

HAWAII, ISLAND OF OAHU

16216000 WAIWAIA STREAM NEAR PEARL CITY

LOCATION.--Lat $21^{\circ} 23'57''$, long $157^{\circ} 58'51''$, Old Hawaiian Datum, Hydrologic Unit 20060000, on left bank 100 ft upstream from lower bridge on Highway 90, 0.6 mi northwest of Pearl City, and 2.0 mi northeast of Waipahu.

DRAINAGE AREA.--26.4 mi².

PERIOD OF RECORD.--June 1952 to current year.

REVISED RECORDS.--WSP 1569: Drainage area, WDR HI-90-1: 1982-89 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.81 ft above mean sea level (State of Hawaii benchmark).

REMARKS.--Records computed by V.E. Kunishige. Records poor. Occasional small irrigation diversion and return flow upstream.

AVERAGE DISCHARGE.--51 years (water years 1953-2003), 32.4 ft³/s (23,440 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,900 ft³/s, October 28, 1981, gage height, 22.46 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurements at gage heights 17.1 ft and 20.56 ft; minimum, e0.75 ft³/s, July 15, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft³/s and maximum (*):

	Date	Time	Discharge (ft ³ /s)	Gage height (ft)		Date	Time	Discharge (ft ³ /s)	Gage height (ft)
	Oct 15	0400	2,360	10.44		Sep 11	0615	3,340	11.77
	Apr 10	2130	*4,220	*12.78					

Minimum daily discharge, 0.75 ft³/s, July 15 (estimated)

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	1.4	2.4	1.6	1.4	17	e2.4	9.6	1.7	1.5	e1.2	1.7	0.95
2	1.4	2.4	1.6	1.4	4.7	e2.0	5.8	1.6	1.5	e1.1	1.5	1.3
3	1.4	2.4	1.5	1.4	2.3	e1.6	4.1	1.6	1.5	e1.2	1.5	1.0
4	1.4	2.3	1.5	1.5	2.0	e1.7	6.3	1.6	1.5	e1.1	1.4	1.1
5	1.4	2.3	1.6	1.4	1.8	e1.8	5.4	1.6	1.5	e1.1	1.4	1.1
6	1.4	2.3	1.6	1.4	1.8	e18	9.6	1.6	2.0	e1.1	1.4	1.1
7	1.4	2.3	1.6	1.4	1.8	e9.3	8.3	1.5	2.5	e1.1	1.3	1.1
8	1.4	2.3	1.5	1.4	1.8	e4.4	4.6	1.5	21	e0.99	1.3	1.1
9	1.4	2.3	1.5	1.4	1.8	e2.1	13	1.5	2.4	e1.1	1.3	1.0
10	1.4	2.3	1.5	1.4	1.7	e1.7	396	1.5	e2.0	e1.1	1.2	1.1
11	1.4	2.3	1.5	1.4	1.7	e1.6	99	1.5	e1.7	e0.82	1.3	688
12	1.4	2.3	1.5	1.4	1.7	e1.5	38	1.5	e1.5	e0.96	1.3	44
13	1.4	21	2.2	1.4	1.7	e1.5	22	1.5	e1.3	e1.1	1.3	46
14	6.2	4.5	1.8	1.5	296	e1.5	9.1	1.5	e1.4	e0.94	1.3	36
15	366	48	1.6	2.4	34	e1.4	5.4	1.5	e1.4	e0.75	1.3	12
16	6.3	75	1.4	1.4	8.2	e91	3.7	1.5	e1.3	e0.93	1.3	6.9
17	8.9	15	1.4	1.4	5.4	31	4.3	1.5	e1.2	e0.96	1.2	4.2
18	4.5	5.9	1.4	1.4	e3.7	5.9	9.1	1.5	e1.1	e0.96	1.2	e1.1
19	2.8	2.9	1.4	1.6	e2.7	2.6	4.5	1.5	e1.1	e0.97	1.2	e0.92
20	2.5	1.9	1.4	1.8	e2.3	2.1	13	1.5	e1.1	e0.97	1.2	e1.0
21	2.5	1.7	1.4	1.4	e2.0	2.0	15	1.5	1.1	e1.3	1.1	e0.95
22	2.5	1.7	1.4	1.4	e2.2	2.0	12	1.5	1.1	e1.0	1.1	e0.95
23	2.5	1.6	1.4	1.4	e2.9	2.0	11	1.5	1.2	e0.95	1.1	e1.1
24	2.5	1.6	1.4	3.3	e2.0	1.9	5.8	1.5	1.1	e0.93	1.1	e1.0
25	2.4	1.6	1.4	1.4	e2.3	1.9	4.3	1.5	1.1	59	1.1	e0.97
26	2.4	2.1	1.4	1.5	e3.0	1.9	3.1	1.5	1.1	233	1.1	e0.98
27	2.4	1.6	1.4	1.5	e3.7	30	e2.0	1.5	1.1	23	1.1	e0.94
28	2.4	1.5	1.4	1.5	e2.8	12	e1.8	1.5	1.1	13	1.1	e0.91
29	2.4	2.0	1.4	1.4	---	56	e1.7	1.5	e1.9	10	1.1	e0.95
30	2.4	2.2	1.4	1.4	---	49	e1.6	1.5	e1.8	3.1	1.1	e0.93
31	2.4	---	1.4	88	---	23	---	1.5	---	1.9	1.0	---
TOTAL	442.2	219.7	46.5	134.0	415.0	366.8	729.1	47.2	63.1	367.63	38.6	860.65
MEAN	14.3	7.32	1.50	4.32	14.8	11.8	24.3	1.52	2.10	11.9	1.25	28.7
MAX	366	75	2.2	88	296	91	396	1.7	21	233	1.7	688
MIN	1.4	1.5	1.4	1.4	1.7	1.4	1.6	1.5	1.1	0.75	1.0	0.91
AC-FT	877	436	92	266	823	728	1,450	94	125	729	77	1,710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

MEAN	27.6	51.4	42.3	44.5	35.5	49.4	39.3	23.7	14.6	25.4	20.2	14.0
(WY)	(1967)	(1997)	(1988)	(1969)	(1955)	(1980)	(1974)	(1965)	(1987)	(1970)	(1982)	(1992)
MAX	131	295	351	199	208	336	241	131	72.9	149	128	104
(WY)	(1985)	(1990)	(2003)	(2001)	(1986)	(2000)	(1992)	(2000)	(1984)	(1970)	(1982)	(1984)
MIN	1.55	2.54	1.50	1.39	1.66	1.43	1.75	1.44	1.43	1.40	1.25	1.28
(WY)	(1985)	(1990)	(2003)	(2001)	(1986)	(2000)	(1992)	(2000)	(1984)	(2003)	(1984)	(1984)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1952 - 2003
ANNUAL TOTAL	8,699.4	3,730.48	
ANNUAL MEAN	23.8	10.2	
HIGHEST ANNUAL MEAN			32.4
LOWEST ANNUAL MEAN			80.8
HIGHEST DAILY MEAN	2,380	May 6	7.56
LOWEST DAILY MEAN	1.1	Jun 28	1982
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 12	1984
ANNUAL RUNOFF (AC-FT)	17,260		5,150
10 PERCENT EXCEEDS	12		Mar 24, 1994
50 PERCENT EXCEEDS	1.8		Jul 15, 2003
90 PERCENT EXCEEDS	1.2		Jul 11, 2003
		7,400	23,440
		10	46
		1.5	6.1
		1.1	1.8

e Estimated

