

HAWAII, ISLAND OF HAWAII

1

16720000 KAWAINUI STREAM NEAR KAMUELA

LOCATION.--Lat 20°05'18", long 155°40'58", Old Hawaiian Datum, Hydrologic Unit 20010000, on left bank 125 ft upstream from Upper Hamakua ditch intake, and 4.5 mi north of Kamuela.

DRAINAGE AREA.--1.58 mi².

PERIOD OF RECORD.--January 1964 to current year.

REVISED RECORDS.--WDR HI-95-1: 1965-90 (m), 1970, 1971, 1979, 1984, 1990.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft above mean sea level (from topographic map).

REMARKS.--Record computed by Roy Taogoshi. Records good. No diversion upstream.

AVERAGE DISCHARGE.--41 years (water years 1965-2005), 14.9 ft³/s (10,780 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft³/s, November 18, 1979, gage height, 10.03 ft, from rating curve extended above 53 ft³/s on basis of computations of peak flow over dam and slope-area measurement at gage height 10.03 ft; minimum, 0.01 ft³/s, January 23-28, February 20-21, 1977, December 16-19, February 23, 24, 1980 (revised).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 440 ft³/s and maximum (*):

	Date	Time	Discharge (ft ³ /s)	Gage height (ft)		Date	Time	Discharge (ft ³ /s)	Gage height (ft)
	Mar 28	1020	*454	*4.94					No other peak greater than base discharge.

Minimum discharge, 0.04 ft³/s, Jan. 28, 29, 30, gage height, 0.93 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.36	0.45	19	3.7	0.29	4.8	57	0.92	1.1	32	17	14
2	37	0.37	27	30	0.28	2.1	32	0.76	0.93	42	30	17
3	5.1	0.33	9.8	79	0.24	1.2	46	0.62	1.4	18	11	8.8
4	2.0	0.24	7.3	12	6.3	0.73	16	0.51	1.1	16	41	3.8
5	1.1	0.18	28	3.3	2.1	0.44	8.7	0.51	5.5	14	14	7.1
6	0.64	0.18	29	1.8	1.0	0.31	43	0.82	5.7	10	12	22
7	0.38	0.19	61	1.4	0.58	0.20	35	1.5	6.6	9.9	62	34
8	0.37	0.14	12	1.00	0.35	0.14	13	1.3	6.7	62	42	13
9	0.39	0.12	7.8	26	0.28	0.12	32	1.1	16	58	18	4.9
10	1.3	0.10	25	24	0.20	15	16	0.87	4.7	43	8.3	4.3
11	3.8	0.09	6.4	8.8	0.14	32	15	0.60	28	38	5.9	6.4
12	1.6	0.08	3.0	3.0	0.16	38	16	0.45	56	60	2.9	39
13	11	0.07	1.9	1.5	39	11	5.2	2.8	12	46	1.9	27
14	7.8	50	1.2	0.92	7.0	3.2	7.0	6.7	8.7	38	1.3	14
15	2.3	227	0.80	0.59	2.7	42	16	3.3	6.2	28	5.8	18
16	4.5	89	0.52	0.37	2.1	12	33	4.0	3.0	14	34	7.4
17	2.8	6.4	0.79	0.24	1.5	3.0	15	2.4	2.3	7.4	7.7	17
18	2.6	27	0.98	0.17	1.4	1.8	5.4	1.7	2.5	27	35	5.3
19	1.8	6.3	2.6	0.14	1.1	1.4	3.2	1.5	1.8	42	10	3.0
20	15	2.8	1.4	0.11	1.1	1.00	2.8	2.2	38	6.5	11	2.2
21	3.7	1.7	0.79	0.10	0.75	0.78	6.7	9.8	47	22	2.9	7.4
22	8.0	1.1	0.48	0.11	0.44	0.81	9.5	3.9	41	31	1.6	13
23	11	0.79	0.32	0.09	0.29	0.92	10	2.4	24	27	1.8	7.4
24	6.3	0.52	0.24	0.07	0.20	0.55	14	2.4	21	22	2.6	2.5
25	2.9	0.36	0.19	0.06	0.23	0.34	9.1	2.2	10	12	16	1.7
26	2.0	0.26	0.15	0.05	21	35	7.6	1.7	3.7	8.8	4.1	23
27	1.2	0.20	0.12	0.06	4.3	79	3.2	1.5	3.8	5.2	1.7	19
28	0.95	0.19	0.11	0.05	5.3	199	2.1	3.7	5.7	23	0.99	19
29	1.1	0.25	0.10	0.04	---	113	1.5	4.1	10	54	0.66	8.0
30	0.80	0.81	0.08	1.4	---	97	1.1	2.1	31	18	0.44	101
31	0.57	---	0.07	0.47	---	78	---	1.4	---	7.8	0.63	---
TOTAL	140.36	417.22	248.14	200.54	100.33	774.84	482.1	89.56	405.43	842.6	404.22	470.2
MEAN	4.53	13.9	8.00	6.47	3.58	25.0	16.1	2.89	13.5	27.2	13.0	15.7
MAX	37	227	61	79	39	199	57	22	56	62	62	101
MIN	0.36	0.07	0.07	0.04	0.14	0.12	1.1	0.45	0.93	5.2	0.44	1.7
AC-FT	278	828	492	398	199	1,540	956	178	804	1,670	802	933

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2005, BY WATER YEAR (WY)

MEAN	9.42	16.3	15.2	14.3	12.8	20.6	22.2	11.9	13.7	18.8	15.1	8.72
MAX	27.7	55.8	41.4	62.5	40.6	98.0	67.5	36.0	37.7	37.0	31.8	27.5
(WY)	(2002)	(1980)	(1971)	(1979)	(1969)	(1980)	(1986)	(1998)	(1998)	(1982)	(1982)	(1992)
MIN	0.17	0.70	0.51	0.34	0.51	3.07	1.71	1.07	3.18	3.65	2.70	0.27
(WY)	(1985)	(2003)	(1981)	(1981)	(1995)	(2003)	(1992)	(1999)	(1985)	(2004)	(1971)	(1965)

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16720000 KAWAINUI STREAM NEAR KAMUELA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1964 - 2005
ANNUAL TOTAL	4,486.12	4,575.54	
ANNUAL MEAN	12.3	12.5	14.9
HIGHEST ANNUAL MEAN			26.3
LOWEST ANNUAL MEAN			7.33
HIGHEST DAILY MEAN	314	Mar 14	612 Nov 18, 1979
LOWEST DAILY MEAN	0.07	Nov 13	0.01 Jan 23, 1977
ANNUAL SEVEN-DAY MINIMUM	0.11	Nov 7	0.01 Jan 22, 1977
ANNUAL RUNOFF (AC-FT)	8,900	9,080	10,780
10 PERCENT EXCEEDS	29	36	41
50 PERCENT EXCEEDS	2.6	3.7	4.5
90 PERCENT EXCEEDS	0.36	0.20	0.49