

16725000 ALAKAHI STREAM NEAR KAMUELA

LOCATION.--Lat 20°04'27", long 155°40'25", 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 fair except for estimated daily discharges, which are poor. Parker Ranch pipeline no longer diverts from tributary 0.4 mi upstream for ranch use in Kamuela area.

AVERAGE DISCHARGE.--38 years (water years 1965-2002), 7.97 ft³/s (5,780 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)
Feb 26	0345	*337	*5.87	Mar 17	1530	182	4.61

Minimum discharge, 0.57 ft³/s, Apr. 11, 12, 13, gage height, 1.42 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	31	16	4.0	e11	3.6	0.79	3.2	0.78	55	9.8	2.6
2	5.2	18	16	2.3	e6.3	1.6	0.82	3.9	3.6	13	3.2	1.9
3	2.2	15	11	23	e2.7	3.9	0.84	12	3.8	18	4.1	2.6
4	2.0	14	12	3.3	e1.8	7.2	0.80	15	2.0	42	36	3.6
5	2.9	37	9.4	2.1	e1.4	59	0.72	3.0	1.8	11	11	7.7
6	4.3	27	3.1	1.3	e1.2	17	0.68	3.9	2.5	8.8	7.6	3.7
7	37	6.3	3.0	1.1	e1.1	3.3	0.65	6.7	2.5	16	13	37
8	15	42	19	1.0	e1.3	1.9	0.64	11	3.1	25	7.1	17
9	20	36	42	0.89	5.6	2.8	0.63	5.2	2.2	74	5.6	18
10	18	18	14	1.4	2.8	3.2	0.61	2.6	9.3	46	5.4	12
11	45	16	20	1.6	10	1.8	0.61	1.9	9.3	33	7.2	3.5
12	8.3	4.2	58	1.0	9.3	1.3	0.61	1.9	4.7	9.4	5.0	2.2
13	22	2.7	51	0.98	22	1.1	0.63	3.2	8.9	5.2	2.6	3.0
14	6.2	2.0	18	0.94	11	1.0	0.62	4.9	4.6	2.7	1.9	7.9
15	3.3	4.0	10	e0.87	5.0	1.5	0.63	2.1	21	14	1.6	22
16	2.8	2.6	9.3	e0.85	2.8	4.3	0.64	3.2	8.0	20	1.6	7.8
17	8.4	1.7	32	e20	3.1	64	3.6	6.1	10	14	2.5	25
18	9.4	1.4	54	e32	1.7	77	3.4	22	19	35	12	6.7
19	5.1	1.3	17	e22	1.3	26	1.5	20	14	8.0	23	3.5
20	8.6	1.2	11	e9.9	3.8	6.1	1.1	6.6	6.9	11	19	1.9
21	14	1.1	13	e12	2.7	5.5	0.97	2.7	6.2	34	5.6	1.4
22	8.5	1.1	4.1	e5.4	1.6	2.5	1.4	1.8	22	74	2.6	1.2
23	2.8	1.0	2.8	e2.8	1.7	1.6	2.5	1.4	12	18	1.2	1.0
24	1.8	0.97	2.3	e1.8	89	1.2	4.1	1.1	5.0	12	22	0.97
25	1.5	0.92	1.8	e1.3	83	1.0	4.3	1.0	7.7	43	9.0	0.89
26	1.4	0.91	1.2	e6.9	166	0.96	2.1	0.95	54	26	3.1	0.79
27	1.5	11	1.2	e11	11	0.94	3.1	0.91	39	11	10	0.74
28	53	22	1.1	e3.4	6.1	0.94	7.9	0.90	27	6.3	23	0.71
29	46	4.2	1.1	e9.7	---	0.87	13	0.86	7.4	4.8	14	0.73
30	50	5.9	14	e5.1	---	0.81	8.2	0.80	25	2.6	11	0.78
31	11	---	26	e10	---	0.77	---	0.78	---	4.5	4.9	---
TOTAL	420.4	330.50	494.4	199.93	466.3	304.69	68.09	151.60	343.28	697.3	296.4	198.81
MEAN	13.6	11.0	15.9	6.45	16.7	9.83	2.27	4.89	11.4	22.5	9.56	6.63
MAX	53	42	58	32	166	77	13	22	54	74	36	37
MIN	1.4	0.91	1.1	0.85	1.1	0.77	0.61	0.78	0.78	2.6	1.6	0.71
AC-FT	834	656	981	397	925	604	135	301	681	1380	588	394

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

MEAN	5.38	8.45	7.46	7.54	6.32	10.1	11.4	6.86	7.97	10.6	8.63	5.12
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	1.07	0.54	0.46	0.40	1.27	0.82	0.78	2.04	2.38	1.72	0.087
(WY)	1985	1969	1981	1981	1993	1983	1992	1999	1985	1981	1971	1965

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1964 - 2002
ANNUAL TOTAL	3647.51	3971.70	
ANNUAL MEAN	9.99	10.9	
HIGHEST ANNUAL MEAN			7.97
LOWEST ANNUAL MEAN			13.4 1994
HIGHEST DAILY MEAN	150 Feb 15	166 Feb 26	3.39 1981
LOWEST DAILY MEAN	0.43 Jan 11	0.61 Apr 10	0.03 May 22 1965
ANNUAL SEVEN-DAY MINIMUM	0.46 Jan 7	0.62 Apr 9	0.04 Sep 22 1965
ANNUAL RUNOFF (AC-FT)	7230	7880	5780
10 PERCENT EXCEEDS	26	26	20
50 PERCENT EXCEEDS	4.1	4.3	3.2
90 PERCENT EXCEEDS	0.71	0.93	0.60

e Estimated

