	6.3	1.5	.5	.7	1.8	.8	.6	.4	4.1	1.1	1.9	2.3
25	15.3	1.0	.5	.6	1.2	.7	.5	.5	7.8	.9	1.9	3.5
26	1.9	.9	.5	.6	1.0	.7	.5	.3	3.9	.8	1.6	10
27	2.2	.8	.4	.5	.9	.8	.4	.2	2.2	.8	1.8	6.0
28	1.5	.8	.4	.5	1.0	.5	.4	.2	1.8	.7	1.2	3.5
29	1.5	.7	.4	.5	1.3	.5	.4	.2	1.2	1.1	1.0	2.0
30	1.1	.8	.4	.4	1.0	.4	.4	-	1.0	18.6	1.0	1.0
31	1.5	2.3	-	5.5	-	.4	.4	-	1.0	-	1.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	15.3	0.5	1.79	2.77	55.4	170
August	3.8	.7	1.39	2.15	43.2	133
September	9.0	.4	1.52	2.35	45.7	140
October	7.7	.4	1.77	2.74	54.8	168
November	10	.3	2.25	3.48	67.5	207
December	3.4	.4	.76	1.18	23.6	72
Calendar year 1935	33.5	.1	3.07	4.75	1,120	3,430
January	12.2	.3	1.06	1.64	32.8	101
February	4.4	.2	.70	1.08	20.4	63
March	12.5	1.0	4.38	6.78	136	417
April	23	.7	5.25	8.12	157	483
May	24	1.0	6.32	9.78	196	602
June	10	.7	2.03	3.14	60.8	187
Fiscal year 1935-36	24	.2	2.44	3.78	893	2,740

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, 2¼ miles west of Keanae, and 3½ miles southeast of Kailua.

Records available.- May 1934 to June 1936. August 1928 to May 1934, at site 300 feet below.

Extremes.- Maximum discharge during year, 91 million gallons a day (141 second-feet) Jan. 17 (gage height, 3.26 feet); no flow at times due to regulation.
1928-36: Maximum discharge, 97 million gallons a day (150 second-feet) Mar. 12, 1935 (gage height, 3.39 feet); no flow at times due to regulation.

Remarks.- Records good except those for Sept. 28-30, Oct. 27 to Nov. 20, Jan. 6-15, Mar. 9, 10, Apr. 12-16, which are poor. Intake is on Puohokamoa Stream just below intake of Koolau Ditch, and normal during periods of flow it takes all water that passes Koolau Ditch intake. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.17	7.3	0.15	0.01	0.17	0	0.22	0.17	7.7	9.8	70	0.13
2	.13	.13	.14	.03	.09	0	.22	1.92	8.5	4.1	36.5	.09
3	.13	.13	.02	11.1	.02	0	.22	1.97	8.3	5.1	.76	.09
4	.13	.09	2.25	21	.40	0	.28	8.9	20.5	7.6	21	.28
5	4.5	.09	11.5	.52	.17	0	.28	.06	26	0	58	.71
6	.17	.09	34	.91	.09	.09	.45	.03	30	55	46	.17
7	.13	.09	4.8	.09	.06	.13	.25	.03	.09	51	53	.17
8	.13	.27	.01	.09	.03	.13	.17	.06	*16.4	9.6	64	.13
9	.17	.09	.06	.09	.01	.28	.50	.06	15	15.1	32.5	.09
10	.17	.22	.09	.09	0	.28	.17	.06	8.0	.28	44	.09
11	.13	.17	11.2	.09	0	.28	.09	.03	*3.8	.22	5.1	.17
12	.17	1.23	9.2	.09	0	.22	.07	.01	43	.15	.93	.28
13	.13	.40	.06	.09	0	.40	.06	.01	1.20	3.0	.22	.22
14	.17	.37	.17	.09	.4	.33	.13	.01	.22	5.0	14.4	.17
15	.17	.13	.09	.06	.08	.22	5.3	.01	.22	.30	19.1	.17
16	.17	.17	.09	.09	5.0	.22	1.56	.01	23	5.0	34.5	.28
17	.13	.09	.09	13.1	30	.22	25.5	.01	62	*35.5	62	.47
18	.13	.09	.13	11.4	50	.22	.13	.01	16.0	53	56	.13
19	.33	.09	.13	.13	35	.33	.13	3.9	15.8	.90	31	.09
20	.13	.09	.13	.13	20	.40	.13	.06	1.72	.22	62	.09
21	.13	5.1	.13	.13	.22	.17	.13	13.2	.28	.17	45	35.5
22	.13	6.7	.13	.13	.22	.17	.13	.03	.22	.17	11.2	6.2
23	.17	4.7	.13	.13	.13	.88	.13	.06	14.9	.13	20.5	.09
24	18.7	.09	.13	.09	.17	.22	.13	.03	1.42	.13	1.33	.66
25	59	.03	.13	.13	.13	.22	.13	.03	21.0	.13	9.3	15.7
26	6.9	.03	.17	*.13	.13	.22	.13	.03	3.1	.09	.36	57
27	2.6	.03	*.17	.09	.09	.22	.13	.03	8.4	.06	.22	37
28	.17	.03	.09	.09	.17	.22	.13	.03	.40	.03	.13	17.6
29	.17	.01	.03	.03	.09	.22	.13	.03	.03	.79	.13	.57
30	.17	0	.03	.01	.03	.22	.17	-	.01	55	.13	.13
31	.28	25.5	-	10	-	.22	.17	-	0	-	.17	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	59	0.13	3.09	4.78	95.9	294
August	25.5	0	1.73	2.68	53.6	164
September	34	.01	2.52	3.90	75.4	232
October	21	.01	2.26	3.50	70.2	215
November	50	0	4.76	7.36	143	439
December	.88	0	.217	.336	6.73	21
Calendar year 1935	70	0	5.56	8.60	2,030	6,220
January	25.5	.06	1.21	1.87	37.4	115
February	13.2	.01	1.06	1.64	30.8	94
March	62	0	11.5	17.8	357	1,100
April	55	0	10.6	16.4	318	975
May	70	.13	25.8	39.9	799	2,450
June	57	.09	5.82	9.00	174	535
Fiscal year 1935-36	70	0	5.91	9.14	2,160	6,630

*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 2½ miles southeast of Kailua.

Drainage area.- 4.4 square miles.

Records available.- January 1922 to June 1936.

Average discharge.- 14 years (1922-36), 14.8 million gallons a day (22.9 second-feet).

Extremes.- Maximum discharge during year, 249 million gallons a day (385 second-feet) Jan. 16 (gage height, 4.04 feet); minimum, 0.8 million gallons a day (1.2 second-feet) Feb. 18, 19.

1922-36: Maximum discharge, 4,660 million gallons a day (7,210 second-feet) Oct. 16, 1924 (gage height, 10.45 feet), from rating curve extended above 100 million gallons a day; 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 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.6	0.6	1.0	2.5	1.8	17.5
.7	.9	1.2	4.5	2.0	24
.8	1.3	1.4	7.6	2.4	44
.9	1.8	1.6	12.0	2.8	75
				3.2	118

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	6.2	10.1	8.4	4.3	2.7	2.6	0.9	2.0	6.6	10.9	44	6.0
2	4.3	6.8	6.4	2.3	1.4	2.1	.9	30.5	13.3	21	27	7.4
3	4.1	8.2	5.2	8.8	1.2	2.1	.9	37	18.3	10.1	12.8	6.6
4	3.5	6.6	4.4	26.5	1.9	1.8	.8	78	28	22	30.5	6.6
5	8.3	4.0	13.1	8.4	3.4	1.6	.9	7.9	40	6.2	11.3	7.8
6	11.8	3.0	32.5	16.0	4.2	1.5	1.2	3.3	58	50	40	7.6
7	6.2	2.9	14.1	8.1	2.5	1.4	1.1	2.6	10.6	38.5	52	4.8
8	5.2	4.7	5.5	3.7	2.1	1.3	1.0	1.6	16.3	19.3	68	6.9
9	5.6	3.4	4.4	2.7	1.6	1.4	.9	1.3	19.1	28	35.5	4.4
10	4.9	3.4	4.0	2.3	1.3	1.4	1.4	1.1	22	11.0	47	3.1
11	4.1	2.9	8.1	4.1	1.2	1.4	1.1	1.1	17.6	7.1	22	2.7
12	4.4	5.9	11.4	4.0	1.2	1.3	.9	1.1	52	5.1	16.9	4.4
13	4.2	5.2	5.1	2.5	1.1	1.7	.8	1.1	15.6	16.5	10.8	5.2
14	3.0	6.8	6.8	2.3	3.3	4.4	.9	1.0	8.0	31	20	3.0
15	2.6	3.4	4.3	2.1	2.2	3.5	14.6	.9	5.2	12.5	22	3.9
16	2.6	3.1	3.3	1.8	1.8	1.8	28.5	.8	37.5	36	26	4.9
17	3.7	2.4	3.6	25	10.7	1.4	53	.8	55	42	47	6.9
18	3.4	2.9	3.1	18.8	68	1.3	5.7	.8	20	66	36	3.7
19	9.6	2.6	2.6	4.5	35	1.6	2.7	2.7	28	15.8	29	3.1
20	4.9	2.7	2.6	3.0	59	9.5	1.9	2.6	19.2	8.4	59	2.9
21	3.0	10.0	3.0	2.5	10.3	3.5	1.6	11.3	10.1	5.9	53	30
22	2.4	11.8	3.5	2.1	5.1	1.9	1.4	2.2	9.8	4.6	18.7	9.3
23	2.8	9.6	2.4	1.8	3.4	3.3	1.3	6.2	13.9	4.3	24.5	4.8
24	23	6.4	1.8	1.6	3.8	1.5	1.1	4.4	12.6	4.3	16.3	13.2
25	64	3.6	1.7	1.6	2.9	1.4	1.1	2.9	15.6	3.8	21	19.1
26	14.2	3.0	1.6	1.4	2.3	1.2	1.0	1.7	13.3	4.8	13.6	65
27	11.0	2.4	1.6	1.4	2.2	1.2	1.0	1.3	12.2	3.3	9.8	38
28	7.1	2.2	1.5	1.3	2.8	1.1	.9	1.1	9.1	2.7	7.6	27
29	5.9	2.1	1.4	1.3	4.6	1.1	.9	1.1	5.2	3.3	6.9	11.3
30	6.6	2.6	9.5	1.2	3.0	1.1	.9	-	4.0	28	5.5	6.4
31	5.9	23.5	-	2.4	-	1.0	1.0	-	3.4	-	5.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	64	2.4	8.02	12.4	248	763
August	23.5	2.1	5.43	8.40	168	516
September	32.5	1.4	5.90	9.13	177	543
October	26.5	1.2	5.48	8.48	170	521
November	68	1.1	8.21	12.7	246	756
December	9.5	1.0	2.05	3.17	63.4	195
Calendar year 1935	381	1.0	14.0	21.7	5,120	15,720
January	53	.8	4.27	6.61	132	406
February	78	.8	7.26	11.2	210	646
March	58	3.4	19.3	29.9	600	1,840
April	66	2.7	17.4	26.9	522	1,600
May	68	5.5	27.1	41.9	839	2,580
June	65	2.7	10.9	16.9	326	1,000
Fiscal year 1935-36	78	.8	10.1	15.6	3,700	11,370

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 1936.

Average discharge.- 25 years (1911-36), 4.94 million gallons a day (7.64 second-feet).

Extremes.- Maximum discharge during year, 253 million gallons a day (391 second-feet) probably Jan. 16 (gage height, 3.30 feet), from rating curve extended above 15 million gallons a day; minimum, 0.28 million gallons a day (0.43 second-foot) Feb. 16, 17.

1910-36: Maximum discharge, 1,600 million gallons a day (2,480 second-feet) Nov. 18, 1930 (gage height, 6.90 feet), from rating curve extended above 15 million gallons a day; minimum, 0.2 million gallons a day (0.3 second-foot) Nov. 22, 23, 1932.

Remarks.- Records good for ordinary stages; those for July 23 to Sept. 4, Nov. 21 to Dec. 6, Dec. 25 to Feb. 1, Mar. 1-11, May 13 to June 10, (computed on basis of records for nearby streams), and those for high stages are poor.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.17	1.0	3.5	1.6	18.5
.6	.66	1.2	6.7	1.9	35
.8	1.70	1.4	11.5	2.2	60

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.3	4.4	1.5	0.63	2.6	1.2	0.50	1.0	7.0	2.4	24.5	1.9
2	1.70	2.3	2.0	.88	.75	1.0	.48	.51	6.0	2.65	14.0	1.5
3	2.05	2.0	1.5	15.8	.63	.90	.45	.92	2.0	3.0	4.7	1.4
4	1.46	1.7	5.0	8.8	2.3	.80	.42	2.5	7.4	3.4	4.7	3.3
5	4.3	1.5	10.4	4.5	3.1	.70	.54	.57	6.0	1.52	5.8	5.0
6	3.95	1.4	11.0	3.45	2.2	.70	.80	.42	3.5	36	8.2	2.0
7	2.05	1.2	3.45	1.64	1.10	.63	.64	.39	2.3	16.3	9.1	1.5
8	2.7	3.0	2.1	1.22	.84	.60	.68	.36	8.0	9.4	9.6	1.4
9	3.4	1.5	2.55	1.10	.70	.80	.54	.34	7.0	8.0	8.1	1.2
10	2.45	2.0	2.7	1.01	.66	.87	.85	.34	4.7	3.3	8.3	1.1
11	1.96	1.7	5.4	1.44	.60	.84	.56	.34	4.5	2.75	4.7	.92
12	2.7	2.2	4.7	.97	.60	.60	.42	.34	12.1	2.05	3.3	2.9
13	2.25	3.0	2.45	.84	.57	1.67	.45	.34	5.8	6.4	2.6	1.52
14	1.34	2.7	2.95	.84	5.0	3.35	1.2	.32	3.0	7.7	9.0	1.06
15	1.22	1.5	1.70	.75	1.58	1.36	9.0	.30	2.3	3.65	11	1.90
16	1.28	1.5	1.40	.66	1.01	.70	4.0	.30	4.7	6.4	17	2.95
17	1.28	1.2	1.95	24	10.4	.60	30	.28	14.3	12.5	17	4.5
18	1.86	1.1	1.16	4.3	11.1	.57	1.7	.30	8.9	11.1	15	1.58
19	3.7	1.1	1.10	1.58	10.6	1.39	1.2	4.8	9.6	3.8	9	1.28
20	1.34	1.1	1.01	1.22	10.5	2.3	.90	1.48	4.6	2.75	11	1.45
21	1.01	3.5	.97	1.16	2.5	.92	.80	6.7	3.5	2.2	7.4	8.3
22	.92	4.0	.88	.97	1.7	.66	.70	.88	2.85	1.70	6.6	6.1
23	1.5	4.5	.79	.84	1.4	3.6	.62	1.02	7.6	1.87	6.0	2.3
24	1.0	2.5	.75	.75	2.3	.75	.62	.84	4.6	1.46	4.0	1.96
25	15.0	1.4	.70	.70	1.3	.70	.58	.79	6.3	1.34	4.2	5.1
26	5.0	1.2	.66	.66	1.1	.61	.54	.57	4.1	1.28	3.5	8.4
27	5.0	1.2	.63	.66	1.0	.60	.50	.51	2.85	.97	3.5	9.0
28	3.0	.90	.60	.60	2.5	.57	.50	.45	2.3	.88	2.5	3.95
29	3.2	.80	.54	.57	1.8	.54	.45	.51	1.78	4.6	2.2	3.7
30	2.5	.70	.95	.57	1.3	.54	.45	-	1.52	29.5	2.0	2.4
31	3.0	4.0	-	3.5	-	.50	.50	-	1.28	-	3.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	15	0.92	2.79	4.32	86.4	265
August	4.5	.70	2.03	3.14	62.8	193
September	11.0	.54	2.45	3.79	73.5	226
October	24	.57	2.79	4.32	86.6	266
November	11.1	.57	2.79	4.32	83.7	257
December	3.6	.50	1.02	1.58	31.6	97
Calendar year 1935	60	.32	3.51	5.43	1,280	3,930
January	30	.42	1.99	3.08	61.6	189
February	6.7	.28	.980	1.52	28.4	87
March	14.3	1.28	5.24	8.11	162	498
April	36	.88	6.36	9.84	191	586
May	24.5	2.0	7.79	12.1	242	741
June	9.0	.92	3.05	4.72	91.6	281
Fiscal year 1935-36	36	.28	3.28	5.07	1,200	3,690

Kaaiea Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'05", long. 156°12'15", 700 feet above Hamakua Ditch trail crossing, 2 miles southeast of Kailua, and 3¼ miles southeast of Huelo.

Drainage area.- 0.5 square mile.

Records available.- December 1921 to June 1936. December 1921 to July 1934, at site 40 feet downstream.

Average discharge.- 14 years (1922-36), 4.67 million gallons a day (7.23 second-feet).

Extremes.- Maximum discharge during year, 316 million gallons a day (489 second-feet) Jan. 17 (gage height, 3.43 feet); minimum, 0.33 million gallons a day (0.51 second-foot) Feb. 11, 12.

1921-36: Maximum discharge, 2,300 million gallons a day (3,560 second-feet) Nov. 18, 1930 (gage height, 7.93 feet, former site and datum), from rating curve extended above 50 million gallons a day; 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; those for Nov. 1-5, Feb. 13 to Mar. 18 and those for stages above 3.1 feet gage height are poor. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.2	0.26	0.5	2.4	0.8	8.7	1.3	29.5
.3	.60	.6	4.0	.9	11.5	1.6	49
.4	1.30	.7	6.1	1.0	15.2		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.0	4.8	1.39	0.70	2.0	1.12	0.48	0.95	8.0	2.3	30	1.80
2	1.58	2.15	2.25	.65	.68	.88	.48	.56	7.0	3.55	16.1	1.47
3	1.91	2.15	1.47	14.9	.58	.81	.44	1.10	2.1	2.8	5.0	1.39
4	1.39	1.68	5.7	8.2	2.2	.75	.40	3.7	9.0	4.5	6.0	3.5
5	5.3	1.58	11.8	4.1	2.8	.70	.52	.65	7.0	1.58	5.7	5.4
6	3.95	1.30	12.3	4.6	1.85	.65	.75	.48	4.0	35.5	11.0	2.15
7	1.80	1.12	3.5	1.58	1.12	.60	.60	.40	2.5	17.7	11.2	1.47
8	2.6	3.2	2.15	1.30	.75	.60	.65	.40	9.0	8.5	12.1	1.47
9	3.25	1.47	2.3	1.12	.70	.70	.52	.37	8.0	13.4	8.9	1.20
10	2.15	2.15	2.4	.95	.60	.65	.81	.37	5.0	3.15	10.1	1.12
11	1.80	1.58	8.2	1.12	.60	.75	.52	.33	4.5	2.4	5.0	.95
12	2.35	2.15	5.4	.95	.60	.56	.40	.33	14	1.80	3.65	2.85
13	2.35	3.65	2.4	.88	.56	1.45	.44	.33	5.0	9.7	2.8	1.78
14	1.30	2.85	3.0	.88	3.35	3.15	.99	.30	2.8	9.5	9.5	1.12
15	1.12	1.47	1.68	.75	1.30	1.32	8.2	.30	2.2	3.15	11.3	2.05
16	1.12	1.47	1.47	.70	.88	.70	3.65	.30	5.0	7.6	20	2.65
17	1.30	1.12	1.96	30.5	14.7	.60	28.5	.27	17	11.8	20	4.9
18	1.72	1.12	1.20	3.8	14.4	.56	1.58	.29	10	17.5	18.4	1.58
19	3.65	1.04	1.04	1.58	11.4	1.41	1.12	6.0	11.3	4.0	9.4	1.30
20	1.39	1.04	.95	1.20	13.0	2.4	.88	1.4	5.0	2.55	11.6	1.30
21	.95	3.9	.88	1.12	2.7	.88	.75	8.0	3.15	2.0	7.9	10.7
22	.88	4.0	.81	.88	1.68	1.70	.65	.82	2.55	1.68	7.2	8.5
23	1.39	4.6	.75	.75	1.30	1.92	.60	1.0	6.9	1.58	6.4	2.15
24	.93	2.4	.70	.75	2.2	.75	.60	.80	4.8	1.47	4.2	1.68
25	18.1	1.30	.65	.70	1.20	.70	.56	.70	7.5	1.30	4.4	5.9
26	5.0	1.20	.65	.60	.95	.60	.52	.56	4.0	1.39	3.65	11.0
27	4.8	1.12	.60	.60	.95	.60	.52	.50	2.7	1.12	3.65	11.2
28	2.7	.88	.60	.56	2.7	.56	.48	.45	2.0	.95	2.4	4.7
29	3.15	.88	.56	.52	1.95	.52	.44	.54	1.68	2.65	2.0	3.65
30	2.4	.88	.93	.56	1.20	.52	.44	-	1.47	30.5	1.91	2.0
31	2.9	4.0	-	3.05	-	.52	.48	-	1.30	-	3.15	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	18.1	0.88	2.81	4.35	87.2	268
August	4.8	.88	2.07	3.20	64.2	197
September	12.3	.58	2.66	4.12	79.7	245
October	30.5	.52	2.92	4.52	90.6	278
November	14.7	.56	3.03	4.69	90.9	279
December	3.15	.52	.956	1.48	29.6	91
Calendar year 1935	67	.44	3.65	5.65	1,330	4,090
January	28.5	.40	1.87	2.89	58.0	178
February	8.0	.27	1.11	1.72	32.2	99
March	17	1.30	5.69	8.80	176	542
April	35.5	.95	6.92	10.7	208	637
May	30	1.91	8.86	13.7	275	843
June	11.2	.95	3.43	5.31	103	316
Fiscal year 1935-36	35.5	.27	3.54	5.48	1,290	3,970

Oopuola Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'15", long. 156°12'30", between Kaaiea and Naillilihaele 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 1936. December 1910 to June 1915 at site half a mile downstream (records not comparable).

Extremes.- Maximum discharge during year, 315 million gallons a day (487 second-feet) Jan. 17 (gage height, 4.95 feet), from rating curve extended above 120 million gallons a day by standard Hofmann weir curve and test of model of station; minimum, 0.09 million gallons a day (0.14 second-foot) Feb. 18, 19.

1930-36: Maximum discharge, 324 million gallons a day (501 second-feet) Jan. 18, 1932 (gage height, 5.12 feet), from rating curve extended above 120 million gallons a day by standard Hofmann weir curve and test of model of station; minimum, that of Feb. 18, 19, 1936.

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

Rating table fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.6	0.05	2.2	5.8
1.7	.22	2.4	11.2
1.8	.68	2.6	18.8
2.0	2.6	2.8	30

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.80	1.72	0.45	0.20	1.29	0.37	0.15	0.73	2.65	0.50	15.2	0.60
2	.60	.80	.86	.20	.29	.33	.18	.40	2.15	.80	8.0	.50
3	.50	.74	.63	5.0	.25	.29	.15	1.10	.74	.81	2.2	.50
4	.50	.60	1.84	5.0	1.52	.25	.15	2.00	2.65	1.71	1.88	1.75
5	1.53	.55	3.95	1.89	1.26	.22	.20	.37	2.35	.50	2.85	1.39
6	1.56	.50	5.8	1.85	.85	.22	.33	.20	1.45	20	3.6	.68
7	.68	.45	1.72	.80	.45	.22	.25	.15	.95	9.1	4.3	.45
8	.80	1.04	.80	.55	.33	.22	.22	.15	3.05	3.9	4.1	.40
9	1.34	.50	1.10	.45	.29	.30	.18	.15	2.7	5.8	3.65	.45
10	.74	1.17	1.21	.37	.25	.49	.22	.15	1.72	1.38	3.85	.40
11	.60	.68	1.37	.40	.25	.29	.18	.12	1.68	1.28	*2.0	.29
12	1.16	.74	2.5	.33	.22	.22	.15	.12	6.0	.80	1.58	1.09
13	.97	1.02	.87	.45	.22	.80	.18	.10	3.0	2.45	1.19	.53
14	.50	.93	1.19	.37	1.06	1.38	.76	.10	1.19	3.65	3.5	.40
15	.45	.45	.68	.29	.60	.60	2.95	.10	.87	1.42	3.85	.60
16	.40	.82	.55	.25	.37	.29	1.75	.10	1.80	2.8	6.6	1.27
17	.40	.37	.74	11.2	4.7	.29	19.1	.10	4.9	4.8	5.2	1.88
18	.51	.37	.50	1.80	3.95	.22	.80	.10	4.7	4.9	5.4	.60
19	1.48	.33	.37	.74	4.4	.67	.50	1.54	5.2	1.48	2.2	.45
20	.50	.33	.33	.45	3.35	.87	.40	.54	2.2	1.02	3.0	.45
21	.37	1.51	.29	.40	1.02	.33	.37	2.6	1.48	.80	2.5	2.5
22	.33	1.97	.29	.37	.68	.25	.29	.37	1.10	.68	2.4	.98
23	.60	1.73	.25	.29	.50	4.8	.22	.25	3.4	.55	2.25	.55
24	3.3	.95	.25	.25	.80	.45	.22	.22	2.5	.55	1.48	.45
25	5.3	.55	.22	.22	.50	.37	.22	.22	1.43	.50	1.49	1.22
26	1.74	.50	.22	.20	.37	.29	.20	.18	1.58	.50	1.10	3.5
27	2.15	.40	.22	.20	.37	.22	.20	.15	.87	.40	1.28	3.1
28	.95	.37	.22	.20	1.01	.22	.20	.15	.74	.37	.80	1.02
29	1.38	.29	.20	.18	.85	.20	.18	.20	.60	1.01	.68	.95
30	1.02	.29	.22	.18	.40	.20	.15	-	.55	15.2	.69	.60
31	1.19	1.05	-	1.38	-	.15	.29	-	.50	-	1.32	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	5.3	0.33	1.11	1.72	34.4	106
August	1.97	.29	.765	1.18	23.7	73
September	5.8	.20	1.00	1.55	30.1	92
October	11.2	.18	1.18	1.83	36.5	112
November	4.7	.22	1.08	1.67	32.5	100
December	4.8	.15	.517	.800	16.0	49
Calendar year 1935	25.5	.15	1.43	2.21	522	1,600
January	19.1	.15	1.01	1.56	31.3	96
February	2.6	.10	.437	.676	12.7	39
March	6.0	.50	2.15	3.33	66.7	205
April	20	.37	2.99	4.63	89.7	275
May	15.2	.68	3.23	5.00	100	307
June	3.5	.29	.985	1.52	29.6	91
Fiscal year 1935-36	20	.10	1.38	2.14	503	1,540

*Partly estimated.

Nailiilihaele Stream near Huelo

Location.- Water-stage recorder, lat. 20°52'30", long. 156°13'05", 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.- December 1910 to June 1918, August 1919 to June 1936. December 1910 to December 1912 from staff gage at site 300 feet downstream.

Average discharge.- 15 years (1920-24, 1925-36), 20.1 million gallons a day (31.1 second-feet).

Extremes.- Maximum discharge during year, 1,310 million gallons a day (2,030 second-feet) Jan. 17 (gage height, 5.90 feet), from rating curve extended above 150 million gallons a day; minimum, 2.1 million gallons a day (3.2 second-feet) Feb. 19.
1910-18, 1919-36: Maximum discharge, 1,800 million gallons a day (2,790 second-feet) May 1, 1916, from rating curve extended above 600 million gallons a day; 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 excellent for ordinary stages; poor for high stages. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.8	1.2	2.4	18.6	3.0	73
2.0	4.4	2.6	31	3.3	120
2.2	10.0	2.8	50	3.6	181

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	10.0	16.8	8.7	4.4	6.6	5.8	3.1	5.1	24.5	16.5	128	12.0
2	8.7	10.0	10.2	3.6	3.3	4.9	2.9	3.8	24.5	20	70	10.4
3	9.4	10.4	7.4	25.5	2.9	4.6	2.9	9.0	14.6	15.8	24.5	10.0
4	8.1	8.7	15.6	50	7.9	4.4	2.9	33	36	24.5	44	16.0
5	23	7.8	46	13.2	7.4	4.2	2.9	6.1	38	9.7	29.5	20.5
6	18.0	6.8	52	25.5	7.4	3.8	4.0	4.0	36.5	151	68	10.8
7	10.0	6.6	16.4	9.0	4.9	3.4	3.4	3.4	13.1	77	83	9.0
8	12.9	12.3	9.4	6.1	3.6	3.4	3.3	3.3	74	37	76	9.0
9	14.9	7.1	9.4	5.4	3.3	3.8	2.9	3.1	35	64	54	8.1
10	12.3	8.4	9.4	4.6	2.9	3.8	4.0	3.1	22	16.7	61	7.4
11	10.4	6.8	33.5	5.6	2.7	3.8	2.9	2.9	24	13.5	29.5	6.8
12	12.2	10.4	25	5.1	2.5	3.3	2.5	2.9	73	11.6	22.5	12.1
13	11.8	13.7	11.2	7.1	2.5	5.6	2.5	2.9	27.5	39	18.6	10.9
14	8.4	12.6	13.1	6.1	6.5	12.3	5.3	2.5	14.8	48	51	7.4
15	7.8	6.8	9.0	4.6	4.9	7.3	35	2.5	12.0	16.2	54	10.8
16	7.8	6.6	7.8	4.0	3.8	3.8	55	2.4	48	47	90	12.5
17	8.4	5.6	8.1	97	62	3.3	145	2.2	114	69	111	24
18	10.2	5.4	6.6	22	63	3.1	9.0	2.2	47	99	95	10.0
19	16.5	5.1	6.1	7.8	46	5.2	6.3	9.0	59	22	60	8.4
20	8.1	4.9	5.8	5.8	67	12.3	5.4	8.1	27.5	15.3	80	8.1
21	6.6	13.3	5.4	5.4	12.3	5.4	4.6	44	20	12.7	59	65
22	5.8	15.8	5.1	4.6	8.7	6.7	4.2	5.8	16.2	11.2	36	36.5
23	7.4	15.4	4.9	4.4	7.1	*9.6	4.0	9.7	32.5	10.4	45	12.3
24	46	10.4	4.4	4.2	9.4	†5.0	3.6	7.7	23	9.7	28	11.2
25	80	6.6	4.2	3.8	6.6	†3.8	3.4	6.8	39.5	9.0	30.5	44
26	20.5	5.8	4.0	3.6	5.6	†3.5	3.4	4.2	21	9.0	22	82
27	19.4	5.4	4.0	3.4	5.4	*3.4	3.3	3.6	17.2	7.8	21	68
28	12.7	4.9	3.8	3.3	11.1	3.4	3.1	3.4	13.1	6.8	16.2	36
29	13.1	4.6	3.6	3.3	9.7	3.3	2.9	3.4	10.8	14.0	13.5	23
30	10.8	4.6	5.7	3.1	6.3	3.3	2.9	-	9.7	127	12.7	13.5
31	12.7	29.5	-	6.2	-	3.1	3.1	-	8.7	-	16.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	80	5.8	15.0	23.2	464	1,420
August	29.5	4.6	9.33	14.4	289	887
September	52	3.6	11.9	18.4	356	1,090
October	97	3.1	11.5	17.8	358	1,100
November	67	2.5	13.1	20.3	393	1,210
December	12.3	3.1	4.92	7.61	152	468
Calendar year 1935	296	2.5	18.5	28.6	6,740	20,700
January	145	2.5	11.0	17.0	340	1,040
February	44	2.2	6.90	10.7	200	614
March	114	8.7	31.5	48.7	977	3,000
April	151	6.8	34.3	53.1	1,030	3,160
May	128	12.7	50.0	77.4	1,550	4,760
June	82	6.8	20.5	31.7	616	1,890
Fiscal year 1935-36	151	2.2	18.4	28.5	6,720	20,640

*Partly estimated.
†Estimated.

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 2½ miles south of Huelo.

Drainage area.- 3.0 square miles.

Records available.- December 1910 to June 1918, July 1919 to June 1936.

Average discharge.- 17 years (1919-36), 17.1 million gallons a day (26.5 second-feet).

Extremes.- Maximum discharge, 710 million gallons a day (1,100 second-feet) Jan. 16 (gage height, 5.90 feet), from rating curve extended above 75 million gallons a day; minimum, 0.64 million gallons a day (0.99 second-foot) Jan. 12-14.

1910-18, 1919-36: Maximum discharge, 3,390 million gallons a day (5,250 second-feet) Nov. 18, 1930 (gage height, 8.61 feet), from rating curve extended above 700 million gallons a day; minimum, 0.07 million gallons a day (0.11 second-foot) June 27, 1921.

Remarks.- Records excellent for ordinary stages; those for July 1-11, Oct. 29 to Nov. 4, Nov. 21 to Dec. 24, Jan. 18-31 (computed on basis of records for six nearby streams), and those for high stages are poor. No diversions above station. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.6	0.45	2.0	4.9	3.0	47
1.7	1.07	2.2	9.4	3.3	70
1.8	2.0	2.4	15.6	3.6	95
1.9	3.3	2.7	28.5		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.4	7.5	9.0	4.5	6.2	3.5	1.35	*2.15	6.4	7.2	62	7.5
2	5.0	5.3	6.0	2.9	1.8	3.0	1.16	4.1	14.3	18.7	39	6.8
3	5.0	6.2	4.9	5.6	1.7	2.5	1.16	26	16.6	8.1	14.3	6.2
4	4.8	4.9	4.4	25	7.0	2.2	1.01	63	33.5	24.5	41	7.0
5	20	4.3	15.2	6.2	*2.9	1.8	1.01	7.8	39.5	6.8	17.2	7.5
6	15	3.95	39	21.5	3.3	1.7	1.16	3.6	59	58	56	6.2
7	6.0	3.8	15.4	8.4	2.5	1.6	1.01	2.9	11.7	50	74	5.1
8	10	5.3	6.0	4.3	2.15	1.6	.95	2.25	25	26	78	4.9
9	12	4.1	4.9	3.3	1.91	1.7	.82	2.0	32	35	47	4.6
10	7.0	4.1	4.9	3.05	1.81	1.7	.82	1.81	18.0	11.7	57	4.1
11	5.2	3.6	11.8	4.0	1.63	1.6	.76	1.72	14.5	8.4	29.5	3.8
12	*5.5	5.2	18.6	4.4	1.63	1.6	.70	1.63	60	6.8	22	5.4
13	5.7	5.4	6.2	10.6	1.63	2.5	*.64	1.63	22	21	13.0	6.2
14	4.4	7.7	7.2	5.7	1.95	8.0	*.64	1.44	10.0	36	29.5	4.1
15	3.95	3.95	5.3	3.95	2.5	4.5	*12.9	1.44	7.0	12.3	31.5	4.9
16	3.8	3.6	4.4	3.15	2.15	3.0	*71	1.35	24	38	41	5.7
17	4.1	3.05	4.4	25.5	20	2.4	76	1.26	88	52	62	10.8
18	4.1	2.9	3.95	22	61	2.1	8.0	1.16	*37.5	82	54	5.1
19	8.4	2.8	3.8	5.1	42	2.3	6.0	1.68	*43	21	44	4.4
20	4.7	2.65	3.6	3.8	*62	8.0	4.0	3.15	28.5	11.1	66	4.1
21	3.8	6.3	3.3	3.45	10	3.0	3.0	21.5	14.9	8.4	59	41
22	3.45	9.4	3.15	3.05	7.0	5.0	2.5	3.3	11.7	7.0	25.5	16.5
23	3.45	6.6	3.05	2.8	5.0	7.0	2.2	10.0	14.8	6.4	35.5	7.0
24	23	6.0	2.9	2.4	6.0	3.0	2.0	5.9	14.5	6.0	22	8.8
25	74	3.8	2.8	2.25	4.0	2.0	1.9	4.4	20	5.3	24	33
26	19.0	3.45	2.65	2.15	3.0	1.91	1.8	2.65	15.2	5.5	16.4	73
27	10.6	3.05	2.65	1.91	2.3	1.81	1.7	2.15	10.2	4.7	13.6	55
28	7.2	2.8	2.5	1.81	10	1.72	1.7	1.91	8.9	4.3	10.6	41
29	6.8	2.65	2.4	1.7	8.0	1.63	1.6	1.81	6.4	4.4	8.9	15.6
30	5.7	2.65	3.05	1.6	4.5	1.54	1.5	-	5.3	43	8.0	8.9
31	6.0	24	-	5.9	-	1.44	1.6	-	4.9	-	8.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	74	3.45	9.78	15.1	303	930
August	24	2.65	5.19	8.03	161	494
September	39	2.4	6.91	10.7	207	636
October	25.5	1.6	6.52	10.1	202	620
November	62	1.63	9.59	14.8	288	882
December	8.0	1.44	2.82	4.36	87.4	268
Calendar year 1935	250	1.44	13.6	21.0	4,960	15,220
January	76	.64	6.86	10.6	213	652
February	63	1.16	6.41	9.92	186	570
March	88	4.9	23.1	35.7	717	2,200
April	82	4.3	21.0	32.5	630	1,930
May	78	8.0	35.8	55.4	1,110	3,400
June	73	3.8	13.8	21.4	414	1,270
Fiscal year 1935-36	88	.64	12.3	19.0	4,520	13,850

*Graph estimated for part of day.

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 1936.

Average discharge.- 24 years (1911-15, 1916-36), 5.07 million gallons a day (7.84 second-feet).

Extremes.- Maximum discharge during year, 220 million gallons a day (340 second-feet) Jan. 17 (gage height, 4.36 feet), from rating curve extended above 100 million gallons a day; minimum, 1.08 million gallons a day (1.67 second-feet) Jan. 12-14.
1911-36: Maximum discharge, 657 million gallons a day (1,020 second-feet) Nov. 18, 1930 (gage height, 6.74 feet), from rating curve extended above 20 million gallons a day; minimum, 0.2 million gallons a day (0.3 second-foot) June 8, 1926.

Remarks.- Records good for ordinary stages, those for July 8-11, Aug. 24 to Sept. 4, Dec. 3-6 (computed on basis of records for nearby streams), and those for high stages are poor. No diversions. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (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		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.15	3.0	3.0	1.62	2.2	2.6	1.40	1.62	3.55	3.3	22	3.3
2	2.85	2.7	2.2	1.62	1.98	2.45	1.31	1.50	4.2	3.3	15.0	3.15
3	2.85	2.7	2.0	3.3	1.86	2.3	1.31	2.25	3.2	3.15	8.2	3.0
4	2.7	2.6	3.0	4.1	3.4	2.1	1.31	4.2	3.75	3.45	7.0	3.3
5	3.45	2.45	4.9	2.45	2.45	2.0	1.31	1.98	3.9	3.0	7.8	3.15
6	3.6	2.35	7.3	2.35	2.2	1.7	1.50	1.74	3.45	17.6	9.0	2.85
7	3.0	2.35	3.9	2.1	2.1	1.74	1.31	1.62	3.0	14.6	9.8	2.7
8	3.3	2.45	3.0	1.98	1.86	1.74	1.23	1.62	6.9	9.3	9.8	2.45
9	3.6	2.35	2.85	1.86	1.86	1.86	1.23	1.50	6.3	12.2	8.7	2.45
10	3.2	2.35	2.85	1.36	1.86	1.74	1.23	1.50	4.4	6.4	9.0	2.35
11	2.9	2.1	3.4	1.86	1.74	1.62	1.23	1.50	4.4	5.6	7.2	2.2
12	2.7	2.1	4.6	1.74	1.74	1.50	1.15	1.50	9.5	4.8	5.8	2.7
13	2.85	2.2	3.3	1.86	1.74	1.86	1.15	1.50	6.4	5.8	5.4	2.35
14	2.6	2.2	3.15	1.74	1.74	2.1	1.30	1.40	5.0	7.2	8.1	2.2
15	2.45	1.98	3.0	1.74	1.36	1.74	2.6	1.31	4.2	4.8	8.4	2.35
16	2.35	1.98	2.7	1.62	1.86	1.62	7.9	1.31	4.8	6.2	12.5	2.6
17	2.35	1.86	2.6	*7.4	5.6	1.62	20.5	1.31	10.2	9.8	13.2	3.45
18	2.35	1.86	2.35	3.65	5.5	1.50	3.3	1.31	8.9	12.8	14.3	2.6
19	2.45	1.74	2.2	2.45	6.0	1.86	2.7	1.73	11.7	6.7	9.8	2.35
20	2.1	1.74	2.2	2.35	6.4	1.86	2.45	1.62	8.0	5.4	9.0	2.2
21	2.1	2.3	2.1	2.35	3.9	1.50	2.35	2.75	6.7	4.6	7.4	4.0
22	1.98	2.2	2.1	2.35	3.45	1.50	2.1	1.74	5.6	4.0	7.0	3.8
23	1.50	2.35	2.1	2.35	3.15	4.6	2.1	1.98	7.7	3.75	7.0	2.7
24	3.05	2.0	1.98	2.2	3.45	1.98	1.98	1.98	7.4	3.45	5.8	1.98
25	7.3	1.8	1.86	2.1	3.0	1.74	1.86	1.86	6.2	3.15	5.4	2.7
26	4.0	1.7	1.74	2.1	2.85	1.74	1.86	1.74	5.6	3.0	5.0	8.4
27	3.6	1.6	1.74	2.1	2.7	1.62	1.74	1.74	4.8	2.7	4.6	7.0
28	3.15	1.6	1.74	2.1	2.85	1.50	1.74	1.62	4.2	2.6	4.2	4.6
29	3.15	1.5	1.62	1.98	3.15	1.50	1.50	1.62	3.9	2.7	3.9	3.9
30	3.0	1.5	1.62	1.98	2.7	1.40	1.62	-	3.75	15.6	3.75	3.45
31	3.0	5.0	-	2.1	-	1.40	1.50	-	3.45	-	3.9	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	7.3	1.50	2.99	4.63	92.6	284
August	5.0	1.5	2.21	3.42	68.6	211
September	7.3	1.62	2.77	4.29	83.1	255
October	7.4	1.62	2.37	3.67	73.4	225
November	6.4	1.74	2.90	4.49	87.2	267
December	4.6	1.40	1.87	2.89	58.0	178
Calendar year 1935	38.5	1.40	3.53	5.46	1,290	3,960
January	20.5	1.15	2.51	3.88	77.8	239
February	4.2	1.31	1.76	2.72	51.0	157
March	11.7	3.0	5.65	8.74	175	537
April	17.6	2.6	6.36	9.84	191	586
May	22	3.75	8.32	12.9	258	792
June	8.4	1.98	3.21	4.97	96.2	295
Fiscal year 1935-36	22	1.15	3.58	5.54	1,310	4,030

*Partly estimated.

Hoolawanui Stream near Huelo

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

Drainage area.- Not determined.

Records available.- October 1933 to June 1936. December 1910 to October 1933, at site 80 feet downstream.

Average discharge.- 24 years (1911-15, 1916-36), 7.72 million gallons a day (11.9 second-feet).

Extremes.- Maximum discharge during year, 251 million gallons a day (388 second-feet) Jan. 17 (gage height, 2.47 feet), from rating curve extended above 150 million gallons a day; minimum, 0.64 million gallons a day (0.99 second-foot) Jan. 11-14.

1910-36: Maximum discharge, 584 million gallons a day (904 second-feet) Nov. 18, 1930 (gage height, 9.37 feet, former datum), from rating curve extended above 20 million gallons a day; minimum, 0.15 million gallons a day (0.23 second-foot) Oct. 25, 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 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.3	0.48	0.6	3.6	0.9	12.1	1.4	45
.4	1.13	.7	5.6	1.0	16.6		
.5	2.15	.8	8.5	1.2	28.5		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	3.1	2.95	2.15	1.22	1.28	1.90	0.83	1.28	3.35	4.2	25	4.8
2	2.8	2.8	1.79	1.22	1.13	1.79	.83	1.13	4.5	4.6	17.6	4.4
3	2.8	2.65	1.58	2.6	1.13	1.68	.83	2.25	2.8	4.2	10.3	4.2
4	2.55	2.55	3.4	4.4	2.55	1.58	.76	8.2	6.3	5.6	13.2	4.4
5	4.6	2.4	4.6	1.79	1.58	1.48	.83	1.79	6.9	3.6	10.8	4.2
6	4.0	2.15	9.0	3.35	1.38	1.38	.97	1.38	7.2	30.5	17.1	3.45
7	2.95	2.15	3.8	1.90	1.13	1.28	.83	1.28	4.0	18.2	26	3.25
8	3.1	2.55	2.55	1.48	1.13	1.28	.76	1.13	11.9	11.4	25	3.25
9	3.45	2.0	2.25	1.38	.97	1.28	.76	1.13	11.7	15.6	19.3	2.95
10	3.1	1.90	2.25	1.28	.97	1.28	.76	1.13	5.6	8.2	19.8	2.8
11	2.8	1.79	4.0	1.48	.97	1.22	.64	.97	5.9	6.8	13.9	2.65
12	2.8	1.90	6.2	1.48	.97	1.13	.64	.97	15.6	5.6	11.0	3.25
13	2.8	2.05	2.8	1.48	.97	1.58	.64	.97	9.2	7.2	8.9	2.95
14	2.4	2.6	2.95	1.58	1.13	1.79	.91	.97	6.2	10.9	13.0	2.55
15	2.25	1.90	2.55	1.28	1.13	1.38	2.75	.90	5.2	6.8	13.9	2.8
16	2.15	1.68	2.25	1.05	.97	1.13	12.0	.90	9.0	10.9	19.6	2.95
17	2.15	1.68	2.25	12.1	8.0	1.05	40	.83	27.5	17.1	26	4.3
18	2.15	1.58	2.15	7.0	8.8	1.05	2.8	.83	14.8	29.5	25	2.8
19	2.95	1.48	1.90	2.15	9.0	1.52	2.15	1.41	19.2	11.7	21.5	2.55
20	2.25	1.35	1.79	1.90	11.7	1.58	1.90	1.28	12.1	*8.5	22	2.55
21	2.0	1.94	1.68	1.79	3.6	1.13	1.58	5.1	9.9	*7.0	19.3	9.0
22	1.90	2.15	1.58	1.58	2.8	1.13	1.58	1.28	7.9	5.6	14.4	7.0
23	2.0	2.0	1.58	1.48	2.55	4.2	1.48	2.85	9.5	5.2	14.8	4.2
24	6.3	1.79	1.48	1.38	2.8	1.22	1.38	2.15	8.2	4.8	11.4	3.6
25	14.0	1.48	1.38	1.38	2.15	1.13	1.28	1.79	8.6	4.4	10.7	9.3
26	5.6	1.38	1.38	1.28	2.0	1.05	1.22	1.28	7.6	4.0	8.9	18.7
27	4.2	1.28	1.38	1.28	1.90	.97	1.13	1.13	5.9	3.45	8.2	15.7
28	3.45	1.28	1.28	1.22	2.25	.97	1.13	1.13	5.4	3.25	7.0	12.9
29	3.25	1.28	1.28	1.22	2.65	.90	1.05	1.13	4.8	3.7	6.2	8.9
30	2.95	1.22	1.22	1.13	2.0	.90	1.05	-	4.4	20	5.4	6.2
31	2.85	3.4	-	1.28	-	.83	1.13	-	4.0	-	5.6	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	14.0	1.90	3.41	5.28	106	325
August	3.4	1.22	1.98	3.06	61.3	188
September	9.0	1.22	2.55	3.95	76.4	235
October	12.1	1.05	2.17	3.36	67.1	206
November	11.7	.97	2.72	4.21	81.6	250
December	4.2	.83	1.38	2.14	42.8	131
Calendar year 1935	132	.83	5.82	9.00	2,130	6,520
January	40	.64	2.79	4.32	86.6	266
February	8.2	.83	1.67	2.58	48.6	149
March	27.5	3.35	8.55	13.2	265	814
April	30.5	3.25	9.42	14.6	282	867
May	26	5.4	15.2	23.5	471	1,440
June	18.7	2.55	5.42	8.39	163	499
Fiscal year 1935-36	40	.64	4.78	7.40	1,750	5,370

*Graph estimated for part of day.

Honopou Stream near Huelo

Location.- Water-stage recorder, lat. 20°53'20", long. 156°15'05", just above Wailoa Ditch intake, 2½ miles west 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 1936.

Average discharge.- 23 years (1911-14, 1916-36), 3.07 million gallons a day (4.75 second-feet).

Extremes.- Maximum discharge during year, 154 million gallons a day (238 second-feet) Jan. 17 (gage height, 3.24 feet); minimum, 0.20 million gallons a day (0.31 second-foot) Nov. 15, 17.

1910-36: Maximum discharge, 1,220 million gallons a day (1,890 second-feet) Nov. 18, 1930 (gage height, 7.28 feet), from rating curve extended above 70 million gallons a day; minimum, 0.01 million gallons a day (0.02 second-foot) several days in 1933 and 1934.

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

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.4	0.10	0.7	2.55	1.4	16.5
.5	.65	.9	5.4		
.6	1.45	1.1	9.2		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.25	1.25	0.84	0.57	0.64	0.84	0.51	0.77	2.9	2.2	15.4	2.55
2	1.08	1.17	.64	.64	.51	.77	.45	.64	2.65	2.1	10.4	2.35
3	1.17	1.17	.64	1.65	.51	.77	.45	1.63	1.40	2.1	6.1	2.2
4	1.08	1.00	1.23	2.5	1.79	.77	.45	3.95	2.15	2.2	5.6	2.35
5	1.62	.92	2.85	*.84	.77	.70	.45	.92	1.89	1.67	7.2	2.2
6	1.45	.84	3.7	.92	.64	.70	.57	.77	1.78	13.4	7.3	1.89
7	1.08	.84	1.25	.77	.57	.64	.51	.77	1.45	8.6	8.0	1.89
8	1.08	1.00	.92	.64	.45	.64	.45	.70	4.8	5.1	8.2	1.56
9	1.17	.84	.84	.64	.45	.70	.45	.64	4.5	7.6	7.5	1.35
10	1.17	.84	.84	.57	.45	.70	.45	.64	2.8	4.4	7.7	1.35
11	1.08	.77	1.27	.64	.40	.70	.45	.57	2.95	3.75	6.2	1.25
12	1.17	.77	2.2	.70	.45	.64	.45	.57	6.1	3.35	5.4	1.78
13	1.17	.77	1.08	.64	.45	.84	.40	.57	3.9	4.3	4.8	1.25
14	.92	.84	1.08	.57	.40	1.08	.60	.51	2.95	4.5	6.8	1.25
15	.92	.64	.92	.51	.25	.77	1.68	.51	2.7	3.2	6.8	1.45
16	.92	.70	.84	.51	.25	.64	4.3	.51	3.3	4.4	9.1	1.45
17	.92	.57	.84	6.3	1.89	.64	14.4	.51	7.3	7.4	10.9	2.0
18	.92	.57	.84	1.82	.70	.57	1.56	.51	5.8	9.5	11.4	1.17
19	1.17	.51	.84	.84	2.1	.84	1.25	.83	9.2	5.2	8.6	1.08
20	.84	.51	.77	.77	2.5	.84	1.08	.70	5.2	4.5	8.2	1.08
21	.77	.77	.77	.70	1.08	.64	1.00	1.66	5.1	3.9	6.8	2.25
22	.77	.84	.70	.70	4.9	.57	.92	.64	4.0	3.5	6.2	2.7
23	.84	.77	.70	.64	1.28	4.1	.84	1.24	6.0	3.1	6.4	1.56
24	2.8	.70	.70	.64	1.25	.70	.77	.77	4.5	2.7	5.2	1.45
25	4.4	.51	.64	.64	1.00	.64	.77	.64	4.4	2.45	4.8	2.05
26	2.0	.51	.64	.64	.92	.64	.77	.57	3.65	2.2	4.4	4.7
27	1.75	.51	.64	.64	.92	.57	.70	.51	3.1	2.1	4.0	4.9
28	1.45	.51	.64	.64	1.08	.51	.70	.51	2.95	1.89	3.65	3.2
29	1.45	.45	.64	.57	1.08	.51	.64	.51	2.7	2.0	3.2	2.95
30	1.35	.51	.64	.57	.92	.51	.64	-	2.45	13.0	2.95	2.45
31	1.35	1.38	-	.57	-	.51	.70	-	2.2	-	3.1	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	4.4	0.77	1.33	2.06	41.1	126
August	1.38	.45	.774	1.20	24.0	74
September	3.7	.64	1.04	1.61	31.1	96
October	6.3	.51	.967	1.50	30.0	92
November	4.9	.25	1.02	1.58	30.6	94
December	4.1	.51	.796	1.23	24.7	76
Calendar year 1935	33	.25	2.16	3.34	788	2,420
January	14.4	.40	1.27	1.96	39.4	121
February	3.95	.51	.837	1.30	24.3	74
March	9.2	1.40	3.77	5.83	117	358
April	13.4	1.67	4.54	7.02	136	418
May	15.4	2.95	6.85	10.6	212	652
June	4.9	1.08	2.06	3.19	61.7	189
Fiscal year 1935-36	15.4	.25	2.11	3.26	772	2,370

*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 1936. April 1930 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 570 million gallons a day (882 second-feet) Jan. 17 (gage height, 3.51 feet), from rating curve extended above 100 million gallons a day; minimum, 0.06 million gallons a day (0.09 second-foot) Feb. 17, 18, 22, 23, 28, Mar. 1.

1932-36: Maximum discharge, 730 million gallons a day (1,130 second-feet) Dec. 31, 1932 (gage height, 3.83 feet), from rating curve extended above 100 million gallons a day; minimum, 0.04 million gallons a day (0.06 second-foot) Oct. 31, 1933.

Remarks.- Records good for ordinary stages and poor for high stages. Wailoa Ditch and New Hamakua Ditch divert most of flow above this station. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (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		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.15	0.15	0.13	0.09	0.09	0.09	0.09	0.09	0.18	0.15	19.2	0.13
2	.15	.13	.13	.09	.09	.09	.09	.09	.15	.15	7.1	.11
3	.15	.13	.13	.13	.09	.09	.09	.09	.13	.15	1.58	.11
4	.15	.13	.13	.20	.15	.09	.09	.15	.13	.18	.80	.11
5	.15	.13	.13	.13	.11	.09	.09	.13	.13	.15	.54	.11
6	.15	.13	.20	.13	.09	.09	.09	.13	.13	12.5	.40	.11
7	.15	.13	.15	.11	.09	.09	.09	.11	.13	9.2	.36	.13
8	.13	.13	.13	.11	.09	.09	.09	.11	.13	1.70	1.14	.11
9	.13	.13	.13	.11	.09	.09	.09	.11	.20	5.5	1.07	.11
10	.13	.13	.13	.11	.09	.09	.09	.11	.15	.66	.36	.13
11	.13	.13	.13	.11	.09	.09	.07	.09	.13	.44	.23	.13
12	.13	.13	.13	.11	.09	.09	.07	.09	.32	.36	.18	.11
13	.13	.13	.13	.11	.09	.11	.09	.09	.23	.26	.18	.11
14	.15	.13	.13	.11	.09	.13	.09	.09	.20	.26	.18	.11
15	.13	.13	.13	.11	.09	.13	.09	.09	.15	.23	.21	.11
16	.13	.13	.11	.11	.11	.11	.51	.09	.13	.20	3.35	.11
17	.13	.13	.11	2.85	.15	.09	27.5	.07	.20	.98	6.8	.11
18	.13	.13	.11	.34	.15	.09	.13	.06	.26	1.69	7.3	.11
19	.15	.13	.11	.13	.15	.09	.11	.07	8.0	.26	2.2	.11
20	.15	.13	.11	.13	.13	.09	.09	.07	.45	.23	1.14	.11
21	.13	.13	.11	.11	.13	.09	.09	.07	.29	.23	.20	.11
22	.13	.18	.11	.09	.13	.09	.09	.07	.23	.23	.18	.09
23	.13	.15	.11	.09	.13	.09	.09	.06	.23	.20	.18	.09
24	.15	.15	.11	.09	.13	.09	.09	.07	.26	.20	.18	.09
25	.20	.15	.11	.09	.11	.09	.09	.07	.23	.20	.15	.09
26	.20	.13	.11	.09	.11	.09	.09	.07	.18	.20	.15	.27
27	.18	.13	.11	.09	.11	.09	.09	.07	.18	.18	.13	.15
28	.18	.13	.11	.09	.11	.09	.07	.06	.18	.15	.15	.13
29	.15	.13	.11	.09	.13	.09	.07	.07	.15	.15	.13	.11
30	.15	.13	.09	.09	.11	.09	.09	-	.15	3.0	.13	.11
31	.15	.13	-	.09	-	.09	.09	-	.15	-	.13	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.20	0.13	0.147	0.227	4.55	14
August	.18	.13	.134	.207	4.16	13
September	.20	.09	.122	.189	3.67	11
October	2.85	.09	.204	.316	6.33	19
November	.15	.09	.111	.172	3.32	10
December	.13	.09	.094	.145	2.91	8.9
Calendar year 1935	.51	.07	.731	1.13	267	818
January	27.5	.07	.987	1.53	30.6	94
February	.15	.06	.088	.136	2.54	7.8
March	8.0	.13	.444	.687	13.8	42
April	12.5	.15	1.33	2.06	40.0	123
May	19.2	.13	1.81	2.80	56.0	172
June	.27	.09	.117	.181	3.52	11
Fiscal year 1935-36	27.5	.06	.468	.724	171	526

Honopou Stream above Haiku Ditch, near Huelo

Location.- Water-stage recorder, lat. 20°55'05", long. 156°14'55", 150 feet below Government Road and 1½ miles west of Huelo.

Drainage area.- 2.2 square miles.

Records available.- July 1932 to June 1936. November 1926 to June 1932, furnished by East Maui Irrigation Co.

Extremes.- Maximum discharge during year, 194 million gallons a day (300 second-feet) Jan. 17 (gage height, 2.52 feet), from rating curve extended above 20 million gallons a day by standard Hofmann weir curve; minimum, 0.11 million gallons a day (0.17 second-foot) Mar. 1.

1932-36: Maximum discharge, that of Jan. 17, 1936; 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. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (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		

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.32	0.44	0.29	0.20	0.20	0.20	0.17	0.17	0.39	0.36	20	0.32
2	.29	.46	.32	.20	.20	.20	.17	.17	.29	.44	9.0	.32
3	.32	.32	.29	.32	,17	.20	.17	.22	.26	.40	2.8	.32
4	.29	.32	.26	.44	.33	.20	.17	.29	.32	.54	2.1	.36
5	.32	.29	.41	.40	.29	.20	.17	.17	.36	.36	1.89	.32
6	.36	.29	.88	.29	.23	.20	.17	.17	.44	13.8	1.79	.32
7	.32	.32	.59	.26	.20	.20	.15	.17	.32	12.2	1.79	.36
8	.29	.32	.36	.26	.20	.20	.15	.17	.32	3.1	2.75	.32
9	.36	.29	.32	.26	.20	.20	.15	.17	.50	6.1	2.45	.29
10	.32	.36	.36	.26	.17	.20	.15	.17	.32	1.59	1.79	.29
11	.29	.32	.32	.26	.23	.20	.15	.15	.32	1.11	1.29	.26
12	.32	.29	.40	.26	.26	.20	.15	.15	.81	.81	1.11	.32
13	.32	.32	.32	.26	.20	.29	.17	.15	.64	.81	.75	.26
14	.29	.29	.36	.26	.26	.32	.15	.15	.40	1.29	.69	.26
15	.29	.29	.29	.23	.26	.26	.23	.15	.36	1.11	.88	.26
16	.29	.29	.26	.23	.20	.20	.60	.15	.32	1.05	4.8	.26
17	.29	.26	.34	2.15	.40	.20	19.3	.15	.64	2.1	6.2	.26
18	.32	.26	.26	1.00	.75	.20	.29	.15	.95	2.85	7.5	.26
19	.32	.29	.23	.29	.69	.29	.23	.15	8.7	1.11	2.85	.23
20	.29	.29	.23	.26	.75	.26	.20	.15	1.67	.75	1.78	.26
21	.29	.36	.23	.23	.40	.23	.20	.20	.95	.59	.59	.29
22	.26	.44	.20	.23	.29	.20	.20	.15	.69	.59	.59	.29
23	.29	.36	.20	.20	.26	.23	.20	.15	.59	.59	.59	.26
24	.40	.36	.20	.20	.29	.20	.17	.13	.69	.49	.59	.26
25	.59	.32	.20	.24	.26	.20	.17	.13	.54	.49	.59	.26
26	.59	.29	.20	.23	.26	.20	.17	.13	.75	.44	.54	.45
27	.49	.26	.20	.23	.26	.17	.15	.13	.49	.40	.54	.45
28	.44	.26	.20	.20	.26	.17	.15	.13	.49	.40	.54	.40
29	.44	.26	.20	.17	.26	.17	.15	.13	.40	.40	.40	.36
30	.40	.26	.20	.17	.23	.17	.17	-	.40	3.25	.40	.32
31	.40	.29	-	.17	-	.17	.17	-	.36	-	.36	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	0.59	0.26	0.348	0.538	10.8	33
August	.46	.26	.315	.487	9.77	30
September	.88	.20	.304	.470	9.12	28
October	2.15	.17	.334	.517	10.4	32
November	.75	.17	.299	.463	8.96	27
December	.32	.17	.211	.326	6.53	20
Calendar year 1935	46	.17	.958	1.48	350	1,070
January	19.3	.15	.806	1.25	25.0	77
February	.29	.13	.160	.248	4.65	14
March	8.7	.26	.796	1.23	24.7	76
April	13.8	.36	1.98	3.06	59.5	183
May	20	.36	2.58	3.99	79.9	245
June	.45	.23	.306	.473	9.19	28
Fiscal year 1935-36	20	.13	.706	1.09	259	793

Honopou Stream below Haiku Ditch, near Huelo

Location.- Water-stage recorder, lat. 20°55'05", 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 1936. Records at same site obtained by East Maui Irrigation Co. November 1926 to June 1932.

Extremes.- Maximum discharge during year, 270 million gallons a day (418 second-feet) Jan. 17 (gage height, 3.25 feet), from rating curve extended above 200 million gallons a day; minimum, 0.04 million gallons a day (0.06 second-foot) Jan. 18.

1932-36: Maximum discharge, 345 million gallons a day (534 second-feet) Dec. 31, 1932 (gage height, 3.43 feet), from rating curve extended above 50 million gallons a day by standard Hofmann weir curve to 200 million gallons a day; minimum, 0.02 million gallons a day (0.03 second-foot) Nov. 27, 1933.

Remarks.- Records good for ordinary stages and poor for high stages. Wailoa, New Hamakua, and Haiku Ditches divert most of flow above this station. Water used for irrigation in central Maui.

Rating table, fiscal year 1935-36 (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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.42	0.75	0.85	0.56	0.62	0.56	0.52	0.56	1.30	0.82	53	0.82
2	.42	.62	.62	.56	.56	.56	.52	.52	1.55	1.21	29.5	.82
3	.42	.62	.62	.56	.52	.56	.52	.75	1.30	.75	7.6	.82
4	.46	.62	.62	9.8	.68	.56	.52	1.48	1.75	1.61	9.8	.90
5	.62	.52	2.8	.62	.62	.56	.52	.20	2.15	.75	1.47	1.04
6	.46	.52	16.3	.69	.56	.56	.52	.56	3.0	34.5	17.2	.90
7	.46	.52	2.9	.42	.56	.56	.52	.56	.97	25	24	.90
8	.42	.56	.69	.42	.52	.56	.52	.52	1.78	8.7	32.5	.90
9	.46	.56	.62	.42	.52	.56	.52	.62	8.9	14.2	25	.90
10	.46	.56	.62	.42	.52	.56	.52	.69	1.05	.19	26	.90
11	.46	.56	.62	.42	.52	.56	.52	.62	.94	.28	8.2	.90
12	.46	.56	3.4	.42	.56	.56	.52	.62	17.8	.97	1.12	.90
13	.46	.56	.52	.52	.52	.62	.52	.62	2.6	3.3	.62	.90
14	.46	.56	.69	.56	.62	.62	.52	.62	.90	14.8	7.6	.82
15	.42	.56	.62	.56	.46	.62	.96	.62	.75	1.38	12.9	.82
16	.46	.62	.56	.52	.46	.56	7.1	.69	.83	2.9	32	.82
17	.52	.62	.56	3.8	3.45	.52	21.5	.69	16.1	22	36	1.04
18	.56	.62	.56	9.4	9.3	.52	.35	.69	14.2	23	43	.82
19	.56	.52	.56	.56	8.2	.52	.56	.82	25	1.59	21.5	.82
20	.56	.52	.56	.52	12.5	.56	.56	.90	10.0	.90	23	.75
21	.56	.56	.56	.56	.22	.56	.56	.92	1.04	.75	17.4	2.5
22	.52	.90	.56	.56	.50	.56	.56	.56	1.04	.75	7.1	1.54
23	.52	.75	.52	.56	.56	.71	.56	.82	.90	.75	6.8	1.04
24	.56	.69	.52	.56	.56	.56	.56	.75	9.7	.75	.97	.82
25	29	.62	.52	.62	.56	.56	.56	.75	.90	.75	1.54	1.26
26	6.7	.62	.56	.56	.56	.56	.56	.75	2.5	.69	.74	9.4
27	.42	.62	.56	.56	.62	.56	.52	.75	.82	.62	.52	10.6
28	.56	.75	.56	.56	.62	.56	.52	.82	1.04	.69	.52	4.5
29	.62	.75	.62	.56	.62	.56	.56	.90	.82	.69	.62	1.12
30	.62	.75	.56	.56	.62	.52	.56	-	.75	26.5	.82	.97
31	.62	3.25	-	.56	-	.52	.56	-	.75	-	.82	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	29	0.42	1.62	2.51	50.2	154
August	3.25	.52	.704	1.09	21.8	67
September	16.3	.52	1.36	2.10	40.8	125
October	9.8	.42	1.22	1.89	38.0	117
November	12.5	.22	1.59	2.46	47.7	146
December	.71	.52	.564	.873	17.5	54
Calendar year 1935	87	.10	3.06	4.73	1,120	3,420
January	21.5	.35	1.43	2.21	44.4	136
February	1.48	.20	.702	1.09	20.4	63
March	25	.75	4.29	6.64	133	409
April	34.5	.19	6.39	9.89	192	589
May	53	.52	14.5	22.4	450	1,380
June	10.6	.75	1.71	2.65	51.2	157
Fiscal year 1935-36	53	.19	3.02	4.67	1,110	3,400

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Wailoa Ditch at Honopou, near Huelo

Location.- Water-stage recorder, lat. 20°53'20", long. 156°15'05", 100 feet below intake from Honopou Stream, half a mile west of Lupi, and 2½ miles west of Kailua.

Records available.- November 1922 to June 1936.

Average discharge.- 13 years (1923-36), 110 million gallons a day (170 second-feet).

Extremes.- Maximum discharge recorded during year, 170 million gallons a day (263 second-feet) June 26 (gage height, 5.60 feet); minimum recorded, 24 million gallons a day (37 second-feet) Feb. 19.

1922-36: 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 excellent except those for July 25 to Aug. 8, Aug. 15, 16, Sept. 23, Oct. 27 to Nov. 5, Mar. 4-12, Mar. 25 to Apr. 13, Apr. 17-23, June 1-8, which were computed from readings of East Maui Ditch Co.'s staff gage 1 mile downstream and are fair. Wailoa Ditch receives the water from Koolau Ditch at Alo Stream and from all streams from the Alo west to the Halehaku at elevation of about 1,200 feet. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	138	155	130	64	110	83	35	55	125	130	170	140
2	114	145	130	61	52	72	35	82	162	165	166	155
3	125	140	110	88	45	72	33.5	139	150	130	166	130
4	106	120	88	150	100	64	33.5	150	160	165	166	150
5	150	100	162	142	90	57	41	70	140	135	166	150
6	158	90	166	134	108	54	57	44	160	150	170	160
7	130	88	158	110	72	54	47	41	150	170	170	110
8	146	110	134	75	57	50	41	35	155	170	170	125
9	150	110	130	68	54	54	39.5	33.5	160	170	166	106
10	138	130	126	61	47	57	54	32	155	165	166	94
11	126	102	138	75	44	54	36.5	30.5	160	165	166	87
12	124	137	162	68	47	47	32	30.5	165	150	166	133
13	122	134	142	68	41	63	32	33.5	166	150	166	123
14	94	138	158	61	81	122	38	29	162	170	166	94
15	87	100	122	54	106	103	158	27.5	138	166	166	118
16	87	100	102	50	77	57	140	26	150	166	166	128
17	94	83	106	79	146	50	166	26	170	170	166	148
18	99	83	90	150	166	47	115	25	170	170	166	114
19	158	79	83	94	162	51	75	49	166	165	166	98
20	102	79	79	83	166	130	61	78	166	165	170	100
21	79	124	79	72	158	83	54	137	166	160	166	166
22	75	150	75	64	138	54	50	57	166	150	166	158
23	90	158	64	57	110	87	47	72	166	135	166	138
24	150	146	78	54	130	52	44	71	166	136	166	150
25	170	102	69	50	94	47	41	64	165	118	166	166
26	160	94	61	47	79	44	38	41	165	118	166	170
27	160	79	57	45	79	41	38	35	165	102	166	170
28	155	72	54	42	101	41	36.5	32	160	94	162	166
29	160	72	50	42	125	38	35	33.5	160	101	162	166
30	145	75	71	42	90	38	35	-	120	170	154	162
31	140	144	-	80	-	36.5	38	-	110	-	162	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	170	75	127	196	3,930	12,070
August	158	72	111	172	3,440	10,550
September	166	50	106	164	3,170	9,740
October	150	42	75.2	116	2,330	7,150
November	166	41	95.8	148	2,880	8,820
December	130	36.5	61.4	95.0	1,900	5,840
Calendar year 1935	170	36.5	108	167	39,290	120,600
January	166	32	55.7	86.2	1,730	5,300
February	150	25	54.4	84.2	1,580	4,850
March	170	110	156	241	4,840	14,850
April	170	94	149	231	4,470	13,720
May	170	154	166	257	5,140	15,780
June	170	87	136	210	4,080	12,510
Fiscal year 1935-36	170	25	108	167	39,490	121,200

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 1936. January 1918 to May 1921, at site 300 feet upstream.

Average discharge.- 18 years (1918-36), 26.9 million gallons a day (41.6 second-feet).

Extremes.- Maximum discharge recorded during year, 104 million gallons a day (161 second-feet) Oct. 17 (gage height, 5.08 feet); minimum recorded, 0.28 million gallons a day (0.43 second-foot) Feb. 18, 19.

1918-36: 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 July 1-3, Aug. 31 to Sept. 3, Sept. 14, 15, Nov. 6 to Feb. 6, June 4-8, and those estimated, which are poor. Ditch diverts water from streams between the Waikamoi and the Halehaku above Center and Lowrie Ditches. Flow regulated by gates and spillways. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2.3	62	20	0.86	16.3	1.2	0.9	0.6	41	20.5	102	1.85
2	2.2	4.8	16	.55	.66	1.1	.9	.5	73	68	101	1.58
3	2.2	3.0	2.5	15.7	.55	1.0	.9	35	49	2.6	93	1.52
4	2.1	1.45	1.62	60	17.3	1.0	1.0	50	85	70	94	20
5	22	1.25	58	16.3	2.3	.9	.9	.6	76	3.1	84	2.5
6	39	1.18	91	30.5	2.5	.9	1.0	.5	83	75	98	45
7	1.85	1.18	51	5.3	1.4	.8	.9	*.47	25	101	99	1.7
8	5.2	10.5	1.18	1.02	1.2	.8	.8	.47	47	72	101	1.3
9	18.4	1.25	1.38	1.31	1.1	.8	.7	.47	68	71	99	1.08
10	7.3	2.45	3.9	.92	1.0	.7	.7	.43	38	7.5	99	.97
11	6.4	1.58	13.2	.82	.9	.6	.6	.39	37	20.5	95	.92
12	8.1	28.5	55	.82	.8	.6	.6	.43	82	3.15	90	6.4
13	7.2	17.2	1.02	.82	.7	.5	.5	.37	85	35	59	13.8
14	1.31	20.5	*25.5	.82	25	1.5	.5	.36	20	91	95	1.02
15	1.18	1.02	*1.31	.66	2.0	1.2	56	.36	1.72	65	95	.92
16	1.13	1.45	1.08	.62	1.0	1.0	45	.32	29.5	85	99	1.16
17	1.08	1.52	1.25	20	56	.9	96	.32	99	98	101	40
18	1.08	.87	1.02	41	92	.8	1.2	.32	95	99	102	1.02
19	28.5	.87	.97	1.38	94	.9	1.1	8.8	95	90	99	.87
20	2.1	.87	.92	.97	94	1.7	1.0	8.0	88	48	101	.82
21	.97	33	.87	.87	58	1.0	1.0	47	58	11.4	98	76
22	.87	49	.82	.82	70	.8	.9	.82	54	2.4	95	37.5
23	.92	51	.71	.76	2.0	12	.9	3.25	31.5	3.45	95	5.7
24	24.5	17.0	.62	.71	2.5	1.5	.8	.70	72	2.5	91	38.5
25	95	1.13	.62	.62	1.5	1.3	.8	.51	41	1.72	89	65
26	74	.97	.62	.62	1.2	1.2	.7	.43	84	1.65	81	95
27	51	.66	.58	.58	1.1	1.1	.7	.39	48	1.52	76	93
28	6.8	.71	.58	.55	1.0	1.1	.6	.39	35.5	1.31	35	89
29	18.0	.71	.51	.55	12	1.0	.6	.39	2.25	3.65	12.9	72
30	3.65	.71	1.57	.51	1.5	1.0	.5	-	1.93	100	2.75	12.9
31	19.6	35	-	8.2	-	.9	1.1	-	1.72	-	19.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	95	0.87	14.7	22.7	456	1,400
August	62	.66	11.4	17.6	353	1,080
September	91	.51	11.8	18.3	355	1,090
October	60	.51	7.01	10.8	217	666
November	94	.55	18.7	28.9	562	1,720
December	12	.5	1.35	2.09	41.8	128
Calendar year 1935	101	.45	19.4	30.0	7,090	21,760
January	96	.5	7.09	11.0	220	675
February	50	.32	5.61	8.68	163	499
March	99	1.72	53.1	82.2	1,650	5,050
April	101	1.31	41.8	64.7	1,250	3,850
May	102	2.75	83.9	130	2,600	7,980
June	95	.82	24.3	37.6	729	2,240
Fiscal year 1935-36	102	.32	23.5	36.4	8,600	26,380

*Partly estimated.

Lowrie Ditch at Honopou Gulch, near Huelo

Location.- Water-stage recorder, lat. 20°54'55", long. 156°15'05", a quarter of a mile below siphon across Honopou Stream and 1½ miles northwest of Kailua.

Records available.- February 1930 to June 1936. January 1910 to March 1927, at site 1½ miles downstream, records furnished by East Maui Irrigation Co.

Average discharge.- 22 years (1910-26, 1930-36), 34.5 million gallons a day (53.4 second-feet).

Extremes.- Maximum discharge during year, 69 million gallons a day (107 second-feet) Mar. 19 (gage height, 4.70 feet); minimum, 0.1 million gallons a day (0.2 second-foot) Nov. 27.

1930-36: Maximum discharge, 86 million gallons a day (133 second-feet) Nov. 18, 1930 (gage height, 5.45 feet); no flow at times.

Remarks.- Records excellent except those for July 24 to Aug. 2, Jan. 14-27, Apr. 6-16, Apr. 21 to May 4, June 9-13, which are poor. Ditch diverts water at elevation of 500 feet from all streams between the Kailua and the Halehaku. Flow regulated by gates. Water used for irrigation in central Maui.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	13.2	35	21.5	5.8	36	7.5	4.5	6.1	27	13.2	56	12.0
2	11.0	11	15.0	6.3	12.1	7.0	4.4	5.2	44	49	60	10.5
3	10.4	12.5	8.8	12.8	5.6	7.1	4.2	23.5	24.5	14.8	58	10.5
4	10.4	11.0	6.5	51	19.6	6.5	4.2	33	47	49.0	54	21.5
5	31.5	10.4	37.5	35	12.8	6.1	4.5	12.5	35	14.0	53	22
6	25	9.7	57	24.5	11.0	6.0	5.5	5.6	54	50	56	16.5
7	11.0	9.7	48	18.8	8.0	6.0	4.9	4.4	27	60	59	11.0
8	11.0	11.0	27.5	8.3	6.9	5.8	4.5	4.1	28	60	59	9.8
9	13.8	10.4	14.0	7.6	6.5	6.3	4.1	4.0	51	56	59	9
10	12.5	18.2	13.2	7.5	6.1	7.5	4.4	3.4	36.5	50	59	8
11	10.4	11.8	13.1	7.4	5.7	6.3	3.8	2.5	24.5	40	59	8
12	11.8	10.9	48	7.2	6.0	5.7	3.6	2.5	57	35	56	13
13	14.7	11.0	21	7.0	5.5	7.5	3.9	2.7	57	45	48	10
14	9.7	15.9	12.5	6.9	18.4	11.0	4.5	2.4	32.5	50	53	8.6
15	9.7	8.0	10.4	6.3	11.8	8.1	35	2.3	18.0	35	56	7.9
16	9.7	10.5	9.6	5.8	8.0	6.1	25	2.2	16.1	50	59	8.6
17	9.7	7.5	9.7	12.4	38.0	5.7	52	2.1	57	60	59	24.5
18	9.7	7.0	8.8	45	57	5.5	20	2.0	57	60	56	8.6
19	13.3	6.9	8.4	23	57	7.4	15	3.5	59	57	53	7.4
20	9.7	6.6	8.0	7.6	57	7.9	11	11.7	57	46	53	7.4
21	8.4	14.5	7.6	7.4	43	6.0	9	35	40	20	53	41
22	8.0	45	7.4	6.7	23.5	5.5	8	22	37	18	56	37
23	9.7	40	7.0	6.6	10.4	23.5	8	3.6	31.5	19	56	28.5
24	35	13.9	6.9	7.0	12.5	6.5	7	3.7	47	17	56	22.5
25	54	8.3	6.5	6.0	9.6	5.7	6	3.6	29	15	53	30
26	25	7.5	6.3	5.7	8.8	5.4	6	2.7	54	14	56	53
27	20	6.9	6.0	5.5	8.3	5.4	6	2.5	29.5	13	47	53
28	13	1.4	5.8	5.4	9.0	4.9	5.5	2.2	32	12	26	53
29	17	1.2	5.5	5.1	10.4	4.8	5.1	2.6	19.7	20	14.5	48
30	10	1.3	5.6	5.0	8.1	4.7	5.2	-	35	50	12.8	26
31	13	8.7	-	9.7	-	4.6	5.6	-	16.1	-	14.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	54	8.0	15.2	23.5	471	1,450
August	45	1.2	12.4	19.2	384	1,180
September	57	5.5	15.4	23.8	463	1,420
October	51	5.0	12.1	18.7	376	1,150
November	57	5.5	17.8	27.5	533	1,630
December	23.5	4.6	6.90	10.7	214	657
Calendar year 1935	61	.2	19.2	29.7	7,000	21,490
January	52	3.6	9.37	14.5	290	891
February	35	2.0	7.37	11.4	214	656
March	59	16.1	38.1	58.9	1,180	3,620
April	60	12	36.4	56.3	1,090	3,350
May	60	12.8	50.6	78.3	1,570	4,820
June	53	7.4	20.9	32.3	627	1,920
Fiscal year 1935-36	60	1.2	20.3	31.4	7,410	22,740

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, 1¾ miles northwest of Kailua.

Records available.- January 1910 to December 1928, February 1930 to June 1936. January 1910 to October 1914, at Peahi weir on old Haiku Ditch. October 1914 to December 1928, at Manawai Gulch, 2 miles downstream. January 1910 to December 1928, records furnished by East Maui Irrigation Co.

Average discharge.- 24 years (1910-1928, 1930-36) 27.4 million gallons a day (42.4 second-feet).

Extremes.- Maximum discharge during year, 168 million gallons a day (260 second-feet) May 1 (gage height, 5.71 feet); minimum, 0.18 million gallons a day (0.28 second-foot) Feb. 8-10.

1910-28, 1930-36: Maximum discharge, that of May 1, 1936; no flow occasionally.

Remarks.- Records good except those for July 25 to Aug. 7, Oct. 12-31, Dec. 11-13, Feb. 19-27, Apr. 12-27, May 3, 11, 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.50	10	22.5	0.60	1.26	0.50	0.25	0.25	9.0	4.9	110	2.0
2	1.40	2.5	1.60	.60	.45	.45	.24	.25	30.5	25.5	110	1.90
3	1.60	2.0	1.00	5.7	.35	.45	.24	5.1	12.5	2.0	90	1.60
4	1.70	1.7	.85	46	5.6	.45	.24	42	39.5	36	66	3.3
5	11.9	1.4	26	1.80	.80	.45	.24	.88	42	1.50	31.5	3.3
6	1.60	1.2	80	5.4	.50	.42	.30	.38	65	82	82	1.40
7	1.40	1.0	34.5	1.42	.45	.42	.28	.25	1.77	110	91	1.85
8	1.50	1.20	1.50	.90	.42	.45	.25	.21	12.1	71	91	1.96
9	1.90	1.00	1.40	.85	.38	.45	.24	.18	53	68	91	.90
10	2.0	1.70	1.30	.85	.32	.45	.24	.48	13.9	11.4	91	.90
11	1.90	1.40	1.10	.80	.42	.4	.23	1.00	5.3	6.6	70	.85
12	2.1	1.40	37.5	.7	.40	.4	.24	.95	81	2.5	47	.85
13	2.35	1.60	1.40	.7	.38	.6	.24	1.00	57	20	6.6	.80
14	2.1	1.60	1.00	.6	4.6	.70	.24	1.00	18.7	30	59	.75
15	1.90	1.40	.95	.5	.90	.48	21.5	1.10	.80	4.0	80	.70
16	1.80	1.50	.85	.5	8.0	.42	32	1.10	10.2	20	110	.70
17	1.70	1.20	.95	2.0	61	.35	55	1.10	91	30	110	9.8
18	1.70	.95	.85	15	91	.30	1.40	1.00	76	40	110	.65
19	1.70	.90	.85	3.0	69	.45	.65	1.0	93	8	91	.55
20	1.20	.85	.80	1.5	42	.45	.55	1.0	55	6	110	.50
21	1.10	.98	.80	1.0	1.45	.38	.48	20	4.5	5	91	56
22	.90	14.4	.80	.9	.80	.35	.45	2.5	3.9	4.0	67	18.1
23	.90	3.3	.80	.8	.75	9.1	.42	1.2	8.8	4.0	71	3.4
24	13.5	1.30	.75	.7	.65	.48	.35	1.0	34.5	3.5	34.5	1.20
25	90	.90	.75	.6	.60	.38	.30	.9	12.1	3.5	30	27
26	8	.75	.75	.6	2.1	.35	.30	.5	43	3.0	24	68
27	3.0	.75	.70	.5	.88	.32	.30	.4	6.5	3.0	6.9	91
28	2.0	6.2	.70	.5	.75	.32	.28	.45	7.7	2.85	3.75	57
29	2.0	6.6	.65	.5	.60	.30	.25	.65	1.50	2.7	2.5	8.1
30	1.9	6.6	.60	.5	.55	.30	.30	-	1.40	92	2.0	1.70
31	1.9	35	-	13	-	.28	.30	-	1.76	-	2.0	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	90	0.90	5.49	8.49	170	522
August	35	.75	3.65	5.65	113	348
September	80	.60	7.47	11.6	224	688
October	46	.5	3.52	5.45	109	335
November	91	.32	9.91	15.3	297	913
December	9.1	.28	.697	1.08	21.6	66
Calendar year 1935	135	.28	12.9	20.0	4,710	14,460
January	55	.23	3.82	5.91	118	363
February	42	.18	3.03	4.69	87.8	270
March	93	.80	28.8	44.6	893	2,740
April	110	1.50	23.4	36.2	703	2,160
May	110	2.0	63.9	98.9	1,980	6,080
June	91	.50	12.2	18.9	367	1,130
Fiscal year 1935-36	110	.18	13.9	21.5	5,080	15,220

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.- Not determined (large part of flow comes from 3 tunnels).

Records available.- September 1930 to June 1936.

Extremes.- Maximum discharge during year, 39 million gallons a day (60 second-feet) July 25 (gage height, 3.73 feet), from rating curve based on weir formulas; minimum, 0.10 million gallons a day (0.16 second-foot) Feb. 26 to Mar. 1.

1930-36: Maximum discharge, 149 million gallons a day (231 second-feet) July 21, 1931 (gage height, 4.70 feet), from rating curve based on weir formulas; no flow at times.

Remarks.- Records excellent for ordinary stages; those for July 1-4, Mar. 21 to Apr. 4, June 9-30 (computed on basis of records for Wailuku River at Pukamaui and above Hilo Boarding School Ditch and for Kapehu Stream), and those for high stages, which are poor. No diversions. Water is used for fluming sugarcane.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

0.1	0.10	1.2	3.15	2.4	8.2
.2	.21	1.6	4.9	2.5	9.5
.4	.52	2.0	6.8	2.6	11.2
.6	.97	2.1	6.8	2.8	15.0
.8	1.58	2.2	7.2	3.0	19.0
				3.2	23.5

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.2	13.1	2.6	4.6	3.15	5.4	1.82	0.66	0.13	6.0	4.1	8.2
2	1.2	12.2	2.45	4.2	2.95	12.1	1.65	.66	.24	9.0	7.0	7.7
3	1.1	10.4	2.2	4.0	2.75	12.2	1.48	.80	.16	15	7.2	7.7
4	1.1	9.5	2.15	3.8	2.6	12.2	1.48	.64	1.64	14	9.5	7.2
5	1.19	8.2	4.9	4.0	2.45	14.0	1.48	.56	2.05	*13.1	8.2	7.5
6	2.35	7.2	9.1	3.8	2.2	15.0	1.14	.49	3.55	12.2	7.7	7.7
7	2.1	6.8	8.7	3.8	2.15	15.0	1.03	.44	1.75	13.1	7.7	7.7
8	2.5	6.8	7.7	3.55	1.96	14.0	.94	.37	4.0	13.1	8.2	7.2
9	2.5	5.9	6.8	3.55	1.82	13.1	.84	.31	4.0	18.0	8.2	6.4
10	2.4	6.3	8.6	3.55	1.65	12.2	.72	.27	4.8	14.0	8.2	5.4
11	2.6	6.6	10.2	3.35	1.55	11.2	.66	.22	4.2	13.1	8.2	4.5
12	2.55	6.3	11.2	4.2	2.55	11.2	.60	.20	4.4	12.2	8.2	4.0
13	2.75	5.9	10.4	4.0	1.68	10.4	.60	.20	4.9	11.2	7.7	4.0
14	2.7	5.9	11.2	3.8	1.55	9.5	.54	.19	5.2	11.2	7.7	3.5
15	2.7	5.2	11.2	3.8	6.4	8.2	2.15	.16	4.9	9.5	7.2	3.4
16	2.7	5.9	10.4	3.8	5.5	7.7	.97	.14	4.6	8.7	8.2	3.3
17	2.75	5.2	9.5	3.8	6.5	6.8	.85	.13	7.2	8.2	7.7	3.2
18	2.7	4.9	8.7	3.55	6.5	6.3	1.24	.13	13.1	9.5	7.7	3.0
19	3.15	4.6	7.7	5.3	9.3	6.1	1.22	.12	13.1	8.2	9.5	3.3
20	3.5	4.6	7.2	4.6	8.7	5.4	1.11	.12	*14.0	7.7	11.2	3.0
21	2.95	4.4	6.8	4.4	8.2	4.9	1.00	.12	12	7.7	12.2	2.7
22	3.15	4.0	7.9	4.2	7.7	4.4	.97	.12	10	7.2	13.1	2.5
23	4.9	3.8	6.3	3.8	7.7	4.0	.90	.11	9.0	6.8	15.0	2.4
24	9.3	3.8	5.6	4.0	7.2	3.8	.82	.11	8.5	6.3	16.0	2.3
25	22	3.55	5.2	4.0	7.2	3.55	.77	.11	9.0	5.9	17.0	2.2
26	18.0	3.55	4.6	4.0	6.8	3.15	.72	.11	8.0	5.4	16.0	2.2
27	20	3.15	4.4	4.0	6.8	2.95	.74	.10	7.5	4.9	14.0	2.5
28	21	2.95	4.0	4.0	6.3	2.65	.66	.10	7.0	4.4	12.2	8.2
29	19.0	2.75	4.0	3.55	5.9	2.45	.62	.10	6.5	4.2	11.2	7.5
30	17.0	2.75	6.4	3.35	5.6	2.2	.58	-	6.0	3.8	9.5	7.0
31	15.0	2.5	-	3.35	-	2.0	.60	-	5.6	-	8.7	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	22	1.1	6.39	9.89	198	608
August	13.1	2.5	5.76	8.91	179	548
September	11.2	2.15	6.94	10.7	208	639
October	5.3	3.35	3.93	6.08	122	373
November	9.3	1.55	4.78	7.40	143	440
December	15.0	2.0	7.87	12.2	244	749
Calendar year 1935	36	.64	7.47	11.6	2,730	8,370
January	2.15	.54	.997	1.54	30.9	95
February	.80	.10	.269	.416	7.79	24
March	14.0	.13	6.03	9.33	187	574
April	18.0	3.8	9.45	14.6	284	870
May	17.0	4.1	9.81	15.2	304	934
June	8.2	2.2	4.91	7.60	147	452
Fiscal year 1935-36	22	.10	5.61	8.68	2,050	6,310

*Partly estimated.

Wailuku River at Pukamauí, near Hilo

Location.- Water-stage recorder, lat. 19°42'45", long. 155°09'40", three-quarters of a mile above Hilo Boarding School Ditch intake and 4½ miles west of Hilo.
Drainage area.- 97.2 square miles.
Records available.- April 1923 to June 1928, July 1929 to June 1936.
Extremes.- Maximum discharge during year, 3,770 million gallons a day (5,830 second-feet) July 25 (gage height, 10.20 feet), from rating curve extended above 200 million gallons a day; no flow Feb. 21-23, Feb. 29 to Mar. 2.
1923-28, 1929-36: Maximum discharge, 17,800 million gallons a day (27,500 second-feet) July 21, 1931 (gage height, 14.95 feet), from rating curve extended above 50 million gallons a day; no flow when all water was diverted.
Remarks.- Records good except those for Oct. 5-25, Jan. 6, 7, May 15-23 (computed on basis of records for Wailuku River above Hilo Boarding School Ditch and for Kapehu and Waiakea Streams), and those for high stages, which are poor. Hilo Waterworks diverts water for domestic use from pool at control. Flow regulated by this diversion.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

3.0	2.7	5.0	213
3.2	6.6	5.5	346
3.4	12.2	6.0	520
3.6	20.5	6.5	735
3.8	31.5	7.0	990
4.0	49	7.5	1,290
4.5	114	8.0	1,640

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.9	26.5	8.4	53	8.7	39.5	3.1	3.1	0	14.4	5.8	26.5
2	4.0	26.5	9.5	20	8.2	237	2.7	2.9	2.1	61	31.5	23.5
3	3.8	28.5	8.9	14.8	7.4	335	2.7	4.9	4.1	492	24	22.5
4	3.8	21.5	8.4	14.0	6.6	160	4.1	3.8	8.6	203	37.5	21
5	4.5	16.8	31.5	16	6.2	62	*7.9	2.9	16.8	56	26	26
6	9.4	14.8	482	22	5.8	35.5	6.0	2.6	23	31.5	16.8	26
7	15.9	14.0	14.5	13	5.6	25.5	4.9	2.7	15.2	39.5	24.5	20.5
8	14.4	19.1	40	10	6.4	80	*4.9	2.9	14.0	87	46	17.7
9	14.0	15.5	23	9	5.6	84	5.8	2.7	55	201	26.5	15.9
10	9.2	29	54	8	4.5	59	4.1	2.4	123	66	22	14.8
11	8.4	57	99	15	38	33	3.1	2.1	35.5	38.5	16.8	14.0
12	9.2	21	160	72	56	38	2.4	2.0	33	26	15.2	12.9
13	9.8	16.4	61	38	17.8	23.5	2.7	1.8	32.5	20.5	15.2	13.3
14	7.9	18.2	38	16	9.5	18.2	2.9	1.8	27.5	22	16.4	11.9
15	7.4	18.2	28	12	121	15.2	41	1.5	20	16.8	15	11.3
16	6.4	19.1	24.5	9.5	192	14.8	18.6	1.4	18.6	15.2	25	12.6
17	6.9	15.2	20	8.5	114	14.4	31	.8	78	17.7	30	15.5
18	8.4	13.3	17.3	8	70	13.3	26	.5	316	32.5	38	11.6
19	11.8	12.9	15.2	9	106	*11.3	14.4	.4	165	19.6	53	18.6
20	17.6	12.2	13.3	32	99	9.2	9.5	.5	70	15.5	105	18.7
21	9.8	11.6	12.9	18	64	9.2	8.2	0	80	14.8	82	12.9
22	7.9	11.3	12.6	11	33	8.7	7.4	0	84	13.7	78	11.3
23	31.5	11.0	11.9	10	23	7.6	7.1	.4	35.5	12.6	100	11.3
24	75	12.2	11.3	9	19.1	7.1	5.6	3.8	28.5	11.9	68	11.6
25	1,330	12.2	10.4	11	18.7	6.6	4.7	2.2	40	9.5	54	11.0
26	192	11.3	9.2	*9.2	25	6.2	4.9	.8	31.5	7.9	39.5	10.1
27	72	10.1	8.9	9.8	62	5.6	6.2	.4	30	7.1	27.5	10.7
28	46	9.2	8.4	11.0	30.5	5.1	5.1	0	22	6.6	23.5	52
29	61	8.7	35	11.3	23.5	4.7	4.9	0	17.7	6.2	21.5	22.5
30	50	8.4	188	9.5	18.2	4.3	4.5	-	15.5	5.1	18.7	26
31	31	7.9	-	8.7	-	4.0	3.8	-	14.0	-	34	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	1,330	3.8	67.2	104	2,080	6,400
August	57	7.9	17.1	26.5	530	1,630
September	482	8.4	48.8	75.5	1,470	4,500
October	72	8	16.7	25.8	518	1,590
November	192	4.5	40.2	62.2	1,210	3,700
December	335	4.0	44.4	68.7	1,380	4,230
Calendar year 1935	1,410	3.8	62.0	95.9	22,630	69,420
January	41	2.4	8.39	13.0	260	799
February	4.9	0	1.77	2.74	51.3	157
March	316	0	47.0	72.7	1,460	4,470
April	492	5.1	51.7	80.0	1,550	4,760
May	105	5.8	36.7	56.8	1,140	3,490
June	52	10.1	17.8	27.5	534	1,640
Fiscal year 1935-36	1,330	0	33.3	51.5	12,180	37,370

*Partly estimated.

Wailuku River above Hilo Boarding School Ditch intake, near Hilo

Location.- Water-stage recorder, lat. 19°42'55", long. 155°09'10", 1,000 feet above Hilo Boarding School Ditch intake, three-quarters of a mile west of Reservoir 1, and 4 miles west of Hilo.
Drainage area.- 124.5 square miles.
Records available.- July 1928 to June 1936.
Extremes.- Maximum discharge during year, 5,450 million gallons a day (8,430 second-feet) July 25 (gage height, 15.44 feet), from rating curve extended above 3,300 million gallons a day; minimum, 1.8 million gallons a day (2.8 second-feet) Feb. 29.
1928-36: Maximum discharge, estimated as 21,000 million gallons a day (32,500 second-feet) July 21, 1931, from rating curve extended above 400 million gallons a day; minimum, 1.1 million gallons a day (1.7 second-feet) Jan. 9, 1934.
Remarks.- Records good for ordinary stages; those for Sept. 3-9, Jan. 1, 2, Mar. 9, 10, Apr. 9 to May 2, computed on basis of records for Wailuku River and Kapehu and Waiakea Streams, and those for high stages are poor. Flow regulated by head gates. Hilo Waterworks diverts about 1 million gallons a day for domestic use from pool at Pukamauí, three-quarters of a mile upstream and water passing station is used for power by Hilo Electric Light Co.

Rating table, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

1.4	1.5	5.0	233
1.7	4.2	6.0	370
2.0	10.0	8.0	860
3.0	53	10.0	1,640
4.0	130	12.0	2,720

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	14.1	88	16.0	129	19.8	116	11.4	9.5	2.7	39	12	84
2	11.1	80	16.7	50	16.7	843	10.0	8.8	5.2	189	105	73
3	9.8	88	15	34	13.8	752	*9.0	13.8	9.0	952	80	66
4	9.5	62	14	31	12.8	482	12.5	11.1	19.3	530	124	62
5	13.1	47	110	37.5	12.2	233	41	8.5	44	199	100	80
6	34	39	1,150	59	11.4	169	19.4	7.5	88	130	70	76
7	56	34	48	42	10.6	112	*14.7	7.0	50	149	100	59
8	56	53	140	29	12.5	172	13.8	6.6	56	159	169	47
9	56	39	80	24.5	11.1	258	12.8	5.9	180	600	106	39
10	31	61	151	21	9.2	245	10.3	5.4	490	220	88	34
11	26.5	169	284	50	118	149	8.0	5.0	44	130	62	29.5
12	34	62	500	232	120	169	7.1	4.8	47	90	53	27
13	39	44	210	130	39	108	7.3	4.5	56	70	44	26
14	25	66	149	53	22.5	84	7.1	4.5	70	74	53	24
15	21	59	100	36.5	*129	66	213	4.0	56	60	50	22
16	17.7	62	84	28	*405	56	75	3.6	62	55	88	22.5
17	16.3	44	62	23	316	47	119	3.0	264	60	104	31
18	22.5	34	53	22	222	42	97	2.6	1,010	115	130	22
19	39	31.5	42	26	385	36.5	50	2.4	553	58	179	42
20	53	26.5	34	111	348	31.5	31.5	2.5	258	50	378	42
21	27	23.5	30.5	59	233	28.5	25	2.2	287	48	271	24
22	21	22.5	28	34	139	25.5	21	2.1	258	43	258	19.8
23	115	21	26	25.5	88	22.5	18.4	3.4	139	40	340	19.4
24	280	27.5	23.5	22.5	76	20	15.4	13.7	108	38	233	20
25	2,330	29	21	25	70	18.4	13.4	6.1	159	28	189	19.1
26	575	25	18.7	21	84	16.3	13.4	3.5	130	20	139	17.4
27	258	19.4	19.4	21	149	15.0	17.7	2.5	100	16	100	21
28	179	17.7	17.0	28.5	92	13.8	14.4	2.1	76	14	76	161
29	199	16.0	167	31.5	70	12.8	13.4	2.2	56	12	66	62
30	169	15.7	519	21	62	12.2	13.1	-	47	11	53	78
31	112	13.4	-	19.8	-	*11.7	11.1	-	39	-	106	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	2,330	9.5	156	241	4,850	14,880
August	169	13.4	45.8	70.9	1,420	4,360
September	1,150	14	138	214	4,130	12,670
October	232	19.8	47.7	73.8	1,480	4,530
November	405	9.2	110	170	3,300	10,120
December	843	11.7	141	218	4,370	13,400
Calendar year 1935	2,330	9.2	149	231	54,280	166,500
January	213	7.1	30.5	47.2	946	2,900
February	13.8	2.1	5.48	e.48	159	487
March	1,010	2.7	154	238	4,760	14,620
April	952	11	141	218	4,230	12,980
May	378	12	127	196	3,930	12,050
June	161	17.4	45.0	69.6	1,350	4,140
Fiscal year 1935-36	2,330	2.1	95.4	148	34,920	107,100

*Partly estimated.

Hilo Boarding School Ditch at intake, near Hilo

Location.- Water-stage recorder, lat. 19°43'00", long. 155°08'55", 200 feet below intake diversion dam on Wailuku River and 3¾ miles northwest of Hilo.

Records available.- October 1931 to June 1936.

Extremes.- Maximum gage height during year, 3.62 feet (discharge greater than 21 million gallons a day or 32 second-feet) Apr. 3; minimum discharge, 1.60 million gallons a day (2.48 second-feet) Feb. 29.

1931-36: Maximum discharge is beyond the measuring capacity of this station; no flow when water was shut out of ditch Nov. 23, 24, 1933.

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 Light Co.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.8	9.7	7.8	9.7	7.3	9.7	6.9	6.4	2.3	8.7	7.3	8.7
2	7.3	9.7	8.2	8.7	7.3	11.2	7.3	6.4	4.6	9.7	8.7	8.7
3	6.9	9.7	7.8	8.7	7.3	11.2	8.2	7.3	6.4	11.7+	8.7	8.2
4	6.9	9.2	7.8	8.7	6.9	10.7	9.2	6.9	7.8	10.7	8.7	8.2
5	7.8	9.2	8.7	8.7	7.8	10.2	9.7	6.9	9.7	9.7	8.7	8.7
6	8.2	8.7	12.9	9.2	8.7	9.7	8.7	6.9	10.2	9.7	8.7	8.7
7	9.2	8.7	10.7	8.7	8.2	9.7	8.2	6.4	9.7	9.7	8.7	8.7
8	9.2	9.2	10.2	8.2	9.2	9.7	7.8	5.8	9.7	9.7	9.2	8.2
9	9.2	8.7	9.7	8.2	8.2	10.2	7.3	5.3	10.2	10.7	8.7	8.2
10	8.7	9.2	9.7	7.8	7.8	10.2	6.9	4.7	10.7	10.2	8.7	7.8
11	8.7	10.2	10.7	8.2	8.2	9.7	6.4	4.2	10.2	9.7	8.7	7.8
12	8.7	9.2	11.2	10.2	9.7	9.7	6.0	3.95	10.2	9.2	8.7	7.8
13	8.7	8.7	10.2	9.7	8.7	9.2	6.4	3.75	9.7	9.2	8.2	7.8
14	8.7	9.2	10.2	8.7	8.2	9.2	6.0	3.65	9.7	9.2	8.2	7.3
15	8.2	9.2	9.7	9.7	10.7	9.2	9.2	3.15	9.2	8.7	8.2	7.3
16	8.2	9.2	9.7	8.2	11.2	8.7	9.2	2.85	9.2	8.7	8.7	7.3
17	7.8	8.7	9.2	8.2	10.7	8.7	9.2	2.45	10.2	8.7	9.2	7.8
18	8.2	8.7	9.2	7.8	10.7	8.7	9.7	2.1	11.8	9.2	9.2	7.3
19	8.7	8.7	8.7	8.2	11.2	8.7	8.7	1.99	10.7	8.7	9.2	7.8
20	9.2	8.7	8.7	9.2	11.2	8.2	8.7	1.99	10.2	8.7	9.7	8.2
21	8.7	8.2	8.7	8.7	10.7	8.2	8.2	1.87	10.2	8.7	9.7	7.8
22	8.2	8.2	8.2	8.2	10.2	8.2	8.2	1.66	10.2	8.2	9.7	7.3
23	9.7	8.2	8.2	8.2	9.7	8.2	8.2	2.6	9.7	8.2	9.7	7.8
24	10.2	8.2	8.2	7.8	9.7	7.8	7.8	7.3	9.2	8.2	9.7	8.2
25	16.4+	8.7	7.8	7.8	9.7	7.8	7.3	4.5	9.7	7.8	9.2	8.2
26	11.2	8.2	7.8	7.8	9.7	7.8	7.3	2.65	9.7	7.8	9.2	7.8
27	10.7	8.2	7.8	7.8	10.2	7.3	7.8	1.99	9.2	7.3	8.7	8.2
28	10.7	7.8	7.8	7.8	9.7	7.3	7.3	1.66	9.2	7.3	8.7	10.2
29	10.7	7.8	8.2	8.2	9.7	7.3	7.3	1.71	9.2	7.3	8.2	9.2
30	10.2	7.8	10.7	7.8	9.2	7.3	7.3	-	8.7	7.3	8.2	9.7
31	10.2	7.8	-	7.8	-	7.3	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	16.4+	6.9	9.14	14.1	283	669
August	10.2	7.8	8.76	13.6	272	834
September	12.9	7.8	9.15	14.2	274	842
October	10.2	7.8	8.44	13.1	262	803
November	11.2	6.9	9.26	14.3	278	852
December	11.2	7.3	8.94	13.8	277	850
Calendar year 1935	16.4+	6.4	8.99	13.9	3,280	10,070
January	9.7	6.0	7.85	12.1	243	747
February	7.3	1.66	4.10	6.34	119	365
March	11.8	2.3	9.23	14.3	286	878
April	11.7+	7.3	8.95	13.8	269	824
May	9.7	7.3	8.83	13.7	274	840
June	10.2	7.3	8.16	12.6	245	752
Fiscal year 1935-36	16.4+	1.66	8.42	13.0	3,080	9,460

Note.- Control was drowned by overflow from Wailuku River from 2:15 a.m. to 10:15 a.m. July 25, from 7:30 p.m. to 10:00 p.m. Apr. 3.

Kapehu Stream at Piihonua, near Hilo

Location.- Water-stage recorder, lat. 19°43'15", long. 155°08'30", a quarter of a mile above confluence with Wailuku River and 3 miles west of Hilo.
Drainage area.- 4.9 square miles.
Records available.- November 1928 to June 1936.
Extremes.- Maximum discharge during year, 719 million gallons a day (1,110 second-feet) July 25 (gage height, 6.04 feet), from rating curve extended above 160 million gallons a day; minimum, 1.4 million gallons a day (2.2 second-feet) Feb. 22, 26, 27.
1928-36: Maximum discharge, 3,640 million gallons a day (5,630 second-feet) Aug. 12, 1930 (gage height, 9.98 feet, former datum), from rating curve extended above 80 million gallons a day; minimum, 1.2 million gallons a day (1.9 second-feet) Feb. 17, 1931.
Remarks.- Records good for low and medium stages; those for Sept. 9-14, Mar. 3-14 (computed on basis of records for Wailuku River at Pukamaui and above Hilo Boarding School Ditch intake), and those for extremely high stages are poor. Small diversion above station for fluming sugarcane. Water passing station is used for power by Hilo Electric Light Co.

Rating tables, fiscal year 1935-36 (gage height, in feet, and discharge, in million gallons a day)

July 1-25				July 26 to June 30			
1.2	5.4	3.0	94	0.7	1.2	2.5	59
1.5	10.5	3.4	138	1.0	3.3	3.0	103
1.8	18.6	3.8	191	1.3	7.2	3.5	157
2.1	30.5	4.2	256	1.6	14.5	4.0	225
2.4	47	4.6	331	2.0	29		
2.7	68						

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	7.6	29.5	13.1	25	8.1	31	6.2	5.9	1.9	17.4	12.2	24
2	7.1	29.5	10.0	16.0	6.9	134	5.9	5.5	2.7	65	38	18.9
3	6.7	29.5	8.8	12.9	6.1	164	5.6	7.4	2.0	130	29.5	17.8
4	6.7	24	8.8	13.4	5.8	110	7.4	4.2	9.0	97	45	23
5	8.2	21	32	17.4	7.2	51	15.8	4.3	11	42	31	27
6	13.9	18.9	209	18.6	7.9	37	5.9	4.4	17	35.5	24.5	21.5
7	14.2	18.2	79	14.2	7.9	30	5.1	4.2	10	59	34.5	16.9
8	17.9	26.5	39	12.1	7.9	58	5.4	4.1	12	129	53	14.8
9	16.4	18.6	26	11.6	7.2	60	4.4	3.8	20	174	32.5	13.7
10	10.3	26.5	60	10.6	6.7	52	3.7	3.6	25	71	30	12.6
11	13.7	45	100	10.6	22	31	3.3	2.9	23	51	24	11.1
12	16.5	21.5	150	24.5	20.5	36	3.2	2.8	23	38	21.5	10.9
13	17.4	18.9	80	22	10.2	26	3.6	2.8	25	32	20	11.1
14	12.1	34	50	13.4	8.1	23	3.5	2.7	28	31	22.5	9.3
15	10.3	24	33.5	11.3	87	21.5	69	2.5	24.5	25.5	20.5	8.8
16	9.1	25	27	9.5	68	20	15.7	2.4	25.5	24.5	29	10.0
17	9.1	19.6	22.5	8.6	48	17.5	64	2.2	95	26	31	10.2
18	11.0	17.8	20.5	8.1	50	16.3	28	2.2	196	39	38	8.4
19	20	17.5	17.8	9.8	92	15.4	14.8	1.9	131	26	51	16.2
20	18.3	16.0	16.0	20	107	14.2	11.3	1.8	71	21.5	108	12.9
21	12.3	14.8	14.8	12.9	67	13.7	10.0	1.6	63	20	71	9.7
22	11.4	14.2	14.8	9.7	42	12.9	9.0	1.4	51	18.9	67	9.0
23	41	13.2	13.2	8.6	32	12.3	8.1	1.6	35	16.9	84	8.8
24	61	15.4	12.1	8.1	30.5	11.3	7.2	2.8	34	16.0	63	9.5
25	283	13.4	10.6	8.8	28	10.6	6.6	1.4	37.5	14.5	51	8.6
26	99	12.3	10.2	7.7	29.5	10.0	6.6	1.4	33	13.4	37.5	8.4
27	51	10.4	10.6	7.4	36	9.3	10.0	1.4	30.5	12.3	27.5	10.9
28	45	9.5	10.2	8.8	28.5	9.0	7.7	1.4	24.5	11.3	23	54
29	51	8.8	28.5	10.2	24	8.6	7.2	1.6	18.6	10.6	20.5	33
30	45	9.0	48	8.1	22	8.1	6.7	-	16.6	10.2	17.2	29
31	33	7.7	-	8.6	-	7.4	6.1	-	14.5	-	32.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	283	6.7	31.6	48.9	979	3,010
August	45	7.7	19.7	30.5	610	1,870
September	209	8.8	39.2	60.7	1,180	3,610
October	25	7.4	12.5	19.3	388	1,190
November	107	5.8	30.8	47.7	924	2,840
December	164	7.4	34.2	52.9	1,060	3,260
Calendar year 1935	314	5.8	33.2	51.4	12,130	37,230
January	69	3.2	11.8	18.3	367	1,130
February	7.4	1.4	2.97	4.60	86.2	265
March	196	1.9	35.8	55.4	1,110	3,410
April	174	10.2	42.6	65.9	1,280	3,920
May	108	12.2	38.4	59.4	1,190	3,650
June	54	8.4	16.0	24.8	480	1,470
Fiscal year 1935-36	283	1.4	26.4	40.8	9,650	29,620

Awini Ditch at East Honokaneiki Gulch, near Niulii

Location.- Water-stage recorder, lat. 20°09'55", long. 155°43'10", on Awini Ditch at flume across East Honokaneiki Gulch and 4½ miles southeast of Niulii.

Records available.- October 1927 to June 1936.

Extremes.- Maximum discharge during year, 33 million gallons a day (51 second-feet) Dec. 20 (gage height, 3.69 feet); no flow Oct. 3, 4.
1927-36: Maximum discharge, 34 million gallons a day (53 second-feet) Jan. 9, 1935 (gage height, 3.76 feet); no flow at times when gates were closed.

Remarks.- Records fair except those for Oct. 5 to Nov. 2, which are poor. Awini Ditch diverts water at about elevation 2,000 feet from all streams between the Waikaloa and the Honokane. Flow regulated by head gates and spillways. Water used for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	5.2	16.2	3.95	1.82	6.0	7.6	3.3	22	17.6	19.2	29	25
2	4.2	14.6	3.0	1.50	4.0	22	3.0	27	18.4	23	29	23.5
3	5.9	20	2.55	.17	2.9	25	2.9	25	23.5	23.5	27	23.5
4	9.3	18.4	2.45	2.3	2.1	20	2.5	25	29	24	27	18.4
5	10.6	13.9	5.9	12	12.0	13.2	2.5	14.6	29	18.4	3.4	17.6
6	17.6	9.9	19.2	25	15.4	9.3	2.35	10.6	31	23.5	2.25	16.9
7	11.8	8.2	18.4	10	13.9	7.6	2.55	11.8	27	29	2.05	13.9
8	7.3	18.4	9.3	6.0	6.2	6.5	6.0	11.8	23	29	1.93	12.5
9	5.6	13.9	7.4	4.5	4.1	11.2	4.2	9.9	23.5	27	1.82	11.2
10	5.2	9.3	6.8	3.5	3.0	8.7	3.0	9.3	29	27	1.77	9.9
11	10.6	15.4	24	3.0	2.55	7.2	2.35	8.7	25	27	1.71	8.7
12	9.9	9.3	25	2.5	3.3	15.5	2.05	7.6	31	25	1.66	14.1
13	5.9	10.5	18.4	5.0	2.7	9.3	1.82	6.4	17.6	25	1.55	27
14	4.2	24	14.6	3.5	8.3	7.3	7.4	5.8	2.9	29	1.71	27
15	3.2	13.2	11.8	2.5	20	20	23.5	5.0	2.35	25	1.71	27
16	2.8	12.5	15.4	2.0	18.4	9.9	12.5	4.0	1.88	27	1.66	27
17	5.7	9.3	13.9	12	8.7	6.4	22	3.4	2.35	29	1.66	27
18	9.6	7.4	8.2	20	12.5	5.2	13.2	2.75	2.05	29	1.66	23.5
19	21	10.6	6.8	10	27	10.3	11.2	2.25	1.77	24	1.66	27
20	13.2	9.9	6.0	7.0	9.8	27	6.8	3.15	1.61	21	1.66	25
21	8.2	7.5	4.9	5.0	1.50	18.4	4.4	12.2	1.44	17.6	1.66	20
22	5.3	6.1	4.5	4.0	1.02	11.2	3.6	11.8	1.25	16.2	3.3	16.9
23	23.5	5.1	3.95	3.5	.79	17.6	3.65	6.9	9.9	16.2	11.6	15.4
24	24	4.7	3.5	3.0	.76	11.8	3.8	6.1	15.4	13.9	23.5	22
25	27	4.5	3.0	2.5	1.07	8.2	3.65	5.0	14.6	13.2	24	16.9
26	27	5.2	2.9	2.0	.79	6.2	3.4	4.2	13.9	12.5	23.5	24
27	23	5.0	2.6	1.4	.79	5.4	3.2	3.8	5.2	11.8	23.5	22
28	18.4	4.1	2.45	1.2	10.4	4.6	2.9	9.8	1.30	10.6	19.2	27
29	24	3.4	2.2	1.0	12.5	4.4	3.0	13.9	.98	9.9	16.9	23.5
30	23	3.5	2.1	1.5	8.7	3.95	4.2	-	.90	14.6	17.6	18.4
31	16.2	4.2	-	7.0	-	3.6	17.6	-	5.8	-	27	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	27	2.8	12.5	19.3	388	1,190
August	24	3.4	10.3	15.9	318	977
September	25	2.1	8.50	13.2	255	783
October	25	.17	5.37	8.31	166	511
November	27	.76	7.37	11.4	221	679
December	27	3.6	11.1	17.2	345	1,060
Calendar year 1935	33	.17	11.3	17.5	4,140	12,700
January	23.5	1.82	6.08	9.41	189	579
February	27	2.25	9.99	15.5	290	889
March	31	.90	13.2	20.4	410	1,260
April	29	9.9	21.4	33.1	641	1,970
May	29	1.55	10.8	16.7	334	1,020
June	27	8.7	20.4	31.6	612	1,880
Fiscal year 1935-36	31	.17	11.4	17.6	4,170	12,800

East Honokaneiki intake to Awini Ditch at East Honokaneiki Gulch, near Niulii

Location.- Water-stage recorder, lat. 20°09'55", long. 155°43'15", on intake tunnel delivering water from East Honokaneiki Gulch to Awini Ditch, on west side of gulch and 4½ miles southeast of Niulii.

Records available.- October 1927 to June 1936.

Extremes.- Maximum discharge during year, 8.2 million gallons a day (12.7 second-feet) Apr. 6 (gage height, 1.51 feet); no flow on several days during year.
1927-36: 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 Oct. 5 to Nov. 2, which are poor. Flow regulated by headgates. Diverts water from East Honokaneiki Gulch to Awini Ditch for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.12	0.79	0.05	0.05	0.5	0.68	0.12	2.5	2.0	3.25	6.6	1.80
2	.08	.61	.05	.04	.2	3.75	.12	1.77	3.85	3.0	5.6	1.46
3	.05	.87	.05	0	.14	3.75	.10	.68	3.8	2.3	4.6	2.0
4	.12	.79	.05	.05	.10	1.33	.08	.30	3.5	2.85	2.75	2.3
5	.22	.55	.06	.5	1.47	.68	.08	.01	3.0	1.90	.58	1.20
6	2.55	.35	2.45	1.0	1.24	.44	.08	0	3.55	4.8	.44	.75
7	.89	.26	2.2	.4	1.15	.29	.10	0	2.25	6.7	.41	.53
8	.29	.65	.41	.3	.35	.26	.18	.50	2.0	5.6	.35	.48
9	.20	.55	.64	.24	.20	.71	.12	.58	2.2	3.9	.32	.35
10	.16	.29	1.42	.19	.16	.51	.10	.48	2.65	2.9	.26	.32
11	.48	.61	3.0	.15	.12	.35	.06	.44	1.65	2.75	.26	.26
12	.35	.32	3.9	.12	.22	1.35	.06	.35	1.90	1.70	.24	.55
13	.20	.73	.95	.4	.18	.51	.04	.26	1.22	2.6	.22	3.15
14	.14	3.5	.68	.25	1.09	.37	1.42	.22	.41	5.6	.22	2.65
15	.10	.61	.91	.15	1.82	2.35	5.1	.20	.38	1.95	.22	3.2
16	.06	.35	1.33	.09	1.48	.51	1.12	.20	.38	3.7	.24	3.6
17	.08	.24	1.28	.4	.44	.26	1.25	.14	.29	4.2	.24	3.2
18	.80	.22	.51	.8	.56	.20	.37	.10	.04	5.0	.26	2.0
19	3.45	.20	.18	.4	4.5	1.48	.65	.16	.01	3.05	.26	3.0
20	.75	.20	.14	.3	1.40	5.0	.44	.26	0	1.38	.29	2.7
21	.26	.20	.12	.25	.61	1.28	.32	2.4	0	1.03	.32	1.38
22	.24	.16	.12	.20	.44	.58	.26	.72	.47	.75	1.75	.81
23	3.35	.16	.10	.16	.26	1.97	.18	.29	3.85	.65	2.6	.24
24	3.4	.16	.10	.13	.26	.75	.16	.22	4.2	.58	1.80	1.82
25	3.35	.16	.10	.11	.51	.38	.16	.16	1.19	.48	2.0	.91
26	1.85	.10	.08	.09	.51	.26	.14	.14	.61	.44	1.87	2.85
27	.91	.10	.05	.08	.51	.22	.12	.12	.58	.41	1.33	2.7
28	1.07	.10	.05	.07	2.25	.20	.12	.12	.55	.35	.79	4.0
29	1.33	.10	.05	.06	.75	.18	.12	.46	.55	.26	.58	1.51
30	1.11	.10	.05	.10	.35	.14	.12	-	.55	.59	.51	1.03
31	.83	.06	-	.6	-	.14	2.05	-	.68	-	3.2	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	3.45	0.05	0.929	1.44	28.8	88
August	3.5	.06	.455	.704	14.1	43
September	3.9	.05	.703	1.09	21.1	65
October	1.0	0	.248	.384	7.68	24
November	4.5	.10	.792	1.23	23.8	73
December	5.0	.14	.996	1.54	30.9	95
Calendar year 1935	5.0	0	.829	1.28	303	929
January	5.1	.04	.495	.766	15.3	47
February	2.5	0	.475	.735	13.8	42
March	4.2	0	1.56	2.41	48.3	148
April	6.7	.26	2.49	3.85	74.7	229
May	6.6	.22	1.33	2.06	41.1	126
June	4.0	.24	1.76	2.72	52.8	162
Fiscal year 1935-36	6.7	0	1.02	1.58	372	1,140

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, 2¾ miles above mouth of Pololu Stream, and 4 miles south of Niulii.

Records available.- August 1927 to June 1936.

Extremes.- Maximum discharge during year, 71 million gallons a day (110 second-feet) July 25 (gage height, 4.10 feet); no flow Apr. 11.
1927-36: 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 except those for Sept. 8-13, Jan. 17, 18, which are poor. 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 the Honokane. Water is used for irrigation in vicinity of Kohala.

Discharge, in million gallons, fiscal year July 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	16.5	28	14.1	12.2	18.3	17.4	12.2	46	30	39	46	39
2	14.1	26	13.8	11.4	13.8	36.5	12.2	34.5	26	43	41	36.5
3	15.6	30	13.0	10.6	12.2	46	12.2	25	36.5	31	34.5	39
4	20	29	13.0	12.2	11.4	29	12.2	30	55	26	31	41
5	23	26	15.6	16.8	17.9	22	11.4	24	53	25	21	36.5
6	39	21	28	36.5	24	18.3	11.4	21.5	53	26	24	30
7	29	20	34.5	23	24	16.5	11.4	26	43	29	31	27
8	20	27	28	16.5	16.5	15.6	14.1	26	36.5	28	32.5	24
9	18.3	26	20	13.8	13.8	24	13.0	18.6	39	27	26	24
10	16.5	21	18	13.0	13.0	18.3	12.2	22	46	24	29	22
11	21	25	35	13.0	12.2	16.5	11.4	22	41	15.8	22	21
12	20	21	50	12.2	13.8	23	11.2	19.2	43	24	20	24
13	16.5	21	40	14.1	13.0	19.2	11.1	18.3	24	26	18.3	46
14	14.1	43	28	13.8	13.1	17.4	15.1	16.5	14.1	23.5	27	43
15	13.8	26	23	12.2	29	32.5	39	15.6	12.2	26	22	55
16	13.0	23	25	11.4	31	20	23	15.6	17.3	28	17.4	53
17	15.6	20	24	16.4	20	16.5	40	14.1	39	29	21	50
18	18.3	18.3	20	30	21	14.1	30	13.8	30	26	27	36.5
19	46	20	17.4	18.3	48	16.4	26	13.8	26	24	29	46
20	27	20	16.5	15.6	26	53	19.2	15.6	29	22	31	46
21	19.2	18.3	15.6	14.1	13.8	32.5	17.4	31	18.3	30	21	34.5
22	17.4	16.5	15.6	13.8	11.1	23	15.6	25	14.1	31	27	31
23	55	15.6	14.1	13.0	9.8	30	14.1	18.3	16.5	29	36.5	29
24	55	15.6	13.8	12.2	9.8	24	13.8	17.4	25	27	34.5	39
25	60	15.6	13.8	12.2	11.1	18.3	13.0	14.1	27	25	36.5	30
26	50	15.6	13.0	12.2	10.3	16.5	13.0	13.8	18.3	23	36.5	41
27	39	15.6	13.0	11.4	10.1	14.1	13.0	13.8	21	24	34.5	39
28	34.5	14.1	13.0	10.9	20	14.1	12.2	13.8	13.0	23	32.5	28
29	46	14.1	12.2	10.3	23	13.8	12.2	19.2	11.4	22	29	34.5
30	41	14.1	12.2	10.8	17.4	13.0	13.0	-	11.4	27	29	34.5
31	29	14.1	-	18.9	-	13.0	46	-	18.3	-	50	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	60	13.0	27.9	43.2	863	2,650
August	43	14.1	21.3	33.0	660	2,030
September	50	12.2	20.4	31.5	613	1,880
October	36.5	10.3	14.9	23.1	463	1,420
November	48	9.8	17.6	27.2	528	1,620
December	53	13.0	22.1	34.2	684	2,100
Calendar year 1935	60	8.2	24.1	37.3	8,800	27,030
January	46	11.1	17.1	26.5	532	1,630
February	46	13.8	20.8	32.2	604	1,860
March	55	11.4	28.6	44.3	888	2,720
April	43	15.8	26.8	41.5	803	2,470
May	50	17.4	29.6	45.8	918	2,820
June	55	21	36.0	55.7	1,080	3,310
Fiscal year 1935-36	60	9.8	23.6	36.5	8,640	26,510

Kehena Ditch near Kohala

Location.- Water-stage recorder, lat. 20°07'25", long. 155°45'05", at old Honokane weir, near head of West Branch of Honokanenui Gulch, and 8½ miles southeast of Kohala.

Records available.- December 1917 to November 1919, April 1928 to June 1936.

Extremes.- Maximum discharge during year, 59 million gallons a day (91 second-feet) Jan. 17 (gage height, 1.36 feet); no flow occasionally, when water was shut out of ditch.

1917-19, 1928-36: 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 except those for Nov. 7-17, Jan. 5-11, which are poor. 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 1935 to June 1936

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	1.47	2.8	0.60	0.10	0.25	0.80	0.15	37	0.70	16.4	19.0	10.8
2	1.04	2.6	.31	.04	.20	7.3	.10	43	5.3	40	32	4.8
3	1.65	3.75	.25	.04	.15	27.5	.04	42	13.4	14.0	24.5	2.6
4	5.8	3.75	.31	.04	.04	6.2	.04	28	38	11.3	34.5	7.1
5	10.8	2.4	1.73	2.1	.04	2.6	.02	23	35	2.4	14.2	6.8
6	20.5	1.32	15.2	15.9	.04	1.04	0	28	39	3.0	17.5	2.2
7	6.6	.80	13.6	7.5	5.0	.60	0	17.6	17.9	29.5	27.5	1.19
8	3.75	3.45	3.3	1.47	.2	.40	.2	5.6	8.6	19.7	17.5	1.04
9	2.6	2.6	2.0	.80	.04	12.8	.1	2.6	15.3	24.5	13.2	.60
10	1.81	1.70	2.75	.50	.04	*2.4	.07	1.65	22	12.3	12.5	.50
11	2.8	3.3	30.5	.40	.04	*1.81	.03	1.19	17.8	6.5	12.1	.31
12	1.65	1.04	29	.31	.5	5.8	0	.92	31	3.3	12.5	.40
13	.92	5.5	7.3	6.9	.1	6.0	0	.80	28	3.1	9.9	6.5
14	.80	13.6	7.0	2.2	.04	6.7	.08	.60	8.4	23.5	14.4	15.6
15	.50	2.4	3.5	.80	13	16.6	15.0	.40	3.75	5.3	16.6	19.7
16	.40	1.81	4.5	.40	.1	3.5	4.0	.40	10.6	16.6	11.0	21.5
17	.40	1.04	2.2	.25	.05	1.32	17.9	.31	42	16.5	19.3	19.7
18	7.3	.70	1.19	.20	.50	.60	1.65	.25	40	34	18.4	9.6
19	23.5	1.44	.92	.15	19.8	.66	1.47	.25	25	13.7	18.4	15.8
20	7.0	2.2	.80	.25	18.4	26.5	1.65	.27	25	3.75	18.4	14.2
21	1.81	1.04	.50	.50	6.3	6.4	1.04	2.55	10.5	1.81	16.2	6.2
22	6.6	.80	.60	.25	1.19	1.81	.70	1.32	5.9	1.32	14.9	2.8
23	31	.60	.50	.15	.92	5.5	.50	.70	3.05	1.19	15.3	2.2
24	37.5	.80	.31	.15	.70	2.2	.40	.60	12.3	.92	11.4	12.9
25	39	1.04	.25	.10	6.6	.80	.31	.25	31	.80	12.9	4.8
26	19.6	2.95	.20	.20	3.5	.60	.25	.20	18.1	.70	9.0	11.1
27	8.3	1.47	.15	.70	5.1	.40	.25	.15	4.5	.70	7.3	15.6
28	11.8	.92	.15	.31	9.7	.25	.20	.10	3.3	.60	3.5	26
29	24	.50	.10	.15	5.6	.20	.20	.25	1.65	.50	1.61	7.6
30	10.1	.50	.10	.10	1.81	.15	.20	-	1.19	.50	1.32	4.5
31	3.5	.60	-	.20	-	.15	28	-	1.04	-	15.5	-

Month	Million gallons a day			Second-feet (mean)	Total run-off	
	Maximum	Minimum	Mean		Million gallons	Acre-feet
July	39	0.40	9.50	14.7	294	904
August	13.6	.50	2.24	3.47	69.4	213
September	30.5	.10	4.33	6.70	130	398
October	15.9	.04	1.39	2.15	43.2	132
November	19.8	.04	3.33	5.15	100	307
December	27.5	.15	4.83	7.47	150	460
Calendar year 1935	41	.04	6.85	10.6	2,500	7,670
January	28	0	2.40	3.71	74.6	229
February	43	.10	8.27	12.8	240	736
March	42	.70	16.8	26.0	519	1,590
April	40	.50	10.4	16.1	311	953
May	34.5	1.32	15.2	23.5	473	1,450
June	26	.31	8.49	13.1	255	781
Fiscal year 1935-36	43	0	7.26	11.2	2,660	8,150

*Partly estimated.

INDEX

Page

Accuracy of data and computed results... 2
Acre-foot, definition of..... 1
Agencies other than Geological Survey, records by..... 3-5
Aiea, Pearl Harbor Springs near..... 39
Alo Stream near Huelo..... 83
Anahola Ditch above Kaneha Reservoir, near Kealia..... 23
Anahola River near Kealia..... 22
Awini Ditch at East Honokaneiki Gulch, near Niulii..... 103
East Honokaneiki intake to, at East Honokaneiki Gulch, near Niulii.... 104
Computations, results of, accuracy of... 2
Cooperation, record of..... 5-6
Data, accuracy of..... 2
explanation of..... 1-2
East Manoa Ditch near Honolulu..... 45
East Wailuaiki Stream near Keanae..... 68
East Wailuanui Stream near Keanae..... 71
Eleele, Hanapepe Ditch near..... 13-14
Hanapepe River near..... 12
Haiku Ditch at Kapalalaea Gulch, near Huelo..... 97
Haipuaena Stream near Huelo..... 76
Hanakapiai Stream near Hanalei..... 28
Hanakoa Stream near Hanalei..... 29
Hanalei, Hanakapiai Stream near..... 28
Hanakoa Stream near..... 29
Kalalau Stream near..... 30
Hanalei River at elevation 625 feet, near Hanalei..... 27
Hanalei Tunnel outlet near Lihue..... 17
Hanapepe Ditch at Koula, near Eleele.... 14
below intake, near Eleele..... 13
Hanapepe River at Koula, near Eleele.... 12
Hanawi Stream below Government Road, near Nahiku..... 59-60
near Nahiku..... 58
Hawaii, gaging-station records on.....98-106
Heeia, Kahaluu Stream near..... 48
Waihee Stream near..... 49
Hilo, Hilo Boarding School Ditch near... 101
Kapehu Stream near..... 102
Wailuku River near.....99-100
Honokahau Stream near Honokahau..... 51
Honokawai Ditch near Lahaina..... 52
Honolulu, East Branch of Manoa Stream near..... 44
East Manoa Ditch near..... 45
Kalihi Stream near..... 41
Moanalua Stream near..... 40
Nuuanu Stream near..... 42
Pukele Stream near..... 46
Waiomao Stream near..... 47
West Branch of Manoa Stream near..... 43
Honomanu Stream near Keanae..... 75
Honopou Stream above Haiku Ditch, near Huelo..... 92
at Lowrie Ditch siphon, near Huelo.... 91
below Haiku Ditch, near Huelo..... 93
near Huelo..... 90
Hoolawaliilii Stream near Huelo..... 88
Hoclawanui Stream near Huelo..... 89
Huelo, Alo Stream near..... 83
Haiku Ditch near..... 97
Haipuaena Stream near..... 76
Honopou Stream near..... 90-93
Hoolawaliilii Stream near..... 88
Hoolawanui Stream near..... 89
Kaaiea Stream near..... 84
Kailua Stream near..... 87
Koolau Ditch near..... 78
Lowrie Ditch near..... 96
Manuel Luis Ditch near..... 80
Nailiilihaele Stream near..... 86
New Hamakua Ditch near..... 95
Oopuola Stream near..... 85
Puohokamoa Stream near..... 79
Spreckels Ditch near..... 77,81

Page

Huelo, Waikamoi Stream near..... 82
Wailoa Ditch near..... 94
Ka Loko Ditch near Kilauea..... 24
Kaaiea Stream near Huelo..... 84
Kahalawe Stream, Right Branch of, near Kipahulu..... 55
Kahaluu Stream near Heeia..... 48
Kailua Stream near Huelo..... 87
Kalalau Stream near Hanalei..... 30
Kalihi Stream near Honolulu..... 41
Kalihiwai Ditch near Kilauea..... 26
Kanaha Ditch near Lihue..... 19
Kapahi Ditch near Kealia..... 21
Kapaula Stream below Government Road, near Nahiku..... 62
near Nahiku..... 61
Kapehu Stream at Piihonua, near Hilo... 102
Kauai, discharge measurements on..... 31
gaging-station records on..... 7-30
Kaukonahua Stream, Left Branch of North Fork of, near Wahiawa..... 33
Right Branch of North Fork of, near Wahiawa..... 32
Kawaikoi Stream near Waimea..... 8
Kealia, Anahola Ditch near..... 23
Anahola River near..... 22
Kapahi Ditch near..... 21
Keanae, East Wailuaiki Stream near..... 68
East Wailuanui Stream near..... 71
Honomanu Stream near..... 75
Koolau Ditch near..... 74
Taro patch feeder ditch at..... 73
Wailuanui Stream near..... 70
West Kopiliula Stream near..... 67
West Wailuaiki Stream near..... 69
West Wailuanui Stream near..... 72
Kehena Ditch near Kohala..... 106
Kekaha Ditch at camp 1, near Waimea.... 11
Kilauea, Ka Loko Ditch near..... 24
Kalihiwai Ditch near..... 26
Puu Ka Ele Ditch near..... 25
Kipahulu, Oheo Stream near..... 54
Right Branch of Kahalawe Stream near. 55
Kohala, Kehena Ditch near..... 106
Kohala Ditch at Pololu, near Niulii.... 105
Kokee Ditch (Kauai), discharge measurements of..... 31
near Waimea..... 9
Koolau Ditch at Haipuaena, near Huelo.. 78
at Nahiku weir, near Nahiku..... 63
near Keanae..... 74
Lahaina, Honokawai Ditch near..... 52
Lihue, East Branch of North Fork of Wailua River near..... 20
Hanalei Tunnel outlet near..... 17
Kanaha Ditch near..... 19
North Fork of Wailau River near..... 16
North Wailua Ditch near..... 18
South Fork of Wailua River near..... 15
Lowrie Ditch at Honopou Gulch, near Huelo..... 96
Makapipi Stream near Nahiku..... 56
Manoa Stream, East Branch of, near Honolulu..... 44
West Branch of, near Honolulu..... 43
Manuel Luis Ditch at Puohokamoa Gulch, near Huelo..... 80
Maui, gaging-station records on..... 51-97
Millions gallons, definition of..... 1
Moanalua Stream near Honolulu..... 40
Mountain View, Waiakea Stream near..... 98
Nahiku, Hanawi Stream near..... 58-60
Kapaula Stream near..... 61-62
Koolau Ditch near..... 63
Makapipi Stream near..... 56
Paakea Stream near..... 65
Waiaaka Stream near..... 64
Waiohue Stream near..... 66
West Makapipi Spring near..... 57
Nailiilihaele Stream near Huelo..... 86

Page
New Hamakua Ditch at Honopou, near Huelo..... 95
Niulii, Awini Ditch near..... 103
East Honokaneiki intake near..... 104
Kohala Ditch near..... 105
North Wailua Ditch near Lihue..... 18
Nuuanu Stream below reservoir 2 waste-way, near Honolulu..... 42
Oahu, discharge measurements on..... 50
gaging-station records on..... 32-49
Oheo Stream below diversion dam near Kipahulu..... 54
Olowalu Ditch near Olowalu..... 53
Oopoula Stream near Huelo..... 85
Paakea Stream near Nahiku..... 65
Pearl City, Pearl Harbor Springs near.. 35-38
Pearl Harbor Springs at Kalauao, near Aiea..... 39
at Kaluaoopu, near Pearl City..... 37
at Loko Kukona, near Pearl City..... 36
at Puukapu, near Pearl City..... 35
at Waiau, near Pearl City..... 38
discharge measurements of..... 50
Publications on stream flow, list of... 3
Puhawai Stream at Lualualei, near Waianae..... 34
Pukele Stream near Honolulu..... 46
Puohokamoa Stream near Huelo..... 79
Puu Ka Ele Ditch near Kilauea..... 25
Second-foot, definition of..... 1
Spreckels Ditch at Haipuaena weir, near Huelo..... 77
at Wahinepee, near Huelo..... 81
Taro patch feeder ditch at Keanae..... 73
Terms, definition of..... 1

Page
Wahiawa, Left Branch of North Fork of Kaukonahua Stream near..... 33
Right Branch of North Fork of Kaukonahua Stream near..... 32
Waiaaka Stream near Nahiku..... 64
Waiahulu Stream near Waimea..... 10
Waiakea Stream at middle flume house, near Mountain View..... 98
Waianae, Puhawai Stream near..... 34
Waihee Stream near Heeia..... 49
Waikamoi Stream above Wailoa Ditch, near Huelo..... 82
Wailoa Ditch at Honopou, near Huelo.... 94
Wailua River, East Branch of North Fork of, near Lihue..... 20
North Fork of, at elevation 650 feet, near Lihue..... 16
South Fork of, near Lihue..... 15
Wailuanui Stream near Keanae..... 70
Wailuku River above Hilo Boarding School Ditch intake, near Hilo... 100
at Pukamaui, near Hilo..... 99
Waimea, Kawakoi Stream near..... 8
Kekaha Ditch near..... 11
Kokee Ditch near..... 9
Waiahulu Stream near..... 10
Waimea River below Kekaha Ditch intake, near Waimea..... 7
Waiohue Stream near Nahiku..... 66
Waiomao Stream above Pukele Stream, near Honolulu..... 47
West Kopiliula Stream near Keanae..... 67
West Makapipi Spring near Nahiku..... 57
West Wailuaiki Stream near Keanae..... 69
West Wailuanui Stream near Keanae..... 72
Work, division of..... 6
scope of..... 1

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