

## HAWAII, ISLAND OF KAUAI

## 16071500 LEFT BRANCH OPAEKAA STREAM NEAR KAPAA

LOCATION.--Lat 22° 04'44", long 159° 23'55", Old Hawaiian Datum, Hydrologic Unit 20070000, on left bank 0.4 mi upstream from mouth, 0.6 mi northeast of Wailua Reservoir, and 4.9 mi west of Kapaa.

DRAINAGE AREA.--0.65 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1960 to current year. Prior to July 1960, published as Left Branch Opaikaa Stream near Kapaa.

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 458.4 ft above mean sea level (by stadia survey).

REMARKS.--Records computed by Roy Taogoshi. Records good. Recording rain gage located at station.

AVERAGE DISCHARGE.--43 years (water years 1961-2003), 2.51 ft<sup>3</sup>/s (1,820 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft<sup>3</sup>/s, December 14, 1991, gage height, 6.60 ft, from rating curve extended above 415 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 5.01 ft; minimum, 0.09 ft<sup>3</sup>/s, September 27-30, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 17	1345	*98	*2.59			96	2.57

Minimum discharge, 0.46 ft<sup>3</sup>/s, on several days, gage height, 0.76 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	0.69	0.76	0.80	0.68	0.64	1.2	3.6	2.1	1.4	1.2	0.76	0.50
2	0.69	0.75	0.82	0.65	0.60	0.92	24	2.1	1.4	1.2	0.70	0.50
3	2.0	0.78	0.78	0.64	0.56	0.87	6.9	2.0	1.3	1.2	0.73	0.50
4	0.88	0.75	0.75	0.64	0.54	0.81	13	2.1	2.4	1.1	0.72	0.50
5	0.82	0.72	0.75	0.60	0.51	0.80	6.8	1.8	2.2	1.1	0.69	0.53
6	0.75	0.69	0.92	0.59	0.50	1.8	5.8	1.7	1.7	1.1	0.68	0.49
7	0.73	0.69	0.86	0.59	0.48	1.3	4.8	4.0	1.9	1.0	0.66	0.64
8	0.73	0.69	0.75	0.59	0.48	1.0	4.0	2.5	2.6	1.0	0.62	0.51
9	0.69	0.69	0.72	0.59	0.48	0.94	3.9	2.2	2.1	1.0	0.59	0.49
10	0.69	0.65	0.69	0.59	0.46	0.88	3.6	2.8	1.8	1.0	0.59	0.46
11	0.70	0.72	0.69	0.59	0.46	0.87	5.4	2.3	1.6	1.0	0.60	1.1
12	0.69	0.64	0.81	0.54	0.46	0.86	8.5	2.1	1.6	0.98	0.59	0.64
13	0.69	0.88	0.75	0.54	7.7	0.82	4.5	2.5	1.5	0.93	0.64	0.88
14	0.65	1.1	0.72	0.54	7.9	0.80	4.0	2.5	1.6	0.92	0.63	0.69
15	0.61	3.9	0.69	0.57	2.4	0.97	3.9	2.3	1.5	0.88	0.58	0.68
16	0.59	1.6	0.69	0.54	1.4	1.7	3.7	2.2	1.5	0.89	0.54	0.60
17	12	1.5	0.69	0.53	1.1	1.1	3.5	2.1	1.5	0.87	0.56	0.65
18	2.0	1.4	0.73	0.54	0.99	0.95	3.1	3.4	1.4	0.86	0.54	0.60
19	1.3	1.2	0.69	0.57	0.93	0.93	2.9	2.4	1.4	0.80	0.53	0.68
20	1.1	1.1	0.69	0.62	0.87	0.91	2.7	2.2	1.4	0.84	0.52	0.62
21	1.0	1.0	0.68	0.53	0.86	0.88	2.7	2.1	1.3	0.89	0.65	0.56
22	0.93	0.94	0.69	0.53	0.85	0.87	3.1	1.9	1.3	0.79	0.57	0.54
23	0.91	0.93	0.65	0.51	0.80	0.87	2.7	1.9	1.7	0.77	0.93	0.51
24	0.87	0.92	0.65	0.88	0.94	0.83	2.7	1.8	1.4	0.75	0.60	0.51
25	0.89	0.92	0.64	0.66	0.80	0.81	2.7	1.8	1.3	0.79	0.54	0.55
26	0.85	0.87	0.67	0.56	0.82	0.81	2.6	1.7	1.3	1.3	0.54	0.50
27	0.81	0.87	0.92	0.54	0.93	0.85	2.4	1.6	1.3	1.1	0.54	0.52
28	0.80	0.93	1.1	0.54	1.4	0.80	2.3	1.5	1.2	0.81	0.50	0.50
29	0.84	0.91	0.83	0.54	---	0.80	2.3	1.5	1.2	0.75	0.51	0.47
30	0.82	0.83	0.75	0.54	---	4.1	2.1	1.5	1.2	0.75	0.65	0.46
31	0.83	---	0.69	0.70	---	3.9	---	1.4	---	0.74	0.54	---
TOTAL	38.55	30.33	23.26	18.27	36.86	35.95	144.2	66.0	47.0	29.31	19.04	17.38
MEAN	1.24	1.01	0.75	0.59	1.32	1.16	4.81	2.13	1.57	0.95	0.61	0.58
MAX	12	3.9	1.1	0.88	7.9	4.1	24	4.0	2.6	1.3	0.93	1.1
MIN	0.59	0.64	0.64	0.51	0.46	0.80	2.1	1.4	1.2	0.74	0.50	0.46
AC-FT	76	60	46	36	73	71	286	131	93	58	38	34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

MEAN	2.13	3.71	3.61	3.10	2.50	2.75	3.11	2.73	1.78	1.64	1.57	1.49
(WY)	8.29	14.3	11.0	12.4	10.8	14.7	11.8	9.66	5.68	3.80	4.24	4.67
(1961)	(1966)	(1992)	(1989)	(1994)	(1982)	(1982)	(1965)	(1980)	(1989)	(1982)	(1980)	
MIN	0.42	0.59	0.56	0.58	0.50	0.50	0.73	0.62	0.29	0.59	0.36	0.38
(WY)	(1985)	(1964)	(1963)	(1977)	(1986)	(1978)	(1998)	(1966)	(1968)	(1984)	(1975)	

## 16071500 LEFT BRANCH OPAEKAA STREAM NEAR KAPAA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1960 - 2003
ANNUAL TOTAL	804.99	506.15	
ANNUAL MEAN	2.21	1.39	
HIGHEST ANNUAL MEAN			2.51
LOWEST ANNUAL MEAN			0.92
HIGHEST DAILY MEAN	40	Mar 25	5.72
LOWEST DAILY MEAN	0.59	Oct 16	0.92
ANNUAL SEVEN-DAY MINIMUM	0.66	Oct 10	1982
ANNUAL RUNOFF (AC-FT)	1,600	1,000	1984
10 PERCENT EXCEEDS	4.1	2.5	Dec 14, 1991
50 PERCENT EXCEEDS	1.2	0.85	Sep 28, 1968
90 PERCENT EXCEEDS	0.73	0.54	Jun 6, 1968
			1,820
			4.3
			1.6
			0.67

