

16501200 OHEO GULCH AT DAM NEAR KIPAHULU

LOCATION.--Lat 20°40'17", long 156°03'17", Old Hawaiian Datum, Hydrologic Unit 20020000, on right bank 31 ft. upstream from dam, 1,000 ft. downstream from the confluence of Palikea and Pipiwai Streams, 0.8 mi. upstream from mouth, and 1.0 mi. north from Kipahulu Church.

DRAINAGE AREA.--8.06 mi².

PERIOD OF RECORD.--July 1988 to September 1997. Oct. 2001 to Sept 2002 (peak discharge and discharge measurements only), Oct. 2002 to current year.

REVISED RECORDS.--WDR HI-94-1: 1989-93 (P).

GAGE.--Water-stage recorder. Elevation of the gage is 420 ft. above mean sea level (from topographic map).

REMARKS.--Records computed by Roy Taogoshi. Records fair. No diversions upstream of gage.

AVERAGE DISCHARGE.--11 years (water years 1989-97, 2003-2004), 53.3 ft³/s (38,650 acre ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s, September 18, 1994 from rating curve extended on the basis of flow over dam computation; no flow, on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,680 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 28	2130	6,660	8.68	Mar 22	0815	5,380	7.95
Dec 6	0830	2,990	6.30	Mar 26	1615	3,130	6.41
Feb 27	2315	3,690	6.84	Aug 3	1215	*6,940	*8.83

Minimum discharge, 0.42 ft³/s, Sept. 13, gage height, 0.71 ft.

REVISIONS.--Peak discharge and annual maximum (*) for water years 2002 and 2003 have been revised, as shown in the following table. These figures supercede those published reports for 2002 and 2003.

Water Year	Date	Discharge (ft ³ /s)	Gage Height (ft.)
2002	Oct 24, 2001	*5,510	*8.03
	Nov 27, 2001	3,580	6.76
	May 13, 2002	4,560	7.44
2003	Oct 15, 2002	*4,780	7.58
	April 10, 2003	4,580	7.45

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	1.2	7.6	100	135	77	4.7	40	2.0	11	13	1.1	1.3
2	1.3	44	25	98	11	3.2	9.5	1.9	8.8	85	71	1.1
3	1.0	46	18	964	52	4.2	6.9	1.7	3.9	13	793	0.95
4	0.94	167	123	122	163	28	4.4	108	3.7	6.7	153	0.77
5	0.81	126	442	17	32	56	3.6	131	3.3	3.9	7.3	0.63
6	0.95	92	484	7.5	124	7.8	3.0	69	3.6	2.4	8.7	0.70
7	3.0	49	62	4.5	214	4.5	2.7	10	8.0	1.8	68	0.67
8	33	11	126	3.4	41	40	2.7	4.2	32	1.9	38	0.68
9	22	5.0	120	e3.0	8.2	7.3	25	2.5	7.3	2.3	10	0.77
10	3.1	93	518	2.5	4.6	3.2	209	1.8	37	1.5	6.8	0.59
11	124	90	110	2.3	3.5	2.3	31	5.4	55	2.4	28	0.80
12	78	70	11	2.7	2.5	166	177	83	69	24	20	1.6
13	82	140	30	2.1	2.2	15	36	4.9	38	64	9.0	0.55
14	128	261	8.4	159	1.9	119	54	4.2	15	8.0	28	2.5
15	172	147	5.6	23	2.0	6.3	22	3.1	4.7	27	8.0	0.86
16	38	392	4.0	5.9	1.7	2.8	139	77	6.4	9.4	15	1.3
17	39	132	3.4	3.5	1.9	1.6	138	9.8	2.1	4.7	9.9	5.4
18	7.7	47	3.3	2.6	14	1.3	31	3.9	1.7	2.5	4.1	8.2
19	4.3	52	3.0	2.1	3.9	1.3	197	2.5	2.4	1.7	3.1	27
20	3.0	10	2.9	1.9	1.6	1.2	168	1.8	7.8	1.3	1.9	5.1
21	2.3	5.9	2.5	1.7	1.4	33	35	1.5	3.0	1.1	6.0	1.9
22	2.0	4.0	2.1	1.6	1.4	1,600	61	1.5	5.2	1.0	50	6.6
23	20	3.1	2.0	4.0	1.5	118	137	3.1	4.6	0.93	103	69
24	7.0	3.0	1.9	1.4	2.9	102	37	8.3	3.1	0.90	7.0	17
25	3.2	2.5	2.4	117	9.9	575	8.7	22	2.1	0.74	3.9	9.6
26	5.4	2.5	4.8	65	6.7	512	6.5	5.5	3.3	0.77	11	9.0
27	25	2.3	2.2	26	273	490	4.3	24	4.9	0.75	11	11
28	9.4	356	1.7	6.6	311	26	3.3	130	11	2.2	5.7	4.6
29	3.5	1,200	1.6	41	11	32	2.6	27	25	1.8	2.7	6.0
30	2.3	437	1.5	99	---	325	2.2	310	49	1.8	1.8	30
31	3.1	---	7.8	193	---	96	---	99	---	1.6	1.5	---
TOTAL	826.50	3,997.9	2,230.1	2,118.3	1,380.8	4,384.7	1,597.4	1,159.6	431.9	290.09	1,487.5	226.17
MEAN	26.7	133	71.9	68.3	47.6	141	53.2	37.4	14.4	9.36	48.0	7.54
MAX	172	1,200	518	964	311	1,600	209	310	69	85	793	69
MIN	0.81	2.3	1.5	1.4	1.4	1.2	2.2	1.5	1.7	0.74	1.1	0.55
AC-FT	1,640	7,930	4,420	4,200	2,740	8,700	3,170	2,300	857	575	2,950	449

16501200 OHEO GULCH AT DAM NEAR KIPAHULU—Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)												
MEAN	48.5	92.1	81.8	51.7	48.7	88.3	45.7	25.0	31.3	43.9	33.0	38.3
MAX	145	334	203	218	163	320	116	99.1	88.8	114	82.4	131
(WY)	(1990)	(1991)	(1993)	(1989)	(1994)	(1991)	(1989)	(1989)	(1997)	(1993)	(1991)	(1994)
MIN	6.03	0.77	5.28	1.94	2.90	8.90	6.56	3.03	6.05	9.36	5.33	5.62
(WY)	(1993)	(2003)	(1990)	(1998)	(1992)	(2003)	(1992)	(1992)	(2003)	(2004)	(1997)	(1997)
SUMMARY STATISTICS												
	FOR 2003 CALENDAR YEAR					FOR 2004 WATER YEAR			WATER YEARS 1988 - 2004			
ANNUAL TOTAL	13,334.66					20,130.96						
ANNUAL MEAN	36.5					55.0			53.3			
HIGHEST ANNUAL MEAN									102			
LOWEST ANNUAL MEAN									20.6			
HIGHEST DAILY MEAN	1,200		Nov 29		1,600		Mar 22		2,220		Nov 19, 1990	
LOWEST DAILY MEAN	0.00		Jan 11		0.55		Sep 13		0.00		Feb 25, 1992	
ANNUAL SEVEN-DAY MINIMUM	0.10		Jan 6		0.69		Sep 4		0.00		Feb 25, 1992	
ANNUAL RUNOFF (AC-FT)	26,450					39,930			38,650			
10 PERCENT EXCEEDS	118					133			138			
50 PERCENT EXCEEDS	4.8					6.8			6.4			
90 PERCENT EXCEEDS	0.86					1.5			1.0			

e Estimated