16704000 WAILUKU RIVER AT PIIHONUA

LOCATION.--Lat 19°42'56", long 155°09'12", Hydrologic Unit 20010000, on right bank 0.2 mi downstream from Hookelekele Stream, 0.9 mi west of Piihonua, and 4.1 mi west of Hilo Post Office. Prior to November 16, 1977, at site directly across river, on left bank.

DRAINAGE AREA.--230 mi^2, of which a portion probably is noncontributing.

PERIOD OF RECORD.--July 1928 to July 1940, October 1940 to December 1947, April 1948 to current year. Monthly discharge only July 1928, published in WSP 1319. Prior to July 1960, published as "above Hilo Boarding School ditch intake, near Hilo."

REVISED RECORDS.--WSP 865: 1929-36(M). WSP 965: 1941. WDR HI-80-1: 1929-79(P). WDR HI-81-1: 1940(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above mean sea level (from topographic map). Prior to November 16, 1977, at site directly across river, on left bank at same datum.

REMARKS.--Records computed by Gary Sanchez. Records good except for estimated daily discharges, which are poor. Kapehu ditch diverted water from Kapehu Stream into Wailuku River upstream 1938-63. Department of Water Supply diverted about 6 ft^3/s of water upstream of gage untill 1967. Hydroelectric plant diverts variable amounts of water up to 160 ft^3/s about 1 mi upstream of gage and discharges it about 500 ft below gage (from 1993).

AVERAGE DISCHARGE.--71 years (water years 1929-39, 1942-47, 1949-2002), 278 ft^3/s (201,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,200 ft^3/s, August 11, 1940, gage height, 28.6 ft, from floodmarks, from rating curve extended above 13,000 ft^3/s based on slope-area measurement at gage height 26.16 ft; minimum, 0.15 ft^3/s, January 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft^3/s, Dec. 13, gage height, 15.67 ft; minimum discharge, 13 ft^3/s, Apr. 16, 17, gage height, 1.71 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

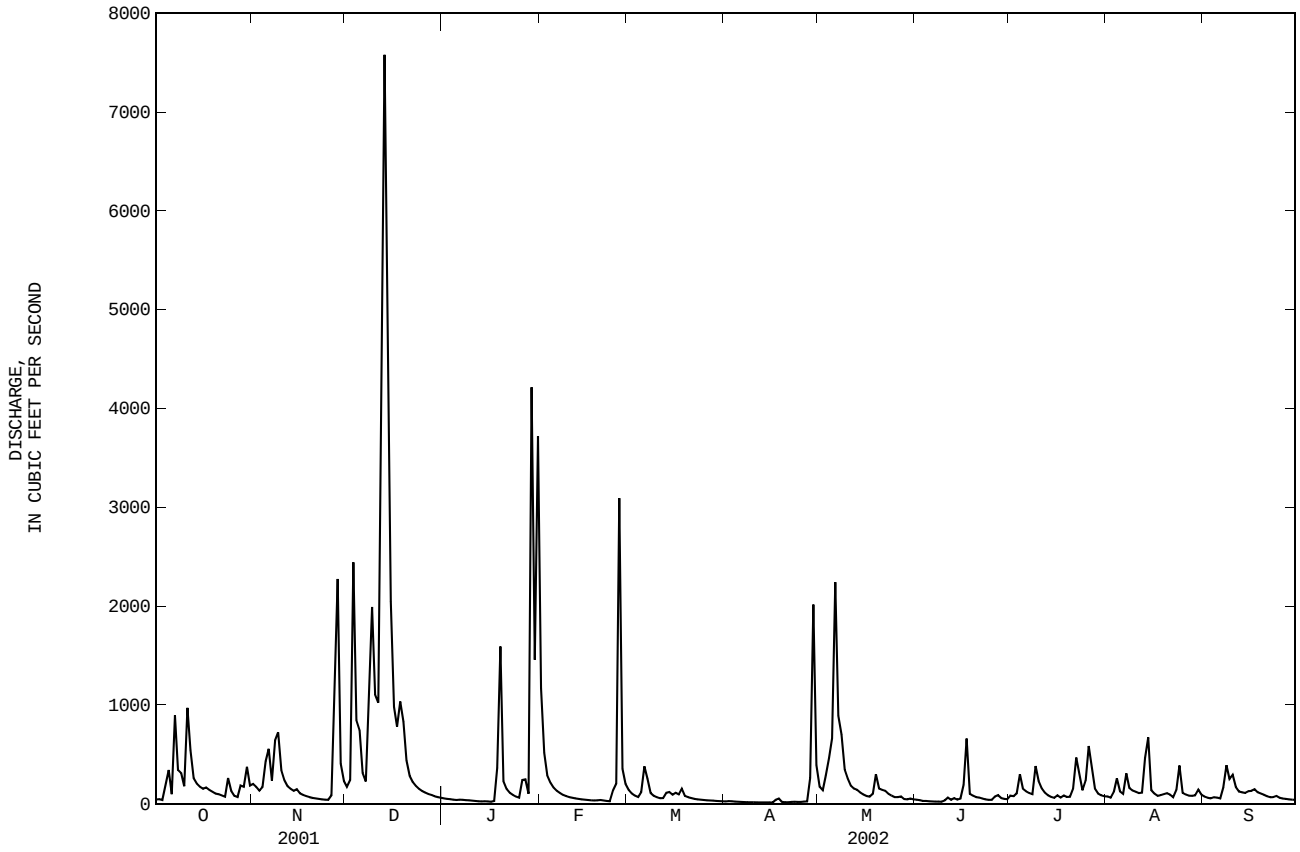
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	201	172	55	1170	140	24	175	42	83	e74	74
2	47	172	239	50	515	106	27	139	38	77	e62	62
3	39	134	2440	46	289	82	27	289	29	105	e122	56
4	194	169	847	43	214	67	23	463	30	300	e257	66
5	342	432	745	39	166	118	21	663	26	152	e125	63
6	98	557	314	42	133	379	19	2240	25	126	e100	56
7	896	235	227	40	110	256	18	891	24	108	e308	165
8	343	643	891	38	91	109	17	700	23	97	e160	390
9	311	724	1990	35	78	81	17	349	22	383	e135	251
10	179	340	1110	32	68	66	16	258	34	231	121	293
11	971	240	1020	29	61	57	15	183	64	156	109	169
12	543	178	2750	26	55	58	14	153	40	113	113	125
13	259	153	7580	25	50	113	15	141	57	86	464	116
14	203	131	6220	27	46	119	15	116	42	70	672	110
15	173	148	2050	25	42	93	14	94	52	61	140	128
16	153	105	980	21	39	112	13	80	e193	e86	104	132
17	165	89	780	29	36	95	40	73	e660	e64	82	147
18	141	78	1030	363	33	154	53	102	102	e84	87	117
19	123	68	831	1590	36	80	20	299	83	e70	97	104
20	104	60	440	229	39	66	16	154	68	e72	106	90
21	96	55	283	151	34	58	16	141	63	e150	93	76
22	85	50	222	113	29	51	19	132	53	e468	66	67
23	71	46	182	91	26	46	21	102	46	e294	140	68
24	261	43	152	74	135	42	19	82	41	e136	386	80
25	130	40	130	61	202	39	19	69	41	e235	112	62
26	81	86	114	241	3090	36	22	67	73	e584	95	53
27	68	1340	98	248	355	34	24	75	88	e367	83	50
28	184	2270	89	102	202	32	260	48	59	e154	80	45
29	171	406	77	4210	---	30	2020	45	50	e104	86	42
30	374	232	68	1460	---	27	391	53	48	e86	144	41
31	185	---	61	3720	---	25	---	46	---	e76	94	---
TOTAL	7034	9425	34132	13255	7344	2771	3235	8422	2216	5178	4817	3298
MEAN	227	314	1101	428	262	89.4	108	272	73.9	167	155	110
MAX	971	2270	7580	4210	3090	379	2020	2240	660	584	672	390
MIN	39	40	61	21	26	25	13	45	22	61	62	41
AC-FT	13950	18690	67700	26290	14570	5500	6420	16710	4400	10270	9550	6540

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

MEAN	172	383	366	288	305	401	379	221	128	214	284	166
MAX	765	2238	1368	2061	2050	2026	2262	1246	715	1140	1989	992
(WY)	1942	1991	1971	1975	1969	1991	1986	1964	1941	1989	1930	1930
MIN	2.96	19.1	7.15	1.10	0.51	0.26	7.83	6.23	5.48	2.79	12.8	10.2
(WY)	1985	1934	1934	1981	1983	1983	1992	1992	1981	1981	1971	1974

HAWAII, ISLAND OF HAWAII

16704000 WAILUKU RIVER AT PIIHONUA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1928 - 2002	
ANNUAL TOTAL	95198.7		101127			
ANNUAL MEAN	261		277		278	
HIGHEST ANNUAL MEAN					588	1991
LOWEST ANNUAL MEAN					103	1981
HIGHEST DAILY MEAN	7580	Dec 13	7580	Dec 13	22200	Jan 8 1975
LOWEST DAILY MEAN	7.3	Feb 7	13	Apr 16	0.22	Mar 20 1983
ANNUAL SEVEN-DAY MINIMUM	8.8	Feb 1	15	Apr 10	0.23	Mar 17 1983
ANNUAL RUNOFF (AC-FT)	188800		200600		201800	
10 PERCENT EXCEEDS	563		549		599	
50 PERCENT EXCEEDS	61		95		80	
90 PERCENT EXCEEDS	18		27		13	

e Estimated