

HAWAII, ISLAND OF KAUAI

1

16114000 LIMAHULI STREAM NEAR WAINIHA

LOCATION.--Lat 22°13'15", long 159°34'48", Old Hawaiian Datum, Hydrologic Unit 20070000, on left bank 0.2 mi upstream from intersection with Kuhio Highway, and entrance to Haena State Park.

DRAINAGE AREA.--1.36 mi².

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorders and natural control. Elevation of gage is 200 ft above mean sea level, by altimeter.

REMARKS.--Records computed by Clayton Yoshida. Records fair. Limahuli Gardens diverts water through a 4-inch pipe upstream of station.

AVERAGE DISCHARGE.--6 years (water years 1999-2004), 7.70 ft³/s (5,580 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 985 ft³/s, December 11, 2000, gage height, 5.24 ft; minimum, 3.4 ft³/s, September 27-30, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

	Date	Time	Discharge (ft ³ /s)	Gage height (ft)		Date	Time	Discharge (ft ³ /s)	Gage height (ft)
	Mar 1	1845	373	3.40		Mar 13	0400	*468	*3.74

Minimum discharge, 3.5 ft³/s, on several days, gage height, 0.35 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	4.7	4.3	21	8.2	4.5	78	9.1	8.4	4.9	6.0	5.0	6.1
2	21	4.0	26	5.9	4.2	53	42	6.7	7.2	5.4	22	5.5
3	6.1	3.9	31	4.9	4.1	11	107	5.8	7.1	5.3	12	5.3
4	5.6	3.8	27	4.3	4.0	90	69	5.9	5.6	5.1	11	5.1
5	5.7	3.7	12	4.0	4.3	30	28	6.5	5.3	5.0	7.0	5.4
6	4.4	3.6	8.0	3.9	4.6	10	14	16	5.7	5.2	5.9	6.3
7	6.5	3.7	16	3.8	4.3	14	9.7	10	5.9	5.1	5.5	5.4
8	6.0	3.7	27	3.8	4.1	17	8.1	13	14	4.9	5.3	5.2
9	10	3.6	22	3.6	3.9	8.4	8.2	22	12	4.8	5.1	5.6
10	6.1	3.6	12	3.9	6.0	7.4	7.7	13	20	4.8	5.1	5.3
11	5.2	3.7	9.9	3.6	4.7	6.3	6.8	8.2	25	4.8	5.1	5.2
12	5.8	3.7	7.1	10	4.6	5.6	6.3	8.6	43	4.8	5.6	6.9
13	8.4	4.2	6.0	4.9	4.2	81	21	7.7	32	4.9	5.5	10
14	5.3	4.6	5.3	15	4.0	13	9.7	7.8	22	4.8	5.0	9.6
15	6.5	4.5	5.0	6.1	16	8.3	7.9	22	11	4.8	4.9	7.8
16	6.5	4.2	4.8	5.0	7.5	11	18	12	10	4.8	4.9	6.3
17	4.9	4.1	7.6	4.6	5.2	8.6	9.7	8.2	13	4.7	4.8	7.0
18	4.4	3.8	4.7	4.3	4.6	7.4	7.1	6.7	33	5.4	4.8	8.1
19	4.2	7.1	4.3	4.1	4.2	6.4	7.1	6.0	38	5.3	4.8	12
20	4.0	4.5	4.1	4.3	4.0	21	6.2	5.7	17	4.8	4.7	11
21	4.0	4.2	4.0	4.7	3.9	24	8.7	5.7	11	4.7	6.7	10
22	4.1	4.1	3.9	7.2	3.8	42	6.7	5.3	16	4.7	5.3	10
23	3.8	7.9	3.8	9.6	3.8	54	5.9	5.2	15	4.7	5.1	12
24	3.8	6.3	3.8	5.3	3.7	38	5.5	5.3	9.4	4.7	5.0	9.7
25	3.7	9.1	3.6	4.7	3.6	26	9.8	5.1	7.6	4.6	6.6	9.2
26	3.6	6.1	3.6	31	4.0	17	26	5.0	7.0	5.6	7.9	7.6
27	3.6	5.1	8.3	8.7	47	12	7.5	5.2	6.2	5.8	7.0	6.4
28	6.7	4.5	14	5.9	17	18	6.3	5.4	5.9	5.8	5.9	5.9
29	6.1	4.2	7.8	5.2	8.7	47	5.7	5.1	5.7	5.0	5.6	5.7
30	6.0	4.0	8.1	5.3	---	31	9.3	4.9	5.6	4.9	7.9	5.6
31	4.9	---	6.6	4.6	---	13	4.8	---	4.9	5.7	---	---
TOTAL	181.6	137.8	328.3	200.4	198.5	809.4	494.0	257.2	421.1	156.1	202.7	221.2
MEAN	5.86	4.59	10.6	6.46	6.84	26.1	16.5	8.30	14.0	5.04	6.54	7.37
MAX	21	9.1	31	31	47	90	107	22	43	6.0	22	12
MIN	3.6	3.6	3.6	3.6	3.6	5.6	5.5	4.8	4.9	4.6	4.7	5.1
AC-FT	360	273	651	397	394	1,610	980	510	835	310	402	439

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	5.49	8.01	10.4	8.12	9.29	9.71	11.7	6.38	6.66	5.67	5.95	5.08
MAX	6.04	10.4	14.5	11.2	14.2	26.1	16.5	9.14	14.0	9.12	7.72	7.37
(WY)	(1999)	(2003)	(2001)	(2000)	(2003)	(2004)	(2000)	(2002)	(2004)	(1999)	(2001)	(2004)
MIN	4.56	4.59	6.16	4.34	4.64	4.22	5.31	4.44	3.80	3.90	3.82	3.55
(WY)	(2003)	(2004)	(2003)	(2001)	(2000)	(2001)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1999 - 2004
ANNUAL TOTAL	2,452.8	3,608.3	
ANNUAL MEAN	6.72	9.86	7.70
HIGHEST ANNUAL MEAN			9.86
LOWEST ANNUAL MEAN			6.65
HIGHEST DAILY MEAN	130	Feb 13	183 Dec 11, 2000
LOWEST DAILY MEAN	3.4	Sep 27	3.4 Sep 27, 2003
ANNUAL SEVEN-DAY MINIMUM	3.4	Sep 24	3.4 Sep 24, 2003
ANNUAL RUNOFF (AC-FT)	4,870	7,160	5,580
10 PERCENT EXCEEDS	10	21	12
50 PERCENT EXCEEDS	4.2	5.9	5.4
90 PERCENT EXCEEDS	3.6	4.0	3.9