

16345000 OPAEULA STREAM NEAR WAHIAWA

LOCATION.--Lat 21°33'55", long 158°00'10", Old Hawaiian Datum, Hydrologic Unit 20060000, on left bank, 4.3 mi northeast of Leilehua High School in Wahiaawa, and 8.1 mi east of Waialua School.

DRAINAGE AREA.--2.98 mi².

PERIOD OF RECORD.--August 1959 to current year.

REVISED RECORDS.--WSP 1937: 1960.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,120 ft above mean sea level (from topographic map).

REMARKS.--Records computed by H.A. Jeppesen. Records good. No diversion upstream of station.

AVERAGE DISCHARGE.--45 years (water years 1960-2004), 13.5 ft³/s (9,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s, July 17, 1974, gage height, 11.94 ft from rating curve extended above 110 ft³/s on basis of slope-area measurements at gage heights 6.74 ft, 6.98 ft, and 10.12 ft; maximum gage height, 13.20 ft, November 20, 1990; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 29	1630	*1,860	*7.93
Dec 7	1945	1,590	7.38
Feb 7	0600	1,330	6.86
Aug 4	0645	1,670	7.54

Minimum discharge, 0.23 ft³/s, Nov. 2, gage height, 1.20 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	0.56	0.31	62	48	15	5.8	12	4.8	5.8	7.5	1.2	2.7
2	0.53	0.27	46	155	9.2	168	22	4.5	4.3	5.9	19	2.1
3	0.88	0.58	36	75	5.1	15	54	4.2	6.4	5.6	22	2.4
4	0.76	2.0	132	11	9.8	15	39	4.7	4.0	4.1	370	1.8
5	0.61	1.2	188	6.9	30	10	13	9.0	7.1	4.0	22	1.9
6	0.47	6.4	43	5.4	13	5.8	9.3	17	3.9	5.0	6.8	3.3
7	0.43	9.5	241	4.6	175	7.2	7.9	112	3.3	5.1	28	4.2
8	0.59	25	75	4.2	112	42	6.9	9.6	12	4.3	8.2	2.1
9	18	4.3	44	3.8	11	10	8.1	5.8	22	49	5.5	1.5
10	4.1	2.0	43	3.3	7.7	6.9	76	8.6	25	6.0	5.1	1.6
11	1.9	1.3	38	2.9	6.2	7.2	18	37	25	7.2	14	3.8
12	17	1.2	14	2.9	5.3	11	50	35	13	6.1	14	4.8
13	6.0	1.2	15	2.9	4.8	10	22	7.0	9.9	4.9	6.9	4.5
14	13	6.8	14	13	4.3	50	10	5.7	7.0	4.2	6.0	2.3
15	8.9	6.4	8.8	9.5	4.0	9.0	10	34	5.2	4.9	5.3	5.2
16	14	4.9	7.2	3.5	3.8	5.4	45	19	4.6	3.6	3.9	2.4
17	4.0	6.3	11	2.4	3.5	4.6	11	7.4	38	2.8	3.7	1.8
18	2.8	9.9	7.3	2.0	2.9	4.3	8.0	5.3	8.1	2.4	3.6	2.4
19	2.4	16	5.4	1.9	2.5	3.7	28	4.7	7.9	2.4	2.9	7.1
20	1.6	6.3	4.8	2.3	2.3	25	15	4.3	7.3	2.2	2.3	6.0
21	1.2	3.2	4.4	3.8	2.1	265	28	3.8	6.8	1.9	4.9	3.0
22	1.00	3.2	4.1	26	1.9	122	9.1	3.9	26	1.6	7.4	3.3
23	0.92	4.4	3.7	14	1.8	116	9.5	3.3	12	1.5	3.9	3.8
24	1.1	13	3.7	6.3	1.8	34	7.1	4.2	7.8	1.4	3.5	5.7
25	1.1	5.2	3.6	31	1.6	39	5.9	3.5	5.1	1.3	4.1	7.4
26	1.0	3.4	3.1	61	4.7	35	110	3.7	4.4	1.4	3.9	5.8
27	0.86	2.4	2.7	12	260	19	16	3.6	4.3	1.8	4.8	3.0
28	0.61	1.8	4.9	5.8	33	14	7.5	7.0	4.4	2.8	4.3	2.1
29	0.47	400	4.8	12	7.7	97	6.0	6.9	12	4.7	7.9	2.0
30	0.40	242	8.5	39	---	116	5.3	4.7	5.7	2.0	4.9	3.2
31	0.35	---	52	9.6	---	20	---	6.4	---	1.4	3.6	---
TOTAL	107.54	790.46	1,131.0	581.0	742.0	1,292.9	669.6	390.6	308.3	159.0	603.6	103.2
MEAN	3.47	26.3	36.5	18.7	25.6	41.7	22.3	12.6	10.3	5.13	19.5	3.44
MAX	18	400	241	155	260	265	110	112	38	49	370	7.4
MIN	0.35	0.27	2.7	1.9	1.6	3.7	5.3	3.3	3.3	1.3	1.2	1.5
AC-FT	213	1,570	2,240	1,150	1,470	2,560	1,330	775	612	315	1,200	205

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	10.7	18.3	15.7	16.1	13.7	19.9	20.0	12.3	7.45	11.5	8.66	7.41
MAX	30.7	71.9	52.6	54.1	66.9	90.0	75.7	45.7	24.9	29.3	31.0	24.9
(WY)	(1982)	(1991)	(1988)	(1988)	(1969)	(1982)	(1989)	(2002)	(1978)	(1989)	(1982)	(1994)
MIN	0.06	2.90	1.29	0.37	0.32	0.35	1.57	1.37	1.59	0.95	1.51	0.52
(WY)	(1985)	(1963)	(1977)	(1977)	(1978)	(1983)	(1966)	(2000)	(2000)	(1971)	(1984)	(1975)

HAWAII, ISLAND OF OAHU

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	4,025.62		6,879.20			
ANNUAL MEAN	11.0		18.8		13.5	
HIGHEST ANNUAL MEAN					29.7	1982
LOWEST ANNUAL MEAN					7.12	1998
HIGHEST DAILY MEAN	400	Nov 29	400	Nov 29	845	May 6, 2002
LOWEST DAILY MEAN	0.15	Jun 3	0.27	Nov 2	0.00	Jan 24, 1977
ANNUAL SEVEN-DAY MINIMUM	0.21	May 29	0.43	Oct 28	0.00	Oct 24, 1984
ANNUAL RUNOFF (AC-FT)	7,980		13,640		9,760	
10 PERCENT EXCEEDS	17		39		28	
50 PERCENT EXCEEDS	2.2		5.7		4.5	
90 PERCENT EXCEEDS	0.42		1.6		0.93	