

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 Dale Nishimoto. Records good except estimated period which is poor. Parker Ranch pipeline no longer diverts from tributary 0.4 mi upstream for ranch use in Kamuela area.

AVERAGE DISCHARGE.--40 years (water years 1965-2004), 7.87 ft³/s (5,700 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)
	Feb 7	1900	243	5.50
	Mar 14	1230	*884	*7.46
	Mar 23	1315	285	5.13
	Apr 10	2230	362	5.52

Minimum discharge, 0.29 ft³/s, on Sept. 29, gage height, 1.31 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.50	e0.39	e4.9	e1.1	11	11	8.7	1.8	3.7	1.5	1.4	0.78
2	e0.48	e0.38	e6.0	e0.94	13	18	3.7	1.4	9.2	9.9	7.8	0.67
3	e0.47	e0.65	e5.5	e2.5	6.2	21	4.4	2.5	4.4	4.1	11	0.57
4	e0.44	e0.90	e14	e24	3.0	7.6	2.1	34	8.4	1.9	3.9	0.48
5	e0.45	e1.2	e5.6	e3.9	9.2	3.2	2.8	24	11	1.9	1.6	0.51
6	e0.44	e0.90	e3.5	e2.0	9.8	1.8	2.1	11	3.4	1.3	2.9	0.44
7	e0.46	e1.0	e2.2	e1.4	27	2.1	1.4	19	4.1	0.96	6.9	0.41
8	e0.48	e1.6	e25	e1.2	8.9	40	1.1	9.5	7.2	0.81	1.9	0.39
9	e0.48	e1.9	e16	e0.95	2.6	9.4	1.2	2.6	11	0.75	1.2	0.37
10	e0.50	e1.6	e11	e0.90	1.8	3.1	80	1.6	6.9	0.90	0.86	0.39
11	e0.70	e2.8	e12	e0.85	1.4	1.7	134	1.2	4.2	1.6	0.72	0.44
12	e0.97	e2.1	e3.6	e0.80	1.2	1.3	83	1.0	4.2	1.0	0.62	0.46
13	e1.6	e2.5	e8.6	e0.75	1.1	16	28	0.88	2.2	1.1	0.70	0.45
14	e2.2	e4.5	e4.7	e1.3	1.0	165	7.9	0.86	2.3	9.1	0.82	0.50
15	e4.0	e4.8	e4.7	e1.0	0.95	32	6.6	0.78	5.4	3.7	0.82	0.48
16	e12	e22	e3.2	e0.95	1.2	7.5	6.0	12	3.5	1.9	9.3	0.61
17	e8.1	e7.8	e4.0	e0.90	1.5	4.7	47	3.2	1.8	1.3	5.7	1.7
18	e2.6	e8.8	e12	e0.85	1.3	2.7	30	1.5	1.4	1.0	1.6	2.6
19	e1.5	e33	e5.2	e0.80	1.2	1.6	16	1.0	2.6	0.80	0.96	1.2
20	e1.0	e10	e2.9	e0.74	1.2	1.1	9.0	0.86	10	0.69	0.77	0.80
21	e0.90	e8.2	e1.9	0.68	1.2	0.93	4.0	0.78	10	0.67	3.1	0.66
22	e0.83	e4.1	e1.6	0.65	1.0	41	2.3	0.72	12	0.64	8.6	0.51
23	e0.72	e2.3	e1.3	1.4	0.91	60	2.8	0.72	4.5	0.57	18	0.45
24	e0.64	e1.6	e1.1	1.8	1.0	48	4.9	0.71	3.7	0.52	2.6	0.41
25	e0.56	e1.6	e1.1	5.1	1.3	32	6.8	3.0	2.4	0.49	1.3	0.38
26	e0.51	e19	e0.91	24	1.2	20	22	13	1.5	0.49	0.94	0.36
27	e0.48	e3.8	e0.78	9.3	1.2	4.1	13	10	1.2	0.52	0.81	0.36
28	e0.45	e2.0	e1.1	5.6	64	6.1	3.7	7.0	5.4	2.9	0.73	0.34
29	e0.41	e2.1	e2.0	61	4.9	13	2.0	24	5.4	3.2	2.0	0.32
30	e0.41	e3.4	e2.0	11	---	41	1.6	8.8	2.2	1.3	3.0	0.32
31	e0.40	---	e1.3	13	---	30	---	8.4	---	0.87	1.1	---
TOTAL	45.68	156.92	169.69	181.36	181.26	646.93	538.1	207.81	155.2	58.38	103.65	18.36
MEAN	1.47	5.23	5.47	5.85	6.25	20.9	17.9	6.70	5.17	1.88	3.34	0.61
MAX	12	33	25	61	64	165	134	34	12	9.9	18	2.6
MIN	0.40	0.38	0.78	0.65	0.91	0.93	1.1	0.71	1.2	0.49	0.62	0.32
AC-FT	91	311	337	360	360	1,280	1,070	412	308	116	206	36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	5.20	8.18	7.33	7.36	6.39	10.1	11.4	6.78	7.83	10.3	8.53	5.05
(WY)	(1999)	(1980)	(1971)	(1979)	(1969)	(1980)	(1986)	(1998)	(1998)	(2002)	(2001)	(1992)
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)	(1985)	(2003)	(1981)	(1981)	(1993)	(2003)	(1992)	(1999)	(1985)	(2004)	(1971)	(1965)
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

HAWAII, ISLAND OF HAWAII

16725000 ALAKAHI STREAM NEAR KAMUELA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1964 - 2004
ANNUAL TOTAL	1,962.37	2,463.34	
ANNUAL MEAN	5.38	6.73	7.87
HIGHEST ANNUAL MEAN			13.4
LOWEST ANNUAL MEAN			3.39
HIGHEST DAILY MEAN	104	Sep 1	1994
LOWEST DAILY MEAN	0.38	Nov 2	1981
ANNUAL SEVEN-DAY MINIMUM	0.42	Oct 27	
ANNUAL RUNOFF (AC-FT)	3,890	4,890	338 Nov 18, 1979
10 PERCENT EXCEEDS	13	15	0.03 May 22, 1965
50 PERCENT EXCEEDS	2.0	1.9	0.04 Sep 22, 1965
90 PERCENT EXCEEDS	0.47	0.50	0.59

e Estimated