

USGS STREAM
FLOW DATA:
STATION NUMBERS,
PERIODS OF RECORD,
AND MAPS

EXHIBIT '6

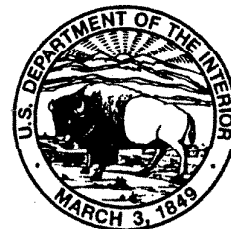
EVALUATION OF THE SURFACE-WATER QUANTITY, SURFACE-WATER QUALITY, AND RAINFALL DATA- COLLECTION PROGRAMS IN HAWAII, 1994

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 95-4212

Prepared in cooperation with the

COMMISSION ON WATER RESOURCE MANAGEMENT,
DEPARTMENT OF LAND AND NATURAL RESOURCES,
STATE OF HAWAII



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Table 4. Surface-water gaging stations, island of Maui, Hawaii, through 1994--Continued

Station ¹	Station name	Type of station ²	Period of record	Years of record ³	Regulated ⁴		Stream classification ⁵
					Low flow	Peak flow	
16596200	Halefaku Gulch near Kailiili.	SW	1965-71	6-SW	no	no	continuous
16597000	Halefaku Gulch weir at New Hamakua Ditch near Huelo.	Ditch	1910-12	2-SW	yes	yes	ditch
16598000	Halefaku Gulch near Huelo	SW	1910-12	--	yes	yes	continuous
16599000	East Branch Opuna Gulch at Haiku-uka boundary near Kailiili.	SW	1932-33	--	no	no	continuous
16599500*	Opuna Tunnel near Kailiili.	Ditch	1965-P	28-SW	yes	yes	ditch
16600000	Opuna Ditch near Huelo	Ditch	1910-12	2-SW	yes	yes	ditch
16601000	Opuna Stream near Huelo	SW	1910-12	--	no	no	continuous
16602000	Kauhako Ditch at Opuna weir near Huelo	Ditch	1910-13 1913-15 1916-28	15-SW	yes	yes	ditch
16602400	Awalau Gulch near Kailiili.	SW	1965-71	6-SW	yes	no	continuous
16603000	Kaluanui Ditch at Puuomalei near Hamakuapoko	Ditch	1910-12	2-SW	yes	yes	ditch
16603300*	Unnamed Gulch at Maliko Bay.	SW-CSG	1963-P	31-CSG	no	no	ephemeral
16603700*	Kaliainui Gulch tributary near Pukalani	SW-CSG	1966-P	28-CSG	no	no	ephemeral
16603800*	Kalupulani Gulch tributary near Pukalani	SW-CSG	1963-P	31-CSG	no	no	ephemeral
16603850*	Kaliainui Gulch near Kahului	SW-CSG	1966-P	28-CSG	no	no	ephemeral
16604000	Iao Stream near Wailuku.	SW	1910-15	2-SW	no	no	continuous
16604500*	Iao Stream at Kepaniwai Park near Wailuku	SW	1983-P	10-SW	no	no	continuous
16605000	Maniania Ditch near Wailuku	Ditch	1910-13	2-SW	yes	yes	ditch
16607000*	Iao Stream at Wailuku.	SW-CSG	1950-51 1952-P	1-SW 42-CSG	yes	no	continuous
16608000	North Waiehu Stream near Wailuku	SW	1912-15	3-SW	no	no	continuous
16609000	North Waiehu Ditch near Wailuku	Ditch	1910-11 1916-17	--	yes	yes	ditch
16609500	North Waiehu Stream below North Waiehu Ditch near Wailuku.	SW	1910-11	--	yes	no	continuous
16610000	South Waiehu Stream near Wailuku.	SW	1910-17	1-SW	yes	no	continuous
16611000	South Waiehu Ditch near Wailuku.	Ditch	1913	--	yes	yes	ditch
16612000	Waiehu River near Waiehe	SW	1913-17	1-SW	yes	no	continuous
16613000	Waiehe Canal near Waiehe	Ditch	1910-12	--	yes	yes	ditch
16613500	Waiehe Canal at Waiale weir near Wailulu	Ditch	1911-12	1-SW	yes	yes	ditch
16614000*	Waiehe River at dam near Waiehe	SW	1910-13 1983-P	9-SW	no	no	continuous
16615000	Spreckels Ditch near Waiehe	Ditch	1910-13	2-SW	yes	yes	ditch
16616000	Spreckels Ditch at Waiale weir near Wailuku	Ditch	1910-11	1-SW	yes	yes	ditch
16616500*	Unnamed Gulch at Maluhia Camp	SW-CSG	1964-P	30-CSG	no	no	ephemeral
16617000	Left Branch Makamakaole Stream near Waiehe.	SW	1939-52	13-SW	yes	no	continuous
16617700	Kahakuloa Stream at altitude 1,380 feet near Honokohau	SW	1913-14	--	no	no	continuous

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Station ¹	Station name	Type of station ²	Period of record	Years of record ³	Regulated ⁴			Stream classification ⁵
					Low flow	Peak flow	Peak flow	
16618000*	Kahakuloa Stream near Honokohau	SW	1939-43 1947-70 1974-P	42-SW	no	no	no	continuous
16619000	Kahakuloa Stream at Kahakuloa near Waihee	SW	1912-13	--	yes	no	no	continuous
16619600	Owahu Gulch near Kahakuloa	SW-CSG	1964-70	6-CSG	no	no	no	ephemeral
16619700*	Poelua Gulch near Kahakuloa	SW-CSG	1964-P	30-CSG	no	no	no	continuous
16620000*	Honokohau Stream near Honokohau	SW	1911 1913-20 1922-88 1990-P	75-SW	no	no	no	continuous
16621000	Honokohau Ditch intake near Honokohau	Ditch	1907-13	5-SW	yes	yes	yes	ditch
16622000	Honokohau Ditch above Honolua Stream near Honokohau	Ditch	1910-11	1-SW	yes	yes	yes	ditch
16623000	Honolua Stream near Honokohau	SW	1912-17	3-SW	no	no	no	continuous
16623400	Honokeana Gulch near Honokahua	SW-CSG	1965-85	22-CSG	no	no	no	ephemeral
16624000	Honokohau Ditch at Honokowai weir near Lahaina	Ditch	1910-12	2-SW	yes	yes	yes	ditch
16625000	Honolua Ditch near Honokohau	Ditch	1911-12	--	yes	yes	yes	ditch
16626000	Honolua Stream at Honolua Ranch near Honokohau	SW	1911	--	yes	no	no	continuous
16627000	Kapaloa Stream at weir 1 near Lahaina	SW	1901	--	no	no	no	continuous
16628000	Kapaloa Stream near Lahaina	SW	1911-12	--	yes	no	no	continuous
16629000	Honokowai Ditch near Lahaina	Ditch	1912-17 1918-58 1958-67	53-SW	yes	yes	yes	ditch
16630000	Honokowai Stream near Lahaina	SW	1913-17	3-SW	yes	no	no	continuous
16630200*	Honokowai Stream at Honokowai	SW-CSG	1965-63 1965-P	31-CSG	yes	no	no	continuous
16633000	Kahoma development tunnel near Lahaina	Ditch	191-17	5-SW	yes	yes	yes	ditch
16634000	Kahoma Stream near Lahaina	SW	191-12 1913-17	3-SW	yes	no	no	continuous
16635000	Lahainalua Stream at weir 1 near Lahaina (Kanaha Stream)	SW	1901	--	yes	no	no	continuous
16635500	Lahainalua Stream at weir 2 near Lahaina (Kanaha Stream)	SW	1901	--	yes	no	no	continuous
16636000	Kanaha Stream above pipeline intake near Lahaina	SW	1916-25 1926-32	14-SW	no	no	no	continuous
16637000	Lahainalua Ditch near Lahaina	Ditch	1913-14	--	yes	yes	yes	ditch
16638000	Kanaha Stream near Lahaina	SW	1911-16	4-SW	yes	no	no	continuous
16638500*	Kahoma Stream at Lahaina	SW SW-CSG	1962-89 1990-P	26-SW 29-CSG	yes	no	no	continuous
16639000	North Fork Kauaula Stream near Lahaina	SW	1901	--	no	no	no	continuous
16640000	South Fork Kauaula Stream near Lahaina	SW	1901	--	no	no	no	continuous
16641000	Kauaula Stream near Lahaina	SW	1912 1914-17	1-SW	yes	no	no	continuous

Table 4. Surface-water gaging stations, island of Maui, Hawaii, through 1994--Continued

Station ¹	Station name	Type of station ²	Period of record	Regulated ⁴		Stream classification ⁵
				Years of record ³	Peak flow	
16643000	Kauaia Ditch near Lahaina	Ditch	1911-17	yes	yes	ditch
16643300*	Kauaia Stream near mouth near Lahaina	SW-CSG	1960	yes	no	continuous
			1962			
			1963-P			
16644000	Launupoko Stream near Lahaina	SW	1911-18	yes	yes	continuous
16645000	Olowalu Ditch near Olowalu	Ditch	1911-16	yes	yes	ditch
			1916-20			
			1920-58			
			1958-67			
16646000	Olowalu Stream near Olowalu	SW	1913-16	yes	yes	ephemeral
16646200*	Olowalu Stream at Olowalu	SW SW-CSG	1963-72 1973-P	yes yes	yes yes	ephemeral
16647000	Ukumehame Gulch near Olowalu	SW	1911-12	no	no	continuous
			1913-16			
			1916-19			
16647100	Ukumehame Gulch at mouth near Olowalu	SW-CSG	1964-71	no	no	continuous
16647500*	Maiaowaiiole Gulch near Maialaea	SW-CSG	1963-P	no	no	ephemeral
16648000	South side Waikapu Ditch near Waikapu	Ditch	1910-17	yes	yes	ditch
16649000	Palolo Ditch near Waikapu	Ditch	1910-17	yes	yes	ditch
16650000	Waikapu Stream near Waikapu	SW	1910-17	yes	no	continuous
16650500*	Waikapu Stream near Kihei	SW-CSG	1963-P	yes	no	continuous
16658500*	Waiahoa Gulch tributary near Waiahoa	SW-CSG	1963-P	no	no	ephemeral
16659000*	Waiahoa Gulch at Kihei	SW-CSG	1963-P	no	no	ephemeral
16660000*	Kulanihakoai Gulch near Kihei	SW	1962-70	no	no	ephemeral
			1971-P			
16663500*	Kamaole Gulch at Kamaole	SW-CSG	1972-P	no	no	ephemeral
16664000*	Lililochole Gulch at Kamaole	SW-CSG	1972-P	no	no	ephemeral

1 *In operation 1994 water year

2 SW Continuous-record surface-water station

SW-CSG Crest-stage gage

SW-CSG-S Crest-stage gage, stage only

SW-LF Low-flow partial-record station

Ditch Station operated on ditch system

Spring Station that measures discharge from spring

3 Years of record as of the end of 1993 water year:

Number-SW is number of water years of complete continuous record

Number-CSG is number of annual peaks

Number-LF is number of years operated as a low-flow partial-record station

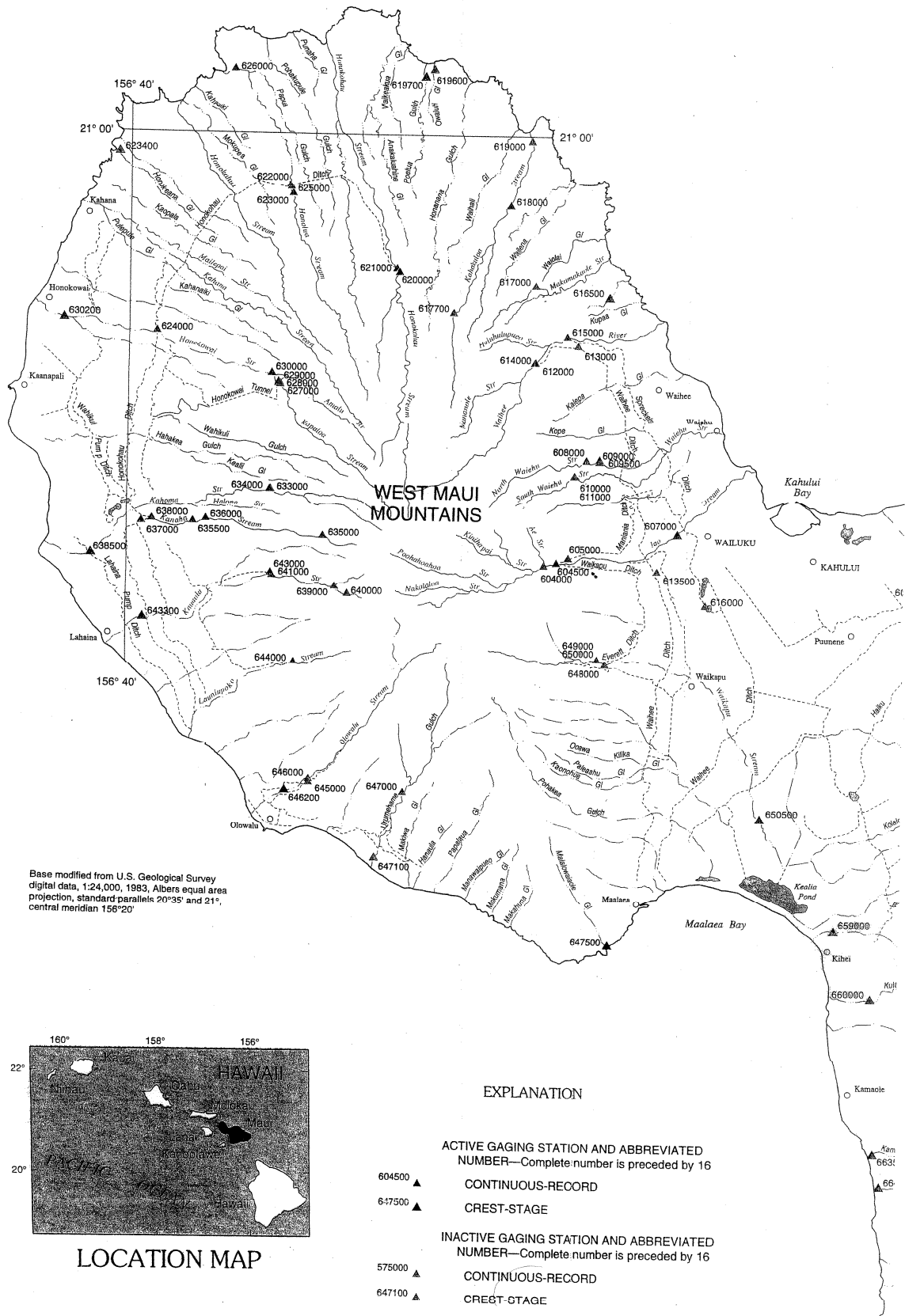
4 Regulated flow is when daily flow and annual peak flows are affected by more than 10 percent

5 Stream classification:

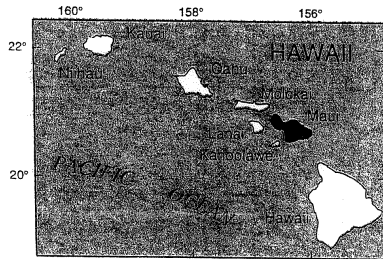
Continuous-flow or perennial streams include those considered continuous or interrupted in the Hawaii stream assessment (Hawaii Department of Land and Natural Resources, 1990). Continuous-flow streams flow to the sea year-round. Interrupted-flow streams flow year-round in the upper parts and intermittently at lower elevations.

Ephemeral flow or intermittent streams are those that do not meet the above criteria and flow only in direct response to precipitation

Ditches and springs are not classified by flow



Base modified from U.S. Geological Survey digital data, 1:24,000, 1993, Albers equal area projection, standard parallels 20°35' and 21°, central meridian 156°20'



LOCATION MAP

EXPLANATION

- 604500 ▲ ACTIVE GAGING STATION AND ABBREVIATED NUMBER—Complete number is preceded by 16
- 617500 ▲ CONTINUOUS-RECORD
- 617500 ▲ CREST-STAGE
- 575000 ▲ INACTIVE GAGING STATION AND ABBREVIATED NUMBER—Complete number is preceded by 16
- 647100 ▲ CONTINUOUS-RECORD
- 647100 ▲ CREST-STAGE