

HAWAII, ISLAND OF HAWAII

16759000 HAUANI GULCH NEAR KAMUELA

LOCATION.--Lat 20° 02'28", long 155° 39'05", Old Hawaiian Datum, 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 Dale Nishimoto. Records good. Diversion upstream for livestock and domestic use.

AVERAGE DISCHARGE.--47 years (water years 1957-2003), 1.74 ft³/s (1,260 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 21	1100	*150	*2.97		Sep 1	0400	107	2.74

Minimum discharge, 0.09 ft³/s, Apr. 7, 8, gage height, 0.83 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	0.35	0.32	0.27	0.15	0.90	0.19	0.31	0.25	1.3	0.97	39
2	0.43	0.33	0.23	0.25	0.21	0.68	0.19	0.27	0.24	1.7	0.71	4.5
3	0.43	0.29	0.52	0.23	0.16	0.51	0.15	0.26	0.23	1.9	0.63	1.4
4	0.43	0.29	2.5	0.23	0.14	0.42	0.13	0.25	0.22	1.3	0.50	0.92
5	1.4	0.29	0.59	0.24	0.13	0.36	0.11	0.22	0.20	0.66	1.2	0.83
6	1.1	0.28	0.36	0.20	0.13	0.33	0.11	0.20	0.18	0.89	0.96	1.5
7	0.77	0.26	9.7	0.19	0.13	0.26	0.11	0.17	0.19	2.0	0.71	1.1
8	0.58	0.25	1.9	0.19	0.12	0.25	0.13	0.17	0.18	5.6	0.57	0.74
9	0.51	0.24	0.69	0.19	0.11	0.28	0.18	0.50	0.16	14	1.1	0.64
10	0.59	0.23	7.9	0.18	0.11	0.23	0.28	2.0	0.17	3.1	2.1	0.74
11	0.53	0.22	1.8	0.53	0.16	0.20	0.22	0.94	0.20	1.4	0.95	0.58
12	0.64	0.22	0.70	0.86	0.15	0.19	0.19	0.73	1.4	17	0.75	0.52
13	0.52	0.22	0.52	0.40	0.12	0.19	0.82	1.2	1.2	9.5	5.0	0.73
14	0.45	0.24	0.44	0.26	5.8	0.18	0.44	1.6	0.45	2.0	3.5	0.78
15	0.52	0.53	0.37	1.1	9.4	0.16	0.28	2.1	0.37	3.3	2.3	0.73
16	0.48	0.48	0.35	0.96	1.9	0.15	0.94	0.68	0.69	2.0	1.5	0.59
17	0.66	0.31	0.34	0.37	0.66	0.14	0.76	1.9	1.2	1.00	0.90	0.50
18	0.49	0.26	0.30	0.27	0.60	0.14	0.73	1.2	6.6	0.79	0.79	0.46
19	0.43	0.24	0.28	0.23	1.8	0.14	0.40	1.1	3.9	1.7	0.75	0.41
20	0.41	0.22	0.26	4.5	1.7	0.14	1.9	4.0	1.5	3.3	1.3	0.39
21	0.37	0.21	0.25	0.86	22	0.16	1.1	0.90	1.2	2.0	0.95	0.39
22	0.39	0.19	0.43	0.42	1.8	0.19	5.0	1.5	0.88	0.90	0.76	0.39
23	0.41	0.19	0.82	0.31	1.1	0.17	2.9	2.9	0.82	0.73	1.1	0.37
24	0.44	0.18	0.73	0.26	2.3	0.14	1.3	1.8	3.0	0.67	1.0	0.35
25	0.37	0.16	0.55	0.26	0.81	0.13	1.2	1.3	4.5	0.74	0.66	0.33
26	0.35	0.16	0.38	0.26	0.66	0.12	2.4	0.62	0.97	0.61	0.66	0.32
27	0.33	0.16	0.93	0.23	0.62	0.11	2.3	0.47	0.62	0.54	0.85	0.31
28	0.31	0.16	0.66	0.20	4.0	0.18	0.68	0.38	0.50	0.49	0.75	0.31
29	0.34	0.84	0.41	0.19	---	0.25	0.46	0.34	0.47	0.47	0.68	0.30
30	0.36	0.75	0.33	0.17	---	0.32	0.37	0.30	1.0	0.55	2.3	0.28
31	0.36	---	0.29	0.16	---	0.22	---	0.27	---	0.54	7.1	---
TOTAL	15.85	8.75	35.85	14.97	56.97	7.84	25.97	30.58	33.49	82.68	44.00	60.41
MEAN	0.51	0.29	1.16	0.48	2.03	0.25	0.87	0.99	1.12	2.67	1.42	2.01
MAX	1.4	0.84	9.7	4.5	22	0.90	5.0	4.0	6.6	17	7.1	39
MIN	0.31	0.16	0.23	0.16	0.11	0.11	0.11	0.17	0.16	0.47	0.50	0.28
AC-FT	31	17	71	30	113	16	52	61	66	164	87	120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

MEAN	1.01	1.60	1.80	1.72	1.49	2.14	2.62	1.44	1.53	2.32	2.15	0.99
(WY)	1984	1980	1960	1979	1960	1980	1986	1998	1998	2002	1958	1992
MIN	0.008	0.000	0.071	0.046	0.089	0.10	0.20	0.20	0.16	0.15	0.12	0.000
(WY)	1985	1963	1996	1962	1983	1983	1981	1966	1981	1961	1965	1965

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200

16759000 HAUANI GULCH NEAR KAMUELA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1956 - 2003
ANNUAL TOTAL	787.50	417.36	
ANNUAL MEAN	2.16	1.14	
HIGHEST ANNUAL MEAN			1.74
LOWEST ANNUAL MEAN			3.66
HIGHEST DAILY MEAN	47	Feb 26	0.48
LOWEST DAILY MEAN	0.16	Nov 25	1981
ANNUAL SEVEN-DAY MINIMUM	0.17	Nov 22	
ANNUAL RUNOFF (AC-FT)	1,560	828	1,260
10 PERCENT EXCEEDS	5.1	2.0	3.9
50 PERCENT EXCEEDS	0.78	0.47	0.54
90 PERCENT EXCEEDS	0.33	0.17	0.09

