

HAWAII, ISLAND OF HAWAII

1

16725000 ALAKAHI STREAM NEAR KAMUELA

LOCATION.--Lat 20°04'27", long 155°40'25", Old Hawaiian Datum, Hydrologic Unit 20010000, on right bank 25 ft upstream from Upper Hamakua ditch intake, and 3.5 mi north of Kamuela.

DRAINAGE AREA.--0.87 mi².

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

REVISED RECORDS.--WDR HI-94-1: 1964-90.

GAGE.--Water-stage recorders. Elevation of gage is 3,900 ft above mean sea level (from topographic map).

REMARKS.--Records computed by Clayton Yoshida. Records good. Parker Ranch pipeline no longer diverts from tributary 0.4 mi upstream for ranch use in Kamuela area.

AVERAGE DISCHARGE.--41 years (water years 1965-2005), 7.84 ft³/s (5,680 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft³/s, January 11, 1967, gage height 8.65 ft, from rating curve extended above 28 ft³/s on basis of computations of peak flow over dam and slope-area measurement at gage height 8.65 ft; maximum gage height, 12.80 ft, November 18, 1979; minimum, 0.03 ft³/s on several days in 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft³/s and maximum (*):

	Date	Time	Discharge (ft ³ /s)	Gage height (ft)		Date	Time	Discharge (ft ³ /s)	Gage height (ft)
	Nov 16	0205	194	4.59		Sep 30	1005	*197	*4.61
	Mar 28	1020	193	4.58					

Minimum discharge, 0.21 ft³/s, Jan. 29, 30, gage height, 1.33 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	0.64	0.54	5.8	0.39	0.26	2.3	28	0.80	0.84	14	11	4.8
2	18	0.50	11	9.7	0.25	1.2	16	0.71	0.78	21	18	7.5
3	3.2	0.45	3.9	34	0.24	0.84	20	0.61	0.89	10	6.1	3.9
4	1.5	0.42	3.3	6.4	1.6	0.63	8.3	0.58	0.78	14	23	2.1
5	1.1	0.39	7.9	2.1	1.0	0.50	5.0	0.60	2.0	8.7	7.6	2.7
6	0.83	0.37	13	1.3	0.65	0.36	26	0.78	3.2	6.2	9.5	8.1
7	0.67	0.34	24	1.1	0.49	0.30	16	0.88	3.2	5.3	40	12
8	0.65	0.34	6.8	0.98	0.37	0.29	6.5	0.87	2.0	30	33	5.9
9	0.72	0.33	2.7	16	0.30	0.27	17	0.76	6.6	30	13	3.0
10	1.5	0.30	9.3	15	0.27	1.9	9.1	0.64	2.1	27	5.9	2.8
11	2.6	0.29	3.3	4.5	0.25	14	5.8	0.53	12	24	4.4	3.7
12	1.3	0.28	1.8	2.0	0.26	18	8.4	0.48	26	30	2.4	18
13	4.9	0.26	1.3	1.2	13	5.8	3.1	1.2	6.1	24	1.8	14
14	4.9	19	0.99	0.90	3.6	2.1	3.1	2.9	5.2	28	1.5	7.8
15	1.6	117	0.82	0.74	1.5	15	6.0	1.6	3.7	14	2.5	9.6
16	2.7	50	0.73	0.62	1.1	6.1	13	1.7	1.8	6.2	17	4.2
17	2.0	4.3	0.97	0.50	0.87	1.8	7.2	1.2	1.4	3.5	5.5	9.5
18	1.6	14	0.99	0.42	0.68	1.2	3.0	0.97	1.6	13	22	3.5
19	1.4	4.3	1.2	0.39	0.59	0.95	1.9	1.2	1.2	25	5.9	2.3
20	8.9	2.1	0.96	0.35	0.51	0.77	1.7	13	18	3.6	5.6	1.7
21	2.4	1.5	0.75	0.34	0.43	0.71	3.3	6.3	29	13	2.2	3.1
22	5.3	1.1	0.65	0.33	0.34	0.90	5.6	2.2	20	11	1.6	7.4
23	6.6	0.89	0.54	0.31	0.28	0.97	6.3	1.4	9.3	12	1.5	5.0
24	3.9	0.80	0.46	0.29	0.27	0.63	9.1	1.1	9.9	10	2.0	2.1
25	1.8	0.70	0.43	0.26	0.27	0.48	5.5	0.91	5.2	6.6	8.3	1.6
26	1.3	0.62	0.40	0.25	7.8	12	4.8	0.82	2.1	5.5	3.4	12
27	0.96	0.54	0.38	0.24	2.3	41	2.0	0.83	1.9	3.4	1.7	10
28	0.82	0.49	0.36	0.23	1.9	99	1.3	2.4	2.7	11	1.4	8.5
29	0.76	0.51	0.36	0.22	---	48	1.0	3.0	4.8	34	1.1	4.5
30	0.70	0.70	0.34	0.34	---	45	0.88	1.4	16	12	0.99	50
31	0.61	---	0.32	0.33	---	41	---	0.97	---	4.7	1.1	---
TOTAL	85.86	223.36	105.75	101.73	41.38	364.00	244.88	53.34	200.29	460.7	260.99	231.3
MEAN	2.77	7.45	3.41	3.28	1.48	11.7	8.16	1.72	6.68	14.9	8.42	7.71
MAX	18	117	24	34	13	99	28	13	29	34	40	50
MIN	0.61	0.26	0.32	0.22	0.24	0.27	0.88	0.48	0.78	3.4	0.99	1.6
AC-FT	170	443	210	202	82	722	486	106	397	914	518	459

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

MEAN	5.14	8.16	7.24	7.26	6.28	10.2	11.4	6.66	7.80	10.4	8.53	5.11
MAX	14.7	26.5	16.7	26.4	18.6	37.9	31.6	20.5	22.6	22.5	19.2	17.8
(WY)	(1999)	(1980)	(1971)	(1979)	(1969)	(1980)	(1986)	(1998)	(1998)	(2002)	(2001)	(1992)
MIN	0.31	0.95	0.54	0.46	0.40	1.11	0.82	0.78	2.04	1.88	1.72	0.09
(WY)	(1985)	(2003)	(1981)	(1981)	(1993)	(2003)	(1992)	(1999)	(1985)	(2004)	(1971)	(1965)

HAWAII, ISLAND OF HAWAII

16725000 ALAKAHI STREAM NEAR KAMUELA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1964 - 2005
ANNUAL TOTAL	2,506.02	2,373.58	
ANNUAL MEAN	6.85	6.50	7.84
HIGHEST ANNUAL MEAN			13.4
LOWEST ANNUAL MEAN			3.39
HIGHEST DAILY MEAN	165	Mar 14	338 Nov 18, 1979
LOWEST DAILY MEAN	0.26	Nov 13	0.03 May 22, 1965
ANNUAL SEVEN-DAY MINIMUM	0.31	Nov 7	0.04 Sep 22, 1965
ANNUAL RUNOFF (AC-FT)	4,970	4,710	5,680
10 PERCENT EXCEEDS	15	17	20
50 PERCENT EXCEEDS	1.6	2.0	3.0
90 PERCENT EXCEEDS	0.48	0.36	0.58