16704000 Wailuku River at Piihonoua, HI

LOCATION.--Lat 19°42'43.7", long 155°09'02.7" referenced to North American Datum of 1983, Hawaii County, HI, 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.--220 mi^2 of which 71.4 mi^2 probably is noncontributing, from automated delineation using 10-meter National Elevation Dataset digital elevation model data dated September 2006 and Watershed Boundary Dataset dated May 2008, using UTM Zone 4 projection, NAD 83 horizontal datum.

SURFACE-WATER RECORDS

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). WDR HI-10-1: Drainage Area.

GAGE.--Water-stage recorder. Elevation of gage is 1,080 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 V. E. Kunishige. Records rated good. 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 until 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 FOR PERIOD OF RECORD.--81 years (water years 1929-39, 1942-47, 1949-2012), 265 ft^3/s (191,800 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.--Peak discharges greater than base discharge of 8,700 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 11	1835	*10,400	*14.92
No other peaks greater than base discharge.			

Minimum discharge, 8.9 ft^3/s, Oct. 14, 15.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 16704000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/16704000.2012.pdf

16704000 Wailuku River at Piihonoua, HI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	14	307	59	127	20	837	150	158	59	128	84	42
2	14	778	85	111	19	976	114	119	114	108	67	40
3	13	602	78	95	20	1,610	95	110	84	141	69	42
4	12	203	64	86	18	473	117	94	70	94	59	36
5	11	126	71	77	16	426	113	89	61	115	62	35
6	11	111	70	70	15	232	94	75	53	188	73	44
7	10	107	103	64	14	171	106	68	58	121	56	31
8	9.9	134	112	58	13	145	152	149	88	110	51	31
9	10	1,000	168	53	13	141	483	115	55	94	46	51
10	10	887	928	49	12	139	246	106	53	85	46	44
11	11	2,590	4,240	48	13	146	184	76	45	74	41	41
12	13	2,170	1,660	45	15	137	148	71	41	64	52	36
13	10	652	502	47	22	190	139	61	37	72	41	36
14	9.5	321	381	40	20	138	157	53	34	57	50	33
15	71	229	316	37	16	102	127	48	32	50	55	37
16	41	166	242	35	14	84	106	43	34	54	46	31
17	27	638	192	33	14	73	93	41	31	57	42	29
18	23	207	155	33	28	77	78	38	28	111	38	28
19	20	253	2,580	32	1,550	115	77	44	27	67	45	31
20	20	556	2,210	30	214	82	136	37	149	53	604	33
21	17	747	1,610	28	1,380	69	100	32	80	47	228	28
22	18	260	3,640	27	1,930	715	92	30	73	44	129	26
23	20	196	1,800	25	482	264	130	58	98	42	95	27
24	21	136	1,110	25	260	2,190	133	58	154	65	74	39
25	31	115	2,280	24	256	3,290	114	61	91	69	60	31
26	25	95	646	23	352	762	96	45	79	51	53	33
27	24	119	365	22	294	368	105	166	172	48	46	52
28	21	93	265	20	605	258	83	149	800	42	41	33
29	27	76	248	23	2,420	186	113	88	396	51	51	29
30	29	68	179	21	---	146	412	64	184	82	47	29
31	604	---	147	22	---	128	---	62	---	116	43	---
Total	1,197.4	13,942	26,506	1,430	10,045	14,670	4,293	2,408	3,280	2,500	2,494	1,058
Mean	38.6	465	855	46.1	346	473	143	77.7	109	80.6	80.5	35.3
Max	604	2,590	4,240	127	2,420	3,290	483	166	800	188	604	52
Min	9.5	68	59	20	12	69	77	30	27	42	38	26
Ac-ft	2,380	27,650	52,570	2,840	19,920	29,100	8,520	4,780	6,510	4,960	4,950	2,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	162	361	354	273	297	395	364	210	119	199	260	157
Max	765	2,238	1,368	2,061	2,050	2,026	2,262	1,246	715	1,140	1,989	992
(WY)	(1942)	(1991)	(1971)	(1975)	(1969)	(1991)	(1986)	(1964)	(1941)	(1989)	(1930)	(1930)
Min	2.96	17.6	7.15	1.10	0.51	0.26	7.83	6.23	5.48	2.79	12.8	6.38
(WY)	(1985)	(2003)	(1934)	(1981)	(1983)	(1983)	(1992)	(1992)	(1981)	(1981)	(1971)	(2010)

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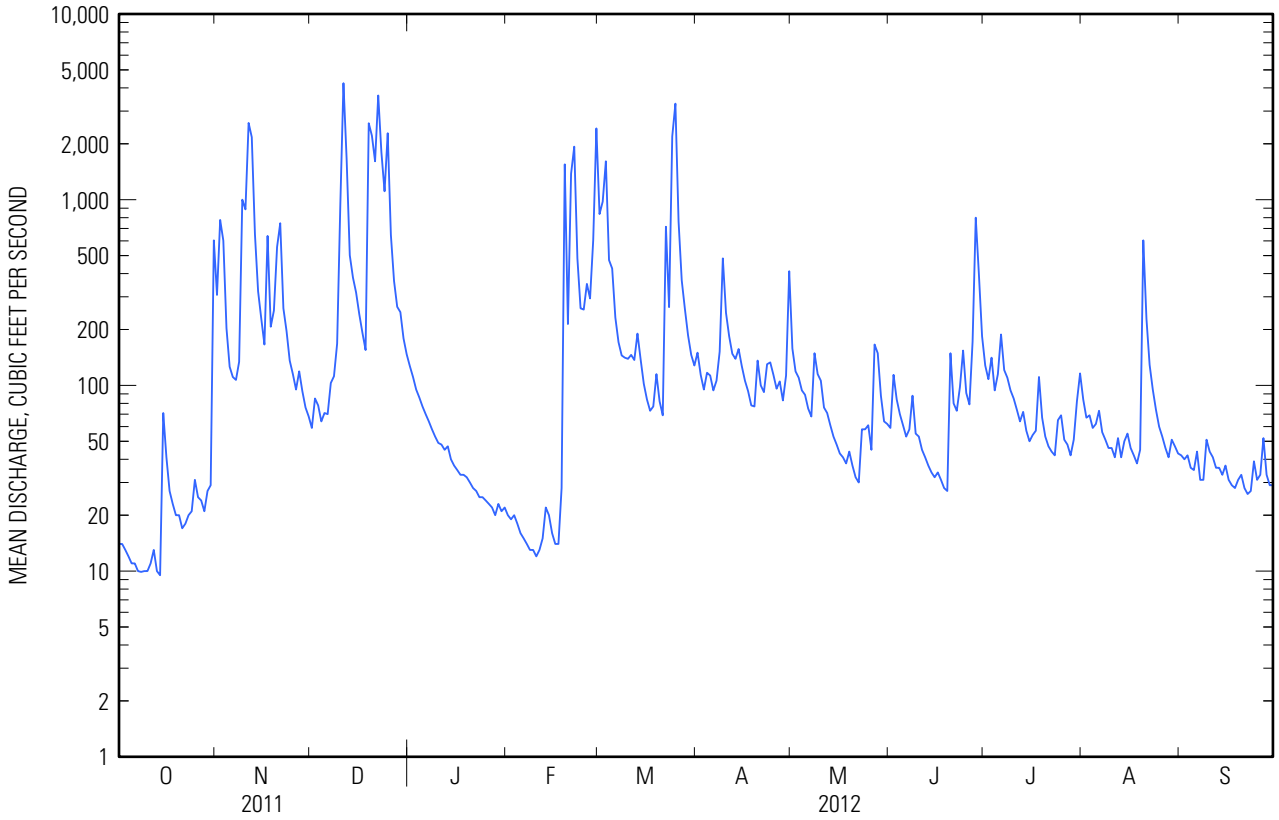
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1928 - 2012	
Annual total	65,279.9		83,823.4			
Annual mean	179		229		265	
Highest annual mean					588	1991
Lowest annual mean					87.1	2010
Highest daily mean	4,240	Dec 11	4,240	Dec 11	22,200	Jan 8, 1975
Lowest daily mean	8.8	Jan 30	9.5	Oct 14	0.22	Mar 20, 1983
Annual seven-day minimum	10	Oct 5	10	Oct 5	0.23	Mar 17, 1983
Annual runoff (ac-ft)	129,500		166,300		191,800	
10 percent exceeds	371		518		562	
50 percent exceeds	41		71		74	
90 percent exceeds	13		21		13