

16759000 HAUANI GULCH NEAR KAMUELA

LOCATION.--Lat 20°02'28", long 155°39'05", Hydrologic Unit 20010000, on left bank 800 ft downstream from small tributary, and 1.8 mi northeast of Kamuela.

DRAINAGE AREA.--0.47 mi².

PERIOD OF RECORD.--March 1956 to current year. Prior to July 1960, published as Hauani Stream near Kamuela.

REVISED RECORDS.--WSP 1569: Drainage area. WSP 1937: 1948(M), 1949-51(P), 1952(M), 1954(M), 1955, 1956-57(P), 1958-60.

GAGE.--Water-stage recorder. Concrete control since February 27, 1963. Elevation of gage is 3,117.42 ft above mean sea level (Hawaii County Department of Water Supply benchmark).

REMARKS.--Records computed by Gary Sanchez. Records good except for estimated daily discharges, which are poor. Diversion upstream for livestock and domestic use.

AVERAGE DISCHARGE.--46 years (water years 1957-2002), 1.75 ft³/s (1,270 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 822 ft³/s, November 18, 1979, gage height, 4.56 ft, from rating curve extended above 11 ft³/s on basis of slope-conveyance study; maximum gage height, 4.65 ft, October 23, 1957; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 78 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 26	0045	*439	*3.87	No other peak greater than base discharge.			

Minimum discharge, 0.31 ft³/s, May 30, 31, June 1, gage height, 0.92 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	1.5	5.5	3.1	0.84	2.6	e0.98	e0.49	e0.75	0.34	21	3.7	0.87
2	2.0	3.4	1.7	0.65	1.3	e0.85	e0.51	e0.85	1.9	4.6	1.2	0.85
3	0.79	1.7	1.3	6.0	0.81	e1.6	e0.53	e1.2	0.91	7.3	1.2	0.86
4	0.75	1.9	1.4	0.88	0.69	e2.6	e0.47	e2.4	0.49	7.3	5.5	0.90
5	0.78	9.4	1.3	0.69	0.62	e12	e0.44	e0.78	0.54	2.0	2.4	1.2
6	0.69	4.5	0.76	0.61	0.59	e4.4	e0.40	e0.85	0.64	1.9	1.7	0.80
7	2.7	1.8	0.69	0.61	0.57	e1.2	e0.40	e1.1	0.56	2.4	2.8	6.8
8	2.0	17	1.8	0.56	0.72	e0.93	e0.38	e1.8	0.64	6.2	1.4	2.6
9	3.1	10	5.7	0.52	1.3	e1.1	e0.36	e1.0	0.43	24	1.2	3.0
10	3.6	4.7	1.9	0.80	0.71	e1.0	e0.35	0.58	0.82	13	1.2	1.9
11	5.4	2.7	1.8	0.68	1.7	e0.75	e0.35	0.51	0.79	8.3	1.1	1.00
12	1.8	1.3	10	0.55	1.6	e0.65	e0.35	0.54	0.55	3.4	0.98	0.88
13	1.8	1.0	8.7	0.51	3.3	e0.58	e0.35	0.66	0.81	1.8	0.87	0.82
14	1.1	0.95	3.4	0.50	3.3	e0.56	e0.35	0.76	0.95	1.2	0.80	0.82
15	0.83	1.1	1.8	0.47	1.4	e0.58	e0.33	0.64	2.9	6.4	0.77	3.1
16	0.75	0.86	1.4	0.50	0.90	e2.7	e0.33	1.4	0.78	6.7	0.73	1.4
17	0.83	0.77	5.6	4.1	0.81	e10	e0.69	1.8	1.4	5.4	1.9	3.0
18	0.90	0.71	13	6.1	0.65	e16	e0.71	4.0	5.0	8.9	2.4	1.2
19	0.81	0.67	3.2	8.0	0.59	e7.6	e0.44	4.2	2.8	2.6	3.2	0.86
20	1.0	0.65	3.1	1.9	1.5	e1.7	e0.40	1.5	1.3	3.0	2.9	0.74
21	1.6	0.61	2.2	2.5	0.85	e1.6	e0.38	0.82	0.83	13	1.3	0.67
22	1.2	0.59	1.1	1.2	0.62	e0.98	e0.51	0.63	3.6	24	0.93	0.62
23	0.71	0.59	0.88	0.80	0.75	e0.78	e0.67	0.53	2.2	5.5	3.0	0.59
24	0.61	0.57	0.77	0.69	30	e0.67	e0.82	0.48	1.1	3.1	5.1	0.56
25	0.57	0.55	0.70	0.61	32	e0.62	e0.82	0.43	1.6	10	2.0	0.52
26	0.52	0.59	0.67	6.9	e47	e0.60	e0.49	0.41	21	7.3	1.0	0.50
27	0.60	3.8	0.66	3.2	e3.3	e0.56	e0.56	0.39	14	3.3	1.6	0.50
28	17	4.3	0.62	0.90	e1.3	e0.56	e1.5	0.38	9.2	2.3	2.9	0.48
29	9.0	1.1	0.60	2.6	---	e0.53	e2.9	0.36	2.3	1.8	3.0	0.47
30	12	1.5	1.1	1.2	---	e0.49	e1.5	0.34	6.2	1.2	1.9	0.48
31	2.7	---	2.7	5.2	---	e0.47	---	0.34	---	1.3	1.0	---
TOTAL	79.64	84.81	83.65	61.27	141.48	75.64	18.78	32.43	86.58	210.2	61.68	38.99
MEAN	2.57	2.83	2.70	1.98	5.05	2.44	0.63	1.05	2.89	6.78	1.99	1.30
MAX	17	17	13	8.0	47	16	2.9	4.2	21	24	5.5	6.8
MIN	0.52	0.55	0.60	0.47	0.57	0.47	0.33	0.34	0.34	1.2	0.73	0.47
AC-FT	158	168	166	122	281	150	37	64	172	417	122	77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2002, BY WATER YEAR (WY)

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002													
MEAN	1.02	1.63	1.81	1.75	1.48	2.18	2.66	1.45	1.53	2.32	2.16	0.97	3.86	8.31	7.01	11.9	6.69	15.7	10.5	4.89	7.07	6.78	8.13	5.93	1.984	1.980	1.960	1.979	1.960	1.980	1.986	1.998	1.998	2.002	1.958	1.992	0.007	0.000	0.071	0.046	0.089	0.10	0.20	0.20	0.16	0.15	0.12	0.000	1.985	1.963	1.996	1.962	1.983	1.983	1.981	1.966	1.981	1.961	1.965	1.965

HAWAII, ISLAND OF HAWAII

16759000 HAUANI GULCH NEAR KAMUELA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1956 - 2002	
ANNUAL TOTAL	654.36		975.15		1.75	
ANNUAL MEAN	1.79		2.67		3.66	
HIGHEST ANNUAL MEAN					0.48	
LOWEST ANNUAL MEAN					1998	
HIGHEST DAILY MEAN	29	Feb 15	47	Feb 26	108	Mar 24 1980
LOWEST DAILY MEAN	0.11	Jan 10	0.33	Apr 15	0.00	Jul 29 1961
ANNUAL SEVEN-DAY MINIMUM	0.12	Jan 7	0.34	Apr 10	0.00	Sep 8 1961
ANNUAL RUNOFF (AC-FT)	1300		1930		1270	
10 PERCENT EXCEEDS	4.5		6.2		3.9	
50 PERCENT EXCEEDS	0.72		1.1		0.54	
90 PERCENT EXCEEDS	0.17		0.50		0.09	

e Estimated

