Water Resources Data for Hawaii and other Pacific Areas

Water Year 1975

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-75-1

Prepared in cooperation with the State of Hawaii, Trust Territory of the Pacific Islands, the Government of American Samoa, the Government of Guam, and with other State, county, and Federal agencies

CALENDAR FOR WATER YEAR 1975

1974

OCTOBER

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1975

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SEPTEMBER

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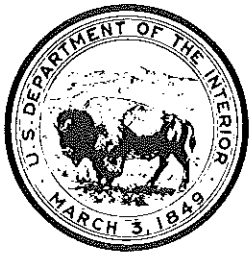
Water Resources Data for Hawaii and other Pacific Areas

Water Year 1975



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-75-1

Prepared in cooperation with the State of Hawaii, Trust Territory of the Pacific Islands, the Government of American Samoa, the Government of Guam, and with other State, county, and Federal agencies

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16. Abstracts

Water resources data for the 1975 water year for Hawaii and other Pacific Areas consist of records of stage, discharge, and water quality of streams; stage of a reservoir; and water levels and water quality in wells and springs. This report contains discharge records for 164 gaging stations; stage only record for 1 gaging station; water quality for 10 gaging stations, 56 partial-record flow stations and 113 wells; and water levels for 8 observation wells. Also included are 107 crest-stage partial-record stations and 103 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U. S. Geological Survey and cooperating State, Territorial, and Federal agencies in Hawaii and other Pacific areas.

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17c. COSATI Field/Group

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PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of Hawaii and with other agencies, by personnel of the Water Resources Division, J. S. Cragwall, Jr., Chief Hydrologist, G. W. Whetstone, Assistant Chief for Scientific Publications and Data Management, under the general direction of G. A. Billingsley, Chief, Reports Section, and C. B. Ham, Chief, Data Reports Unit.

The data were collected and computed under supervision of F. T. Hidaka, District Chief, Water Resources Division, Honolulu, Hawaii.

UNITED STATES DEPARTMENT OF THE INTERIOR

THOMAS S. KLEPPE, Secretary

GEOLOGICAL SURVEY

V. E. McKelvey, Director

Prepared in cooperation with

Hawaii Department of Land and Natural Resources,
Division of Water and Land Development
Hawaii Department of Transportation
Government of Guam
Government of American Samoa
Trust Territory of the Pacific Islands
City and County of Honolulu
Corps of Engineers, U.S. Army

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
5th Floor, 1833 Kalakaua Avenue
Honolulu, Hawaii 96815

1976

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(Letters after station name designate type of data: (c), chemical; (t), water temperature; (s), sediment)

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U. S. Army, Wahiawa	(3-2901-07)212927158014807..	395
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WATER RESOURCES DATA FOR HAWAII AND OTHER PACIFIC AREAS, 1975

Part 1. Surface-Water Records
Part 2. Water-Quality Records
Part 3. Ground-Water Records

INTRODUCTION

Water resources data for the 1975 water year for Hawaii and other Pacific areas consist of records of stage, discharge, and water quality of streams; stage of reservoirs; and water-levels and water quality of wells and springs. This report contains discharge records for 164 gaging stations; stage only records for 1 gaging station; water quality for 10 gaging stations, 56 partial-record flow stations, and 113 wells; and water levels for 8 observation wells. Also included are data for 107 crest-stage partial-record stations and 103 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, Territorial, and Federal agencies in Hawaii and other Pacific areas.

Through September 30, 1960 (June 30, 1960, for Hawaii and other Pacific areas), the records of discharge (or stage) of streams, and contents (or stage) of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." The records in Hawaii were contained in the series as "Surface Water Supply of Hawaii." Records for other Pacific areas were contained in one volume entitled, "Surface Water Supply of Mariana, Caroline, and Samoa Islands." Through water year 1960 these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States."

Beginning with the 1961 water year (fiscal year for Hawaii) and continuing through water year 1974, streamflow data have been released by the Geological Survey in annual reports on a State-boundary basis. The Hawaii reports have included records for other Pacific areas. Through June 1967, the Hawaii reports were on a fiscal-year basis (the 12-month period July 1 to June 30) and discharges (except for Guam and Okinawa) were published in million gallons a day. Beginning with the 1967 water year, the Hawaii reports have been published on a water-year basis and with discharges entirely in cubic feet per second.

Water-quality records beginning with the 1964 water year, and ground-water data since the 1971 water year have been similarly released either in separate reports or in conjunction with streamflow records. These reports provided rapid release of preliminary water data shortly after the end of the water year. The final data were then released in the water-supply paper series mentioned above. Beginning with the 1975 water year, water data will be released on a State-boundary basis in final form and will not be republished in the water-supply paper series. The 1975 and subsequent water year reports will be in a series which will carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report HI-75-1. These reports are for sale to the public for a nominal fee from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22151. For more information on publications available, see "PUBLICATIONS" on a subsequent page.

COOPERATION

The U.S. Geological Survey and organizations of the State of Hawaii have had cooperative agreements for the systematic collection of streamflow records since 1909, and for water-quality records since 1967. Cooperative agreements with the Territory of Guam for the collection of streamflow records began in 1953, with the Territory of American Samoa in 1957, and with the Trust Territory of the Pacific Islands in 1968. Organizations that supplied data are acknowledged

in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Hawaii Department of Land and Natural Resources, Division of Water and Land Development, R. T. Chuck, manager-chief engineer.
Hawaii Department of Transportation, E. Alvey Wright, director.
Trust Territory of the Pacific Islands, E. E. Johnston, high commissioner.
Government of American Samoa, E. B. Ruth, governor.
Government of Guam, R. J. Bordallo, governor.
City and County of Honolulu, Board of Water Supply, Edward Y. Hirata, manager and chief engineer.
City and County of Honolulu, Division of Engineering, Kazu Hayashida, director and chief engineer.

Assistance in the form of funds or services are given by the Corps of Engineers, U.S. Army in collecting records for 10 gaging stations, 2 water-quality stations and 5 partial-record stations, and the U.S. Forest Service for 1 water-quality station published in this report.

The following organizations aided in collecting records:

Maui County Board of Water Supply; East Kauai Water Co., Ltd.; McBryde Sugar Co., Ltd.; East Maui Irrigation Co., Ltd.; and B. P. Bishop Estate.

DEFINITION OF TERMS

Definition of terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined as follows:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons or 1,233 cubic metres.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Bed material is the shifting portion of fragmented material of which the streambed is composed.

Biomass is the amount of living matter present at any given time, expressed as the weight per unit area or volume of habitat.

Ash weight is the weight or amount of residue present after the residue from the dry weight determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash weight values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic metre), and periphyton and benthic organisms in g/m^2 (grams per square metre).

Dry weight refers to the weight of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the weight remains unchanged. This weight represents the total organic matter, ash and sediment, in the sample. Dry weight values are expressed in the same units as ash weight.

Organic weight or volatile weight of the living substance is the difference between the dry weight and the ash weight, and represents the actual weight of the living matter. The organic weight is expressed in the same units as for ash and dry weights.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, or 646,317 gallons or 2,445 cubic metres. It represents a runoff of 0.0372 inch from 1 square mile or 0.3468 millimetre from 1 square kilometre.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 millilitres is determined by the immediate or delayed incubation membrane filter method.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include those periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (CFS, cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic metres per second.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

Mean discharge is the arithmetic average of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Dissolved refers to the amount of a substance present in true chemical solution. In practice, however, the term includes all forms of the substance that will pass through a 0.45-micrometre membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Diversity index is a numerical rating of the variety of the aquatic organisms. The greater the number of different types of organisms, the greater the diversity. The formula for diversity index is $d = -\Sigma \frac{ni}{n} \log_2 \frac{ni}{n}$, where ni is the number of individuals per taxon, and n is the total number of individuals.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO^3$).

Micrograms per litre (UG/L, µg/l) is a more precise unit for expressing the concentration of chemical constituents in solution as the weight (micrograms) of solute per unit volume (litre) of water. One thousand micrograms per litre is equivalent to one milligram per litre.

Milligrams per litre (MG/L, mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per litre represents the weight of solute per unit volume of water. Milligrams or micrograms per litre

may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per litre by multiplying by the factors in table 1, page 9. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per litre of water-sediment mixture. Sediment concentrations are determined in the laboratory as parts per million (ppm) and are converted mg/l by using the factors in table 2, page 9.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multi-celled and are counted according to the number of contained cells per sample volume, usually millilitres (ml) or litres (l).

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square metres (m^2), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually millilitres (ml) or litres (l). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimetres (mm), of suspended sediment or bed material determined by sieve and sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per litre to milliequivalents per litre

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3}) *....	0.11119	Iodide (I^{-1})	0.00788
Ammonia as NH_4^{+1}....	.05544	Iron (Fe^{+3}) *.....	.05372
Barium (Ba^{+2})	.01456	Lead (Pb^{+2}) *.....	.00965
Bicarbonate (HCO_3^{-1}).	.01639	Lithium (Li^{+1})*.....	.14411
Bromide (Br^{-1})	.01251	Magnesium (Mg^{+2}) ...	.08226
Calcium (Ca^{+2})	.04990	Manganese (Mn^{+2}) *..	.03640
Carbonate (CO_3^{-2})...	.03333	Nickel (Ni^{+2}) *.....	.03406
Chloride (Cl^{-1})	.02821	Nitrate (NO_3^{-1})	.01613
Chromium (Cr^{+6}) *....	.11539	Nitrite (NO_2^{-1})	.02174
Cobalt (Co^{+2}) *.....	.03394	Phosphate (PO_4^{-3})...	.03159
Copper (Cu^{+2}) *.....	.03148	Potassium (K^{+1})	.02557
Cyanide (CN^{-1})	.03844	Sodium (Na^{+1})	.04350
Fluoride (F^{-1})	.05264	Strontium (Sr^{+2})*...	.02283
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{-2})	.02082
Hydroxide (OH^{-1})	.05880	Zinc (Zn^{+2}) *.....	.03060

*Constituent reported in micrograms per litre; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per litre to parts per million*
(All values calculated to three significant figures)

Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling) (Guy, 1969).

Particle-size classification, used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per millilitre (cells/ml) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per millilitre (cells/ml) of sample.

Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting chiefly of minute plants (as diatoms and blue-green algae) and of minute animals (as protozoan, entomostracans, and various larvae).

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/l times 0.0027.

Total-sediment discharge or total-sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time (Colby and Hembree, 1955).

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per litre of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per litre) is about 65 percent of the specific conductance (in micromhos per cm at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The use of artificial substrates simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with *Species* at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....*Hexagenia*
Species....*Hexagenia limbata*

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of milligrams per litre by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total (as used in tables of chemical analyses) refers to the amount of a substance that is present both in solution and in suspension. Analyses are performed on representative samples of water-suspended sediment mixtures.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published state annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality-accounting network is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in stream quality.

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides includes insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application

of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds. The United States annually produces about 1 billion pounds of these compounds. Although efforts are being made to substitute many of the chlorinated hydrocarbon pesticides with more specific, fast-acting, and easily degradable compounds, chlorinated hydrocarbon pesticides are still commonly used in many areas of the country.

Radiochemical program is a network of regularly sampled water quality stations where additional samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are natural uranium in µg/l (micrograms per litre), radium as radium-226 in PC/L, (pCi/l, picocuries per litre), gross beta radiation as equivalent strontium/yttrium-90 or cesium-137 in PC/L, and gross alpha radiation as micrograms of uranium equivalent per litre (µg/l). Gross alpha and beta radioactivity associated with the fine grained (silt and clay sized) sediments in the samples are also determined.

A picocurie (PC,pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

DOWNSTREAM ORDER AND STATION NUMBER

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the lists of gaging stations and water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station, partial-record station, and water-quality station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 16884600 which appears just to the left of the station name includes the 2-digit number "16" plus the 6-digit downstream order number "884600." In this report, the records are listed in downstream order by islands.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

Miscellaneous downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds

of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits is a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and a miscellaneous site are the same, assign sequential numbers "01," "02," etc. as one would for wells. See figure 24.

Beginning in 1971, the local well-numbering system for Hawaii was restructured to contain seven digits based on a non-arbitrary, unique one-minute grid system. One-minute parallel lines for both latitude and longitude are drawn on the map resulting in one-minute grids. Each grid is designated by a four-digit number. The first two digits represent minutes of latitude for the grid and the second two digits represent minutes of longitude for that grid. This establishes unique minute-grid numbers within each of the islands in the state except for the island of Hawaii where it encompasses an area more than one degree (60 minutes) of latitude and longitude. To establish unique minute-grid numbers for this island, 30 was added to the minutes of latitude in areas less than 19°00' of latitude, and 60 was added to the minutes of latitude in areas more than 20°00' of latitude. For the same reason, 30 was added to the minutes of longitude in areas less than 155°00' of longitude, and 60 was added to the minutes of longitudes more than 156°00' longitude. See figures 25 and 26.

To distinguish wells within a minute grid, two digits are added following the 4-digit minute-grid numbers with a dash separator. These two-digit numbers are assigned with the oldest well dug within the grid as 01 and increase chronologically, with few exceptions, to the latest dug.

Since it is possible to have a same 6-digit number for wells on different islands, another digit distinguishing each of the islands, is added in front of the 6-digit number with a dash separator.

For continuity, the old well numbers are listed in parentheses after the new well numbers.

EXPLANATION OF SURFACE-WATER RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct reading on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 5-, 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the gage height to the rating table gives the discharge. The daily mean discharge is computed from gage heights, then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence

of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1975 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, notations of revisions of previously published records, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified. The average discharge for the number of years indicated is given

under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. The maximum discharge (or contents), the maximum gage height, and the minimum discharge if there is little or no regulation (or minimum contents) are given under "EXTREMES." The maximum and minimum daily discharges are given if there is extensive regulation. In the first paragraph headed "Current year," the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in "PERIOD OF RECORD" paragraph. Reliable information concerning major floods or abnormally low flows that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital) or crest-stage gage. If the maximum gage height did not occur at the same time as the maximum discharge (or contents), it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of water-quality records, is given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (FISCAL YEARS)" or "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the fiscal or water years for which figures are revised in that report. In listing the years only one number is given; for instance, 1933 stands for either the fiscal year July 1, 1932, to June 30, 1933, or the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)"

that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The daily table for stream-gaging stations gives the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX." and "MIN." give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month is also expressed in acre-feet (line headed "AC-FT").

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are minimum daily discharges.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE," certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are

indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

Accuracy of data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation, or if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversions, consumptive use, regulation, evaporation or other factors.

Publications

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding water-supply papers containing streamflow

information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in Hawaii and other Pacific areas for the period October 1959 to September 1965 are in Water-Supply Paper 1937.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 (June 1950, for Hawaii) and the second series covers the period October 1950 to September 1960 (July 1950 to June 1960, for Hawaii and other Pacific areas). These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in Hawaii and other Pacific areas are compiled in Water-Supply Paper 1319 through June 1950, in 1739 and 1851 for July 1950 to June 1960, and in 1937 for October 1959 to September 1965.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other data available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements of miscellaneous sites.

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on

file in the district office. Also, most gaging-station records are available in computer-usable form and many statistical analyses have been made.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads in this report.

Descriptive statements are given for water-quality stations located at or near streamflow stations. Given are location, drainage area, periods of record for the various water-quality data, extremes of pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations. For ground-water stations, no descriptive statements are given; however, the well number, depth of well, date of sampling, and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Data on the quality of surface water were collected daily at some sites and less frequently at others. Water-quality information is presented for chemical quality, biological, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. The biological information includes qualitative and quantitative analyses of plankton, bottom organisms and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per litre (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per millilitre), parts per million and milligrams per litre can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per litre. To convert temperatures in degrees Fahrenheit to degrees Celsius, see table 3, p. 27.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per litre instead of milligrams per litre. (See "Definition of Terms," p. 3, and table for converting English Units to SI Units, p. 34).

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman. The method for determining elemental constituents by emission of spectrographic techniques is described by Barnett and Mallory. Analysis of pesticides, herbicides, and organic substances in water are described by Goerlitz and Lamar, Lamar, Goerlitz, and Law, and Goerlitz and Brown. The collection and analysis of aquatic, biological and microbiological samples are described by Slack and others. One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals across the channel to determine accurately the solute load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between the reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken about the same time each day when sample is collected. Large streams have a small diurnal temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature.

At stations where continuous recording thermographs are present the records consist of maximum and minimum temperatures for each day and the monthly maximum and minimum.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	74	34.0	93	44.0	111
4.5	40	14.5	58	24.5	75	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

* C = 5/9 (°F - 32) or °F = 9/5 (°C + 32).

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily, or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the sub-divided day method (time-discharge weighted average). Therefore, for those days when the published sediment

discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the sub-divided day method. For periods when no samples are collected, daily loads of suspended sediment are estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

Publications

The annual series of water-supply papers that contain information on quality of surface waters in Hawaii and other Pacific areas are listed below.

Water year	WSP No.	Water year	WSP No.	Water year	WSP No.
1964	1966	1967	2016	1970	A2160
1965	1966	1968	2016	1971	A2170
1966	1996	1969	2150		

A In preparation.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic national network of observation wells are published herein. These water-level measurements are intended to provide a sampling and historical record of water-level changes in the nation's most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on the grid system of latitude and longitude as shown in figure 4, and (2) a local number that is provided for continuity with older reports and for other use as dictated by local needs.

Measurements are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well insure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The altitude of the measuring point (MP) above mean sea level is given when instrument levels from a bench mark were made. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom). To show the intraday variations in the ground-water levels caused by local pumping and tidal fluctuations, instantaneous maximum and minimum water levels are given with the mean water levels for the day.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot,

whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Publications

Publication of ground-water level data for the United States in Water-Supply Papers was begun by the Geological Survey in 1935. From 1935 through 1939, a single Water-Supply Paper for each year covering the entire nation was issued (Water-Supply Papers 777, 817, 840, 845, and 886). From 1940 through 1974, separate Water-Supply Papers were issued for 6 sections of the United States. Water-level data for Hawaii are in the Water-Supply Papers listed below, each report containing one or more calendar years (January-December) of data. Data in this report are for the 12-month water year ending September 30.

Calendar year	WSP No.	Calendar year	WSP No.	Calendar year	WSP No.	Calendar year	WSP No.
1935	777	1942	949	1949	1161	1956-60	1770
1936	817	1943	991	1950	1170	1961-65	1855
1937	840	1944	1021	1951	1196	1966-70	2010
1938	845	1945	1028	1952	1226	1971-74	2162
1939	886	1946	1076	1953	1270		
1940	911	1947	1101	1954	1326		
1941	941	1948	1131	1955	1409		

Information about reports and other data on ground water in Hawaii may be obtained from the district office, at the address given on the back of the title page.

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Table 4.--Factors for converting English units to International System (SI) units

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply English units	By	To obtain SI units
Length		
inches (in)	25.4	millimetres (mm)
	.0254	metres (m)
feet (ft)	.3048	metres (m)
yards (yd)	.9144	metres (m)
rods	5.0292	metres (m)
miles (mi)	1.609	kilometres (km)
Area		
acres	4047	square metres (m^2)
	.4047	*hectares (ha)
	.4047	square hectometres (hm^2)
	.004047	square kilometres (km^2)
square miles (mi^2)	2.590	square kilometres (km^2)
Volume		
gallons (gal)	3.785	**litres (l)
	3.785	cubic decimetres (dm^3)
	3.785×10^{-3}	cubic metres (m^3)
million gallons (10^6 gal)	3785	cubic metres (m^3)
	3.785×10^{-3}	cubic hectometres (hm^3)
cubic feet (ft^3)	28.32	cubic decimetres (dm^3)
	.02832	cubic metres (m^3)
cfs-day (ft^3/s-day)	2447	cubic metres (m^3)
	2.447×10^{-3}	cubic hectometres (hm^3)
acre-feet (acre-ft)	1233	cubic metres (m^3)
	1.233×10^{-3}	cubic hectometres (hm^3)
	1.233×10^{-6}	cubic kilometres (km^3)
Flow		
cubic feet per second (ft^3/s)	28.32	litres per second (l/s)
	28.32	cubic decimetres per second (dm^3/s)
	.02832	cubic metres per second (m^3/s)
gallons per minute (gpm)	.06309	litres per second (l/s)
	.06309	cubic decimetres per second (dm^3/s)
	6.309×10^{-5}	cubic metres per second (m^3/s)
million gallons per day (mgd)	43.81	cubic decimetres per second (dm^3/s)
	.04381	cubic metres per second (m^3/s)
Mass		
ton (short)	.9072	tonnes (t)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p. 15, 1972 edition.

**The unit litre is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

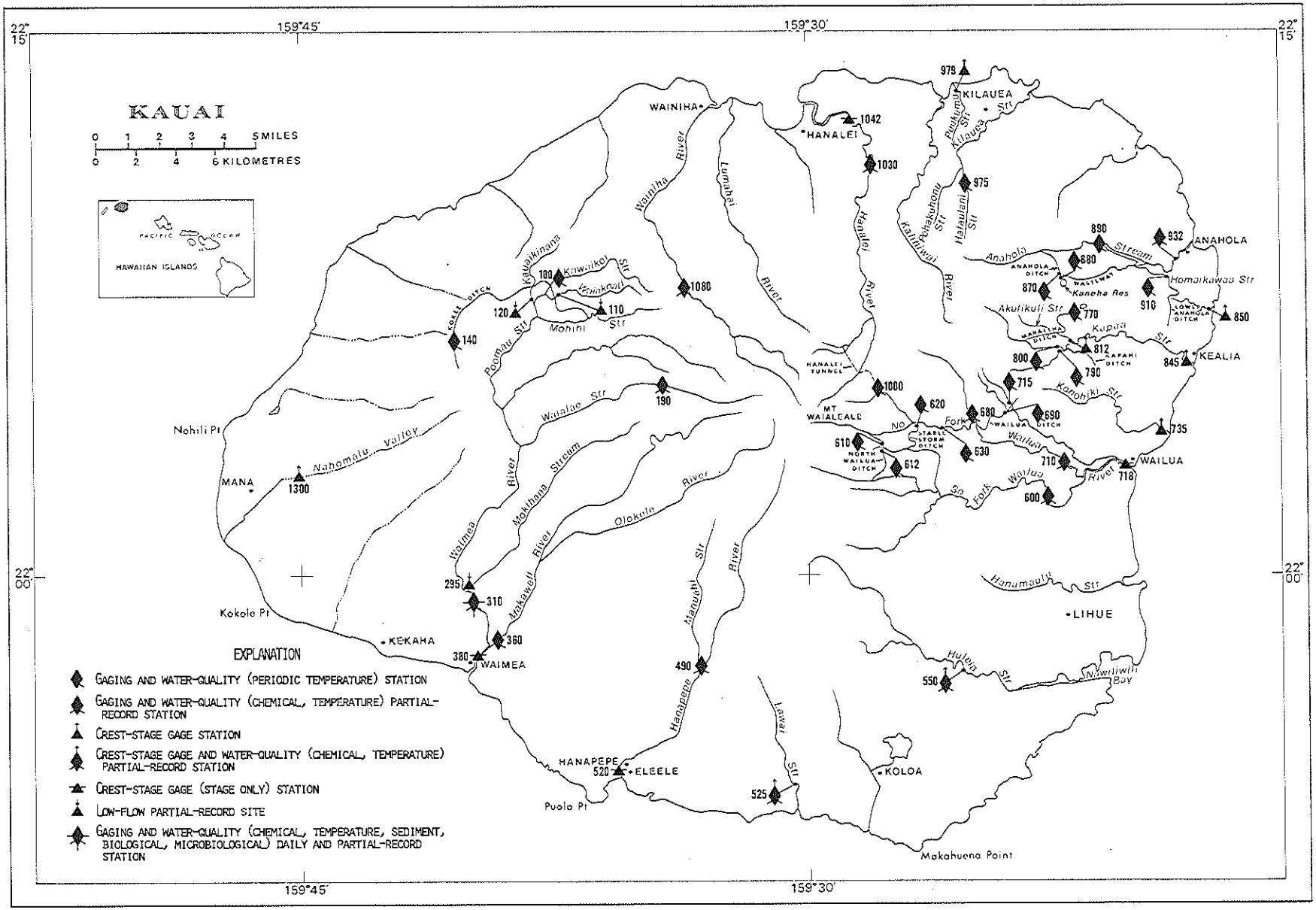

FIGURE 1.--MAP OF KAUAI SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

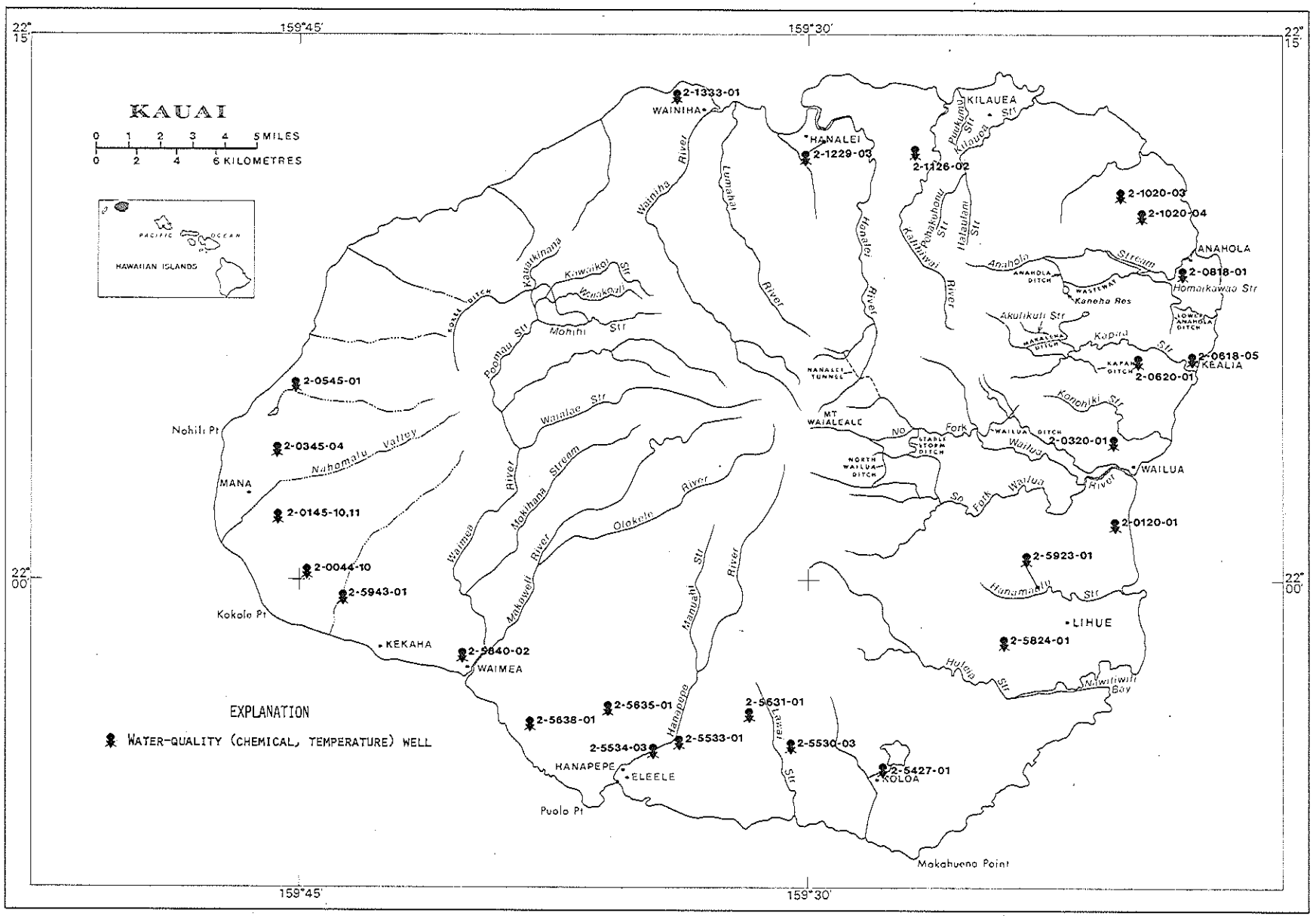

FIGURE 2.--MAP OF KAUAI SHOWING LOCATIONS OF GROUND-WATER QUALITY SAMPLING SITES.

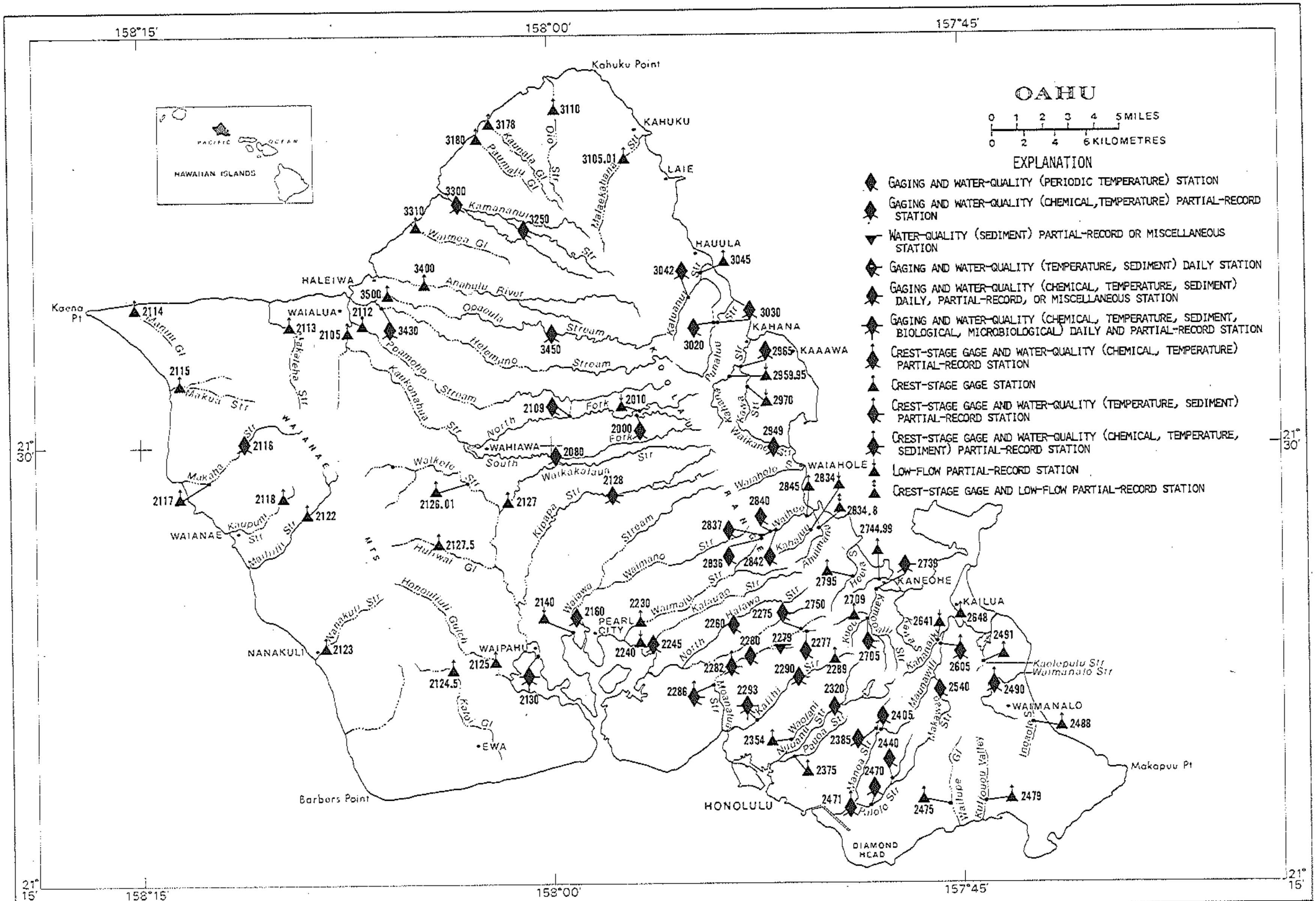

FIGURE 3.--MAP OF OAHU SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

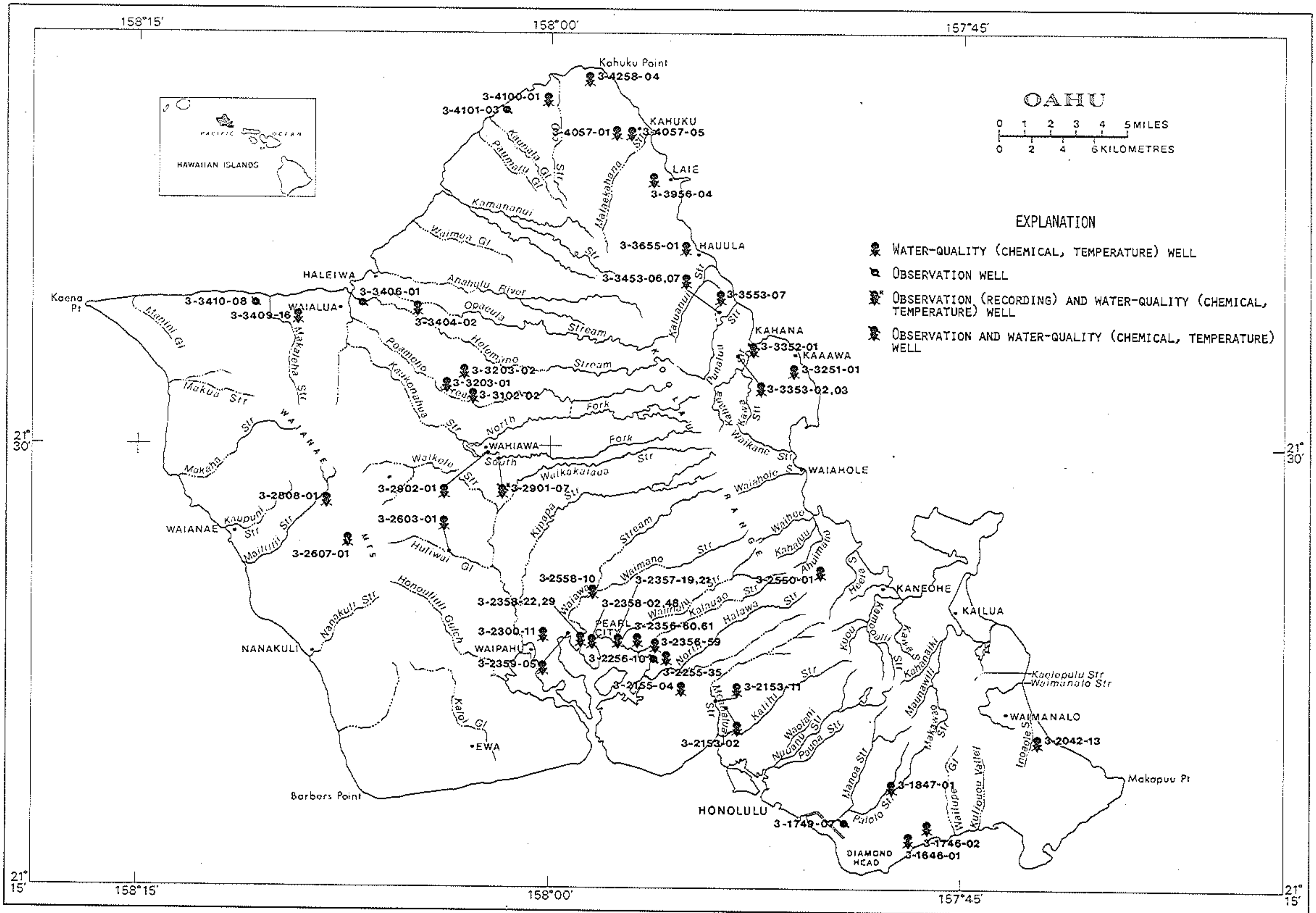

FIGURE 4.--MAP OF OAHU SHOWING LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER QUALITY SAMPLING SITES.

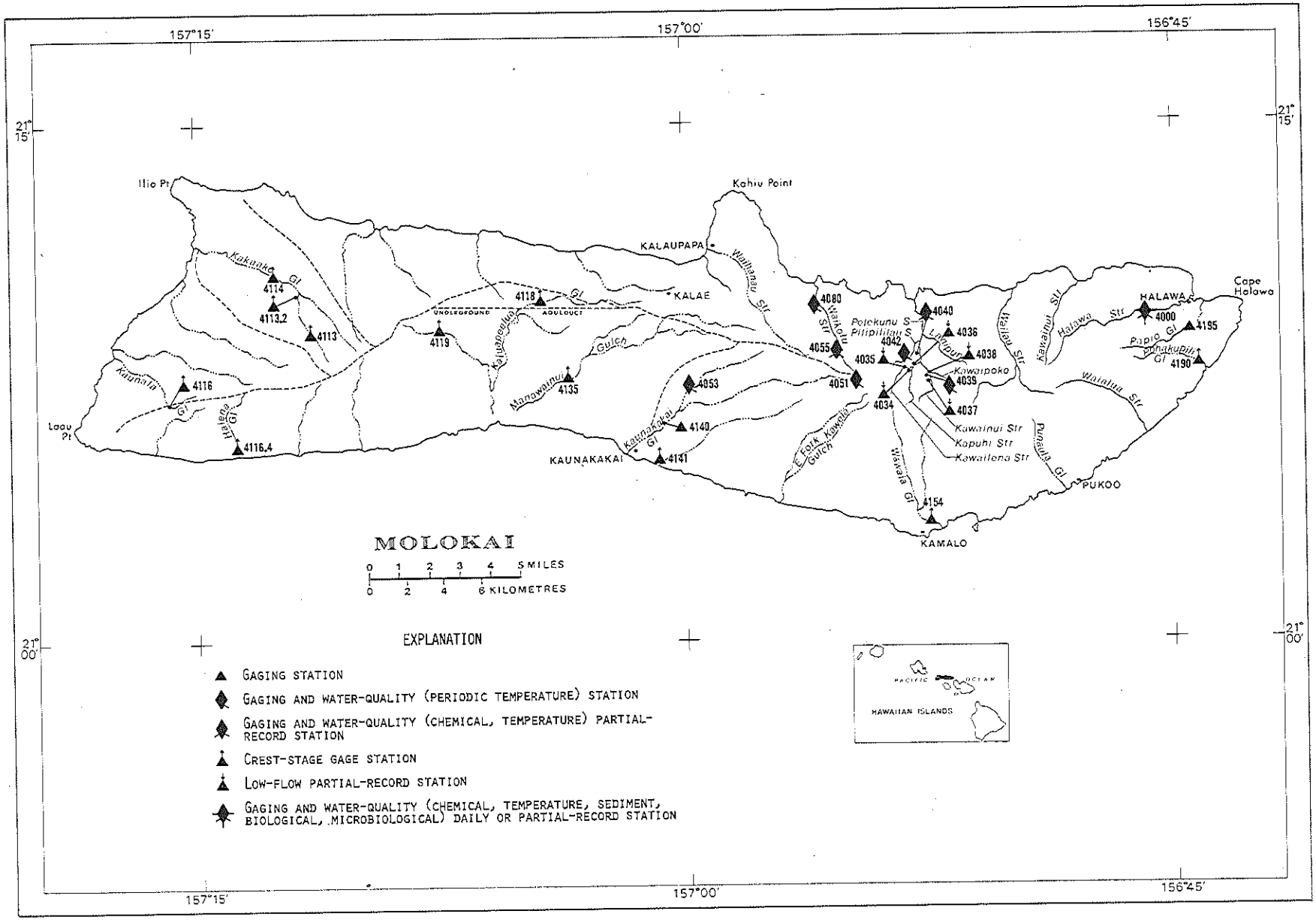

FIGURE 5.--MAP OF MOLOKAI SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

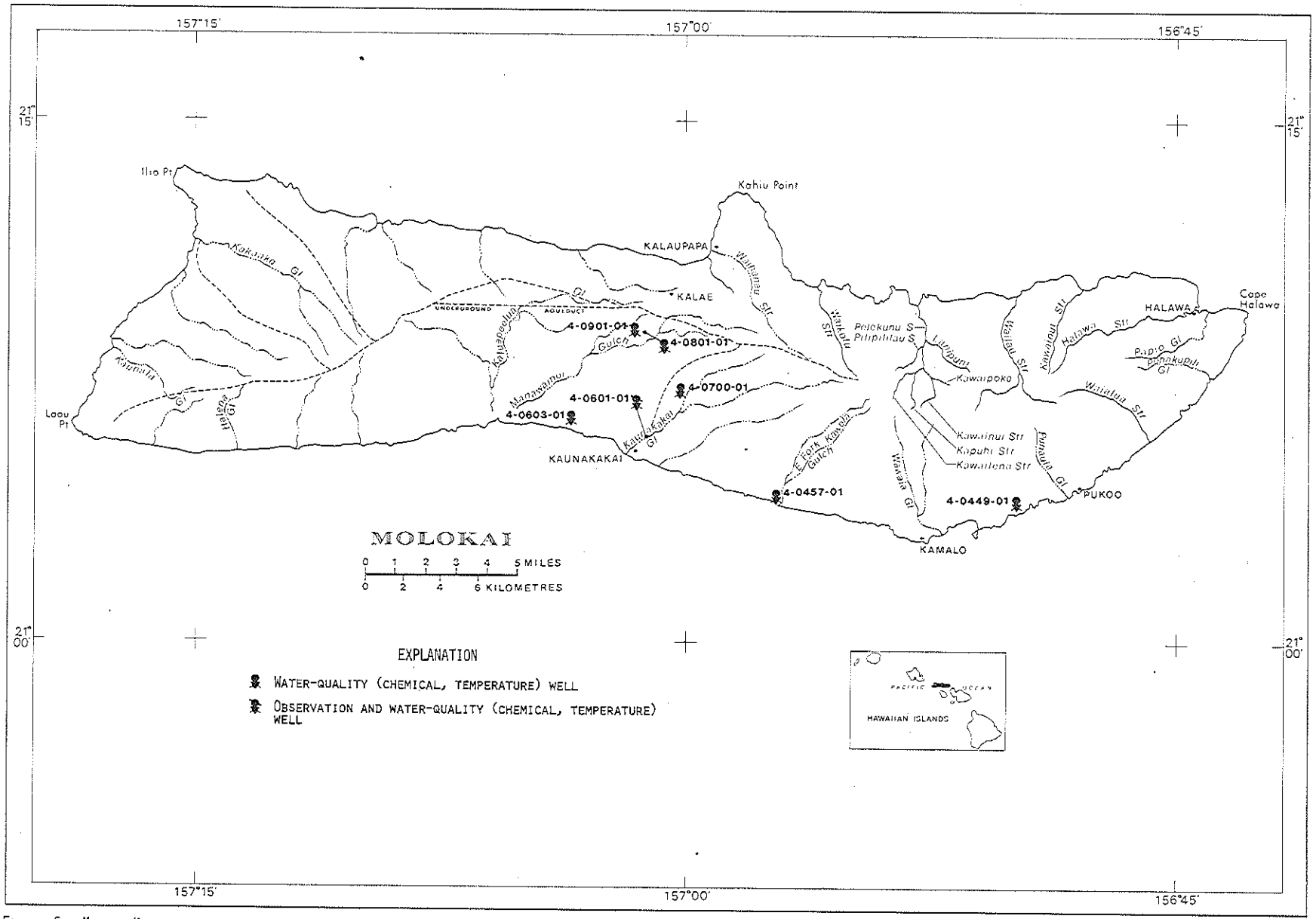

FIGURE 6.--MAP OF MOLOKAI SHOWING LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER SAMPLING SITES.

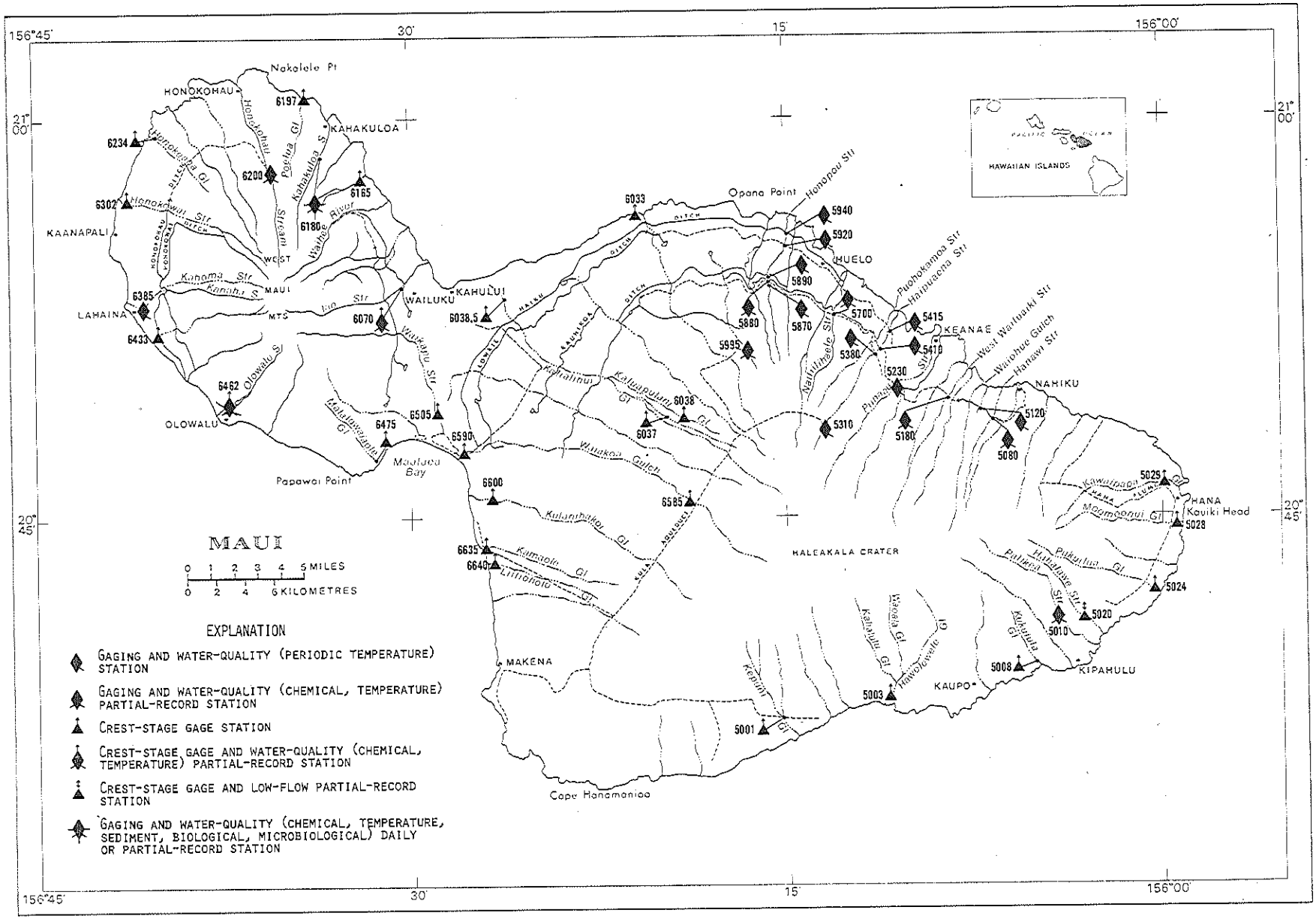

FIGURE 7.--MAP OF MAUI SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

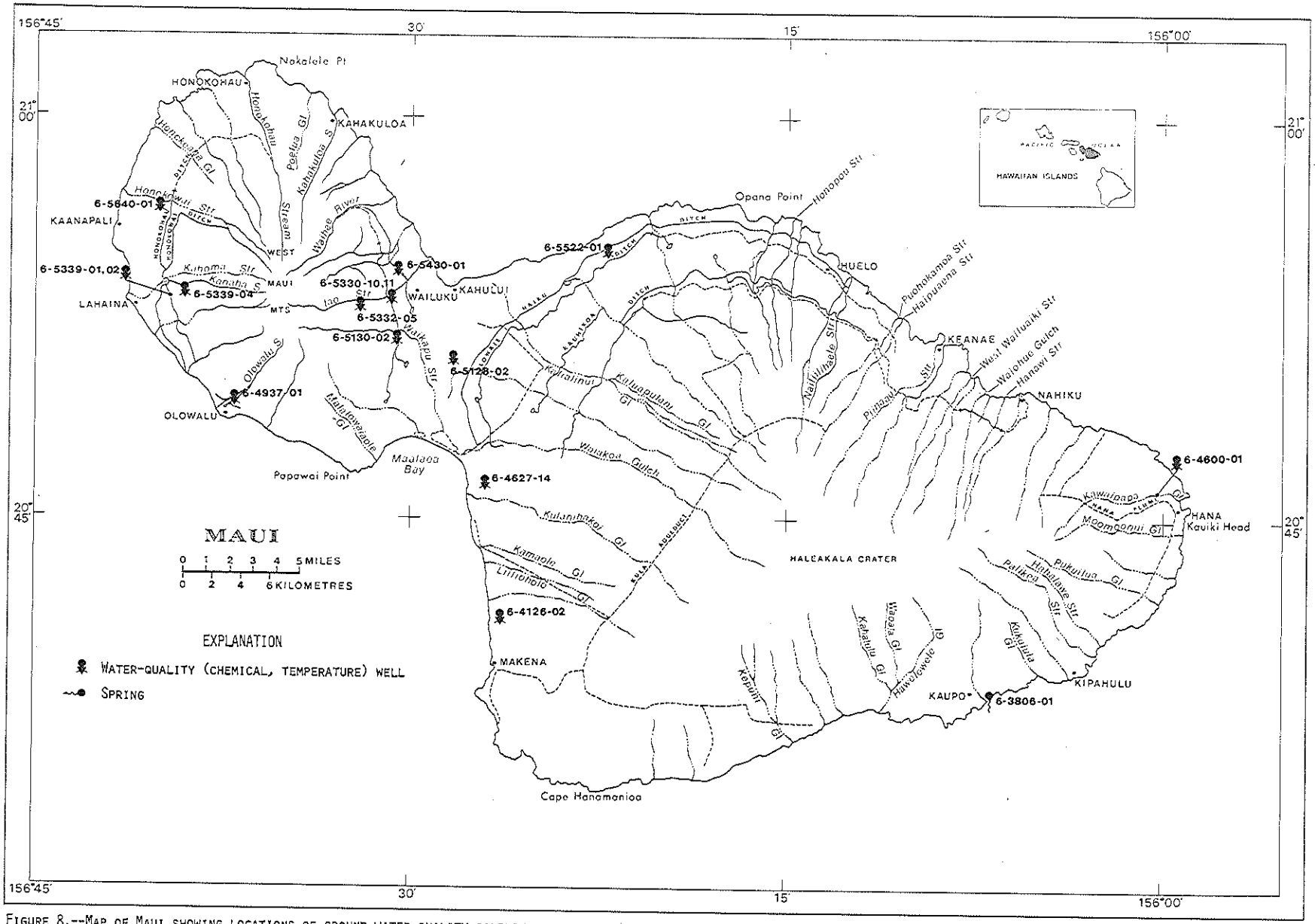

FIGURE 8.--MAP OF MAUI SHOWING LOCATIONS OF GROUND-WATER QUALITY SAMPLING SITES.

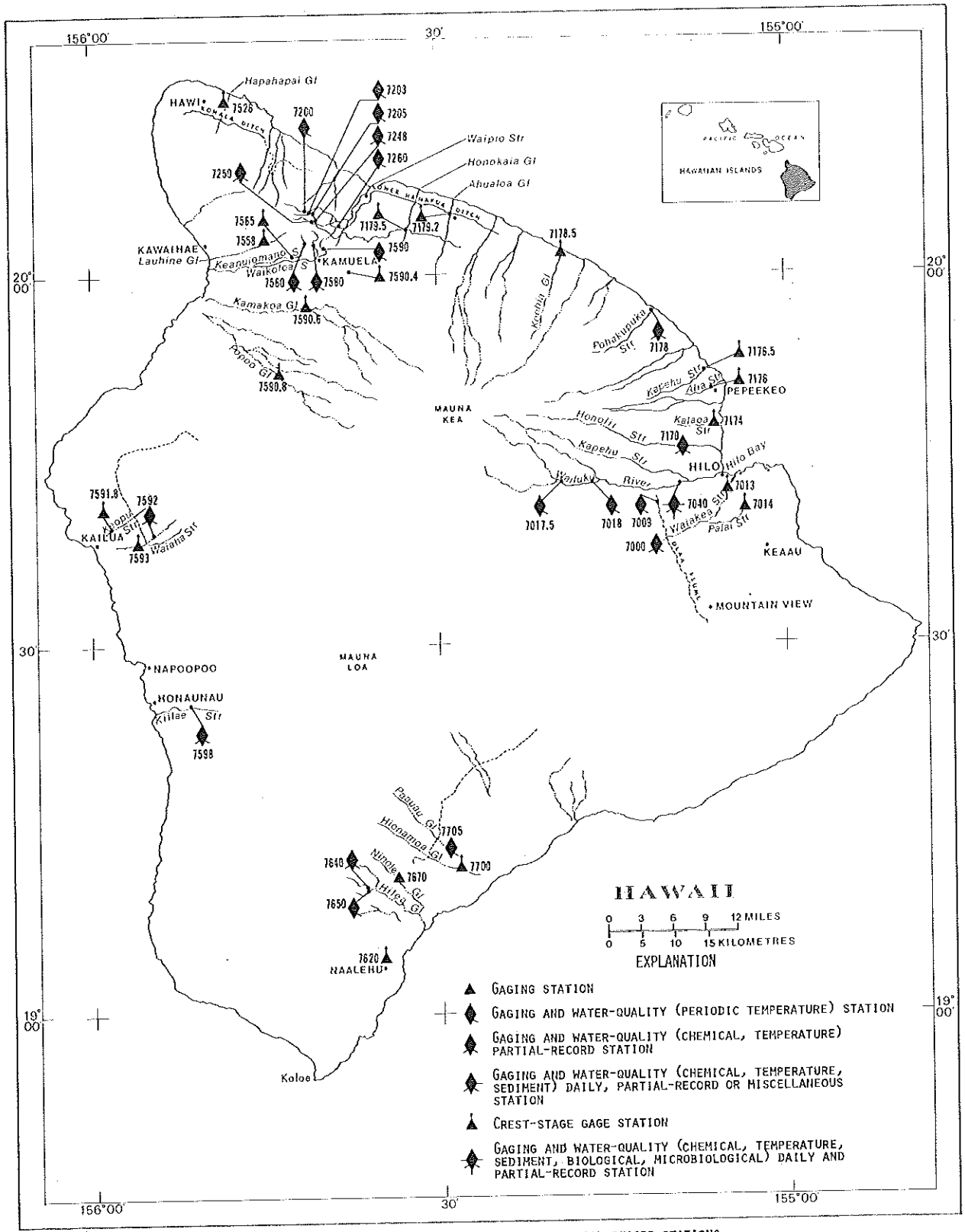

FIGURE 9.--MAP OF HAWAII SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS,

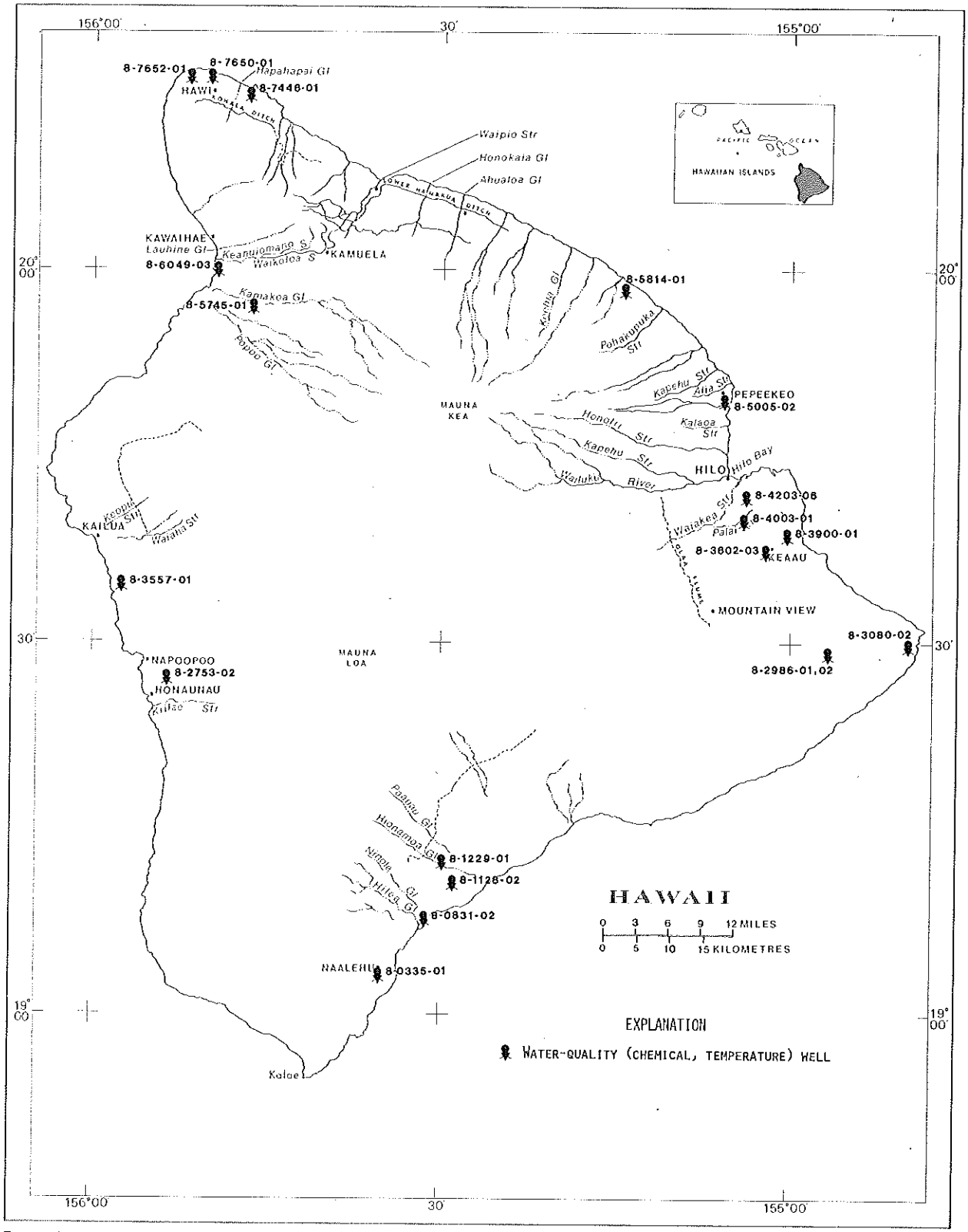

FIGURE 10.--MAP OF HAWAII SHOWING LOCATIONS OF GROUND-WATER QUALITY SAMPLING SITES.

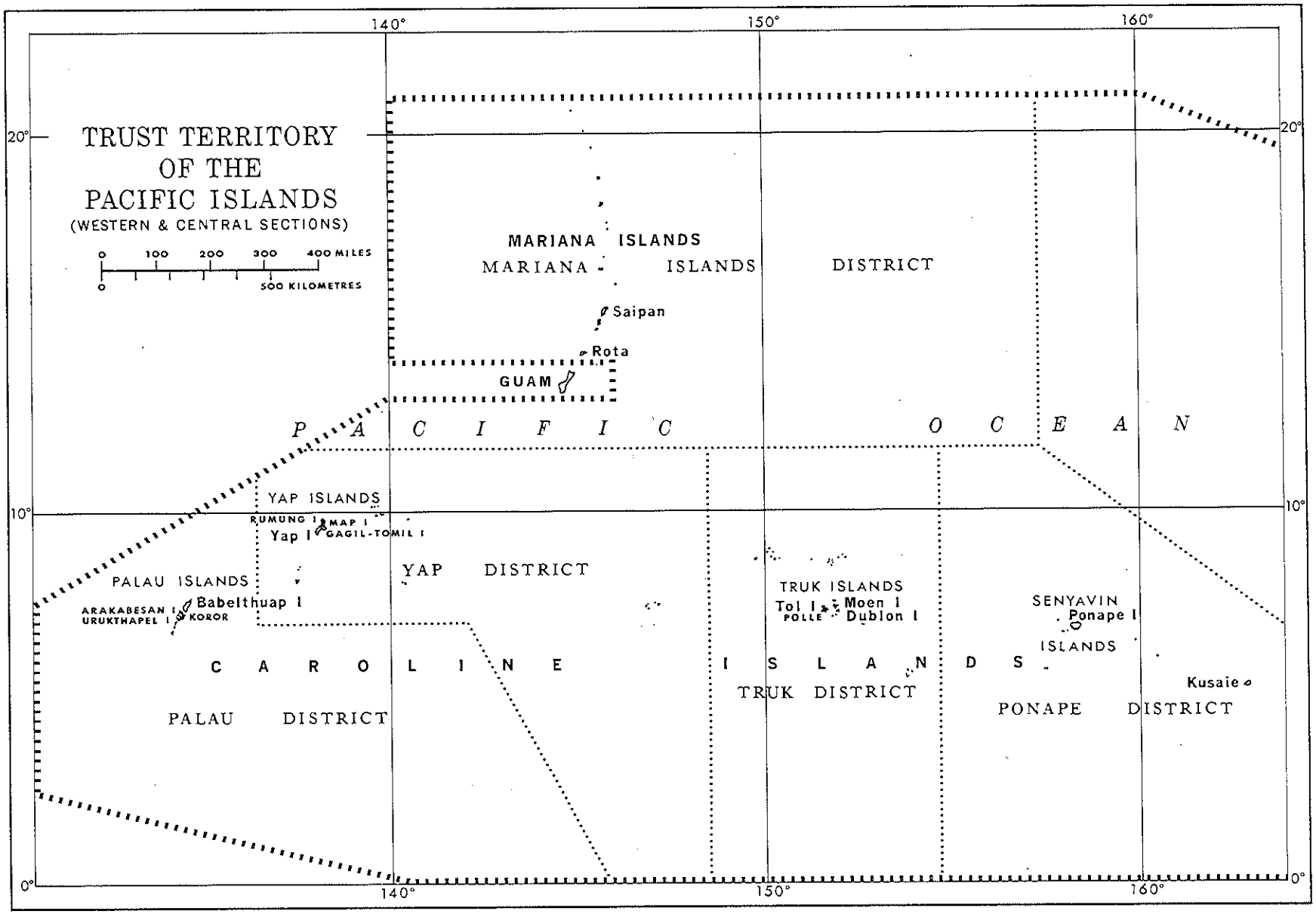

FIGURE 11. MAP SHOWING LOCATIONS OF THE TRUST TERRITORY PACIFIC ISLANDS

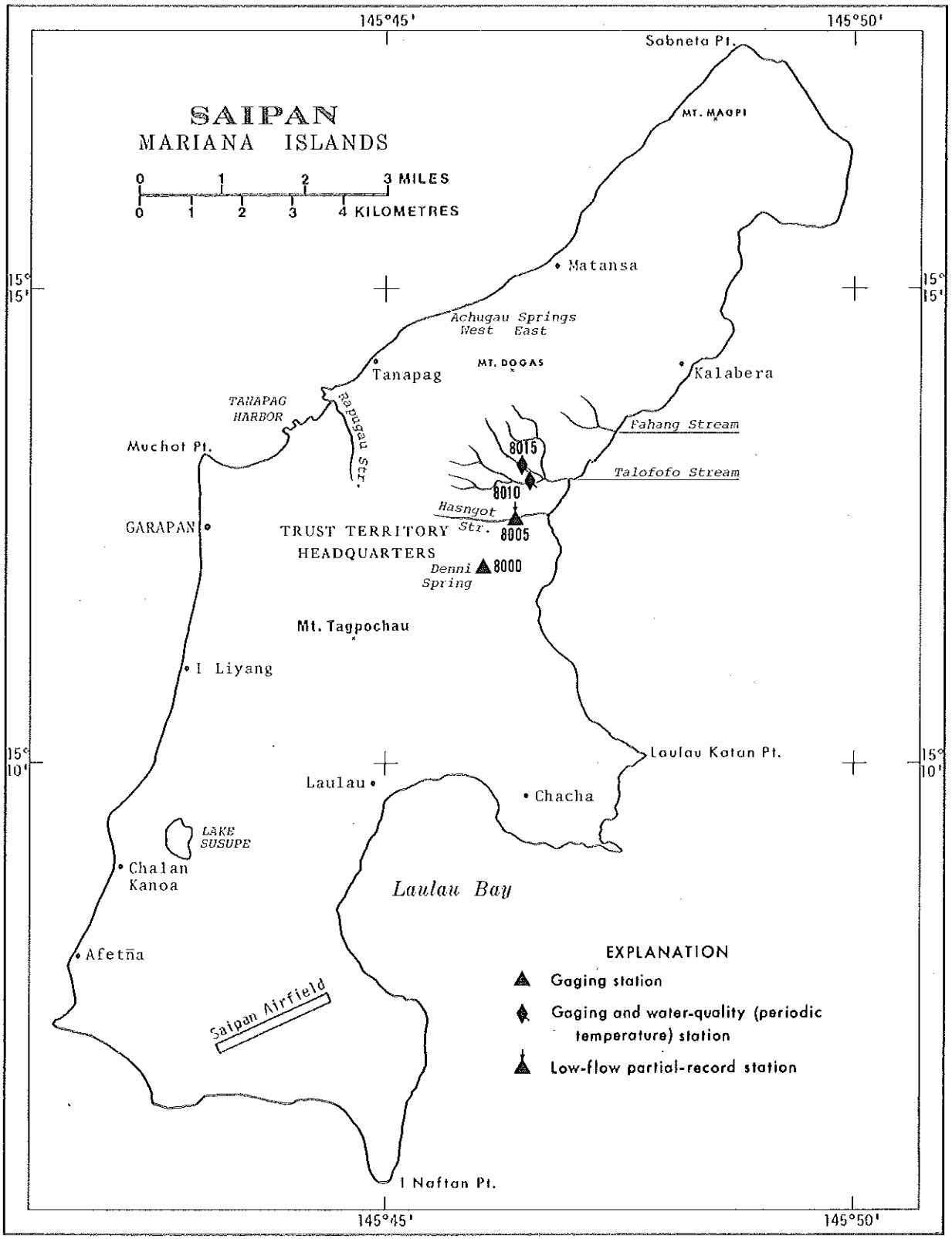

FIGURE 12.--MAP OF SAIPAN, MARIANA ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

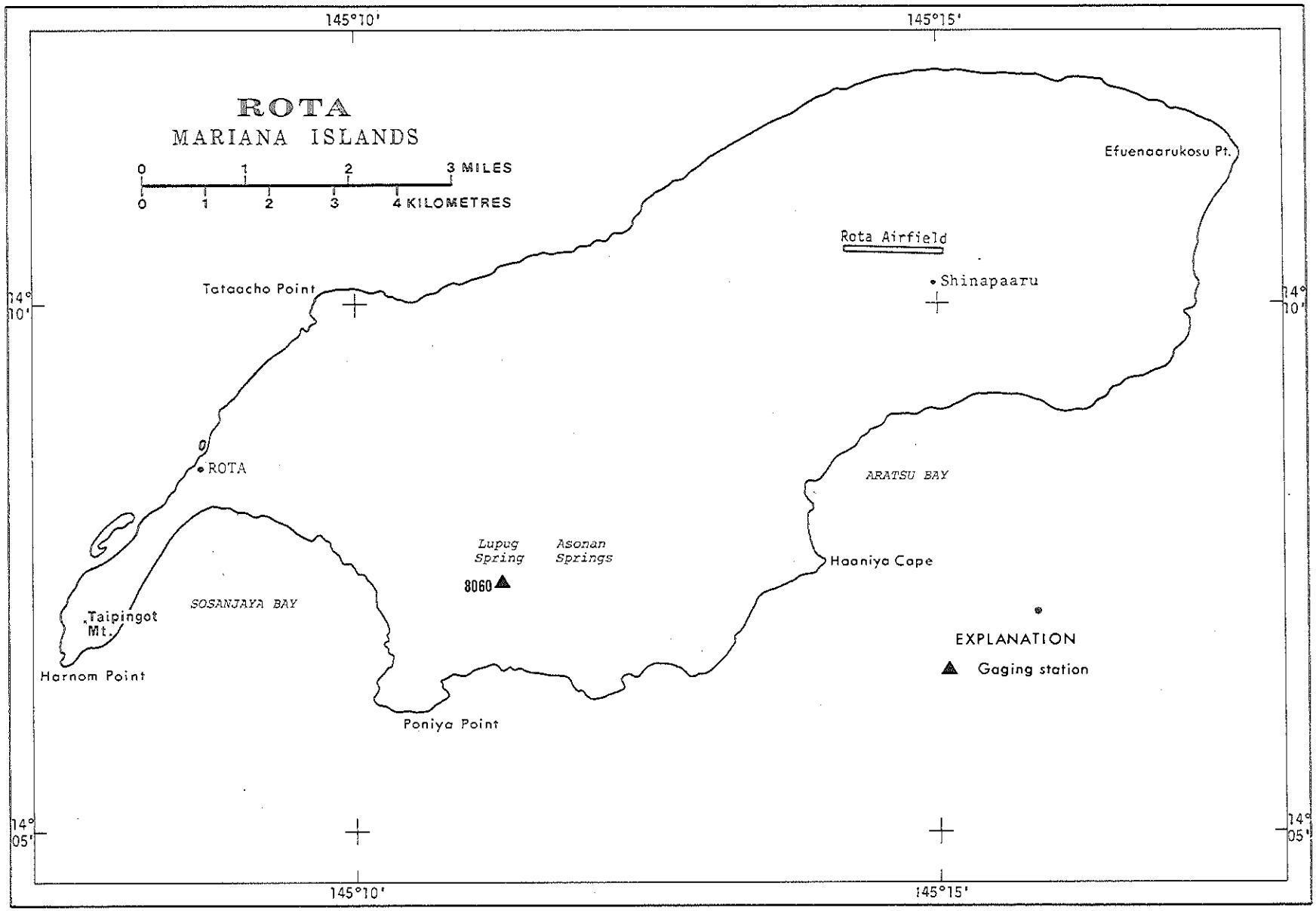

FIGURE 13.--MAP OF ROTA, MARIANA ISLANDS, SHOWING LOCATION OF GAGING STATION.

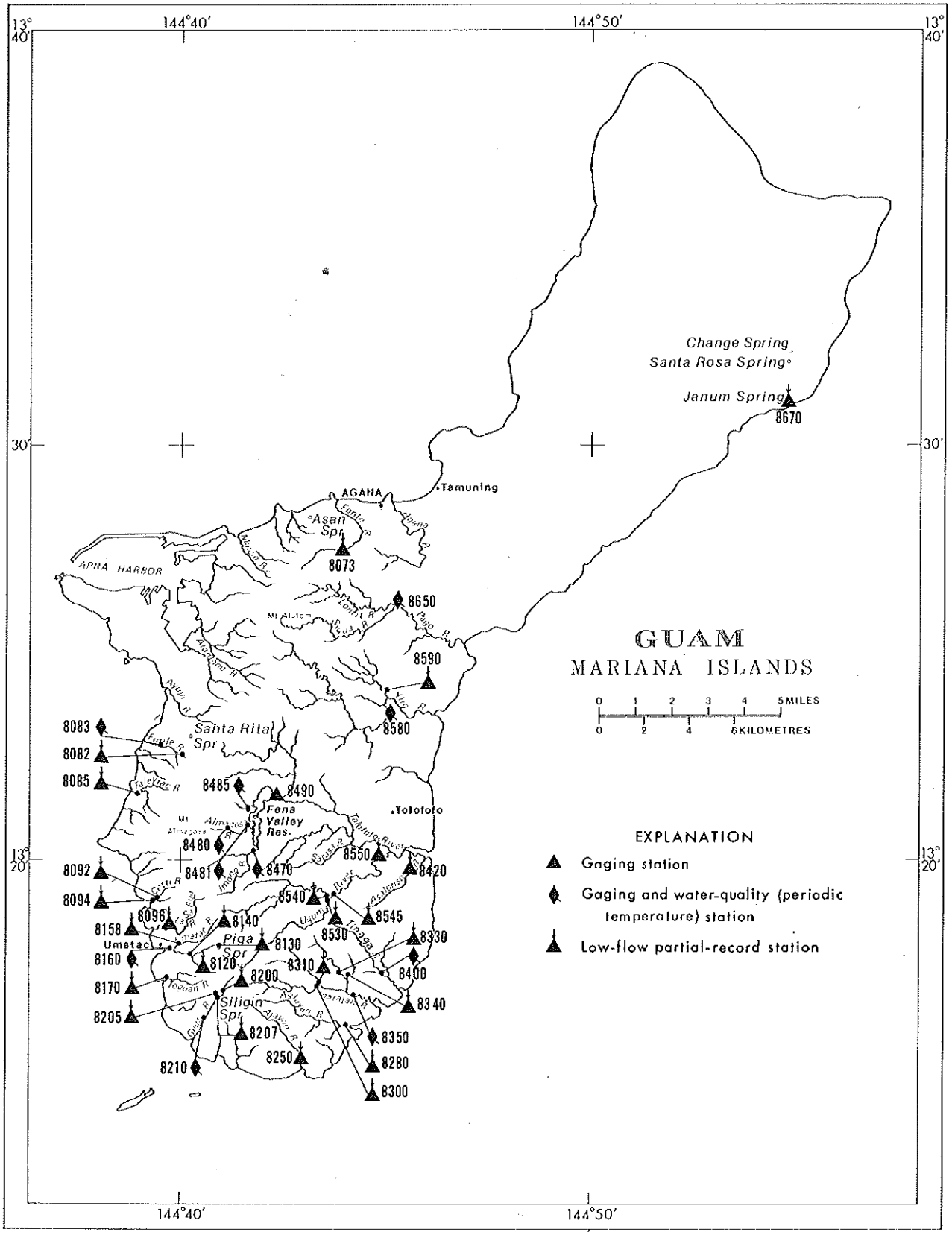

FIGURE 14.--MAP OF GUAM, MARIANA ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

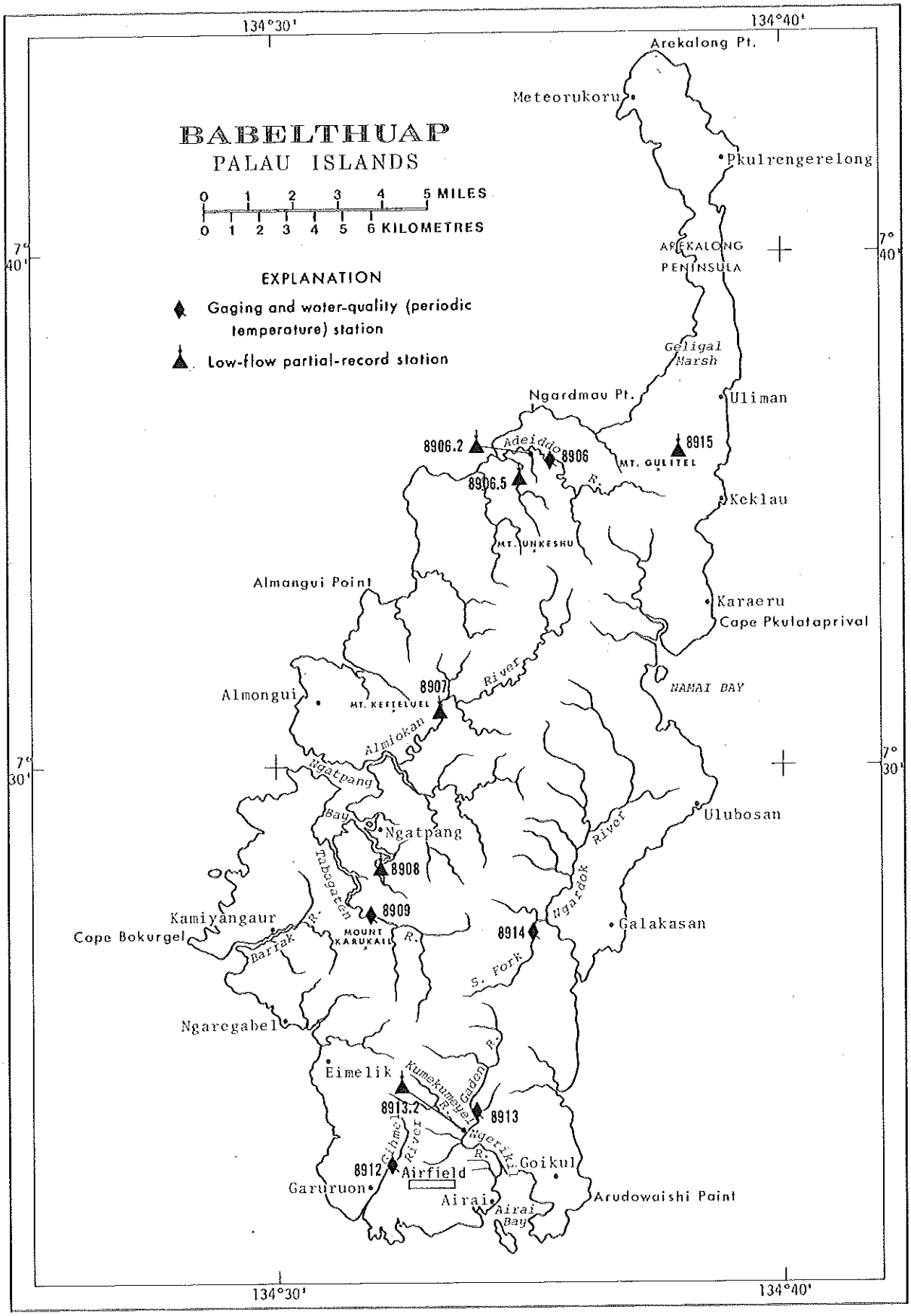

FIGURE 15.--MAP OF BABELTHUAP, PALAU ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

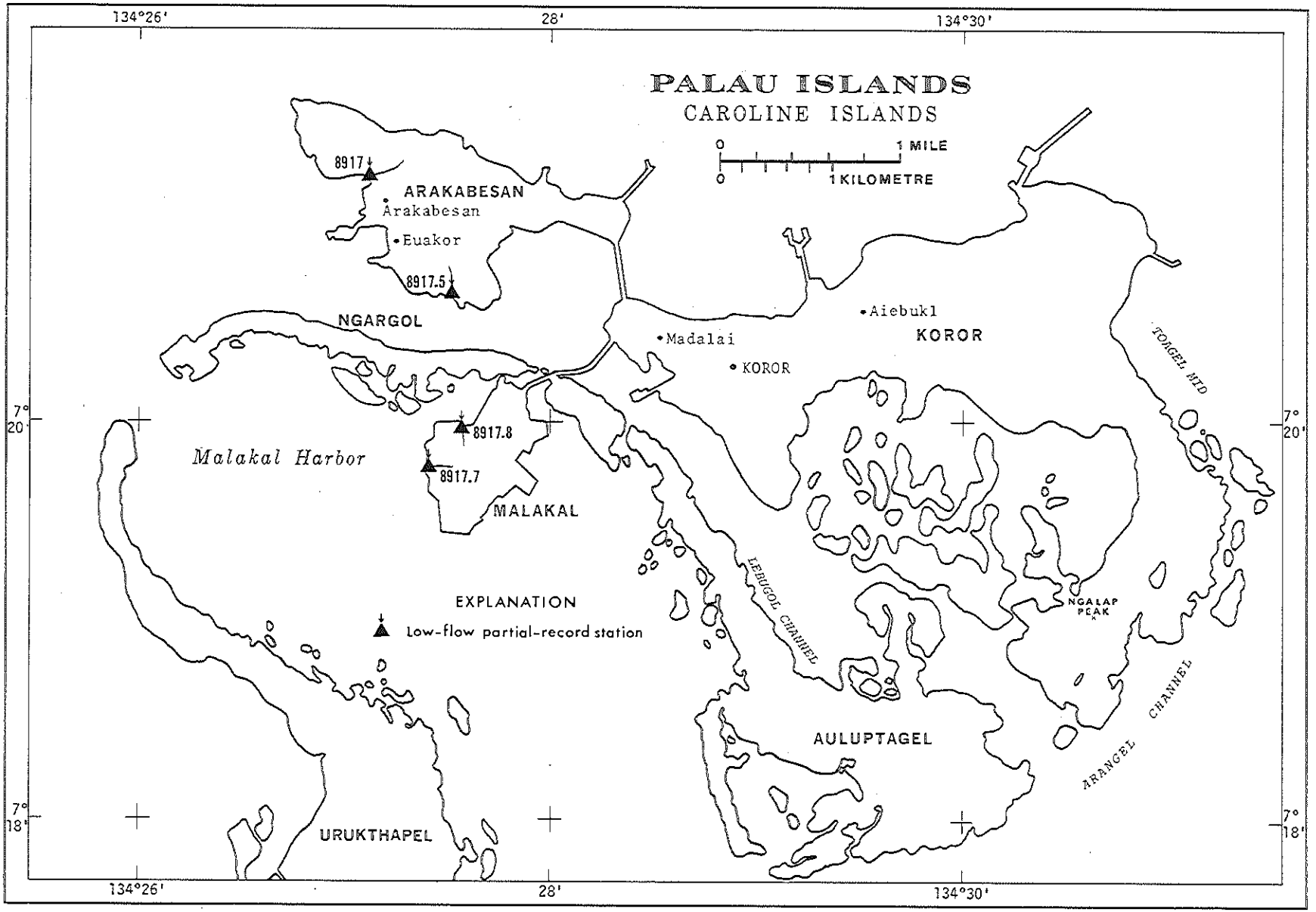

FIGURE 16.--MAP OF ARAKABESAN, MALAKAL, PALAU ISLANDS, SHOWING LOCATIONS OF PARTIAL-RECORD STATIONS.

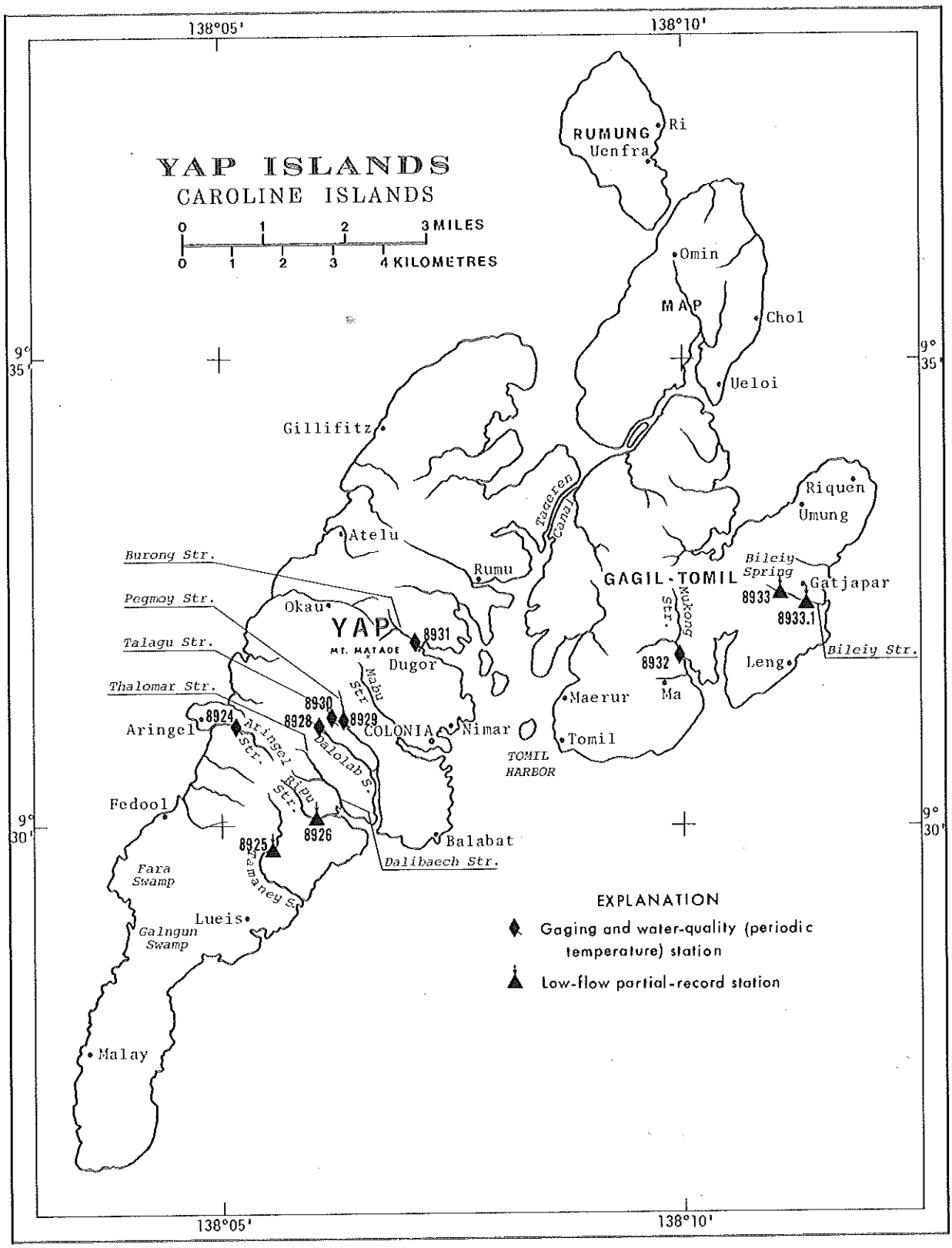

FIGURE 17.--MAP OF YAP ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

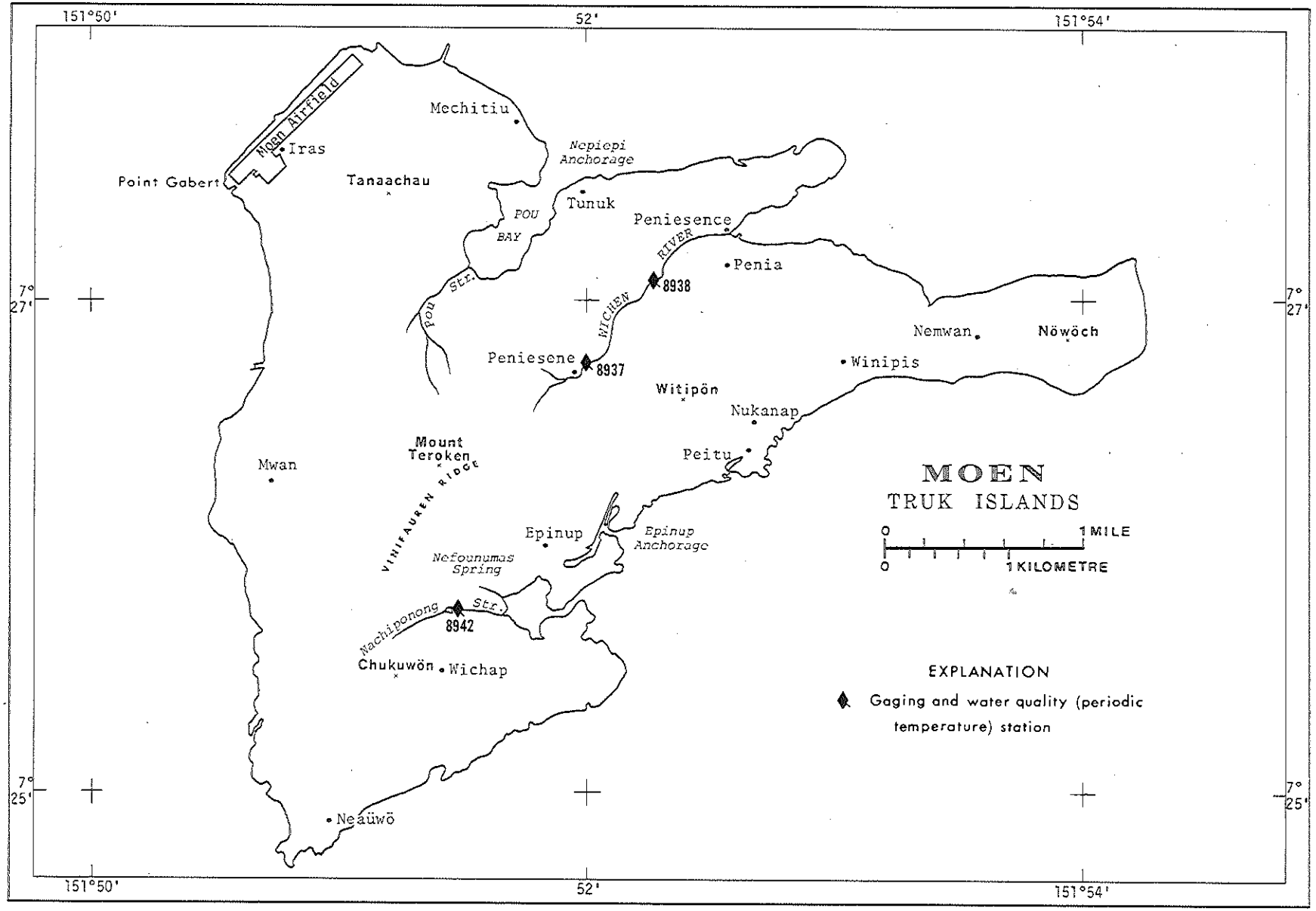

FIGURE 18.--MAP OF MOEN, TRUK ISLANDS, SHOWING LOCATIONS OF GAGING AND WATER-QUALITY STATIONS.

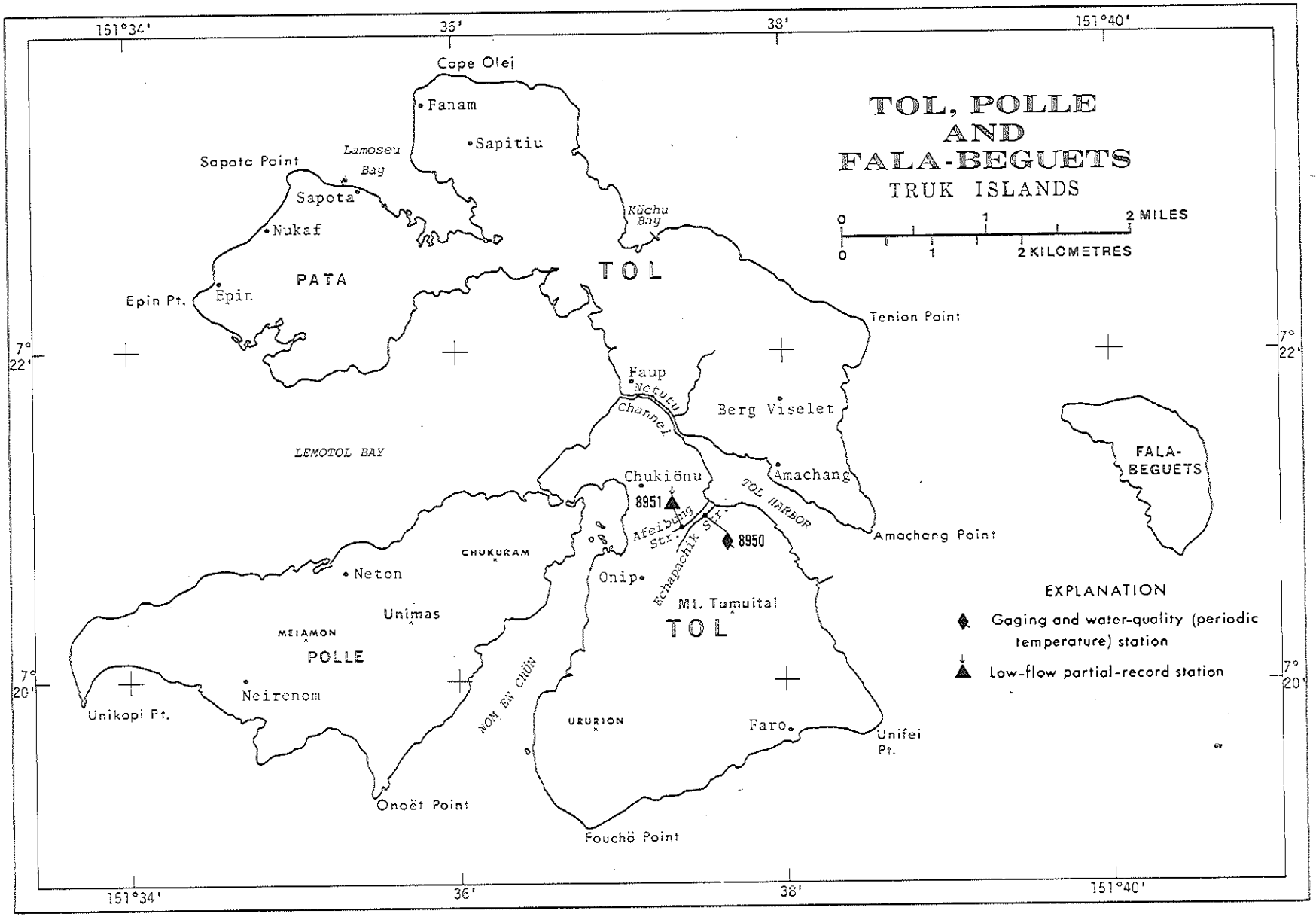

FIGURE 19.--MAP OF TOL, TRUK ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

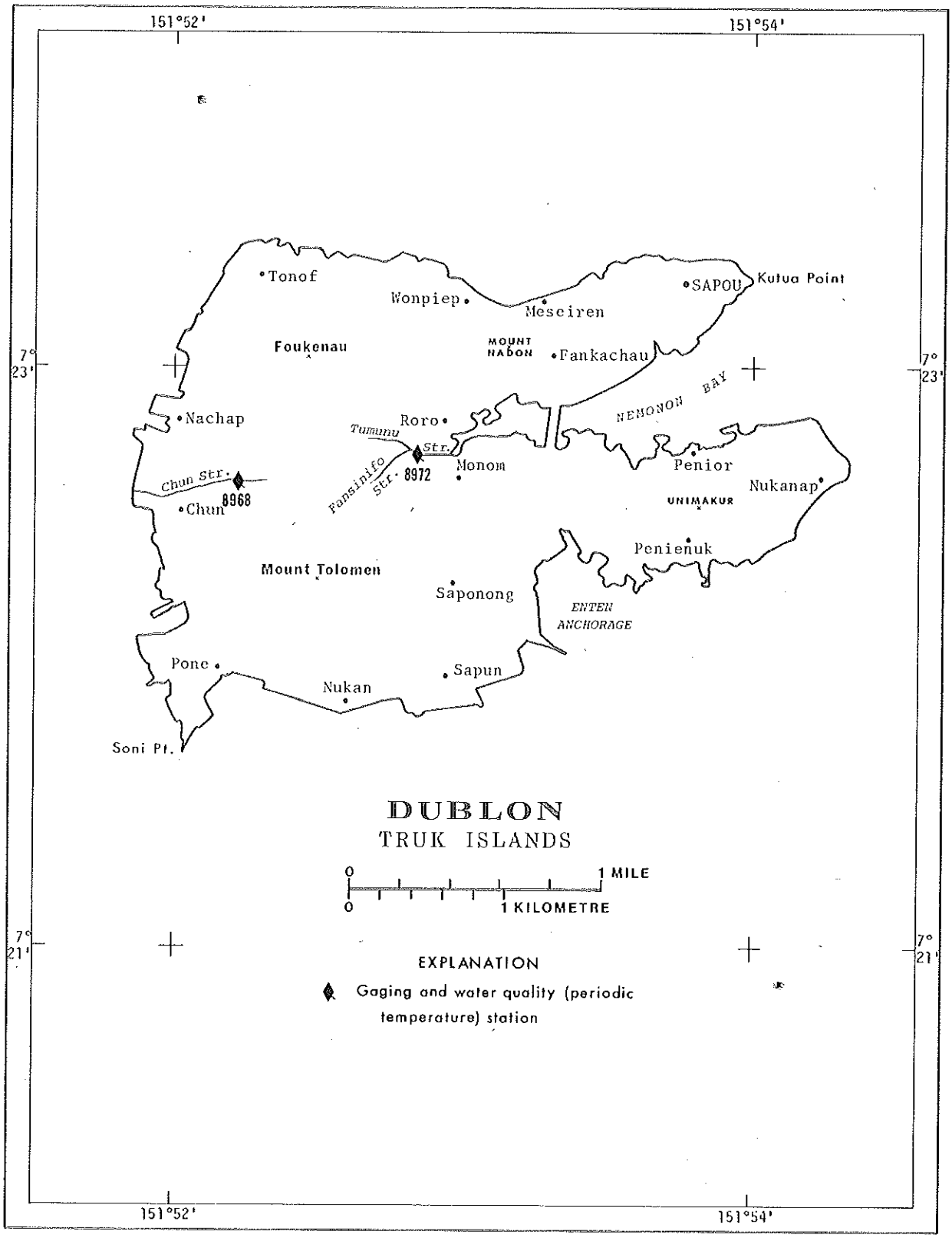

FIGURE 20.--MAP OF DUBLON ISLAND, TRUK ISLANDS, SHOWING LOCATIONS OF GAGING AND WATER-QUALITY STATIONS.

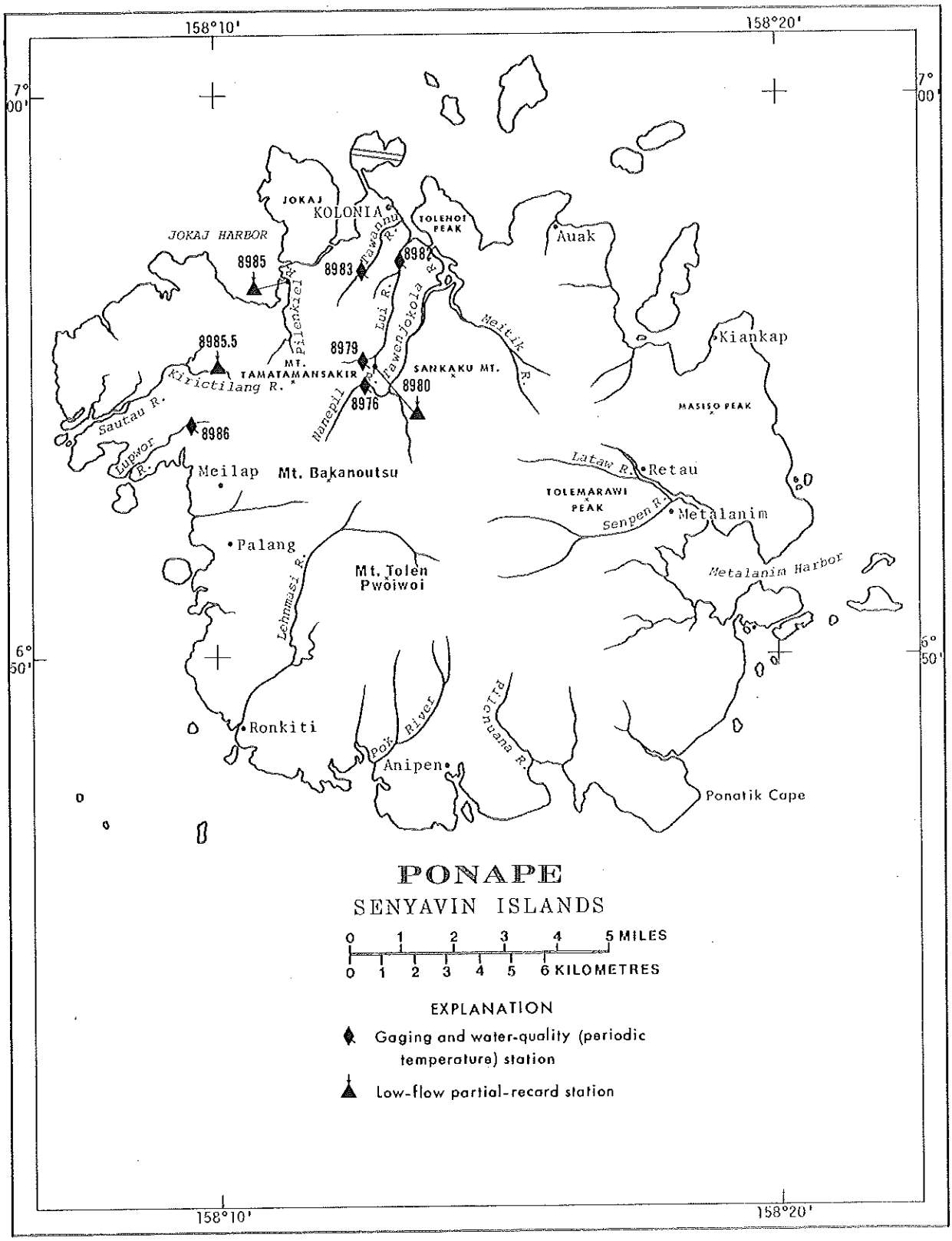

FIGURE 21.--MAP OF PONAPE, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

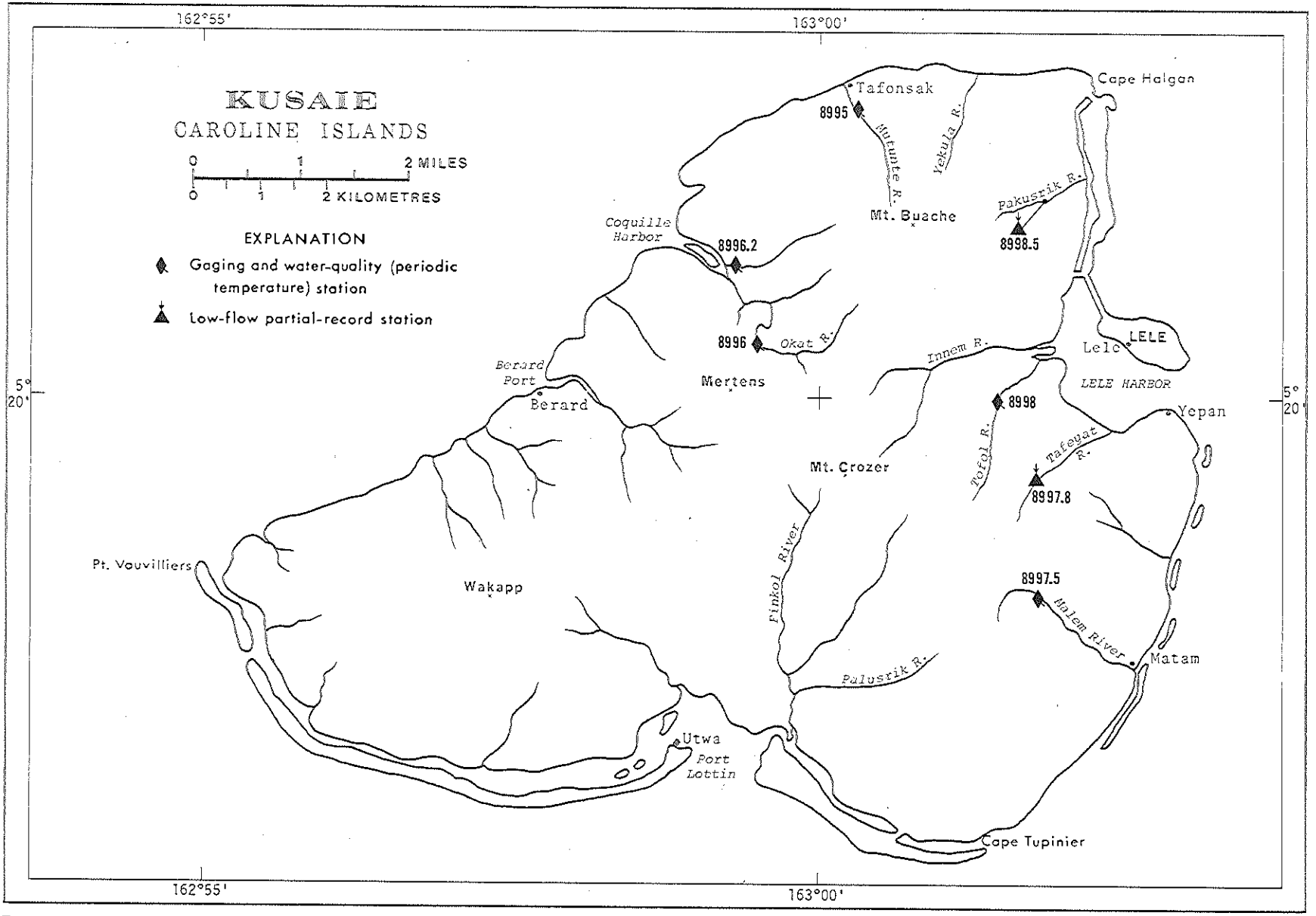

FIGURE 22.--MAP OF KUSAIE, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

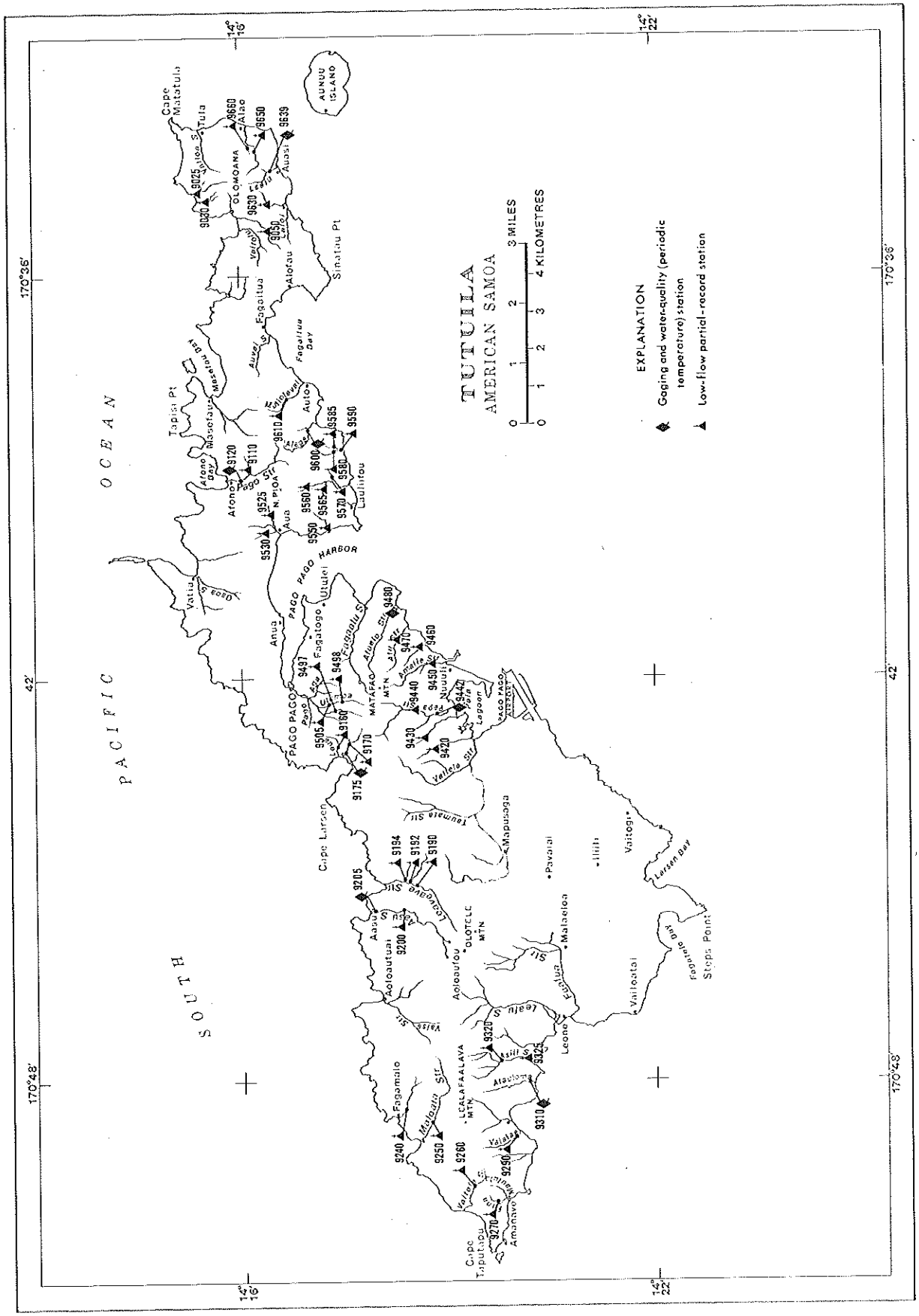

FIGURE 23.--MAP OF TUTUILA, SAMOA ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

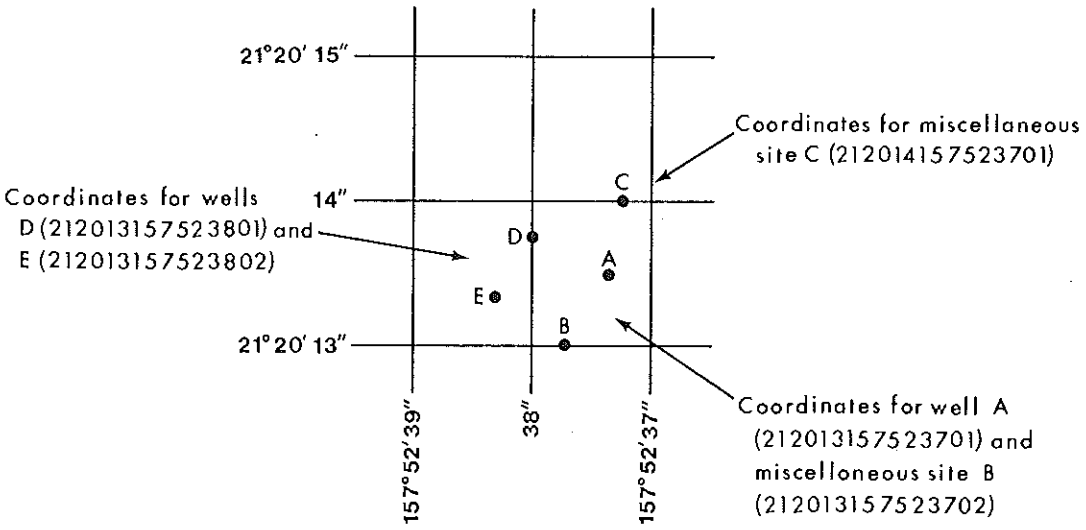

Figure 24. Sketch showing system for numbering wells and miscellaneous sites

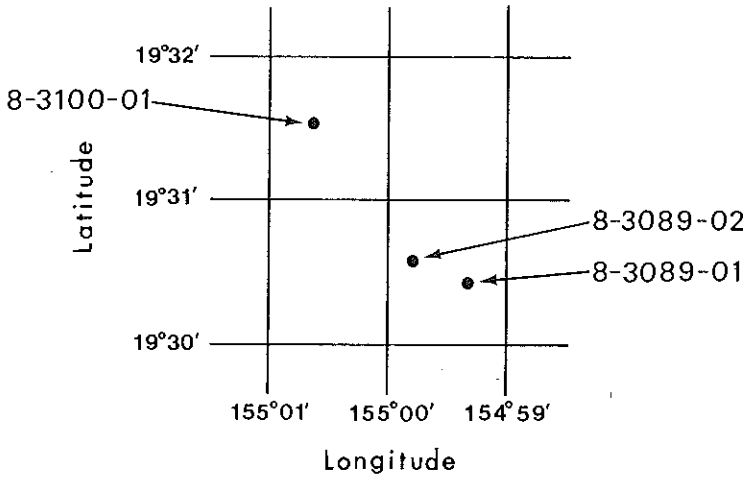

Figure 25. Sketch showing local well numbering system

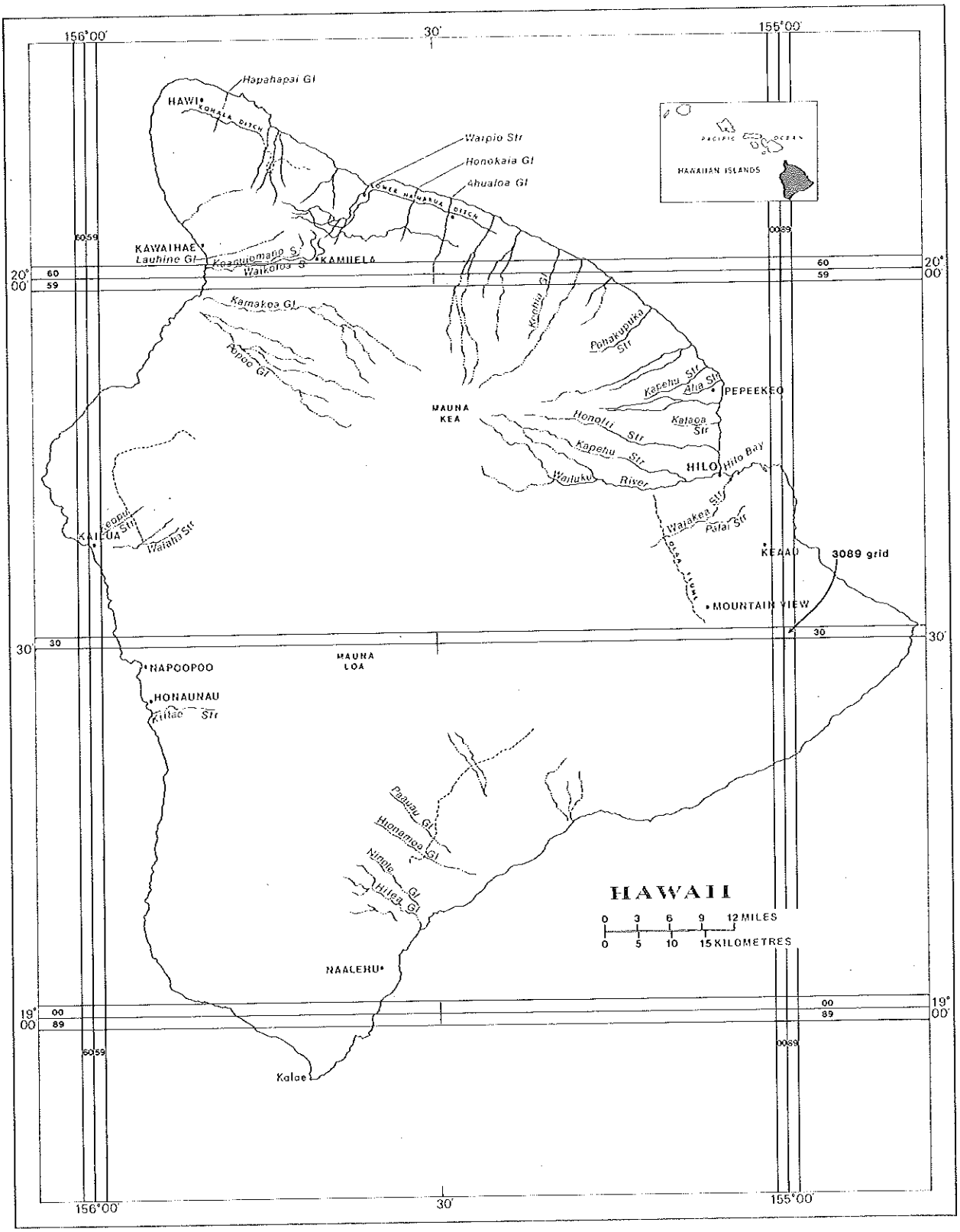

FIGURE 26.--MAP OF HAWAII SHOWING SYSTEM FOR NUMBERING LOCAL WELL NUMBERS.

PART 1. SURFACE-WATER RECORDS

HAWAII, ISLAND OF KAUAI

16010000 KAWAIKOI STREAM NEAR WAIMEA

LOCATION.--Lat 22°08'09", long 159°37'22", on left bank 0.2 mi (0.3 km) upstream from Kokee-Mohihi Road crossing, 2.5 mi (4.0 km) east of Kokee Lodge, and 12.5 mi (20.1 km) north of Waimea.

DRAINAGE AREA.--3.95 mi^2 (10.23 km^2).

PERIOD OF RECORD.--April 1909 to October 1912, December 1912 to March 1913, May 1913 to June 1915, August 1915 to May 1916, July to December 1916, July 1919 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,420 ft (1,042 m) by barometer. Prior to May 26, 1910, nonrecording gage at site 300 ft (91 m) downstream at different datum.

AVERAGE DISCHARGE.--58 years (1911-12, 1913-14, 1919-75), 34.6 ft^3/s (0.980 m^3/s), 25,070 acre-ft/yr (30.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 4,310 ft^3/s (122 m^3/s) Mar. 28 (gage height, 10.61 ft or 3.234 m), from rating curve extended as explained below; minimum, 1.7 ft^3/s (0.048 m^3/s) Sept. 28-30.
Period of record: Maximum discharge, 11,300 ft^3/s (320 m^3/s) Jan. 13, 1967 (gage height, 15.33 ft or 4.673 m), from rating curve extended above 470 ft^3/s (13.3 m^3/s) on basis of slope-area measurements at gage heights 12.12 ft (3.694 m) and 13.43 ft (4.093 m); minimum, 1.14 ft^3/s (0.032 m^3/s) Sept. 21, 22, 1953.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 555: 1920-21. WSP 1185: 1914-17(M), 1920-38(M), 1940-43(M), 1947(M). WSP 1719: 1912, 1921-25, 1927-32, 1936. WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	* DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	5.1	17	11	49	8.9	19	9.1	4.5	11	3.0	6.5
2	4.2	4.1	12	10	32	8.5	16	8.6	4.4	12	8.3	3.8
3	4.3	3.7	10	21	23	8.6	15	8.1	4.4	5.8	4.3	3.1
4	5.4	3.5	9.5	51	133	8.8	14	7.9	4.4	4.2	3.3	2.7
5	13	3.4	8.9	40	33	22	23	7.9	4.4	3.6	3.0	2.3
6	6.3	3.6	8.4	19	21	13	39	19	4.2	3.2	2.7	2.2
7	5.0	9.9	8.0	56	18	9.8	17	18	4.2	3.0	2.6	2.1
8	6.6	18	8.0	40	16	8.7	13	12	4.1	3.4	2.5	1.9
9	7.4	9.6	56	57	15	8.0	11	8.9	4.1	4.4	2.4	1.9
10	5.4	125	16	123	17	7.9	11	7.9	4.4	4.2	2.5	1.9
11	4.6	214	10	25	14	9.4	9.7	12	4.4	8.1	2.6	2.2
12	4.2	35	15	58	28	19	9.1	9.7	4.1	14	2.7	2.1
13	4.0	14	12	126	24	13	8.4	34	4.1	11	2.7	2.1
14	31	13	8.6	83	21	36	7.9	45	4.2	18	3.5	2.1
15	17	75	37	25	14	14	7.7	18	4.5	9.7	15	1.9
16	17	127	30	18	15	12	7.4	11	4.4	5.4	7.0	1.9
17	7.9	245	12	15	57	14	16	8.6	4.2	6.5	4.3	2.7
18	5.6	82	9.0	13	20	10	77	7.7	4.1	102	12	2.7
19	4.9	53	8.4	12	13	9.4	49	7.0	4.1	93	6.2	2.3
20	4.4	520	98	11	11	8.1	20	6.5	4.1	16	3.9	2.2
21	4.0	413	23	11	11	8.3	41	6.3	3.9	8.0	3.2	2.1
22	3.8	100	69	10	195	7.3	35	6.1	3.8	6.0	2.8	2.1
23	3.6	46	16	9.4	26	6.9	27	5.8	3.6	4.6	2.7	1.9
24	3.6	31	12	233	15	8.6	86	5.6	3.4	4.0	2.9	1.8
25	3.5	23	9.8	65	12	7.9	54	5.4	3.4	3.6	3.9	1.8
26	3.4	19	68	22	11	6.9	23	5.2	3.5	3.5	3.3	1.8
27	3.5	16	34	17	9.9	9.0	15	5.0	4.1	3.3	2.7	1.8
28	4.8	14	16	14	9.4	911	12	4.9	6.5	3.2	2.5	1.7
29	5.1	13	13	13	---	325	11	4.9	8.1	2.9	2.6	1.7
30	4.6	17	11	168	---	39	10	4.7	5.6	2.8	48	1.7
31	4.4	---	9.5	484	---	24	---	4.7	---	2.8	36	---
TOTAL	206.9	2255.9	695.1	1860.4	863.3	1603.0	704.2	325.5	131.2	383.2	205.1	69.0
MEAN	6.67	75.2	22.4	60.0	30.8	51.7	23.5	10.5	4.37	12.4	6.62	2.30
MAX	31	520	98	484	195	911	86	45	8.1	102	48	6.5
MIN	3.4	3.4	8.0	9.4	9.4	6.9	7.4	4.7	3.4	2.8	2.4	1.7
AC-FT	410	4470	1380	3690	1710	3180	1400	646	260	760	407	137

CAL YR 1974 TOTAL 13405.7 MEAN 36.7 MAX 600 MIN 3.1 AC-FT 26590
WTR YR 1975 TOTAL 9302.8 MEAN 25.5 MAX 911 MIN 1.7 AC-FT 18450

PEAK DISCHARGE (BASE, 2,100 CFS).--Jan. 31 (1345) 3,210 cfs (9.46 ft); Mar. 28 (1600) 4,310 cfs (10.61 ft).

16014000 KOKEE DITCH NEAR WAIMEA

LOCATION.--Lat 22°06'42", long 159°40'43", on left bank, 0.3 mi (0.5 km) west of Highway 55, 1.9 mi (3.1 km) south of Kokee Lodge, and 10.5 mi (16.9 km) north of Waimea.

PERIOD OF RECORD.--September 1926 to current year.

GAGE.--Water-stage recorder and suppressed weir. Altitude of gage is 3,310 ft (1,009 m) by barometer. Prior to July 1, 1962, at datum 0.07 ft (0.021 m) higher.

AVERAGE DISCHARGE.--49 years, 24.1 ft^3/s (0.683 m^3/s), 17,460 acre-ft/yr (21.5 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 105 ft^3/s (2.97 m^3/s) Dec. 2, 1929, Mar. 4, 1933; no flow at times.

REMARKS.--Records good. Ditch diverts at altitude 3,400 ft (1,040 m) from Mohihi Stream and all streams west which are tributary to Waimea River, for irrigation in vicinity of Kekaha. Records do not include waste water diverted at times at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	6.2	23	12	4.1	14	39	18	8.2	9.1	4.0	9.4
2	6.4	5.6	17	12	8.8	14	36	17	8.0	16	8.5	5.6
3	6.4	5.0	15	19	21	14	33	15	7.8	8.2	6.2	4.4
4	6.9	4.8	14	42	26	14	30	15	8.0	6.0	4.6	3.5
5	21	4.6	13	44	28	25	35	15	7.8	5.2	4.0	3.1
6	11	4.8	12	22	29	21	53	24	7.6	5.0	3.7	3.0
7	8.0	8.2	12	56	29	18	30	28	7.4	5.0	3.7	2.8
8	8.8	21	12	48	29	17	25	21	7.2	5.2	3.7	2.6
9	12	15	51	56	27	15	22	16	7.0	5.8	3.7	2.6
10	8.5	47	21	80	22	15	21	14	7.4	6.0	3.7	2.6
11	7.1	71	14	27	13	16	19	17	7.8	8.6	3.7	3.0
12	6.2	52	17	27	24	26	17	15	7.6	14	3.7	3.0
13	5.8	24	15	35	22	22	17	14	7.4	13	3.7	2.6
14	23	22	11	32	27	44	15	53	7.2	17	3.3	2.4
15	22	54	35	26	12	25	15	32	7.0	13	14	2.3
16	25	84	33	27	18	20	16	18	6.5	8.0	9.0	2.3
17	14	76	16	24	50	24	19	16	6.7	6.2	5.4	2.8
18	9.2	75	14	21	31	16	62	14	6.4	46	11	3.0
19	7.5	56	13	19	21	17	61	12	6.7	56	8.0	2.6
20	6.7	87	64	18	16	15	33	11	6.4	19	5.4	2.3
21	6.2	53	26	17	17	14	40	10	6.2	8.8	4.1	2.1
22	5.8	33	52	16	61	13	44	9.6	5.8	7.7	3.5	2.1
23	5.8	13	21	15	39	13	37	9.4	5.6	6.2	3.3	2.1
24	5.6	14	16	64	24	14	57	10	5.2	6.2	3.5	1.9
25	5.4	33	14	73	20	14	52	10	5.0	6.2	4.4	1.8
26	5.2	27	37	40	17	12	43	9.8	5.0	5.0	3.7	1.8
27	5.0	24	40	28	15	14	28	9.6	5.4	4.6	3.3	1.8
28	6.0	21	19	24	15	74	24	9.2	7.1	4.6	3.0	1.6
29	6.9	19	15	21	------	49	21	9.0	9.5	4.6	3.0	1.6
30	6.4	21	13	38	------	44	19	8.8	7.1	4.6	20	1.9
31	5.8	------	12	28	------	45	------	8.6	------	4.6	40	------
TOTAL	286.3	981.4	887	1,011	667.9	700	963	489.0	208.0	335.4	204.8	84.6
MEAN	9.24	32.7	28.2	32.6	23.9	22.6	32.1	15.8	6.93	10.8	6.61	2.82
MAX	25	87	64	80	61	74	62	53	9.5	56	40	9.4
MIN	5.0	4.6	11	12	4.1	12	15	8.6	5.0	4.6	3.0	1.6
AC-FT	568	1,950	1,760	2,010	1,320	1,390	1,910	970	413	665	406	168

CAL YR 1974 TOTAL 9,032.1 MEAN 24.7 MAX 87 MIN 1.4 AC-FT 17,920
WTR YR 1975 TOTAL 6,618.4 MEAN 18.1 MAX 87 MIN 1.6 AC-FT 13,130

NOTE.--No gage-height record May 12 to June 16.

16019000 WAIALAE STREAM AT ALTITUDE 3,820 FT (1,164 M), NEAR WAIMEA

LOCATION.--Lat 22°05'20", long 159°34'18", on left bank 5.0 mi (8.0 km) northeast of mouth, 6.4 mi (10.3 km) southeast of Kokee Lodge, and 11 mi (18 km) northeast of Waimea.

DRAINAGE AREA.--1.79 mi² (4.64 km²).

PERIOD OF RECORD.--January 1920 to July 1932, June 1952 to current year. Prior to July 1954, published as Waialae River at altitude 3,700 ft (1,128 m) near Waimea.

GAGE.--Water-stage recorder. Altitude of gage is 3,820 ft (1,164 m), from topographic map.

AVERAGE DISCHARGE.--34 years (1920-31, 1952-75), 22.5 ft³/s (0.637 m³/s), 16,300 acre-ft/yr (20.1 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,400 ft³/s (125 m³/s) Nov. 21 (gage height, 8.31 ft or 2.533 m); minimum, 1.1 ft³/s (0.031 m³/s) Sept. 30.
Period of record: Maximum discharge, 4,530 ft³/s (128 m³/s) Jan. 16, 1921 (gage height, 8.44 ft or 2.573 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement at gage height 4.60 ft (1.402 m); minimum, 0.99 ft³/s (0.028 m³/s) May 17, 18, May 30 to June 2, 1966.

REMARKS.--Records fair. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1921, 1922-32(M), 1953(M), 1954. WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	6.4	14	10	61	5.5	2.1	7.0	1.9	36	2.1	4.2
2	2.1	3.8	11	9.0	20	5.5	11	6.2	1.9	6.4	2.4	2.8
3	2.1	3.2	8.0	67	12	5.2	26	5.8	1.8	3.4	2.3	2.3
4	2.8	3.0	7.6	80	27	5.2	20	5.6	1.8	2.4	6.0	2.1
5	2.4	2.8	6.0	60	14	5.6	72	5.2	1.8	1.8	4.0	1.7
6	2.2	4.9	5.6	45	10	5.6	62	13	1.7	1.6	2.8	1.6
7	4.2	7.2	5.4	164	9.5	5.5	32	11	1.6	1.6	2.1	1.5
8	9.0	18	5.0	131	8.6	6.1	10	9.0	1.5	1.8	1.8	1.5
9	6.6	15	56	230	6.1	5.6	8.6	7.0	1.5	2.1	1.7	1.5
10	5.0	111	30	211	7.2	8.7	8.1	5.4	1.9	1.9	1.7	1.7
11	3.6	112	20	25	7.2	20	7.7	7.0	1.7	2.1	1.8	1.6
12	2.8	20	14	60	6.9	22	7.2	6.0	1.6	12	1.8	1.5
13	2.4	12	10	100	6.6	47	7.2	20	1.6	5.8	1.8	1.5
14	2.8	11	8.0	25	12	23	6.9	30	2.3	16	2.2	1.4
15	3.4	69	35	14	7.7	9.0	6.9	20	3.0	6.9	5.5	1.4
16	6.4	180	20	11	48	22	6.9	10	2.6	4.2	4.4	1.7
17	4.5	228	16	9.0	50	9.5	44	6.0	2.1	3.4	3.2	2.1
18	3.4	154	8.0	8.1	11	8.1	24	5.0	1.8	29	12	2.1
19	2.8	21	7.0	6.9	7.7	7.2	28	4.5	1.6	80	5.0	1.7
20	2.6	354	76	6.6	6.9	7.2	12	4.0	1.5	10	3.4	1.6
21	2.3	737	136	7.7	6.6	6.9	12	3.5	1.4	44	2.8	1.5
22	2.2	150	174	7.2	9.0	6.9	12	3.1	1.4	6.4	2.4	1.4
23	2.1	50	15	6.1	7.7	7.2	28	3.0	1.2	3.8	3.0	1.4
24	2.1	35	12	45	6.6	8.0	46	2.8	1.2	3.0	6.4	1.2
25	2.1	20	10	26	6.4	6.9	52	2.6	1.2	2.6	4.4	1.2
26	1.9	16	154	11	6.1	6.6	13	2.3	1.6	2.4	3.0	1.2
27	2.6	13	56	8.6	5.8	35	12	2.3	1.8	2.2	2.2	1.2
28	15	12	15	6.9	5.8	248	10	2.2	3.4	1.9	1.9	1.2
29	7.2	10	10	69	---	33	8.1	2.1	3.6	1.9	1.8	1.2
30	7.7	16	9.6	233	---	10	7.7	2.1	2.8	1.8	4.6	1.2
31	9.0	---	7.0	598	---	8.1	---	2.1	---	1.7	11	---
TOTAL	127.4	2395.3	942.0	2291.1	395.4	616.3	609.4	215.6	56.8	300.1	111.5	50.2
MEAN	4.11	79.8	30.4	73.9	14.1	19.9	20.3	6.96	1.89	9.68	3.60	1.67
MAX	15	737	174	598	61	248	72	30	3.6	80	12	4.2
MIN	1.9	2.8	5.0	6.1	5.8	5.2	6.9	2.1	1.2	1.6	1.7	1.2
AC-FT	253	4750	1870	4540	784	1220	1210	428	113	595	221	100

CAL YR 1974 TOTAL 12423.9 MEAN 34.0 MAX 737 MIN 1.9 AC-FT 24640
WTR YR 1975 TOTAL 8111.3 MEAN 22.2 MAX 737 MIN 1.2 AC-FT 16090

PEAK DISCHARGE (BASE, 1,300 CFS).--Nov. 21 (2030) 4,400 cfs (8.31 ft); Jan. 31 (1130) 3,300 cfs (7.17 ft).

NOTE.--No gage-height record Nov. 22 to Jan. 15.

16031000 WAIMEA RIVER NEAR WAIMEA

LOCATION (revised).--Lat 21°59'02", long 159°39'47", on right bank 1.3 mi (2.1 km) upstream from Makaweli River and 1.9 mi (3.1 km) north of Waimea Post Office.

DRAINAGE AREA.--57.8 mi^2 (149.7 km^2).

PERIOD OF RECORD.--July 1910 to June 1918, July to October 1919, November 1943 to September 1968, October 1969 to September 1972 (discontinued as a continuous-record station; converted to a crest-stage partial-record station October 1972 to April 1975), May to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 20.0 ft (6.10 m) above mean sea level (Department of Water, County of Kauai bench mark). Prior to Oct. 5, 1911, nonrecording gage at site 1.0 mi (1.6 km) downstream at different datum. Oct. 5, 1911, to Oct. 31, 1919, nonrecording gage at present site at different datum. Oct. 1, 1972, to Apr. 30, 1975, at site 60 ft (18.3 m) streamward at same datum.

AVERAGE DISCHARGE.--34 years (1910-17, 1944-68, 1969-72), 135 ft^3/s (3.823 m^3/s), 97,810 acre-ft/yr (121 hm^3/yr).

EXTREMES.--Maximum discharge during period May to September 1975, 425 ft^3/s (12.0 m^3/s) July 19 (gage height, 4.65 ft or 1.417 m); minimum, 1.9 ft^3/s (0.054 m^3/s) June 24, July 29.

Period of record: Maximum discharge, 37,100 ft^3/s (1,050 m^3/s) Feb. 7, 1949 (gage height, 19.3 ft or 5.88 m), from rating curve extended above 5,200 ft^3/s (147 m^3/s) on basis of slope-area measurements at gage heights 10.28 ft (3.133 m) and 18.7 ft (5.70 m); practically no flow occasionally owing to upstream diversions.

Flood of Apr. 19, 1974, which destroyed the station reached a stage of 19.05 ft (5.806 m), from flood-marks, discharge, 29,100 ft^3/s (824 m^3/s), from rating curve extended above 2,000 ft^3/s (56.6 m^3/s) on basis of slope-area measurement at gage height 19.05 ft (5.806 m).

REMARKS.--Records good. Several upstream diversions for power and irrigation. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1975

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								9.0	3.2	12	2.0	11
2								8.0	3.1	40	2.0	4.7
3								7.0	2.9	5.4	2.0	3.5
4								6.6	3.0	3.2	2.0	3.1
5								6.0	3.2	2.9	5.6	3.2
6								14	3.2	3.0	3.3	3.2
7								12	3.2	3.3	2.6	3.2
8								10	3.3	3.1	2.6	3.7
9								8.0	3.3	3.3	2.7	3.9
10								7.0	3.4	3.7	2.8	3.7
11								8.0	3.4	4.0	3.1	4.2
12								7.0	3.5	3.9	3.1	4.3
13								15	3.5	7.2	3.5	4.3
14								35	3.2	8.2	3.3	4.3
15								29	3.6	20	3.3	4.2
16								11	3.3	6.7	4.5	3.7
17								10	3.9	4.7	4.9	4.0
18								9.9	3.5	9.6	4.0	4.5
19								7.7	3.3	288	9.6	4.7
20								5.4	3.2	60	5.1	4.5
21								3.2	3.5	38	3.6	4.5
22								3.3	3.5	26	3.2	4.9
23								3.6	3.2	5.8	3.2	4.7
24								3.6	2.6	3.9	3.5	4.2
25								3.5	2.8	2.6	5.1	4.0
26								3.3	3.5	2.4	4.9	4.2
27								3.2	3.1	2.2	3.9	4.0
28								3.2	3.3	2.2	3.3	4.0
29								3.3	3.6	2.2	3.6	4.3
30								3.5	4.3	2.1	3.6	4.2
31				/29,000				3.3	---	2.0	12	---
TOTAL								262.6	99.6	581.6	121.9	128.9
MEAN								8.47	3.32	18.8	3.93	4.30
MAX								35	4.3	288	12	11
MIN								3.2	2.6	2.0	2.0	3.1
AC-FT								521	198	1150	242	266

PEAK DISCHARGE (BASE, 8,700 CFS).--No peak above base.

/ Discharge on Jan. 31 determined from crest-stage gage reading.

16036000 MAKAWELI RIVER NEAR WAIMEA

LOCATION.--Lat 21°58'31", long 159°38'55", on left bank 0.7 mi (1.1 km) upstream from mouth and 1.9 mi (3.1 km) northeast of Waimea.

DRAINAGE AREA.--26.0 mi^2 (67.3 km^2).

PERIOD OF RECORD.--July 1943 to current year. Records for October 1911 to June 1917 at site 0.2 mi (0.3 km) downstream not equivalent owing to intervening diversion.

GAGE.--Water-stage recorder. Datum of gage is 18.2 ft (5.55 m) above mean sea level (by stadia survey). Prior to June 16, 1959, at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--32 years, 90.6 ft^3/s (2.566 m^3/s), 65,640 acre-ft/yr (80.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 26,000 ft^3/s (736 m^3/s) Jan. 31 (gage height, 15.51 ft or 4.727 m), from rating curve extended as explained below; minimum, 9.3 ft^3/s (0.26 m^3/s) Sept. 14-16.
Period of record: Maximum discharge, 26,000 ft^3/s (736 m^3/s) Jan. 31, 1975 (gage height, 15.51 ft or 4.727 m), from rating curve extended above 3,200 ft^3/s (90.6 m^3/s) on basis of slope-area measurement at gage height 10.65 ft (3.246 m); minimum, 3.15 ft^3/s (0.089 m^3/s) July 19, 1951.

REMARKS.--Records good. Olokele ditch diverts all low flow from Olokele River 9 mi (14.5 km) above station for irrigation in vicinity of Makaweli. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	49	177	745	12	12	15	16	195	13	22
2	14	14	44	89	200	9.8	66	13	16	47	14	20
3	14	13	34	156	120	9.3	115	20	16	19	14	18
4	13	14	32	254	111	8.8	130	28	16	15	97	18
5	13	13	30	206	107	9.3	130	30	16	13	18	17
6	13	21	28	190	90	14	213	127	16	12	13	16
7	34	26	28	422	154	9.3	380	91	16	12	12	16
8	48	48	28	506	157	29	64	30	16	13	12	16
9	21	48	80	852	77	22	64	13	16	13	12	16
10	20	360	30	1010	75	52	53	11	16	13	12	17
11	16	230	27	254	73	73	19	13	16	13	17	18
12	14	73	35	146	68	170	18	10	16	30	17	17
13	14	27	27	143	50	82	13	32	16	25	12	17
14	19	23	26	176	133	195	12	137	29	103	12	13
15	21	70	38	76	93	31	13	81	20	25	13	9.8
16	40	410	34	60	61	120	22	95	17	16	14	9.8
17	19	336	36	50	158	36	68	111	16	14	24	12
18	15	507	25	45	167	22	143	28	15	40	58	12
19	14	83	26	42	64	11	86	24	15	221	22	11
20	13	724	128	80	29	9.8	40	21	15	50	23	11
21	13	2960	257	160	31	11	49	24	14	103	16	11
22	12	1080	587	110	24	12	59	28	22	31	18	11
23	12	270	172	60	39	56	39	19	17	20	34	11
24	12	171	140	121	20	47	279	18	14	16	22	11
25	12	116	110	85	15	13	528	18	13	16	21	11
26	12	99	400	58	13	9.3	189	17	14	15	19	11
27	13	105	195	61	13	13	195	17	15	14	18	11
28	132	71	138	62	12	225	171	16	23	14	17	12
29	27	55	68	81	---	158	119	17	17	13	17	12
30	18	48	60	1010	---	25	81	17	16	13	18	12
31	24	---	70	3040	---	13	---	16	---	13	23	---
TOTAL	677	8033	2982	9782	2899	1507.6	3370	1137	500	1157	652	419.6
MEAN	21.8	268	96.2	316	104	48.6	112	36.7	16.7	37.3	21.0	14.0
MAX	132	2960	587	3040	745	225	528	137	29	221	97	22
MIN	12	13	25	42	12	8.8	12	10	13	12	12	9.8
AC-FT	1340	15930	5910	19400	5750	2990	6680	2260	992	2290	1290	832

CAL YR 1974 TOTAL 55928.0 MEAN 153 MAX 3180 MIN 11 AC-FT 110900
WTR YR 1975 TOTAL 33116.2 MEAN 90.7 MAX 3040 MIN 8.8 AC-FT 65690

PEAK DISCHARGE (BASE, 4,700 CFS).--Nov. 21 (2115) 12,300 cfs (10.92 ft); Jan. 31 (1315) 26,000 cfs (15.51 ft).

NOTE.--No gage-height record Dec. 2 to Jan. 24.

16049000 HANAPEPE RIVER BELOW MANUAHI STREAM, NEAR ELEELE

LOCATION.--Lat 21°57'29", long 159°33'13", on left bank 200 ft (61 m) downstream from Manuahi Strean and 4.0 mi (6.4 km) northeast of Eleele.

DRAINAGE AREA.--18.5 mi^2 (47.9 km^2).

PERIOD OF RECORD.--July 1917 to January 1921, December 1926 to current year. Prior to July 1952, published as "at Koula, near Eleele." Records for August 1910 to December 1916 at site 0.5 mi (0.8 km) upstream not equivalent owing to intervening inflow.

GAGE.--Water-stage recorder. Datum of gage is 222 ft (67.67 m) above mean sea level (by stadia survey). July 1, 1917, to Jan. 22, 1921, nonrecording gage and Dec. 16, 1926, to June 30, 1951, water-stage recorder, at same site at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--51 years (1917-20, 1927-75), 87.9 ft^3/s (2.489 m^3/s), 63,680 acre-ft/yr (78.5 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 27,300 ft^3/s (773 m^3/s) Jan. 31 (gage height, 13.14 ft or 4.005 m); minimum, 16 ft^3/s (0.45 m^3/s) June 19, 24, 30, July 17, 27, Aug. 6.
Period of record: Maximum discharge, 39,000 ft^3/s (1,100 m^3/s) Apr. 15, 1963 (gage height, 14.87 ft or 4.532 m), from rating curve extended above 7,600 ft^3/s (215 m^3/s) on basis of slope-area measurement of peak flow; minimum, 5.1 ft^3/s (0.14 m^3/s) May 21, 1954.

REMARKS.--Records good. Hanapepe ditch diverts 3.0 mi (4.8 km) above station for irrigation in vicinity of Makaweli. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 740: 1931. WSP 1719: 1929-31(M). WSP 1937: 1918, 1919(M), 1920, 1921(M), 1927-28(M), 1930, 1936-37(M), 1941(P), 1943-46(P), 1947(M), 1948-52(P), 1955(M), 1956-57(P), 1958(M), 1960(M). WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	26	37	195	426	17	26	49	22	138	19	18
2	18	20	34	82	240	18	42	42	22	30	20	17
3	26	20	30	180	150	19	93	39	22	19	17	17
4	46	22	28	260	115	22	170	45	22	18	37	17
5	46	19	26	195	97	24	170	42	22	17	17	18
6	25	27	26	134	86	22	275	218	21	17	16	17
7	45	31	25	512	80	23	309	86	19	18	17	17
8	57	54	26	566	76	42	83	50	19	18	17	18
9	36	55	70	822	75	22	97	39	19	17	18	18
10	29	484	28	834	72	59	67	34	20	17	19	20
11	23	206	25	230	52	97	45	34	18	18	28	18
12	21	52	32	128	33	228	32	30	19	29	19	18
13	19	33	24	105	45	138	30	59	18	19	17	18
14	23	28	23	90	91	278	30	168	25	88	18	19
15	29	26	35	63	38	49	33	69	20	23	20	18
16	79	51	31	55	85	110	34	119	17	17	17	19
17	27	70	23	48	110	51	64	117	17	16	19	18
18	26	192	22	44	53	39	127	42	17	35	27	17
19	21	49	23	40	36	30	73	40	16	168	19	17
20	19	615	97	73	30	27	41	34	17	32	22	17
21	19	2690	440	152	28	26	52	36	17	64	19	18
22	18	1080	561	92	28	27	59	42	19	24	18	17
23	19	516	192	52	27	55	50	29	19	18	25	17
24	18	185	86	45	24	70	168	27	16	17	23	17
25	18	99	63	40	20	30	670	26	17	17	18	17
26	18	70	489	35	20	27	162	25	17	17	17	17
27	22	57	233	34	19	32	238	24	18	16	17	17
28	182	49	148	62	18	123	195	23	22	17	17	17
29	40	43	72	112	---	50	127	24	17	16	19	17
30	26	39	51	970	---	31	85	23	16	18	25	17
31	37	---	61	3080	---	27	---	23	---	18	25	---
TOTAL	1049	6908	3061	9330	2174	1813	3647	1658	570	998	626	527
MEAN	33.8	230	98.7	301	77.6	58.5	122	53.5	19.0	32.2	20.2	17.6
MAX	182	2690	561	3080	426	278	670	218	25	168	37	20
MIN	17	19	22	34	18	17	26	23	16	16	16	17
AC-FT	2080	13700	6070	18510	4310	3600	7230	3290	1130	1980	1240	1050

CAL YR 1974 TOTAL 49393 MEAN 135 MAX 2690 MIN 17 AC-FT 97970
WTR YR 1975 TOTAL 32361 MEAN 88.7 MAX 3080 MIN 16 AC-FT 64190

PEAK DISCHARGE (BASE, 3,600 CFS).--Nov. 21 (2030) 7,850 cfs (8.38 ft); Jan. 31 (1300) 27,300 cfs (13.14 ft).

16060000 SOUTH FORK WAILUA RIVER NEAR LIHUE

LOCATION.--Lat 22°02'24", long 159°22'58", on right bank 0.2 mi (0.3 km) upstream from Wailua Falls and 4.3 mi (6.9 km) north of Lihue.

DRAINAGE AREA.--22.4 mi^2 (58.0 km^2).

PERIOD OF RECORD.--December 1911 to April 1919, June 1919 to March 1921, May 1921 to June 1957, August, September 1957, November 1957 to February 1958, June 1958 to current year. Monthly discharge only for some periods, published in WSP 1319. Published as "above Waiehu Falls, near Lihue" 1912-13.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73 m), from topographic map. Prior to Nov. 18, 1918, at site 0.3 mi (0.5 km) upstream at different datum. Nov. 18, 1918, to June 30, 1957, at site 10 ft (3 m) downstream from present site at datum 2.50 ft (0.762 m) higher and July 1, 1957, to June 23, 1958, at present datum.

AVERAGE DISCHARGE.--58 years (1912-18, 1919-20, 1921-24, 1925-56, 1958-75), 119 ft^3/s (3.370 m^3/s), 86,220 acre-ft/yr (106 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 42,500 ft^3/s (1,200 m^3/s) Jan. 31 (gage height, 20.21 ft or 6.160 m); minimum, 2.4 ft^3/s (0.068 m^3/s) Sept. 27.
Period of record: Maximum discharge, 87,300 ft^3/s (2,470 m^3/s) Apr. 15, 1963 (gage height, 22.90 ft or 6.980 m), from rating curve extended above 13,000 ft^3/s (368 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.69 ft^3/s (0.048 m^3/s) Sept. 21, 1953.

REMARKS.--Records good. Lihue and Hananaulu ditches divert upstream for irrigation of sugarcane in vicinity of Lihue. Records of chemical analyses and periodic determinations of water temperature for the current year year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1249: 1941-47(M), 1948-51(P). WSP 1719: 1943-49. WSP 1937: 1958-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	79	210	801	14	20	73	5.1	155	4.2	4.2
2	9.9	7.3	94	156	446	12	31	56	4.8	55	4.8	3.2
3	12	6.4	82	146	263	11	81	48	4.8	13	4.9	3.0
4	132	6.4	69	194	206	10	207	44	4.8	7.9	44	2.8
5	140	7.5	72	164	178	10	202	35	4.6	4.8	13	2.8
6	68	7.8	58	105	146	9.9	173	62	4.4	4.0	4.8	2.7
7	33	11	36	315	128	15	191	73	4.4	3.9	3.9	2.6
8	50	25	36	379	116	112	61	15	4.2	3.7	3.7	2.6
9	31	46	54	1030	111	27	109	8.7	4.2	3.9	3.7	2.6
10	26	337	25	1220	97	108	137	12	4.2	4.0	4.0	2.7
11	32	238	20	367	98	167	50	11	4.2	4.0	16	2.8
12	34	75	20	250	96	362	56	8.1	4.4	20	17	2.8
13	24	25	18	219	133	121	42	8.4	4.8	10	4.9	2.6
14	16	10	16	244	291	333	60	151	4.8	60	4.0	2.6
15	43	8.4	16	170	142	92	50	96	6.4	11	3.9	3.0
16	221	77	17	148	284	152	36	121	4.8	4.9	4.0	2.7
17	71	176	15	127	185	87	27	158	4.2	4.6	3.9	2.6
18	47	374	14	116	76	57	62	41	3.9	4.9	4.6	2.8
19	40	104	13	112	43	22	17	35	3.7	66	5.3	2.6
20	34	654	86	113	44	13	11	20	3.4	16	4.4	2.6
21	24	2040	385	134	48	12	8.1	14	3.5	36	4.9	2.6
22	15	3020	722	115	69	8.4	52	26	4.5	11	4.0	2.6
23	9.3	816	279	83	52	47	31	7.1	11	4.6	4.8	2.5
24	8.7	425	194	89	34	59	57	5.7	8.1	3.7	5.5	2.5
25	7.8	236	134	87	28	20	555	5.3	5.5	3.4	4.4	2.5
26	7.5	157	356	75	25	13	228	5.1	5.1	3.2	3.9	2.5
27	7.5	120	246	72	23	9.0	304	5.1	5.1	3.2	3.4	2.5
28	137	102	200	74	20	346	293	6.0	5.1	3.2	3.4	2.6
29	67	90	151	77	---	392	188	5.5	7.1	3.1	3.4	2.6
30	18	88	130	2090	---	133	123	5.5	6.2	3.4	3.2	2.7
31	16	---	124	5180	---	66	---	5.3	---	3.9	3.7	---
TOTAL	1391.7	9303.8	3761	13861	4185	2840.3	3462.1	1166.8	151.3	535.3	203.6	81.9
MEAN	44.9	310	121	447	149	91.6	115	37.6	5.04	17.3	6.57	2.73
MAX	221	3020	722	5180	801	392	555	158	11	155	44	4.2
MIN	7.5	6.4	13	72	20	8.4	8.1	5.1	3.4	3.1	3.2	2.5
AC-FT	2760	18450	7460	27490	8300	5630	6870	2310	300	1060	404	162

CAL YR 1974	TOTAL	65237.4	MEAN 179	MAX 3020	MIN 4.2	AC-FT	129400	
WTR YR 1975	TOTAL	40943.8	MEAN 112	MAX 5180	MIN 2.5	AC-FT	81210	

PEAK DISCHARGE (BASE, 5,800 CFS).--Nov. 22 (0130) 20,900 cfs (17.99 ft); Jan. 31 (1400) 42,500 cfs (20.21 ft).

HAWAII, ISLAND OF KAUAI

16061000 NORTH WAILUA DITCH NEAR LIHUE

LOCATION.--Lat 22°03'56", long 159°28'14", on left bank 300 ft (91 m) downstream from intake, 7.9 mi (12.7 km) west of Wailua House Lots, and 8.8 mi (14.2 km) northwest of Lihue.

PERIOD OF RECORD.--July 1932 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,105.45 ft (336.941 m) above mean sea level (levels by Lihue Plantation Co.).

AVERAGE DISCHARGE.--43 years, 18.9 ft^3/s (0.535 m^3/s), 13,690 acre-ft/yr (16.9 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 59 ft^3/s (1.67 m^3/s) Dec. 21, 1933, Apr. 24, 1934; no flow at times.

REMARKS.--Records good. Ditch diverts from North Fork Wailua River for power and irrigation in vicinity of Lihue. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEAR).--WSP 770: 1933.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	16	20	.64	16	22	21	20	24	19	16
2	16	16	16	18	.07	16	22	21	20	18	20	16
3	16	16	16	19	.01	16	25	21	20	17	20	16
4	17	16	16	20	0	17	24	21	20	17	21	16
5	17	16	16	19	0	17	24	21	19	18	18	16
6	16	16	16	19	0	17	24	24	19	17	20	16
7	18	16	16	20	0	19	24	22	19	17	20	15
8	18	16	16	21	0	19	23	20	19	18	20	15
9	17	16	17	23	0	18	25	20	19	18	21	15
10	17	18	17	23	6.1	19	22	20	21	19	23	17
11	16	17	16	18	16	21	21	20	21	17	23	16
12	16	16	17	16	17	21	20	20	22	21	17	15
13	16	16	16	18	19	19	20	23	21	22	16	17
14	17	16	17	19	20	21	20	25	25	23	17	16
15	18	16	17	18	18	20	21	23	23	20	18	16
16	18	17	17	17	20	21	21	25	19	20	17	18
17	16	16	17	17	19	20	22	24	18	20	19	16
18	16	19	18	18	18	20	22	22	18	22	18	15
19	16	17	18	18	17	20	22	22	17	24	17	15
20	16	19	20	18	17	20	21	22	17	21	18	15
21	16	22	22	18	17	20	22	24	18	23	17	15
22	16	5.5	21	18	20	22	22	23	24	21	16	15
23	16	5.8	20	17	18	22	22	21	26	20	18	15
24	16	4.5	19	20	17	21	23	21	22	20	17	17
25	16	1.5	18	19	17	20	26	21	22	20	16	15
26	16	9.7	20	18	17	20	24	22	21	20	16	15
27	17	16	18	18	17	21	25	22	22	20	16	15
28	19	16	18	18	17	27	24	22	23	19	16	18
29	17	16	18	20	------	24	24	21	21	19	17	16
30	16	16	16	25	------	22	23	21	21	19	20	15
31	16	------	18	20	------	22	------	21	------	19	17	------
TOTAL	514	446.0	543	590	327.82	618	680	676	617	613	568	473
MEAN	16.6	14.9	17.5	19.0	11.7	19.9	22.7	21.8	20.6	19.8	18.3	15.8
MAX	19	22	22	25	20	27	26	25	26	24	23	18
MIN	16	1.5	16	16	0	16	20	20	17	17	16	15
AC-FT	1,020	885	1,080	1,170	650	1,230	1,350	1,340	1,220	1,220	1,130	938

CAL YR 1974 TOTAL 5,892.0 MEAN 16.1 MAX 22 MIN 1.5 AC-FT 11,690
WTR YR 1975 TOTAL 6,665.82 MEAN 18.3 MAX 27 MIN 0 AC-FT 13,220

16061200 NORTH WAILUA DITCH BELOW WAIKOKO STREAM, NEAR LIHUE

LOCATION.--Lat 22°03'34", long 159°28'00", on left bank 380 ft (116 m) downstream from Waikoko Stream, 8.1 mi (13.0 km) west of Wailua, and 8.4 mi (13.5 km) northwest of Lihue.

PERIOD OF RECORD.--January 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitnde of gage is 1,070 ft (326 m), from topographic map.

AVERAGE DISCHARGE.--10 years, 25.2 ft^3/s (0.714 m^3/s), 18,260 acre-ft/yr (22.5 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 58 ft^3/s (1.64 m^3/s) Oct. 11, 1966; no flow Jan. 1-18, 1965.

REMARKS.--Records good. Ditch diverts from North Fork Wailua River and Waikoko Stream for power and irrigation in vicinity of Lihue. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	22	22	27	13	20	21	22	21	30	20	19
2	22	22	22	24	10	20	23	21	21	22	21	19
3	22	22	22	25	6.3	20	27	21	21	21	20	18
4	24	22	22	28	10	20	26	22	21	20	24	18
5	24	21	22	25	7.4	20	25	22	21	20	20	18
6	23	22	21	24	6.7	20	25	26	20	19	21	18
7	25	23	21	29	2.4	23	26	24	20	19	21	18
8	26	24	21	29	.19	23	24	22	20	19	21	18
9	25	24	22	33	.17	21	27	21	20	20	21	18
10	24	30	22	34	8.3	25	24	21	21	20	22	19
11	23	28	21	26	20	27	22	21	21	20	23	18
12	22	24	22	24	20	31	21	20	22	23	21	18
13	22	23	21	25	24	27	21	22	22	23	20	19
14	24	22	22	25	26	26	21	25	24	25	20	19
15	25	24	22	23	22	25	21	23	23	22	21	18
16	28	28	22	23	26	27	21	26	21	21	20	19
17	24	31	22	22	24	24	22	26	20	21	21	18
18	23	29	22	23	22	24	23	22	20	22	21	18
19	23	25	22	22	21	23	22	22	19	26	21	17
20	22	31	26	22	22	23	21	21	19	22	21	17
21	22	38	31	23	21	22	23	24	20	24	21	17
22	21	33	32	22	26	23	23	24	24	22	20	17
23	22	29	30	22	22	27	22	22	26	21	22	17
24	21	23	27	24	21	25	24	22	23	21	21	18
25	21	16	26	23	21	24	30	21	23	21	20	17
26	21	20	29	22	21	24	26	22	23	21	20	17
27	22	23	27	22	20	23	29	22	23	21	20	17
28	22	23	25	22	20	30	27	22	24	21	19	20
29	25	22	24	24	---	26	26	21	23	20	19	18
30	23	22	22	38	---	22	24	21	23	20	21	17
31	23	---	24	34	---	22	---	21	---	20	21	---
TOTAL	722	746	736	789	465.46	739	717	692	649	667	644	539
MEAN	23.3	24.9	23.7	25.5	16.6	23.8	23.9	22.3	21.6	21.5	20.8	18.0
MAX	28	38	32	38	26	31	30	26	26	30	24	20
MIN	21	16	21	22	.17	20	21	20	19	19	19	17
AC-FT	1430	1480	1460	1560	923	1470	1420	1370	1290	1320	1280	1070

CAL YR 1974	TOTAL	8785.00	MEAN 24.1	MAX 38	MIN	16	AC-FT	17430
WTR YR 1975	TOTAL	8105.46	MEAN 22.2	MAX 38	MIN	.17	AC-FT	16080

16062000 STABLE STORM DITCH NEAR LIHUE

LOCATION.--Lat 22°04'09", long 159°26'46", on left bank 100 ft (30 m) downstream from intake, 7.8 mi (12.6 km) northwest of Lihue, and 7.9 mi (12.7 km) west of Kapaa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 710 ft (216 m) by barometer.

AVERAGE DISCHARGE.--38 years (1937-75), 10.8 ft^3/s (0.306 m^3/s), 7,820 acre-ft/yr (9.64 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 71 ft^3/s (2.01 m^3/s) Apr. 3, 1948; no flow at times each year.

REMARKS.--Records good. Ditch diverts from North Fork Wailua River for irrigation of sugarcane in vicinity of Lihue. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975.
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	.28	0	.12	.06	0	.28	.28	21	46	29	28
2	28	.28	0	.12	.06	0	.28	.28	21	38	31	26
3	26	.26	0	.06	.02	0	.28	.28	20	12	29	26
4	16	.18	0	.06	.02	0	.42	.26	20	.42	44	26
5	.28	.18	0	.06	.01	0	.57	.28	20	.28	33	26
6	8.3	.18	.02	.42	0	0	.57	.28	20	.28	30	26
7	11	.18	.02	.42	0	19	.57	.28	19	20	29	25
8	.42	.18	.02	.42	0	23	.57	.26	20	28	29	26
9	.42	.18	.02	.43	0	18	.57	.28	20	28	30	26
10	.28	.18	.06	.45	0	29	.57	.26	21	27	30	26
11	.28	.18	.06	.06	0	35	.42	.26	21	27	37	26
12	.28	.42	.06	.06	0	10	.42	.26	21	30	34	26
13	.42	.18	2.4	.06	0	.72	.28	.26	20	31	32	29
14	.42	.18	.42	.02	0	.57	.28	.28	25	26	32	26
15	.42	.18	.28	.02	0	.57	.28	.26	22	22	35	26
16	.42	.18	.28	.02	0	.57	.28	.26	20	28	31	27
17	.28	.18	.26	.02	0	.57	.28	.26	19	27	35	26
18	.26	.18	.28	.02	0	.42	.28	.26	19	18	36	25
19	.28	.18	.28	.02	0	.42	.28	.26	19	12	32	25
20	.28	.28	.28	.02	0	.42	.28	.26	24	12	35	25
21	.28	1.5	1.0	.06	0	.26	.28	.26	28	12	32	24
22	.26	.39	.12	.06	0	.42	.26	.26	32	3.9	30	24
23	.26	.12	.12	.06	0	.42	.28	.26	34	.28	37	24
24	.26	.06	.12	.06	0	.42	.26	.28	30	.28	35	25
25	.28	.06	.12	.06	0	.42	.28	.26	30	.28	30	24
26	.28	.06	.12	.06	0	.42	.28	16	30	.28	29	22
27	.28	.02	.12	.06	0	.42	.28	23	30	.28	28	22
28	.28	.02	.12	.06	0	.42	.28	22	32	18	27	26
29	.28	0	.12	.94	---	.26	.28	22	30	27	27	23
30	.28	0	.12	.40	---	.26	.28	21	30	28	31	22
31	.28	---	.12	2.7	---	.28	---	21	---	28	31	---
TOTAL	127.14	6.47	6.96	7.40	.17	142.32	10.56	132.00	718	551.28	990	760
MEAN	4.10	.22	.22	.24	.006	4.59	.35	4.26	23.9	17.8	31.9	25.3
MAX	28	1.5	2.4	2.7	.06	35	.57	23	34	46	44	29
MIN	.28	0	0	.02	0	0	.28	.26	19	.28	27	22
AC-FT	252	13	14	15	.3	282	21	262	1420	1090	1960	1510

CAL YR 1974 TOTAL 685.38 MEAN 1.88 MAX 28 MIN 0 AC-FT 1360
WTR YR 1975 TOTAL 3452.30 MEAN 9.46 MAX 46 MIN 0 AC-FT 6850

16063000 NORTH FORK WAILUA RIVER AT ALTITUDE 650 FT (198 M), NEAR LIHUE

LOCATION.--Lat 22°04'02", long 159°26'21", on right bank 0.5 mi (0.8 km) downstream from intake of Stable storm ditch and 7.6 mi (12.2 km) northwest of Lihue.

DRAINAGE AREA.--5.29 mi^2 (13.70 km^2).

PERIOD OF RECORD.--September 1914 to March 1915, May 1915 to October 1918, December 1918, March 1919, June 1919 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder. Altitude of gage is 650 ft (198 m), from topographic map. Prior to Sept. 9, 1944, at datum 2.0 ft (0.61 m) higher.

AVERAGE DISCHARGE.--59 years (1915-18, 1919-75), 73.5 ft^3/s (2.082 m^3/s), 53,250 acre-ft/yr (65.7 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 8,100 ft^3/s (229 m^3/s) Jan. 31 (gage height, 11.26 ft or 3.432 m); minimum recorded, 0.91 ft^3/s (0.026 m^3/s) Sept. 3-5.
Period of record: Maximum discharge, 13,200 ft^3/s (374 m^3/s) Nov. 12, 1955 (gage height, 13.53 ft or 4.124 m), from rating curve extended above 2,300 ft^3/s (65.1 m^3/s) on basis of slope-area measurement at gage height 10.65 ft (3.246 m); minimum, 0.23 ft^3/s (0.007 m^3/s) June 5, 1968.

REMARKS.--Records fair. Since 1925, Hanalei tunnel (see sta 16100000) has diverted from Hanalei River basin into North Fork Wailua River above station; North Wailua and Stable storm ditches (see sta 16061000 and 16062000) divert water above station for power development and irrigation in vicinity of Lihue. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 555: 1921. WSP 1569: 1915-27(M), 1943-47(M), 1948-56(P). WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	40	31	126	234	20	106	112	15	150	3.2	1.0
2	9.1	30	27	64	152	18	140	106	14	22	5.6	.98
3	7.8	25	26	75	112	18	183	108	14	27	3.5	.98
4	70	67	24	106	154	18	209	107	14	39	95	.98
5	79	23	21	71	96	22	206	101	13	40	6.9	.98
6	48	41	20	68	78	23	201	186	13	36	2.1	.98
7	87	46	19	142	69	34	249	147	12	15	1.6	.98
8	113	65	19	178	65	28	163	94	12	5.6	1.6	.98
9	99	65	34	561	62	4.4	255	80	12	6.6	1.7	.98
10	89	224	20	590	50	39	176	76	14	3.7	3.2	1.6
11	82	180	18	156	30	79	117	76	15	3.9	35	1.0
12	54	70	32	104	29	297	98	67	16	20	6.6	1.0
13	51	49	15	168	83	132	82	120	14	29	3.7	2.4
14	82	38	21	117	117	190	84	244	26	72	3.2	1.5
15	117	87	27	65	58	81	86	128	17	22	8.4	1.0
16	136	157	20	51	164	152	94	238	13	7.8	2.6	1.7
17	70	315	15	42	84	69	119	172	12	6.7	16	1.1
18	67	241	18	37	47	62	138	94	12	47	14	1.0
19	35	97	24	32	37	45	113	102	12	112	4.3	1.0
20	53	395	106	27	33	38	92	84	6.3	38	11	1.0
21	45	1010	439	36	29	30	117	137	2.6	103	3.7	1.0
22	48	835	300	26	159	85	122	116	17	47	2.5	1.0
23	49	350	138	22	44	163	95	70	28	41	25	1.0
24	46	158	91	85	32	217	148	62	4.9	40	8.8	1.0
25	45	108	64	45	28	118	386	57	4.4	39	2.5	1.0
26	43	69	178	25	25	82	186	31	5.0	38	1.6	.98
27	64	51	103	24	22	80	270	18	5.2	33	1.1	1.0
28	230	44	64	23	21	574	256	17	11	14	1.0	2.3
29	82	37	52	176	---	357	197	17	4.7	3.1	1.0	1.7
30	48	38	38	1030	---	130	161	16	5.0	1.8	3.2	1.5
31	55	---	51	1460	---	118	---	15	---	2.4	5.1	---
TOTAL	2121.7	4915	2055	5732	2114	3323.4	4849	2998	364.1	1065.6	284.7	35.62
MEAN	68.4	164	66.3	185	75.5	107	162	96.7	12.1	34.4	9.18	1.19
MAX	230	1010	439	1460	234	574	386	244	28	150	95	2.4
MIN	5.8	23	15	22	21	4.4	82	15	2.6	1.8	1.0	.98
AC-FT	4210	9750	4080	11370	4190	6590	9620	5950	722	2110	565	71

CAL YR 1974 TOTAL 36286.0 MEAN 99.4 MAX 1010 MIN 3.7 AC-FT 71970
WTR YR 1975 TOTAL 29858.12 MEAN 81.8 MAX 1460 MIN .98 AC-FT 59220

PEAK DISCHARGE (BASE, 2,800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-22	0100	9.04	4,780	1-10	0200	7.61	3,030
12-21	2100	8.26	3,720	1-31	1200	11.26	8,100

16068000 EAST BRANCH OF NORTH FORK WAILUA RIVER NEAR LIHUE

LOCATION.--Lat 22°04'19", long 159°25'05", on right bank 1,200 ft (366 m) upstream from mouth and 7.2 mi (11.6 km) northwest of Lihue.

DRAINAGE AREA.--6.27 mi^2 (16.24 km^2).

PERIOD OF RECORD.--July 1912 to September 1914, December 1914 to March 1915, May 1915 to March 1919, June 1919 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 500 ft (152 m), from topographic map. Prior to Dec. 31, 1914, nonrecording gage at site 725 ft (221 m) downstream at different datum. Dec. 31, 1914, to May 10, 1934, water-stage recorder at site 75 ft (23 m) upstream at present datum.

AVERAGE DISCHARGE.--60 years (1912-14, 1915-17, 1919-75), 48.7 ft^3/s (1.379 m^3/s), 35,280 acre-ft/yr (43.5 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 7,560 ft^3/s (214 m^3/s) Jan. 31 (gage height, 9.99 ft or 3.045 m); minimum, 13 ft^3/s (0.37 m^3/s) for several days in September.
Period of record: Maximum discharge, 18,400 ft^3/s (521 m^3/s) Nov. 12, 1955 (gage height, 14.7 ft or 4.48 m), from floodmarks, from rating curve extended above 2,700 ft^3/s (76.5 m^3/s); minimum, 6.8 ft^3/s (0.19 m^3/s) July 3, 13, 1926.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 770: 1932-33. WSP 1719: 1916. WSP 1937: 1918. WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	26	36	57	186	25	46	44	23	66	15	15
2	27	25	34	40	115	24	41	39	22	26	18	14
3	27	25	32	44	80	24	43	37	22	18	16	14
4	38	25	30	47	78	24	56	35	22	16	27	14
5	34	24	29	39	57	24	68	36	22	16	16	14
6	27	29	27	36	50	23	46	65	21	16	14	13
7	30	30	26	61	45	29	56	51	21	15	14	13
8	45	34	26	70	41	36	44	36	20	16	14	13
9	50	31	30	384	39	24	46	33	20	17	14	13
10	39	78	25	333	38	32	41	32	21	16	16	15
11	34	119	24	103	35	48	36	31	21	16	25	14
12	30	47	27	85	35	77	34	29	22	23	20	13
13	29	35	24	104	61	51	32	34	20	29	16	14
14	37	32	23	87	57	107	32	92	23	34	15	15
15	43	36	25	58	44	38	31	42	21	21	16	14
16	47	80	24	52	69	51	32	47	20	18	15	13
17	35	148	22	46	46	36	41	54	19	16	17	14
18	35	120	22	42	38	33	58	36	18	29	21	14
19	31	70	22	39	35	30	43	34	18	37	16	13
20	33	327	80	38	35	29	35	32	18	23	18	14
21	30	372	99	56	32	27	49	41	18	26	16	14
22	28	374	124	38	62	29	46	63	18	20	15	14
23	27	166	56	35	35	40	35	33	20	18	20	13
24	27	96	44	75	32	38	48	30	18	17	16	13
25	26	71	37	57	30	82	132	29	18	16	15	13
26	25	57	54	38	28	35	70	27	18	16	15	13
27	27	50	44	37	27	31	86	26	20	16	14	13
28	59	45	38	36	26	454	76	26	25	15	14	14
29	39	40	34	103	------	212	65	25	20	15	14	13
30	30	39	32	799	------	70	55	25	18	14	15	13
31	30	------	32	1,190	------	53	------	24	------	15	19	------
TOTAL	1,046	2,651	1,182	4,231	1,456	1,836	1,523	1,190	607	656	516	409
MEAN	33.8	88.4	38.1	136	52.0	59.2	50.8	38.4	20.2	21.2	16.6	13.6
MAX	59	374	124	1,190	186	454	132	92	25	66	27	15
MIN	25	24	22	35	26	23	31	24	18	14	14	13
AC-FT	2,080	5,260	2,340	8,390	2,890	3,640	3,020	2,360	1,200	1,300	1,020	811

CAL YR 1974 TOTAL 21,256 MEAN 58.2 MAX 523 MIN 20 AC-FT 42,160
WTR YR 1975 TOTAL 17,305 MEAN 47.4 MAX 1,190 MIN 13 AC-FT 34,320

PEAK DISCHARGE (BASE, 1,900 CFS).--Jan. 31 (1400) 7,560 cfs (9.99 ft).

HAWAII, ISLAND OF KAUAI

16069000 WAILUA DITCH NEAR KAPAA

LOCATION.--Lat 22°04'34", long 159°24'04", on right bank 2,000 ft (610 m) downstream from Wailua Reservoir, 5.2 mi (8.4 km) west of Kapaa, and 7.0 mi (11.3 km) north of Lihue.

PERIOD OF RECORD.--November 1936 to current year.

GAGE.--Water-stage recorder. Sharp-crested weir since Feb. 4, 1965. Datum of gage is 462.3 ft (140.91 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--38 years (1937-75), 14.7 ft^3/s (0.416 m^3/s), 10,650 acre-ft/yr (13.1 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 63 ft^3/s (1.78 m^3/s) June 4, 1937; no flow at times.

REMARKS.--Records good. Ditch diverts water from North Fork Wailua River to reservoir 2,000 ft (610 m) above station and thence to fields for irrigation of sugarcane in vicinity of Kapaa. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	12	2.1	2.0	6.5	3.1	2.7	5.3	15	24	27	16
2	34	12	2.1	2.0	2.1	2.9	4.9	13	20	26	26	14
3	36	12	2.0	2.1	1.7	2.8	4.9	21	23	23	25	12
4	32	12	2.0	2.1	1.7	2.8	5.1	21	23	20	24	12
5	29	12	2.0	2.1	1.6	2.8	5.1	21	24	21	25	11
6	28	17	1.9	2.1	1.7	2.9	4.9	21	28	22	23	10
7	27	20	1.8	11	1.8	2.8	4.9	21	30	25	21	10
8	29	20	1.9	16	1.9	12	16	27	29	28	18	10
9	31	19	7.7	11	1.9	18	21	31	29	28	16	10
10	32	19	17	5.1	1.8	18	21	32	34	28	16	10
11	23	19	18	4.9	1.7	18	22	32	35	27	18	11
12	17	19	18	4.7	1.7	18	22	36	35	27	22	9.7
13	16	18	18	4.7	1.7	13	22	38	35	27	22	9.7
14	22	18	17	4.7	1.6	10	21	38	35	28	20	11
15	35	18	16	4.7	1.3	10	22	38	34	31	18	10
16	40	18	16	4.9	1.2	10	22	37	34	34	18	9.5
17	41	18	16	4.9	11	10	14	37	34	34	16	9.3
18	35	18	6.7	4.9	19	16	5.3	36	33	34	22	9.1
19	29	12	2.1	4.7	20	19	5.1	36	32	34	22	8.9
20	29	6.1	2.2	4.7	22	19	4.7	36	32	34	21	8.5
21	28	2.8	2.2	5.1	21	19	4.7	37	30	34	20	7.1
22	28	2.8	2.2	4.9	21	19	4.9	37	29	34	18	3.7
23	27	2.8	2.2	4.7	20	19	5.1	35	29	34	20	7.6
24	27	2.8	2.2	4.5	20	19	5.3	32	28	34	21	6.9
25	27	2.5	2.0	4.7	17	19	5.5	33	27	34	20	6.7
26	26	2.4	2.0	4.9	11	19	5.1	35	26	33	17	7.3
27	26	2.4	2.0	4.7	11	11	4.9	34	25	33	14	7.3
28	23	2.4	2.0	15	6.3	2.0	4.9	28	25	33	13	8.7
29	20	2.2	2.0	14	------	1.9	4.9	19	25	32	12	9.5
30	21	2.2	1.9	5.5	------	1.4	5.1	15	24	30	12	9.3
31	17	------	2.0	9.1	------	1.3	------	15	------	28	16	------
TOTAL	863	344.4	193.2	180.4	231.2	342.7	301.0	897.3	862	914	603	285.8
MEAN	27.8	11.5	6.23	5.82	8.26	11.1	10.0	28.9	28.7	29.5	19.5	9.53
MAX	41	20	18	16	22	19	22	38	35	34	27	16
MIN	16	2.2	1.8	2.0	1.2	1.3	2.7	5.3	15	20	12	3.7
AC-FT	1,710	683	383	358	459	680	597	1,780	1,710	1,810	1,200	567

CAL YR 1974 TOTAL 4,820.05 MEAN 13.2 MAX 41 MIN .50 AC-FT 9,560
WTR YR 1975 TOTAL 6,016.0 MEAN 16.5 MAX 41 MIN 1.2 AC-FT 11,940

HAWAII, ISLAND OF KAUAI

16071000 NORTH FORK WAILUA RIVER NEAR KAPAA

LOCATION.--Lat 22°03'08", long 159°22'22", on right bank 1.1 mi (1.8 km) upstream from confluence with South Fork, 3.7 mi (6.0 km) southwest of Kapaa, and 5.0 mi (8.0 km) north of Lihue.

DRAINAGE AREA.--17.9 mi² (46.4 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 18 ft (5.5 m), from topographic map.

AVERAGE DISCHARGE.--23 years, 131 ft³/s (3.710 m³/s), 94,910 acre-ft/yr (117 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 20,300 ft³/s (575 m³/s) Jan. 31 (gage height, 13.37 ft or 4.075 m); minimum, 4.5 ft³/s (0.13 m³/s) Sept. 15, 18, 23, 24, 26.
Period of record: Maximum discharge, 53,200 ft³/s (1,510 m³/s) Nov. 12, 1955 (gage height, 19.88 ft or 6.059 m) in gage well, 20.8 ft (6.34 m), from floodmarks, from rating curve extended above 3,700 ft³/s (105 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.12 ft³/s (0.060 m³/s) Oct. 28, 1953.
Water year 1974: Maximum discharge, 7,520 ft³/s (213 m³/s) May 14 (gage height, 8.94 ft or 2.725 m); minimum, 8.9 ft³/s (0.25 m³/s) Nov. 6, 7.

REMARKS.--Records good. Wailua and Aahoaka ditches (see stas 16069000 and 16070000) divert above station for irrigation of sugarcane in vicinities of Kapaa and Wailua, respectively. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area. Revised figures of discharge, in cubic feet per second, for water year 1974, superseding those published in WRD for Hawaii and other Pacific Areas, 1974, are given herewith:

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	85	2,040	218	392	83	58	50	98	180	101	13
2	20	96	722	111	327	128	67	74	141	165	94	28
3	46	60	366	105	459	94	65	81	105	155	105	80
4	38	56	260	76	201	103	93	74	71	123	89	94
5	24	40	204	84	158	433	620	71	57	117	61	80
6	22	9.8	175	259	133	345	227	68	76	129	70	42
7	36	9.2	330	214	123	236	526	52	107	260	96	33
8	141	11	222	164	134	184	301	46	135	133	65	11
9	38	27	152	121	131	317	255	74	98	49	96	71
10	32	24	272	82	119	131	180	77	216	62	133	34
11	127	672	160	110	148	105	480	91	131	64	121	12
12	79	932	143	203	100	574	377	76	79	210	198	11
13	94	285	123	258	96	152	476	190	55	323	92	11
14	117	129	115	326	77	117	290	1,560	160	236	65	22
15	94	92	103	190	61	101	328	570	132	198	43	22
16	101	98	94	125	102	91	326	433	145	115	28	79
17	58	85	81	135	60	89	247	469	91	141	38	25
18	278	74	64	157	36	109	315	239	77	295	73	193
19	496	758	60	115	14	505	1,210	222	117	139	85	350
20	278	1,530	56	98	30	145	871	178	57	135	76	566
21	155	647	53	188	40	115	562	119	82	117	76	222
22	113	399	52	129	35	280	591	131	119	89	51	150
23	135	320	70	98	35	228	400	94	143	207	129	98
24	100	497	49	260	35	105	264	81	89	139	92	57
25	123	365	52	152	31	87	190	94	65	107	78	53
26	82	314	51	131	21	77	160	111	57	180	35	57
27	70	239	57	295	51	71	135	133	165	281	13	74
28	84	937	50	165	38	70	121	175	388	127	12	74
29	77	403	50	123	------	73	79	180	688	143	12	87
30	148	308	80	402	------	71	37	163	580	101	12	30
31	70	------	54	672	------	61	------	119	------	92	12	------
TOTAL	3,290	9,502.0	6,360	5,756	3,187	5,280	9,851	6,095	4,525	4,802	2,251	2,679
MEAN	106	317	205	186	114	170	328	197	151	155	72.6	89.3
MAX	496	1,530	2,040	672	459	574	1,210	1,560	688	323	198	566
MIN	14	9.2	49	76	14	61	37	46	55	49	12	11
AC-FT	6,530	18,850	12,620	11,420	6,320	10,470	19,540	12,090	8,980	9,520	4,460	5,310

CAL YR 1973 TOTAL 32,256.1 MEAN 88.4 MAX 2,040 MIN 6.0 AC-FT 63,980
WTR YR 1974 TOTAL 63,578.0 MEAN 174 MAX 2,040 MIN 9.2 AC-FT 126,100

PEAK DISCHARGE (BASE, 4,100 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-28	1400	7.83	5,320	4-19	0700	8.14	5,910
12- 1	1400	7.20	4,300	5-14	0700	8.94	7,520

HAWAII, ISLAND OF KAUAI

16071000 NORTH FORK WAILUA RIVER NEAR KAPAA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	61	87	164	787	45	104	150	37	105	7.0	5.6
2	10	56	76	114	443	47	141	135	35	31	7.3	5.3
3	11	50	70	110	287	49	225	133	30	8.3	7.5	5.1
4	60	49	65	145	316	47	278	129	18	16	53	5.3
5	99	38	61	111	243	46	291	110	19	17	9.5	5.3
6	63	56	58	92	227	44	250	204	19	13	6.6	5.1
7	66	62	58	135	178	51	296	175	19	11	6.3	5.1
8	72	82	57	190	158	77	180	97	18	6.8	6.6	4.9
9	81	74	69	813	156	26	250	64	17	6.6	6.6	4.9
10	79	246	45	998	151	46	207	61	17	6.6	7.0	5.1
11	72	251	42	309	103	94	136	65	17	6.8	16	4.9
12	84	119	56	219	115	342	121	58	17	12	11	4.9
13	81	74	36	246	178	160	105	93	17	20	6.6	4.7
14	82	62	42	225	230	320	102	277	19	59	6.3	4.9
15	53	74	47	129	149	139	103	145	18	22	6.3	4.7
16	85	219	45	104	270	210	111	204	15	7.8	6.3	4.9
17	68	396	37	91	121	114	141	222	15	6.6	6.6	4.9
18	77	343	39	78	40	100	219	116	15	24	9.2	4.9
19	57	148	49	71	27	80	190	106	15	96	6.6	4.9
20	57	661	165	67	42	71	163	72	15	33	6.6	4.9
21	47	1250	364	93	73	61	173	91	15	79	6.6	4.9
22	45	1240	534	73	209	78	163	155	18	31	6.6	4.9
23	44	540	190	68	99	175	126	68	21	25	9.5	4.7
24	43	301	139	150	58	156	173	58	15	22	6.8	4.7
25	40	212	104	114	39	207	507	53	14	20	6.1	4.9
26	38	162	185	73	41	115	296	42	14	21	6.1	4.7
27	49	129	148	68	42	133	352	20	15	17	5.8	4.9
28	213	113	108	64	44	965	350	29	14	14	5.8	5.1
29	80	100	87	58	---	773	257	42	16	7.3	5.8	5.1
30	39	96	74	1920	---	288	207	38	15	8.0	5.8	4.9
31	54	---	77	3120	---	165	---	42	---	7.3	5.8	---
TOTAL	1966	7316	3238	10212	4826	5226	6217	3250	549	760.1	269.6	149.1
MEAN	63.2	244	104	329	172	169	207	105	18.3	24.5	8.70	4.97
MAX	213	1250	534	3120	787	965	507	277	37	105	53	5.6
MIN	10	38	37	58	27	26	102	20	14	6.6	5.8	4.7
AC-FT	3890	14510	6420	20260	9570	10370	12330	6450	1090	1510	535	296

CAL YR 1974 TOTAL 56938.0 MEAN 156 MAX 1560 MIN 10 AC-FT 112900
WTR YR 1975 TOTAL 43970.8 MEAN 120 MAX 3120 MIN 4.7 AC-FT 87220

PEAK DISCHARGE (BASE, 4,100 CFS).--Nov. 22 (0100) 4,680 cfs (7.45 ft); Jan. 31 (1400) 20,300 cfs (13.37 ft).

16071500 LEFT BRANCH OPAEKAA STREAM NEAR KAPAA

LOCATION.--Lat 22°04'43", long 159°23'55", on left bank 0.4 mi (0.6 km) upstream from mouth, 0.6 mi (1.0 km) northeast of Wailua Reservoir, and 4.9 mi (7.9 km) west of Kapaa.

DRAINAGE AREA.--0.65 mi^2 (1.68 km^2).

PERIOD OF RECORD.--May 1960 to current year. Prior to July 1960, published as Left Branch Opaikaa Stream near Kapaa.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 458.4 ft (139.72 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--15 years, 2.77 ft^3/s (0.0784 m^3/s), 2,010 acre-ft/yr (2.48 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 724 ft^3/s (20.5 m^3/s) Jan. 31 (gage height, 5.58 ft or 1.701 m); minimum, 0.30 ft^3/s (0.008 m^3/s) Sept. 12.
Period of record: Maximum discharge, 724 ft^3/s (20.5 m^3/s) Jan. 31, 1975 (gage height, 5.58 ft or 1.701 m), from rating curve extended above 415 ft^3/s (11.8 m^3/s); minimum, 0.09 ft^3/s (0.003 m^3/s) Sept. 27-30, 1968.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.8	2.9	2.1	10	2.2	3.0	2.6	1.7	1.5	.60	.41
2	2.2	1.8	2.8	2.1	8.0	2.2	2.7	2.5	1.7	1.3	.75	.41
3	2.3	1.8	2.6	2.0	7.0	2.2	2.8	2.4	1.7	1.2	.60	.41
4	3.8	1.8	2.6	2.1	6.0	2.2	3.2	2.4	1.7	1.1	.60	.41
5	2.6	1.7	2.5	2.0	5.2	2.2	3.3	2.6	1.6	1.1	.60	.41
6	2.3	1.7	2.5	2.0	4.0	2.2	2.8	2.8	1.4	1.0	.60	.41
7	2.2	1.7	2.4	2.0	3.5	2.4	2.6	2.5	1.4	.91	.60	.41
8	2.3	1.7	2.4	2.2	3.2	2.2	2.4	2.3	1.4	1.0	.60	.41
9	2.3	1.6	2.3	7.0	2.9	2.1	2.3	2.2	1.4	1.0	.60	.41
10	2.3	2.1	2.3	5.7	2.7	2.3	2.2	2.2	1.5	.91	.67	.41
11	2.3	2.0	2.2	3.8	2.6	2.6	2.2	2.2	1.4	.91	.75	.41
12	2.2	1.8	2.3	3.2	2.6	3.0	2.2	2.1	1.4	.91	.75	.41
13	2.1	1.7	2.2	3.5	3.0	2.5	2.2	2.3	1.4	1.0	.67	.35
14	2.2	1.6	2.2	4.6	2.9	3.3	2.2	2.9	1.4	1.0	.67	.41
15	2.4	1.6	2.2	3.3	2.7	2.5	2.2	2.2	1.3	.91	.60	.41
16	2.4	1.8	2.1	3.2	3.1	2.7	2.2	2.3	1.3	.83	.60	.35
17	2.2	2.5	2.1	3.0	2.7	2.3	2.4	2.4	1.3	.75	.60	.35
18	2.4	4.3	2.1	2.9	2.5	2.2	2.5	2.2	1.3	.75	.60	.35
19	2.1	2.3	2.1	2.8	2.4	2.2	2.3	2.2	1.3	.75	.60	.35
20	2.3	6.0	2.9	2.8	2.3	2.2	2.1	2.2	1.3	.75	.53	.35
21	2.0	6.8	3.1	2.6	2.2	2.2	2.5	2.3	1.2	.83	.53	.35
22	2.0	12	4.1	2.6	2.9	2.3	2.3	2.2	1.3	.75	.47	.35
23	2.0	8.6	2.5	2.5	2.7	2.4	2.3	2.0	1.3	.75	.53	.41
24	2.0	5.5	2.3	2.6	2.5	2.7	2.5	1.9	1.3	.67	.53	.35
25	1.9	4.6	2.2	2.5	2.4	2.3	3.5	1.9	1.3	.67	.47	.35
26	1.9	4.0	2.2	2.5	2.3	2.3	2.8	1.8	1.3	.67	.41	.35
27	1.9	3.6	2.2	2.4	2.3	2.3	2.7	1.7	1.3	.60	.41	.35
28	1.9	3.3	2.1	2.4	2.3	8.0	2.6	1.7	1.3	.60	.41	.35
29	1.9	3.2	2.1	2.4	---	5.0	2.6	1.7	1.2	.60	.41	.35
30	1.8	3.2	2.1	26	---	4.0	2.6	1.7	1.2	.60	.41	.41
31	1.8	---	2.1	89	---	3.5	---	1.7	---	.60	.53	---
TOTAL	68.3	98.1	74.7	199.8	98.9	84.7	76.2	68.1	41.6	26.92	17.70	11.46
MEAN	2.20	3.27	2.41	6.45	3.53	2.73	2.54	2.20	1.39	.87	.57	.38
MAX	3.8	12	4.1	89	10	8.0	3.5	2.9	1.7	1.5	.75	.41
MIN	1.8	1.6	2.1	2.0	2.2	2.1	2.1	1.7	1.2	.60	.41	.35
AC-FT	135	195	148	396	196	168	151	135	83	53	35	23

CAL YR 1974 TOTAL 1124.8 MEAN 3.08 MAX 20 MIN 1.3 AC-FT 2230
WTR YR 1975 TOTAL 866.48 MEAN 2.37 MAX 89 MIN .35 AC-FT 1720

PEAK DISCHARGE (BASE, 70 CFS).--Jan. 31 (1500) 724 cfs (5.58 ft).

NOTE.--No gage-height record Jan. 31 to June 5.

HAWAII, ISLAND OF KAUAI

16077000 MAKALEHA DITCH NEAR KEALIA

LOCATION.--Lat 22°07'06", long 159°22'04", on left bank at end of last tunnel from which flow enters Mimino Reservoir, 3.9 mi (6.3 km) northwest of Kealia, and 4.0 mi (6.4 km) northwest of Kapaa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 518 ft (158 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--38 years (1937-75), 6.73 ft^3/s (0.191 m^3/s), 4,880 acre-ft/yr (6.02 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 31 ft^3/s (0.88 m^3/s) Aug. 1, 1961; no flow at times.

REMARKS.--Records good. Ditch diverts from Makaleha Stream for irrigation of sugarcane in vicinity of Kealia. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	9.6	.33	.21	8.8	8.6	.69	11	7.8	14	8.2	6.1
2	8.2	8.7	.38	.21	3.6	8.2	.58	10	7.6	12	8.7	5.8
3	8.0	8.7	.24	3.7	1.6	7.6	.47	9.3	7.6	9.3	3.5	5.6
4	8.4	9.1	.24	12	1.1	6.2	.47	9.0	7.8	8.6	5.9	5.6
5	.63	8.6	.24	12	.63	7.4	.42	9.4	8.6	10	7.1	5.7
6	.58	8.6	.21	7.8	.42	7.3	.42	14	8.3	8.3	6.3	6.1
7	5.4	6.9	.21	.38	.33	11	.38	14	7.4	8.6	6.0	6.1
8	13	7.0	.21	.38	.28	14	.38	11	7.4	7.8	6.2	6.2
9	13	6.8	6.0	1.2	.24	9.4	.38	9.1	6.6	8.9	6.9	6.0
10	12	6.6	9.3	2.1	.17	12	.33	9.5	7.3	8.9	9.8	6.4
11	11	6.0	8.6	1.3	.14	16	3.7	11	7.7	8.9	10	6.2
12	10	7.3	11	.99	.14	17	10	8.6	9.8	12	9.4	6.1
13	10	9.9	8.6	1.4	.17	14	8.6	12	8.7	12	7.6	5.8
14	12	9.8	7.8	2.7	.17	16	4.9	15	11	15	6.5	6.1
15	14	9.4	9.9	1.5	.17	13	4.8	14	9.7	13	7.0	5.8
16	14	14	7.9	.99	.24	15	5.3	7.6	8.0	9.7	6.3	5.0
17	12	15	.33	.74	.33	13	7.5	.21	6.9	8.9	7.7	5.3
18	12	14	.24	.58	.24	13	8.0	.21	7.6	15	9.6	5.3
19	11	6.7	.11	.47	.24	10	.09	2.8	7.5	15	7.3	5.6
20	12	1.3	.21	.42	.21	11	.04	.38	7.4	13	9.0	5.6
21	11	2.6	.21	.42	2.6	10	.06	11	7.4	12	7.6	5.7
22	9.6	5.7	.33	.33	14	11	.09	15	7.5	9.3	6.8	5.8
23	9.4	4.5	5.0	.33	14	12	.06	9.2	10	8.6	8.3	5.7
24	9.7	2.3	12	.42	11	10	.04	.33	11	8.0	8.0	6.0
25	9.0	1.3	10	.38	9.7	15	.14	.33	10	7.9	7.1	5.8
26	8.6	.87	8.5	.33	9.3	11	.09	3.0	9.7	8.2	6.6	5.4
27	9.6	.63	.33	.33	8.7	10	.09	6.8	12	6.0	6.2	5.4
28	14	.47	.24	3.9	6.6	11	8.3	9.2	12	5.0	5.7	6.3
29	14	.36	.21	5.0	------	6.5	15	8.3	10	5.7	6.1	5.8
30	11	.33	.21	4.2	------	1.8	14	8.2	10	6.9	7.3	5.5
31	11	------	.17	17	------	.99	------	7.9	------	8.2	8.6	------
TOTAL	313.31	193.08	109.25	83.71	97.32	328.99	95.32	257.36	260.3	304.7	227.3	173.8
MEAN	10.1	6.44	3.52	2.70	3.48	10.6	3.18	8.30	8.68	9.83	7.33	5.79
MAX	14	15	12	17	14	17	15	15	12	15	10	6.4
MIN	.58	.33	.11	.21	.14	.99	.04	.21	6.6	5.0	3.5	5.0
AC-FT	621	383	217	166	193	653	189	510	516	604	451	345

CAL YR 1974 TOTAL 2,422.09 MEAN 6.64 MAX 17 MIN .11 AC-FT 4,800
WTR YR 1975 TOTAL 2,444.44 MEAN 6.70 MAX 17 MIN .04 AC-FT 4,850

16079000 KAPAHI DITCH NEAR KEALIA

LOCATION.--Lat 22°06'09", long 159°22'28", on right bank 500 ft (152 m) downstream from intake and 4.0 mi (6.4 km) west of Kealia.

PERIOD OF RECORD.--April 1909 to February 1911, May 1911, July 1911 to May 1914, July 1915 to April 1917, June 1917 to current year. Published as "at Kapahi, near Kapaa" prior to January 1913 and as "at Kapahi, near Kealia" January to December 1913.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 377.1 ft (114.94 m) above mean sea level (by stadia survey). Prior to Nov. 26, 1936, at site 61 ft (19 m) upstream at datum 2.52 ft (0.768 m) higher.

AVERAGE DISCHARGE.--57 years (1917-20, 1921-75), 6.38 ft^3/s (0.181 m^3/s), 4,620 acre-ft/yr (5.70 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 138 ft^3/s (3.91 m^3/s) Feb. 6, 1913; no flow at times.

REMARKS.--Records good. Ditch diverts from Kapaa Stream for irrigation of sugarcane in vicinity of Kapaa. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	.25	.51	.66	.66	.31	0	5.9	.38	25	2.3	3.3
2	4.6	.19	3.7	.58	.19	.31	0	4.9	2.1	5.2	4.6	3.0
3	4.9	.19	13	6.9	.19	.73	0	4.4	3.5	2.6	6.5	3.0
4	9.7	1.3	13	7.6	.14	1.7	0	4.1	3.5	3.2	9.6	3.0
5	.51	3.6	13	6.4	.10	.74	0	4.4	3.0	3.5	2.9	3.0
6	.38	4.3	12	7.8	.10	2.3	0	14	3.0	2.9	2.5	2.5
7	1.4	4.2	12	18	.10	6.6	6.7	7.7	3.3	2.9	2.4	2.5
8	1.5	.19	12	18	.06	9.6	21	4.7	3.5	3.2	2.5	2.5
9	.51	.19	12	11	.06	4.2	22	4.1	3.6	3.2	2.8	2.5
10	3.2	.31	4.6	1.1	.06	7.5	12	3.9	3.6	3.2	4.0	2.6
11	.38	10	4.2	.31	.10	12	4.2	4.7	3.5	3.0	12	2.6
12	.31	14	5.4	.31	.10	19	0	3.9	4.4	4.5	4.7	2.6
13	.25	5.3	4.2	.90	.19	6.5	0	9.2	3.5	4.4	2.9	2.9
14	.31	4.1	4.2	.53	.14	20	4.1	30	3.7	15	3.0	2.8
15	7.4	3.9	4.4	.19	.19	3.5	6.8	11	3.2	4.7	3.2	2.5
16	11	8.7	6.4	.19	.25	.56	7.2	13	2.9	3.6	2.9	3.0
17	5.5	15	12	4.1	10	2.9	6.1	12	2.8	3.5	6.0	3.3
18	.38	12	13	17	16	4.7	.91	.45	2.8	15	6.6	3.0
19	.31	1.5	12	15	16	4.1	.51	8.2	2.8	16	2.5	2.6
20	.31	2.0	8.3	15	15	3.9	.51	5.4	2.8	4.4	3.8	2.5
21	.31	1.7	5.0	11	13	3.8	15	5.0	2.8	4.0	2.5	2.5
22	.25	1.8	.51	.74	4.7	5.8	24	6.4	3.0	2.6	2.5	2.6
23	.25	.74	.19	.51	.14	12	19	1.3	3.5	2.3	3.5	2.4
24	.25	.45	.31	.51	.14	11	23	3.5	3.3	2.2	3.3	2.4
25	.25	.38	1.4	.45	.14	17	19	3.2	3.2	2.2	2.8	2.4
26	.25	1.7	.99	.38	.10	9.4	.51	5.0	3.0	2.2	2.6	2.8
27	.31	1.4	.82	11	.25	2.6	.45	5.0	3.6	3.5	2.8	2.8
28	.38	1.3	.66	15	.45	.96	15	6.8	4.2	4.1	3.0	3.2
29	.38	1.1	.74	6.2	------	.55	15	3.9	3.8	3.3	3.0	2.6
30	1.6	.66	.66	3.1	------	.01	11	.66	3.3	2.4	3.6	2.4
31	3.2	------	.66	4.9	------	0	------	.45	------	2.5	4.9	------
TOTAL	64.98	102.45	181.85	185.36	78.55	174.29	233.99	197.16	95.58	160.3	122.2	81.8
MEAN	2.10	3.42	5.87	5.98	2.81	5.62	7.80	6.36	3.19	5.17	3.94	2.73
MAX	11	15	13	18	16	20	24	30	4.4	25	12	3.3
MIN	.25	.19	.19	.19	.06	0	0	.45	.38	2.2	2.3	2.4
AC-FT	129	203	361	368	156	346	464	391	190	318	242	162

CAL YR 1974 TOTAL 1,331.49 MEAN 3.65 MAX 29 MIN .01 AC-FT 2,640
WTR YR 1975 TOTAL 1,678.51 MEAN 4.60 MAX 30 MIN 0 AC-FT 3,330

16080000 KAPAA STREAM AT KAPAHI DITCH INTAKE, NEAR KAPAA

LOCATION.--Lat 22°06'15", long 159°22'29", on right bank at Kapahi ditch intake, 3.8 mi (6.1 km) northwest of Kapaa, and 4.3 mi (6.9 km) northwest of Wailua.

DRAINAGE AREA.--3.86 mi^2 (10.00 km^2).

PERIOD OF RECORD.--July 1936 to current year. Prior to July 1959, published as Kapaa River at Kapahi ditch intake, near Kapaa.

GAGE.--Water-stage recorder and concrete-masonry control. Datum of gage is 381.8 ft (116.37 m) above mean sea level (by stadia survey). Prior to July 1, 1962, at datum 0.07 ft (0.021 m) higher.

AVERAGE DISCHARGE.--39 years, 21.2 ft^3/s (0.600 m^3/s), 15,360 acre-ft/yr (18.9 hm^3/yr).

EXTREMES.--Current year: Maximun discharge, 4,470 ft^3/s (127 m^3/s) Jan. 31 (gage height, 4.28 ft or 1.305 m); no flow for many days.
Period of record: Maximum discharge, 7,670 ft^3/s (217 m^3/s) Jan. 25, 1956 (gage height, 5.41 ft or 1.649 m), present datum, from rating curve extended above 2,800 ft^3/s (79.3 m^3/s); no flow at times.

REMARKS.--Records good. Entire low flow is diverted above station at times for irrigation of sugarcane. Records do not include flow of Kapahi ditch (see sta 16079000). Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.0	17	35	99	3.5	18	0	2.2	2.1	0	
2	0	2.6	10	20	50	3.0	17	0	.71	.74	0	
3	.74	2.6	0	12	32	3.0	17	0	0	.27	0	
4	10	1.4	0	0	37	3.5	25	0	0	0	0	
5	19	0	0	0	24	5.1	28	0	0	0	0	
6	13	.62	0	0	19	3.4	17	3.3	0	0	0	
7	4.0	4.5	0	5.4	18	3.3	15	0	0	0	0	
8	9.9	9.1	0	11	17	1.8	.54	0	0	0	0	
9	12	9.9	2.9	107	17	0	.13	0	0	0	0	
10	3.0	46	0	154	16	0	3.7	0	0	0	0	
11	4.5	21	0	45	14	.95	6.3	0	0	0	0	
12	3.5	.09	0	37	16	5.5	3.5	0	0	0	.03	
13	3.5	0	0	99	46	0	4.0	0	0	0	0	
14	9.4	0	0	100	44	19	3.5	24	0	.09	0	
15	5.6	0	0	30	28	1.8	0	0	0	0	0	
16	9.1	.12	0	21	43	12	0	5.8	0	0	0	
17	1.4	59	0	14	19	2.3	7.0	13	0	0	0	
18	6.2	39	0	0	2.3	0	23	12	0	0	0	
19	4.5	33	0	0	.18	0	20	6.8	0	.01	0	
20	13	162	42	0	0	0	17	0	0	0	0	
21	5.1	161	21	11	.01	0	11	0	0	0	0	
22	3.5	161	77	16	60	0	4.1	9.7	0	0	0	
23	3.0	71	25	13	9.9	.01	.02	2.9	0	0	0	
24	3.0	34	9.1	63	6.2	0	6.8	0	0	0	0	
25	3.0	25	4.5	38	5.1	31	76	0	0	0	0	
26	2.6	19	20	18	4.5	0	37	0	0	0	0	
27	3.0	17	19	7.6	4.0	2.0	61	0	0	0	0	
28	24	16	17	0	3.5	273	19	0	0	0	0	
29	9.9	14	13	3.7	------	211	0	2.2	0	0	0	
30	1.9	19	13	344	------	30	0	2.2	0	0	0	
31	1.1	------	13	792	------	20	------	2.2	------	0	0	------
TOTAL	192.44	930.93	303.5	1,996.7	634.69	635.16	440.59	84.1	2.91	3.21	.03	0
MEAN	6.21	31.0	9.79	64.4	22.7	20.5	14.7	2.71	.097	.10	.001	0
MAX	24	162	77	792	99	273	76	24	2.2	2.1	.03	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	382	1,850	602	3,960	1,260	1,260	874	167	5.8	6.4	.06	0

CAL YR 1974 TOTAL 7,985.82 MEAN 21.9 MAX 283 MIN 0 AC-FT 15,840
WTR YR 1975 TOTAL 5,224.26 MEAN 14.3 MAX 792 MIN 0 AC-FT 10,360

PEAK DISCHARGE (BASE, 1,900 CFS).--Jan. 31 (1730) 4,470 cfs (4.28 ft).

NOTE.--No gage-height record Apr. 28 to May 30.

16087000 ANAHOLA DITCH WASTEWAY NEAR KEALIA

LOCATION.--Lat 22°08'16", long 159°22'28", on right bank 300 ft (91 m) downstream from wasteway gates on Anahola ditch, 500 ft (152 m) north of Kaneha Reservoir, 3.8 mi (6.1 km) west of Anahola, and 4.9 mi (7.9 km) northwest of Kealia.

PERIOD OF RECORD.--July 1936 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 825 ft (251 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--39 years, 4.78 ft^3/s (0.135 m^3/s), 3,460 acre-ft/yr (4.27 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 84 ft^3/s (2.38 m^3/s) Nov. 12, 1955; no flow at times.

REMARKS.--Records good. Water that passes station flows into Kaupaku Stream and thence into Anahola Stream 2 mi (3 km) below gaging station 16089000 on Anahola Stream. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.04	6.0	.62	.52	0	0	0	0	.33	.04	.11
2	.11	.04	4.6	.62	.19	0	0	0	.04	.11	.04	.11
3	.04	.04	4.1	.47	.11	0	0	0	.04	.11	.04	.11
4	.04	.04	3.8	.47	.11	.04	0	0	.04	.04	.04	.11
5	.04	.19	3.6	.47	.19	.04	0	0	.04	.19	.04	.11
6	.04	.33	3.3	.47	.11	.04	0	.01	.04	.19	.04	.11
7	.04	.47	3.1	.33	.11	.05	0	0	.04	.19	.04	.11
8	.11	.33	2.0	.33	.11	.04	.01	0	.04	.19	.04	.11
9	.04	.04	.62	.33	.04	0	.04	0	.04	.19	.04	.11
10	.04	.04	.47	.33	.04	0	0	0	.04	.19	.04	.11
11	.04	.04	.33	.33	.04	0	0	0	.04	.33	.04	.11
12	.04	.04	.19	.33	.04	0	0	0	.04	.47	.04	.11
13	.04	0	.11	.19	.04	0	0	0	.04	.47	.04	.11
14	.11	0	.04	.19	.04	0	0	.11	.11	.47	.04	.11
15	.19	.11	.11	.19	.04	0	0	.04	.04	.47	.11	.11
16	.11	.11	.04	.19	.04	0	0	.01	.04	.47	.11	.11
17	.11	.11	.04	.19	.11	0	.01	.04	0	.33	.11	.11
18	.04	0	.04	.19	.04	0	.04	0	0	.62	.11	.11
19	.11	0	.04	.33	.04	0	.04	0	0	.47	.11	.11
20	.11	.04	.33	.19	.04	0	.02	0	0	.33	.11	.04
21	.04	11	3.1	.19	.04	0	0	0	.04	.04	.11	.04
22	.04	18	.33	.11	.03	0	0	0	.04	.02	.11	.04
23	0	17	.33	.11	0	0	0	0	.11	0	.11	.04
24	0	12	.94	.19	0	0	0	0	.11	0	.11	.04
25	0	8.3	1.8	.33	0	0	0	0	.19	0	.11	.04
26	0	6.8	1.1	.19	0	0	0	0	.19	0	.11	.04
27	0	5.7	.19	.19	0	0	0	0	.33	0	.11	.04
28	.04	5.1	.33	.19	0	.23	0	0	.33	0	.11	.04
29	.04	4.6	.62	.33	------	.06	0	0	.33	0	.11	.04
30	.04	8.9	.62	.33	------	0	0	0	.19	0	.11	.04
31	.04	------	.62	5.5	------	0	------	0	------	0	.11	------
TOTAL	1.75	99.41	42.84	14.42	2.07	.50	.16	.21	2.53	6.22	2.43	2.53
MEAN	.057	3.31	1.38	.47	.074	.016	.005	.007	.084	.20	.078	.084
MAX	.19	18	6.0	5.5	.52	.23	.04	.11	.33	.62	.11	.11
MIN	0	0	.04	.11	0	0	0	0	0	0	.04	.04
AC-FT	3.5	197	85	29	4.1	1.0	.3	.4	5.0	12	4.8	5.0

CAL YR 1974 TOTAL 1,168.87 MEAN 3.20 MAX 32 MIN 0 AC-FT 2,320
WTR YR 1975 TOTAL 175.07 MEAN .48 MAX 18 MIN 0 AC-FT 347

16088000 ANAHOLA DITCH ABOVE KANEHA RESERVOIR, NEAR KEALIA

LOCATION.--Lat 22°08'10", long 159°22'28", on left bank at point of discharge into Kaneha Reservoir, 500 ft (152 m) below wasteway gates, and 4.8 mi (7.7 km) northwest of Kealia.

PERIOD OF RECORD.--December 1921 to current year. Records for May 1915 to December 1921 at site 520 ft (158 m) upstream not equivalent owing to intervening diversion.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 821.8 ft (250.48 m) above mean sea level (Lihue Plantation bench mark). Dec. 9, 1921, to June 2, 1934, at site 480 ft (146 m) upstream at different datum.

AVERAGE DISCHARGE.--51 years (1922-25, 1927-75), 4.14 ft^3/s (0.117 m^3/s), 3,000 acre-ft/yr (3.70 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 62 ft^3/s (1.76 m^3/s) Nov. 12, 1947; no flow at times.

REMARKS.--Records good. Ditch diverts water from Anahola Stream to Kaneha Reservoir, where it is stored for irrigation. Flow sometimes diverted above station by Anahola ditch wasteway (see sta 16087000). Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	1.9	.13	8.8	19	2.8	6.1	6.4	2.8	12	1.4	1.2
2	2.6	1.8	.13	5.3	11	2.6	5.1	5.3	2.6	3.2	2.5	1.0
3	2.4	1.9	.13	5.9	8.7	2.6	5.1	4.8	2.4	1.4	1.4	1.0
4	2.8	1.8	.13	5.4	9.1	2.4	8.5	4.4	2.4	1.2	4.4	.97
5	3.3	1.7	.13	4.8	7.0	2.6	9.6	4.3	2.4	1.2	1.6	.97
6	3.2	3.9	.13	3.6	6.2	2.3	6.2	8.5	2.3	1.0	1.2	.97
7	3.3	4.0	.13	5.8	5.7	3.6	7.0	9.3	2.2	.88	1.2	.97
8	9.2	6.4	.91	8.9	5.1	5.0	6.2	4.8	2.2	.97	1.2	.97
9	4.8	5.0	4.7	22	4.8	2.4	7.6	3.9	2.2	1.0	1.4	.97
10	5.7	17	2.2	24	4.4	2.3	4.4	3.9	2.0	1.0	2.0	.97
11	3.2	16	1.9	12	4.1	6.3	3.8	5.0	2.0	2.0	3.8	1.0
12	2.6	6.2	3.9	19	4.8	12	3.3	3.5	2.2	3.7	2.3	.97
13	2.3	3.6	2.3	23	13	5.2	3.0	7.1	2.2	2.3	1.4	.97
14	6.6	2.9	2.2	15	9.8	13	3.0	12	2.3	5.9	1.4	.97
15	12	2.8	4.5	9.3	7.2	4.1	2.9	8.7	2.2	2.0	1.4	.97
16	11	5.2	3.2	7.4	7.7	7.8	2.9	6.8	2.0	1.4	1.4	.97
17	4.3	18	2.2	6.1	7.5	4.1	4.4	8.9	2.0	1.2	1.4	.97
18	5.1	16	2.0	5.3	5.5	4.1	8.7	5.3	2.0	8.9	2.8	.88
19	4.3	7.5	2.0	4.8	4.8	3.2	6.5	4.8	1.9	10	1.6	.88
20	3.8	29	13	4.1	4.8	3.0	3.6	3.9	1.9	3.8	2.6	.88
21	3.0	16	11	5.6	4.1	2.6	7.5	4.7	1.8	4.1	2.6	.79
22	2.6	.38	15	3.9	8.9	3.7	8.3	9.4	1.8	2.3	2.4	.79
23	2.4	.20	8.9	3.5	4.8	5.8	4.4	4.1	2.2	1.8	2.4	.88
24	2.3	.13	5.3	14	3.9	6.3	9.8	3.5	2.2	1.7	1.8	.79
25	1.9	.13	3.9	9.8	3.5	15	18	3.3	1.8	1.4	1.7	.79
26	1.8	.16	7.4	5.0	3.2	4.8	12	3.0	1.8	1.6	1.2	.79
27	2.4	.16	5.0	4.4	3.0	5.0	14	2.9	2.3	1.4	1.0	.79
28	11	.16	4.1	4.1	2.9	35	13	7.2	2.2	1.2	1.0	.97
29	6.0	.13	3.6	4.2	------	19	10	3.5	2.7	1.2	1.0	.88
30	2.6	.20	3.2	37	------	9.8	9.3	2.9	1.7	1.2	1.2	.79
31	2.2	------	2.9	43	------	7.0	------	2.8	------	1.4	3.2	------
TOTAL	133.6	170.25	116.22	335.0	184.5	205.6	216.2	168.9	64.7	84.35	57.9	27.71
MEAN	4.31	5.68	3.75	10.8	6.59	6.63	7.21	5.45	2.16	2.72	1.87	.92
MAX	12	29	15	43	19	35	18	12	2.8	12	4.4	1.2
MIN	1.8	.13	.13	3.5	2.9	2.3	2.9	2.8	1.7	.88	1.0	.79
AC-FT	265	338	231	664	366	408	429	335	128	167	115	55

CAL YR 1974 TOTAL 1,695.62 MEAN 4.65 MAX 42 MIN .13 AC-FT 3,360
WTR YR 1975 TOTAL 1,764.93 MEAN 4.84 MAX 43 MIN .13 AC-FT 3,500

16089000 ANAHOLA STREAM NEAR KEALIA

LOCATION.--Lat 22°09'05", long 159°21'17", on right bank at intake of Lower Anahola ditch and 4.7 mi (7.6 km) northwest of Kealia.

DRAINAGE AREA.--4.27 mi² (11.06 km²).

PERIOD OF RECORD.--August to December 1910, January 1913 to November 1918, January 1919, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1319. Published as Anahola River above dam at Kiokala, near Kealia prior to July 1913 and as Anahola River near Kealia July 1913 to June 1958.

GAGE.--Water-stage recorder and combination concrete dam and orifice control. Datum of gage is 295.11 ft (89.950 m) above mean sea level (Highway Department bench mark). Prior to May 4, 1934, at site 0.1 mi (0.2 km) upstream at different datum.

AVERAGE DISCHARGE.--60 years (1913-17, 1919-75), 22.7 ft³/s (0.643 m³/s), 16,450 acre-ft/yr (20.3 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 4,500 ft³/s (127 m³/s) Jan. 31 (gage height, 7.85 ft or 2.393 m), from rating curve extended above 240 ft³/s (6.80 m³/s) on basis of slope-area measurement at gage height 10.6 ft (3.23 m); minimum, 2.1 ft³/s (0.059 m³/s) Sept. 25, 26.
Period of record: Maximum discharge, 19,600 ft³/s (555 m³/s) Jan. 25, 1956 (gage height, 14.6 ft or 4.45 m), from floodmarks; from rating curve extended above 590 ft³/s (16.7 m³/s); minimum, 1.9 ft³/s (0.054 m³/s) Oct. 30 to Nov. 1, Nov. 7-11, 1973.

REMARKS.--Records poor. Records include flow in Lower Anahola ditch (see sta 16091000). Anahola ditch (see sta 16088000) diverts 3 mi (5 km) above station for irrigation in vicinity of Kealia. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1719: 1915, 1916-18(M). (WATER YEAR).--WSP 2137: 1965(P), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	4.9	16	12	140	9.0	20	13	4.9	14	3.0	2.4
2	5.7	4.8	12	9.2	21	8.6	18	11	4.7	6.9	3.0	2.4
3	5.7	5.0	10	8.4	16	8.4	18	9.8	4.7	4.1	2.9	2.3
4	6.4	4.9	9.6	6.5	28	8.0	18	9.4	4.6	3.9	3.3	2.3
5	6.4	4.8	9.0	8.1	24	8.0	18	9.0	4.7	3.9	3.0	2.3
6	5.8	5.6	8.2	5.6	19	7.7	16	12	4.5	3.6	2.7	2.2
7	6.2	3.7	8.0	7.1	16	8.0	16	17	4.4	3.5	2.6	2.2
8	15	5.8	7.7	12	15	9.4	16	9.4	4.3	3.5	2.6	2.3
9	9.4	5.1	10	104	14	7.2	16	8.0	4.2	3.6	2.6	2.3
10	9.5	20	8.2	123	13	7.0	15	8.0	4.2	3.5	2.7	2.4
11	6.5	26	7.2	33	12	7.0	14	9.2	4.1	3.6	2.8	2.4
12	5.7	11	6.6	86	15	19	13	7.6	4.4	5.0	3.1	2.3
13	5.5	8.6	7.4	120	83	10	12	9.5	4.3	3.8	2.4	2.3
14	7.4	7.4	6.8	60	39	31	12	26	4.4	4.4	2.4	2.3
15	13	7.1	7.7	29	20	10	11	15	4.3	4.2	2.3	2.2
16	16	8.4	8.0	24	21	13	10	10	4.1	3.8	2.2	2.2
17	8.3	52	6.5	19	16	11	12	14	4.1	3.6	2.4	2.2
18	9.5	32	6.4	17	14	9.0	18	8.6	4.0	9.2	2.4	2.2
19	7.1	13	6.4	15	12	8.6	15	7.4	4.0	11	2.4	2.2
20	6.8	111	36	14	12	8.0	12	7.2	3.9	6.1	2.4	2.2
21	5.3	146	25	21	12	7.6	14	7.0	3.8	4.4	2.6	2.2
22	4.8	203	67	16	41	7.6	17	15	3.9	4.1	2.5	2.2
23	4.9	67	17	13	14	9.2	12	7.7	4.0	3.7	2.4	2.2
24	5.0	39	10	31	11	11	17	6.5	4.0	3.6	2.6	2.2
25	4.8	27	8.0	23	10	28	84	6.2	4.0	3.6	2.4	2.2
26	4.7	21	11	14	10	9.0	26	5.8	4.0	3.5	2.3	2.3
27	5.2	18	11	14	9.8	7.8	30	5.6	4.0	3.3	2.2	2.2
28	11	16	7.4	13	9.6	361	29	12	4.0	3.3	2.2	2.4
29	5.1	14	6.8	12	---	168	19	6.6	4.0	3.2	2.2	2.3
30	5.6	18	6.2	299	---	29	16	5.5	4.1	3.1	2.4	2.3
31	5.1	---	5.7	804	---	23	---	5.0	---	3.0	2.9	---
TOTAL	227.3	910.1	376.8	1972.9	871.4	869.1	564	304.0	126.6	144.2	79.9	68.1
MEAN	7.33	30.3	12.2	63.6	29.0	28.0	18.8	9.81	4.22	4.65	2.58	2.27
MAX	16	203	67	804	140	361	84	26	4.9	14	3.3	2.4
MIN	4.7	3.7	5.7	5.6	9.6	7.0	10	5.0	3.8	3.0	2.2	2.2
AC-FT	451	1810	747	3910	1730	1720	1120	603	251	286	158	135

CAL YR 1974 TOTAL 7656.9 MEAN 21.0 MAX 334 MIN 3.7 AC-FT 15190
WTR YR 1975 TOTAL 6314.4 MEAN 17.3 MAX 804 MIN 2.2 AC-FT 12520

PEAK DISCHARGE (BASE, 2,200 CFS).--Jan. 31 (1600) 4,500 cfs (7.58 ft).

16091000 LOWER ANAHOLA DITCH NEAR KEALIA

LOCATION.--Lat 22°08'14", long 159°19'31", on left bank 100 ft (30 m) downstream from last wasteway, 1.5 mi (2.4 km) southwest of mouth of Anahola Stream, and 2.8 mi (4.5 km) northwest of Kealia.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 276.11 ft (84.158 m) above mean sea level (Highway Department bench mark).

AVERAGE DISCHARGE.--38 years (1937-75), 3.16 ft^3/s (0.0895 m^3/s), 2,290 acre-ft/yr (2.82 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 18.6 ft^3/s (0.53 m^3/s) June 1, 1938; no flow at times each year.

REMARKS.--Records good. Ditch diverts from Anahola Stream for irrigation of sugarcane in vicinity of Anahola. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	1.1	.06	.75	13	6.3	8.6	6.7	4.6	4.4	1.8	1.6
2	4.0	1.1	.06	.75	11	5.9	6.2	6.1	5.6	4.6	1.9	1.6
3	3.8	1.1	.06	.75	10	5.9	5.4	4.7	5.2	3.9	1.8	1.5
4	2.0	1.1	7.0	.65	8.5	6.0	5.9	4.6	5.2	3.4	1.8	1.3
5	.99	1.1	11	.42	7.0	6.1	10	4.0	5.1	3.3	1.9	1.2
6	.99	2.4	11	.31	6.6	6.7	10	5.7	4.8	3.2	1.8	1.2
7	1.9	3.6	10	.02	6.1	6.1	10	4.6	4.0	3.6	1.7	1.1
8	4.1	4.0	9.9	.20	6.1	6.2	9.2	5.5	4.0	3.7	1.7	1.2
9	4.1	3.7	8.6	.70	7.2	5.6	7.9	5.3	4.0	4.6	1.7	1.2
10	4.1	4.1	8.0	.56	6.5	6.6	7.6	5.1	3.8	3.8	1.6	1.2
11	3.9	4.5	8.1	.31	8.5	6.0	7.8	4.4	3.8	3.6	1.7	1.3
12	4.1	4.2	9.0	.13	8.6	6.4	6.2	4.7	3.8	4.1	2.1	1.2
13	3.4	4.0	9.1	.24	9.0	6.3	6.0	5.5	3.8	4.3	1.8	1.2
14	3.6	3.9	8.9	.94	9.2	7.4	7.0	6.2	3.7	4.2	1.5	1.1
15	4.4	3.8	9.8	.89	8.5	7.4	6.3	5.8	3.6	4.9	1.5	1.1
16	4.5	3.0	9.1	.85	8.5	6.3	6.3	5.3	3.7	5.4	1.2	1.1
17	3.8	3.0	8.1	.85	9.1	7.2	6.4	4.0	3.6	5.4	1.2	1.1
18	4.2	3.8	8.7	.85	8.7	8.0	6.7	3.9	3.5	5.4	1.2	1.1
19	3.4	4.3	8.3	.85	8.2	6.8	6.3	3.6	3.6	5.8	1.6	1.1
20	3.0	6.8	8.9	.85	8.0	6.8	6.1	3.9	3.5	5.7	1.7	1.1
21	3.5	4.7	7.1	.75	7.2	6.7	6.5	3.6	3.3	5.9	1.8	1.1
22	3.2	.99	11	.75	7.6	6.6	5.9	3.8	3.2	3.8	1.8	1.1
23	3.2	.80	12	.75	7.5	6.6	5.6	5.0	3.6	2.5	1.6	1.2
24	3.0	.75	7.8	.80	6.1	6.6	5.6	6.1	3.6	2.2	1.6	.99
25	2.8	.75	7.4	.75	8.7	7.4	7.0	5.7	3.5	2.0	1.5	.96
26	2.6	.61	11	.75	7.0	7.0	6.1	5.6	3.3	1.9	1.5	.95
27	2.6	.42	11	2.4	6.6	6.6	8.9	4.6	3.4	1.7	1.2	.85
28	2.8	.13	6.1	6.6	6.3	9.6	9.8	4.9	3.3	1.6	1.2	.75
29	3.4	.06	5.4	5.9	---	10	9.0	5.2	3.2	1.9	1.2	1.2
30	2.4	.06	5.1	9.8	---	10	8.4	5.5	3.6	1.8	1.4	.75
31	1.2	---	.75	11	---	9.5	---	4.8	---	1.8	1.8	---
TOTAL	98.96	75.57	231.33	52.12	227.3	217.2	226.7	155.4	116.6	114.0	49.8	34.35
MEAN	3.19	2.52	7.46	1.68	8.12	7.01	7.56	5.01	3.89	3.68	1.61	1.15
MAX	4.5	8.5	12	11	13	10	10	6.7	5.6	5.9	2.1	1.6
MIN	.99	.06	.06	.02	6.1	5.6	5.1	3.8	3.2	1.7	1.2	.65
AC-FT	196	150	459	103	451	431	450	308	231	226	99	68

CAL YR 1974 TOTAL 1774.56 MEAN 4.86 MAX 13 MIN 0 AC-FT 3520
WTR YR 1975 TOTAL 1599.35 MEAN 4.38 MAX 13 MIN .02 AC-FT 3170

16093200 ANAHOLA STREAM AT ANAHOLA

LOCATION.--Lat 22°08'42", long 159°18'59", on downstream side of old highway bridge at Anahola, 0.1 mi (0.2 km) upstream from Highway 56, and 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--9.24 mi^2 (23.93 km^2).

PERIOD OF RECORD.--Annual maximum, water years 1962-65, November 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (by stadia survey). Apr. 12, 1962, to Nov. 19, 1964, crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--10 years (1965-75), 37.2 ft^3/s (1.054 m^3/s), 26,950 acre-ft/yr (33.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 10,500 ft^3/s (297 m^3/s) Jan. 31 (gage height, 14.95 ft or 4.557 m); minimum, 3.1 ft^3/s (0.088 m^3/s) Aug. 29.
Period of record: Maximum discharge, 13,000 ft^3/s (368 m^3/s) May 15, 1965 (gage height, 16.0 ft or 4.88 m), from rating curve extended above 5,800 ft^3/s (164 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 2.8 ft^3/s (0.08 m^3/s) Oct. 16, 17, 1973.

REMARKS.--Records fair. Anahola and Lower Anahola ditches (see sta 16088000 and 16091000) divert above station for irrigation of sugarcane in vicinities of Kealia and Anahola, respectively. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.7	47	37	346	13	18	10	8.0	14	6.1	4.0
2	5.1	8.0	32	34	107	12	15	9.6	8.4	9.1	6.1	3.7
3	5.1	6.9	28	31	98	12	16	8.7	8.0	6.9	5.8	3.7
4	5.8	8.0	25	29	48	12	18	9.1	8.0	6.5	5.8	3.7
5	10	8.4	23	23	30	12	23	9.1	8.4	6.5	6.1	4.0
6	8.7	7.2	23	16	30	12	21	9.6	8.4	6.5	5.4	4.0
7	8.4	5.8	21	12	28	12	18	14	8.4	6.5	5.1	4.0
8	10	6.1	20	16	24	13	14	9.6	8.0	6.9	4.8	3.7
9	7.8	7.8	20	193	23	11	12	8.4	8.0	6.5	4.8	3.4
10	6.9	31	18	192	21	12	11	8.4	7.6	6.5	5.1	3.4
11	6.1	41	17	54	20	11	11	9.1	7.6	7.2	5.1	3.4
12	5.1	14	19	124	21	21	9.6	8.4	8.0	8.4	6.1	3.4
13	4.2	6.5	18	178	65	14	9.1	9.1	7.6	7.6	5.1	3.7
14	5.1	5.1	15	116	46	29	10	23	8.0	7.6	4.5	3.7
15	9.1	4.6	15	51	28	14	9.1	14	8.0	8.4	4.5	3.7
16	17	5.4	16	38	27	13	9.1	11	7.2	7.6	4.5	4.0
17	8.7	60	15	31	26	14	10	13	7.2	7.2	4.5	4.0
18	7.6	57	13	28	21	12	14	11	6.9	10	4.8	4.0
19	6.9	15	16	29	18	10	11	9.1	6.9	13	4.8	4.0
20	5.8	185	51	28	18	9.6	10	9.1	6.9	10	4.2	4.0
21	5.4	273	27	32	17	9.6	11	9.1	6.9	8.4	4.2	4.0
22	5.2	369	93	34	38	9.6	14	14	6.9	8.0	4.0	4.0
23	5.4	153	40	25	18	9.6	10	10	6.9	7.6	3.7	4.0
24	6.9	88	15	50	17	11	13	9.6	6.9	7.6	4.0	3.7
25	6.5	61	12	50	14	30	68	9.1	6.9	6.9	4.0	3.7
26	6.1	49	21	28	14	13	23	8.7	6.9	6.5	3.7	3.7
27	6.5	42	28	23	14	11	38	8.7	7.2	7.2	3.4	3.7
28	8.7	42	10	20	13	348	37	12	7.2	6.5	3.4	4.0
29	9.1	42	9.1	26	---	129	17	9.6	7.2	6.5	3.1	4.0
30	8.0	50	14	439	---	35	14	8.7	7.2	6.1	3.4	3.7
31	9.1	---	14	1640	---	23	---	8.4	---	6.1	4.0	---
TOTAL	226.6	1661.2	737.1	3627	1196	897.4	513.9	321.2	225.7	240.3	144.1	114.0
MEAN	7.32	55.4	23.8	117	42.7	28.9	17.1	10.4	7.52	7.75	4.65	3.80
MAX	17	369	93	1640	346	348	68	23	8.4	14	6.1	4.0
MIN	4.2	4.6	9.1	12	13	9.6	9.1	8.4	6.9	6.1	3.1	3.4
AC-FT	450	3290	1460	7190	2370	1780	1020	637	448	477	286	226

CAL YR 1974 TOTAL 11225.1 MEAN 30.8 MAX 382 MIN 4.0 AC-FT 22260
WTR YR 1975 TOTAL 9904.7 MEAN 27.1 MAX 1640 MIN 3.1 AC-FT 19650

PEAK DISCHARGE (BASE, 2,200 CFS).--Jan. 31 (1415) 10,500 cfs (14.95 ft).

16097500 HALAULANI STREAM AT ALTITUDE 400 FT (122 M), NEAR KILAUEA

LOCATION.--Lat 22°10'54", long 159°25'17", on left bank 0.5 mi (0.8 km) upstream from confluence with Pohakuhonu Stream and 2.3 mi (3.7 km) south of Kilauea.

DRAINAGE AREA.--1.19 mi^2 (3.08 km^2).

PERIOD OF RECORD.--November 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 391.8 ft (119.42 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--17 years (1958-75), 11.4 ft^3/s (0.323 m^3/s), 8,260 acre-ft/yr (10.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,580 ft^3/s (44.7 m^3/s) Jan. 31 (gage height, 7.28 ft or 2.219 m), from rating curve extended as explained below; minimum, 3.3 ft^3/s (0.094 m^3/s) Sept. 5-7.
Period of record: Maximum discharge, 2,070 ft^3/s (58.6 m^3/s) Aug. 6, 1959 (gage height, 8.30 ft or 2.530 m), from rating curve extended above 190 ft^3/s (5.38 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.8 ft^3/s (0.051 m^3/s) Sept. 6-8, 1968.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.4	6.4	12	27	5.9	9.6	10	4.8	10	4.0	3.7
2	5.0	4.2	7.3	8.7	17	5.9	8.7	9.3	4.8	5.8	4.3	3.6
3	4.9	4.3	6.8	8.7	12	5.7	8.4	8.4	4.8	4.5	4.6	3.6
4	5.0	4.1	6.6	9.6	11	5.7	10	8.1	4.6	4.3	7.5	3.5
5	4.9	4.1	6.4	8.1	8.9	5.7	13	8.4	4.6	4.2	4.4	3.5
6	4.7	4.6	6.2	7.3	7.9	5.5	9.6	13	4.6	4.1	4.0	3.4
7	5.0	5.8	5.9	10	7.4	6.6	12	10	4.4	4.1	3.9	3.4
8	7.9	8.4	6.2	14	7.0	7.3	10	8.1	4.4	4.6	3.9	3.6
9	6.4	8.4	7.0	53	6.7	5.7	9.9	7.3	4.4	4.7	4.0	3.5
10	8.3	31	5.9	69	6.4	6.2	8.1	7.3	4.6	4.2	4.3	3.7
11	5.5	19	5.7	27	6.2	7.5	7.5	7.3	4.7	4.2	5.0	4.2
12	4.9	9.1	6.2	46	6.8	16	7.0	6.8	4.8	5.1	4.3	4.2
13	4.9	6.7	5.5	52	40	17	6.8	8.7	4.7	4.7	4.0	4.1
14	5.6	5.8	5.5	25	29	27	6.6	14	4.5	6.7	3.9	4.1
15	6.1	5.4	6.4	16	14	9.6	6.4	9.3	4.8	5.2	4.0	4.1
16	7.4	6.5	5.5	12	18	13	6.4	8.1	4.6	4.6	3.9	4.1
17	5.2	32	5.3	10	13	9.6	8.7	8.7	4.5	4.5	4.3	4.1
18	4.9	25	5.1	9.3	9.9	9.3	10	6.8	4.5	6.5	4.5	4.2
19	5.0	9.4	5.7	8.7	9.0	7.5	8.1	6.8	4.6	9.9	4.0	4.1
20	5.1	38	15	8.1	8.1	7.0	6.8	6.2	4.5	6.3	4.2	4.2
21	4.6	77	20	7.5	7.8	6.6	9.3	6.4	4.5	6.1	4.5	4.1
22	4.5	83	33	7.0	13	7.0	10	8.6	4.5	4.9	4.1	4.1
23	4.4	29	14	6.8	7.8	8.1	8.4	5.9	4.5	4.5	4.2	4.1
24	4.4	19	9.6	8.7	7.0	8.7	14	5.5	4.4	4.3	4.2	4.1
25	4.4	13	8.4	9.0	6.8	18	38	5.3	4.4	4.3	4.0	4.1
26	4.3	11	15	6.8	6.6	8.1	19	5.1	4.5	4.2	3.7	4.1
27	4.8	9.6	11	6.6	6.4	10	24	4.9	4.7	4.0	3.7	4.1
28	8.4	8.7	8.7	6.4	6.2	95	22	5.1	4.8	4.0	3.9	4.2
29	6.1	8.1	8.1	15	---	34	15	4.9	4.6	4.0	3.8	4.1
30	4.8	10	7.0	134	---	15	12	4.8	5.1	4.0	4.2	4.1
31	4.7	---	6.6	245	---	11	---	4.6	---	4.0	4.3	---
TOTAL	167.2	504.6	274.0	867.3	326.9	405.2	345.3	233.7	138.6	156.5	131.6	118.0
MEAN	5.39	16.8	8.84	28.0	11.7	13.1	11.5	7.54	4.62	5.05	4.25	3.93
MAX	8.4	83	33	245	40	95	38	14	5.1	10	7.5	4.2
MIN	4.3	4.1	5.1	6.4	6.2	5.5	6.4	4.6	4.4	4.0	3.7	3.4
AC-FT	332	1000	543	1720	648	804	685	464	275	310	261	234

CAL YR 1974 TOTAL 4277.8 MEAN 11.7 MAX 162 MIN 4.1 AC-FT 8490
WTR YR 1975 TOTAL 3668.9 MEAN 10.1 MAX 245 MIN 3.4 AC-FT 7280

PEAK DISCHARGE (BASE, 580 CFS).--Jan. 31 (1330) 1,580 cfs (7.28 ft).

HAWAII, ISLAND OF KAUAI

16100000 HANALEI TUNNEL OUTLET NEAR LIHUE

LOCATION.--Lat 22°05'02", long 159°27'50", on right bank at outlet of Hanalei tunnel, 2.2 mi (3.5 km) downstream from intake on Kaapoko Stream, and 9.4 mi (15.1 km) northwest of Lihue.

PERIOD OF RECORD.--July 1932 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 1,210 ft (369 m), from tunnel-profile.

AVERAGE DISCHARGE.--43 years, 27.4 ft^3/s (0.776 m^3/s), 19,850 acre-ft/yr (24.5 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 99 ft^3/s (2.80 m^3/s) Apr. 11, 25, 26, 1942; no flow at times.

REMARKS.--Records good. Tunnel diverts water from Kaapoko Stream and Hanalei River into North Branch of North Fork Wailua River, from which it is later diverted for irrigation in vicinity of Lihue and Kapaa. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	7.7	24	11	2.4	36	36	28	45	28	25
2	25	24	7.2	12	7.2	2.4	42	35	28	34	31	25
3	25	18	7.2	15	5.4	2.4	44	36	28	30	28	25
4	27	19	6.8	17	10	2.1	46	37	28	29	38	25
5	28	19	6.8	14	5.4	4.7	47	36	28	28	28	24
6	27	24	6.8	13	4.9	7.7	46	43	28	27	26	24
7	33	24	6.8	25	4.4	12	48	40	28	28	25	24
8	35	28	6.8	29	4.4	11	42	34	28	28	26	24
9	33	28	9.9	42	4.0	8.2	47	32	28	28	27	23
10	32	43	6.8	38	4.0	13	42	32	30	27	28	27
11	27	39	6.8	17	3.6	17	38	32	30	28	31	24
12	27	25	9.6	14	4.0	25	36	30	30	32	27	23
13	25	23	6.8	26	7.5	18	30	39	28	36	26	25
14	30	22	7.7	18	8.7	23	34	46	34	38	27	23
15	30	30	9.1	11	5.4	13	34	40	32	30	30	23
16	33	34	7.7	9.5	11	19	34	46	28	30	27	26
17	27	47	6.8	8.6	6.2	12	40	44	28	30	32	23
18	27	41	7.7	8.2	4.4	11	41	36	27	36	32	23
19	25	29	8.6	7.7	4.4	9.5	39	37	27	42	27	22
20	25	53	16	7.7	4.4	4.0	36	35	27	32	30	22
21	24	65	29	7.7	4.0	.80	39	40	27	41	28	22
22	24	49	25	7.2	16	23	38	38	32	32	26	21
23	25	30	19	7.2	4.0	44	36	32	33	30	32	22
24	25	17	13	17	3.2	41	42	32	29	30	29	23
25	24	13	11	12	3.2	38	52	31	29	29	26	21
26	23	11	24	8.2	2.8	34	43	30	30	28	25	19
27	30	9.5	17	8.6	2.8	33	50	30	31	27	25	19
28	53	8.6	13	8.2	2.8	53	47	30	32	27	25	23
29	38	8.2	11	13	---	53	44	30	29	27	25	21
30	32	8.6	8.6	55	---	40	41	29	30	27	31	20
31	35	---	12	46	---	39	---	28	---	27	29	---
TOTAL	899	820.9	342.2	546.8	159.1	616.20	1234	1096	875	963	875	691
MEAN	29.0	27.4	11.0	17.6	5.68	19.9	41.1	35.4	29.2	31.1	28.2	23.0
MAX	53	65	29	55	16	53	52	46	34	45	38	27
MIN	23	8.2	6.8	7.2	2.8	.80	30	28	27	27	25	19
AC-FT	1780	1630	679	1080	316	1220	2450	2170	1740	1910	1740	1370

CAL YR 1974 TOTAL 7753.10 MEAN 21.2 MAX 65 MIN 2.4 AC-FT 15380
WTR YR 1975 TOTAL 9118.20 MEAN 25.0 MAX 65 MIN .80 AC-FT 18090

HAWAII, ISLAND OF KAUAI

16103000 HANALEI RIVER NEAR HANALEI

LOCATION.--Lat 22°11'31", long 159°27'57", on right bank 2.6 mi (4.2 km) southeast of Hanalei School and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--19.1 mi² (49.5 km²).

PERIOD OF RECORD.--January 1912 to November 1919, annual maximum, water years 1962-63, December 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 35.8 ft (10.91 m) above mean sea level (by stadia survey). Jan. 1, 1912, to Nov. 20, 1919, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Jan. 26 to Dec. 26, 1962, crest-stage gage at present site and datum.

AVERAGE DISCHARGE (since diversion to Hanalei tunnel).--12 years (1963-75), 227 ft³/s (6.429 m³/s), 164,500 acre-ft/yr (203 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 21,600 ft³/s (612 m³/s) Jan. 31 (gage height, 13.62 ft or 4.151 m); minimum, 24 ft³/s (0.68 m³/s) Sept. 30.
Period of record: Maximum discharge, 24,900 ft³/s (705 m³/s), Apr. 19, 1974 (gage height, 14.28 ft or 4.353 m), from rating curve extended above 9,600 ft³/s (272 m³/s); minimum, 24 ft³/s (0.68 m³/s) Sept. 30, 1975.

REMARKS.--Records fair. Since 1925, Hanalei tunnel (see sta 16100000) had diverted from Hanalei River and its tributary Kaapoko Stream above station to North Branch of North Fork Wailua River for irrigation. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1937: Drainage area. WSP 2137: 1962(M), 1963-65(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	78	135	358	700	68	111	96	50	234	42	33
2	78	73	107	180	327	68	182	85	50	72	48	30
3	80	79	96	271	231	70	189	83	48	46	44	30
4	94	81	90	353	453	74	286	83	48	43	141	29
5	100	78	84	246	201	79	313	79	48	42	46	29
6	83	108	82	242	151	69	283	224	47	41	39	29
7	116	113	79	617	131	101	357	378	46	41	36	28
8	166	166	80	797	119	151	181	102	46	43	35	28
9	151	150	132	1380	109	73	236	79	46	43	36	28
10	123	754	84	1220	102	142	163	72	48	41	39	32
11	92	605	78	455	96	235	96	70	47	42	59	30
12	83	254	100	615	126	580	83	65	50	64	45	28
13	80	148	78	978	524	513	76	115	48	91	37	28
14	149	123	79	568	533	905	71	299	56	106	35	28
15	128	126	127	285	172	214	68	136	52	56	42	26
16	167	256	97	210	347	337	72	279	47	46	36	27
17	96	731	78	172	403	171	122	100	44	43	42	28
18	88	609	75	151	180	151	224	80	44	98	70	26
19	83	294	112	135	133	115	130	76	44	256	38	26
20	80	2010	493	129	121	109	85	86	43	82	42	26
21	77	2860	730	119	114	109	172	64	43	99	37	26
22	74	2590	762	107	886	98	153	62	49	58	36	26
23	73	845	308	98	300	158	96	62	51	50	45	26
24	72	434	214	608	150	149	200	62	43	47	40	26
25	70	266	159	271	90	186	537	60	42	46	35	26
26	69	202	455	135	80	76	223	58	42	44	33	28
27	82	170	283	110	72	76	284	55	47	43	31	33
28	302	147	226	120	70	3130	240	54	59	42	31	26
29	122	129	159	500	---	1040	184	54	49	42	30	26
30	86	173	129	1000	---	202	140	53	48	42	38	25
31	88	---	136	3000	---	147	---	51	---	42	52	---
TOTAL	3253	14632	5847	15430	6921	9596	5557	3222	1425	2085	1360	837
MEAN	105	488	189	498	247	310	185	104	47.5	67.3	43.9	27.9
MAX	302	2860	762	3000	886	3130	537	378	59	256	141	33
MIN	69	73	75	98	70	68	68	51	42	41	30	25
AC-FT	6450	29020	11600	30610	13730	19030	11020	6390	2830	4140	2700	1660

CAL YR 1974 TOTAL 108752 MEAN 298 MAX 3700 MIN 69 AC-FT 215700
WTR YR 1975 TOTAL 70165 MEAN 192 MAX 3130 MIN 25 AC-FT 139200

PEAK DISCHARGE (BASE, 9,200 CFS).--Nov. 21 (2330) 11,100 cfs (10.80 ft); Jan. 31 (probably 1300) 21,600 cfs (13.62 ft).

NOTE.--No gage-height Jan. 26 to Feb. 2.

16108000 WAINIHA RIVER NEAR HANALEI

LOCATION.--Lat 22°08'20", long 159°33'38", on left bank at Puwainui Falls, 1.5 mi (2.4 km) upstream from Wainiha powerplant intake, and 6.0 mi (9.6 km) southwest of Hanalei.

DRAINAGE AREA.--10.2 mi^2 (26.4 km^2).

PERIOD OF RECORD.--August 1952 to February 1956, October 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 960 ft (293 m), from topographic map.

AVERAGE DISCHARGE.--20 years (1952-55, 1958-75), 143 ft^3/s (4.050 m^3/s), 103,600 acre-ft/yr (128 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 10,200 ft^3/s (289 m^3/s) Nov. 21 (gage height, 6.86 ft or 2.091 m), from rating curve extended as explained below; minimum, 42 ft^3/s (1.19 m^3/s) Sept. 30.
Period of record: Maximum discharge, 28,100 ft^3/s (796 m^3/s) Apr. 19, 1974 (gage height, 9.47 ft or 2.886 m), from rating curve extended above 1,100 ft^3/s (31.2 m^3/s) on basis of slope-area measurement at gage height 7.72 ft (2.353 m); minimum, 34.8 ft^3/s (0.99 m^3/s) Feb. 12, 1954.
Flood of Feb. 17, 1956, which destroyed the station, reached a stage of 14.1 ft (4.30 m), from floodmarks, discharge, about 40,000 ft^3/s (1,130 m^3/s), from unit-discharge study.

REMARKS.--Records fair. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	69	60	218	141	48	114	66	56	363	69	55
2	54	56	56	104	85	49	132	79	56	105	83	51
3	53	58	54	194	66	52	268	91	56	66	59	49
4	64	76	52	210	180	68	180	106	56	60	130	49
5	76	61	52	195	82	76	302	143	60	65	61	48
6	72	107	50	192	64	58	378	177	58	57	56	46
7	147	99	50	504	59	116	171	116	56	59	56	46
8	143	148	55	486	56	76	123	75	56	66	55	48
9	115	134	116	655	52	63	162	66	56	68	58	48
10	68	618	63	413	50	157	76	73	73	60	66	67
11	62	653	59	136	49	187	68	64	70	65	93	50
12	59	171	102	163	61	299	63	66	76	108	70	46
13	56	107	60	243	163	378	62	202	65	105	58	46
14	101	87	71	226	176	177	62	272	113	187	56	46
15	76	327	123	100	76	122	87	124	86	87	90	47
16	106	399	86	79	200	230	76	235	63	69	58	69
17	81	722	68	71	180	85	261	93	59	79	95	56
18	59	459	80	66	83	79	147	77	56	192	120	48
19	55	184	95	61	64	61	145	74	56	200	58	45
20	53	1660	273	60	59	70	120	80	56	90	60	46
21	51	3650	498	61	55	68	160	110	58	140	58	45
22	55	820	562	59	237	115	127	65	95	70	57	44
23	54	178	193	58	77	131	181	61	77	61	98	45
24	56	104	119	348	61	72	336	60	62	64	88	50
25	50	79	108	191	56	63	355	60	70	62	57	48
26	49	69	548	93	52	52	190	59	91	64	54	46
27	71	65	220	83	50	109	194	59	87	55	52	44
28	79	62	166	75	49	1320	136	58	103	54	50	49
29	105	58	114	476	---	206	119	58	70	53	52	47
30	73	65	80	1370	---	92	79	57	95	54	104	44
31	116	---	117	1600	---	78	---	56	---	62	91	---
TOTAL	2314	11334	4350	8790	2583	4759	4874	2982	2091	2890	2212	1468
MEAN	74.6	378	140	284	92.3	154	162	96.2	69.7	93.2	71.4	48.9
MAX	147	3650	562	1600	237	1320	378	272	113	363	130	69
MIN	49	56	50	58	49	48	62	56	56	53	50	44
AC-FT	4590	22480	8630	17430	5120	9440	9670	5910	4150	5730	4390	2910

CAL YR 1974 TOTAL 61897 MEAN 170 MAX 3650 MIN 47 AC-FT 122800
WTR YR 1975 TOTAL 50647 MEAN 139 MAX 3650 MIN 44 AC-FT 100500

PEAK DISCHARGE (BASE, 3,600 CFS).--Nov. 21 (2100) 10,200 cfs (6.86 ft); Jan. 31 (1130) 8,800 cfs (6.60 ft).

16200000 NORTH FORK KAUKONAHUA STREAM ABOVE RIGHT BRANCH, NEAR WAHIAWA

LOCATION.--Lat 21°31'09", long 157°56'53", on left bank 140 ft (43 m) upstream from Mauka ditch intake and Right Branch, and 4.5 mi (7.2 km) northeast of Wahiawa.

DRAINAGE AREA.--1.38 mi^2 (3.57 km^2).

PERIOD OF RECORD.--May 1913 to July 1953, April 1960 to current year. Monthly discharge only for some periods, published in WSP 1319. Prior to August 1953, published as Left Branch of North Fork Kaukonahua Stream near Wahiawa.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,150 ft (351 m), from topographic map.

AVERAGE DISCHARGE.--52 years (1913-24, 1926-52, 1960-75), 16.7 ft^3/s (0.473 m^3/s), 12,100 acre-ft/yr (14.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,720 ft^3/s (77.0 m^3/s) Nov. 21 (gage height, 8.70 ft or 2.652 m), from rating curve extended above 82 ft^3/s (2.32 m^3/s) on basis of slope-area measurement at gage height 12.46 ft (3.798 m); minimum, 0.46 ft^3/s (0.013 m^3/s) Sept. 27, 28.
Period of record: Maximum discharge, 5,490 ft^3/s (155 m^3/s) Jan. 1, 1933 (gage height, 11.7 ft or 3.57 m), from floodmarks, from rating curve extended above 68 ft^3/s (1.93 m^3/s) by test of model of station site; maximum gage height, 12.46 ft (3.798 m) Apr. 15, 1963; minimum discharge, 0.12 ft^3/s (0.003 m^3/s) Mar. 2, 13, 1941.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1219: 1931-33(M), 1935(M), 1937-38(M). WSP 1319: 1914, 1917-18(M), 1920-23(M), 1925(M), 1927-30(M). WSP 1719: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	9.1	4.1	12	111	3.1	17	9.4	4.0	73	4.0	1.8
2	2.1	8.6	3.8	5.9	12	2.7	11	8.6	3.6	7.6	2.7	1.6
3	4.8	5.5	3.5	25	7.8	6.6	28	11	3.5	4.7	7.0	1.6
4	2.6	10	3.2	24	13	3.0	30	13	3.2	5.2	14	1.5
5	2.4	4.6	3.1	21	9.8	2.6	44	51	3.1	4.7	3.5	1.3
6	5.7	5.6	3.0	26	5.5	2.6	32	40	3.0	3.4	2.6	1.3
7	7.9	8.0	3.1	66	4.7	41	26	63	2.7	4.0	2.2	1.2
8	8.6	16	2.7	24	4.4	11	105	15	2.7	3.2	2.2	1.3
9	4.7	24	3.2	17	4.2	3.6	43	11	2.7	6.0	19	1.4
10	9.2	24	3.0	15	4.0	11	14	8.6	2.7	3.2	19	2.2
11	4.9	19	2.4	46	3.5	64	11	7.8	30	3.1	57	1.3
12	3.0	6.6	4.8	83	3.5	137	9.4	7.1	23	12	5.7	1.0
13	6.7	5.1	2.4	17	59	48	8.0	6.6	26	12	3.6	.95
14	3.0	4.7	16	43	28	45	10	23	21	26	3.2	.90
15	42	4.4	22	13	22	21	31	14	8.6	4.2	3.1	.85
16	14	11	4.4	10	16	47	10	56	4.4	3.2	2.6	7.9
17	16	86	2.6	8.5	23	13	25	29	3.8	5.2	40	2.0
18	8.5	7.0	3.0	8.0	7.3	10	11	8.8	4.0	20	8.4	1.0
19	36	8.7	3.9	7.1	7.6	7.6	15	9.9	3.2	30	14	.85
20	15	52	18	6.4	13	9.8	7.6	6.8	3.4	6.8	4.6	.85
21	6.0	352	12	5.7	5.1	6.4	7.3	23	6.2	8.2	15	.76
22	4.3	25	97	5.3	20	14	12	21	5.9	4.0	4.9	.68
23	3.4	12	54	4.7	6.8	33	9.4	11	8.1	4.8	3.4	.72
24	3.2	10	17	47	4.4	20	11	8.0	5.2	20	3.1	.68
25	2.9	8.3	11	16	4.0	33	80	6.4	3.5	4.4	2.7	.68
26	3.3	7.3	104	5.9	3.6	17	36	5.5	2.8	3.4	2.4	.49
27	136	6.4	26	4.9	3.5	7.6	40	5.1	11	3.1	2.2	.46
28	15	5.7	11	4.4	3.4	31	25	7.4	5.1	2.8	2.1	17
29	18	5.1	8.0	4.9	------	9.4	20	4.7	22	2.6	2.0	2.3
30	23	4.6	6.4	42	------	6.8	14	4.2	15	2.6	4.3	1.8
31	21	------	17	31	------	9.6	------	4.1	------	23	2.6	------
TOTAL	436.2	758.9	471.6	649.7	410.1	677.8	742.7	500.7	243.4	316.4	263.1	58.37
MEAN	14.1	25.3	15.2	21.0	14.6	21.9	24.8	16.2	8.11	10.2	8.49	1.95
MAX	136	352	104	83	111	137	105	63	30	73	57	17
MIN	2.1	4.4	2.4	4.4	3.4	2.6	7.3	4.1	2.7	2.6	2.0	.46
AC-FT	869	1,510	935	1,290	813	1,340	1,470	993	483	628	522	116

CAL YR 1974 TOTAL 7,228.4 MEAN 19.8 MAX 723 MIN 1.9 AC-FT 14,340
WTR YR 1975 TOTAL 5,530.97 MEAN 15.2 MAX 352 MIN .46 AC-FT 10,970

PEAK DISCHARGE (BASE, 1,300 CFS).--Nov. 21 (2000) 2,720 cfs (8.70 ft).

HAWAII, ISLAND OF OAHU

16208000 SOUTH FORK KAUKONAHUA STREAM AT EAST PUMP RESERVOIR, NEAR WAHIAWA

LOCATION.--Lat 21°29'32", long 157°59'54", on right bank on upstream side of dam at East Pump Reservoir, 2.3 mi (3.7 km) east of Wahiawa Post Office, and 7.1 mi (11.4 km) north of Waipahu.

DRAINAGE AREA.--4.04 mi² (10.46 km²).

PERIOD OF RECORD.--July 1957 to June 1963, water years 1963-64 (annual maximum), July 1964 to current year.

GAGE.--Water-stage recorder and Ogee-type dam control. Datum of gage is 860.35 ft (262.235 m) above mean sea level. July 1, 1963, to June 30, 1964, crest-stage gage at same site and datum.

AVERAGE DISCHARGE (since termination of diversions to Schofield Barracks).--13 years (1960-62, 1964-75), 22.8 ft³/s (0.646 m³/s), 16,520 acre-ft/yr (20.4 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 1,210 ft³/s (34.3 m³/s) Nov. 21 (gage height, 5.30 ft or 1.615 m); minimum, 0.48 ft³/s (0.014 m³/s) Sept. 24, 27, 28.
Period of record: Maximum discharge, 5,460 ft³/s (155 m³/s) Apr. 15, 1963 (gage height, 11.33 ft or 3.453 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of computation of peak flow over dam; no flow Dec. 24, 25, 27, 28, 1960, Feb. 23, 24, 1963.

REMARKS.--Records good. Prior to 1960, diversions from reservoirs above station for use at Schofield Barracks. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	11	7.9	11	274	5.4	11	7.3	3.7	52	8.9	2.2
2	3.4	6.9	7.3	6.6	31	4.0	7.9	6.6	3.3	8.5	3.4	1.5
3	5.5	5.9	6.6	35	19	5.9	11	6.4	3.2	3.9	2.6	1.3
4	6.6	7.9	6.2	26	18	6.5	24	7.2	3.2	2.9	3.5	1.2
5	2.9	5.5	5.8	45	19	4.1	42	69	3.0	3.1	3.7	1.1
6	2.5	5.0	5.4	48	12	3.7	21	78	2.9	2.5	2.3	1.1
7	3.7	8.4	5.8	109	10	4.6	29	66	2.7	2.1	2.0	1.0
8	16	21	6.3	49	9.4	16	54	24	2.6	2.4	1.9	1.6
9	5.3	17	9.2	39	8.9	4.6	37	16	2.6	9.7	12	1.8
10	3.5	32	5.8	30	8.3	4.0	12	11	2.8	7.8	26	1.5
11	10	57	4.6	94	7.6	14	9.8	9.1	11	8.3	31	1.5
12	5.3	16	7.6	199	7.1	102	8.5	8.1	27	37	7.2	1.1
13	11	8.1	4.7	36	21	43	7.6	8.2	22	7.1	3.8	.93
14	4.6	7.6	4.0	53	20	70	7.0	25	12	35	3.5	.88
15	41	6.4	58	26	11	27	21	23	8.0	7.4	3.5	.86
16	21	13	18	18	17	29	12	11	4.7	4.4	2.6	1.1
17	18	151	7.8	15	23	15	17	24	3.4	3.9	7.6	3.2
18	8.1	20	5.4	13	9.5	11	13	8.4	7.4	25	13	1.3
19	68	13	4.7	12	6.5	8.1	25	7.0	4.4	61	3.3	.90
20	17	55	19	11	6.7	9.4	12	6.2	3.0	12	2.9	.78
21	6.6	548	7.5	9.6	5.7	8.0	10	6.5	2.9	6.4	7.0	.67
22	5.4	98	12	9.0	19	6.7	13	23	2.6	4.8	5.8	.62
23	3.8	32	49	8.3	16	19	16	12	2.3	4.4	2.5	.59
24	3.4	22	13	84	6.0	10	23	7.6	2.8	18	2.0	.56
25	3.0	17	8.9	46	4.9	35	43	6.6	4.7	7.4	1.8	.55
26	4.2	14	103	12	4.5	12	21	5.1	2.9	4.2	1.6	.56
27	105	12	22	9.3	4.4	10	15	4.6	14	3.5	1.4	.51
28	37	12	13	8.3	5.2	55	14	4.6	11	3.0	1.3	5.2
29	19	10	9.0	8.4	---	15	11	5.2	5.1	2.8	1.3	5.3
30	39	8.9	7.4	43	---	8.4	8.5	4.2	7.4	2.6	2.9	1.5
31	21	---	8.4	77	---	9.0	---	3.9	---	25	4.2	---
TOTAL	504.3	1241.6	453.3	1190.5	604.7	575.4	556.3	504.8	188.6	378.1	176.5	42.91
MEAN	16.3	41.4	14.6	38.4	21.6	18.6	18.5	16.3	6.29	12.2	5.69	1.43
MAX	105	548	103	199	274	102	54	78	27	61	31	5.3
MIN	2.5	5.0	4.0	6.6	4.4	3.7	7.0	3.9	2.3	2.1	1.3	.51
AC-FT	1000	2460	899	2360	1200	1140	1100	1000	374	750	350	85

CAL YR 1974 TOTAL 10952.80 MEAN 30.0 MAX 902 MIN 2.5 AC-FT 21720
WTR YR 1975 TOTAL 6417.01 MEAN 17.6 MAX 548 MIN .51 AC-FT 12730

PEAK DISCHARGE (BASE, 1,100 CFS).--Nov. 21 (2300) 1,210 cfs (5.30 ft).

16210900 POAMOHO TUNNEL NEAR WAHIAWA

LOCATION.--Lat 21°31'12", long 157°58'51", on left bank 5 ft (2 m) downstream from tunnel outlet and 3.6 mi (5.8 km) northeast of Wahiawa Post Office.

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,120 ft (341 m), from topographic map.

AVERAGE DISCHARGE.--17 years, 4.95 ft^3/s (0.140 m^3/s), 3,590 acre-ft/yr (4.43 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 265 ft^3/s (7.50 m^3/s) Mar. 16, 1968; no flow at times.

REMARKS.--Records fair. Tunnel diverts from Poamoho Stream to North Fork Kaukonahua Stream to augment storage in Wahiawa Reservoir. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.5	3.1	7.7	33	2.3	6.0	3.6	2.0	11	2.2	.38
2	1.3	2.4	2.9	3.9	9.9	2.0	5.5	4.3	1.9	2.8	.78	.25
3	3.4	2.1	2.7	6.3	6.2	2.9	12	5.1	1.8	1.4	.54	.21
4	2.5	2.0	2.4	6.1	6.2	2.6	9.7	5.1	1.7	1.1	1.3	.17
5	1.4	1.8	2.4	7.8	6.2	2.1	13	14	1.6	.98	1.2	.15
6	5.4	1.8	2.2	14	4.3	2.0	13	12	1.5	.88	.54	.15
7	8.4	2.3	2.2	22	3.9	7.5	11	14	1.4	.78	.41	.13
8	2.9	4.3	2.1	22	3.6	6.2	24	6.4	1.3	.78	.34	.12
9	1.5	16	2.1	15	3.5	2.4	6.9	4.4	1.3	.74	.38	.12
10	1.3	19	2.0	10	3.4	9.4	5.3	3.5	1.3	.70	2.0	.13
11	1.1	10	1.8	15	3.2	18	4.4	3.2	4.5	.70	5.5	.11
12	.88	4.3	1.8	20	3.1	31	4.0	3.0	3.3	1.7	1.7	.11
13	1.5	2.7	1.8	3.2	7.8	8.4	3.5	2.8	2.4	1.4	.70	.10
14	.83	2.8	1.8	7.6	11	8.9	3.3	5.8	3.8	2.2	.50	.09
15	1.2	2.1	8.3	2.8	5.9	5.1	4.0	11	2.7	1.3	.50	.10
16	4.8	5.2	2.9	2.3	4.3	22	3.3	21	1.6	.74	.38	.23
17	4.4	36	1.9	2.1	7.6	6.4	4.8	13	1.3	.62	10	.19
18	1.8	6.5	1.6	2.0	3.5	4.4	4.3	4.5	1.2	4.0	4.3	.13
19	14	6.3	1.6	1.9	3.3	3.4	4.4	5.1	1.1	18	7.1	.13
20	3.4	13	12	1.8	19	3.1	3.1	3.4	1.1	3.1	2.0	.10
21	1.9	41	5.0	1.8	3.4	2.9	2.7	7.0	1.2	1.9	8.9	.08
22	1.4	10	14	1.7	13	8.1	2.4	7.6	1.1	1.2	2.6	.07
23	.98	9.1	15	1.6	5.4	24	2.8	3.9	2.8	.93	1.1	.09
24	.83	7.7	7.4	12	3.1	9.3	3.6	4.7	1.5	2.7	.74	.11
25	.74	5.9	4.2	6.0	2.9	17	21	4.2	1.4	1.8	.62	.08
26	.66	5.0	25	2.2	2.7	9.6	9.1	3.0	1.0	.88	.44	.06
27	21	4.4	10	2.0	2.4	4.4	13	2.6	1.0	.70	.36	.05
28	17	3.9	6.7	1.9	2.4	16	9.7	4.1	1.8	.58	.34	7.8
29	6.1	3.5	4.2	2.6	------	6.4	11	2.7	6.1	.54	.32	2.0
30	9.1	3.3	3.1	20	------	4.4	5.3	2.3	4.6	.47	.34	.74
31	4.7	------	4.8	13	------	6.2	------	2.1	------	2.1	.41	------
TOTAL	127.72	237.9	159.6	238.3	184.2	258.4	226.1	189.6	61.3	68.72	58.54	14.18
MEAN	4.12	7.93	5.13	7.69	6.58	8.34	7.54	6.12	2.04	2.22	1.89	.47
MAX	21	41	25	22	33	31	24	21	6.1	18	10	7.8
MIN	.66	1.8	1.6	1.6	2.4	2.0	2.4	2.1	1.0	.47	.32	.05
AC-FT	253	472	315	473	365	513	448	376	122	136	116	28

CAL YR 1974 TOTAL 1,992.23 MEAN 5.46 MAX 110 MIN .03 AC-FT 3,950
WTR YR 1975 TOTAL 1,823.96 MEAN 5.00 MAX 41 MIN .05 AC-FT 3,620

16211600 MAKAHA STREAM NEAR MAKAHA

LOCATION.--Lat 21°30'16", long 158°10'59", on right bank 1.5 mi (2.4 km) northeast of Kaneaki Heiau and 3.4 mi (5.5 km) northeast of Makaha.

DRAINAGE AREA.--2.31 mi^2 (5.98 km^2).

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder and concrete-masonry control. Datum of gage is 938.64 ft (286.097 m) above mean sea level (Waianae Plantation bench mark).

AVERAGE DISCHARGE.--16 years, 1.97 ft^3/s (0.0558 m^3/s), 1,430 acre-ft/yr (1.76 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 196 ft^3/s (5.55 m^3/s) Feb. 1 (gage height, 3.38 ft or 1.030 m), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 1,170 ft^3/s (33.1 m^3/s) Mar. 13, 1962 (gage height, 6.50 ft or 1.981 m), from floodmarks, from rating curve extended above 51 ft^3/s (1.44 m^3/s) on basis of slope-area measurement of peak flow; no flow at times.
Maximum stage known since at least 1953, about 7.8 ft (2.38 m) Nov. 24, 1954, from information by local resident. Discharge, about 1,700 ft^3/s (48.1 m^3/s).

REMARKS.--Records good. Wells and water-development tunnels in the vicinity and above the station may affect low-flow records. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	.33	.47	.23	29	.70	1.4	.38	.15	.03	.02	0
2	.40	.29	.43	.21	16	.61	.92	.33	.15	.05	.01	0
3	.42	.26	.40	.50	8.2	.65	.83	.31	.13	.04	.01	0
4	.42	.27	.40	.43	14	.69	.77	.28	.13	.05	.02	0
5	.42	.23	.40	.30	7.8	.65	1.2	.38	.12	.04	.01	0
6	.38	.24	.38	.26	5.7	.70	1.1	.73	.12	.04	0	0
7	.37	.22	.36	.24	4.6	.59	.69	.79	.11	.04	0	0
8	.35	.21	.35	.56	4.0	.54	.78	.69	.11	.04	0	0
9	.33	.23	.35	.82	3.9	.50	.66	.44	.11	.04	0	0
10	.32	.42	.34	7.1	3.6	.48	.50	.35	.12	.04	0	0
11	.31	.47	.33	7.2	2.6	.46	.45	.31	.12	.05	0	0
12	.29	.62	.31	21	2.2	1.2	.45	.28	.12	.07	0	.01
13	.26	.42	.28	8.8	2.1	.66	.41	.27	.12	.07	0	0
14	.26	.41	.28	9.4	1.7	.51	.38	.28	.25	.07	0	0
15	.27	1.4	.30	5.1	1.5	.44	.36	.26	.35	.06	0	0
16	.25	1.2	.28	3.6	1.4	.42	.34	.24	.32	.06	0	0
17	.38	1.7	.30	2.6	1.3	.46	.68	.24	.24	.05	0	0
18	.30	1.9	.29	2.1	1.2	.43	.89	.24	.20	.05	0	0
19	.44	1.2	.29	1.7	1.1	.41	.77	.24	.16	.02	0	0
20	.41	1.7	.28	1.5	1.0	.50	.53	.21	.14	.05	0	0
21	.35	7.4	.26	1.3	.97	.53	.55	.21	.12	.21	0	0
22	.31	3.1	.40	1.2	2.5	.53	.53	.21	.11	.14	0	0
23	.28	2.0	.73	1.1	1.5	.49	.56	.21	.09	.12	0	0
24	.26	1.4	.43	4.0	1.0	.48	1.0	.24	.07	.11	0	0
25	.23	1.1	.36	4.4	.88	.48	.77	.23	.05	.09	0	0
26	.21	.88	.44	2.5	.77	.46	.60	.20	.04	.07	0	0
27	1.6	.83	.47	2.0	.73	.52	.83	.18	.04	.05	0	0
28	1.4	.68	.37	1.7	.72	5.4	.58	.20	.05	.03	0	0
29	.64	.89	.29	1.5	---	5.5	.57	.19	.03	.02	0	0
30	.45	.52	.26	3.2	---	1.5	.46	.18	.01	.02	0	0
31	.38	---	.24	4.7	---	1.7	---	.17	---	.01	0	---
TOTAL	13.12	32.22	11.07	101.25	121.97	29.19	20.56	9.47	3.88	1.83	.07	.01
MEAN	.42	1.07	.36	3.27	4.36	.94	.69	.31	.13	.059	.002	0
MAX	1.6	7.4	.73	21	29	5.5	1.4	.79	.35	.21	.02	.01
MIN	.21	.21	.24	.21	.72	.41	.34	.17	.01	.01	0	0
AC-FT	26	64	22	201	242	58	41	19	7.7	3.6	.1	.02

CAL YR 1974 TOTAL 723.87 MEAN 1.98 MAX 57 MIN .10 AC-FT 1440
WTR YR 1975 TOTAL 344.64 MEAN .94 MAX 29 MIN 0 AC-FT 684

PEAK DISCHARGE (BASE, 200 CFS).--No peak above base.

16212800 KIPAPA STREAM NEAR WAHIAWA

LOCATION.--Lat 21°28'13", long 157°57'40", on left bank 1,700 ft (518 m) downstream from forest-reserve boundary, 4.9 mi (7.9 km) southeast of Wahiawa Post Office, and 6.3 mi (10.1 km) northeast of Waipahu.

DRAINAGE AREA.--4.29 mi^2 (11.11 km^2).

PERIOD OF RECORD.--January 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 690 ft (210 m), from topographic map.

AVERAGE DISCHARGE.--18 years, 11.0 ft^3/s (0.312 m^3/s), 7,970 acre-ft/yr (9.83 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,890 ft^3/s (53.5 m^3/s) Nov. 21 (gage height, 8.74 ft or 2.664 m), from rating curve extended as explained below; no flow for many days in September.
Period of record: Maximum discharge, 5,680 ft^3/s (161 m^3/s) May 14, 1963 (gage height, 12.29 ft or 3.746 m), from rating curve extended above 300 ft^3/s (8.50 m^3/s) on basis of slope-area measurements at gage heights 7.96 ft (2.426 m) and 12.29 ft (3.746 m); no flow at times.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Records of chemical analyses, suspended-sediment discharge, and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	4.1	2.4	3.9	166	1.1	5.7	2.1	.80	34	3.3	.22
2	.80	2.7	2.2	2.1	20	.92	3.1	1.7	.69	2.8	.80	.13
3	1.8	1.9	2.0	7.7	11	1.9	3.2	1.7	.64	1.1	.37	.03
4	2.3	1.5	1.6	9.4	16	2.6	4.9	2.0	.59	.64	.22	0
5	.86	1.2	1.7	21	11	1.2	11	7.6	.59	.45	.19	0
6	.59	1.1	2.0	17	4.9	.92	7.2	21	.59	.41	.17	0
7	1.4	1.7	3.1	45	3.9	1.4	8.4	39	.54	.33	.13	0
8	1.5	10	2.8	36	3.4	6.7	24	10	.54	.30	.13	0
9	1.5	6.6	3.1	30	3.0	1.4	8.1	3.9	.59	.30	.66	0
10	.80	13	2.3	15	2.7	1.8	4.1	2.6	.54	.27	4.4	0
11	.54	16	1.9	66	2.3	6.8	3.4	2.0	1.0	.25	14	0
12	1.8	6.6	4.1	96	2.1	64	2.2	1.5	3.9	.45	2.8	0
13	1.4	2.8	2.3	16	6.9	7.9	1.9	1.5	2.3	.64	.92	0
14	1.0	4.5	1.9	51	12	10	1.5	4.5	1.7	.80	.49	0
15	3.0	2.3	14	14	9.2	7.5	2.3	6.3	2.1	.92	.37	0
16	9.9	12	5.3	7.3	3.4	12	1.6	6.9	.98	.33	.27	0
17	6.2	110	2.2	5.3	6.4	4.9	3.7	7.7	.64	.25	.25	.48
18	3.4	12	1.3	4.3	3.2	3.0	3.4	2.3	.54	8.7	1.4	.25
19	53	13	1.1	3.4	1.9	2.1	2.9	1.7	.41	22	2.5	.13
20	9.9	26	2.7	3.1	2.1	1.9	2.4	1.3	.33	2.1	2.0	.09
21	2.8	355	2.2	2.6	1.6	1.6	1.3	7.4	.37	1.0	10	0
22	1.6	54	12	2.3	21	2.4	1.3	11	.41	.54	3.1	0
23	.98	18	37	2.1	9.2	15	2.9	9.7	.37	.33	.92	0
24	.74	11	7.8	44	2.6	8.0	7.3	6.7	.80	4.6	.49	0
25	.54	7.6	3.2	26	1.6	27	38	3.0	1.4	2.2	.37	0
26	.49	5.8	33	6.3	1.3	13	7.6	1.5	.80	.80	.27	0
27	72	4.7	15	4.1	1.3	6.0	8.1	1.1	3.3	.41	.19	0
28	24	3.9	8.2	3.1	1.3	41	7.3	1.3	1.8	.25	.13	13
29	9.9	3.4	4.1	3.0	------	8.5	7.4	1.5	.74	.19	.13	2.8
30	16	2.8	2.7	37	------	4.3	3.2	1.3	.45	.17	.22	.64
31	7.6	------	3.5	73	------	6.4	------	.98	------	6.1	.41	------
TOTAL	239.03	717.6	188.9	657.0	331.3	273.24	189.4	172.78	30.45	93.63	51.60	17.77
MEAN	7.71	23.9	6.09	21.2	11.8	8.81	6.31	5.57	1.02	3.02	1.66	.59
MAX	72	355	37	96	166	64	38	39	3.9	34	14	13
MIN	.49	1.1	1.1	2.1	1.3	.92	1.3	.98	.33	.17	.13	0
AC-FT	474	1,420	375	1,300	657	542	376	343	60	186	102	35

CAL YR 1974 TOTAL 5,559.32 MEAN 15.2 MAX 739 MIN .46 AC-FT 11,030
WTR YR 1975 TOTAL 2,962.70 MEAN 8.12 MAX 355 MIN 0 AC-FT 5,880

PEAK DISCHARGE (BASE, 930 CFS).--Nov. 17 (1130) 1,070 cfs (7.23 ft); Nov. 21 (2100) 1,890 cfs (8.74 ft).

16213000 WAIKELE STREAM AT WAIPAHU

LOCATION.--Lat 21°23'11", long 158°00'49", on left bank 300 ft (91 m) upstream from bridge on Highway 90 and 0.3 mi (0.5 km) southwest of sugar refinery at Waipahu.

DRAINAGE AREA.--45.7 mi^2 (118.4 km^2).

PERIOD OF RECORD.--June to October 1951, December 1951 to October 1959, July 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.37 ft (0.418 m) above mean sea level. Prior to July 1, 1960, at site 300 ft (91 m) downstream at datum 1.30 ft (0.396 m) higher.

AVERAGE DISCHARGE.--22 years (1952-59, 1960-75), 39.2 ft^3/s (1.110 m^3/s), 28,400 acre-ft/yr (35.0 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 8,120 ft^3/s (230 m^3/s) Feb. 1 (gage height, 10.20 ft or 3.109 m); minimum, 0.56 ft^3/s (0.016 m^3/s) Sept. 4.
Period of record: Maximum discharge, 13,600 ft^3/s (385 m^3/s) Nov. 28, 1954 (gage height, 14.82 ft or 4.517 m), site and datum then in use, from rating curve extended above 730 ft^3/s (20.7 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.56 ft^3/s (0.016 m^3/s) Sept. 4, 1975.

REMARKS.--Records good. Diversions above station for irrigation of sugarcane in vicinity of Waipahu. Records of chemical analyses, suspended-sediment discharge and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEAR).--WSP 1639: 1955(M). (WATER YEARS).--WSP 1937: Drainage area. WSP 2137: 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	37	35	1330	30	33	21	18	34	17	18
2	22	24	28	34	144	24	24	19	17	23	17	6.6
3	20	24	38	43	83	23	23	21	13	15	9.4	2.7
4	25	17	34	41	61	22	24	24	21	22	4.1	1.3
5	28	15	29	56	70	22	41	22	21	22	5.0	3.6
6	28	15	27	57	52	19	44	44	17	17	3.6	2.7
7	23	18	31	92	46	18	35	54	18	18	4.1	8.3
8	17	26	38	100	42	22	44	57	19	18	3.9	6.6
9	17	33	24	88	41	16	38	28	18	18	5.7	4.1
10	17	45	23	76	41	18	30	33	18	17	6.8	4.8
11	12	56	21	210	39	17	25	34	17	17	14	3.1
12	17	37	21	550	38	104	25	30	18	20	19	5.5
13	21	20	24	102	33	39	33	20	19	21	8.6	1.6
14	13	16	23	108	41	31	24	19	18	12	6.6	7.0
15	17	19	31	75	39	37	26	24	20	9.1	6.6	6.6
16	34	36	40	53	44	27	21	23	17	14	9.4	2.8
17	20	291	40	46	34	28	22	29	19	16	9.7	2.5
18	22	58	35	43	31	20	24	37	17	16	6.1	3.1
19	98	28	32	41	23	13	26	30	18	48	8.0	4.4
20	39	65	36	39	22	14	27	17	9.7	31	14	7.2
21	23	650	37	37	21	15	25	16	18	18	14	16
22	15	280	36	37	31	12	22	28	22	16	18	13
23	12	90	73	36	58	18	22	28	5.0	15	4.8	3.2
24	12	64	46	69	37	31	25	26	8.0	18	3.6	3.9
25	11	40	37	120	28	43	61	29	11	22	1.8	3.7
26	17	33	83	49	26	32	38	23	9.1	17	5.7	3.2
27	84	29	62	37	24	23	34	17	5.9	17	5.0	7.0
28	104	41	50	31	23	120	32	17	7.5	16	4.8	16
29	44	45	39	34	---	65	28	18	7.7	15	4.8	17
30	34	45	36	72	---	40	26	18	7.7	14	12	2.8
31	41	---	34	187	---	27	---	20	---	13	17	---
TOTAL	907	2226	1145	2598	2502	970	902	826	454.6	589.1	270.1	188.3
MEAN	29.3	74.2	36.9	83.8	89.4	31.3	30.1	26.6	15.2	19.0	8.71	6.28
MAX	104	650	83	550	1330	120	61	57	22	48	19	18
MIN	11	15	21	31	21	12	21	16	5.0	9.1	1.8	1.3
AC-FT	1800	4420	2270	5150	4960	1920	1790	1640	902	1170	536	373

CAL YR 1974 TOTAL 20289.1 MEAN 55.6 MAX 1890 MIN 6.7 AC-FT 40240
WTR YR 1975 TOTAL 13578.1 MEAN 37.2 MAX 1330 MIN 1.3 AC-FT 26930

PEAK DISCHARGE (BASE, 1,300 CFS).--Nov. 21 (2300) 2,320 cfs (5.82 ft); Feb. 1 (0600) 8,120 cfs (10.20 ft).

16216000 WAIAWA STREAM NEAR PEARL CITY

LOCATION.--Lat 21°23'57", long 157°58'51", on left bank 100 ft (30 m) upstream from lower bridge on Highway 90, 0.6 mi (1.0 km) northwest of Pearl City, and 2.0 mi (3.2 km) northeast of Waipahu.

DRAINAGE AREA.--26.4 mi^2 (68.4 km^2).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.81 ft (0.552 m) above mean sea level.

AVERAGE DISCHARGE.--23 years, 32.9 ft^3/s (0.932 m^3/s), 23,840 acre-ft/yr (29.4 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 8,760 ft^3/s (248 m^3/s) Nov. 21 (gage height, 14.44 ft or 4.401 m), from rating curve extended as explained below; minimum, 1.8 ft^3/s (0.051 m^3/s) Aug. 11.
Period of record: Maximum discharge, 23,400 ft^3/s (663 m^3/s) Jan. 5, 1968 (gage height, 20.56 ft or 6.267 m), from rating curve extended above 1,100 ft^3/s (31.2 m^3/s) on basis of slope-area measurements at gage heights 17.1 ft (5.21 m) and 20.56 ft (6.267 m); minimum, 1.7 ft^3/s (0.048 m^3/s) Nov. 8, 9, 1973.

REMARKS.--Records good except those above 300 ft^3/s (8.50 m^3/s), which are poor. Low flow affected by effluent from sewage treatment plant and occasional small irrigation diversions and return flows above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	8.2	5.3	11	1350	6.2	15	6.5	4.0	28	6.7	2.8
2	5.4	5.5	4.9	7.7	102	5.8	8.2	5.3	4.3	10	5.1	2.8
3	6.0	4.5	4.2	8.7	51	5.1	7.4	4.9	4.1	5.9	4.4	2.9
4	5.2	3.9	3.6	9.3	36	4.9	10	4.5	4.0	4.9	4.0	2.9
5	4.5	4.4	4.0	18	40	5.1	11	4.7	4.1	4.5	3.6	4.1
6	4.0	3.5	4.0	39	17	5.5	14	24	4.0	4.3	3.7	4.3
7	4.5	3.4	4.4	151	10	4.7	22	66	4.5	4.1	3.3	4.4
8	4.4	3.7	4.0	108	8.2	9.1	35	38	4.3	4.6	3.8	4.5
9	4.0	4.5	3.9	110	6.9	6.0	20	15	4.5	4.9	3.4	4.5
10	4.9	21	4.2	47	5.5	5.1	13	8.5	4.3	4.5	3.2	4.6
11	4.4	23	4.1	340	5.5	4.5	7.9	6.0	4.3	4.0	3.2	4.2
12	4.0	17	4.1	1100	4.9	124	6.5	4.7	4.3	3.7	4.7	4.4
13	3.7	8.3	4.6	94	11	23	5.5	4.7	4.0	3.7	3.1	4.0
14	3.4	5.8	4.7	105	34	14	4.7	4.3	3.8	3.6	3.0	4.0
15	3.8	4.8	12	44	13	14	4.3	6.2	3.6	4.4	2.9	4.1
16	3.6	12	13	24	8.5	23	4.0	6.7	3.5	5.1	3.3	5.2
17	3.3	458	8.7	16	6.7	16	3.8	23	3.3	5.0	3.5	5.4
18	3.1	50	5.5	12	7.9	9.4	4.9	7.4	3.5	4.3	3.9	3.9
19	94	18	4.6	9.7	5.3	6.2	4.5	4.5	3.2	29	3.4	3.7
20	15	123	6.6	8.1	4.5	5.1	4.1	3.6	3.3	7.6	3.3	3.5
21	7.3	2580	7.4	6.7	4.7	4.3	4.1	6.7	3.5	4.1	3.2	3.5
22	4.8	398	6.0	5.5	26	4.1	4.1	21	3.5	3.6	3.5	3.9
23	3.7	65	69	5.0	27	9.0	3.6	12	3.3	3.5	3.4	3.4
24	3.8	34	21	63	12	14	4.0	6.2	3.3	5.5	3.0	3.3
25	3.6	21	10	76	6.0	22	39	6.2	3.3	7.1	3.0	3.3
26	3.3	15	44	21	6.5	16	14	4.1	3.8	3.9	3.0	3.1
27	161	11	44	12	6.7	16	14	3.8	3.8	3.4	2.8	3.3
28	91	8.6	25	7.4	6.0	114	16	4.7	4.1	3.3	3.0	3.2
29	26	7.3	13	6.8	---	31	14	4.9	4.3	3.4	2.9	3.8
30	14	5.9	8.7	40	---	14	9.1	4.3	4.3	4.1	3.3	3.1
31	15	---	7.0	247	---	11	---	4.0	---	4.8	3.0	---
TOTAL	519.7	3928.3	365.5	2752.9	1822.8	552.1	327.7	326.4	116.1	192.8	109.6	114.1
MEAN	16.8	131	11.8	88.8	65.1	17.8	10.9	10.5	3.87	6.22	3.54	3.80
MAX	161	2580	69	1100	1350	124	39	66	4.5	29	6.7	5.4
MIN	3.1	3.4	3.6	5.0	4.5	4.1	3.6	3.6	3.2	3.3	2.8	2.8
AC-FT	1030	7790	725	5460	3620	1100	650	647	230	382	217	226

CAL YR 1974 TOTAL 21266.7 MEAN 58.3 MAX 3740 MIN 3.1 AC-FT 42180
WTR YR 1975 TOTAL 11128.0 MEAN 30.5 MAX 2580 MIN 2.8 AC-FT 22070

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-17	1315	9.98	3,690	1-12	0115	10.93	4,630
11-21	2215	14.44	8,760	2- 1	0630	11.81	5,510

16224500 KALAUAO STREAM AT MOANALUA ROAD, AT AIEA

LOCATION.--Lat 21°23'07", long 157°56'22", on left bank at downstream side of Moanalua Road bridge, 0.4 mi (0.6 km) northwest of Aiea Post Office, and 2.3 mi (3.7 km) southeast of Pearl City Post Office.

DRAINAGE AREA.--2.59 mi^2 (6.71 km^2).

PERIOD OF RECORD.--July 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 11.71 ft (3.569 m) above mean sea level. Nov. 15, 1965, to June 16, 1966, at datum 0.04 ft (0.012 m) higher. Prior to Nov. 15, 1965, and June 17, 1966, to Sept. 30, 1970, at datum 1.04 ft (0.317 m) higher.

AVERAGE DISCHARGE.--18 years, 2.94 ft^3/s (0.0833 m^3/s), 2,130 acre-ft/yr (2.63 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 685 ft^3/s (19.4 m^3/s) Nov. 21 (gage height, 4.33 ft or 1.320 m); minimum, 0.03 ft^3/s (0.001 m^3/s) Sept. 29, 30.
Period of record: Maximum discharge, 2,580 ft^3/s (73.1 m^3/s) May 14, 1963 (gage height, 6.63 ft or 2.021 m), datum then in use, from rating curve extended above 77 ft^3/s (2.18 m^3/s) on basis of slope-area measurements at gage heights 6.29 ft (1.917 m) and 6.63 ft (2.021 m); no flow for many days in 1970-74.

REMARKS.--Records poor. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.34	.16	.16	107	.11	1.6	.15	.08	.06	.15	.08
2	.10	.23	.15	.14	11	.10	.43	.14	.08	.11	.16	.05
3	.30	.23	.13	.42	6.2	.09	.31	.15	.11	.09	.08	.05
4	.13	.32	.13	.20	3.8	.10	.24	.16	.13	.18	.11	.05
5	.10	.29	.12	.26	4.4	.11	.31	.19	.08	.15	.09	.06
6	.08	.17	.11	1.9	1.3	.11	.54	.17	.15	.07	.12	.07
7	.14	.31	.13	7.7	.66	.12	.55	2.9	.07	.07	.08	.06
8	.11	.19	.15	8.7	.40	.11	6.2	4.4	.08	.10	.08	.05
9	.09	.08	.12	9.8	.31	.11	7.1	1.6	.08	.09	.08	.06
10	.16	.10	.12	3.4	.26	.08	2.7	.37	.08	.09	.07	.06
11	.14	.17	.11	77	.22	.08	.47	.24	.07	.14	.07	.06
12	.07	.09	.10	155	.20	8.6	.29	.18	.07	.21	.07	.07
13	.07	.11	.09	11	1.8	1.8	.26	.20	.07	.26	.11	.10
14	.07	.12	.08	13	1.8	.58	.25	.16	.08	.11	.13	.06
15	.08	.15	.13	4.6	.55	1.0	.44	.14	.10	.07	.11	.05
16	.07	.23	.19	2.0	.29	2.7	.35	.12	.17	.08	.11	.06
17	.07	37	.15	1.1	.22	1.6	.30	.13	.19	.10	.11	.06
18	.17	5.0	.11	.56	.18	.55	.23	.12	.11	.34	.10	.06
19	9.7	1.3	.11	.35	.15	.24	.18	.11	.16	.13	.12	.06
20	1.8	8.7	.18	.25	.14	.18	.15	.16	.19	.15	.08	.06
21	.28	238	.12	.21	.14	.15	.17	.11	.11	.14	.10	.08
22	.14	32	.13	.24	.21	.14	.15	.13	.09	.10	.10	.06
23	.10	5.8	.21	.41	.13	.12	.12	.19	.07	.12	.13	.05
24	.09	2.8	.17	32	.12	.10	.14	.22	.08	.16	.13	.05
25	.08	1.4	.12	17	.12	.10	.30	.15	.09	.10	.15	.05
26	.09	.72	.15	3.0	.12	.14	.17	.13	.11	.10	.08	.05
27	18	.38	.66	1.4	.16	.15	.15	.17	.17	.10	.06	.05
28	9.3	.26	.47	.70	.12	24	.11	.11	.19	.08	.06	.49
29	2.0	.20	.26	.42	---	4.2	.12	.07	.23	.11	.07	.05
30	.76	.17	.19	1.4	---	1.4	.13	.07	.18	.10	.08	.04
31	.82	---	.17	26	---	1.2	---	.07	---	.09	.06	---
TOTAL	45.19	336.86	5.22	380.32	142.00	50.07	24.46	13.21	3.47	3.82	3.05	2.20
MEAN	1.46	11.2	.17	12.3	5.07	1.62	.82	.43	.12	.12	.098	.073
MAX	18	238	.66	155	107	24	7.1	4.4	.23	.34	.16	.49
MIN	.07	.08	.08	.14	.12	.08	.11	.07	.07	.07	.06	.04
AC-FT	90	668	10	754	282	99	49	26	6.9	7.6	6.0	4.4

CAL YR 1974 TOTAL 1556.67 MEAN 4.26 MAX 247 MIN .07 AC-FT 3090
WTR YR 1975 TOTAL 1009.87 MEAN 2.77 MAX 238 MIN .04 AC-FT 2000

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-21	2115	4.33	685	2-1	0545	3.83	444
1-12	0830	3.97	506				

16226000 NORTH HALAWA STREAM NEAR AIEA

LOCATION.--Lat 21°23'46", long 157°53'37", on left bank 2.7 mi (4.3 km) upstream from confluence with South Halawa Stream and 2.7 mi (4.3 km) northeast of Aiea Post Office.

DRAINAGE AREA.--3.45 mi^2 (8.94 km^2).

PERIOD OF RECORD.--August 1929 to June 1933, July 1953 to current year. Monthly discharge only May, June 1931, published in WSP 1319.

GAGE.--Water-stage recorder. Altitude of gage is 320 ft (98 m), from topographic map.

AVERAGE DISCHARGE.--25 years (1929-32, 1953-75), 5.09 ft^3/s (0.144 m^3/s), 3,690 acre-ft/yr (4.55 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 950 ft^3/s (26.9 m^3s) Nov. 21 (gage height, 9.97 ft or 3.039 m), from rating curve extended above 44 ft^3/s (1.25 m^3/s) on basis of slope-area measurements at gage heights 10.3 ft (3.14 m), 13.04 ft (3.975 m), and 13.46 ft (4.103 m); no flow for many days.
Period of record: Maximum discharge, 6,650 ft^3/s (188 m^3/s) Feb. 28, 1932 (gage height, 13.36 ft or 4.103 m), from rating curve extended above 420 ft^3/s (11.9 m^3/s); maximum gage height, 13.46 ft (4.103 m) May 14, 1963; no flow at times each year.

REMARKS.--Records fair. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1319: Drainage area. WSP 1719: 1954-55(P), 1956, 1957(P), 1958-59.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	1.3	.63	.15	60	.50	2.0	.35	.02	0	.06	
2	.03	.68	.48	.11	12	.30	1.0	.27	.01	0	.03	
3	.03	.43	.35	.21	6.0	.40	.50	.13	.01	0	.02	
4	.03	.30	.23	.23	4.0	.20	.30	.08	0	0	.02	
5	.03	.20	.16	.32	7.0	.10	.40	.08	0	0	.01	
6	.05	.13	.12	1.2	4.0	.15	.60	.53	0	0	0	
7	.05	.09	.12	12	2.5	.20	.70	8.3	0	0	0	
8	.02	.08	.09	18	1.7	.15	10	4.4	0	0	0	
9	.02	.07	.08	17	1.2	.10	12	1.5	0	0	0	
10	.01	1.6	.07	4.8	.95	.08	2.6	.63	0	0	0	
11	0	4.5	.08	66	.74	.08	1.5	.39	0	0	0	
12	0	1.7	.09	103	.58	10	1.0	.21	0	0	0	
13	0	.74	.08	23	3.3	2.0	.68	.12	0	0	0	
14	0	.43	.08	29	2.6	.70	.43	.08	0	0	0	
15	0	.30	.11	9.0	1.1	1.0	.30	.07	0	0	0	
16	.01	2.7	.12	4.0	.80	3.0	.16	.06	0	0	0	
17	0	38	.12	2.0	.94	1.3	.13	.82	0	0	0	
18	.01	9.5	.12	1.0	.87	.70	.10	.32	0	.01	0	
19	17	3.3	.12	.60	.43	.45	.07	.20	0	.29	0	
20	3.2	21	.09	.40	.32	.35	.07	.10	0	.21	0	
21	1.0	210	.08	.30	.25	.25	.03	.07	0	.16	0	
22	.39	46	.08	.40	.18	.20	.03	.07	0	.12	0	
23	.25	12	6.2	.60	.16	.16	.02	.06	0	.08	0	
24	.14	4.5	1.8	25	.15	.12	.02	.07	0	.08	0	
25	.08	3.6	.74	10	.12	.10	2.3	.06	0	.07	0	
26	.05	2.4	1.8	3.0	.10	.14	1.5	.04	0	.07	0	
27	37	1.8	1.9	1.0	.15	.20	.87	.03	0	.08	0	
28	15	1.2	1.2	.60	.40	20	1.1	.02	0	.07	0	
29	5.3	.94	.68	.40	---	5.0	1.1	.02	0	.08	0	
30	3.6	.74	.43	.60	---	2.0	.63	.02	0	.09	0	
31	3.0	---	.27	2.0	---	1.5	---	.02	---	.10	0	---
TOTAL	86.33	370.63	18.52	335.92	112.54	51.43	42.14	19.12	.04	1.51	.14	0
MEAN	2.78	12.4	.60	10.8	4.02	1.66	1.40	.62	.001	.049	.005	0
MAX	37	210	6.2	103	60	20	12	8.3	.02	.29	.06	0
MIN	0	.07	.07	.11	.10	.08	.02	.02	0	0	0	0
AC-FT	171	735	37	666	223	102	84	38	.08	3.0	.3	0

CAL YR 1974 TOTAL 2164.08 MEAN 5.93 MAX 216 MIN 0 AC-FT 4290
WTR YR 1975 TOTAL 1038.32 MEAN 2.84 MAX 210 MIN 0 AC-FT 2060

PEAK DISCHARGE (BASE, 570 CFS).--Nov. 21 (2030) 950 cfs (9.97 ft).

NOTE.--No gage-height record Feb. 25 to Apr. 9.

16227500 MOANALUA STREAM NEAR KANEOHE

LOCATION.--Lat 21°23'29", long 157°51'05", on left bank 3.3 mi (5.3 km) northeast of Tripler Hospital and 3.6 mi (5.8 km) southwest of Kaneohe Post Office.

DRAINAGE AREA.--0.94 mi^2 (2.43 km^2).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 660 ft (201 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 1.43 ft^3/s (0.0405 m^3/s), 1,040 acre-ft/yr (1.28 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 734 ft^3/s (20.8 m^3/s) Nov. 21 (gage height, 6.07 ft or 1.850 m), from rating curve extended as explained below; no flow most of time.
Period of record: Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) Nov. 26, 1970 (gage height, 8.07 ft or 2.460 m), from rating curve extended above 18 ft^3/s (0.51 m^3/s) on basis of slope-area measurement at gage height 5.94 ft (1.811 m); no flow for many days each year.

REMARKS.--Records fair. No diversion above station. Recording rain gage and evaporation pan located at station. Records of suspended-sediment discharge and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.11	.24	0	28	0	.80	0				
2	0	0	.19	0	2.5	0	.40	0				
3	0	0	.15	0	.89	0	.27	0				
4	0	0	.11	0	7.4	0	.21	0				
5	0	0	.04	0	2.9	0	.14	.40				
6	0	0	0	0	1.2	0	.12	.20				
7	0	0	0	0	.83	0	.03	.20				
8	0	0	0	.98	.68	0	3.0	.65				
9	0	0	0	2.8	.61	0	.47	.25				
10	0	0	0	.51	.56	0	.25	.07				
11	0	0	0	24	.49	0	.14	0				
12	0	0	0	37	.47	1.4	.04	0				
13	0	0	0	7.5	.94	.01	0	0				
14	0	0	0	10	.94	0	0	0				
15	.02	0	0	2.2	.85	0	0	0				
16	.01	.02	0	1.2	.56	0	0	0				
17	0	4.6	0	.78	.73	0	0	0				
18	0	.64	0	.60	.47	0	0	0				
19	2.7	.22	0	.50	.33	0	0	0				
20	.91	6.3	0	.42	.25	0	0	0				
21	.04	90	0	.35	.20	0	0	.45				
22	0	13	.30	.28	.19	0	0	.12				
23	0	2.9	1.1	.23	.16	0	0	0				
24	0	1.4	.25	3.3	.10	0	0	0				
25	0	.86	.06	1.7	.04	0	.63	0				
26	0	.64	.06	.63	0	0	.20	0				
27	10	.53	.05	.45	0	.14	.10	0				
28	2.8	.44	0	.36	0	10	0	0				
29	1.0	.36	0	.29	---	2.3	0	0				
30	.42	.29	0	1.6	---	.66	0	0				
31	.29	---	0	16	---	1.9	---	0	---			---
TOTAL	18.19	122.31	2.55	113.68	52.29	16.41	6.80	2.34	0	0	0	0
MEAN	.59	4.08	.082	3.67	1.87	.53	.23	.076	0	0	0	0
MAX	10	90	1.1	37	28	10	3.0	.65	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	36	243	5.1	225	104	33	13	4.6	0	0	0	0

CAL YR 1974 TOTAL 598.83 MEAN 1.64 MAX 90 MIN 0 AC-FT 1190
WTR YR 1975 TOTAL 334.57 MEAN .92 MAX 90 MIN 0 AC-FT 664

PEAK DISCHARGE (BASE, 250 CFS).--Nov. 21 (2110) 734 cfs (6.07 ft).

16227700 MOANALUA STREAM TRIBUTARY NEAR KANEOHE

LOCATION.--Lat 21°23'27", long 157°50'53", on left bank 3.4 mi (5.5 km) northeast of Tripler Hospital and 3.6 mi (5.8 km) southwest of Kaneohe Post Office.

DRAINAGE AREA.--0.62 mi^2 (1.61 km^2).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 700 ft (213 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.783 ft^3/s (0.0222 m^3/s), 567 acre-ft/yr (699,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 695 ft^3/s (19.7 m^3/s) Nov. 21 (gage height, 5.22 ft or 1.591 m), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 892 ft^3/s (25.3 m^3/s) Feb. 1, 1969 (gage height, 5.57 ft or 1.698 m), from rating curve extended above 28 ft^3/s (0.79 m^3/s) on basis of slope-area measurement at gage height 5.19 ft (1.582 m); no flow at times most years.

REMARKS.--Records fair. No diversion above station. Recording rain gage located at station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.40	.27	.19	10	.22	.40	.35	.12	.80	0	
2	.18	.33	.27	.17	1.2	.18	.41	.38	.05	.05	0	
3	.10	.22	.26	.18	.69	.18	.47	.35	.07	.04	0	
4	.08	.22	.27	.19	4.1	.18	.35	.32	.06	.02	0	
5	.10	.19	.25	.25	1.1	.18	.37	.34	.05	.01	0	
6	.10	.19	.25	.38	.70	.21	.35	.23	.06	.01	0	
7	.11	.53	.24	.52	.59	.23	.32	2.5	.06	.01	0	
8	.10	.39	.31	1.7	.54	.25	1.7	.34	.09	.01	0	
9	.10	.23	.28	1.4	.44	.27	.38	.22	.10	.01	0	
10	.10	.30	.22	.32	.44	.27	.37	.20	.10	0	0	
11	.10	.60	.23	12	.43	1.1	.32	.19	.10	.02	.02	
12	.06	.21	.29	16	.41	5.3	.32	.18	.06	.03	0	
13	.06	.15	.27	3.4	.77	.51	.30	.18	.07	0	0	
14	.03	.14	.27	3.6	.86	.39	.27	.20	.10	0	0	
15	.68	.14	.39	1.1	.53	.36	.29	.16	.07	0	0	
16	.17	.18	.18	.77	.53	1.0	.27	.30	.06	0	0	
17	.12	1.6	.18	.58	.59	.38	.26	.19	.06	0	0	
18	1.1	.27	.18	.49	.51	.34	.18	.21	.06	.03	0	
19	2.9	.18	.19	.44	.48	.37	.22	.21	.06	.03	0	
20	1.4	1.6	.29	.38	.39	.39	.22	.22	.05	.01	0	
21	.18	44	.16	.36	.32	.44	.27	.51	.04	.01	0	
22	.14	5.2	1.2	.34	.33	.36	.22	.16	.05	0	0	
23	.14	1.6	1.6	.33	.27	.39	.22	.14	.05	0	0	
24	.10	.99	.36	1.9	.27	.28	.20	.14	.06	.09	0	
25	.10	.68	.33	.62	.27	.25	1.9	.15	.05	.01	0	
26	.10	.52	.53	.38	.27	.22	.43	.14	.05	0	0	
27	9.6	.52	.29	.32	.27	.60	.64	.12	.07	0	0	
28	1.6	.38	.22	.32	.27	6.9	.37	.12	.03	0	0	
29	.55	.32	.22	.32	---	.91	.38	.10	.01	0	0	
30	.55	.32	.19	1.1	---	.40	.33	.11	.01	0	0	
31	.44	---	.16	5.1	---	.92	---	.13	---	.01	0	---
TOTAL	21.23	62.60	10.40	55.15	27.57	24.00	12.73	9.09	1.91	1.20	.02	0
MEAN	.68	2.09	.34	1.78	.98	.77	.42	.29	.064	.039	.001	0
MAX	9.6	44	1.6	16	10	6.9	1.9	2.5	.12	.80	.02	0
MIN	.03	.14	.16	.17	.27	.18	.18	.10	.01	0	0	0
AC-FT	42	124	21	109	55	48	25	18	3.8	2.4	.04	0

CAL YR 1974 TOTAL 317.34 MEAN .87 MAX 44 MIN .03 AC-FT 632
WTR YR 1975 TOTAL 225.90 MEAN .62 MAX 44 MIN 0 AC-FT 448

PEAK DISCHARGE (BASE, 150 CFS).--Nov. 21 (2100) 695 cfs (5.22 ft).

16228000 MOANALUA STREAM NEAR HONOLULU

LOCATION.--Lat 21°22'53", long 157°52'22", on left bank 1.8 mi (2.9 km) northeast of Tripler Hospital and 5.0 mi (8.0 km) north of Honolulu Post Office.

DRAINAGE AREA.--2.73 mi^2 (7.07 km^2).

PERIOD OF RECORD.--June 1926 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 338.12 ft (103.059 m) above mean sea level (city and county of Honolulu bench mark). Prior to July 1, 1960, at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--49 years, 3.21 ft^3/s (0.0909 m^3/s), 2,330 acre-ft/yr (2.87 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,110 ft^3/s (31.4 m^3/s) Nov. 21 (gage height, 7.28 ft or 2.219 m), from rating curve extended above 160 ft^3/s (4.53 m^3/s) on basis of slope-area measurement at gage height 11.82 ft (3.603 m); no flow most of time.
Period of record: Maximum discharge, 4,580 ft^3/s (130 m^3/s) Nov. 18, 1930 (gage height, 12.58 ft or 3.834 m), present datum, from rating curve extended above 110 ft^3/s (3.12 m^3/s) by test of model of station site; no flow at times each year.

REMARKS.--Records fair. No diversion above station. Recording rain gage located at station.

REVISIONS (FISCAL YEARS).--WSP 935: 1931(M). WSP 1319: 1927-30(M), 1932-41(M). WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.11	.02	0	71	0	1.3	0				
2	0	.05	0	0	9.1	0	.31	0				
3	0	.02	.01	0	4.0	0	.28	0				
4	0	.01	.02	.01	14	0	.45	0				
5	0	0	.01	.05	5.7	0	.23	0				
6	0	0	0	.92	2.4	0	1.1	0				
7	0	0	0	2.8	1.3	0	.63	4.3				
8	0	0	0	3.8	.74	0	5.1	1.9				
9	0	0	0	7.0	.43	0	1.1	.44				
10	0	0	0	2.1	.23	0	.38	.11				
11	0	.61	0	64	.10	0	.15	.06				
12	0	.36	0	128	.06	9.2	.08	.03				
13	0	.12	0	19	.10	.95	.06	.02				
14	0	.06	0	30	.47	.16	.04	.01				
15	0	.02	0	7.1	.49	.07	.03	.01				
16	0	.02	0	3.5	.14	.83	.03	.01				
17	0	9.0	0	2.0	.09	.46	.03	0				
18	0	2.9	0	1.3	.12	.11	.03	0				
19	2.1	.85	0	.71	.05	.05	.02	0				
20	.85	12	0	.28	.03	.03	.01	0				
21	.03	305	0	.09	.03	.01	0	0				
22	0	58	0	.02	.02	.01	0	0				
23	0	11	.68	0	.02	.01	0	0				
24	0	4.9	.14	8.8	0	.01	0	0				
25	0	2.7	.03	7.9	0	0	0	0				
26	0	1.5	.25	2.3	0	0	0	0				
27	30	.91	.50	.98	0	0	0	0				
28	10	.70	.17	.38	0	37	0	0				
29	2.0	.30	.06	.11	---	5.5	0	0				
30	0	.07	0	.09	---	1.6	0	0				
31	0	---	0	30	---	2.6	---	0	---			---
TOTAL	44.98	411.21	1.89	323.24	110.62	58.60	11.36	6.89	0	0	0	0
MEAN	1.45	13.7	.061	10.4	3.95	1.89	.38	.22	0	0	0	0
MAX	30	305	.68	128	71	37	5.1	4.3	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	89	816	3.7	641	219	116	23	14	0	0	0	0

CAL YR 1974 TOTAL 1640.52 MEAN 4.49 MAX 316 MIN 0 AC-FT 3250
WTR YR 1975 TOTAL 966.79 MEAN 2.65 MAX 305 MIN 0 AC-FT 1920

PEAK DISCHARGE (BASE, 400 CFS).--Nov. 21 (2130) 1,110 cfs (7.28 ft).

16229000 KALIHI STREAM NEAR HONOLULU

LOCATION.--Lat 21°22'00", long 157°50'49", on right bank 1.9 mi (3.1 km) upstream from Kamanaiki Stream and 4.1 mi (6.6 km) north of Honolulu Post Office.

DRAINAGE AREA.--2.61 mi^2 (6.76 km^2).

PERIOD OF RECORD.--September 1913 to April 1914, July 1914 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 464.40 ft (141.549 m) above mean sea level. Prior to Oct. 12, 1923, at datum 2.00 ft (0.610 m) lower.

AVERAGE DISCHARGE.--61 years (1914-75), 6.88 ft^3/s (0.195 m^3/s), 4,980 acre-ft/yr (6.14 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,420 ft^3/s (40.2 m^3/s) Nov. 21 (gage height, 8.80 ft or 2.682 m), from rating curve extended as explained below; minimum, 0.19 ft^3/s (0.005 m^3/s) Sept. 24, 26, 27.
Period of record: Maximum discharge, about 12,400 ft^3/s (351 m^3/s) Nov. 18, 1930 (gage height, 13.81 ft or 4.209 m), from rating curve extended above 280 ft^3/s (7.93 m^3/s) on basis of indirect measurements at gage heights 8.9 ft (2.71 m), 10.96 ft (3.341 m), and 11.27 ft (3.435 m); minimum, 0.09 ft^3/s (0.003 m^3/s) Oct. 22, 1933, July 29, 1966.

REMARKS.--Records fair. No diversion above station. Records of chemical analyses, suspended-sediment discharge, and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 1719: 1921-22(M), 1923-24, 1925-26(M), 1927-28, 1929-32(M), 1935, 1937, 1938-39(M), 1943(M), 1948-52(P), 1955-56, 1957-58(M), 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.8	3.8	2.4	72	2.0	4.5	2.4	1.4	2.6	.91	.50
2	1.3	2.5	3.6	2.8	11	1.9	4.3	2.2	1.4	1.2	.73	.50
3	1.5	2.2	3.2	2.3	9.6	2.6	5.4	2.0	1.3	1.1	.65	.43
4	1.4	2.4	3.0	2.3	25	2.0	4.4	2.0	1.3	.91	.65	.36
5	1.2	2.0	2.8	2.8	9.5	2.0	5.4	3.8	1.3	.82	.65	.36
6	.91	2.6	2.6	4.6	6.8	1.8	5.0	4.9	1.3	.82	.50	.30
7	1.2	4.5	3.0	7.4	5.9	2.1	4.6	11	1.2	.82	.50	.36
8	1.6	5.5	2.6	6.9	5.4	2.2	15	6.3	1.2	.73	.57	1.0
9	1.4	7.0	2.3	6.8	4.9	2.1	4.5	3.8	1.1	.91	.82	.73
10	1.0	5.2	2.2	4.0	4.6	2.2	3.4	2.6	1.1	.91	1.7	.43
11	1.1	6.5	1.8	55	4.4	7.0	3.0	2.4	2.2	1.8	2.4	.36
12	1.1	4.0	2.3	88	4.2	14	2.6	2.2	1.4	2.2	1.1	.36
13	1.1	3.2	1.9	19	4.2	4.1	2.3	2.2	1.4	1.1	.91	.30
14	1.1	2.6	2.0	22	3.8	3.8	2.2	3.5	1.3	1.1	1.0	.30
15	9.0	2.3	2.6	9.1	3.6	3.4	2.5	5.7	1.3	1.0	.82	.36
16	2.8	7.0	2.0	7.1	3.6	10	2.2	4.0	1.2	.82	.73	.57
17	1.5	12	1.9	5.9	3.6	4.2	2.4	3.0	1.1	1.2	1.1	.36
18	2.3	4.8	1.8	5.4	3.2	3.5	2.0	2.4	1.0	4.2	.91	.30
19	8.2	3.5	1.5	4.9	2.8	2.7	2.1	2.3	1.0	4.4	1.4	.30
20	3.8	12	1.8	4.6	2.6	2.9	2.2	2.0	1.0	2.0	.73	.57
21	2.0	240	1.9	4.2	2.4	2.3	2.3	2.6	1.1	1.6	1.8	.36
22	1.4	40	5.2	3.8	2.3	2.6	2.5	2.0	.91	1.2	1.1	.36
23	1.3	16	7.0	3.6	2.3	2.9	2.8	1.9	1.0	1.1	.73	.30
24	1.1	11	3.0	21	2.3	2.3	2.1	1.8	.91	4.1	.65	.24
25	1.1	8.0	2.3	8.7	2.2	2.0	6.3	1.6	1.0	1.6	.50	.24
26	1.1	6.0	4.9	4.9	2.1	2.0	7.7	1.5	1.0	1.3	.43	.24
27	30	5.4	3.6	4.0	2.2	6.0	7.1	1.5	1.5	1.0	.50	.24
28	8.0	4.9	2.8	3.2	2.5	19	5.1	2.2	1.1	.73	.43	1.1
29	6.0	4.4	2.3	3.2	------	7.0	3.8	1.6	.91	.73	.36	.50
30	5.0	4.2	2.0	7.2	------	4.3	2.8	1.5	1.0	.65	.65	.36
31	3.8	------	2.4	19	------	7.8	------	1.5	------	1.3	.57	------
TOTAL	105.61	434.5	86.1	346.1	209.0	134.7	122.5	90.4	35.93	45.95	26.50	12.69
MEAN	3.41	14.5	2.78	11.2	7.46	4.35	4.08	2.92	1.20	1.48	.85	.42
MAX	30	240	7.0	88	72	19	15	11	2.2	4.4	2.4	1.1
MIN	.91	2.0	1.5	2.3	2.1	1.8	2.0	1.5	.91	.65	.36	.24
AC-FT	209	862	171	686	415	267	243	179	71	91	53	25

CAL YR 1974 TOTAL 2,326.61 MEAN 6.37 MAX 240 MIN .90 AC-FT 4,610
WTR YR 1975 TOTAL 1,649.98 MEAN 4.52 MAX 240 MIN .24 AC-FT 3,270

PEAK DISCHARGE (BASE, 700 CFS).--Nov. 21 (1900) 1,420 cfs (8.80 ft).

NOTE.--No gage-height record Oct. 27 to Nov. 26.

HAWAII, ISLAND OF OAHU

16229300 KALIHI STREAM AT KALIHI

LOCATION.--Lat 21°20'29", long 157°52'36", on right bank at Kalihi, 0.4 mi (0.6 km) northwest of Bishop Museum, and 2.4 mi (3.9 km) northwest of Honolulu Post Office.

DRAINAGE AREA.--5.18 mi^2 (13.42 km^2).

PERIOD OF RECORD.--Water year 1962 (annual maximum), July 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 70 ft (21 m), from topographic map. Aug. 28, 1961, to June 30, 1962, crest-stage gage at site 600 ft (183 m) downstream at different datum.

AVERAGE DISCHARGE.--13 years, 11.9 ft^3/s (0.337 m^3/s), 8,620 acre-ft/yr (10.6 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,800 ft^3/s (51 m^3/s) Nov. 21 (gage height, 5.23 ft or 1.59 m), from rating curve extended as explained below; minimum, 0.56 ft^3/s (0.016 m^3/s) for several days in September.
Period of record: Maximum discharge, 7,110 ft^3/s (201 m^3/s) Apr. 19, 1974 (gage height, 9.98 ft or 3.042 m), from rating curve extended above 180 ft^3/s (5.10 m^3/s) on basis of slope-area measurement at gage height 9.98 ft (3.042 m); minimum, 0.16 ft^3/s (0.005 m^3/s) June 24, 1966.
Flood of May 14, 1960, reached a stage of 8.0 ft (2.44 m) from floodmarks, present site and datum, discharge, 6,350 ft^3/s (180 m^3/s), from slope-area measurement of peak flow.

REMARKS.--Records fair. No diversion above station. Recording rain gage located at station. Records of chemical analyses, suspended-sediment discharge, and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.7	5.0	3.8	136	3.2	6.5	5.0	2.2	3.3	1.4	.80
2	2.5	4.1	4.7	3.0	20	3.0	6.9	3.5	2.0	1.7	1.0	.71
3	5.2	3.2	4.4	7.4	14	4.1	7.8	3.5	2.0	1.5	1.1	.71
4	2.2	3.5	4.1	4.4	29	3.0	6.1	3.8	1.8	1.4	1.0	.71
5	1.7	2.8	3.8	12	14	3.2	7.8	6.1	1.5	1.1	1.0	.80
6	1.8	4.1	3.5	14	10	2.8	7.3	10	1.5	1.1	.90	.80
7	2.0	6.5	5.8	24	8.9	3.5	6.5	18	1.7	1.1	.90	.80
8	2.8	9.4	4.4	15	8.9	3.8	25	11	2.2	1.0	1.1	1.1
9	2.2	13	3.8	12	7.8	3.5	6.5	6.9	2.0	1.1	2.0	1.4
10	1.8	9.5	3.2	7.8	6.1	3.8	4.7	4.7	1.7	1.1	2.2	1.1
11	1.5	12	3.0	137	5.7	13	4.1	4.1	2.8	3.3	2.6	.71
12	1.7	6.9	4.4	227	6.1	26	3.8	3.5	2.2	5.2	1.5	.63
13	1.8	4.4	3.0	29	9.5	6.9	3.5	3.5	1.8	1.4	1.1	.63
14	1.5	3.5	2.8	33	6.9	6.5	3.2	5.9	1.8	1.5	1.1	.63
15	25	3.0	5.5	16	5.7	5.7	3.8	11	1.7	1.1	1.2	.70
16	4.7	11	4.1	11	6.3	17	3.2	6.9	1.4	1.1	1.0	1.2
17	3.0	22	2.6	8.9	6.5	6.9	3.8	5.3	1.2	2.2	1.5	.80
18	3.1	6.9	2.4	7.3	4.7	5.7	3.0	4.1	1.4	9.4	1.1	.63
19	13	4.7	2.4	6.5	4.4	4.4	3.2	3.8	1.2	5.4	2.2	.63
20	6.1	18	7.5	6.1	4.1	4.7	3.2	3.5	1.4	2.4	1.4	.88
21	3.0	436	3.2	5.7	3.8	3.8	3.5	4.1	1.5	2.0	1.5	.90
22	2.6	64	4.5	5.0	4.4	4.1	3.5	3.9	1.7	1.5	1.4	.80
23	2.2	20	9.8	4.7	3.8	4.7	4.4	3.2	1.5	1.1	1.4	.63
24	2.2	13	4.4	52	3.2	3.8	4.3	3.0	1.5	5.1	1.5	.56
25	2.2	10	3.0	22	3.2	3.2	9.0	2.8	1.7	2.0	1.4	.71
26	2.0	7.8	11	9.5	3.2	3.2	10	2.4	1.5	1.5	1.1	.80
27	54	6.9	6.1	6.9	3.5	8.1	11	2.2	2.2	1.2	1.2	.90
28	16	6.1	4.1	5.7	4.7	47	9.5	3.2	1.7	1.1	1.2	1.2
29	11	5.7	3.2	5.3	------	11	6.1	2.2	1.1	1.0	1.0	1.2
30	8.4	5.3	2.8	12	------	6.5	4.7	2.0	1.2	.90	1.5	.71
31	6.1	------	4.6	34	------	13	------	2.2	------	1.7	1.0	------
TOTAL	195.5	728.0	137.1	748.0	344.4	239.1	185.9	155.3	51.1	66.50	41.50	24.78
MEAN	6.31	24.3	4.42	24.1	12.3	7.71	6.20	5.01	1.70	2.15	1.34	.83
MAX	54	436	11	227	136	47	25	18	2.8	9.4	2.6	1.4
MIN	1.5	2.8	2.4	3.0	3.2	2.8	3.0	2.0	1.1	.90	.90	.56
AC-FT	388	1,440	272	1,480	683	474	369	308	101	132	82	49

CAL YR 1974 TOTAL 4,792.6 MEAN 13.1 MAX 681 MIN 1.4 AC-FT 9,510
WTR YR 1975 TOTAL 2,917.18 MEAN 7.99 MAX 436 MIN .56 AC-FT 5,790

PEAK DISCHARGE (BASE, 1,600 CFS).--Nov. 21 (1930) 1,800 cfs (5.23 ft).

16232000 NUUANU STREAM BELOW RESERVOIR 2 WASTEWAY, NEAR HONOLULU

LOCATION.--Lat 21°20'57", long 157°49'40", on right bank beside Old Pali Road in upper Nuuanu Valley, 0.2 mi (0.3 km) downstream from reservoir 2 wasteway, and 3.5 mi (5.6 km) northeast of Honolulu Post Office.

DRAINAGE AREA.--3.35 mi^2 (8.68 km^2).

PERIOD OF RECORD.--October 1913 to January 1921, September 1921 to current year.

GAGE.--Water-stage recorder and sharp-crested weirs. Datum of gage is 631.71 ft (192.545 m) above mean sea level. Prior to Sept. 7, 1915, nonrecording gage at same site at datum 0.03 ft (0.009 m) lower and Sept. 7, 1915, to Mar. 31, 1918, at same datum.

AVERAGE DISCHARGE.--59 years (1914-16, 1917-20, 1921-75), 7.24 ft^3/s (0.205 m^3/s), 5,250 acre-ft/yr (6.47 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 446 ft^3/s (12.6 m^3/s) Nov. 21 (gage height, 4.39 ft or 1.338 m), from rating curve extended above 420 ft^3/s (11.9 m^3/s) on basis of slope-area measurement at gage height 6.69 ft (2.039 m); minimum, 0.45 ft^3/s (0.013 m^3/s) Sept. 18-20.
Period of record: Maximum discharge, 6,990 ft^3/s (198 m^3/s) Jan. 16, 1921 (gage height, 8.74 ft or 2.664 m), from floodmarks, from rating curve extended above 420 ft^3/s (11.9 m^3/s) by test of model of station site; minimum, 0.09 ft^3/s (0.003 m^3/s) Sept. 10, 11, 1925.

REMARKS.--Records fair. Low-flow regulation by reservoirs 2, 3, and 4, capacities, 21 acre-ft (25,900 m^3), 34 acre-ft (41,900 m^3), and 1,630 acre-ft (2.01 hm^3), respectively. Honolulu Board of Water Supply diverts ground water from tunnels in drainage area. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 985: 1921-35(M). WSP 1319: 1931. WSP 1569: Drainage area. WSP 1639: 1931, 1935.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.2	3.8	2.8	29	4.0	5.0	4.2	2.5	2.2	1.2	.96
2	1.8	2.2	3.7	2.6	11	3.8	4.8	3.8	2.3	1.6	1.1	1.0
3	2.0	2.1	3.6	2.8	7.5	4.1	4.9	3.8	2.3	1.6	1.2	1.0
4	1.8	2.1	3.5	2.7	16	3.8	4.8	3.6	2.4	1.6	1.1	.96
5	1.7	2.0	3.4	3.4	7.5	3.7	4.7	3.7	2.4	1.6	.91	.96
6	1.8	2.3	3.4	3.5	6.2	3.7	5.0	4.5	2.2	1.5	.91	.91
7	1.9	2.9	3.4	6.2	5.6	4.2	5.4	11	2.2	1.6	.96	.76
8	2.0	3.0	3.3	5.2	5.6	4.2	9.4	6.2	2.2	1.5	1.1	.62
9	1.8	3.0	3.3	4.6	5.6	3.8	4.9	4.5	2.2	1.5	1.1	.62
10	1.7	3.6	3.2	3.4	5.3	4.2	4.6	3.8	2.0	1.5	1.2	.66
11	1.6	2.8	3.1	28	5.3	6.2	4.7	3.3	2.5	1.9	1.3	.58
12	1.8	2.2	3.2	40	5.7	16	4.7	3.2	2.4	2.0	.86	.58
13	1.7	2.1	2.8	8.2	6.6	6.3	4.5	3.3	2.2	1.6	.96	.58
14	1.6	2.1	3.1	12	6.2	6.0	4.4	3.7	2.2	1.7	.96	.58
15	6.3	1.8	3.2	7.2	5.9	5.1	5.1	4.6	2.2	1.5	1.0	.58
16	2.8	2.4	3.1	6.6	5.9	7.5	4.4	4.0	1.8	1.3	1.1	.81
17	1.9	6.7	2.7	6.3	6.3	5.7	4.7	3.7	1.8	1.4	1.3	.66
18	1.9	2.6	2.7	6.2	5.6	5.0	4.3	3.4	2.0	1.6	1.2	.62
19	2.8	2.2	2.7	6.1	5.6	4.6	4.6	3.3	1.9	1.7	1.1	.50
20	2.2	5.8	2.9	6.0	5.9	4.8	3.6	2.8	1.9	1.7	.81	.50
21	1.8	103	2.9	6.0	5.2	4.3	3.8	4.4	1.7	1.6	.96	.50
22	1.6	15	5.1	5.9	5.1	5.0	4.0	3.7	1.7	1.3	.96	.50
23	1.6	7.5	5.6	5.8	4.8	6.4	3.5	3.2	1.7	1.4	.96	.54
24	1.6	6.5	3.8	15	4.6	4.7	3.7	2.9	1.8	3.6	1.0	.54
25	1.6	6.0	3.5	7.5	4.5	4.4	7.0	2.8	1.7	1.8	1.1	.54
26	1.5	5.7	4.6	6.2	4.3	4.2	6.2	2.8	1.7	1.7	1.1	.54
27	22	5.2	4.2	6.0	4.4	6.6	8.3	2.7	1.8	1.7	.86	.54
28	5.6	4.8	3.3	5.8	4.4	15	7.0	2.9	1.7	1.4	.86	.92
29	3.2	4.4	3.2	5.9	---	6.6	21	2.8	1.7	1.0	.86	.66
30	2.9	4.0	2.8	6.3	---	4.6	14	2.6	1.7	1.1	.91	.71
31	2.3	---	2.8	11	---	5.7	---	2.6	---	1.3	.91	---
TOTAL	89.0	218.2	105.9	245.2	195.6	174.2	177.0	117.8	60.8	50.5	31.85	20.43
MEAN	2.87	7.27	3.42	7.91	6.99	5.62	5.90	3.80	2.03	1.63	1.03	.68
MAX	22	103	5.6	40	29	16	21	11	2.5	3.6	1.3	1.0
MIN	1.5	1.8	2.7	2.6	4.3	3.7	3.5	2.6	1.7	1.0	.81	.50
AC-FT	177	433	210	486	388	346	351	234	121	100	63	41

CAL YR 1974 TOTAL 2204.8 MEAN 6.04 MAX 109 MIN 1.5 AC-FT 4370
WTR YR 1975 TOTAL 1486.48 MEAN 4.07 MAX 103 MIN .50 AC-FT 2950

PEAK DISCHARGE (BASE, 240 CFS).--Nov. 21 (1100) 446 cfs (4.39 ft).

HAWAII, ISLAND OF OAHU

16238500 WAIHI STREAM AT HONOLULU

LOCATION.--Lat 21°19'55", long 157°48'12", on left bank 100 ft (30 m) upstream from bridge on Waaloa Way, 700 ft (213 m) upstream from confluence with Waiakeakua Stream, and 4.2 mi (6.8 km) northeast of Honolulu Post Office.

DRAINAGE AREA.--1.14 mi^2 (2.95 km^2).

PERIOD OF RECORD.--May 1913 to January 1921, August 1925 to current year. Prior to July 1960, published as West Branch Manoa Stream near Honolulu.

GAGE.--Water-stage recorder and combination Parshall flume and V-notch weir. Datum of gage is 290.84 ft (88.648 m) above mean sea level (Honolulu Board of Water Supply bench mark). Prior to June 17, 1914, non-recording gage at same site at different datum. June 17, 1914, to Jan. 16, 1921, water-stage recorder at site 150 ft (46 m) upstream at different datum and Aug. 4, 1925, to Mar. 15, 1928, at present site at datum 3.35 ft (1.021 m) lower.

AVERAGE DISCHARGE.--57 years (1913-20, 1925-75), 3.64 ft^3/s (0.103 m^3/s), 2,640 acre-ft/yr (3.26 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 917 ft^3/s (26.0 m^3/s) Nov. 21 (gage height, 4.64 ft or 1.414 m), from rating curve extended above 120 ft^3/s (3.40 m^3/s) by test of model of station site; minimum, 0.12 ft^3/s (0.003 m^3/s) on several days in September.
Period of record: Maximum discharge, 3,250 ft^3/s (92.0 m^3/s) Jan. 16, 1921 (gage height, 10.4 ft or 3.17 m), from floodmarks, site and datum then in use, from rating curve extended above 60 ft^3/s (1.70 m^3/s); minimum, 0.08 ft^3/s (0.002 m^3/s) Dec. 16, 18, 1913, Jan. 16-18, Feb. 4, 6, 1915, Mar. 16, 22, 1926.

REMARKS.--Records good. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1319: 1930-32(M), 1939(M). WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	1.1	1.7	1.6	18	.76	2.0	2.1	.91	4.9	.55	.25
2	.28	1.1	1.5	1.2	13	.67	1.9	1.8	.80	.89	.38	.37
3	.36	.80	1.3	1.5	4.1	.77	1.8	1.6	.76	.62	.39	.25
4	.38	1.4	1.2	1.1	13	.71	2.0	1.5	.74	.47	.68	.20
5	.23	.73	1.0	2.2	4.1	.79	2.0	4.4	.67	.39	.37	.20
6	.24	1.2	1.0	1.6	2.9	.70	2.4	3.2	.66	.42	.31	.26
7	.34	4.3	1.3	5.8	2.4	2.2	3.3	11	.60	.42	.28	.25
8	.89	2.3	1.2	4.1	2.1	1.4	9.4	6.2	.60	.40	.28	.29
9	.70	3.8	.96	2.5	2.0	.84	2.6	2.7	.61	.35	.84	.20
10	.43	5.0	.83	1.9	1.8	1.7	1.9	1.9	.56	.35	1.4	.32
11	.33	3.8	.79	42	1.7	4.8	1.6	1.6	2.5	1.4	3.6	.21
12	.31	1.8	1.0	35	1.6	18	1.5	1.4	1.8	1.7	.70	.17
13	.28	1.4	.70	9.1	7.1	5.1	1.3	1.5	2.3	.57	.55	.15
14	.25	1.1	1.0	12	3.6	4.8	1.2	3.9	1.0	.87	.48	.15
15	14	.99	2.0	4.4	2.3	3.2	2.1	3.9	.92	.41	.42	.14
16	1.6	1.7	.74	3.4	2.6	7.6	1.1	5.0	.75	.35	.36	.20
17	1.5	8.3	.63	2.8	2.9	3.0	1.4	3.3	.65	.95	.89	.18
18	.68	1.8	.47	2.4	1.8	2.3	1.2	1.8	.62	2.8	.66	.16
19	1.5	1.7	.59	2.1	1.8	1.8	2.2	2.0	.58	2.7	2.8	.20
20	1.8	20	.79	2.0	1.6	2.1	1.1	1.4	.55	2.5	.48	.49
21	.62	122	1.2	1.8	1.4	1.6	1.2	4.7	.48	1.5	1.9	.18
22	.45	18	7.2	1.6	1.3	1.7	1.4	2.7	.62	.80	.60	.16
23	.39	7.3	8.2	1.5	1.2	4.6	1.9	2.2	.60	.65	.63	.15
24	.37	4.9	3.1	13	1.0	1.8	4.1	1.6	.64	5.4	.38	.15
25	.32	3.8	1.8	4.4	.91	2.0	13	1.4	.69	1.2	.36	.14
26	.34	3.2	6.5	2.4	.85	1.7	6.1	1.2	.48	.79	.34	.12
27	30	2.7	4.0	1.9	.91	5.6	9.9	1.1	1.1	.64	.26	.14
28	5.3	2.3	2.3	1.7	1.1	13	7.1	3.5	.61	.52	.25	1.7
29	2.6	2.0	1.7	1.5	---	3.5	4.0	1.4	.48	.45	.24	.24
30	2.5	1.8	1.4	2.1	---	2.3	2.6	1.1	.74	.41	.68	.16
31	1.5	---	2.4	8.1	---	3.5	---	1.0	---	1.5	.45	---
TOTAL	70.89	232.32	60.50	178.7	99.07	104.54	95.3	84.1	25.02	37.32	22.51	7.78
MEAN	2.29	7.74	1.95	5.76	3.54	3.37	3.18	2.71	.83	1.20	.73	.26
MAX	30	122	8.2	42	18	18	13	11	2.5	5.4	3.6	1.7
MIN	.23	.73	.47	1.1	.85	.67	1.1	1.0	.48	.35	.24	.12
AC-FT	141	461	120	354	197	207	189	167	50	74	45	15

CAL YR 1974 TOTAL 1313.15 MEAN 3.60 MAX 122 MIN .23 AC-FT 2610
WTR YR 1975 TOTAL 1018.05 MEAN 2.79 MAX 122 MIN .12 AC-FT 2020

PEAK DISCHARGE (BASE, 310 CFS).--Nov. 21 (1030) 917 cfs (4.64 ft); Jan.11 (0700) 310 cfs (3.14 ft).

HAWAII, ISLAND OF OAHU

16240500 WAIAKEAKUA STREAM AT HONOLULU

LOCATION.--Lat 21°19'53", long 157°48'12", on right bank 5 ft (2 m) downstream from bridge on Waaloa Way, 500 ft (152 m) upstream from confluence with Waihi Stream, and 4.2 mi (6.8 km) northeast of Honolulu Post Office.

DRAINAGE AREA.--1.06 mi^2 (2.75 km^2).

PERIOD OF RECORD.--May 1913 to January 1921, August 1925 to current year. Prior to July 1960, published as East Branch Manoa Stream near Honolulu.

GAGE.--Water-stage recorder and combination Parshall flume and concrete weir. Datum of gage is 294.50 ft (89.764 m) above mean sea level (Honolulu Board of Water Supply bench mark). Prior to May 20, 1914, nonrecording gage at site 200 ft (61 m) upstream at different datum. May 20, 1914, to Jan. 16, 1921, water-stage recorder at site 30 ft (9 m) upstream at different datum. Aug. 18, 1925, to Mar. 15, 1928, water-stage recorder at present site at datum 2.99 ft (0.911 m) lower, and Mar. 16, 1928, to Oct. 18, 1933, at datum 0.41 ft (0.125 m) higher than present datum.

AVERAGE DISCHARGE.--57 years (1913-20, 1925-75), 5.13 ft^3/s (0.145 m^3/s), 3,720 acre-ft/yr (4.59 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 774 ft^3/s (21.9 m^3/s) Nov. 21 (gage height, 4.24 ft or 1.292 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s) on basis of slope-area measurement at gage height 5.28 ft (1.609 m); minimum, 1.2 ft^3/s (0.034 m^3/s) Sept. 26-28, 30.
Period of record: Maximum discharge, 3,090 ft^3/s (87.5 m^3/s) Jan. 16, 1921 (gage height, 10.4 ft or 3.17 m), from floodmarks, site and datum then in use, from rating curve extended above 58 ft^3/s (1.64 m^3/s); minimum, 0.6 ft^3/s (0.017 m^3/s) June 7, 8, 1926.

REMARKS.--Records fair. Honolulu Board of Water Supply at times diverts a small amount of ground water from tunnel above station. Occasional small diversions for irrigation above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1319: 1919(M), 1930-33(M). WSP 1569: Drainage area. WSP 1937: 1949(M), 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.8	3.1	3.0	19	3.0	3.8	3.4	2.7	5.2	2.1	1.5
2	2.2	2.7	3.0	2.6	18	3.0	3.6	3.2	2.7	2.4	1.9	1.9
3	2.4	2.6	3.0	2.7	6.1	3.1	3.6	3.1	2.6	2.1	1.9	1.5
4	2.2	2.7	3.0	2.6	16	3.1	3.6	3.1	2.6	2.1	2.1	1.5
5	2.1	2.5	2.8	3.1	6.1	3.2	3.4	4.1	2.6	2.0	1.9	1.5
6	2.1	2.5	2.8	2.8	4.6	3.1	3.4	4.0	2.6	2.0	1.8	1.5
7	2.5	4.0	3.2	4.7	4.1	4.0	3.8	7.8	2.5	2.0	1.8	1.5
8	3.2	3.0	3.1	4.4	4.0	3.3	9.8	5.9	2.5	2.0	1.8	1.7
9	2.6	4.3	2.8	3.3	3.8	3.1	3.8	4.0	2.5	2.0	2.2	1.6
10	2.2	5.9	2.7	3.1	3.7	3.7	3.4	3.4	2.5	1.9	2.4	1.7
11	2.5	5.5	2.7	38	3.6	6.6	3.2	3.2	4.1	2.7	5.1	1.5
12	2.5	3.2	2.8	34	3.8	14	3.1	3.1	3.5	3.2	2.1	1.5
13	2.2	2.7	2.6	9.2	7.9	6.6	3.0	3.2	3.3	2.2	1.9	1.4
14	2.1	2.6	2.8	18	5.7	5.7	3.0	4.1	2.6	2.2	1.9	1.4
15	13	2.5	3.2	5.9	4.5	4.4	3.2	4.9	2.6	2.0	1.9	1.4
16	3.8	4.8	2.7	4.6	4.9	7.2	3.0	5.4	2.5	1.9	1.8	1.5
17	4.6	10	2.6	3.8	5.3	4.2	3.1	4.9	2.4	3.0	2.1	1.4
18	3.0	3.4	2.6	3.4	4.1	3.8	3.1	3.4	2.4	5.0	1.9	1.4
19	4.4	3.4	2.8	3.3	3.7	3.4	3.2	3.3	2.4	4.0	3.1	1.4
20	4.9	18	3.0	3.1	3.6	3.8	3.0	3.1	2.4	3.5	1.8	1.7
21	2.7	88	3.2	3.0	3.4	3.3	3.0	5.4	2.2	2.8	3.3	1.4
22	2.5	16	7.5	3.0	3.4	3.6	3.2	4.1	2.5	2.2	1.9	1.3
23	2.4	6.8	4.7	2.8	3.3	4.3	3.8	3.8	2.5	2.1	1.8	1.3
24	2.2	5.3	3.8	18	3.2	3.6	5.2	3.3	2.7	6.0	1.7	1.3
25	2.1	4.5	3.1	6.8	3.1	3.3	8.5	3.3	2.6	2.6	1.7	1.3
26	2.1	4.0	6.0	3.8	3.0	3.2	6.6	3.0	2.4	2.2	1.6	1.3
27	26	3.9	4.6	3.4	3.1	6.3	7.0	2.8	3.0	2.1	1.6	1.3
28	6.9	3.6	3.2	3.3	3.3	14	6.9	4.6	2.5	2.0	1.6	2.5
29	4.2	3.3	2.8	3.2	---	4.6	4.4	3.1	2.2	2.0	1.6	1.4
30	3.6	3.2	2.7	4.0	---	4.0	3.7	2.8	2.5	1.9	2.5	1.3
31	3.2	---	3.1	9.6	---	5.9	---	2.8	---	3.5	1.8	---
TOTAL	124.8	227.7	107.0	216.5	158.3	148.6	125.4	119.6	79.1	82.8	64.6	44.9
MEAN	4.03	7.59	3.45	6.98	5.65	4.79	4.18	3.86	2.64	2.67	2.08	1.50
MAX	26	88	9.7	38	19	14	9.8	7.8	4.1	6.0	5.1	2.5
MIN	2.1	2.5	2.6	2.6	3.0	3.0	3.0	2.8	2.2	1.9	1.6	1.3
AC-FT	248	452	212	429	314	295	249	237	157	164	128	89

CAL YR 1974 TOTAL 1758.0 MEAN 4.82 MAX 88 MIN 2.1 AC-FT 3490
WTR YR 1975 TOTAL 1499.3 MEAN 4.11 MAX 88 MIN 1.3 AC-FT 2970

PEAK DISCHARGE (BASE, 310 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-15	1700	3.46	381	1-11	1000	3.26	318
11-21	1100	4.24	774				

16244000 PUKELE STREAM NEAR HONOLULU

LOCATION.--Lat 21°18'36", long 157°47'27", on right bank 200 ft (61 m) upstream from bridge on Palolo Avenue, 0.6 mi (1.0 km) upstream from confluence with Waiomao Stream, and 4.8 mi (7.7 km) east of Honolulu Post Office.

DRAINAGE AREA.--1.18 mi^2 (3.06 km^2).

PERIOD OF RECORD.--June 1926 to current year.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 344.78 ft (105.089 m) above mean sea level (Honolulu Board of Water Supply bench mark).

AVERAGE DISCHARGE.--49 years, 1.98 ft^3/s (0.0561 m^3/s), 1,430 acre-ft/yr (1.76 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 345 ft^3/s (9.77 m^3/s) Nov. 21 (gage height, 4.30 ft or 1.311 m); minimum, 0.20 ft^3/s (0.006 m^3/s) Sept. 17-30.
Period of record: Maximum discharge, 2,600 ft^3/s (73.6 m^3/s) Apr. 11, 1930 (gage height, 7.75 ft or 2.362 m), from rating curve extended above 71 ft^3/s (2.01 m^3/s) by test of model of station site; minimum, 0.08 ft^3/s (0.002 m^3/s) Oct. 31, 1929.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 835: 1930(M). WSP 1569: Drainage area. WSP 1639: 1927-29(M), 1931(M), 1932, 1933-34(M). WSP 1719: 1935(M), 1937-40(M), 1942(M), 1948-59(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.50	.60	.55	11	.90	1.5	1.0	.53	.32	.36	.26
2	.32	.45	.60	.54	9.6	.88	1.2	1.1	.50	.30	.35	.26
3	.32	.51	.60	.57	5.0	.95	1.2	1.1	.48	.29	.32	.26
4	.30	.60	.59	.50	7.3	.83	1.2	1.1	.45	.29	.27	.26
5	.30	.53	.58	.50	3.8	.84	1.2	1.1	.45	.29	.26	.26
6	.29	.49	.58	.50	1.9	.79	1.2	1.1	.45	.31	.26	.26
7	.29	.53	.70	.59	1.7	.78	1.2	1.7	.52	.30	.29	.25
8	.30	.46	.57	.50	1.5	.77	4.0	1.2	.40	.32	.29	.23
9	.30	.99	.53	.50	1.4	.75	1.2	1.3	.40	.35	.29	.23
10	.29	1.2	.50	.50	1.4	.75	1.0	1.0	.40	.32	.32	.23
11	.29	1.8	.50	22	1.3	.92	1.0	1.0	.38	.30	.29	.23
12	.32	.81	.50	28	1.3	4.6	1.0	1.0	.41	.30	.27	.23
13	.32	.62	.49	4.9	3.5	1.5	1.0	1.1	.39	.29	.27	.23
14	.31	.64	.49	11	1.8	1.2	1.0	1.1	.37	.29	.26	.23
15	2.5	.62	.60	3.4	1.5	.97	1.1	1.1	.37	.29	.26	.23
16	1.5	1.5	.53	2.0	1.5	2.3	.98	1.0	.38	.29	.26	.23
17	.85	4.1	.50	1.4	2.3	1.3	.98	.97	.37	.29	.26	.23
18	.60	1.7	.48	1.2	1.5	1.2	.95	.92	.38	.31	.26	.20
19	.90	.89	.48	1.0	1.4	1.2	.93	.87	.37	.31	.25	.20
20	.75	7.9	.48	.90	1.4	1.2	.86	.75	.32	.30	.24	.20
21	.60	45	.47	.85	1.4	1.1	.82	.68	.32	.32	.24	.20
22	.45	8.8	.60	.80	1.4	1.1	.79	.65	.32	.31	.24	.20
23	.40	3.6	1.5	.75	1.2	1.1	.82	.65	.32	.30	.25	.20
24	.39	2.3	.60	7.9	1.2	1.1	.77	.63	.32	.32	.26	.20
25	.38	1.7	.48	4.8	1.1	1.0	.79	.62	.32	.32	.26	.20
26	.38	1.1	.90	2.0	1.0	.96	2.2	.62	.33	.30	.26	.20
27	2.5	.80	.55	1.6	1.0	1.2	2.7	.64	.36	.29	.26	.20
28	1.0	.70	.53	1.4	.97	7.0	2.5	.65	.36	.30	.26	.20
29	.70	.66	.55	1.3	---	2.0	1.3	.63	.35	.29	.26	.20
30	.60	.63	.55	2.2	---	1.6	1.0	.60	.34	.36	.26	.20
31	.53	---	.56	3.5	---	2.6	---	.58	---	.36	.26	---
TOTAL	19.43	92.53	18.19	108.15	71.37	45.39	38.39	28.46	11.66	9.53	8.44	6.71
MEAN	.63	3.08	.59	3.49	2.55	1.46	1.28	.92	.39	.31	.27	.22
MAX	2.5	45	1.5	28	11	7.0	4.0	1.7	.53	.36	.36	.26
MIN	.29	.45	.47	.50	.97	.75	.77	.58	.32	.29	.24	.20
AC-FT	39	184	36	215	142	90	76	56	23	19	17	13

CAL YR 1974 TOTAL 670.46 MEAN 1.84 MAX 45 MIN .29 AC-FT 1330
WTR YR 1975 TOTAL 458.25 MEAN 1.26 MAX 45 MIN .20 AC-FT 909

PEAK DISCHARGE (BASE, 140 CFS).--Nov. 21 (1045) 345 cfs (4.30 ft); Jan. 11 (1030) 204 cfs (3.72 ft).

NOTE.--No gage-height record Nov. 25 to Dec. 27.

16247000 PALOLO STREAM NEAR HONOLULU

LOCATION.--Lat 21°17'35", long 157°48'25", on left bank 250 ft (76 m) downstream from bridge on Palolo Avenue and 3.9 mi (6.3 km) east of Honolulu Post Office.

DRAINAGE AREA.--3.63 mi^2 (9.40 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 95 ft (29 m), from topographic map.

AVERAGE DISCHARGE.--23 years, 5.73 ft^3/s (0.162 m^3/s), 4,150 acre-ft/yr (5.12 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,050 ft^3/s (29.7 m^3/s) Jan. 11 (gage height, 3.50 ft or 1.067 m), from rating curve extended as explained below; minimum, 0.17 ft^3/s (0.005 m^3/s) Sept. 24, 26.
Period of record: Maximum discharge, 4,270 ft^3/s (121 m^3/s) Dec. 18, 1967 (gage height, 5.98 ft or 1.823 m), from rating curve extended above 140 ft^3/s (3.96 m^3/s) on basis of slope-conveyance study and slope-area measurements at gage heights 3.92 ft (1.195 m) and 4.13 ft (1.259 m); minimum, 0.02 ft^3/s (0.001 m^3/s) June 25, 1958.

REMARKS.--Records poor. Honolulu Board of Water Supply diverts ground water from tunnels in drainage area. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 1937: 1953, 1955-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	1.0	1.7	1.2	94	1.6	4.1	2.7	.76	1.0	.58	.44
2	2.5	1.0	1.7	1.1	51	1.2	3.0	2.7	.75	.71	.58	.43
3	.57	1.0	1.6	2.7	16	2.4	2.7	2.5	.72	.57	.58	.42
4	.46	1.0	1.5	1.6	23	1.5	2.7	2.5	.73	.55	.58	.40
5	.44	.91	1.4	1.7	9.9	1.6	2.5	3.2	.74	.50	.53	.41
6	.54	1.2	1.4	1.6	3.6	1.6	2.5	3.2	.73	.46	.53	.40
7	.67	2.9	2.0	4.1	2.0	1.7	2.6	5.0	.70	.46	.58	.40
8	.63	1.2	1.7	1.7	1.9	1.9	8.7	3.2	.69	.45	.63	.60
9	.78	7.4	1.3	1.3	1.6	1.5	2.6	2.7	.69	.57	1.2	.79
10	.47	2.4	1.2	1.1	1.6	1.5	2.2	1.7	.68	.52	.68	.36
11	.54	6.5	1.2	140	1.4	3.5	2.1	1.7	1.2	.64	1.4	.34
12	.88	2.4	1.3	194	1.9	15	2.1	1.7	.98	.74	1.0	.34
13	.54	1.7	1.2	22	10	4.2	2.0	1.9	.81	.52	.70	.32
14	.47	1.7	1.3	50	4.3	4.0	1.9	2.3	.72	.53	.64	.33
15	20	1.6	1.3	14	2.8	2.7	2.2	2.0	.62	.55	.70	.33
16	2.0	11	1.4	5.6	2.4	5.7	1.9	1.4	.60	.54	.77	.43
17	1.2	13	1.2	2.9	6.5	3.1	2.1	1.2	.57	.63	.77	.33
18	1.0	4.7	1.2	2.3	2.2	3.2	2.0	1.3	.54	.92	.43	.36
19	9.5	4.1	1.2	1.9	1.8	2.5	2.3	1.2	.53	1.1	.43	.43
20	3.6	35	1.3	1.6	1.8	2.6	2.1	1.2	.52	.80	.43	.43
21	2.0	162	1.4	1.4	1.7	2.6	2.0	1.2	.52	.64	.43	.36
22	1.6	41	1.7	1.3	1.9	2.7	2.3	1.3	.52	.48	.48	.36
23	1.3	12	7.2	1.3	1.9	2.6	3.1	1.3	.51	.54	.53	.36
24	1.1	4.0	2.4	49	1.7	2.6	3.0	1.3	.53	.94	.48	.33
25	1.0	3.1	1.9	27	1.7	2.9	3.7	1.4	.53	.83	.48	.35
26	.93	2.6	4.3	5.6	1.7	2.6	7.4	.85	.50	1.1	.48	.33
27	20	2.3	1.8	2.9	1.9	4.6	8.0	.77	.68	.52	.43	.34
28	2.0	2.1	1.3	2.3	2.1	36	6.2	.93	.65	.55	.48	.37
29	1.6	1.9	1.3	2.1	---	7.2	3.6	.93	.59	.53	.43	.36
30	1.1	1.8	1.7	7.4	---	10	2.9	.85	.56	.90	.62	.37
31	1.1	---	1.7	15	---	12	---	.85	---	.70	.46	---
TOTAL	81.07	334.51	54.8	567.7	254.3	149.2	96.5	56.98	19.87	20.49	19.04	11.82
MEAN	2.62	11.2	1.77	18.3	9.08	4.81	3.22	1.84	.66	.66	.61	.39
MAX	20	162	7.2	194	94	36	8.7	5.0	1.2	1.1	1.4	.79
MIN	.44	.91	1.2	1.1	1.4	1.2	1.9	.77	.50	.45	.43	.32
AC-FT	161	664	109	1130	504	296	191	113	39	41	38	23

CAL YR 1974 TOTAL 1977.67 MEAN 5.42 MAX 162 MIN .44 AC-FT 3920
WTR YR 1975 TOTAL 1666.28 MEAN 4.57 MAX 194 MIN .32 AC-FT 3310

PEAK DISCHARGE (BASE, 500 CFS).--Nov. 21 (1100) 557 cfs (2.88 ft); Jan. 11 (0945) 1,050 cfs (3.50 ft).

16254000 MAKAWAO STREAM NEAR KAILUA

LOCATION.--Lat 21°21'49", long 157°46'02", on left bank 650 ft (198 m) upstream from mouth, 2.7 mi (4.3 km) southwest of Kailua, and 4.3 mi (6.9 km) southeast of Kaneohe Courthouse.

DRAINAGE AREA.--2.04 mi^2 (5.28 km^2).

PERIOD OF RECORD.--November 1912 to June 1916, January 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 80 ft (24 m), from topographic map. Prior to Jan. 1, 1958, nonrecording gage at sites about 200 ft (61 m) upstream at different datums.

AVERAGE DISCHARGE.--19 years (1913-15, 1958-75), 5.23 ft^3/s (0.148 m^3/s), 3,790 acre-ft/yr (4.67 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 286 ft^3/s (8.10 m^3/s) Jan. 12 (gage height, 4.43 ft or 1.350 m); minimum, 0.83 ft^3/s (0.024 m^3/s) Sept. 12.
Period of record: Maximum discharge, 6,000 ft^3/s (170 m^3/s) Feb. 4, 1965 (gage height, 12.41 ft or 3.783 m), from rating curve extended above 470 ft^3/s (13.3 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.43 ft^3/s (0.012 m^3/s) Sept. 8-12, 14, 16-20, 22, 23, 1964.

REMARKS.--Records fair. Maunawili ditch diverts 1.5 mi (2.4 km) above station for irrigation in vicinity of Waimanalo. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.6	2.6	1.6	63	3.6	5.2	2.5	1.9	1.6	1.4	1.1
2	1.4	1.5	2.6	1.6	29	3.5	4.3	2.5	1.9	1.5	1.3	1.1
3	1.4	1.4	2.5	1.6	16	3.5	4.3	2.3	1.9	1.5	1.4	1.1
4	1.4	1.4	2.5	1.6	21	3.5	3.8	2.3	1.8	1.5	1.4	1.0
5	1.3	1.4	2.5	1.7	17	3.3	3.2	2.3	1.9	1.5	1.3	1.0
6	1.3	1.4	2.2	1.6	15	3.3	3.3	2.5	1.8	1.4	1.3	1.0
7	1.3	1.7	2.2	1.7	14	3.3	3.2	2.5	1.8	1.4	1.3	.97
8	1.4	1.6	2.1	2.0	12	3.2	3.3	2.5	1.8	1.4	1.3	1.0
9	1.3	1.5	2.0	1.7	12	3.2	3.1	2.2	1.8	1.4	1.4	1.0
10	1.3	1.5	2.0	1.7	11	3.2	3.6	2.2	1.8	1.4	1.4	1.0
11	1.4	1.6	2.3	30	10	3.3	3.2	2.2	1.9	1.7	1.5	1.0
12	1.4	1.4	2.0	55	11	3.6	3.1	2.1	1.8	1.5	1.3	1.0
13	1.4	1.4	2.0	13	13	3.3	3.0	2.2	1.8	1.5	1.3	1.0
14	1.4	1.4	1.9	19	9.7	3.1	3.0	2.3	1.8	1.5	1.3	.97
15	3.5	1.4	1.9	9.0	9.0	3.0	3.1	2.5	1.7	1.4	1.2	.97
16	1.6	2.5	1.9	7.4	8.8	3.1	3.2	2.2	1.7	1.4	1.2	1.0
17	1.4	3.5	1.8	6.4	8.5	3.2	3.3	2.1	1.7	1.5	1.3	1.0
18	1.4	2.7	1.8	5.6	8.0	3.2	3.1	2.1	1.6	1.6	1.3	.97
19	1.6	2.6	1.8	5.0	7.8	3.2	2.7	2.0	1.6	1.4	1.2	.97
20	1.9	3.2	1.9	4.8	7.4	3.3	2.7	2.0	1.6	1.4	1.2	1.0
21	1.6	28	1.8	4.5	5.8	3.2	2.7	2.0	1.6	1.4	1.3	1.0
22	1.4	9.5	1.9	4.3	4.5	3.2	2.7	2.1	1.7	1.4	1.2	.97
23	1.4	5.2	2.0	3.9	4.1	3.3	2.7	2.1	1.7	1.4	1.1	.97
24	1.4	3.9	1.8	5.4	3.9	3.2	2.7	2.0	1.7	2.0	1.1	.97
25	1.4	3.3	1.7	4.3	3.9	3.2	2.7	2.0	1.6	1.4	1.1	1.0
26	1.4	3.1	1.7	3.8	3.8	3.2	2.7	2.0	1.6	1.4	1.1	1.0
27	7.0	3.0	1.7	3.6	3.8	3.3	2.7	1.9	1.7	1.3	1.0	1.0
28	2.7	2.8	1.7	3.5	3.8	13	2.6	1.9	1.6	1.3	1.0	1.0
29	1.9	2.7	1.7	3.3	---	5.8	2.5	2.1	1.5	1.7	1.0	1.0
30	1.7	2.7	1.7	3.9	---	4.3	2.5	2.0	1.5	2.0	1.2	1.0
31	1.6	---	1.7	7.8	---	7.6	---	1.9	---	1.4	1.1	---
TOTAL	54.0	100.9	61.9	220.3	336.8	119.2	94.2	67.5	51.8	46.2	38.5	30.06
MEAN	1.74	3.36	2.00	7.11	12.0	3.85	3.14	2.18	1.73	1.49	1.24	1.00
MAX	7.0	28	2.6	55	63	13	5.2	2.5	1.9	2.0	1.5	1.1
MIN	1.3	1.4	1.7	1.6	3.8	3.0	2.5	1.9	1.5	1.3	1.0	.97
AC-FT	107	200	123	437	668	236	187	134	103	92	76	60

CAL YR 1974 TOTAL 1404.70 MEAN 3.85 MAX 69 MIN 1.2 AC-FT 2790
WTR YR 1975 TOTAL 1221.36 MEAN 3.35 MAX 63 MIN .97 AC-FT 2420

PEAK DISCHARGE (BASE, 390 CFS).--No peak above base.

16270500 KAMOOALII STREAM BELOW KUOU STREAM, NEAR KANEOHE

LOCATION.--Lat 21°23'42", long 157°48'26", on right bank 100 ft (30 m) downstream from Kuou Stream, 1.1 mi (1.8 km) southwest of Castle High School, and 1.9 mi (3.1 km) south of Kaneohe Post Office.

DRAINAGE AREA.--3.21 mi^2 (8.31 km^2).

PERIOD OF RECORD.--April 1967 to September 1970. Occasional low-flow measurements and annual maximum, water year 1971. January 1972 to current year.

GAGE.--Water-stage recorder and combination pipe culverts and paved road control. Altitude of gage is 118 ft (36 m), from topographic map. Control rebuilt and datum lowered 2.80 ft (0.853 m) Apr. 22, 1969.

AVERAGE DISCHARGE.--6 years (1968-70, 1973-75), 11.7 ft^3/s (0.331 m^3/s) 8,480 acre-ft/yr (10.5 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,890 ft^3/s (81.8 m^3/s) Nov. 21 (gage height, 10.82 ft or 3.298 m), from rating curve extended above 130 ft^3/s (3.68 m^3/s); minimum, 3.7 ft^3/s (0.105 m^3/s) several days in August and September.
Period of record: Maximum discharge, 10,800 ft^3/s (306 m^3/s) Feb. 1, 1969 (gage height, 12.42 ft or 3.786 m), control and datum then in use, from rating curve extended above 1,800 ft^3/s (51 m^3/s); minimum, 3.1 ft^3/s (0.088 m^3/s) Oct. 10, 12, 1973.

REMARKS.--Records poor. No diversion above station. Records of suspended-sediment discharge and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	7.1	7.9	5.7	225	9.8	11	8.4	6.6	7.9	4.9	3.9
2	6.8	6.6	7.9	5.7	35	9.2	10	8.2	6.6	5.9	4.9	3.8
3	6.8	6.5	7.9	6.2	19	9.8	9.8	8.2	6.4	5.7	4.9	3.8
4	6.8	6.2	7.6	6.5	65	9.2	9.5	8.0	6.4	5.7	5.1	3.7
5	6.5	6.2	7.6	6.5	19	9.2	9.5	8.4	6.2	5.5	4.7	3.7
6	6.2	6.8	7.4	6.8	15	9.2	9.5	9.0	6.2	5.5	4.5	3.7
7	6.5	7.9	8.2	6.8	14	9.8	9.8	9.0	6.4	5.3	4.5	3.8
8	6.5	7.1	7.6	11	13	8.8	11	8.6	6.4	5.5	4.7	4.0
9	6.8	6.5	7.4	8.2	13	8.6	9.5	8.0	6.2	5.7	4.7	4.0
10	6.5	6.5	7.4	7.1	12	8.8	9.2	7.8	6.2	5.7	5.1	3.9
11	6.5	6.8	7.4	107	12	9.8	9.2	7.6	6.6	6.8	5.3	3.9
12	6.8	6.2	7.4	149	13	13	9.0	7.6	6.6	5.9	4.7	3.8
13	6.5	6.2	7.1	19	18	9.2	9.0	8.2	6.4	5.5	4.5	3.9
14	6.8	5.9	7.1	17	14	8.5	8.8	7.8	6.6	5.3	4.7	3.9
15	9.2	6.2	7.1	11	13	9.2	8.6	8.0	6.6	5.3	4.5	3.9
16	7.1	7.4	6.8	10	12	9.2	8.4	7.6	6.4	5.3	4.3	4.0
17	6.5	22	6.5	9.2	12	8.5	8.8	7.8	6.2	5.5	4.5	3.9
18	9.2	8.2	6.5	9.2	11	8.5	8.4	7.4	6.2	6.5	4.1	3.9
19	13	7.4	6.8	8.5	11	8.5	8.4	7.4	6.0	5.7	4.1	3.9
20	8.5	11	7.1	8.2	11	8.5	8.2	7.4	6.0	5.5	4.0	4.1
21	7.1	151	6.8	8.2	11	8.5	8.2	7.2	5.9	5.3	4.7	4.0
22	6.8	22	7.1	7.9	11	8.5	8.2	7.2	5.9	5.1	4.0	4.0
23	6.5	17	7.6	7.9	11	8.5	8.2	7.2	5.9	5.1	4.0	4.0
24	6.5	11	6.5	11	11	8.5	8.0	7.0	6.2	7.1	4.0	4.0
25	6.2	9.2	6.2	8.8	10	8.5	8.5	7.0	5.9	5.1	4.0	4.0
26	6.2	8.2	6.5	8.2	9.8	8.5	8.2	7.0	5.9	4.9	3.9	4.0
27	27	8.2	6.2	8.2	11	11	9.0	6.8	6.5	4.9	3.8	3.9
28	9.2	7.9	5.9	7.9	9.8	33	8.8	6.6	5.7	4.7	3.8	4.5
29	7.9	7.6	5.7	8.5	---	13	8.6	6.8	5.9	4.7	3.8	4.0
30	7.9	7.9	5.7	11	---	10	8.4	6.6	6.2	4.7	4.0	4.0
31	7.4	---	5.9	28	---	18	---	6.6	---	4.9	3.9	---
TOTAL	244.7	404.9	216.8	534.2	641.6	321.5	276.7	236.8	187.2	172.2	136.6	117.9
MEAN	7.89	13.5	6.99	17.2	22.9	10.4	9.02	7.64	6.24	5.55	4.41	3.93
MAX	27	151	8.2	149	225	33	11	9.0	6.6	7.9	5.3	4.5
MIN	6.2	5.9	5.7	5.7	9.8	8.5	8.0	6.6	5.7	4.7	3.8	3.7
AC-FT	485	803	430	1060	1270	638	549	470	371	342	271	234

CAL YR 1974 TOTAL 3646.9 MEAN 10.5 MAX 151 MIN 5.7 AC-FT 7630
WTR YR 1975 TOTAL 3485.1 MEAN 9.55 MAX 225 MIN 3.7 AC-FT 6910

PEAK DISCHARGE (BASE, 900 CFS).--Nov. 21 (2100) 2,890 cfs (10.82 ft); Feb. 1 (0200) 1,200 cfs (8.68 ft).

16273900 KAMOOALII STREAM AT KANEOHE

LOCATION.--Lat 21°24'51", long 157°48'13", on right bank 500 ft (152 m) upstream from Highway 83 and 0.2 mi (0.3 km) south of Parker School in Kaneohe.

DRAINAGE AREA.--4.38 mi^2 (11.34 km^2).

PERIOD OF RECORD.--January 1959 to October 1963, November 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.75 ft (11.811 m) above mean sea level (levels by city and county of Honolulu). Prior to Oct. 5, 1963, at site 50 ft (15 m) downstream at datum 0.93 ft (0.283 m) lower.

AVERAGE DISCHARGE.--13 years (1959-63, 1966-75), 15.4 ft^3/s (0.436 m^3/s), 11,160 acre-ft/yr (13.8 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 4,610 ft^3/s (131 m^3/s) Nov. 21 (gage height, 6.90 ft or 2.103 m); minimum, 4.5 ft^3/s (0.127 m^3/s) Sept. 5.
Period of record: Maximum discharge, 12,000 ft^3/s (340 m^3/s) Feb. 1, 1969 (gage height, 10.16 ft or 3.097 m), from rating curve extended above 380 ft^3/s (10.8 m^3/s) on basis of slope-area measurements at gage heights 5.26 ft (1.603 m), 7.14 ft (2.176 m), 7.47 ft (2.277 m), and 10.16 ft (3.097 m); minimum, 3.4 ft^3/s (0.096 m^3/s) Aug. 28, 1962.
Flood of Oct. 23, 1958, reached a stage of 8.3 ft (2.53 m), from floodmarks, former site and datum, discharge, 6,610 ft^3/s (187 m^3/s), from rating curve extended above 120 ft^3/s (3.40 m^3/s) on basis of slope-area measurement at gage height 5.69 ft (1.734 m). Discharge for peaks of Feb. 4 and May 2, 1965, 6,190 ft (175 m^3/s) and 5,400 ft^3/s (153 m^3/s), respectively; results of slope-area measurements of peak flow.

REMARKS.--Records fair. Recording rain gage located at station. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	10	11	8.2	280	14	15	11	8.2	11	7.0	5.4
2	9.7	9.7	11	8.2	49	13	14	10	8.2	8.5	7.0	5.2
3	9.7	9.3	11	8.9	27	14	14	10	8.2	8.2	7.0	5.2
4	9.7	8.9	11	9.3	88	13	14	10	7.9	8.2	7.3	5.0
5	9.3	8.9	11	9.3	26	13	13	11	7.9	7.9	6.7	5.0
6	8.9	9.7	10	9.7	21	13	14	12	7.9	7.9	6.4	5.0
7	9.3	11	12	9.7	19	14	12	12	8.2	7.6	6.4	5.2
8	9.3	10	11	16	18	12	15	11	8.2	7.9	6.7	5.7
9	9.7	9.3	10	12	18	12	12	10	7.9	8.2	6.7	5.7
10	9.3	9.3	10	10	18	12	12	10	7.9	8.2	7.3	5.4
11	9.3	9.7	10	160	18	14	12	9.7	8.9	9.8	7.6	5.4
12	9.7	8.9	10	189	19	17	12	9.7	8.9	8.5	6.7	5.2
13	9.3	8.9	10	27	25	13	12	10	8.5	7.9	6.4	5.4
14	9.7	8.5	10	24	19	12	12	10	8.9	7.6	6.7	5.4
15	13	8.9	10	16	19	13	12	11	8.9	7.6	6.4	5.4
16	10	10	9.7	14	17	13	11	9.7	8.5	7.6	6.2	5.7
17	9.3	30	9.3	13	17	12	12	10	7.9	7.9	6.4	5.4
18	13	12	9.3	13	16	12	11	9.3	8.2	9.3	6.0	5.4
19	18	10	9.6	12	16	12	11	9.3	8.2	8.2	6.0	5.4
20	12	15	9.9	12	16	12	11	9.3	8.2	7.9	5.7	6.0
21	10	253	9.7	12	15	12	11	9.3	8.5	7.6	6.8	5.7
22	9.7	30	10	11	16	12	12	9.3	8.5	7.3	5.7	5.7
23	9.3	17	11	11	15	12	11	9.3	8.5	7.3	5.7	5.7
24	9.3	15	9.3	16	15	12	11	9.3	8.9	10	5.7	5.7
25	8.9	13	8.9	12	14	12	13	8.9	8.5	7.3	5.7	5.7
26	8.9	12	9.3	12	14	12	12	8.9	8.5	7.0	5.4	5.7
27	37	12	8.9	12	15	15	12	8.9	9.3	7.0	5.2	5.4
28	13	11	8.5	11	14	46	11	8.5	8.2	6.7	5.2	6.4
29	11	11	8.2	12	---	18	11	8.5	8.5	6.7	5.2	5.7
30	11	11	8.2	16	---	14	11	8.2	8.9	6.7	5.7	5.7
31	10	---	8.5	38	---	25	---	8.2	---	7.0	5.4	---
TOTAL	345.6	603.0	306.3	744.3	864	450	366	302.3	251.9	246.5	194.3	164.9
MEAN	11.1	20.1	9.88	24.0	30.9	14.5	12.2	9.75	8.40	7.95	6.27	5.50
MAX	37	253	12	189	280	46	15	12	9.3	11	7.6	6.4
MIN	8.9	8.5	8.2	8.2	14	12	11	8.2	7.9	6.7	5.2	5.0
AC-FT	685	1200	608	1480	1710	893	726	600	500	489	385	327

CAL YR 1974 TOTAL 5455.6 MEAN 14.9 MAX 253 MIN 8.2 AC-FT 10820
WTR YR 1975 TOTAL 4839.1 MEAN 13.3 MAX 280 MIN 5.0 AC-FT 9600

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-21	2130	6.90	4,610	2-1	0230	4.21	1,310
1-11	2300	3.85	1,020				

16275000 HAIKU STREAM NEAR HEEIA

LOCATION.--Lat 21°24'46", long 157°49'33", on left bank 1.7 mi (2.7 km) west of Kaneohe Post Office and 1.8 mi (2.9 km) southwest of Heeia.

DRAINAGE AREA.--0.97 mi² (2.51 km²).

PERIOD OF RECORD.--January 1914 to October 1919, July 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 271.9 ft (82.875 m) above mean sea level (levels by city and county of Honolulu). Prior to Apr. 28, 1914, nonrecording gage and Apr. 28, 1914, to Oct. 25, 1919, water-stage recorder, at same site at different datums.

AVERAGE DISCHARGE (since diversion from tunnel began).--32 years (1943-75), 2.20 ft³/s (0.0623 m³/s), 1,590 acre-ft/yr (1.96 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 721 ft³/s (20.4 m³/s) Nov. 21 (gage height, 3.51 ft or 1.070 m), from rating curve extended as explained below; minimum, 0.94 ft³/s (0.027 m³/s) Aug. 22, 28, 29, Sept. 1, 13.
Period of record: Maximum discharge, 5,740 ft³/s (163 m³/s) May 2, 1965 (gage height, 7.94 ft or 2.420 m), from rating curve extended above 57 ft³/s (1.61 m³/s) on basis of slope-area measurements at gage heights 3.87 ft (1.180 m), 3.88 ft (1.183 m), and 7.94 ft (2.420 m); minimum, 0.20 ft³/s (0.006 m³/s) July 20, 1957, Sept. 17, 1961.

REMARKS.--Records fair. Honolulu Board of Water Supply has diverted ground water from tunnel in drainage area since 1943. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 935: 1940. WSP 1319: 1916-19(M). WSP 1569: Drainage area. WSP 1719: 1942-43, 1946(M), 1947, 1949, 1951, 1954(M), 1955, 1957-59. WSP 1937: 1940-45(M), 1947(M), 1948-50(P), 1951, 1952(P), 1953(M), 1955-57(P), 1958-59, 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.4	1.5	1.3	28	1.5	1.5	1.4	1.1	1.2	1.1	1.0
2	1.4	1.4	1.5	1.3	4.7	1.5	1.4	1.4	1.1	1.1	1.1	1.0
3	1.4	1.3	1.5	1.3	2.0	1.4	1.4	1.4	1.1	1.1	1.1	1.0
4	1.4	1.3	1.4	1.3	2.0	1.5	1.4	1.4	1.1	1.1	1.2	1.0
5	1.3	1.3	1.4	1.3	2.1	1.5	1.3	1.4	1.1	1.1	1.1	1.0
6	1.3	1.3	1.4	1.3	1.8	1.6	1.3	1.4	1.1	1.1	1.1	1.0
7	1.3	1.3	1.4	1.4	1.7	1.8	1.3	1.5	1.1	1.1	1.1	1.0
8	1.3	1.3	1.4	2.0	1.7	1.8	1.4	1.5	1.1	1.1	1.1	1.1
9	1.4	1.3	1.4	2.8	1.6	1.5	1.4	1.4	1.1	1.1	1.1	1.1
10	1.3	1.3	1.4	1.8	1.6	1.6	1.4	1.4	1.1	1.1	1.1	1.1
11	1.3	1.3	1.3	18	1.6	1.7	1.3	1.4	1.1	1.1	1.2	1.1
12	1.3	1.3	1.3	28	1.7	1.7	1.4	1.3	1.1	1.0	1.1	1.0
13	1.3	1.3	1.3	8.2	1.7	1.5	1.4	1.3	1.1	1.0	1.1	1.0
14	1.3	1.3	1.3	7.3	1.7	1.5	1.4	1.3	1.1	1.0	1.3	1.0
15	1.5	1.3	1.3	3.3	1.7	1.5	1.4	1.3	1.1	1.0	1.4	1.0
16	1.4	1.4	1.3	2.3	1.6	1.5	1.4	1.3	1.1	1.0	1.1	1.0
17	1.3	2.7	1.3	1.9	1.6	1.8	1.4	1.3	1.1	1.1	1.1	1.0
18	1.4	1.8	1.3	1.7	1.6	1.8	1.4	1.3	1.2	1.1	1.0	1.1
19	2.0	1.5	1.3	1.6	1.6	1.6	1.4	1.3	1.2	1.1	1.1	1.1
20	1.5	3.5	1.3	1.5	1.7	1.8	1.4	1.3	1.2	1.1	1.2	1.1
21	1.3	56	1.3	1.5	1.7	1.9	1.4	1.3	1.2	1.1	1.3	1.1
22	1.3	11	1.3	1.4	1.8	1.7	1.3	1.3	1.2	1.1	1.2	1.1
23	1.2	3.3	1.4	1.4	1.8	1.7	1.3	1.3	1.2	1.1	1.2	1.1
24	1.2	2.3	1.3	1.5	1.8	1.6	1.3	1.3	1.2	1.3	1.1	1.1
25	1.2	1.9	1.3	1.5	1.7	1.5	1.4	1.3	1.2	1.1	1.0	1.1
26	1.1	1.8	1.3	1.5	1.6	1.7	1.3	1.3	1.2	1.1	1.0	1.1
27	5.9	1.7	1.3	1.4	1.7	2.0	1.4	1.2	1.2	1.1	1.0	1.1
28	3.1	1.6	1.3	1.5	1.6	2.5	1.4	1.2	1.2	1.1	.94	1.1
29	1.8	1.5	1.3	1.5	---	1.4	1.4	1.2	1.2	1.1	1.1	1.1
30	1.6	1.5	1.3	1.8	---	1.6	1.4	1.2	1.2	1.1	1.2	1.0
31	1.5	---	1.3	7.5	---	1.9	---	1.2	---	1.2	1.0	---
TOTAL	49.0	113.2	41.7	112.1	77.4	51.6	41.3	41.1	34.3	34.0	34.74	31.6
MEAN	1.58	3.77	1.35	3.62	2.76	1.66	1.38	1.33	1.14	1.10	1.12	1.05
MAX	5.9	56	1.5	28	28	2.5	1.5	1.5	1.2	1.3	1.4	1.1
MIN	1.1	1.3	1.3	1.3	1.6	1.4	1.3	1.2	1.1	1.0	.94	1.0
AC-FT	97	225	83	222	154	102	82	82	68	67	69	63

CAL YR 1974 TOTAL 836.6 MEAN 2.29 MAX 56 MIN 1.1 AC-FT 1660
WTR YR 1975 TOTAL 662.04 MEAN 1.81 MAX 56 MIN .94 AC-FT 1310

PEAK DISCHARGE (BASE, 340 CFS).--Nov. 21 (2130) 721 cfs (3.51 ft).

16283600 SOUTH FORK WAIHEE STREAM NEAR HEEIA

LOCATION.--Lat 21°26'47", long 157°52'12", on left bank 0.2 mi (0.3 km) upstream from confluence with North Fork, 3.0 mi (4.8 km) southwest of Waiahole School, and 4.0 mi (6.4 km) northwest of Heeia.

DRAINAGE AREA.--0.03 mi^2 (0.08 km^2).

PERIOD OF RECORD.--September 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 615.74 ft (187.678 m) above mean sea level (levels by Honolulu Board of Water Supply).

AVERAGE DISCHARGE.--13 years, 1.98 ft^3/s (0.0561 m^3/s), 1,430 acre-ft/yr (1.76 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 96 ft^3/s (2.72 m^3/s) Nov. 21 (gage height, 2.74 ft or 0.835 m), from rating curve extended above 3.9 ft^3/s (0.11 m^3/s); minimum, 1.4 ft^3/s (0.040 m^3/s) many days.
Period of record: Maximum discharge, 279 ft^3/s (7.90 m^3/s) May 2, 1965 (gage height, 3.96 ft or 1.207 m), from rating curve extended above 3.9 ft^3/s (0.11 m^3/s); minimum, 1.1 ft^3/s (0.031 m^3/s) many days in 1973.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.9	1.7	1.7	4.0	1.7	1.8	1.7	1.7	1.7	1.6	1.4
2	2.0	1.8	1.7	1.7	1.8	1.7	1.8	1.7	1.7	1.7	1.6	1.4
3	2.0	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.6	1.4
4	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.5	1.4
5	2.0	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.5	1.4
6	2.0	1.8	1.7	1.7	1.6	1.7	1.7	1.7	1.6	1.7	1.5	1.4
7	2.0	1.8	1.7	1.7	1.6	1.7	1.7	1.8	1.6	1.7	1.5	1.4
8	2.0	1.8	1.7	1.8	1.6	1.7	1.7	1.7	1.6	1.7	1.5	1.4
9	2.0	1.8	1.7	1.9	1.6	1.7	1.7	1.7	1.6	1.7	1.5	1.4
10	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.5	1.4
11	2.0	1.8	1.7	3.2	1.7	1.7	1.7	1.7	1.6	1.7	1.5	1.4
12	2.0	1.8	1.7	3.7	1.7	2.0	1.7	1.7	1.6	1.7	1.5	1.4
13	2.0	1.8	1.7	2.0	1.8	1.7	1.7	1.7	1.6	1.7	1.5	1.4
14	1.9	1.8	1.7	2.1	1.8	1.7	1.7	1.7	1.6	1.7	1.5	1.4
15	1.9	1.8	1.7	1.9	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.4
16	1.9	1.9	1.7	1.9	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.4
17	1.9	2.9	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
18	2.1	1.9	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
19	2.5	1.9	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
20	2.0	2.2	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
21	1.9	5.6	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
22	1.8	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
23	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
24	1.8	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
25	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.6	1.5	1.4
26	1.9	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.6	1.5	1.4
27	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4
28	2.0	1.7	1.7	1.7	1.7	2.4	1.7	1.7	1.7	1.6	1.5	1.6
29	1.9	1.7	1.7	1.7	---	1.9	1.7	1.7	1.7	1.6	1.5	1.6
30	1.9	1.7	1.7	2.1	---	1.8	1.7	1.7	1.7	1.6	1.5	1.6
31	1.9	---	1.7	2.5	---	1.9	---	1.7	---	1.6	1.4	---
TOTAL	61.4	59.1	52.9	59.4	49.8	54.4	51.4	52.8	49.6	51.0	46.7	42.6
MEAN	1.98	1.97	1.71	1.92	1.78	1.75	1.71	1.70	1.65	1.65	1.51	1.42
MAX	2.5	5.6	1.8	3.7	4.0	2.4	1.8	1.8	1.7	1.7	1.6	1.6
MIN	1.8	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.6	1.6	1.4	1.4
AC-FT	122	117	105	118	99	108	102	105	98	101	93	84

CAL YR 1974 TOTAL 665.7 MEAN 1.82 MAX 6.6 MIN 1.4 AC-FT 1320
WTR YR 1975 TOTAL 631.1 MEAN 1.73 MAX 5.6 MIN 1.4 AC-FT 1250

PEAK DISCHARGE (BASE, 47 CFS).--Nov. 21 (2000) 96 cfs (2.74 ft).

16283700 NORTH FORK WAIHEE STREAM NEAR HEEIA

LOCATION.--Lat 21°26'48", long 157°52'18", on left bank 0.3 mi (0.5 km) upstream from confluence with South Fork, 2.8 mi (4.5 km) southwest of Waiahole School, and 4.3 mi (6.9 km) northwest of Heeia.

DRAINAGE AREA.--0.03 mi^2 (0.08 km^2).

PERIOD OF RECORD.--September 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 639.00 ft (194.767 m) above mean sea level (levels by Honolulu Board of Water Supply).

AVERAGE DISCHARGE.--13 years, 1.96 ft^3/s (0.0555 m^3/s), 1,420 acre-ft/yr (1.75 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 100 ft^3/s (2.83 m^3/s) Nov. 21 (gage height, 2.23 ft or 0.680 m), from rating curve extended above 19 ft^3/s (0.54 m^3/s); minimum, 1.6 ft^3/s (0.045 m^3/s) on several days in September.
Period of record: Maximum discharge, 376 ft^3/s (10.6 m^3/s) Feb. 4, 1965 (gage height, 3.38 ft or 1.030 m), from rating curve extended above 19 ft^3/s (0.54 m^3/s); minimum, 1.3 ft^3/s (0.037 m^3/s) many days in 1963, 1973, and Oct. 11-13, 1973.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.0	2.0	1.9	3.5	1.9	1.8	1.8	1.8	1.8	1.7	1.7
2	2.0	2.0	2.0	1.9	2.1	1.8	1.8	1.8	1.8	1.8	1.7	1.7
3	2.0	2.0	2.0	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7
4	2.0	2.0	2.0	1.8	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.7
5	2.0	2.0	2.0	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.7
6	2.0	2.0	2.0	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7
7	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.7
8	2.0	2.0	2.0	2.1	1.9	1.8	1.9	1.8	1.8	1.7	1.8	1.7
9	2.0	2.0	2.0	2.0	1.9	1.8	1.9	1.8	1.8	1.7	1.8	1.7
10	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.8	1.8	1.7	1.8	1.7
11	2.0	2.0	2.0	3.2	1.9	1.8	1.9	1.8	1.8	1.7	1.8	1.7
12	2.0	2.0	1.9	3.7	1.9	2.1	1.9	1.8	1.8	1.7	1.8	1.7
13	2.0	2.0	1.9	2.1	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.7
14	2.0	2.0	1.9	2.2	2.0	1.8	1.9	1.8	1.8	1.6	1.8	1.7
15	2.0	2.0	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.6	1.8	1.7
16	2.0	2.0	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.6	1.8	1.7
17	2.0	2.8	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.7
18	2.2	2.1	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.7
19	2.7	2.1	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.7
20	2.1	2.4	1.9	1.8	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.6
21	2.0	5.6	1.9	1.8	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.6
22	2.0	2.2	2.0	1.8	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.6
23	2.0	2.1	2.0	1.8	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.6
24	2.0	2.1	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.6	1.8	1.6
25	2.0	2.1	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.6
26	2.2	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.6
27	2.7	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.6
28	2.1	2.0	1.9	1.8	1.9	2.3	1.8	1.8	1.8	1.7	1.7	1.7
29	2.0	2.0	1.9	1.8	---	1.8	1.8	1.8	1.8	1.7	1.7	1.6
30	2.0	2.0	1.9	2.1	---	1.8	1.8	1.8	1.8	1.7	1.7	1.6
31	2.0	---	1.9	2.6	---	1.9	---	1.8	---	1.7	1.7	---
TOTAL	64.0	65.5	60.2	62.5	55.2	56.8	55.7	55.9	54.0	52.2	55.2	50.0
MEAN	2.06	2.18	1.94	2.02	1.97	1.83	1.86	1.80	1.80	1.68	1.78	1.67
MAX	2.7	5.6	2.0	3.7	3.5	2.3	1.9	1.9	1.8	1.8	1.8	1.7
MIN	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.7	1.6
AC-FT	127	130	119	124	109	113	110	111	107	104	109	99

CAL YR 1974 TOTAL 734.8 MEAN 2.01 MAX 6.3 MIN 1.6 AC-FT 1460
WTR YR 1975 TOTAL 687.2 MEAN 1.88 MAX 5.6 MIN 1.6 AC-FT 1360

PEAK DISCHARGE (BASE, 45 CFS).--Nov. 21 (2000) 100 cfs (2.23 ft).

16284000 WAIHEE STREAM NEAR HEEIA

LOCATION.--Lat 21°27'01", long 157°51'38", on left bank 120 ft (37 m) downstream from forest-reserve boundary, 3.5 mi (5.6 km) northwest of Heeia, and 4.0 mi (6.4 km) northwest of Kaneohe Post Office.

DRAINAGE AREA.--0.93 mi^2 (2.41 km^2).

PERIOD OF RECORD.--December 1935 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 193.44 ft (58.961 m) above mean sea level (levels by Honolulu Board of Water Supply).

AVERAGE DISCHARGE.--39 years (1936-75), 8.53 ft^3/s (0.242 m^3/s), 6,180 acre-ft/yr (7.62 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 500 ft^3/s (14.2 m^3/s) Nov. 21 (gage height, unknown); minimum, 2.2 ft^3/s (0.062 m^3/s) Sept. 29, 30.
Period of record: Maximum discharge, 5,110 ft^3/s (145 m^3/s) Feb. 4, 1965 (gage height, 8.72 ft or 2.658 m), from floodmarks, from rating curve extended above 77 ft^3/s (2.18 m^3/s) on basis of slope-area measurements at gage heights 6.06 ft (1.847 m) and 8.72 ft (2.658 m); minimum, 1.9 ft^3/s (0.054 m^3/s) several days in September and October 1973.

REMARKS.--Records fair. Honolulu Board of Water Supply diverts water from tunnel in drainage area and pumps water from well nearby. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 1719: 1956-57. WSP 1937: 1940-43(M), 1947(M), 1948(P), 1949-50(M), 1953(M), 1955(M), 1958(M), 1959(P). (WATER YEAR).--WRD 1972: 1971(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.4	4.0	3.5	35	3.5	3.7	3.3	3.1	3.2	2.7	2.4
2	4.0	4.3	4.0	3.5	6.2	3.5	3.3	3.3	3.1	3.1	2.7	2.5
3	4.1	4.0	3.8	3.5	5.5	3.3	3.3	3.3	3.1	3.0	2.7	2.4
4	4.1	4.0	3.8	3.5	6.0	3.3	3.3	3.3	3.1	3.0	2.7	2.5
5	4.1	3.8	3.8	3.5	5.1	3.3	3.3	3.5	3.1	2.8	2.7	2.5
6	4.0	3.7	3.8	3.5	4.4	3.3	3.2	3.5	3.1	3.0	2.6	2.5
7	4.0	3.7	3.8	4.3	4.3	3.5	3.2	3.8	3.1	3.0	2.7	2.5
8	4.0	3.8	3.8	4.8	4.1	3.3	3.3	3.7	3.1	3.0	2.6	2.4
9	3.8	3.8	3.8	5.7	4.0	3.3	3.2	3.5	3.1	3.0	2.6	2.4
10	3.8	3.8	3.8	4.1	4.0	3.2	3.2	3.5	3.0	2.8	2.6	2.5
11	3.8	3.8	4.0	22	4.0	3.5	3.2	3.3	3.1	3.0	2.7	2.5
12	3.8	3.7	4.0	34	4.3	4.0	3.2	3.3	3.1	3.2	2.6	2.5
13	3.8	3.7	4.0	9.0	4.3	3.5	3.2	3.3	3.1	2.8	2.6	2.5
14	3.8	3.7	3.8	7.4	4.4	3.3	3.2	3.5	3.1	2.8	2.6	2.4
15	4.0	3.8	3.8	5.5	4.1	3.2	3.2	3.3	3.1	2.8	2.6	2.4
16	4.1	4.3	3.8	4.6	4.0	3.2	3.2	3.5	3.1	2.8	2.6	2.5
17	4.1	14	3.8	4.3	3.8	3.2	3.2	3.5	3.1	2.8	2.6	2.4
18	4.8	6.2	3.8	4.0	3.8	3.2	3.2	3.3	3.1	3.1	2.6	2.5
19	9.0	5.3	3.7	3.8	3.8	3.2	3.2	3.3	3.0	2.8	2.6	2.5
20	4.9	6.2	3.8	3.8	3.8	3.2	3.2	3.2	3.0	2.8	2.6	2.4
21	4.4	35	3.7	3.7	3.8	3.2	3.2	3.3	3.0	2.8	2.7	2.4
22	4.3	14	4.1	3.7	3.8	3.2	3.3	3.3	3.1	2.8	2.6	2.4
23	4.3	7.4	4.3	3.5	3.8	3.2	3.3	3.3	3.1	2.8	2.6	2.4
24	4.3	6.0	3.7	3.8	3.7	3.2	3.5	3.2	3.1	2.8	2.5	2.4
25	4.1	5.5	3.7	3.5	3.7	3.7	3.7	3.2	3.0	2.7	2.5	2.4
26	4.1	5.1	3.7	3.3	3.6	3.5	3.7	3.2	3.0	2.7	2.4	2.4
27	7.6	4.9	3.5	3.3	3.7	3.5	3.5	3.1	3.1	2.7	2.4	2.4
28	5.3	4.6	3.5	3.3	3.6	3.0	3.5	3.1	3.0	2.7	2.4	2.7
29	4.8	4.3	3.5	3.3	---	4.1	3.7	3.1	3.1	2.7	2.4	2.3
30	4.4	4.1	3.5	5.4	---	3.8	3.5	3.1	3.1	2.7	2.4	2.2
31	4.4	---	3.5	11	---	4.1	---	3.1	---	2.8	2.4	---
TOTAL	137.8	166.9	117.6	186.1	150.6	111.3	99.9	103.2	92.3	89.0	80.0	73.2
MEAN	4.45	6.23	3.79	6.00	5.38	3.59	3.33	3.33	3.08	2.87	2.58	2.44
MAX	9.0	35	4.3	34	35	8.0	3.7	3.8	3.1	3.2	2.7	2.7
MIN	3.8	3.7	3.5	3.3	3.6	3.2	3.2	3.1	3.0	2.7	2.4	2.2
AC-FT	273	331	233	369	299	221	198	205	183	177	159	145

CAL YR 1974 TOTAL 1922.2 MEAN 5.27 MAX 37 MIN 3.5 AC-FT 3810
WTR YR 1975 TOTAL 1427.9 MEAN 3.91 MAX 35 MIN 2.2 AC-FT 2830

PEAK DISCHARGE (BASE, 140 CFS).--Nov. 21 (2030) about 500 cfs; Jan. 11 (2230) 169 cfs (3.59 ft).

16284200 WAIHEE STREAM NEAR KAHALUU

LOCATION.--Lat 21°27'04", long 157°51'36", on right bank 0.2 mi (0.3 km) downstream from forest reserve boundary, 1.0 mi (1.6 km) south of Kahaluu School and 1.6 mi (2.6 km) west of Ahuimanu sewage treatment plant.

DRAINAGE AREA.--0.97 mi^2 (2.51 km^2).

PERIOD OF RECORD.--Current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 170 ft (52 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 508 ft^3/s (14.4 m^3/s) Nov. 21, gage height, 5.96 ft (1.817 m) from rating curve extended above 10 cfs (0.28 m^3/s); minimum, 2.7 cfs (0.076 m^3/s) on several days in September.

REMARKS.--Records good. Periodic determinations of water temperature for the water year 1975 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	6.1	4.7	4.2	39	4.2	4.7	4.4	4.0	4.1	3.3	3.2
2	5.0	5.9	4.7	4.2	10	4.2	4.6	4.4	3.8	3.8	3.3	3.4
3	5.1	5.6	4.4	4.4	7.1	4.2	4.6	4.4	3.8	3.8	3.3	3.0
4	5.1	5.6	4.4	4.2	7.3	4.2	4.4	4.4	3.8	3.8	3.3	2.9
5	5.1	5.2	4.4	4.2	6.3	4.2	4.2	4.6	3.8	3.7	3.3	2.9
6	5.1	5.2	4.4	4.1	5.6	4.2	4.2	4.4	3.8	3.6	3.2	2.8
7	5.0	5.2	4.2	4.7	5.2	4.4	4.2	4.7	3.8	3.6	3.2	2.8
8	5.0	5.4	4.2	5.7	5.0	4.2	4.2	4.6	3.8	3.6	3.2	2.7
9	5.0	5.4	4.2	6.3	5.0	4.2	4.2	4.4	3.8	3.6	3.3	2.7
10	4.8	5.4	4.2	4.9	5.0	4.2	4.1	4.4	3.7	3.4	3.3	2.7
11	4.8	5.4	4.2	20	4.9	4.4	4.1	4.4	3.8	3.6	3.3	2.9
12	4.8	5.4	4.4	40	5.2	5.4	4.1	4.4	3.8	3.4	3.2	2.9
13	4.7	5.4	4.6	11	5.2	4.2	4.1	4.4	3.8	3.4	3.2	2.8
14	4.7	5.2	4.6	9.3	5.4	4.1	4.1	4.4	3.8	3.4	3.2	2.8
15	5.0	5.9	4.7	6.6	5.0	4.1	4.0	4.4	3.8	3.4	3.2	2.8
16	5.1	6.1	4.7	5.9	4.9	4.1	4.1	4.4	3.8	3.4	3.2	2.9
17	5.2	15	4.6	5.2	4.7	4.0	4.1	4.4	3.8	3.4	3.3	2.9
18	6.0	7.6	4.4	4.9	4.6	4.0	4.2	4.2	3.7	3.7	3.2	2.9
19	10	6.3	4.2	4.7	4.6	4.0	4.2	4.2	3.7	3.4	3.2	2.9
20	6.8	9.5	4.6	4.6	4.6	4.0	4.2	4.1	3.7	3.4	3.2	2.8
21	5.6	42	4.2	4.6	4.6	4.0	4.2	4.7	3.7	3.4	3.3	2.8
22	5.5	10	4.7	4.4	4.7	4.0	4.2	4.2	3.8	3.4	3.2	2.8
23	5.4	8.6	5.0	4.4	4.4	4.1	4.2	4.4	3.8	3.3	3.1	2.8
24	5.4	6.8	4.6	4.6	4.4	4.2	4.4	4.2	3.8	3.4	3.1	2.8
25	5.4	6.3	4.4	4.4	4.4	4.7	4.6	4.2	3.8	3.3	3.1	2.7
26	5.4	6.1	4.4	4.4	4.2	4.4	4.6	4.1	3.8	3.3	3.1	2.7
27	9.6	5.6	4.2	4.2	4.4	4.4	4.4	4.1	4.0	3.3	3.0	2.7
28	7.3	5.4	4.4	4.2	4.2	9.1	4.6	4.0	3.8	3.3	3.0	3.2
29	6.3	5.0	4.2	4.2	---	5.2	4.4	4.0	4.0	3.3	3.0	2.8
30	6.3	4.9	4.2	6.3	---	4.9	4.4	4.0	3.8	3.3	3.0	2.7
31	6.3	---	4.2	9.8	---	5.2	---	4.0	---	3.4	3.0	---
TOTAL	175.8	227.5	137.3	214.6	179.9	138.7	128.6	133.9	114.1	108.2	98.8	85.7
MEAN	5.67	7.58	4.43	6.92	6.43	4.47	4.29	4.32	3.80	3.49	3.19	2.86
MAX	10	42	5.0	40	39	9.1	4.7	4.7	4.0	4.1	3.3	3.4
MIN	4.7	4.9	4.2	4.1	4.2	4.0	4.0	4.0	3.7	3.3	3.0	2.7
AC-FT	349	451	272	426	357	275	255	266	226	215	196	170

WTR YR 1975 TOTAL 1743.1 MEAN 4.78 MAX 42 MIN 2.7 AC-FT 3460

PEAK DISCHARGE (BASE, 150 CFS).--Nov. 21 (2030) 508 cfs (5.96 ft); Jan. 11 (2230) 194 cfs (4.67 ft).

16294900 WAIKANE STREAM AT ALTITUDE 75 FT (23 M), AT WAIKANE

LOCATION.--Lat 21°30'00", long 157°51'54", on right bank 0.3 mi (0.5 km) downstream from Waikeekee Stream, 0.7 mi (1.1 km) west of Waikane, and 1.2 mi (1.9 km) northwest of Waiahole School.

DRAINAGE AREA.--2.22 mi^2 (5.75 km^2).

PERIOD OF RECORD.--December 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 75 ft (23 m), from topographic map.

AVERAGE DISCHARGE.--15 years (1960-75), 8.90 ft^3/s (0.252 m^3/s), 6,450 acre-ft/yr (7.95 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 810 ft^3/s (22.9 m^3/s) Feb. 1 (gage height, 5.10 ft or 1.554 m), from rating curve extended as explained below; minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 9.
Period of record: Maximum discharge, 8,800 ft^3/s (249 m^3/s) Feb. 4, 1965 (gage height, 10.76 ft or 3.280 m), from rating curve extended above 120 ft^3/s (3.40 m^3/s) on basis of slope-area measurements at gage heights 4.88 ft (1.487 m), 9.46 ft (2.883 m), and 10.76 ft (3.280 m); minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 9, 1975.

REMARKS.--Records good. Waiahole tunnel diverts from two tributaries above station for irrigation in vicinity of Waipahu. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.0	4.2	2.5	141	4.5	4.3	2.7	2.2	4.2	1.8	1.3
2	2.4	2.8	4.0	2.5	25	4.4	3.6	2.7	2.2	2.0	1.6	1.3
3	2.5	2.6	3.8	2.5	16	5.3	3.5	2.8	2.2	1.9	1.7	1.3
4	2.4	2.7	3.7	2.6	23	4.3	3.7	2.7	2.1	1.9	1.7	1.3
5	2.4	2.5	3.7	2.7	17	4.2	4.3	3.0	2.0	1.9	1.7	1.3
6	2.4	2.7	3.6	3.1	13	4.1	3.4	3.1	2.0	1.9	1.8	1.3
7	2.4	2.7	3.5	3.4	11	4.3	3.3	3.9	2.0	2.0	1.8	1.3
8	2.5	2.9	3.4	3.4	9.7	4.0	4.0	2.9	2.1	1.8	1.8	1.3
9	2.5	3.8	3.4	7.1	8.9	3.9	3.8	2.5	2.0	1.7	2.1	1.3
10	2.5	2.9	3.3	4.1	8.2	3.8	3.2	2.4	2.0	1.7	2.1	1.4
11	2.7	3.9	3.2	19	7.5	4.0	3.0	2.4	2.1	1.8	3.5	1.5
12	2.9	2.7	3.1	94	22	6.9	2.8	2.4	2.0	2.0	1.8	1.7
13	3.6	2.6	3.2	24	13	4.2	2.8	2.5	2.0	1.7	1.7	1.5
14	2.5	2.6	3.1	39	9.1	3.9	2.6	2.9	2.1	1.8	1.7	1.4
15	3.3	2.7	3.2	17	7.9	3.6	2.8	2.6	2.0	1.8	1.7	1.4
16	3.5	5.4	3.0	12	7.1	3.6	2.6	2.4	1.9	1.8	1.7	1.4
17	3.3	54	2.9	9.2	7.0	3.6	3.0	2.5	1.9	2.0	1.8	1.4
18	3.1	7.9	3.0	7.9	6.2	3.4	2.8	2.5	1.9	3.3	1.9	1.4
19	17	6.6	3.1	7.1	5.9	3.3	2.8	2.4	1.8	3.9	1.8	1.4
20	6.4	9.2	3.3	6.6	6.8	3.3	2.7	2.4	1.8	1.8	1.8	1.4
21	3.7	43	2.9	6.1	5.7	3.3	2.8	2.5	1.9	1.7	2.3	1.4
22	3.0	17	3.4	5.6	11	3.4	2.8	3.1	2.0	1.6	1.7	1.4
23	2.7	9.1	4.3	5.3	7.4	3.7	2.9	7.1	2.1	1.7	1.6	1.4
24	2.5	7.4	2.9	11	5.9	3.3	2.9	2.8	2.3	2.4	1.6	1.4
25	2.4	6.3	2.7	7.1	5.4	3.2	3.7	2.3	2.0	1.7	1.6	1.4
26	2.4	5.7	5.8	5.8	5.1	3.4	3.2	2.2	1.9	1.7	1.6	1.4
27	6.6	5.3	3.0	5.2	4.9	3.5	3.5	2.2	2.3	1.8	1.4	1.4
28	4.0	5.0	2.7	4.9	4.8	11	3.5	2.2	1.9	1.8	1.4	1.4
29	3.1	4.6	2.6	7.9	---	5.2	3.1	2.8	2.0	1.8	1.4	1.4
30	3.4	4.3	2.5	20	---	3.9	2.8	2.3	2.1	1.8	1.4	1.6
31	3.6	---	2.6	33	---	5.1	---	2.3	---	3.6	1.4	---
TOTAL	110.2	233.9	103.1	381.6	415.5	131.6	96.2	85.5	60.8	64.5	54.9	41.8
MEAN	3.55	7.80	3.33	12.3	14.8	4.25	3.21	2.76	2.03	2.08	1.77	1.39
MAX	17	54	5.8	94	141	11	4.3	7.1	2.3	4.2	3.5	1.7
MIN	2.4	2.5	2.5	2.5	4.8	3.2	2.6	2.2	1.8	1.6	1.4	1.3
AC-FT	219	464	204	757	824	261	191	170	121	128	109	83

CAL YR 1974 TOTAL 2674.7 MEAN 7.33 MAX 175 MIN 2.4 AC-FT 5310
WTR YR 1975 TOTAL 1779.6 MEAN 4.88 MAX 141 MIN 1.3 AC-FT 3530

PEAK DISCHARGE (BASE, 700 CFS).--Feb. 1 (0230) 810 cfs (5.10 ft).

16296500 KAHANA STREAM AT ALTITUDE 30 FT (9.1 M), NEAR KAHANA

LOCATION.--Lat 21°32'37", long 157°53'07", on right bank 600 ft (183 m) upstream from Kawa Stream, 1.1 mi (1.8 km) southwest of Kahana, and 2.2 mi (3.5 km) southwest of Swanzy Beach Park in Kaaawa.

DRAINAGE AREA.--3.74 mi^2 (9.69 km^2).

PERIOD OF RECORD.--December 1958 to current year.

GAGE.--Water-stage recorder and concrete-masonry control. Altitude of gage is 30 ft (9.1 m), from topographic map.

AVERAGE DISCHARGE.--16 years (1959-75), 36.6 ft^3/s (1.037 m^3/s), 26,520 acre-ft/yr (32.7 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,200 ft^3/s (62.3 m^3/s) Nov. 17 (gage height, 5.45 ft or 1.661 m), from rating curve extended as explained below; minimum, 12 ft^3/s (0.34 m^3/s) Sept. 22-27.
Period of record: Maximum discharge, 5,430 ft^3/s (154 m^3/s) Apr. 15, 1963 (gage height, 8.10 ft or 2.469 m), from rating curve extended above 530 ft^3/s (15.0 m^3/s) on basis of computation of peak flow over submerged weir; minimum, 10 ft^3/s (0.28 m^3/s) Sept. 17, 18, 20, 1961.

REMARKS.--Records fair. Approximately 9 ft^3/s (0.25 m^3/s) is diverted by Waiahole Water Co. at 800-ft (244-m) elevation, 2.3 mi (3.7 km) above station. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1959-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	19	18	17	341	17	24	20	17	56	15	13
2	16	18	18	16	41	16	21	19	17	18	14	13
3	17	17	17	17	29	18	22	19	17	16	14	13
4	17	17	17	19	37	16	25	18	17	16	14	13
5	16	17	17	17	29	16	35	20	16	16	14	13
6	16	17	17	19	24	16	22	27	16	16	13	13
7	17	17	16	23	22	25	24	37	16	15	13	13
8	17	17	16	21	21	21	45	21	16	15	13	13
9	16	21	16	75	20	18	36	19	16	15	15	13
10	16	24	16	24	20	17	22	18	16	15	15	13
11	18	26	16	91	19	24	21	17	17	14	52	13
12	17	17	16	264	40	101	20	17	18	15	16	13
13	18	16	15	57	54	30	19	17	16	15	14	13
14	16	16	15	76	34	23	19	20	18	16	14	13
15	18	16	17	37	26	20	19	21	16	14	14	13
16	21	20	15	29	23	24	18	160	16	14	14	13
17	38	225	15	25	25	19	20	44	15	14	14	13
18	25	25	15	23	21	16	18	22	15	17	14	13
19	91	22	15	21	20	17	18	20	15	28	52	13
20	32	28	18	20	20	18	17	19	15	16	16	13
21	21	351	16	20	19	17	17	54	16	15	33	13
22	19	68	57	19	32	18	18	27	16	14	17	12
23	18	35	53	18	20	37	18	59	18	14	15	12
24	18	31	21	34	18	39	18	24	16	17	14	12
25	17	25	18	20	18	60	77	20	16	14	14	12
26	17	22	60	18	17	107	31	19	15	14	14	12
27	98	22	21	17	17	24	35	18	18	14	14	12
28	34	20	19	17	17	72	29	20	16	14	14	27
29	22	20	17	25	---	28	27	21	17	14	14	14
30	22	19	17	92	---	23	22	18	18	14	14	13
31	22	---	17	110	---	27	---	18	---	24	14	---
TOTAL	767	1208	641	1281	1024	926	757	873	491	529	537	399
MEAN	24.7	40.3	20.7	41.3	36.6	29.9	25.2	28.2	16.4	17.1	17.3	13.3
MAX	98	351	60	264	341	107	77	160	18	56	52	27
MIN	16	16	15	16	17	16	17	17	15	14	13	12
AC-FT	1520	2400	1270	2540	2030	1840	1500	1730	974	1050	1070	791

CAL YR 1974 TOTAL 13857 MEAN 38.0 MAX 575 MIN 15 AC-FT 27490
WTR YR 1975 TOTAL 9433 MEAN 25.8 MAX 351 MIN 12 AC-FT 18710

PEAK DISCHARGE (BASE, 1,600 CFS).--Nov. 17 (1045) 2,200 cfs (5.45 ft).

16302000 PUNALUU DITCH NEAR PUNALUU

LOCATION.--Lat 21°33'41", long 157°54'10", on right bank 800 ft (244 m) downstream from intake, 1.5 mi (2.4 km) west of Kahana, and 1.7 mi (2.7 km) southwest of Punaluu.

PERIOD OF RECORD.--May 1953 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 200 ft (61 m), from topographic map.

AVERAGE DISCHARGE.--22 years, 9.32 ft^3/s (0.264 m^3/s), 6,750 acre-ft/yr (8.32 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 54 ft^3/s (1.53 m^3/s) Oct. 31, 1964; no flow for several days in 1963, 1966, 1969, 1972, 1974.

REMARKS.--Records good. Ditch diverts from Punaluu Stream for irrigation and domestic use in Punaluu Valley. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1719: 1954-55.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	2.6	2.4	1.8	13	.57	2.2	1.7	5.0	6.0	5.0	5.0
2	.92	2.6	2.4	1.8	2.4	.53	1.7	1.7	5.1	5.5	5.0	5.0
3	.92	2.5	2.4	1.9	1.7	.61	1.6	1.6	5.0	5.5	5.0	5.0
4	.92	2.5	2.3	1.9	1.7	.57	1.8	1.6	5.0	5.3	5.0	5.0
5	1.3	3.0	2.3	1.8	1.4	.69	2.1	1.6	5.0	5.2	5.0	4.8
6	1.6	4.7	2.3	2.0	1.2	1.0	1.0	2.0	5.1	5.2	4.8	4.8
7	1.6	4.7	2.4	2.2	1.0	1.4	1.9	2.1	5.1	5.2	5.0	4.8
8	1.6	5.0	2.3	2.3	1.1	1.2	3.0	1.6	5.1	5.2	5.0	4.8
9	1.6	5.2	2.3	4.6	1.4	1.2	2.0	1.6	5.1	5.5	5.2	4.6
10	1.5	6.2	2.3	2.7	1.3	1.3	1.8	1.6	5.1	5.3	5.1	5.0
11	1.4	5.5	2.2	4.6	1.2	1.4	1.7	1.6	5.0	5.3	5.3	5.0
12	2.5	5.2	2.2	12	2.4	2.5	1.7	1.6	4.8	5.5	5.1	5.0
13	3.4	5.1	2.2	5.5	2.5	1.4	1.6	1.6	4.8	5.3	5.0	5.0
14	3.4	5.1	2.1	6.6	1.8	1.4	1.6	1.6	4.8	5.3	5.1	4.8
15	4.1	5.1	2.2	3.9	1.5	1.3	1.6	1.7	4.8	5.3	5.1	5.0
16	4.1	5.5	2.0	3.2	.87	1.9	1.6	2.9	4.8	5.3	5.0	5.1
17	4.4	4.1	2.0	2.8	.92	1.5	1.7	2.6	4.8	5.5	5.1	5.2
18	5.2	1.1	2.0	2.4	.78	1.5	1.6	1.8	4.8	5.8	5.0	5.2
19	4.4	.87	1.9	2.3	.82	1.4	1.8	1.7	5.0	5.2	6.7	5.2
20	5.2	.97	2.1	2.1	.87	1.4	1.6	1.6	5.1	5.9	5.8	4.8
21	4.2	6.7	2.0	1.9	.78	1.4	1.6	2.2	5.2	5.8	6.4	4.8
22	3.9	2.4	2.5	1.8	1.1	1.7	1.6	1.9	5.3	5.6	5.6	4.6
23	3.8	1.8	2.7	1.7	.78	3.6	1.6	1.8	5.3	5.5	5.2	4.6
24	3.7	1.4	2.1	2.2	.65	2.0	1.6	4.1	5.3	5.8	5.1	4.7
25	3.7	1.2	1.8	1.8	.57	3.8	3.0	5.0	5.3	5.6	5.1	4.8
26	3.6	1.1	2.7	1.6	.57	4.5	1.9	5.0	5.3	5.5	5.2	5.0
27	4.2	.97	2.2	1.6	.57	1.7	2.6	5.1	5.5	5.1	5.2	4.8
28	3.3	.92	2.0	1.6	.57	3.9	2.2	5.2	5.0	5.0	5.2	7.2
29	2.7	.87	1.8	3.7	---	2.0	2.2	5.0	5.0	4.8	5.1	5.6
30	3.0	1.4	1.8	6.6	---	1.7	1.8	5.0	5.1	4.8	5.1	5.5
31	2.7	---	1.8	6.3	---	1.1	---	5.0	---	5.1	5.1	---
TOTAL	89.73	96.30	67.7	99.2	45.45	52.17	55.7	81.5	151.6	166.9	161.6	150.9
MEAN	2.89	3.21	2.18	3.20	1.62	1.68	1.86	2.63	5.05	5.38	5.21	5.03
MAX	5.2	6.7	2.7	12	13	4.5	3.0	5.2	5.5	6.0	6.7	7.2
MIN	.87	.87	1.6	1.6	.57	.53	1.0	1.6	4.8	4.8	4.8	4.6
AC-FT	178	191	134	197	90	103	110	162	301	331	321	299

CAL YR 1974 TOTAL 1293.04 MEAN 3.54 MAX 26 MIN 0 AC-FT 2560
WTR YR 1975 TOTAL 1218.75 MEAN 3.34 MAX 13 MIN .53 AC-FT 2420

HAWAII, ISLAND OF OAHU

16303000 PUNALUU STREAM NEAR PUNALUU

LOCATION.--Lat 21°33'33", long 157°54'06", on left bank at Punaluu ditch diversion dam, 1.4 mi (2.2 km) west of Kahana, and 1.8 mi (2.9 km) southwest of Punaluu.

DRAINAGE AREA.--2.78 mi^2 (7.20 km^2).

PERIOD OF RECORD.--May 1953 to current year.

GAGE.--Water-stage recorder and masonry control. Altitude of gage is 212 ft (65 m), from topographic map.

AVERAGE DISCHARGE.--22 years, 16.7 ft^3/s (0.473 m^3/s), 12,100 acre-ft/yr (14.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,560 ft^3/s (44.2 m^3/s) Nov. 17 (gage height, 4.38 ft or 1.335 m), from rating curve extended as explained below; minimum, 5.3 ft^3/s (0.15 m^3/s) Sept. 14, 15.
Period of record: Maximum discharge, 5,700 ft^3/s (161 m^3/s) July 17, 1974 (gage height, 7.60 ft or 2.316 m), from ratiug curve extended above 170 ft^3/s (4.81 m^3/s) on basis of slope-area measurements at gage heights 5.77 ft (1.759 m) and 7.60 ft (2.316 m); no flow at times.

REMARKS.--Records poor. Records do not include flow of Punaluu ditch (see sta 16302000). Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report. All published peak discharges prior to Oct. 1, 1970, have been found to be in error; revised records are on file in the district office and will be published in the next water-supply paper.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 1937: 1956(P), 1957(M), 1959(M).
(WATER YEARS).--WRD Hawaii 1974: 1971-72(P), 1973(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	17	14	183	15	19	15	12	13	8.6	6.3
2	15	19	17	13	33	15	15	15	11	9.6	8.2	6.3
3	16	18	16	15	26	15	16	15	9.6	9.1	8.2	6.3
4	16	18	16	15	27	14	16	15	9.6	9.1	7.7	6.0
5	16	16	15	15	23	14	19	15	9.6	9.1	7.7	6.3
6	15	14	15	16	21	15	23	17	9.6	9.1	8.2	6.3
7	16	14	15	16	19	18	17	19	9.6	9.1	7.7	6.3
8	15	15	15	18	18	16	27	15	9.6	9.1	7.7	6.3
9	15	16	15	48	19	15	18	15	9.6	9.6	8.6	6.0
10	15	34	14	21	18	16	16	14	9.6	9.1	8.2	6.0
11	15	23	14	53	17	18	16	14	9.6	9.1	9.1	6.0
12	14	17	15	141	30	33	16	14	9.6	9.1	8.2	6.0
13	18	16	14	51	32	17	15	14	9.1	8.2	7.7	6.0
14	16	16	15	64	24	16	15	15	9.1	8.2	8.2	5.7
15	23	17	15	31	22	15	15	15	9.1	8.2	8.2	5.7
16	24	20	14	26	19	19	15	30	9.1	8.2	8.2	6.0
17	30	243	13	23	21	15	15	23	8.2	8.6	8.2	6.0
18	27	25	13	21	18	14	16	15	8.2	11	7.7	6.0
19	52	22	13	19	19	14	16	15	8.6	15	23	6.0
20	26	23	15	18	19	14	14	15	8.6	11	10	6.0
21	22	168	14	17	18	13	13	19	8.6	10	16	6.0
22	20	45	19	16	22	17	14	16	8.6	9.6	10	5.7
23	19	41	23	16	18	38	14	16	9.1	8.6	8.6	6.0
24	19	30	15	20	17	21	15	18	8.6	9.1	8.6	6.0
25	19	24	14	17	16	44	30	13	8.6	8.2	7.7	6.0
26	18	22	22	16	16	50	19	13	8.6	7.7	7.7	6.0
27	37	20	16	15	16	19	23	13	9.1	8.2	7.7	6.0
28	27	19	16	15	15	41	19	12	8.6	8.2	7.2	19
29	22	19	15	25	---	22	19	12	9.6	8.2	7.2	8.6
30	25	18	14	76	---	16	16	12	9.1	8.2	7.2	8.2
31	21	---	14	71	---	19	---	12	---	9.1	6.8	---
TOTAL	648	1011	478	942	746	628	521	481	277.5	287.6	274.0	199.0
MEAN	20.9	33.7	15.4	30.4	26.6	20.3	17.4	15.5	9.25	9.28	8.84	6.63
MAX	52	243	23	141	183	50	30	30	12	15	23	19
MIN	14	14	13	13	15	13	13	12	8.2	7.7	6.8	5.7
AC-FT	1290	2010	948	1870	1480	1250	1030	954	550	570	543	395

CAL YR 1974 TOTAL 9627 MEAN 26.4 MAX 434 MIN 13 AC-FT 19100
WTR YR 1975 TOTAL 6493.1 MEAN 17.8 MAX 243 MIN 5.7 AC-FT 12880

PEAK DISCHARGE (BASE, 930 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-17	1030	4.38	1,560	2-1	0330	3.85	1,190
11-21	2100	3.42	932				

16304200 KALUANUI STREAM NEAR PUNALUU

LOCATION.--Lat 21°35'22", long 157°54'38", on right bank 0.8 mi (1.3 km) downstream from Sacred Falls, 1.6 mi (2.6 km) west of Punaluu Beach Park, and 1.7 mi (2.7 km) south of cenetery in Hauula.

DRAINAGE AREA.--1.11 mi^2 (2.87 km^2).

PERIOD OF RECORD.--May 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 110 ft (34 m), from topographic map.

AVERAGE DISCHARGE.--8 years, 3.90 ft^3/s (0.110 m^3/s), 2,830 acre-ft/yr (3.49 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 562 ft^3/s (15.9 m^3/s) Nov. 17 (gage height, 8.62 ft or 2.627 m), from rating curve extended as explained below; no flow Sept. 14-27.
Period of record: Maximum discharge, 2,010 ft^3/s (56.9 m^3/s) Feb. 1, 1969 (gage height, 10.0 ft or 3.05 m), from rating curve extended above 14 ft^3/s (0.40 m^3/s) on basis of slope-area measurements at gage heights 8.85 ft (2.697 m) and 10.0 ft (3.05 m); maximum gage height, 10.84 ft (3.304 m) July 17, 1974; no flow for several days in July and August 1971, Sept. 14-27, 1975.

REMARKS.--Records fair except those above 100 ft^3/s (2.8 m^3/s), which are poor. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	1.7	.65	1.3	69	.54	2.1	1.2	.23	8.2	.96	.30
2	.21	.84	.57	.79	4.6	.37	1.5	.99	.21	1.1	.48	.21
3	.88	.65	.49	.68	2.8	1.6	1.8	.85	.18	.62	.34	.18
4	1.1	.84	.42	2.5	2.3	.62	4.1	.72	.17	.49	.46	.15
5	.32	.61	.39	1.5	1.9	.35	4.0	1.7	.16	.92	.46	.13
6	.14	1.2	.36	1.7	1.7	.30	3.7	5.7	.15	.40	.31	.09
7	.48	.78	.33	6.6	1.4	2.7	2.6	3.1	.12	.39	.26	.07
8	1.4	1.4	.39	2.4	1.2	1.6	5.6	1.7	.09	.31	.22	.08
9	.37	2.5	.87	32	1.0	.51	3.0	1.0	.10	.28	2.7	.08
10	.20	7.4	.53	4.1	.92	.55	1.4	.67	.08	.26	2.4	.05
11	.16	6.3	.34	17	.78	5.0	1.1	.56	.19	.25	4.5	.03
12	.19	1.4	.62	52	7.0	10	.92	.46	.53	2.2	.80	.03
13	2.9	.75	.43	19	9.0	3.5	.80	.48	1.3	.45	.44	.01
14	.40	.75	.26	22	4.7	2.6	.69	1.8	1.2	.87	.29	0
15	2.2	.81	3.4	4.6	4.2	1.3	.64	1.6	.79	.52	.50	0
16	1.2	2.8	.68	2.7	2.0	4.5	.58	7.2	.41	.37	.36	0
17	2.1	71	.37	2.0	8.4	1.3	.95	2.9	.65	.73	1.1	0
18	10	3.0	.21	1.6	1.7	1.1	1.4	1.0	1.0	8.9	.99	0
19	18	3.9	.19	1.4	1.2	.86	1.7	.85	.93	7.3	13	0
20	2.8	5.0	2.8	1.2	1.2	.87	.85	.59	.76	1.3	.99	0
21	2.0	49	1.7	1.0	.90	.83	.59	6.1	.78	1.5	5.7	0
22	.83	7.8	4.6	.86	4.6	5.1	2.5	1.9	2.0	.75	1.1	0
23	.57	4.2	7.0	.76	1.3	7.6	2.2	1.2	2.9	.54	.63	0
24	.46	4.2	1.5	8.3	.74	5.0	3.8	.93	1.7	2.1	.62	0
25	.37	1.7	.82	2.4	.61	9.0	9.4	.65	1.0	.70	.58	0
26	.32	1.4	6.6	.95	.53	6.9	5.4	.45	.40	.45	.40	0
27	12	1.1	3.4	.72	.49	1.5	6.5	.37	1.4	.37	.34	0
28	5.9	1.0	1.9	.62	.46	13	3.4	.52	.97	.33	.29	3.8
29	3.1	.94	.91	13	---	6.5	3.5	.44	1.8	.29	.25	.81
30	3.3	.77	.67	33	---	1.8	1.7	.30	2.1	.26	.49	.60
31	2.0	---	1.1	30	---	5.9	---	.26	---	4.1	.59	---
TOTAL	76.12	185.74	44.50	268.68	136.63	103.30	78.42	48.19	24.30	47.25	42.55	6.62
MEAN	2.46	6.19	1.44	8.67	4.88	3.33	2.61	1.55	.81	1.52	1.37	.22
MAX	18	71	7.0	52	69	13	9.4	7.2	2.9	8.9	13	3.8
MIN	.14	.61	.19	.62	.46	.30	.58	.26	.08	.25	.22	0
AC-FT	151	368	88	533	271	205	156	96	48	94	84	13

CAL YR 1974 TOTAL 1513.49 MEAN 4.15 MAX 128 MIN .14 AC-FT 3000
WTR YR 1975 TOTAL 1062.30 MEAN 2.91 MAX 71 MIN 0 AC-FT 2110

PEAK DISCHARGE (BASE, 500 CFS).--Nov. 17 (1045) 562 cfs (8.62 ft).

16325000 KAMANANUI STREAM AT PUPUKEA MILITARY ROAD, NEAR MAUNAWAI

LOCATION.--Lat 21°37'25", long 158°01'04", on right bank 75 ft (23 m) upstream from Pupukea Military Road and 3.5 mi (5.6 km) southeast of Maunawai.

DRAINAGE AREA.--3.13 mi² (8.11 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961, 1963, June 1963 to current year.

GAGE.--Water-stage recorder and combination pipe culverts and paved road control. Altitude of gage is 590 ft (180 m), from topographic map.

AVERAGE DISCHARGE.--12 years, 11.8 ft³/s (0.334 m³/s), 8,550 acre-ft/yr (10.5 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 3,390 ft³/s (96.0 m³/s) Jan. 30 (gage height, 10.06 ft or 3.066 m), from rating curve extended as explained below; no flow for many days in September.
Period of record: Maximum discharge, 3,390 ft³/s (96.0 m³/s) Jan. 30, 1975 (gage height, 10.06 ft or 3.066 m), from rating curve extended above 42 ft³/s (1.19 m³/s) on basis of slope-area measurement at gage height 10.06 ft (3.066 m); no flow Aug. 26 to Sept. 1, Sept. 23, Oct. 15-25, 1971, many days in September 1975.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	3.6	4.2	6.0	500	3.2	6.7	3.0	1.2	6.4	3.5	.23
2	1.6	2.5	3.9	4.0	85	3.1	3.7	2.7	1.2	3.0	1.1	.19
3	2.0	2.0	3.8	3.5	50	3.5	3.8	2.6	1.2	1.4	.56	.15
4	2.3	1.8	3.7	3.0	40	3.4	8.1	2.5	1.1	.74	.47	.09
5	1.8	2.2	3.6	4.0	45	3.1	13	2.8	1.1	.61	.43	.06
6	1.5	1.3	3.5	3.6	15	3.0	7.7	16	1.0	.51	.47	.03
7	1.5	3.3	3.6	8.0	10	3.2	10	12	1.0	.47	.51	0
8	1.5	3.6	3.7	16	9.6	4.2	6.8	5.7	.92	.51	.47	0
9	3.2	4.8	4.2	60	9.2	3.1	7.7	3.9	.92	.61	.47	0
10	1.9	25	4.5	7.2	9.0	3.1	4.8	2.9	.92	.56	1.7	0
11	1.4	5.4	3.5	20	8.0	4.3	3.6	2.5	1.0	.61	5.2	0
12	1.4	3.7	3.7	71	7.2	41	3.2	2.2	1.7	1.4	3.0	0
13	1.4	3.4	4.4	24	12	5.4	3.0	2.1	1.7	1.9	1.2	0
14	1.5	2.3	3.4	53	15	3.5	2.9	4.1	2.8	1.3	.61	0
15	1.5	2.6	9.0	16	9.0	3.2	3.0	3.8	2.2	1.9	.56	0
16	1.9	4.9	4.5	8.5	7.0	6.8	3.0	11	2.3	.92	.51	0
17	2.4	79	3.1	6.3	11	4.5	6.7	11	1.0	.61	.61	0
18	2.9	12	2.7	5.2	6.0	3.0	5.7	3.4	.83	2.4	.92	0
19	39	11	2.7	4.4	4.8	2.5	5.1	2.6	.79	19	9.3	0
20	6.6	19	11	3.8	4.6	2.4	3.7	2.5	.74	3.1	3.3	0
21	3.8	309	5.5	3.5	4.5	2.4	2.9	2.6	.83	2.1	1.4	0
22	2.3	90	7.6	3.1	11	2.8	2.7	8.6	.74	1.1	2.8	0
23	1.8	21	13	3.0	6.7	19	3.5	2.6	.74	.67	1.1	0
24	1.4	12	8.8	16	4.2	6.7	4.9	2.0	.74	.61	.67	0
25	1.1	8.7	4.8	9.8	3.7	5.7	19	1.8	1.3	2.1	.56	0
26	.97	7.0	22	3.8	3.5	4.3	7.4	1.6	1.5	1.0	.61	0
27	34	6.0	10	3.0	3.5	3.1	9.7	1.6	1.1	.56	.51	0
28	20	5.7	11	2.7	3.4	30	7.7	1.6	1.4	.47	.40	.33
29	7.1	4.9	5.0	12	---	13	5.7	1.6	1.4	.37	.37	3.8
30	5.8	4.6	3.0	310	---	5.4	3.8	1.4	1.0	.37	.34	1.1
31	3.9	---	2.5	100	---	4.9	---	1.3	---	2.1	.28	---
TOTAL	160.97	662.3	179.9	794.4	897.9	206.8	179.5	126.0	36.37	59.40	43.93	5.98
MEAN	5.19	22.1	5.80	25.6	32.1	6.67	5.98	4.06	1.21	1.92	1.42	.20
MAX	39	309	22	310	500	41	19	16	2.8	19	9.3	3.8
MIN	.97	1.3	2.5	2.7	3.4	2.4	2.7	1.3	.74	.37	.28	0
AC-FT	319	1310	357	1580	1780	410	356	250	72	118	87	12

CAL YR 1974 TOTAL 5488.96 MEAN 15.0 MAX 599 MIN .46 AC-FT 10890
WTR YR 1975 TOTAL 3353.45 MEAN 9.19 MAX 500 MIN 0 AC-FT 6650

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-21	2300	8.26	1,320	2-1	/0330	-	/2,800
1-30	0330	10.06	3,390				

/ About.

HAWAII, ISLAND OF OAHU

16330000 KAMANANUI STREAM AT MAUNAWAI

LOCATION.--Lat 21°38'20", long 158°03'27", on right bank at Maunawai, 25 ft (7.6 m) upstream from Elehaha Stream, 4.9 mi (7.9 km) northeast of Waialua School, and 7.3 mi (11.7 km) southwest of Kahuku School.

DRAINAGE AREA.--9.79 mi^2 (25.4 km^2).

PERIOD OF RECORD.--February 1958 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6.1 m), from topographic map. Prior to May 13, 1965, at datum 2.00 ft (0.610 m) higher and May 13, 1965, to May 17, 1966, at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--17 years, 16.2 ft^3/s (0.459 m^3/s), 11,740 acre-ft/yr (14.5 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 5,270 ft^3/s (149 m^3/s) Jan. 30 (gage height, 10.15 ft or 3.094 m), from rating curve extended as explained below; no flow for several days in September.
Period of record: Maximum discharge, 5,610 ft^3/s (159 m^3/s) Apr. 19, 1974 (gage height, 10.43 ft or 3.179 m), from rating curve extended above 150 ft^3/s (4.25 m^3/s) on basis of slope-area measurements at gage heights 6.25 ft (1.905 m), 8.13 ft (2.478 m), 10.14 ft (3.091 m), and 10.43 ft (3.179 m); no flow at times.

REMARKS.--Records fair. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1958-60. (WATER YEARS).--WRD Hawaii 1974: 1971(P), 1972-73(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	3.7	5.4	8.2	912	4.7	12	4.8	.89	4.8	5.8	.12
2	.24	2.3	5.0	6.1	130	4.6	5.8	3.7	.73	8.6	2.8	.12
3	.24	1.3	4.7	4.3	72	4.6	4.8	3.3	.66	2.6	.97	.10
4	.43	.91	4.3	3.9	50	4.9	11	3.2	.60	1.1	.38	.09
5	.54	.71	4.2	5.8	64	4.5	19	3.3	.54	.54	.13	.07
6	.34	1.0	4.1	5.6	21	4.3	12	21	.52	.30	.06	.06
7	.24	1.9	4.2	10	16	4.3	17	11	.48	.17	.04	.03
8	.21	1.4	4.3	21	14	5.1	8.6	12	.53	.12	.03	.03
9	1.5	3.5	5.0	80	13	4.8	9.6	7.0	.43	.07	.03	.02
10	.97	21	5.4	17	13	4.3	7.3	4.8	.38	.07	.02	.01
11	.48	10	4.6	38	11	5.0	4.8	3.3	.48	.08	2.4	.01
12	.27	6.0	4.3	221	10	77	3.9	2.8	.89	.13	6.1	.01
13	.21	3.4	5.2	56	19	14	3.5	2.6	1.7	.73	2.2	.01
14	.19	2.1	4.0	142	24	6.7	3.3	4.8	3.2	1.2	.81	.01
15	.19	1.5	11	44	13	5.6	3.5	8.2	3.5	1.3	.43	0
16	.19	3.9	6.6	25	10	7.0	3.7	13	2.4	1.2	.21	0
17	.38	91	4.5	20	15	7.3	5.3	26	1.2	.54	.09	0
18	.97	21	4.0	17	12	4.3	16	6.4	1.1	.60	.03	0
19	39	7.1	3.5	14	7.9	3.3	6.7	4.3	.66	31	7.9	0
20	11	23	15	12	7.0	3.2	5.6	3.3	.48	9.3	6.4	0
21	5.3	460	7.0	11	6.8	3.0	4.3	2.8	.34	3.9	2.2	0
22	2.4	250	9.0	9.6	15	3.0	3.2	11	.27	2.2	2.6	0
23	1.2	49	18	9.3	15	18	3.2	4.3	.17	1.1	2.2	0
24	.73	20	10	32	7.2	12	5.1	3.0	.13	.60	.97	0
25	.48	11	6.0	31	6.0	6.4	28	2.2	.12	1.2	.48	0
26	.30	9.0	30	14	5.6	5.3	11	1.8	.60	1.4	.27	0
27	13	8.0	11	11	5.2	4.6	12	1.5	.66	.73	.17	0
28	26	7.0	12	8.9	5.0	84	13	1.4	.54	.43	.13	0
29	8.6	6.0	6.7	12	---	53	8.6	1.4	.89	.21	.07	0
30	5.6	5.8	4.3	689	---	14	6.7	1.2	.66	.13	.07	0
31	7.7	---	3.3	225	---	8.5	---	.97	---	.09	.07	---
TOTAL	129.17	1032.52	225.4	1803.7	1499.7	391.3	258.5	180.37	25.75	76.44	46.06	.69
MEAN	4.17	34.4	7.27	58.2	53.6	12.6	8.62	5.82	.86	2.47	1.49	.023
MAX	39	460	30	689	912	84	28	26	3.5	31	7.9	.12
MIN	.19	.71	3.3	3.9	5.0	3.0	3.2	.97	.12	.07	.02	0
AC-FT	256	2050	447	3580	2970	776	513	358	51	152	91	1.4

CAL YR 1974 TOTAL 7656.83 MEAN 21.0 MAX 1490 MIN .19 AC-FT 15190
WTR YR 1975 TOTAL 5669.60 MEAN 15.5 MAX 912 MIN 0 AC-FT 11250

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-21	2330	7.81	2,710	2-1	0400	8.04	2,920
1-30	0400	10.15	5,270				

HAWAII, ISLAND OF OAHU

16343000 HELEMANO STREAM AT HALEIWA

LOCATION.--Lat 21°34'40", long 158°06'12", on left bank at upstream side of private road bridge, 0.3 mi (0.5 km) east of Weed Circle, and 1.1 mi (1.8 km) southeast of Waialua School at Haleiwa.

DRAINAGE AREA.--14.2 mi^2 (36.8 km^2).

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1.57 ft (0.479 m) above mean sea level.

AVERAGE DISCHARGE.--7 years (1968-75), 14.8 ft^3/s (0.419 m^3/s), 10,720 acre-ft/yr (13.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 4,820 ft^3/s (137 m^3/s) Nov. 22 (gage height, 13.25 ft or 4.04 m), from floodmark, from rating curve extended as explained below; minimum, 0.01 ft^3/s (<0.001 m^3/s) Sept. 23-30.
Period of record: Maximum discharge, 18,200 ft^3/s (515 m^3/s) Apr. 19, 1974 (gage height, 22.5 ft or 6.86 m), from floodmark, from rating curve extended above 300 ft^3/s (8.50 m^3/s) on basis of slope-area measurements at gage heights 10.54 ft (3.213 m), 14.2 ft (4.328 m), 15.34 ft (4.676 m), 17.63 ft (5.374 m), and 22.5 ft (6.86 m); no flow at times.

REMARKS.--Records fair except those below 1.0 ft^3/s (0.03 m^3/s), which are poor. Minor regulation by reservoir on upstream tributary. Diversions into basin for irrigation of sugarcane; low flow affected by irrigation return flow and releases. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.07	9.4	9.2	847	.38	.28	.06	.01	.03	.02	.02
2	.06	.06	11	9.0	58	.34	.12	.06	.02	.03	.02	.02
3	.04	.05	.74	9.0	25	.31	.11	.05	.02	.03	.02	.02
4	.04	.05	.34	9.0	13	.28	.10	.04	.02	.03	.02	.02
5	.04	.06	.25	8.5	14	.28	.07	.03	.02	.04	.02	.02
6	.04	.06	.25	9.0	7.5	.22	.06	.04	.02	.04	.03	.02
7	.03	.05	.28	9.7	4.2	.12	.06	.03	.03	.04	.02	.02
8	.03	.06	.25	17	2.7	.12	1.4	.04	.03	.04	.03	.02
9	.03	.06	.25	66	2.3	.14	.34	.06	.02	.04	.02	.03
10	.04	.07	.25	28	2.2	.14	.44	.06	.03	.03	.03	.03
11	.04	.06	.22	74	2.0	.14	.11	.05	.03	.03	.02	.03
12	.03	.05	.25	168	1.7	.16	.06	.05	.03	.02	.02	.03
13	.03	.05	.25	57	1.2	8.9	.04	.05	.03	.02	.02	.02
14	.04	.05	.25	55	.93	1.0	.04	.04	.03	.02	.02	.03
15	.03	.05	.28	49	.74	.28	.03	.03	.03	.03	.02	.03
16	.03	.05	.28	31	.64	.16	.03	.02	.03	.03	.02	.02
17	.03	176	.28	28	.59	.69	.03	.02	.03	.02	.02	.02
18	.03	43	.28	26	.54	1.4	.03	.02	.03	.03	.02	.02
19	.03	12	.25	26	.50	.38	.04	.02	.03	.04	.02	.02
20	.03	1.1	.22	17	2.4	.20	.04	.02	.04	.04	.02	.02
21	.03	385	.22	7.0	.69	.16	.04	.02	.04	.04	.03	.02
22	.02	638	.25	6.2	.46	.14	.04	.03	.04	.04	.03	.02
23	.02	41	2.5	5.4	.38	6.5	.04	.03	.04	.04	.03	.01
24	.02	24	8.2	3.3	.34	5.9	.04	.04	.05	.04	.03	.01
25	.02	15	8.7	97	.34	18	.05	.04	.06	.03	.02	.01
26	.02	5.8	9.0	34	.31	10	.06	.04	.06	.03	.02	.01
27	.02	16	22	16	.31	1.5	.07	.04	.03	.04	.02	.01
28	7.3	15	11	1.8	.38	7.7	.07	.04	.02	.02	.02	.01
29	1.0	14	9.4	.80	---	17	.07	.04	.02	.02	.02	.01
30	.12	12	9.2	215	---	4.7	.07	.02	.03	.03	.02	.01
31	.08	---	9.2	134	---	3.7	---	.01	---	.02	.02	---
TOTAL	9.36	1398.80	115.24	1225.90	990.35	90.94	3.98	1.14	.92	.98	.69	.58
MEAN	.30	46.6	3.72	39.5	35.4	2.93	.13	.037	.031	.032	.022	.019
MAX	7.3	638	22	215	847	18	1.4	.06	.06	.04	.03	.03
MIN	.02	.05	.22	.80	.31	.12	.03	.01	.01	.02	.02	.01
AC-FT	19	2770	229	2430	1960	180	7.9	2.3	1.8	1.9	1.4	1.2

CAL YR 1974	TOTAL	8587.58	MEAN 23.5	MAX 2800	MIN .02	AC-FT	17030
WTR YR 1975	TOTAL	3838.88	MEAN 10.5	MAX 847	MIN .01	AC-FT	7610

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-22	0030	13.25	4,820	2-1	0530	11.79	3,470
1-30	0700	8.15	1,200				

HAWAII, ISLAND OF OAHU

16345000 OPAEULA STREAM NEAR WAHIAWA

LOCATION.--Lat 21°33'55", long 158°00'10", on left bank 4.3 mi (6.9 km) northeast of Leilehua High School in Wahiawa and 8.1 mi (13.0 km) east of Waialua School.

DRAINAGE AREA.--2.98 mi^2 (7.72 km^2).

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,120 ft (341 m), from topographic map.

AVERAGE DISCHARGE.--16 years, 14.1 ft^3/s (0.399 m^3/s), 10,220 acre-ft/yr (12.6 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,060 ft^3/s (58.3 m^3/s) Nov. 21 (gage height, 7.73 ft or 2.356 m), from rating curve extended as explained below; minimum, 0.01 ft^3/s (<0.001 m^3/s) Sept. 25-28.
Period of record: Maximum discharge, 5,540 ft^3/s (157 m^3/s) July 17, 1974 (gage height, 11.94 ft or 3.639 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s) on basis of slope-area measurements at gage heights 6.74 ft (2.054 m) and 10.12 ft (3.085 m); minimum, 0.01 ft^3/s (<0.001 m^3/s) Sept. 25-28, 1975.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEAR).--WSP 1937: 1960.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	7.7	2.4	5.0	237	2.1	12	4.4	1.1	22	9.0	.67
2	.77	3.6	2.2	4.4	22	2.0	5.6	3.5	1.0	7.1	2.3	.88
3	.76	2.0	1.9	3.1	12	4.1	5.3	3.1	.97	2.7	1.2	.61
4	1.4	1.7	1.7	14	32	6.6	17	3.0	.88	1.6	.81	.43
5	2.4	2.3	1.6	15	31	2.6	20	4.9	.86	1.2	.65	.31
6	1.5	2.4	1.5	9.7	8.6	1.9	11	20	.81	1.4	.71	.23
7	1.1	4.0	1.4	30	6.6	3.0	18	14	.76	1.2	.79	.18
8	2.0	3.2	1.5	26	5.6	12	19	13	.72	.91	.56	.16
9	2.7	4.9	1.8	67	5.0	4.5	11	5.4	.68	.83	.50	.13
10	1.4	31	2.1	15	4.6	4.2	7.4	3.3	.66	.80	5.1	.12
11	.89	32	1.7	56	4.0	11	4.6	2.5	.77	1.0	7.7	.12
12	.65	13	1.7	90	3.6	50	3.9	2.2	1.2	.96	5.9	.10
13	.57	4.0	3.1	17	24	11	3.4	2.1	2.2	2.5	1.9	.07
14	3.2	3.1	1.8	93	18	13	3.1	2.6	5.3	2.0	1.1	.05
15	1.9	3.1	12	19	10	10	3.0	7.8	3.5	4.1	.80	.06
16	5.2	6.5	6.0	9.8	6.8	18	3.2	14	2.3	1.8	.60	.09
17	5.1	202	3.0	7.3	16	9.2	3.0	21	1.7	1.2	.76	.08
18	4.1	16	1.7	5.9	8.7	5.0	7.6	6.4	1.3	8.3	3.9	.06
19	62	6.9	1.2	4.9	4.3	3.8	7.3	3.1	.84	37	12	.04
20	12	18	11	4.2	6.2	4.0	6.3	2.4	.64	6.9	6.7	.03
21	5.0	381	6.7	3.7	5.0	3.5	3.1	2.1	.54	3.4	7.4	.03
22	2.3	79	7.9	3.3	13	7.0	2.7	11	.48	2.6	7.6	.02
23	1.6	14	28	2.9	10	25	9.3	3.8	1.5	1.8	2.4	.02
24	1.1	9.5	12	61	4.0	15	13	2.8	3.3	1.3	1.5	.02
25	.89	6.7	4.5	29	2.8	30	32	4.6	4.5	3.5	.96	.02
26	.80	5.1	31	7.2	2.4	10	16	2.2	2.7	1.8	1.0	.01
27	37	4.2	14	4.3	2.2	7.0	15	1.6	1.8	1.0	.87	.01
28	29	3.6	12	3.3	2.3	29	13	1.5	5.8	.78	.62	.32
29	8.9	3.2	4.8	74	---	22	9.6	1.5	2.9	.64	.50	8.5
30	12	2.9	3.1	212	---	7.7	6.1	1.6	8.9	.54	.52	2.3
31	9.2	---	2.5	94	---	9.0	---	1.3	---	5.4	.55	---
TOTAL	218.53	876.6	187.8	991.0	507.7	343.2	291.5	172.7	60.61	128.26	86.90	15.67
MEAN	7.05	29.2	6.06	32.0	18.1	11.1	9.72	5.57	2.02	4.14	2.80	.52
MAX	62	381	31	212	237	50	32	21	8.9	37	12	8.5
MIN	.57	1.7	1.2	2.9	2.2	1.9	2.7	1.3	.48	.54	.50	.01
AC-FT	433	1740	373	1970	1010	681	578	343	120	254	172	31

CAL YR 1974 TOTAL 6244.69 MEAN 17.1 MAX 640 MIN .57 AC-FT 12390
WTR YR 1975 TOTAL 3880.47 MEAN 10.6 MAX 381 MIN .01 AC-FT 7700

PEAK DISCHARGE (BASE, 1,200 CFS).--Nov. 21 (2245) 2,060 cfs (7.73 ft); Jan. 30 (0430) 1,510 cfs (6.92 ft).

16400000 HALAWA STREAM NEAR HALAWA

LOCATION.--Lat 21°09'31", long 156°45'53", on right bank 600 ft (183 m) downstream from Hipuapua Stream and 1.5 mi (2.4 km) west of Halawa.

DRAINAGE AREA.--4.62 mi^2 (11.97 km^2).

PERIOD OF RECORD.--July 1917 to July 1932, November 1937 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 210 ft (64 m), from topographic map. Prior to June 25, 1923, at site 350 ft (107 m) upstream at different datum. June 25, 1923, to July 18, 1932, and Nov. 17, 1937, to Feb. 3, 1965, at present site at datum 2.00 ft (0.610 m) higher.

AVERAGE DISCHARGE.--51 years (1917-31, 1938-75), 29.3 ft^3/s (0.830 m^3/s), 21,230 acre-ft/yr (26.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,870 ft^3/s (53.0 m^3/s) Nov. 21 (gage height, 8.46 ft or 2.579 m), from rating curve extended as explained below; minimum, 1.6 ft^3/s (0.045 m^3/s) Sept. 27, 28.
Period of record: Maximum discharge, 26,900 ft^3/s (762 m^3/s) Feb. 4, 1965 (gage height, 19.91 ft or 6.069 m), from floodmarks, from rating curve extended above 86 ft^3/s (2.44 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.76 ft^3/s (0.022 m^3/s) about Nov. 23, 1962.

REMARKS.--Records fair. No diversion above station. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1319: 1928, 1929(M), 1930-31, 1938-50(M), drainage area. WSP 1719: 1954.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
PEAK VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	9.8	6.2	11	142	7.6	11	11	4.9	62	5.1	4.9
2	3.2	5.4	5.7	7.9	16	5.5	8.5	11	4.2	11	3.3	4.8
3	2.4	4.2	5.2	11	27	9.1	9.0	8.6	3.5	7.6	3.0	4.4
4	2.1	6.2	4.8	9.9	90	7.2	13	7.6	3.4	6.4	6.0	4.0
5	2.0	4.4	4.5	14	33	29	16	11	3.3	6.2	3.8	3.4
6	2.0	11	4.4	7.9	13	11	14	26	3.2	4.8	2.9	3.0
7	2.2	14	4.4	55	9.8	15	16	38	2.9	4.2	2.7	2.8
8	6.6	35	5.7	41	8.3	10	30	38	2.7	3.7	2.5	3.0
9	3.4	33	4.6	53	7.4	6.2	12	31	2.7	3.6	8.1	4.9
10	5.4	30	4.8	23	7.2	5.4	63	11	2.7	3.4	54	4.6
11	3.7	27	4.8	12	13	45	37	8.3	19	3.5	70	3.2
12	3.7	14	7.3	81	147	41	13	7.1	27	25	9.1	2.7
13	3.4	7.2	4.9	79	66	23	10	6.6	7.9	7.0	14	3.1
14	2.5	15	4.2	66	64	25	8.6	6.6	8.8	27	8.6	2.7
15	16	8.3	18	50	38	12	50	8.3	8.8	7.7	23	2.3
16	7.0	24	14	48	45	64	14	6.9	5.2	5.3	8.8	2.8
17	6.5	33	8.1	16	52	13	20	12	3.8	4.9	22	3.2
18	18	10	4.5	14	17	23	20	6.9	4.2	32	20	2.3
19	74	45	4.2	11	13	16	23	5.8	3.5	15	10	2.1
20	13	106	44	9.4	17	11	17	5.0	3.1	8.1	7.6	2.1
21	8.7	480	45	8.5	12	8.3	12	17	3.7	4.9	58	2.0
22	4.5	94	36	7.4	9.9	15	18	6.8	15	4.2	10	1.8
23	3.6	34	44	6.8	19	14	19	9.4	6.9	4.0	7.2	1.9
24	3.0	22	16	9.8	8.1	8.5	19	6.1	7.1	27	12	1.9
25	2.7	14	14	57	6.8	29	44	5.8	18	7.2	8.5	1.8
26	5.2	11	50	11	6.7	20	28	4.9	32	5.2	6.1	1.6
27	79	9.6	44	7.4	9.6	8.6	39	4.3	18	4.2	5.3	1.7
28	22	9.6	16	6.3	10	47	30	4.2	12	3.6	4.8	1.8
29	15	6.3	10	5.7	---	47	20	21	23	3.3	4.1	2.3
30	7.1	6.9	8.1	15	---	30	16	5.7	12	3.2	13	2.1
31	17	---	7.1	29	---	28	---	5.4	---	2.9	9.7	---
TOTAL	351.9	1131.9	452.5	786.0	907.8	634.4	648.1	357.3	272.8	316.1	423.2	85.4
MEAN	11.4	37.7	14.6	25.4	32.4	20.5	21.6	11.5	9.08	10.2	13.7	2.85
MAX	79	480	50	81	147	64	63	38	32	62	70	4.9
MIN	2.0	4.2	4.2	5.7	6.7	5.4	8.5	4.2	2.7	2.9	2.5	1.7
AC-FT	698	2250	898	1560	1800	1260	1290	709	541	627	839	169

CAL YR 1974 TOTAL 7954.8 MEAN 21.8 MAX 480 MIN 2.0 AC-FT 15780
WTR YR 1975 TOTAL 6367.1 MEAN 17.4 MAX 480 MIN 1.7 AC-FT 12630

PEAK DISCHARGE (BASE, 1,900 CFS).--No peak above base.

16403900 KAWAINUI STREAM NEAR PELEKUNU

LOCATION.--Lat 21°07'59", long 156°52'38", on right bank 900 ft (274 m) upstream from confluence with Kapuhi Stream, 2.1 mi (3.4 km) south of former village of Pelekunu, and 5.7 mi (9.2 km) north of Kamalo.

DRAINAGE AREA.--1.17 mi² (3.03 km²).

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (235 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 8.41 ft³/s (0.238 m³/s), 6,090 acre-ft/yr (7.51 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 256 ft³/s (7.25 m³/s) Nov. 21 (gage height, 3.99 ft or 1.216 m), from rating curve extended above 43 ft³/s (1.22 m³/s); minimum, 0.95 ft³/s (0.027 m³/s) Oct. 3, 4, 13-15, 17, 18.

Period of record: Maximum discharge, 1,630 ft³/s (46.2 m³/s) Jan. 8, 1969 (gage height, 7.36 ft or 2.243 m), from rating curve extended above 43 ft³/s (1.22 m³/s); minimum, 0.70 ft³/s (0.020 m³/s) Sept. 22, 1968.

REMARKS.--Records good except those above 90 ft³/s (2.55 m³/s), which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	4.6	4.3	6.9	24	5.4	11	6.6	2.3	6.1	2.5	1.9
2	1.0	3.3	4.1	5.9	12	4.6	9.0	6.6	2.3	4.1	2.1	1.9
3	1.0	3.1	3.9	10	9.8	5.6	9.5	5.5	2.1	3.3	2.3	1.8
4	1.0	4.9	3.6	8.0	11	4.9	10	5.9	2.5	3.0	2.8	1.7
5	1.0	2.9	3.3	9.4	10	7.4	18	9.1	2.2	3.0	2.0	1.6
6	1.0	4.1	3.2	8.4	8.5	5.2	13	8.5	2.0	2.4	1.9	1.6
7	1.3	6.0	3.8	11	7.4	6.6	11	12	1.9	2.3	1.7	1.5
8	1.6	7.6	3.6	11	6.6	6.0	12	12	1.9	2.2	2.1	1.9
9	1.5	9.3	3.1	9.7	6.2	4.9	9.0	10	1.9	2.7	3.8	1.6
10	1.3	12	3.7	8.2	6.3	5.2	7.9	8.0	2.3	2.1	3.4	1.5
11	1.1	22	3.0	7.6	8.7	11	7.2	7.0	6.6	2.6	4.0	1.4
12	1.0	14	3.7	13	10	15	7.3	6.2	5.6	3.6	2.3	1.4
13	1.0	10	2.7	9.7	9.6	9.6	6.0	5.9	4.6	4.8	7.2	1.4
14	.95	12	3.2	10	8.5	12	5.5	5.5	6.7	6.3	4.4	1.3
15	.95	9.0	14	9.8	8.4	9.8	8.7	5.6	4.9	3.4	5.6	1.4
16	1.0	16	10	8.5	9.6	15	6.2	4.8	3.2	2.8	3.9	3.8
17	.95	28	5.6	7.4	13	12	7.0	4.2	3.0	3.9	6.3	1.5
18	3.0	14	4.9	6.6	9.1	14	8.2	4.1	2.9	9.2	6.3	1.3
19	7.4	27	4.9	5.9	7.8	11	10	4.0	2.4	6.4	4.2	1.3
20	2.3	39	13	5.2	6.7	9.1	9.1	4.1	2.4	4.4	3.7	1.3
21	1.5	104	12	4.8	6.0	8.0	8.5	5.0	2.3	3.7	5.5	1.2
22	1.3	25	9.7	4.4	6.5	8.8	8.0	3.7	2.4	3.2	3.9	1.2
23	1.2	14	11	4.1	7.3	9.1	8.2	3.3	2.2	3.0	3.9	1.2
24	1.2	10	11	7.5	5.2	7.2	10	3.1	2.8	6.8	3.7	1.2
25	1.4	8.8	11	31	4.8	6.7	14	3.0	5.2	3.9	3.4	1.2
26	2.4	7.6	19	12	5.6	6.0	10	2.9	5.6	3.4	2.7	1.2
27	15	6.6	18	8.8	6.2	5.2	9.2	2.8	5.2	2.9	2.5	1.2
28	9.4	5.9	12	7.6	7.3	20	9.0	2.7	4.2	2.7	2.3	1.2
29	5.4	5.2	9.4	6.7	------	16	8.6	2.6	3.8	2.5	2.3	1.2
30	4.6	4.8	6.2	7.8	------	18	7.4	2.4	3.2	2.4	3.0	1.2
31	6.5	------	8.5	7.6	------	15	------	2.6	------	2.3	2.3	------
TOTAL	81.55	440.7	231.4	274.5	242.1	294.5	278.5	169.7	100.6	115.4	108.0	45.1
MEAN	2.63	14.7	7.46	8.85	8.65	9.50	9.28	5.47	3.35	3.72	3.48	1.50
MAX	15	104	19	31	24	20	18	12	6.7	9.2	7.2	3.8
MIN	.95	2.9	2.7	4.1	4.8	4.6	5.5	2.4	1.9	2.1	1.7	1.2
AC-FT	162	874	459	544	480	584	552	337	200	229	214	89

CAL YR 1974 TOTAL 3,089.75 MEAN 8.47 MAX 190 MIN .95 AC-FT 6,130
WTR YR 1975 TOTAL 2,362.05 MEAN 6.53 MAX 104 MIN .95 AC-FT 4,720

PEAK DISCHARGE (BASE, 300 CFS).--No peak above base.

16404000 PELEKUNU STREAM NEAR PELEKUNU

LOCATION.--Lat 21°08'11", long 156°52'43", on right bank, 0.4 mi (0.6 km) upstream from Pilipililau Stream, 1.9 mi (3.1 km) south of former village of Pelekunu, and 5.8 mi (9.3 km) north of Kamalo.

DRAINAGE AREA.--2.59 mi^2 (6.71 km^2).

PERIOD OF RECORD.--December 1919 to January 1929, September 1937 to November 1947, June 1948 to August 1957, August 1971 to current year. Occasional low-flow measurements and annual maximum, water years 1968-71.

GAGE.--Water-stage recorder. Altitude of gage is 552 ft (168.250 m) above mean sea level (levels by Bureau of Reclamation). Prior to Aug. 25, 1957, at site 300 ft (91 m) downstream at different datum.

AVERAGE DISCHARGE.--30 years (1920-28, 1937-47, 1948-56, 1971-75), 16.6 ft^3/s (0.470 m^3/s), 12,030 acre-ft/yr (14.8 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 346 ft^3/s (9.80 m^3/s) Nov. 21 (gage height, 3.26 ft or 0.994 m), from rating curve extended above 60 ft^3/s (1.70 m^3/s); minimum, 2.2 ft^3/s (0.062 m^3/s) Oct. 3, 4, 6, 12-18.
Period of record: Maximum discharge, 4,120 ft^3/s (117 m^3/s) Nov. 20, 1940 (gage height, 6.81 ft or 2.076 m), from rating curve extended above 39 ft^3/s (1.10 m^3/s) by test on model of station site; minimum, 2.2 ft^3/s (0.062 m^3/s) Sept. 29, Oct. 3, 4, 6, 12-18, 1974.
Flood of undetermined magnitude destroyed station on Jan. 26, 1948.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEAR).--WSP 1569: 1940(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	7.1	7.5	11	57	9.1	21	11	5.4	9.1	5.2	4.4
2	2.4	5.2	7.1	9.1	22	7.9	17	11	5.2	6.4	4.6	4.3
3	2.4	5.2	6.8	22	17	9.6	19	9.6	5.2	6.1	4.6	4.2
4	2.4	7.1	6.4	14	22	8.3	20	10	5.8	5.8	5.4	3.9
5	2.4	4.8	6.1	17	19	12	45	17	5.4	5.4	4.6	3.7
6	2.6	6.1	6.1	14	15	8.7	28	15	5.2	5.2	4.3	3.7
7	2.6	8.7	6.8	21	12	11	21	24	5.2	5.2	4.0	3.6
8	2.8	12	6.4	21	12	10	24	22	5.2	4.8	4.6	4.2
9	3.0	14	6.1	17	11	8.3	16	17	5.2	5.4	6.8	3.8
10	2.8	22	6.4	12	12	8.7	14	14	5.2	4.8	6.8	3.5
11	2.4	44	5.4	11	16	20	12	12	12	5.4	7.5	3.3
12	2.4	25	6.4	29	22	28	13	10	9.1	7.1	5.2	3.3
13	2.2	15	5.2	17	18	16	10	10	8.3	9.3	16	3.3
14	2.2	22	5.7	19	15	22	10	9.6	11	13	8.3	3.0
15	2.4	14	27	18	15	17	16	10	7.9	6.1	10	3.2
16	2.4	36	15	14	18	33	10	8.7	6.1	5.4	7.1	7.8
17	2.2	65	8.3	12	24	21	13	8.3	5.8	7.0	11	3.5
18	5.3	27	7.5	11	15	28	16	7.9	5.8	19	11	3.1
19	12	50	7.9	10	13	19	22	7.9	5.2	10	7.1	3.0
20	4.3	80	25	9.1	12	15	17	7.9	5.2	7.5	6.4	3.0
21	3.0	157	20	8.7	10	12	15	9.1	5.2	6.4	8.7	2.9
22	2.8	49	16	7.9	14	14	14	7.1	5.2	6.1	6.4	2.9
23	2.8	25	18	7.9	14	15	14	6.8	4.8	5.8	6.8	2.9
24	2.6	18	19	17	9.1	12	19	6.4	5.8	13	6.8	2.9
25	2.8	14	16	67	8.7	11	28	6.4	9.1	7.1	6.1	2.9
26	4.6	12	38	21	9.6	9.6	19	6.1	10	6.4	5.2	2.9
27	44	10	35	15	16	8.7	17	6.1	9.1	5.8	5.2	2.9
28	16	9.1	21	12	12	56	16	5.4	7.1	5.4	4.8	2.9
29	8.3	8.3	15	11	------	34	15	5.4	6.8	5.2	4.8	2.9
30	7.1	7.9	16	13	------	40	12	5.4	6.1	5.2	5.8	2.9
31	9.1	------	14	12	------	34	------	5.8	------	4.8	4.8	------
TOTAL	166.9	780.5	405.1	500.7	456.4	558.9	533	312.9	198.6	219.2	205.9	104.8
MEAN	5.38	26.0	13.1	16.2	16.3	18.0	17.8	10.1	6.62	7.07	6.64	3.49
MAX	44	157	38	67	57	56	45	24	12	19	16	7.8
MIN	2.2	4.8	5.2	7.9	8.7	7.9	10	5.4	4.8	4.8	4.0	2.9
AC-FT	331	1,550	804	993	905	1,110	1,060	621	394	435	408	208

CAL YR 1974 TOTAL 5,431.6 MEAN 14.9 MAX 199 MIN 2.2 AC-FT 10,770
WTR YR 1975 TOTAL 4,442.9 MEAN 12.2 MAX 157 MIN 2.2 AC-FT 8,810

PEAK DISCHARGE (BASE, 460 CFS).--No peak above base.

16404200 PILIPILILAU STREAM NEAR PELEKUNU

LOCATION.--Lat 21°08'08", long 156°53'09", on right bank 500 ft (152 m) downstream from left-bank tributary, 1.9 mi (3.1 km) south of former village of Pelekunu, and 5.8 mi (9.3 km) north of Kamalo.

DRAINAGE AREA.--0.49 mi^2 (1.27 km^2).

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (305 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 1.45 ft^3/s (0.0411 m^3/s), 1,050 acre-ft/yr (1.29 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 28 ft^3/s (0.79 m^3/s) Nov. 21 (gage height, 2.45 ft or 0.747 m), from rating curve extended above 3.8 ft^3/s (0.11 m^3/s); minimum, 0.50 ft^3/s (0.014 m^3/s) Sept. 2-8, 21-29.
Period of record: Maximum discharge, 274 ft^3/s (7.76 m^3/s) Dec. 8, 1973 (gage height, 3.78 ft or 1.152 m), from rating curve extended above 3.8 ft^3/s (0.11 m^3/s); minimum, 0.50 ft^3/s (0.014 m^3/s) Sept. 2-8, 21-29, 1975.

REMARKS.--Records good except those above 8 ft^3/s (0.23 m^3/s), which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.62	.74	.78	2.6	.82	1.3	.82	.65	.68	.59	.53
2	.59	.56	.71	.65	1.6	.78	1.1	.82	.68	.65	.56	.53
3	.59	.59	.71	1.6	1.2	.86	1.2	.82	.65	.62	.56	.50
4	.59	.65	.71	1.0	1.9	.78	1.2	.82	.71	.59	.59	.50
5	.56	.56	.71	1.1	1.6	.86	1.6	.90	.68	.59	.56	.50
6	.59	.65	.68	1.0	1.2	.78	1.4	.86	.68	.56	.56	.50
7	.62	.74	.71	1.1	1.2	.82	1.3	.98	.68	.56	.56	.50
8	.62	.74	.68	1.1	1.1	.78	1.3	.98	.68	.56	.56	.53
9	.62	.74	.68	.98	1.1	.74	1.1	.90	.68	.56	.59	.53
10	.65	.78	.68	.86	1.1	.74	1.1	.82	.68	.56	.59	.53
11	.62	1.2	.68	.86	1.3	.82	1.0	.78	.78	.59	.59	.53
12	.62	.82	.74	2.0	1.4	.94	1.1	.74	.71	.62	.56	.56
13	.62	.71	.65	1.4	1.3	.78	.98	.74	.71	.62	.65	.56
14	.62	.86	.68	1.6	1.1	.82	.94	.74	.78	.65	.59	.56
15	.62	.74	1.1	1.4	1.1	.82	1.1	.74	.71	.59	.62	.56
16	.62	1.8	.94	1.1	1.1	1.1	.98	.74	.68	.59	.56	.65
17	.62	3.2	.68	1.0	1.1	.86	1.0	.71	.68	.62	.62	.59
18	.82	1.1	.71	.94	.94	1.0	1.0	.71	.68	.90	.62	.56
19	.82	2.6	.74	.86	.90	.90	1.2	.71	.68	.65	.56	.53
20	.65	4.3	1.2	.86	.86	.82	1.1	.74	.68	.62	.56	.53
21	.65	7.6	1.1	.82	.82	.82	1.0	.74	.68	.59	.59	.50
22	.62	1.9	.82	.78	.94	.86	.98	.74	.65	.56	.56	.50
23	.62	1.3	.78	.82	.90	.86	.94	.71	.65	.56	.59	.50
24	.62	1.1	.78	1.0	.82	.78	1.1	.71	.65	.65	.59	.50
25	.65	.98	.82	3.2	.78	.78	1.3	.71	.68	.56	.59	.50
26	.65	.90	1.2	1.3	.86	.74	.98	.71	.74	.56	.56	.50
27	1.3	.86	1.1	1.1	.86	.71	.94	.71	.71	.56	.56	.50
28	.74	.82	.90	.98	.94	3.3	.94	.71	.68	.56	.56	.50
29	.65	.78	.78	.90	------	2.1	.90	.71	.71	.56	.56	.50
30	.65	.74	.65	1.0	------	1.6	.86	.68	.68	.56	.62	.53
31	.68	------	.82	1.0	------	2.1	------	.68	------	.56	.56	------
TOTAL	20.51	40.94	24.88	35.09	32.62	31.47	32.94	23.88	20.69	18.66	17.99	15.81
MEAN	.66	1.36	.80	1.13	1.17	1.02	1.10	.77	.69	.60	.58	.53
MAX	1.3	7.6	1.2	3.2	2.6	3.3	1.6	.98	.78	.90	.65	.65
MIN	.56	.56	.65	.65	.78	.71	.86	.68	.65	.56	.56	.50
AC-FT	41	81	49	70	65	62	65	47	41	37	36	31

CAL YR 1974 TOTAL 490.60 MEAN 1.34 MAX 21 MIN .56 AC-FT 973
WTR YR 1975 TOTAL 315.48 MEAN .86 MAX 7.6 MIN .50 AC-FT 626

PEAK DISCHARGE (BASE, 80 CFS).--No peak above base.

16405100 MOLOKAI TUNNEL AT EAST PORTAL

LOCATION.--Lat 21°08'38", long 156°55'16", on left bank 100 ft (30 m) downstream from the east portal, 5.3 mi (8.5 km) southeast of Kalaupapa, and 7.5 mi (12.1 km) northeast of Kaunakakai.

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 989 ft (301.4 m), from tunnel plans.

AVERAGE DISCHARGE.--9 years, 2.82 ft^3/s (0.0799 m^3/s), 2,040 acre-ft/yr (2.52 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 29 ft^3/s (0.82 m^3/s) Jan. 27, May 18, 1973; no flow at times.

REMARKS.--Records good. Tunnel diverts from Waikolu Stream and two tributaries; diversion is augmented by water pumped from two wells in Waikolu Valley near the east portal. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.0	1.3	2.1	8.7	1.6	1.6	.37	.90	5.0	2.8	2.9
2	1.4	1.7	1.4	1.6	2.4	.53	.66	1.5	.99	3.9	2.7	2.7
3	1.4	1.4	1.2	7.4	1.3	1.4	.90	2.9	.82	3.1	2.7	2.9
4	1.4	2.0	1.2	2.7	5.4	1.1	2.7	3.0	.99	2.9	2.6	2.9
5	1.4	1.6	1.2	4.2	4.5	3.5	3.4	7.0	.90	2.7	3.1	2.7
6	1.4	1.6	1.2	2.4	1.3	1.7	2.7	7.0	.90	2.7	3.1	2.7
7	1.6	7.7	1.2	4.2	.66	.82	2.1	8.7	.90	2.2	3.1	2.7
8	1.4	10	1.2	4.8	.42	1.5	1.9	7.9	.90	2.3	3.1	2.7
9	1.4	6.6	1.3	3.2	.37	.59	.90	5.9	.90	2.6	3.1	2.1
10	1.4	11	1.2	1.9	.99	.53	.53	2.0	.90	2.6	3.7	2.9
11	1.4	15	1.2	1.6	2.1	2.0	.22	2.0	3.3	2.7	4.3	2.7
12	1.4	5.7	1.4	6.6	5.5	4.0	.66	1.3	4.8	3.3	3.5	2.7
13	1.4	2.3	.99	2.9	3.6	1.2	.74	1.2	2.7	3.5	7.7	2.7
14	1.4	0.0	.99	9.0	1.6	1.7	.44	1.2	7.3	6.8	5.6	2.7
15	1.6	3.6	3.7	5.6	1.1	1.7	.90	1.5	4.2	2.5	10	2.7
16	1.4	11	3.9	2.0	3.2	4.0	.74	1.5	2.0	3.1	4.5	3.2
17	1.4	9.3	1.6	1.6	4.2	1.9	1.1	1.3	1.4	3.0	5.5	3.1
18	1.6	3.6	1.2	1.4	1.3	3.6	2.9	1.1	1.3	12	7.5	2.6
19	5.2	6.5	1.1	1.4	.66	2.6	3.0	1.2	1.1	7.0	3.9	2.5
20	2.5	9.3	3.6	1.4	.37	1.1	2.3	.99	.99	3.9	3.3	2.5
21	1.6	12	4.4	1.3	.29	.74	2.1	2.3	.99	3.3	3.3	2.5
22	1.6	3.8	2.4	1.2	.37	1.3	2.3	1.7	.90	3.1	3.3	2.6
23	1.6	2.6	2.9	1.1	2.4	2.3	1.7	1.3	.96	3.1	3.1	2.9
24	1.6	2.1	2.4	2.6	.74	.99	2.6	1.1	.95	5.3	3.1	2.7
25	1.6	2.0	2.6	9.9	.33	.53	2.9	.99	1.9	4.0	3.0	2.7
26	1.6	1.5	6.3	2.7	1.6	.37	1.7	.90	6.7	3.3	3.1	2.7
27	15	1.4	4.8	1.9	3.8	.29	1.3	1.0	6.0	3.1	2.9	2.7
28	10	1.4	2.3	.53	4.0	2.6	1.3	.90	4.6	2.7	2.9	2.7
29	2.0	1.4	1.5	.29	---	4.2	1.6	2.1	2.4	2.6	2.9	2.4
30	1.6	1.3	1.6	1.9	---	2.1	.66	1.5	3.6	2.6	2.9	2.5
31	5.0	---	1.5	3.8	---	3.5	---	.90	---	2.6	2.9	---
TOTAL	76.7	149.4	64.78	95.22	63.40	55.99	48.55	74.25	67.19	113.5	119.2	81.0
MEAN	2.47	4.98	2.09	3.07	2.26	1.81	1.62	2.40	2.24	3.66	3.85	2.70
MAX	15	15	6.3	9.9	8.7	4.2	3.4	8.7	7.3	12	10	3.2
MIN	1.4	1.3	.99	.29	.29	.29	.22	.37	.82	2.2	2.6	2.1
AC-FT	152	296	128	189	126	111	96	147	133	225	236	161

CAL YR 1974	TOTAL	466.88	MEAN 1.28	MAX 21	MIN 0	AC-FT	926
WTR YR 1975	TOTAL	1009.18	MEAN 2.76	MAX 15	MIN .22	AC-FT	2000

16405300 MOLOKAI TUNNEL AT WEST PORTAL

LOCATION.--Lat 21°07'27", long 156°59'50", on left bank 50 ft (15 m) upstream from the west portal, 2.5 mi (4.0 km) northeast of Kaunakakai, and 4.7 mi (7.6 km) south of Kalaupapa.

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 970 ft (295.7 m), from tunnel plans.

AVERAGE DISCHARGE.--10 years, 5.14 ft^3/s (0.146 m^3/s), 3,720 acre-ft/yr (4.59 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 34 ft^3/s (0.96 m^3/s) Feb. 5, 1972; minimum daily, 1.8 ft^3/s (0.051 m^3/s) Oct. 15, 1967.

REMARKS.--Records excellent. Tunnel diverts from Waikolu Stream and two tributaries; diversion is augmented by water pumped from two wells in Waikolu Valley near east portal and one well in the tunnel near east portal. Water is used for irrigation in west-central Molokai. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	7.1	3.3	4.3	10	4.3	4.1	2.4	2.8	7.0	4.9	5.2
2	2.8	4.1	3.7	3.7	5.0	3.0	3.0	3.2	3.0	6.3	4.7	4.9
3	2.8	3.5	3.3	8.9	3.6	3.5	3.0	5.0	2.8	5.2	4.7	5.2
4	2.8	3.9	3.3	5.0	6.7	3.3	4.5	5.0	3.0	4.8	4.6	4.9
5	2.8	3.7	3.3	6.2	7.0	5.9	5.2	8.6	3.0	4.7	4.9	4.9
6	2.8	3.5	3.3	4.8	3.7	4.1	4.8	9.7	2.8	4.8	4.9	5.0
7	3.0	6.5	3.3	6.2	3.0	3.1	4.8	10	2.8	4.2	4.9	5.0
8	2.8	12	3.3	7.2	2.6	3.7	4.0	10	2.8	4.3	4.9	5.0
9	2.8	8.2	3.3	6.0	2.4	2.6	3.1	8.9	2.8	4.6	4.9	4.4
10	2.8	13	3.1	4.1	3.2	2.8	2.8	4.3	2.9	4.4	5.8	4.9
11	2.8	15	3.3	3.9	4.1	3.7	2.4	3.5	4.7	4.6	6.5	4.9
12	2.8	9.5	3.5	9.0	7.4	6.8	2.6	3.4	7.6	5.2	5.7	4.9
13	2.8	4.3	3.3	5.2	6.2	3.5	3.1	3.1	4.8	5.3	9.0	4.9
14	2.8	7.5	3.3	9.6	3.7	3.7	2.5	3.3	9.0	9.2	8.1	4.9
15	3.0	5.9	5.1	8.2	3.1	3.7	2.8	3.5	6.8	4.5	12	4.9
16	2.8	12	7.5	4.1	5.0	6.8	3.0	3.7	4.5	5.4	7.2	5.1
17	2.8	11	4.1	3.7	6.8	4.4	3.0	3.5	3.5	4.8	6.8	5.8
18	3.0	6.0	3.7	3.5	3.8	5.7	4.5	3.1	3.3	14	10	4.8
19	6.6	6.9	3.5	3.3	3.0	5.0	5.0	3.3	3.1	9.8	6.5	4.7
20	3.9	12	6.0	3.5	2.6	3.3	4.5	3.0	3.1	6.3	5.5	4.7
21	3.0	13	7.0	3.3	2.4	3.0	4.3	4.1	3.1	5.5	5.6	4.7
22	3.0	8.2	5.0	3.3	2.4	3.3	4.7	3.9	3.1	5.2	5.6	4.7
23	3.0	4.0	3.5	3.1	4.8	4.5	3.9	3.3	3.1	4.9	5.5	4.9
24	3.0	4.3	4.8	3.8	3.1	3.4	4.8	3.1	3.1	7.0	5.5	4.9
25	3.0	4.1	4.5	12	2.4	2.8	5.2	3.0	3.7	6.4	5.2	4.9
26	3.0	3.7	8.5	4.8	3.6	2.4	4.3	3.0	8.6	5.4	5.5	4.9
27	17	3.5	7.5	3.9	6.8	2.3	3.7	3.2	8.5	5.2	5.2	4.9
28	12	3.5	4.5	2.8	6.5	4.5	3.6	2.8	7.3	4.7	5.2	4.9
29	5.6	3.3	3.7	2.5	---	6.5	3.9	3.9	4.5	4.6	5.0	4.7
30	4.1	3.3	3.9	3.1	---	4.3	3.0	3.8	5.7	4.6	5.2	4.6
31	6.1	---	3.5	6.0	---	5.6	---	2.8	---	4.6	5.2	---
TOTAL	123.7	207.2	134.9	159.0	124.9	125.7	114.1	137.4	129.8	177.5	185.2	147.1
MEAN	3.99	6.91	4.35	5.13	4.46	4.05	3.80	4.43	4.33	5.73	5.97	4.90
MAX	17	15	8.5	12	10	6.8	5.2	10	9.0	14	12	5.8
MIN	2.8	3.3	3.1	2.5	2.4	2.3	2.4	2.4	2.8	4.2	4.6	4.4
AC-FT	245	411	268	315	248	249	226	273	257	352	367	292

CAL YR 1974 TOTAL 1251.0 MEAN 3.43 MAX 21 MIN 1.9 AC-FT 2480
WTR YR 1975 TOTAL 1700.5 MEAN 4.64 MAX 17 MIN 2.3 AC-FT 3500

16405500 WAIKOLU STREAM AT ALTITUDE 900 FT (274 M), NEAR KALAUPAPA

LOCATION.--Lat 21°08'43", long 156°55'18", on right bank 1.8 mi (2.9 km) southwest of Haupu Bay, 2.3 mi (3.7 km) upstream from mouth, and 5.2 mi (8.4 km) southeast of Kalaupapa.

DRAINAGE AREA.--1.99 mi^2 (5.15 km^2).

PERIOD OF RECORD.--May 1956 to October 1961, July 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 900 ft (274 m), from topographic map. Prior to July 1, 1962, at site 200 ft (61 m) upstream at datum 6.14 ft (1.871 m) higher.

AVERAGE DISCHARGE (since Molokai tunnel diversion began).--14 years (1960-61, 1962-75), 7.81 ft^3/s (0.221 m^3/s), 5,660 acre-ft/yr (6.98 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 433 ft^3/s (12.3 m^3/s) Nov. 21 (gage height, 3.46 ft or 1.055 m), from rating curve extended above 43 ft^3/s (1.22 m^3/s); minimum, 0.06 ft^3/s (0.002 m^3/s) Sept. 9.
Period of record: Maximum discharge, 2,080 ft^3/s (58.9 m^3/s) Apr. 13, 1965 (gage height, 6.12 ft or 1.865 m), from rating curve extended above 43 ft^3/s (1.22 m^3/s); minimum, 0.06 ft^3/s (0.002 m^3/s) Sept. 9, 1975.
Flood of Oct. 31, 1961, reached a stage of 13.62 ft (4.151 m), from floodmarks, former site and datum, discharge, 6,220 ft^3/s (176 m^3/s), by slope-area measurement.

REMARKS.--Records fair except those above 90 ft^3/s (2.55 m^3/s), which are poor. Since Nov. 16, 1960, water diverted above station at times, either into or from Molokai tunnel. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEAR).--WSP 1719: 1959. (WATER YEARS).--WSP 2137: 1963(P), 1964(M), 1965(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	1.1	1.1	3.9	67	3.3	3.9	3.0	.74	.74	.21	.28
2	.92	.74	1.1	2.1	4.2	2.7	2.4	2.1	.74	.74	.21	.28
3	.92	.74	1.1	21	2.4	3.9	4.3	1.6	.74	.59	.21	.21
4	.92	.74	.92	4.2	21	3.6	6.8	1.4	.74	.46	.21	.21
5	.92	.74	.92	8.8	7.3	7.3	17	2.1	.74	.36	.21	.28
6	.92	.92	.92	3.6	2.4	3.6	5.3	2.1	.74	.28	.28	.28
7	.92	1.9	.92	10	2.1	3.0	4.5	4.9	.74	.21	.28	.28
8	.92	2.4	.92	11	1.9	3.9	4.9	2.7	.74	.26	.36	.21
9	.92	1.6	.92	5.9	2.1	2.7	2.4	2.4	.74	.21	.36	.11
10	.92	3.0	.74	2.7	2.4	2.7	2.1	1.1	.74	.21	.36	.21
11	.92	21	.74	2.1	3.9	5.7	1.9	1.1	.74	.28	.46	.21
12	.92	2.7	.74	22	15	10	2.7	1.1	.92	.21	.36	.21
13	.92	1.4	.74	4.2	5.6	2.7	2.7	1.1	.74	.28	1.8	.28
14	.92	9.3	.92	13	3.0	3.6	2.4	1.1	1.6	.92	.36	.36
15	.92	1.9	9.2	7.6	3.0	3.6	3.6	1.1	.92	.36	1.4	.36
16	.92	23	7.8	2.4	5.2	14	3.0	1.1	.74	.21	.28	.36
17	.74	25	2.4	1.9	7.6	3.0	3.6	1.1	.74	.26	.66	.28
18	.92	2.4	1.6	1.4	3.6	9.3	7.7	1.1	.74	6.0	.94	.28
19	1.1	35	1.6	1.4	3.0	5.2	13	1.1	.74	.74	.21	.28
20	.74	36	7.4	1.4	2.7	3.3	5.9	1.1	.74	.36	.15	.15
21	.74	90	6.8	1.4	2.7	3.0	6.3	1.1	.74	.36	.21	.21
22	.74	4.8	4.8	1.4	3.3	4.2	6.3	1.1	.74	.36	.15	.21
23	.74	1.9	5.9	1.4	5.2	5.2	5.6	1.1	.74	.36	.21	.28
24	.74	1.1	4.8	7.7	2.7	3.3	12	1.1	.74	.59	.15	.46
25	.92	1.1	4.2	62	2.7	3.3	17	1.1	.74	.46	.21	.59
26	.92	1.1	15	3.3	3.6	3.3	4.8	1.1	1.1	.36	.28	.21
27	12	1.1	11	1.9	4.8	3.0	4.5	1.1	.92	.36	.28	.21
28	1.9	1.1	3.9	2.4	5.6	47	4.2	1.1	.59	.28	.28	.21
29	.92	1.1	2.1	2.4	---	15	5.2	1.1	.59	.21	.28	.21
30	.74	1.1	1.6	4.4	---	7.2	3.3	.92	.59	.21	.28	.15
31	1.1	---	2.1	5.6	---	9.5	---	.74	---	.21	.21	---
TOTAL	59.66	275.58	106.90	224.5	196.0	201.7	169.3	45.96	23.51	17.48	11.85	7.86
MEAN	1.92	9.19	3.45	7.24	7.00	6.51	5.64	1.48	.78	.56	.38	.26
MAX	12	90	15	62	67	47	17	4.9	1.6	6.0	1.8	.59
MIN	.74	.74	.74	1.4	1.9	2.7	1.9	.74	.59	.21	.15	.11
AC-FT	79	547	212	445	389	400	336	91	47	35	24	16

CAL YR 1974 TOTAL 2118.91 MEAN 5.81 MAX 137 MIN .70 AC-FT 4200
WTR YR 1975 TOTAL 1320.72 MEAN 3.62 MAX 90 MIN .11 AC-FT 2620

PEAK DISCHARGE (BASE, 590 CFS).--No peak above base.

HAWAII, ISLAND OF MOLOKAI

16408000 WAIKOLU STREAM BELOW PIPELINE CROSSING, NEAR KALAUPAPA

LOCATION.--Lat 21°09'45", long 156°55'54", on left bank 0.7 mi (1.1 km) upstream from mouth and 4.4 mi (7.1 km) southeast of Molokai Lighthouse near Kalaupapa.

DRAINAGE AREA.--3.68 mi^2 (9.53 km^2).

PERIOD OF RECORD.--July 1919 to November 1930, August 1931 to July 1932, September 1937 to January 1948, July 1948 to current year. Prior to August 1931, published as "at pipeline crossing, near Kalaupapa."

GAGE.--Water-stage recorder. Datum of gage is 252 ft (76.810 m) above mean sea level (hand levels by Bureau of Reclamation). Prior to Nov. 19, 1930, at site 500 ft (152 m) upstream at different datums. Aug. 14, 1931, to July 20, 1932, and Sept. 20, 1937, to Jan. 26, 1948, at present site at datum 1.49 ft (0.454 m) higher, and July 30, 1948, to June 30, 1962, at present site at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE (since Molokai tunnel diversion began).--15 years (1960-75), 15.5 ft^3/s (0.439 m^3/s), 11,230 acre-ft/yr (13.8 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 518 ft^3/s (14.7 m^3/s) Nov. 21 (gage height, 4.28 ft or 1.305 m), from rating curve extended as explained below; minimum daily, 3.2 ft^3/s (0.091 m^3/s) Oct. 7.
Period of record: Maximum discharge, 6,600 ft^3/s (187 m^3/s) Oct. 31, 1961 (gage height, 13.75 ft or 4.191 m), present datum, from floodmarks, from rating curve extended above 39 ft^3/s (1.10 m^3/s) on basis of slope-area measurement of peak flow; minimum, 2.0 ft^3/s (0.057 m^3/s) Nov. 1, 2, 1925, June 5, 1926.

REMARKS.--Records fair except those above 80 ft^3/s (2.27 m^3/s), which are poor. Diversion above station for domestic use in Kalaupapa, and since Nov. 16, 1960, water has been diverted above station both to and from Molokai tunnel. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1155: 1932(M), 1938-44(M), 1946-48(M). WSP 1319: 1923(M), 1930(M), 1932, 1938-40, 1945(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.0	6.2	6.6	64	9.4	9.2	7.1	5.8	5.3	4.3	4.3
2	4.2	5.5	6.2	5.3	11	7.9	7.6	6.2	5.3	5.1	4.3	4.3
3	4.2	5.5	6.0	22	8.1	8.7	8.5	4.5	5.5	5.1	4.3	4.2
4	4.2	5.5	6.0	7.6	36	8.1	12	4.5	5.8	5.1	4.3	4.2
5	4.2	5.5	6.0	11	20	12	23	4.6	5.5	5.1	4.3	4.2
6	4.2	5.5	5.8	6.9	9.2	8.1	11	5.3	5.5	5.1	4.3	4.2
7	4.2	6.0	5.5	11	7.9	7.4	9.7	7.4	5.5	5.1	4.3	4.2
8	4.2	6.6	5.5	13	7.6	7.9	9.8	6.6	5.5	4.8	4.3	4.3
9	4.2	6.0	5.5	8.9	7.4	7.1	7.6	7.4	5.5	5.1	4.5	4.3
10	4.2	7.1	5.5	6.2	7.1	6.4	7.1	6.4	5.5	5.1	4.5	4.3
11	4.5	34	5.5	5.5	8.1	8.4	6.9	6.4	6.0	5.1	4.5	4.3
12	4.8	8.7	5.3	28	26	15	7.6	6.2	6.2	4.8	4.7	4.3
13	4.8	6.6	5.3	8.7	13	7.4	7.4	6.4	6.0	4.8	5.5	4.2
14	4.8	14	5.1	20	8.4	7.9	6.6	6.4	6.6	5.5	5.1	4.2
15	4.8	6.9	11	15	8.1	7.9	7.9	6.4	6.0	5.1	4.8	4.2
16	4.8	28	12	7.6	9.7	18	7.1	6.4	5.8	4.8	4.7	4.5
17	4.8	35	6.6	6.6	13	8.1	7.9	6.2	6.2	5.1	5.1	4.2
18	5.5	7.9	5.5	6.4	8.1	13	11	6.0	6.0	9.8	4.8	4.2
19	5.5	49	5.5	6.2	7.1	9.2	18	5.8	5.8	6.0	4.5	4.3
20	4.8	54	5.9	6.0	7.1	7.1	11	5.8	5.8	4.8	4.5	4.2
21	4.8	141	11	5.8	6.6	6.9	10	5.8	5.5	4.7	4.5	4.2
22	4.8	14	7.6	5.5	7.1	7.6	10	5.8	5.5	4.7	4.3	4.2
23	4.8	8.7	8.1	5.5	8.9	8.4	8.9	5.8	5.5	4.7	4.3	4.2
24	4.8	7.6	7.6	8.8	6.6	6.4	16	5.8	5.5	4.8	4.3	4.2
25	4.8	6.9	7.1	84	8.4	6.4	21	5.8	5.8	4.7	4.5	4.2
26	4.8	6.6	15	9.7	7.9	6.4	8.9	6.0	6.0	4.7	4.3	4.2
27	15	6.6	13	7.1	9.2	6.2	8.4	5.8	6.0	4.5	4.3	4.3
28	7.6	6.6	7.1	6.9	16	56	7.6	6.4	5.8	4.5	4.2	4.3
29	5.8	6.4	6.0	7.1	---	31	8.7	6.2	5.8	4.5	4.2	4.3
30	5.5	6.4	5.1	8.7	---	10	7.4	5.8	5.5	4.5	4.5	4.3
31	6.0	---	5.3	11	---	19	---	5.8	---	4.5	4.3	---
TOTAL	159.9	514.1	222.8	368.6	355.6	349.3	303.8	187.2	172.7	157.5	139.3	127.5
MEAN	5.16	17.1	7.19	11.9	12.7	11.3	10.1	6.04	5.76	5.08	4.49	4.25
MAX	15	141	15	84	64	56	23	7.4	6.6	9.8	5.5	4.5
MIN	4.2	5.5	5.1	5.3	6.4	6.2	6.6	4.5	5.3	4.5	4.2	4.2
AC-FT	317	1020	442	731	705	693	603	371	343	312	276	253

CAL YR 1974 TOTAL 4342.4 MEAN 11.9 MAX 153 MIN 4.2 AC-FT 8610
WTR YR 1975 TOTAL 3056.3 MEAN 8.38 MAX 141 MIN 4.2 AC-FT 6070

HAWAII, ISLAND OF MOLOKAI

16414000 KAUNAKAKAI GULCH AT KAUNAKAKAI

LOCATION.--Lat 21°06'21", long 157°00'34", on left bank 0.6 mi (1.0 km) upstream from Molokai Ranch pipeline crossing, 1.3 mi (2.1 km) northeast of Kaunakakai Post Office, and 1.7 mi (2.7 km) upstream from mouth.

DRAINAGE AREA.--6.57 mi² (17.02 km²).

PERIOD OF RECORD.--December 1949 to current year. Prior to July 1958, published as Kaunakakai Stream at Kaunakakai.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73 m), from topographic map.

AVERAGE DISCHARGE.--25 years (1950-75), 1.55 ft³/s (0.0439 m³/s), 1,120 acre-ft/yr (1.38 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 290 ft³/s (8.21 m³/s) Nov. 21 (gage height, 4.90 ft or 1.494 m), from rating curve extended as explained below; no flow most of time.
Period of record: Maximum discharge, 3,060 ft³/s (86.7 m³/s) Oct. 31, 1961 (gage height, 9.30 ft or 2.835 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of slope-area measurement of peak flow; no flow at times each year.

REMARKS.--Records good. Flow has been augmented by occasional spillage from Molokai tunnel since May 1965.

REVISIONS (FISCAL YEARS).--WSP 1289: 1950-51. WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0		0	7.9	0						
2		0		0	.95	0						
3		0		0	0	0						
4		0		0	0	0						
5		0		0	0	0						
6		0		0	0	0						
7		0		0	0	0						
8		0		0	0	0						
9		0		0	0	0						
10		0		0	0	0						
11		0		0	0	0						
12		0		0	0	0						
13		0		0	0	0						
14		0		0	0	0						
15		0		0	0	0						
16		0		0	0	0						
17		5.3		0	0	0						
18		0		0	0	0						
19		.21		0	0	0						
20		20		0	0	0						
21		52		0	0	0						
22		3.1		0	0	0						
23		0		0	0	0						
24		0		0	0	0						
25		0		3.6	0	0						
26		0		.04	0	0						
27		0		0	0	0						
28		0		0	0	.27						
29		0		0	---	3.4						
30		0		0	---	0						---
31		---		0	---	0	---		---			
TOTAL	0	80.61	0	3.64	8.85	3.67	0	0	0	0	0	0
MEAN	0	2.69	0	.12	.32	.12	0	0	0	0	0	0
MAX	0	52	0	3.6	7.9	3.4	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	160	0	7.2	18	7.3	0	0	0	0	0	0

CAL YR 1974 TOTAL 514.77 MEAN 1.41 MAX 206 MIN 0 AC-FT 1020
WTR YR 1975 TOTAL 96.77 MEAN .27 MAX 52 MIN 0 AC-FT 192

PEAK DISCHARGE (BASE, 280 CFS).--Nov. 21 (1200) 290 cfs (4.90 ft).

16419500 PAPIO GULCH AT HALAWA

LOCATION.--Lat 21°08'55", long 156°44'16", on left bank 200 ft (61 m) downstream from wooden bridge on Highway 45 and 0.8 mi (1.3 km) south of Halawa.

DRAINAGE AREA.--0.94 mi^2 (2.43 km^2).

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

AVERAGE DISCHARGE.--12 years, 0.876 ft^3/s (0.0248 m^3/s), 635 acre-ft/yr (783,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 118 ft^3/s (3.34 m^3/s) Nov. 21 (gage height, 3.35 ft or 1.021 m); no flow most of time.
Period of record: Maximum discharge, 2,720 ft^3/s (77.0 m^3/s) Apr. 13, 1965 (gage height, 11.25 ft or 3.429 m), from rating curve extended above 37 ft^3/s (1.05 m^3/s) on basis of slope-area measurements at gage heights 4.60 ft (1.402 m), 7.15 ft (2.179 m), and 11.25 ft (3.429 m); no flow at times.

REMARKS.--Records good. Diversion above station for domestic use at Puu O Hoku Ranch.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0		0	4.6	.06	.05					
2		0		0	.56	.04	.03					
3		0		0	2.1	.03	.01					
4		0		0	1.2	.04	0					
5		0		0	.68	.04	0					
6		0		0	.24	.04	0					
7		0		0	.12	.04	0					
8		0		0	.07	.04	0					
9		0		0	.07	.03	0					
10		0		0	.07	.02	0					
11		0		0	.15	.01	0					
12		0		.44	1.4	0	0					
13		0		4.8	2.8	.03	0					
14		0		.73	1.1	.04	0					
15		0		.98	.54	.04	0					
16		0		.93	.54	.22	0					
17		0		.46	.68	.12	0					
18		0		.15	.30	.04	0					
19		0		.09	.18	.02	0					
20		5.3		.07	.15	.01	0					
21		25		.06	.09	0	0					
22		2.3		.04	.07	.01	0					
23		1.4		.01	.09	0	0					
24		.83		0	.06	0	0					
25		.36		.05	.06	0	0					
26		.05		.06	.08	0	0					
27		.01		.02	.09	0	0					
28		0		0	.07	0	0					
29		0		0	---	.06	0					
30		0		0	---	.06	0					
31		---		0	---	.21	---		---			---
TOTAL	0	35.19	0	8.89	18.08	1.25	.09	0	0	0	0	0
MEAN	0	1.17	0	.29	.65	.040	.003	0	0	0	0	0
MAX	0	25	0	4.8	4.6	.22	.05	0	0	0	0	0
MIN	0	0	0	0	.06	0	0	0	0	0	0	0
AC-FT	0	70	0	18	36	2.5	.2	0	0	0	0	0

CAL YR 1974 TOTAL 157.09 MEAN .43 MAX 25 MIN 0 AC-FT 313
WTR YR 1975 TOTAL 63.30 MEAN .17 MAX 25 MIN 0 AC-FT 126

PEAK DISCHARGE (BASE, 210 CFS).--No peak above base.

16501000 PALIKEA STREAM BELOW DIVERSION DAM, NEAR KIPAHULU

LOCATION.--Lat 20°41'03", long 156°04'10", on left bank 50 ft (15 m) downstream from old diversion dam, 2 mi (3 km) northwest of Kipahulu, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--6.29 mi^2 (16.29 km^2).

PERIOD OF RECORD.--February 1927 to September 1929, December 1931 to September 1935, December 1935 to February 1938, May to October, December 1938, January 1939, August 1939 to current year. Published as Oheo Stream at elevation 1,550 ft (472 m) near Kipahulu 1927-29 and as Oheo Stream below diversion dam, near Kipahulu 1930-56.

GAGE.--Water-stage recorder. Datum of gage is 1,546 ft (471 m) above mean sea level (by vertical angles). Prior to Sept. 6, 1929, at site 100 ft (30 m) upstream at different datum.

AVERAGE DISCHARGE.--40 years (1927-28, 1932-34, 1936-37, 1939-75), 58.4 ft^3/s (1.654 m^3/s), 42,310 acre-ft/yr (52.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,820 ft^3/s (79.9 m^3/s) Nov. 21 (gage height, 8.91 ft or 2.716 m); minimum, 0.02 ft^3/s (0.001 m^3/s) on several days in July to September.
Period of record: Maximum discharge, 16,100 ft^3/s (456 m^3/s) Jan. 23, 1965 (gage height, 18.3 ft or 5.58 m), from floodmarks, from rating curve extended above 3,300 ft^3/s (93.5 m^3/s) on basis of computations of peak flow over dam at gage heights 12.68 ft (3.865 m) and 17.5 ft (5.33 m); no flow at times.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1155: 1939(M). WSP 1569: Drainage area. WSP 1719: 1932-34, 1937-40, 1948, 1949-50(P), 1951, 1952-54(P), 1956-58(P). WSP 1937: 1932-38(M), 1940-47(M), 1948-49(P), 1950(M), 1951-53(P), 1956(P), 1957(M), 1958-59(P), 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	21	.41	53	20	17	2.8	5.6	.05	149	.69	.02
2	.07	6.6	.29	6.6	6.6	.56	19	43	.03	8.2	1.6	21
3	.03	1.8	.15	214	48	.35	159	19	.03	1.9	45	.89
4	.02	7.9	.09	366	4.8	.24	188	104	.07	1.1	30	.04
5	7.3	1.6	.05	311	1.2	5.8	354	232	.09	.64	.98	.02
6	6.0	12	.05	311	.72	1.6	347	167	.09	.29	.12	.02
7	42	61	.35	741	.41	34	181	234	.03	.12	.02	.02
8	42	139	.29	908	.19	18	105	85	.03	.05	.02	.10
9	.72	125	.29	613	.65	7.8	65	16	.03	.12	12	.27
10	38	95	7.6	62	11	47	21	4.1	.24	.03	55	6.1
11	4.2	186	5.1	10	39	201	71	2.2	38	.30	45	.13
12	14	32	8.8	4.1	25	382	180	1.4	58	55	3.8	.29
13	.56	4.3	11	5.6	15	260	95	.91	43	38	39	.39
14	.15	1.2	74	3.0	298	286	45	.72	27	49	27	.08
15	1.1	.74	427	1.9	122	112	99	.91	5.8	6.6	60	.05
16	1.4	127	238	1.5	106	380	47	25	.41	2.1	7.6	64
17	1.9	205	22	1.2	247	86	87	3.7	.12	.13	303	4.3
18	23	48	34	.81	30	88	83	1.7	.12	.11	76	.04
19	72	11	13	4.3	37	37	112	4.6	.05	.05	13	.02
20	1.8	188	346	2.2	19	18	70	5.3	.15	.02	4.9	.02
21	.72	662	74	1.2	3.9	26	97	41	4.7	.03	61	.02
22	.15	64	218	.91	1.4	51	50	2.0	5.8	.02	11	.02
23	.09	7.3	155	.64	1.2	127	58	.35	.48	.10	19	.02
24	.03	3.2	209	.48	.64	24	137	.15	9.3	136	4.7	.02
25	.02	2.0	209	24	.35	34	137	.12	28	2.0	.77	.03
26	.03	1.8	561	.81	.19	136	70	.09	24	.05	.25	.05
27	485	2.8	279	.35	.19	10	34	.05	5.8	.02	.03	.04
28	98	1.4	33	.24	85	2.8	34	.03	.91	.02	.03	.47
29	17	.81	18	199	---	2.8	53	2.4	59	.02	.02	4.5
30	122	.64	3.7	866	---	79	25	.24	12	.02	.35	.02
31	120	---	78	481	---	61	---	.09	---	.02	.44	---
TOTAL	1104.39	2020.09	3026.17	5194.84	1124.44	2535.95	3025.8	1002.66	323.33	451.06	822.32	102.99
MEAN	35.6	67.3	97.6	168	40.2	81.8	101	32.3	10.8	14.6	26.5	3.43
MAX	485	662	561	908	298	382	354	234	59	149	303	64
MIN	.02	.64	.05	.24	.19	.24	2.8	.03	.03	.02	.02	.02
AC-FT	2190	4010	6000	10300	2230	5030	6000	1990	641	895	1630	204

CAL YR 1974	TOTAL	21601.86	MEAN 59.2	MAX 2130	MIN .01	AC-FT	42850
WTR YR 1975	TOTAL	20734.04	MEAN 56.8	MAX 908	MIN .02	AC-FT	41130

PEAK DISCHARGE (BASE, 3,700 CFS).--No peak above base.

HAWAII, ISLAND OF MAUI

16508000 HANAWI STREAM NEAR NAHIKU

LOCATION.--Lat 20°48'37", long 156°07'00", on left bank 200 ft (61 m) upstream from Koolau ditch intake and trail, 1.9 mi (3.1 km) southwest of Nahiku, and 4.5 mi (7.2 km) southeast of Keanae.

DRAINAGE AREA.--3.49 mi^2 (9.04 km^2).

PERIOD OF RECORD.--January 1914 to January 1916, November 1921 to current year. Monthly discharge only April to June 1915, published in WSP 1319.

GAGE.--Water-stage recorder. Datum of gage is 1,318 ft (401.7 m) above mean sea level (by vertical angles). Prior to Nov. 1, 1921, at site 50 ft (15 m) downstream at datum 0.12 ft (0.037 m) lower.

AVERAGE DISCHARGE.--53 years (1922-75), 22.8 ft^3/s (0.646 m^3/s), 16,520 acre-ft/yr (20.4 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,600 ft^3/s (73.6 m^3/s) Nov. 21 (gage height, 8.10 ft or 2.469 m), from rating curve extended as explained below; minimum, 1.2 ft^3/s (0.034 m^3/s) Oct. 17.
Period of record: Maximum discharge, about 5,570 ft^3/s (158 m^3/s) Jan. 18, 1916 (gage height, 11.6 ft or 3.54 m), present site and datum, from rating curve extended above 814 ft^3/s (23.1 m^3/s) by test model of station site; minimum, 1.2 ft^3/s (0.034 m^3/s) Oct. 17, 1974.

REMARKS.--Records good. No diversion above station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1045: 1922-43(M). WSP 1569: Drainage area. WSP 1719: 1915(M), 1922, 1924-25, 1927, 1930-35, 1937, 1939-40, 1942-43.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	5.9	2.8	6.9	34	36	6.2	6.0	3.3	11	3.3	4.0
2	1.5	3.5	3.0	5.6	12	8.6	5.8	6.4	3.2	4.3	3.1	3.6
3	1.5	3.0	3.0	83	41	12	14	6.1	3.2	3.6	5.0	3.2
4	1.5	3.0	3.1	196	18	8.7	27	7.8	3.3	3.3	4.4	3.1
5	1.5	2.7	3.1	222	18	25	85	15	3.7	3.1	3.0	2.9
6	1.5	3.9	3.1	128	10	11	70	17	3.5	3.0	2.8	2.8
7	1.6	4.5	3.4	230	7.6	8.2	21	31	4.0	2.9	2.6	2.8
8	1.7	29	3.3	316	6.6	8.1	11	23	3.2	2.8	2.6	3.1
9	1.5	10	3.6	95	6.1	7.5	8.6	13	3.2	2.9	5.3	3.0
10	1.5	11	4.8	18	6.0	9.9	7.0	9.0	3.3	2.8	7.0	3.3
11	1.4	161	5.7	12	7.8	14	6.3	7.7	3.7	3.1	6.7	2.8
12	1.6	36	5.3	12	284	74	5.8	6.9	7.0	6.7	4.4	2.7
13	1.4	13	4.5	12	23	51	5.4	6.2	5.0	6.9	7.5	2.6
14	1.4	33	3.8	18	54	64	5.4	5.8	3.9	19	7.9	2.6
15	1.4	12	69	23	21	42	5.9	5.6	3.5	7.0	14	2.5
16	1.4	5.3	80	17	55	29	5.8	5.3	3.3	4.5	8.7	11
17	1.3	21	9.0	15	100	15	11	4.8	3.1	3.8	79	5.6
18	18	3.9	5.5	13	21	27	16	4.7	3.1	6.7	26	3.1
19	21	7.5	6.4	12	13	22	25	4.5	3.0	4.4	10	2.7
20	2.6	104	138	11	9.5	14	29	4.5	2.9	3.4	6.5	2.7
21	1.8	433	36	9.9	8.1	10	51	4.6	2.9	3.1	5.6	2.6
22	1.6	21	15	9.1	7.8	8.9	21	4.1	2.8	3.0	4.6	2.5
23	1.6	7.7	11	8.5	20	8.0	24	4.0	2.7	2.9	4.2	2.5
24	1.5	5.0	11	15	8.0	7.5	36	3.9	3.1	4.0	4.1	2.5
25	1.5	3.9	42	121	6.8	7.0	21	3.8	4.4	2.9	3.9	3.0
26	1.6	3.4	92	12	6.5	6.8	11	3.7	8.3	2.9	3.5	2.7
27	139	3.1	49	8.8	13	6.4	8.4	3.7	4.2	3.3	3.3	2.5
28	11	2.9	13	7.7	123	6.3	7.4	3.6	3.2	3.0	3.1	2.5
29	3.5	2.8	9.2	16	---	6.4	6.8	3.5	5.7	2.7	3.2	2.4
30	42	2.8	6.6	421	---	13	6.4	3.4	4.6	2.6	18	2.3
31	11	---	6.7	114	---	11	---	3.4	---	2.6	10	---
TOTAL	282.9	958.8	651.9	2188.5	940.8	578.3	564.2	232.0	114.3	138.2	273.3	95.6
MEAN	9.13	32.0	21.0	70.6	33.6	18.7	18.8	7.48	3.81	4.46	8.82	3.19
MAX	139	433	138	421	284	74	85	31	8.3	19	79	11
MIN	1.3	2.7	2.8	5.6	6.0	6.3	5.4	3.4	2.7	2.6	2.6	2.3
AC-FT	561	1900	1290	4340	1870	1150	1120	460	227	274	542	190

CAL YR 1974 TOTAL 7102.7 MEAN 19.5 MAX 433 MIN 1.3 AC-FT 14090
WTR YR 1975 TOTAL 7018.8 MEAN 19.2 MAX 433 MIN 1.3 AC-FT 13920

PEAK DISCHARGE (BASE, 1,700 CFS).--Nov. 21 (1315) 2,600 cfs (8.10 ft).

HAWAII, ISLAND OF MAUI

16512000 KOOLAU DITCH AT NAHIKU WEIR, NEAR NAHIKU

LOCATION.--Lat 20°48'56", long 156°07'15", on right bank between Kapaula and Waiohue Gulches, 1.8 mi (2.9 km) southwest of Nahiku, and 3.8 mi (6.1 km) southeast of Keanae.

PERIOD OF RECORD.--February 1919 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,289.14 ft (392.930 m) above mean sea level. Prior to Apr. 28, 1922, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--56 years, 34.0 ft^3/s (0.963 m^3/s), 24,630 acre-ft/yr (30.4 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 99 ft^3/s (2.80 m^3/s) Apr. 27, May 11, 1963, May 25, 1964; no flow at times.

REMARKS.--Records excellent. Ditch diverts water from nearly all streams from the Makapipi west to the Alo for power, domestic use, and irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	30	16	33	71	67	27	29	14	42	15	23
2	5.6	20	16	29	51	36	25	30	14	21	14	21
3	5.7	17	15	74	61	42	44	28	13	17	22	19
4	5.5	17	14	86	67	38	67	32	14	16	21	18
5	5.7	16	14	87	71	68	85	52	15	15	15	16
6	5.7	21	14	87	50	44	79	55	14	14	14	16
7	6.0	24	14	89	39	36	70	74	16	13	13	15
8	6.4	54	14	91	34	34	51	74	14	13	12	16
9	5.8	41	14	87	31	32	43	55	14	14	22	15
10	5.7	48	17	65	30	39	37	41	14	13	32	15
11	5.6	66	20	52	35	54	33	36	16	14	33	13
12	6.4	71	19	50	74	80	30	32	25	26	23	13
13	5.5	48	16	48	73	64	28	29	20	28	31	13
14	5.2	66	14	58	83	88	27	27	17	58	31	12
15	5.1	49	43	72	72	85	28	26	15	31	45	12
16	5.0	31	81	57	79	83	27	25	14	22	36	30
17	4.9	43	33	50	85	67	37	23	13	20	81	19
18	21	26	23	45	69	75	55	22	12	29	81	13
19	43	38	25	41	53	72	65	21	12	22	50	12
20	12	82	80	38	45	58	62	21	12	18	38	12
21	8.1	87	66	35	40	47	81	21	12	17	34	11
22	6.9	66	55	33	37	42	68	19	11	16	29	11
23	6.6	41	50	34	58	38	70	18	11	15	27	10
24	6.2	32	46	54	37	35	82	18	13	21	26	10
25	6.0	28	63	83	32	33	72	17	16	16	24	12
26	6.2	25	86	54	30	31	52	17	26	15	21	11
27	68	22	84	43	43	29	43	16	17	16	20	10
28	44	20	56	38	63	28	37	16	14	14	19	10
29	20	18	47	48	---	28	34	15	22	13	18	9.7
30	53	17	38	86	---	41	32	15	19	13	52	9.3
31	47	---	35	83	---	39	---	14	---	12	40	---
TOTAL	443.6	1164	1130	1830	1533	1553	1491	918	459	614	939	427.0
MEAN	14.3	38.8	36.5	59.0	54.8	50.1	49.7	29.6	15.3	19.8	30.3	14.2
MAX	68	87	86	91	85	88	85	74	26	58	81	30
MIN	4.9	16	14	29	30	28	25	14	11	12	12	9.3
AC-FT	880	2310	2240	3630	3040	3080	2960	1820	910	1220	1860	847

CAL YR 1974 TOTAL 10348.2 MEAN 28.4 MAX 88 MIN 4.9 AC-FT 20530
WTR YR 1975 TOTAL 12501.6 MEAN 34.3 MAX 91 MIN 4.9 AC-FT 24800

16518000 WEST WAILUAIKI STREAM NEAR KEANAE

LOCATION.--Lat 20°49'16", long 156°08'37", on left bank 500 ft (152 m) upstream from Koolau ditch crossing and trail bridge and 2.8 mi (4.5 km) south of Keanae Post Office.

DRAINAGE AREA.--3.66 mi^2 (9.48 km^2).

PERIOD OF RECORD.--January 1914 to December 1915, May 1916 to October 1917, November 1921 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder. Datum of gage is 1,343.1 ft (409.38 m) above mean sea level (by vertical angles). Prior to Oct. 3, 1974, at present site at datum 0.50 ft (0.15 m) higher.

AVERAGE DISCHARGE.--55 years (1914-15, 1916-17, 1922-75), 35.4 ft^3/s (1.003 m^3/s), 25,650 acre-ft/yr (31.6 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 4,040 ft^3/s (114 m^3/s) Nov. 21 (gage height, 10.05 ft or 3.063 m), from rating curve extended above 650 ft^3/s (18.4 m^3/s); minimum, 0.70 ft^3/s (0.020 m^3/s) Oct. 18.
Period of record: Maximum discharge, 9,900 ft^3/s (280 m^3/s) Jan. 14, 1923 (gage height, 13.5 ft or 4.11 m), from floodmarks, from rating curve extended above 650 ft^3/s (18.4 m^3/s); minimum, 0.5 ft^3/s (0.014 m^3/s) July 26, 1922.

REMARKS.--Records good. No diversion above station. Water is diverted by Koolau ditch, 500 ft (152 m) below station, for domestic supply and irrigation of sugarcane in central Maui. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 2137: 1915-16(M), 1923-25(M), 1929-31(M), 1934-35(M), 1937-39(M), 1941-43(M), 1946-47(M), 1948(P), 1949(M), 1952-53(M), 1955-56(M), 1959-60(M).
(WATER YEARS).--WSP 2137: 1960(P), 1961(M), 1963(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	9.1	4.7	8.2	37	65	6.9	6.7	2.4	14	6.3	7.6
2	.86	6.0	4.4	7.2	17	14	6.2	7.3	2.3	4.8	4.6	6.4
3	.86	5.2	4.1	77	56	19	14	6.7	2.3	3.7	7.7	5.5
4	.80	5.5	3.8	227	27	13	24	7.7	3.0	3.6	6.1	4.9
5	.86	5.1	3.5	267	32	31	84	13	3.8	3.2	4.1	4.5
6	.91	16	3.4	129	16	15	56	17	3.5	2.8	4.0	4.2
7	1.2	17	5.3	237	11	11	22	35	4.4	2.5	3.2	4.6
8	1.8	53	6.3	180	9.5	10	14	24	2.8	2.5	3.1	5.9
9	1.2	15	7.0	48	8.2	10	10	13	3.0	3.0	8.7	5.3
10	.97	14	8.7	21	7.8	10	8.7	8.7	3.1	2.4	8.9	5.2
11	.94	200	12	15	12	14	7.5	7.5	3.8	4.0	9.0	5.4
12	1.3	66	12	17	291	102	7.0	6.6	8.6	15	6.4	5.0
13	1.0	24	9.6	13	31	64	6.7	6.0	5.1	10	13	3.8
14	.88	63	6.2	14	43	88	6.3	5.8	3.6	31	13	3.2
15	.84	22	76	19	21	55	7.3	5.7	3.2	9.0	21	3.3
16	.86	15	84	13	65	29	6.9	5.2	2.8	6.1	15	29
17	.84	13	16	11	126	18	12	4.7	2.5	5.1	120	9.5
18	28	9.3	11	8.9	26	33	18	4.5	2.5	14	42	5.0
19	37	14	9.8	8.2	16	31	30	4.3	2.2	6.6	15	4.1
20	4.8	169	130	7.2	12	18	45	4.6	2.3	4.9	10	4.7
21	2.1	673	52	6.6	10	13	65	4.3	2.5	4.2	8.6	3.7
22	1.5	34	19	6.2	9.1	10	27	3.7	2.1	3.7	7.1	3.5
23	1.5	16	14	6.0	24	9.1	30	3.4	2.0	3.4	6.8	3.3
24	1.2	11	12	24	9.3	8.2	45	3.2	3.2	5.4	7.1	3.1
25	1.2	9.3	40	199	7.8	7.5	25	3.2	5.5	3.6	7.7	5.1
26	1.6	8.0	91	19	7.5	6.9	14	3.1	10	3.6	5.8	3.9
27	202	7.0	50	11	25	6.3	11	2.9	4.9	9.4	5.7	3.1
28	18	6.3	18	8.7	169	6.3	9.5	2.8	3.4	4.2	5.0	3.0
29	7.0	5.8	13	8.2	---	7.8	8.3	2.7	8.9	3.4	6.1	2.7
30	73	5.3	10	121	---	18	7.5	2.5	5.6	3.0	41	2.5
31	18	---	9.6	42	---	15	---	2.5	---	3.0	19	---
TOTAL	413.90	1516.9	746.4	1779.4	1126.2	758.1	634.8	228.3	115.3	195.1	441.0	161.0
MEAN	13.4	50.6	24.1	57.4	40.2	24.5	21.2	7.36	3.84	6.29	14.2	5.37
MAX	202	673	130	267	291	102	84	35	10	31	120	29
MIN	.80	5.1	3.4	6.0	7.5	6.3	6.2	2.5	2.0	2.4	3.1	2.5
AC-FT	821	3010	1480	3530	2230	1500	1260	453	229	387	875	319

CAL YR 1974 TOTAL 8785.63 MEAN 24.1 MAX 673 MIN .80 AC-FT 17430
WTR YR 1975 TOTAL 8116.40 MEAN 22.2 MAX 673 MIN .80 AC-FT 16100

PEAK DISCHARGE (BASE, 1,900 CFS).--Nov. 21 (1300) 4,040 cfs (10.05 ft); Feb. 12 (1100) 2,020 cfs (7.86 ft).

16523000 KOOLAU DITCH NEAR KEANAE

LOCATION.--Lat 20°49'53", long 156°10'30", on right bank on west side of Keanae Valley, 2.6 mi (4.2 km) southwest of Keanae Post Office, and 5.1 mi (8.2 km) southeast of Kailua.

PERIOD OF RECORD.--January 1910 to December 1912, November 1917 to February 1918, April 1918 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,237.7 ft (377.25 m) above mean sea level (by plane-table traverse). Jan. 1, 1910, to Dec. 31, 1912, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--59 years (1910-12, 1918-75), 101 ft^3/s (2.860 m^3/s), 73,200 acre-ft/yr (90.3 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 266 ft^3/s (7.53 m^3/s) Apr. 19, 1935; no flow at times.

REMARKS.--Records excellent. Ditch diverts at altitude 1,260 ft (384 m) from nearly all streams from the Makapipi west to the Alo for power, domestic use, and irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	98	51	95	194	207	74	78	36	133	58	77
2	14	80	48	81	164	127	68	82	35	59	46	69
3	14	51	46	194	171	148	147	78	35	47	92	61
4	14	56	43	220	203	121	198	94	39	44	71	56
5	14	50	42	221	214	207	215	162	46	42	46	52
6	14	95	40	220	161	140	210	164	42	38	45	49
7	17	114	51	224	118	108	188	210	53	36	39	49
8	22	178	55	224	99	101	145	200	38	35	38	60
9	16	141	57	219	68	97	141	140	40	39	98	54
10	15	155	69	200	83	120	95	105	41	34	128	56
11	14	212	84	162	119	154	84	92	49	45	123	46
12	17	222	73	170	192	220	78	84	100	118	73	44
13	15	190	70	147	210	206	73	77	61	99	130	40
14	13	209	54	157	216	222	71	72	47	197	123	38
15	13	179	115	194	200	216	80	70	43	100	178	38
16	13	127	216	162	216	213	75	66	38	66	139	143
17	13	126	131	134	223	194	105	60	36	58	221	78
18	48	84	86	113	211	210	170	58	34	122	219	46
19	165	102	87	103	172	206	200	56	32	66	168	41
20	43	223	201	92	132	184	201	56	33	54	123	43
21	25	204	205	85	114	140	216	59	35	48	108	39
22	20	177	188	80	102	120	208	51	31	44	88	37
23	19	150	163	80	177	105	207	48	30	42	82	35
24	17	107	138	159	103	93	214	46	40	66	83	34
25	16	89	180	224	88	85	201	45	59	45	84	46
26	19	78	210	175	82	80	151	44	102	45	67	38
27	179	70	218	118	149	75	122	42	53	69	65	34
28	146	63	183	98	223	74	104	41	41	44	58	33
29	84	59	147	109	---	80	93	40	87	39	62	31
30	172	54	112	208	---	143	87	38	59	36	200	30
31	166	---	105	208	---	123	---	37	---	36	146	---
TOTAL	1352	3725	3468	4876	4424	4521	4221	2497	1415	1946	3201	1497
MEAN	43.6	124	112	157	158	146	141	80.5	47.2	62.8	103	49.9
MAX	179	223	218	224	223	222	216	210	102	197	221	143
MIN	13	50	40	80	62	74	68	37	30	34	38	30
AC-FT	2680	7390	6880	9670	8780	8970	8370	4950	2810	3860	6350	2970

CAL YR 1974 TOTAL 30344.3 MEAN 83.1 MAX 223 MIN 1.3 AC-FT 60190
WTR YR 1975 TOTAL 37143 MEAN 102 MAX 224 MIN 13 AC-FT 73670

16531000 KULA DIVERSION FROM HAIPUAENA STREAM NEAR OLINDA

LOCATION.--Lat 20°28'24", long 156°13'27", on left bank of Haipuaena Stream, 3.4 mi (5.5 km) east of Olinda, and 6.2 mi (10.0 km) south of Kailua.

PERIOD OF RECORD.--July 1945 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir since Apr. 2, 1975. Altitude of gage is 4,320 ft (1,317 m), from topographic map.

AVERAGE DISCHARGE.--30 years, 0.638 ft^3/s (0.0181 m^3/s), 462 acre-ft/yr (570,000 m^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 3.9 ft^3/s (0.11 m^3/s) July 18, 1975; no flow Nov. 4, 1964, Dec. 3, 5, 1970, Mar. 27 to Apr. 1, Apr. 10-14, 1975.

REMARKS.--Records good. Water is diverted from Haipuaena Stream at station for domestic use and irrigation of truck crops in the Olinda and Kula areas. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.59	.10	.14	1.3	.88	0	.26	.05	1.9	.44	.30
2	.09	.43	.08	.12	1.1	.62	.05	.20	.03	.43	.30	.18
3	.05	.30	.07	1.2	1.2	.64	.04	.18	.02	.16	.18	.14
4	.04	.26	.05	2.0	1.2	.70	.29	.14	.02	.10	.16	.12
5	.04	.25	.05	2.2	1.2	.76	.48	.81	.03	.08	.16	.10
6	.03	1.3	.04	2.1	.85	.70	.14	1.8	.08	.06	.12	.07
7	.04	1.9	.07	2.2	.45	1.1	.34	3.1	.07	.04	.09	.05
8	.32	1.9	.23	2.0	.32	1.1	.18	2.3	.07	.03	.07	.06
9	.21	1.2	.45	.66	.25	.47	.05	1.0	.05	.02	.07	.09
10	.23	.81	.49	.50	.19	.49	0	.30	.05	.02	.52	.23
11	.44	1.0	.65	.45	.34	.99	0	.20	.14	.04	.77	.30
12	.86	.15	.91	1.2	1.6	2.3	0	.14	1.1	2.4	.34	.20
13	.40	.15	.57	.80	1.2	2.2	0	.12	.99	.90	1.6	.12
14	.23	.17	.38	.50	.67	2.6	0	.10	.38	2.0	1.1	.09
15	.40	.77	.76	.40	.72	2.0	.25	.09	.18	.38	1.4	.08
16	.83	1.3	.18	.30	1.8	1.7	.34	.07	.12	.20	.91	3.0
17	.73	1.3	.15	.25	1.9	1.5	.45	.06	.09	.14	2.1	.77
18	.91	.62	.68	.18	.94	1.7	1.3	.05	.06	3.9	2.0	.20
19	2.0	.54	.54	.14	.59	1.6	1.5	.04	.04	.48	1.0	.14
20	1.3	1.4	1.3	.11	.47	.91	2.5	.03	.03	.30	.43	.14
21	.88	.08	.62	.09	.34	.38	3.0	.04	.07	.38	.58	.12
22	.43	.69	.57	.07	.25	.28	.91	.05	.26	.16	.38	.10
23	.30	.76	.54	.08	.34	.26	1.4	.04	.23	.14	.26	.09
24	.18	.49	.75	1.2	.26	.19	2.3	.03	.12	.34	.20	.07
25	.14	.34	1.6	1.0	.18	.17	2.0	.02	.20	.26	.30	.09
26	.10	.28	2.0	.43	.12	.11	2.0	.02	1.5	.18	.20	.12
27	.30	.24	1.4	.38	1.2	0	2.1	.02	.38	.30	.14	1.9
28	.68	.21	.70	.34	1.9	0	1.0	.07	.18	.18	.14	.91
29	.62	.17	.40	.34	------	0	.64	.23	.81	.14	.16	1.1
30	1.6	.14	.30	.85	------	0	.53	.10	.58	.20	2.9	.53
31	.97	------	.20	1.2	------	0	------	.07	------	.08	1.4	------
TOTAL	15.43	19.74	16.83	23.43	22.88	26.35	23.79	11.68	7.93	15.94	20.42	11.41
MEAN	.50	.66	.54	.76	.82	.85	.79	.38	.26	.51	.66	.38
MAX	2.0	1.9	2.0	2.2	1.9	2.6	3.0	3.1	1.5	3.9	2.9	3.0
MIN	.03	.08	.04	.07	.12	0	0	.02	.02	.02	.07	.05
AC-FT	31	39	33	46	45	52	47	23	16	32	41	23

CAL YR 1974 TOTAL 179.02 MEAN .49 MAX 2.6 MIN .02 AC-FT 355
WTR YR 1975 TOTAL 215.83 MEAN .59 MAX 3.9 MIN 0 AC-FT 428

HAWAII, ISLAND OF MAUI

16538000 SPRECKELS DITCH AT HAIPUAENA WEIR, NEAR HUELO

LOCATION.--Lat 20°51'15", long 156°11'25", on right bank near Spreckels ditch trail between Haipuaena and Puohokamoa Streams, 2.7 mi (4.3 km) west of Keanae, and 4.5 mi (7.2 km) southeast of Huelo.

PERIOD OF RECORD.--April 1922 to current year. Published as "at Haipuaena, near Huelo" 1930-35.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,470.96 ft (448.349 m) above mean sea level (East Maui Irrigation Co. bench mark). Apr. 29, 1922, to Feb. 19, 1930, at same site at different datum. Feb. 20, 1930, to Oct. 25, 1935, at site 100 ft (30 m) upstream at different datum.

AVERAGE DISCHARGE (since termination of powerplant diversion).--14 years (1961-75), 29.4 ft^3/s (0.833 m^3/s), 21,300 acre-ft/yr (26.3 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 150 ft^3/s (4.25 m^3/s) Feb. 10, 1955, Feb. 18, 1956; no flow at times.

REMARKS.--Records excellent. Spreckels ditch diverts from all streams between the Nuaailua and the Kailua above Koolau ditch east of the Puohokamoa, and below Koolau ditch west of the Puohokamoa. About 6 ft^3/s (0.17 m^3/s) was diverted above station to East Maui Irrigation Co. powerplant at Kolea Gulch prior to June 30, 1961, when the plant was abandoned. Water used for domestic supply and irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 770: 1932-33.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	23	9.7	16	48	73	12	14	4.7	47	19	19
2	1.9	15	9.0	16	24	24	11	16	4.4	13	9.4	15
3	1.9	11	8.3	77	43	42	36	13	4.3	10	29	13
4	2.0	13	7.8	113	41	27	61	16	7.3	10	17	11
5	1.9	12	7.3	113	76	72	100	39	13	8.7	9.7	10
6	2.0	41	6.9	104	30	31	72	46	10	7.5	10	9.0
7	3.0	36	15	99	21	24	46	75	13	6.9	7.7	10
8	6.3	73	19	96	17	26	32	63	6.7	6.3	7.0	16
9	3.3	27	15	39	15	21	20	37	9.1	7.2	29	11
10	2.6	35	19	30	15	24	16	22	8.5	6.0	50	11
11	2.3	94	22	26	27	46	14	18	12	14	43	18
12	3.1	72	24	36	101	123	12	14	33	42	20	10
13	3.3	49	17	27	55	89	12	13	15	38	48	7.3
14	2.4	64	12	31	49	110	11	12	9.8	73	44	6.4
15	2.1	40	54	48	39	85	14	12	9.0	26	62	6.7
16	2.1	34	79	28	84	65	12	11	7.3	15	44	57
17	3.0	25	27	22	102	51	25	9.4	6.4	12	126	20
18	21	18	21	18	53	72	47	8.9	6.0	50	90	8.7
19	46	40	24	16	33	58	62	8.4	5.5	15	47	7.4
20	32	102	99	14	24	40	68	9.3	5.7	12	29	8.2
21	12	86	64	13	21	27	80	9.9	8.4	11	28	9.8
22	4.5	48	43	12	17	22	50	7.8	7.6	9.0	21	8.7
23	3.4	32	40	11	32	19	61	7.0	5.4	8.4	20	6.8
24	2.7	23	30	54	17	17	80	6.6	12	20	20	6.3
25	2.5	19	64	113	14	16	57	6.4	20	9.4	26	12
26	3.1	16	113	36	13	14	32	6.2	42	9.8	15	7.6
27	105	14	68	20	44	13	25	5.9	12	21	15	20
28	45	13	41	17	122	16	21	6.1	8.7	9.0	12	12
29	17	12	30	15	---	28	17	6.7	31	7.5	16	6.8
30	76	11	22	51	---	22	17	5.4	14	6.4	84	6.7
31	44	---	19	34	---	16	---	4.8	---	6.5	46	---
TOTAL	459.5	1118	1050.0	1345	1177	1313	1123	529.8	351.8	537.6	1043.8	371.4
MEAN	14.8	37.3	33.9	43.4	42.0	42.4	37.4	17.1	11.7	17.3	33.7	12.4
MAX	105	102	113	113	122	123	100	75	42	73	126	57
MIN	1.9	11	6.9	11	13	13	11	4.8	4.3	6.0	7.0	6.3
AC-FT	911	2220	2080	2670	2330	2600	2230	1050	698	1070	2070	737

CAL YR 1974	TOTAL	9286.6	MEAN 25.4	MAX 127	MIN 1.9	AC-FT	18420
WTR YR 1975	TOTAL	10419.9	MEAN 28.5	MAX 126	MIN 1.9	AC-FT	20670

16541000 KOOLAU DITCH AT HAIPUAENA, NEAR HUELO

LOCATION.--Lat 20°51'17", long 156°11'19", on right bank at Haipuaena Stream, 1,000 ft (305 m) upstream from intake at Puohokamoa Stream, 3.3 mi (5.3 km) southeast of Kailua, and 4.5 mi (7.2 km) southeast of Huelo.

PERIOD OF RECORD.--April 1932 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 1,240 ft (378 m), from topographic map. Prior to Mar. 21, 1933, at datum 1.94 ft (0.591 m) lower, and Mar. 21, 1933, to Mar. 20, 1935, at datum 0.25 ft (0.076 m) lower, than present datum.

AVERAGE DISCHARGE.--43 years, 117 ft^3/s (3.313 m^3/s), 84,770 acre-ft/yr (105 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 300 ft^3/s (8.50 m^3/s) July 1, 17, 1963; no flow at times.

REMARKS.--Records excellent. Ditch is extension of Wailoa ditch east of Alo Stream; it receives water from Makapipi ditch at Hanawi Stream and diverts from nearly all streams from there west to the Alo. Water is used for power, domestic supply, and irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	98	50	98	198	222	78	82	36	134	56	79
2	14	60	48	85	162	127	70	87	35	59	45	69
3	14	51	46	206	175	147	142	81	34	47	88	62
4	14	56	42	265	202	122	205	95	38	44	71	56
5	14	50	41	258	224	211	254	157	46	41	46	52
6	14	91	40	260	156	143	227	170	42	38	45	49
7	17	118	51	276	119	112	191	212	53	35	38	49
8	22	196	54	258	102	107	151	206	38	35	37	60
9	16	136	57	222	91	102	116	158	41	38	89	54
10	15	153	66	204	87	123	100	111	41	34	128	56
11	14	240	79	160	116	159	90	96	48	43	122	45
12	17	235	83	164	237	279	82	87	98	114	74	43
13	15	192	68	144	219	233	78	79	63	100	125	39
14	13	232	53	150	217	268	73	74	48	208	116	37
15	13	180	134	202	206	242	85	72	43	101	168	37
16	13	128	235	159	246	217	78	67	38	67	136	134
17	12	128	125	133	264	196	109	62	35	60	275	75
18	56	87	90	114	212	218	173	60	34	121	237	45
19	166	110	90	104	172	215	209	56	32	68	155	40
20	46	262	243	95	135	156	211	58	32	56	121	43
21	26	279	208	84	118	144	238	60	34	49	107	38
22	20	196	184	78	107	124	202	52	30	45	90	36
23	19	153	159	77	170	109	205	49	30	42	84	34
24	17	110	139	170	106	99	236	46	40	66	84	33
25	17	93	196	267	93	92	204	46	59	46	85	45
26	18	83	266	168	67	87	152	44	102	44	67	38
27	226	72	240	121	146	80	126	41	56	68	66	37
28	148	64	184	100	274	76	107	41	41	44	58	33
29	64	60	146	108	---	84	97	39	86	40	59	30
30	191	54	112	209	---	140	92	38	60	36	208	28
31	164	---	105	205	---	128	---	37	---	35	152	---
TOTAL	1430	3987	3634	5144	4641	4764	4381	2563	1413	1958	3232	1476
MEAN	46.1	133	117	166	166	154	146	82.7	47.1	63.2	104	49.2
MAX	226	279	266	276	274	279	254	212	102	208	275	134
MIN	12	50	40	77	67	76	70	37	30	34	37	28
AC-FT	2840	7870	7210	10200	9210	9450	8690	5080	2800	3880	6410	2930

CAL YR 1974 TOTAL 31,659.26 MEAN 86.7 MAX 280 MIN .38 AC-FT 62800
WTR YR 1975 TOTAL 38603 MEAN 106 MAX 279 MIN 12 AC-FT 76570

16541500 MANUEL LUIS DITCH AT PUOHOKAMOA GULCH, NEAR HUELO

LOCATION.--Lat 20°51'48", long 156°10'49", on right bank at lower portal of tunnel between Haipuaena and Puohokamoa Streams, 2.2 mi (3.5 km) west of Keanae, and 4.4 mi (7.1 km) southeast of Huelo.

PERIOD OF RECORD.--December 1917 to November 1924, January 1925 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 920 ft (280 m), from topographic map.

AVERAGE DISCHARGE.--56 years (1918-24, 1925-75), 8.38 ft^3/s (0.237 m^3/s), 6,070 acre-ft/yr (7.48 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 142 ft^3/s (4.02 m^3/s) Jan. 3, 1927; no flow at times.

REMARKS.--Records good. Ditch is extension of Center ditch and picks up water from streams between the Kolea and the Waikamoi for irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1719: 1918-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	1.8	.68	1.6	3.0	1.7	.60	1.2	.22	2.5	.30	.86
2	.01	.64	.60	1.3	1.9	.71	.56	1.1	.16	.41	.22	.84
3	.01	.43	.52	8.7	2.9	.71	.68	.98	.16	.27	.51	.69
4	.01	.41	.46	38	2.8	.68	1.6	.91	.23	.23	.38	.61
5	.01	.36	.41	22	5.8	1.1	10	1.6	.22	.21	.25	.56
6	.01	.38	.38	10	2.9	.70	5.9	1.8	.19	.17	.22	.50
7	.03	.56	.47	47	2.3	.56	2.6	7.4	.20	.16	.19	.48
8	.10	.69	.52	26	1.9	.53	2.6	2.4	.16	.16	.16	.60
9	.05	.82	.41	8.0	1.7	.48	1.4	1.9	.16	.18	.26	.50
10	.01	1.1	.42	4.4	1.5	.61	1.2	1.1	.16	.16	1.5	.46
11	.01	1.3	.40	3.1	1.8	3.0	1.1	.96	.19	.16	1.6	.41
12	.06	1.4	.52	2.9	66	44	.94	.87	.26	.75	.51	.35
13	.02	1.4	.35	3.2	14	17	.85	.82	.30	2.3	1.4	.33
14	.01	1.3	.30	2.7	12	21	.77	.85	.22	4.1	.65	.28
15	.01	1.3	6.7	5.2	8.3	4.5	.86	.82	.20	.81	1.7	.28
16	.01	1.3	5.9	2.8	16	4.1	.67	.64	.16	.46	1.6	.47
17	.01	1.3	.70	2.2	36	2.6	.82	.56	.14	.38	42	.34
18	.20	1.2	.52	1.9	6.0	6.3	1.9	.51	.12	1.0	9.1	.28
19	1.8	1.2	.59	1.6	4.0	3.7	2.0	.49	.11	.51	3.4	.26
20	.25	5.7	16	1.4	2.8	2.1	2.2	.50	.11	.40	1.9	.26
21	.21	34	7.4	1.2	2.1	1.6	2.2	.56	.19	.32	1.6	.22
22	.04	12	2.4	1.1	1.8	1.4	1.4	.43	.16	.28	1.2	.22
23	.07	2.9	2.7	1.0	1.5	1.2	1.4	.38	.11	.28	.97	.22
24	.07	2.1	1.8	8.2	1.3	1.1	3.3	.34	.13	1.1	.93	.22
25	.03	2.0	9.3	50	1.1	.95	4.2	.31	.43	.42	1.0	.22
26	.07	1.7	23	2.8	.96	.86	1.8	.28	.80	.31	.74	.19
27	5.0	1.3	12	2.0	.90	.77	1.5	.28	.40	.28	.69	.16
28	2.7	1.1	4.1	1.7	28	.98	1.3	.28	.24	.28	.60	.16
29	.57	.89	3.3	1.5	---	1.0	1.2	.25	.48	.22	.56	.16
30	2.2	.77	2.1	6.1	---	.83	1.4	.22	.38	.22	11	.16
31	2.0	---	1.9	2.7	---	.72	---	.22	---	.22	4.0	---
TOTAL	15.63	83.35	106.85	272.3	231.26	127.49	58.95	30.96	6.99	19.25	91.14	11.29
MEAN	.50	2.78	3.45	8.78	8.26	4.11	1.97	1.00	.23	.62	2.94	.38
MAX	5.0	34	23	50	66	44	10	7.4	.80	4.1	42	.86
MIN	.01	.36	.30	1.0	.90	.48	.56	.22	.11	.16	.16	.16
AC-FT	31	165	212	540	459	253	117	61	14	38	181	22

CAL YR 1974 TOTAL 1074.86 MEAN 2.94 MAX 97 MIN .01 AC-FT 2130
WTR YR 1975 TOTAL 1055.46 MEAN 2.89 MAX 66 MIN .01 AC-FT 2090

16570000 NAILILIHAELE STREAM NEAR HUELO

LOCATION.--Lat 20°52'28", long 156°13'06", on left bank 200 ft (61 m) upstream from Wailoa ditch intake, 1,000 ft (305 m) upstream from New Hamakua ditch trail, 1.5 mi (2.4 km) south of Kailua, and 2.4 mi (3.9 km) southeast of Huelo Church.

DRAINAGE AREA.--3.49 mi^2 (9.04 km^2).

PERIOD OF RECORD.--December 1910 to December 1911, October 1913 to June 1918, August to October 1919, December 1919 to June 1924, January 1925 to February 1975 (discontinued). Gage-height records for July to December 1912 at site 700 ft (213 m) downstream not equivalent owing to diversion. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 1,205 ft (367.3 m) above mean sea level (by vertical angles). Dec. 9, 1910, to Dec. 31, 1911, nonrecording gage at site 300 ft (91 m) downstream at different datum. Oct. 8, 1913, to Mar. 20, 1922, water-stage recorder at present site at datum 0.50 ft (0.152 m) higher.

AVERAGE DISCHARGE (since termination of upstream diversion).--50 years (1922-23, 1925-74), 35.1 ft^3/s (0.994 m^3/s), 25,430 acre-ft/yr (31.4 hm^3/yr).

EXTREMES.--Maximum discharge during period October 1974 to February 1975, 4,300 ft^3/s (122 m^3/s) Nov. 21 (gage height, 9.08 or 2.768 m), from rating curve extended as explained below; minimum, 1.8 ft ft^3/s (0.051 m^3/s) Oct. 17, 18.

Period of record: Maximum discharge, 6,410 ft^3/s (182 m^3/s) Nov. 18, 1930 (gage height, 10.74 ft or 3.274 m), from rating curve extended above 600 ft^3/s (17.0 m^3/s) on basis of slope-area measurement at gage height 9.08 ft (2.768 m); minimum, 0.70 ft^3/s (0.020 m^3/s) July 14, 1920.

REVISIONS.--The figures of maximum discharge for the water years 1971-74 have been revised as shown in the following table. They supersede those published in Water Resources Data for Hawaii and other Pacific Areas as indicated.

Water year	Date	Discharge (ft^3/s)	Gage height (feet)
1971	Apr. 23, 1971	4,230	9.02
1972	Feb. 8, 1972	2,520	7.56
1973	Mar. 11, 1973	2,640	7.67
1974	Jan. 31, 1974	2,110	7.12

REMARKS.--Records good. No diversion above station since 1922. All low flow diverted into Wailoa ditch (see sta 16588000) 200 ft (61 m) below station for domestic supply, power, and irrigation. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: 1925-56. WSP 1937: Drainage area. Some figures of peak discharges for water years 1971-73 have been revised as shown in the following table. They supersede figures published in Water Resources Data for Hawaii and other Pacific Areas, Part 1, for those years.

REVISED PEAK DISCHARGE.--Nov. 5 (0030) 2,170 cfs (7.19 ft); Nov. 25 (1800) 2,150 cfs (7.17 ft); Jan. 19 (0145) 2,990 cfs (7.99 ft); Apr. 23 (1400) 4,230 cfs (9.02 ft).
1972: Feb. 8 (1745) 2,520 cfs (7.56 ft); July 15 (1630) 2,490 cfs (7.54 ft).
1973: Oct. 3 (0830) 1,900 cfs (6.88 ft); Mar. 11 (0345) 2,640 cfs (7.67 ft).

NOTE.--Published records for some peak discharges in the fiscal years 1958-60 and water years 1960-70 have been found to be in error; revised records are on file in the district office and will be published in the next water-supply paper.

HAWAII, ISLAND OF MAUI

16570000 NAILIILIHAELE STREAM NEAR HUELO--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1974 TO FEBRUARY 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	18	9.4	16	38							
2	2.5	12	8.3	14	16							
3	2.3	9.8	8.0	69	46							
4	2.3	9.8	7.6	172	35							
5	2.3	9.4	7.3	93	61							
6	2.5	24	6.9	100	21							
7	2.9	17	8.3	196	16							
8	3.8	62	11	160	13							
9	2.5	20	9.0	46	12							
10	2.3	31	11	30	11							
11	2.1	105	13	24	19							
12	2.7	35	14	26	360							
13	2.1	23	10	24	37							
14	2.0	45	8.3	20	43							
15	2.0	24	80	56	29							
16	2.0	24	49	20	83							
17	2.0	20	17	17	128							
18	2.9	15	15	15	37							
19	17	35	28	14	25							
20	4.3	205	187	12	19							
21	2.7	870	54	11	16							
22	2.5	50	35	11	14							
23	2.3	28	33	10	17							
24	2.1	21	23	58	13							
25	2.1	17	83	197	11							
26	2.5	15	156	20	10							
27	270	13	112	14	13							
28	29	12	37	12	153							
29	12	11	30	11	---							
30	98	10	21	34	---							
31	35	---	19	20	---							
TOTAL	523.2	1791.0	1111.1	1522	1296							
MEAN	16.9	59.7	35.8	49.1	46.3							
MAX	270	870	187	197	360							
MIN	2.0	9.4	6.9	10	10							
AC-FT	1040	3550	2200	3020	2570							

CAL YR 1974 TOTAL 10546.9 MEAN 28.9 MAX 870 MIN 2.0 AC-FT 20920

PEAK DISCHARGE (BASE, 1,700 CFS).--Nov. 21 (1100) 4,300 cfs (9.08 ft).

HAWAII, ISLAND OF MAUI

16587000 HONOPOU STREAM NEAR HUELO

LOCATION.--Lat 20°53'20", long 156°15'20", on left bank 75 ft (23 m) upstream from Wailoa ditch intake, 2.2 mi (3.5 km) southwest of Huelo, and 2.5 mi (4.0 km) west of Kailua.

DRAINAGE AREA.--0.64 mi^2 (1.66 km^2).

PERIOD OF RECORD.--December 1910 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,208 ft (368 m) above mean sea level (by vertical angles). Prior to June 19, 1914, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--64 years (1911-75), 4.69 ft^3/s (0.133 m^3/s), 3,400 acre-ft/yr (4.19 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,490 ft^3/s (42.2 m^3/s) Nov. 21 (gage height, 4.49 ft or 1.369 m), from rating curve extended as explained below; minimum, 0.15 ft^3/s (0.004 m^3/s) Oct. 4, 5.
Period of record: Maximum discharge, 5,710 ft^3/s (162 m^3/s) Nov. 18, 1930 (gage height, 7.28 ft or 2.219 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s) by test of model of station site; minimum, 0.02 ft^3/s (0.001 m^3/s) several days in 1933, 1934.

REMARKS.--Records excellent. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1219: 1914(M), 1916-50(M). WSP 1249: 1948-50(P). WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	1.1	2.8	4.7	6.5	3.2	2.5	3.0	.96	1.3	.54	2.5
2	.30	.84	2.7	4.3	3.5	2.7	2.4	2.8	.84	.74	.46	2.4
3	.30	.54	2.5	6.0	3.3	2.6	3.3	2.7	.84	.54	.74	2.1
4	.19	.54	2.3	8.4	3.3	2.7	3.9	2.7	1.2	.54	.54	2.1
5	.19	.46	2.1	7.6	4.7	3.7	6.5	3.2	1.1	.54	.46	2.0
6	.24	1.5	2.1	8.5	3.3	2.7	5.6	3.0	.96	.46	.46	1.8
7	.24	1.3	2.1	13	3.2	2.5	4.9	4.1	.96	.46	.38	1.8
8	.30	1.6	2.1	15	3.0	2.5	4.3	3.9	.84	.46	.38	1.8
9	.24	1.2	2.0	11	2.8	2.4	3.7	3.2	.84	.46	.64	1.7
10	.24	1.7	1.8	6.8	2.8	2.5	3.5	2.7	.84	.46	1.2	1.7
11	.24	3.6	1.8	7.6	3.3	3.8	3.3	2.5	.96	.54	1.2	1.6
12	.24	2.3	1.8	7.3	33	9.6	3.2	2.4	1.1	.84	.64	1.5
13	.24	1.7	1.7	6.7	9.2	5.4	2.8	2.3	1.1	1.0	1.3	1.5
14	.30	1.7	1.5	6.0	8.0	8.5	2.8	2.3	.96	2.5	1.3	1.3
15	.30	1.6	3.1	5.8	6.7	6.5	2.7	2.1	.84	1.2	2.0	1.3
16	.30	2.1	2.6	4.7	7.3	7.1	2.5	2.1	.74	.74	1.5	1.8
17	.30	1.8	2.0	4.3	11	6.5	3.0	2.0	.64	.64	35	1.3
18	.38	1.5	2.0	3.9	7.1	6.7	3.3	2.0	.64	1.6	9.2	1.2
19	.46	1.7	3.2	3.7	6.5	6.2	3.5	1.8	.54	.74	5.8	1.1
20	.24	8.4	10	3.3	5.6	5.4	3.2	1.8	.54	.64	4.3	1.1
21	.19	147	5.2	3.2	5.1	4.7	3.7	1.8	.74	.64	3.9	1.1
22	.19	16	4.5	3.0	4.5	4.5	3.2	1.6	.64	.54	3.2	.96
23	.19	9.2	4.1	2.8	4.3	4.1	3.2	1.5	.54	.54	3.0	.96
24	.19	7.3	3.7	3.3	3.7	3.7	6.0	1.5	.74	1.2	2.8	.84
25	.19	6.0	5.6	9.9	3.3	3.3	5.3	1.5	.96	.64	2.8	.96
26	.19	5.1	11	4.1	3.2	3.0	4.1	1.3	1.2	.54	2.5	.84
27	6.7	4.5	12	3.5	3.2	2.8	3.7	1.2	.74	.54	2.4	.84
28	1.5	3.9	8.2	3.3	4.5	3.5	3.3	1.2	.64	.54	2.1	.84
29	.64	3.5	7.3	3.2	------	3.7	3.3	1.1	.74	.46	2.1	.84
30	2.3	3.0	6.0	3.3	------	4.0	3.2	1.1	.54	.46	6.7	.74
31	1.6	------	5.4	3.2	------	3.0	------	.96	------	.46	3.3	------
TOTAL	19.42	242.68	125.4	183.4	165.9	133.7	109.9	67.36	24.92	22.96	102.84	42.52
MEAN	.63	8.09	4.05	5.92	5.93	4.31	3.66	2.17	.83	.74	3.32	1.42
MAX	6.7	147	12	15	33	9.6	6.5	4.1	1.2	2.5	35	2.5
MIN	.19	.46	1.5	2.8	2.8	2.4	2.4	.96	.54	.46	.38	.74
AC-FT	39	481	249	364	329	265	218	134	49	46	204	84

CAL YR 1974 TOTAL 1,155.20 MEAN 3.16 MAX 147 MIN .19 AC-FT 2,290
WTR YR 1975 TOTAL 1,241.00 MEAN 3.40 MAX 147 MIN .19 AC-FT 2,460

PEAK DISCHARGE (BASE, 270 CFS).--Nov. 21 (1030) 1,490 cfs (4.49 ft).

16588000 WAILOA DITCH AT HONOPOU, NEAR HUELO

LOCATION.--Lat 20°53'20", long 156°15'19", on right bank 100 ft (30 m) downstream from intake at Honopou Stream, 0.5 mi (0.8 km) west of Lupi, and 2.2 mi (3.5 km) southwest of Huelo.

PERIOD OF RECORD.--November 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,208 ft (368.2 m) above mean sea level (by vertical angles).

AVERAGE DISCHARGE.--52 years (1923-75), 177 ft^3/s (5.013 m^3/s), 128,200 acre-ft/yr (158 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 326 ft^3/s (9.23 m^3/s) Apr. 1, 1967; no flow Jan. 24-27, 1923.

REMARKS.--Records excellent. Wailoa ditch receives water from Koolau ditch at Alo Stream and from all streams from there west to Halehaku Gulch at altitude of about 1,200 ft (366 m). Water is used for domestic supply, power, and irrigation in central Maui. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	172	100	186	272	283	143	156	60	218	121	169
2	23	124	94	161	255	225	129	163	57	126	84	147
3	22	96	87	260	244	235	245	149	55	93	148	128
4	22	102	83	288	275	216	283	168	70	86	136	115
5	23	92	79	289	278	283	289	268	87	78	87	104
6	24	155	76	289	259	247	287	275	82	69	85	97
7	28	153	102	292	215	199	285	287	103	64	70	96
8	40	239	122	291	183	208	271	287	66	62	65	126
9	28	189	110	286	161	181	223	275	71	67	150	106
10	24	197	135	284	152	215	189	212	73	59	226	102
11	23	259	148	273	216	250	167	182	92	79	220	99
12	29	251	170	273	277	292	150	161	196	204	152	91
13	24	196	128	263	237	286	139	151	140	148	214	77
14	22	251	102	249	245	290	129	140	95	283	208	70
15	21	208	180	279	216	288	154	136	83	189	268	69
16	21	193	273	270	217	288	134	127	69	136	233	224
17	21	185	223	229	268	286	175	114	61	110	288	155
18	109	157	168	197	280	287	272	107	58	218	291	89
19	169	210	171	178	271	286	283	102	54	147	275	77
20	95	289	279	162	237	283	282	106	56	109	203	81
21	40	298	274	148	215	264	285	111	75	99	198	73
22	31	285	271	139	190	230	282	93	59	86	186	70
23	27	270	268	134	258	202	282	85	53	79	179	65
24	24	224	242	252	184	181	288	80	78	151	175	61
25	26	191	262	292	156	164	287	78	151	91	183	63
26	71	165	286	271	144	152	278	75	212	83	142	72
27	291	145	283	212	216	141	251	71	120	139	135	75
28	165	130	276	178	287	157	217	70	82	84	118	71
29	164	119	261	175	---	212	196	69	131	71	120	55
30	229	109	221	259	---	225	188	63	137	65	276	53
31	209	---	205	271	---	204	---	61	---	63	244	---
TOTAL	2069	5694	5679	7330	6408	7260	6783	4422	2726	3556	5480	2900
MEAN	66.7	190	183	236	229	234	226	143	90.9	115	177	96.7
MAX	291	298	286	292	287	292	289	287	212	283	291	224
MIN	21	92	76	134	144	141	129	61	53	59	65	53
AC-FT	4100	11290	11260	14540	12710	14400	13450	8770	5410	7050	10870	5750

CAL YR 1974 TOTAL 48864 MEAN 134 MAX 298 MIN 21 AC-FT 96920
WTR YR 1975 TOTAL 60307 MEAN 165 MAX 298 MIN 21 AC-FT 119600

16589000 NEW HAMAKUA DITCH AT HONOPOU, NEAR HUELO

LOCATION.--Lat 20°53'28", long 156°15'22", on right bank 15 ft (4.6 m) upstream from tunnel portal, 600 ft (183 m) downstream from Honopou Stream crossing, and 2.1 mi (3.4 km) southwest of Huelo.

PERIOD OF RECORD.--January 1918 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,170 ft (356.6 m) above mean sea level (by vertical angles). Prior to May 14, 1921, at site 300 ft (91 m) upstream at different datum. May 14, 1921, to Mar. 18, 1962, at present site at datum 1.00 ft (0.305 m) higher.

AVERAGE DISCHARGE.--57 years, 36.4 ft^3/s (1.031 m^3/s), 26,370 acre-ft/yr (32.5 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 182 ft^3/s (5.15 m^3/s) Nov. 2, 1967; no flow at times.

REMARKS.--Records excellent. Ditch diverts from streams between Waikamoi Stream and Halehaku Gulch above Center and Lowrie ditches for irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	34	2.2	4.0	81	139	2.2	2.8	1.0	77	1.4	5.0
2	.14	1.0	2.6	3.4	40	12	2.0	2.7	.95	1.5	1.1	2.0
3	.12	.73	1.8	96	2.0	38	30	2.6	.92	.93	43	1.8
4	.05	.65	1.6	156	.16	11	115	2.6	.99	.83	1.8	1.6
5	.07	.57	1.5	157	.02	129	155	44	1.0	.78	.95	1.5
6	.08	49	1.3	158	.02	36	142	76	.98	.71	.86	1.4
7	.12	63	1.4	159	.04	2.2	105	133	1.0	.66	.80	1.3
8	.18	101	1.4	159	.10	6.2	59	149	.99	.65	.74	1.3
9	.14	66	1.4	157	.10	1.7	3.9	79	.92	.71	23	1.3
10	.08	102	1.2	110	.07	6.0	3.3	6.5	.89	.69	72	1.2
11	.07	145	1.5	39	.04	41	3.0	5.1	.86	.64	77	1.2
12	.06	148	4.1	65	.19	156	2.7	4.6	5.6	64	1.6	1.1
13	.07	145	1.0	41	30	148	3.8	3.7	2.2	27	70	1.0
14	.07	141	.92	21	.34	156	3.8	2.4	.95	140	50	.96
15	.06	115	35	108	.22	155	3.7	2.4	.89	40	111	.92
16	.06	59	129	23	.22	153	2.1	2.1	.82	1.4	94	81
17	.06	57	23	5.2	53	107	5.3	1.9	.73	1.2	156	15
18	7.6	1.3	1.3	4.0	93	148	83	1.8	.70	80	154	1.0
19	63	26	9.3	3.5	63	140	120	1.8	.65	3.9	118	.92
20	.70	152	136	3.1	23	81	119	1.7	.65	1.2	70	.90
21	.34	147	130	2.7	5.6	13	150	1.7	.72	1.1	54	.83
22	.14	132	82	2.5	4.8	3.7	120	1.7	.69	1.0	9.5	.79
23	.12	72	56	2.3	29	3.2	125	1.6	.60	.93	3.4	.75
24	.09	20	26	69	4.2	3.0	152	1.5	.64	21	3.2	.71
25	.08	6.2	75	148	3.3	2.6	141	1.5	1.2	1.3	20	.73
26	.10	4.8	160	77	3.0	2.6	43	1.4	41	1.0	2.2	.77
27	106	3.5	160	3.2	27	2.4	6.5	1.3	2.3	1.0	1.9	.73
28	75	3.3	116	2.6	148	2.6	4.2	1.2	.84	1.0	1.7	.70
29	.94	2.9	53	.99	---	9.9	3.3	1.2	31	.92	1.6	.66
30	104	2.6	14	52	---	56	3.3	1.1	10	.85	135	.62
31	110	---	6.5	79	---	31	---	1.1	---	.80	95	---
TOTAL	471.74	1801.95	1235.42	1911.49	611.42	1796.3	1716.1	541.0	112.68	474.70	1374.75	129.69
MEAN	15.2	60.1	39.9	61.7	21.8	57.9	57.2	17.5	3.76	15.3	44.3	4.32
MAX	110	152	160	159	148	156	155	149	41	140	156	81
MIN	.06	.57	.92	.99	.02	1.7	2.0	1.1	.60	.64	.74	.62
AC-FT	936	3570	2450	3790	1210	3560	3400	1070	224	942	2730	257

CAL YR 1974 TOTAL 8666.05 MEAN 23.7 MAX 162 MIN .02 AC-FT 17190
WTR YR 1975 TOTAL 12177.24 MEAN 33.4 MAX 160 MIN .02 AC-FT 24150

HAWAII, ISLAND OF MAUI

16592000 LOWRIE DITCH AT HONOPOU GULCH, NEAR HUELO

LOCATION.--Lat 20°54'57", long 156°15'08", on left bank 0.2 mi (0.3 km) downstream from siphon across Honopou Stream, 1.6 mi (2.6 km) west of Huelo, and 2.7 mi (4.3 km) northwest of Kailua.

PERIOD OF RECORD.--January 1910 to March 1927, February 1930 to current year. Published as "at Opana weir, near Huelo" 1910-27.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 598.0 ft (182.27 m) above mean sea level. Jan. 1, 1910, to Mar. 31, 1927, at site 1.5 mi (2.4 km) downstream at different datum.

AVERAGE DISCHARGE.--61 years (1910-26, 1930-75), 38.0 ft^3/s (1.076 m^3/s), 27,530 acre-ft/yr (33.9 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 116 ft^3/s (3.29 m^3/s) Oct. 31, 1921; no flow at times.

REMARKS.--Records good. Lowrie ditch receives water from Center ditch at Nailiilihaele Stream and diverts from additional streams westward to Maliko Gulch for irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	23	15	20	54	71	15	22	6.3	32	5.8	18
2	1.6	19	25	19	39	21	16	18	6.0	20	4.8	18
3	1.5	18	23	50	36	23	18	17	5.9	15	7.6	28
4	1.4	18	17	75	103	24	25	17	6.8	15	7.3	30
5	1.4	11	13	76	87	69	81	24	6.5	7.1	5.2	25
6	1.6	15	12	75	54	35	65	26	6.3	4.3	5.1	11
7	2.2	16	13	77	31	33	58	66	6.6	4.0	4.4	7.7
8	2.5	38	11	78	27	14	49	61	5.7	4.1	4.1	8.9
9	1.9	27	10	75	24	14	29	46	5.7	5.0	5.0	7.9
10	1.6	23	9.5	70	25	19	33	26	5.7	4.5	11	7.6
11	1.5	62	9.0	60	38	42	26	31	6.2	5.0	13	6.8
12	1.6	66	9.5	43	94	88	26	32	7.1	12	9.3	6.5
13	1.8	28	8.3	47	69	77	26	30	6.5	8.0	19	6.1
14	1.6	49	8.0	46	71	82	20	26	6.1	76	17	5.8
15	1.6	37	21	57	58	78	26	20	5.5	30	20	5.7
16	1.3	24	73	46	62	78	29	17	4.9	29	23	8.1
17	1.3	22	22	44	71	55	20	13	4.5	16	87	18
18	1.6	18	26	31	62	70	33	11	4.5	19	88	5.9
19	21	22	26	22	66	70	40	11	4.1	14	56	5.2
20	16	86	81	19	45	48	37	11	4.3	15	34	5.3
21	6.8	100	78	17	38	34	77	11	4.7	14	48	4.6
22	1.9	65	67	20	35	36	50	9.8	4.3	11	38	4.5
23	1.8	63	51	31	33	35	48	9.1	4.0	11	24	4.8
24	1.7	40	32	48	29	32	79	8.7	4.5	17	14	4.4
25	1.6	43	36	72	30	29	77	8.4	7.2	8.6	14	4.5
26	2.1	39	90	47	30	22	58	8.1	8.5	6.5	11	4.4
27	58	34	77	27	28	15	38	7.9	15	5.9	11	4.1
28	44	18	64	32	79	18	35	7.4	6.2	5.6	9.4	3.9
29	21	19	47	31	---	22	28	7.0	9.1	5.2	9.0	3.7
30	55	23	40	30	---	23	27	6.7	20	5.0	45	3.6
31	35	---	23	42	---	21	---	6.6	---	4.9	50	---
TOTAL	295.7	1066	1037.3	1427	1418	1298	1189	615.7	198.7	429.7	700.0	278.0
MEAN	9.54	35.5	33.5	46.0	50.6	41.9	39.6	19.9	6.62	13.9	22.6	9.27
MAX	58	100	90	78	103	88	81	66	20	76	88	30
MIN	1.3	11	8.0	17	24	14	15	6.6	4.0	4.0	4.1	3.6
AC-FT	587	2110	2060	2830	2810	2570	2360	1220	394	852	1390	551

CAL YR 1974 TOTAL 7882.9 MEAN 21.6 MAX 100 MIN 1.2 AC-FT 15640
WTR YR 1975 TOTAL 9953.1 MEAN 27.3 MAX 103 MIN 1.3 AC-FT 19740

HAWAII, ISLAND OF MAUI

16594000 HAIKU DITCH AT HONOPOU GULCH, NEAR KAILUA

LOCATION.--Lat 20°55'07", long 156°14'58", on right bank on west side of Honopou Gulch, 160 ft (49 m) below new Government Road, 2.5 mi (4.0 km) northwest of Kailua, and 5.0 mi (8.0 km) east of Haiku.

PERIOD OF RECORD.--January 1910 to December 1928, February 1930 to current year. Published as "at Peahi weir, near Huelo" prior to July 1919, as "at Manawai Gulch, near Peahi" July 1919 to December 1928, and as "at Kapalalaea Gulch, near Huelo" February 1930 to January 1940. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 421.54 ft (128.485 m) above mean sea level. Prior to Oct. 7, 1914, at site at Peahi weir on old Haiku ditch at different datum. Oct. 7, 1914, to Dec. 31, 1928, at site 2.9 mi (4.7 km) downstream at different datum. Feb. 19, 1930, to Feb. 20, 1940, at site 0.9 mi (1.4 km) downstream at different datum.

AVERAGE DISCHARGE.--60 years (1910-11, 1913-14, 1915-28, 1930-75), 25.8 ft^3/s (0.731 m^3/s), 18,690 acre-ft/yr (23.0 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 209 ft^3/s (5.92 m^3/s) Nov. 13, 1934, Jan. 8, 9, Feb. 25-27, 1935, Jan. 27, 1938; no flow at times.

REMARKS.--Records excellent. Ditch diverts from all streams between Nailiilihaele Stream and Maliko Gulch for irrigation in central Maui. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	3.3	2.4	4.2	32	41	3.0	2.4	1.3	3.4	.89	2.9
2	.54	.2.7	2.2	3.8	8.7	4.1	2.3	2.5	1.3	1.4	.81	1.8
3	.53	2.2	2.1	21	5.1	3.9	2.4	2.3	1.2	1.1	.88	.67
4	.53	.94	1.9	59	36	3.3	2.6	2.3	1.4	.99	.82	.58
5	.52	.61	1.8	54	45	13	37	2.7	1.3	.99	.86	.56
6	.56	.63	1.7	45	31	3.4	32	2.4	1.3	.92	.79	.53
7	.60	.63	1.8	44	12	3.1	21	40	1.3	.86	.72	.55
8	.57	26	1.7	43	8.4	2.7	3.7	22	1.2	.86	.68	.87
9	.45	7.1	1.7	38	8.0	2.5	2.8	13	1.1	.99	.73	.83
10	.43	3.7	1.6	15	7.6	2.5	2.6	2.5	1.2	.92	.88	.63
11	.47	45	1.5	9.3	5.7	3.1	2.5	2.3	1.2	.99	1.1	.47
12	.49	47	1.7	6.3	57	95	2.4	2.2	1.4	1.4	.81	.53
13	.47	3.6	1.7	11	11	49	2.4	2.1	1.3	1.1	1.1	.52
14	.45	27	1.5	8.7	44	66	2.3	2.1	1.2	47	1.0	.46
15	.46	10	8.3	31	3.5	54	2.6	2.0	1.1	1.9	1.1	.41
16	.46	3.3	26	7.2	3.3	45	2.3	2.0	1.1	1.3	.91	.53
17	.44	2.8	2.8	6.4	51	6.3	2.5	2.0	1.1	1.4	91	.47
18	.51	2.3	1.6	5.9	48	21	2.6	1.9	1.1	2.2	79	.36
19	1.0	1.7	1.7	5.8	18	32	13	1.8	.99	1.8	22	.30
20	.53	79	64	5.2	11	5.0	6.9	1.8	.99	1.6	2.9	.32
21	.48	89	45	4.9	8.8	4.4	55	1.9	.99	.94	2.7	.31
22	.47	47	7.9	4.8	6.6	4.1	20	1.8	.92	.91	1.7	.30
23	.46	19	3.2	4.6	5.9	3.9	2.9	1.7	1.1	1.2	1.1	.35
24	.46	10	2.9	21	5.3	3.6	40	1.6	1.4	1.7	1.2	.33
25	.45	7.3	15	84	4.9	3.5	35	1.5	1.4	.96	1.4	.35
26	.49	5.3	99	17	4.9	3.4	5.2	1.5	1.4	.92	1.5	.33
27	66	4.6	85	4.6	4.4	3.2	4.0	1.5	1.2	.89	.93	.30
28	33	4.0	20	4.1	51	4.4	3.0	1.5	1.1	.89	.84	.30
29	3.3	3.6	6.0	3.8	---	5.4	2.7	1.4	1.2	.83	.83	.30
30	51	3.1	5.1	9.0	---	4.4	2.6	1.4	1.2	.85	14	.28
31	4.9	---	4.8	18	---	4.1	---	1.4	---	.83	39	---
TOTAL	171.58	462.41	423.6	599.6	538.1	500.3	319.3	129.5	35.99	84.04	274.18	17.44
MEAN	5.53	15.4	13.7	19.3	19.2	16.1	10.6	4.18	1.20	2.71	8.84	.58
MAX	66	89	99	84	57	95	55	40	1.4	47	91	2.9
MIN	.43	.61	1.5	3.8	3.3	2.5	2.3	1.4	.92	.83	.68	.28
AC-FT	340	917	840	1190	1070	992	633	257	71	167	544	35

CAL YR 1974 TOTAL 3367.72 MEAN 9.23 MAX 109 MIN .09 AC-FT 6680
WTR YR 1975 TOTAL 3556.04 MEAN 9.74 MAX 99 MIN .28 AC-FT 7050

16599500 OPANA TUNNEL AT KAILIILI

LOCATION.--Lat 20°51'04", long 156°16'17", on left bank at tunnel outlet, 0.3 mi (0.5 km) north of Kailiili, and 2.7 mi (4.3 km) east of Makawao.

PERIOD OF RECORD.--May 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,340 ft (713 m), from topographic map.

AVERAGE DISCHARGE.--10 years, 3.20 ft^3/s (0.0906 m^3/s), 2,320 acre-ft/yr (2.86 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 13 ft^3/s (0.37 m^3/s) Apr. 1, 1969, Apr. 9, 10, 1972, Nov. 12, 1973; minimum daily, 0.11 ft^3/s (0.003 m^3/s) Nov. 5-10, 1973, Oct. 5, 6, 25, 26, 1974.

REMARKS.--Records good. Tunnel diverts from Opana Gulch for domestic use in the Kokomo, Makawao and Pukalani areas. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	1.6	1.8	2.3	6.0	9.2	3.9	2.0	.72	1.5	.23	.44
2	.12	.94	1.6	2.2	5.5	6.2	3.2	2.0	.72	.94	.23	.39
3	.12	.58	1.4	5.5	5.0	5.4	3.3	1.8	.65	.55	.23	.52
4	.12	.52	1.4	10	5.8	4.9	3.4	1.8	.72	.42	.30	.47
5	.11	.52	1.3	11	6.3	5.7	6.6	2.0	.79	.37	.24	.38
6	.11	.94	1.3	9.8	4.9	4.8	6.3	2.4	.72	.33	.40	.32
7	.12	3.2	1.4	11	3.8	4.4	5.4	4.1	.72	.32	.30	.32
8	.13	5.5	1.4	10	3.3	4.6	4.5	4.1	.58	.30	.24	.38
9	.13	3.7	1.4	8.8	3.0	3.9	3.6	3.1	.58	.28	.24	.32
10	.13	1.8	1.4	7.3	2.9	3.6	3.2	2.3	.58	.27	.20	.30
11	.13	6.0	1.4	6.3	3.1	3.4	2.9	1.8	.58	.34	.20	.28
12	.13	8.1	1.4	7.3	7.2	6.6	2.5	1.6	.94	.92	.32	.24
13	.13	5.8	1.4	6.3	6.3	7.5	2.3	1.6	.79	.75	.52	.24
14	.13	7.5	1.3	5.2	4.5	9.4	2.3	1.4	.65	2.7	.58	.22
15	.13	6.6	1.6	5.4	3.9	8.2	2.3	1.4	.52	1.4	.39	.23
16	.13	5.4	8.4	4.3	5.5	6.3	2.2	1.3	.47	.73	1.0	1.6
17	.13	4.9	4.2	3.7	9.0	5.2	2.3	1.3	.47	.50	7.0	1.2
18	.13	2.4	3.0	3.4	6.0	5.5	2.9	1.1	.42	1.4	1.5	.52
19	.17	2.0	2.4	3.1	4.6	6.3	3.1	1.1	.42	1.3	.90	.34
20	.20	7.2	4.8	3.0	4.2	4.8	3.6	1.1	.42	.66	.60	.32
21	.14	12	7.7	2.6	3.7	4.2	4.9	1.0	.42	.56	.54	.27
22	.13	8.2	4.1	2.4	3.4	3.8	3.7	1.1	.37	.47	.46	.24
23	.12	5.5	2.9	2.4	3.6	3.4	3.4	1.1	.37	.40	.44	.24
24	.12	4.1	2.4	4.4	3.1	3.3	4.8	1.0	.47	1.0	.44	.23
25	.11	3.2	3.6	9.7	2.9	3.0	4.8	1.0	.52	.50	.41	.24
26	.11	2.6	9.8	6.8	2.5	3.0	3.6	.94	.79	.42	.38	.26
27	7.0	2.3	7.9	4.4	3.7	2.6	3.0	.94	.72	.41	.34	.24
28	5.2	2.0	4.8	3.7	9.8	3.4	2.6	.86	.47	.40	.34	.21
29	1.4	2.0	3.4	3.4	---	4.9	2.4	.86	.52	.25	.49	.23
30	7.5	1.8	3.0	3.6	---	6.8	2.3	.79	.79	.25	.90	.20
31	3.6	---	2.4	3.8	---	6.3	---	.79	---	.25	.58	---
TOTAL	28.06	118.90	96.3	173.1	133.5	160.6	105.3	49.68	17.90	20.89	20.94	11.39
MEAN	.91	3.96	3.11	5.58	4.77	5.18	3.51	1.60	.60	.67	.68	.38
MAX	7.5	12	9.8	11	9.8	9.4	6.6	4.1	.94	2.7	7.0	1.6
MIN	.11	.52	1.3	2.2	2.5	2.6	2.2	.79	.37	.25	.20	.20
AC-FT	56	236	191	343	265	319	209	99	36	41	42	23

CAL YR 1974 TOTAL 916.66 MEAN 2.51 MAX 12 MIN .11 AC-FT 1820
WTR YR 1975 TOTAL 936.56 MEAN 2.57 MAX 12 MIN .11 AC-FT 1860

NOTE.--No gage-height record July 23 to Sept. 2.

HAWAII, ISLAND OF MAUI

16618000 KAHAKULOA STREAM NEAR HONOKOHAU

LOCATION.--Lat 20°58'54", long 156°33'26", on right bank 0.5 mi (0.8 km) downstream from Kapuna Stream, 1.3 mi (2.1 km) south of Kahakuloa, 2.0 mi (3.2 km) west of Puu Makawana, and 4.3 mi (6.9 km) southeast of Honokohau.

DRAINAGE AREA.--3.47 mi^2 (8.99 km^2).

PERIOD OF RECORD.--July 1939 to August 1943, September 1947 to November 1970, current year. Records for January 1913 to December 1914 (fragmentary) at site 1.0 mi (1.6 km) upstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 330 ft (101 m), from topographic map.

AVERAGE DISCHARGE.--26 years (1939-42, 1947-70), 16.9 ft^3/s (0.479 m^3/s), 12,240 acre-ft/yr (15.1 hm^3/yr).

EXTREMES.--Maximum discharge during period December 1974 to September 1975, 982 ft^3/s (27.8 m^3/s) Jan. 12 (gage height, 5.89 ft or 1.795 m); minimum, 3.9 ft^3/s (0.11 m^3/s) Sept. 22-25, 27.

Period of record: Maximum discharge, 3,800 ft^3/s (108 m^3/s) Nov. 25, 1970 (gage height, 10.57 ft or 3.222 m), from floodmarks, from rating curve extended above 510 ft^3/s (14.4 m^3/s) on basis of slope-area measurements at gage heights 6.70 ft (2.042 m), 8.48 ft(2.585 m) and 10.57 ft (3.222 m); minimum, 3.0 ft^3/s (0.085 m^3/s) Feb. 9-11, 1954.

REMARKS.--Records good. No diversion above station. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1319: 1948, 1949(M). WSP 1569: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			4.5	4.3	43	9.0	6.4	5.7	4.4	14	5.9	5.4
2			4.0	4.1	8.5	6.9	6.0	5.3	4.3	6.0	4.7	5.1
3			4.0	4.4	12	13	5.8	5.2	4.4	5.0	15	4.9
4			4.0	11	58	8.0	6.0	5.0	4.6	5.2	11	4.8
5			4.0	7.3	50	27	6.4	5.0	5.5	5.0	5.5	4.6
6			4.0	5.5	10	10	6.5	5.0	4.9	4.7	5.0	4.5
7			5.4	15	7.3	7.8	22	6.5	4.7	4.4	4.6	4.5
8			5.8	22	6.4	7.5	11	8.7	4.4	4.4	4.4	5.7
9			5.0	6.9	5.8	6.4	6.4	9.0	4.3	4.3	6.1	5.3
10			5.4	5.3	5.8	6.4	5.8	5.5	4.4	4.3	27	4.5
11			4.6	4.9	40	15	5.5	5.0	5.3	4.9	47	4.7
12			6.6	71	317	52	5.3	4.9	6.7	14	8.4	4.6
13			4.3	22	54	13	5.7	4.9	6.7	5.3	22	4.2
14			4.0	14	24	18	5.2	4.9	5.0	7.4	7.7	4.1
15			11	38	14	9.0	5.5	5.0	5.0	5.2	11	4.6
16			15	25	11	9.0	5.0	4.9	4.7	4.7	7.8	6.3
17			5.2	8.5	18	7.3	4.9	4.9	4.4	4.7	129	4.7
18			4.6	6.7	9.7	10	5.5	4.7	4.3	16	36	4.2
19			4.4	5.8	8.3	9.2	5.2	4.7	4.3	6.9	16	4.2
20			25	5.3	7.5	7.3	5.3	4.9	4.1	5.6	9.1	4.5
21			19	5.0	6.7	6.5	5.7	5.2	4.4	6.1	14	4.1
22			9.2	4.9	6.5	6.2	7.3	4.9	5.5	4.8	7.3	4.0
23			9.7	4.9	8.5	6.4	12	4.6	5.0	4.5	6.1	3.9
24			6.5	6.4	6.7	6.2	12	4.4	5.0	13	7.6	3.9
25			5.3	74	6.0	5.7	12	4.7	11	5.4	7.5	4.2
26			5.7	8.5	6.0	5.5	7.5	4.6	11	4.7	5.8	4.3
27			7.3	6.0	6.3	5.5	9.5	4.4	6.2	4.6	5.5	5.6
28			5.8	5.3	36	34	10	5.0	5.0	4.5	5.2	5.7
29			5.0	5.0	---	23	6.7	5.3	8.7	4.4	5.0	4.3
30			4.6	5.0	---	10	6.7	4.4	7.3	4.6	10	4.1
31			4.3	5.8	---	7.3	---	4.4	---	7.3	11	---
TOTAL			213.2	417.8	793.0	368.1	224.8	161.6	165.5	195.9	468.2	139.5
MEAN			6.88	13.5	28.3	11.9	7.49	5.21	5.52	6.32	15.1	4.65
MAX			25	74	317	52	22	9.0	11	16	129	6.3
MIN			4.0	4.1	5.8	5.5	4.9	4.4	4.1	4.3	4.4	3.9
AC-FT			423	829	1570	730	446	321	328	389	929	277

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-12	0500	5.89	982	8-17	1730	5.34	604
2-12	1000	5.66	802				

HAWAII, ISLAND OF MAUI

16620000 HONOKOHAU STREAM NEAR HONOKOHAU

LOCATION.--Lat 20°57'48", long 156°35'22", on right bank 1,000 ft (305 m) upstream from intake of Honokohau ditch and 4.1 mi (6.6 km) southeast of Honokohau.

DRAINAGE AREA.--4.11 mi^2 (10.64 km^2).

PERIOD OF RECORD.--September, November and December 1911 (combined flow of stream and ditch below point of diversion), March 1913 to September 1920, May 1922 to current year. Monthly discharge only for some periods, published in WSP 1319.

GAGE.--Water-stage recorder and masonry control. Altitude of gage is 870 ft (265 m), from topographic map. Prior to Mar. 7, 1913, nonrecording gage at site just below Honokohau ditch intake at different datum.

AVERAGE DISCHARGE.--59 years (1913-19, 1922-75), 39.5 ft^3/s (1.119 m^3/s), 28,620 acre-ft/yr (35.3 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,240 ft^3/s (35.1 m^3/s) Nov. 21 (gage height, 5.61 ft or 1.710 m), from rating curve extended above 480 ft^3/s (13.6 m^3/s); minimum, 10 ft^3/s (0.28 m^3/s) Oct. 2-6, 10, 11, 14, 15, 25, 26.

Period of record: Maximum discharge, 3,740 ft^3/s (106 m^3/s) Dec. 14, 1942, Aug. 30, 1957 (gage height, 8.40 ft or 2.560 m), from rating curve extended above 480 ft^3/s (13.6 m^3/s); minimum, 8.4 ft^3/s (0.24 m^3/s) May 1, 1945, Jan. 5, 1946.

REMARKS.--Records good. No diversion above station. All medium and low flow, together with the inflow from two development tunnels below station, is diverted into Honokohau ditch. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	13	13	51	27	15	15	13	66	21	13
2	11	14	12	12	16	14	14	15	13	15	12	15
3	10	12	12	23	33	36	22	15	13	13	33	13
4	10	13	12	40	24	17	36	15	23	14	26	13
5	10	13	12	21	38	60	34	19	22	17	13	12
6	11	15	12	23	15	20	21	27	16	13	14	12
7	15	26	16	53	13	33	45	44	16	12	12	13
8	21	34	17	41	13	19	23	52	14	12	12	21
9	11	20	15	16	12	14	17	28	15	13	42	14
10	11	74	16	13	14	30	15	15	16	12	41	14
11	11	80	14	12	46	102	14	14	29	18	43	13
12	16	21	20	73	156	186	14	14	35	30	17	12
13	11	14	13	16	54	72	14	14	18	32	63	12
14	11	42	19	15	63	68	15	14	19	48	22	12
15	24	17	61	21	63	33	32	17	16	15	36	14
16	14	34	30	17	31	36	16	18	14	14	19	33
17	12	21	14	13	50	33	23	14	13	21	262	13
18	11	13	13	12	22	47	28	14	13	66	46	12
19	21	112	13	12	20	29	25	14	13	18	20	12
20	85	128	57	12	16	19	20	15	15	34	18	13
21	21	461	36	12	14	16	24	23	21	17	29	12
22	13	26	33	12	14	21	23	15	14	13	16	12
23	11	17	70	12	25	19	33	13	13	13	16	12
24	11	15	19	18	15	15	52	13	30	40	17	12
25	10	14	17	140	14	15	58	15	36	14	24	16
26	13	14	37	17	14	14	43	15	54	13	14	13
27	218	13	50	13	17	14	40	15	17	13	13	13
28	27	13	16	13	70	72	29	16	14	12	13	12
29	19	13	13	12	---	30	22	14	38	12	13	12
30	41	13	13	12	---	19	21	13	17	12	73	12
31	41	---	13	13	---	16	---	13	---	13	27	---
TOTAL	763	1319	708	732	933	1146	788	558	600	655	1027	412
MEAN	24.6	44.0	22.8	23.6	33.3	37.0	26.3	18.0	20.0	21.1	33.1	13.7
MAX	218	461	70	140	156	186	58	52	54	66	262	33
MIN	10	12	12	12	12	14	14	13	13	12	12	12
AC-FT	1510	2620	1400	1450	1850	2270	1560	1110	1190	1300	2040	817

CAL YR 1974 TOTAL 9152 MEAN 25.1 MAX 461 MIN 10 AC-FT 18150
WTR YR 1975 TOTAL 9641 MEAN 26.4 MAX 461 MIN 10 AC-FT 19120

PEAK DISCHARGE (BASE, 1,100 CFS).--Nov. 21 (0815) 1,240 cfs (5.61 ft).

16638500 KAHOMA STREAM AT LAHAINA

LOCATION.--Lat 20°53'10", long 156°40'36", on right bank 0.2 mi (0.3 km) west of Kelawea, 0.6 mi (1.0 km) northeast of Lahaina, 0.6 mi (1.0 km) downstream from Kanaha Stream, and 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--5.22 mi^2 (13.52 km^2).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 90 ft (27 m), from topographic map.

AVERAGE DISCHARGE.--12 years (1963-75), 4.01 ft^3/s (0.114 m^3/s), 2,910 acre-ft/yr (3.59 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,200 ft^3/s (34.0 m^3/s) Nov. 21 (gage height, 8.26 ft or 2.518 m), from rating curve extended as explained below; no flow many days.
Period of record: Maximum discharge, 2,490 ft^3/s (70.5 m^3/s) July 11, 1965 (gage height, 11.03 ft or 3.362 m), from rating curve extended above 206 ft^3/s (5.83 m^3/s) on basis of slope-area measurements at gage heights 7.58 ft (2.310 m), 8.07 ft (2.460 m), and 11.03 ft (3.362 m); no flow many days each year.
Maximum discharge of flood of May 13, 1960, 7,750 ft^3/s (219 m^3/s), by slope-area measurement at site 0.5 mi (0.8 km) upstream.

REMARKS.--Records fair except those below 10 ft^3/s (0.28 m^3/s), which are poor. Diversion above station by Pioneer Mill Co. for irrigation of sugarcane. Diversion from Kanaha Stream above station by Maui County Board of Water Supply for domestic use. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 2137: 1963-65(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.6	1.3	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	0	0	
3	0	0	0	.79	2.9	.93	2.2	0	0	0	0	
4	0	0	0	5.1	0	0	16	0	0	0	0	
5	0	0	0	.06	0	0	21	0	0	0	0	
6	0	0	0	2.0	0	0	4.7	.19	0	0	0	
7	0	0	0	7.0	.03	0	1.6	5.5	0	0	0	
8	0	0	0	.44	1.5	0	0	.05	0	0	0	
9	0	0	0	0	2.8	0	0	.03	0	0	0	
10	0	1.4	0	0	.01	0	0	0	0	0	0	
11	0	9.6	0	0	1.2	2.1	0	0	0	0	0	
12	0	2.2	0	38	.01	7.1	0	0	0	0	0	
13	0	.03	0	.01	.10	0	0	0	0	0	15	
14	0	0	0	0	26	5.0	0	0	0	.02	7.6	
15	1.8	0	7.2	0	12	6.0	0	0	0	0	.44	
16	0	0	1.8	0	7.8	.89	0	0	0	0	0	
17	0	0	0	0	11	1.6	0	0	0	0	7.4	
18	0	0	0	0	0	4.1	0	0	0	5.1	.02	
19	0	0	0	0	0	1.3	.86	0	0	0	0	
20	2.5	13	0	0	0	0	.33	0	0	0	0	
21	.07	149	0	0	0	0	.45	0	0	0	0	
22	0	.44	0	0	0	0	0	0	0	0	0	
23	0	0	0	0	0	0	0	0	0	0	0	
24	.03	0	0	0	0	0	2.9	0	0	0	0	
25	0	0	0	33	0	0	.31	0	0	0	0	
26	0	0	15	0	0	0	0	0	1.3	0	0	
27	22	0	8.4	0	0	0	0	0	0	0	0	
28	1.6	0	.02	0	46	5.0	0	0	0	0	0	
29	.01	0	0	0	---	.31	0	0	0	0	0	
30	5.5	0	0	0	---	0	0	0	0	0	1.8	
31	.25	---	0	0	---	0	---	0	---	0	.31	---
TOTAL	33.76	175.67	32.42	86.40	166.95	35.63	50.35	5.77	1.3	5.12	32.57	0
MEAN	1.09	5.86	1.05	2.79	3.82	1.15	1.68	.19	.043	.17	1.05	0
MAX	22	149	15	38	46	7.1	21	5.5	1.3	5.1	15	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	67	348	64	171	212	71	100	11	2.6	10	65	0

CAL YR 1974 TOTAL 748.64 MEAN 2.05 MAX 149 MIN 0 AC-FT 1490
WTR YR 1975 TOTAL 565.94 MEAN 1.55 MAX 149 MIN 0 AC-FT 1120

PEAK DISCHARGE (BASE, 590 CFS).--Nov. 21 (1030) 1,200 cfs (8.26 ft).

HAWAII, ISLAND OF HAWAII

16700000 WAIAKEA STREAM NEAR MOUNTAIN VIEW

LOCATION.--Lat 19°38'30", long 155°10'28", on left bank 200 ft (61 m) upstream from Olaa Flume Road, 7.3 mi (11.7 km) northwest of Mountain View, and 8.0 mi (12.9 km) southwest of Hilo Post Office.

DRAINAGE AREA.--17.4 mi^2 (45.1 km^2).

PERIOD OF RECORD.--September 1930 to current year. Prior to July 1960, published as "at middle flume house, near Mountain View."

GAGE.--Water-stage recorder and combined Parshall flume and concrete-weir control. Datum of gage is 1,934 ft (589 m) above mean sea level (by stadia survey). Prior to Jan. 21, 1938, at datum 0.23 ft (0.070 m) lower.

AVERAGE DISCHARGE.--45 years, 11.9 ft^3/s (0.337 m^3/s), 8,620 acre-ft/yr (10.6 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 537 ft^3/s (15.2 m^3/s) Jan. 8 (gage height, 4.41 ft or 1.344 m), from rating curve extended above 160 ft^3/s (4.53 m^3/s); minimum, 0.18 ft^3/s (0.005 m^3/s) Oct. 9.
Period of record: Maximum discharge, 565 ft^3/s (16.0 m^3/s) Mar. 14, 1942, Aug. 26, 1970, from rating curve extended above 160 ft^3/s (4.53 m^3/s); maximum gage height, 4.45 ft (1.356 m) Aug. 26, 1970; no flow at times.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No diversion above station. Large part of flow comes from 3 tunnels. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 2137: 1939(M), 1942(M), 1944-45(M), 1947(M), 1949(P), 1950-51(M), 1952-53(P), 1955(P), 1956(M), 1957-58(P), 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	4.9	9.3	28	17	22	9.9	16	3.8	.90	2.5	3.9
2	.20	4.5	8.7	24	17	22	9.2	16	3.5	.85	3.0	3.9
3	.20	4.0	7.9	22	17	23	9.4	15	3.3	.65	2.5	3.5
4	.20	3.6	7.1	35	16	23	9.0	14	3.0	.70	2.0	3.3
5	.20	3.4	6.5	48	15	22	13	15	2.9	.65	2.0	3.0
6	.20	3.3	6.1	58	14	20	17	17	2.6	.65	2.5	3.0
7	.20	3.3	5.6	143	13	19	17	16	2.4	.56	2.5	2.9
8	.20	3.1	5.2	232	12	17	18	17	2.2	.52	2.0	2.6
9	.18	3.2	5.2	151	12	16	18	16	2.0	.52	2.0	2.6
10	.20	3.5	4.9	116	11	16	18	16	1.8	.48	2.0	2.6
11	.40	4.8	4.7	88	11	16	17	15	2.0	.52	2.0	2.4
12	.60	5.4	4.4	69	11	28	16	14	2.0	.75	1.5	2.3
13	.32	4.5	5.2	52	16	30	15	13	2.0	.60	1.5	2.1
14	.28	4.2	4.6	37	14	44	14	12	1.8	.85	1.5	2.0
15	.28	3.6	8.9	30	16	40	13	11	1.8	.75	1.3	1.8
16	.24	5.2	19	25	16	41	12	10	1.6	.75	1.3	3.5
17	.24	5.0	14	21	26	37	12	9.4	1.4	.70	7.3	3.5
18	.20	25	14	18	27	34	12	8.9	1.3	.70	6.3	2.9
19	.24	17	15	17	28	33	12	8.2	1.2	.75	8.7	2.6
20	.28	21	32	16	27	28	14	7.6	1.1	.70	7.6	2.5
21	.28	18	34	14	25	26	19	7.2	1.0	.80	6.7	2.4
22	.24	18	59	13	23	23	19	6.7	.95	.75	6.0	2.2
23	.24	17	56	12	21	21	20	6.2	.85	.70	6.3	2.0
24	.20	16	56	10	19	19	20	5.7	.75	.65	5.7	1.8
25	.20	15	56	11	17	18	18	5.4	.70	.75	4.9	1.7
26	.24	14	62	9.3	16	17	18	5.1	.56	2.0	4.7	1.6
27	11	13	60	8.8	17	15	18	4.9	.52	1.5	4.5	1.5
28	6.0	12	56	8.1	19	14	17	4.7	.44	.85	4.4	1.6
29	4.4	11	49	8.3	------	13	17	4.4	.85	.80	4.2	1.3
30	4.9	9.9	41	19	------	12	16	4.2	.75	.75	4.0	1.2
31	4.9	------	33	18	------	11	------	4.0	------	.75	4.7	------
TOTAL	37.66	276.4	750.3	1,361.5	493	720	457.5	325.6	51.07	23.85	118.1	74.2
MEAN	1.21	9.21	24.2	43.9	17.6	23.2	15.3	10.5	1.70	.77	3.81	2.47
MAX	11	25	62	232	28	44	20	17	3.8	2.0	8.7	3.9
MIN	.18	3.1	4.4	8.1	11	11	9.0	4.0	.44	.48	1.3	1.2
AC-FT	75	548	1,490	2,700	978	1,430	907	646	101	47	234	147

CAL YR 1974 TOTAL 3,545.58 MEAN 9.71 MAX 95 MIN .18 AC-FT 7,030
WTR YR 1975 TOTAL 4,689.18 MEAN 12.8 MAX 232 MIN .18 AC-FT 9,300

NOTE.--No gage-height record July 13 to Aug. 14.

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-18	0930	3.48	106	1- 8	0700	4.41	537
12-20	2130	3.73	172				

16700900 OLAA FLUME SPRING NEAR KAUMANA

LOCATION.--Lat 19°41'59", long 155°11'13", on left bank 58 ft (18 m) downstream from tunnel entrance, 3.3 mi (5.3 km) northwest of Kaumana School, and 6.5 mi (10.5 km) southwest of Hilo Post Office.

PERIOD OF RECORD.--October 1974 to September 1975.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,970 ft (600 m), from topographic map.

EXTREMES.--Current year: Maximum daily discharge, 43 ft^3/s (1.22 m^3/s) Jan. 8; minimum daily, 1.2 ft^3/s (0.034 m^3/s) Oct. 10.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	11	4.6	28	32	30	15	21	8.4	5.7	6.0	8.0
2	1.4	9.7	4.4	26	29	32	14	20	7.6	5.7	7.8	7.4
3	1.4	7.6	4.2	26	27	29	15	20	7.2	5.2	10	7.1
4	1.4	6.0	6.0	31	26	27	17	20	6.6	4.7	10	6.6
5	1.5	5.4	7.1	37	24	25	19	22	6.4	4.4	10	6.0
6	1.5	5.2	6.6	38	22	24	26	26	6.0	4.1	9.4	5.7
7	1.5	5.0	6.0	42	20	23	30	27	5.7	4.1	8.8	5.4
8	1.6	4.9	5.5	43	18	21	31	26	5.4	4.0	8.0	5.1
9	1.4	5.0	5.4	41	18	20	30	25	5.1	3.8	7.2	4.9
10	1.2	5.0	5.4	40	16	20	28	22	4.9	3.6	6.7	5.1
11	1.5	5.2	5.2	38	16	21	26	20	4.7	3.4	6.7	4.9
12	1.8	5.4	4.9	36	18	28	24	18	4.7	3.8	7.2	4.6
13	1.9	5.4	5.4	34	20	32	23	18	5.5	5.4	7.1	4.6
14	1.8	5.4	7.4	32	26	34	20	16	6.4	6.6	6.6	4.4
15	1.7	5.2	9.8	29	26	33	20	15	6.6	8.6	7.2	4.1
16	1.6	5.0	23	28	26	32	20	14	6.6	9.2	7.8	4.6
17	1.6	4.8	29	27	27	31	20	14	6.2	9.4	8.2	7.4
18	1.6	6.8	28	26	32	30	20	13	5.7	9.0	11	10
19	1.5	14	25	24	33	29	22	12	5.4	8.6	15	9.4
20	1.5	13	25	23	30	29	24	12	4.7	8.4	16	8.8
21	1.5	13	34	21	29	27	29	12	4.7	8.0	14	8.0
22	1.6	12	39	20	26	25	29	12	4.9	8.0	14	7.1
23	1.5	10	39	19	24	23	28	12	4.6	7.4	12	6.4
24	1.4	7.6	37	18	22	22	27	11	4.3	6.9	12	5.9
25	1.5	6.2	35	17	20	21	25	11	4.0	6.6	11	5.5
26	1.4	6.0	37	17	18	20	24	10	4.1	6.6	11	5.4
27	3.1	5.8	38	16	18	18	21	10	4.1	6.6	10	5.1
28	13	5.6	37	16	21	18	20	9.8	3.8	7.4	10	4.9
29	13	5.2	34	15	------	17	20	9.4	3.6	7.4	9.4	5.2
30	12	5.0	32	22	------	16	21	9.2	4.9	6.7	8.6	5.1
31	11	------	30	31	------	16	------	8.8	------	6.2	8.2	------
TOTAL	91.8	211.6	610.1	661	664	773	688	496.2	162.8	195.5	296.9	182.7
MEAN	2.96	7.05	19.7	27.8	23.7	24.9	22.9	16.0	5.43	6.31	9.58	6.09
MAX	13	14	39	43	33	34	31	27	8.4	9.4	16	10
MIN	1.2	4.8	4.2	15	16	16	14	8.8	3.6	3.4	6.0	4.1
AC-FT	182	420	1,210	1,710	1,320	1,530	1,360	984	323	388	589	362

WTR YR 1975 TOTAL 5,233.6 MEAN 14.3 MAX 43 MIN 1.2 AC-FT 10,380

HAWAII, ISLAND OF HAWAII

16701750 WAILUKU RIVER NEAR HUMUULA

LOCATION.--Lat 19°42'55", long 155°18'36", on right bank 300 ft (91 m) upstream from trail terminus, 10 mi (16 km) east of Humuula, and 14 mi (22 km) west of Hilo.

DRAINAGE AREA.--34.8 mi^2 (90.1 km^2).

PERIOD OF RECORD.--February 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,250 ft (1,295 m), from topographic map.

AVERAGE DISCHARGE.--10 years, 3.21 ft^3/s (0.0909 m^3/s), 2,330 acre-ft/yr (2.87 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,580 ft^3/s (44.7 m^3/s) Jan. 8 (gage height, 8.80 ft or 2.682 m), from rating curve extended above 18 ft^3/s (0.51 m^3/s); no flow for many days.
Period of record: Maximum discharge, 3,180 ft^3/s (90.1 m^3/s) Nov. 20, 1973 (gage height, 11.00 ft or 3.353 m), from rating curve extended above 18 ft^3/s (0.51 m^3/s); no flow at times in 1965, 1969-75.

REMARKS.--Records good except those for periods of no gage-height record and those above 40 ft^3/s (1.13 m^3/s), which are fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.85	.06	2.6	5.0	6.6	.57	.52	.06	.02	.05	0
2	0	.56	.06	1.8	3.5	1.2	.70	.52	.06	.03	.15	0
3	0	.21	.06	7.8	3.0	.85	.66	.52	.06	.01	.03	0
4	0	.12	.05	45	2.5	.70	.66	.80	.06	.01	.02	0
5	0	.08	.05	72	2.0	.66	1.9	1.3	.06	0	.01	0
6	0	.08	.04	69	2.0	.62	4.6	.95	.05	0	0	0
7	0	.18	.08	561	1.5	.62	2.5	.80	.05	0	0	0
8	0	.40	.05	790	1.5	.57	1.4	.62	.05	0	0	0
9	0	.40	.06	71	1.5	.52	.90	.52	.05	0	0	0
10	0	.40	.06	16	1.0	.52	1.0	.44	.05	0	0	0
11	.03	.32	.05	10	1.0	.75	.95	.44	.04	0	0	0
12	.05	1.1	.06	7.0	1.0	4.4	.75	.39	.04	.55	0	0
13	.02	.21	1.1	5.5	1.5	2.9	.66	.34	.03	.15	0	0
14	.05	.10	.40	5.0	1.5	7.7	.66	.34	.03	.10	0	0
15	.12	.08	2.5	4.5	1.0	2.2	.66	.39	.03	.03	0	0
16	.03	.05	13	4.5	1.0	2.1	.62	.30	.02	.03	.01	.20
17	.02	.04	2.2	4.0	3.5	1.5	.66	.30	.02	.02	.40	.25
18	.01	3.2	.71	3.5	5.5	1.2	.75	.25	.02	.02	.30	.05
19	0	1.4	.45	4.0	1.5	1.2	.85	.25	.03	.02	.25	0
20	.02	.71	60	3.5	1.0	.95	1.4	.25	.02	.01	.20	0
21	.06	.50	55	3.0	1.0	.90	1.2	.21	.02	.03	.15	0
22	.02	.28	71	2.5	1.1	.90	.90	.17	.02	.01	.05	0
23	.01	.21	14	2.0	.90	.85	.75	.14	.01	0	.05	0
24	0	.18	13	1.5	.75	.80	.66	.17	.01	0	.03	0
25	0	.12	27	1.5	.66	.75	.62	.14	.01	0	.02	0
26	0	.10	52	1.0	.66	.75	.52	.12	0	.01	.02	0
27	59	.08	19	.95	.75	.70	.52	.10	0	.05	.01	0
28	4.0	.06	10	.95	2.5	.66	.57	.10	0	.02	.01	.20
29	.92	.06	7.2	2.0	------	.66	.52	.10	.03	0	.01	.10
30	1.1	.06	4.8	25	------	.66	.48	.08	.05	0	.01	.01
31	.57	------	3.5	20	------	.62	------	.08	------	0	.01	------
TOTAL	66.83	11.98	367.56	1,748.10	50.32	48.01	29.59	11.65	.98	1.12	1.79	.81
MEAN	2.16	.40	11.9	56.4	1.80	1.55	.99	.38	.033	.036	.058	.027
MAX	59	3.2	71	790	5.5	8.6	4.6	1.3	.06	.55	.40	.25
MIN	0	.04	.04	.95	.66	.52	.48	.08	0	0	0	0
AC-FT	133	24	729	3,470	100	95	59	23	1.9	2.2	3.6	1.6

CAL YR 1974 TOTAL 1,136.67 MEAN 3.11 MAX 88 MIN 0 AC-FT 2,250
WTR YR 1975 TOTAL 2,338.74 MEAN 6.41 MAX 790 MIN 0 AC-FT 4,640

PEAK DISCHARGE (BASE, 310 CFS).--Dec. 20 (2230) 412 cfs (5.85 ft); Jan. 8 (1100) 1,580 cfs (8.80 ft).

NOTE.--No gage-height record Jan. 11 to Feb. 21, June 21 to Sept. 30.

16701800 WAILUKU RIVER NEAR KAUMANA

LOCATION.--Lat 19°43'15", long 155°16'08", on right bank 0.2 mi (0.3 km) upstream from Waipahoehoe Gulch and 8.4 mi (13.5 km) west of Kaumana.

DRAINAGE AREA.--43.4 mi^2 (112.4 km^2).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,520 ft (1,073 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 30.9 ft^3/s (0.875 m^3/s), 22,390 acre-ft/yr (27.6 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 9,480 ft^3/s (268 m^3/s) Jan. 8 (gage height, 13.29 ft or 4.051 m), from rating curve extended above 2,200 ft^3/s (62.3 m^3/s); minimum, 0.11 ft^3/s (0.003 m^3/s) Oct. 4, 5.
Period of record: Maximum discharge, 9,580 ft^3/s (271 m^3/s) Aug. 8, 1967 (gage height, 13.35 ft or 4.069 m), from rating curve extended above 2,200 ft^3/s (62.3 m^3/s); no flow Mar. 13, 14, 1970.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	10	1.3	14	45	209	3.1	6.5	.94	.49	.91	.49
2	.28	5.0	1.2	11	18	18	4.7	9.4	.91	.55	1.7	.46
3	.15	4.5	1.1	91	12	12	5.9	8.1	.88	.37	.79	.49
4	.13	4.0	1.0	462	11	9.9	6.3	6.8	.85	.37	.64	.37
5	.22	3.0	.97	715	8.5	9.0	44	20	.85	.28	.46	.28
6	.43	2.5	.88	545	6.6	7.6	128	26	.85	.28	.37	.25
7	.40	4.4	.97	4530	5.4	6.5	83	16	.82	.28	.28	.22
8	.40	6.9	.91	5380	4.7	6.5	28	13	.82	.22	.22	.22
9	.25	6.3	.97	812	4.1	5.1	14	9.0	.82	.25	.22	.43
10	.19	5.7	1.2	212	3.8	5.5	15	7.0	.82	.22	.31	.52
11	.49	3.5	.85	106	18	7.3	18	5.7	.82	.19	.40	.37
12	1.4	16	.91	60	17	135	13	5.1	1.0	10	.31	.34
13	.58	3.5	16	36	79	64	8.8	4.6	1.0	1.3	.22	.34
14	.55	2.5	4.2	23	34	187	7.8	3.8	.85	1.0	.49	.22
15	1.4	2.2	41	18	12	51	9.9	3.7	.80	.76	.49	.19
16	.04	1.8	204	14	12	49	8.3	4.1	.75	.73	.52	1.2
17	.46	1.6	24	11	120	27	7.0	2.8	.70	.58	5.8	1.7
18	.31	88	9.9	9.0	144	18	15	2.6	.70	.49	4.0	.67
19	.22	18	7.2	9.8	30	17	11	2.2	.65	.52	2.7	.37
20	.22	9.9	457	8.8	22	12	27	2.1	.60	.46	1.4	.28
21	.28	7.2	2130	5.7	16	9.9	29	2.0	.55	.70	1.4	.25
22	.25	5.2	874	3.8	12	9.2	18	1.7	.50	.52	.94	.25
23	.17	4.0	148	3.1	9.7	8.5	16	1.4	.45	.40	1.0	.22
24	.15	3.4	120	2.6	7.6	7.0	12	1.2	.40	.40	.85	.25
25	.13	2.8	268	2.6	6.3	5.7	11	1.4	.40	.46	.73	.34
26	.13	2.5	656	2.2	5.4	5.4	9.2	1.2	.35	.52	.70	.28
27	300	2.2	178	1.9	7.6	5.1	7.6	1.1	.28	.88	.67	.34
28	25	1.8	74	1.8	77	4.3	7.6	1.0	.22	.49	.64	1.4
29	10	1.6	47	3.3	---	3.8	8.8	1.0	.63	.37	.55	.82
30	15	1.4	25	266	---	4.0	7.8	1.0	.82	.28	.55	.43
31	8.0	---	18	231	---	6.2	---	.97	---	.26	.58	---
TOTAL	368.35	231.4	5313.56	13591.6	748.7	925.5	588.8	174.47	21.03	24.64	30.84	13.99
MEAN	11.9	7.71	171	438	26.7	29.9	19.6	5.63	.70	.79	.99	.47
MAX	300	88	2130	5380	144	209	128	26	1.0	10	5.8	1.7
MIN	.13	1.4	.85	1.8	3.8	3.8	3.1	.97	.22	.19	.22	.19
AC-FT	731	459	10540	26960	1490	1840	1170	346	42	49	61	28

CAL YR 1974 TOTAL 12058.36 MEAN 33.0 MAX 2130 MIN .09 AC-FT 23920
WTR YR 1975 TOTAL 22032.68 MEAN 60.4 MAX 5380 MIN .13 AC-FT 43700

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-27	/0900	6.50	1,670	1- 5	1200	6.50	1,670
12-21	0130	9.06	3,860	1- 8	1300	13.29	9,480

/ About.

16704000 WAILUKU RIVER AT PIIHONUA

LOCATION.--Lat 19°42'58", long 155°09'13", on left bank 0.2 mi (0.3 km) downstream from Hookelekele Stream, 0.9 mi (1.4 km) west of Piihonua, and 4.1 mi (6.6 km) west of Hilo Post Office.

DRAINAGE AREA.--125 mi^2 (324 km^2).

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."

GAGE.--Water-stage recorder. Altitude of gage is 1,070 ft (326 m), from topographic map.

AVERAGE DISCHARGE.--44 years (1928-39, 1941-47, 1948-75), 285 ft^3/s (8.071 m^3/s), 206,500 acre-ft/yr (255 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 38,200 ft^3/s (1,080 m^3/s) Jan. 8 (gage height, 22.13 ft or 6.745 m); minimum, 1.6 ft^3/s (0.045 m^3/s) Oct. 20, 21.
Period of record: Maximum discharge, 63,400 ft^3/s (1,800 m^3/s) Aug. 11, 1940 (gage height, 28.6 ft or 8.72 m), from floodmarks, from rating curve extended about 11,000 ft^3/s (312 m^3/s); minimum, 0.25 ft^3/s (0.007 m^3/s) Mar. 9, 1941.

REMARKS.--Records good. Hawaii County Board of Water Supply diverts about 6 ft^3/s (0.17 m^3/s) above station for domestic supply. Kapehu ditch diverted from Kapehu Stream into Wailuku River above station 1938-63. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 865: 1929-36(M). WSP 965: 1941.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	200	26	238	559	2220	79	171	14	14	26	21
2	4.0	106	24	190	311	449	91	214	12	14	102	20
3	2.4	68	22	692	219	285	187	192	12	10	43	21
4	1.7	50	19	3500	171	215	180	179	12	11	35	16
5	1.7	41	17	4020	132	212	503	414	11	9.1	24	11
6	1.7	37	15	3790	106	191	1080	561	11	7.4	19	9.4
7	2.1	50	14	13200	85	144	1160	338	11	6.8	15	10
8	3.0	74	13	22200	71	146	603	279	11	6.5	12	9.4
9	2.4	73	18	5390	62	116	259	208	11	7.6	10	19
10	1.8	92	24	1650	55	182	212	152	9.0	5.6	14	18
11	4.3	66	17	1060	69	226	246	121	8.1	4.6	34	12
12	46	208	14	730	191	1760	214	102	16	95	21	10
13	12	68	121	525	492	1180	128	85	25	34	13	11
14	4.3	44	68	427	374	2460	111	72	19	85	39	8.4
15	15	36	480	330	208	1020	148	64	17	37	34	8.8
16	6.5	29	2130	269	206	1020	133	68	16	37	33	107
17	4.8	25	516	226	1080	643	107	56	10	26	159	113
18	3.4	1320	263	187	1500	463	277	57	7.4	20	144	37
19	2.0	464	178	166	593	514	173	56	6.5	20	194	24
20	1.7	582	2290	168	397	318	631	48	6.2	16	92	19
21	22	305	3860	129	239	242	837	50	8.3	22	83	16
22	7.8	202	4290	111	174	205	480	42	10	16	56	13
23	4.2	131	1370	98	138	198	377	33	8.4	12	68	11
24	2.2	96	1310	84	103	170	272	28	6.6	12	49	11
25	2.0	73	1870	91	78	145	227	27	8.3	14	40	14
26	2.1	58	3550	82	84	130	179	26	9.3	15	33	12
27	5000	50	1540	68	167	117	148	23	6.6	44	30	15
28	600	42	840	59	818	99	126	21	5.0	19	26	57
29	300	36	600	77	---	88	203	19	10	13	21	23
30	400	32	410	2600	---	98	200	17	21	9.6	20	14
31	300	---	290	1530	---	147	---	15	---	8.2	34	---
TOTAL	6763.8	4658	26199	63887	8682	15403	9571	3738	338.7	651.4	1523	691.0
MEAN	218	155	845	2061	310	497	319	121	11.3	21.0	49.1	23.0
MAX	5000	1320	4290	22200	1500	2460	1160	561	25	95	194	113
MIN	1.7	25	13	59	55	88	79	15	5.0	4.6	10	8.4
AC-FT	13420	9240	51970	126700	17220	30550	18980	7410	672	1290	3020	1370

CAL YR 1974 TOTAL 97453.1 MEAN 267 MAX 5050 MIN 1.6 AC-FT 193300
WTR YR 1975 TOTAL 142105.9 MEAN 389 MAX 22200 MIN 1.7 AC-FT 281900

PEAK DISCHARGE (BASE, 8,700 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-27	1000	16.50	13,200	1-4	1800	15.46	10,100
12-21	0230	17.43	16,300	1-8	1330	22.13	38,200

16717000 HONOLII STREAM NEAR PAPAIKOU
(Hydrologic bench-mark station)

LOCATION.--Lat 19°46'00", long 155°09'16", on left bank 0.7 mi (1.1 km) downstream from Pohakupaa Stream, 4.1 mi (6.6 km) west of Papaikou, and 4.8 mi (7.7 km) northwest of Hilo Post Office.

DRAINAGE AREA.--11.6 mi² (30.0 km²).

PERIOD OF RECORD.--June 1911 to March 1913 (published as "at Kaiwiki, near Hilo"), February 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,540 ft (469 m), from topographic map. Prior to Aug. 27, 1911, nonrecording gage and Aug. 27, 1911, to Mar. 24, 1913, water-stage recorder, at site 0.5 mi (0.8 km) upstream at different datum.

AVERAGE DISCHARGE.--9 years, 127 ft³/s (3.597 m³/s), 92,010 acre-ft/yr (113 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 8,590 ft³/s (243 m³/s) Jan. 8 (gage height, 16.09 ft or 4.904 m); minimum, 6.0 ft³/s (0.17 m³/s) Oct. 4, 5.
Period of record: Maximum discharge, 9,450 ft³/s (268 m³/s) Aug. 3, 1967 (gage height, 16.95 ft or 5.166 m); minimum, 0.8 ft³/s (0.023 m³/s) Jan. 31, 1912.

REMARKS.--Records good. No diversion above station. During period 1911-13, Honolii ditch diverted an average of about 3.2 ft³/s (0.091 m³/s) above station for fluming cane and domestic use. Records of chemical analyses, periodic determinations of water temperature, and suspended-sediment discharge for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	77	13	48	135	993	36	57	11	26	89	20
2	11	38	12	35	67	63	49	99	10	27	84	23
3	8.2	26	11	421	47	43	110	78	10	18	51	22
4	6.6	22	9.7	1860	39	43	112	75	11	23	32	16
5	6.4	19	8.8	1860	33	71	352	191	11	19	25	13
6	8.9	18	8.3	1360	29	58	614	189	11	20	19	12
7	11	41	8.5	4320	25	44	263	86	11	19	16	13
8	14	50	9.0	5780	22	46	126	66	13	23	13	14
9	13	48	16	1300	21	42	63	55	11	20	12	31
10	11	52	22	208	20	108	59	41	12	14	22	25
11	37	50	20	95	27	130	79	34	14	14	46	18
12	53	206	15	67	60	834	63	32	25	121	24	16
13	23	42	106	62	237	542	43	28	33	40	18	15
14	15	28	46	47	105	1130	40	25	24	82	34	12
15	39	22	528	38	104	263	71	24	31	38	36	12
16	20	19	1100	37	57	396	52	26	25	42	36	129
17	14	16	122	34	692	132	51	24	17	27	203	89
18	11	973	54	29	673	94	154	29	14	22	86	33
19	8.4	196	45	29	173	173	84	31	13	20	119	22
20	11	220	1330	36	94	64	407	31	11	16	49	17
21	31	153	898	25	52	49	436	35	14	22	42	15
22	15	64	1580	22	40	50	133	25	16	18	31	13
23	11	39	247	21	43	54	150	19	15	20	42	13
24	8.8	31	435	18	32	51	96	17	12	22	33	12
25	7.8	27	868	34	26	46	76	16	18	20	28	18
26	7.8	23	1370	31	24	48	58	17	17	21	24	15
27	1260	20	502	20	85	39	49	16	13	27	28	67
28	189	18	114	17	408	33	51	14	9.9	18	20	65
29	63	16	91	90	---	33	86	13	21	14	17	28
30	76	14	57	1540	---	73	74	13	22	12	23	19
31	66	---	44	613	---	72	---	12	---	12	44	---
TOTAL	2067.9	2528	9690.3	20097	3370	5817	4037	1418	475.9	837	1346	817
MEAN	66.7	84.3	313	648	120	188	135	45.7	15.9	27.0	43.4	27.2
MAX	1260	973	1580	5780	692	1130	614	191	33	121	203	129
MIN	6.4	14	8.3	17	20	33	36	12	9.9	12	12	12
AC-FT	4100	5010	19220	39860	6680	11540	8010	2810	944	1660	2670	1620

CAL YR 1974 TOTAL 40089.7 MEAN 110 MAX 1970 MIN 4.4 AC-FT 79520
WTR YR 1975 TOTAL 52501.1 MEAN 144 MAX 5780 MIN 6.4 AC-FT 104100

PEAK DISCHARGE (BASE, 4,400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-18	0930	12.02	4,620	1-5	1015	13.04	5,540
12-15	2245	12.10	4,690	1-8	1245	16.09	8,590
12-20	2045	14.12	6,620				

16717800 POHAKUPUKA STREAM NEAR PAPAALOA

LOCATION.--Lat 19°57'20", long 155°11'20", on right bank 200 ft (61 m) downstream from Highway 19, 2.8 mi (4.5 km) northwest of Honohina, and 3.0 mi (4.8 km) southeast of Papaaloa.

DRAINAGE AREA.--2.76 mi^2 (7.15 km^2).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 250 ft (76.2 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--13 years, 27.0 ft^3/s (0.765 m^3/s), 19,560 acre-ft/yr (24.1 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,530 ft^3/s (71.6 m^3/s) Jan. 8 (gage height, 9.66 ft or 2.944 m), from rating curve extended above 1,100 ft^3/s (31.2 m^3/s); minimum, 0.52 ft^3/s (0.015 m^3/s) Nov. 6.
Period of record: Maximum discharge, 5,340 ft^3/s (151 m^3/s) Nov. 26, 1967 (gage height, 13.37 ft or 4.075 m), from rating curve extended above 1,100 ft^3/s (31.2 m^3/s); minimum, 0.28 ft^3/s (0.008 m^3/s) Nov. 9, 1962.

REMARKS.--Records good. No diversion above station. Irrigation ditches in basin occasionally overflow, but amount reaching stream is small. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	5.1	1.3	8.7	30	167	9.9	8.9	3.5	2.1	14	3.9
2	.75	2.7	1.2	7.6	19	15	9.5	11	3.4	2.1	17	3.1
3	.73	1.5	.80	42	14	12	14	9.2	3.3	2.1	5.3	2.5
4	.73	1.1	.94	241	13	14	11	8.3	3.3	2.1	3.9	2.1
5	.75	.75	.87	203	14	34	35	15	3.2	2.1	2.8	1.8
6	.73	.65	.80	188	14	20	69	22	3.2	2.0	2.0	1.6
7	.73	6.0	.75	803	11	11	32	12	3.1	1.9	1.6	1.6
8	.77	5.5	.75	1070	10	11	14	9.8	3.0	2.0	1.4	1.7
9	.76	3.5	1.0	171	9.5	11	12	9.0	3.0	1.9	1.2	1.7
10	.72	1.8	1.3	44	9.1	14	11	7.8	3.0	1.9	1.6	1.8
11	1.1	42	1.4	29	40	21	10	7.5	3.1	2.0	3.4	1.7
12	.80	63	1.2	23	41	167	9.7	7.2	3.2	9.4	2.8	1.5
13	.74	14	22	45	43	107	8.9	7.0	4.1	4.6	1.8	1.2
14	.69	9.5	6.1	27	24	207	8.5	7.0	3.9	19	5.8	1.1
15	.68	5.1	96	20	17	50	8.9	6.5	3.4	5.1	5.8	1.1
16	.68	3.0	184	18	15	38	9.6	6.0	3.3	4.8	4.7	18
17	.65	2.2	18	17	86	23	8.5	6.0	3.2	3.7	36	18
18	.68	133	8.1	15	108	21	23	5.5	2.9	2.7	20	4.2
19	.77	68	6.1	14	31	54	14	5.5	2.7	2.7	31	2.5
20	.66	110	411	14	17	17	86	5.0	2.6	2.2	9.5	2.1
21	.65	27	187	13	13	13	104	5.0	2.5	1.8	5.9	1.8
22	.65	11	270	13	12	12	28	4.5	2.4	1.6	4.2	1.4
23	.64	5.4	35	12	29	11	30	4.5	2.4	1.6	5.8	1.2
24	.64	4.5	26	12	12	10	15	4.0	2.3	1.5	4.2	1.1
25	.65	3.5	107	64	10	9.8	14	4.0	2.5	1.4	3.2	1.1
26	.65	2.9	225	23	9.6	9.4	10	4.0	2.3	1.4	3.5	1.0
27	154	2.3	66	14	32	8.9	9.2	3.5	2.2	2.4	2.6	1.3
28	21	2.0	22	12	126	12	8.5	3.8	2.2	1.9	2.6	1.3
29	4.6	1.6	17	12	---	29	9.1	3.7	2.2	1.5	2.5	1.7
30	12	1.3	12	96	---	22	11	3.6	2.2	1.3	4.9	1.2
31	5.2	---	9.5	46	---	12	---	3.5	---	1.3	40	---
TOTAL	215.51	539.90	1749.11	3317.3	809.2	1163.1	647.3	220.3	87.6	94.1	251.0	86.3
MEAN	6.95	18.0	56.1	107	28.9	37.5	21.6	7.11	2.92	3.04	8.10	2.88
MAX	154	133	411	1070	126	207	104	22	4.1	19	40	18
MIN	.64	.65	.75	7.6	9.1	8.9	8.5	3.5	2.2	1.3	1.2	1.0
AC-FT	427	1070	3450	6580	1610	2310	1280	437	174	187	498	171

CAL YR 1974 TOTAL 6779.11 MEAN 18.6 MAX 411 MIN .62 AC-FT 13450
WTR YR 1975 TOTAL 9171.72 MEAN 25.1 MAX 1070 MIN .64 AC-FT 18190

PEAK DISCHARGE (BASE, 1,400 CFS).--Dec. 20 (2030) 2,330 cfs (9.34 ft); Jan. 8 (1015) 2,530 cfs (9.66 ft).

16720000 KAWAINUI STREAM NEAR KAMUELA

LOCATION.--Lat 20°05'18", long 155°40'58", on left bank 250 ft (76 m) upstream from Upper Hamakua ditch intake and 4.5 mi (7.2 km) north of Kamuela.

DRAINAGE AREA.--1.58 mi^2 (4.09 km^2).

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,060 ft (1,237 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 13.3 ft^3/s (0.377 m^3/s), 9,640 acre-ft/yr (11.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,310 ft^3/s (65.4 m^3/s) Oct. 20 (gage height, 9.03 ft or 2.752 m), from rating curve extended as explained below; minimum, 0.02 ft^3/s (0.001 m^3/s) Oct. 11.
Period of record: Maximum discharge, 2,400 ft^3/s (68.0 m^3/s) Jan. 11, 1967 (gage height, 9.15 ft or 2.789 m), from rating curve extended above 53 ft^3/s (1.50 m^3/s) on basis of computation of peak flow over dam; minimum, 0.02 ft^3/s (0.001 m^3/s) Sept. 23, 24, 26-30, Oct. 11, 1974.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	13	.75	2.3	2.7	94	1.8	4.3	.49	24	72	4.7
2	.12	3.8	.54	1.3	2.1	5.6	1.5	23	.43	13	13	2.6
3	.07	2.1	.43	2.0	1.3	9.9	2.7	8.4	.46	16	5.3	2.4
4	.05	2.0	.34	51	1.0	12	11	7.6	4.6	19	6.3	2.0
5	.04	2.7	.27	46	2.2	43	26	24	13	9.0	12	1.4
6	.04	3.9	.21	34	4.4	17	25	13	19	3.4	5.8	1.1
7	.03	5.1	1.7	80	1.9	15	14	39	11	4.1	2.9	2.1
8	.03	2.9	5.1	114	1.2	12	4.9	22	3.4	7.2	1.7	3.2
9	.02	1.8	12	9.4	.83	13	2.3	16	3.3	7.3	16	2.3
10	.02	3.1	4.2	3.1	2.2	34	1.5	3.6	5.0	2.7	20	1.9
11	.03	73	4.9	1.9	55	26	1.1	2.0	9.0	7.8	28	1.3
12	.08	48	5.4	7.0	15	69	.84	1.6	23	47	6.5	1.0
13	.06	8.9	7.7	5.2	5.3	38	.69	1.6	12	48	12	.83
14	.05	14	3.4	3.2	3.4	62	.89	1.1	12	60	34	.68
15	.04	9.6	13	1.8	2.9	41	13	1.2	12	16	39	.66
16	.03	6.8	49	1.5	11	24	8.6	1.5	10	12	12	19
17	.03	6.1	7.3	1.1	42	18	7.3	2.3	4.1	19	28	29
18	.02	4.2	2.7	.83	46	29	34	7.1	3.2	36	19	3.4
19	.21	6.5	1.6	.70	17	29	26	10	2.1	6.4	29	1.9
20	102	12	45	.55	4.1	9.6	80	22	1.4	2.6	12	1.5
21	17	33	57	.44	2.1	4.4	80	11	1.2	2.6	20	1.2
22	9.1	8.5	83	.34	1.3	5.6	31	3.2	1.1	2.0	5.8	.93
23	3.5	2.8	22	.35	7.0	4.3	36	1.7	.84	6.2	9.3	.91
24	2.1	1.8	12	3.8	4.2	2.1	53	1.2	.83	2.7	3.8	1.1
25	3.5	1.3	18	100	1.8	1.5	14	1.2	19	2.4	2.7	.97
26	12	.89	56	15	32	1.1	8.8	1.8	6.6	1.9	1.9	.84
27	126	.65	26	3.3	67	.85	8.3	1.5	2.7	2.2	1.6	.77
28	23	.57	7.5	1.7	143	.71	16	1.1	1.5	2.0	2.8	.92
29	9.1	.61	5.3	1.1	---	4.4	13	.86	1.4	1.5	19	.71
30	28	1.1	2.9	2.5	---	11	12	.69	2.0	4.2	38	.57
31	15	---	2.3	5.9	---	4.7	---	.59	---	28	37	---
TOTAL	351.76	280.72	457.54	501.31	479.93	641.76	535.22	236.14	186.65	416.2	516.4	91.89
MEAN	11.3	9.36	14.8	16.2	17.1	20.7	17.8	7.62	6.22	13.4	16.7	3.06
MAX	126	73	83	114	143	94	80	39	23	60	72	29
MIN	.02	.57	.21	.34	.83	.71	.69	.59	.43	1.5	1.6	.57
AC-FT	698	557	908	994	952	1270	1060	468	370	826	1020	182

CAL YR 1974 TOTAL 3542.02 MEAN 9.70 MAX 185 MIN .02 AC-FT 7030
WTR YR 1975 TOTAL 4695.52 MEAN 12.9 MAX 143 MIN .02 AC-FT 9310

PEAK DISCHARGE (BASE, 440 CFS).--Oct. 20 (1515) 2,310 cfs (9.03 ft); Nov. 11 (2000) 458 cfs (5.07 ft).

16720300 KAWAIKI STREAM NEAR KAMUELA

LOCATION.--Lat 20°05'13", long 155°40'59", on right bank 0.2 mi (0.3 km) upstream from Upper Hamakua ditch intake and 4.4 mi (7.1 km) north of Kamuela.

DRAINAGE AREA.--0.45 mi^2 (1.17 km^2).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,090 ft (1,247 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 3.64 ft^3/s (0.103 m^3/s), 2,640 acre-ft/yr (3.26 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 595 ft^3/s (16.9 m^3/s) Oct. 20 (gage height, 5.65 ft or 1.722 m), from rating curve extended above 33 ft^3/s (0.94 m^3/s); minimum, 0.12 ft^3/s (0.003 m^3/s) Oct. 4, 5, 17, 19.
Period of record: Maximum discharge, 595 ft^3/s (16.9 m^3/s) Oct. 20, 1974 (gage height, 5.65 ft or 1.722 m), from rating curve extended above 33 ft^3/s (0.94 m^3/s); minimum, 0.03 ft^3/s (0.001 m^3/s) Nov. 12-15, 1968.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	2.7	.40	.93	.89	21	.76	2.4	.49	7.6	17	1.5
2	.21	1.1	.32	.61	.72	1.5	.72	5.0	.48	3.4	3.1	.98
3	.16	.73	.28	.76	.51	3.4	1.0	2.1	.54	5.4	1.6	.98
4	.15	.78	.25	9.0	.42	3.8	3.5	2.1	2.6	5.8	2.5	.88
5	.14	.93	.24	9.1	.95	12	6.1	6.0	4.2	3.0	4.0	.67
6	.18	1.3	.21	8.0	1.7	4.5	6.7	3.7	5.4	1.2	1.8	.57
7	.18	1.5	.75	17	.69	4.4	4.5	10	3.1	1.4	1.1	1.3
8	.18	.82	1.6	22	.47	3.1	1.9	6.2	1.4	3.3	.76	1.3
9	.16	.55	2.7	2.2	.37	3.7	1.0	4.2	1.6	2.4	6.1	.95
10	.15	.82	.98	.98	1.0	8.7	.76	1.1	1.9	1.1	6.0	.95
11	.17	17	.91	.70	12	7.2	.67	.76	2.8	2.9	9.0	.63
12	.25	10	.96	3.2	3.5	15	.61	.68	6.3	10	2.1	.54
13	.24	2.5	1.5	2.1	1.9	8.5	.54	.68	3.3	14	4.0	.47
14	.19	3.7	.74	1.2	1.3	13	.68	.59	3.1	16	8.2	.42
15	.16	2.1	2.8	.79	1.4	8.9	3.3	1.0	3.2	4.4	10	.41
16	.15	1.3	8.3	.72	4.2	5.7	2.5	.99	3.2	3.8	3.1	5.3
17	.13	1.3	1.5	.62	11	4.7	2.3	1.7	1.5	5.3	8.1	6.7
18	.16	1.4	.65	.54	11	8.7	6.4	3.4	1.3	9.5	6.0	1.1
19	.21	2.2	.43	.48	3.7	7.8	6.1	3.6	.84	2.0	8.8	.70
20	22	3.9	11	.47	1.2	2.6	20	6.7	.67	.93	4.0	.69
21	4.7	12	12	.42	.75	1.4	20	2.9	.59	.84	5.0	.56
22	2.3	2.3	20	.42	.55	2.2	6.4	1.1	.58	.95	1.9	.47
23	1.0	.94	4.9	.35	3.2	1.7	7.8	.78	.53	2.2	2.9	.50
24	.68	.65	3.0	1.5	1.6	1.0	12	.63	.58	1.2	1.5	.51
25	1.5	.49	3.2	23	.75	.83	3.7	.95	5.0	1.0	1.1	.48
26	3.6	.40	12	3.5	9.3	.74	2.4	1.3	2.0	.87	.85	.42
27	24	.34	5.6	.95	16	.68	2.7	.95	.94	1.0	.75	.50
28	4.7	.33	1.8	.59	32	.64	4.3	.73	.70	.85	1.2	.53
29	2.5	.39	1.2	.44	---	2.0	4.3	.65	.70	.75	5.1	.40
30	6.3	.58	.79	.81	---	2.4	4.1	.58	1.0	2.0	11	.36
31	3.8	---	.90	1.7	---	1.2	---	.54	---	8.9	8.3	---
TOTAL	80.64	75.05	101.91	115.08	123.07	162.99	137.74	74.01	60.54	123.99	146.86	31.77
MEAN	2.60	2.50	3.29	3.71	4.40	5.26	4.59	2.39	2.02	4.00	4.74	1.06
MAX	24	17	20	23	32	21	20	10	6.3	16	17	6.7
MIN	.13	.33	.21	.35	.37	.64	.54	.54	.48	.75	.75	.36
AC-FT	160	149	202	228	244	323	273	147	120	246	291	63

CAL YR 1974 TOTAL 928.86 MEAN 2.54 MAX 41 MIN .11 AC-FT 1840
WTR YR 1975 TOTAL 1233.65 MEAN 3.38 MAX 32 MIN .13 AC-FT 2450

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-20	1500	5.65	595	11-21	1600	3.55	155
11-11	1945	3.00	108				

16720500 UPPER HAMAKUA DITCH BELOW KAWAIKI STREAM, NEAR KAMUELA

LOCATION.--Lat 20°05'15", long 155°40'42", on right bank 800 ft (244 m) downstream from Kawaiki Stream intake and 4.4 mi (7.1 km) north of Kamuela.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,020 ft (1,225 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 8.49 ft^3/s (0.240 m^3/s), 6,150 acre-ft/yr (7.58 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 49 ft^3/s (1.39 m^3/s) Nov. 2, 1967; minimum daily, 0.05 ft^3/s (0.001 m^3/s) Oct. 4-6, 1965.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Ditch diverts from Kawainui and Kawaiki Streams for irrigation in vicinity of Kamuela. Recording rain gage located at this station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	10	1.3	3.5	3.8	13	2.6	6.0	.80	10	15	5.5
2	.38	5.2	.69	2.3	3.1	6.5	2.3	10	.75	8.0	8.0	3.5
3	.31	3.2	.78	2.9	1.9	8.1	4.4	9.3	.80	9.0	6.0	3.0
4	.24	3.1	.67	12	1.5	11	12	8.5	6.0	10	7.0	2.5
5	.20	3.8	.62	13	3.3	13	13	12	9.0	4.5	8.0	2.0
6	.20	5.4	.56	12	5.9	11	13	10	12	5.0	6.0	1.5
7	.20	6.0	2.4	13	2.9	10	10	14	10	8.0	3.5	2.5
8	.20	4.1	5.8	13	1.7	10	5.4	12	5.0	8.5	2.0	4.0
9	.17	2.9	9.8	9.0	1.3	10	3.1	10	5.0	3.0	9.0	3.0
10	.14	4.0	5.2	4.4	3.1	13	2.3	5.0	7.0	8.0	10	2.5
11	.20	13	5.9	3.0	11	12	1.8	3.5	8.0	12	12	2.0
12	.42	14	6.0	6.4	11	13	1.5	2.5	14	12	7.0	1.5
13	.38	9.5	8.0	6.8	6.6	13	1.3	2.0	10	14	8.0	1.0
14	.28	13	4.4	4.8	4.7	13	4.5	1.5	10	10	12	.80
15	.20	9.6	6.6	3.0	3.8	13	11	1.5	10	8.0	12	.75
16	.17	6.2	13	2.5	6.9	13	7.6	2.0	8.0	9.0	8.0	10
17	.17	7.1	6.2	2.0	13	12	8.0	3.5	5.0	12	10	13
18	.10	5.3	3.8	1.5	13	13	13	8.5	4.0	7.0	9.0	4.0
19	.38	6.0	2.4	1.4	11	13	13	10	3.0	3.0	10	2.5
20	5.9	11	6.0	1.1	5.3	9.5	14	12	2.0	3.0	8.0	2.0
21	4.8	12	13	.69	3.0	5.2	14	6.0	2.0	3.0	10	2.0
22	2.6	8.7	13	.84	1.9	7.1	13	4.0	1.5	2.5	6.5	1.5
23	1.2	4.6	12	.72	8.1	5.2	13	2.0	1.0	7.0	9.5	1.5
24	.78	2.7	10	2.6	5.4	3.1	13	1.5	1.0	3.0	5.0	1.5
25	3.9	1.9	8.3	14	2.9	2.3	11	1.5	12	3.0	3.0	1.5
26	11	1.4	13	10	11	1.8	9.3	2.5	6.0	2.0	2.5	1.0
27	15	1.1	12	4.4	13	1.5	9.3	2.0	4.0	2.5	2.5	.90
28	14	1.0	8.2	2.5	14	1.6	12	1.5	2.3	2.5	5.0	1.5
29	9.6	1.0	6.2	1.7	---	6.4	10	1.0	2.0	2.0	10	.85
30	9.4	1.9	3.9	3.1	---	8.1	8.0	.85	2.9	5.0	14	.70
31	13	---	3.4	7.0	---	4.6	---	.80	---	10	14	---
TOTAL	96.24	180.1	195.26	165.35	174.1	277.0	256.4	169.45	167.05	206.5	252.5	80.50
MEAN	3.10	6.00	6.30	5.33	6.22	8.94	8.55	5.47	5.57	6.66	8.15	2.68
MAX	15	14	13	14	14	13	14	14	14	14	15	13
MIN	.10	1.0	.50	.72	1.3	1.5	1.3	.80	.75	2.0	2.0	.70
AC-FT	191	357	387	328	345	549	509	336	331	410	501	160

CAL YR 1974 TOTAL 1432.94 MEAN 3.93 MAX 22 MIN .09 AC-FT 2840
WTR YR 1975 TOTAL 2220.45 MEAN 6.08 MAX 15 MIN .10 AC-FT 4400

NOTE.--No gage-height record May 4 to June 27, July 1 to Sept. 30.

16724800 UPPER HAMAKUA DITCH ABOVE ALAKAHI STREAM, NEAR KAMUELA

LOCATION.--Lat 20°04'31", long 155°40'26", on right bank 0.1 mi (0.2 km) upstream from Alakahi Stream and 3.6 mi (5.8 km) north of Kamuela.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,890 ft (1,186 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 6.49 ft^3/s (0.184 m^3/s), 4,700 acre-ft/yr (5.80 hm^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 41 ft^3/s (1.16 m^3/s) Aug. 18, 1972; no flow at times each year.

REMARKS.--Records good. Ditch diverts from Kawainui and Kawaiki Streams for irrigation in vicinity of Kamuela. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	12	.47	2.1	2.2	19	1.4	5.0	0	7.7	15	4.6
2	0	4.0	.25	1.1	1.7	6.4	1.1	10	0	9.0	9.9	2.1
3	0	2.0	.13	1.1	.85	7.0	1.8	8.0	0	9.9	4.8	1.9
4	0	1.9	.04	12	.58	12	7.9	5.2	3.2	11	4.9	1.5
5	0	2.5	.01	14	1.6	15	12	11	7.5	8.2	9.7	.89
6	0	4.1	0	13	3.9	12	13	12	11	2.8	5.3	.56
7	0	5.0	1.3	15	1.4	8.8	12	12	8.2	3.0	2.5	1.4
8	0	2.8	4.1	18	.72	11	5.5	14	2.7	5.1	1.2	2.2
9	0	1.6	8.3	9.5	.41	9.0	2.1	11	2.4	6.0	5.3	1.4
10	0	2.5	3.4	3.2	1.5	14	1.1	3.5	3.6	1.9	12	1.2
11	0	16	3.9	1.7	11	14	.75	1.7	4.8	2.3	12	.59
12	0	18	4.0	6.0	12	16	.49	1.2	12	14	5.7	.34
13	0	10	5.9	5.6	5.8	15	.31	1.1	9.1	14	9.5	.17
14	0	15	2.8	3.2	3.5	16	.29	.61	8.4	16	10	.05
15	0	10	4.7	1.6	2.8	15	9.2	.82	9.6	12	14	.04
16	0	5.0	14	1.2	6.0	15	6.5	1.2	8.6	11	9.5	4.3
17	0	6.4	7.3	.85	14	12	5.0	1.7	3.5	11	11	10
18	0	3.9	2.4	.55	15	15	13	5.7	2.4	14	13	2.4
19	0	7.2	1.2	.40	12	15	13	8.1	1.3	6.6	14	1.1
20	9.3	11	6.2	.25	4.2	11	17	12	.70	2.1	12	.79
21	5.0	13	15	.14	1.8	4.7	17	9.1	.49	1.8	11	.51
22	2.0	9.5	17	.06	.98	5.6	15	2.7	.38	1.3	4.9	.32
23	.53	2.9	13	.03	6.9	5.0	14	1.2	.21	5.0	8.2	.28
24	.17	1.6	11	.97	4.3	2.1	15	.62	.18	2.1	3.3	.42
25	2.6	.98	7.3	17	1.5	1.3	13	.66	7.6	1.7	2.2	.29
26	11	.63	14	11	10	.90	9.0	1.3	5.4	1.1	1.3	.19
27	21	.43	13	3.2	16	.65	8.4	.92	1.9	1.4	.91	.19
28	17	.33	7.7	1.4	20	.53	11	.47	.82	1.2	1.8	.27
29	10	.35	4.9	.79	---	3.8	12	.25	.71	.75	6.7	.09
30	15	.85	2.5	1.6	---	5.8	10	.07	1.0	2.8	13	.01
31	9.2	---	2.0	5.5	---	4.4	---	.01	---	11	14	---
TOTAL	102.80	171.47	177.80	152.04	162.64	292.98	247.84	143.13	117.69	197.75	248.61	40.10
MEAN	3.32	5.72	5.74	4.90	5.81	9.45	8.26	4.62	3.92	6.38	8.02	1.34
MAX	21	18	17	18	20	19	17	14	12	16	15	10
MIN	0	.33	0	.03	.41	.53	.29	.01	0	.75	.91	.01
AC-FT	204	340	353	302	323	581	492	284	233	392	493	80

CAL YR 1974 TOTAL 1275.41 MEAN 3.49 MAX 24 MIN 0 AC-FT 2530
WTR YR 1975 TOTAL 2054.85 MEAN 5.63 MAX 21 MIN 0 AC-FT 4080

16725000 ALAKAHI STREAM NEAR KAMUELA

LOCATION.--Lat 20°04'27", long 155°40'25", on right bank 25 ft (8 m) upstream from Upper Hamakua ditch intake and 3.5 mi (5.6 km) north of Kamuela.

DRAINAGE AREA.--0.87 mi² (2.25 km²).

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,900 ft (1,189 m), from topographic map.

AVERAGE DISCHARGE.--11 years, 6.26 ft³/s (0.177 m³/s), 4,540 acre-ft/yr (5.60 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 451 ft³/s (12.8 m³/s) Oct. 20 (gage height, 6.37 ft or 1.942 m), from rating curve extended as explained below; minimum, 0.32 ft³/s (0.009 m³/s) Dec. 6, 7.
Period of record: Maximum discharge, 1,420 ft³/s (40.2 m³/s) Jan. 11, 1967 (gage height, 8.65 ft or 2.637 m), from rating curve extended above 28 ft³/s (0.79 m³/s) on basis of computation of peak flow over dam; minimum, 0.03 ft³/s (0.001 m³/s) on several days in 1965.

REMARKS.--Records good. Parker Ranch pipeline diverts from tributary 0.4 mi (0.6 km) above station for ranch use in Kamuela area. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	5.6	.73	1.7	2.5	36	1.6	4.2	1.0	13	25	5.0
2	1.2	2.5	.57	1.2	2.0	4.9	1.3	6.6	.97	6.3	11	3.7
3	1.1	1.8	.46	.92	1.4	6.0	1.2	5.3	.94	9.4	4.2	3.3
4	1.0	1.5	.42	6.7	.98	6.6	2.0	3.2	2.3	10	3.5	3.0
5	.95	1.3	.34	12	1.2	20	7.1	8.0	6.7	5.6	8.7	2.4
6	.94	2.0	.36	13	2.8	9.6	9.5	6.6	8.5	3.5	4.5	2.0
7	.95	2.0	.73	28	1.6	6.6	8.1	12	5.8	2.7	3.4	2.2
8	.95	1.6	1.3	29	.99	7.5	5.2	11	3.1	4.4	2.4	3.0
9	.90	1.1	3.3	4.8	.71	5.0	2.8	11	2.5	4.4	5.9	2.6
10	.92	.90	2.0	3.2	1.4	13	1.8	4.0	2.6	2.7	15	3.0
11	1.1	21	1.5	2.1	15	11	1.4	2.7	2.9	6.2	17	2.2
12	1.6	20	1.1	8.0	8.1	26	1.1	2.0	9.4	16	5.6	1.7
13	1.3	4.8	1.3	4.3	4.1	16	.98	1.8	6.4	23	8.2	1.6
14	1.2	5.7	1.4	3.0	3.3	21	.90	1.5	4.7	27	8.7	1.4
15	1.1	4.2	1.0	2.0	2.3	13	2.2	1.3	5.0	8.9	14	1.4
16	1.0	2.4	11	1.4	6.9	12	3.6	2.2	4.8	7.3	12	4.7
17	.96	2.0	3.4	1.2	16	7.4	2.6	1.8	3.4	10	11	13
18	.95	1.6	1.7	.90	20	13	8.4	5.5	2.5	17	13	3.6
19	1.3	3.8	.97	.70	6.4	16	9.2	7.1	1.9	5.2	18	2.3
20	29	5.4	7.6	.65	3.5	5.2	23	9.8	1.5	3.4	9.6	1.8
21	9.9	12	20	.60	2.4	3.7	32	6.5	1.2	2.6	10	1.6
22	5.9	5.1	30	.65	1.6	4.0	11	3.5	1.1	2.1	4.5	1.4
23	3.0	2.5	10	.65	6.0	4.6	15	2.1	1.1	3.1	6.2	1.3
24	1.6	1.5	6.3	.86	4.1	2.7	19	1.5	1.1	2.3	3.8	1.3
25	1.7	1.1	3.7	31	2.2	2.0	7.4	1.5	6.1	2.0	3.3	1.2
26	4.5	.79	16	7.6	8.8	1.6	4.8	2.7	3.8	1.7	2.6	1.2
27	35	.63	11	3.2	29	1.3	5.4	2.2	2.2	1.7	2.2	1.3
28	10	.61	4.6	1.9	41	1.2	7.7	1.6	1.5	1.7	2.3	1.4
29	5.5	.71	2.9	1.2	---	2.7	7.5	1.3	1.3	1.5	10	1.3
30	9.9	.95	1.9	1.1	---	3.2	9.1	1.2	1.4	2.6	19	1.2
31	5.7	---	1.4	3.3	---	3.0	---	1.1	---	13	16	---
TOTAL	142.62	117.49	149.03	176.83	196.28	286.0	212.88	132.8	97.71	220.3	280.6	77.1
MEAN	4.60	3.92	4.81	5.70	7.01	9.23	7.10	4.28	3.26	7.11	9.05	2.57
MAX	35	21	30	31	41	36	32	12	9.4	27	25	13
MIN	.90	.61	.36	.60	.71	1.2	.90	1.1	.94	1.5	2.2	1.2
AC-FT	283	233	296	351	389	567	422	263	194	437	557	153

CAL YR 1974 TOTAL 1821.54 MEAN 4.99 MAX 57 MIN .36 AC-FT 3610
WTR YR 1975 TOTAL 2089.64 MEAN 5.73 MAX 41 MIN .36 AC-FT 4140

PEAK DISCHARGE (BASE, 120 CFS).--Oct. 20 (1545) 451 cfs (6.37 ft).

HAWAII, ISLAND OF HAWAII

16726000 UPPER HAMAKUA DITCH ABOVE WAIMEA RESERVOIR DIVERSION, NEAR KAMUELA

LOCATION.--Lat 20°03'31", long 155°37'40", on left bank 120 ft (37 m) upstream from diversion intake leading to Waimea Reservoir and 3.7 mi (6.0 km) northeast of Kamuela Post Office.

PERIOD OF RECORD.--October 1974 to September 1975.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,020 ft (920 m), from topographic map.

EXTREMES.--Period of record: Maximum daily discharge, 39 ft^3/s (1.10 m^3/s) Apr. 21, 1975; no flow at times during the year.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Ditch diverts from Kawainui, Kawaiki, and Alakahi streams for use in vicinity of Kamuela. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.2	1.9	5.0	4.0	38	3.6	11	.85	16	25	18
2	0	2.6	1.2	4.0	3.5	18	2.6	17	.75	21	21	7.7
3	0	2.3	.92	3.0	2.0	15	2.8	15	.69	22	11	5.6
4	0	2.6	.67	10	1.5	21	8.7	8.6	3.5	27	7.9	5.0
5	0	3.6	.52	20	2.0	32	19	20	13	18	15	3.3
6	0	6.1	.42	20	4.5	25	23	19	21	8.4	12	2.4
7	0	6.3	1.7	30	3.0	17	22	23	15	6.7	8.3	2.5
8	0	4.8	5.2	35	2.5	20	13	26	6.2	9.0	4.7	4.6
9	0	2.8	11	10	2.0	16	5.8	24	4.5	13	4.9	3.2
10	0	2.9	5.0	7.0	3.0	28	3.6	9.8	5.9	4.9	25	3.4
11	0	24	4.9	5.0	20	29	2.5	5.9	7.0	4.2	25	3.4
12	0	31	4.5	15	15	35	1.9	4.2	21	27	15	1.5
13	0	18	6.5	7.0	10	30	1.5	4.0	18	29	15	1.1
14	0	24	4.9	6.0	8.0	31	1.3	2.6	13	36	12	.87
15	0	16	4.9	5.0	5.5	27	8.1	2.8	16	24	18	.74
16	0	7.9	21	4.0	12	27	9.8	4.4	14	19	19	5.6
17	0	12	13	3.5	29	21	5.2	5.1	8.1	20	12	22
18	0	5.8	4.9	3.0	31	27	20	17	5.0	32	22	6.3
19	0	11	2.1	2.0	21	30	24	19	3.1	16	27	3.1
20	0	16	8.5	1.5	9.4	18	34	25	1.8	7.0	20	2.1
21	0	23	32	1.0	5.5	10	39	17	1.4	5.3	17	1.5
22	3.0	17	38	1.5	3.5	11	29	7.1	1.1	3.6	12	1.1
23	4.0	6.5	25	1.5	15	13	28	4.0	.87	8.3	9.8	.96
24	2.1	3.9	15	2.5	12	6.3	30	2.6	.73	5.2	8.0	1.1
25	2.3	2.5	10	35	5.1	4.2	23	2.7	11	3.9	6.0	.93
26	4.4	1.8	20	10	16	3.2	16	4.9	9.0	2.6	4.2	.78
27	7.5	1.3	15	5.0	36	2.5	20	3.6	3.8	2.4	3.1	.73
28	3.8	1.1	10	4.0	38	2.2	22	2.3	1.7	2.5	3.2	1.1
29	3.1	2.7	7.0	3.5	---	7.2	23	1.7	1.4	1.7	7.9	.71
30	3.2	3.8	5.0	3.0	---	9.3	23	1.3	1.6	3.2	27	.56
31	3.1	---	4.0	5.0	---	8.6	---	1.0	---	19	34	---
TOTAL	36.5	266.7	284.73	268.0	320.0	582.5	465.4	311.6	210.99	417.9	452.0	111.88
MEAN	1.18	8.89	9.18	8.65	11.4	18.8	15.5	10.1	7.03	13.5	14.6	3.73
MAX	7.5	31	38	35	38	38	39	26	21	36	34	22
MIN	0	1.1	.42	1.0	1.5	2.2	1.3	1.0	.69	1.7	3.1	.56
AC-FT	72	529	565	532	635	1160	923	618	418	829	897	222

WTR YR 1975 TOTAL 3728.20 MEAN 10.2 MAX 39 MIN 0 AC-FT 7390

NOTE.--No gage-height record Dec. 23 to Feb. 13.

HAWAII, ISLAND OF HAWAII

16756000 KOHAKOHAU STREAM NEAR KAMUELA

LOCATION.--Lat 20°02'38", long 155°41'10", on left bank 0.6 mi (1.0 km) upstream from Oolamakapehu Gulch and 1.7 mi (2.7 km) northwest of Kamuela.

DRAINAGE AREA.--2.51 mi^2 (6.50 km^2).

PERIOD OF RECORD.--March 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,273 ft (997.6 m) above mean sea level (by stadia survey by State Department of Land and Natural Resources). Prior to Jan. 11, 1967, at site 0.5 mi (0.8 km) upstream at different datums.

AVERAGE DISCHARGE.--19 years, 8.43 ft^3/s (0.239 m^3/s), 6,110 acre-ft/yr (7.53 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 210 ft^3/s (5.95 m^3/s) Nov. 11 (gage height, 4.10 ft or 1.250 m), from rating curve extended above 46 ft^3/s (1.30 m^3/s) on basis of computation of flow over dam at gage height 6.20 ft (1.890 m); no flow for many days.
Period of record: Maximum discharge, 3,880 ft^3/s (110 m^3/s) Aug. 7, 1958 (gage height, 10.76 ft or 3.280 m), site and datum then in use, from rating curve extended above 70 ft^3/s (1.98 m^3/s), by test of model of station site; no flow at times in 1968, 1971-75.

REMARKS.--Records good. Parker Ranch pipeline diverts above station at altitude 4,250 ft (1,295 m). Hawaii Division of Water and Land Development diverts by pipeline 0.3 mi (0.5 km) above station at altitude 3,400 ft (1,036 m) for domestic use in the Kamuela and Kawaihae areas since Aug. 20, 1973. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.4	.26	.54	1.6	58	0	.30	0	2.1	4.8	3.0
2	0	1.3	.13	.40	1.2	6.4	0	2.1	0	1.3	10	.50
3	0	1.5	0	.33	.72	3.4	0	.34	0	.63	.45	.40
4	0	.38	.03	7.3	.53	5.4	0	.06	0	10	.13	.20
5	0	0	.01	19	.44	30	0	0	0	1.8	2.6	.10
6	0	0	0	14	.67	17	0	.08	0	.06	.68	0
7	0	0	0	43	.44	6.9	0	5.2	0	0	.19	0
8	0	0	.05	62	.27	11	0	4.0	.01	0	0	0
9	0	0	.04	7.5	.17	5.5	0	1.4	0	0	1.1	0
10	0	0	.04	2.6	.64	19	0	0	0	0	7.4	0
11	0	16	.02	1.5	19	18	0	0	0	0	12	0
12	0	40	0	11	9.3	49	0	0	.53	16	1.7	0
13	0	4.4	0	3.6	.02	33	0	0	2.6	14	4.8	0
14	0	3.4	0	2.2	0	43	0	0	.35	37	5.1	0
15	0	2.3	0	.96	0	30	0	0	.37	11	19	0
16	0	1.4	11	.55	.04	26	0	0	.39	1.1	7.1	0
17	0	1.1	2.0	.33	16	11	0	0	.05	7.1	10	4.7
18	0	.95	.63	.19	32	15	2.7	0	0	42	11	0
19	0	2.0	.34	.13	5.4	35	7.4	.07	0	8.9	18	0
20	15	2.3	12	.08	0	13	39	.08	0	2.1	5.8	0
21	1.9	2.2	27	.06	0	9.1	53	.06	0	1.1	4.0	0
22	0	3.8	49	.05	0	7.2	16	0	0	.33	1.0	0
23	0	1.4	16	.12	0	6.4	24	0	0	.28	.50	0
24	0	.83	6.3	.23	0	6.3	28	0	0	0	.30	0
25	0	.58	4.2	45	0	.34	9.6	0	0	0	.10	0
26	0	.47	28	13	1.9	0	.52	0	0	0	0	0
27	42	.37	18	2.6	35	0	4.6	0	0	0	0	0
28	8.8	.31	4.4	1.3	60	0	6.3	0	0	0	0	0
29	.02	.29	1.8	.86	---	0	6.1	0	0	0	3.0	0
30	4.1	.32	1.1	1.1	---	0	.35	0	0	0	20	0
31	.34	---	.72	2.5	---	0	---	0	---	.85	25	---
TOTAL	72.16	90.00	183.07	244.03	185.34	464.94	199.57	17.69	4.30	157.65	175.75	8.90
MEAN	2.33	3.00	5.91	7.87	6.62	15.0	6.65	.57	.14	5.09	5.67	.30
MAX	42	40	49	62	60	58	53	9.2	2.6	42	25	4.7
MIN	0	0	0	.05	0	0	0	0	0	0	0	0
AC-FT	143	179	363	484	368	922	396	35	8.5	313	349	18

CAL YR 1974 TOTAL 1546.86 MEAN 4.24 MAX 126 MIN 0 AC-FT 3070
WTR YR 1975 TOTAL 1803.40 MEAN 4.94 MAX 62 MIN 0 AC-FT 3580

PEAK DISCHARGE (BASE, 310 CFS).--No peak above base.

16758000 WAIKOLOA STREAM AT MARINE DAM, NEAR KAMUELA

LOCATION.--Lat 20°02'48", long 155°39'58", on right bank 160 ft (49 m) upstream from Marine Dam, 0.4 mi (0.6 km) east of Puu Ohu, and 1.6 mi (2.6 km) north of Kamuela.

DRAINAGE AREA.--1.18 mi^2 (3.06 km^2).

PERIOD OF RECORD .--May 1947 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,460 ft (1,055 m), from topographic map.

AVERAGE DISCHARGE.--28 years, 8.61 ft^3/s (0.244 m^3/s), 6,240 acre-ft/yr (7.69 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 668 ft^3/s (18.9 m^3/s) Oct. 20 (gage height, 4.52 ft or 1.378 m), from rating curve extended as explained below; minimum, 1.4 ft^3/s (0.040 m^3/s) Oct. 15-18, 20, Dec. 19, 20.
Period of record: Maximum discharge, 3,390 ft^3/s (96.0 m^3/s) Oct. 23, 1957 (gage height, 6.99 ft or 2.131 m), from rating curve extended above 120 ft^3/s (3.40 m^3/s) on basis of computations of flow over dam at gage heights 5.46 ft (1.664 m) and 5.96 ft (1.817 m); minimum, 0.59 ft^3/s (0.017 m^3/s) Oct. 3-6, 1965.

REMARKS.--Records good. Diversion above station for livestock and domestic use. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1569: Drainage area. WSP 1937: 1948(M), 1949-51(P), 1952(M), 1954(M), 1955, 1956-57(P), 1958-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	6.3	2.6	2.2	4.3	56	3.8	5.0	2.2	11	29	7.3
2	1.9	3.8	2.3	2.0	3.7	8.1	3.6	4.6	2.1	7.9	10	4.7
3	1.8	3.0	2.2	2.0	3.1	7.4	3.5	4.0	2.1	9.6	4.3	4.2
4	1.8	2.6	2.1	3.0	2.7	8.7	3.5	3.5	2.3	16	4.0	4.0
5	1.8	2.5	2.0	6.9	3.4	18	4.6	4.6	4.1	6.2	7.4	3.6
6	1.6	2.8	1.9	5.8	5.2	12	6.4	4.9	6.7	3.8	4.5	3.4
7	1.6	2.6	2.3	18	3.2	7.4	34	11	5.3	3.1	3.6	3.5
8	1.6	2.4	2.3	39	2.6	7.9	8.4	10	3.2	3.0	3.1	3.4
9	1.5	2.2	2.5	7.7	2.5	6.5	4.6	9.4	2.7	3.2	10	3.3
10	1.5	2.1	2.4	4.1	3.6	12	3.8	4.4	2.6	2.7	13	2.9
11	1.6	26	2.1	3.2	21	13	3.3	3.5	2.7	3.0	19	2.5
12	1.6	30	2.1	13	13	26	3.2	3.3	4.7	10	5.8	2.4
13	1.5	6.0	2.1	7.7	6.1	17	3.0	3.2	5.1	15	6.4	2.2
14	1.5	7.6	2.0	5.1	4.5	23	3.0	2.9	3.7	26	7.1	2.2
15	1.5	5.3	2.0	3.5	3.6	11	3.0	3.2	3.8	8.5	15	2.2
16	1.5	3.7	3.5	3.0	6.4	13	2.6	3.3	3.8	6.1	9.0	3.2
17	1.4	3.1	2.4	2.6	17	8.4	2.5	3.6	3.2	10	13	8.5
18	1.5	3.1	1.6	2.4	28	11	5.7	6.2	2.8	25	16	3.3
19	1.6	4.1	1.5	2.3	7.1	17	7.0	7.7	2.5	7.4	25	2.6
20	46	5.9	7.8	2.2	4.5	7.4	24	10	2.3	4.0	11	2.4
21	7.7	6.1	16	2.1	4.3	5.5	35	5.6	2.2	3.4	9.3	2.2
22	4.2	4.8	31	2.0	3.5	6.0	12	3.5	2.1	3.1	5.2	2.1
23	3.6	3.4	11	2.1	6.8	6.3	13	3.1	2.1	3.1	4.8	2.2
24	2.5	2.9	7.5	2.3	5.5	4.8	16	2.8	2.0	2.9	4.1	2.1
25	2.5	2.6	4.1	42	3.7	4.1	9.3	2.8	2.4	2.7	3.7	2.0
26	3.1	2.4	11	13	8.7	4.0	5.3	3.1	2.4	2.6	3.4	2.0
27	31	2.3	9.6	4.6	39	3.6	5.7	2.8	2.2	2.6	3.3	2.1
28	11	2.2	4.4	3.3	55	3.6	8.1	2.6	2.0	2.5	3.4	2.0
29	5.0	2.4	3.2	2.8	---	5.8	8.6	2.4	2.1	2.4	8.8	1.9
30	5.4	3.0	2.7	3.4	---	5.5	10	2.3	2.0	2.5	22	1.9
31	5.2	---	2.4	5.0	---	4.6	---	2.2	---	11	23	---
TOTAL	157.4	157.8	152.6	218.3	272.0	344.6	256.5	141.5	89.4	220.3	307.2	92.3
MEAN	5.08	5.26	4.92	7.04	9.71	11.1	8.55	4.56	2.98	7.11	9.91	3.08
MAX	46	30	31	42	55	56	35	11	6.7	26	29	8.5
MIN	1.4	2.1	1.5	2.0	2.5	3.6	2.5	2.2	2.0	2.4	3.1	1.9
AC-FT	312	313	303	433	540	684	509	281	177	437	609	183

CAL YR 1974 TOTAL 1952.8 MEAN 5.35 MAX 85 MIN 1.4 AC-FT 3870
WTR YR 1975 TOTAL 2409.9 MEAN 6.60 MAX 56 MIN 1.4 AC-FT 4780

PEAK DISCHARGE (BASE, 180 CFS).--Oct. 20 (1530) 668 cfs (4.52 ft); Apr. 7 (1430) 269 cfs (3.63 ft).

HAWAII, ISLAND OF HAWAII

16759000 HAUANI GULCH NEAR KAMUELA

LOCATION--Lat 20°02'28", long 155°39'05", on left bank 800 ft (244 m) downstream from small tributary and 1.8 mi (2.9 km) northeast of Kamuela.

DRAINAGE AREA.--0.47 mi^2 (1.22 km^2).

PERIOD OF RECORD.--March 1956 to current year. Prior to July 1960, published as Hauani Stream near Kamuela.

GAGE.--Water-stage recorder. Concrete control since Feb. 27, 1963. Datum of gage is 3,117.42 ft (950.190 m) above mean sea level (Hawaii County Board of Water Supply bench mark).

AVERAGE DISCHARGE.--19 years, 1.46 ft^3/s (0.0413 m^3/s), 1,060 acre-ft/yr (1.31 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 590 ft^3/s (16.7 m^3/s) Oct. 20 (gage height, 4.18 ft or 1.274 m), from rating curve extended above 54 ft^3/s (1.53 m^3/s); no flow Nov. 10, Dec. 4-6, 9-13, 19.
Period of record: Maximum discharge, 590 ft^3/s (16.7 m^3/s) Oct. 20, 1974 (gage height, 4.18 ft or 1.274 m), from rating curve extended above 11 ft^3/s (0.31 m^3/s) on basis of slope-conveyance study; maximum gage height, 4.65 ft (1.417 m) Oct. 23, 1957; no flow at times.

REMARKS.--Records good. Diversion above station for livestock and domestic use. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.52	.08	.06	.35	18	.21	.63	.12	1.9	5.5	.76
2	.06	.18	.04	.04	.27	1.1	.19	.49	.11	.86	1.2	.42
3	.05	.09	.01	.02	.13	1.2	.18	.38	.12	1.8	.43	.35
4	.05	.07	0	.08	.09	1.1	.22	.35	.16	2.6	.47	.32
5	.04	.05	0	.43	.10	3.5	.34	.52	.25	.72	.85	.26
6	.04	.05	0	.31	.29	1.9	.52	.48	.72	.32	.39	.23
7	.05	.04	.03	2.2	.12	1.0	3.4	1.4	.41	.22	.30	.27
8	.04	.02	.02	5.5	.07	.85	.77	1.1	.18	.18	.24	.25
9	.04	.01	0	.80	.05	.76	.32	.93	.15	.20	2.6	.23
10	.06	0	0	.29	.24	1.7	.22	.41	.13	.14	1.5	.23
11	.05	2.5	0	.17	5.6	3.0	.18	.32	.16	.16	3.4	.21
12	.05	3.9	0	1.7	1.6	4.2	.16	.28	.42	.80	.74	.19
13	.04	.60	0	.71	.45	2.5	.15	.26	.40	3.0	.85	.19
14	.03	1.2	.01	.38	.28	3.9	.16	.23	.22	5.6	.89	.17
15	.03	.48	.01	.19	.20	1.2	.30	.33	.27	1.1	2.9	.17
16	.03	.22	.01	.13	.50	1.5	.18	.30	.27	1.0	1.2	.26
17	.02	.13	.01	.09	1.8	.83	.14	.26	.19	1.5	2.1	.70
18	.02	.13	.01	.09	4.5	1.7	.71	.98	.14	2.7	2.2	.26
19	.03	.21	0	.13	.74	3.2	.78	1.0	.11	.82	3.8	.19
20	17	.33	1.4	.09	.34	.91	5.5	1.2	.09	.41	1.4	.15
21	.84	.57	1.6	.03	.35	.60	9.2	.58	.09	.31	1.0	.13
22	.25	.36	5.1	.01	.21	.57	2.0	.32	.08	.28	.65	.12
23	.11	.14	1.3	.01	.81	.53	1.9	.26	.08	.29	.53	.14
24	.07	.08	.77	.05	.34	.37	2.9	.22	.07	.23	.40	.13
25	.09	.06	.27	8.2	.20	.31	1.2	.28	.15	.20	.33	.12
26	.11	.04	1.4	1.5	2.1	.27	.70	.31	.11	.18	.27	.11
27	3.3	.02	1.1	.35	10	.24	.70	.23	.08	.17	.24	.13
28	1.1	.02	.34	.18	15	.25	1.1	.19	.06	.16	.23	.11
29	.36	.16	.18	.11	---	.36	1.2	.17	.06	.14	.67	.10
30	.33	.25	.11	.48	---	.32	1.3	.15	.06	.15	3.8	.09
31	.42	---	.08	.67	---	.29	---	.13	---	1.5	3.4	---
TOTAL	24.80	12.43	13.88	25.00	46.73	58.16	36.83	14.71	5.46	29.64	44.48	6.99
MEAN	.80	.41	.45	.81	1.67	1.88	1.23	.47	.18	.96	1.43	.23
MAX	17	3.9	5.1	8.2	15	18	9.2	1.4	.72	5.6	5.5	.76
MIN	.02	0	0	.01	.05	.24	.14	.13	.06	.14	.23	.09
AC-FT	49	25	28	50	93	115	73	29	11	59	88	14

CAL YR 1974 TOTAL 218.48 MEAN .60 MAX 18 MIN 0 AC-FT 433
WTR YR 1975 TOTAL 319.11 MEAN .87 MAX 18 MIN 0 AC-FT 633

PEAK DISCHARGE (BASE, 78 CFS).--Oct. 20 (1515) 590 cfs (4.18 ft); Mar. 1 (0430) 91 cfs (2.67 ft).

16759200 RIGHT BRANCH WAIAHA STREAM NEAR HOLUALOA

LOCATION.--Lat 19°38'41", long 155°54'55", on right bank 1,000 ft (305 m) upstream from reservoir, 1.0 mi (1.6 km) northeast of Holualoa Makai Camp, and 2.9 mi (4.7 km) northeast of Holualoa School.

DRAINAGE AREA.--1.89 mi^2 (4.90 km^2).

PERIOD OF RECORD.--April 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,280 ft (1,000 m), from topographic map.

AVERAGE DISCHARGE.--15 years, 0.365 ft^3/s (0.0103 m^3/s), 264 acre-ft/yr (326,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 460 ft^3/s (13.0 m^3/s) Oct. 15 (gage height, 4.85 ft or 1.478 m), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 1,630 ft^3/s (46.2 m^3/s) Oct. 3, 1968 (gage height, 5.78 ft or 1.762 m), from rating curve extended above 9.1 ft^3/s (0.26 m^3/s) on basis of slope-area measurements at gage heights 4.07 ft (1.241 m) and 5.78 ft (1.762 m); no flow at times each year.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 2137: 1963-65(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.01		0	.01	.06	.05	.14	.72	.49	.02	.25
2	.06	.17		0	.01	.03	.06	.09	.55	.21	.16	.12
3	.05	.17		0	1.1	.01	.05	.11	.19	.11	.09	.08
4	.03	.06		0	.17	.01	.28	.11	.33	.09	.07	.06
5	.02	.04		0	.09	.01	.17	.87	.39	.06	.04	.05
6	.02	.02		0	.04	.01	.16	1.3	.30	.06	.03	.05
7	.01	.02		0	.14	.01	1.0	.72	.14	.07	.02	.06
8	5.1	.02		0	.06	.01	.25	.45	.10	.04	.02	.27
9	1.5	.01		0	.53	.01	.11	.25	.08	.06	.03	.17
10	3.2	.01		0	4.9	.01	.08	.16	.07	.06	.02	.12
11	2.6	.01		0	12	.01	.08	.11	.05	.04	.02	.10
12	.73	.01		0	1.2	.01	.08	.12	.05	.03	.03	.06
13	1.0	0		.01	e.1	.27	.05	.16	.06	.02	.02	.03
14	5.3	0		0	.63	1.8	.07	.12	.23	.02	.02	.03
15	20	0		0	6.6	.30	2.4	.10	.27	.03	.03	.02
16	.63	0		0	.59	.12	.19	.08	.59	.04	.03	.02
17	.50	0		0	.23	.08	.16	.06	.23	.04	.02	.02
18	.25	0		0	.17	.06	.50	.06	.54	.11	.01	.02
19	4.6	.03		0	.14	.06	.45	.22	.45	1.7	.01	.02
20	.48	.02		0	.10	.06	.27	1.2	.36	.66	.83	.02
21	.12	.06		0	.25	.04	.19	1.1	.16	.17	.66	.02
22	.04	.05		0	.09	.02	.14	1.1	.07	.19	.39	.01
23	.06	.02		0	.05	.04	.09	1.2	.04	.19	.14	.01
24	.04	.01		0	.03	.09	.11	1.2	.02	.19	.09	.03
25	.02	.01		0	.02	.06	.14	.45	.06	.09	.06	.05
26	.01	.01		0	.02	.04	.11	.55	.55	.07	.09	.02
27	.03	.01		0	.01	.04	.16	.55	.16	.06	.08	.02
28	.03	.01		0	.01	.03	.19	.85	.14	.06	.05	.02
29	.05	.01		0	---	.25	.30	1.7	.09	.05	.03	.02
30	.03	0		0	---	.10	.19	4.3	.09	.03	.02	.02
31	.02	---		.01	---	.06	---	1.1	---	.02	.39	---
TOTAL	50.40	1.61	0	.02	36.09	3.73	8.08	20.53	7.08	5.06	3.52	1.79
MEAN	1.63	.054	0	.0006	1.29	.12	.27	.66	.24	.16	.11	.060
MAX	20	.01	0	.01	12	1.8	2.4	4.3	.72	1.7	.83	.27
MIN	.01	0	0	0	.01	.01	.05	.06	.02	.02	.01	.01
AC-FT	100	3.2	0	.04	72	7.4	16	41	14	10	7.0	3.6

CAL YR 1974 TOTAL 103.06 MEAN .28 MAX 20 MIN 0 AC-FT 206
WTR YR 1975 TOTAL 137.91 MEAN .38 MAX 20 MIN 0 AC-FT 274

PEAK DISCHARGE (BASE, 115 CFS).--Oct. 15 (1500) 460 cfs (4.85 ft).

16759800 KIILAE STREAM NEAR HONAUNAU

LOCATION.--Lat 19°24'52", long 155°50'56", on right bank 2.4 mi (3.9 km) northeast of Kealia and 3.0 mi (4.8 km) southeast of Honaunau Post Office.

DRAINAGE AREA.--0.67 mi^2 (1.74 km^2).

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,898 ft (883.3 m) above mean sea level (by stadia traverse).

AVERAGE DISCHARGE.--17 years, 0.214 ft^3/s (0.0061 m^3/s), 155 acre-ft/yr (191,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 30 ft^3/s (0.85 m^3/s) Mar. 14 (gage height, 1.63 ft or 0.497 m); no flow for many days.
Period of record: Maximum discharge, 104 ft^3/s (2.95 m^3/s) Jan. 13, 1959 (gage height, 2.32 ft or 0.707 m), from rating curve extended above 5.7 ft^3/s (0.161 m^3/s); no flow at times each year.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No diversion above station. Banks overflow at high stage and part of overflow is lost in lava. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.13	0	0	.19	.23	.32	.50	1.0	.60	.09	.04
2	.01	2.0	0	0	.23	.06	.13	.15	.75	.30	.55	.02
3	0	2.9	0	0	1.4	0	.06	.20	.05	.15	.14	.03
4	0	.07	0	0	.10	0	.34	.20	.07	.10	.04	.20
5	0	.02	0	0	.02	0	.58	1.0	.23	.05	.01	.49
6	.05	0	0	0	.14	.01	.54	3.0	.48	.05	0	.34
7	.02	.24	0	0	.06	.02	.65	1.0	.11	.05	0	.09
8	.71	.08	0	1.4	0	0	.45	.50	.22	.03	.01	.12
9	.20	.06	0	.06	0	0	.11	.30	.10	.04	.03	.10
10	.52	.04	0	0	1.1	0	.35	.20	.06	.04	.04	.05
11	.34	.01	0	0	2.4	0	.16	.15	.03	.02	.07	.01
12	2.4	.17	0	0	.20	0	.07	.15	.03	.01	.09	0
13	.46	.03	0	.20	.19	2.1	.03	.20	.03	0	.34	.01
14	.07	0	.20	.02	.04	2.6	.78	.15	.30	0	.28	.03
15	.40	0	.05	0	.77	.16	1.1	.10	.35	0	.13	.20
16	1.1	.04	.50	.02	.57	.10	1.0	.10	.75	.01	.06	.03
17	3.6	.02	.19	.01	.06	.06	.56	.10	.30	.03	.01	.64
18	.22	.16	.02	.01	.20	.34	.18	.15	.75	.74	0	.16
19	.04	.14	0	0	.04	.34	.52	.30	.60	.72	0	.06
20	.01	.01	0	.63	.19	.06	.12	2.5	.45	.10	0	.20
21	0	.04	.01	.04	.12	.03	.07	2.0	.20	.02	.03	.11
22	0	.03	.44	.68	.04	.04	.20	2.0	.10	.52	.17	.05
23	0	.01	.02	.07	0	.04	.10	2.5	.05	.61	.58	.04
24	0	0	.01	0	0	.19	.13	2.5	0	.32	.11	.02
25	0	0	.03	.07	0	.06	.21	.50	.03	.04	.36	0
26	.06	0	0	.02	0	.07	.16	.75	.75	.08	.31	0
27	.11	.01	0	0	0	.04	.13	.75	.20	.04	.14	0
28	0	0	.02	0	0	.32	.08	1.5	.15	.05	.05	.31
29	.06	0	0	0	---	.15	.08	2.0	.10	.03	.04	.13
30	.01	0	0	0	---	.11	.22	5.0	.10	0	.01	.04
31	0	---	0	.33	---	.04	---	2.0	---	.65	.03	---
TOTAL	10.41	6.21	1.49	3.56	8.06	7.19	9.43	32.45	8.34	5.40	3.72	3.52
MEAN	.34	.21	.048	.11	.29	.23	.31	1.05	.28	.17	.12	.12
MAX	3.6	2.9	.50	1.4	2.4	2.6	1.1	5.0	1.0	.74	.58	.64
MIN	0	0	0	0	0	0	.03	.10	0	0	0	0
AC-FT	21	12	3.0	7.1	16	14	19	64	17	11	7.4	7.0

CAL YR 1974 TOTAL 102.43 MEAN .28 MAX 7.0 MIN 0 AC-FT 203
WTR YR 1975 TOTAL 99.78 MEAN .27 MAX 5.0 MIN 0 AC-FT 198

PEAK DISCHARGE (BASE, 25 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-12	2230	1.58	25	3-14	1730	1.63	30
10-17	1930	1.62	29				

NOTE.--No gage-height record May 1 to June 3, June 12 to July 16.

HAWAII, ISLAND OF HAWAII

16764000 HILEA GULCH TRIBUTARY NEAR HONUAPO

LOCATION.--Lat 19°10'27", long 155°35'58", on right bank 0.5 mi (0.8 km) upstream from mouth, 6.6 mi (10.6 km) northwest of Honuapo, and 6.7 mi (10.8 km) west of Punaluu.

DRAINAGE AREA.--9.17 mi^2 (23.75 km^2).

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,940 ft (896 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 8.45 ft^3/s (0.239 m^3/s), 6,120 acre-ft/yr (7.55 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,210 ft^3/s (34.3 m^3/s) Jan. 8 (gage height, 6.33 ft or 1.929 m), from rating curve extended above 75 ft^3/s (2.12 m^3/s); minimum, 0.02 ft^3/s (0.001 m^3/s) Dec. 5.
Period of record: Maximum discharge, 1,220 ft^3/s (34.6 m^3/s) Dec. 30, 1966 (gage height, 6.35 ft or 1.935 m), from rating curve extended above 75 ft^3/s (2.12 m^3/s); no flow at times each year.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Records of chemical analyses and periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	11	.54	1.5	35	4.2	2.3	15	.78	10	.81	2.8
2	.54	3.5	.18	1.3	63	.47	6.1	6.6	.47	3.0	.84	4.7
3	.47	4.3	.11	1.2	24	1.1	3.5	4.1	.48	.98	1.7	1.6
4	.38	1.4	.06	50	4.0	.64	39	36	7.6	.62	.54	.35
5	7.5	1.3	.04	9.1	3.1	8.6	7.7	47	10	.60	.30	.28
6	1.1	.56	31	7.8	1.3	1.6	24	48	6.1	10	.25	.24
7	27	.34	3.8	133	.69	14	25	33	2.6	13	.22	.70
8	62	.29	.30	695	.54	4.1	10	12	15	33	.19	.78
9	13	1.4	.25	160	1.2	.67	8.9	6.2	5.4	63	.17	16
10	5.9	4.6	.20	19	1.4	14	4.5	4.8	14	29	4.9	4.5
11	24	.81	.15	6.9	1.6	45	14	.83	19	5.2	2.9	1.2
12	6.0	.31	.15	3.0	3.1	88	1.9	5.7	25	12	.48	.77
13	2.1	.23	.17	1.7	22	40	11	3.5	10	11	.25	1.1
14	11	.18	.15	.98	29	57	13	36	11	3.0	.85	7.5
15	47	.16	.74	.79	64	5.5	16	4.1	3.8	.61	.38	1.2
16	11	.15	.30	1.1	8.3	13	3.7	1.6	1.8	.55	2.0	22
17	2.3	1.1	.25	1.5	24	37	.95	.97	.98	.43	37	3.7
18	9.5	37	.20	1.9	26	5.8	.61	3.4	2.4	80	13	.67
19	7.1	15	.15	25	31	2.0	7.3	2.8	4.3	38	31	1.6
20	4.7	27	.15	4.3	10	.68	1.3	4.4	20	5.6	70	2.6
21	1.9	6.9	40	3.2	2.9	.52	.32	2.2	3.9	9.1	8.3	2.3
22	.52	2.0	203	24	.87	22	.27	.69	1.4	3.7	2.1	4.8
23	.54	.43	61	7.5	.57	5.6	.22	.37	.81	37	1.1	.98
24	1.2	.76	26	2.8	.45	4.8	2.1	1.9	.72	8.6	.42	.29
25	1.4	.48	29	6.0	.37	4.2	2.9	3.8	.53	1.4	26	.20
26	.65	6.9	109	1.3	.33	2.6	.92	2.0	.39	1.5	4.3	.22
27	152	8.0	30	.49	.29	.76	1.7	10	2.1	1.0	5.0	18
28	12	1.3	10	6.2	19	.59	13	6.3	1.0	.60	3.1	7.0
29	1.9	5.6	5.1	6.3	---	.54	7.9	3.0	25	.50	2.0	1.2
30	1.4	2.2	2.7	158	---	20	31	1.4	3.0	.33	.91	.49
31	13	---	2.0	121	---	2.6	---	2.0	---	.31	16	---
TOTAL	435.60	145.20	556.69	1461.86	378.01	407.57	261.09	311.66	199.56	383.63	237.01	109.77
MEAN	14.1	4.84	18.0	47.2	13.5	13.1	8.70	10.1	6.65	12.4	7.65	3.66
MAX	152	37	203	695	64	88	39	48	25	80	70	22
MIN	.38	.15	.04	.49	.29	.47	.22	.37	.39	.31	.17	.20
AC-FT	864	288	1100	2900	750	808	518	618	396	761	470	218

CAL YR 1974 TOTAL 3819.21 MEAN 10.5 MAX 203 MIN 0 AC-FT 7570
WTR YR 1975 TOTAL 4887.65 MEAN 13.4 MAX 695 MIN .04 AC-FT 9690

PEAK DISCHARGE (BASE, 600 CFS).--Dec. 22 (0800) 862 cfs (5.63 ft); Jan. 8 (1100) 1,210 cfs (6.33 ft).

16765000 HILEA GULCH TRIBUTARY NO. 2 NEAR HONUAPO

LOCATION.--Lat 19°10'17", long 155°36'05", on right bank 0.5 mi (0.8 km) upstream from mouth, 6.3 mi (10.1 km) northwest of Honuapo, and 6.6 mi (10.6 km) west of Punaluu.

DRAINAGE AREA.--1.86 mi^2 (4.82 km^2).

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,880 ft (878 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 3.28 ft^3/s (0.0929 m^3/s), 2,380 acre-ft/yr (2.93 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 464 ft^3/s (13.1 m^3/s) Jan. 8 (gage height, 6.85 ft or 2.088 m), from rating curve extended above 41 ft^3/s (1.16 m^3/s); no flow for many days.
Period of record: Maximum discharge, 523 ft^3/s (14.8 m^3/s) Dec. 30, 1966 (gage height, 7.16 ft or 2.182 m), from rating curve extended above 41 ft^3/s (1.16 m^3/s); no flow many days each year.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	2.5	9	0	16	1.1	.02	8.1	0	1.7	.20	.18
2	0	.09	8	8	42	0	1.1	2.0	0	.53	.04	.57
3	0	.12	0	0	11	0	.70	.40	0	0	0	0
4	0	.02	9	17	1.0	0	11	23	.84	0	0	0
5	.37	0	0	.60	.18	1.9	5.6	30	1.5	0	0	0
6	.01	0	16	1.9	.03	.14	6.6	30	1.0	.99	0	0
7	11	0	.06	77	0	5.4	9.1	21	.18	2.6	0	0
8	22	0	0	266	0	1.4	2.4	4.9	4.0	13	0	0
9	1.8	0	0	84	0	0	2.4	5.2	1.4	28	0	3.5
10	.22	.56	0	12	.03	4.0	1.0	.80	4.2	11	.50	.22
11	4.3	.01	0	1.2	0	19	3.2	.01	5.4	1.2	.10	.02
12	.01	0	0	.06	1.1	39	.25	1.9	8.9	5.5	0	0
13	.09	0	0	0	8.1	18	2.9	.65	2.5	3.8	0	0
14	1.6	0	0	0	12	27	4.2	23	2.6	.61	0	1.2
15	14	0	0	0	31	1.5	5.6	.60	.60	0	0	.06
16	1.7	0	0	0	3.9	3.7	1.0	.12	.04	0	0	8.6
17	.09	0	0	0	12	13	.03	0	0	0	22	1.0
18	3.2	18	0	0	10	1.4	0	.66	.02	49	6.6	0
19	.19	3.6	0	8.6	13	.08	.22	.25	.47	14	18	0
20	.21	14	37	.02	3.4	0	.23	1.2	.61	1.6	40	0
21	.05	.57	20	0	.52	0	0	.12	.55	1.1	2.1	.08
22	0	.03	57	12	0	6.6	0	0	0	.43	.07	.29
23	0	0	20	2.8	0	1.0	0	0	0	14	0	.03
24	0	0	5.1	.66	0	.92	.34	0	0	3.2	0	0
25	0	0	8.7	1.3	0	.61	.40	3.5	0	.04	18	0
26	0	.34	40	.16	0	.36	.01	.90	0	.06	.17	0
27	102	.66	5.5	0	0	0	0	5.1	0	.05	.31	4.0
28	2.5	.04	.80	1.1	10	0	10	1.6	0	0	.06	.50
29	.02	.56	.06	1.7	---	0	2.7	.37	10	0	0	.03
30	0	.07	0	92	---	4.5	20	0	.35	0	0	0
31	2.7	---	0	66	---	.28	---	0	---	0	6.8	---
TOTAL	169.77	40.97	219.22	648.10	173.26	150.85	91.00	163.38	43.16	152.41	114.95	20.28
MEAN	5.48	1.37	6.78	20.9	6.19	4.87	3.03	5.27	1.44	4.92	3.71	.68
MAX	102	18	57	268	42	39	20	30	10	49	40	8.6
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	337	81	417	1290	344	299	180	324	86	302	228	40

CAL YR 1974 TOTAL 1285.72 MEAN 3.52 MAX 102 MIN 0 AC-FT 2550
WTR YR 1975 TOTAL 1976.35 MEAN 5.42 MAX 268 MIN 0 AC-FT 3920

PEAK DISCHARGE (BASE, 310 CFS).--Dec. 22 (about 0900) 319 cfs (about 6.00 ft); Jan. 8 (about 2330) 464 cfs (6.85 ft).

16767000 NINOLE GULCH NEAR PUNALUU

LOCATION.--Lat 19°10'44", long 155°33'46", on right bank 300 ft (91 m) downstream from forest-reserve boundary, 4.6 mi (7.4 km) northwest of Punaluu, and 6.0 mi (9.6 km) north of Honuapo.

DRAINAGE AREA.--15.5 mi^2 (40.1 km^2).

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitnde of gage is 2,080 ft (634 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 4.03 ft^3/s (0.114 m^3/s), 2,920 acre-ft/yr (3.60 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 2,010 ft^3/s (56.9 m^3/s) Jan. 8 (gage height, 6.34 ft or 1.932 m), from rating curve extended above 30 ft^3/s (0.85 m^3/s); no flow for many days.
Period of record: Maximum discharge, 2,430 ft^3/s (68.8 m^3/s) Apr. 11, 1970 (gage height, 6.62 ft or 2.018 m), from rating curve extended above 30 ft^3/s (0.85 m^3/s); no flow for many days each year.

REMARKS.--Records good except those above 60 ft^3/s (1.70 m^3/s), which are fair. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	0	0	0	14	.27	0	.28	0	.30	0	.05
2	0	0	0	0	56	.02	0	0	0	0	0	0
3	0	0	0	0	16	0	0	0	0	0	0	0
4	0	0	0	16	.32	0	0	9.3	0	0	0	0
5	0	0	0	.14	0	0	0	17	.49	0	0	0
6	0	0	14	0	0	0	0	14	2.0	0	0	0
7	3.3	0	.19	70	0	.30	0	14	.48	0	0	0
8	15	0	0	678	0	.14	1.6	.48	0	5.1	0	0
9	0	0	0	118	0	0	2.8	.83	0	21	0	0
10	0	0	0	4.1	0	.35	.07	.42	0	4.3	0	0
11	7.5	0	0	.30	0	24	2.5	.01	.66	.05	0	0
12	0	0	0	.02	0	46	.04	0	3.7	0	0	0
13	2.2	0	0	0	4.7	13	.16	0	2.7	0	0	0
14	3.7	0	0	0	16	17	.17	5.6	2.1	0	0	0
15	11	0	0	0	83	.49	.04	0	2.2	0	0	0
16	.20	0	0	0	1.7	.11	0	0	.64	0	0	0
17	0	0	0	.02	4.1	10	0	0	0	0	9.3	0
18	10	8.2	0	.01	6.0	.47	0	0	0	57	.13	0
19	6.4	.62	0	12	11	.08	0	0	.53	13	11	0
20	0	19	40	.09	1.1	.01	0	0	4.0	.54	31	0
21	0	4.8	16	0	.06	0	0	0	2.9	1.3	.44	0
22	0	.06	147	8.9	0	.60	0	0	1.6	.11	0	0
23	0	0	20	.99	0	.06	0	0	.51	23	0	0
24	0	0	.52	.16	0	0	0	0	0	.23	0	0
25	0	0	3.8	1.8	0	0	0	0	0	0	13	0
26	0	1.5	53	.01	0	0	0	0	0	0	.16	0
27	78	.46	2.8	0	0	0	0	0	0	0	.04	15
28	.23	.04	.07	.82	2.0	0	0	0	0	0	0	3.8
29	0	.03	0	.15	---	0	.03	0	2.9	0	0	0
30	0	0	0	125	---	0	2.8	0	2.1	0	0	0
31	0	---	0	77	---	0	---	0	---	0	4.8	---
TOTAL	137.54	34.71	297.38	1113.51	215.98	112.90	10.21	61.92	29.51	125.93	69.87	18.85
MEAN	4.44	1.16	9.59	35.9	7.71	3.64	.34	2.00	.98	4.06	2.25	.63
MAX	78	19	147	678	83	46	2.8	17	4.0	57	31	15
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	273	69	590	2210	428	224	20	123	59	250	139	37

CAL YR 1974 TOTAL 1228.94 MEAN 3.37 MAX 147 MIN 0 AC-FT 2440
WTR YR 1975 TOTAL 2228.31 MEAN 6.11 MAX 678 MIN 0 AC-FT 4420

PEAK DISCHARGE (BASE, 1,000 CFS).--Jan. 8 (1115) 2,010 cfs (6.34 ft).

16770500 PAAUAU GULCH AT PAHALA

LOCATION.--Lat 19°12'39", long 155°28'48", on right bank 100 ft (30 m) downstream from bridge on Wood Valley Road and 0.7 mi (1.1 km) north of Pahala.

DRAINAGE AREA.--1.74 mi^2 (4.51 km^2).

PERIOD OF RECORD.--May 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 972 ft (296.3 m) above mean sea level (by stadia survey).

AVERAGE DISCHARGE.--13 years, 0.739 ft^3/s (0.0209 m^3/s), 535 acre-ft/yr (660,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 3,600 ft^3/s (102 m^3/s) Jan. 8 (gage height, 5.90 ft or 1.798 m); no flow most of time.
Period of record: Maximum discharge, 3,600 ft^3/s (102 m^3/s) Jan. 5, 1969, Jan. 8, 1975 (gage height, 5.90 ft or 1.798 m), from rating curve extended above 360 ft^3/s (10.2 m^3/s) on basis of slope-area measurement at gage height 4.40 ft (1.341 m); no flow most of time. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REMARKS.--Records good. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0		0	0	17	0	0		0	0	0	.21
2	0		0	0	13	0	0		0	0	0	0
3	0		0	0	9.2	0	0		0	0	0	0
4	0		0	0	3.6	0	0		0	0	0	0
5	0		0	0	0	0	0		0	0	0	0
6	.01		0	0	0	0	0		0	0	0	.85
7	0		0	24	0	0	0		0	0	0	.28
8	0		0	720	0	0	.05		0	0	0	0
9	0		0	65	0	0	.17		0	0	0	0
10	0		0	3.0	.12	0	.31		0	0	0	0
11	0		0	.10	0	0	.14		0	0	0	0
12	0		0	0	3.5	0	.14		0	0	0	0
13	0		0	0	0	0	.09		0	0	0	0
14	0		0	0	0	0	.14		0	0	0	0
15	0		0	0	.04	0	.04		0	0	0	0
16	0		0	0	0	0	.07		0	0	0	0
17	0		0	0	.15	0	0		0	0	0	0
18	0		0	0	0	.02	0		0	0	0	0
19	0		0	0	0	.06	0		0	0	0	0
20	0		0	0	0	0	0		0	0	0	0
21	0		.07	0	0	0	0		0	0	0	.01
22	0		30	0	0	0	0		0	0	0	.04
23	0		1.3	2.2	0	.16	0		0	0	0	0
24	0		0	.80	0	.01	0		.10	0	0	0
25	0		0	0	0	0	0		0	0	0	0
26	0		2.0	0	0	0	0		0	0	0	0
27	0		0	0	0	0	0		0	0	0	0
28	0		0	0	0	0	0		0	.30	.01	0
29	0		0	0	---	0	0		0	0	0	0
30	0		0	61	---	3.6	0		0	0	0	0
31	0	---	0	34	---	.16	---		---	0	5.7	---
TOTAL	.01	0	33.37	914.10	46.61	4.03	1.15	0	.10	.30	5.71	1.39
MEAN	.0003	0	1.08	29.5	1.66	.13	.038	0	.003	.010	.18	.046
MAX	.01	0	30	720	17	3.6	.31	0	.10	.30	5.7	.85
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	.02	0	66	1810	92	8.0	2.3	0	.2	.6	11	2.8

CAL YR 1974 TOTAL 38.01 MEAN .10 MAX 30 MIN 0 AC-FT 75
WTR YR 1975 TOTAL 1006.77 MEAN 2.76 MAX 720 MIN 0 AC-FT 2000

PEAK DISCHARGE (BASE, 180 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	0900	3.90	310	1-30	0630	4.58	880
1- 8	1300	5.90	3,600				

16800000 DENNI SPRING

LOCATION.--Lat 15°11'57" N., long 145°46'05" E., 2.8 mi (4.5 km) southeast of Tanapag, 3.1 mi (5.0 km) east of Garapan, and 5.6 mi (9.0 km) northeast of Chalan Kanoa.

PERIOD OF RECORD.--August 1952 to June 1954 (published as Donni Spring near Garapan), March 1968, January 1969 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 261 ft (79.6 m) from U.S. Navy.

AVERAGE DISCHARGE.--7 years (1952-53, 1969-75), 0.536 ft^3/s (0.0152 m^3/s), 388 acre-ft/yr (478,000 m^3/yr).

EXTREMES.--Period of record: Maximum daily discharge, 2.7 ft^3/s (0.076 m^3/s) Aug. 11-16, 1972; minimum daily, 0.02 ft^3/s (0.001 m^3/s) Sept. 16, 17, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.6	.81	.61	.37	.37	.29	.23	.20	.17	.81	.90
2	1.4	1.5	.77	.61	.37	.37	.29	.23	.20	.17	.85	.85
3	1.4	1.5	.77	.61	.37	.37	.29	.23	.20	.17	.90	.81
4	1.4	1.7	.77	.61	.41	.37	.29	.20	.20	.17	.96	.77
5	1.3	1.8	.77	.61	.41	.37	.29	.20	.17	.17	1.1	.77
6	1.3	1.8	.77	.57	.41	.37	.29	.20	.17	.17	1.1	.73
7	1.2	1.7	.77	.57	.41	.37	.29	.20	.17	.17	1.1	.69
8	1.2	1.6	.73	.53	.41	.37	.26	.20	.17	.17	1.1	.69
9	1.3	1.6	.73	.49	.41	.37	.26	.17	.17	.17	1.1	.69
10	1.3	1.6	.73	.49	.45	.37	.26	.17	.17	.17	1.1	.69
11	1.3	1.6	.73	.49	.45	.37	.26	.20	.17	.17	1.1	.65
12	1.4	1.6	.69	.49	.45	.37	.26	.20	.17	.17	1.2	.65
13	1.4	1.6	.69	.49	.41	.33	.26	.20	.17	.17	1.6	.65
14	1.4	1.5	.69	.45	.37	.33	.26	.20	.17	.14	1.6	.65
15	1.4	1.5	.69	.45	.37	.33	.23	.20	.17	.14	1.6	.65
16	1.4	1.4	.69	.49	.37	.33	.23	.20	.17	.14	1.6	.65
17	1.3	1.4	.69	.49	.37	.33	.23	.20	.17	.14	1.7	.69
18	1.1	1.3	.69	.49	.37	.33	.23	.20	.17	.14	1.7	1.2
19	1.1	1.2	.69	.45	.37	.33	.23	.20	.17	.14	1.7	1.4
20	1.0	1.1	.69	.45	.37	.33	.23	.20	.17	.14	1.7	1.4
21	1.0	1.1	.69	.45	.37	.29	.23	.20	.20	.14	1.6	1.4
22	1.0	1.0	.69	.45	.37	.29	.23	.20	.20	.17	1.6	1.4
23	1.1	1.0	.69	.45	.37	.29	.23	.20	.20	.17	1.6	1.4
24	1.6	1.0	.89	.45	.37	.29	.23	.20	.20	.17	1.5	1.3
25	1.7	.96	.69	.45	.41	.29	.23	.20	.20	.20	1.4	1.3
26	1.7	.90	.69	.41	.41	.29	.23	.20	.20	.29	1.4	1.3
27	1.7	.90	.69	.37	.37	.29	.23	.20	.17	.53	1.3	1.3
28	1.7	.85	.69	.37	.37	.29	.23	.20	.17	.53	1.2	1.2
29	1.7	.81	.65	.37	------	.29	.23	.20	.17	.49	1.1	1.1
30	1.6	.81	.65	.37	------	.29	.23	.20	.17	.57	1.1	1.1
31	1.6	------	.65	.37	------	.29	------	.20	------	.69	.96	------
TOTAL	42.4	39.93	22.03	14.95	10.96	10.27	7.53	6.23	5.40	7.14	40.38	28.98
MEAN	1.37	1.33	.71	.48	.39	.33	.25	.20	.18	.23	1.30	.97
MAX	1.7	1.8	.81	.61	.45	.37	.29	.23	.20	.69	1.7	1.4
MIN	1.0	.81	.65	.37	.37	.29	.23	.17	.17	.14	.81	.65
AC-FT	84	79	44	30	22	20	15	12	11	14	80	57

CAL YR 1974 TOTAL 233.66 MEAN .64 MAX 1.8 MIN .12 AC-FT 463
WTR YR 1975 TOTAL 236.20 MEAN .65 MAX 1.8 MIN .14 AC-FT 469

16801000 SOUTH FORK TALOFOFO STREAM

LOCATION.--Lat 15°12'58" N., long 145°46'31" E., on left bank 0.3 mi (0.5 km) upstream from confluence with Middle and North Forks, 1.4 mi (2.3 km) south of Ogso Dogas, and 2.2 mi (3.5 km) southeast of Tanapag.

DRAINAGE AREA.--0.69 mi^2 (1.79 km^2). Area at site used prior to Mar. 31, 1971, 0.73 mi^2 (1.89 km^2).

PERIOD OF RECORD.--October 1968 to current year. Low-flow records not equivalent prior to Mar. 31, 1971, due to undetermined amount of underflow between sites.

GAGE.--Water-stage recorder. Concrete control since Mar. 31, 1971. Altitude of gage is 30 ft (9.1 m), from topographic map. Prior to Mar. 31, 1971, at site 0.2 mi (0.3 km) downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 480 ft^3/s (13.6 m^3/s) Nov. 3 (gage height, 4.42 ft or 1.347 m), from rating curve extended above 59 ft^3/s (1.67 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) for many days in June.

Period of record: Maximum discharge, 1,230 ft^3/s (34.8 m^3/s) Nov. 19, 1968 (gage height, 7.18 ft or 2.188 m), site and datum then in use, from rating curve extended above 1.2 ft^3/s (0.034 m^3/s) on basis of estimate of discharge from high-water marks; maximum gage height, 8.14 ft (2.481 m) Nov. 2, 1968, site and datum then in use, from floodmark (backwater from vegetation); no flow at times prior to Mar. 31, 1971, at site then in use.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	1.7	.72	.35	.21	.19	.15	.08	.07	.15	4.6	1.4
2	.76	7.4	.67	.35	.37	.19	.13	.08	.06	.13	5.2	1.4
3	.80	44	.67	.35	2.9	.21	.12	.08	.05	.09	9.4	1.4
4	.85	22	.67	.35	.58	.19	.12	.08	.02	.34	12	1.4
5	.67	4.5	.72	.35	.37	.17	.13	.07	.02	.07	5.4	1.4
6	.77	3.2	.67	.30	1.1	.17	.19	.06	.02	.08	3.8	1.0
7	2.0	2.9	.62	.30	.76	.17	.25	.05	.01	.06	3.6	.94
8	1.1	2.5	.62	.30	.67	.17	.15	.05	.01	.12	2.6	.85
9	.80	2.1	.58	.30	.54	.17	.13	.03	.01	.13	2.8	.80
10	.76	1.9	.58	.30	.44	.17	.13	.03	.01	.11	4.5	.76
11	4.8	1.8	.54	.30	.44	.25	.12	.06	.01	.08	3.4	.72
12	2.0	1.5	.54	.30	.40	.17	.12	.12	.01	.08	43	.72
13	1.6	1.5	.54	.30	.37	.15	.09	.19	.02	.06	13	.67
14	1.3	1.4	.49	.28	.34	.13	.08	.19	.01	.15	6.6	.67
15	1.2	1.4	.49	.28	.31	.13	.08	.19	.01	.36	4.1	.67
16	1.0	1.4	.45	.25	.31	.15	.09	.19	.01	.25	3.3	.94
17	.94	1.3	.45	.25	.31	.13	.08	.19	.01	.31	2.7	33
18	.80	1.3	.45	.23	.31	.12	.09	.17	.01	.12	27	10
19	.76	1.3	.45	.21	.34	.19	.09	.17	.01	.09	5.0	3.8
20	.72	1.4	.45	.54	.28	.19	.09	.23	.03	.12	3.6	4.2
21	.67	1.2	.40	.28	.31	.15	.08	.15	.02	.12	2.9	4.0
22	1.6	1.1	.40	.21	.28	.13	.09	.13	.01	.11	5.3	2.9
23	17	1.1	.40	.21	.28	.15	.09	.09	.02	2.1	3.2	2.6
24	16	1.0	.40	.19	.25	.15	.09	.06	.05	6.8	7.5	4.5
25	5.0	.85	.40	.17	.23	.12	.09	.06	.05	3.2	3.3	2.6
26	2.9	.80	.40	.17	.25	.13	.09	.06	.12	14	2.7	2.1
27	2.4	.80	.40	.19	.23	.13	.09	.05	.12	1.9	2.2	1.7
28	2.5	.76	.35	.19	.21	.12	.09	.05	.11	2.7	2.0	1.5
29	1.9	.76	.35	.19	------	.11	.08	.05	.12	11	1.7	1.5
30	1.7	.72	.35	.21	------	.11	.08	.07	.19	6.7	1.7	2.4
31	1.7	------	.35	.19	------	.72	------	.07	------	12	1.6	------
TOTAL	77.76	115.59	15.57	8.39	13.39	5.43	3.30	3.15	1.22	63.53	199.7	92.54
MEAN	2.51	3.85	.50	.27	.48	.18	.11	.10	.041	2.05	6.44	3.08
MAX	17	44	.72	.54	2.9	.72	.25	.23	.19	14	43	33
MIN	.67	.72	.35	.17	.21	.11	.08	.03	.01	.06	1.6	.67
AC-FT	154	229	31	17	27	11	6.5	6.2	2.4	126	396	184

CAL YR 1974 TOTAL 456.92 MEAN 1.25 MAX 44 MIN .01 AC-FT 906
WTR YR 1975 TOTAL 599.57 MEAN 1.64 MAX 44 MIN .01 AC-FT 1,190

PEAK DISCHARGE (BASE, 400 CFS).--Nov. 3 (1300) 480 cfs (4.42 ft).

MARIANA ISLANDS, ISLAND OF SAIPAN

16801500 MIDDLE FORK TALOFOFO STREAM

LOCATION.--Lat 15°13'05" N., long 145°46'36" E., on left bank 700 ft (213 m) upstream from confluence with South and North Forks, 2.2 mi (3.5 km) southeast of Tanapag, and 3.7 mi (6.0 km) east of Garapan.

DRAINAGE AREA.--0.35 mi^2 (0.91 km^2).

PERIOD OF RECORD.--March 1968 to current year.

GAGE.--Water-stage recorder. Concrete control since Feb. 28, 1971. Altitude of gage is 25 ft (7.6 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.610 ft^3/s (0.0173 m^3/s), 442 acre-ft/yr (545,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 294 ft^3/s (8.33 m^3/s) Nov. 3 (gage height, 4.16 ft or 1.268 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); minimum, 0.08 ft^3/s (0.002 m^3/s) May 26-28, 30.
Period of record: Maximum discharge, 526 ft^3/s (14.9 m^3/s) Nov. 19, 1968 (gage height, 5.22 ft or 1.591 m), from rating curve extended above 5.1 ft^3/s (0.14 m^3/s); minimum, 0.07 ft^3/s (0.002 m^3/s) July 5, 6, 1973, Apr. 25, 1974.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.52	.48	.40	.41	.32	.26	.24	.24	.16	1.2	.75
2	.38	1.3	.48	.40	.52	.35	.26	.22	.22	.16	1.2	.70
3	.41	9.0	.48	.40	.95	.35	.26	.22	.20	.16	1.8	.70
4	.41	1.6	.48	.40	.44	.35	.26	.22	.20	.38	3.6	.70
5	.35	1.2	.52	.40	.38	.35	.26	.20	.20	.20	1.5	.75
6	.41	.95	.48	.40	.52	.32	.26	.20	.21	.22	1.0	.65
7	.70	.85	.48	.40	.48	.32	.26	.20	.22	.18	.95	.60
8	.52	.85	.48	.40	.44	.35	.26	.21	.22	.35	.75	.60
9	.38	.75	.48	.40	.38	.32	.22	.20	.22	.26	.90	.56
10	.38	.70	.48	.40	.38	.32	.22	.20	.20	.24	1.2	.56
11	1.5	.70	.48	.40	.38	.41	.22	.20	.20	.22	.90	.56
12	.65	.65	.44	.40	.38	.26	.26	.18	.20	.20	8.3	.56
13	.56	.65	.44	.40	.35	.26	.24	.20	.22	.18	2.4	.56
14	.44	.65	.44	.40	.35	.29	.22	.20	.24	.16	1.6	.56
15	.41	.60	.44	.38	.35	.29	.22	.20	.24	1.4	1.1	.56
16	.41	.60	.48	.35	.35	.26	.24	.18	.20	.67	.95	.70
17	.38	.60	.44	.41	.35	.26	.26	.20	.20	.48	.90	6.8
18	.38	.60	.45	.38	.35	.26	.26	.18	.20	.26	8.0	2.5
19	.38	.60	.45	.35	.35	.32	.26	.20	.20	.22	1.4	1.1
20	.48	.60	.45	.52	.32	.32	.24	.18	.21	.20	1.1	1.2
21	.65	.60	.45	.35	.32	.29	.24	.18	.18	.22	1.0	.95
22	1.1	.60	.45	.32	.35	.29	.22	.18	.18	.22	1.8	.90
23	2.4	.65	.45	.35	.35	.26	.22	.16	.18	.60	1.5	1.0
24	1.9	.56	.45	.32	.35	.26	.22	.14	.18	2.4	2.6	1.3
25	.90	.56	.45	.32	.32	.26	.24	.12	.18	1.3	1.1	.90
26	.65	.56	.45	.29	.32	.29	.22	.12	.21	3.7	1.0	.85
27	.60	.52	.45	.32	.32	.32	.24	.12	.18	.70	.95	.80
28	.65	.52	.45	.31	.32	.26	.23	.12	.20	1.3	.90	.80
29	.56	.48	.45	.35	------	.26	.22	.12	.18	4.5	.85	.85
30	.52	.48	.45	.38	------	.26	.22	.12	.18	1.8	.80	.90
31	.48	------	.45	.35	------	.44	------	.18	------	2.4	.80	------
TOTAL	20.26	29.50	14.30	11.65	11.08	9.47	7.21	5.59	6.09	25.44	54.05	30.92
MEAN	.65	.98	.46	.38	.40	.31	.24	.18	.20	.82	1.74	1.03
MAX	2.4	9.0	.52	.52	.95	.44	.26	.24	.24	4.5	8.3	6.8
MIN	.32	.48	.44	.29	.32	.26	.22	.12	.18	.16	.75	.56
AC-FT	40	59	28	23	22	19	14	11	12	50	107	61

CAL YR 1974 TOTAL 154.48 MEAN .42 MAX 9.0 MIN .08 AC-FT 306
WTR YR 1975 TOTAL 225.56 MEAN .62 MAX 9.0 MIN .12 AC-FT 447

PEAK DISCHARGE (BASE, 150 CFS).--Nov. 3 (1300) 294 cfs (4.16 ft).

MARIANA ISLANDS, ISLAND OF ROTA

16806000 LUPUG SPRING

LOCATION.--Lat 14°07'22" N., long 145°11'13" E., on right bank 20 ft (6 m) downstream from mouth of large cave where spring originates, 2.8 mi (4.5 km) east of Rota School, and 3.1 mi (5.0 km) west of Haaniya Cape.

PERIOD OF RECORD.--April 1971 to April 1972. October 1972 to June 1975 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,120 ft (341.4 m) from vertical-angle survey.

EXTREMES.--Period of record: Maximum daily discharge, 7.6 ft^3/s (0.22 m^3/s) Aug. 6, 1972; no flow for many days in 1973-75.

REMARKS.--Records fair. About 0.75 ft^3/s (0.021 m^3/s) is diverted from the cave above station for domestic use in the village of Songsong and most of the time much of the remaining flow is diverted from the mouth of the cave for irrigation in the airport area.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1974 TO JUNE 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.50	.42	.16	.25	.08	.05	.03				
2	.48	.48	.42	.16	.25	.06	.05	.03				
3	.48	.46	.42	.15	.25	.05	.05	.03				
4	.48	.48	.42	.15	.24	.03	.05	.02				
5	.48	.59	.40	.15	.24	.01	.05	.01				
6	.46	.59	.38	.15	.24	.02	.05	0				
7	.44	.55	.36	.15	.24	.03	.04	0				
8	.42	.52	.36	.15	.22	.01	.03	0				
9	.40	.55	.34	.16	.22	0	.03	0				
10	.40	.55	.32	.17	.22	0	.03	0				
11	.40	.55	.32	.18	.21	0	.03	0				
12	.38	.55	.32	.17	.24	0	.03	0				
13	.38	.59	.30	.15	.26	0	.06	0				
14	.36	.59	.30	.13	.26	0	.09	0				
15	.36	.59	.29	.12	.26	0	.11	0				
16	.36	.59	.28	.12	.26	0	.12	0				
17	.34	.59	.28	.12	.26	0	.10	0				
18	.34	.55	.26	.12	.22	0	.11	0				
19	.34	.55	.26	.12	.19	0	.12	0				
20	.35	.52	.25	.29	.18	0	.11	0				
21	.35	.52	.26	.63	.16	0	.10	0				
22	.35	.50	.26	.50	.15	0	.09	0				
23	.50	.50	.25	.44	.14	0	.09	0				
24	.75	.48	.24	.38	.13	0	.08	0				
25	.70	.48	.22	.34	.12	.01	.07	0				
26	.65	.46	.21	.30	.11	.04	.06	0				
27	.63	.46	.20	.30	.10	.06	.06	0				
28	.59	.46	.20	.29	.09	.06	.05	0				
29	.59	.44	.20	.28	---	.16	.05	0				
30	.76	.44	.19	.26	---	.47	.04	0				
31	.55	---	.18	.26	---	.05	---	0	---			
TOTAL	14.57	15.68	9.11	7.05	5.71	1.14	2.00	.12	0			
MEAN	.47	.52	.29	.23	.20	.037	.067	.004	0			
MAX	.76	.59	.42	.63	.26	.47	.12	.03	0			
MIN	.34	.44	.18	.12	.09	0	.03	0	0			
AC-FT	29	31	18	14	11	2.3	4.0	.2	0			

CAL YR 1974 TOTAL 167.11 MEAN .46 MAX 3.3 MIN 0 AC-FT 331

MARIANA ISLANDS, ISLAND OF GUAM

16808300 FINILE CREEK AT AGAT

LOCATION.--Lat 13°22'39" N., long 144°39'26" E., on right bank 0.4 mi (0.6 km) upstream from estuary and 0.4 mi (0.6 km) south of Agat School.

DRAINAGE AREA.--0.28 mi^2 (0.73 km^2).

PERIOD OF RECORD.--April 1960 to current year. Prior to October 1969, published as Finile River at Agat.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

AVERAGE DISCHARGE.--15 years, 1.40 ft^3/s (0.0396 m^3/s), 1,010 acre-ft/yr (1.25 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 103 ft^3/s (2.92 m^3/s) Sept. 25 (gage height, 1.76 ft or 0.536 m), from rating curve extended above 50 ft^3/s (1.42 m^3/s) on basis of slope-area measurement at gage height 3.66 ft (1.116 m); minimum, 0.05 ft^3/s (0.001 m^3/s) June 3, 22, 23.
Period of record: Maximum discharge, 319 ft^3/s (9.03 m^3/s) Oct. 17, 1969 (gage height, 3.81 ft or 1.161 m), from floodmark in well, from rating curve extended above 30 ft^3/s (0.85 m^3/s) on basis of slope-area measurement at gage height 3.66 ft (1.116 m); minimum, 0.04 ft^3/s (0.001 m^3/s) July 2-4, 6, 8, 9, 1973.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.5	.93	.75	.58	.37	.27	.18	.13	.08	5.6	.50
2	1.0	2.2	.93	.66	.60	.32	.27	.18	.14	.08	.76	.47
3	1.0	3.7	.93	.66	.59	.32	.22	.22	.15	.09	.40	.41
4	1.0	3.7	.93	.75	.56	.32	.22	.18	.11	.08	3.0	.50
5	.93	2.0	1.0	.66	.56	.37	.27	.27	.11	.12	1.4	.50
6	1.0	2.2	.93	.66	.56	.37	.32	.22	.10	.11	1.7	.42
7	3.3	1.7	1.0	.66	.59	.37	.32	.22	.15	.12	1.5	.40
8	1.8	1.5	.93	.66	.55	.37	.27	.18	.11	.16	1.0	.39
9	3.3	2.0	.84	.66	.55	.37	.22	.17	.11	.12	1.1	.47
10	2.0	1.5	.84	.58	.54	.37	.22	.17	.11	.19	1.2	.40
11	1.5	2.4	.84	.58	.56	.37	.22	.17	.11	.29	1.4	.55
12	1.4	1.5	2.0	1.1	.54	.37	.27	.16	.10	.22	4.4	.51
13	1.3	1.4	.84	1.1	.51	.32	.22	.14	.16	.18	6.1	.41
14	1.3	1.4	.84	.93	.52	.32	.27	.14	.13	.19	2.6	.36
15	1.3	1.5	2.0	1.0	.50	.32	.22	.14	.13	.29	1.3	.37
16	1.3	1.3	.84	1.3	.43	.32	.22	.15	.12	.38	1.1	.37
17	1.1	1.6	.84	1.0	.43	.32	.22	.14	.10	.33	.99	1.8
18	1.1	1.3	.84	.93	.43	.32	.22	.14	.10	.30	1.4	1.5
19	5.0	1.1	.84	.84	.43	.32	.22	.15	.10	.25	1.2	.74
20	2.0	1.1	.75	.93	.43	.37	.18	.15	.10	.29	1.0	1.9
21	1.3	2.0	.75	.67	.43	.75	.18	.76	.09	.33	.81	.84
22	1.5	1.7	.75	.66	.43	.32	.18	.19	.09	.30	1.0	.74
23	1.5	1.5	.75	.68	.37	.32	.18	.16	.08	.27	2.4	1.3
24	1.7	1.3	.66	.62	.37	.32	.22	.15	.08	.25	.93	1.9
25	1.4	1.1	2.4	.63	.37	.27	.18	.15	.10	.34	.79	3.8
26	1.1	1.0	.84	.63	.37	.27	.18	.17	.09	.99	.81	1.2
27	2.4	1.0	.75	1.1	.37	.27	.18	.16	.08	.23	.69	.95
28	1.7	.93	.75	.61	.37	.27	.18	.14	.10	.21	.62	.82
29	1.3	1.0	.66	.62	---	.27	.18	.13	.09	.23	.57	2.0
30	2.0	.93	.75	.61	---	.27	.15	.14	.08	.19	.61	1.1
31	1.8	---	.75	.58	---	.22	---	.14	---	.83	.54	---
TOTAL	51.43	48.96	29.70	23.82	13.54	10.45	6.67	5.76	3.25	8.04	48.92	27.62
MEAN	1.66	1.63	.96	.77	.48	.34	.22	.19	.11	.26	1.58	.92
MAX	5.0	3.7	2.4	1.3	.60	.75	.32	.76	.16	.99	6.1	3.8
MIN	.93	.93	.66	.58	.37	.22	.15	.13	.08	.08	.40	.36
AC-FT	102	97	59	47	27	21	13	11	6.4	16	97	55

CAL YR 1974 TOTAL 578.00 MEAN 1.58 MAX 14 MIN .33 AC-FT 1150
WTR YR 1975 TOTAL 276.16 MEAN .76 MAX 6.1 MIN .08 AC-FT 552

PEAK DISCHARGE (BASE, 170 CFS).--No peak above base.

16816000 UMATAC RIVER AT UMATAC

LOCATION.--Lat 13°17'48" N., long 144°39'46" E., on left bank 0.2 mi (0.3 km) upstream from mouth, 0.3 mi (0.5 km) southeast of Umatac, and 5.8 mi (9.3 km) northwest of Inarajan.

DRAINAGE AREA.--2.11 mi^2 (5.46 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8 ft (2.4 m), from topographic map. Prior to Oct. 16, 1953, at datum 0.62 ft (0.189 m) higher.

AVERAGE DISCHARGE.--23 years, 8.39 ft^3/s (0.238 m^3/s), 6,080 acre-ft/yr (7.50 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,060 ft^3/s (30.0 m^3/s) Aug. 1 (gage height, 3.09 ft or 0.942 m), from rating curve extended as explained below; minimum, 0.10 ft^3/s (0.003 m^3/s) June 20-23, July 3-6.
Period of record: Maximum discharge, 7,460 ft^3/s (211 m^3/s) Oct. 19, 1960 (gage height, 7.04 ft or 2.146 m), from rating curve extended above 320 ft^3/s (9.06 m^3/s) on basis of slope-area measurements at gage heights 3.51 ft (1.070 m) and 7.04 ft (2.146 m); minimum, 0.10 ft^3/s (0.003 m^3/s) June 20-23, July 3-6, 1975.

REMARKS.--Records good. Upstream diversion at Piga Spring for domestic use at Umatac. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	7.1	3.7	4.9	1.8	1.1	.67	.50	.30	.20	65	3.7
2	4.9	14	3.5	2.4	1.6	1.1	1.4	.50	.20	.20	14	3.3
3	3.6	29	3.4	2.1	1.6	1.1	.85	.50	.20	.10	5.7	2.9
4	4.4	35	3.2	2.4	1.5	1.1	.72	.50	.20	.10	4.8	3.4
5	2.9	32	5.0	2.1	1.5	1.4	1.0	.50	.20	.10	4.3	3.2
6	4.2	11	3.4	1.8	1.8	1.4	1.0	.50	.20	.70	6.7	2.5
7	38	9.2	4.7	2.9	1.6	1.2	1.1	.40	.20	.50	9.1	2.3
8	15	8.0	3.4	2.1	1.8	1.0	.87	.40	.20	.70	9.8	2.2
9	23	16	2.9	2.0	1.5	1.1	.78	.40	.20	.30	15	2.2
10	8.9	12	2.6	1.8	1.5	.98	.71	.30	.20	1.6	12	2.2
11	6.8	20	2.6	1.8	1.5	.98	.77	.30	.20	2.9	16	3.2
12	6.8	10	11	1.8	1.5	.90	1.3	.30	.20	1.4	48	2.3
13	4.9	9.1	3.1	2.1	1.3	.87	.90	.30	.20	.74	54	2.6
14	4.3	7.9	2.6	2.3	1.6	.82	1.3	.30	.20	.61	32	2.3
15	4.2	10	3.4	3.1	1.6	.94	1.1	.40	.20	5.3	16	2.3
16	4.9	8.3	2.6	5.2	1.5	.80	.70	.30	.20	7.3	12	4.7
17	3.9	19	2.6	2.6	1.3	.75	.60	.30	.20	2.2	8.3	17
18	4.5	13	2.4	2.1	1.3	.73	.70	.30	.20	1.2	12	17
19	18	10	2.3	3.1	1.3	.71	.70	.30	.20	.88	12	6.9
20	11	17	2.3	8.4	1.2	.81	.60	.30	.10	2.5	9.2	29
21	5.2	19	2.1	3.6	1.2	1.3	.60	.60	.10	2.9	7.0	12
22	7.3	12	2.1	3.9	1.2	.90	.50	.40	.10	1.6	14	7.4
23	9.9	9.0	2.4	2.9	1.0	.76	.50	.30	.20	1.0	8.4	10
24	41	7.0	2.0	2.3	1.2	.76	2.0	.30	.30	.86	6.9	20
25	15	5.5	15	3.4	1.2	.77	.80	.30	.40	1.1	6.4	9.4
26	12	5.0	3.4	2.1	1.2	.71	.70	.20	.30	2.1	9.8	7.2
27	6.4	4.5	2.3	6.6	1.2	.69	.50	.20	.30	1.7	6.4	5.9
28	14	4.1	2.1	2.3	1.1	.80	.50	.20	.20	1.2	5.1	5.6
29	6.2	9.8	2.0	2.1	---	.79	.50	.20	.20	.98	4.4	5.3
30	8.0	4.1	2.1	2.9	---	.72	.50	.20	.20	.91	4.3	4.8
31	7.5	---	4.4	2.0	---	.69	---	.30	---	1.2	4.2	---
TOTAL	309.6	377.6	110.6	91.1	39.6	28.70	24.87	10.80	6.30	45.08	442.8	202.8
MEAN	9.99	12.6	3.57	2.94	1.41	.93	.83	.35	.21	1.45	14.3	6.76
MAX	41	35	15	8.4	1.8	1.4	2.0	.60	.40	7.3	65	29
MIN	2.9	4.1	2.0	1.8	1.0	.69	.50	.20	.10	.10	4.2	2.2
AC-FT	614	749	219	181	79	57	49	21	12	89	878	402

CAL YR 1974 TOTAL 3406.30 MEAN 9.33 MAX 148 MIN .70 AC-FT 6760
WTR YR 1975 TOTAL 1689.85 MEAN 4.63 MAX 65 MIN .10 AC-FT 3350

PEAK DISCHARGE (BASE, 1,400 CFS).--No peak above base.

16821000 GEUS RIVER NEAR MERIZO

LOCATION.--Lat 13°16'13" N., long 144°40'38" E., on left bank 0.7 mi (1.1 km) northeast of Merizo, 2.2 mi (3.5 km) southeast of Umatac, and 4.7 mi (7.6 km) west of Inarajan.

DRAINAGE AREA.--0.93 mi^2 (2.41 km^2).

PERIOD OF RECORD.--April 1953 to September 1975 (discontinued).

GAGE.--Water-stage recorder and broad-crested weir. Altitude of gage is 60 ft (18.3 m), from topographic map.

AVERAGE DISCHARGE.--22 years, 3.02 ft^3/s (0.0855 m^3/s), 2,190 acre-ft/yr (2.70 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 572 ft^3/s (16.2 m^3/s) Oct. 24 (gage height, 2.64 ft or 0.805 m), from rating curve extended above 85 ft^3/s (2.41 m^3/s) on basis of slope-area measurements at gage heights 4.00 ft (1.219 m) and 4.16 ft (1.268 m); no flow for many days in May to July.
Period of record: Maximum discharge, 2,940 ft^3/s (83.3 m^3/s) Oct. 19, 1960 (gage height, 4.16 ft or 1.268 m), from rating curve extended above 66 ft^3/s (1.87 m^3/s) on basis of slope-area measurements at gage heights 4.00 ft (1.219 m) and 4.16 ft (1.268 m); no flow at times in 1966, 1969-70, 1972-75.

REMARKS.--Records fair. Water is diverted 0.5 mi (0.8 km) upstream for domestic use and at station for irrigation. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1954(P), 1959(P). WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	2.4	.91	2.4	.40	.05	.02	.01	0	0	77	.58
2	4.3	13	.91	.91	.18	.05	.09	.01	0	0	5.2	.46
3	1.7	17	.91	.77	.58	.04	.05	0	0	0	1.7	.52
4	1.0	19	1.0	.64	.52	.05	.06	.01	0	0	1.3	.40
5	.91	31	1.2	.58	.18	.06	.03	0	0	0	.83	.35
6	.70	5.6	1.0	.52	.18	.11	.02	0	0	.10	2.7	.30
7	24	4.6	1.4	3.8	.35	.07	.02	.01	0	.01	5.2	.22
8	8.9	2.5	1.1	.91	.18	.04	.02	.01	0	0	4.3	.18
9	18	6.0	.77	.64	.18	.13	.02	.01	0	0	7.8	.18
10	5.6	3.3	.58	.64	.15	.05	.02	0	0	1.3	6.5	.15
11	2.2	17	.64	.46	.13	.09	.02	0	0	2.0	9.0	.64
12	1.9	2.5	3.3	.64	.13	.05	.06	0	0	.40	35	.35
13	1.4	2.0	.91	1.2	.18	.03	.01	0	0	.02	35	.40
14	1.1	1.7	.64	1.3	.13	.02	.06	0	0	.01	16	.40
15	.83	1.9	.77	1.4	.30	.02	.03	.01	.01	.30	8.8	.30
16	.52	2.5	.70	1.7	.18	.03	.02	0	0	7.7	4.6	.22
17	.58	2.4	.70	.91	.35	.02	.07	0	0	.64	2.5	5.7
18	.58	1.9	.64	.70	.07	.02	.03	0	0	.11	6.4	8.9
19	9.4	1.6	.58	.83	.07	.01	.01	0	0	.03	6.8	2.5
20	4.6	2.5	.64	2.0	.07	.03	.01	0	0	.22	3.3	24
21	1.3	8.0	.35	2.5	.07	.15	.14	.01	0	1.1	2.4	5.9
22	2.9	4.0	.40	1.1	.09	.11	.46	.01	0	.22	6.5	2.4
23	5.9	2.4	.40	.83	.07	.09	.01	0	0	.05	4.0	3.1
24	41	3.0	.46	.70	.06	.09	.62	0	0	.01	2.4	11
25	11	1.6	4.5	.64	.05	.07	.01	0	0	.40	1.7	3.3
26	4.9	1.2	1.2	.52	.13	.02	.01	0	0	.70	2.0	1.9
27	1.6	1.2	.77	1.1	.07	.01	.01	0	0	.64	1.4	1.4
28	5.9	1.1	.64	.64	.18	.01	.01	0	0	.15	.91	1.0
29	2.0	1.2	.58	.58	------	.02	.01	0	0	.06	.77	1.0
30	1.9	.91	.64	.52	------	.01	.01	0	0	.03	.77	.77
31	2.5	------	1.4	.40	------	.03	------	0	------	.18	.64	------
TOTAL	169.64	165.41	30.64	32.48	5.23	1.58	1.96	.09	.01	16.38	263.42	78.52
MEAN	5.47	5.51	.99	1.05	.19	.051	.065	.003	.0003	.53	8.50	2.62
MAX	41	31	4.5	3.8	.58	.15	.62	.01	.01	7.7	77	24
MIN	.52	.91	.35	.40	.05	.01	.01	0	0	0	.64	.15
AC-FT	336	328	61	64	10	3.1	3.9	.2	.02	32	522	156

CAL YR 1974 TOTAL 1,554.62 MEAN 4.26 MAX 138 MIN 0 AC-FT 3,080
WTR YR 1975 TOTAL 765.36 MEAN 2.10 MAX 77 MIN 0 AC-FT 1,520

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 7	2100	2.53	491	11- 5	1000	2.35	370
10-24	1930	2.64	572	8- 1	1830	2.63	564

16835000 INARAJAN RIVER NEAR INARAJAN

LOCATION.--Lat 13°16'41" N., long 144°44'15" E., on right bank 0.6 mi (1.0 km) northwest of Inarajan and 4.9 mi (7.9 km) east of Merizo.

DRAINAGE AREA.--4.42 mi^2 (11.45 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

AVERAGE DISCHARGE.--23 years, 17.1 ft^3/s (0.484 m^3/s), 12,390 acre-ft/yr (15.3 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,440 ft^3/s (40.8 m^3/s) Oct. 7 (gage height, 9.19 ft or 2.801 m); minimum, 0.42 ft^3/s (0.012 m^3/s) June 21, 22.
Period of record: Maximum gage height, 12.90 ft (3.932 m) Oct. 11, 1963 (discharge not determined); minimum discharge, 0.42 ft^3/s (0.012 m^3/s) June 21, 22, 1975.

REMARKS.--Records fair. Stage-discharge relation not determined above gage height 11.0 ft (3.35 m) owing to ungaged overbank flow. Village of Inarajan diverted about 40,000 gallons (151 m^3) a day above station for domestic use until October 1973 and during dry periods about 250,000 gallons (946 m^3) a day for irrigation. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	10	14	5.0	3.4	2.5	1.9	1.5	.75	12	6.5
2	33	42	11	7.6	4.7	3.6	3.6	1.9	1.3	.70	9.3	6.0
3	14	49	9.6	6.8	5.0	3.4	2.9	1.9	1.3	.70	7.4	6.3
4	15	52	9.3	7.1	4.7	3.4	2.7	1.9	1.3	.70	6.6	5.9
5	12	48	13	6.6	4.5	4.0	3.2	2.0	1.3	.75	5.9	5.6
6	12	26	9.9	6.3	4.7	3.6	2.9	1.9	1.3	1.3	7.4	5.0
7	90	26	15	18	4.7	3.6	2.9	1.9	2.4	1.0	7.6	5.3
8	32	14	11	7.6	4.7	3.2	2.7	1.7	1.5	1.3	13	5.3
9	77	39	9.0	7.1	4.5	3.4	2.4	1.9	1.2	1.0	17	4.9
10	17	17	8.8	6.6	4.4	3.2	2.4	1.7	1.2	22	19	4.9
11	15	95	8.5	6.3	4.4	3.2	2.2	1.5	.82	11	17	7.8
12	15	16	15	7.6	4.4	3.1	3.6	1.5	.81	3.9	57	5.8
13	12	14	8.8	9.9	4.2	2.9	2.5	1.5	1.4	1.9	49	6.6
14	11	13	8.2	15	4.5	2.9	3.1	1.5	1.5	2.2	43	6.0
15	14	14	8.8	7.7	4.2	2.7	2.7	2.5	1.0	3.4	22	5.7
16	11	15	8.2	8.2	4.5	2.7	2.2	1.8	.87	4.0	15	5.7
17	11	15	8.2	6.6	4.2	2.7	2.2	1.7	.83	4.5	11	13
18	16	13	7.6	7.1	4.0	2.7	2.4	1.7	.88	4.0	23	16
19	37	14	7.4	7.1	4.0	2.7	2.4	1.7	.82	1.7	20	8.7
20	20	16	7.1	14	4.0	2.7	2.2	1.8	.75	2.2	13	20
21	13	38	7.1	16	3.8	3.6	2.2	5.2	.70	5.6	9.8	12
22	24	20	6.8	7.7	3.8	3.1	2.2	2.5	.65	2.7	48	8.7
23	22	14	7.9	6.9	3.8	2.9	2.2	1.8	.65	2.0	15	19
24	94	15	6.8	6.1	3.6	2.9	4.7	1.5	.90	1.7	11	28
25	23	12	23	6.6	3.6	2.7	2.4	1.5	1.6	1.3	10	12
26	16	12	8.8	5.9	3.4	2.7	2.2	1.5	.87	6.3	12	9.1
27	18	11	7.4	8.2	3.4	2.5	2.0	1.5	.74	4.5	9.1	8.4
28	28	10	6.8	5.8	3.4	2.7	2.0	1.5	1.1	2.9	7.8	7.5
29	14	13	6.6	5.5	---	3.1	2.0	1.5	.89	2.2	6.7	7.3
30	13	12	7.1	5.3	---	2.5	1.9	1.5	.81	1.8	7.1	7.2
31	15	---	10	5.2	---	2.5	---	1.5	---	1.5	7.1	---
TOTAL	754	709	292.7	256.4	118.1	94.3	77.5	57.4	32.89	101.50	518.8	270.2
MEAN	24.3	23.6	9.44	8.27	4.22	3.04	2.58	1.85	1.10	3.27	16.7	9.01
MAX	94	95	23	18	5.0	4.0	4.7	5.2	2.4	22	57	28
MIN	10	10	6.6	5.2	3.4	2.5	1.9	1.5	.65	.70	5.9	4.9
AC-FT	1500	1410	581	509	234	187	154	114	65	201	1030	536

CAL YR 1974 TOTAL 9028.30 MEAN 24.7 MAX 478 MIN 3.0 AC-FT 17910
WTR YR 1975 TOTAL 3282.79 MEAN 8.99 MAX 95 MIN .65 AC-FT 6510

PEAK DISCHARGE (BASE, 1,700 CFS).--No peak above base.

16840000 TINAGA RIVER NEAR INARAJAN

LOCATION.--Lat 13°17'10" N., long 144°45'04" E., on right bank 0.3 mi (0.5 km) upstream from mouth, 0.9 mi (1.4 km) northeast of Inarajan, and 4.5 mi (7.2 km) south of Talofofo.

DRAINAGE AREA.--1.89 mi² (4.90 km²).

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1969, published as Paululuc River near Inarajan.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

AVERAGE DISCHARGE.--23 years, 5.56 ft³/s (0.157 m³/s), 4,030 acre-ft/yr (4.97 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 167 ft³/s (4.73 m³/s) Nov. 11 (gage height, 2.54 ft or 0.774 m), from rating curve extended above 210 ft³/s (5.95 m³/s); minimum, 0.26 ft³/s (0.007 m³/s) June 21-23.
Period of record: Maximum discharge, 2,980 ft³/s (84.4 m³/s) Oct. 15, 1953 (gage height, 13.11 ft or 3.996 m), from rating curve extended above 210 ft³/s (5.95 m³/s); minimum, 0.15 ft³/s (0.004 m³/s) May 16, 21-23, 29, 1966, June 13, 29, 30, 1973.

REMARKS.--Records good except those above 20 ft³/s (0.57 m³/s), which are fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.7	4.5	2.9	1.4	.74	.54	.38	.32	.31	5.6	2.5
2	5.4	8.0	3.9	2.5	1.3	.74	.58	.38	.34	.32	6.2	2.3
3	3.9	14	3.7	2.5	1.2	.74	.51	.38	.32	.36	2.6	1.9
4	4.1	23	3.5	2.3	1.2	.74	.51	.38	.32	.38	1.9	1.7
5	4.1	26	3.7	2.1	1.1	.79	.54	.38	.32	.38	1.7	1.6
6	3.9	8.8	3.3	2.1	1.1	.84	.54	.36	.32	.38	1.3	1.5
7	9.3	8.0	3.9	2.7	1.1	.79	.51	.36	.34	.38	1.2	1.4
8	22	6.0	3.9	2.1	1.1	.79	.51	.36	.32	.34	1.9	1.3
9	23	13	3.7	2.1	1.1	.84	.48	.36	.31	.31	4.5	1.3
10	7.2	12	3.3	2.1	1.1	.79	.48	.36	.29	3.8	6.5	1.3
11	6.3	29	3.1	2.0	1.2	.79	.45	.36	.31	7.0	4.9	2.1
12	6.6	6.9	4.5	2.3	1.2	.74	.58	.34	.31	2.2	11	1.7
13	4.8	6.0	3.7	2.7	1.1	.66	.48	.34	.32	.90	14	1.7
14	4.5	5.4	3.1	4.5	1.1	.63	.54	.34	.31	.62	16	1.7
15	5.1	5.1	3.3	2.9	1.1	.63	.51	.38	.31	.58	9.2	1.9
16	5.4	5.7	3.3	2.7	1.0	.58	.48	.34	.31	.86	7.2	1.9
17	5.1	6.0	3.3	2.7	1.0	.54	.45	.34	.30	1.7	3.9	3.1
18	5.1	5.7	3.1	2.5	1.0	.54	.48	.34	.30	.98	9.0	3.9
19	12	5.4	2.9	2.3	1.0	.54	.45	.34	.30	.62	15	2.6
20	9.7	6.0	2.7	3.1	1.0	.58	.45	.34	.30	.48	5.2	8.7
21	5.4	8.8	2.3	3.3	.94	.63	.45	.68	.29	1.3	3.7	4.9
22	7.2	6.0	2.1	2.7	.89	.58	.43	.79	.29	1.4	18	3.0
23	8.0	5.1	2.3	2.7	.89	.58	.43	.63	.29	.73	7.7	23
24	13	5.7	2.3	2.3	.84	.58	.45	.48	.31	.54	4.4	13
25	13	4.8	4.8	2.1	.84	.58	.41	.43	.38	.47	4.0	5.3
26	5.7	4.5	4.3	1.9	.79	.54	.41	.38	.30	1.7	4.9	3.8
27	7.6	4.5	2.9	1.9	.79	.54	.41	.36	.30	2.6	4.0	3.8
28	12	4.3	2.5	1.8	.74	.54	.38	.34	.35	1.2	3.1	3.6
29	6.0	7.2	2.3	1.8	---	.51	.38	.34	.31	.75	2.5	3.3
30	5.4	5.4	2.1	1.6	---	.51	.38	.34	.30	.63	2.2	3.2
31	6.3	---	2.3	1.6	---	.54	---	.34	---	.55	2.6	---
TOTAL	241.2	282.0	100.6	74.8	29.12	20.18	14.20	12.27	9.39	34.77	185.9	113.0
MEAN	7.78	8.73	3.25	2.41	1.04	.65	.47	.40	.31	1.12	6.00	3.77
MAX	23	29	4.8	4.5	1.4	.84	.58	.79	.38	7.0	18	23
MIN	3.9	4.3	2.1	1.6	.74	.51	.38	.34	.29	.31	1.2	1.3
AC-FT	478	520	200	148	58	40	28	24	19	69	369	224

CAL YR 1974 TOTAL 2855.48 MEAN 7.82 MAX 134 MIN .85 AC-FT 5660
WTR YR 1975 TOTAL 1097.43 MEAN 3.01 MAX 29 MIN .29 AC-FT 2180

PEAK DISCHARGE (BASE, 400 CFS).--No peak above base.

16847000 IMONG RIVER NEAR AGAT

LOCATION.--Lat 13°20'17" N., long 144°41'55" E., on left bank 500 ft (152 m) upstream from Fena Valley Reservoir, 1.4 mi (2.3 km) south of Fena Dam spillway, and 4.1 mi (6.6 km) southeast of Agat School.

DRAINAGE AREA.--1.95 mi^2 (5.05 km^2).

PERIOD OF RECORD.--March 1960 to March 1971. October 1971 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 120 ft (37 m), from topographic map.

AVERAGE DISCHARGE.--14 years, 9.92 ft^3/s (0.281 m^3/s), 7,190 acre-ft/yr (8.87 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,600 ft^3/s (45.3 m^3/s) Oct. 7 (gage height, 6.39 ft or 1.948 m), from rating curve extended as explained below; minimum, 0.74 ft^3/s (0.021 m^3/s) May 14.
Period of record: Maximum discharge, 3,370 ft^3/s (95.4 m^3/s) Oct. 19, 1960 (gage height, 10.06 ft or 3.066 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s) on basis of slope-area measurements at gage heights 7.46 ft (2.274 m) and 10.06 ft (3.066 m); minimum, 0.37 ft^3/s (0.010 m^3/s) May 21, 22, 26, 1966.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	7.8	4.6	5.9	2.6	1.8	1.8	1.6	1.3	.94	59	4.6
2	4.9	16	4.5	3.5	2.6	1.8	2.8	1.5	1.4	1.4	17	4.3
3	4.9	29	4.4	3.3	2.6	1.8	1.8	1.6	1.3	1.1	6.2	4.0
4	4.6	26	4.3	5.6	2.6	1.8	1.7	1.6	1.3	1.1	6.1	4.2
5	4.9	20	5.5	3.5	2.6	2.1	2.0	1.8	1.3	1.3	6.2	4.0
6	7.5	8.3	4.0	3.0	2.8	2.0	2.0	1.5	1.3	1.7	5.6	3.7
7	42	6.9	4.3	3.3	2.8	1.8	1.8	1.5	1.4	2.0	5.6	3.7
8	16	6.1	4.0	3.0	2.6	1.8	1.7	1.5	1.1	2.6	7.6	3.6
9	26	20	4.0	3.3	2.3	1.8	1.8	1.3	1.1	1.4	11	3.5
10	10	7.5	3.8	3.0	2.3	2.0	1.8	1.3	1.0	3.8	12	3.8
11	11	23	4.3	3.0	2.3	2.0	1.8	1.2	1.0	4.6	12	3.8
12	8.0	9.0	12	3.0	2.3	1.8	2.3	1.1	.94	2.1	50	3.5
13	5.9	7.0	4.3	3.5	2.3	1.7	1.7	1.1	1.1	1.5	53	3.6
14	5.6	8.0	4.0	3.8	2.6	1.7	2.1	.94	1.2	1.4	28	3.4
15	5.6	7.0	7.1	3.5	3.0	1.7	1.7	1.1	1.0	16	18	3.4
16	9.5	6.5	4.0	4.6	2.6	1.7	2.0	1.0	1.0	12	14	5.0
17	4.9	12	4.0	3.3	2.3	1.7	1.7	1.0	1.0	3.3	9.1	13
18	4.9	6.5	3.8	3.0	2.1	1.7	1.7	1.1	1.0	2.0	11	13
19	14	6.0	3.5	3.5	2.1	1.7	1.7	1.0	1.0	1.8	15	6.6
20	12	6.0	3.5	12	2.1	1.8	1.5	1.0	.94	2.6	12	51
21	5.2	7.5	3.5	4.0	2.1	2.8	1.5	5.2	.94	4.0	8.3	12
22	20	7.0	3.3	3.8	2.3	1.8	1.5	1.8	.94	2.1	12	7.2
23	7.5	6.0	3.8	3.8	2.1	1.8	1.7	1.6	.94	1.8	9.0	13
24	54	7.5	3.3	3.3	2.1	1.8	1.8	1.6	1.0	1.7	6.9	18
25	12	5.2	17	3.8	2.1	1.8	1.7	1.5	1.5	2.0	5.9	10
26	13	8.0	4.6	3.0	2.0	1.8	1.7	1.6	1.0	3.3	11	7.3
27	6.9	5.3	3.8	12	2.0	1.7	1.7	1.5	1.0	2.6	7.1	5.9
28	11	4.7	3.5	3.5	2.0	1.8	1.6	1.5	1.2	2.1	5.7	5.7
29	6.2	12	3.5	3.3	---	1.8	1.6	1.4	1.0	2.1	5.1	6.1
30	14	4.8	3.5	3.0	---	1.7	1.6	1.4	1.0	2.3	5.7	5.5
31	16	---	3.5	2.8	---	1.7	---	1.5	---	7.6	5.0	---
TOTAL	372.9	306.6	147.2	126.9	66.2	56.7	53.8	46.34	33.20	96.24	440.1	236.4
MEAN	12.0	10.2	4.75	4.09	2.36	1.83	1.79	1.49	1.11	3.10	14.2	7.88
MAX	54	29	17	12	3.0	2.8	2.8	5.2	1.5	16	59	51
MIN	4.6	4.7	3.3	2.8	2.0	1.7	1.5	.94	.94	.94	5.0	3.4
AC-FT	740	608	292	252	131	112	107	92	66	191	873	469

CAL YR 1974 TOTAL 3935.60 MEAN 10.8 MAX 148 MIN 2.0 AC-FT 7810
WTR YR 1975 TOTAL 1982.58 MEAN 5.43 MAX 59 MIN .94 AC-FT 3930

PEAK DISCHARGE (BASE, 1,400 CFS).--Oct. 7 (about 1330) 1,600 cfs (6.39 ft).

16848000 ALMAGOSA SPRINGS NEAR AGAT

LOCATION.--Lat 13°20'43" N., long 144°40'45" E., on left bank 2.9 mi (4.7 km) southeast of Agat and 3.5 mi (5.6 km) northeast of Umatac.

DRAINAGE AREA.--0.70 mi^2 (1.81 km^2).

PERIOD OF RECORD.--September 1951 to December 1967, December 1971 to September 1975 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 620 ft (189 m), from topographic map.

AVERAGE DISCHARGE.--19 years (1951-67, 1972-75), 3.60 ft^3/s (0.102 m^3/s), 2,610 acre-ft/yr (3.22 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 160 ft^3/s (4.53 m^3/s) Oct. 24 (gage height, 2.63 ft or 0.802 m); minimum, 0.32 ft^3/s (0.009 m^3/s) June 11, 12.
Period of record: Maximum discharge, 770 ft^3/s (21.8 m^3/s) Oct. 15, 1953 (gage height, 5.02 ft or 1.530 m), from rating curve extended above 53 ft^3/s (1.50 m^3/s); no flow at times.

REMARKS.--Records fair. Up to 3.9 ft^3/s (0.11 m^3/s) diverted above station for municipal use. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	6.4	1.4	1.5	.85	.55	1.3	.38	.35	.35	34	1.5
2	1.6	7.5	1.3	1.0	.80	.55	1.6	.38	.35	.35	20	1.4
3	1.7	14	1.6	.90	.75	.55	1.4	.38	.35	.35	5.8	1.0
4	1.7	18	1.6	1.3	.75	.55	.75	.38	.35	.35	2.5	.97
5	1.7	19	1.6	.97	.75	.55	.47	.38	.35	.35	2.5	.97
6	3.2	12	1.5	.91	.75	.55	.47	.38	.35	.40	2.0	.85
7	12	8.1	1.5	.85	.70	.55	.80	.35	.35	.50	2.0	.75
8	16	6.4	1.5	.85	.70	.55	1.4	.35	.35	.50	3.9	.75
9	12	6.1	1.4	.85	.70	.55	1.3	.35	.35	.45	4.6	.75
10	7.0	5.0	1.3	.85	.70	.55	1.1	.35	.35	.50	7.2	.75
11	6.1	8.4	1.3	.91	.70	.55	.80	.35	.32	.55	7.8	.75
12	5.0	5.0	3.4	.91	.70	.55	.47	.35	.35	.50	19	.75
13	3.9	4.1	1.3	.91	.70	.51	.44	.35	.35	.40	32	.75
14	3.1	3.7	1.3	.97	.70	.51	.51	.35	.38	.40	23	.70
15	2.7	3.2	4.4	1.2	.70	.51	.51	.35	.38	3.5	13	.65
16	2.4	2.6	1.4	1.3	.65	.51	.47	.35	.35	.85	8.4	.65
17	2.0	3.4	1.3	1.2	.65	.51	.47	.35	.35	.51	4.8	3.5
18	2.1	2.5	1.4	1.1	.65	.51	.47	.35	.38	.41	3.6	6.1
19	2.8	2.1	1.4	1.1	.65	.51	.47	.35	.38	.41	6.1	3.2
20	7.0	2.1	1.3	3.1	.60	.51	.47	.35	.38	.41	7.5	17
21	4.5	2.2	1.3	1.2	.60	.55	.47	.55	.35	.44	5.0	11
22	9.1	2.5	1.2	1.2	.60	.51	.47	.44	.35	.41	6.1	5.8
23	8.4	2.0	1.3	1.3	.60	.51	.47	.41	.35	.38	4.6	5.6
24	21	2.5	1.2	1.3	.60	.47	.47	.41	.35	.38	3.2	9.7
25	17	1.8	5.3	1.2	.60	.47	.47	.38	.38	.38	2.5	10
26	11	2.0	1.6	1.0	.55	.75	.47	.38	.35	.55	3.6	10
27	7.8	1.6	1.5	4.3	.55	1.4	.44	.38	.35	.51	2.4	6.1
28	7.0	1.5	1.4	1.2	.55	1.4	.41	.38	.40	.47	1.7	3.7
29	4.6	3.8	1.3	1.2	------	1.4	.41	.35	.35	.44	1.6	2.7
30	5.6	1.6	1.2	1.1	------	1.3	.41	.35	.35	.41	1.6	1.9
31	7.8	------	1.1	.97	------	1.3	------	.35	------	2.0	1.6	------
TOTAL	199.4	161.1	51.6	38.65	18.80	20.74	20.16	11.56	10.70	18.41	243.6	110.24
MEAN	6.43	5.37	1.66	1.25	.67	.67	.67	.37	.36	.59	7.86	3.67
MAX	21	19	5.3	4.3	.85	1.4	1.6	.55	.40	3.5	34	17
MIN	1.6	1.5	1.1	.85	.55	.47	.41	.35	.32	.35	1.6	.65
AC-FT	396	320	102	77	37	41	40	23	21	37	483	219

CAL YR 1974 TOTAL 1,965.60 MEAN 5.39 MAX 93 MIN .41 AC-FT 3,900
WTR YR 1975 TOTAL 904.96 MEAN 2.48 MAX 34 MIN .32 AC-FT 1,790

PEAK DISCHARGE (BASE, 90 CFS).--Oct. 24 (2000) 160 cfs (2.63 ft); Aug. 1 (1830) 126 cfs (2.40 ft).

16848100 ALMAGOSA RIVER NEAR AGAT

LOCATION.--Lat 13°20'43" N., long 144°41'36" E., on right bank 400 ft (122 m) upstream from Fena Valley Reservoir and 3.5 mi (5.6 km) southeast of Agat.

DRAINAGE AREA.--1.32 mi^2 (3.42 km^2) revised.

PERIOD OF RECORD.--April 1972 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 155 ft (47 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 1,180 ft^3/s (33.4 m^3/s) Oct. 7 (gage height, 5.70 ft or 1.737 m), from rating curve extended above 81 ft^3/s (2.29 m^3/s); minimum, 0.30 ft^3/s (0.009 m^3/s) for several days in June, July.
Period of record: Maximum discharge, 1,700 ft^3/s (48.1 m^3/s) Aug. 2, 1972 (gage height, 6.64 ft or 2.024 m), from rating curve extended above 81 ft^3/s (2.29 m^3/s); minimum, 0.19 ft^3/s (0.005 m^3/s) June 4, 5, 1972.

REMARKS.--Records good. Up to 3.9 ft^3/s (0.11 m^3/s) diverted above upstream station (see sta 16848000) for domestic use. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	7.3	2.4	2.7	1.6	.90	1.6	.42	.42	.30	66	2.7
2	2.7	13	2.2	1.9	1.5	.90	2.1	.42	.48	.42	32	2.5
3	2.7	30	2.4	1.8	1.5	.90	1.8	.48	.42	.30	6.9	2.2
4	2.6	30	2.4	2.5	1.5	.90	1.2	.48	.36	.30	4.4	2.1
5	2.6	32	2.7	2.0	1.5	.99	.66	.72	.36	.36	4.1	2.1
6	8.9	13	2.4	1.7	1.7	.90	.66	.54	.36	.54	3.6	1.9
7	50	8.7	2.4	1.7	1.7	.84	1.1	.48	.48	.78	3.6	1.7
8	21	7.1	2.2	1.6	1.6	.84	1.6	.48	.42	.59	5.5	1.7
9	20	12	2.1	1.6	1.5	.84	1.4	.42	.36	.54	6.8	1.6
10	9.2	6.9	2.0	1.6	1.5	.84	1.4	.42	.36	1.2	8.9	1.7
11	8.2	19	2.0	1.6	1.5	.78	1.3	.42	.36	1.7	9.7	1.8
12	6.1	6.3	11	1.5	1.5	.72	.78	.42	.42	.84	47	1.9
13	4.8	5.3	2.2	1.8	1.4	.72	.54	.42	.60	.54	73	1.6
14	4.0	5.6	2.1	2.1	1.5	.72	.90	.42	.60	.48	41	1.5
15	3.6	4.3	11	2.5	1.6	.72	.60	.42	.36	12	20	1.5
16	3.5	3.6	2.6	3.0	1.4	.66	.66	.42	.36	2.7	11	1.7
17	2.9	6.6	2.2	2.1	1.3	.66	.54	.36	.42	1.4	6.8	8.3
18	3.9	3.7	2.2	2.0	1.2	.72	.54	.42	.36	.90	6.7	8.7
19	17	3.2	2.4	2.2	1.1	.66	.54	.36	.42	.72	4.0	4.9
20	11	3.0	2.2	8.9	1.1	.72	.54	.42	.36	.78	9.5	40
21	5.3	3.6	2.1	2.2	1.1	1.2	.48	2.1	.36	1.4	2.8	14
22	13	3.7	2.1	2.0	1.1	.72	.48	.66	.30	.78	3.0	7.0
23	7.1	2.9	2.2	2.1	.99	.66	.54	.48	.30	.66	2.8	7.8
24	43	3.6	2.0	2.1	.99	.66	.60	.48	.36	.60	4.8	13
25	23	2.7	13	2.5	.99	.66	.54	.48	.54	.78	4.0	20
26	13	3.7	2.8	2.1	.99	.84	.48	.48	.30	1.9	6.6	11
27	8.2	2.7	2.2	13	.99	1.6	.42	.48	.30	1.3	4.1	7.0
28	10	2.4	2.1	2.1	.90	1.7	.42	.42	.54	.84	3.2	4.9
29	5.7	13	2.0	2.0	---	1.7	.42	.42	.36	.90	2.9	4.2
30	11	2.5	2.0	1.9	---	1.6	.42	.42	.42	.78	3.2	3.4
31	14	---	2.1	1.8	---	1.6	---	.42	---	6.5	2.9	---
TOTAL	340.7	261.4	97.7	80.6	37.25	28.87	25.26	15.78	12.06	44.23	410.8	184.4
MEAN	11.0	8.71	3.15	2.60	1.33	.93	.84	.51	.40	1.43	13.3	6.15
MAX	50	32	13	13	1.7	1.7	2.1	2.1	.60	12	73	40
MIN	2.6	2.4	2.0	1.5	.90	.66	.42	.36	.30	.30	2.8	1.5
AC-FT	676	518	194	160	74	57	50	31	24	88	815	366

CAL YR 1974 TOTAL 3558.24 MEAN 9.75 MAX 165 MIN .98 AC-FT 7060
WTR YR 1975 TOTAL 1539.05 MEAN 4.22 MAX 73 MIN .30 AC-FT 3050

PEAK DISCHARGE (BASE, 800 CFS).--Oct. 7 (1600) 1,180 cfs (5.70 ft); Oct. 24 (1830) 860 cfs (5.05 ft).

16848500 MAULAP RIVER NEAR AGAT

LOCATION.--Lat 13°21'14" N., long 144°41'44" E., on right bank 600 ft (183 m) upstream from Fena Valley Reservoir and 3.2 mi (5.1 km) southeast of Agat.

DRAINAGE AREA.--1.15 mi^2 (2.98 km^2), revised.

PERIOD OF RECORD.--January 1972 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 130 ft (40 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 1,100 ft^3/s (31.2 m^3/s) Oct. 24 (gage height, 6.80 ft or 2.073 m), from rating curve extended above 38 ft^3/s (1.08 m^3/s); minimum, 0.33 ft^3/s (0.009 m^3/s) June 10-12, 27, July 1, 2.
Period of record: Maximum discharge, 1,220 ft^3/s (34.6 m^3/s) Aug. 27, 1974 (gage height, 7.10 ft or 2.164 m), from rating curve extended above 38 ft^3/s (1.08 m^3/s); minimum, 0.33 ft^3/s (0.009 m^3/s) June 10-12, 27, July 1, 2, 1975.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEAR).--WRD Hawaii 1973: 1972.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.0	2.0	2.4	1.2	.98	.90	.52	.42	.33	44	2.6
2	2.2	15	1.9	1.8	1.1	.98	1.1	.47	.42	.33	9.6	2.3
3	2.0	28	1.9	1.7	1.1	.98	.81	.52	.42	.47	4.2	2.2
4	2.0	22	1.9	1.9	1.1	.98	.73	.57	.42	.70	8.1	2.5
5	2.0	9.2	2.9	1.8	1.1	1.1	.90	.90	.42	.95	5.2	2.5
6	7.8	4.4	2.0	1.5	1.1	1.1	1.1	.65	.47	.75	5.7	2.0
7	52	5.4	1.9	1.5	1.2	.90	.98	.52	.42	.52	6.6	1.9
8	6.6	3.3	1.9	1.5	1.1	.90	.81	.47	.37	.90	6.6	1.9
9	15	8.8	1.8	1.5	1.1	.82	.73	.47	.37	.70	6.8	1.9
10	6.8	3.5	1.8	1.4	1.1	.90	.73	.47	.37	.82	6.8	1.9
11	6.3	21	1.8	1.4	1.2	.82	.65	.47	.37	1.3	9.2	2.3
12	3.8	3.5	6.8	1.4	1.2	.65	.90	.47	.37	.82	30	2.3
13	2.9	3.1	1.9	1.7	1.1	.65	.57	.47	.47	.47	40	1.9
14	2.7	3.3	1.9	1.8	1.2	.65	1.1	.47	.82	.52	17	1.8
15	2.6	2.7	25	2.3	1.3	.65	.82	.52	.42	2.7	11	1.8
16	2.9	2.9	2.2	4.2	1.2	.65	.74	.47	.40	3.1	7.4	2.0
17	3.1	7.8	2.0	1.8	1.2	.65	.65	.52	.37	1.2	5.2	8.1
18	7.1	2.9	1.9	1.5	1.2	.65	.74	.47	.42	.82	7.1	6.2
19	24	2.6	1.8	1.7	1.2	.65	.82	.47	.42	.57	7.4	4.2
20	8.8	2.9	1.8	8.5	1.2	.65	.65	.47	.39	1.5	6.0	21
21	3.1	4.2	1.7	1.9	1.2	1.8	.57	2.0	.37	2.0	4.4	6.2
22	19	3.5	1.7	1.7	1.1	.73	.57	.47	.35	.98	8.8	4.4
23	5.2	2.9	2.2	1.8	1.1	.65	.52	.52	.37	.74	6.3	5.1
24	46	4.2	1.7	1.5	1.1	.58	.57	.52	.40	.57	4.6	7.8
25	6.3	2.3	13	2.0	1.1	.58	.57	.56	.52	.98	4.2	22
26	4.0	4.9	2.3	1.5	1.1	.65	.57	.58	.35	3.5	7.1	6.2
27	3.5	2.3	1.8	8.8	.98	.81	.52	.52	.33	1.7	4.0	4.9
28	6.3	2.2	1.8	1.7	.98	.90	.57	.56	.45	1.1	3.5	4.0
29	2.9	4.9	1.7	1.4	---	.98	.52	.58	.37	.90	3.1	4.6
30	6.3	2.2	1.7	1.4	---	.90	.52	.52	.37	.82	3.1	3.6
31	14	---	1.9	1.3	---	.81	---	.52	---	17	2.8	---
TOTAL	279.4	189.9	98.6	68.3	31.86	25.70	21.93	17.75	12.43	49.76	295.8	142.1
MEAN	9.01	6.33	3.18	2.20	1.14	.83	.73	.57	.41	1.61	9.54	4.74
MAX	52	28	25	8.8	1.3	1.8	1.1	2.0	.82	17	44	22
MIN	2.0	2.2	1.7	1.3	.98	.58	.52	.47	.33	.33	2.8	1.8
AC-FT	554	377	196	135	63	51	43	35	25	99	587	282

CAL YR 1974 TOTAL 2680.47 MEAN 7.34 MAX 99 MIN .97 AC-FT 5320
WTR YR 1975 TOTAL 1233.53 MEAN 3.38 MAX 52 MIN .33 AC-FT 2450

PEAK DISCHARGE (BASE, 600 CFS).--Oct. 7 (1330) 873 cfs (6.21 ft); Oct. 24 (1915) 1,100 cfs (6.80 ft).

16849000 FENA DAM SPILLWAY NEAR AGAT

LOCATION.--Lat 13°21'28" N., long 144°42'12" E., on left bank 3.5 mi (5.6 km) southeast of Agat and 5.8 mi (9.3 km) southwest of Yona.

DRAINAGE AREA.--5.88 mi^2 (15.23 km^2).

PERIOD OF RECORD.--September 1951 to July 1952, November 1952 to current year. Daily mean gage heights published since October 1973.

GAGE.--Water-stage recorder and concrete-dam control. Datum of gage is 111.35 ft (33.939 m) above mean sea level (from U.S. Navy construction plans).

AVERAGE DISCHARGE.--20 years (1953-73), 17.9 ft^3/s (0.507 m^3/s), 12,970 acre-ft/yr (16.0 hm^3/yr).

EXTREMES.--Current year: Maximum gage height, 1.31 ft (0.399 m) Oct. 24; minimum, -18.68 ft (-5.694 m) July 31.
Period of record: Maximum discharge, not determined, occurred Oct. 15, 1953 (gage height, at least 4.5 ft or 1.37 m); no flow for many days each year.

REMARKS.--Gage-height records good. About 10 ft^3/s (0.28 m^3/s) is diverted from Fena Valley Reservoir and tributary springs for military and civilian use. Discharge records represent flow over spillway only.

REVISIONS.--WSP 2137: Drainage area.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.33	.23	.06	-.18	-2.09	-4.87	-8.27	-12.39	-16.83	-17.49	-4.94
2	.12	.39	.19	.04	-.23	-2.17	-4.94	-8.41	-12.54	-16.96	-15.44	-4.98
3	.09	.56	.17	.02	-.28	-2.26	-5.04	-8.55	-12.69	-17.12	-15.15	-5.01
4	.08	.56	.15	-.02	-.35	-2.37	-5.17	-8.66	-12.84	-17.28	-14.93	-5.02
5	.08	.37	.15	.02	-.41	-2.45	-5.30	-8.79	-12.99	-17.41	-14.78	-5.01
6	.15	.37	.17	-.01	-.46	-2.52	-5.38	-8.87	-13.15	-17.55	-14.63	-5.00
7	.50	.33	.15	-.06	-.51	-2.59	-5.49	-8.99	-13.30	-17.69	-14.51	-5.02
8	.54	.29	.14	-.09	-.56	-2.68	-5.60	-9.13	-13.45	-17.74	-14.24	-5.06
9	.45	.34	.12	-.11	-.63	-2.78	-5.72	-9.32	-13.60	-17.88	-14.03	-5.11
10	.32	.40	.08	-.14	-.70	-2.85	-5.84	-9.50	-13.75	-18.00	-13.68	-5.12
11	.35	.54	.07	-.15	-.77	-2.93	-5.96	-9.64	-13.90	-17.93	-13.34	-5.14
12	.25	.36	.20	-.18	-.82	-3.04	-6.04	-9.78	-14.05	-17.98	-12.50	-5.15
13	.30	.29	.23	-.20	-.89	-3.13	-6.15	-9.83	-14.19	-18.10	-10.37	-5.17
14	.20	.28	.18	-.21	-.94	-3.23	-6.20	-10.09	-14.32	-18.21	-8.66	-5.22
15	.18	.28	.35	-.20	-.98	-3.34	-6.31	-10.24	-14.47	-18.11	-8.05	-5.26
16	.25	.26	.27	-.17	-1.03	-3.45	-6.43	-10.38	-14.63	-17.67	-7.55	-5.28
17	.20	.30	.19	-.16	-1.08	-3.56	-6.56	-10.53	-14.78	-17.65	-7.32	-5.15
18	.18	.34	.09	-.18	-1.15	-3.66	-6.67	-10.68	-14.92	-17.78	-7.14	-4.73
19	.45	.30	.00	-.19	-1.22	-3.77	-6.76	-10.83	-15.06	-17.85	-6.78	-4.57
20	.40	.26	-.02	-.04	-1.32	-3.86	-6.88	-10.98	-15.22	-17.96	-6.48	-3.64
21	.25	.32	-.04	.03	-1.40	-3.87	-6.99	-10.94	-15.38	-17.92	-6.30	-3.05
22	.45	.33	-.06	.00	-1.46	-3.92	-7.11	-10.94	-15.54	-17.98	-6.05	-2.87
23	.38	.28	-.05	-.03	-1.53	-4.04	-7.24	-11.08	-15.70	-18.10	-5.80	-2.66
24	.50	.31	-.08	-.05	-1.63	-4.14	-7.35	-11.21	-15.85	-18.22	-5.64	-2.27
25	.53	.24	.03	-.08	-1.73	-4.25	-7.46	-11.36	-15.97	-18.30	-5.58	-1.90
26	.38	.22	.13	-.10	-1.81	-4.36	-7.59	-11.50	-16.12	-18.33	-5.27	-1.42
27	.31	.25	.12	.04	-1.89	-4.47	-7.73	-11.65	-16.27	-18.33	-5.11	-1.25
28	.34	.20	.08	.06	-1.99	-4.57	-7.86	-11.80	-16.40	-18.42	-5.05	-1.16
29	.25	.47	.05	-.02	---	-4.56	-8.00	-11.95	-16.53	-18.52	-5.00	-1.06
30	.31	.29	.02	-.08	---	-4.64	-8.13	-12.10	-16.67	-18.62	-4.99	-.95
31	.41	---	.00	-.13	---	-4.76	---	-12.24	---	-18.50	-4.96	---
MEAN	.30	.34	.11	-.08	-1.00	-3.43	-6.43	-10.27	-14.56	-17.90	-9.57	-3.94
MAX	.54	.57	.35	.06	-.18	-2.09	-4.87	-8.27	-12.39	-16.83	-4.96	-.95
MIN	.08	.20	-.08	-.21	-1.99	-4.76	-8.13	-12.24	-16.67	-18.62	-17.49	-5.28

WTR YR 1975 MEAN -5.57 MAX .57 MIN -18.62

16858000 YLIG RIVER NEAR YONA

LOCATION.--Lat 13°23'28" N., long 144°45'06" E., on right bank 2.2 mi (3.5 km) upstream from mouth, 1.9 mi (3.1 km) southwest of Yona, and 5.6 mi (9.0 km) south of Agana.

DRAINAGE AREA.--6.48 mi^2 (16.78 km^2).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

AVERAGE DISCHARGE.--23 years, 28.2 ft^3/s (0.799 m^3/s), 20,430 acre-ft/yr (25.2 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,500 ft^3/s (42.5 m^3/s) Nov. 24 (gage height, 9.15 ft or 2.789 m), from rating curve extended as explained below; minimum, 0.29 ft^3/s (0.008 m^3/s) June 4.
Period of record: Maximum discharge, 4,900 ft^3/s (139 m^3/s) Sept. 9, 1963 (gage height, 19.77 ft or 6.026 m), from floodmarks, from rating curve extended above 620 ft^3/s (17.6 m^3/s) on basis of slope-area measurements at gage heights 11.24 ft (3.426 m) and 15.87 ft (4.837 m); minimum, 0.07 ft^3/s (0.002 m^3/s) May 20, 1973, but may have been less during period of diversion from gage pool May 15 to June 20, 1966.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1957-58. WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	13	16	6.4	3.2	1.7	1.0	.64	.78	113	19
2	15	61	13	9.2	6.0	3.3	2.1	.95	.59	.58	35	16
3	14	58	13	8.0	6.2	3.2	2.2	.95	.59	.46	42	15
4	20	49	12	12	5.8	3.1	1.8	.95	.64	.40	41	14
5	13	47	22	8.5	5.4	3.2	1.8	1.3	.46	.72	25	15
6	20	38	14	7.1	5.4	3.4	2.5	1.7	.46	.58	20	12
7	52	35	16	7.1	5.8	3.4	2.8	1.2	.82	.65	194	12
8	44	22	13	6.7	5.6	3.1	2.3	.95	.77	1.8	65	11
9	46	48	11	6.9	5.1	3.0	1.9	.95	.54	2.2	67	10
10	38	32	11	6.9	4.9	3.2	1.7	.90	.64	1.9	65	10
11	22	104	10	6.7	5.1	3.0	1.6	.86	.86	14	194	15
12	22	26	31	6.9	4.9	2.7	1.8	.82	.72	7.3	248	11
13	18	21	11	17	4.9	2.5	1.8	.77	1.1	3.4	252	10
14	15	19	9.9	7.7	4.9	2.4	1.8	.77	2.9	3.3	150	9.5
15	17	18	48	10	5.6	2.5	2.1	.72	1.6	13	94	9.8
16	38	18	12	12	6.0	2.2	1.8	.77	.95	126	44	9.5
17	15	25	11	8.2	4.6	2.2	1.5	.86	.82	11	34	28
18	27	17	9.9	7.3	4.4	2.1	3.3	.82	.77	5.5	119	28
19	82	16	9.4	14	4.1	2.0	3.2	.72	.64	3.9	49	16
20	59	16	8.9	38	4.0	2.3	2.0	1.0	.52	7.8	36	22
21	26	20	8.7	11	4.0	8.9	1.6	2.6	.52	38	26	21
22	46	15	8.7	8.7	3.8	3.7	1.5	2.2	.46	11	32	16
23	42	39	9.2	9.9	3.7	2.7	1.3	1.1	.40	6.8	122	28
24	52	109	8.0	8.0	3.6	2.5	1.5	1.1	.40	5.1	35	59
25	35	19	56	7.5	3.6	2.4	1.5	1.0	.46	4.4	30	23
26	23	18	12	7.1	3.4	2.3	1.3	.95	.65	87	107	18
27	34	17	9.4	27	3.3	2.1	1.3	.86	.65	17	36	16
28	29	15	8.7	8.5	3.3	2.0	1.2	.77	.58	9.8	28	14
29	20	15	8.2	7.5	---	2.0	1.1	.72	.52	7.8	24	22
30	32	14	8.2	9.4	---	1.8	1.1	.68	.91	7.8	23	19
31	31	---	9.2	6.9	---	1.8	---	.64	---	16	20	---
TOTAL	961	972	447.4	327.7	133.6	88.2	55.1	31.58	22.58	415.97	2370	528.8
MEAN	31.0	32.4	14.4	10.6	4.78	2.85	1.84	1.02	.75	13.4	76.5	17.6
MAX	82	109	56	38	6.4	8.9	3.3	2.6	2.9	126	252	59
MIN	13	14	8.0	6.7	3.3	1.8	1.1	.64	.40	.40	20	9.5
AC-FT	1910	1930	887	650	265	175	109	63	45	825	4700	1050

CAL YR 1974 TOTAL 13999.80 MEAN 38.4 MAX 841 MIN 3.0 AC-FT 27770
WTR YR 1975 TOTAL 6354.13 MEAN 17.4 MAX 252 MIN .40 AC-FT 12600

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

16865000 PAGO RIVER NEAR ORDOT

LOCATION.--Lat 13°26'08" N., long 144°45'14" E., on left bank 0.8 mi (1.3 km) south of Ordot, 2.6 mi (4.2 km) south of Agana, and 3.6 mi (5.8 km) southeast of Asan.

DRAINAGE AREA.--5.67 mi^2 (14.69 km^2).

PERIOD OF RECORD.--September 1951 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 25 ft (7.6 m), from topographic map. Prior to Apr. 10, 1972, at datum 1.00 ft (0.305 m) lower.

AVERAGE DISCHARGE.--24 years, 25.0 ft^3/s (D.708 m^3/s), 18,110 acre-ft/yr (22.3 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,610 ft^3/s (45.6 m^3/s) Oct. 19 (gage height, 8.03 ft or 2.448 m), from rating curve extended as explained below; minimum, 0.07 ft^3/s (0.002 m^3/s) June 22-24.
Period of record: Maximum discharge, 9,470 ft^3/s (268 m^3/s) Aug. 2, 1962 (gage height, 18.87 ft or 5.752 m), from floodmarks, from rating curve extended above 320 ft^3/s (9.06 m^3/s) on basis of slope-area measurements at gage heights 13.22 ft (4.029 m), 15.07 ft (4.593 m), and 18.87 ft (5.752 m); no flow for many days in 1959 and 1966.

REMARKS.--Records good except those above 400 ft^3/s (11.3 m^3/s), which are fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (FISCAL YEARS).--WSP 1937: 1954(M), 1958(M). WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	8.2	9.9	5.4	2.9	1.4	1.1	.37	.55	39	13
2	9.4	54	7.9	5.9	4.8	2.9	1.5	1.1	.46	.30	26	12
3	8.7	61	7.7	5.1	4.8	2.5	2.1	1.1	.46	.21	17	11
4	8.2	58	7.0	20	4.7	2.1	2.1	1.2	.37	.19	28	10
5	7.9	33	57	6.6	4.2	2.4	1.4	1.2	.28	.63	21	9.5
6	8.2	29	13	5.2	4.2	2.6	1.6	1.2	.28	.76	25	8.6
7	46	23	12	4.5	4.2	2.5	1.9	.85	.28	.88	30	7.8
8	33	16	12	4.5	4.3	2.3	1.7	.75	.37	1.8	36	7.5
9	59	16	8.1	4.5	3.9	2.2	1.4	.75	.37	1.4	60	7.5
10	18	14	7.5	4.4	3.6	2.0	1.3	.65	.46	4.7	54	7.4
11	15	37	7.3	4.2	3.6	2.0	1.2	.65	.37	18	104	8.9
12	13	14	48	4.6	3.7	2.0	1.3	.65	.28	5.6	119	7.2
13	11	12	10	13	3.8	2.2	1.3	.65	.28	2.9	172	6.6
14	9.6	13	8.3	5.3	3.3	1.8	1.2	.55	2.4	3.6	89	5.9
15	9.8	10	7.8	9.1	3.5	1.7	1.5	.97	1.7	13	44	7.3
16	14	10	7.0	8.2	3.6	1.6	1.3	.97	1.1	18	32	6.8
17	8.9	17	6.5	5.9	3.3	1.5	1.2	.85	.97	7.2	24	21
18	35	11	6.1	5.3	3.1	1.5	2.8	.65	.65	3.5	39	32
19	144	15	5.5	21	3.1	1.5	2.1	.55	.55	2.5	34	13
20	54	18	5.4	73	2.9	1.7	1.3	.65	.28	2.6	31	16
21	16	36	5.2	17	2.9	4.7	1.2	2.0	.19	21	22	13
22	17	21	5.2	8.7	2.9	2.5	1.2	2.0	.09	6.0	57	10
23	51	14	5.2	7.5	2.7	1.9	1.1	.97	.07	3.6	61	10
24	59	36	5.1	6.5	2.6	1.8	1.5	.85	.22	2.8	33	22
25	32	12	17	6.9	2.7	1.7	1.5	.85	.70	5.5	25	24
26	19	12	7.5	5.8	2.7	1.7	1.3	.85	.49	73	33	14
27	17	10	5.6	16	2.4	1.5	1.4	.75	.34	20	27	11
28	17	9.4	5.1	6.7	2.6	1.5	1.2	.55	.35	9.7	21	9.9
29	13	9.4	4.8	6.1	---	1.4	1.2	.55	.37	6.8	17	19
30	18	8.7	4.8	12	---	1.4	1.2	.37	.40	8.0	16	15
31	21	---	5.0	6.0	---	1.4	---	.37	---	8.4	14	---
TOTAL	802.7	642.5	322.8	319.4	99.5	63.4	44.4	27.15	15.50	253.12	1350	366.9
MEAN	25.9	21.4	10.4	10.3	3.55	2.05	1.48	.88	.52	8.17	43.5	12.2
MAX	144	61	57	73	5.4	4.7	2.8	2.0	2.4	73	172	32
MIN	7.9	8.7	4.8	4.2	2.4	1.4	1.1	.37	.07	.19	14	5.9
AC-FT	1590	1270	640	634	197	126	88	54	31	502	2680	728

CAL YR 1974 TOTAL 11708.70 MEAN 32.1 MAX 768 MIN 2.2 AC-FT 23220
WTR YR 1975 TOTAL 4307.37 MEAN 11.8 MAX 172 MIN .07 AC-FT 8540

PEAK DISCHARGE (BASE, 2,700 CFS).--No peak above base.

16890600 ADEIDDO RIVER, BABELTHUAP

LOCATION.--Lat 7°36'01" N., long 134°35'38" E., on right bank at Ngardmau, 0.3 mi (0.5 km) upstream from left-bank tributary, and 0.6 mi (1.0 km) northwest of Mount Megilon.
DRAINAGE AREA.--4.43 mi² (11.47 km²).
PERIOD OF RECORD.--October 1969 to current year.
GAGE.--Water-stage recorder. Altitude of gage is 15 ft (4.6 km), from topographic map.
AVERAGE DISCHARGE.--6 years, 34.1 ft³/s (0.966 m³/s), 24,710 acre-ft/yr (30.5 hm³/yr).
EXTREMES.--Current year: Maximum discharge, 2,310 ft³/s (65.4 m³/s) Jan. 22 (gage height, 15.44 ft or 4.706 m), from rating curve extended as explained below; minimum, 5.8 ft³/s (0.16 m³/s) Apr. 17, 18.
Period of record: Maximum discharge, 2,310 ft³/s (65.4 m³/s) Jan. 22, 1975 (gage height, 15.44 ft or 4.706 m), from rating curve extended above 82 ft³/s (2.32 m³/s) on basis of field estimate at gage height 15.44 ft (4.706 m); minimum, 2.7 ft³/s (0.076 m³/s) Mar. 24, 25, 31, Apr. 1, 1973.
REVISIONS.--The figures of maximum discharge for some water years have been revised as shown in the following table. They supersede those published in Water Resources Data for Hawaii and other Pacific Areas, Part I, for water years indicated.

Water year	Date	Discharge (ft³/s)	Gage height (feet)
1970	July 12, 1970	1,700	12.80
1972	Sept. 29, 1972	1,730	12.96
1973	Sept. 16, 1973	2,290	15.35

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.
REVISIONS.--Revised figures of peak discharges for water years 1972 and 1973, superseding those published in Water Resources Data for Hawaii and other Pacific Areas, Part I, are given herewith: 1972, Mar. 15 (0700) 1,730 ft³/s (12.93 ft); Sept. 29 (0530) 1,730 ft³/s (12.96 ft); 1973, Dec. 2 (0230) 1,520 ft³/s (11.90 ft); Sept. 16 (0200) 2,290 ft³/s (15.35 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	161	38	41	36	12	12	16	23	47	48	22
2	16	86	37	41	34	12	8.2	14	22	66	61	25
3	22	74	88	40	30	12	7.5	13	22	53	49	22
4	19	133	39	40	30	11	7.3	13	61	74	57	21
5	16	83	50	49	36	10	7.1	14	67	76	59	20
6	15	76	51	47	26	10	7.1	14	51	94	54	18
7	30	94	39	46	26	10	7.1	14	44	91	47	17
8	27	84	36	37	25	9.5	6.7	16	52	73	43	16
9	43	70	35	35	23	9.5	6.7	18	50	64	43	16
10	58	248	32	45	21	9.5	7.5	15	47	58	38	25
11	35	98	30	34	20	9.5	6.9	15	57	52	41	19
12	30	121	36	34	20	9.5	6.5	15	142	49	45	16
13	29	108	98	32	19	10	6.5	25	166	44	170	15
14	29	91	66	35	19	11	6.3	15	90	52	64	15
15	34	78	56	33	19	34	6.1	15	74	43	52	15
16	25	72	46	30	18	17	6.1	14	82	46	47	17
17	30	60	46	43	16	14	5.9	13	74	36	48	15
18	25	53	44	43	15	12	6.5	43	70	33	65	16
19	23	61	39	41	16	10	8.1	39	102	33	50	19
20	25	54	42	39	16	10	32	32	92	29	41	15
21	24	53	36	47	16	11	13	26	78	26	38	34
22	22	52	33	716	14	11	32	22	79	27	38	18
23	21	53	46	169	13	9.2	106	22	70	32	49	20
24	30	58	39	102	13	9.0	31	32	64	25	34	37
25	25	44	32	80	12	8.4	22	26	57	33	31	21
26	32	40	30	69	12	8.6	18	22	59	24	29	19
27	47	40	34	71	12	9.0	16	25	53	25	27	26
28	45	36	29	53	19	9.7	15	35	54	24	25	29
29	63	34	30	47	---	9.5	14	31	59	23	26	35
30	90	32	73	41	---	9.2	18	30	53	31	29	67
31	76	---	55	38	---	11	---	25	---	54	24	---
TOTAL	1022	2347	1385	2218	576	348.1	453.1	669	2014	1437	1472	670
MEAN	33.0	78.2	44.7	71.5	20.6	11.2	15.1	21.6	67.1	46.4	47.5	22.3
MAX	90	248	98	716	36	34	106	43	166	94	170	67
MIN	15	32	29	30	12	8.4	5.9	13	22	23	24	15
AC-FT	2030	4660	2750	4400	1140	690	899	1330	3990	2850	2920	1330

CAL YR 1974 TOTAL 14227 MEAN 39.0 MAX 248 MIN 13 AC-FT 28220
WTR YR 1975 TOTAL 14611.2 MEAN 40.0 MAX 716 MIN 5.9 AC-FT 28980

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-10	0630	11.21	1,380	6-12	2300	10.09	1,160
1-22	1730	15.44	2,310	8-13	1300	9.64	1,070

16890900 TABAGATEN RIVER, BABELTHUAP

LOCATION.--Lat 7°27'00" N., long 134°32'05" E., on left bank 0.3 mi (0.5 km) downstream from unnamed tributary, 0.7 mi (1.1 km) northeast of Mount Karukail, and 1.0 mi (1.6 km) south of Ngatpang.

DRAINAGE AREA.--6.34 mi^2 (16.42 km^2).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6.1 m), from topographic map.

AVERAGE DISCHARGE.--5 years, 49.8 ft^3/s (1.41 m^3/s), 36,080 acre-ft/yr (44.5 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 3,090 ft^3/s (87.5 m^3/s) Jan. 22 (gage height, 8.46 ft or 2.579 m), from rating curve extended above 124 ft^3/s (3.51 m^3/s); minimum, about 5.0 ft^3/s (0.14 m^3/s) Apr. 17.
Period of record: Maximum discharge, 3,580 ft^3/s (101 m^3/s) Dec. 23, 1973 (gage height, 8.79 ft or 2.679 m), from rating curve extended above 124 ft^3/s (3.51 m^3/s); minimum, 0.80 ft^3/s (0.023 m^3/s) Mar. 23, 24, 1973.

REMARKS.--Records poor. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	120	28	70	46	11	29	18	36	48	140	20
2	53	80	109	55	35	10	11	18	32	46	120	19
3	59	142	178	54	31	9.2	9.2	16	31	124	90	18
4	59	88	53	47	28	8.7	8.7	16	49	171	80	17
5	47	75	217	97	28	8.2	8.2	15	150	126	70	16
6	124	84	135	50	24	7.5	7.5	25	80	136	55	15
7	112	220	120	68	23	7.3	7.2	30	50	128	50	30
8	122	153	73	42	21	7.1	6.9	26	110	98	50	18
9	172	98	58	38	20	7.0	6.6	22	85	73	45	15
10	203	200	50	46	18	6.9	6.4	26	70	60	40	20
11	105	107	44	35	18	6.8	6.2	20	70	47	40	18
12	77	81	63	37	17	6.7	6.0	19	70	43	75	15
13	63	75	486	31	18	6.6	5.8	20	150	49	200	18
14	72	59	172	43	16	6.5	5.6	17	250	74	80	25
15	67	50	100	46	15	25	5.5	16	120	132	60	20
16	45	52	73	40	14	20	5.4	20	125	76	50	15
17	40	39	60	41	14	17	5.3	15	120	56	45	15
18	37	35	54	53	13	12	7.0	35	150	54	50	20
19	32	36	48	65	13	9.2	9.0	42	120	60	45	25
20	53	133	43	48	12	8.4	80	25	100	45	40	12
21	37	98	38	45	13	7.8	25	28	90	40	40	35
22	32	53	35	815	12	7.6	30	22	150	55	35	20
23	29	46	74	314	12	7.4	180	27	150	45	35	18
24	29	40	62	142	11	7.2	35	28	100	35	35	15
25	30	38	39	95	11	7.0	26	39	90	60	30	16
26	44	33	35	73	9.8	6.8	22	27	86	55	30	30
27	90	34	32	99	9.2	6.6	19	157	84	50	25	175
28	75	30	31	60	22	6.4	20	90	138	60	22	60
29	105	28	146	49	---	6.3	20	57	70	45	20	40
30	135	26	243	42	---	14	22	51	61	100	25	70
31	130	---	98	38	---	17	---	40	---	250	20	---
TOTAL	2339	2353	2997	2778	524.0	295.2	635.5	1007	2987	2441	1742	850
MEAN	75.5	78.4	96.7	89.6	18.7	9.52	21.2	32.5	99.6	78.7	56.2	28.3
MAX	203	220	486	815	46	25	180	157	250	250	200	175
MIN	29	26	28	31	9.2	6.3	5.3	15	31	35	20	12
AC-FT	4640	4670	5940	5510	1040	586	1260	2000	5920	4840	3460	1690

CAL YR 1974 TOTAL 22641.0 MEAN 62.0 MAX 799 MIN 12 AC-FT 44910
WTR YR 1975 TOTAL 20948.7 MEAN 57.4 MAX 815 MIN 5.3 AC-FT 41550

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 6	2100	5.48	713	12-29	2300	6.51	1,160
11- 7	2000	6.69	1,250	1-22	1400	8.46	3,090
12- 2	2330	6.11	955	5-27	1530	5.79	826
12- 5	0300	6.27	1,040	6-14	/0400	-	/1,000
12-13	1800	8.40	3,000				

/ About.

NOTE.--No gage-height record July 17 to Sept. 30.

16891200 GIHMEL RIVER, BABELTHUAP

LOCATION.--Lat 7°21'59" N., long 134°32'06" E., on right bank at Garuruon, 400 ft (122 m) downstream from dam, and 0.5 (0.8 km) upstream from coast road.

DRAINAGE AREA.--1.09 mi^2 (2.82 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 15 ft (4.6 m), from topographic map.

AVERAGE DISCHARGE.--6 years, 2.74 ft^3/s (0.0776 m^3/s), 1,990 acre-ft/yr (2.45 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 274 ft^3/s (7.76 m^3/s) Jan. 22 (gage height, 7.34 ft or 2.237 m), from rating curve extended above 8.7 ft^3/s (0.25 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) for many days in March and April.
Period of record: Maximum discharge, 274 ft^3/s (7.76 m^3/s) Jan. 22, 1975 (gage height, 7.34 or 2.237 m), from rating curve extended above 8.7 ft^3/s (0.25 m^3/s); no flow for many days during 1973-74.
REVISIONS.--Figures of maximum discharge for the water years 1973 and 1974 have been revised to 130 ft^3/s (3.68 m^3/s) Aug. 22, 1973 (gage height, 5.65 ft or 1.722 m) and 210 ft^3/s (5.95 m^3/s) Jan. 16, 1974 (gage height, 6.68 ft or 2.036 m), superseding those published in Water Resources Data for Hawaii and other Pacific Areas for water years 1973 and 1974, respectively.

REMARKS.--Records fair. An 8-inch (20 cm) pipeline diverts an average of about 0.75 ft^3/s (0.021 m^3/s) from above the dam, 400 ft (122 m) upstream from the gage, for consumption on the island of Koror. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--Revised figures of discharge for some peak discharges in the water year 1974, superseding those published in Water Resources Data for Hawaii and other Pacific Areas, Part 1, 1974, are given herewith: Jan. 8 (1000) 112 cfs (5.40 ft); Jan. 16 (1100) 210 cfs (6.68 ft); Aug. 4 (1930) 206 cfs (6.67 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	15	1.1	5.5	4.8	.01	.04	1.3	2.1	4.0	13	.36
2	12	8.9	3.7	4.4	2.2	.04	.04	.52	1.6	3.3	9.8	.16
3	6.5	15	3.5	4.6	2.2	.06	.04	.24	1.3	3.5	6.5	.96
4	4.9	9.8	2.2	2.9	1.6	.04	.04	.13	2.1	12	4.9	.16
5	6.6	8.3	6.8	8.6	1.5	.06	.02	.04	7.8	11	4.2	.10
6	5.8	8.0	8.2	3.3	1.1	.10	.02	.66	3.5	12	3.2	.13
7	19	10	4.4	2.9	1.0	.10	.02	.96	2.8	10	4.7	1.8
8	21	10	2.8	2.2	.72	.10	.04	2.8	5.8	7.8	2.5	.84
9	16	7.0	2.3	2.6	.56	.10	.02	1.3	6.2	5.5	1.9	1.8
10	20	18	2.1	2.1	.44	.08	.02	.96	10	4.6	1.8	.66
11	11	8.6	1.8	2.6	.40	.08	.04	.60	8.0	3.8	1.4	2.9
12	7.0	6.0	2.7	2.1	.40	.06	.04	2.3	11	3.0	4.8	.66
13	5.8	4.9	7.3	1.5	.36	.06	.04	3.0	16	3.5	12	8.6
14	6.0	4.0	4.4	3.4	.16	.04	.04	1.2	16	4.4	5.5	4.7
15	6.5	3.2	2.8	8.0	.06	.29	.04	.90	9.2	12	3.5	2.8
16	3.8	2.9	2.2	4.4	.06	.02	.06	.60	11	6.2	2.8	1.4
17	3.0	2.5	2.7	3.5	.04	.06	.06	.48	8.0	4.4	2.6	.90
18	2.3	2.0	2.1	3.3	.04	.02	.06	4.2	8.3	3.2	3.0	1.0
19	2.0	1.8	1.7	5.1	.04	.02	.10	5.1	9.9	4.0	2.5	1.8
20	2.3	6.1	1.4	3.6	.04	.01	.28	4.3	7.0	3.0	1.6	.56
21	2.8	7.2	3.4	3.3	.04	.01	.08	4.8	5.8	2.3	1.4	3.0
22	2.6	3.0	1.5	47	.04	.01	.18	2.9	8.7	3.6	2.3	1.1
23	2.3	2.8	4.1	22	.04	.01	3.6	3.1	11	2.5	1.5	1.6
24	5.7	2.1	3.0	13	.04	.01	2.0	2.6	6.8	1.7	1.1	5.7
25	4.9	1.6	1.9	8.9	.02	.01	.90	3.0	4.9	4.4	1.0	3.3
26	4.9	1.7	1.6	7.0	.02	.01	.60	2.0	4.2	4.4	.78	9.2
27	6.6	1.6	1.5	8.7	.02	.01	.36	11	4.0	2.6	.60	13
28	8.0	1.2	1.3	5.1	.10	.01	.10	7.8	7.8	2.8	.48	11
29	11	1.1	5.3	3.8	---	.04	.16	4.4	4.0	3.7	.40	5.8
30	15	1.0	24	3.2	---	.06	2.1	3.8	6.0	13	.60	4.0
31	11	---	10	2.6	---	.13	---	2.8	---	17	.40	---
TOTAL	245.6	175.3	123.8	201.2	18.04	1.68	11.14	79.79	210.8	179.2	102.76	89.99
MEAN	7.92	5.84	3.99	6.49	.64	.054	.37	2.57	7.03	5.78	3.31	3.00
MAX	21	18	24	47	4.8	.29	3.6	11	16	17	13	13
MIN	2.0	1.0	1.1	1.5	.02	.01	.02	.04	1.3	1.7	.40	.10
AC-FT	487	348	246	399	36	3.3	22	158	418	355	204	178

CAL YR 1974 TOTAL 1268.89 MEAN 3.48 MAX 63 MIN .04 AC-FT 2520
WTR YR 1975 TOTAL 1439.30 MEAN 3.94 MAX 47 MIN .01 AC-FT 2850

PEAK DISCHARGE (BASE, 75 CFS, REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 7	1030	4.86	80	1-22	1300	7.34	274
12-29	2330	5.00	88				

16891300 GADEN RIVER, BABELTHUAP

LOCATION.--Lat 7°22'56" N., long 134°33'42" E., on left bank 1,000 ft (305 m) upstream from confluence with Kumekuneyel River, 1.0 mi (1.6 km) southwest of Mount Kabekobekushi, and 1.8 mi (2.9 km) north of Airai.

DRAINAGE AREA.--4.23 mi^2 (10.96 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7 ft (2.1 m), from topographic map. Prior to Dec. 9, 1974, at site 300 ft (91 m) downstream at datum 0.30 ft (0.09 m) lower.

AVERAGE DISCHARGE.--6 years, 33.3 ft^3/s (0.943 m^3/s), 24,130 acre-ft/yr (29.8 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 3,520 ft^3/s (99.7 m^3/s) Jan. 22 (gage height, 17.24 ft or 5.255 m), from rating curve extended above 61 ft^3/s (1.7 m^3/s); minimum, 2.0 ft^3/s (0.057 m^3/s) Apr. 15-17.
Period of record: Maximum discharge, 3,520 ft^3/s (99.7 m^3/s) Jan. 22, 1975 (gage height, 17.24 ft or 5.255 m), from rating curve extended above 61 ft^3/s (1.7 m^3/s); minimum, 1.6 ft^3/s (0.045 m^3/s) Mar. 23, 24, 1973.
REVISIONS.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in Water Resources Data of Hawaii and other Pacific Areas for water years indicated.

Water year	Date	Discharge (ft^3/s)	Gage height (feet)
1970	July 12, 1970	1,280	10.74
1971	May 28, 1971	2,240	14.05
1972	May 1, 1972	2,910	15.70
1973	Dec. 2, 1972	922	9.16
1974	Jan. 8, 1974	2,970	15.87

REMARKS.--Records fair except those above 200 ft^3/s, which are poor. No diversion above gage. Periodic determinations of water temperature for the water year 1975 are published in Part 2 of this report.

REVISIONS.--The figures of peak discharge for water years 1970-72, 1974 have been revised as shown in the following table. They supersede figures published in Water Resources Data for Hawaii and other Pacific Areas, 1970-72, 1974.
REVISED PEAK DISCHARGE.--1970: July 12 (1200) 1,280 ft^3/s (10.74 ft); July 14 (1530) 1,010 ft^3/s (9.62 ft); Sept. 16 (1930) 670 ft^3/s (7.90 ft).
1971: Oct. 23 (2300) 994 ft^3/s (9.52 ft); Feb. 14 (1100) 1,710 ft^3/s (12.26 ft); Mar. 6 (0730) 1,320 ft^3/s (10.88 ft); May 8 (1600) 730 ft^3/s (8.20 ft); May 28 (1500) 2,240 ft^3/s (14.05 ft); July 7 (2230) 1,050 ft^3/s (9.80 ft); July 12 (0530) 616 ft^3/s (7.57 ft).
1972: Dec. 28 (2000) 1,330 ft^3/s (10.90 ft); May 1 (0230) 2,910 ft^3/s (15.70 ft); July 2 (1130) 1,010 ft^3/s (9.58 ft); Aug. 24 (2000) 2,550 ft^3/s (14.79 ft); Sept. 2 (1400) 1,110 ft^3/s (9.98 ft); Sept. 29 (0430) 1,950 ft^3/s (13.03 ft).
1974: Jan. 8 (0800) 2,970 ft^3/s (15.87 ft); Jan. 16 (1100) 2,840 ft^3/s (15.56 ft); Mar. 10 (1430) 1,160 ft^3/s (10.24 ft); Aug. 4 (2030) 2,920 ft^3/s (15.81 ft).

16891300 GADEN RIVER, BABELTHUAP--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	120	20	51	40	8.4	14	9.9	20	46	127	10
2	48	75	140	44	30	6.9	5.9	8.7	20	63	73	10
3	26	70	100	39	30	6.1	4.6	8.0	15	72	52	11
4	31	60	45	36	25	5.9	4.4	7.8	23	153	44	8.9
5	34	60	140	71	22	5.3	4.3	7.3	53	106	39	8.9
6	45	75	70	34	20	5.0	3.9	16	32	91	34	8.2
7	104	200	60	37	19	5.0	3.4	13	27	83	35	25
8	99	100	45	28	17	4.4	3.0	16	45	61	29	14
9	109	70	41	26	16	4.3	3.0	13	51	49	23	14
10	174	160	36	27	15	4.1	3.2	13	44	42	22	12
11	75	80	33	28	14	3.8	2.8	11	41	38	23	15
12	57	70	45	24	16	3.6	2.6	11	42	33	37	11
13	54	60	294	21	15	4.4	2.4	12	109	42	126	73
14	68	55	84	51	13	4.1	2.2	9.1	232	51	47	29
15	59	45	57	51	12	39	2.1	8.7	70	246	32	20
16	41	40	46	32	11	20	2.0	7.8	69	59	28	15
17	44	35	43	33	11	13	2.0	6.9	59	43	28	12
18	35	30	39	33	9.9	12	4.8	15	66	37	29	17
19	30	30	33	51	9.6	6.5	4.3	16	68	40	25	23
20	34	100	30	38	9.6	5.1	48	12	50	32	21	12
21	32	60	34	40	10	5.0	12	15	47	30	19	30
22	43	45	28	900	10	5.0	10	9.6	86	36	20	17
23	50	40	68	335	8.7	4.3	95	15	93	28	19	14
24	35	35	40	113	7.5	3.9	20	15	58	24	16	12
25	30	30	30	72	6.5	3.6	14	18	47	39	14	12
26	40	30	28	60	6.3	3.3	11	13	25	32	14	25
27	90	30	27	71	10	3.2	9.6	140	51	26	13	98
28	60	25	24	48	23	3.0	8.7	60	119	31	12	51
29	90	20	103	40	---	6.3	15	40	51	32	11	29
30	100	20	352	35	---	8.7	13	30	58	108	13	26
31	90	---	75	30	---	13	---	25	---	171	11	---
TOTAL	1834	1870	2210	2499	437.1	226.2	331.2	602.8	1771	1944	1036	663.0
MEAN	59.2	62.3	71.3	80.6	15.6	7.30	11.0	19.4	59.0	62.7	33.4	22.1
MAX	174	200	352	900	40	39	95	140	232	246	127	98
MIN	25	20	20	21	6.3	3.0	2.0	6.9	15	24	11	8.2
AC-FT	3640	3710	4380	4960	867	449	657	1200	3510	3860	2050	1320

CAL YR 1974 TOTAL 16838.0 MEAN 46.1 MAX 1090 MIN 11 AC-FT 33400
WTR YR 1975 TOTAL 15424.3 MEAN 42.3 MAX 900 MIN 2.0 AC-FT 30590

PEAK DISCHARGE (BASE, 1,000 CFS, REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-13	1800	12.73	1,850	1-22	/1400	17.24	3,520
12-29	2400	11.88	1,590	7-15	1130	11.40	1,450

/ About.

NOTE.--No gage-height record Oct. 23 to Dec. 8, Jan. 22.

16891400 SOUTH FORK NGARDOK RIVER, BABELTHUAP

LOCATION.--Lat 7°26'15" N., long 134°35'03" E., on right bank 0.3 mi (0.5 km) upstream from left-bank tributary, 0.6 mi (1.0 km) northwest of Garasho Mountain, and 1.3 mi (2.1 km) west of village of Ngarsul.

DRAINAGE AREA.--2.26 mi^2 (5.85 km^2).

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 65 ft (20 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 5,750 ft^3/s (163 m^3/s) Dec. 13 (gage height, 9.19 ft or 2.801 m), from rating curve extended as explained below; minimum, 1.5 ft^3/s (0.042 m^3/s) Apr. 15-18.
Period of record: Maximum discharge, 5,750 ft^3/s (163 m^3/s) Dec. 13, 1974 (gage height, 9.19 ft or 2.801 m), from rating curve extended above 70 ft^3/s (1.98 m^3/s) on basis of field estimate at gage height 7.57 ft (2.307 m); minimum, 0.55 ft^3/s (0.016 m^3/s) Mar. 9, 1973.
REVISIONS.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede those published in Water Resources Data for Hawaii and other Pacific Areas for water years indicated.

Water year	Date	Discharge (ft^3/s)	Gage height (feet)
1971	July 27, 1971	958	4.33
1972	May 1, 1972	3,270	7.10
1973	Sept. 30, 1973	1,460	5.10
1974	Dec. 23, 1973	3,040	6.89

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--Revised figures of discharge, in cubic feet per second, for high-water periods in water years 1972-74, superseding those published in Water Resources Data for Hawaii and other Pacific Areas, 1972-74, are given below:

Date	Discharge	Date	Discharge
1972		1974-Con.	
May 1	298	Oct. 3	232
Sept. 2	151	4	165
29	277	Dec. 23	270
		Jan. 8	189
1974		16	610
Oct. 2	221	17	439

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
May 1972	766.2	298	6.2	24.7	1,520
September	974.0	277	6.2	32.5	1,930
Water year 1971-72	8,154.0	298	5.2	22.3	16,170
Calendar year 1972	7,304.2	298	3.8	20.0	14,490
October 1973	1,189.2	232	7.2	38.4	2,360
December	610.0	270	5.7	19.7	1,210
Calendar year 1973	5,769.59	270	.70	15.8	11,440
January 1974	1,953.2	610	9.2	63.0	3,870
Water year 1973-74	8,723.9	610	4.8	23.9	17,300

REVISED PEAK DISCHARGE.--1972: Mar. 25 (2000) 780 ft^3/s (4.00 ft); May 1 (0200) 3,270 ft^3/s (7.10 ft); May 7 (0330) 780 ft^3/s (4.00 ft); Aug. 24 (1930) 3,140 ft^3/s (6.98 ft); Sept. 2 (1400) 2,110 ft^3/s (5.93 ft); Sept. 29 (0400) 1,560 ft^3/s (5.24 ft).
1973: Dec. 2 (0200) 946 ft^3/s (4.31 ft); Sept. 30 (1500) 1,460 ft^3/s (5.10 ft).
1974: Oct. 3 (2330) 1,050 ft^3/s (4.48 ft); Dec. 23 (0830) 3,040 ft^3/s (6.89 ft); Jan. 8 (1100) 2,000 ft^3/s (5.80 ft); Jan. 16 (1830) 2,050 ft^3/s (5.86 ft); Aug. 4 (2000) 2,960 ft^3/s (6.82 ft); Sept. 24 (2400) 1,150 ft^3/s (4.65 ft).

16891400 SOUTH FORK NGARDOK RIVER, BABELTHUAP--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	60	12	22	22	4.0	10	5.4	11	27	70	5.2
2	19	36	113	19	14	3.2	3.6	5.2	9.3	36	48	5.2
3	13	32	62	20	13	3.2	3.2	4.8	8.7	91	34	5.2
4	28	28	22	18	11	2.9	2.9	4.4	19	85	31	4.4
5	15	29	56	40	11	2.9	2.9	4.4	52	61	26	4.4
6	136	36	26	18	9.3	3.2	3.2	6.2	24	60	20	4.4
7	46	94	26	26	9.3	3.2	2.6	6.2	19	60	18	8.4
8	47	49	19	16	8.7	2.9	2.3	6.8	38	42	18	4.8
9	50	34	18	14	8.0	2.9	2.3	6.2	28	31	16	4.0
10	77	83	15	18	7.4	2.9	2.3	7.4	22	25	14	5.2
11	37	40	14	14	7.4	2.9	2.3	5.2	23	21	14	5.2
12	27	29	20	14	8.0	2.6	2.0	4.8	23	18	28	4.4
13	22	28	497	12	7.4	3.2	2.0	5.2	65	23	112	4.8
14	29	30	65	22	6.2	3.2	2.3	4.4	148	26	34	5.7
15	22	23	37	24	5.7	15	1.8	4.0	40	60	22	5.2
16	17	20	26	16	5.7	5.7	1.8	4.4	46	25	19	4.0
17	19	18	20	18	5.2	5.2	1.5	3.6	42	19	16	4.0
18	18	14	18	19	5.2	4.8	2.9	4.0	51	17	19	6.0
19	13	14	17	37	4.8	3.6	3.2	8.7	43	20	15	6.2
20	15	54	14	23	5.2	3.2	35	4.0	38	14	12	3.6
21	12	31	13	26	5.2	3.2	8.0	4.4	31	13	11	9.6
22	15	20	12	769	5.2	3.2	8.6	4.0	57	19	10	4.8
23	12	19	35	146	4.4	2.9	80	6.2	56	14	10	4.8
24	14	17	20	58	4.0	2.9	12	6.2	37	12	9.3	4.0
25	13	14	14	39	3.6	2.6	8.0	8.7	28	21	8.0	4.4
26	20	14	12	32	3.6	2.6	6.8	5.7	30	18	7.4	7.5
27	47	14	12	45	4.4	2.3	5.7	94	23	16	6.8	86
28	33	12	10	25	7.4	2.9	4.8	30	30	20	5.7	21
29	48	11	102	20	---	3.6	6.8	16	30	14	5.2	13
30	51	10	115	17	---	7.1	7.4	16	32	43	6.2	27
31	46	---	33	15	---	5.7	---	12	---	127	5.2	---
TOTAL	973	913	1475	1602	212.3	119.7	238.2	308.5	1104.0	1078	670.8	282.4
MEAN	31.4	30.4	47.6	51.7	7.58	3.86	7.94	9.95	36.8	34.8	21.6	9.41
MAX	136	94	497	769	22	15	80	94	148	127	112	86
MIN	12	10	10	12	3.6	2.3	1.5	3.6	8.7	12	5.2	3.6
AC-FT	1930	1810	2930	3180	421	237	472	612	2190	2140	1330	560

CAL YR 1974 TOTAL 9393.8 MEAN 25.7 MAX 610 MIN 4.8 AC-FT 18630
WTR YR 1975 TOTAL 8976.9 MEAN 24.6 MAX 769 MIN 1.5 AC-FT 17810

PEAK DISCHARGE (BASE, 800 CFS, REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 6	2000	5.92	2,100	1-22	1300	7.57	3,800
12- 2	2200	4.44	1,020	5-27	1530	4.33	958
12-13	1700	9.19	5,750	6-14	0330	4.53	1,080
12-30	2200	4.91	1,330				

16892400 ARINGEL STREAM, YAP

LOCATION.--Lat 9°31'01" N., long 138°05'11" E., on right bank at Aringel and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.24 mi^2 (0.62 km^2).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 35 ft (10.7 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 1.13 ft^3/s (0.0320 m^3/s), 819 acre-ft/yr (1.01 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 277 ft^3/s (7.84 m^3/s) Nov. 4 (gage height, 5.48 ft or 1.670 m), from rating curve extended above 20 ft^3/s (0.57 m^3/s); no flow for many days.
Period of record: Maximum discharge, 457 ft^3/s (12.9 m^3/s) Sept. 15, 1973 (gage height, 6.68 ft or 2.036 m), from floodmark in well, from rating curve extended above 20 ft^3/s (0.57 m^3/s); no flow for many days in most years.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.85	.03	.61	.04	0	0	.37	.05	.29	1.5	.10
2	.35	.97	.01	.50	.03	0	0	.14	.04	.65	3.9	1.0
3	.21	6.1	.01	.65	.02	0	0	.10	.05	.53	.44	.25
4	.21	19	.01	.57	.02	0	0	.06	.05	.33	7.4	.10
5	1.0	3.0	10	.47	.02	0	0	.05	.05	5.9	4.7	.08
6	5.1	4.4	1.2	1.3	.01	0	0	.05	.11	2.8	5.6	.06
7	3.2	2.1	1.3	.41	.01	0	0	.04	.07	3.4	9.2	.05
8	6.3	1.1	.50	.19	.01	0	0	.05	.07	6.1	1.3	.05
9	1.7	1.3	.33	.14	0	0	0	.13	9.7	.53	.44	.05
10	3.0	.31	.21	.37	0	0	0	.71	1.8	.33	.37	.10
11	2.7	2.8	.14	.27	0	0	0	.29	3.7	1.9	1.4	.20
12	8.3	.41	1.3	.14	0	0	0	.13	.44	.61	6.5	1.3
13	12	.21	18	.10	0	0	0	.06	1.5	.37	3.1	1.3
14	2.6	.16	1.6	.10	0	0	0	1.7	.73	9.2	.80	6.0
15	.97	.25	7.1	2.3	0	0	0	.89	.29	1.3	.20	1.0
16	.65	.39	.77	2.5	0	.02	0	.23	.69	.65	.15	.70
17	1.8	1.3	.53	1.3	0	.01	0	.13	.31	.35	.10	6.0
18	2.8	2.0	2.9	.57	0	0	0	3.8	4.4	.35	.08	2.5
19	9.5	3.9	1.1	3.9	0	0	0	4.9	2.3	.23	.07	.80
20	2.1	2.0	.57	11	0	0	0	3.1	2.4	.16	.10	.25
21	1.1	8.1	.52	42	0	0	0	.53	.69	.10	.08	3.0
22	.77	12	.33	18	0	0	0	.19	6.5	.07	.06	.70
23	.53	2.6	.31	1.2	0	0	0	4.6	2.3	.06	.20	.30
24	.39	.93	1.1	.44	0	0	0	.57	.69	.05	.25	.80
25	10	.27	.69	.21	0	0	0	5.3	.41	.16	.20	1.5
26	9.8	.11	.31	.19	0	0	0	1.4	.33	.07	10	1.0
27	1.8	.06	.29	.61	0	0	0	1.4	.33	.04	.80	2.0
28	4.8	.04	2.1	.31	0	0	.23	.65	.33	.04	.25	1.0
29	6.4	.03	.47	.14	---	0	4.3	.31	.69	.04	.15	3.5
30	.97	.02	.93	.11	---	0	15	.16	.35	2.0	.15	1.0
31	.93	---	.98	.06	---	0	---	.10	---	.93	.15	---
TOTAL	102.35	76.71	55.64	90.66	.16	.03	19.53	32.14	41.37	39.54	59.64	36.69
MEAN	3.30	2.56	1.79	2.92	.006	.001	.65	1.04	1.38	1.28	1.92	1.22
MAX	12	19	18	42	.04	.02	15	5.3	9.7	9.2	10	6.0
MIN	.21	.02	.01	.06	0	0	0	.04	.04	.04	.06	.05
AC-FT	203	152	110	180	.3	.06	39	64	82	78	118	73

CAL YR 1974 TOTAL 573.76 MEAN 1.57 MAX 23 MIN 0 AC-FT 1140
WTR YR 1975 TOTAL 554.46 MEAN 1.52 MAX 42 MIN 0 AC-FT 1100

PEAK DISCHARGE (BASE, 200 CFS).--Nov. 4 (0930) 277 cfs (5.48 ft); Jan. 21 (0330) 206 cfs (4.96 ft).

NOTE.--No gage-height record Aug. 14 to Sept. 30.

16892800 DALOLAB STREAM, YAP

LOCATION.--Lat 9°31'04" N., long 138°06'04" E., on left bank at Talagu and 0.9 mi (1.4 km) upstrean from mouth.

DRAINAGE AREA.--0.09 mi² (0.23 km²).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 150 ft (46 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.379 ft³/s (0.0107 m³/s), 275 acre-ft/yr (339,000 m³/yr).

EXTREMES.--Current year: Maximum discharge, 110 ft³/s (3.12 m³/s) Nov. 4 (gage height, 4.02 ft or 1.225 m), from floodmark in well, from rating curve extended above 17 ft³/s (0.48 m³/s); no flow for many days.
Period of record: Maximum discharge, 180 ft³/s (5.10 m³/s) Sept. 15, 1973 (gage height, 4.80 ft or 1.463 m), from floodmark in well, from rating curve extended above 17 ft³/s (0.48 m³/s); no flow for many days each year.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.12	.01	.12	.01		0	.02	0	.03	.44	.02
2	.04	.17	.01	.08	.01		0	0	0	.36	1.2	.57
3	.01	1.9	0	.17	.01		0	0	0	.19	.10	.08
4	.14	5.3	0	.08	0		0	0	.01	.04	2.4	.02
5	.24	1.4	3.6	.06	0		0	0	.01	2.6	3.4	.01
6	3.0	1.6	.43	.27	0		0	0	.01	.80	3.6	0
7	.83	.88	.36	.05	0		0	0	.01	.99	4.4	0
8	2.5	.40	.08	.01	0		0	0	.01	1.6	.30	0
9	.48	.78	.04	.01	0		0	0	4.0	.10	.06	0
10	1.5	.08	.01	.08	0		0	.09	.44	.04	.04	0
11	1.0	1.1	.01	.03	0		0	.02	1.1	.12	.42	0
12	3.8	.14	.67	.01	0		0	.01	.06	.06	2.4	.41
13	3.5	.05	4.4	0	0		0	0	1.2	.04	1.2	.60
14	.54	.05	.24	.01	0		0	.49	.24	3.2	.20	1.2
15	.12	.08	2.1	.66	0		0	.12	.04	.30	.04	.27
16	.06	.14	.05	.95	0		0	.01	.12	.10	.01	.10
17	.49	.60	.03	.30	0		0	0	.19	.03	.01	3.3
18	.36	.59	2.2	.08	0		0	.86	1.6	.19	.01	.40
19	2.3	1.6	.22	1.3	0		0	.71	1.9	.03	.01	.14
20	.92	1.1	.05	4.0	0		0	.33	.82	.02	.03	.01
21	.19	3.4	.06	15	0		0	.04	.12	.01	.01	.87
22	.06	4.8	.02	6.8	0		0	.01	2.0	.01	.01	.25
23	.04	1.3	.02	.36	0		0	1.2	.71	0	.05	.10
24	.03	.36	.10	.08	0		0	.03	.19	0	.04	.30
25	3.9	.06	.05	.04	0		0	1.2	.14	.16	.01	.60
26	3.2	.03	.01	.04	0		0	.27	.12	.04	3.6	.40
27	.44	.01	.03	.17	0		0	.33	.19	.01	.14	.80
28	1.9	.01	.81	.08	0		.03	.10	.17	.01	.02	.45
29	1.7	.01	.08	.03	---		.76	.03	.17	.01	.01	1.5
30	.22	.01	.12	.04	---		4.6	.01	.05	.98	.03	.40
31	.14	---	.24	.03	---		---	0	---	.30	.04	---
TOTAL	33.67	28.07	16.05	30.94	.03	0	5.39	5.88	15.62	12.37	24.23	12.80
MEAN	1.09	.94	.52	1.00	.001	0	.18	.19	.52	.40	.78	.43
MAX	3.9	5.3	4.4	15	.01	0	4.6	1.2	4.0	3.2	4.4	3.3
MIN	.01	.01	0	0	0	0	0	0	0	0	.01	0
AC-FT	67	56	32	61	.06	0	11	12	31	25	48	25

CAL YR 1974 TOTAL 182.12 MEAN .50 MAX 9.0 MIN 0 AC-FT 361
WTR YR 1975 TOTAL 185.05 MEAN .51 MAX 15 MIN 0 AC-FT 367

PEAK DISCHARGE (BASE, 75 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-12	2200	3.52	75	12- 5	1430	3.83	96
10-25	1430	3.64	83	1-21	0300	3.76	91
11- 4	0700	4.02	110				

16892900 PEMGOY STREAM, YAP

LOCATION.--Lat 9°31'07" N., long 138°06'18" E., on right bank at Talagu, 100 ft (30 m) upstream from Talagu Stream, and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--0.17 mi^2 (0.44 km^2).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Concrete control since Mar. 30, 1974. Altitude of gage is 100 ft (30 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.581 ft^3/s (0.0165 m^3/s), 421 acre-ft/yr (519,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, about 150 ft^3/s (4.25 m^3/s) Nov. 4 (gage height, unknown), from rating curve extended above 1.5 ft^3/s (0.042 m^3/s); no flow for many days.
Period of record: Maximum discharge, 240 ft^3/s (6.80 m^3/s) Sept. 15, 1973 (gage height, 4.72 ft or 1.439 m), from rating curve extended above 11 ft^3/s (0.31 m^3/s); no flow for many days most years.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.25	.06	.20	.07	.02	.01	.09	.02	.12	.93	.05
2	.31	.40	.04	.16	.06	.02	.01	.02	.02	.73	2.0	.75
3	.20	3.5	.04	.31	.07	.02	.01	.01	.02	.34	.20	.20
4	.27	10	.03	.18	.07	.01	0	.01	.03	.11	3.8	.08
5	.98	3.0	4.6	.12	.07	.01	0	0	.03	3.3	5.0	.06
6	2.6	3.0	.52	.20	.07	.02	0	0	.05	1.0	4.4	.05
7	2.6	1.0	.16	.11	.07	.02	0	.01	.04	2.6	5.9	.04
8	4.8	1.3	.10	.05	.06	.01	0	.01	.03	1.7	.93	.05
9	1.9	1.6	.08	.05	.05	.01	0	.02	6.0	.22	.14	.05
10	4.0	.25	.05	.10	.05	.01	0	.12	.60	.10	.09	.10
11	2.0	1.4	.05	.08	.05	0	0	.05	1.8	.10	.19	.15
12	6.0	.34	.66	.05	.05	0	0	.02	.20	.09	3.7	1.0
13	7.0	.13	6.7	.04	.05	0	0	.01	2.0	.06	2.1	1.0
14	1.0	.11	.81	.05	.05	.01	0	.62	.40	2.9	.50	4.0
15	.30	.11	4.7	.87	.05	.05	0	.20	.10	.75	.15	.80
16	.10	.22	.18	1.4	.05	.02	0	.05	.20	.14	.10	.60
17	.80	.75	.10	.81	.05	.01	0	.02	.30	.08	.08	4.0
18	.80	1.1	3.1	.20	.05	.01	0	1.2	1.5	.69	.06	2.0
19	4.0	3.1	.69	2.2	.05	.01	0	1.0	1.7	.11	.05	.50
20	2.0	1.8	.14	6.2	.05	.01	0	.50	2.2	.07	.10	.20
21	.50	3.8	.11	20	.04	0	0	.10	.20	.05	.06	1.6
22	.15	6.6	.07	10	.05	0	0	.03	2.2	.05	.05	.50
23	.08	2.9	.06	1.3	.04	0	0	2.0	2.1	.04	.15	.16
24	.08	.81	.18	.31	.03	0	0	.10	.34	.05	.20	.58
25	7.0	.16	.14	.14	.02	0	0	2.0	.42	.36	.15	1.5
26	6.0	.09	.06	.14	.02	0	0	.40	.20	.11	6.0	.69
27	1.0	.06	.09	.52	.03	.01	.04	.50	.28	.07	.50	1.6
28	3.5	.05	1.7	.42	.03	.02	.20	.20	.31	.07	.15	.75
29	3.0	.05	.42	.14	---	.01	.78	.10	.34	.06	.10	2.5
30	.60	.04	.38	.12	---	.01	6.2	.05	.16	.46	.10	.64
31	.30	---	.28	.10	---	.01	---	.03	---	.38	.10	---
TOTAL	64.39	47.92	26.30	46.57	1.40	.33	7.25	9.47	23.79	16.91	37.98	26.10
MEAN	2.08	1.60	.85	1.50	.050	.011	.24	.31	.79	.55	1.23	.87
MAX	7.0	10	6.7	20	.07	.05	6.2	2.0	6.0	3.3	6.0	4.0
MIN	.08	.04	.03	.04	.02	0	0	0	.02	.04	.05	.04
AC-FT	128	95	52	92	2.8	.7	14	19	47	34	75	52

CAL YR 1974 TOTAL 328.45 MEAN .90 MAX 13 MIN 0 AC-FT 651
WTR YR 1975 TOTAL 308.41 MEAN .85 MAX 20 MIN 0 AC-FT 612

PEAK DISCHARGE (BASE, 70 CFS).--Nov. 4 (about 0800) about 150 cfs; Jan. 21 (0330) 102 cfs (3.42 ft).

NOTE.--No gage-height record Oct. 10 to Nov. 7, Feb. 28 to Apr. 25, May 15 to June 19, Aug. 14 to Sept. 22.

16893000 TALAGU STREAM, YAP

LOCATION.--Lat 9°31'08" N., long 138°06'13" E., on left bank at Talagu, 300 ft (91 m) upstream from mouth, and 0.9 mi (1.4 km) upstream from mouth of Pemgoy Stream.

DRAINAGE AREA.--0.07 mi^2 (0.18 km^2).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and concrete control since Apr. 3, 1975. Altitude of gage is 130 ft (40 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.357 ft^3/s (0.010 m^3/s), 259 acre-ft/yr (319,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 114 ft^3/s (3.23 m^3/s) Nov. 4 (gage height, 2.97 ft or 0.905 m), from rating curve extended above 29 ft^3/s (0.82 m^3/s); no flow for many days.
Period of record: Maximum discharge, 213 ft^3/s (6.03 m^3/s) Sept. 15, 1973 (gage height, 3.98 ft or 1.213 m), from rating curve extended above 29 ft^3/s (0.82 m^3/s); no flow for many days most years.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.13	.01	.18	.04	0	0	.06	.02	.08	.39	.02
2	.11	.21	.01	.15	.02	0	0	.03	.02	.29	.80	.38
3	.04	1.7	0	.26	.01	0	0	.02	.02	.29	.12	.12
4	.03	7.0	0	.15	.01	0	0	.02	.02	.09	2.5	.04
5	.39	1.5	3.1	.11	.01	0	0	.01	.02	2.0	2.9	.02
6	2.1	1.5	.39	.26	.01	0	0	.01	.04	.47	2.3	.02
7	.85	.50	.37	.07	.01	0	0	.01	.04	1.2	3.5	.03
8	2.4	.57	.11	.02	.01	0	0	.01	.04	1.2	.47	.05
9	.66	.84	.03	.01	0	0	0	.01	2.1	.19	.10	.05
10	1.6	.21	.02	.07	0	0	0	.09	.52	.09	.07	.07
11	.66	.71	.01	.03	0	0	0	.06	.71	.09	.16	.09
12	3.2	.26	.40	.01	0	0	0	.03	.12	.08	1.9	.55
13	3.6	.09	4.3	.01	0	0	0	.02	1.1	.06	.96	.45
14	.61	.05	.42	.01	0	0	0	.45	.24	2.0	.26	2.4
15	.15	.09	2.3	.42	0	0	0	.19	.06	.42	.07	.42
16	.04	.21	.15	.97	0	.01	0	.06	.12	.19	.05	.24
17	.37	.44	.07	.57	0	.01	0	.04	.32	.10	.04	2.5
18	.42	.66	1.8	.29	0	0	0	.66	1.4	.32	.04	1.0
19	2.0	1.4	.39	1.5	0	0	0	.66	.65	.14	.05	.32
20	.95	.95	.11	3.7	0	0	0	.26	1.5	.08	.05	.09
21	.29	2.5	.13	14	0	0	0	.07	.19	.06	.03	.78
22	.07	4.1	.04	6.6	0	0	0	.04	.37	.04	.03	.24
23	.03	1.3	.04	.57	0	0	0	.55	2.4	.04	.10	.10
24	.04	.44	.15	.21	0	0	0	.07	.29	.03	.12	.24
25	3.4	.11	.09	.13	0	0	0	.84	.29	.24	.10	.47
26	3.1	.01	.02	.11	0	0	0	.32	.19	.09	3.4	.39
27	.52	.01	.09	.29	0	0	0	.32	.26	.04	.29	.80
28	1.7	.01	.90	.26	.01	0	.03	.16	.29	.02	.08	.42
29	1.4	.01	.34	.13	---	0	.47	.07	.24	.02	.06	1.3
30	.37	0	.39	.11	---	0	3.3	.03	.12	.28	.05	.34
31	.15	---	.32	.09	---	0	---	.02	---	.21	.05	---
TOTAL	31.36	27.91	16.50	31.29	.13	.02	3.80	5.17	13.70	10.45	21.04	13.94
MEAN	1.01	.93	.53	1.01	.005	.001	.13	.17	.46	.34	.68	.46
MAX	3.6	7.0	4.3	14	.04	.01	3.3	.84	2.4	2.0	3.5	2.5
MIN	.03	0	0	.01	0	0	0	.01	.02	.02	.03	.02
AC-FT	62	55	33	62	.3	.04	7.5	10	27	21	42	28

CAL YR 1974 TOTAL 171.09 MEAN .47 MAX 7.6 MIN 0 AC-FT 339
WTR YR 1975 TOTAL 175.31 MEAN .48 MAX 14 MIN 0 AC-FT 348

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-12	2230	2.17	54	1-21	0400	2.58	82
10-25	1500	2.18	55	8-26	1330	2.36	63
11- 4	0800	2.97	114				

16893100 BURONG STREAM, YAP

LOCATION.--Lat 9°31'59" N., long 138°07'05" E., on left bank at Dugor and 0.1 mi (0.2 km) upstream from mouth.

DRAINAGE AREA.--0.29 mi^2 (0.75 km^2).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.957 ft^3/s (0.0271 m^3/s), 693 acre-ft/yr (854,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 208 ft^3/s (5.89 m^3/s) Nov. 4 (gage height, 4.49 ft or 1.369 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); no flow for many days.
Period of record: Maximum discharge, 303 ft^3/s (8.58 m^3/s) Sept. 15, 1973 (gage height, 5.09 ft or 1.551 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); no flow for many days most years.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.28	.08	.44	.10		0	.17	0	.30	.82	.13
2	1.6	.25	.06	.30	.06		0	.03	0	.70	1.4	.40
3	1.6	3.1	.03	.58	.05		0	0	0	.50	.28	.25
4	1.5	17	.02	.37	.04		0	0	0	.30	7.1	.11
5	4.1	5.4	6.6	.21	.03		0	0	.01	5.0	7.4	.07
6	1.2	2.7	1.0	.44	.02		0	0	.02	2.5	6.3	.06
7	2.4	1.2	.37	.21	.02		0	0	.01	3.0	12	.03
8	6.1	2.3	.28	.11	.01		0	0	.03	4.0	2.1	.01
9	4.2	2.1	.28	.08	.01		0	0	7.5	.50	.48	.01
10	11	.62	.13	.11	.01		0	.01	1.9	.30	.23	.02
11	3.7	3.2	.10	.07	.01		0	.01	.37	1.0	.26	.04
12	6.7	.87	.62	.06	.01		0	0	.15	.60	5.5	1.0
13	11	.40	3.4	.04	.01		0	0	.34	.30	3.4	.67
14	1.9	.30	.92	.05	.01		0	.68	.23	8.0	1.0	3.8
15	.58	.23	6.8	.58	0		0	.25	.10	1.0	.50	3.5
16	.28	.65	.44	2.7	0		0	.05	.30	.50	.30	.65
17	1.8	1.7	.30	1.6	.01		0	.01	.15	.30	.20	2.9
18	1.7	1.3	5.5	.48	0		0	2.1	4.0	.50	.15	3.6
19	2.0	5.3	1.6	2.9	0		0	1.5	2.5	.30	.10	.87
20	2.6	2.2	.37	7.7	0		0	.28	2.5	.15	.06	.30
21	1.1	3.5	.23	33	0		0	.06	.60	.10	.04	7.7
22	.44	10	.15	20	0		0	.02	5.0	.05	.03	.82
23	.25	4.1	.13	1.8	0		0	.05	2.5	.03	.25	.40
24	.15	1.2	.44	.44	0		0	.02	.60	.02	.50	1.8
25	11	.40	.34	.23	0		0	.22	.40	.15	.40	1.5
26	7.9	.21	.13	.19	0		0	.19	.35	.05	1.4	.87
27	1.6	.13	.25	.65	0		0	.50	.35	.04	.70	.58
28	4.5	.10	2.2	.48	0		.13	.54	.30	.02	.40	.51
29	4.4	.07	.40	.25	---		1.3	.17	.50	.01	.15	4.2
30	1.1	.05	.62	.17	---		10	.08	.40	.08	.15	1.0
31	.40	---	.54	.15	---		---	.02	---	.25	.17	---
TOTAL	99.90	70.86	34.33	76.39	.40	0	11.43	6.96	31.11	30.55	53.77	37.80
MEAN	3.22	2.36	1.11	2.46	.014	0	.38	.22	1.04	.99	1.73	1.26
MAX	11	17	6.8	33	.10	0	10	2.1	7.5	8.0	12	7.7
MIN	.15	.05	.02	.04	0	0	0	0	0	.01	.03	.01
AC-FT	198	141	68	152	.8	0	23	14	62	61	107	75

CAL YR 1974 TOTAL 504.50 MEAN 1.38 MAX 20 MIN 0 AC-FT 1000
WTR YR 1975 TOTAL 453.50 MEAN 1.24 MAX 33 MIN 0 AC-FT 900

PEAK DISCHARGE (BASE, 100 CFS, REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-10	0030	3.80	120	11- 4	0900	4.49	208
10-25	1600	4.39	194	1-21	0330	4.02	142

NOTE.--No gage-height record June 16 to July 28.

16893200 MUKONG STREAM, GAGIL-TOMIL

LOCATION.--Lat 9°32'06" N., long 138°09'59" E., on right bank 0.2 mi (0.3 km) upstream from mouth and 1.6 mi (2.6 km) southwest of Gatjapar.

DRAINAGE AREA.--0.36 mi^2 (0.93 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1972-75. Current year.

GAGE.--Water-stage recorder. Altitude of gage is 5 ft (1.5 m) from topographic map.

EXTREMES.--Maximum discharge during period, 39 ft^3/s (1.10 m^3/s) Jan. 22, gage height, 2.69 ft (0.820 m); minimum, 0.11 ft^3/s (0.003 m^3/s) for several days in April.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the water year 1975 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			2.4	2.5	1.2	.29	.17	3.7	.70	1.7	2.0	.84
2			1.8	2.0	1.2	.29	.17	2.0	.68	1.7	2.5	.99
3	/ 3.1		1.4	3.0	1.0	.29	.15	1.4	.84	1.4	1.5	.99
4			1.3	2.5	.94	.29	.13	1.0	.84	4.9	3.5	.89
5			10	2.0	.94	.29	.13	.94	.78	11	4.0	.78
6			2.9	2.5	.90	.29	.11	.73	.73	6.8	3.0	.63
7			2.4	2.0	.85	.29	.13	.63	.63	6.2	7.5	.53
8			2.3	1.6	.80	.29	.13	.73	.73	3.0	4.4	.53
9			2.4	1.3	.80	.25	.15	.89	5.5	2.9	2.4	.49
10			1.9	1.5	.75	.25	.13	1.0	6.1	2.0	1.9	.49
11			1.8	1.2	.70	.20	.13	.94	2.4	1.8	1.6	.49
12			3.0	1.0	.65	.20	.11	.73	1.5	1.6	8.2	1.6
13			4.6	.85	.60	.20	.11	.63	2.2	1.5	7.1	1.6
14			3.4	.73	.73	.20	.13	.78	1.7	5.1	3.7	2.6
15			3.9	2.1	.68	.20	.13	.94	1.4	2.4	2.2	1.2
16			2.5	2.9	.63	.80	.12	.68	2.0	2.9	1.8	1.0
17			2.4	3.1	.58	.70	.11	.58	6.0	2.5	1.5	2.7
18			10	1.4	.53	.60	.11	.99	4.0	1.6	1.4	5.7
19			6.2	4.8	.53	.55	.15	3.7	3.7	1.4	1.4	1.9
20			3.6	5.8	.49	.50	.20	5.5	3.8	1.1	1.4	1.2
21			2.8	27	.49	.45	.35	2.4	2.4	.99	1.4	1.3
22			2.3	26	.49	.40	.29	1.5	2.7	.89	4.8	1.7
23			2.1	7.8	.49	.35	.23	1.9	5.9	.84	2.6	2.0
24			2.5	3.9	.45	.30	.17	1.2	3.1	.99	2.1	1.8
25			2.2	3.2	.41	.30	.15	1.2	2.3	.89	2.0	1.4
26			1.6	2.7	.37	.25	.13	1.0	2.0	.84	1.7	4.6
27			2.0	3.6	.37	.25	.41	1.4	1.7	.78	1.4	2.6
28			4.0	2.4	.33	.20	1.5	1.3	4.3	.70	1.4	2.0
29			3.5	1.8	---	.20	6.4	1.8	3.0	.60	1.1	4.3
30			3.0	1.5	---	.20	17	1.2	2.0	.80	.94	5.1
31			3.0	1.4	---	.20	---	.89	---	1.5	.89	---
TOTAL			99.2	126.08	19.10	10.07	29.33	44.28	75.63	73.32	83.33	53.95
MEAN			3.20	4.07	.68	.32	.98	1.43	2.52	2.37	2.69	1.80
MAX			10	27	1.2	.80	17	5.5	6.1	11	8.2	5.7
MIN			1.3	.73	.33	.20	.11	.58	.63	.60	.89	.49
AC-FT			197	250	38	20	58	88	150	145	165	107

PEAK DISCHARGE (BASE, 25 CFS)

/ Result of discharge measurement.

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12- 5	0600	2.29	29	4-30	0130	2.63	37
1-22	1000	2.69	39				

16893700 WICHEN RIVER AT ALTITUDE 55 M, MOEN

LOCATION.--Lat 7°26'45" N., long 151°52'02" E., on left bank at Peniesence, 1.0 mi (1.6 km) upstream from mouth, and 1.6 mi (2.6 km) west of Saint Xaviers Academy.

DRAINAGE AREA.--0.23 mi^2 (0.60 km^2).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 180 ft (55 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 1.02 ft^3/s (0.0289 m^3/s), 739 acre-ft/yr (911,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 42 ft^3/s (1.19 m^3/s) Dec. 8 (gage height, 2.47 ft or 0.753 m), from rating curve extended above 3 ft^3/s (0.085 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) for many days in February and March.
Period of record: Maximum discharge, 193 ft^3/s (5.47 m^3/s) Nov. 25, 1969 (gage height, 4.08 ft or 1.241 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) Mar. 29-31, 1969, for several days in March and April 1973, and for many days in February and March 1975.

REMARKS.--Records poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	1.3	1.9	.16	.02	.02	.13	.04	.55	.90	.34	.30
2	2.0	1.5	1.3	.26	.02	.02	.09	.03	.49	.70	.26	.19
3	1.8	2.4	.97	.30	.02	.02	.07	.02	.44	.70	.26	.19
4	.85	1.5	.70	.22	.02	.02	.05	.04	.44	.60	.30	.22
5	1.2	1.9	.55	.22	.01	.01	.04	.05	.55	.50	.30	.19
6	5.5	2.7	.70	.16	.01	.01	.04	.04	2.2	.70	.22	.19
7	3.0	3.7	.88	.14	.01	.01	.05	.03	2.3	.50	2.8	.44
8	3.0	2.6	4.6	.12	.01	.01	.07	.02	1.2	.35	1.6	.19
9	2.5	1.9	2.9	.10	.01	.01	.07	.02	.79	.50	1.6	.19
10	3.0	1.5	2.6	.08	.01	.01	.07	.02	.55	1.0	5.8	.16
11	3.3	1.2	2.0	.07	.01	.01	.07	.02	.44	.75	3.7	.59
12	3.3	1.1	1.6	.06	.01	.01	.15	.03	.34	.55	1.9	.62
13	2.6	.79	1.4	.05	.01	.02	.09	.02	.62	.39	1.2	.22
14	2.0	.62	1.2	.04	.01	.22	.05	.03	1.1	.34	.88	.19
15	1.5	.55	1.0	.07	.01	.04	.04	.55	1.1	.30	1.3	.19
16	1.2	.50	.90	.07	.01	.87	.04	.22	.79	1.4	2.2	.22
17	3.7	.45	1.0	.07	.03	2.3	.08	3.7	1.2	.88	1.3	.22
18	3.8	.40	.80	.05	.06	.39	.05	1.3	.97	.49	.97	.39
19	2.0	.35	.65	.04	.04	.19	.11	.49	1.2	.34	4.0	.34
20	1.4	.30	.55	.04	.03	.09	.05	1.9	1.7	.30	2.2	.22
21	3.1	.50	.50	.04	.02	.05	.03	.97	4.0	.34	1.7	.16
22	2.3	.40	.35	.11	.02	.07	.02	.55	2.6	.26	1.5	.22
23	4.0	.30	.30	.06	.01	2.4	.02	.39	7.3	.22	1.1	.26
24	2.6	.25	.25	.05	.01	2.0	.03	.30	3.3	.22	.79	.22
25	2.0	.30	.20	.04	.01	1.4	.09	1.5	3.3	.26	.55	.18
26	1.6	3.1	.15	.03	.02	1.0	.05	4.6	4.9	.26	.49	.45
27	1.2	1.9	.25	.03	.02	.75	.03	2.7	3.0	.22	.44	1.3
28	1.1	3.0	.25	.02	.02	.55	.03	2.4	2.2	.62	.39	2.9
29	1.2	1.3	.25	.02	---	.35	.02	1.5	1.6	.49	.39	1.9
30	1.9	4.4	.15	.02	---	.25	.02	1.1	1.2	.55	.39	1.7
31	1.2	---	.14	.02	---	.15	---	.79	---	.39	.39	---
TOTAL	70.40	42.71	30.99	2.76	.49	13.25	1.75	25.37	52.37	16.02	41.26	14.75
MEAN	2.27	1.42	1.00	.089	.018	.43	.058	.82	1.75	.52	1.33	.49
MAX	5.5	4.4	4.6	.30	.06	2.4	.15	4.6	7.3	1.4	5.8	2.9
MIN	.55	.25	.14	.02	.01	.01	.02	.02	.34	.22	.22	.16
AC-FT	140	85	61	5.5	1.0	26	3.5	50	104	32	82	29

CAL YR 1974 TOTAL 452.32 MEAN 1.24 MAX 9.0 MIN .04 AC-FT 897
WTR YR 1975 TOTAL 312.12 MEAN .86 MAX 7.3 MIN .01 AC-FT 619

PEAK DISCHARGE (BASE, 70 CFS).--No peak above base.

16893800 WICHEN RIVER AT ALTITUDE 18 M, MOEN

LOCATION.--Lat 7°27'05" N., long 151°52'18" E., on left bank at Peniesence and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--0.60 mi^2 (1.55 km^2).

PERIOD OF RECORD.--April 1955 to March 1956 (published as "at Peniesence"), June 1968 to current year. All figures of discharge above 3 ft^3/s (0.085 m^3/s) prior to April 1956, published in WSP 1751, are unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control since Mar. 29, 1973. Altitude of gage is 60 ft (18 m), from topographic map. Prior to Apr. 1, 1956, nonrecording gage at site 100 ft (30 m) downstream at different datum.

AVERAGE DISCHARGE.--7 years, 2.69 ft^3/s (0.0762 m^3/s), 1,950 acre-ft/yr (2.40 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 235 ft^3/s (6.66 m^3/s) Oct. 17 (gage height, 3.73 ft or 1.137 m), from rating curve extended above 20 ft^3/s (0.57 m^3/s); minimum, 0.02 ft^3/s (0.001 m^3/s) Feb. 14.
Period of record: Maximum discharge, 910 ft^3/s (25.8 m^3/s) June 4, 1972 (gage height, 6.80 ft or 2.073 m), from rating curve extended above 26 ft^3/s (0.74 m^3/s); minimum, 0.02 ft^3/s (0.001 m^3/s) Feb. 14, 1975.

REMARKS.--Records fair to poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.0	6.2	.27	.10	.08	.33	.10	1.2	1.9	.85	.47
2	5.5	3.7	3.9	.47	.10	.10	.27	.08	.74	1.6	.47	.33
3	4.0	8.1	2.6	.85	.08	.08	.22	.08	.74	1.6	.47	.33
4	2.0	3.9	1.9	.47	.06	.10	.22	.12	.74	1.6	.47	.40
5	2.5	4.1	1.5	.40	.05	.08	.15	.22	1.0	1.3	.47	.33
6	18	7.3	1.8	.33	.05	.06	.18	.15	7.0	1.6	.40	.33
7	10	12	3.1	.27	.05	.08	.18	.10	7.4	1.2	11	1.3
8	10	7.4	25	.22	.05	.08	.22	.10	3.2	.85	5.1	.55
9	6.8	4.8	11	.18	.05	.08	.22	.10	2.1	1.3	4.4	.40
10	7.5	3.4	10	.15	.05	.06	.22	.10	1.6	2.4	22	.55
11	9.9	2.4	7.1	.15	.05	.05	.22	.08	1.3	1.6	16	1.4
12	8.8	2.1	5.7	.15	.06	.06	.47	.15	.74	1.2	6.5	1.8
13	6.0	1.8	4.3	.12	.05	.08	.27	.12	1.5	.74	4.1	.64
14	3.9	1.3	3.7	.10	.03	1.6	.18	.12	2.6	.64	2.4	.33
15	2.8	1.2	2.8	.18	.04	.40	.15	2.2	2.8	.55	3.9	.15
16	2.1	1.0	2.4	.15	.04	3.5	.15	1.6	2.2	3.3	7.1	.18
17	18	.85	2.6	.18	.12	12	.18	18	3.0	2.2	4.1	.18
18	15	.74	1.9	.12	.27	2.1	.22	5.1	2.2	1.3	2.6	.85
19	5.1	.64	1.5	.12	.18	1.0	.40	2.2	3.0	.64	20	.85
20	3.4	.55	1.0	.12	.15	.47	.18	7.8	4.3	.55	7.1	.47
21	11	1.0	.85	.10	.08	.27	.15	3.9	12	.55	4.5	.33
22	5.7	.74	.64	.33	.06	.27	.12	2.2	6.2	.40	3.9	.47
23	18	.55	.55	.18	.06	12	.10	1.6	29	.27	2.4	.55
24	7.1	.47	.47	.15	.06	11	.12	1.2	8.8	.27	1.6	.47
25	5.7	.55	.40	.12	.06	4.8	.27	5.8	8.5	.33	1.2	.40
26	4.8	9.7	.33	.12	.08	2.4	.12	21	14	.33	1.0	1.3
27	3.2	7.4	.47	.12	.08	1.5	.10	8.5	7.1	.33	.85	5.4
28	2.2	11	.47	.12	.08	1.2	.08	6.2	4.5	1.5	.55	13
29	2.2	3.9	.47	.10	---	.74	.08	3.9	3.2	1.6	.55	7.4
30	4.5	24	.33	.10	---	.55	.06	2.4	2.4	1.8	.40	7.1
31	3.0	---	.27	.10	---	.40	---	1.8	---	1.3	.47	---
TOTAL	210.1	129.59	105.25	6.54	2.19	57.19	5.83	97.02	145.06	36.75	136.85	48.26
MEAN	6.78	4.32	3.40	.21	.078	1.84	.19	3.13	4.84	1.19	4.41	1.61
MAX	18	24	25	.85	.27	12	.47	21	29	3.3	22	13
MIN	1.4	.47	.27	.10	.03	.05	.06	.08	.74	.27	.40	.15
AC-FT	417	257	209	13	4.3	113	12	192	288	73	271	96

CAL YR 1974 TOTAL 1528.38 MEAN 4.19 MAX 43 MIN .06 AC-FT 3030
WTR YR 1975 TOTAL 980.63 MEAN 2.69 MAX 29 MIN .03 AC-FT 1950

PEAK DISCHARGE (BASE, 170 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 6	/2200	3.25	172	11-30	0700	3.36	186
10-17	1900	3.73	235	12- 8	1830	3.59	216
10-23	1330	3.56	212	6-23	0700	3.56	210

/ About.

16894200 NACHIPONONG STREAM, MOEN

LOCATION.--Lat 7°25'45" N., long 151°51'31" E., on left bank at Wichap, 300 ft (91 m) downstream from dam site, and 0.2 mi (0.3 km) upstream from mouth.

DRAINAGE AREA.--0.16 mi^2 (0.41 km^2).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Concrete control since Aug. 10, 1971. Altitude of gage is 33 ft (10.1 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.529 ft^3/s (0.0150 m^3/s), 383 acre-ft/yr (472,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 54 ft^3/s (1.53 m^3/s) Oct. 17 (gage height, 2.42 ft or 0.738 m), from rating curve extended above 11 ft^3/s (0.31 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) for many days in February and March.
Period of record: Maximum discharge, 102 ft^3/s (2.89 m^3/s) June 4, 1972 (gage height, 3.86 ft or 1.177 m), from rating curve extended above 11 ft^3/s (0.31 m^3/s); no flow Mar. 26-31, 1969, March and April 1973, Dec. 10, 1973.

REMARKS.--Records poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	1.0	.79	.03	.02	.02	.04	.03	.47	.64	.25	.10
2	1.4	1.0	.59	.07	.02	.02	.04	.03	.31	.55	.17	.08
3	1.1	1.2	.47	.10	.02	.02	.04	.03	.34	.59	.10	.06
4	.55	.64	.43	.08	.01	.02	.04	.06	.40	.55	.25	.08
5	.64	1.1	.37	.08	.01	.02	.04	.07	.43	.37	.22	.06
6	4.6	1.8	.51	.08	.01	.01	.04	.03	2.0	.74	.12	.10
7	2.8	1.8	.90	.09	.01	.02	.04	.03	1.0	.37	1.1	.22
8	2.9	1.4	5.0	.06	.01	.02	.03	.03	.55	.28	.47	.07
9	1.8	1.1	1.5	.05	.01	.02	.03	.03	.34	.47	.91	.15
10	2.4	.84	1.5	.04	.01	.01	.03	.03	.28	.47	2.6	.10
11	2.8	.69	1.1	.04	.01	.01	.03	.03	.25	.25	1.5	.10
12	2.4	.64	.79	.03	.01	.01	.10	.03	.20	.20	1.1	.10
13	1.6	.51	.79	.03	.01	.02	.07	.03	.40	.20	.90	.05
14	1.1	.40	.55	.02	.01	.06	.03	.03	.64	.17	.74	.04
15	.79	.37	.43	.05	.01	.03	.03	.82	.90	.12	1.6	.04
16	.59	.28	.51	.04	.01	.60	.03	.10	.47	.82	1.7	.09
17	3.6	.25	.57	.05	.03	1.3	.04	3.9	.55	.22	.90	.08
18	2.2	.20	.40	.03	.07	.10	.04	.47	.34	.12	.74	.20
19	1.0	.17	.31	.03	.05	.08	.07	.17	1.0	.08	3.4	.10
20	.79	.43	.28	.03	.04	.06	.05	2.1	1.6	.08	1.3	.07
21	1.6	1.3	.22	.02	.02	.05	.04	.47	4.0	.08	1.3	.06
22	1.3	.37	.17	.05	.01	.05	.03	.28	1.6	.07	.96	.08
23	1.7	.22	.15	.05	.01	2.8	.03	.25	5.7	.06	.69	.09
24	1.1	.12	.12	.04	.01	1.2	.03	.20	2.0	.05	.51	.06
25	.90	.15	.09	.03	.01	.40	.10	1.5	2.6	.06	.40	.05
26	.84	1.6	.08	.03	.02	.20	.04	4.9	3.9	.08	.37	.09
27	.64	.79	.15	.03	.02	.10	.03	1.3	1.6	.06	.28	.51
28	.51	1.4	.12	.03	.02	.08	.03	1.6	1.3	.34	.22	2.1
29	.64	.47	.10	.02	---	.06	.03	.96	1.0	.15	.20	.69
30	1.3	2.9	.04	.02	---	.05	.03	.69	.79	.17	.17	.74
31	.55	---	.04	.02	---	.04	---	.64	---	.12	.15	---
TOTAL	46.51	25.14	19.07	1.37	.50	7.48	1.25	20.84	36.96	8.53	25.32	6.36
MEAN	1.50	.84	.62	.044	.018	.24	.042	.67	1.23	.28	.82	.21
MAX	4.6	2.9	5.0	.10	.07	2.8	.10	4.9	5.7	.82	3.4	2.1
MIN	.37	.12	.04	.02	.01	.01	.03	.03	.20	.05	.10	.04
AC-FT	92	50	38	2.7	1.0	15	2.5	41	73	17	50	13

CAL YR 1974 TOTAL 314.73 MEAN .86 MAX 7.4 MIN .02 AC-FT 624
WTR YR 1975 TOTAL 199.33 MEAN .55 MAX 5.7 MIN .01 AC-FT 395

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-17	1900	2.42	54	5-17	0030	2.17	42
12- 8	1800	2.35	52	6-21	0800	2.16	41

NOTE.--No gage-height record Jan. 11 to Mar. 13.

16895000 ECHAPACHIK STREAM, TOL

LOCATION.--Lat 7°20'57" N., long 151°37'26" E., on right bank 0.2 mi (0.3 km) upstream from mouth and 0.6 mi (1.0 km) north of Mount Tunuital.

DRAINAGE AREA.--0.15 mi² (0.39 km²).

PERIOD OF RECORD.--April 1955 to March 1957 (published as "at Fasan"), June 1968 to September 1975 (discontinued).

GAGE.--Water-stage recorder. Concrete control since Nov. 6, 1971. Altitude of gage is 10 ft (3 m), from topographic map. Prior to Apr. 1, 1957, nonrecording gage at same site at different datum.

AVERAGE DISCHARGE.--8 years (1955-56, 1968-75), 0.526 ft³/s (0.0149 m³/s), 381 acre-ft/yr (470,000 m³/yr).

EXTREMES.--Current year: Maximum discharge, 27 ft³/s (0.76 m³/s) May 20 (gage height, 3.26 ft or 0.994 m), from rating curve extended above 13 ft³/s (0.37 m³/s); minimum, 0.01 ft³/s (<0.001 m³/s) for many days.
Period of record: Maximum discharge, 51 ft³/s (1.44 m³/s) Sept. 1, 1970 (gage height, 3.23 ft or 0.985 m), from rating curve extended above 0.7 ft³/s (0.020 m³/s); no flow Mar. 24, 25, 1957, for many days in 1969, Feb. 17, 1974.

REMARKS.--Records poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 2137: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.35	1.4	.31	.02	.01	.03	.44	.09	.60	.07	.16
2	1.0	.86	.24	.39	.02	.01	.03	.12	.06	.50	.04	.06
3	1.8	2.1	.07	1.2	.02	.01	.02	.04	.03	.50	.03	.04
4	1.0	.60	.02	1.1	.01	.02	.02	1.4	.04	.40	.04	.04
5	1.0	.12	.01	.72	.02	.01	.04	3.3	.03	.30	.04	.02
6	6.0	.06	.01	.35	.02	.01	.07	.90	1.2	.40	.07	.06
7	3.5	1.0	.19	.27	.01	.02	.06	.49	1.0	.30	.10	.16
8	2.5	2.5	3.2	.27	.01	.02	.07	.35	.50	.10	.10	.09
9	2.5	.66	3.9	.21	.01	.01	.06	.39	.40	.30	.31	.07
10	3.0	.21	.84	.16	.01	.01	.07	.24	.30	.35	2.7	.04
11	3.6	.12	4.4	.14	.01	.01	.12	.14	.20	.44	1.5	.13
12	.54	.09	1.5	.10	.01	.01	.31	.10	.10	.18	.64	.09
13	.24	.07	.66	.09	.01	.09	.10	.07	.30	.12	.90	.04
14	.14	.06	1.1	.04	.01	.35	.07	.33	.50	.07	.27	.02
15	.07	.07	1.5	2.6	.01	.16	.03	1.7	.50	.06	.24	.01
16	.04	.07	1.5	.27	.01	1.9	.03	1.5	.40	.07	1.5	.01
17	1.1	.07	3.1	.10	.01	6.7	.06	8.3	.50	.06	.72	.02
18	2.9	.06	2.8	.16	.02	1.0	.09	1.7	.30	.06	.21	.25
19	.39	.04	1.6	.10	.03	.27	.09	.84	.60	.04	1.9	1.4
20	.16	.03	.84	.03	.01	.12	.09	5.8	1.0	.04	1.2	1.8
21	.31	.02	.49	.01	.01	.06	.03	1.2	3.0	.04	.31	1.4
22	.39	.02	.35	4.6	.01	.04	.02	.54	1.5	.04	.14	.90
23	.18	.01	.18	.78	.01	4.2	.02	.31	4.0	.04	.09	.39
24	.09	.01	.12	.12	.01	1.4	.07	.21	1.5	.06	.07	.21
25	.03	.01	.10	.09	.01	.54	1.1	.77	1.5	.07	.09	.12
26	.02	.18	.09	.06	.01	.21	.97	1.6	3.0	.06	.06	.10
27	.01	2.3	.80	.04	.01	.10	.39	.78	1.5	.03	.07	.09
28	.01	5.4	2.3	.03	.01	.08	.10	1.0	1.0	.10	.06	1.4
29	.02	.78	2.3	.03	---	.06	3.7	.54	.80	.07	.21	2.4
30	3.9	2.9	1.7	.03	---	.04	1.5	.27	.70	.06	.12	2.2
31	1.1	---	.78	.03	---	.04	---	.14	---	.03	.14	---
TOTAL	38.03	20.77	38.09	14.43	.36	17.51	9.36	35.51	26.55	5.49	13.94	13.72
MEAN	1.23	.69	1.23	.47	.013	.56	.31	1.15	.89	.18	.45	.46
MAX	6.0	5.4	4.4	4.6	.03	6.7	3.7	8.3	4.0	.60	2.7	2.4
MIN	.01	.01	.01	.01	.01	.01	.02	.04	.03	.03	.03	.01
AC-FT	75	41	76	29	.7	35	19	70	53	11	28	27

CAL YR 1974 TOTAL 247.96 MEAN .68 MAX 6.6 MIN .01 AC-FT 492
WTR YR 1975 TOTAL 233.76 MEAN .64 MAX 8.3 MIN .01 AC-FT 464

PEAK DISCHARGE (BASE, 15 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10- 6	/2400	3.20	26	5-17	0400	3.08	24
11-27	2400	2.71	17	5-20	0600	3.26	27
12-11	1900	2.99	21	6-23	/0800	2.65	17
4-29	1200	2.73	18				

/ About.

NOTE.--No gage-height record June 7 to July 10.

16896800 CHUN STREAM, DUBLON ISLAND

LOCATION.--Lat 7°22'36" N., long 151°52'13" E., on right bank at Chun, 0.4 mi (0.6 km) upstream from mouth, and 1.8 mi (2.9 km) west of Penienuk.

DRAINAGE AREA.--0.09 mi² (0.23 km²).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Concrete control since Sept. 10, 1971. Altitude of gage is 50 ft (15 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 0.486 ft³/s (0.0138 m³/s), 352 acre-ft/yr (434,000 m³/yr).

EXTREMES.--Current year: Maximum discharge, 22 ft³/s (0.62 m³/s) May 20 (gage height, 2.81 ft or 0.856 m), from rating curve extended above 1.9 ft³/s (0.054 m³/s); minimum, 0.02 ft³/s (0.001 m³/s) Mar. 13.
Period of record: Maximum discharge, 39 ft³/s (1.10 m³/s) Feb. 18, 1970 (gage height, 3.00 ft or 0.914 m), from rating curve extended above 0.8 ft³/s (0.023 m³/s); minimum, 0.01 ft³/s (<0.001 m³/s) many days February to April 1969, March and April 1973.

REMARKS.--Records poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	1.6	.80	.20	.15	.09	.18	.11	.47	.90	.20	.29
2	1.0	1.6	.85	.61	.13	.08	.15	.06	.42	.70	.20	.26
3	1.0	1.5	1.0	.37	.13	.06	.15	.06	.37	.60	.20	.23
4	.40	1.2	.85	.26	.11	.09	.12	.13	.56	.50	.23	.26
5	.40	1.1	.75	.26	.11	.09	.12	.20	.47	.45	.20	.23
6	3.5	1.2	1.2	.20	.11	.08	.10	.11	1.6	.40	.18	.79
7	2.0	1.3	.85	.25	.09	.09	.10	.09	1.4	.35	.29	.80
8	2.0	1.0	1.5	.26	.11	.08	.10	.13	.90	.30	.23	.42
9	1.0	1.0	1.2	.20	.08	.06	.09	.20	.70	.49	.37	.37
10	1.5	.85	1.1	.18	.08	.06	.09	.09	.65	.52	1.2	.29
11	1.5	.75	1.2	.15	.08	.06	.08	.09	.56	.29	1.0	.26
12	2.2	.70	1.0	.14	.08	.05	.08	.13	.52	.23	.65	.26
13	1.5	.61	.85	.12	.08	.08	.09	.13	.52	.26	.56	.23
14	1.2	.61	.75	.12	.09	.15	.09	.13	.65	.26	.42	.20
15	1.0	.75	.70	.15	.09	.10	.08	.82	1.0	.29	.42	.26
16	.85	.56	.75	.12	.09	.80	.11	.42	.75	.61	.85	.29
17	1.1	.56	.75	.30	.11	1.2	.18	.52	1.2	.42	.52	.33
18	1.4	.52	.61	.15	.20	.40	.15	.42	.80	.26	.42	.56
19	1.0	.47	.52	.13	.18	.30	.15	.79	.70	.23	1.7	.42
20	.80	.56	.47	.11	.13	.20	.18	3.0	.75	.20	.95	.33
21	.70	1.2	.47	.10	.09	.15	.15	.95	2.5	.20	1.0	.33
22	.50	.75	.42	.52	.09	.15	.09	.70	1.5	.18	.85	.29
23	.40	.61	.37	.26	.08	2.5	.09	.56	2.0	.18	.61	.29
24	.60	.52	.33	.20	.06	1.2	.09	.42	1.5	.18	.52	.26
25	.80	.52	.29	.20	.06	.70	.15	1.3	1.5	.18	.47	.23
26	1.2	.75	.26	.18	.09	.40	.08	2.6	3.0	.18	.37	.23
27	.80	1.0	.37	.18	.08	.35	.08	1.2	2.0	.18	.47	.30
28	.65	1.7	.29	.15	.11	.30	.08	.85	1.5	.71	.42	.50
29	.65	1.1	.33	.13	---	.25	.08	.70	1.3	.37	.47	.60
30	1.1	1.4	.23	.15	---	.20	.08	.61	1.0	.42	.42	.50
31	1.0	---	.23	.15	---	.15	---	.56	---	.26	.33	---
TOTAL	34.10	27.99	21.29	6.50	2.89	10.47	3.36	18.08	32.79	11.30	16.72	10.61
MEAN	1.10	.93	.69	.21	.10	.34	.11	.58	1.09	.36	.54	.35
MAX	3.5	1.7	1.5	.61	.20	2.5	.18	3.0	3.0	.90	1.7	.80
MIN	.35	.47	.23	.10	.06	.05	.08	.06	.37	.18	.18	.20
AC-FT	68	56	42	13	5.7	21	6.7	36	65	22	33	21

CAL YR 1974 TOTAL 250.59 MEAN .69 MAX 3.9 MIN .08 AC-FT 497
WTR YR 1975 TOTAL 196.10 MEAN .54 MAX 3.5 MIN .05 AC-FT 389

PEAK DISCHARGE (BASE, 16 CFS).--May 20 (0700) 22 cfs (2.81 ft); June 21 (about 0800) 20 cfs (2.75 ft).

16897200 TUMUNU STREAM, DUBLON ISLAND

LOCATION.--Lat 7°22'42" N., long 151°52'51" E., on left bank at Roro, 0.1 mi (0.2 km) upstream from mouth, and 1.1 mi (1.8 km) west of Penienuk.

DRAINAGE AREA.--0.26 mi^2 (0.67 km^2).

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Concrete control since Aug. 13, 1971. Altitude of gage is 15 ft (4.6 m), from topographic map.

AVERAGE DISCHARGE.--7 years, 1.07 ft^3/s (0.0303 m^3/s), 775 acre-ft/yr (956,000 m^3/yr).

EXTREMES.--Current year: Maximum discharge, 28 ft^3/s (0.79 m^3/s) May 20 (gage height, 2.48 ft or 0.756 m), from rating curve extended above 2.9 ft^3/s (0.082 m^3/s); no flow Mar. 9-13, Apr. 6-11, 13.
Period of record: Maximum discharge, 168 ft^3/s (4.76 m^3/s) Feb. 18, 1970 (gage height, 5.08 ft or 1.548 m), from rating curve extended above 5.4 ft^3/s (0.15 m^3/s); no flow Mar. 9-13, Apr. 6-11, 13, 1975.

REMARKS.--Records fair. Normally no diversion above station. During Mar. 9-13, Apr. 6-13, flow was diverted 500 ft (152 m) upstream for testing of a diversion under construction, causing no flow at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	4.0	2.3	.56	.15	.15	.26	.25	1.0	1.8	.35	.56
2	3.0	4.0	2.0	1.1	.12	.09	.18	.12	.89	1.4	.42	.45
3	3.0	3.8	2.5	.89	.09	.09	.15	.12	.89	1.2	.50	.45
4	.80	3.0	2.4	.67	.09	.09	.09	.21	1.0	1.1	.78	.45
5	.70	2.7	1.9	.62	.09	.12	.07	.50	.89	.94	.72	.45
6	9.0	2.9	2.9	.45	.09	.07	.01	.28	2.7	.84	.62	1.6
7	6.0	3.2	2.4	.56	.12	.07	0	.32	3.4	.78	.84	2.4
8	4.5	2.7	3.5	.62	.12	.04	0	.28	2.1	.72	.84	1.2
9	4.0	2.7	3.8	.42	.09	.01	0	.42	1.7	.84	1.2	1.4
10	3.7	2.1	3.4	.42	.12	.01	0	.25	1.3	1.0	3.4	1.0
11	3.8	1.7	3.2	.42	.12	.01	.02	.21	1.1	.78	3.0	.89
12	5.5	1.5	3.0	.38	.12	.02	.09	.25	.89	.67	1.5	.78
13	3.8	1.2	2.4	.38	.15	.02	.01	.35	.89	.72	1.2	.72
14	3.1	1.1	1.9	.35	.07	.25	.04	.25	1.2	.72	1.5	.62
15	2.6	1.5	1.6	.45	.07	.15	.09	1.3	1.6	.84	1.3	.78
16	2.1	1.1	1.6	.38	.05	1.8	.13	.72	1.4	1.4	1.4	.89
17	2.8	1.2	1.5	.78	.07	3.2	.25	.84	2.4	1.3	.84	.89
18	3.6	.89	1.3	.45	.21	1.0	.25	.72	1.9	.89	.89	1.1
19	2.4	.84	1.1	.38	.15	.62	.32	1.2	1.7	.84	3.1	1.1
20	2.0	.78	.94	.38	.09	.42	.28	5.8	1.8	.67	1.8	.84
21	1.7	1.2	.84	.25	.09	.32	.21	2.6	5.8	.62	1.9	.78
22	1.3	1.0	.78	.67	.12	.32	.21	1.7	3.6	.45	1.6	.72
23	1.1	.84	.72	.45	.09	6.0	.18	1.2	5.1	.42	1.3	.72
24	1.5	.72	.67	.50	.09	3.0	.18	.94	3.6	.32	1.1	.62
25	2.0	.78	.62	.38	.09	1.7	.25	2.8	3.7	.28	1.1	.56
26	3.2	1.5	.62	.32	.07	1.1	.18	5.9	6.7	.28	1.1	.56
27	2.0	1.7	.72	.28	.05	.89	.15	4.0	4.1	.21	1.2	.72
28	1.6	3.0	.72	.21	.15	.72	.12	2.9	3.4	.97	.84	1.2
29	1.6	1.7	.84	.18	---	.62	.12	2.2	2.7	.67	.78	1.5
30	2.8	3.2	.62	.15	---	.45	.12	1.8	2.1	.78	.84	1.0
31	2.6	---	.62	.21	---	.38	---	1.3	---	.67	.67	---
TOTAL	86.50	58.55	53.41	14.26	2.93	23.73	3.96	41.73	71.55	25.12	38.63	26.95
MEAN	2.85	1.95	1.72	.46	.10	.77	.13	1.35	2.39	.81	1.25	.90
MAX	9.0	4.0	3.8	1.1	.21	6.0	.32	5.9	6.7	1.8	3.4	2.4
MIN	.70	.72	.62	.15	.05	.01	0	.12	.89	.21	.35	.45
AC-FT	176	116	106	28	5.8	47	7.9	83	142	50	77	53

CAL YR 1974 TOTAL 645.62 MEAN 1.77 MAX 10 MIN .12 AC-FT 1280
WTR YR 1975 TOTAL 449.32 MEAN 1.23 MAX 9.0 MIN 0 AC-FT 891

PEAK DISCHARGE (BASE, 30 CFS).--No peak above base.

CAROLINE ISLANDS, ISLAND OF PONAPE

16897600 NANEPIL RIVER

LOCATION.--Lat 6°55'11" N., long 158°12'36" E., on left bank 1.4 mi (2.3 km) northeast of Mount Tamatamansakir and 1.4 mi (2.3 km) southeast of Rekisau.

DRAINAGE AREA.--2.93 mi^2 (7.59 km^2).

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map.

AVERAGE DISCHARGE.--5 years, 52.7 ft^3/s (1.492 m^3/s), 38,180 acre-ft/yr (47.1 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 6,720 ft^3/s (190 m^3/s) Oct. 12 (gage height, 7.73 ft or 2.356 m), from rating curve extended above 130 ft^3/s (3.68 m^3/s); minimum, 2.0 ft^3/s (0.057 m^3/s) Feb. 5, 6.
Period of record: Maximum discharge, 8,800 ft^3/s (249 m^3/s) July 11, 1974 (gage height, 8.16 ft or 2.487 m), from rating curve extended above 130 ft^3/s (3.68 m^3/s); minimum, 1.6 ft^3/s (0.045 m^3/s) Nov. 17-23, 1972, Feb. 6, Oct. 21, 22, 1973.

REMARKS.--Records good except those above 200 ft^3/s (5.66 m^3/s), which are poor. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	79	42	211	5.0	11	7.2	90	13	15	21	6.3
2	73	63	56	77	4.7	266	5.2	57	70	11	13	4.9
3	17	21	21	43	2.8	49	6.8	20	26	67	30	142
4	22	14	20	70	2.3	28	5.5	12	18	75	40	31
5	168	13	44	50	2.2	14	4.8	96	64	198	54	53
6	106	12	69	25	3.1	11	4.0	187	36	21	30	20
7	34	12	31	72	3.1	25	115	47	55	17	20	11
8	120	115	38	29	10	19	27	90	71	43	22	9.0
9	38	51	39	16	3.9	18	11	45	28	27	71	7.7
10	35	14	324	13	2.6	11	11	99	15	13	50	78
11	27	10	128	9.3	6.2	28	31	35	10	11	34	68
12	331	164	61	16	6.2	39	16	20	94	16	135	38
13	188	144	121	13	4.7	381	9.3	16	70	120	28	19
14	36	55	150	9.9	12	58	50	21	194	42	42	34
15	20	58	134	9.8	11	191	250	116	74	100	69	45
16	16	32	57	8.2	5.5	160	31	79	27	63	140	14
17	154	28	39	6.6	7.6	51	44	23	16	120	26	83
18	23	19	26	5.7	15	40	22	39	168	137	20	93
19	14	14	27	5.2	9.5	17	15	16	37	36	21	21
20	94	72	17	12	8.6	13	21	102	34	38	13	13
21	37	36	21	12	7.1	15	12	79	104	21	38	12
22	33	20	22	11	4.7	55	10	28	63	48	14	61
23	185	15	28	7.1	3.6	35	25	15	165	16	11	30
24	173	113	37	5.0	3.9	14	36	11	54	29	9.3	127
25	98	54	20	4.1	283	9.8	395	23	32	20	8.2	52
26	32	30	42	3.6	30	7.8	56	148	41	17	7.0	57
27	18	50	36	3.3	69	6.8	69	122	65	14	5.5	36
28	15	186	17	3.3	19	10	33	45	48	12	5.2	42
29	21	39	12	3.3	---	7.5	33	20	23	46	8.5	36
30	32	97	11	3.6	---	5.5	34	40	23	32	27	37
31	47	---	11	10	---	10	---	29	---	19	9.8	---
TOTAL	2215.1	1630	1701	768.0	546.3	1606.4	1389.8	1770	1738	1446	1022.5	1280.9
MEAN	71.5	54.3	54.9	24.8	19.5	51.8	46.3	57.1	57.9	46.6	33.0	42.7
MAX	331	186	324	211	283	381	395	187	194	198	140	142
MIN	8.1	10	11	3.3	2.2	5.5	4.0	11	10	11	5.2	4.9
AC-FT	4390	3230	3370	1520	1080	3190	2760	3510	3450	2870	2030	2540

CAL YR 1974 TOTAL 20488.8 MEAN 56.1 MAX 400 MIN 2.8 AC-FT 40640
WTR YR 1975 TOTAL 17114.0 MEAN 46.9 MAX 395 MIN 2.2 AC-FT 33950

PEAK DISCHARGE (BASE, 4,000 CFS).--Oct. 12 (1930) 6,720 cfs (7.73 ft).

16897900 LUI RIVER

LOCATION.--Lat 6°55'36" N., long 158°12'55" E., on right bank 300 ft (91 m) upstream from right-bank tributary and 1.3 mi (2.1 km) southeast of Rekisau.

DRAINAGE AREA.--0.47 mi² (1.22 km²).

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

AVERAGE DISCHARGE.--5 years, 5.40 ft³/s (0.153 m³/s), 3,910 acre-ft/yr (4.82 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 422 ft³/s (12.0 m³/s) Nov. 15 (gage height, 3.97 ft or 1.210 m), from rating curve extended above 37 ft³/s (1.05 m³/s); minimum, 0.18 ft³/s (0.005 m³/s) Jan. 30, Feb. 10-22.
Period of record: Maximum discharge, 970 ft³/s (27.5 m³/s) May 4, 1972 (gage height, 5.64 ft or 1.719 m), from rating curve extended above 37 ft³/s (1.05 m³/s); minimum, 0.13 ft³/s (0.004 m³/s) Feb. 2-4, 1973.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	8.0	4.4	15	.29	.47	.35	7.9	1.7	2.4	3.6	.88
2	2.8	7.0	4.0	8.0	.35	27	.35	6.1	7.2	2.0	1.9	.66
3	1.3	2.0	2.3	6.0	.29	5.3	.53	2.4	4.0	9.8	2.6	10
4	1.7	1.6	2.5	5.0	.29	1.9	.35	1.4	2.5	6.4	2.6	4.0
5	13	1.3	3.6	4.0	.23	.80	.23	6.9	6.1	27	5.0	6.5
6	12	1.7	7.6	3.0	.23	.53	.18	23	4.8	3.4	3.8	3.1
7	4.6	1.7	2.8	2.5	.23	.47	4.0	6.1	7.0	2.4	3.4	1.8
8	13	8.1	3.8	2.2	.23	1.0	.80	8.4	9.0	3.1	3.2	1.2
9	6.1	5.9	3.8	1.4	.23	1.1	.41	5.3	3.6	3.0	8.7	1.1
10	5.9	1.9	32	1.1	.18	.60	.47	11	2.0	1.7	7.3	4.7
11	3.0	1.2	15	.80	.18	1.5	1.9	5.0	1.3	2.1	3.6	7.5
12	24	19	5.7	.80	.18	1.3	1.5	2.8	10	2.3	8.8	2.8
13	15	18	10	.73	.18	11	.66	2.0	7.8	24	3.6	1.8
14	4.4	7.3	10	.73	.18	3.6	4.7	3.2	14	5.0	5.1	2.1
15	2.4	23	11	.60	.18	7.6	16	14	7.6	9.0	5.6	3.2
16	2.3	6.4	5.7	.53	.18	4.6	3.6	8.4	6.4	8.6	11	1.3
17	9.0	4.8	4.4	.47	.18	3.6	3.4	3.4	3.8	15	3.7	5.7
18	3.4	3.6	3.1	.41	.18	2.8	2.3	4.0	18	17	2.6	10
19	1.9	2.1	3.4	.41	.18	1.8	1.3	2.1	5.5	4.8	2.4	2.8
20	2.6	4.3	2.1	.47	.29	1.3	2.1	7.9	5.5	5.9	1.7	1.8
21	3.1	5.4	3.0	.53	.18	1.8	1.0	10	11	3.4	3.6	1.8
22	1.9	2.6	1.8	.41	.23	4.6	.88	3.8	9.3	3.8	1.7	11
23	19	1.8	1.8	.35	.23	3.6	1.7	2.1	15	2.3	1.2	5.5
24	12	8.3	2.8	.29	.35	1.4	8.6	1.8	7.8	3.0	1.0	2.6
25	9.8	3.2	1.7	.23	9.1	.88	46	3.6	5.7	2.5	1.2	6.1
26	3.7	2.3	5.3	.23	1.9	.60	5.9	5.6	8.6	2.5	.96	4.8
27	2.3	3.1	4.0	.23	6.1	.53	2.8	9.8	7.0	1.8	.66	4.2
28	1.5	35	1.7	.23	1.3	.96	1.8	4.4	5.7	1.5	.60	6.4
29	2.4	4.8	1.1	.23	---	.66	5.5	2.6	3.1	1.3	.88	6.4
30	5.9	7.3	1.3	.18	---	.47	3.8	3.8	2.6	1.9	4.0	5.0
31	4.0	---	1.9	.53	---	.60	---	3.2	---	1.5	1.5	---
TOTAL	194.96	202.7	163.6	57.59	23.85	94.37	123.11	182.0	203.6	180.4	107.50	126.74
MEAN	6.29	6.76	5.28	1.86	.85	3.04	4.10	5.87	6.79	5.82	3.47	4.22
MAX	24	35	32	15	9.1	27	46	23	18	27	11	11
MIN	.96	1.2	1.1	.18	.18	.47	.18	1.4	1.3	1.3	.60	.66
AC-FT	387	402	325	114	47	187	244	361	404	358	213	251

CAL YR 1974 TOTAL 2223.89 MEAN 6.09 MAX 58 MIN .41 AC-FT 4410
WTR YR 1975 TOTAL 1660.42 MEAN 4.55 MAX 46 MIN .18 AC-FT 3290

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

16898200 LUI RIVER AT MOUTH

LOCATION.--Lat 6°57'07" N., long 158°13'16" E., on right bank 0.4 mi (0.6 km) upstream from mouth and 1.3 mi (2.1 km) west of Tolenot Peak.

DRAINAGE AREA.--2.06 mi^2 (5.34 km^2).

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (12 m), from topographic map.

AVERAGE DISCHARGE.--5 years, 27.9 ft^3/s (0.790 m^3/s), 20,210 acre-ft/yr (24.9 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,760 ft^3/s (49.8 m^3/s) Nov. 15 (gage height, 4.60 ft or 1.402 m), from rating curve extended above 92 ft^3/s (2.61 m^3/s); minimum, 0.38 ft^3/s (0.011 m^3/s) Feb. 24.
Period of record: Maximum discharge, 7,440 ft^3/s (211 m^3/s) July 17, 1971 (gage height, 7.92 ft or 2.414 m), from rating curve extended above 92 ft^3/s (2.61 m^3/s); minimum, 0.26 ft^3/s (0.007 m^3/s) Jan. 20, 1973.

REMARKS.--Records good except those above 100 ft^3/s (2.83 m^3/s), which are fair. During dry periods, water is diverted from dam, 500 ft (152 m) upstream, to Tawannu River pump-station pool for domestic use in Kolonia. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	40	25	73	2.5	4.9	3.2	48	8.2	15	6.8	5.0
2	8.6	39	21	44	2.3	123	3.6	38	24	14	6.1	4.3
3	6.3	19	14	29	2.0	22	2.3	16	16	30	8.7	26
4	6.5	13	13	19	1.8	9.4	2.3	11	11	67	8.7	14
5	39	11	17	16	1.7	6.4	2.3	25	22	120	20	22
6	44	13	28	12	2.7	6.3	1.5	145	18	20	16	13
7	19	12	15	20	1.8	5.2	50	34	23	14	15	9.1
8	60	26	21	12	1.8	4.9	14	36	34	18	13	7.3
9	27	29	18	8.8	1.6	5.4	8.0	28	16	13	34	7.1
10	30	12	189	7.4	1.6	4.3	6.1	44	11	9.1	28	14
11	17	9.8	77	6.5	1.7	5.0	6.8	26	8.9	8.4	15	16
12	71	110	32	6.2	1.3	5.3	6.6	17	47	10	29	9.1
13	71	160	36	5.6	1.5	200	4.7	12	34	135	14	7.3
14	24	49	39	5.5	1.4	29	15	14	60	22	20	7.0
15	15	144	51	4.9	1.2	82	77	46	38	29	20	9.1
16	12	43	28	4.5	.86	58	18	41	25	45	40	6.3
17	35	25	23	4.0	.86	20	15	18	16	84	16	13
18	18	20	17	3.8	1.9	14	10	17	77	59	13	30
19	12	14	16	3.4	1.0	9.4	8.0	11	30	22	10	13
20	19	19	12	3.4	1.0	11	10	23	23	25	8.7	9.6
21	18	28	12	3.5	.62	11	6.7	42	40	16	12	8.9
22	13	16	9.0	3.2	.50	16	5.9	18	34	17	8.7	50
23	94	12	8.6	2.9	.46	15	6.4	12	58	12	7.1	24
24	46	28	10	2.6	.58	8.2	30	9.6	44	12	6.7	15
25	49	14	7.8	2.4	25	6.3	257	12	31	9.6	6.3	22
26	24	11	15	2.2	8.6	5.3	30	16	44	8.7	5.9	20
27	15	13	12	2.0	14	4.6	15	33	44	8.0	5.0	17
28	12	220	7.6	2.0	5.5	4.9	10	16	31	7.3	4.9	26
29	14	29	6.2	1.9	---	4.3	23	11	18	7.0	5.3	29
30	22	56	6.3	1.8	---	3.5	22	13	18	6.3	10	24
31	22	---	6.1	2.9	---	4.3	---	13	---	6.4	6.3	---
TOTAL	869.4	1234.8	796.6	316.4	87.78	708.9	670.4	845.6	904.1	869.8	420.2	478.1
MEAN	28.0	41.2	25.7	10.2	3.14	22.9	22.3	27.3	30.1	28.1	13.6	15.9
MAX	94	220	189	73	25	200	257	145	77	135	40	50
MIN	6.0	9.8	6.1	1.8	.46	3.5	1.5	9.6	8.2	6.3	4.9	4.3
AC-FT	1720	2450	1580	628	174	1410	1330	1680	1790	1730	833	948

CAL YR 1974	TOTAL	10952.70	MEAN 30.0	MAX 360	MIN 4.0	AC-FT	21720
WTR YR 1975	TOTAL	8202.08	MEAN 22.5	MAX 257	MIN .46	AC-FT	16270

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

16898300 TAWÁNNU RIVER

LOCATION.--Lat 6°56'57" N., long 158°12'50" E., on left bank 1.3 mi (2.1 km) northeast of Rekisau and 1.8 mi (2.9 km) west of Tolenot Peak.

DRAINAGE AREA.--1.00 mi^2 (2.59 km^2).

PERIOD OF RECORD.--March 1970 to December 1974 (discontinued as a continuous-record station; converted to a partial-record station).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 110 ft (34 m), from topographic map.

EXTREMES.--Maximum discharge during period, 336 ft^3/s (9.52 m^3/s) Nov. 15 (gage height, 2.92 ft or 0.890 m), from rating curve extended above 76 ft^3/s (2.15 m^3/s); minimum, about 1.0 ft^3/s (0.028 m^3/s) Oct. 3.
Period of record: Maximum discharge, 1,550 ft^3/s (43.9 m^3/s) July 17, 1971 (gage height, 5.58 ft or 1.701 m), from rating curve extended above 76 ft^3/s (2.15 m^3/s); no flow for many days during January and February 1973.

REMARKS.--Records fair. During dry periods, water from Lui River is pumped to the gage pool to augment the water supply and up to 360,000 gallons per day (1,368 m^3/day) is then diverted 100 ft (30 m) above station for domestic use in Kolonia. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	14	13									
2	1.3	14	10				/.28		/4.9			
3	1.1	6.7	7.5									
4	1.2	4.0	6.3		/.10	/3.7						
5	8.2	3.5	7.1									
6	16	4.0	9.9									
7	4.7	3.3	6.7									
8	17	7.9	7.9									
9	6.7	6.3	8.2									
10	9.9	3.5	66									
11	4.7	2.8	29									
12	12	31	14					/3.5				
13	31	62	15									
14	7.9	13	14									
15	5.2	42	24				/2.5					
16	5.2	14	11									
17	10	9.0	7.9						/5.8			
18	6.0	6.0	7.5		/.77	/5.8				/14		
19	3.8	4.5	6.0									
20	3.8	6.7	4.7									
21	4.2	19	4.5									
22	3.3	7.1	4.2	/.67								
23	39	4.5	4.5									
24	11	6.7	4.2									
25	14	4.7	3.3									
26	6.7	4.2	4.7									
27	4.7	4.2	4.2									
28	3.8	74	3.0									
29	4.0	14	2.7				/5.8					
30	5.0	20	2.8						/10			
31	5.2	---	6.4									
TOTAL	257.52	416.6	320.2									
MEAN	8.31	13.9	10.3									
MAX	39	74	66									
MIN	.92	2.8	2.7									
AC-FT	511	826	635									

PEAK DISCHARGE (BASE, 600 CFS).--No peak above base.

/ Result of discharge measurement.

16898600 LUPWOR RIVER

LOCATION.--Lat 6°54'15" N., long 158°09'45" E., on left bank about 300 ft (91 m) upstream from 50-ft (15-m) waterfall, 1.8 mi (2.9 km) above mouth, and 2.1 mi (3.4 km) west of Mount Tamatanansakir.

DRAINAGE AREA.--1.12 mi^2 (2.90 km^2).

PERIOD OF RECORD.--September 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 100 ft (30 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 853 ft^3/s (24.2 m^3/s) Oct. 12 (gage height, 5.49 ft or 1.673 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); minimum, 0.45 ft^3/s (0.013 m^3/s) Feb. 10, 22-24.
Period of record: Maximum discharge, 1,770 ft^3/s (50.1 m^3/s) July 11, 1974 (gage height, 6.53 ft or 1.990 m), from rating curve extended above 15 ft^3/s (0.42 m^3/s); minimum, 0.40 ft^3/s (0.011 m^3/s) Feb. 18, 19, 1973.

REMARKS.--Records good except those above 30 ft^3/s (0.85 m^3/s), which are fair. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	7.4	6.9	23	.77	1.8	1.3	12	4.4	4.5	5.3	1.6
2	6.3	7.8	5.9	10	.77	30	1.1	10	8.5	3.6	4.2	1.4
3	5.1	4.6	4.5	8.0	.65	8.2	1.1	5.7	5.5	6.5	4.3	12
4	7.1	3.7	4.4	7.8	.65	4.9	1.0	4.2	4.5	23	4.3	5.6
5	17	3.2	5.3	7.6	.65	3.1	.89	11	8.4	50	5.6	9.3
6	16	2.6	10	5.9	.65	2.3	.82	26	6.6	7.1	4.9	5.2
7	8.0	2.4	5.9	12	.57	2.3	5.7	9.3	9.9	5.7	4.3	4.8
8	13	8.2	7.3	6.5	.77	2.7	2.9	13	10	6.7	4.3	4.0
9	8.0	6.4	6.7	4.8	.57	2.7	1.6	9.4	6.5	5.5	8.1	2.9
10	8.3	3.1	60	3.8	.53	1.9	1.6	13	4.9	3.9	6.1	6.6
11	6.7	2.6	23	3.1	1.3	3.8	3.7	8.2	3.9	3.4	5.6	11
12	46	20	9.5	3.1	.86	4.0	2.3	6.1	13	3.5	22	5.4
13	29	20	13	2.6	.65	39	1.5	5.1	11	27	7.3	5.1
14	7.3	12	15	2.3	.86	9.5	4.3	4.7	24	15	6.3	5.0
15	5.5	8.8	20	2.1	.86	18	24	17	12	21	9.6	6.1
16	4.7	7.0	10	1.8	.61	21	6.0	11	7.2	11	17	3.6
17	26	5.0	7.8	1.6	.61	9.6	6.3	5.9	5.5	14	7.1	7.0
18	5.7	4.0	6.2	1.5	.77	7.5	4.5	7.4	22	9.5	5.9	13
19	4.2	3.0	5.9	1.3	.69	5.1	3.6	4.7	8.4	9.2	5.4	5.4
20	43	7.0	4.5	2.5	.65	3.7	4.3	13	7.2	10	4.0	4.0
21	7.8	6.0	4.4	1.8	.57	4.0	2.8	12	15	6.7	5.3	3.4
22	5.3	4.0	3.4	1.4	.49	6.1	2.3	6.9	13	8.1	3.6	8.0
23	25	3.0	3.7	1.2	.49	5.0	3.6	5.2	24	5.2	3.1	6.1
24	9.0	12	4.0	1.1	.69	3.1	7.9	4.1	10	5.5	2.6	4.0
25	8.4	7.0	3.0	1.0	43	2.4	55	4.9	7.5	4.8	2.2	6.1
26	5.5	5.0	5.9	.95	4.8	2.1	9.3	24	8.0	4.3	2.0	6.0
27	4.3	6.0	5.6	.90	7.3	1.8	19	19	9.6	3.8	1.8	5.5
28	3.9	25	3.6	.90	3.0	2.1	8.2	9.0	8.0	3.2	1.6	6.4
29	4.0	7.0	2.8	.81	---	1.7	6.5	6.0	5.7	18	1.9	6.4
30	5.2	9.0	2.3	.73	---	1.4	6.2	7.6	5.5	8.0	4.0	6.1
31	6.2	---	2.3	1.1	---	1.7	---	6.6	---	5.6	2.1	---
TOTAL	354.5	222.8	272.8	123.19	74.78	212.5	199.31	302.0	289.7	313.3	171.8	177.0
MEAN	11.4	7.43	8.80	3.97	2.67	6.85	6.64	9.74	9.66	10.1	5.54	5.90
MAX	46	25	60	23	43	39	55	26	24	50	22	13
MIN	3.0	2.4	2.3	.73	.49	1.4	.82	4.1	3.9	3.2	1.6	1.4
AC-FT	703	442	541	244	148	421	395	599	575	621	341	351

CAL YR 1974 TOTAL 3219.00 MEAN 8.82 MAX 198 MIN 1.4 AC-FT 6380
WTR YR 1975 TOTAL 2713.68 MEAN 7.43 MAX 60 MIN .49 AC-FT 5380

PEAK DISCHARGE (BASE, 900 CFS).--No peak above base.

16899500 MUTUNTE RIVER

LOCATION.--Lat 5°22'25" N., long 163°00'24" E., on left bank at dam, 0.3 mi (0.5 km) upstream from mouth, and 1.1 mi (1.8 km) northwest of Mount Buache.

DRAINAGE AREA.--0.60 mi² (1.55 km²).

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 46 ft (14.0 m) from stadia survey.

EXTREMES.--Current year: Maximum discharge, 380 ft³/s (10.8 m³/s) May 6 (gage height, 2.30 ft or 0.701 m), from rating curve extended above 140 ft³/s (3.96 m³/s); minimum, 0.96 ft³/s (0.027 m³/s) Aug. 24, during short regulation of flow.
Period of record: Maximum discharge, 1,290 ft³/s (26.5 m³/s) Sept. 11, 1972 (gage height, 2.87 ft or 0.875 m), from rating curve extended above 140 ft³/s (3.96 m³/s); minimum, 0.96 ft³/s (0.027 m³/s) Aug. 24, 1975, during short regulation of flow.

REMARKS.--Records good. Water is diverted from the gage pool through a 3-in (7.6-cm) pipe for domestic use in Tafunsak. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.5	8.7	7.6	2.8	28	2.6	2.9	2.7	3.3	3.3	3.0
2	12	2.3	4.0	8.2	2.8	7.6	2.6	4.1	3.5	2.9	12	2.8
3	3.8	2.3	2.9	4.5	2.6	4.5	2.6	3.2	3.0	2.6	11	2.7
4	9.7	2.8	2.9	3.8	2.6	3.8	2.6	2.7	2.7	31	17	4.1
5	6.0	9.7	2.9	3.6	2.8	3.4	2.5	4.9	12	6.8	20	24
6	3.8	3.0	3.3	5.5	2.6	3.2	3.0	50	5.1	4.3	6.5	4.3
7	7.5	3.0	21	7.9	2.6	3.0	3.5	6.9	6.0	4.7	5.3	3.2
8	16	2.5	8.3	3.8	2.6	2.8	2.7	11	6.6	3.2	4.8	2.9
9	3.9	4.7	23	3.2	2.6	2.6	2.5	3.9	9.7	3.0	7.3	2.8
10	14	2.8	14	2.8	2.6	2.8	2.7	3.9	14	2.8	3.9	3.9
11	4.3	2.5	18	2.8	2.8	4.3	12	3.2	4.4	2.6	4.0	3.5
12	3.3	3.8	4.1	2.8	9.2	4.7	5.2	2.9	6.4	2.9	6.1	3.0
13	2.9	3.6	3.2	2.6	27	9.9	3.1	25	7.8	32	4.2	3.1
14	2.7	2.8	3.2	7.4	16	18	4.1	4.3	14	3.8	4.1	2.7
15	2.9	2.6	2.8	25	4.7	11	14	5.5	10	4.0	16	2.5
16	6.0	2.5	19	14	14	5.3	6.0	5.6	4.1	44	5.4	2.5
17	3.3	3.0	49	5.8	4.9	4.1	5.5	5.8	5.0	11	3.7	2.5
18	2.7	2.5	8.8	6.4	3.6	25	4.2	6.0	16	4.1	3.2	2.4
19	3.2	2.3	16	3.8	3.8	5.5	4.2	3.5	8.4	3.4	3.7	3.3
20	2.7	2.3	8.2	9.2	6.4	4.3	5.0	3.0	3.9	4.6	7.9	4.1
21	2.5	2.3	13	4.3	18	6.4	3.6	3.2	3.3	14	3.5	6.7
22	2.4	9.5	8.5	3.4	4.1	6.9	5.0	2.8	3.4	6.5	3.0	3.2
23	2.6	9.9	31	3.2	3.2	4.1	4.6	2.6	9.7	4.5	3.4	2.6
24	9.6	4.7	7.8	3.0	6.6	3.6	10	2.6	12	3.9	2.8	2.6
25	3.0	3.9	35	2.8	4.1	3.2	5.5	2.5	6.2	3.6	2.7	2.5
26	2.6	3.0	19	3.0	3.4	3.0	16	3.6	4.3	4.3	2.6	2.4
27	2.5	3.6	6.1	3.0	4.1	3.8	4.4	10	3.7	4.9	2.6	3.5
28	3.6	6.2	4.4	3.0	42	3.2	3.2	3.5	3.9	5.1	8.5	2.9
29	2.8	3.2	3.7	3.0	---	3.2	5.4	2.8	3.6	4.8	21	2.7
30	2.5	17	3.3	2.8	---	3.2	3.3	3.8	2.9	4.4	7.3	2.7
31	2.5	---	3.1	2.8	---	2.8	---	3.1	---	3.3	3.4	---
TOTAL	150.9	126.8	358.2	165.0	204.5	197.4	151.6	198.8	198.3	236.3	210.2	115.1
MEAN	4.87	4.23	11.6	5.32	7.30	6.37	5.05	6.41	6.61	7.62	6.78	3.84
MAX	16	17	49	25	42	28	16	50	16	44	21	24
MIN	2.4	2.3	2.8	2.6	2.6	2.8	2.5	2.5	2.7	2.6	2.6	2.4
AC-FT	299	252	710	327	406	392	301	394	393	469	417	228

CAL YR 1974 TOTAL 2149.5 MEAN 5.89 MAX 49 MIN 2.2 AC-FT 4260
WTR YR 1975 TOTAL 2313.1 MEAN 6.34 MAX 50 MIN 2.3 AC-FT 4590

PEAK DISCHARGE (BASE, 600 CFS).--No peak above base.

CAROLINE ISLANDS, ISLAND OF KUSAIE

16899600 OKAT RIVER

LOCATION.--Lat 5°20'32" N., long 162°59'30" E., on left bank 1.6 mi (2.6 km) upstream from mouth and 1.9 mi (3.1 km) northwest of Mount Crozer.

DRAINAGE AREA.--1.60 mi^2 (4.14 km^2).

PERIOD OF RECORD.--July 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (3.0 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 560 ft^3/s (15.9 m^3/s) Dec. 7 (gage height, 6.37 ft or 1.942 m), from rating curve extended above 230 ft^3/s (6.51 m^3/s); minimum, 4.0 ft^3/s (0.113 m^3/s) Nov. 20-22.
Period of record: Maximum discharge, 775 ft^3/s (21.9 m^3/s) May 22, 1972 (gage height, 7.70 ft or 2.347 m), from rating curve extended above 230 ft^3/s (6.51 m^3/s); minimum, 1.7 ft^3/s (0.048 m^3/s) Feb. 15, 20, 21, 1973.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS) .--WRD Hawaii 1974: 1971-72(P), 1973(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	7.8	19	28	6.5	60	7.2	11	9.8	17	10	9.5
2	43	5.7	9.5	20	6.2	30	7.0	22	9.5	9.2	40	8.7
3	19	5.2	6.5	13	5.9	20	6.5	11	8.4	9.2	45	7.8
4	42	6.2	5.4	12	5.4	15	7.0	9.2	7.2	44	60	18
5	25	24	5.4	12	6.3	13	6.0	9.2	17	16	60	73
6	16	7.5	6.5	17	5.4	11	12	77	13	10	35	16
7	30	10	61	22	5.4	9.5	15	24	22	14	25	12
8	34	6.5	16	14	5.2	8.4	7.0	25	23	9.2	20	10
9	16	7.0	66	11	4.9	8.4	4.7	15	39	8.1	35	10
10	68	5.7	46	9.5	4.6	7.2	4.9	14	52	7.8	15	23
11	23	5.2	52	9.2	5.4	9.5	39	11	20	7.5	17	16
12	16	9.0	20	8.7	39	10	15	11	21	7.5	20	13
13	14	12	15	8.4	70	20	8.4	66	25	68	12	12
14	12	12	13	35	41	33	9.2	18	54	11	11	9.2
15	12	6.7	11	82	20	18	42	32	34	11	17	7.5
16	23	5.7	32	48	69	14	16	22	19	123	12	7.5
17	12	5.2	145	25	9.0	13	19	27	32	33	9.8	7.2
18	10	4.7	50	19	16	59	13	17	49	18	9.5	6.2
19	10	4.9	55	16	14	19	12	14	26	14	13	12
20	9.5	4.2	30	32	21	14	12	12	17	15	28	13
21	8.4	4.2	42	16	39	22	9.2	13	15	42	10	15
22	7.5	10	33	13	15	14	13	11	14	16	23	8.4
23	7.0	11	89	12	12	11	14	9.2	35	13	12	6.7
24	23	16	48	9.8	27	11	18	9.0	40	14	11	5.9
25	7.5	11	121	9.0	19	9.0	14	7.5	19	15	9.0	5.2
26	7.0	6.5	84	10	12	7.8	60	12	20	13	8.1	4.9
27	6.5	5.9	38	8.1	11	19	20	34	14	15	7.8	11
28	6.2	5.7	25	7.8	88	10	15	13	14	14	27	6.7
29	6.2	4.9	19	7.5	---	11	20	9.8	11	11	41	5.4
30	9.3	12	15	7.2	---	9.0	13	23	9.5	11	18	5.2
31	13	---	13	7.0	---	8.7	---	12	---	10	10	---
TOTAL	553.1	242.4	1191.3	549.2	583.2	524.5	459.1	600.9	689.4	626.5	671.2	366.0
MEAN	17.8	8.08	38.4	17.7	20.8	16.9	15.3	19.4	23.0	20.2	21.7	12.2
MAX	68	24	145	82	88	60	60	77	54	123	60	73
MIN	6.2	4.2	5.4	7.0	4.6	7.2	4.7	7.5	7.2	7.5	7.8	4.9
AC-FT	1100	481	2360	1090	1160	1040	911	1190	1370	1240	1330	726

CAL YR 1974 TOTAL 7144.1 MEAN 19.6 MAX 145 MIN 3.5 AC-FT 14170
WTR YR 1975 TOTAL 7056.8 MEAN 19.3 MAX 145 MIN 4.2 AC-FT 14000

PEAK DISCHARGE (BASE, 600 CFS).--No peak above base.

16899620 MELO RIVER

LOCATION.--Lat 5°21'06" N., long 162°59'29" E., on left bank 0.35 mi (0.56 km) upstream from mouth and 1.7 mi (2.7 km) southwest of Mount Buache.

DRAINAGE AREA.--0.48 mi^2 (1.24 km^2).

PERIOD OF RECORD.--Current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

EXTREMES.--Maximum discharge, 236 ft^3/s (6.68 m^3/s) July 21 (gage height, 3.57 ft or 1.088 m), from rating curve extended above 12 ft^3/s (0.34 m^3/s); minimum, 1.5 ft^3/s (0.042 m^3/s) Nov. 20.

REMARKS.--Records fair. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

Discharge measurement made prior to beginning of continuous discharge record

Sept. 24, 1974..... 11.2 cfs

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	2.4	6.5	9.5	2.8	26	3.5	5.1	4.0	7.9	4.7	4.0
2	11	2.0	3.8	10	2.8	13	3.2	10	4.7	5.1	13	3.5
3	5.3	1.9	2.7	5.3	2.5	8.6	2.8	5.1	4.0	4.2	15	3.3
4	13	2.5	2.5	5.3	2.2	6.5	3.2	4.2	3.6	20	22	4.3
5	8.1	10	2.5	5.1	2.5	5.6	2.5	5.3	9.9	9.7	21	27
6	6.0	3.0	3.2	8.9	2.4	4.7	5.9	30	7.2	6.8	12	6.8
7	10	3.0	14	10	2.2	4.2	6.8	11	7.8	8.7	9.9	5.1
8	18	2.2	8.3	5.8	2.0	3.6	3.5	12	9.5	5.3	8.1	4.2
9	7.0	3.2	21	4.7	1.9	3.5	3.0	7.3	13	4.7	12	4.2
10	14	2.2	16	3.8	1.9	3.2	3.6	7.6	17	4.5	6.3	7.3
11	7.6	2.0	16	4.0	2.4	4.7	14	5.6	5.8	4.2	6.8	5.1
12	5.8	3.2	7.3	3.6	13	5.8	7.8	5.4	11	4.7	7.8	5.1
13	4.9	3.6	5.6	3.5	22	11	5.3	25	10	26	5.1	4.5
14	4.5	2.5	5.1	11	15	14	6.5	7.3	15	6.5	4.5	4.4
15	4.5	2.0	4.5	25	8.5	10	18	15	12	6.8	14	3.2
16	7.7	2.0	15	12	20	7.6	9.8	8.6	7.8	30	6.3	3.0
17	4.0	2.4	40	11	9.8	6.9	9.3	10	11	13	4.7	2.8
18	3.3	1.9	16	8.3	6.5	22	7.3	7.0	19	8.1	4.0	2.5
19	3.5	1.8	20	7.3	7.5	9.2	7.8	5.3	12	6.8	5.3	4.1
20	3.2	1.7	13	12	8.6	7.6	8.4	4.7	8.1	7.6	10	5.7
21	2.8	1.9	15	7.0	15	10	6.3	5.3	7.3	18	4.2	8.2
22	2.5	7.7	11	5.8	6.8	8.5	8.1	4.7	6.3	8.1	5.7	3.8
23	3.0	7.2	29	6.0	5.3	6.5	7.6	4.0	14	6.5	4.9	3.0
24	8.1	6.6	16	4.7	10	6.0	11	4.0	14	6.8	3.6	2.5
25	3.0	4.2	35	4.5	7.3	4.9	7.8	3.6	9.5	7.1	3.2	2.2
26	2.7	2.7	26	4.5	5.1	4.0	25	6.8	9.3	6.5	2.8	2.2
27	2.5	2.7	13	3.6	5.6	7.0	8.0	13	6.8	7.3	2.7	4.0
28	2.7	4.2	8.9	3.5	32	4.7	6.5	6.0	7.0	6.8	9.4	3.0
29	2.5	2.5	7.0	3.5	---	4.7	8.0	4.5	5.8	5.8	17	2.7
30	2.5	7.6	5.8	3.3	---	4.0	6.0	7.5	4.9	6.0	8.0	3.0
31	2.8	---	4.9	3.2	---	4.2	---	4.5	---	4.5	4.7	---
TOTAL	181.4	102.8	394.6	215.7	223.6	242.2	226.5	255.4	277.3	274.0	258.7	144.7
MEAN	5.85	3.43	12.7	6.96	7.99	7.81	7.55	8.24	9.24	8.84	8.35	4.82
MAX	18	10	40	25	32	26	25	30	19	30	22	27
MIN	2.5	1.7	2.5	3.2	1.9	3.2	2.5	3.6	3.6	4.2	2.7	2.2
AC-FT	360	204	783	428	444	480	449	507	550	543	513	287

WTR YR 1975 TOTAL 2796.9 MEAN 7.66 MAX 40 MIN 1.7 AC-FT 5550

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
7-21	1900	3.57	236	8-29	1930	3.54	231
8- 4	2300	3.44	216				

16899750 MALEM RIVER

LOCATION.--Lat 5°18'21" N., long 163°01'46" E., on left bank 1.2 mi (1.9 km) upstream from mouth and 1.8 mi (2.9 km) southeast of Mount Crozer.

DRAINAGE AREA.--0.48 mi^2 (1.24 km^2).

PERIOD OF RECORD.--July 1971 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 95 ft (29 m) from stadia survey.

EXTREMES.--Current year: Maximum discharge, 820 ft^3/s (23.2 m^3/s) Dec. 7 (gage height, 5.40 ft or 1.646 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s); minimum, 0.14 ft^3/s (0.004 m^3/s) Nov. 20, during flushing at dam upstream.
Period of record: Maximum discharge, 980 ft^3/s (27.8 m^3/s) July 6, 1971 (gage height, 5.60 ft or 1.707 m), from rating curve extended above 110 ft^3/s (3.12 m^3/s); minimum, 0.14 ft^3/s (0.004 m^3/s) Nov. 20, 1974, during flushing at dam upstream.

REMARKS.--Records good. Part of the time, water is diverted through 6-in. (0.15-cm) pipe from dam above station for domestic use in village of Malem. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.0	14	16	2.1	28	2.2	4.0	3.2	22	3.0	3.3
2	25	1.8	5.6	10	2.0	11	2.2	10	3.0	7.6	6.4	2.9
3	9.7	1.8	3.0	6.7	1.9	7.0	2.1	5.1	2.9	4.9	9.2	2.6
4	11	1.9	2.4	5.8	1.9	5.5	2.0	3.9	2.7	7.6	34	5.5
5	7.7	2.6	2.1	4.8	3.1	4.7	1.9	3.8	9.2	5.4	16	36
6	4.9	1.9	2.6	5.8	3.7	4.2	1.9	23	5.4	4.1	7.5	7.3
7	8.6	1.7	51	11	1.9	3.7	2.3	8.5	18	3.8	7.3	4.9
8	9.6	1.7	7.4	5.0	1.7	3.4	1.9	6.3	12	3.2	8.0	4.1
9	4.8	1.9	32	4.1	1.7	3.2	1.8	5.5	25	2.9	22	3.7
10	30	1.7	24	3.3	1.6	2.9	2.0	9.9	22	2.9	7.3	5.2
11	7.5	1.6	27	3.3	1.8	3.9	37	4.6	7.9	2.6	12	7.4
12	5.4	1.9	7.6	2.8	8.4	4.6	7.8	3.8	8.2	2.8	8.7	3.8
13	4.7	1.6	5.5	2.5	36	7.1	4.0	31	15	23	6.0	4.9
14	4.0	3.5	5.1	8.9	23	26	3.3	7.6	22	4.0	4.7	3.3
15	3.8	1.6	3.8	49	14	8.5	17	7.5	25	4.5	5.2	2.7
16	5.6	1.5	19	25	45	7.1	7.6	13	8.2	63	4.3	2.6
17	3.8	1.5	68	11	9.1	5.4	6.9	13	11	16	3.7	3.2
18	3.0	1.3	21	7.7	6.3	35	7.1	7.0	25	7.5	3.2	2.3
19	3.0	1.4	30	5.6	8.9	8.4	6.1	5.1	11	5.4	4.7	4.4
20	2.9	1.2	15	20	12	6.5	4.2	4.5	7.9	7.4	13	5.8
21	2.3	1.3	17	6.8	16	8.3	3.3	4.2	6.4	11	4.3	4.1
22	2.8	5.1	15	5.1	6.0	5.5	5.1	3.7	5.7	7.1	14	2.9
23	3.0	4.4	39	4.4	4.7	4.4	7.4	3.2	11	5.2	5.8	2.3
24	8.7	17	12	3.8	10	3.9	11	3.8	16	4.7	5.4	2.0
25	2.7	6.7	42	3.4	15	3.3	7.7	4.3	10	4.0	3.8	1.9
26	2.3	2.4	32	3.3	5.4	3.0	30	6.0	7.2	7.2	3.2	1.9
27	2.1	1.9	12	2.8	4.5	7.8	8.7	9.2	5.9	4.7	3.3	5.0
28	2.1	6.5	8.4	2.8	36	4.2	6.5	5.1	5.4	4.0	6.5	3.0
29	2.5	2.9	6.7	2.4	---	3.5	4.8	3.8	5.9	3.8	12	2.5
30	1.9	8.6	6.6	2.3	---	2.9	4.3	5.4	4.3	4.5	7.5	2.2
31	2.3	---	6.3	2.4	---	2.6	---	3.5	---	3.3	4.0	---
TOTAL	190.7	93.1	543.1	247.8	283.7	235.5	210.1	229.3	322.4	260.1	256.0	143.7
MEAN	6.15	3.10	17.5	7.99	10.1	7.60	7.00	7.40	10.7	8.39	8.26	4.79
MAX	30	17	68	49	45	35	37	31	25	63	34	36
MIN	1.9	1.2	2.1	2.3	1.6	2.6	1.8	3.2	2.7	2.6	3.0	1.9
AC-FT	378	185	1080	492	563	467	417	455	639	516	508	285

CAL YR 1974 TOTAL 2709.0 MEAN 7.42 MAX 68 MIN 1.2 AC-FT 5370
WTR YR 1975 TOTAL 3015.5 MEAN 8.26 MAX 68 MIN 1.2 AC-FT 5980

PEAK DISCHARGE.--(BASE, 500 CFS).--Dec. 7 (1300) 820 cfs (5.40 ft).

16899800 TOFOL RIVER

LOCATION.--Lat 5°19'53" N., long 163°01'25" E., on left bank 25 ft (7.6 m) downstream from right-bank tributary, 0.7 mi (1.1 km) upstream from mouth, and 1.2 mi (1.9 km) northeast of Mount Crozer.

DRAINAGE AREA.--0.44 mi^2 (1.14 km^2).

PERIOD OF RECORD.--June 1971 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 98 ft (29.9 m) from stadia survey.

EXTREMES.--Current year: Maximum discharge, 488 ft^3/s (13.8 m^3/s) Dec. 7 (gage height, 4.17 ft or 1.271 m), from rating curve extended above 79 ft^3/s (2.24 m^3/s); minimum, 0.86 ft^3/s (0.024 m^3/s) Nov. 27, Sept. 30, during short regulation of flow upstream.
Period of record: Maximum discharge, 1,050 ft^3/s (29.7 m^3/s) July 6, 1971 (gage height, 5.24 ft or 1.597 m), from rating curve extended above 79 ft^3/s (2.24 m^3/s); minimum, 0.82 ft^3/s (0.023 m^3/s) Feb. 21, 1973.

REMARKS.--Records fair. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.7	9.9	12	2.3	16	2.5	3.7	3.3	6.6	3.1	3.0
2	15	2.0	4.2	6.5	2.2	9.1	2.3	6.9	3.4	4.2	6.0	2.7
3	6.0	1.9	3.0	4.9	2.1	6.5	2.2	4.0	2.9	3.6	8.5	2.4
4	10	2.0	2.7	4.4	2.0	5.4	2.3	3.3	2.7	8.0	13	4.9
5	6.4	3.0	2.5	4.3	2.6	4.8	2.1	3.4	6.4	4.7	17	24
6	4.4	2.0	2.7	4.8	2.3	4.3	2.0	19	4.0	3.6	6.9	5.5
7	6.0	1.8	24	6.0	1.9	3.9	2.7	6.7	9.5	4.2	5.9	4.2
8	6.7	1.7	5.0	3.9	1.8	3.5	2.0	6.2	7.0	3.3	5.5	3.7
9	4.1	2.1	23	3.4	1.7	3.4	1.9	4.4	16	3.0	17	3.5
10	21	1.6	18	3.1	1.7	3.1	1.9	7.0	15	2.9	5.6	7.6
11	6.1	1.5	19	2.9	1.9	3.4	15	4.1	6.4	2.8	6.5	4.9
12	4.7	2.2	7.1	2.6	6.2	3.6	4.6	3.8	6.1	3.0	5.9	3.8
13	4.3	1.9	5.5	2.5	22	5.3	2.9	21	13	20	4.6	4.0
14	3.8	2.8	5.4	11	13	14	3.2	6.2	18	3.9	4.1	3.4
15	3.7	1.7	4.2	29	6.2	5.7	12	6.3	15	3.6	4.7	3.0
16	6.8	1.6	17	15	19	4.4	5.0	9.0	7.5	38	4.9	3.0
17	4.0	1.5	45	8.4	7.5	4.7	5.3	11	9.4	12	3.6	2.9
18	3.2	1.4	17	6.1	5.9	21	4.6	6.2	16	6.5	3.3	2.5
19	3.3	1.5	25	5.3	6.3	6.5	4.4	5.1	9.7	5.2	4.9	5.3
20	3.1	1.4	12	13	8.9	5.3	3.4	4.6	7.5	5.8	7.6	5.5
21	2.7	1.4	17	5.7	13	6.4	3.0	4.6	6.1	15	2.3	4.3
22	2.5	5.4	13	4.7	5.6	4.7	4.4	4.2	5.6	6.6	6.2	3.0
23	2.6	3.5	27	4.4	4.6	4.0	5.6	3.6	10	4.8	3.8	2.6
24	7.0	6.9	13	3.8	7.5	3.9	6.9	3.7	13	4.3	3.5	2.3
25	2.6	4.2	30	3.5	7.2	3.4	5.1	3.2	8.1	4.3	2.5	2.2
26	2.4	2.2	22	3.3	4.6	3.0	23	4.9	6.8	6.2	1.9	2.1
27	2.2	2.0	12	3.1	4.1	5.7	6.0	9.2	5.4	4.5	2.1	4.0
28	2.4	9.4	8.8	2.9	25	3.7	4.7	4.2	5.1	4.0	5.6	2.7
29	2.3	2.9	6.9	2.6	---	3.1	4.1	3.3	4.9	3.6	8.4	2.3
30	2.7	8.3	5.7	2.5	---	2.8	3.9	7.3	4.1	4.0	6.4	2.2
31	3.1	---	5.0	2.7	---	2.8	---	3.9	---	3.2	3.2	---
TOTAL	158.8	84.5	412.6	188.3	189.1	177.4	149.0	194.0	247.9	205.4	184.5	127.5
MEAN	5.12	2.82	13.3	6.07	6.75	5.72	4.97	6.26	8.26	6.63	5.95	4.25
MAX	21	9.4	45	29	25	21	23	21	18	38	17	24
MIN	2.2	1.4	2.5	2.5	1.7	2.8	1.9	3.2	2.7	2.8	1.9	2.1
AC-FT	315	168	818	373	375	352	296	385	492	407	366	253

CAL YR 1974 TOTAL 2182.1 MEAN 5.98 MAX 45 MIN 1.4 AC-FT 4330
WTR YR 1975 TOTAL 2319.0 MEAN 6.35 MAX 45 MIN 1.4 AC-FT 4600

PEAK DISCHARGE (BASE, 450 CFS).--Dec. 7 (1300) 488 cfs (4.17 ft).

16912000 PAGO STREAM AT AFONO

LOCATION.--Lat 14°16'03" S., long 170°39'02" W., on left bank 0.2 mi (0.3 km) south of Afono and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.60 mi^2 (1.55 km^2).

PERIOD OF RECORD.--October 1958 to current year. Prior to July 1960, published as Afono Stream at Afono.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 30 ft (9 m), from topographic map.

AVERAGE DISCHARGE.--16 years (1959-75), 3.28 ft^3/s (0.0929 m^3/s), 2,380 acre-ft/yr (2.93 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 444 ft^3/s (12.6 m^3/s) Jan. 26 (gage height, 4.03 ft or 1.228 m), from rating curve extended above 12 ft^3/s (0.34 m^3/s); minimum, 0.19 ft^3/s (0.005 m^3/s) Oct. 20, 21, 23.
Period of record: Maximum discharge, 1,350 ft^3/s (38.2 m^3/s) July 5, 1969 (gage height, 5.49 ft or 1.673 m), from rating curve extended above 22 ft^3/s (0.62 m^3/s); minimum, 0.17 ft^3/s (0.005 m^3/s) Sept. 22, 1974.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. About 0.06 ft^3/s (0.002 m^3/s) is diverted above station for domestic use in Afono. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.23	.52	.93	4.7	3.9	22	12	1.3	.86	2.0	.52
2	.31	.26	.42	.78	3.6	3.8	14	38	1.2	.86	2.2	.47
3	.26	.23	.38	.64	3.0	12	13	26	1.2	.78	1.6	.47
4	.60	.21	.34	.58	2.5	21	9.7	15	1.1	.78	1.3	.52
5	.38	.26	.38	.58	2.2	6.6	3.6	7.6	1.1	.78	1.2	.47
6	.64	.26	.38	.58	2.3	4.0	2.8	5.2	1.0	.71	1.1	.47
7	.29	.21	.31	.64	2.5	3.0	3.6	3.8	1.0	.71	1.0	.47
8	.26	.56	.29	1.3	1.9	2.5	3.6	3.3	1.0	.71	1.0	.47
9	.23	.52	1.9	.78	1.5	2.5	2.6	3.8	1.0	.64	.93	.42
10	.23	1.3	1.0	.58	1.4	2.2	1.9	3.2	.90	.64	.93	.64
11	.42	.47	4.2	1.2	1.4	1.8	1.9	2.7	.90	.64	.85	1.7
12	.47	.29	6.3	1.4	1.9	1.6	1.8	2.5	.90	.64	.85	.58
13	.29	4.2	2.8	1.1	1.8	1.6	1.5	2.4	1.1	.64	.78	.78
14	.23	1.5	1.9	.93	3.0	1.6	1.4	2.3	1.0	.58	.78	.64
15	.23	.58	1.1	.71	2.6	1.4	1.2	2.1	.90	.58	.85	.47
16	.23	1.7	.85	.58	1.6	1.3	1.1	2.0	.90	.78	.78	.38
17	.21	4.2	1.5	.52	1.2	1.3	1.1	2.0	.90	.71	.71	.38
18	.23	6.5	8.8	.47	1.8	1.2	1.0	2.8	.90	1.4	.78	1.5
19	.21	1.6	9.8	.47	2.0	1.1	3.1	2.4	.90	.93	.85	1.2
20	.19	.71	6.9	.42	1.6	1.0	14	2.0	.90	.71	.93	.58
21	.19	.47	4.0	4.0	1.5	1.2	14	1.8	1.2	.64	.78	.47
22	.23	.42	2.3	1.6	3.8	1.0	6.6	1.7	10	.58	.71	.38
23	.19	.34	1.6	.85	2.0	.93	5.2	1.6	5.0	.71	.64	.38
24	.21	.47	1.3	.71	7.2	.93	3.4	1.5	3.0	.58	.58	.34
25	.21	.38	1.0	1.6	12	.85	2.6	1.4	2.0	.71	.58	.38
26	.21	2.0	.85	40	5.2	.85	2.3	1.4	1.6	2.5	.64	.38
27	.21	.85	.85	102	3.2	.85	2.0	1.4	1.4	22	.58	.47
28	.21	2.8	2.3	28	2.5	.78	1.8	1.6	1.2	19	.52	.38
29	.26	1.8	1.8	17	---	1.6	23	1.4	1.0	7.6	.52	.34
30	.26	.85	1.1	9.0	---	3.6	13	1.4	.90	3.8	.52	.34
31	.21	---	1.0	8.2	---	5.4	---	1.4	---	2.6	.58	---
TOTAL	8.88	36.17	68.17	228.15	81.9	93.39	174.8	157.7	47.40	75.80	28.07	16.99
MEAN	.29	1.21	2.20	7.36	2.93	3.01	5.83	5.09	1.58	2.45	.91	.57
MAX	.64	6.5	9.8	102	12	21	23	38	10	22	2.2	1.7
MIN	.19	.21	.29	.42	1.2	.78	1.0	1.4	.90	.58	.52	.34
AC-FT	18	72	135	453	162	185	347	313	94	150	56	34

CAL YR 1974 TOTAL 615.45 MEAN 1.69 MAX 59 MIN .19 AC-FT 1220
WTR YR 1975 TOTAL 1017.42 MEAN 2.79 MAX 102 MIN .19 AC-FT 2020

PEAK DISCHARGE (BASE, 210 CFS).--Jan. 26 (2100) 444 cfs (4.03 ft); May 2 (0030) 228 cfs (3.41 ft).

NOTE.--No gage-height record May 7 to July 2.

16917500 LEELE STREAM AT MOUTH, AT FAGASA

LOCATION.--Lat 14°17'28" S., long 170°43'09" W., on left bank at Fagasa and 200 ft (61 m) upstream from mouth.

DRAINAGE AREA.--0.23 mi² (0.60 km²).

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

AVERAGE DISCHARGE.--9 years, 1.55 ft³/s (0.0439 m³/s), 1,120 acre-ft/yr (1.38 hm³/yr).

EXTREMES.--Current year: Maximum discharge, 256 ft³/s (7.25 m³/s) Apr. 29 (gage height, 3.54 ft or 1.079 m), from rating curve extended as explained below; minimum, 0.05 ft³/s (0.001 m³/s) Nov. 4, 5, 7, 8.
Period of record: Maximum discharge, 390 ft³/s (11.0 m³/s) Aug. 30, 1970 (gage height, 3.82 ft or 1.164 m), from rating curve extended above 13 ft³/s (0.37 m³/s) on basis of slope-area measurement at gage height 3.61 ft (1.100 m); minimum, 0.03 ft³/s (0.001 m³/s) Sept. 3, 4, 1974.

REMARKS.--Records good. Small diversion above station for local village use. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.07	.20	.37	1.6	.93	6.2	4.1	1.2	.51	.69	.24
2	.07	.07	.17	.56	1.1	1.6	2.5	2.8	.84	.51	.98	.21
3	.07	.06	.13	.43	1.2	6.0	3.0	4.7	.76	.51	.76	.28
4	.36	.05	.11	.37	.96	2.6	1.2	3.4	.69	.45	.56	.28
5	.20	.05	.19	.31	.87	1.2	.93	2.5	.62	.45	.51	.32
6	.44	.06	.42	.37	.84	1.2	.76	1.6	.69	.40	.51	.24
7	.11	.05	.31	.37	.84	.84	4.5	1.8	.76	.36	.56	.21
8	.10	.72	.28	.56	.69	.84	1.8	1.6	.56	.36	.51	.21
9	.08	.75	.56	.37	.62	1.1	1.1	1.2	.51	.36	.40	.18
10	.08	.61	.31	.37	.56	.76	.84	.98	.51	.36	.36	.24
11	.10	.19	2.8	2.3	.51	.69	.76	.84	.51	.32	.36	1.2
12	.13	.07	1.3	1.1	.69	.56	.76	.76	.45	.28	.32	.45
13	.24	.86	1.5	.61	.89	.56	.69	.84	5.6	.28	.32	.76
14	.10	.61	1.1	.40	1.2	.56	.56	.76	4.7	.32	.45	.51
15	.08	.17	.66	.40	.84	.54	.51	.69	1.2	.28	.51	.32
16	.07	.26	.78	.28	.69	.54	.62	.62	.93	.45	.36	.24
17	.07	.85	.73	.28	.56	.52	.51	1.6	4.3	.36	.32	.24
18	.08	5.0	2.9	.28	.56	.52	.51	19	1.4	.51	.45	.51
19	.08	.40	5.3	.26	2.2	.51	1.9	9.4	1.1	.32	1.1	.36
20	.08	.22	3.7	.26	2.9	.45	9.0	2.2	.84	.28	.84	.28
21	.07	.17	1.9	3.3	1.2	.45	12	1.2	.84	.28	.56	.28
22	.07	.13	1.0	.72	2.2	.40	4.1	1.1	3.4	.28	.40	.24
23	.07	.20	.66	.43	1.4	.36	3.1	1.1	3.6	.36	.36	.21
24	.07	.28	.47	.89	3.8	.40	1.6	.84	1.7	.28	.28	.21
25	.07	.20	.40	1.6	3.3	.36	1.2	.76	1.2	.94	.28	.21
26	.07	.40	.31	7.8	1.8	.36	5.1	1.2	.93	3.0	.28	.28
27	.07	.31	.37	21	1.2	.36	1.8	1.1	.76	16	.24	.32
28	.08	2.3	1.8	9.8	.93	.32	1.2	3.0	.69	6.8	.21	.28
29	.10	.92	1.1	4.8	---	.56	22	1.2	.62	2.3	.21	.24
30	.19	.37	.56	2.7	---	.84	9.6	1.1	.56	1.2	.21	.24
31	.08	---	.56	2.7	---	1.6	---	1.2	---	.93	.21	---
TOTAL	3.55	16.40	32.58	65.99	36.15	28.53	100.35	75.19	42.47	40.04	14.11	9.79
MEAN	.11	.55	1.05	2.13	1.29	.92	3.35	2.43	1.42	1.29	.46	.33
MAX	.44	5.0	5.3	21	3.8	6.0	22	19	5.6	16	1.1	1.2
MIN	.07	.05	.11	.26	.51	.32	.51	.62	.45	.28	.21	.18
AC-FT	7.0	33	65	131	72	57	199	149	84	79	28	19

CAL YR 1974 TOTAL 247.91 MEAN .68 MAX 16 MIN .04 AC-FT 492
WTR YR 1975 TOTAL 465.15 MEAN 1.27 MAX 22 MIN .05 AC-FT 923

PEAK DISCHARGE (BASE, 78 CFS).--Jan. 26 (2200) 86 cfs (2.97 ft); Apr. 29 (1000) 256 cfs (3.54 ft).

16920500 AASU STREAM AT AASU

LOCATION.--Lat 14°17'51" S., long 170°45'30" W., on right bank at Aasu and 200 ft (61 m) upstream from mouth.

DRAINAGE AREA.--1.03 mi^2 (2.67 km^2).

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5 ft (1.5 m) by hand levels from high-tide mark.

AVERAGE DISCHARGE.--16 years (1959-75), 6.16 ft^3/s (0.174 m^3/s), 4,460 acre-ft/yr (5.50 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 219 ft^3/s (6.20 m^3/s) Jan. 26 (gage height, 3.76 ft or 1.146 m), from floodmark, from rating curve extended as explained below; minimum, 0.12 ft^3/s (0.003 m^3/s) Oct. 21, 23, Oct. 24, 27.
Period of record: Maximum discharge, 498 ft^3/s (14.1 m^3/s) Sept. 7, 1972 (gage height, 5.16 ft or 1.573 m), from rating curve extended above 20 ft^3/s (0.57 m^3/s) on basis of slope-area measurement at gage height 4.57 ft (1.393 m); minimum, 0.12 ft^3/s (0.003 m^3/s) Oct. 21, 23, 24, 27, 1974.

REMARKS.--Records good. Small diversion above station for domestic use. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area. (FISCAL YEARS).--WSP 2137: 1959-60(P). (WATER YEARS).--1960(P), 1961(M), 1962-65(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.14	1.4	4.0	14	4.9	16	22	6.9	4.2	8.0	1.2
2	.26	3.6	1.2	3.6	12	6.6	7.3	16	6.1	4.2	7.3	1.1
3	.20	.63	1.2	3.4	10	22	6.9	19	6.4	3.8	6.4	1.2
4	.95	.30	1.1	2.8	8.3	17	5.9	18	5.6	3.6	5.4	1.1
5	.57	.26	1.0	3.0	8.4	12	5.4	16	4.9	3.4	4.9	1.4
6	.68	.42	1.4	7.1	8.0	9.3	4.9	12	4.9	3.0	4.4	1.1
7	.26	.30	1.3	4.2	6.9	8.0	6.9	15	4.9	2.8	4.7	1.0
8	.23	1.2	1.1	5.4	5.6	7.3	5.9	13	4.4	2.7	4.2	.95
9	.20	2.4	1.4	3.8	4.9	7.3	4.9	10	4.0	2.5	3.4	.81
10	.20	2.4	1.3	3.8	4.4	6.4	4.4	9.3	3.8	2.4	3.0	1.0
11	.23	1.4	6.2	6.1	4.0	5.6	4.7	8.3	3.6	2.1	2.7	6.6
12	.23	.87	3.6	4.4	4.2	5.2	4.7	7.6	2.5	2.1	2.4	2.2
13	.42	2.8	4.4	3.4	5.8	4.7	4.4	7.6	10	1.9	2.2	2.2
14	.23	2.9	3.8	2.8	6.9	4.2	3.6	8.3	11	1.8	2.4	2.1
15	.17	1.0	2.8	2.7	4.9	4.0	3.4	6.4	6.4	1.8	2.1	1.6
16	.14	.95	3.8	2.4	4.0	3.8	3.2	5.9	5.6	2.7	1.9	1.5
17	.14	1.6	4.6	7.5	3.6	3.6	3.0	6.1	17	2.1	1.7	1.3
18	.17	8.8	12	5.9	3.6	3.0	2.7	45	7.6	2.4	1.8	2.4
19	.20	2.7	13	5.2	3.9	2.8	4.8	24	6.6	1.8	2.5	1.7
20	.14	1.9	11	4.4	4.7	2.7	11	13	5.9	1.7	2.1	1.4
21	.12	1.4	8.6	7.8	4.2	3.0	23	11	5.6	1.6	1.8	1.3
22	.14	1.3	6.9	5.4	9.8	2.5	14	9.3	9.5	1.5	1.5	1.3
23	.12	1.2	6.1	4.2	5.2	2.4	9.7	9.0	11	1.6	1.4	1.2
24	.12	1.3	5.6	6.3	6.6	2.2	7.3	7.6	8.3	1.3	1.5	1.1
25	.23	1.3	4.9	6.9	7.3	2.1	6.4	6.9	6.6	2.8	1.4	1.3
26	.14	1.4	4.4	30	6.4	2.2	7.8	8.3	5.9	8.2	1.6	1.3
27	.12	1.2	4.0	80	5.4	1.9	6.6	6.6	5.4	30	1.4	1.3
28	.14	3.2	4.7	54	4.7	1.8	6.1	12	5.2	29	1.3	1.1
29	.30	2.1	3.8	27	---	2.1	32	7.3	4.9	14	1.2	1.0
30	.34	1.6	3.0	22	---	2.5	26	6.9	4.7	10	1.3	.95
31	.14	---	5.4	20	---	3.4	---	7.3	---	9.3	1.2	---
TOTAL	7.76	52.57	135.0	349.5	177.7	166.5	252.9	374.7	195.2	162.3	89.1	45.71
MEAN	.25	1.75	4.35	11.3	6.35	5.37	8.43	12.1	6.51	5.24	2.87	1.52
MAX	.95	8.8	13	80	14	22	32	45	17	30	8.0	6.6
MIN	.12	.14	1.0	2.4	3.6	1.8	2.7	5.9	2.5	1.3	1.2	.81
AC-FT	15	104	268	693	352	330	502	743	387	322	177	91

CAL YR 1974	TOTAL	995.53	MEAN	2.73	MAX	19	MIN	.12	AC-FT	1970
WTR YR 1975	TOTAL	2008.94	MEAN	5.50	MAX	80	MIN	.12	AC-FT	3980

PEAK DISCHARGE (BASE, 180 CFS).--Jan. 26 (about 1000) 219 cfs (3.76 ft).

NOTE.--Fragmentary gage-height record Jan. 26-28.

16931000 ATAULOMA STREAM AT AFAO

LOCATION.--Lat 14°20'10" S., long 170°48'02" W., on left bank at Afao, 100 ft (30 m) upstream from highway bridge, and 300 ft (91 m) upstream from mouth.

DRAINAGE AREA.--0.24 mi^2 (0.62 km^2).

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) by hand levels from high-tide mark.

AVERAGE DISCHARGE.--16 years (1959-75), 1.45 ft^3/s (0.0411 m^3/s), 1,050 acre-ft/yr (1.29 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 80 ft^3/s (2.27 m^3/s) Jan. 27 (gage height, 2.02 ft or 0.616 m), from rating curve extended above 26 ft^3/s (0.74 m^3/s); minimum, 0.04 ft^3/s (0.001 m^3/s) Oct. 24-26, 28-31, Nov. 1.
Period of record: Maximum discharge, 605 ft^3/s (17.1 m^3/s) Aug. 10, 1967 (gage height, 3.99 ft or 1.216 m), from rating curve extended above 26 ft^3/s (0.74 m^3/s); minimum, 0.04 ft^3/s (0.001 m^3/s) Oct. 24-26, Oct. 28-31, Nov. 1, 1974.

REMARKS.--Records good. No diversion above station. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.04	.38	.92	2.5	1.4	13	8.5	1.5	.74	1.1	.30
2	.05	.17	.26	.74	1.9	3.7	2.9	4.0	1.3	.74	1.1	.26
3	.05	.07	.23	.53	1.6	3.8	2.5	3.7	1.4	.68	.86	.26
4	.26	.05	.20	.48	1.3	3.0	1.5	4.5	1.1	.68	.80	.26
5	.20	.05	.20	.38	1.7	1.9	1.2	3.3	.99	.68	.74	.30
6	.12	.08	.23	.53	1.4	1.4	1.3	2.3	.99	.63	.68	.26
7	.10	.08	.30	.38	1.4	1.1	1.8	3.7	.92	.58	.68	.23
8	.08	.53	.23	.70	1.1	.99	1.4	2.6	.80	.53	.63	.23
9	.10	.52	.40	.43	.92	1.2	1.1	1.9	.74	.58	.58	.23
10	.12	.63	.26	.48	.86	.80	.99	1.5	.68	.53	.70	.30
11	.10	.14	1.8	.53	.86	.74	.99	1.4	.63	.48	.68	3.4
12	.10	.12	.92	.63	.99	.68	.99	1.3	.63	.48	.48	.80
13	.10	6.6	.58	.53	1.5	.68	.86	1.1	7.5	.48	1.1	.74
14	.08	6.4	.38	.34	1.4	.68	.80	1.4	5.0	.48	.63	.74
15	.08	.43	.34	.43	.99	.74	.80	.99	1.6	.48	.58	.48
16	.08	.38	.30	.30	.86	.68	.68	.99	1.4	.90	.53	.38
17	.08	5.3	3.5	5.3	.80	.63	.63	.99	2.6	.53	.48	.30
18	.07	5.9	5.9	1.6	.74	.58	.63	7.3	1.4	.48	.58	.74
19	.07	2.4	5.5	.86	1.5	.58	.63	3.5	1.6	.43	.74	.38
20	.05	1.2	3.7	.68	3.5	.53	1.1	1.7	1.3	.38	.68	.30
21	.05	.68	2.6	1.5	1.4	.63	5.2	1.3	1.2	.38	.53	.30
22	.05	.48	1.4	.80	4.0	.48	2.4	1.1	3.6	.38	.43	.26
23	.05	.38	1.1	.63	1.5	.53	1.4	1.2	3.5	.38	.38	.26
24	.04	.42	.80	.58	1.2	.48	1.1	.99	2.3	.34	.38	.23
25	.04	.47	.68	.58	1.3	.48	.86	.92	1.5	.53	.34	.30
26	.04	.92	.58	3.6	1.4	.53	2.4	1.6	1.3	2.4	.38	.26
27	.05	.34	.53	25	1.2	.43	1.3	1.1	1.1	16	.34	.30
28	.04	1.5	.68	14	.92	.38	.99	2.7	.99	11	.30	.26
29	.05	.86	.47	6.3	---	.43	11	1.2	.92	2.9	.30	.23
30	.05	.58	.38	5.8	---	.63	12	1.4	.80	1.8	.26	.23
31	.04	---	1.4	4.0	---	.63	---	1.5	---	1.4	.30	---
TOTAL	2.44	37.72	36.23	79.56	40.64	31.44	74.45	71.68	51.29	49.00	18.29	13.52
MEAN	.079	1.26	1.17	2.57	1.45	1.01	2.48	2.31	1.71	1.58	.59	.45
MAX	.26	6.6	5.9	25	4.0	3.8	13	8.5	7.5	16	1.1	3.4
MIN	.04	.04	.20	.30	.74	.38	.63	.92	.63	.34	.26	.23
AC-FT	4.8	75	72	158	81	62	148	142	102	97	36	27

CAL YR 1974	TOTAL	207.50	MEAN	.57	MAX	6.9	MIN	.04	AC-FT	411
WTR YR 1975	TOTAL	506.26	MEAN	1.39	MAX	25	MIN	.04	AC-FT	1,000

PEAK DISCHARGE (BASE, 160 CFS).--No peak above base.

16944200 PAPA STREAM AT NUUULI

LOCATION.--Lat 14°18'48" S., long 170°42'33" W., on right bank 500 ft (150 m) downstream from Tauese Stream and 0.8 mi (1.3 km) northwest of Nuuuli.

DRAINAGE AREA.--0.78 mi^2 (2.02 km^2).

PERIOD OF RECORD.--July 1966 to September 1967, November 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 30 ft (9.1 m), from topographic map.

AVERAGE DISCHARGE.--7 years (1966-67, 1969-75), 4.36 ft^3/s (0.123 m^3/s), 3,160 acre-ft/yr (3.90 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 1,640 ft^3/s (46.4 m^3/s) Apr. 29 (gage height, 5.40 ft or 1.646 m), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 1,640 ft^3/s (46.4 m^3/s) Apr. 29, 1975 (gage height, 5.40 ft or 1.646 m), from rating curve extended above 66 ft^3/s (1.87 m^3/s) on basis of flow-over-road measurement at gage height 3.32 ft (1.012 m); no flow for many days each year.
Flood of Oct. 9, 1967, reached a stage of 3.32 ft (1.012 m), from floodmarks, discharge, 470 ft^3/s (13.3 m^3/s), from rating curve extended as explained above.

REMARKS.--Records fair except those below 5.0 ft^3/s (0.14 m^3/s), which are poor. Diversion by frequent pumping from gage pool for public water supply. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	7.0	1.8	29	20	1.8	.32	2.1	0
2	0	0	0	.03	4.8	2.5	10	17	1.3	.27	3.8	0
3	0	0	0	1.2	3.6	9.0	8.8	24	1.1	.06	2.1	0
4	.02	0	0	.32	2.5	5.7	3.6	15	.64	0	1.3	0
5	0	0	0	.01	2.1	3.4	2.1	8.9	.46	0	.78	.03
6	0	0	.16	.04	2.0	2.5	1.5	6.0	.78	0	.64	0
7	0	0	.34	0	2.1	2.0	14	14	.54	0	.95	0
8	0	.43	.02	.25	1.6	1.8	4.5	8.5	.32	0	.46	0
9	0	.03	.36	0	.95	3.3	2.3	5.7	.15	0	.22	0
10	0	.27	0	0	.54	2.0	1.5	4.8	0	0	.04	0
11	0	0	6.8	2.0	.38	1.3	1.1	3.4	0	0	0	5.0
12	0	0	4.5	.38	.96	.95	.95	2.8	0	0	0	.33
13	0	4.0	2.0	.09	1.6	.78	.54	2.0	16	0	0	1.1
14	0	.52	.54	0	2.5	.76	.38	3.6	11	0	.21	.22
15	0	0	1.5	0	1.5	.54	.22	2.0	3.1	0	1.6	0
16	0	.12	1.6	0	.64	.64	.46	1.6	1.8	.08	.38	0
17	0	8.7	2.4	0	.32	.64	.15	7.2	6.7	0	.03	0
18	0	20	9.3	0	.18	.54	.15	67	2.5	1.6	.22	1.7
19	0	1.5	22	0	17	.12	1.3	35	2.0	.04	2.3	.46
20	0	.08	15	0	13	0	15	9.3	1.1	0	1.5	.02
21	0	0	7.0	5.8	3.9	0	26	5.7	.95	0	.38	0
22	0	0	3.4	.64	6.2	0	12	4.2	10	0	.03	0
23	0	0	2.0	.06	3.6	0	7.7	3.9	10	0	0	0
24	0	0	.95	.38	4.9	0	3.9	2.5	5.4	0	0	0
25	0	0	.38	2.9	6.0	0	2.5	2.0	3.1	2.1	0	0
26	0	0	.15	52	4.5	0	26	3.8	2.0	9.2	0	0
27	0	0	.15	224	3.1	0	6.6	2.8	1.6	51	0	0
28	0	3.6	2.3	60	2.0	0	3.6	8.6	1.3	29	0	0
29	0	.46	.64	25	---	.67	165	3.1	.95	11	0	0
30	0	0	.11	15	---	1.6	49	2.5	.54	5.4	0	0
31	0	---	.03	13	---	3.9	---	2.3	---	3.4	0	---
TOTAL	.02	39.71	83.63	403.10	99.47	46.46	399.85	299.2	87.13	113.47	19.04	8.86
MEAN	.0006	1.32	2.70	13.0	3.55	1.50	13.3	9.65	2.90	3.66	.61	.30
MAX	.02	20	22	224	17	9.0	165	67	16	51	3.8	5.0
MIN	0	0	0	0	.18	0	.15	1.6	0	0	0	0
AC-FT	.04	79	166	800	197	92	793	593	173	225	38	18

CAL YR	1974	TOTAL	734.49	MEAN	2.01	MAX	53	MIN	0	AC-FT	1,460
WTR YR	1975	TOTAL	1,599.94	MEAN	4.38	MAX	224	MIN	0	AC-FT	3,170

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-27	0500	3.73	665	4-29	1030	5.40	1,640
4-26	1230	3.38	496	5-18	1900	3.25	438

16948000 AFUELO STREAM AT MATUU

LOCATION.--Lat 14°18'07" S., long 170°41'07" W., on left bank 0.2 mi (0.3 km) northwest of Matuu and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.25 mi^2 (0.65 km^2).

PERIOD OF RECORD.--March 1958 to current year. Prior to July 1960, published as Matuu Stream at Matuu.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (24.4 m), from topographic map.

AVERAGE DISCHARGE.--17 years, 1.45 ft^3/s (0.0411 m^3/s), 1,050 acre-ft/yr (1.29 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 502 ft^3/s (14.2 m^3/s) Apr. 29 (gage height, 4.59 ft or 1.399 m), from rating curve extended as explained below; minimum, 0.01 ft^3/s (<0.001 m^3/s) Sept. 16, 17, 20-26, 28, 29.
Period of record: Maximum discharge, 502 ft^3/s (14.2 m^3/s) Apr. 29, 1975 (gage height, 4.59 ft or 1.399 m), from rating curve extended above 8.4 ft^3/s (0.24 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.01 ft^3/s (<0.001 m^3/s) Sept. 16, 17, 20-26, 28, 29, 1975.

REMARKS.--Records fair. Small diversion above station for domestic use since September 1972. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area. (FISCAL YEARS).--WSP 2137: 1958-60, (WATER YEARS) 1960-65.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.06	.09	.18	1.8	.71	7.2	5.0	.76	.25	.48	.16
2	.04	.06	.07	.41	1.0	.93	4.2	6.8	.76	.25	1.0	.16
3	.03	.05	.08	.22	1.1	3.3	3.8	6.6	.59	.20	.56	.18
4	.21	.05	.07	.12	.71	2.0	1.6	6.3	.44	.18	.41	.18
5	.07	.05	.20	.08	.56	.93	.81	3.0	.36	.20	.37	.21
6	.39	.05	.08	.10	.61	.71	.61	1.8	.41	.16	.44	.07
7	.06	.05	.05	.16	.71	.52	4.7	4.4	.41	.16	.61	.05
8	.04	.83	.04	.31	.52	.48	1.7	2.7	.31	.16	.44	.05
9	.04	.93	1.1	.14	.34	1.3	.86	2.1	.28	.14	.31	.05
10	.04	1.3	.63	.09	.31	.66	.66	3.0	.28	.14	.28	.04
11	.03	.18	3.5	.87	.28	.44	.61	1.5	.25	.12	.28	1.1
12	.05	.09	1.5	.31	.67	.31	.48	1.2	.25	.12	.28	.12
13	.05	2.4	.86	.18	.81	.28	.41	1.4	4.2	.12	.25	.16
14	.04	1.0	.44	.14	1.6	.28	.34	1.7	3.3	.12	.28	.09
15	.03	.19	.28	.16	.52	.22	.31	1.1	.61	.10	.37	.02
16	.05	.94	.48	.12	.31	.22	.41	.81	.44	.20	.28	.01
17	.05	3.4	1.3	.09	.22	.22	.31	.76	.71	.16	.22	.01
18	.05	5.9	4.2	.18	.28	.16	.25	12	.41	.70	.31	.12
19	.05	.56	6.7	.12	3.0	.16	.37	6.5	.37	.18	.66	.08
20	.05	.22	3.9	.07	2.8	.14	3.5	2.0	.31	.14	.48	.01
21	.05	.12	1.8	2.8	1.0	.14	7.2	1.2	.34	.12	.28	.01
22	.05	.09	.76	.48	2.3	.12	3.3	.93	3.8	.12	.22	.01
23	.05	.08	.48	.18	1.1	.10	2.8	1.1	3.4	.16	.18	.01
24	.04	.08	.31	.21	3.3	.10	1.2	.81	1.6	.12	.14	.01
25	.05	.09	.25	2.3	2.7	.12	.66	.71	.86	.66	.14	.01
26	.04	.22	.18	16	1.6	.16	2.8	1.1	.56	2.7	.20	.01
27	.05	.08	.22	35	1.3	.16	1.3	1.2	.48	15	.16	.02
28	.07	2.0	1.2	13	1.1	.14	.66	2.7	.52	8.5	.14	.01
29	.07	.48	.48	5.4	---	.42	40	.93	.37	2.8	.14	.01
30	.07	.16	.22	4.3	---	.71	12	.93	.28	1.2	.14	.02
31	.07	---	.18	4.3	---	1.5	---	.81	---	.71	.16	---
TOTAL	2.02	21.71	31.65	88.02	32.55	17.66	105.05	83.09	27.66	35.89	10.21	2.99
MEAN	.065	.72	1.02	2.84	1.16	.57	3.50	2.68	.92	1.16	.33	.10
MAX	.39	5.9	6.7	35	3.3	3.3	40	12	4.2	15	1.0	1.1
MIN	.03	.05	.04	.07	.22	.10	.25	.71	.25	.10	.14	.01
AC-FT	4.0	43	63	175	65	35	208	165	55	71	20	5.9

CAL YR 1974 TOTAL 249.26 MEAN .68 MAX 16 MIN .03 AC-FT 494
WTR YR 1975 TOTAL 458.50 MEAN 1.26 MAX 40 MIN .01 AC-FT 909

PEAK DISCHARGE (BASE, 95 CFS).--Jan. 26 (2130) 196 cfs (3.33 ft); Apr. 29 (1000) 502 cfs (4.59 ft).

16960000 ALEGA STREAM AT ALEGA

LOCATION.--Lat 14°16'58" S., long 170°38"19" W., on left bank 300 ft (91 m) upstream from left-bank tributary, 0.2 mi (0.3 km) northwest of Alega, and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.19 mi^2 (0.49 km^2).

PERIOD OF RECORD.--March 1958 to current year. Prior to July 1960, published as West Branch Alega Stream at Alega.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map.

AVERAGE DISCHARGE.--17 years, 1.24 ft^3/s (0.0351 m^3/s), 898 acre-ft/yr (1.11 hm^3/yr).

EXTREMES.--Current year: Maximum discharge, 62 ft^3/s (1.76 m^3/s) May 1 (gage height, 2.83 ft or 0.863 m), from rating curve extended above 10.1 ft^3/s (0.29 m^3/s); minimum, 0.23 ft^3/s (0.007 m^3/s) for many days during October to December.
Period of record: Maximum discharge, 232 ft^3/s (6.57 m^3/s) Apr. 8, 1970 (gage height, 4.48 ft or 1.366 m), from recorded range in stage, from rating curve extended above 8.3 ft^3/s (0.24 m^3/s); minimum, 0.17 ft^3/s (0.005 m^3/s) many days during July and August 1974.

REMARKS.--Records good. No diversion above station. Periodic determinations of water temperature for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1937: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.23	.28	.63	2.0	1.2	5.3	6.2	.72	.47	.78	.47
2	.43	.28	.28	.43	1.7	1.1	3.9	9.9	.72	.47	.82	.47
3	.43	.23	.28	.43	1.5	2.3	3.7	9.1	.66	.47	.66	.38
4	.53	.23	.28	.38	1.3	4.3	2.1	5.6	.61	.47	.61	.34
5	.48	.28	.28	.38	1.1	2.0	1.6	3.5	.61	.42	.56	.34
6	.43	.28	.33	.33	1.2	1.6	1.3	2.5	.61	.47	.51	.30
7	.43	.23	.23	.33	1.0	1.3	1.6	2.3	.61	.47	.47	.30
8	.43	.23	.23	.48	.92	1.2	1.3	1.9	.61	.47	.47	.26
9	.38	.23	.58	.38	.86	1.2	1.1	2.2	.56	.47	.47	.26
10	.33	.40	.28	.38	.80	1.0	.98	2.2	.56	.47	.47	.34
11	.38	.23	.63	.43	.80	.98	.92	1.6	.56	.47	.47	.58
12	.38	.23	1.1	.38	.80	.92	.86	1.5	.51	.47	.47	.30
13	.38	1.0	.58	.60	.80	.86	.80	1.4	.66	.42	.47	.38
14	.33	.38	.38	.63	.86	.80	.80	1.3	.56	.42	.47	.34
15	.28	.23	.28	.43	.74	.80	.74	1.2	.51	.42	.51	.30
16	.33	.48	.23	.38	.68	.74	.74	1.1	.51	.61	.42	.30
17	.28	1.0	.38	.38	.63	.74	.68	1.1	.51	.66	.42	.34
18	.28	1.5	1.4	.38	.93	.68	.68	1.8	.51	.94	.42	.61
19	.28	.43	2.1	.33	1.0	.68	.67	1.5	.51	.78	.42	.38
20	.28	.28	1.8	.33	1.1	.63	3.2	1.1	.51	.72	.42	.34
21	.23	.23	1.2	1.2	.86	.68	2.6	1.0	.56	.66	.42	.30
22	.23	.23	.68	.48	1.6	.63	1.6	.94	2.1	.66	.38	.30
23	.23	.23	.58	.43	.98	.63	1.4	.94	1.2	.66	.38	.30
24	.23	.23	.53	.38	1.0	.58	1.2	.88	.72	.66	.38	.30
25	.23	.23	.48	.53	24	.53	1.0	.80	.61	.82	.38	.30
26	.23	.43	.38	7.2	2.0	.53	1.3	.80	.56	1.1	.38	.30
27	.23	.28	.48	20	1.4	.48	.94	.80	.51	3.7	.38	.30
28	.23	.74	.68	8.6	1.2	.46	.82	.94	.51	3.6	.38	.26
29	.28	.43	.53	5.4	---	.72	5.1	.78	.51	1.6	.42	.26
30	.28	.28	.43	3.7	---	1.3	5.7	.78	.51	1.0	.42	.26
31	.23	---	.92	3.2	---	1.7	---	.78	---	.82	.47	---
TOTAL	10.28	11.69	18.82	59.54	53.76	33.29	54.63	68.44	19.41	25.84	14.70	10.21
MEAN	.33	.39	.61	1.92	1.92	1.07	1.82	2.21	.65	.83	.47	.34
MAX	.58	1.5	2.1	20	24	4.3	5.7	9.9	2.1	3.7	.82	.61
MIN	.23	.23	.23	.33	.63	.46	.67	.78	.51	.42	.38	.26
AC-FT	20	23	37	118	107	66	108	136	38	51	29	20

CAL YR 1974 TOTAL 223.61 MEAN .61 MAX 16 MIN .17 AC-FT 444
WTR YR 1975 TOTAL 380.61 MEAN 1.04 MAX 24 MIN .23 AC-FT 755

PEAK DISCHARGE (BASE, 52 CFS).--Jan. 26 (2130) 56 cfs (2.73 ft); May 1 (2400) 62 cfs (2.83 ft).

16963900 LEAFU STREAM NEAR AUASI

LOCATION.--Lat 14°16'27" S., long 170°34'26" W., on right bank 35 ft (11 m) upstream from upper village intake, 0.1 mi (0.2 km) north of Auasi, and 0.2 mi (0.3 km) upstream from mouth.

DRAINAGE AREA.--0.11 mi^2 (0.28 km^2).

PERIOD OF RECORD.--February 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 120 ft (37 m), from topographic map.

EXTREMES.--Current year: Maximum discharge, 31 ft^3/s (0.88 m^3/s) Apr. 2 (gage height, 2.37 ft or 0.722 m), from rating curve extended as explained below; minimum, 0.03 ft^3/s (0.001 $m^3.s$) on many days in October and November.

Period of record: Maximum discharge, 39 ft^3/s (1.10 m^3/s), revised, July 29, 1973 (gage height, 2.56 ft or 0.780 m), from recorded range in stage, from rating curve extended above 11 ft^3/s (0.31 m^3/s); minimum, 0.03 ft^3/s (0.001 m^3/s) Sept. 29, 30, many days in October and November 1974.

REVISIONS.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in Water Resources Data for Hawaii and other Pacific Areas, 1972-74.

Water year	Date	Discharge (ft^3/s)	Gage height (feet)
1972	May 12, 1972	35	2.47
1973	July 29, 1973	39	2.56
1974	Dec. 9, 1973	32	2.41

REMARKS.--Records good. No diversion above station. Periodic determinations of water tempeature for the current year are published in Part 2 of this report.

REVISIONS.--Revised figures of discharge, in cubic feet per second, for high-water periods in water years 1972-74, superseding figures published in Water Resources Data for Hawaii and other Pacific Areas, 1973-74 are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1973		1973-Con.		1974	
Jan. 30	7.5	Dec. 4	5.5	Mar. 27	5.1
Nov. 3	5.4	9	5.4	Apr. 19	2.9

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
January 1973	27.32	7.5	0.07	0.88	54
Water year 1973	117.21	7.5	.04	.32	232
November 1973	26.49	5.4	.11	.88	53
December	28.71	5.5	.10	.93	57
Calendar year 1973	147.06	7.5	.04	.40	292
March 1974	13.11	5.1	.06	.42	26
April	15.14	2.9	.11	.50	30
Water year 1974	124.33	5.5	.03	.34	247

REVISED PEAK DISCHARGE.--1972: Mar. 25 (0730) 21 ft^3/s (2.12 ft); May 12 (1700) 35 ft^3/s (2.47 ft); July 6 (1500) 19 ft^3/s (2.06 ft); Sept. 7 (2400) 26 ft^3/s (2.25 ft).
1973: Nov. 1 (0730) 17 ft^3/s (2.00 ft); Nov. 3 (1630) 24 ft^3/s (2.21 ft); Dec. 26 (1900) 23 ft^3/s (2.17 ft); Jan. 27 (0100) 18 ft^3/s (2.03 ft); Jan. 30 (0230) 26 ft^3/s (2.25 ft); July 29 (time unknown) 39 ft^3/s (2.56 ft).
1974: Nov. 3 (1800) 21 ft^3/s (2.13 ft); Nov. 6 (1930) 19 ft^3/s (2.07 ft); Dec. 1 (0800) 17 ft^3/s (2.01 ft); Dec. 4 (0430) 19 ft^3/s (2.08 ft); Dec. 9 (0330) 32 ft^3/s (2.41 ft); Mar. 27 (1800) 26 ft^3/s (2.25 ft); Apr. 19 (1730) 26 ft^3/s (2.25 ft).

16963900 LEAFU STREAM NEAR AUASI--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.06	.08	.60	.16	2.5	.34	.07	.06	.10	.04
2	.03	.03	.05	.10	.34	.23	2.9	.28	.07	.06	.08	.04
3	.03	.03	.05	.08	.28	.16	2.6	.71	.08	.07	.07	.04
4	.05	.03	.04	.06	.23	.18	.80	1.0	.08	.06	.07	.04
5	.03	.03	.08	.06	.20	.16	.55	.55	.07	.06	.07	.05
6	.03	.03	.06	.05	.20	.18	.23	.31	.07	.06	.07	.05
7	.03	.03	.05	.05	.20	.13	.18	.47	.07	.06	.07	.06
8	.03	.03	.04	.07	.16	.10	.18	.46	.07	.05	.07	.05
9	.03	.03	.12	.07	.15	.10	.16	.25	.07	.04	.07	.05
10	.03	.06	.07	.06	.15	.08	.15	.20	.06	.04	.07	.05
11	.04	.04	.08	.16	.13	.08	.15	.16	.06	.04	.08	.05
12	.03	.03	.52	.08	.15	.07	.15	.15	.06	.04	.07	.05
13	.03	.08	.20	.80	.49	.07	.13	.26	.07	.05	.07	.05
14	.03	.05	.11	.46	.38	.07	.13	.20	.07	.05	.07	.05
15	.03	.04	.07	.18	.25	.06	.11	.15	.06	.06	.07	.04
16	.03	.04	.07	.13	.18	.08	.11	.15	.06	.07	.06	.04
17	.03	.22	.11	.10	.15	.07	.11	.15	.06	.07	.06	.05
18	.04	.28	1.6	.08	.13	.06	.11	.16	.06	.20	.06	.06
19	.03	.07	1.4	.08	.87	.06	.11	.18	.06	.06	.07	.04
20	.03	.20	1.3	.07	.66	.06	1.2	.15	.06	.05	.07	.04
21	.03	.06	.55	.32	.28	.05	.55	.11	.06	.05	.06	.04
22	.03	.05	.25	.15	.55	.05	.28	.09	.32	.05	.06	.04
23	.03	.07	.16	.10	.23	.05	.18	.09	.16	.04	.05	.04
24	.03	.06	.11	.23	.16	.05	.15	.08	.08	.04	.05	.04
25	.03	.06	.10	.93	.18	.05	.11	.08	.07	.05	.08	.04
26	.04	.49	.07	5.0	.16	.06	.13	.07	.07	.13	.10	.04
27	.04	.13	.10	11	.13	.06	.11	.07	.06	.92	.06	.04
28	.04	.25	.11	5.4	.13	.07	.11	.07	.06	1.7	.05	.04
29	.04	.16	.07	2.8	---	.13	.16	.07	.06	.38	.05	.04
30	.04	.08	.11	1.4	---	.13	.50	.07	.06	.16	.05	.04
31	.04	---	.08	1.6	---	.34	---	.08	---	.11	.05	---
TOTAL	1.04	2.79	7.79	31.75	7.72	3.20	14.84	7.16	2.33	4.88	2.08	1.34
MEAN	.034	.093	.25	1.02	.28	.10	.49	.23	.078	.16	.067	.045
MAX	.05	.49	1.6	11	.87	.34	2.9	1.0	.32	1.7	.10	.06
MIN	.03	.03	.04	.05	.13	.05	.11	.07	.06	.04	.05	.04
AC-FT	2.1	5.5	15	63	15	6.3	29	14	4.6	9.7	4.1	2.7

CAL YR 1974 TOTAL 69.82 MEAN .19 MAX 5.1 MIN .03 AC-FT 138
WTR YR 1975 TOTAL 86.92 MEAN .24 MAX 11 MIN .03 AC-FT 172

PEAK DISCHARGE (BASE, 17 CFS, REVISED).--Jan. 26 (2200) 28 cfs (2.31 ft); Apr. 2 (2000) 31 cfs (2.37 ft).

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1975

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Hawaii, Island of Kauai				
16011000	Waiakoali Stream near Waimea	Lat 22°07'42", long 159°37'27", 0.3 mi (0.5 km) upstream from mouth and 12 mi (19 km) northeast of Waimea.	1.58 (4.09)	1909-13≠, 1914-17, 1919-25≠, 1961-62, 1964, 1966-70, 1972-75	5-12-75 6-17-75 8-14-75	2.3 1.4 1.0
16012000	Kauaikinana Stream near Waimea	Lat 22°08'12", long 159°37'58", 0.6 mi (1.0 km) upstream from mouth and 12 mi (19 km) northeast of Waimea.	.84 (2.18)	1911-13, 1915-17, 1919-25≠, 1961-62, 1964, 1966-75	5-12-75 6-16-75 8-14-75	1.1 .79 .61
16029500	Mokihana Stream near Waimea	Lat 21°59'38", long 159°40'07", 500 ft (152 m) upstream from mouth and 2.5 mi (4.0 km) north of Waimea.	4.83 (12.51)	1962, 1964-75	2-25-75 5-21-75 7- 7-75	4.2 .26 1.1
		Hawaii, Island of Oahu				
16201000	Right Branch of North Fork Kaukonahua Stream near Wahiawa	Lat 21°31'11", long 157°56'53", 200 ft (61 m) above confluence with Left Branch (revised) and 4.5 mi (7.2 km) east of Leilehua High School in Wahiawa.	1.17 (3.03)	1913-53≠, 1960-62, 1966, 1968-75	2-12-75 5- 9-75 6-24-75 8- 6-75 9-19-75	2.9 7.5 2.2 1.3 .52
16214000	Pearl Harbor Springs at Waiawa, near Pearl City	Lat 21°23'36", long 157°59'11", 0.7 mi (1.1 km) west of Pearl City and 1.5 mi (2.4 km) east of Waipahu Post Office.	-	1931-34≠, 1937-64≠, 1967-68, 1970-75	3- 3-75 6- 9-75	16 15
16224000	Pearl Harbor Springs at Kalauao, near Aiea	Lat 21°23'05", long 157°56'46", 300 ft (91 m) downstream from Highway 90 and 0.8 mi (1.3 km) west of Aiea Post Office.	-	1931-62≠, 1964-65≠, 1966-68, 1970-75	3- 3-75 6-10-75	20 19
16264100	Kahanaiki Stream at Highway 61, near Kailua	Lat 21°22'49", long 157°46'06", at bridge on Highway 61 and 1.9 mi (3.1 km) southwest of Kailua Post Office.	1.45 (3.76)	1960-63, 1965-66, 1971-75	3- 7-75 9-29-75	2.6 .42
16283400	Kahaluu Stream near Kahaluu	Lat 21°27'14", long 157°50'17", 600 ft (183 m) above Ahuimanu Stream and 0.6 mi (1.0 km) south of Kahaluu.	1.29 (3.34)	1962-63, 1966, 1972-75	3- 7-75 9-29-75	4.1 1.4
*16283480	Ahuimanu Stream near Kahaluu	Lat 21°27'06", long 157°50'13", at bridge on Ahuimanu Road and 0.8 mi (1.3 km) south of Kahaluu.	2.31 (5.98)	1962-63, 1965-66, 1968, 1972-75	9-29-75	.87

* Also a crest-stage partial-record station.
≠ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Hawaii, Island of Oahu--Continued				
16295995	Kahana Stream at Mauka trail crossing, near Kahana	Lat 21°32'17", long 157°53'29", 1.8 mi (2.9 km) upstream fron main bridge on Kamehaneha Highway and 2.8 mi (4.5 km) southwest of Kaaawa School.	3.18 (8.24)	1960-62, 1966, 1971-72, 1974-75	3-10-75 9-26-75	17 12
16297000	Kawa Stream near Kahana	Lat 21°32'33", long 157°53'00", 0.1 mi (0.2 km) above confluence with Kahana Stream (revised) and 1.0 mi (1.6 km) south of Kahana.	2.09 (5.41)	1914-17≠, 1958b, 1961-62, 1966, 1971-72, 1974-75	3-10-75 9-26-75	2.7 .36
		Hawaii, Island of Molokai				
16403400	Kapuhi Stream at altitude 1,000 ft (305 m) near Pelekunu	Lat 21°07'50", long 156°53'02", 500 ft (152 m) upstream from Kawailena Stream, 2.2 mi (3.5 km) south of former village of Pelekunu, and 5.4 mi (8.7 km) north of Kamalo.	.51 (1.32)	1968-75	10-22-74 2- 6-75 7- 1-75	.42 2.7 1.6
16403500	Kawailena Strean near Pelekunu	Lat 20°07'52", long 156°53'05", 800 ft (244 m) upstream from mouth, 2.2 mi (3.5 km) south of former village of Pelekunu, and 5.5 mi (8.8 km) north of Kamalo.	.65 (1.68)	1968-75	10-22-74 2- 6-75 7- 1-75	1.1 2.5 1.8
16403600	Kapuhi Stream near Pelekunu	Lat 21°07'57", long 156°52'56", on left bank 400 ft (122 m) downstream from Kawailena Strean, 2.1 mi (3.4 km) south of former village of Pelekunu, and 5.6 mi (9.0 km) north of Kamalo.	1.20 (3.11)	1968-70≠, 1974-75	10-22-74 2- 6-75 7- 1-75	1.6 5.4 3.3
16403700	Kawainui Stream at altitude 1,000 ft (305 m) near Pelekunu	Lat 20°07'46", long 156°52'31", 400 ft (122 m) upstream from Kawaipoko Stream, 2.4 mi (3.9 km) south of former village of Pelekunu, and 5.4 mi (8.7 km) north of Kamalo.	.79 (2.05)	1968-75	10-21-74 2- 5-75 7- 2-75	1.2 6.5 2.3
16403800	Kawaipoko Stream near Pelekunu	Lat 21°07'48", long 156°52'30", 300 ft (91 m) upstream from mouth, 2.4 mi (3.9 km) south of former village of Pelekunu, and 5.4 mi (8.7 km) north of Kamalo.	.26 (.67)	1968-75	10-21-74 2- 5-75 7- 2-75	.19 2.0 .70
		Hawaii, Island of Maui				
*16502000	Hahalawe Gulch near Kipahulu	Lat 20°40'54", long 156°02'50", at old ditch intake, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) northeast of Kipahulu Church.	.43 (1.11)	1927-69≠, 1970-75	5-14-75 7-10-75 8- 7-75	2.1 1.7 1.8
		Mariana Islands, Island of Saipan				
16800500	Hasngot Stream	Lat 15°12'44" N., long 145°46'23" E., 750 ft (229 m) upstream from right-bank tributary, 0.5 mi (0.8 km) upstream from mouth, and 3.4 mi (5.5 km) east of Garapan.	.43 (1.11)	1968-75	1-30-75 2- 6-75 3-13-75 7-18-75 8-28-75 9-26-75	.16 .44 .12 .19 .28 .61
		Mariana Islands, Island of Guam				
16807300	Fonte River at dam, near Nimitz Hill	Lat 13°27'26" N., long 144°43'37" E., at old diversion dam, 0.4 mi (0.6 km) south of Navy Headquarters building on Nimitz Hill, and 1.3 mi (2.1 km) south of Coontz Junction at Adelup.	.69 (1.79)	1961-73, 1975	3-12-75 4-23-75 5-22-75 6-25-75	.12 .11 .09 .06
16808200	Faata Springs at Agat	Lat 13°22'35" N., long 144°39'47" E., 0.7 mi (1.1 km) south of Agat Junior High School and 0.8 mi (1.3 km) southwest of Santa Rita Catholic Church.	-	1963-73, 1975	3-12-75 4-23-75 5-22-75 6-25-75	.14 .16 .14 .05

* Also a crest-stage partial-record station.
≠ Operated as a continuous-record gaging station.
b Previously published with discharge measurements at miscellaneous sites.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Mariana Islands, Island of Guam--Continued				
16808500	Taleyfac River near Agat	Lat 13°21'35" N., long 144°38'57" E., 800 ft (244 m) upstream from bridge on Highway 2 at Biyae and 1.7 mi (2.7 km) south of Mount Carmel School in Agat.	a1.96 (5.08)	1959-70, 1972-73, 1975	3-12-75 4-23-75 5-22-75 6-25-75	0.59 .32 .39 .42
16809200	Cetti River above tributary, near Umatac	Lat 13°18'59" N., long 144°39'24" E., 20 ft (6.1 m) upstream from left-bank tributary, 0.2 mi (0.3 km) upstream from mouth, and 1.3 mi (2.1 km) north of Sanchez School in Umatac.	.37 (.96)	1961-62, 1964-66, 1969-70, 1972-73, 1975	3-18-75 5- 2-75 5-29-75 6-30-75	.21 .18 .17 .12
16809400	Cetti River near Umatac	Lat 13°18'58" N., long 144°39'23" E., 30 ft (9.1 m) downstream from left-bank tributary, 0.2 mi (0.3 km) upstream from mouth, and 1.3 mi (2.1 km) north of Sanchez School in Umatac.	a.75 (1.94)	1960-67≠, 1968-70, 1972-73, 1975	3-18-75 5- 2-75 5-29-75 6-30-75	.30 .25 .22 .12
16809600	La Sa Fua River near Umatac	Lat 13°18'23" N., long 144°39'45" E., 0.6 mi (1.0 km) north of Sanchez School in Umatac and 0.8 mi (1.3 km) upstream from mouth.	1.06 (2.75)	1953-60≠, 1961-63, 1966, 1969-70, 1972-73, 1975	3-18-75 5 -2-75 5-29-75 6-30-75	.50 .32 .31 .28
16812000	Madog River near Umatac	Lat 13°17'24" N., long 144°40'30" E., 50 ft (15 m) downstream from right-bank tributary and 1.1 mi (1.8 km) southeast of Sanchez School in Umatac.	.36 (.93)	1960-75	3-13-75 4-22-75 5-23-75 6-26-75	.10 .15 .08 .04
16813000	Piga Stream near Umatac	Lat 13°17'56" N., long 144°40'49"E., on left bank of Astaban River right-bank tributary, 0.3 mi (0.5 km) west of Mount Bolanos, and 1.3 mi (2.1 km) east of Sanchez School in Umatac.	-	1955, 1961-65, 1967-75	3-13-75 4-22-75 5-23-75 6-26-75	.16 .18 .15 .13
16814000	Astaban River at Umatac	Lat 13°17'41" N., long 144°40'15" E., 200 ft (61 m) upstream from mouth and 0.7 mi (1.1 km) southeast of Sanchez School in Umatac.	.38 (.98)	1960-75	3-13-75 4-22-75 5-23-75 6-26-75	.07 .06 .05 e.01
16815800	Laelae River at Umatac	Lat 13°17'50" N., long 144°39'51" E., 100 ft (30 m) upstream from mouth and 0.2 mi (0.3 km) east of Sanchez School in Umatac.	.96 (2.49)	1960-75	3-13-75 4-22-75 5-23-75 6-26-75	.55 .40 .21 .10
16817000	Toguan River near Umatac	Lat 13°17'03" N., long 144°39'36" E., at Highway 4 bridge, 100 ft (30 m) upstream from mouth, and 0.9 mi (1.4 km) south of Umatac.	.48 (1.24)	1952, 1960-75	3-13-75 4-22-75 5-23-75 6-26-75	.10 .07 .06 e.01
16820000	Geus River above Siligin Spring tributary, near Merizo	Lat 13°16'38" N., long 144°40'56" E., 100 ft (30 m) upstream from Siligin Spring tributary, 0.1 mi (0.2 km) upstream from dam, and 1.5 mi (2.4 km) northeast of Merizo School.	.51 (1.32)	1960-75	3-13-75 4-22-75 5-23-75 6-26-75	.05 .07 .06 .06
16820500	Siligin Spring near Merizo	Lat 13°16'38" N., long 144°40'55" E., 120 ft (37 m) upstream from mouth of Siligin Spring tributary, 0.1 mi (0.2 km) upstream from diversion dam, and 1.5 mi (2.4 km) northeast of Merizo School.	-	1954, 1961-75	4-22-75	.07
16820700	Geus River below Siligin Spring tributary, near Merizo	Lat 13°16'35" N., long 144°40'53" E., 100 ft (30 m) upstream from diversion dam, 300 ft (91 m) downstream from Siligin Spring tributary, and 1.4 mi (2.3 km) northeast of Merizo School.	.68 (1.76)	1962-75	3-13-75 4-22-75 5-23-75 6-26-75	.23 .16 .12 .12
16825000	Ajayan River near Inarajan	Lat 13°15'16" N., long 144°42'56" E., 0.4 mi (0.6 km) upstream from mouth and 2.4 mi (3.9 km) southwest of Inarajan Catholic Church.	1.16 (3.00)	1962-73, 1975	3-14-75 4-24-75 5-27-75 6-27-75	.19 .26 .08 .09

≠ Operated as a continuous-record gaging station.
a Revised.
e Estimated.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Mariana Islands, Island of Guam--Continued				
16828000	Agfayan River near Inarajan	Lat 13°16'05" N., long 144°43'42" E., 0.6 mi (1.0 km) upstream from mouth and 1.2 mi (1.9 km) west of Inarajan Catholic Church.	1.66 (4.30)	1962-65, 1967-73, 1975	3-14-75 4-26-75 5-27-75 6-27-75	0.19 .42 .07 .04
16830000	Pasanano River near Inarajan	Lat 13°16'59" N., long 144°43'26" E., 25 ft (7.6 m) upstream from confluence with Yledigao River and 1.7 mi (2.7 km) northwest of Inarajan Catholic Church.	1.42 (3.68)	1960-73, 1975	3-14-75 4-24-75 5-27-75 6-27-75	1.4 1.9 .48 .43
16831000	Yledigao River near Inarajan	Lat 13°17'00" N., long 144°43'26" E., 75 ft (23 m) upstream from confluence with Pasanano River and 1.7 mi (2.7 km) northwest of Inarajan Catholic Church.	1.08 (2.80)	1960-73, 1975	3-14-75 6-24-75 5-27-75 6-27-75	1.2 1.2 .51 .52
16833000	Fintasa River near Inarajan	Lat 13°17'18" N., long 144°43'54" E., 100 ft (30 m) upstream from falls, 0.4 mi (0.6 km) upstream from confluence with Fensol River, and 1.5 mi (2.4 km) northwest of Inarajan Catholic Church.	.80 (2.07)	1960-73, 1975	3-14-75 4-24-75 5-27-75	1.0 .49 .23
16834000	Fensol River near Inarajan	Lat 13°17'09" N., long 144°44'08" E., 300 ft (91 m) upstream from confluence with Fintasa River and 1.1 mi (1.8 km) northwest of Inarajan Catholic Church.	.40 (1.04)	1960-73, 1975	3-14-75 4-24-75 5-27-75	.30 .11 .07
16842000	Asalonso River near Talofofo	Lat 13°19'43" N., long 144°45'34" E., 10 ft (3.0 m) downstream from left-bank tributary, 500 ft (152 m) downstream from bridge on Highway 4, and 1.6 mi (2.6 km) south of Talofofo.	1.85 (4.79)	1952, 1961-73, 1975	3-17-75 4-23-75 6-27-75	.42 .17 .17
16853000	Ugum River above Bubulao River, near Talofofo	Lat 13°19'08" N., long 144°43'46" E., 50 ft (15 m) upstream from Bubulao River, 0.8 mi (1.3 km) northwest of NASA Tracking Station, and 2.8 mi (4.5 km) southwest of Talofofo.	a2.66 (6.89)	1961-70, 1973, 1975	3-17-75 4-30-75 5-15-75 6- 9-75 6-20-75	2.2 1.8 2.2 1.6 1.5
16854000	Bubulao River near Talofofo	Lat 13°19'08" N., long 144°43'45" E., 50 ft (15 m) upstream from mouth, 0.8 mi (1.3 km) northwest of NASA Tracking Station, and 2.8 mi (4.5 km) southwest of Talofofo.	a2.93 (7.59)	1961-70, 1973, 1975	3-17-75 4-30-75 5-15-75 6- 9-75 6-20-75	3.3 3.2 2.3 2.3 2.2
16854500	Ugum River above Talofofo Falls, near Talofofo	Lat 13°19'16" N., long 144°44'01" E., 300 ft (91 m) upstream from Talofofo Falls and 0.9 mi (1.4 km) north of NASA Tracking Station.	5.76 (14.92)	1973, 1975	6- 7-73 4-30-75 5-15-75 6- 9-75 6-20-75 7- 3-75	c4.5 3.7 4.6 3.4 3.6 3.8
16855000	Ugum River near Talofofo	Lat 13°20'02" N., long 144°44'55" E., 0.4 mi (0.6 km) upstream from confluence with Talofofo River, 1.3 mi (2.1 km) south of Talofofo, and 4.2 mi (6.8 km) north of Inarajan.	a7.13 (18.47)	1952-71≠, 1973, 1975	3-17-75 4-30-75 5-15-75 6- 9-75 6-20-75 7-13-75	7.5 6.0 5.4 4.8 4.4 5.1
16859000	Manengon River near Yona	Lat 13°24'02" N., long 144°45'01" E., 200 ft (61 m) downstream from left-bank tributary, 0.2 mi (0.3 km) upstream from mouth, and 1.7 mi (2.7 km) west of Saint Francis School at Yona.	a2.04 (5.28)	1960-62, 1964-66, 1968-70, 1973, 1975	5- 1-75 6- 3-75 6-25-75	.17 .09 .08
16867000	Janum Spring near Yigo	Lat 13°30'56" N., long 144°54'47" E., in cave at sea level in limestone cliff on edge of reef, 1.3 mi (2.1 km) south of Mount Santa Rosa, and 2.2 mi (3.5 km) southeast of Yigo.	-	1953-56, 1958, 1960-62, 1964-65, 1967-70, 1973, 1975	3-31-75 5-14-75	2.9 2.4

≠ Operated as a continuous-record gaging station.
a Revised.
c Not previously published.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Caroline Islands, Palau Islands				
16890620	Ngechutrong River, Babelthuap	Lat 7°36'08" N., long 134°35'25" E., 300 ft (91 m) upstream from Adeiddo River and 0.9 mi (1.4 km) northwest of Mount Megilon.	0.24 (.62)	1974-75	11- 4-74	3.9
					1- 7-75	2.4
					2-18-75	.94
					3- 7-75	.62
					3-30-75	.56
					4-29-75	1.4
					5-21-75	2.9
					6-12-75	2.6
					7-14-75	2.0
					8-12-75	2.3
					9-16-75	1.3
16890650	Galkatan River, Babelthuap	Lat 7°35'45" N., long 134°34'49" E., 0.9 mi (1.4 km) upstream from Adeiddo River and 1.5 mi (2.4 km) west of Mount Megilon.	1.50 (3.88)	1974-75	1- 7-75	12
					2-18-75	7.2
					3- 7-75	3.0
					3-30-75	5.2
					4-29-75	7.1
					5-22-75	9.8
					7-20-75	11
					8-27-75	11
					9-19-75	6.3
16890700	Almiokan River, Babelthuap	Lat 7°31'12" N., long 134°33'51" E., 0.5 mi (0.8 km) upstream from unnamed tributary and 4.6 mi (7.4 km) northeast of Ngatpang village.	7.05 (18.26)	1973-75	11-23-74	88
					2-10-75	26
					3- 8-75	11
					4- 2-75	14
					6-19-75	102
					7-19-75	27
					9-17-75	22
16890800	Ngatpang River, Babelthuap	Lat 7°27'40" N., long 134°32'15" E., 0.2 mi (0.3 km) upstream from unnamed tributary and 0.4 mi (0.6 km) southeast of Ngatpang village.	.35 (.91)	1973-75	11-23-74	2.1
					2-10-75	1.0
					3- 8-75	.45
					4- 2-75	.67
					6-19-75	5.4
					7-19-75	1.6
					9-17-75	.87
16891320	Kumekumeyel River, Babelthuap	Lat 7°23'01" N., long 134°33'34" E., 100 ft (30 m) upstream from confluence with Gaden River, 1.1 mi (1.8 km) west of Mount Kabekobekushi, and 1.9 mi (3.1 km) north of Airai.	1.55 (4.02)	1970-75	11-29-74	6.4
					3-13-75	2.4
					4-17-75	2.4
					5-15-75	4.8
					7-24-75	8.9
					8- 8-75	11
16891500	Geligal Marsh outlet, Babelthuap	Lat 7°36'07" N., long 134°38'08" E., 0.7 mi (1.1 km) northeast of Mount Gulitel and 1.6 mi (2.6 km) southwest of Uliman village.	.34 (.88)	1971-75	3-18-75	.48
					4- 4-75	.27
16891700	Unnamed west coast stream, Arakabesan	Lat 7°21'14" N., long 134°27'10" E., 0.1 mi (0.2 km) upstream from mouth and 0.15 mi (0.24 km) north of village of Arakabesan.	.03 (.08)	1970-75	10- 1-74	.03
					10-31-74	.13
					1-28-75	.12
					3-12-75	.48
					4-18-75	.05
					5-29-75	.11
					7- 1-75	.20
					7-23-75	.14
					8-26-75	.09
16891750	Unnamed south coast stream, Arakabesan	Lat 7°20'41" N., long 134°27'29" E., 0.1 mi (0.2 km) upstream from mouth and 0.6 mi (1.0 km) southeast of village of Arakabesan.	.03 (.08)	1970-75	10- 1-74	.04
					10-31-74	.16
					1-28-75	.18
					3-12-75	.03
					4-18-75	.02
					5-29-75	.05
					7- 1-75	.13
					7-23-75	.12
					8-26-75	.06
16891770	Unnamed west coast stream, Malakal	Lat 7°19'44" N., long 134°27'25" E., 200 ft (61 m) upstream from mouth and 1.5 mi (2.4 km) southwest of Madalai.	.01 (.03)	1971-75	10- 1-74	.01
					10-31-74	.02
					1-28-75	.02
					5-29-75	.02
					7- 7-75	.03
					7-23-75	.01
					8-26-75	<.01

< Less than.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Caroline Islands, Palau Islands--Continued				
16891780	Unnamed north coast stream, Malakal	Lat 7°19'51" N., long 134°27'33" E., 0.2 mi (0.3 km) upstream from mouth and 1.3 mi (2.1 km) southwest of Madalai.	0.02 (.05)	1971-75	10- 1-74 10-31-74 1-28-75 3-13-75 5-29-75 7- 7-75 7-23-75 8-26-75	0.02 .04 .04 .01 .04 .09 .03 .01
		Caroline Islands, Yap Islands				
16892500	Tamaney Stream, Yap	Lat 9°29'45" N., long 138°05'34" E., at abandoned German dam, 0.5 mi (0.8 km) northwest of Inuf, and 2.3 mi (3.7 km) southwest of Colonia.	.21 (.54)	1968-75	4- 4-75 5- 2-75 6-20-75 7-15-75 8-29-75	0 .25 1.6 .52 .23
16892600	Ripu Stream, Yap	Lat 9°30'05" N., long 138°06'02" E., 1,000 ft (305 m) upstream from mouth and 1.6 mi (2.6 km) southwest of Colonia.	.24 (.62)	1968-75	4- 4-75 5- 2-75 6-20-75 7-15-75 8-29-75	0 .22 1.5 .85 .33
16893300	Bileiy Spring, Gagil-Tomil	Lat 9°32'19" N., long 138°10'59" E., on right bank at Binau, 200 ft (61 m) downstream from main spring, and 0.6 mi (1.0 km) upstream from mouth.	-	1968-74≠, 1975	10- 3-74 11- 9-74 4- 2-75 4-30-75 7- 8-75 8-27-75	.05 .45 e.01 .10 .18 .16
16893310	Bileiy Stream, Gagil-Tomil	Lat 9°32'15" N., long 138°11'11" E., 0.3 mi (0.5 km) downstream from Bileiy Spring, 0.4 mi (0.6 km) upstream from mouth, and 0.4 mi (0.6 km) south of Gaţjapar.	.15 (.39)	1968-75	10- 3-74 11- 9-74 12- 3-74 1- 2-75 2-13-75 4- 2-75 4-30-75 5-20-75 7- 8-75 8-27-75	.32 1.4 .67 .40 .36 .06 .29 .19 .80 .36
		Caroline Islands, Truk Islands				
16895100	Afeibung Stream, Tol	Lat 7°20'55" N., long 151°37'22" E., 0.3 mi (0.5 km) upstream from mouth and 0.6 mi (1.0 km) northwest of Mount Tumuital.	.08 (.21)	1968-71, 1973-75	10-10-74 4-17-75 7-10-75 7-17-75 8-30-75 9- 3-75	1.2 .04 1.2 .08 1.2 .07
		Caroline Islands, Island of Ponape				
16898000	Lui River tributary No. 2	Lat 6°55'20" N., long 158°12'55" E., 0.3 mi (0.5 km) upstream from mouth and 1.5 mi (2.4 km) southeast of Rekisau.	.04 (.10)	1970-75	10- 9-74 10-22-74 11- 5-74	1.0 .40 .44
16898500	Pilenkiel River	Lat 6°56'23" N., long 158°11'26" E., 100 ft (30 m) downstream from right-bank tributary, 0.6 mi (1.0 km) west of Rekisau, and 0.9 mi (1.4 km) upstream from mouth.	1.93 (5.00)	1971-73, 1975	11- 6-74 11-29-74	7.1 7.2
16898550	Kirictilang River	Lat 6°55'25" N., long 158°10'15" E., at small right-bank tributary, 0.1 mi (0.2 km) downstream from road bridge, and 0.1 mi (0.2 km) southeast of Tolen Palikir Mountain.	.96 (2.49)	1972-73, 1975	10-10-74 10-30-74 11- 6-74 11-29-74 4- 2-75	8.0 6.6 6.0 6.9 1.8
		Caroline Islands, Island of Kusaie				
16899780	Tafeyat River	Lat 5°19'20" N., long 163°01'45" E., 100 ft (30 m) downstream from former Japanese dam, 1.0 mi (1.6 km) upstream from mouth, and 1.4 mi (2.2 km) east of Mount Crozer.	.47 (1.22)	1974-75	4- 2-75	1.2

≠ Operated as a continuous-record gaging station.
e Estimated.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Caroline Islands, Island of Kusaie--Continued				
16899850	Pakusrik River	Lat 5°21'40" N., long 163°01'45" E., 80 ft (24 m) downstream from new diversion dam, 0.5 mi (0.8 km) upstream from mouth, and 0.9 mi (1.4 km) east of Mount Buache.	0.40 (1.04)	1974-75	4- 2-75	0.62
		Samoa Islands, Island of Tutuila				
16902500	Vaisa Stream at Onenoa	Lat 14°15'27" S., long 170°34'44" W., 30 ft (9 m) downstream from unnamed tributary, 0.1 mi (0.2 km) southeast of Onenoa, and 0.1 mi (0.2 km) upstream from mouth.	.12 (.31)	1964-65, 1968-69, 1972, 1974-75	11-13-74 9-30-75	.09 .10
16903000	Afimuao Stream at Onenoa	Lat 14°15'34" S., long 170°34'53" W., 200 ft (61 m) downstream from unnamed tributary, 0.2 mi (0.3 km) southwest of Onenoa, and 0.2 mi (0.3 km) upstream from mouth.	.06 (.16)	1959-61, 1963-65, 1968-69, 1974-75	11-13-74 9-30-75	.01 .03
16905000	Lepa Stream at Aoa	Lat 14°16'21" S., long 170°35'17" W., 0.5 mi (0.8 km) upstream from mouth and 0.6 mi (1.0 km) southwest of Aoa.	.09 (.23)	1959-61, 1963-65, 1967-71, 1974-75	11-12-74	.01
16911000	Pago Stream tributary at Afono	Lat 14°16'07" S., long 170°38'56" W., 200 ft (61 m) upstream from mouth and 0.3 mi (0.5 km) southeast of Afono.	.10 (.26)	1959-60, 1962-64, 1971, 1974-75	11-21-74	.06
16916000	Leua Stream at Fagasa	Lat 14°17'24" S., long 170°43'00" W., 0.2 mi (0.3 km) northeast of Fagasa and 0.2 mi (0.3 km) upstream from mouth.	.14 (.36)	1959-61, 1963-65, 1968-71, 1974-75	11- 4-74 9-23-75	.01 .02
16917000	Leele Stream at Fagasa	Lat 14°17'32" S., long 170°43'01" W., 0.1 mi (0.2 km) southeast of Fagasa and 0.2 mi (0.3 km) upstream from mouth.	.19 (.49)	1959-61, 1963-65, 1968, 1971, 1974-75	11- 4-74 9-23-75	.01 .12
16919000	Leaveave Stream near Aasu	Lat 14°18'28" S., long 170°45'06" W., 0.6 mi (1.0 km) upstream from mouth and 0.9 mi (1.4 km) southeast of Aasu.	.60 (1.55)	1959-60, 1962-63, 1968, 1974-75	10-16-74	.18
16919200	Leaveave Stream tributary No. 2 near Aasu	Lat 14°18'24" S., long 170°45'03" W., 50 ft (15 m) upstream from mouth and 0.8 mi (1.3 km) southeast of Aasu.	.16 (.41)	1960, 1962-63, 1968, 1974-75	10-16-74	.05
16919400	Leaveave Stream tributary No. 1 near Aasu	Lat 14°18'21" S., long 170°45'01" W., 50 ft (15 m) upstream from mouth and 0.8 mi (1.3 km) southeast of Aasu.	.15 (.39)	1960, 1962-63, 1968, 1974-75	10-16-74	.03
16920000	Aasu Stream near Aasu	Lat 14°18'16" S., long 170°45'29" W., 300 ft (91 m) downstream from 100 ft (30 m) waterfall, 0.5 mi (0.8 km) south of Aasu, and 0.5 mi (0.8 km) upstream from mouth.	.82 (2.12)	1959-63, 1968, 1974-75	10-16-74	.21
16924000	Matavai Stream at Fagamalo	Lat 14°18'21" S., long 170°48'23" W., 0.2 mi (0.3 km) southeast of Fagamalo and 0.3 mi (0.5 km) upstream from mouth.	.17 (.44)	1959-60, 1962-63, 1968, 1975	10-16-74	.03
16925000	Maloata Stream at Maloata	Lat 14°18'44" S., long 170°48'36" W., 0.4 mi (0.6 km) southeast of Maloata and 0.4 mi (0.6 km) upstream from mouth.	.74 (1.92)	1959-60, 1962-63, 1968, 1975	10-16-74	.29
16926000	Vaitele Stream at Poloa	Lat 14°19'18" S., long 170°49'36" W., 750 ft (229 m) upstream from unnamed tributary on right and 0.4 mi (0.6 km) east of Poloa.	.11 (.28)	1959-61, 1963-64, 1969-70, 1974-75	9-22-75	.14

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Samoa Islands, Island of Tutuila--Continued				
16927000	Puna Stream at Amanave	Lat 14°19'39" S., long 170°49'48" W., 0.2 mi (0.3 km) upstream from Maululu Stream and 0.2 mi (0.3 km) north of Amanave.	0.03 (.08)	1959-61, 1963-65, 1968-69, 1974-75	9-22-75	0.07
16929000	Vaialae Stream at Utumea	Lat 14°19'56" S., long 170°48'50" W., 0.1 mi (0.2 km) north of Utumea and 0.1 mi (0.2 km) upstream from mouth.	.15 (.39)	1959-61, 1963-65, 1968-71, 1974-75	9-22-75	.16
16932000	Asili Stream near Asili	Lat 14°19'46" S., long 170°47'42" W., 0.4 mi (0.6 km) north of Asili and 0.5 mi (0.8 km) upstream from mouth.	.55 (1.42)	1959-61, 1963-65, 1968, 1970, 1974-75	11-21-74 9-25-75	1.8 1.1
16932500	Asili Stream at Asili	Lat 14°20'04" S., long 170°47'40" W., 100 ft (30 m) upstream from highway bridge at Asili and 0.1 mi (0.2 km) upstream from mouth.	.66 (1.71)	1958-59≠, 1960-61, 1963-65, 1967-69, 1974-75	9-25-75	.97
16942000	Sauino Stream near Nuuuli	Lat 14°18'53" S., long 170°43'03" W., 0.6 mi (1.0 km) upstream from mouth and 1.3 mi (2.1 km) west of Nuuuli.	.09 (.23)	1959-61, 1963-65, 1968-69, 1971, 1974-75	9-25-75	.08
16943000	Mataalii Stream near Nuuuli	Lat 14°18'42" S., long 170°42'51" W., 0.6 mi (1.0 km) upstream from mouth and 1.1 mi (1.8 km) northwest of Nuuuli.	.14 (.36)	1959-61, 1963-65, 1968-69, 1974-75	9-25-75	.20
16944000	Papa Stream near Nuuuli	Lat 14°18'31" S., long 170°42'29" W., 0.3 mi (0.5 km) upstream from Tauese Stream and 0.9 mi (1.4 km) northwest of Nuuuli.	.57 (1.48)	1959-61, 1963-64, 1967-68, 1974-75	4- 3-75 9-26-75	9.7 .74
16945000	Amailo Stream at Nuuuli	Lat 14°18'31" S., long 170°41'48" W., 0.3 mi (0.5 km) upstream from mouth and 0.5 mi (0.8 km) north of Nuuuli.	.19 (.49)	1959-61, 1963-64, 1968-69, 1974-75	9-29-75	.08
16946000	Avau Stream at Faganeanea	Lat 14°18'34" S., long 170°41'35" W., 0.2 mi (0.3 km) upstream from mouth and 0.4 mi (0.6 km) southwest of Faganeanea.	.09 (.23)	1959-61, 1963-65, 1967-69, 1974-75	9-29-75	.08
16947000	Afu Stream at Faganeanea	Lat 14°18'16" S., long 170°41'25" W., 0.2 mi (0.3 km) northwest of Faganeanea and 0.3 mi (0.5 km) upstream from mouth.	.22 (.57)	1959-61, 1963-65, 1967-69, 1971, 1974-75	9-29-75	.05
16949700	Vaima Stream at Pago Pago	Lat 14°17'30" S., long 170°42'20" W., 0.6 mi (1.0 km) upstream from mouth and 1.1 mi (2.8 km) southwest of Pago Pago.	.05 (.13)	1959-65, 1967-68, 1970, 1975	11- 4-74 9-23-75	.01 .06
16949800	Utumoa Stream near Pago Pago	Lat 14°17'35" S., long 170°42'20" W., 0.6 mi (1.0 km) upstream from mouth and 1.1 mi (1.8 km) south of Pago Pago.	.07 (.18)	1960-61, 1963-65, 1967-71, 1974-75	11- 4-74 11- 4-74 9-23-75	.11 .04 .15
16950500	Utumoa Stream at Pago Pago	Lat 14°17'21" S., long 170°42'21" W., 150 ft (46 m) downstream from pipeline diversion, 0.3 mi (0.5 km) upstream from mouth, and 0.8 mi (1.3 km) south of Pago Pago.	.17 (.44)	1957-58≠, 1960-65, 1967-68, 1974-75	9-23-75	.08
16952500	Lalolamauta Stream at Aua	Lat 14°16'25" S., long 170°39'31" W., 300 ft (91 m) upstream from Amano Stream and 0.4 mi (0.6 km) east of Aua.	.14 (.36)	1959-61, 1963-65, 1968-70, 1974-75	11- 6-74 9-24-75	.12 .08

≠ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Samoa Islands, Island of Tutuila--Continued				
16953000	Matagimalie Stream at Aua	Lat 14°16'19" S., long 170°39'50" W., 0.2 mi (0.3 km) north of Aua and 0.2 mi (0.3 km) upstream from mouth.	0.03 (.08)	1959-61, 1963-65, 1968-69, 1971, 1974-75	11- 6-74 9-24-75	0.01 .04
16955000	Anasosopo Stream at Anasosopo	Lat 14°17'14" S., long 170°39'44" W., 400 ft (122 m) upstream from highway bridge at Anasosopo and 0.1 mi (0.2 km) upstream from mouth.	.05 (.13)	1959-61, 1963-65, 1968, 1971, 1974-75	11- 6-74 9-24-75	.01 .05
16956000	Vaitele Stream at Lauliituai	Lat 14°17'05" S., long 170°39'07" W., 200 ft (61 km) upstream from left-bank tributary, 0.5 mi (0.8 km) north of Lauliituai and 0.7 mi (1.1 km) upstream from mouth.	.19 (.49)	1959-61, 1963-65, 1968, 1970, 1974-75	11- 5-74 9-24-75	.24 .28
16956500	Maga Stream at Lauliituai	Lat 14°17'12" S., long 170°39'09" W., 0.1 mi (0.2 km) upstream from mouth and 0.4 mi (0.6 km) north of Lauliituai.	.05 (.13)	1959-61, 1963-65, 1968, 1974-75	9-24-75	.01
16957000	Lesea Stream at Lauliituai	Lat 14°17'19" S., long 170°39'00" W., 0.1 mi (0.2 km) upstream from mouth and 0.3 mi (0.5 km) northeast of Lauliituai.	.02 (.05)	1959-61, 1963-65, 1968, 1974-75	11- 6-74 9-24-75	.14 .12
16958000	Visa Stream at Alega	Lat 14°17'21" S., long 170°38'37" W., 0.2 mi (0.3 km) upstream from mouth and 0.5 mi (0.8 km) southwest of Alega.	.10 (.26)	1959-61, 1963-65, 1967-69, 1971, 1974-75	11- 5-74 9-24-75	.01 .05
16958500	Visa Stream tributary at Aumi	Lat 14°17'24" S., long 170°38'35" W., 200 ft (61 m) upstream from mouth and 0.3 mi (0.5 km) northeast of Aumi.	.02 (.05)	1959-61, 1963-65, 1967-69, 1971, 1974-75	11- 5-74 9-24-75	.08 .10
16959000	Visa Stream at Aumi	Lat 14°17'27" S., long 170°38'36" W., 100 ft (30 m) upstream from highway bridge and 0.2 mi (0.3 km) east of Aumi.	.16 (.41)	1957-58≠, 1963-64, 1968-71, 1974-75	11- 5-74 9-24-75	.10 .14
16963000	Televai Stream at Amouli	Lat 14°16'25" S., long 170°34'55" W., 50 ft (15 m) downstream from right-bank tributary, 0.1 mi (0.2 km) upstream from Tuavaa Stream, and 0.3 mi (0.5 km) north of Amouli.	.10 (.26)	1959-61, 1963-65, 1968-71, 1974-75	11-12-74	.01
16965000	Vaialili Stream	Lat 14°16'15" S., long 170°34'08" W., 0.2 mi (0.3 km) upstream from Vaifusi Stream and 0.5 mi (0.8 km) southwest of Alao.	.10 (.26)	1959-61, 1963-65, 1968, 1970-71, 1974-75	9-30-75	.07
16966000	Vaifusi Stream at Alao	Lat 14°16'08" S., long 170°34'05" W., 400 ft (122 m) upstream from mouth and 0.3 mi (0.5 km) west of Alao.	.02 (.05)	1959-61, 1963-65, 1968, 1970, 1974-75	11-13-74 9-30-75	.01 .01

≠ Operated as a continuous-record gaging station.

Crest-stage partial-record stations

Prior to 1973, crest-stage partial-record station records for the State of Hawaii were published in an annual progress report entitled "An Investigation of Floods in Hawaii." The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements or peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1975

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Kauai					
16038000	Waimea River at Waimea	Lat 21°57'23", long 159°39'59", 150 ft (46 m) upstream from highway bridge at Waimea and 0.2 mi (0.3 km) upstream from mouth.	86.5 (224.0)	1944-75d	1-31-75	8.77	-
16052000	Hanapepe River at Hanapepe	Lat 21°54'47", long 159°35'33", 400 ft (122 m) upstream from bridge on Highway 50 and 0.5 mi (0.8 km) upstream from mouth.	26.6 (68.9)	1950-75d	1-31-75	8.36	-
**16052500	Lawai Stream near Koloa	Lat 21°54'11", long 159°30'21", on right bank at private road bridge, 0.9 mi (1.4 km) upstream from mouth and 2.4 mi (3.9 km) southwest of Koloa.	6.62 (17.15)	1962-63, 1964-72≠, 1973-75	1-31-75	11.37	5,810
**16055000	Huleia Stream near Lihue	Lat 21°57'20", long 159°25'23", at highway bridge, 3.7 mi (6.0 km) southwest of Lihue, and 4.5 mi (7.2 km) upstream from mouth.	17.6 (45.6)	1912-15≠, 1962-67, 1968-70≠, 1971-75	1-31-75	19.87	18,400
16071800	Wailua River near Kapaa	Lat 22°03'00", long 159°20'26", at State Park 600 ft (183 m) upstream from highway bridge, 850 ft (259 m) upstream from mouth, and 2.5 mi (4.0 km) southwest of Kapaa.	52.6 (136.2)	1962-75d	1-31-75	6.57	-
16073500	Konohiki Stream near Kapaa	Lat 22°04'01", long 159°20'21", at culvert on private road, 1.8 mi (2.9 km) upstream from mouth and 2.4 mi (3.9 km) southwest of Kapaa High School.	3.38 (8.75)	1964-67, 1970-75	2- 5-75	8.53	1,220
16081200	Akulikuli Stream near Kapaa	Lat 22°06'25", long 159°22'07", at Kahuna road crossing, 800 ft (244 m) upstream from mouth and 3.5 mi (5.6 km) northwest of Kapaa armory.	.40 (1.04)	1964-75	1-31-75	5.60	525
16084500	Kapaa Stream at old highway crossing, near Kealia	Lat 22°06'28", long 159°19'52", at abutment of old highway bridge, 100 ft (30 m) upstream from road crossing, 1.4 mi (2.2 km) northwest of Kealia and 2.1 mi (3.4 km) upstream from mouth.	14.0 (36.3)	1962-75	1-31-75	17.70	16,200
16085000	Homaikawaa Stream near Kealia	Lat 22°07'23", long 159°18'12", at culvert on Highway 56, 1.6 mi (2.6 km) southeast of Anahola School and 1.6 mi (2.6 km) north of Kealia.	.85 (2.20)	1964-75	1-31-75	7.90	485
16097900	Puukumu Stream near Kilauea	Lat 22°13'02", long 159°25'18" at culvert on Highway 56, 0.8 mi (1.3 km) northwest of Kilauea School and 0.9 mi (1.4 km) upstream from mouth.	.91 (2.36)	1964-68, 1971-75	1-31-75	8.70	525
16104200	Hanalei River at Highway 56 Bridge near Hanalei	Lat 22°12'50", long 159°28'43", at highway bridge, 1.6 mi (2.6 km) northeast of Hanalei and 2.4 mi (3.9 km) upstream from mouth.	21.0 (54.4)	1963-75d	1-31-75	11.62	-

** Also a water-quality partial-record station.
≠ Operated as a continuous-record gaging station.
d Gage height only.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Kauai--Continued					
16130000	Nahomalu Valley near Mana	Lat 22°02'41", long 159°45'17", on left bank 1.1 mi (1.8 km) northeast of Mana and 5.3 mi (8.5 km) northwest of Kekaha School.	3.81 (9.87)	1962-63, 1964-71≠, 1972-75	1-31-75	6.77	1,880
		Hawaii, Island of Oahu					
16210500	Kaukonahua Stream at Waialua	Lat 21°33'56", long 158°07'26", 0.2 mi (0.3 km) upstream from Highway 99, 0.4 mi (0.6 km) southeast of Waialua High School and 1.3 mi (2.1 km) southwest of Weed Circle.	38.7 (100.2)	1963, 1968-75	2- 1-75	16.63	889
16211200	Poamoho Stream at Waialua	Lat 21°34'00", long 158°06'40", at culvert crossing of Kaheaka Road, 0.2 mi (0.3 km) upstream from Highway 83 and 1.1 mi (1.8 km) east of Waialua High School.	10.9 (28.2)	1967-75	2- 1-75	17.62	1,800
16211300	Makaleha Stream near Waialua	Lat 21°33'49", long 158°09'21", 1.0 mi (1.6 km) southwest of Dillingham Ranch and 1.9 mi (3.1 km) southwest of sugar mill at Waialua.	4.15 (10.75)	1958-63, 1964-65≠, 1966-75	11-21-74	5.55	480
16211400	Manini Gulch at Kaena	Lat 21°34'50", long 158°15'12", 180 ft (55 m) upstream from Highway 99, 1.7 mi (2.7 km) west of Camp Erdman and 2.0 mi (3.2 km) east of Kaena Point.	1.08 (2.80)	1974-75	2- 1-75	10.60	e70
16211500	Makua Stream at Makua	Lat 21°31'59", long 158°13'49", on left bank, 20 ft (6 m) upstream from old concrete highway ford, 140 ft (43 m) downstream from Farrington Highway box culvert, 0.1 mi (0.2 km) north of Makua cemetery, and 4.5 mi (7.2 km) southeast of Kaena Point lighthouse.	4.28 (11.09)	1958-75	-	-	80
16211700	Makaha Stream at Makaha	Lat 21°28'47", long 158°12'31", 0.9 mi (1.4 km) upstream from Farrington Highway and 1.1 mi (1.8 km) north of junction of Farrington Highway and Makaha Valley Road.	5.25 (13.60)	1966-75	2- 1-75	8.95	410
16211800	Kaupuni Stream at altitude 374 ft (114 m), near Waianae	Lat 21°28'20", long 158°09'26", at abandoned diversion dam, 2.6 mi (4.2 km) northeast of Waianae cemetery and 2.8 mi (4.5 km) northeast of junction of Waianae Valley Road and Farrington Highway.	3.58 (9.27)	1961-72≠, 1973-75	-	-	200
16212200	Mailiilii Stream near Waianae	Lat 21°27'34", long 158°08'05", at bridge at Lualualei Naval Reservation and 3.4 mi (5.5 km) east of cemetery near Waianae.	1.51 (3.91)	1958-75	2- 1-75	1.88	422
16212300	Nanakuli Stream at Nanakuli	Lat 21°23'08", long 158°08'11", 0.7 mi (1.1 km) upstream from Highway 90 and 0.6 mi (1.0 km) northeast of Nanakuli Post Office.	3.98 (10.31)	1968-75	2- 1-75	20.51	904
16212450	Kaloi Gulch tributary near Honouliuli	Lat 21°22'41", long 158°03'45", at culvert on private road, 1.8 mi (2.9 km) west of Honouliuli and 2.8 mi (4.5 km) northwest of Ewa Post Office.	1.70 (4.40)	1968-75	2- 1-75	4.93	314
16212500	Honouliuli Stream near Waipahu	Lat 21°22'40", long 158°02'10", at bridge on Farrington Highway and 1.8 mi (2.9 km) west of Waipahu Post Office.	11.0 (28.5)	1956-75	2- 1-75	5.32	1,460
16212601	Waikele Stream at Wheeler Field	Lat 21°28'24", long 158°03'08", at culvert 0.3 mi (0.5 km) west of east-west runway at Wheeler Field, and 1.9 mi (3.1 km) southwest of Wahiawa Post Office.	6.35 (16.45)	1958, 1960-75	2- 1-75	6.86	385

≠ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Oahu--Continued					
16212700	Waikakalaua Stream near Wahiawa	Lat 21°27'50", long 158°01'38", 0.2 mi (0.3 km) downstream from Kamehameha Highway and 2.4 mi (3.9 km) south of Wahiawa Post Office.	7.49 (19.40)	1958-75	2- 1-75	8.59	1,500
16212750	Huliwai Gulch near Kunia Camp	Lat 21°26'43", long 158°03'47", 200 ft (61 m) upstream from Highway 75 and 1.2 mi (1.9 km) south of Kunia Camp.	.84 (2.18)	1974-75	2- 1-75	12.74	e100
16223000	Waimalu Stream near Aiea	Lat 21°23'48", long 157°56'56", 1,300 ft (400 m) upstream from bridge on Moanalua Road and 1.2 mi (1.9 km) northwest of Aiea High School (revised)	a5.97 (15.46)	1952-62≠ 1963-70≠ 1973-75	11-21-74	3.14	1,570
**16228200	Moanalua Stream near Aiea	Lat 21°22'37", long 157°53'03", on right bank 1.1 mi (1.8 km) northeast of Tripler Hospital and 2.9 mi (4.7 km) east of Aiea sugar refinery.	3.34 (8.65)	1969-75	11-21-74	5.14	1,430
16228600	Moanalua Stream at Tripler Hospital	Lat 21°21'52°, long 157°54'05", on right bank 0.5 mi (0.8 km) west of Tripler Hospital and 1.6 mi (2.6 km) northeast of Aliamanu School.	4.44 (11.50)	1971-75	11-21-74	14.74	e1,600
16228900	Kalihi Stream near Kaneohe	Lat 21°22'35", long 157°49'32", on right bank 800 ft (244 m) downstream from Likelike Highway, and 2.8 mi (4.5 km) southwest of Castle High School in Kaneohe.	.60 (1.55)	1967-71≠ 1972-75	11-21-74	3.48	452
16235400	Waolani Stream at Honolulu	Lat 21°20'00", long 157°51'04", at Wyllie Street bridge and 1.8 mi (2.9 km) northeast of Honolulu Post Office.	1.28 (3.32)	1958-75	11-21-74	2.85	720
16237500	Pauoa Stream at Honolulu	Lat 21°19'18", long 157°51'03", at Lusitana Street bridge and 1.1 mi (1.8 km) northeast of Honolulu Post Office.	1.43 (3.70)	1958-75	11-21-74	-	866
**16247100	Manoa-Palolo Drainage Canal at Moiliili	Lat 21°17'24", long 157°49'17", on left bank at Kaimuki High School, 0.3 mi (0.5 km) downstream from confluence of Manoa and Palolo Streams and 0.6 mi (1.0 km) upstream from point of discharge into Ala Wai Canal.	9.35 (24.22)	1968-75	11-21-74	6.12	1,850
16247500	Wailupe Gulch at Aina Haina	Lat 21°17'46", long 157°45'29", at Ani Street bridge and 1.0 mi (1.6 km) upstream from Kalanianaole Highway in Aina Haina.	2.35 (6.09)	1958-75	1-11-75	-	370
16247900	Kuliouou Valley at Kuliouou	Lat 21°17'50", long 157°43'35", at Kuliouou, 300 ft (91 m) downstream of single-lane wooden bridge and 0.6 mi (1.0 km) upstream from Highway 72.	1.18 (3.06)	1958-59, 1970-75	1-11-75	28.76	704
16248800	Inoaole Stream at Waimanalo	Lat 21°20'31", long 157°42'40", 30 ft (9 m) upstream from culvert on Hihimanu Street and 0.8 mi (1.3 km) northwest of Waimanalo Post Office.	1.21 (3.13)	1958-75	1-11-75	4.31	252
**16249000	Waimanalo Stream at Waimanalo	Lat 21°21'12", long 157°43'52", on right bank 40 ft (12 m) upstream from Highway 72 and 2.3 mi (3.7 km) northwest of Waimanalo Post Office.	2.16 (5.59)	1967-70≠ 1971-75	1-11-75	3.35	e600
16249100	Kaelepulu Stream tributary at Kailua	Lat 21°21'44", long 157°44'22", 30 ft (9 m) upstream from Kalanianaole Highway, 1.6 mi (2.6 km) northwest of Waimanalo School and 2.4 mi (3.9 km) south of Kailua Post Office.	.16 (.41)	1963-75	2- 1-75	2.40	66

** Also a water-quality partial-record station.
≠ Operated as a continuous-record gaging station.
a Revised.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Oahu--Continued					
**16260500	Maunawili Stream at Highway 61, near Kailua	Lat 21°22'51", long 157°45'48", on right bank at downstream side of bridge on Highway 61, 0.6 mi (1.0 km) west of Maunawili School and 1.6 mi (2.6 km) southwest of Kailua Post Office.	5.34 (13.83)	1958-67, 1968-71≠, 1972-75	11-21-74	8.69	1,400
16264800	Kawainui Canal at Kailua	Lat 21°24'15", long 157°45'28", at head of canal and 1.2 mi (1.9 km) northwest of Kailua Post Office.	11.0 (28.5)	1957-60, 1963-64, 1967-75	1-12-75	5.82	/
16270900	Luluku Stream at altitude 220 ft (67 m), near Kaneohe	Lat 21°23'42", long 157°48'46", on left bank 0.5 mi (0.8 km) upstream from mouth, 1.4 mi (2.2 km) southwest of Castle High School, and 1.9 mi (3.1 km) south of Kaneohe Post Office.	.44 (1.14)	1967-71≠, 1972-75	11-21-74	4.20	180
16274499	Keaahala Stream at Kamehameha Highway, at Kaneohe	Lat 21°25'12", long 157°48'15", 35 ft (11 m) upstream from bridge on Kamehameha Highway in Kaneohe.	.62 (1.61)	1959-75	11-21-74	5.56	778
16279500	Heeia Strean at Kaneohe	Lat 21°25'17", long 157°49'01", 60 ft (18 m) downstrean fron culvert on Kahekili Highway, 0.7 mi (1.1 km) west of Kaneohe Post Office and 0.8 ni (1.3 km) southwest of Heeia.	1.80 (4.66)	1965-66, 1968-75	11-21-74	7.20	2,900
*16283480	Ahuimanu Strean near Kahaluu	Lat 21°27'04", long 157°50'13", at bridge on Ahuimanu Road and 0.8 mi (1.3 km) south of Kahaluu.	2.31 (5.98)	1963-75	11-21-74	8.94	2,030
16284500	Waihee Stream at Kahaluu	Lat 21°27'31", long 157°50'26", on left bank 20 ft (6 m) upstream from Ahaolelo Road, 300 ft (91 n) upstrean fron nouth and 0.3 mi (0.5 km) southwest of Kahaluu.	2.26 (5.85)	1967-75	11-21-74	-	e700
16304500	Kaluanui Stream at Hauula	Lat 21°35'57", long 157°54'24", on left downstrean wingwall of concrete bridge, 1.2 mi (1.9 km) southeast of cenetery in Hauula and 1.4 mi (2.2 km) northeast of Sacred Falls (revised).	2.12 (5.49)	1958-75	11-17-74	3.78	e750
16310501	Malaekahana Strean at altitude 30 ft (9 m), near Kahuku	Lat 21°39'47", long 157°57'11", at abandoned plantation railroad bridge, 1.1 ni (1.8 km) southwest of junction of plantation road and Highway 83, and 1.2 mi (1.9 km) south of Kahuku Hospital (revised).	4.05 (10.49)	1959-75	2-1- 75	10.2	e700
16311000	Oio Stream near Kahuku	Lat 21°41'32", long 157°59'48", 0.6 ni (1.0 km) southwest of junction of Plantation Road and Highway 83 and 2.7 ni (4.3 km) west of Kahuku Hospital (revised).	2.13 (5.52)	1958-75	2- 1-75	7.06	e200
16317800	Kaunala Gulch near Sunset Beach	Lat 21°40'59", long 158°02'12", on downstrean left bank wingwall of road bridge on Highway 83 near Sunset Beach and 2.9 mi (4.7 km) northeast of Waimea.	1.98 (5.13)	1973-75	2- 1-75	12.01	<250
16318000	Paumalu Gulch at Sunset Beach	Lat 21°40'19", long 158°02'28", 0.4 mi (0.6 km) upstrean from Highway 83 at Sunset Beach and 2.2 mi (3.5 km) northeast of Waimea.	2.59 (6.71)	1968-75	2- 1-75	4.29	150

* Also a low-flow partial-record station.
** Also a water-quality partial-record station.
/ Discharge not determined.
≠ Operated as a continuous-record gaging station.
< Less than.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Oahu--Continued					
16331000	Waimea Gulch near Kawailoa Camp	Lat 21°37'29", long 158°04'58", at culvert on Ashley Road, 0.1 mi (0.2 km) upstream from Highway 83 and 1.1 mi (1.8 km) north of Kawailoa Camp.	2.23 (5.78)	1968-75	2- 1-75	3.66	181
16340000	Anahulu River near Haleiwa	Lat 21°35'28", long 158°04'45", 1.7 mi (2.7 km) southeast of junction of Emerson Road and Kamehameha Highway and 2.5 mi (4.0 km) east of Waialua School at Haleiwa.	13.5 (35.0)	1958-75	11-21-74	8.91	3,930
16350000	Opaeula Stream near Haleiwa	Lat 21°35'09", long 158°06'01", 0.6 mi (1.0 km) upstream from Kamehameha Highway and 2.1 mi (3.4 km) northeast of Waialua.	5.96 (15.44)	1956-75	11-21-74	13.35	1,610
		Hawaii, Island of Molokai					
16411300	Kakaako Gulch at Highway 46, near Mauna Loa	Lat 21°08'49", long 157°11'36", at Highway 46, 1.6 mi (2.6 km) northeast of Mauna Loa, and 1.8 mi (2.9 km) upstream from Kamakahi Gulch.	.55 (1.42)	1964-75	2- 1-75	1.08	9.4
16411320	Kakaako Gulch above Kamakahi Gulch, near Mauna Loa	Lat 21°10'11", long 157°11'56", 0.1 mi (0.2 km) upstream from Kamakahi Gulch, 1.7 mi (2.7 km) downstream from Highway 46, and 2.5 mi (4.0 km) northeast of Mauna Loa.	1.40 (3.63)	1964-75	11-17-74	1.44	91
16411400	Kakaako Gulch near Mauna Loa	Lat 21°10'39", long 157°12'31", on left bank 1.0 mi (2.0 km) downstream from Kamakahi Gulch and 3.0 mi (4.8 km) north of Mauna Loa School.	5.34 (13.83)	1963-72≠ 1973-75	2- 1-75	3.85	948
16411600	Kaunala Gulch near Mauna Loa	Lat 21°07'01", long 157°15'43", at Sand Haul Road, 3.2 mi (5.2 km) east of Laau Point lighthouse, and 3.3 mi (5.3 km) southwest of Mauna Loa.	.28 (.73)	1964-75	2- 1-75	1.54	27
16411640	Halena Gulch near Mauna Loa	Lat 21°05'53", long 157°13'47", 2.7 mi (4.3 km) southwest of Mauna Loa and 5.5 mi (8.8 km) east of Laau Point.	2.07 (5.36)	1965-75	2- 1-75	1.97	179
16411800	Kaluapeelua Gulch at Hoolehua	Lat 21°09'55", long 157°04'22", 0.4 mi (0.6 km) south of Hoolehua and 2.1 mi (3.4 km) west of Kualapuu.	1.46 (3.78)	1964-75	2- 1-75	3.17	81
16411900	Kaluapeelua Gulch tributary near Molokai Airport	Lat 21°08'57", long 157°07'12", 1.7 mi (2.7 km) southwest of Molokai Airport and 5.1 mi (8.2 km) west of Kualapuu.	1.56 (4.04)	1964-75	2- 1-75	5.75	98
16413500	Manawainui Gulch near Kualapuu	Lat 21°07'42", long 157°03'25", at bridge on Highway 46, 0.5 mi (0.8 km) south of Holomua School and 2.3 mi (3.7 km) southwest of Kualapuu.	10.4 (26.9)	1965-75	11-21-74	5.88	236
16414100	Unnamed gulch at Kaunakakai	Lat 21°05'14", long 157°00'45", at bridge on Highway 45, 0.6 mi (1.0 km) southeast of Kaunakakai and 0.8 mi (1.3 km) northwest of Kaniloloa.	1.19 (3.08)	1965-75	-	-	No flow
16415400	Wawaia Gulch at Kamalo	Lat 21°03'25", long 156°52'20", at Highway 45, 0.3 mi (0.5 km) upstream from mouth, and 0.5 mi (0.8 km) northeast of Kamalo.	2.12 (5.49)	1964-75	11-21-74	1.03	202
16419000	Pohakupili Gulch near Halawa	Lat 21°07'59", long 156°44'15", at Highway 45, 0.5 mi (0.8 km) upstream from mouth and 1.9 mi (3.1 km) south of Halawa.	.48 (1.24)	1964-75	11-21-74	5.05	50

≠ Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations during water year 1975 --Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Maui					
16500100	Kepuni Gulch near Kahikinui House	Lat 20°37'21", long 156°15'16", on right bank 120 ft (37 m) upstream from bridge on Highway 31, 400 ft (122 m) upstream from Kamole Gulch, 1.1 mi (1.8 km) east of Kahikinui House, and 8.5 mi (1.4 km) west of Kaupo.	1.91 (4.95)	1963-72≠, 1973-75	-	-	No flow
16500300	Hawelewele Gulch near Kaupo	Lat 20°38'01", long 156°11'08", 700 ft (213 m) upstream from Piilani Highway 31 and 3.9 mi (6.3 km) west of Kaupo.	11.3 (29.3)	1967-75	11-17-74	9.34	7,110
165D08D0	Kukuiula Gulch near Kipahulu	Lat 20°39'18", long 156°04'44", at Highway 31, 1.3 mi (2.1 km) west of Kipahulu and 3.2 mi (5.2 km) east of Kaupo.	.76 (1.97)	1963-68≠, 1969-75	11-17-74	<2.56	e340
*16502000	Hahalawe Gulch near Kipahulu	Lat 20"40'54", long 156°02'50", on left bank at old ditch intake, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) northeast of Kipahulu Church.	.43 (1.11)	1927-69≠, 1970-75	11-17-74	4.69	1,380
16502400	Pukuilua Gulch near Hana	Lat 20°42'00", long 156°00'14", at Highway 31, 0.4 mi (0.6 km) southwest of Puuiki, and 4.0 mi (6.4 km) south of Hana.	.48 (1.24)	1963-75	11-17-74	3.72	180
16502800	Moomoonui Gulch at Hana	Lat 20°44'37", long 155°59'18", at Highway 31 just downstream from Moomooiki Gulch and 1.0 mi (1.6 km) south of Hana.	.90 (2.33)	1963-75	2-12-75	11.34	686
16502900	Kawaipapa Gulch at Hana	Lat 20°46'08", long 156°00'04", 1,000 ft (305 m) upstream from Highway 36 and 0.3 mi (0.5 km) northwest of Hana Hospital.	5.83 (15.10)	1965-75	2-12-75	7.84	4,970
16603300	Unnamed gulch at Maliko Bay	Lat 20°56'26", long 156°21'04", at Hana Highway, 0.5 mi (0.8 km) west of Maliko Bay, and 1.3 mi (2.1 km) north of Hanakuapoko.	.43 (1.11)	1963-75	11-21-74	2.66	31
16603700	Kalialinui Gulch tributary near Pukalani	Lat 20°49'02", long 156°19'44", at Lower Kula Road and 1.4 mi (2.3 km) south of Pukalani.	1.17 (3.03)	1967-75	-	-	No flow
16603800	Kaluapulani Gulch tributary near Pukalani	Lat 20°48'52", long 156°18'32", at Haleakala Highway, 1.5 mi (2.4 km) west of Olinda Prison Camp, and 2.3 mi (3.7 km) southeast of Pukalani.	.45 (1.17)	1963-75	-	-	No flow
16603850	Kalialinui Gulch near Kahului	Lat 20°52'47", long 156°26'06", 600 ft (183 m) upstream from Hansen Road, 0.5 mi (0.8 km) northeast of Puunene Hospital, and 2.5 mi (4.0 km) southeast of Kahului Post Office.	17.9 (46.4)	1967-75	11-21-74	3.97	31
**16607000	Iao Stream at Wailuku	Lat 20°53'38", long 156°30'27", 560 ft (171 m) upstream from Market Street bridge at Wailuku and 1.9 mi (3.1 km) upstream from mouth.	8.24 (21.4)	1951≠, 1952-75	11-21-74	5.52	3,720
16616500	Unnamed gulch at Maluhia Camp	Lat 20°57'26", long 156°31'41", at Kahekili Highway, 0.6 mi (1.0 km) east of Maluhia Camp and 1.8 mi (2.9 km) northwest of Waihee.	.12 (.31)	1964-75	1-12-75	<7.29	e97
16619700	Poelua Gulch near Kahakuloa	Lat 21°00'58", long 156°34'58", at Highway 30 (bypass), 1.3 mi (2.1 km) southeast of Nakalele Point lighthouse, and 2.2 mi (3.5 km) northwest of Kahakuloa.	1.18 (3.06)	1965-75	11-21-74	9.31	342

* Also a low-flow partial-record station.
** Also a water-quality partial-record station.
≠ Operated as a continuous-record gaging station.
< Less than.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area, mi^2 (km^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Hawaii, Island of Maui--Continued					
16623400	Honokeana Gulch near Honokahua	Lat 20°59'39", long 156°40'13", at Honoapiilani Highway, 1.1 mi (1.8 km) southwest of Honokahua and 1.1 mi (1.8 km) south of Hawea Point.	0.59 (1.53)	1964-75	1-12-75	6.81	273
16630200	Honokowai Stream at Honokowai	Lat 20°56'58", long 156°41'07", 0.5 mi (0.8 km) southeast of Honokowai and 1.1 mi (1.8 km) northwest of Puukolii.	5.59 (14.48)	1962-63, 1965-75	11-21-74	7.24	1,520
16643300	Kauaula Stream near mouth, near Lahaina	Lat 20°52'09", long 156°39'43", 0.7 mi (1.1 km) upstream from Honoapiilani Highway (bypass) and 1.3 mi (2.1 km) southeast of Lahaina lighthouse.	4.12 (10.67)	1960, 1962, 1964-75	11-21-74	<3.68	e25
**16646200	Olowalu Stream at Olowalu	Lat 20°49'23", long 156°37'15", on downstream side of center pier of plantation road bridge, 0.6 mi (1.0 km) northeast of Olowalu, and 5.5 mi (8.8 km) southeast of Lahaina.	4.08 (10.57)	1962-72≠ 1973-75	11-21-74	3.65	444
16647500	Malalowaiaole Gulch near Maalaea	Lat 20°46'56", long 156°31'32", at Honoapiilani Highway, 200 ft (61 m) upstream from mouth, 0.2 mi (0.3 km) north of McGregor Point, and 1.2 mi (1.9 km) southwest of Maalaea.	.64 (1.66)	1964-75	-	-	No flow
16650500	Waikapu Stream near Kihei	Lat 20°49'02", long 156°29'00", at railroad bridge beside Lower Maalaea Road, 2.5 mi (4.0 km) northeast of Maalaea, and 2.5 mi (4.0 km) northwest of Kihei.	6.97 (18.05)	1963-75	8-17-75	2.83	288
16658500	Waiakoa Gulch tributary near Waiakoa	Lat 20°44'56", long 156°19'22", at Upper Kula Road, 1.0 mi (1.6 km) southeast of Waiakoa and 1.0 mi (1.6 km) northeast of junction of Lower and Upper Kula Roads.	.98 (2.54)	1964-75	-	-	No flow
16659000	Waiakoa Gulch at Kihei	Lat 20°47'14", long 156°27'41", 0.3 mi (0.5 km) northeast of Kihei and 0.4 mi (0.6 km) upstream from mouth.	10.1 (26.2)	1963-75	-	-	No flow
16660000	Kulanihakoi Gulch near Kihei	Lat 20°46'06", long 156°27'03", on right bank 0.5 mi (0.8 km) northeast of Lihue Cemetery, 0.8 mi (1.3 km) upstream from mouth and 1.3 mi (2.1 km) southeast of Kihei.	14.4 (37.3)	1963-70≠ 1971-75	11-22-74	<0	e25
16663500	Kanaole Gulch at Kanaole	Lat 20°43'36", long 156°27'02", at Kihei Road, 350 ft (107 m) upstream from mouth, and 0.2 mi (0.3 km) south of Kamaole.	4.28 (11.09)	1972-75	-	-	No flow
16664000	Liilioholo Gulch at Kamaole	Lat 20°43'04", long 156°26'55", on upstream side of Kihei Road, 300 ft (91 m) upstream from mouth, and 0.8 mi (1.3 km) south of Kamaole.	4.12 (10.67)	1972-75	-	-	No flow
		Hawaii, Island of Hawaii					
16701300	Waiakea Stream at Hilo	Lat 19°42'38", long 155°05'02", 0.3 mi (0.5 km) upstream from Kinoole Street bridge and 1.3 mi (2.1 km) southeast of Hilo Post Office.	35.8 (92.7)	1968-75	1-8-75	4.90	510
16701400	Palai Stream at Hilo	Lat 19°40'56", long 155°04'04", at Highway 11, 300 ft (91 m) south of Palai Street intersection and 3.5 mi (5.6 km) southeast of Hilo Post Office.	5.08 (13.16)	1965-75	1-8-75	4.38	364
16717400	Kalaoa Mauka Stream near Hilo	Lat 19°48'07", long 155°06'03", at culvert on Highway 19, 1.0 mi (1.6 km) north of Papaikou and 5.1 mi (8.2 km) north of Hilo Post Office.	.24 (.62)	1963-75	1-8-75	6.04	124

** Also a water-quality partial-record station.
≠ Operated as a continuous-record gaging station.
< Less than.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1975--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Hawaii, Island of Hawaii--Continued					
16717600	Alia Stream near Hilo	Lat 19°50'38", long 155°06'21", on left bank 10 ft (3.0 m) downstream from culvert on Highway 19 at Pepeekeo, 2.0 mi (3.2 km) south of Honomu, and 8.0 mi (12.9 km) north of Hilo.	0.58 (1.50)	1962-72≠ 1973-75	1- 8-75	4.96	724
16717650	Kapehu Stream near Pepeekeo	Lat 19°51'52", long 155°06'11", at culvert on Highway 19, 1.0 mi (1.6 km) outheast of Honomu, 2.2 mi (3.5 km) north of Pepeekeo, and 9.4 mi (15.1 km) north of Hilo.	1.09 (2.82)	1963-75	1- 8-75	7.75	704
16717850	Keehia Gulch near Ookala	Lat 20°01'08", long 155°18'45", at culvert on Highway 19, 1.7 mi (2.7 km) west of Ookala, and 4.1 mi (6.6 km) southeast of Paauilo.	.62 (1.61)	1963-75	1- 8-75	3.20	85
16717920	Ahualoa Gulch at Honokaa	Lat 20°05'12", long 155°29'17", at Highway 24, 1.1 mi (1.8 km) northwest of Honokaa Hospital, and 1.5 mi (2.4 km) upstream from nouth.	2.27 (5.88)	1963-75	1- 8-75	7.00	70
16717950	Honokaia Gulch tributary near Honokaa	Lat 20°02'58", long 155°32'19", at culvert, 4.8 mi (7.7 km) southwest of Honokaa Hospital, and 5.5 mi (8.8 km) southeast of Kukuihaele.	2.42 (6.27)	1963-75	-	-	No flow
16752600	Hapahapai Gulch at Kapaau	Lat 20°14'00", long 155°48'00", at Highway 27, 300 ft (91 m) east of Kapaau Post Office.	1.52 (3.94)	1963-75	1-11-75	3.66	13
16755800	Luahine Gulch near Waimea	Lat 20°03'11", long 155°44'35", at culvert 5.1 mi (8.2 km) northwest of Waimea and 5.7 mi (9.2 km) east of Kawaihae.	.32 (.83)	1963-75	3- 1-75	2.51	69
16756500	Keanuiomano Stream near Kamuela	Lat 20°01'48", long 155°42'05", on left bank 150 ft (46 m) upstream from Highway 25 at Waiaka and 2.0 mi (3.2 km) west of Kamuela.	4.30 (11.14)	1964-72≠ 1973-75	1-11-75	4.90	450
16759040	Paiakuli Reservoir tributary near Waimea	Lat 20°02'16", long 155°38'08", at Highway 19, 2.1 mi (3.4 km) west of Puukapu Reservoir, and 2.6 mi (4.2 km) northeast of Waimea.	.27 (.70)	1963-75	3- 1-75	2.13	52
16759060	Kamakoa Gulch near Waimea	Lat 19°57'32", long 155°41'02", at bridge, 1.4 mi (2.2 km) north of Saddle Road Junction and 4.5 mi (7.2 km) south of Wainea.	50.6 (131.1)	1963-75	-	-	No flow
16759080	Popoo Gulch near Waikii	Lat 19°52'11", long 155°43'51", at bridge on Highway 19, 2.0 mi (3.2 km) north of Keanuku and 5.2 mi (8.4 km) west of Waikii.	33.1 (85.7)	1963-75	-	-	No flow
16759180	Keopu Stream near Kailua	Lat 19°38'54", long155°58'15", at county road bridge, 1.9 mi (3.1 km) east of Kailua, and 2.3 mi (3.7 km) northwest of Holualoa Post Office.	2.61 (6.76)	1962, 1965-75	-	-	No flow
16759300	Waiaha Stream at Luawai, near Holualoa	Lat 19°38'12", long 155°55'45", on right bank at Luawai, 1.8 mi (2.9 km) northeast of Holualoa School, and 4.2 mi (6.8 km) southeast of H Honokohau School.	8.74 (22.64)	1961-75	10-15-74	7.03	1,890
16762000	Alapai Gulch at Naalehu	Lat 19°04'00", long 155°35'19", at debris catchment outlet of Naalehu Watershed Protection Project and 0.2 mi (0.3 km) upstream from Highway 11 at Naalehu.	2.87 (7.43)	1963-75	1- 8-75	6.15	943
16770000	Hionamoa Gulch at Pahala	Lat 19°11'45", long 155°29'11", at bridge, 0.6 mi (1.0 km) southwest of Pahala, and 4.1 mi (6.6 km) north of Punaluu.	9.41 (24.37)	1963-75	1- 8-75	15.00	6,100

≠ Operated as a continuous-record gaging station.

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1975

Stream	Tributary to	Location	Drainage area mi² (km²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
Hawaii, Island of Maui						
Hanawi Stream	Pacific Ocean	Lat 20°48'52", long 156°06'38", 900 ft (274 m) downstream from Hanawi bridge and Maui Pine pump, 1.4 mi (2.3 km) southwest of Nahiku, and 4.5 mi (7.2 km) southeast of Keanae point.			5-21-75	0.56
Hanawi Stream	Pacific Ocean	Lat 20°49'15", long 156°06'25", 0.7 mi (1.1 km) downstream from Hanawi bridge and Maui Pine pump, 0.95 mi (1.53 km) southwest of Nahiku, and 4.3 mi (6.9 km) southeast of Keanae point.		1927-32/, 1932-47≠	10- 9-74 5-22-75	14 16
Hanawi Stream	Pacific Ocean	Lat 20°49'21", long 156°06'23", 0.8 mi (1.3 km) downstream from Hanawi bridge and Maui Pine pump and 0.9 mi (1.4 km) southwest of Nahiku.			10- 9-74 5-22-75	18 19
Hanawi Stream	Pacific Ocean	Lat 20°49'34", long 156°06'21", 1,000 ft (305 m) upstream from mouth and 0.8 mi (1.3 km) west of Nahiku.			10- 9-74 5-21-75	19 22
Palauhulu Stream	Piinaau Stream	Lat 20°51'35", long 156°08'58", under the highway bridge, 600 ft (183 m) upstream from Piinaau Stream, and 0.65 mi (1.0 km) south from Keanae point.			5-22-75	3.4
Iao Stream	Pacific Ocean	Lat 20°53'01", long 156°32'54", at Iao Needle Park, 0.7 mi (1.1 km) upstream from Kepaniwai Park, and 2.7 mi (4.3 km) southwest of Wailuku Federal Building.		1974	11- 5-74 7-24-75	17 39
Honokohau ditch	-	Lat 20°58'03", long 156°35'33", at No. 6 cross cut, 0.4 mi (0.6 km) downstream from the gaging station L6620000), 4.1 mi (6.6 km) south of Honokohau bay, and 4.9 mi (7.9 km) southeast of Honokohua Post Office.			10- 2-74	16
Honokohau ditch	-	Lat 20°59'08", long 156°37'18", at Honolua intake, 2.5 mi (4.0 km) southeast of Honolua bay, and 2.6 mi (4.2 km) southeast of Honokohua Post Office.			10- 2-74	14
Honokohau Stream	Pacific Ocean	Lat 20°58'43", long 156°35'41", 3.6 mi (5.8 km) above mouth, 4.4 mi (7.1 km) southeast of Honokohua Post Office, and at altitude 580 ft (176.8 m).		1968	9-23-75	.97
Right Branch Kahakuloa Stream	Kahakuloa Stream	Lat 20°58'17", long 156°33'44", 0.8 mi (1.3 km) upstream from Kahakuloa gaging station (16618000), 2.2 mi (3.5 km) upstream from mouth and 2.8 mi (4.5 km) west of Hulu Island.			9-24-75	.43
Kahakuloa Stream	Pacific Ocean	Lat 20°58'17", long 156°33'46", 0.8 mi (1.3 km) upstream from Kahakuloa gaging station (16618000), 2.2 mi (3.5 km) upstream from mouth, and 2.9 mi (4.7 km) west of Hulu Island.			9-24-75	1.5
Kahakuloa Stream	Pacific Ocean	Lat 20°58'33", long 156°33'44", 0.6 mi (1.0 km) upstream from Kahakuloa gaging station (16618000), 1.9 mi (3.1 km) upstream from mouth and 2.9 mi (4.7 km) northwest of Hulu Island.			9-24-75 do	1.4 1.3
Left Branch Kahakuloa Stream	Kahakuloa Stream	Lat 20°58'34", long 156°33'44", 0.5 mi (0.8 km) upstream from Kahakuloa gaging station (16618000), 1.9 mi (3.1 km) from mouth and 2.9 mi (4.7 km) northwest of Hulu Island.			9-24-75	2.2

/ Operated as a continuous-record gaging station by E. M. I. Co.
≠ Operated as a continuous-record gaging station.

PART 2. WATER-QUALITY RECORDS

16031000 WAIMEA RIVER NEAR WAIMEA
(National Stream-quality accounting network station)

LOCATION.--Lat 21°59'02", long 159°39'47", on right bank 1.3 mi (2.1 km) upstream from Makaweli River, 1.9 mi (3.1 km) north of Waimea Post Office.

DRAINAGE AREA.--57.8 mi^2 (149.7 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1971-74 (partial-record station), November 1974 to September 1975. Sediment records: November 1974 to September 1975.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
NOV.											
22...	1310	--	--	--	--	--	--	--	--	--	--
22...	1315	504	9.3	2.4	2.0	3.4	.8	16	--	13	2.3
DEC.											
02...	1030	22	22	7.1	7.1	7.8	.7	55	--	45	1.8
JAN.											
06...	1245	92	13	3.1	2.9	5.0	.7	24	--	20	3.4
28...	0930	11	20	8.3	6.2	7.1	.7	50	--	41	1.8
FEB.											
25...	1300	15	18	6.0	6.0	6.9	1.1	47	0	39	2.4
APR.											
14...	1100	9.0	20	6.9	9.5	8.5	.7	67	0	55	2.3
MAY											
05...	1300	6.0	22	8.8	10	9.5	.9	80	--	66	3.0
21...	1245	3.4	23	8.3	11	9.4	.8	86	0	71	1.5
JUNE											
03...	1015	2.9	23	9.9	14	11	1.2	104	0	85	2.5
17...	1300	4.3	25	10	13	11	.8	103	0	84	2.7
JULY											
07...	1100	3.5	25	11	13	11	.8	93	0	76	3.3
AUG.											
05...	1305	6.3	27	13	14	10	.8	98	0	80	1.8
SEP.											
08...	1030	3.9	26	9.3	15	11	.8	101	0	83	1.9

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	4.7	.0	.16	.28	.44	.09	36	33	.05	14	1
DEC.											
02...	9.8	.0	--	--	--	--	--	84	.11	47	2
JAN.											
06...	7.3	.0	.06	.15	.21	.01	54	47	.07	20	0
28...	9.2	.4	.00	.25	.25	.00	77	78	.10	46	5
FEB.											
25...	10	.1	.01	.26	.27	.03	74	74	.10	40	1
APR.											
14...	14	.1	.03	.51	.54	.02	93	95	.13	56	1
MAY											
05...	14	.0	.00	.09	.09	.01	110	108	.15	63	0
21...	13	.1	.02	.10	.12	.01	113	110	.15	66	0
JUNE											
03...	16	.1	.00	3.2	3.2	.00	133	129	.18	82	0
17...	16	.1	.01	.22	.23	.01	132	130	.18	79	0
JULY											
07...	15	.1	.00	.16	.16	.01	116	125	.16	81	5
AUG.											
05...	17	.1	.01	.21	.22	.02	120	132	.16	90	10
SEP.											
08...	15	.1	.01	.25	.26	.03	127	129	.17	85	2

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV.											
22...	--	--	--	--	--	--	--	--	200	B56	--
22...	33	.4	40	7.2	20.0	60	20	1.6	--	--	--
DEC.											
02...	26	.5	112	7.9	21.0	5	2	1.1	--	--	--
JAN.											
06...	35	.5	66	7.0	19.0	--	2	3.8	120	100	4.1
28...	25	.5	110	7.5	17.5	--	4	2.5	--	--	--
FEB.											
25...	27	.5	120	7.2	23.0	--	2	4.7	90	1200	--
APR.											
14...	24	.5	160	7.3	25.0	3	2	5.4	110	890	3.0
MAY											
05...	24	.5	180	6.4	23.5	4	2	51	100	430	--
21...	23	.5	200	7.1	25.5	4	2	11	320	350	--
JUNE											
03...	22	.5	220	6.9	23.0	5	2	21	170	290	--
17...	23	.5	212	7.0	25.0	15	2	16	130	200	5.4
JULY											
07...	23	.5	220	7.3	24.0	15	2	7.5	130	95	--
AUG.											
05...	19	.5	220	7.2	26.5	15	3	9.9	240	220	--
SEP.											
08...	22	.5	220	7.2	24.5	5	1	10	110	120	3.4

B Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
DEC.												
02...	1030	--	50	--	0	--	--	--	--	--	--	--
JAN.												
06...	1245	310	60	20	10	0	0	<10	0	0	0	0
APR.												
14...	1100	270	50	40	10	1	1	10	0	0	0	<50
JUNE												
17...	1300	310	260	30	30	1	1	<10	1	0	0	<50
SEP.												
08...	1030	650	80	70	20	0	0	<10	0	0	0	100

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
DEC.											
02...	--	--	--	--	--	--	--	--	--	--	--
JAN.											
06...	0	260	1	<100	1	.0	.0	0	0	20	0
APR.											
14...	1	10	1	<100	5	--	.0	0	0	40	6
JUNE											
17...	0	10	1	<100	7	.0	.0	0	0	50	0
SEP.											
08...	0	10	1	<100	2	.0	.0	0	0	110	10

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
NOV.							
22...	1315	504	320	--	--	--	--
DEC.							
02...	1030	22	--	--	--	--	--
JAN.							
06...	1245	92	670	13	8.5	14	2.1
28...	0930	11	270	--	--	--	--
FEB.							
25...	1300	15	980	--	--	--	--
APR.							
14...	1100	9.0	760	12	9.8	10	1.4
MAY							
05...	1300	6.0	1800	--	--	--	--
21...	1245	3.4	460	--	--	--	--
JUNE							
03...	1015	2.9	960	--	--	--	--
17...	1300	4.3	--	5.6	4.2	7.2	1.0
JULY							
07...	1100	3.5	380	--	--	--	--
AUG.							
05...	1305	6.3	730	--	--	--	--
SEP.							
08...	1030	3.9	1400	1.1	1.0	24	6.3

NOV. 22, 1974
1315 HOURS

IDENTIFICATION OF PHYTOPLANKTON

320 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		44	14
	....COCCONEIS		11	3
	....RHOICOSPHENIA		33	10
	...CYMBELLACEAE			
	....EPITHEMIA		44	14
	...EUNOTIACEAE			
	....EUNOTIA		11	3
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		55	17
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		11	3
	...NITZSCHIACEAE			
D	....NITZSCHIA		76	24
	...TABELLARIACEAE			
	....TABELLARIA		33	10

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER ; 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 2.513
GENERA 2.900

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JAN. 28, 1975
0930 HOURS

IDENTIFICATION OF PHYTOPLANKTON

270 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		21	8
	....RHOIOCOSPHENIA		32	12
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		11	4
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		200	73
	...NITZSCHIACEAE			
	....NITZSCHIA		11	4

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER ; 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.150
GENERA 1.336

FEB. 25, 1975
1300 HOURS

980 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...CYMBELLACEAE			
	....CYMBELLA		38	4
	...FRAGILARIACEAE			
	....SYNEDRA		75	8
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		38	4
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		600	62
	...NITZSCHIACEAE			
D	....NITZSCHIA		230	23

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER ; 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.565
GENERA 1.565

APR. 14, 1975
1100 HOURS

760 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
D	....CHLORELLA		170	22
	...SCENEDESMACEAE			
D	....SCENEDESMUS		130	18
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		100	13
	....RHOIOCOSPHENIA		34	4
	...CYMBELLACEAE			
	....CYMBELLA		17	2
	...FRAGILARIACEAE			
	....SYNEDRA		34	4
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		84	11
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		190	24

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER ; 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.971
CLASS 0.971
ORDER 0.971
FAMILY 2.539
GENERA 2.683

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

MAY 5, 1975
1300 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,800 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		19	1
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		97	5
	....RHOICOSPHENIA		19	1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		77	4
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		150	9
	...NITZSCHIACEAE			
	....NITZSCHIA		97	5
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		1,400	74

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	0.883
CLASS	0.883
ORDER	0.883
FAMILY	1.361
GENERA	1.403

MAY 21, 1975
1245 HOURS

460 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		13	3
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....COSMARIUM		13	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		53	11
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		26	6
	....COCCONEIS		26	6
	...FRAGILARIACEAE			
	....FRAGILARIA		26	6
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		39	9
	...NAVICULACEAE	NAVICULOID		
	....DIPLONEIS		26	6
D	....NAVICULA		170	37
	...NITZSCHIACEAE			
	....NITZSCHIA		66	14

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	0.316
CLASS	0.316
ORDER	0.876
FAMILY	2.473
GENERA	2.830

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JUNE 3, 1975
1015 HOURS

IDENTIFICATION OF PHYTOPLANKTON

960 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		400	41
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		33	3
	....RHOICOSPHENIA		33	3
	...DIATOMACEAE			
	....DIATOMA		33	3
	...FRAGILARIACEAE			
D	....FRAGILARIA		230	24
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		160	17
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		33	3
	...NITZSCHIACEAE			
	....NITZSCHIA		33	3

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.978
FAMILY 2.228
GENERA 2.297

AUG. 5, 1975
1305 HOURS

740 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
L	....SCENEDESMUS			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		84	11
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		21	3
L	....RHOICOSPHENIA			0
	...CYMBELLACEAE			
	....CYMBELLA		84	11
	...FRAGILARIACEAE			
D	....FRAGILARIA		210	29
	....SYNEDRA		21	3
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		21	3
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		190	26
	...NITZSCHIACEAE			
	....NITZSCHIA		110	14
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
L	....TRACHELOMONAS			0

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.513
FAMILY 2.438
GENERA 2.576

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

SEP. 8, 1975
1030 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,400 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		19	1
	....KIRCHNERIELLA		19	1
L	....TETRAEDRON			0
	...SCENEDESMACEAE			
	....SCENEDESMUS		75	5
	..ZYGNEMATALES			
	...ZYGNEMATACEAE			
	....MOUGEOTIA		19	1
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		110	8
L	....MELOSIRA			0
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		75	5
	....RHOICOSPHENIA		19	1
	...CYMBELLACEAE			
	....CYMBELLA		130	9
L	....RHOPALODIA			0
	...FRAGILARIACEAE			
	....FRAGILARIA		170	12
	....SYNEDRA		19	1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		19	1
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		260	19
	....PINNULARIA		19	1
	...NITZSCHIACEAE			
	....NITZSCHIA		150	11
	...SURIRELLACEAE			
L	....SURIRELLA			0
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		280	20
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
L	....PHACUS			0
	PYRRHOPHYTA			
	.DINOPHYCEAE	DINOFLAGELLATES		
	..PERIDINIALES			
	...PERIDINIACEAE			
	....PERIDINIUM		19	1

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.233
CLASS	1.233
ORDER	1.646
FAMILY	3.146
GENERA	3.354

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Feb. 25	1340	15.0	23.0
Apr. 14	1100	8.91	25.0
May 5	1310	6.00	23.5
21	1315	3.36	25.5
June 3	0950	2.91	23.0
17	1235	4.36	25.0
July 7	1045	3.55	24.0
Aug. 5	1305	6.29	26.5
Sept. 8	1015	3.95	24.5

SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
NOV.					
22...	1310	--	41	--	63
22...	1315	504	--	--	--
DEC.					
02...	1030	22	--	--	--
JAN.					
06...	1245	92	3	.75	99
28...	0930	11	3	.09	100
FEB.					
25...	1300	15	3	.12	100
APR.					
14...	1100	9.0	2	.05	100
MAY					
05...	1300	6.0	4	.06	100
21...	1245	3.4	3	.03	100
JUNE					
03...	1015	2.9	5	.04	68
17...	1300	4.3	4	.05	100
JULY					
07...	1100	3.5	5	.05	100
AUG.					
05...	1305	6.3	5	.09	100
SEP.					
08...	1030	3.9	5	.05	95

16212800 KIPAPA STREAM NEAR WAHIAWA

LOCATION.--Iat 21°28'13", long 157°57'40", on left bank 1,700 ft (518 m) downstream from forest-reserve boundary, 4.9 mi (7.9 km) southeast of Wahiawa Post Office, and 6.3 mi (10.1 km) northeast of Waipahu.

DRAINAGE AREA.--4.29 mi^2 (11.11 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1970-75 (partial-record station).
Sediment records: Water years 1970-71 (partial-record station), February 1973 to September 1975.

EXTREMES.--1974-75:
Sediment concentrations: Maximum daily 558 mg/l Nov. 21; minimum daily, no flow on many days during September.
Sediment discharge: Maximum daily, 897 tons (814 tonnes) Nov. 21; minimum daily, 0 tons (0 tonnes) on many days.

Period of record:
Sediment concentrations: Maximum daily, 905 mg/l Apr. 19, 1974; minimum daily, no flow on many days during September 1975.
Sediment discharge: Maximum daily, 4,110 tons (3,730 tonnes) Apr. 19, 1974; minimum daily, 0 tons (0 tonnes) on many days during each year.

REMARKS.--Chemical analyses for this station on page 342.

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 7	1425	1.81	24.0
Dec. 24	1420	5.40	22.0
Feb. 5	1530	7.80	21.0
Mar. 25	1220	31.8	22.5
May 6	1315	12.5	21.5
June 17	1135	.57	24.0
Aug. 5	1000	.15	23.5
Sept. 17	0955	.86	22.5

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.69	3	.01	4.1	8	.09	2.4	3	.02
2	.80	4	.01	2.7	6	.04	2.2	3	.02
3	1.8	6	.03	1.9	5	.03	2.0	3	.02
4	2.3	5	.03	1.5	5	.02	1.8	3	.01
5	.86	3	.01	1.2	4	.01	1.7	3	.01
6	.59	3	0	1.1	4	.01	2.0	6	.03
7	1.4	6	.02	1.7	5	.02	3.1	5	.04
8	1.5	4	.02	10	25	.68	2.8	5	.04
9	1.5	5	.02	8.8	20	.48	3.1	6	.05
10	.80	3	.01	13	20	.70	2.3	4	.02
11	.54	3	0	16	20	.86	1.9	4	.02
12	1.8	8	.04	6.8	10	.18	4.1	10	.11
13	1.4	5	.02	2.8	8	.06	2.3	6	.04
14	1.0	3	.01	4.5	12	.15	1.9	6	.03
15	3.0	6	.05	2.3	10	.06	14	15	.57
16	9.9	15	.40	12	25	.81	5.3	10	.14
17	6.2	8	.13	110	230	189	2.2	6	.04
18	3.4	6	.06	12	16	.52	1.3	5	.02
19	53	60	8.6	13	30	1.1	1.1	4	.01
20	9.9	20	.53	26	45	3.2	2.7	10	.07
21	2.8	8	.06	355	558	897	2.2	6	.04
22	1.6	5	.02	54	110	16	12	20	.65
23	.98	3	.01	18	14	.68	37	25	2.5
24	.74	3	.01	11	13	.39	7.8	10	.21
25	.54	3	0	7.6	8	.16	3.2	10	.09
26	.49	3	0	5.8	5	.08	33	49	7.0
27	72	150	29	4.7	4	.05	15	15	.61
28	24	30	1.9	3.9	3	.03	8.2	12	.27
29	9.9	25	.67	3.4	3	.03	4.1	5	.06
30	16	40	1.7	2.8	3	.02	2.7	4	.03
31	7.6	10	.21	---	---	---	3.5	5	.05
MONTH	239.03	---	43.58	717.6	---	1112.46	188.9	---	12.82

16212800 KIPAPA STREAM NEAR WAHIAWA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	JANUARY MEAN DISCHARGE (CFS)	JANUARY MEAN CONCEN-TRATION (MG/L)	JANUARY SEDIMENT DISCHARGE (TONS/DAY)	FEBRUARY MEAN DISCHARGE (CFS)	FEBRUARY MEAN CONCEN-TRATION (MG/L)	FEBRUARY SEDIMENT DISCHARGE (TONS/DAY)	MARCH MEAN DISCHARGE (CFS)	MARCH MEAN CONCEN-TRATION (MG/L)	MARCH SEDIMENT DISCHARGE (TONS/DAY)
1	3.9	6	.06	166	147	131	1.1	3	.01
2	2.1	3	.02	20	5	.27	.92	3	.01
3	7.7	20	.42	11	3	.09	1.9	6	.03
4	9.4	20	.51	16	10	.43	2.6	3	.02
5	21	35	2.0	11	7	.21	1.2	2	.01
6	17	30	1.4	4.9	5	.07	.92	2	.01
7	45	122	18	3.9	5	.05	1.4	6	.02
8	36	40	3.9	3.4	5	.05	6.7	15	.27
9	30	30	2.4	3.0	4	.03	1.4	5	.02
10	15	25	1.0	2.7	3	.02	1.8	5	.02
11	66	182	63	2.3	3	.02	6.8	12	.22
12	96	141	53	2.1	3	.02	64	82	23
13	16	7	.30	6.9	8	.15	7.9	10	.21
14	51	46	9.2	12	15	.49	10	12	.32
15	14	8	.30	9.2	20	.50	7.5	12	.24
16	7.3	4	.08	3.4	8	.07	12	15	.49
17	5.3	3	.04	6.4	20	.35	4.9	7	.09
18	4.3	3	.03	3.2	9	.08	3.0	5	.04
19	3.4	3	.03	1.9	6	.03	2.1	5	.03
20	3.1	3	.03	2.1	6	.03	1.9	4	.02
21	2.6	2	.01	1.6	5	.02	1.6	3	.01
22	2.3	2	.01	21	62	8.3	2.4	5	.03
23	2.1	2	.01	9.2	13	.32	15	20	.81
24	44	33	11	2.6	8	.06	8.0	12	.26
25	26	9	.63	1.6	5	.02	27	25	1.8
26	6.3	3	.05	1.3	5	.02	13	25	.88
27	4.1	2	.02	1.3	5	.02	6.0	10	.16
28	3.1	2	.02	1.3	5	.02	41	88	16
29	3.0	2	.02	---	---	---	8.5	12	.28
30	37	78	13	---	---	---	4.3	5	.06
31	73	62	24	---	---	---	6.4	18	.31
MONTH	657.0	---	204.49	331.3	---	142.74	273.24	---	45.68

DAY	APRIL MEAN DISCHARGE (CFS)	APRIL MEAN CONCEN-TRATION (MG/L)	APRIL SEDIMENT DISCHARGE (TONS/DAY)	MAY MEAN DISCHARGE (CFS)	MAY MEAN CONCEN-TRATION (MG/L)	MAY SEDIMENT DISCHARGE (TONS/DAY)	JUNE MEAN DISCHARGE (CFS)	JUNE MEAN CONCEN-TRATION (MG/L)	JUNE SEDIMENT DISCHARGE (TONS/DAY)
1	5.7	10	.15	2.1	3	.02	.80	2	0
2	3.1	5	.04	1.7	2	.01	.69	2	0
3	3.2	5	.04	1.7	3	.01	.64	2	0
4	4.9	8	.11	2.0	4	.02	.59	2	0
5	11	30	.89	7.6	20	.41	.59	2	0
6	7.2	25	.49	21	35	2.0	.59	2	0
7	8.4	20	.45	39	90	18	.54	2	0
8	24	97	12	10	18	.49	.54	2	0
9	8.1	15	.33	3.9	7	.07	.59	2	0
10	4.1	8	.09	2.6	5	.04	.54	2	0
11	3.4	7	.06	2.0	3	.02	1.0	4	.01
12	2.2	4	.02	1.5	2	.01	3.9	8	.08
13	1.9	3	.02	1.5	2	.01	2.3	5	.03
14	1.5	3	.01	4.5	8	.10	1.7	5	.02
15	2.3	5	.03	6.3	8	.14	2.1	5	.03
16	1.6	3	.01	6.9	20	.37	.98	5	.01
17	3.7	10	.10	7.7	15	.31	.64	4	.01
18	3.4	6	.06	2.3	5	.03	.54	3	0
19	2.9	6	.05	1.7	4	.02	.41	3	0
20	2.4	5	.03	1.3	4	.01	.33	3	0
21	1.3	3	.01	7.4	25	.50	.37	3	0
22	1.3	2	.01	11	20	.59	.41	3	0
23	2.9	6	.05	9.7	25	.65	.37	3	0
24	7.3	8	.16	6.7	20	.36	.80	5	.01
25	38	60	11	3.0	7	.06	1.4	5	.02
26	7.6	10	.21	1.5	6	.02	.80	3	.01
27	8.1	10	.22	1.1	6	.02	3.3	25	.22
28	7.3	6	.12	1.3	5	.02	1.8	7	.03
29	7.4	6	.12	1.5	3	.01	.74	5	.01
30	3.2	4	.03	1.3	3	.01	.45	3	0
31	---	---	---	.98	2	.01	---	---	---
MONTH	189.4	---	26.91	172.78	---	24.34	30.45	---	.49

16212800 KIPAPA STREAM NEAR WAHIAWA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	34	109	26	3.3	8	.07	.22	2	0
2	2.8	15	.11	.80	5	.01	.13	2	0
3	1.1	6	.02	.37	3	0	.03	2	0
4	.64	4	.01	.22	3	0	0	0	0
5	.45	3	0	.19	3	0	0	0	0
6	.41	2	0	.17	2	0	0	0	0
7	.33	2	0	.13	2	0	0	0	0
8	.30	2	0	.13	2	0	0	0	0
9	.30	2	0	.66	10	.02	0	0	0
10	.27	2	0	4.4	12	.14	0	0	0
11	.25	2	0	14	25	.95	0	0	0
12	.45	5	.01	2.8	15	.11	0	0	0
13	.64	5	.01	.92	8	.02	0	0	0
14	.80	5	.01	.49	5	.01	0	0	0
15	.92	5	.01	.37	4	0	0	0	0
16	.33	3	0	.27	4	0	0	0	0
17	.25	4	0	.25	4	0	.48	5	.01
18	8.7	30	.70	1.4	8	.03	.25	4	0
19	22	35	2.1	2.5	10	.07	.13	3	0
20	2.1	9	.05	2.0	5	.03	.09	3	0
21	1.0	7	.02	10	35	.95	0	0	0
22	.54	5	.01	3.1	15	.13	0	0	0
23	.33	4	0	.92	8	.02	0	0	0
24	4.6	30	.37	.49	5	.01	0	0	0
25	2.2	15	.09	.37	5	.01	0	0	0
26	.80	8	.02	.27	4	0	0	0	0
27	.41	5	.01	.19	4	0	0	0	0
28	.25	4	0	.13	4	0	13	40	1.4
29	.19	4	0	.13	4	0	2.8	10	.08
30	.17	4	0	.22	4	0	.64	5	.01
31	6.1	25	.41	.41	4	0	---	---	---
MONTH	93.63	---	29.96	51.60	---	2.58	17.77	---	1.50
YEAR	2962.70		1647.55						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT,
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM
NOV.								
17...	1135	860	1500	3480	24	37	53	68
21...	2045	1870	2560	12900	19	33	46	62

DATE	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM
NOV.							
17...	81	87	94	98	99	100	--
21...	76	82	88	93	97	99	100

16213000 WAIKELE STREAM AT WAIPAHU
(National Stream-quality accounting network station)

LOCATION.--Lat 21°23'11", long 158°00'49", on left bank 300 ft (91 m) upstream from bridge on Highway 90 and 0.3 mi (0.5 km) southwest of sugar refinery at Waipahu.

DRAINAGE AREA.--45.7 mi^2 (118.4 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1969-73 (partial-record station), July 1972 to September 1975.
Specific conductance: April 1973 to September 1975.
Water temperatures: April 1973 to September 1975.
Sediment records: Water years 1967-72 (partial-record station), July 1972 to September 1975.

EXTREMES.--1974-75:
Specific conductance: Maximum recorded, 656 micromhos/cm June 22; minimum recorded, 112 micromhos/cm Jan. 11, Mar. 12.
Water temperatures: Maximum recorded, 27.5°C July 7; minimum recorded 18.5 °C Feb. 1.
Sediment concentrations: Maximum daily, 1,740 mg/l Feb. 1; minimum daily, 15 mg/l on many days.
Sediment discharge: Maximum daily, 20,000 tons (18,100 tonnes) Feb. 1; minimum daily, 0.07 ton (0.06 tonnes) Sept. 4.

Period of record:
Specific conductance: Maximum recorded, 656 micromhos/cm June 22, 1975; minimum, 30 micromhos/cm Apr. 19, 1974.
Water temperatures: Maximum, 30.0°C May 6, 1973; minimum, 17.0°C Mar. 19, 1974.
Sediment concentrations: Maximum daily, 2,800 mg/l Apr. 19, 1974; minimum daily, 10 mg/l May 10, Aug. 10, 29-31, Sept. 1, 1974.
Sediment discharge: Maximum daily, 32,200 tons (29,200 tonnes) Apr. 19, 1974; minimum daily, 0.07 ton (0.06 tonnes) Sept. 4, 1975.

REMARKS.-- Recorder malfunction Oct. 1 to Dec. 24, Jan. 12 to Mar. 11.

CORRECTIONS.--The minimum daily sediment concentration for water year 1974 is 10 mg/l May 10, Aug. 10, 29-31, Sept. 1, 1974; the previously published figure was not the minimum daily.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
29...	0945	39	40	10	5.5	37	2.8	48	--	39	15
29...	1730	43	--	--	--	--	--	--	--	--	--
NOV.											
25...	1030	40	38	9.3	5.7	36	2.6	51	--	42	17
DEC.											
23...	1000	86	28	5.5	3.6	23	1.6	33	--	27	9.9
JAN.											
06...	1130	54	39	8.2	5.9	37	2.5	45	--	37	15
FEB.											
03...	1005	83	29	10	5.8	27	2.7	52	--	43	16
05...	0630	76	--	--	--	--	--	--	--	--	--
MAR.											
18...	1230	16	45	10	8.5	50	3.2	58	0	48	19
APR.											
08...	0945	27	44	10	8.0	46	4.6	56	0	46	19
MAY											
05...	0945	24	58	11	9.4	61	3.3	73	0	60	23
JUNE											
16...	0900	17	60	12	9.8	63	3.6	76	0	62	27
JULY											
21...	1000	18	52	12	9.0	54	3.0	65	0	53	20
AUG.											
18...	1240	15	52	15	9.3	64	3.2	80	0	66	24
SEP.											
15...	1330	2.8	57	11	9.3	64	3.3	78	0	64	24

16213000 WAIKELE STREAM AT WAIPAHU--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
OCT.											
29...	48	.1	1.7	.41	2.1	.87	194	182	.26	48	8
29...	--	--	--	--	--	--	--	--	--	--	--
NOV.											
25...	48	.1	2.1	.94	3.0	1.2	195	182	.27	47	5
DEC.											
23...	33	.1	.83	.72	1.6	.57	119	121	.16	29	1
JAN.											
06...	49	.1	1.5	.37	1.9	.84	191	179	.26	45	8
FEB.											
03...	39	.1	--	--	--	--	170	155	.23	49	6
05...	--	--	1.4	.68	2.1	.59	--	--	--	--	--
MAR.											
18...	66	.2	2.8	.30	3.1	1.2	260	231	.35	60	12
APR.											
08...	63	.3	2.9	.68	3.6	1.2	231	222	.31	58	12
MAY											
05...	77	.2	2.8	.33	3.1	1.4	297	279	.40	66	6
JUNE											
16...	81	.2	3.0	.37	3.4	1.6	312	294	.42	70	8
JULY											
21...	72	.3	1.7	.34	2.0	.91	259	254	.35	67	14
AUG.											
18...	82	.2	2.3	.30	2.6	1.1	299	289	.41	76	10
SEP.											
15...	81	.2	2.4	.47	2.9	1.6	310	288	.42	66	2

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.											
29...	61	2.3	300	7.1	23.5	60	30	6.1	6600	600	--
29...	--	--	--	--	--	--	--	--	--	--	--
NOV.											
25...	61	2.3	300	6.6	22.5	10	20	20	2200	1200	--
DEC.											
23...	62	1.9	185	7.3	21.2	100	60	2.6	1800	2200	5.6
JAN.											
06...	63	2.4	300	7.2	21.0	40	30	4.5	510	2600	--
FEB.											
03...	53	1.7	265	7.0	21.5	100	100	8.3	1900	2300	7.1
05...	--	--	270	6.5	--	--	--	--	--	--	--
MAR.											
18...	63	2.8	400	6.6	22.5	10	8	23	820	560	--
APR.											
08...	61	2.6	360	6.9	22.0	--	16	11	1300	3000	--
MAY											
05...	66	3.3	450	7.0	22.2	6	4	12	1400	600	2.4
JUNE											
16...	65	3.3	465	6.8	22.5	5	3	19	1000	330	--
JULY											
21...	62	2.9	395	6.9	23.0	20	9	13	650	380	--
AUG.											
18...	64	3.2	457	7.1	23.5	15	16	10	360	210	1.9
SEP.											
15...	67	3.4	460	7.1	23.4	6	2	9.9	930	400	--

HAWAII, ISLAND OF OAHU

16213000 WAIKELE STREAM AT WAIPAHU--Continued

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
DEC.												
23...	1000	6000	50	20	20	2	2	<10	0	<10	<10	<50
FEB.												
03...	1005	8600	80	210	67	2	2	<10	0	60	0	<50
MAY												
05...	0945	550	70	90	70	1	1	<10	0	0	0	<50
AUG.												
18...	1240	680	0	30	30	1	0	<10	0	10	0	<50

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
DEC.											
23...	0	400	1	<100	3	<.1	<.1	1	1	30	0
FEB.											
03...	0	40	3	100	9	.2	.1	1	1	90	20
MAY											
05...	4	10	5	<100	1	.1	.0	2	1	30	4
AUG.											
18...	0	<10	1	<100	0	.0	.0	1	1	10	10

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
OCT.							
29...	0945	39	1000	--	--	--	--
29...	1730	43	--	--	--	--	--
NOV.							
25...	1030	40	120	--	--	--	--
DEC.							
23...	1000	86	1400	3.8	3.1	5.2	4.5
JAN.							
06...	1130	54	400	--	--	--	--
FEB.							
03...	1005	83	94	.80	.80	.0	.0
05...	0630	76	--	--	--	--	--
MAR.							
18...	1230	16	1900	--	--	--	--
APR.							
08...	0945	28	1000	--	--	--	--
MAY							
05...	0945	24	540	13	8.6	36	12
JUNE							
16...	0900	17	930	--	--	--	--
JULY							
21...	1000	18	960	--	--	--	--
AUG.							
18...	1240	15	270	7.5	1.0	81	39
SEP.							
15...	1330	2.8	300	--	--	--	--

16213000 WAIKELE STREAM AT WAIPAHU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

OCT. 29, 1974
0945 HOURS
IDENTIFICATION OF PHYTOPLANKTON

1,000 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
D	....SCENEDESMUS		310	31
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		56	6
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		140	14
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		56	6
D	....NAVICULA		280	28
	...NITZSCHIACEAE			
	....NITZSCHIA		140	14
	...SURIRELLACEAE			
	....SURIRELLA		28	3

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	0.888
CLASS	0.888
ORDER	0.888
FAMILY	2.217
GENERA	2.434

NOV. 25, 1974
1030 HOURS
120 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
	....SCENEDESMUS		8	7
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....PLEUROTAENIUM			1
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		3	2
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		3	2
	....RHOICOSPHENIA		2	2
	...DIATOMACEAE			
	....DIATOMA			1
	...EUNOTIACEAE			
	....EUNOTIA			1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		9	7
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		7	6
	...NITZSCHIACEAE			
	....NITZSCHIA		7	6
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		77	66

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.187
CLASS	1.187
ORDER	1.343
FAMILY	1.898
GENERA	1.938

16213000 WAIKELE STREAM AT WAIPAHU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DEC. 23, 1974
1000 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,400 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		67	5
	..PENNALES	PENNATE		
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		330	24
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		400	29
	...NITZSCHIACEAE			
D	....NITZSCHIA		530	38
	...TABELLARIACEAE			
	....TABELLARIA		67	5

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.276
FAMILY 1.958
GENERA 1.958

JAN. 6, 1975
1130 HOURS

400 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		29	7
	...EUNOTIACEAE			
	....EUNOTIA		14	4
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		100	25
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		100	25
	...NITZSCHIACEAE			
D	....NITZSCHIA		160	39

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.973
GENERA 1.973

FEB. 3, 1975
1005 HOURS

94 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...NAVICULACEAE	NAVICULOID		
D	....STAURONEIS		31	33
	...NITZSCHIACEAE			
D	....NITZSCHIA		63	67

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 0.918
GENERA 0.918

MAR. 18, 1975
1230 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,900 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....SELENASTRUM		200	11
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....COSMARIUM		16	1
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		220	12
	...EUNOTIACEAE			
	....EUNOTIA		94	5
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		63	3
	...NAVICULACEAE	NAVICULOID		
	....FRUSTULIA		47	3
	....NAVICULA		47	3
	...NITZSCHIACEAE			
	....NITZSCHIA		250	13
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		940	50

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.392
CLASS	1.392
ORDER	1.435
FAMILY	2.250
GENERA	2.300

APR. 8, 1975
0945 HOURS

1,000 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		130	12
	...SCENEDESMACEAE			
D	....CRUCIGENIA		400	39
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		51	5
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		25	2
D	....NAVICULA		350	34
	...NITZSCHIACEAE			
	....NITZSCHIA		51	5
	...SURIRELLACEAE			
	....SURIRELLA		25	2

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.000
CLASS	1.000
ORDER	1.000
FAMILY	1.987
GENERA	2.116

16213000 WAIKELE STREAM AT WAIPAHU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

MAY 5, 1975
0945 HOURS

IDENTIFICATION OF PHYTOPLANKTON

540 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....MELOSIRA		15	3
	..PENNALES	PENNATE		
	...DIATOMACEAE			
	....DIATOMA		15	3
	...FRAGILARIACEAE			
D	....SYNEDRA		150	28
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		130	25
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		90	17
	...NITZSCHIACEAE			
D	....NITZSCHIA		100	19
	...TABELLARIACEAE			
	....TABELLARIA		30	6

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.183
FAMILY 2.422
GENERA 2.422

JUNE 16, 1975
0900 HOURS

930 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		24	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		24	3
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		200	21
	...NITZSCHIACEAE			
D	....NITZSCHIA		490	53
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
D	....ANACYSTIS		200	21

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.909
CLASS 0.909
ORDER 0.909
FAMILY 1.710
GENERA 1.710

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JULY 21, 1975
1000 HOURS

IDENTIFICATION OF PHYTOPLANKTON

960 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...CYMBELLACEAE			
	....CYMBELLA		42	4
L	....RHOPALODIA			0
	...EUNOTIACEAE			
L	....EUNOTIA			0
	...FRAGILARIACEAE			
	....FRAGILARIA		84	9
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		170	17
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		500	52
	...NITZSCHIACEAE			
	....NITZSCHIA		130	13
	...SURIRELLACEAE			
L	....SURIRELLA			0
	...TABELLARIACEAE			
L	....TABELLARIA			0
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....TRACHELOMONAS		42	4

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.258
CLASS 0.258
ORDER 0.258
FAMILY 2.012
GENERA 2.012

AUG. 18, 1975
1240 HOURS

270 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
L	....ACHNANTHES			0
	...CYMBELLACEAE			
	....CYMBELLA		11	4
	...FRAGILARIACEAE			
	....SYNEDRA		11	4
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		120	46
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		68	25
	....PINNULARIA		34	13
	....TROPIDONEIS		11	4
	...NITZSCHIACEAE			
	....NITZSCHIA		11	4
	...TABELLARIACEAE			
L	....TABELLARIA			0

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.615
GENERA 2.155

16213000 WAIKELE STREAM AT WAIPAHU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

SEP. 15, 1975
1330 HOURS
310 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
L	....CYCLOTELLA			0
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
	....SYNEDRA		19	6
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		56	18
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		93	30
	...NITZSCHIACEAE			
	....NITZSCHIA		9	3
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...NOSTOCACEAE			
D	....APHANIZOMENON		56	18
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		75	24

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.983
CLASS 0.983
ORDER 0.983
FAMILY 2.310
GENERA 2.310

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	426	405	422
2	---	---	---	---	---	---	---	---	---	438	404	424
3	---	---	---	---	---	---	---	---	---	430	368	397
4	---	---	---	---	---	---	---	---	---	380	350	366
5	---	---	---	---	---	---	---	---	---	383	236	320
6	---	---	---	---	---	---	---	---	---	315	268	295
7	---	---	---	---	---	---	---	---	---	300	171	230
8	---	---	---	---	---	---	---	---	---	223	165	202
9	---	---	---	---	---	---	---	---	---	216	192	200
10	---	---	---	---	---	---	---	---	---	240	212	225
11	---	---	---	---	---	---	---	---	---	255	112	191
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	390	341	371	---	---	---
26	---	---	---	---	---	---	392	145	288	---	---	---
27	---	---	---	---	---	---	296	180	245	---	---	---
28	---	---	---	---	---	---	332	274	302	---	---	---
29	---	---	---	---	---	---	389	329	365	---	---	---
30	---	---	---	---	---	---	423	378	399	---	---	---
31	---	---	---	---	---	---	436	400	418	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

HAWAII, ISLAND OF OAHU

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	408	344	372	454	415	431
2	---	---	---	---	---	---	440	366	402	467	437	451
3	---	---	---	---	---	---	462	411	436	486	448	465
4	---	---	---	---	---	---	454	400	439	484	463	471
5	---	---	---	---	---	---	416	260	353	495	459	472
6	---	---	---	---	---	---	398	278	327	495	239	338
7	---	---	---	---	---	---	367	301	337	345	174	300
8	---	---	---	---	---	---	372	198	308	332	178	238
9	---	---	---	---	---	---	325	234	290	393	309	361
10	---	---	---	---	---	---	365	313	340	479	375	428
11	---	---	---	---	---	---	404	366	387	506	452	475
12	---	---	---	435	112	246	450	390	416	536	462	493
13	---	---	---	318	163	245	516	426	482	528	460	481
14	---	---	---	344	286	316	511	433	464	485	467	476
15	---	---	---	314	232	274	490	456	472	484	399	451
16	---	---	---	375	278	333	479	464	471	410	369	384
17	---	---	---	362	274	318	479	451	462	401	322	363
18	---	---	---	410	359	387	465	431	447	498	409	460
19	---	---	---	451	392	415	452	405	432	519	444	483
20	---	---	---	460	417	441	449	436	441	467	449	458
21	---	---	---	469	434	450	467	431	443	517	449	482
22	---	---	---	470	431	452	471	455	465	493	307	384
23	---	---	---	484	322	450	500	465	481	421	332	376
24	---	---	---	349	278	310	485	453	468	407	317	374
25	---	---	---	377	194	285	457	175	300	411	360	389
26	---	---	---	310	248	274	346	230	294	450	401	429
27	---	---	---	387	289	341	370	340	358	476	432	452
28	---	---	---	384	162	243	380	356	367	481	462	472
29	---	---	---	421	252	333	396	363	382	505	473	487
30	---	---	---	466	388	429	429	368	405	523	507	515
31	---	---	---	416	378	401	---	---	---	532	514	521
MONTH	---	---	---	---	---	---	516	175	401	536	174	431

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	518	480	494	488	182	374	483	453	468	479	468	474
2	491	473	483	378	248	329	456	422	440	481	467	474
3	505	478	487	504	369	413	485	458	472	479	465	472
4	504	477	493	465	442	453	487	463	476	475	457	468
5	519	486	505	478	456	466	490	480	485	478	463	472
6	509	485	495	526	472	491	491	479	490	480	470	474
7	526	490	509	543	487	511	487	469	479	474	460	468
8	527	490	499	515	473	490	482	467	476	477	463	471
9	499	482	491	490	470	478	484	468	477	474	451	462
10	525	483	506	484	466	475	515	484	499	468	452	458
11	511	476	496	483	468	477	515	464	485	469	460	463
12	522	487	498	511	468	484	457	336	379	462	454	459
13	497	477	485	512	483	502	441	394	421	475	463	467
14	494	477	487	485	468	479	467	442	455	474	463	467
15	486	470	476	485	464	475	469	454	461	476	459	468
16	504	468	478	488	474	484	485	460	471	478	461	470
17	510	481	494	492	470	486	523	480	504	486	467	476
18	497	473	489	502	488	493	511	466	480	495	471	480
19	508	485	495	503	256	365	484	463	473	479	468	473
20	505	483	495	392	285	352	478	459	468	498	460	472
21	527	488	502	425	378	401	473	458	465	503	486	494
22	656	525	554	464	418	441	471	352	395	517	495	504
23	529	493	504	474	461	467	428	376	407	497	459	474
24	507	494	499	475	452	469	456	431	447	470	451	461
25	502	492	496	446	362	395	472	453	461	482	461	468
26	536	502	515	460	409	435	474	458	466	483	461	477
27	542	500	523	468	448	458	475	459	468	475	461	468
28	506	480	492	475	462	469	488	462	473	547	468	492
29	506	493	499	478	462	470	478	461	472	505	444	488
30	498	479	489	476	457	467	483	460	469	490	423	451
31	---	---	---	481	466	474	485	464	472	---	---	---
MONTH	656	468	498	543	182	452	523	336	463	547	423	472
YEAR	656	112	432									

16213000 WAIKELE STREAM AT WAIPAHU--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	23.0	21.5	22.0
2	---	---	---	---	---	---	---	---	---	22.5	21.0	22.0
3	---	---	---	---	---	---	---	---	---	22.5	21.5	22.0
4	---	---	---	---	---	---	---	---	---	22.5	21.0	22.0
5	---	---	---	---	---	---	---	---	---	22.5	21.0	21.5
6	---	---	---	---	---	---	---	---	---	22.5	20.5	21.5
7	---	---	---	---	---	---	---	---	---	21.5	20.5	21.0
8	---	---	---	---	---	---	---	---	---	21.5	20.0	20.5
9	---	---	---	---	---	---	---	---	---	22.0	20.5	21.0
10	---	---	---	---	---	---	---	---	---	23.0	21.5	22.0
11	---	---	---	---	---	---	---	---	---	22.0	20.5	21.5
12	---	---	---	---	---	---	---	---	---	21.0	20.0	20.5
13	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
14	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
15	---	---	---	---	---	---	---	---	---	22.0	20.0	21.0
16	---	---	---	---	---	---	---	---	---	22.5	20.5	21.5
17	---	---	---	---	---	---	---	---	---	22.5	20.5	21.5
18	---	---	---	---	---	---	---	---	---	23.0	21.0	22.0
19	---	---	---	---	---	---	---	---	---	22.5	21.0	22.0
20	---	---	---	---	---	---	---	---	---	23.0	21.0	22.0
21	---	---	---	---	---	---	---	---	---	23.0	21.5	22.0
22	---	---	---	---	---	---	---	---	---	23.0	21.0	22.0
23	---	---	---	---	---	---	---	---	---	23.0	21.0	22.0
24	---	---	---	---	---	---	---	---	---	23.0	20.5	22.0
25	---	---	---	---	---	---	23.0	21.5	22.5	21.5	19.0	20.5
26	---	---	---	---	---	---	23.0	21.0	22.0	21.0	20.0	20.5
27	---	---	---	---	---	---	22.5	20.5	21.5	22.0	20.5	21.0
28	---	---	---	---	---	---	23.0	20.5	21.5	22.5	20.5	21.5
29	---	---	---	---	---	---	23.0	21.0	22.0	22.5	20.5	21.5
30	---	---	---	---	---	---	22.5	21.0	21.5	22.0	20.5	21.5
31	---	---	---	---	---	---	23.0	21.0	22.0	21.0	19.5	20.5
MONTH	---	---	---	---	---	---	---	---	---	23.0	19.0	21.5

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.0	18.5	20.0	24.0	22.0	23.0	23.5	21.5	22.5	25.0	22.5	23.5
2	22.5	20.5	21.5	24.0	21.5	22.5	24.0	22.0	23.0	24.5	22.5	23.0
3	23.0	20.5	21.5	23.5	21.5	22.0	25.0	22.0	23.0	24.5	22.0	23.0
4	22.5	21.0	21.5	23.0	21.0	22.0	25.0	22.0	23.0	24.0	22.5	23.0
5	22.5	20.0	21.0	23.0	21.5	22.0	25.0	22.0	23.5	24.0	22.5	23.0
6	22.0	20.0	21.0	24.0	21.0	22.5	24.0	21.5	22.5	24.5	22.5	23.0
7	22.5	20.5	21.5	24.5	22.5	23.5	23.0	22.0	22.5	24.5	21.5	22.5
8	22.5	20.5	21.5	24.0	22.0	23.0	26.0	21.5	23.0	24.5	20.5	22.5
9	22.5	20.5	21.5	24.0	22.0	23.0	24.0	21.5	23.0	24.5	22.0	23.0
10	22.0	21.0	21.5	24.5	21.5	23.0	24.5	21.5	23.0	25.5	22.0	23.0
11	22.0	21.0	21.5	24.5	22.0	23.0	24.5	22.0	23.5	26.0	21.5	23.0
12	23.0	21.0	22.0	23.0	21.0	22.0	24.0	22.0	23.0	24.5	22.0	23.0
13	23.0	22.5	22.5	23.0	20.5	21.5	24.5	22.0	23.0	25.0	22.5	23.5
14	23.0	21.5	22.5	23.0	21.0	22.0	25.0	22.0	23.5	24.5	22.5	23.0
15	24.0	22.0	23.0	23.0	21.0	22.0	25.0	22.5	23.5	25.5	22.5	23.5
16	24.0	22.0	23.0	24.0	21.5	23.0	25.0	22.5	23.5	24.0	23.0	23.5
17	24.5	23.0	23.5	23.5	21.5	22.5	23.0	22.0	22.5	24.5	22.0	23.5
18	24.5	21.5	23.0	24.0	22.0	23.0	24.0	21.5	23.0	24.5	22.5	23.5
19	23.5	21.0	22.5	24.0	22.0	23.0	24.5	22.0	23.0	26.5	22.5	24.0
20	23.5	21.5	22.5	24.0	22.0	22.5	24.0	22.0	23.0	24.5	22.5	23.5
21	23.5	21.0	22.0	24.0	21.5	22.5	23.5	22.0	22.5	24.5	22.5	23.0
22	23.0	21.5	22.0	24.0	21.5	22.5	23.0	22.0	22.5	24.0	22.5	23.0
23	22.5	20.0	21.5	25.5	22.0	23.5	24.0	22.0	22.5	23.5	22.5	23.0
24	23.5	20.5	22.0	23.0	21.5	22.5	22.5	22.0	22.0	23.5	22.0	23.0
25	23.0	21.0	22.0	25.0	22.0	23.0	23.0	21.5	22.0	25.0	22.0	23.5
26	24.0	21.5	22.5	25.0	21.5	23.0	24.5	21.5	23.0	24.5	22.5	23.5
27	24.5	22.0	23.0	24.5	22.0	23.0	24.5	22.5	23.5	25.0	22.0	23.5
28	24.5	22.0	23.0	23.0	21.0	21.5	24.5	22.5	23.5	24.5	22.0	23.0
29	---	---	---	23.0	21.0	22.0	25.5	23.0	24.0	23.0	22.0	22.5
30	---	---	---	24.5	22.0	23.0	25.0	23.0	24.0	24.5	22.0	23.0
31	---	---	---	23.0	22.0	22.5	---	---	---	25.0	22.0	23.0
MONTH	24.5	18.5	22.0	25.5	20.5	22.5	26.0	21.5	23.0	26.5	20.5	23.0

16213000 WAIKELE STREAM AT WAIPAHU--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.0	22.0	23.5	25.5	22.5	23.5	25.0	22.5	23.5	24.0	22.0	23.0
2	25.0	22.5	23.0	25.0	22.5	23.5	24.5	22.5	23.5	25.0	22.0	23.0
3	24.5	22.0	23.0	27.0	23.0	24.0	25.0	22.5	23.5	24.5	22.5	23.0
4	25.5	22.5	24.0	25.0	22.5	23.5	25.0	22.0	23.5	24.5	22.0	23.0
5	26.5	23.0	24.5	25.0	22.0	23.5	25.0	22.5	23.5	24.5	22.0	23.0
6	25.5	22.5	23.5	25.0	22.0	23.5	25.0	22.5	23.0	24.0	22.0	23.0
7	26.0	22.5	24.0	27.5	22.0	24.5	24.0	22.0	23.0	24.0	22.0	23.0
8	24.5	22.5	23.5	24.5	22.5	23.5	24.0	22.0	23.0	24.5	22.5	23.0
9	24.5	22.5	23.0	25.0	22.0	23.5	24.5	22.0	23.0	24.5	22.0	23.0
10	26.0	22.0	24.0	25.0	22.5	23.5	25.5	22.5	23.5	24.5	22.5	23.0
11	24.5	22.5	23.0	24.0	22.5	23.0	24.5	22.5	23.5	24.0	22.0	23.0
12	25.0	22.0	23.5	24.5	22.0	23.5	25.0	23.5	24.0	24.5	22.0	23.0
13	23.5	22.5	23.0	25.5	23.0	24.0	24.5	22.5	23.5	23.5	22.0	22.5
14	24.0	22.5	23.0	24.5	22.5	23.5	24.0	22.5	23.0	24.0	21.5	22.5
15	24.0	22.5	23.0	25.0	22.5	23.5	24.0	22.5	23.0	24.0	22.0	23.0
16	25.0	22.5	23.5	25.0	22.0	23.5	24.5	22.0	23.0	23.5	22.0	22.5
17	25.0	22.5	24.0	25.5	22.5	23.5	25.5	22.5	24.0	24.0	22.0	23.0
18	25.5	22.0	23.5	26.0	23.0	24.0	25.0	22.5	23.5	24.5	22.0	23.0
19	25.5	22.0	23.5	26.0	23.5	25.0	24.5	22.0	23.0	25.0	22.5	23.5
20	25.5	22.0	23.5	25.0	23.5	24.5	25.0	22.5	23.5	24.5	22.0	23.0
21	25.0	22.0	23.0	25.0	22.5	23.5	24.0	22.5	23.0	24.5	23.0	23.5
22	24.5	22.0	23.0	25.5	22.5	23.5	25.0	23.0	24.0	25.0	22.5	23.5
23	25.0	22.0	23.5	24.5	22.0	23.5	25.0	22.5	23.5	24.0	22.0	23.0
24	25.0	22.0	23.0	24.0	22.0	23.0	24.5	22.5	23.0	24.0	22.0	23.0
25	25.5	22.0	23.5	24.5	23.0	23.5	24.5	22.0	23.0	23.5	22.0	23.0
26	25.5	22.0	22.5	25.0	22.5	23.5	24.5	22.0	23.0	24.0	22.0	22.0
27	24.5	22.0	23.0	24.5	22.0	23.0	24.5	22.0	23.0	24.0	21.5	22.5
28	25.5	22.0	23.5	24.5	22.0	23.0	24.5	22.0	23.0	23.0	22.0	22.5
29	25.5	22.5	23.5	24.0	22.0	23.0	24.0	22.0	22.5	24.5	22.0	23.0
30	25.5	22.5	23.5	24.6	22.5	23.5	25.0	22.0	23.5	24.5	22.5	23.5
31	---	---	---	24.5	22.5	23.0	24.5	22.5	23.0	---	---	---
MONTH	26.5	22.0	23.5	27.5	22.0	23.5	25.5	22.0	23.5	25.0	21.5	23.0
YEAR	27.5	18.5	23.0									

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Dec. 31	1345	31.2	23.0
Feb. 19	1630	18.8	24.0
Apr. 8	0845	26.8	21.5
May 13	1055	19.2	24.0
July 8	0940	19.5	23.0

HAWAII, ISLAND OF OAHU

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	20	25	1.4	26	35	2.5	37	35	3.5
2	22	25	1.5	24	30	1.9	28	30	2.3
3	20	30	1.6	24	30	1.9	38	30	3.1
4	25	25	1.7	17	35	1.6	34	30	2.8
5	28	22	1.7	15	30	1.2	29	30	2.3
6	28	22	1.7	15	30	1.2	27	30	2.2
7	23	25	1.6	18	40	1.9	31	20	1.7
8	17	25	1.1	26	40	2.8	38	20	2.1
9	17	20	.92	33	35	3.1	24	30	1.9
10	17	20	.92	45	40	4.9	23	30	1.9
11	12	20	.65	56	70	11	21	30	1.7
12	17	20	.92	37	50	5.0	21	30	1.7
13	21	18	1.0	20	30	1.6	24	25	1.6
14	13	30	1.1	16	20	.86	23	25	1.6
15	17	20	.92	19	25	1.3	31	25	2.1
16	34	40	3.7	36	40	3.9	40	30	3.2
17	20	30	1.6	291	860	1290	40	30	3.2
18	22	25	1.5	58	160	25	35	30	2.8
19	98	350	93	28	70	5.3	32	25	2.2
20	39	60	6.3	65	120	21	36	25	2.4
21	23	40	2.5	690	1380	3850	37	25	2.5
22	15	30	1.2	280	800	1080	36	25	2.4
23	12	20	.65	90	130	32	73	70	14
24	12	20	.65	64	40	6.9	46	40	5.0
25	11	20	.59	40	30	3.2	37	30	3.0
26	17	20	.92	33	40	3.6	83	160	36
27	84	234	152	29	40	3.1	62	50	8.4
28	104	90	25	41	40	4.4	50	30	4.1
29	44	40	4.8	45	35	4.3	39	25	2.6
30	34	35	3.2	45	35	4.3	36	25	2.4
31	41	60	6.6	---	---	---	34	30	2.8
MONTH	907	---	322.94	2226	---	6379.76	1145	---	129.5

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	35	30	2.8	1330	1740	20000	30	20	1.6
2	34	30	2.8	144	158	63	24	20	1.3
3	43	30	3.5	83	70	16	23	20	1.2
4	41	30	3.3	61	25	4.1	22	20	1.2
5	56	45	6.8	70	50	9.5	22	20	1.2
6	57	50	7.7	52	35	4.9	19	25	1.3
7	92	110	27	46	35	4.3	18	25	1.2
8	100	80	22	42	30	3.4	22	25	1.5
9	88	70	17	41	30	3.3	16	30	1.3
10	76	120	25	41	20	2.2	18	30	1.5
11	210	522	497	39	20	2.1	17	30	1.4
12	550	1140	2220	38	20	2.1	104	159	61
13	102	70	19	33	40	3.6	39	50	5.3
14	108	80	23	41	30	3.3	31	30	2.5
15	75	30	6.1	39	30	3.2	37	50	5.0
16	53	25	3.6	44	40	4.8	27	30	2.2
17	46	20	2.5	34	30	2.8	28	30	2.3
18	43	20	2.3	31	50	4.2	20	25	1.4
19	41	15	1.7	23	40	2.5	13	20	.70
20	39	20	2.1	22	30	1.8	14	20	.76
21	37	30	3.0	21	20	1.1	15	20	.81
22	37	20	2.0	31	60	5.0	12	20	.65
23	36	20	1.9	58	60	9.4	18	20	.97
24	69	68	36	37	25	2.5	31	20	1.7
25	120	116	50	28	20	1.5	43	30	3.5
26	49	20	2.6	26	20	1.4	32	30	2.6
27	37	20	2.0	24	20	1.3	23	30	1.9
28	31	30	2.5	23	20	1.2	120	160	52
29	34	20	1.8	---	---	---	65	40	7.0
30	72	40	11	---	---	---	40	25	2.7
31	187	163	117	---	---	---	27	25	1.8
MONTH	2598	---	3125.0	2502	---	20164.5	970	---	171.49

HAWAII, ISLAND OF OAHU

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	33	25	2.2	21	15	.85	18	30	1.5
2	24	20	1.3	19	20	1.0	17	30	1.4
3	23	20	1.2	21	20	1.1	13	25	.88
4	24	20	1.3	24	15	.97	21	25	1.4
5	41	30	3.3	22	20	1.2	21	25	1.4
6	44	30	3.6	44	40	4.8	17	25	1.1
7	35	30	2.8	54	70	10	18	25	1.2
8	44	50	5.9	57	60	9.2	19	25	1.3
9	38	40	4.1	28	30	2.3	18	25	1.2
10	30	40	3.2	33	25	2.2	18	25	1.2
11	25	30	2.0	34	20	1.8	17	20	.92
12	25	30	2.0	30	20	1.6	18	20	.97
13	33	25	2.2	20	20	1.1	19	20	1.0
14	24	25	1.6	19	20	1.0	18	20	.97
15	26	25	1.8	24	25	1.6	20	20	1.1
16	21	25	1.4	23	25	1.6	17	20	.92
17	22	25	1.5	29	25	2.0	19	25	1.3
18	24	25	1.6	37	20	2.0	17	25	1.1
19	26	20	1.4	30	20	1.6	18	25	1.2
20	27	20	1.5	17	20	.92	9.7	30	.79
21	25	20	1.4	16	20	.86	18	30	1.5
22	22	20	1.2	28	50	3.8	22	35	2.1
23	22	20	1.2	28	50	3.8	5.0	35	.47
24	25	20	1.4	26	45	3.2	8.0	35	.76
25	61	80	13	29	45	3.5	11	30	.89
26	38	40	4.1	23	30	1.9	9.1	20	.49
27	34	30	2.8	17	30	1.4	5.9	20	.32
28	32	20	1.7	17	25	1.1	7.5	20	.41
29	28	20	1.5	18	25	1.2	7.7	20	.42
30	26	20	1.4	18	25	1.2	7.7	25	.52
31	---	---	---	20	25	1.4	---	---	---
MONTH	902	---	75.6	826	---	72.20	454.6	---	30.73

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	34	60	5.5	17	20	.92	18	15	.73
2	23	45	2.8	17	20	.92	6.6	20	.36
3	15	40	1.6	9.4	20	.51	2.7	20	.15
4	22	30	1.8	4.1	15	.17	1.3	20	.07
5	22	20	1.2	5.0	15	.20	3.6	20	.19
6	17	20	.92	3.6	15	.15	2.7	20	.15
7	18	20	.97	4.1	15	.17	8.3	20	.45
8	18	20	.97	3.9	15	.16	6.6	15	.27
9	18	20	.97	5.7	20	.31	4.1	20	.22
10	17	20	.92	6.8	20	.37	4.8	25	.32
11	17	20	.92	14	20	.76	3.1	25	.21
12	20	15	.81	19	20	1.0	5.5	25	.37
13	21	15	.85	8.6	20	.46	1.6	25	.11
14	12	15	.49	6.6	20	.36	7.0	25	.47
15	9.1	20	.49	6.6	20	.36	6.6	20	.36
16	14	20	.76	9.4	20	.51	2.8	15	.11
17	16	20	.86	9.7	20	.52	2.5	15	.10
18	16	20	.86	6.1	20	.33	3.1	15	.13
19	48	45	5.8	8.0	25	.54	4.4	15	.18
20	31	30	2.5	14	25	.95	7.2	15	.29
21	18	25	1.2	14	25	.95	16	15	.65
22	16	25	1.1	18	25	1.2	13	15	.53
23	15	30	1.2	4.8	25	.32	3.2	15	.13
24	18	30	1.5	3.6	20	.19	3.9	15	.16
25	22	30	1.8	1.8	20	.10	3.7	15	.15
26	17	20	.92	5.7	25	.38	3.2	20	.17
27	17	20	.92	5.0	20	.27	7.0	30	.57
28	16	20	.86	4.8	20	.26	16	30	1.3
29	15	20	.81	4.8	20	.26	17	30	1.4
30	14	20	.76	12	20	.65	2.8	25	.19
31	13	20	.70	17	15	.69	---	---	---
MONTH	589.1	---	43.76	270.1	---	14.94	188.3	---	10.49
YEAR	13578.1		32211.91						

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM
OCT.							
29...	0945	39	--	--	--	--	--
29...	1730	43	35	4.1	--	--	--
NOV.							
25...	1030	40	15	1.6	--	--	--
DEC.							
23...	1000	86	82	19	--	--	--
JAN.							
06...	1120	54	28	--	--	--	--
06...	1130	54	--	--	--	--	--
12...	0430	704	2750	5230	43	54	66
FEB.							
01...	0500	5550	8660	130	30	37	48
03...	1005	83	72	16	--	--	--
05...	0630	76	--	--	--	--	--
MAR.							
18...	1230	16	10	.4	--	--	--
APR.							
08...	0945	28	13	.9	--	--	--
MAY							
05...	0945	24	6	.3	--	--	--
JUNE							
16...	0900	17	7	.3	--	--	--
JULY							
21...	1000	18	12	.5	--	--	--
AUG.							
18...	1240	15	9	.3	--	--	--
SEP.							
15...	1330	2.8	6	.0	--	--	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM
OCT.							
29...	--	--	--	--	--	--	--
29...	--	--	93	--	--	--	--
NOV.							
25...	--	--	100	--	--	--	--
DEC.							
23...	--	--	98	--	--	--	--
JAN.							
06...	--	--	90	--	--	--	--
06...	--	--	--	--	--	--	--
12...	82	95	97	100	--	--	--
FEB.							
01...	60	72	81	92	92	99	100
03...	--	--	96	--	--	--	--
05...	--	--	--	--	--	--	--
MAR.							
18...	--	--	100	--	--	--	--
APR.							
08...	--	--	100	--	--	--	--
MAY							
05...	--	--	79	--	--	--	--
JUNE							
16...	--	--	100	--	--	--	--
JULY							
21...	--	--	100	--	--	--	--
AUG.							
18...	--	--	81	--	--	--	--
SEP.							
15...	--	--	100	--	--	--	--

16227500 MOANALUA STREAM NEAR KANEOHE

LOCATION.--Lat 21°23'29", long 157°51'05", on left bank 3.3 mi (5.3 km) northeast of Tripler Hospital and 3.6 mi (5.8 km) southwest of Kaneohe Post Office.

DRAINAGE AREA.--0.94 mi^2 (2.43 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1970-71 (partial-record station).
Sediment records: Water years 1970-71 (partial-record station), October 1971 to September 1975.

EXTREMES.--1974-75:
Sediment concentrations: Maximum daily, 73 mg/l Nov. 21; minimum daily, no flow for many days.
Sediment discharge: Maximum daily, 46 tons (42 tonnes) Nov. 21; minimum daily, 0 tons (0 tonnes) on many days.

Period of record:
Sediment concentrations: Maximum daily, 256 mg/l Apr. 14, 1972; no flow on many days each year.
Sediment discharge: Maximum daily, 142 tons (129 tonnes) May 14, 1974; minimum daily, 0 tons (0 tonnes) on many days each year.

REMARKS.--Periodic determinations of water temperature for this station on page 325.

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	.11	0	0	.24	4	0
2	0	0	0	0	0	0	.19	4	0
3	0	0	0	0	0	0	.15	4	0
4	0	0	0	0	0	0	.11	4	0
5	0	0	0	0	0	0	.04	4	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	.02	5	0	0	0	0	0	0	0
16	.01	3	0	.02	5	0	0	0	0
17	0	0	0	4.6	20	.25	0	0	0
18	0	0	0	.64	8	.01	0	0	0
19	2.7	20	.15	.22	5	0	0	0	0
20	.91	8	.02	6.3	25	.43	0	0	0
21	.04	4	0	90	73	46	0	0	0
22	0	0	0	13	20	.70	.30	5	0
23	0	0	0	2.9	8	.06	1.1	10	.03
24	0	0	0	1.4	5	.02	.25	5	0
25	0	0	0	.86	4	.01	.06	4	0
26	0	0	0	.64	4	.01	.06	4	0
27	10	25	.68	.53	4	.01	.05	4	0
28	2.8	10	.08	.44	4	0	0	0	0
29	1.0	8	.02	.36	4	0	0	0	0
30	.42	5	.01	.29	4	0	0	0	0
31	.29	4	0	---	---	---	0	0	0
MONTH	18.19	---	.96	122.31	---	47.50	2.55	---	.03

16227500 MOANALUA STREAM NEAR KANEOHE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	JANUARY MEAN DISCHARGE (CFS)	JANUARY MEAN CONCENTRATION (MG/L)	JANUARY SEDIMENT DISCHARGE (TONS/DAY)	FEBRUARY MEAN DISCHARGE (CFS)	FEBRUARY MEAN CONCENTRATION (MG/L)	FEBRUARY SEDIMENT DISCHARGE (TONS/DAY)	MARCH MEAN DISCHARGE (CFS)	MARCH MEAN CONCENTRATION (MG/L)	MARCH SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	28	31	5.5	0	0	0
2	0	0	0	2.5	8	.05	0	0	0
3	0	0	0	.89	5	.01	0	0	0
4	0	0	0	7.4	15	.30	0	0	0
5	0	0	0	2.9	8	.06	0	0	0
6	0	0	0	1.2	5	.02	0	0	0
7	0	0	0	.83	5	.01	0	0	0
8	.98	5	.01	.68	4	.01	0	0	0
9	2.8	10	.08	.61	4	.01	0	0	0
10	.51	5	.01	.56	4	.01	0	0	0
11	24	69	12	.49	4	.01	0	0	0
12	37	68	13	.47	4	.01	1.4	10	.04
13	7.5	8	.16	.94	5	.01	.01	5	0
14	10	10	.27	.94	5	.01	0	0	0
15	2.2	6	.04	.85	5	.01	0	0	0
16	1.2	5	.02	.56	5	.01	0	0	0
17	.78	4	.01	.73	5	.01	0	0	0
18	.60	4	.01	.47	4	.01	0	0	0
19	.50	4	.01	.33	4	0	0	0	0
20	.42	4	0	.25	4	0	0	0	0
21	.35	4	0	.20	4	0	0	0	0
22	.28	4	0	.19	4	0	0	0	0
23	.23	4	0	.16	4	0	0	0	0
24	3.3	15	.13	.10	4	0	0	0	0
25	1.7	8	.04	.04	4	0	0	0	0
26	.63	4	.01	0	0	0	0	0	0
27	.45	4	0	0	0	0	.14	5	0
28	.36	4	0	0	0	0	10	15	.41
29	.29	4	0	---	---	---	2.3	8	.05
30	1.6	10	.04	---	---	---	.66	5	.01
31	16	22	2.0	---	---	---	1.9	5	.03
MONTH	113.68	---	27.84	52.29	---	6.06	16.41	---	.54

DAY	APRIL MEAN DISCHARGE (CFS)	APRIL MEAN CONCENTRATION (MG/L)	APRIL SEDIMENT DISCHARGE (TONS/DAY)	MAY MEAN DISCHARGE (CFS)	MAY MEAN CONCENTRATION (MG/L)	MAY SEDIMENT DISCHARGE (TONS/DAY)	JUNE MEAN DISCHARGE (CFS)	JUNE MEAN CONCENTRATION (MG/L)	JUNE SEDIMENT DISCHARGE (TONS/DAY)
1	.80	4	.01	0	0	0	0	0	0
2	.40	4	0	0	0	0	0	0	0
3	.27	4	0	0	0	0	0	0	0
4	.21	4	0	0	0	0	0	0	0
5	.14	4	0	.40	10	.01	0	0	0
6	.12	4	0	.20	8	0	0	0	0
7	.03	4	0	.20	5	0	0	0	0
8	3.0	15	.12	.65	5	.01	0	0	0
9	.47	8	.01	.25	5	0	0	0	0
10	.25	5	0	.07	5	0	0	0	0
11	.14	4	0	0	0	0	0	0	0
12	.04	4	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	.45	10	.01	0	0	0
22	0	0	0	.12	5	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	.63	10	.02	0	0	0	0	0	0
26	.20	5	0	0	0	0	0	0	0
27	.10	5	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	---	---	---	0	0	0	---	---	---
MONTH	6.80	---	.16	2.34	---	.03	0	---	0

16227500 MOANALUA STREAM NEAR KANEOHE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	---	---	---
MONTH	0	---	0	0	---	0	0	---	0
YEAR	334.57		83.12						

16229300 KALIHI STREAM AT KALIHI
(National Stream-quality accounting network station)

LOCATION.--Lat 21°20'29", long 157°52'36", on right bank at Kalihi, 0.4 mi (0.6 km) northwest of Bishop Museum, and 2.4 mi (3.9 km) northwest of Honolulu Post Office.

DRAINAGE AREA.--5.18 mi^2 (13.42 km^2)

PERIOD OF RECORD.--Chemical analyses: Water years 1970-74 (partial-record station), October 1974 to September 1975.
Sediment records: Water years 1967-74 (partial-record station), October 1974 to September 1975.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
29...	0900	9.5	15	13	5.9	18	1.5	65	--	53	8.8
NOV.											
25...	1230	10	15	14	6.7	21	1.5	71	--	58	11
DEC.											
23...	1240	9.1	14	12	5.6	17	1.1	62	--	51	8.3
JAN.											
06...	1410	10	13	17	7.4	23	2.0	84	--	69	13
28...	1000	6.3	17	15	8.1	23	1.3	81	--	66	12
FEB.											
03...	0915	13	17	14	8.0	21	1.6	71	--	58	13
05...	0830	14	--	--	--	--	--	--	--	--	--
MAR.											
18...	1030	5.7	15	16	9.4	25	1.7	83	0	68	16
APR.											
08...	1215	16	16	15	7.7	22	2.5	77	0	63	12
MAY											
05...	1345	5.9	12	15	8.6	24	1.7	82	0	67	9.8
JUNE											
16...	1045	1.3	11	16	9.8	26	1.3	98	0	80	8.6
JULY											
21...	1330	1.8	15	17	8.5	21	1.4	79	0	65	8.8
AUG.											
18...	1430	.93	17	19	9.7	27	1.3	100	0	82	8.3
SEP.											
15...	1000	.64	18	21	12	32	1.5	129	0	106	7.4

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT.											
29...	23	.0	.19	.12	.31	.06	121	117	.16	57	3
NOV.											
25...	29	.0	.37	.35	.72	.05	136	133	.19	63	4
DEC.											
23...	25	.0	.18	.17	.35	.11	115	114	.16	53	2
JAN.											
06...	32	.1	.38	.71	1.1	.28	154	149	.21	73	4
28...	32	.1	--	--	--	--	--	150	.20	71	4
FEB.											
03...	31	.1	--	--	--	--	146	141	.20	68	10
05...	--	--	.25	.16	.41	.05	--	--	--	--	--
MAR.											
18...	36	.1	.21	.21	.42	.09	156	160	.21	79	11
APR.											
08...	28	.2	.35	.58	.93	.10	151	141	.21	69	6
MAY											
05...	35	.1	.08	.24	.32	.11	155	147	.21	73	6
JUNE											
16...	33	.1	.03	.19	.22	.04	155	154	.21	80	0
JULY											
21...	29	.1	.10	.25	.35	.06	134	140	.18	77	13
AUG.											
18...	35	.1	.02	.34	.36	.08	155	167	.21	87	5
SEP.											
15...	41	.1	.03	.30	.33	.06	199	197	.27	100	0

16229300 KALIHI STREAM AT KALIHI--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COLONIES PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.											
29...	40	1.0	200	7.8	22.6	30	10	1.6	3900	1700	--
NOV.											
25...	42	1.2	235	6.7	23.5	10	5	23	3400	2900	--
DEC.											
23...	40	1.0	200	8.3	23.0	--	20	.5	3800	880	5.5
JAN.											
06...	40	1.2	280	8.0	22.5	100	70	1.3	12000	22000	--
28...	41	1.2	255	7.2	18.5	3	2	8.2	--	--	--
FEB.											
03...	40	1.1	250	7.7	20.5	20	10	2.3	4200	B2600	4.0
05...	--	--	190	7.1	19.5	--	--	--	--	--	--
MAR.											
18...	40	1.2	280	7.8	21.0	10	8	2.1	8700	13000	--
APR.											
08...	40	1.2	240	8.0	23.5	--	37	1.2	4400	8900	--
MAY											
05...	41	1.2	260	8.5	25.5	25	18	.4	7400	10000	4.4
JUNE											
16...	41	1.3	280	7.8	23.5	2	2	2.5	3100	8690	--
JULY											
21...	37	1.0	245	7.7	26.0	17	3	2.5	2100	1300	--
AUG.											
18...	40	1.3	282	8.1	26.5	25	11	1.3	2000	760	3.8
SEP.											
15...	40	1.4	340	7.6	22.5	2	0	5.2	2900	540	--

B Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
DEC.												
23...	1240	1700	60	20	0	1	1	<10	0	<10	<10	<50
JAN.												
28...	1000	--	90	--	0	--	--	--	--	--	--	--
FEB.												
03...	0915	800	170	20	10	10	8	<10	0	50	10	<50
MAY												
05...	1345	1300	60	30	5	3	2	<10	0	0	0	<50
AUG.												
18...	1430	150	80	10	10	1	0	<10	0	10	0	<50

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
DEC.											
23...	0	1000	2	<100	3	.1	.1	0	0	60	0
JAN.											
28...	--	--	--	--	--	--	--	--	--	--	--
FEB.											
03...	0	30	3	<100	2	.1	.0	1	0	50	20
MAY											
05...	3	10	4	<100	11	.0	.0	0	0	20	0
AUG.											
18...	0	<10	1	<100	<100	.0	.0	0	0	40	20

16229300 KALIHI STREAM AT KALIHI--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
OCT.							
29...	0900	9.5	80	--	--	--	--
NOV.							
25...	1230	10	140	--	--	--	--
DEC.							
23...	1240	9.1	5700	6.2	3.8	36	22
JAN.							
06...	1410	10	3100	--	--	--	--
28...	1000	5.3	--	--	--	--	--
FEB.							
03...	0915	13	380	3.1	2.3	2.3	.0
05...	0830	14	--	--	--	--	--
MAR.							
18...	1030	5.7	480	--	--	--	--
APR.							
08...	1215	16	1100	--	--	--	--
MAY							
05...	1345	5.3	830	4.5	2.9	18	4.0
JUNE							
16...	1045	1.7	300	--	--	--	--
JULY							
21...	1330	2.4	310	--	--	--	--
AUG.							
18...	1430	1.5	1000	2.2	1.1	3.3	1.2
SEP.							
15...	1000	.64	370	--	--	--	--

OCT. 29, 1974
0900 HOURS

IDENTIFICATION OF PHYTOPLANKTON

80 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		34	43
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		11	14
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		34	43

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.449
GENERA 1.449

16229300 KALIHI STREAM AT KALIHI--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

NOV. 25, 1974
1230 HOURS

IDENTIFICATION OF PHYTOPLANKTON

140 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		5	4
	...SCENEDESMACEAE			
	....CRUCIGENIA		4	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		12	9
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		16	12
	....COCCONEIS		3	2
	...FRAGILARIACEAE			
	....SYNEDRA		7	5
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		3	2
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		3	2
	....NAVICULA		4	3
	...NITZSCHIACEAE			
	....NITZSCHIA		5	4
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		74	54

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER ; 200-X MICROSCOPE
DIVERSITY INDICES; BASED ON ACTUAL COUNTS:

PHYL/DIV	1.274
CLASS	1.274
ORDER	1.575
FAMILY	2.245
GENERA	2.375

DEC. 23, 1974
1240 HOURS

IDENTIFICATION OF PHYTOPLANKTON

5,700 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...MICRACTINIACEAE			
L	....GOLENKINIA			0
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
	....CHLAMYDOMONAS		32	1
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		32	1
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		32	1
	....RHOICOSPHENIA		64	1
	...FRAGILARIACEAE			
L	....SYNEDRA			0
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		230	4
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		48	1
	...NITZSCHIACEAE			
	....NITZSCHIA		210	4
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		4,100	73
D	....OSCILLATORIA		850	15
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
L	....EUGLENA			0

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.600
CLASS 0.600
ORDER 0.641
FAMILY 0.843
GENERA 1.440

JAN. 6, 1975
1410 HOURS

3,100 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....RHOICOSPHENIA		550	18
	...CYMBELLACEAE			
	....AMPHORA		110	4
	...EUNOTIACEAE			
	....EUNOTIA		110	4
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		220	7
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		440	14
D	....NAVICULA		1,200	39
	...NITZSCHIACEAE			
	....NITZSCHIA		440	14

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.943
GENERA 2.391

FEB. 3, 1975
0915 HOURS

IDENTIFICATION OF PHYTOPLANKTON

380 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		12	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....RHOICOSPHENIA		23	6
	...CYMBELLACEAE			
	....AMPHORA		12	3
	...FRAGILARIACEAE			
	....SYNEDRA		12	3
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		35	9
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		12	3
D	....NAVICULA		92	24
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		180	48

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.166
CLASS	1.166
ORDER	1.166
FAMILY	2.036
GENERA	2.173

MAR. 18, 1975
1030 HOURS

480 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		17	4
	...SCENEDESMACEAE			
	....SCENEDESMUS		69	14
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		69	14
	....RHOICOSPHENIA		17	4
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		120	25
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		140	29
	...NITZSCHIACEAE			
	....NITZSCHIA		52	11

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	0.677
CLASS	0.677
ORDER	0.677
FAMILY	2.378
GENERA	2.507

APR. 8, 1975
1215 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,100 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		27	3
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		180	16
	....RHOICOSPHENIA		95	9
	...FRAGILARIACEAE			
	....SYNEDRA		14	1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		95	9
	...NAVICULACEAE	NAVICULOID		
	....DIPLONEIS		27	3
	....NAVICULA		68	6
	...NITZSCHIACEAE			
	....HANTZSCHIA		14	1
	....NITZSCHIA		150	14
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...NOSTOCACEAE			
D	....ANABAENA		410	38

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.958
CLASS 0.958
ORDER 1.110
FAMILY 2.279
GENERA 2.655

MAY 5, 1975
1345 HOURS

830 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		57	7
	....COCCONEIS		86	10
	....RHOICOSPHENIA		29	3
	...FRAGILARIACEAE			
	....SYNEDRA		57	7
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		230	28
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		86	10
	...NITZSCHIACEAE			
D	....NITZSCHIA		290	34

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 2.117
GENERA 2.419

JUNE 16, 1975
1045 HOURS

IDENTIFICATION OF PHYTOPLANKTON

300 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		21	7
	....CHODATELLA		7	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		7	2
	....RHOICOSPHENIA		14	5
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		7	2
	...NAVICULACEAE	NAVICULOID		
	....GYROSIGMA		7	2
	....NAVICULA		21	7
	...NITZSCHIACEAE			
	....NITZSCHIA		21	7
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....ANACYSTIS		7	2
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		77	26
D	....PHORMIDIUM		110	37

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 1.225
CLASS 1.225
ORDER 1.370
FAMILY 1.847
GENERA 2.675

JULY 21, 1975
1330 HOURS

320 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		64	20
L	....RHOICOSPHENIA			0
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		85	27
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		110	33
	....STAURONEIS		21	7
	...NITZSCHIACEAE			
	....NITZSCHIA		42	13

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.889
GENERA 2.149

16229300 KALIHI STREAM AT KALIHI--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

AUG. 18, 1975
1430 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,000 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		17	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		17	2
	....MELOSIRA		17	2
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		17	2
	....RHOIOCOSPHENIA		34	3
	...FRAGILARIACEAE			
D	....FRAGILARIA		310	30
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		68	7
	...NITZSCHIACEAE			
	....NITZSCHIA		85	8
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...NOSTOCACEAE			
D	....APHANIZOMENON		480	46

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 1.101
CLASS 1.101
ORDER 1.278
FAMILY 2.061
GENERA 2.139

SEP. 15, 1975
1000 HOURS

380 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....RHOIOCOSPHENIA		5	1
	...FRAGILARIACEAE			
L	....SYNEDRA			0
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		16	4
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		5	1
	...NITZSCHIACEAE			
	....NITZSCHIA		5	1
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
L	....LYNGBYA			0
D	....OSCILLATORIA		350	92

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.418
CLASS 0.418
ORDER 0.418
FAMILY 0.569
GENERA 0.569

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 24	1105	2.02	24.5
Dec. 31	1005	3.00	20.5
Jan. 28	1130	6.27	19.5
Mar. 18	0915	5.70	18.5
May 5	1345	5.94	25.5
June 16	1140	1.29	22.0
July 21	1335	1.82	26.0
Aug. 18	1505	.93	26.5
Sept. 15	1055	.64	22.5

SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT.					
29...	0900	9.5	6	.15	100
NOV.					
25...	1230	10	3	.08	100
DEC.					
23...	1240	9.1	--	--	--
23...	1245	--	12	--	100
JAN.					
06...	1410	10	80	2.2	97
28...	1000	6.3	--	--	--
FEB.					
03...	0915	13	4	.14	100
05...	0830	14	--	--	--
MAR.					
18...	1030	5.7	16	.25	89
APR.					
08...	1215	16	31	1.3	97
MAY					
05...	1345	5.9	13	.22	100
JUNE					
16...	1045	1.3	2	.01	100
JULY					
21...	1330	1.8	3	.01	100
AUG.					
18...	1430	.93	2	.01	100
SEP.					
15...	1000	.64	1	.00	100

16270500 KAMOOALII STREAM BELOW KUOU STREAM, NEAR KANEOHE

LOCATION.--Lat 21°23'42", long 157°48'26", on right bank 100 ft (30 m) downstream from Kuou Stream, 1.1 mi (1.8 km) southwest of Castle High School, and 1.9 mi (3.1 km) south of Kaneohe Post Office.

DRAINAGE AREA.--3.21 mi^2 (8.31 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1969-71, 1973 (partial-record station).
Sediment records: Water years 1967-71 (partial-record station), January 1972 to September 1975.

EXTREMES.--1974-75:
Sediment concentrations: Maximum daily, 358 mg/l Feb. 1; minimum daily, 2 mg/l Apr. 21-24.
Sediment discharge: Maximum daily, 498 tons (452 tonnes) Feb. 1; minimum daily, 0.03 ton (0.027 tonnes) on many days in September.

Period of record:
Sediment concentrations: Maximum daily, 420 mg/l May 14, 1974; minimum daily, 0 mg/l on several days in October 1972.
Sediment discharge: Maximum daily, 512 tons (464 tonnes), May 14, 1974; minimum daily, 0 tons (0 tonnes) on several days in October 1972.

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 29	1210	7.43	24.0
Feb. 3	1205	18.1	22.0
Mar. 7	1437	10.9	22.5
Apr. 2	1100	9.94	23.5
30	1320	8.66	23.0
June 30	1020	5.32	23.0
July 23	0850	5.83	22.5
Sept. 2	1340	3.85	24.0
29	0920	3.81	22.0

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.5	4	.07	7.1	4	.08	7.9	5	.11
2	6.8	4	.07	6.8	4	.07	7.9	4	.09
3	6.8	5	.09	6.5	4	.07	7.9	4	.09
4	6.8	5	.09	6.2	4	.07	7.6	4	.08
5	6.5	5	.09	6.2	4	.07	7.6	4	.08
6	6.2	5	.08	6.8	6	.11	7.4	4	.08
7	6.5	4	.07	7.9	6	.13	8.2	10	.22
8	6.5	3	.05	7.1	4	.08	7.6	5	.10
9	6.8	3	.06	6.5	4	.07	7.4	5	.10
10	6.5	3	.05	6.5	3	.05	7.4	5	.10
11	6.5	3	.05	6.8	3	.06	7.4	5	.10
12	6.8	3	.06	6.2	3	.05	7.4	5	.10
13	6.5	3	.05	6.2	3	.05	7.1	4	.08
14	6.8	3	.06	5.9	3	.05	7.1	4	.08
15	9.2	18	.45	6.2	3	.05	7.1	8	.15
16	7.1	8	.15	7.4	5	.10	6.8	4	.07
17	6.5	3	.05	22	80	4.8	6.5	4	.07
18	9.2	3	.07	8.2	6	.13	6.5	4	.07
19	13	15	.53	7.4	6	.12	6.8	6	.11
20	8.5	5	.11	11	10	.30	7.1	8	.15
21	7.1	5	.10	151	261	438	6.8	5	.09
22	6.8	5	.09	22	70	4.2	7.1	12	.23
23	6.5	5	.09	17	20	.92	7.6	8	.16
24	6.5	3	.05	11	15	.45	6.5	6	.11
25	6.2	3	.05	9.2	6	.15	6.2	6	.10
26	6.2	3	.05	8.2	4	.09	6.5	6	.11
27	27	80	5.8	8.2	7	.16	6.2	4	.07
28	9.2	5	.12	7.9	6	.13	5.9	4	.06
29	7.9	4	.09	7.6	6	.12	5.7	4	.06
30	7.9	4	.09	7.9	8	.17	5.7	4	.06
31	7.4	4	.08	---	---	---	5.9	6	.10
MONTH	244.7	---	8.91	404.9	---	450.90	216.8	---	3.18

16270500 KAMOOALII STREAM BELOW KUOU STREAM, NEAR KANEOHE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	JANUARY MEAN DISCHARGE (CFS)	JANUARY MEAN CONCEN-TRATION (MG/L)	JANUARY SEDIMENT DISCHARGE (TONS/DAY)	FEBRUARY MEAN DISCHARGE (CFS)	FEBRUARY MEAN CONCEN-TRATION (MG/L)	FEBRUARY SEDIMENT DISCHARGE (TONS/DAY)	MARCH MEAN DISCHARGE (CFS)	MARCH MEAN CONCEN-TRATION (MG/L)	MARCH SEDIMENT DISCHARGE (TONS/DAY)
1	5.7	5	.08	225	358	498	9.8	10	.26
2	5.7	5	.08	35	120	11	9.2	10	.25
3	6.2	5	.08	19	50	2.6	9.8	15	.40
4	6.5	5	.09	65	150	26	9.2	10	.25
5	6.5	8	.14	19	20	1.0	9.2	10	.25
6	6.8	8	.15	15	10	.41	9.2	12	.30
7	6.8	8	.15	14	10	.38	9.8	15	.40
8	11	15	.45	13	8	.28	8.8	8	.19
9	8.2	12	.27	13	8	.28	8.8	6	.14
10	7.1	8	.15	12	8	.26	8.8	6	.14
11	107	283	169	12	8	.26	9.8	10	.26
12	149	351	223	13	12	.42	13	30	1.1
13	19	60	3.1	18	20	.97	9.2	10	.25
14	17	30	1.4	14	15	.57	8.5	6	.14
15	11	8	.24	13	12	.42	9.2	6	.15
16	10	7	.19	12	10	.32	9.2	12	.30
17	9.2	6	.15	12	15	.49	8.5	8	.18
18	9.2	5	.12	11	8	.24	8.5	6	.14
19	8.5	5	.11	11	8	.24	8.5	6	.14
20	8.2	5	.11	11	8	.24	8.5	5	.11
21	8.2	5	.11	11	8	.24	8.5	5	.11
22	7.9	5	.11	11	12	.36	8.5	5	.11
23	7.9	5	.11	11	10	.30	8.5	5	.11
24	11	40	1.2	11	8	.24	8.5	8	.18
25	8.8	10	.24	10	8	.22	8.5	8	.18
26	8.2	8	.18	9.8	8	.21	8.5	8	.18
27	8.2	6	.13	11	12	.36	11	20	.59
28	7.9	6	.13	9.8	10	.26	33	60	5.3
29	8.5	8	.18	---	---	---	13	20	.70
30	11	30	.89	---	---	---	10	12	.32
31	28	40	3.0	---	---	---	18	50	2.4
MONTH	534.2	---	405.34	641.6	---	546.57	321.5	---	15.53

DAY	APRIL MEAN DISCHARGE (CFS)	APRIL MEAN CONCEN-TRATION (MG/L)	APRIL SEDIMENT DISCHARGE (TONS/DAY)	MAY MEAN DISCHARGE (CFS)	MAY MEAN CONCEN-TRATION (MG/L)	MAY SEDIMENT DISCHARGE (TONS/DAY)	JUNE MEAN DISCHARGE (CFS)	JUNE MEAN CONCEN-TRATION (MG/L)	JUNE SEDIMENT DISCHARGE (TONS/DAY)
1	11	12	.36	8.4	5	.11	6.6	6	.11
2	10	6	.16	8.2	5	.11	6.6	6	.11
3	9.8	4	.11	8.2	5	.11	6.4	6	.10
4	9.5	4	.10	8.0	5	.11	6.4	6	.10
5	9.5	4	.10	8.4	5	.11	6.2	6	.10
6	9.5	4	.10	9.0	6	.15	6.2	6	.10
7	9.0	3	.07	9.0	6	.15	6.4	6	.10
8	11	8	.24	8.6	5	.12	6.4	6	.10
9	9.5	5	.13	8.0	5	.11	6.2	6	.10
10	9.2	4	.10	7.8	5	.11	6.2	6	.10
11	9.2	4	.10	7.6	5	.10	6.6	8	.14
12	9.0	3	.07	7.8	5	.11	6.6	8	.14
13	9.0	3	.07	8.2	5	.11	6.4	8	.14
14	8.8	3	.07	7.8	5	.11	6.6	8	.14
15	8.6	4	.09	8.0	5	.11	6.6	8	.14
16	8.4	4	.09	7.6	5	.10	6.4	8	.14
17	8.6	4	.09	7.8	5	.11	6.2	8	.13
18	8.4	4	.09	7.4	5	.10	6.2	8	.13
19	8.4	4	.09	7.4	5	.10	6.0	8	.13
20	8.2	4	.09	7.4	5	.10	6.0	6	.10
21	8.2	2	.04	7.2	5	.10	5.9	6	.10
22	8.2	2	.04	7.2	5	.10	5.9	6	.10
23	8.2	2	.04	7.2	5	.10	5.9	6	.10
24	8.0	2	.04	7.0	5	.09	6.2	6	.10
25	9.5	10	.26	7.0	5	.09	5.9	6	.10
26	9.2	5	.12	7.0	5	.09	5.9	6	.10
27	9.0	4	.10	6.8	5	.09	6.5	6	.11
28	8.8	4	.10	6.8	5	.09	5.7	6	.09
29	8.6	4	.09	6.8	5	.09	5.9	6	.10
30	8.4	4	.09	6.6	6	.11	6.2	6	.10
31	---	---	---	6.6	6	.11	---	---	---
MONTH	270.7	---	3.24	236.8	---	3.30	187.2	---	3.35

16270500 KAMOOALII STREAM BELOW KUOU STREAM, NEAR KANEOHE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	7.9	8	.17	4.9	4	.05	3.9	3	.03
2	5.9	5	.08	4.9	4	.05	3.8	3	.03
3	5.7	3	.05	4.9	4	.05	3.8	3	.03
4	5.7	3	.05	5.1	4	.06	3.7	3	.03
5	5.5	5	.07	4.7	4	.05	3.7	3	.03
6	5.5	5	.07	4.5	4	.05	3.7	3	.03
7	5.3	5	.07	4.5	4	.05	3.8	3	.03
8	5.5	5	.07	4.7	4	.05	4.0	3	.03
9	5.7	5	.08	4.7	4	.05	4.0	3	.03
10	5.7	5	.08	5.1	4	.06	3.9	3	.03
11	6.8	5	.09	5.3	4	.06	3.9	3	.03
12	5.9	5	.08	4.7	4	.05	3.8	3	.03
13	5.5	5	.07	4.5	4	.05	3.9	3	.03
14	5.3	5	.07	4.7	4	.05	3.9	3	.03
15	5.3	5	.07	4.5	4	.05	3.9	3	.03
16	5.3	5	.07	4.3	4	.05	4.0	3	.03
17	5.5	5	.07	4.5	4	.05	3.9	3	.03
18	6.5	5	.09	4.1	4	.04	3.9	3	.03
19	5.7	5	.08	4.1	4	.04	3.9	3	.03
20	5.5	5	.07	4.0	4	.04	4.1	3	.03
21	5.3	5	.07	4.7	4	.05	4.0	3	.03
22	5.1	5	.07	4.0	4	.04	4.0	3	.03
23	5.1	5	.07	4.0	4	.04	4.0	3	.03
24	7.1	8	.15	4.0	4	.04	4.0	3	.03
25	5.1	5	.07	4.0	4	.04	4.0	3	.03
26	4.9	5	.07	3.9	4	.04	4.0	3	.03
27	4.9	5	.07	3.8	4	.04	3.9	3	.03
28	4.7	5	.06	3.8	4	.04	4.5	3	.04
29	4.7	5	.06	3.8	4	.04	4.0	3	.03
30	4.7	5	.06	4.0	4	.04	4.0	3	.03
31	4.9	5	.07	3.9	4	.04	---	---	---
MONTH	172.2	---	2.37	136.6	---	1.45	117.9	---	.91
YEAR	3485.1		663.05						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM
NOV. 21...	2100	2150	1040	6040	33	50	66	81	93	95	99	100

16400000 HALAWA STREAM NEAR HALAWA
(National Stream-quality accounting network station)

LOCATION.--Lat 21°09'31", long 156°45'53", on right bank 600 ft (183 m) downstream from Hipuapua Stream and 1.5 mi (2.4 km) west of Halawa.

DRAINAGE AREA.--4.62 mi^2 (11.97 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1969-74 (partial-record station), October 1974 to September 1975. Sediment records: October 1974 to September 1975.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
16...	1330	5.9	7.9	1.4	.7	6.6	.7	10	--	8	3.2
DEC.											
11...	1045	4.7	9.6	2.6	1.6	7.5	.5	12	--	10	2.6
JAN.											
28...	0945	6.3	7.5	2.7	1.0	7.0	.6	7	--	6	2.3
FEB.											
24...	1230	8.1	6.4	2.7	1.2	6.6	.6	8	--	7	2.7
APR.											
07...	1200	12	6.2	.9	1.0	7.3	.9	6	0	5	2.2
MAY											
05...	1330	9.5	7.8	1.2	1.1	7.2	.7	8	0	7	3.3
JUNE											
09...	1330	2.9	9.1	1.6	1.3	8.6	.6	11	0	9	2.0
13...	0930	7.1	8.2	1.8	1.4	7.2	.5	5	0	4	2.7
JULY											
07...	1300	4.0	8.6	1.4	1.1	7.0	.5	6	0	5	2.6
AUG.											
04...	1330	9.8	9.6	1.7	.4	7.0	.6	12	0	10	2.3
SEP.											
15...	1400	2.1	9.3	1.7	1.0	8.0	.7	9	0	7	2.6

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT.											
16...	9.5	.0	--	--	--	--	--	35	.05	6	0
DEC.											
11...	13	.0	.03	.11	.14	.04	42	43	.06	13	3
JAN.											
28...	13	.1	.00	.19	.19	.03	43	38	.06	11	5
FEB.											
24...	11	.0	.13	.19	.32	.01	37	35	.05	12	5
APR.											
07...	12	.2	.02	.14	.16	.02	38	34	.05	6	1
MAY											
05...	10	.0	.01	.08	.09	.03	38	35	.05	8	1
JUNE											
09...	12	.1	.03	.21	.24	.04	37	41	.05	9	0
13...	11	.0	.01	.25	.26	.03	42	32	.06	10	6
JULY											
07...	11	.1	.01	.23	.24	.01	37	35	.05	8	3
AUG.											
04...	12	.1	.05	.43	.48	.00	43	40	.06	6	0
SEP.											
15...	13	.1	.05	.23	.28	.05	47	41	.06	8	1

16400000 HALAWA STREAM NEAR HALAWA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.											
16...	66	1.1	52	6.8	22.5	40	2	2.5	--	--	--
DEC.											
11...	54	.9	60	7.0	19.5	5	1	1.9	30	64	--
JAN.											
28...	57	.9	58	7.2	16.0	20	3	.7	100	160	2.6
FEB.											
24...	54	.8	55	6.9	18.0	30	2	1.6	34	42	--
APR.											
07...	68	1.3	56	6.7	20.0	20	2	1.9	1500	190	--
MAY											
05...	65	1.1	58	6.5	19.5	8	1	4.0	1300	110	--
JUNE											
09...	65	1.2	66	6.3	22.0	3	1	8.8	330	100	1.5
13...	59	1.0	58	6.2	19.5	45	3	5.0	1600	260	--
JULY											
07...	64	1.1	60	6.6	21.0	10	2	2.4	470	130	--
AUG.											
04...	70	1.3	60	6.7	21.5	15	1	3.8	390	110	3.1
SEP.											
15...	65	1.2	65	6.7	22.0	9	1	2.9	820	250	--

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT.												
16...	1330	--	70	--	0	--	--	--	--	--	--	--
JAN.												
28...	0945	210	80	0	0	1	1	<10	0	10	0	<50
APR.												
07...	1200	100	50	10	0	1	0	<10	0	0	0	<50
JUNE												
09...	1330	200	40	10	0	0	0	<10	1	20	0	<50
AUG.												
04...	1330	100	30	10	0	0	0	10	1	0	0	0

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN.											
28...	0	50	1	<100	2	--	.0	1	0	20	6
APR.											
07...	0	<10	0	<100	3	.1	.1	0	0	20	0
JUNE											
09...	0	<10	0	<100	0	.0	.0	0	0	10	0
AUG.											
04...	0	<10	1	<100	10	.1	.0	0	0	10	0

16400000 HALAWA STREAM NEAR HALAWA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
OCT.							
16...	1330	5.9	--	--	--	--	--
DEC.							
11...	1045	4.7	88	--	--	--	--
JAN.							
28...	0945	6.3	35	--	1.5	12	1.2
FEB.							
24...	1230	8.1	43	8.6	.90	2.5	.7
APR.							
07...	1200	12	240	2.8	1.8	11	2.8
MAY							
05...	1330	9.5	93	1.2	.50	4.0	1.0
JUNE							
09...	1330	2.9	360	--	--	--	--
13...	0930	7.1	160	--	--	--	--
JULY							
07...	1300	4.0	110	--	--	--	--
AUG.							
04...	1330	9.8	220	1.6	.80	8.3	1.4
SEP.							
15...	1400	2.1	280	--	--	--	--

DEC. 11, 1974
1045 HOURS

IDENTIFICATION OF PHYTOPLANKTON

88 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....COCCONEIS		26	30
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		26	30
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		26	30
	...NITZSCHIACEAE			
	....NITZSCHIA		9	10

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.895
GENERA 1.895

JAN. 28, 1975
0945 HOURS

35 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		6	17
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		6	17
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		23	67

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.252
GENERA 1.252

16400000 HALAWA STREAM NEAR HALAWA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

FEB. 24, 1975
1230 HOURS

IDENTIFICATION OF PHYTOPLANKTON
43 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		11	25
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		22	50
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		11	25

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.500
GENERA 1.500

APR. 7, 1975
1200 HOURS
240 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		9	4
	...FRAGILARIACEAE			
	....SYNEDRA		18	8
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		18	8
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		9	4
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		180	77

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.779
CLASS 0.779
ORDER 0.779
FAMILY 1.222
GENERA 1.222

MAY 5, 1975
1330 HOURS
93 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		14	15
	....COCCONEIS		7	8
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		22	23
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		43	46
	...NITZSCHIACEAE			
	....NITZSCHIA		7	8

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.776
GENERA 1.988

HAWAII, ISLAND OF MOLOKAI

16400000 HALAWA STREAM NEAR HALAWA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JUNE 13, 1975
0930 HOURS

IDENTIFICATION OF PHYTOPLANKTON

160 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..ZYGNEMATALES			
	...ZYGNEMATACEAE			
	....MOUGEOTIA		12	8
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		6	4
	...CYMBELLACEAE			
	....CYMBELLA		6	4
	...EUNOTIACEAE			
	....EUNOTIA		12	8
	...FRAGILARIACEAE			
D	....SYNEDRA		44	27
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		50	31
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		25	15
	...NITZSCHIACEAE			
	....NITZSCHIA		6	4

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.391
CLASS 0.391
ORDER 0.391
FAMILY 2.560
GENERA 2.560

AUG. 4, 1975
1330 HOURS

230 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....MELOSIRA		9	4
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		9	4
	...CYMBELLACEAE			
	....CYMBELLA		9	4
	...FRAGILARIACEAE			
D	....SYNEDRA		38	17
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		76	33
	...NAVICULACEAE	NAVICULOID		
	....CALONEIS		19	8
D	....NAVICULA		57	25
	...NITZSCHIACEAE			
	....NITZSCHIA		9	4

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
SAMPLING METHOD: PLASTIC SLIDES, RANDOM
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.250
FAMILY 2.252
GENERA 2.522

HAWAII, ISLAND OF MOLOKAI

16400000 HALAWA STREAM NEAR HALAWA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

SEP. 15, 1975
1400 HOURS

IDENTIFICATION OF PHYTOPLANKTON

280 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		7	2
	..ZYGNEMATALES			
	...ZYGNEMATACEAE			
L	....MOUGEOTIA			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		35	12
	...CYMBELLACEAE			
	....CYMBELLA		7	2
	...FRAGILARIACEAE			
L	....SYNEDRA			0
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		35	12
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		41	15
	...NITZSCHIACEAE			
	....NITZSCHIA		35	12
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		69	24
D	....SCHIZOTHRIX		55	20

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
L - LESS THEN 1%: MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.134
CLASS	1.134
ORDER	1.134
FAMILY	2.299
GENERA	2.734

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 16	1215	5.91	22.5
Dec. 11	1245	4.72	19.5
Jan. 28	1100	6.29	16.0
Feb. 24	1315	8.15	18.0
Apr. 7	1255	11.8	19.0
May 5	1430	9.53	19.5
June 9	1350	2.90	22.0
13	0800	7.08	19.5
July 7	1210	4.00	21.0
Aug. 4	1235	9.82	21.5
Sept. 15	1225	2.14	22.0

16400000 HALAWA STREAM NEAR HALAWA--Continued

SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT.					
16...	1330	5.9	--	--	--
DEC.					
11...	1045	4.7	2	.03	100
JAN.					
28...	0945	6.3	2	.03	100
FEB.					
24...	1230	8.1	1	.02	100
APR.					
07...	1200	12	2	.06	100
MAY					
05...	1330	9.5	2	.05	100
JUNE					
09...	1330	2.9	2	.02	100
13...	0930	7.1	4	.08	100
JULY					
07...	1300	4.0	3	.03	100
AUG.					
04...	1330	9.8	2	.05	100
SEP.					
15...	1400	2.1	2	.01	100

16618000 KAHAKULOA STREAM NEAR HONOKOHAU
(National Stream-quality accounting network station)

LOCATION.--lat 20°58'54", long 156°33'26", on right bank 0.5 mi (0.8 km) downstream from Kapuna Stream, 1.3 mi (2.1 km) south of Kahakuloa, and 4.3 mi (6.9 km) southeast of Honokohau.

DRAINAGE AREA.--3.47 mi^2 (8.99 km^2).

PERIOD OF RECORD.--Chemical analyses: December 1974 to September 1975.
Sediment records: December 1974 to September 1975.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
DEC.											
16...	1100	19	12	2.7	1.2	6.4	.7	12	--	10	2.3
JAN.											
13...	1120	16	11	3.6	1.2	6.3	1.2	12	--	10	2.1
FEB.											
11...	1030	25	13	3.0	1.9	5.5	1.6	17	--	14	2.1
MAR.											
10...	1130	6.8	17	3.9	2.5	7.2	1.2	21	0	17	2.4
APR.											
14...	1230	4.5	19	4.3	2.1	8.3	1.4	31	0	25	2.0
MAY											
26...	1100	4.3	21	4.3	2.2	8.2	1.1	32	0	26	1.2
JUNE											
02...	1130	4.2	20	4.6	2.8	8.4	1.1	37	0	30	2.0
23...	1230	5.2	21	6.4	2.7	8.1	.9	37	0	30	2.6
JULY											
14...	1300	6.8	19	4.7	2.4	7.4	.8	30	0	25	3.3
AUG.											
11...	1300	42	6.8	1.7	.6	5.8	.7	9	0	7	2.8
SEP.											
09...	1200	4.9	19	4.6	2.7	8.1	.9	28	0	23	1.7

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
DEC.											
16...	12	.0	.14	.05	.19	.04	48	43	.07	12	2
JAN.											
13...	11	.0	.13	.31	.44	.02	44	42	.06	14	4
FEB.											
11...	8.3	.0	.11	.14	.25	.01	40	44	.05	15	1
MAR.											
10...	11	.1	.07	.03	.10	.02	58	56	.08	20	3
APR.											
14...	11	.0	.12	.23	.35	.04	68	63	.09	19	0
MAY											
26...	10	.0	.07	.04	.11	.03	71	64	.10	20	0
JUNE											
02...	11	.1	.04	1.4	1.4	.03	71	68	.10	23	0
23...	9.1	.1	.07	.12	.19	.02	62	69	.08	27	0
JULY											
14...	10	.1	.06	.12	.18	.03	59	62	.08	22	0
AUG.											
11...	8.4	.0	.06	.16	.22	.00	32	31	.04	7	0
SEP.											
09...	10	.1	.08	.12	.20	.03	64	61	.09	23	0

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
DEC.											
16...	53	.8	62	7.1	19.5	10	2	1.5	260	270	--
JAN.											
13...	47	.7	61	6.7	19.0	20	3	3.6	e2900	740	3.6
FEB.											
11...	41	.6	52	7.0	18.5	20	4	2.7	1400	690	--
MAR.											
10...	42	.7	60	7.1	19.5	10	1	2.7	610	170	.8
APR.											
14...	46	.8	85	6.7	20.5	2	2	9.9	440	100	--
MAY											
20...	46	.8	85	7.8	21.0	1	1	.8	580	110	1.4
JUNE											
02...	43	.8	95	7.9	21.0	0	2	.7	110	89	--
23...	38	.7	85	7.5	22.0	1	1	1.9	520	110	--
JULY											
14...	42	.7	78	7.3	21.0	7	1	2.4	1500	280	--
AUG.											
11...	62	1.0	45	6.5	21.0	50	13	4.6	760	530	4.2
SEP.											
05...	43	.7	85	7.6	21.0	2	0	1.1	680	550	--

B Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
JAN.												
13...	1120	300	50	0	0	1	1	10	0	0	0	<50
MAR.												
10...	1130	60	10	10	0	0	1	<10	0	10	0	<50
MAY												
20...	1100	70	20	10	5	1	0	<10	0	0	0	<50
AUG.												
11...	1300	250	50	10	0	0	0	<10	1	0	0	<50

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JAN.											
13...	1	0	1	<100	4	.1	.0	0	0	60	20
MAR.											
10...	4	20	0	<100	2	.0	.0	0	0	30	0
MAY											
20...	0	10	0	<100	3	.0	.0	0	0	70	0
AUG.											
11...	0	<10	0	<100	8	.1	.1	0	0	20	0

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
DEC.							
16...	1100	19	230	--	--	--	--
JAN.							
13...	1120	16	130	--	--	--	--
FEB.							
11...	1030	25	140	.90	.60	5.2	1.2
MAR.							
10...	1130	6.8	260	--	--	--	--
APR.							
14...	1230	4.9	900	6.0	.50	100	31
MAY							
20...	1100	4.3	520	9.3	6.5	38	10
JUNE							
02...	1130	4.2	1500	--	--	--	--
23...	1230	5.2	570	--	--	--	--
JULY							
14...	1300	6.8	1100	--	--	--	--
AUG.							
11...	1300	42	390	18	14	37	5.8
SEP.							
09...	1200	4.9	56	--	--	--	--

DEC. 16, 1974
1100 HOURS

IDENTIFICATION OF PHYTOPLANKTON

230 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		21	9
D	....RHOICOSPHENIA		41	18
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		150	64
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		21	9

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.241
GENERA 1.491

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JAN. 13, 1975
1120 HOURS

IDENTIFICATION OF PHYTOPLANKTON

130 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		9	7
	....COCCONEIS		9	7
D	....RHOICOSPHENIA		27	21
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		46	36
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		18	14
	...NITZSCHIACEAE			
	....NITZSCHIA		18	14

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.863
GENERA 2.353

FEB. 11, 1975
1030 HOURS

140 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		20	14
D	....RHOICOSPHENIA		49	36
	...FRAGILARIACEAE			
D	....SYNEDRA		30	21
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		20	14
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		20	14

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.778
GENERA 2.210

MAR. 10, 1975
1130 HOURS

280 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		14	5
D	....RHOICOSPHENIA		84	30
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		77	27
	...NAVICULACEAE	NAVICULOID		
	....CALONEIS		7	2
	....NEIDIUM		7	2
	...NITZSCHIACEAE			
	....NITZSCHIA		21	7
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		70	25

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.811
CLASS 0.811
ORDER 0.811
FAMILY 2.039
GENERA 2.296

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

APR. 14, 1975
1230 HOURS

IDENTIFICATION OF PHYTOPLANKTON

900 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		82	9
D	....RHOICOSPHENIA		150	17
	...FRAGILARIACEAE			
	....FRAGILARIA		58	6
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		140	16
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		470	52

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.999
CLASS 0.999
ORDER 0.999
FAMILY 1.670
GENERA 1.913

MAY 20, 1975
1100 HOURS

520 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....MELOSIRA		32	6
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		32	6
D	....RHOICOSPHENIA		390	75
	...FRAGILARIACEAE			
	....SYNEDRA		32	6
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		32	6

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.337
FAMILY 0.993
GENERA 1.311

JUNE 2, 1975
1130 HOURS

1,500 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....MELOSIRA		130	9
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		84	6
D	....RHOICOSPHENIA		550	37
	...FRAGILARIACEAE			
	....FRAGILARIA		130	9
	....SYNEDRA		84	6
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		340	23
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		42	3
	...NITZSCHIACEAE			
	....NITZSCHIA		130	9

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.422
FAMILY 2.166
GENERA 2.547

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JUNE 23, 1975
1230 HOURS

IDENTIFICATION OF PHYTOPLANKTON

570 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		110	19
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		63	11
D	....RHOICOSPHENIA		230	41
	...CYMBELLACEAE			
	....CYMBELLA		21	4
	...FRAGILARIACEAE			
	....SYNEDRA		21	4
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		42	7
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		63	11
	...NITZSCHIACEAE			
	....NITZSCHIA		21	4

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.691
FAMILY 2.101
GENERA 2.489

JULY 14, 1975
1300 HOURS

1,200 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		230	19
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		32	3
D	....RHOICOSPHENIA		390	32
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		97	8
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		130	11
	...NITZSCHIACEAE			
	....NITZSCHIA		130	11
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		190	16

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.639
CLASS 0.639
ORDER 1.285
FAMILY 2.398
GENERA 2.536

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

AUG. 11, 1975
1300 HOURS

IDENTIFICATION OF PHYTOPLANKTON

400 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
L	....MELOSIRA			0
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		21	5
D	....RHOICOSPHENIA		130	32
	...CYMBELLACEAE			
L	....CYMBELLA			0
	...FRAGILARIACEAE			
	....SYNEDRA		21	5
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		100	26
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		63	16
	...NITZSCHIACEAE			
D	....NITZSCHIA		63	16
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
L	....LYNGBYA			0

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
SAMPLING METHOD: PLASTIC SLIDES, RANDOM
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 2.102
GENERA 2.320

SEP. 9, 1975
1200 HOURS

56 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....RHOICOSPHENIA		28	50
	...FRAGILARIACEAE			
	....SYNEDRA		7	12
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		7	12
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		7	12
	...NITZSCHIACEAE			
	....NITZSCHIA		7	12
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
L	....LYNGBYA			0

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 2.000
GENERA 2.000

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Dec. 13	1525	4.14	20.0
16	1115	19.5	19.5
Jan. 13	1140	16.6	19.0
Feb. 11	1152	25.5	18.5
27	1210	6.07	20.0
Mar. 10	1215	6.75	19.5
Apr. 14	1240	4.96	20.5
May 20	1120	4.32	21.0
June 2	1140	4.21	21.0
23	1135	5.24	22.0
July 14	1215	6.82	21.0
Sept. 9	1140	4.92	21.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT,
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
DEC.					
16...	1100	19	2	.10	100
JAN.					
13...	1120	16	3	.13	100
FEB.					
11...	1030	25	5	.34	100
MAR.					
10...	1130	6.8	0	.00	100
APR.					
14...	1230	4.9	0	.00	100
MAY					
20...	1100	4.3	4	.05	100
JUNE					
02...	1130	4.2	2	.02	100
23...	1230	5.2	3	.04	100
JULY					
14...	1300	6.8	3	.06	100
AUG.					
11...	1300	42	6	.68	100
SEP.					
09...	1200	4.9	1	.01	100

16704000 WAILUKU RIVER AT PIIHONUA
(National Stream-quality accounting network station)

LOCATION.--Lat 19°42'58", long 155°09'13", on left bank 0.2 mi (0.3 km) downstream from Hookelekele Stream 0.9 mi (1.4 km) west of Piihonua, and 4.1 mi (6.6 km) west of Hilo Post Office.

DRAINAGE AREA.--125 mi^2 (324 km^2).

PERIOD OF RECORD.--Chemical analyses: Water years 1972-74 (partial-record station), October 1974 to September 1975.
Specific conductance: May to September 1975.
Water temperatures: May to September 1975.
Sediment records: May to September 1975.

EXTREMES.--May to September 1975:
Specific conductance: Maximum, 54 micromhos/cm June 8; minimum, 22 micromhos/cm July 17.
Water temperatures: Maximum, 23.5°C July 23; minimum, 18.5°C Sept. 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
31...	1000	146	7.9	1.9	1.5	2.2	.4	11	--	9	1.9
NOV.											
25...	1025	74	11	4.2	1.9	2.7	.4	20	--	16	2.1
JAN.											
14...	1115	500	13	3.6	1.0	2.7	.5	14	--	11	1.4
28...	0930	60	15	4.2	2.5	3.1	.3	23	--	19	1.7
FEB.											
26...	0935	99	11	3.4	1.9	2.8	.8	20	--	16	2.6
MAR.											
24...	1400	162	10	2.8	1.2	2.9	.3	18	0	15	4.1
APR.											
29...	1400	215	8.3	2.4	.8	2.5	.5	14	0	11	1.6
MAY											
20...	1300	51	12	3.6	2.3	3.0	.7	19	0	16	.8
JUNE											
24...	1035	6.2	15	5.2	3.1	3.8	.4	33	0	27	1.7
JULY											
15...	1135	36	8.6	5.1	1.2	2.5	.4	25	0	21	2.6
AUG.											
19...	0940	211	5.8	3.5	1.3	2.5	.4	8	0	7	2.3
SEP.											
22...	1030	13	11	4.3	2.2	3.2	.4	22	0	18	2.2

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT.											
31...	3.6	.0	.09	.21	.30	.01	24	25	.03	11	2
NOV.											
25...	3.1	.0	.26	.91	1.2	.01	35	35	.05	18	2
JAN.											
14...	1.0	.1	.05	.19	.24	.00	33	30	.04	13	2
28...	3.2	.0	.10	.26	.36	.03	44	41	.06	21	2
FEB.											
26...	3.0	.1	.20	.10	.30	.00	35	35	.05	16	0
MAR.											
24...	2.8	.1	.10	.08	.18	.03	36	33	.05	12	0
APR.											
29...	1.8	.0	.07	.31	.38	.05	20	25	.03	9	0
MAY											
20...	3.9	.0	.08	.08	.16	.00	33	36	.04	18	3
JUNE											
24...	4.5	.0	.11	.73	.84	.00	44	50	.06	26	0
JULY											
15...	3.4	.0	.05	.22	.27	.05	31	36	.04	18	0
AUG.											
19...	3.5	.0	.07	.38	.45	.03	22	23	.03	14	8
SEP.											
22...	4.0	.1	.09	.25	.34	.01	33	38	.04	20	2

16704000 WAILUKU RIVER AT PIIHONUA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.										
31...	30	.3	26	5.8	19.5	2	28	140	330	--
NOV.										
25...	24	.3	44	6.8	19.0	1	5.1	26	91	--
JAN.										
14...	30	.3	38		18.0	2		20	370	1.4
28...	24	.3	49	7.0	16.5	2	3.7	17	37	--
FEB.										
26...	26	.3	34	6.9	18.0	1	4.0	9	37	--
MAR.										
24...	34	.4	39	6.6	19.0	1	7.2	5	81	1.6
APR.										
29...	35	.4	34	6.3	18.5	2	11	82	150	--
MAY										
20...	25	.3	50	6.7	20.5	1	6.1	3	31	--
JUNE										
24...	24	.3	70	7.9	21.5	2	.7	18	49	4.0
JULY										
15...	23	.3	39	7.3	17.5	3	2.0	B130	400	--
AUG.										
19...	27	.3	29	7.0	20.0	10	1.3	230	1700	--
SEP.										
22...	26	.3	42	6.9	23.0	1	4.4	34	B240	2.9

B Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
JAN.												
14...	1115	210	70	0	0	1	1	10	0	0	0	<50
MAR.												
24...	1400	160	40	0	0	3	3	<10	0	10	10	<50
JUNE												
24...	1035	180	90	--	5	1	1	<10	1	0	0	<50
SEP.												
22...	1030	240	110	10	0	3	0	<10	1	10	0	<50

DATE	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JAN.											
14...	1	20	3	200	9	.9	.0	0	0	40	0
MAR.											
24...	0	10	2	<100	1	.2	.2	1	0	10	0
JUNE											
24...	0	<10	0	<100	13	.1	.0	0	0	40	0
SEP.											
22...	0	<10	0	<100	10	.2	.0	0	0	10	0

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL A MG/SQ M	UNCORRECTED PERIPHYTON CHLOROPHYLL B MG/SQ M
OCT.							
31...	1000	146	190	--	--	--	--
NOV.							
25...	1025	74	29	--	--	--	--
JAN.							
14...	1115	500	29	--	--	--	--
28...	0930	60	290	--	--	--	--
FEB.							
26...	0935	99	120	--	--	--	--
MAR.							
24...	1400	162	260	--	--	--	--
APR.							
29...	1400	215	110	--	--	--	--
MAY							
20...	1300	51	130	--	--	--	--
JUNE							
24...	1035	6.2	270	4.6	4.5	.5	.1
JULY							
15...	1135	36	870	1.6	.80	1.1	.4
AUG.							
19...	0940	211	2100	--	--	--	--
SEP.							
22...	1030	13	290	--	--	--	--

OCT. 31, 1974
1000 HOURS

IDENTIFICATION OF PHYTOPLANKTON

190 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
	....SYNEDRA		15	8
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		89	46
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		59	31
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
D	....ANACYSTIS		30	15

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	0.619
CLASS	0.619
ORDER	0.619
FAMILY	1.738
GENERA	1.738

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

NOV. 25, 1974
1025 HOURS

IDENTIFICATION OF PHYTOPLANKTON

29 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....COSMARIUM		1	4
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		6	21
	....COCCONEIS		1	4
	...FRAGILARIACEAE			
	....SYNEDRA		4	12
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		10	33
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		4	12
	...NITZSCHIACEAE			
	....NITZSCHIA		4	12

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.250
CLASS 0.250
ORDER 0.250
FAMILY 2.344
GENERA 2.507

JAN. 28, 1975
0930 HOURS

290 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		67	23
	...FRAGILARIACEAE			
D	....SYNEDRA		110	37
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		25	9
	...NITZSCHIACEAE			
D	....NITZSCHIA		92	31

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.846
GENERA 1.846

HAWAII, ISLAND OF HAWAII

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

FEB. 26, 1975
0935 HOURS

IDENTIFICATION OF PHYTOPLANKTON

120 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		19	15
	...CYMBELLACEAE			
	....CYMBELLA		10	8
	...FRAGILARIACEAE			
D	....SYNEDRA		19	15
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		67	54
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		10	8

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 1.881
GENERA 1.881

MAR. 24, 1975
1400 HOURS

260 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..ULOTRICHALES			
	...ULOTRICHACEAE			
D	....ULOTHRIX		99	38
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....CLOSTERIUM		12	5
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		99	38
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		25	10
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		25	10

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.985
CLASS 0.985
ORDER 1.201
FAMILY 1.916
GENERA 1.916

HAWAII, ISLAND OF HAWAII

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

APR. 29, 1975
1400 HOURS

IDENTIFICATION OF PHYTOPLANKTON

110 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		5	5
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		32	29
	...CYMBELLACEAE			
	....CYMBELLA		5	5
	...FRAGILARIACEAE			
D	....SYNEDRA		22	19
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		43	38
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		5	5

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.276
CLASS 0.276
ORDER 0.276
FAMILY 2.130
GENERA 2.130

MAY 20, 1975
1300 HOURS

130 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		24	19
	...CYMBELLACEAE			
	....CYMBELLA		5	4
	...FRAGILARIACEAE			
D	....SYNEDRA		29	23
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		20	15
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		49	38

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
FAMILY 2.072
GENERA 2.072

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JUNE 24, 1975
1035 HOURS

IDENTIFICATION OF PHYTOPLANKTON

270 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		18	6
	....FRANCEIA		27	10
	...SCENEDESMACEAE			
	....SCENEDESMUS		9	3
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
	....SPHAEROZOSMA		18	6
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		44	16
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		9	3
	...FRAGILARIACEAE			
	....FRAGILARIA		27	10
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		120	42
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....GOMPHOSPHAERIA		9	3

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.015
CLASS	1.015
ORDER	1.773
FAMILY	2.435
GENERA	2.592

JULY 15, 1975
1135 HOURS

870 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		15	2
	...SCENEDESMACEAE			
	....SCENEDESMUS		31	4
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
D	....SPHAEROZOSMA		180	21
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....MELOSIRA		46	5
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		15	2
	...CYMBELLACEAE			
	....CYMBELLA		15	2
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		15	2
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		340	39
	...NITZSCHIACEAE			
	....NITZSCHIA		92	11
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....GOMPHOSPHAERIA		120	14

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV	1.349
CLASS	1.349
ORDER	1.796
FAMILY	2.545
GENERA	2.545

16704000 WAILUKU RIVER AT PIIHONUA--Continued

BIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

AUG. 19, 1975
0940 HOURS

IDENTIFICATION OF PHYTOPLANKTON

2,100 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		22	1
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
L	....CLOSTERIUM			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		480	22
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
L	....ACHNANTHES			0
	...CYMBELLACEAE			
	....CYMBELLA		22	1
	...FRAGILARIACEAE			
	....SYNEDRA		22	1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		44	2
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		220	10
	...NITZSCHIACEAE			
	....NITZSCHIA		22	1
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....LYNGBYA		1,300	61

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 1.031
CLASS 1.031
ORDER 1.399
FAMILY 1.638
GENERA 1.638

SEP. 22, 1975
1030 HOURS

300 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...HYDRODICTYACEAE			
	....PEDIASTRUM		43	14
	..ZYGNEMATALES			
	...DESMIDIACEAE	PLACODERM DESMIDS		
L	....SPONDYLOSIUM			0
	...ZYGNEMATACEAE			
L	....MOUGEOTIA			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		21	7
	...CYMBELLACEAE			
	....CYMBELLA		11	4
	...FRAGILARIACEAE			
	....SYNEDRA		32	11
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		74	25
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		96	32
	...NITZSCHIACEAE			
L	....NITZSCHIA			0
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....EUGLENA		21	7

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER , 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.946
CLASS 0.946
ORDER 0.946
FAMILY 2.488
GENERA 2.488

16704000 WAILUKU RIVER AT PIIHONUA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), MAY TO SEPTEMBER 1975

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										---	---	---
19										---	---	---
20										---	---	---
21										40	39	39
22										40	38	39
23										41	36	39
24										40	37	39
25										43	40	42
26										44	42	43
27										44	42	44
28										45	42	44
29										46	43	45
30										46	44	46
31										47	46	46
MONTH										---	---	---

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	48	46	47	44	42	43	40	37	38	43	37	40
2	49	48	48	43	41	42	40	32	36	44	40	42
3	49	48	49	42	41	41	36	35	35	48	42	45
4	50	48	49	41	40	41	35	32	33	44	42	40
5	50	48	49	41	40	41	33	30	31	41	38	39
6	50	49	50	41	39	40	32	29	31	40	36	38
7	52	50	51	40	39	40	33	30	32	40	38	39
8	54	52	52	41	39	40	35	32	34	40	32	36
9	53	52	53	41	39	40	36	33	35	37	33	35
10	53	50	51	41	40	41	37	35	36	36	34	35
11	51	50	51	41	40	40	39	37	38	35	31	33
12	51	49	50	40	38	39	39	36	38	34	30	32
13	50	48	49	37	33	35	39	36	37	34	32	33
14	48	45	46	33	30	31	38	37	38	33	27	30
15	45	41	43	32	28	30	38	35	37	34	26	30
16	42	38	40	32	28	30	37	35	37	30	28	29
17	40	38	39	30	22	29	37	34	36	30	26	28
18	40	36	38	31	29	30	34	28	30	34	30	32
19	42	37	39	32	29	31	29	25	28	38	32	35
20	39	37	38	33	30	32	27	24	26	40	34	37
21	39	37	38	34	32	33	26	23	25	44	36	40
22	41	38	40	35	33	35	29	24	27	41	37	39
23	42	40	42	36	33	35	34	29	32	42	34	38
24	43	42	42	37	35	36	35	32	34	45	40	42
25	42	41	42	38	35	37	45	32	39	45	40	42
26	43	41	42	40	37	39	44	40	42	47	42	45
27	43	41	43	40	39	40	50	40	45	46	40	43
28	44	42	43	40	38	38	44	40	42	48	42	45
29	44	43	43	38	36	37	48	40	44	44	40	42
30	44	42	43	37	36	37	43	38	40	43	37	40
31	---	---	---	38	36	37	43	38	40	---	---	---
MONTH	54	36	45	44	22	37	50	23	35	48	26	37

16704000 WAILUKU RIVER AT PIIHONUA--Continued

TEMPERATURE (DEG. C) OF WATER, MAY TO SEPTEMBER 1975

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										---	---	---
19										---	---	---
20										---	---	---
21										20.0	19.5	20.0
22										20.5	19.0	20.0
23										20.5	19.0	20.0
24										20.5	19.5	20.0
25										20.5	19.5	20.0
26										20.5	19.5	20.0
27										20.5	19.5	20.0
28										20.5	19.0	20.0
29										20.5	19.5	20.0
30										21.0	19.5	20.5
31										21.0	20.0	20.5
MONTH										---	---	---

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.0	20.0	20.5	21.0	21.0	21.0	21.5	20.0	21.0	22.5	19.5	21.0
2	20.5	20.0	20.0	22.0	20.5	21.0	21.0	20.0	20.5	22.5	19.5	21.0
3	21.0	19.5	20.5	21.5	21.0	21.0	20.5	20.0	20.5	22.5	20.5	21.5
4	21.0	20.0	20.5	22.0	20.5	21.5	21.5	20.0	21.0	22.5	19.5	21.0
5	21.5	19.5	20.5	21.5	21.0	21.5	22.0	20.5	21.5	22.0	20.0	21.0
6	21.5	20.0	21.0	22.5	20.5	21.5	22.0	21.0	21.5	21.5	20.0	21.0
7	21.5	20.0	20.5	23.0	21.5	22.0	22.5	21.0	21.5	22.0	20.0	21.0
8	22.0	20.0	21.0	22.5	21.5	22.0	22.5	21.0	22.0	21.5	20.0	20.5
9	22.5	20.5	21.0	22.0	21.0	21.5	22.5	21.5	22.0	21.5	19.5	20.5
10	21.5	20.5	21.0	22.5	20.5	21.5	23.0	21.5	22.5	21.5	19.5	20.5
11	21.0	20.5	21.0	22.5	21.0	21.5	22.0	21.5	22.0	21.5	19.5	20.5
12	21.0	20.5	20.5	21.0	20.0	20.5	23.0	21.0	22.0	21.0	19.5	20.5
13	20.5	20.0	20.0	20.5	20.0	20.5	23.0	21.5	22.5	21.5	19.5	20.5
14	20.0	19.5	20.0	21.0	20.0	20.5	22.5	21.5	22.0	21.5	19.0	20.0
15	20.5	19.5	20.0	21.0	19.5	20.5	22.0	21.0	21.5	20.5	19.0	20.0
16	20.5	19.5	20.0	21.0	19.5	20.0	21.0	20.5	21.0	20.5	19.0	20.0
17	21.0	19.5	20.5	22.5	20.0	21.5	20.5	20.0	20.5	20.5	18.5	19.5
18	21.5	20.0	20.5	22.5	21.0	22.0	20.0	19.0	19.5	21.5	19.5	20.0
19	21.0	20.5	20.5	22.5	21.0	22.0	20.0	19.5	19.5	21.5	19.5	20.5
20	21.0	20.0	20.5	22.0	21.0	21.5	20.0	19.5	20.0	21.5	20.0	20.5
21	21.5	20.0	21.0	22.5	21.0	21.5	20.5	19.5	20.0	21.5	20.0	20.5
22	21.0	20.5	21.0	22.5	21.0	22.0	21.0	19.5	20.0	21.5	19.5	20.5
23	21.0	20.5	21.0	23.5	21.5	22.5	20.5	20.0	20.5	21.5	19.5	20.5
24	21.5	20.5	20.5	22.5	22.0	22.5	20.5	20.0	20.0	22.0	20.5	21.0
25	22.0	20.5	21.0	23.0	21.5	22.0	21.5	19.5	20.5	22.5	20.5	21.5
26	22.0	20.5	21.0	22.0	20.5	21.5	22.0	21.0	21.5	22.0	21.0	21.5
27	22.5	20.5	21.5	20.5	20.0	20.5	22.0	21.0	21.5	22.0	20.5	21.5
28	23.0	21.0	22.0	21.0	20.0	20.5	22.0	20.5	21.0	21.5	20.5	21.0
29	22.0	21.5	22.0	21.5	20.5	21.0	22.0	21.0	21.5	21.0	20.0	20.5
30	22.0	20.5	21.0	21.5	20.5	21.0	21.0	21.0	21.0	21.5	19.5	20.5
31	---	---	---	22.0	21.0	21.5	21.5	20.5	21.0	---	---	---
MONTH	23.0	19.5	21.0	23.5	19.5	21.5	23.0	19.0	21.0	22.5	18.5	20.5

16704000 WAILUKU RIVER AT PIIHONUA--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 8	1445	2.88	23.0
Nov. 25	1140	73.0	19.0
Jan. 28	1045	59.4	16.5
Feb. 26	1050	99.0	17.0
May 20	0940	51.4	19.0
June 24	1140	6.24	21.5
July 16	1030	38.4	20.0
Sept. 22	1205	12.9	22.0

SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT.					
31...	1000	146	1	.39	100
NOV.					
25...	1025	74	0	.00	100
JAN.					
14...	1115	500	1	1.3	100
28...	0930	60	0	.00	100
FEB.					
26...	0935	99	1	.27	100
MAR.					
24...	1400	162	0	.00	100
APR.					
29...	1400	215	1	.58	100
MAY					
20...	1300	51	1	.14	100
JUNE					
24...	1035	6.2	1	.02	100
JULY					
15...	1135	36	4	.39	73
AUG.					
19...	0940	211	11	6.3	80
SEP.					
22...	1030	13	2	.23	100

16717000 HONOLII STREAM NEAR PAPAIKOU
(Hydrologic bench-mark station)

LOCATION.--Lat 19°46'00", long 155°09'16", at gaging station 0.7 mi (1.1 km) downstream from Pohakupaa Stream, 4.1 mi (6.6 km) west of Papaikou, and 4.8 mi (7.7 km) northwest of Hilo Post Office.

DRAINAGE AREA.--11.6 mi^2 (30.0 km^2).

PERIOD OF RECORD.--Chemical analyses: September 1969 to September 1975.
Sediment records: Water years 1969-75 (partial-record station).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT.										
30...	1030	108	3.4	1.5	.1	1.8	.2	7	--	6
NOV.										
26...	0935	23	11	6.8	1.6	3.0	.2	23	--	19
JAN.										
14...	1430	45	8.7	3.5	1.4	1.8	.4	14	--	11
28...	1430	16	16	5.5	3.0	2.8	.2	31	--	25
FEB.										
26...	1355	24	--	--	--	--	--	--	--	--
26...	1400	24	12	4.3	1.9	2.7	.6	26	--	21
MAR.										
24...	1000	48	8.0	3.3	1.7	2.2	.2	17	0	14
24...	1015	48	--	--	--	--	--	--	--	--
APR.										
29...	1000	80	5.1	1.6	1.5	2.0	.3	9	0	7
MAY										
20...	0905	33	11	3.6	2.2	2.7	.6	18	0	15
JUNE										
25...	1355	21	15	9.0	2.1	3.4	.3	34	0	28
JULY										
15...	1005	36	6.7	4.4	.9	2.8	.3	12	0	10
AUG.										
20...	1040	50	5.3	2.0	1.5	2.3	.2	11	0	9
SEP.										
23...	1030	12	16	6.2	3.1	3.3	.3	40	0	33

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT.										
30...	2.3	2.3	.0	.04	.01	28	15	.04	4	0
NOV.										
26...	1.6	2.7	.0	.03	.02	40	38	.05	24	5
JAN.										
14...	2.1	2.3	.2	1.8	.01	30	27	.04	15	3
28...	1.6	2.6	.1	.05	.00	51	47	.07	26	1
FEB.										
26...	--	--	--	--	--	--	--	--	--	--
26...	1.8	2.5	.0	.58	.02	53	39	.07	19	0
MAR.										
24...	2.4	2.8	.1	.04	.01	32	29	.04	15	1
24...	--	--	--	--	--	--	--	--	--	--
APR.										
29...	3.8	3.1	.0	.01	.01	16	22	.02	10	3
MAY										
20...	1.0	3.5	.0	.02	.01	41	33	.06	18	3
JUNE										
25...	1.2	3.4	.1	.03	.01	51	51	.07	31	3
JULY										
15...	3.0	3.6	.1	.01	.01	37	28	.05	15	5
AUG.										
20...	1.8	3.7	.1	.02	.00	27	22	.04	11	2
SEP.										
23...	2.3	3.1	.1	.02	.01	50	54	.07	28	0

16717000 HONOLII STREAM NEAR PAPAIKOU--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT.										
30...	47	.4	22	5.2	19.0	10	8.3	B400	B570	530
NOV.										
26...	22	.3	44	6.8	18.0	1	9.0	29	30	17
JAN.										
14...	21	.2	34	--	18.0	2	8.7	180	110	70
28...	19	.2	58	6.9	17.5	2	9.1	49	23	3
FEB.										
26...	--	--	--	--	19.0	--	--	20	12	3
26...	23	.3	50	6.5	19.0	1	8.6	--	--	--
MAR.										
24...	24	.2	35	6.8	16.5	3	9.2	--	--	--
24...	--	--	--	--	16.5	--	--	29	11	100
APR.										
29...	29	.3	26	6.5	17.0	5	8.9	250	440	170
MAY										
20...	24	.3	48	7.1	18.5	3	8.8	40	61	37
JUNE										
25...	19	.3	66	7.8	20.0	3	8.8	100	10	27
JULY										
15...	29	.3	33	7.3	19.0	5	8.5	260	140	98
AUG.										
20...	30	.3	29	7.1	18.5	4	8.9	310	100	260
SEP.										
23...	20	.3	65	6.8	19.5	1	--	120	84	29

B Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF MINOR AND TRACE CONSTITUENTS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT.							
30...	1030	2100	30	0	<100	<10	<50
MAY							
20...	0905	700	20	0	0	<10	<50

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT.						
30...	<10	<100	.0	<10	0	80
MAY						
20...	<10	<100	.2	<10	0	0

RADIOCHEMICAL ANALYSIS, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (U) (UG/L)
OCT.									
30...	1030	<.4	.8	1.9	1.3	1.6	1.2	.02	.01

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)
OCT.											
30...	1000	.00	.0	.0	0	.00	.0	.00	.0	.00	.0

16717000 HONOLII STREAM NEAR PAPAIKOU--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)
OCT. 30...	.00	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0

DATE	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (LG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
OCT. 30...	.00	.00	.00	.0	0	0	0	.00	.00	.00

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1035	10.4	19.0
30	1020	111	19.5
Nov. 26	1020	22.4	18.0
Jan. 14	1435	43.8	18.0
28	1450	17.1	17.5
Feb. 26	1420	22.9	19.0
Mar. 24	1045	48.2	16.5
Apr. 29	1040	81.8	19.0
May 20	0940	33.8	18.5
June 25	1420	21.8	20.0
July 9	1030	19.1	19.0
Sept. 23	1050	12.8	18.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS,
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT. 30...	1030	108	19.0	12	3.5
NOV. 26...	0935	23	18.0	1	.06
JAN. 14...	1430	45	18.0	2	.24
28...	1430	16	17.5	0	.00
FEB. 26...	1355	24	19.0	1	.06
MAR. 24...	1015	48	16.5	0	.00
APR. 29...	1000	80	17.0	3	.65
MAY 20...	0905	33	18.5	1	.09
JUNE 25...	1355	21	20.0	2	.11
JULY 15...	1005	36	19.0	4	.39
AUG. 20...	1040	50	18.5	5	.67
SEP. 23...	1030	12	19.5	1	.03

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF KAUAI			
16010000 KAWAIKOI STREAM NEAR WAIMEA (LAT 22 08 09 LONG 159 37 22)			
Oct. 8, 1974	1105	5.29	19.5
Dec. 11, 1974	1315	9.87	17.0
Feb. 6, 1975	1120	21.7	15.0
Mar. 12, 1975	1130	17.5	16.0
May 12, 1975	1130	9.60	17.0
June 16, 1975	1055	4.61	17.5
Aug. 13, 1975	1130	2.81	18.0
16014000 KOKEE DITCH NEAR WAIMEA (LAT 22 06 42 LONG 159 40 43)			
Oct. 8, 1974	1420	7.80	21.0
Dec. 11, 1974	1435	13.4	17.5
Feb. 6, 1975	1420	29.2	15.0
Mar. 12, 1975	1425	26.1	16.0
May 12, 1975	1435	15.2	17.5
June 16, 1975	1435	6.52	18.0
Aug. 13, 1975	1430	3.71	16.0
16036000 MAKAWELI RIVER NEAR WAIMEA (LAT 21 58 31 LONG 159 38 55)			
Oct. 7, 1974	1350	79.1	23.5
Dec. 2, 1974	1230	36.1	21.0
Jan. 24, 1975	0910	41.2	18.5
Mar. 10, 1975	1140	159	20.5
May 6, 1975	1045	198	19.5
June 13, 1975	1200	15.8	24.5
Aug. 6, 1975	1300	12.4	24.5
Sept.18, 1975	1400	10.6	22.0
16061000 NORTH WAILUA DITCH NEAR LIHUE (LAT 22 03 56 LONG 159 28 14)			
Oct. 2, 1974	1055	15.2	20.5
Oct. 21, 1974	1210	15.8	20.5
Nov. 18, 1974	1500	17.4	19.5
Dec. 19, 1974	1235	17.8	19.0
Jan. 17, 1975	1240	17.3	18.5
Feb. 18, 1975	1235	17.6	17.5
Mar. 21, 1975	1240	20.5	18.0
Apr. 17, 1975	1250	23.8	17.5
May 19, 1975	1210	21.2	19.0
June 20, 1975	1235	17.2	19.5
July 18, 1975	1250	23.7	19.5
Aug. 28, 1975	1335	16.4	22.5
Sept.19, 1975	1255	14.5	20.5
16061200 NORTH WAILUA DITCH BELOW WAIKOKO STREAM NEAR LIHUE (LAT 22 03 34 LONG 159 28 00)			
Oct. 21, 1974	1025	21.4	19.5
Nov. 18, 1974	1320	25.9	19.5
Dec. 19, 1974	1120	21.3	19.0
Jan. 17, 1975	1050	21.7	17.5
Feb. 18, 1975	1035	21.5	17.5
Mar. 21, 1975	1035	21.4	17.5
Apr. 17, 1975	1055	21.6	17.0
May 19, 1975	1040	22.9	19.5
June 20, 1975	1035	19.3	18.5
July 18, 1975	1050	21.5	19.5
Aug. 21, 1975	1005	20.5	19.5
Sept.19, 1975	1055	16.9	19.5
16062000 STABLE STORM DITCH NEAR LIHUE (LAT 22 04 09 LONG 159 26 46)			
Nov. 18, 1974	1135	.24	21.0
Dec. 19, 1974	0935	.33	19.5
Jan. 17, 1975	0905	.02	18.5
Mar. 21, 1975	0910	.35	19.5
Apr. 17, 1975	0925	.31	19.5
May 19, 1975	0915	.28	20.0
June 20, 1975	0920	27.6	19.5
July 18, 1975	0950	11.5	20.5
Aug. 21, 1975	1210	30.6	22.0
Sept.19, 1975	0940	24.1	19.5

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF KAUAI			
16063000 NORTH FORK WAILUA RIVER AT ALTITUDE 650 FT (198 M), NEAR LIHUE (LAT 22 04 02 LONG 159 26 21)			
Oct. 2, 1974	1540	5.92	23.0
Nov. 1, 1974	1125	39.4	21.5
Nov. 27, 1974	1020	50.5	19.0
Dec. 24, 1974	1045	79.0	19.5
Jan. 29, 1975	1020	27.8	18.5
Mar. 31, 1975	1110	106	18.5
May 1, 1975	1050	119	19.0
May 29, 1975	1020	16.8	20.0
June 27, 1975	1005	4.42	20.5
July 23, 1975	1030	41.2	20.5
Aug. 26, 1975	0940	1.78	22.5
Sept.26, 1975	0950	1.08	22.5
16069000 WAILUA DITCH NEAR KAPAA (LAT 22 04 34 LONG 159 24 04)			
Oct. 21, 1974	1405	29.2	26.0
Nov. 18, 1974	0925	17.8	21.5
Dec. 19, 1974	1425	2.27	22.5
Jan. 17, 1975	1425	4.85	22.5
Feb. 18, 1975	1435	18.7	22.5
Mar. 21, 1975	1425	20.0	22.5
Apr. 17, 1975	1440	5.53	23.5
May 19, 1975	1325	34.9	24.5
June 20, 1975	1420	32.5	26.0
July 18, 1975	1435	32.7	24.5
Aug. 21, 1975	1335	21.0	25.0
Sept.19, 1975	1510	8.79	27.0
16071500 LEFT BRANCH OPAEKAA STREAM NEAR KAPAA (LAT 22 04 43 LONG 159 23 55)			
Oct. 9, 1974	1320	2.23	23.0
Dec. 5, 1974	1330	2.54	20.5
Jan. 27, 1975	1420	2.44	20.0
Jan. 30, 1975	1340	12.5	19.5
Jan. 31, 1975	1450	415	19.5
Feb. 5, 1975	1050	5.23	20.5
Mar. 6, 1975	1040	2.20	19.5
May 1, 1975	1235	2.62	21.0
June 11, 1975	0845	1.42	23.0
July 30, 1975	1010	.58	23.0
Sept.11, 1975	1140	.42	22.5
16077000 MAKALEHA DITCH NEAR KEALIA (LAT 22 07 06 LONG 159 22 04)			
Oct. 21, 1974	----	10.5	22.0
Nov. 18, 1974	1345	14.7	20.5
Dec. 19, 1974	1335	.08	20.0
Jan. 17, 1975	1310	.70	18.5
Feb. 18, 1975	1355	.24	19.5
Mar. 24, 1975	1330	9.05	20.5
Apr. 17, 1975	1420	6.68	21.5
May 19, 1975	1335	.20	20.0
June 20, 1975	1350	7.20	23.0
July 18, 1975	1350	15.3	21.5
Aug. 21, 1975	1330	7.16	20.5
Sept.19, 1975	1305	5.57	23.0
16079000 KAPAHI DITCH NEAR KEALIA (LAT 22 06 09 LONG 159 22 28)			
Oct. 21, 1974	----	.32	23.0
Nov. 18, 1974	1420	16.7	21.5
Dec. 19, 1974	1510	12.6	20.5
Jan. 17, 1975	1510	.25	19.0
Feb. 18, 1975	1520	16.2	19.0
Mar. 24, 1975	1515	8.55	20.5
Apr. 17, 1975	1540	14.6	21.5
May 19, 1975	1510	12.3	20.5
June 20, 1975	1455	2.84	22.5
July 18, 1975	1505	24.1	21.5
Aug. 21, 1975	1530	2.42	23.0
Sept.19, 1975	1455	2.61	23.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF KAUAI			
16080000 KAPAA STREAM AT KAPAHI DITCH INTAKE NEAR KAPAA (LAT 22 06 15 LONG 159 22 29)			
Oct. 24, 1974	1450	3.02	22.5
Nov. 25, 1974	0920	25.9	20.0
Dec. 23, 1974	1525	28.3	19.5
Feb. 24, 1975	1515	6.20	19.5
May 30, 1975	1405	2.23	21.0
16087000 ANAHOLA DITCH WASTEWAY NEAR KEALIA (LAT 22 08 16 LONG 159 22 28)			
July 18, 1975	1010	.67	20.5
Aug. 29, 1975	----	.15	23.0
16088000 ANAHOLA DITCH ABOVE KANEHA RESERVOIR NEAR KEALIA (LAT 22 08 10 LONG 159 22 28)			
Oct. 21, 1974	----	3.05	22.0
Nov. 18, 1974	0945	15.6	21.0
Dec. 19, 1974	0950	1.97	20.0
Jan. 17, 1975	0920	6.03	18.0
Feb. 18, 1975	0940	5.58	19.0
Mar. 24, 1975	0950	5.64	20.0
Apr. 17, 1975	0945	3.29	22.5
May 19, 1975	0950	5.00	20.0
June 20, 1975	0955	1.95	22.0
July 18, 1975	0910	4.43	21.0
Aug. 21, 1975	1050	1.76	21.5
Sept.19, 1975	1010	.86	23.0
16089000 ANAHOLA STREAM NEAR KEALIA (LAT 22 09 05 LONG 159 21 17)			
Oct. 1, 1974	1110	6.18	23.5
Oct. 25, 1974	1010	4.86	23.0
Nov. 25, 1974	1415	26.8	20.5
Dec. 23, 1974	1245	15.3	19.5
Jan. 29, 1975	1315	12.6	17.0
Feb. 24, 1975	1300	11.0	19.5
Mar. 26, 1975	1255	8.78	20.5
Apr. 28, 1975	1250	25.9	20.0
May 30, 1975	1130	5.51	21.0
June 26, 1975	1220	4.04	22.0
July 24, 1975	1245	3.59	22.5
Aug. 29, 1975	1205	2.23	25.5
Sept.24, 1975	1210	2.21	24.0
16091000 LOWER ANAHOLA DITCH NEAR KEALIA (LAT 22 08 14 LONG 159 19 31)			
Oct. 21, 1974	1120	3.82	22.5
Nov. 18, 1974	1125	3.95	21.0
Dec. 19, 1974	1135	5.80	20.0
Jan. 17, 1975	1200	.84	19.5
Feb. 18, 1975	1145	9.02	19.5
Mar. 24, 1975	1155	7.01	20.5
Apr. 17, 1975	1140	7.83	23.0
May 19, 1975	1220	3.93	20.5
June 20, 1975	1200	3.35	23.0
July 18, 1975	1115	5.05	21.0
Aug. 21, 1975	0920	1.89	22.5
Sept.19, 1975	1210	1.23	23.0
16097500 HALAULANI STREAM AT ALTITUDE 400 FT (122 M), NEAR KILAUEA (LAT 22 10 54 LONG 159 25 17)			
Oct. 4, 1974	1410	4.70	22.0
Dec. 4, 1974	1340	6.61	20.0
Feb. 7, 1975	0930	7.35	19.0
Mar. 5, 1975	1245	5.72	19.0
May 2, 1975	1010	9.08	20.0
June 10, 1975	1010	4.56	23.0
July 29, 1975	1030	4.24	23.0
Sept.10, 1975	0950	4.08	21.5

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF KAUAI			
16100000 HANALEI TUNNEL OUTLET NEAR LIHUE (LAT 22 05 02 LONG 159 27 50)			
Oct. 31, 1974	1135	46.5	20.0
Nov. 26, 1974	1320	7.81	19.0
Dec. 23, 1974	1040	15.3	18.5
Jan. 21, 1975	1205	7.21	17.0
Feb. 26, 1975	1220	2.92	18.0
Mar. 27, 1975	1300	32.4	18.0
Apr. 23, 1975	1120	34.7	17.5
May 29, 1975	1150	30.3	19.0
June 26, 1975	1100	28.7	18.5
July 22, 1975	1110	32.1	21.0
Aug. 28, 1975	1020	24.4	18.5
Sept.25, 1975	1330	21.7	20.0
HAWAII, ISLAND OF OAHU			
16210900 POAMOHO TUNNEL NEAR WAHIAWA (LAT 21 31 12 LONG 157 58 51)			
Oct. 2, 1974	1020	1.20	22.0
Nov. 15, 1974	1055	2.04	18.5
Dec. 31, 1974	1105	5.45	19.0
Feb. 14, 1975	1615	13.2	19.0
Apr. 2, 1975	1105	4.73	19.5
May 13, 1975	1505	2.91	22.5
June 19, 1975	1505	.99	22.0
Aug. 4, 1975	1500	.52	23.0
Sept.16, 1975	1440	.36	20.0
16226000 NORTH HALAWA STREAM NEAR AIEA (LAT 21 23 46 LONG 157 53 37)			
Nov. 18, 1974	1138	9.60	21.0
Dec. 30, 1974	1005	.33	20.0
Feb. 10, 1975	1250	1.04	21.0
Apr. 9, 1975	1208	6.39	20.5
May 21, 1975	1117	.05	21.5
16227500 MOANALUA STREAM NEAR KANEOHE (LAT 21 23 29 LONG 157 51 05)			
Feb. 4, 1975	1025	28.8	22.0
Feb. 4, 1975	1130	15.5	22.0
16244000 PUKELE STREAM NEAR HONOLULU (LAT 21 18 36 LONG 157 47 27)			
Nov. 5, 1974	1311	.53	22.5
Dec. 27, 1974	1103	.55	21.5
Feb. 12, 1975	1222	1.32	22.0
Apr. 8, 1975	1200	2.48	22.0
May 20, 1975	1158	.64	21.5
July 1, 1975	1035	.25	21.5
July 11, 1975	1345	.29	23.0
July 11, 1975	1408	.30	23.0
Aug. 14, 1975	1205	.30	22.5
Sept.23, 1975	1215	.21	21.5
16254000 MAKAWAO STREAM NEAR KAILUA (LAT 21 21 49 LONG 157 46 02)			
Oct. 23, 1974	1545	1.34	24.0
Dec. 20, 1974	1046	1.79	21.0
Feb. 14, 1975	1055	10.0	20.0
Mar. 14, 1975	1042	3.22	20.5
Apr. 29, 1975	1017	2.53	21.0
June 17, 1975	1400	1.65	22.5
July 22, 1975	1030	1.37	24.0
Sept. 5, 1975	1325	.96	21.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF OAHU			
16283600 SOUTH FORK WAIHEE STREAM NEAR HEEIA (LAT 21 26 47 LONG 157 52 12)			
Oct. 25, 1974	1350	1.68	20.0
Dec. 17, 1974	1337	1.66	19.0
Feb. 7, 1975	1335	1.49	19.0
Mar. 18, 1975	1445	1.60	19.0
Apr. 25, 1975	1357	1.64	21.0
June 16, 1975	1345	1.68	19.5
July 25, 1975	1220	1.56	20.0
Sept. 8, 1975	1210	1.38	19.0
16283700 NORTH FORK WAIHEE STREAM NEAR HEEIA (LAT 21 26 48 LONG 157 52 18)			
Oct. 25, 1974	1210	2.03	20.0
Dec. 17, 1974	1203	1.86	19.0
Feb. 7, 1975	1200	1.81	19.0
Mar. 18, 1975	1307	1.76	18.5
Apr. 25, 1975	1350	1.84	19.0
June 16, 1975	1130	1.73	19.5
July 25, 1975	1040	1.83	20.0
Sept. 8, 1975	1135	1.70	18.5
16284000 WAIHEE STREAM NEAR HEEIA (LAT 21 27 01 LONG 157 51 38)			
Nov. 14, 1974	1235	3.58	20.0
Dec. 10, 1974	1335	3.99	21.0
Jan. 31, 1975	1220	6.08	20.0
Mar. 13, 1975	1110	3.38	19.5
Apr. 22, 1975	1318	3.14	19.0
June 18, 1975	1348	2.72	22.0
July 24, 1975	1215	2.95	21.0
Sept. 8, 1975	1435	2.50	22.5
16284200 WAIHEE STREAM NEAR KAHALUU (LAT 21 27 04 LONG 157 51 36)			
Nov. 4, 1974	0945	5.88	20.0
Dec. 10, 1974	1415	3.86	21.0
Jan. 31, 1975	1345	7.38	20.0
Mar. 13, 1975	1145	4.01	19.5
Apr. 22, 1975	1415	4.28	19.5
June 18, 1975	1435	3.39	22.5
July 24, 1975	1015	3.68	21.0
Sept. 8, 1975	1520	2.70	22.5
16302000 PUNALUU DITCH NEAR PUNALUU (LAT 21 33 41 LONG 157 54 10)			
Oct. 21, 1974	1245	4.12	22.5
Dec. 9, 1974	1325	2.26	21.0
Jan. 30, 1975	1440	4.83	19.5
Mar. 12, 1975	1030	5.25	19.5
Apr. 23, 1975	1005	1.50	19.0
June 19, 1975	1048	5.23	21.5
July 29, 1975	1430	4.70	22.0
Aug. 29, 1975	1410	5.17	22.5
16325000 KAMANANUI STREAM AT PUPUKEA MILITARY ROAD, NEAR MAUNAWAI (LAT 21 37 25 LONG 158 01 04)			
Jan. 9, 1975	1335	43.3	24.5
Mar. 26, 1975	1625	5.76	20.5
May 12, 1975	1235	2.02	25.0
June 19, 1975	1050	.79	24.5
Aug. 4, 1975	0935	.44	24.0
HAWAII, ISLAND OF MOLOKAI			
16403900 KAWAINUI STREAM NEAR PELEKUNU (LAT 21 07 59 LONG 156 52 38)			
Oct. 21, 1974	1100	1.42	21.0
Dec. 29, 1974	1115	9.78	18.5
Feb. 5, 1975	1225	10.5	18.0
July 2, 1975	1330	3.55	21.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF MOLOKAI			
16404200 PILIPILILAU STREAM NEAR PELEKUNU (LAT 21 08 08 LONG 156 53 09)			
Oct. 22, 1974	0930	1.42	20.5
Dec. 29, 1974	1030	.82	18.5
Feb. 6, 1975	0950	1.23	17.0
Apr. 22, 1975	1125	.94	18.5
16405100 MOLOKAI TUNNEL AT EAST PORTAL (LAT 21 08 38 LONG 156 55 16)			
Oct. 30, 1974	1625	1.59	20.5
Dec. 12, 1974	1550	1.52	19.0
Jan. 30, 1975	1510	2.56	17.0
Apr. 8, 1975	1420	2.43	18.5
June 10, 1975	1400	.94	19.5
Aug. 5, 1975	1535	3.58	18.5
16405300 MOLOKAI TUNNEL AT WEST PORTAL (LAT 21 07 27 LONG 156 59 50)			
Oct. 31, 1974	1535	6.46	19.0
Dec. 10, 1974	1030	2.84	18.0
Jan. 29, 1975	1425	2.39	18.0
Apr. 8, 1975	1715	4.52	17.5
June 10, 1975	1645	3.01	18.5
16408000 WAIKOLU STREAM BELOW PIPELINE CROSSING NEAR KALAUPAPA (LAT 21 09 55 LONG 156 55 54)			
Oct. 30, 1974	1205	5.37	21.5
Dec. 12, 1974	1145	5.26	20.0
Jan. 30, 1975	0950	7.38	19.0
Apr. 8, 1975	1100	13.9	19.5
June 10, 1975	1055	5.58	19.5
Aug. 5, 1975	1110	4.30	21.5
HAWAII, ISLAND OF MAUI			
16512000 KOOLAU DITCH AT NAHIKU WEIR, NEAR NAHIKU (LAT 20 48 56 LONG 156 07 15)			
Oct. 3, 1974	1300	5.49	21.5
Jan. 7, 1975	1520	89.3	16.5
May 13, 1975	1435	28.9	20.5
Aug. 26, 1975	1400	20.8	19.5
16523000 KOOLAU DITCH NEAR KEANAE (LAT 20 49 53 LONG 156 10 30)			
Oct. 1, 1974	1015	14.9	21.5
Oct. 9, 1974	1720	14.4	21.0
Nov. 19, 1974	1017	74.0	18.0
Jan. 7, 1975	1010	223	16.0
Mar. 4, 1975	1040	114	16.0
May 13, 1975	1020	77.8	18.5
July 9, 1975	1105	41.1	20.0
16531000 KULA DIVERSION FROM HAIPUAENA STREAM NEAR OLINDA (LAT 20 28 24 LONG 156 13 27)			
Oct. 11, 1974	1500	.29	15.0
Jan. 16, 1975	1125	.28	12.5
Apr. 18, 1975	1235	1.10	13.0
Apr. 21, 1975	1020	3.64	12.0
May 7, 1975	1230	6.25	12.0
June 13, 1975	1020	1.07	13.0
16538000 SPRECKELS DITCH AT HAIPUAENA WEIR, NEAR HUELO (LAT 20 51 15 LONG 156 11 25)			
Oct. 7, 1974	1445	2.86	22.5
Mar. 12, 1975	1300	137	17.0
May 7, 1975	1225	106	18.0
July 30, 1975	1310	6.72	21.5

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF MAUI			
16541000 KOOLAU DITCH AT HAIPUAENA NEAR HUELO (LAT 20 51 17 LONG 156 11 19)			
Oct. 7, 1974	1055	15.0	20.0
Nov. 26, 1974	1255	79.8	18.5
Jan. 15, 1975	1010	192	17.5
Mar. 12, 1975	1110	281	17.5
June 24, 1975	1115	29.5	18.0
16541500 MANUEL LUIS DITCH AT PUOHOKAMOA GULCH, NEAR HUELO (LAT 20 51 48 LONG 156 10 49)			
Oct. 7, 1974	1600	.03	22.0
Jan. 15, 1975	1555	3.18	19.5
Mar. 12, 1975	1600	64.8	18.0
May 7, 1975	1535	4.61	19.0
July 30, 1975	1025	.18	21.0
Sept. 2, 1975	1520	.80	22.5
16570000 NAILIILIHAELE STREAM NEAR HUELO (LAT 20 52 28 LONG 156 13 06)			
Oct. 4, 1974	1055	2.30	21.5
Nov. 21, 1974	1605	298	19.5
16587000 HONOPOU STREAM NEAR HUELO (LAT 20 53 20 LONG 156 15 20)			
Oct. 4, 1974	1225	.15	21.0
Dec. 26, 1974	0925	11.4	19.0
Mar. 7, 1975	1505	2.39	19.0
May 16, 1975	1445	1.93	21.0
July 15, 1975	1430	.97	23.0
Aug. 29, 1975	1150	2.18	21.0
16589000 NEW HAMAKUA DITCH AT HONOPOU, NEAR HUELO (LAT 20 53 28 LONG 156 15 22)			
Nov. 25, 1974	1500	6.05	20.5
Jan. 10, 1975	1015	107	18.0
Feb. 13, 1975	0935	165	17.5
Feb. 24, 1975	1500	3.96	19.0
Mar. 7, 1975	1055	2.41	18.5
May 16, 1975	1050	2.05	20.0
July 15, 1975	1115	24.5	19.5
Aug. 21, 1975	1055	81.8	20.0
16592000 LOWRIE DITCH AT HONOPOU GULCH, NEAR HUELO (LAT 20 54 57 LONG 156 15 08)			
Oct. 8, 1974	1330	2.68	26.5
Jan. 14, 1975	1040	47.0	20.0
May 5, 1975	1320	21.8	21.5
July 15, 1975	1135	37.8	21.5
Aug. 28, 1975	1255	9.82	24.5
16594000 HAIKU DITCH AT HONOPOU GULCH, NEAR KAILUA (LAT 20 55 07 LONG 156 14 58)			
Oct. 8, 1974	1015	.58	23.0
Nov. 25, 1974	1705	6.04	22.5
Jan. 10, 1975	1540	10.7	22.0
Mar. 6, 1975	1530	3.22	21.5
July 15, 1975	1620	1.57	22.0
Aug. 28, 1975	1110	.91	23.0
16638500 KAHOMA STREAM AT LAHAINA (LAT 20 53 10 LONG 156 40 36)			
Nov. 22, 1974	1115	.14	21.0
Mar. 14, 1975	1120	6.06	19.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF HAWAII			
16700900 OLAA FLUME SPRING, NEAR KAUMANA (LAT 19 41 59 LONG 155 11 13)			
Oct. 9, 1974	1150	1.14	17.5
Oct. 24, 1974	1115	1.25	17.0
Nov. 26, 1974	1005	13.4	17.0
Dec. 4, 1974	1125	8.56	17.0
Dec. 19, 1974	1000	24.8	17.0
Jan. 17, 1975	1217	26.7	17.0
Feb. 20, 1975	1205	29.4	17.0
Mar. 18, 1975	0950	29.7	16.0
Apr. 18, 1975	1040	19.7	15.0
May 13, 1975	1135	17.4	17.0
June 16, 1975	1010	5.25	17.0
June 19, 1975	1100	4.40	16.0
July 3, 1975	1135	4.96	17.0
July 14, 1975	1115	6.44	17.0
Aug. 27, 1975	1120	10.1	17.0
Sept. 19, 1975	1035	9.59	17.0
16701750 WAILUKU RIVER NEAR HUMUULA (LAT 19 42 55 LONG 155 18 36)			
Nov. 20, 1974	1030	.71	15.0
Dec. 30, 1974	1125	4.81	15.0
Feb. 21, 1975	1155	1.16	15.0
Mar. 31, 1975	1115	.63	16.0
May 5, 1975	1215	1.34	15.0
16701800 WAILUKU RIVER NEAR KAUMANA (LAT 19 43 15 LONG 155 16 08)			
Oct. 9, 1974	1055	.24	19.0
Nov. 6, 1974	1130	2.19	17.0
Jan. 21, 1975	1140	4.68	15.0
Feb. 27, 1975	1135	8.28	15.5
Apr. 1, 1975	1245	3.20	16.5
May 9, 1975	1125	8.70	15.0
June 26, 1975	1040	.31	17.5
July 23, 1975	1150	.38	17.0
Aug. 29, 1975	1330	.49	20.0
16720000 KAWAINUI STREAM NEAR KAMUELA (LAT 20 05 18 LONG 155 40 58)			
Oct. 1, 1974	1235	.44	15.0
Nov. 21, 1974	1125	8.37	10.0
Jan. 23, 1975	1255	.31	13.0
Feb. 20, 1975	1205	4.04	12.0
May 2, 1975	1110	9.58	13.0
June 27, 1975	1005	2.74	14.0
Aug. 28, 1975	1220	4.09	15.0
16720300 KAWAIKI STREAM NEAR KAMUELA (LAT 20 05 13 LONG 155 40 59)			
Oct. 1, 1974	1145	.37	15.0
Nov. 21, 1974	1045	2.24	10.0
Jan. 23, 1975	1200	.40	14.0
Feb. 20, 1975	1120	1.19	11.0
May 2, 1975	1035	2.68	13.0
June 27, 1975	0925	.93	14.0
Aug. 28, 1975	1145	1.82	15.0
16720500 UPPER HAMAKUA DITCH BELOW KAWAIKI STREAM, NEAR KAMUELA (LAT 20 05 15 LONG 155 40 42)			
Oct. 1, 1974	1105	.72	15.0
Nov. 21, 1974	1015	9.36	10.0
Jan. 23, 1975	1120	.74	14.0
Feb. 20, 1975	1040	5.22	12.0
May 2, 1975	0930	11.2	13.0
June 27, 1975	0850	3.72	14.0
Aug. 28, 1975	1100	5.76	15.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
HAWAII, ISLAND OF HAWAII			
16726000 UPPER HAMAKUA DITCH ABOVE WAIMEA RESERVOIR DIVERSION, NEAR KAMUELA (LAT 20 03 31 LONG 155 37 40)			
Oct. 22, 1974	0950	4.00	17.0
Oct. 22, 1974	1310	4.82	17.0
Nov. 7, 1974	1005	4.64	16.5
Nov. 22, 1974	1400	14.1	17.0
Jan. 24, 1975	1230	.64	15.5
Feb. 13, 1975	1145	10.8	15.0
Mar. 4, 1975	1550	20.8	12.0
Mar. 13, 1975	1120	28.8	14.0
Apr. 15, 1975	1530	8.53	15.0
June 4, 1975	1405	6.63	15.0
July 17, 1975	1340	6.94	16.5
Sept.10, 1975	1430	3.46	17.0
16759000 HAUANI GULCH NEAR KAMUELA (LAT 20 02 28 LONG 155 39 05)			
Oct. 4, 1974	1150	.05	17.0
Nov. 22, 1974	1235	.28	18.0
Jan. 24, 1975	1105	.03	13.0
Mar. 4, 1975	1520	1.03	15.0
Apr. 15, 1975	1455	.26	16.0
June 4, 1975	1420	.17	14.0
July 17, 1975	1340	.96	15.0
Sept.10, 1975	1320	.21	15.0
16765000 HILEA GULCH TRIBUTARY NO. 2 NEAR HONUAPO (LAT 19 10 17 LONG 155 36 05)			
Apr. 8, 1974	1235	.51	14.5
May 28, 1975	1130	.09	14.0
16770500 PAAUAU GULCH AT PAHALA (LAT 19 12 39 LONG 155 28 48)			
Apr. 8, 1975	1530	.20	18.5
MARIANA ISLANDS, ISLAND OF SAIPAN			
16801000 SOUTH FORK TALOFOFO STREAM (LAT 15 12 58 N. LONG 145 46 31 E.)			
Oct. 1, 1974	1425	.67	24.0
Nov. 11, 1974	1545	1.72	26.0
Jan. 14, 1975	1345	.11	25.0
Jan. 28, 1975	1509	.16	25.0
Jan. 30, 1975	0905	.24	25.0
Feb. 6, 1975	1410	.67	25.0
Feb. 28, 1975	0926	.21	24.0
Mar. 13, 1975	1325	.22	25.0
May 23, 1975	0940	.14	25.0
July 31, 1975	1205	1.68	26.0
16801500 MIDDLE FORK TALOFOFO STREAM (LAT 15 13 05 N. LONG 145 46 36 E.)			
Oct. 1, 1974	1330	.32	25.0
Nov. 11, 1974	1420	.72	26.0
Jan. 14, 1975	1045	.35	25.0
Jan. 28, 1975	1536	.27	25.0
Jan. 30, 1975	0957	.40	25.0
Feb. 6, 1975	1322	.46	25.0
Mar. 13, 1975	1350	.30	25.0
Apr. 1, 1975	0940	.36	26.0
May 23, 1975	0845	.17	25.0
July 3, 1975	0921	.13	25.0
July 18, 1975	1021	.36	25.0
July 31, 1975	1420	1.56	26.0
Aug. 28, 1975	1030	.78	25.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
MARIANA ISLANDS, ISLAND OF GUAM			
16808300 FINILE CREEK AT AGAT (LAT 13 22 39 N. LONG 144 39 26 E.)			
Oct. 24, 1974	1630	1.11	27.0
Nov. 27, 1974	1150	.99	27.0
Dec. 30, 1974	1640	.74	27.0
Jan. 31, 1975	1230	.57	26.0
Mar. 4, 1975	1620	.27	26.0
Apr. 8, 1975	1500	.27	26.0
June 16, 1975	1430	.09	27.0
July 1, 1975	1430	.13	28.0
Sept. 4, 1975	1120	.45	26.0
16816000 UMATAC RIVER AT UMATAC (LAT 13 17 48 N. LONG 144 39 46 E.)			
Nov. 27, 1974	1340	4.35	27.0
Jan. 2, 1975	1450	2.29	27.0
Jan. 31, 1975	1540	1.73	26.0
Mar. 3, 1975	1525	.95	26.0
Apr. 1, 1975	1505	.60	26.0
July 1, 1975	1600	.16	27.0
16821000 GEUS RIVER NEAR MERIZO (LAT 13 16 13 N. LONG 144 40 38 E.)			
Nov. 27, 1974	1445	1.28	27.0
Jan. 2, 1975	1550	1.15	27.0
Feb. 4, 1975	1530	.64	26.0
Aug. 12, 1975	1440	12.7	26.0
Sept.11, 1975	1440	.71	28.0
16835000 INARAJAN RIVER NEAR INARAJAN (LAT 13 16 41 N. LONG 144 44 15 E.)			
Oct. 25, 1974	1400	17.2	27.0
Nov. 26, 1974	1250	11.4	27.0
Dec. 31, 1974	1120	7.54	27.0
Jan. 30, 1975	1345	5.24	26.0
Mar. 4, 1975	1445	3.35	26.0
Apr. 7, 1975	1525	2.92	28.0
June 11, 1975	1310	.98	28.0
July 7, 1975	1210	1.22	27.0
Aug. 7, 1975	1415	4.87	25.5
16840000 TINAGA RIVER NEAR INARAJAN (LAT 13 17 10 N. LONG 144 45 04 E.)			
Nov. 26, 1974	1115	4.23	27.0
Dec. 31, 1974	1325	2.16	27.0
Mar. 4, 1975	1320	.71	26.0
Apr. 7, 1975	1415	.49	28.0
June 18, 1975	1225	.32	27.0
July 7, 1975	1115	.43	26.0
Aug. 7, 1975	1325	1.24	26.0
16847000 IMONG RIVER NEAR AGAT (LAT 13 20 17 N. LONG 144 41 55 E.)			
Dec. 5, 1974	1505	4.75	26.0
Jan. 9, 1975	1340	3.18	26.0
Feb. 11, 1975	1408	2.45	25.5
Mar. 11, 1975	1309	1.81	26.0
May 8, 1975	1415	1.36	29.0
June 12, 1975	1510	.97	27.0
July 16, 1975	1500	5.09	26.0
16848000 ALMAGOSA SPRINGS NEAR AGAT (LAT 13 20 43 N. LONG 144 40 45 E.)			
Dec. 2, 1974	1140	1.27	26.0
Jan. 8, 1975	1040	.82	25.5
Feb. 10, 1975	1125	.73	26.0
Mar. 10, 1975	1205	.54	26.0
June 13, 1975	1140	.35	28.0
July 15, 1975	1000	.58	25.0
July 31, 1975	----	.93	26.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
MARIANA ISLANDS, ISLAND OF GUAM			
16848100 ALMAGOSA RIVER NEAR AGAT (LAT 13 20 43 N. LONG 144 41 36 E.)			
Jan. 9, 1975	1150	1.65	26.0
Feb. 11, 1975	1230	1.41	26.5
Mar. 11, 1975	1140	.83	26.0
June 12, 1975	1400	.38	27.0
July 16, 1975	1345	3.59	26.0
16848500 MAULAP RIVER NEAR AGAT (LAT 13 21 14 N. LONG 144 41 44 E.)			
Jan. 9, 1975	1045	1.60	26.0
Feb. 11, 1975	1046	1.16	24.5
Mar. 11, 1975	1023	.76	26.0
June 12, 1975	1220	.38	27.0
July 16, 1975	1155	14.1	25.0
16858000 YLIG RIVER NEAR YONA (LAT 13 23 28 N. LONG 144 45 06 E.)			
Oct. 24, 1974	1455	24.6	28.0
Nov. 25, 1974	1550	17.2	26.0
Dec. 30, 1974	1215	8.55	27.0
Jan. 31, 1975	1050	7.62	26.0
Mar. 3, 1975	1150	3.13	26.0
Apr. 1, 1975	1145	1.64	26.0
June 25, 1975	1420	.46	28.0
July 1, 1975	1205	.71	27.5
16865000 PAGO RIVER NEAR ORDOT (LAT 13 26 08 N. LONG 144 45 14 E.)			
Oct. 24, 1974	1245	19.6	26.0
Nov. 25, 1974	1330	11.8	26.0
Dec. 30, 1974	1420	5.11	27.0
Feb. 3, 1975	1140	5.50	26.0
Mar. 5, 1975	1200	2.62	26.0
Apr. 7, 1975	1150	2.13	27.0
June 10, 1975	1325	.44	28.0
July 7, 1975	1420	.61	27.0
Aug. 7, 1975	1135	27.0	25.5
CAROLINE ISLANDS, PALAU ISLANDS			
16890600 ADEIDDO RIVER, BABELTHUAP (LAT 7 36 01 N. LONG 134 35 38 E.)			
Nov. 7, 1974	1332	71.8	25.0
Feb. 4, 1975	1453	28.0	25.5
Feb. 18, 1975	1316	15.3	24.5
Mar. 7, 1975	1153	9.47	25.0
Mar. 30, 1975	0913	9.44	25.0
Apr. 29, 1975	1115	14.4	25.5
May 21, 1975	1215	27.0	25.0
July 14, 1975	1145	45.2	25.0
Aug. 12, 1975	1202	36.0	25.0
Sept.16, 1975	1341	13.9	25.0
16890900 TABAGATEN RIVER, BABELTHUAP (LAT 7 27 00 N. LONG 134 32 05 E.)			
Oct. 29, 1974	1035	62.0	25.0
Feb. 9, 1975	0915	21.0	24.5
Mar. 6, 1975	1025	7.48	25.5
Mar. 29, 1975	1047	6.25	25.5
Apr. 24, 1975	1059	36.2	25.0
July 17, 1975	1125	56.2	25.0
Aug. 13, 1975	1130	73.8	25.0
Aug. 18, 1975	1130	51.4	25.0
Sept.10, 1975	1412	18.8	25.5
Sept.20, 1975	1150	11.9	26.0
16891200 GIHMEL RIVER, BABELTHUAP (LAT 7 11 59 N. LONG 134 32 06 E.)			
Oct. 23, 1974	1200	2.33	29.0
Feb. 3, 1975	1648	1.55	29.0
Mar. 11, 1975	1358	.06	27.0
Apr. 17, 1975	0840	.06	26.0
June 17, 1975	1405	8.21	28.0
July 24, 1975	1353	1.85	31.0
Aug. 8, 1975	1343	2.43	28.0
Aug. 16, 1975	1325	2.65	27.0
Sept.14, 1975	1136	4.14	29.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
CAROLINE ISLANDS, PALAU ISLANDS			
16891300 GADEN RIVER, BABELTHUAP (LAT 7 22 57 N. LONG 134 33 40 E.)			
Oct. 23, 1974	1510	24.5	25.5
Feb. 6, 1975	1418	20.0	25.5
Mar. 13, 1975	1038	6.99	25.0
Apr. 17, 1975	1048	4.00	25.0
May 15, 1975	1302	8.74	26.0
June 3, 1975	1515	13.5	26.0
June 26, 1975	1605	42.4	26.0
July 24, 1975	1105	24.0	25.0
Aug. 8, 1975	1103	28.4	25.0
Aug. 16, 1975	1220	29.4	25.0
Sept.22, 1975	1154	16.2	25.0
16891400 SOUTH FORK NGARDOK RIVER, BABELTHUAP (LAT 7 26 15 N. LONG 134 35 03 E.)			
Oct. 30, 1974	1345	40.9	25.0
Feb. 5, 1975	1218	10.8	26.5
Mar. 5, 1975	1121	2.81	26.0
Apr. 1, 1975	1037	7.24	25.5
May 1, 1975	1102	5.03	26.0
May 20, 1975	1145	4.21	26.0
June 18, 1975	1310	38.2	25.0
July 16, 1975	1204	23.7	25.0
Aug. 19, 1975	1045	15.6	25.0
Sept.18, 1975	1142	4.87	25.5
CAROLINE ISLANDS, YAP ISLANDS			
16892400 ARINGEL STREAM, YAP (LAT 9 31 01 N. LONG 138 05 11 E.)			
Oct. 9, 1974	1453	1.60	26.0
Nov. 5, 1974	1050	2.90	26.0
Dec. 6, 1974	1414	.69	26.0
Dec. 30, 1974	1044	.94	25.5
Jan. 14, 1975	1354	.10	26.0
May 2, 1975	0945	.13	25.0
May 15, 1975	1040	.99	26.0
June 17, 1975	0810	.34	26.0
July 14, 1975	0920	5.55	25.0
Aug. 14, 1975	1400	.77	27.0
Aug. 28, 1975	1015	.28	25.0
Sept.22, 1975	0940	.51	25.0
16892800 DALOLAB STREAM, YAP (LAT 9 31 04 N. LONG 138 06 04 E.)			
Oct. 9, 1974	1621	.27	26.0
Nov. 6, 1974	1525	.29	26.5
Dec. 11, 1974	1403	.01	26.0
Dec. 31, 1974	1518	.77	25.0
Jan. 14, 1975	1455	.01	25.5
May 20, 1975	1515	.25	27.0
June 17, 1975	1035	.20	26.0
July 14, 1975	1040	2.18	26.0
Aug. 14, 1975	1032	.23	26.0
Aug. 28, 1975	1150	.25	25.0
Sept.22, 1975	1045	.17	26.0
16892900 PEMGOY STREAM, YAP (LAT 9 31 07 N. LONG 138 06 18 E.)			
Nov. 7, 1974	1627	.14	26.0
Dec. 12, 1974	1533	.54	25.5
Jan. 14, 1975	0954	.05	25.0
May 14, 1975	1400	.02	27.0
June 17, 1975	1410	.26	26.0
July 14, 1975	1440	1.45	26.0
Aug. 14, 1975	0955	.50	25.0
Aug. 28, 1975	1505	.20	26.0
Sept.22, 1975	1445	.16	26.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
CAROLINE ISLANDS, YAP ISLANDS			
16893000 TALAGU STREAM, YAP (LAT 9 31 08 N. LONG 138 06 13 E.)			
Oct. 10, 1974	1510	0.48	26.0
Nov. 7, 1974	1528	.09	26.0
Dec. 12, 1974	1440	.39	25.5
Dec. 31, 1974	1232	.40	25.0
Jan. 14, 1975	0857	.02	25.5
June 17, 1975	1410	.29	26.0
July 14, 1975	1410	1.07	27.0
Aug. 14, 1975	0850	.37	25.0
Aug. 28, 1975	1420	.08	26.0
Sept.22, 1975	1525	.20	27.0
16893100 BURONG STREAM, YAP (LAT 9 31 59 N. LONG 138 07 05 E.)			
Oct. 7, 1974	1410	1.29	26.0
Nov. 5, 1974	1508	8.54	25.5
Dec. 3, 1974	1015	.03	25.0
Dec. 30, 1974	1514	.43	26.5
Jan. 14, 1975	1555	.05	26.0
May 20, 1975	1345	.32	27.0
June 16, 1975	1435	.22	27.0
July 8, 1975	1320	.91	26.0
Aug. 25, 1975	1010	.40	26.0
Sept.18, 1975	1402	2.41	26.0
16893200 MUKONG STREAM, GAGIL-TOMIL (LAT 9 32 06 N. LONG 138 09 59 E.)			
Apr. 1, 1975	1530	.17	28.0
Apr. 2, 1975	1350	.17	28.0
Apr. 16, 1975	0955	.03	26.0
Apr. 30, 1975	1030	14.5	26.0
May 20, 1975	0945	4.69	27.0
June 18, 1975	1425	11.3	27.0
July 8, 1975	1025	3.08	26.0
July 28, 1975	1020	.89	26.0
Aug. 6, 1975	0945	3.04	26.0
Aug. 14, 1975	1552	3.22	27.0
Aug. 27, 1975	1045	1.44	26.0
Sept.18, 1975	1010	6.87	26.0
CAROLINE ISLANDS, TRUK ISLANDS			
16893700 WICHEN RIVER AT ALTITUDE 55 M, MOEN (LAT 7 26 45 N. LONG 151 52 02 E.)			
Nov. 6, 1974	0950	1.99	25.0
Nov. 8, 1974	0839	2.87	25.0
Dec. 5, 1974	1200	1.14	25.5
Dec. 31, 1974	----	.74	25.5
Jan. 13, 1975	----	.62	25.0
Jan. 20, 1975	1440	.31	26.0
Feb. 1, 1975	1020	.10	26.0
Feb. 20, 1975	0930	12	26.0
Mar. 3, 1975	1425	.05	26.0
Mar. 31, 1975	0955	1.08	26.0
Apr. 18, 1975	0933	.08	25.0
Apr. 30, 1975	1425	.06	26.0
May 13, 1975	1431	.18	26.0
June 2, 1975	1100	.51	26.0
June 12, 1975	1050	.53	26.0
June 18, 1975	0935	.42	26.0
June 30, 1975	1100	.61	26.0
July 11, 1975	0914	.76	25.0
July 15, 1975	1355	.36	26.0
July 30, 1975	1414	.67	26.0
Aug. 20, 1975	1345	1.27	26.0
Sept. 2, 1975	1500	.47	25.0
Sept.15, 1975	0945	.75	25.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
CAROLINE ISLANDS, TRUK ISLANDS			
16893800 WICHEN RIVER AT ALTITUDE 18 M, MOEN (LAT 7 27 05 N. LONG 151 52 18 E.)			
Nov. 6, 1974	1155	3.79	26.5
Nov. 8, 1974	1009	7.45	25.5
Dec. 5, 1974	1445	1.56	26.0
Dec. 31, 1974	----	.98	26.0
Jan. 13, 1975	1200	.67	25.0
Jan. 20, 1975	1445	.38	25.0
Feb. 3, 1975	1440	.13	25.0
Feb. 20, 1975	1055	.17	26.0
Mar. 3, 1975	----	.09	24.5
Mar. 31, 1975	----	1.12	26.0
Apr. 17, 1975	1608	.18	26.0
Apr. 30, 1975	1525	.05	26.0
May 13, 1975	1515	.20	26.0
June 2, 1975	1201	.60	26.0
June 12, 1975	1155	1.34	26.0
June 18, 1975	1020	2.44	26.0
June 30, 1975	1200	2.97	26.0
July 11, 1975	1200	1.47	26.0
July 15, 1975	1451	.49	26.0
July 30, 1975	1525	.88	26.0
Aug. 20, 1975	1510	1.83	25.0
Sept. 2, 1975	1609	.78	26.0
16894200 NACHIPONONG STREAM, MOEN (LAT 7 25 45 N. LONG 151 51 31 E.)			
Oct. 7, 1974	1528	1.94	25.5
Nov. 6, 1974	1357	.79	26.0
Dec. 3, 1974	1125	1.08	26.5
Dec. 17, 1974	1450	1.05	25.0
Dec. 27, 1974	1455	.20	26.0
Jan. 3, 1975	1145	.95	26.0
Jan. 20, 1975	1005	.03	25.0
Jan. 28, 1975	1540	.02	25.5
Feb. 20, 1975	1200	.03	26.0
Mar. 18, 1975	0925	.02	26.0
Mar. 31, 1975	----	.94	25.5
Apr. 30, 1975	0948	.03	26.0
May 13, 1975	0945	.04	26.0
June 2, 1975	1320	.24	26.0
June 12, 1975	0910	.19	26.0
June 19, 1975	1035	.85	26.0
June 30, 1975	0900	.74	26.0
July 8, 1975	1424	.23	26.0
July 15, 1975	0935	.17	26.0
July 30, 1975	1045	.30	26.0
Aug. 18, 1975	0950	.74	26.0
Aug. 30, 1975	0855	.17	25.0
16895000 ECHAPACHIK STREAM, TOL (LAT 7 20 57 N. LONG 151 37 26 E.)			
Nov. 19, 1974	----	.58	24.0
Jan. 6, 1975	----	.34	26.0
Feb. 5, 1975	----	.02	24.0
Apr. 3, 1975	----	.02	26.0
Apr. 17, 1975	1008	.04	26.0
July 10, 1975	1015	1.42	25.0
July 17, 1975	1050	.05	26.0
July 28, 1975	1055	.03	26.0
Aug. 25, 1975	1120	.09	26.0
Sept. 2, 1975	1050	.05	26.0
16896800 CHUN STREAM, DUBLON ISLAND (LAT 7 22 36 N. LONG 151 52 13 E.)			
Nov. 7, 1974	1130	1.22	25.5
Jan. 11, 1975	----	.14	25.5
Jan. 21, 1975	----	.03	26.0
Feb. 4, 1975	----	.02	26.0
Feb. 11, 1975	1020	.04	26.0
Mar. 12, 1975	0940	.02	25.0
Apr. 1, 1975	1000	.97	25.5
Apr. 16, 1975	1615	.09	26.0
May 5, 1975	1146	.14	25.0
May 22, 1975	----	.17	26.0
May 30, 1975	1300	.26	26.0
June 17, 1975	1125	1.86	26.0
July 9, 1975	1158	.31	25.5
Aug. 4, 1975	1220	.16	26.0
Aug. 21, 1975	1155	.35	26.0
Sept. 4, 1975	1255	.16	25.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)

CAROLINE ISLANDS, TRUK ISLANDS

16897200 TUMUNU STREAM, DUBLON ISLAND
(LAT 7 22 42 N. LONG 151 52 51 E.)

Nov. 7, 1974	1000	2.88	25.0
Dec. 2, 1974	----	1.35	25.5
Jan. 11, 1975	----	.42	25.5
Jan. 21, 1975	----	.26	26.0
Feb. 4, 1975	----	.08	26.0
Feb. 11, 1975	1200	.10	26.0
Mar. 12, 1975	1100	.10	26.0
Apr. 1, 1975	----	.28	26.0
Apr. 16, 1975	1502	.09	26.0
May 5, 1975	1010	.26	26.0
May 22, 1975	1036	.57	26.0
May 30, 1975	1136	.30	26.0
June 17, 1975	1030	2.41	26.0
July 9, 1975	1013	.88	26.0
Aug. 4, 1975	1040	.29	26.0
Aug. 21, 1975	1055	.54	26.0
Sept. 4, 1975	1100	.37	25.0

CAROLINE ISLANDS, ISLAND OF PONAPE

16897600 NANEPIL RIVER
(LAT 6 55 11 N. LONG 158 12 36 E.)

Nov. 5, 1974	1005	13.6	23.0
Nov. 27, 1974	1010	45.6	24.0
Dec. 17, 1974	1030	38.9	23.0
Jan. 20, 1975	1247	6.48	23.5
Feb. 5, 1975	1035	2.22	24.0
Feb. 19, 1975	1015	8.54	24.0
Mar. 6, 1975	1200	10.5	24.0
Mar. 19, 1975	1035	20.7	24.0
Apr. 4, 1975	0955	7.98	24.0
Apr. 16, 1975	1037	31.9	24.0
May 1, 1975	1045	22.5	24.0
May 15, 1975	1030	20.9	24.0
June 4, 1975	1030	16.9	24.0
June 19, 1975	1030	39.3	25.0
July 2, 1975	1125	11.4	24.0
July 15, 1975	1035	61.8	24.0
July 31, 1975	1138	12.8	24.0

16897900 LUI RIVER
(LAT 6 55 36 N. LONG 158 12 55 E.)

Nov. 5, 1974	1300	1.45	25.0
Nov. 27, 1974	1205	2.78	24.0
Dec. 17, 1974	1300	4.34	24.0
Jan. 20, 1975	1559	.61	24.0
Feb. 5, 1975	1400	.24	24.0
Feb. 19, 1975	1350	.19	24.0
Mar. 6, 1975	1400	.56	25.0
Mar. 19, 1975	1315	1.57	24.0
Apr. 4, 1975	1150	.44	25.0
Apr. 16, 1975	1335	3.23	24.0
May 1, 1975	1230	2.76	24.0
May 22, 1975	1010	4.17	24.0
June 4, 1975	1310	2.72	24.0
June 19, 1975	1135	5.75	24.0
July 2, 1975	1245	2.20	23.0
July 15, 1975	1350	5.96	24.0
July 31, 1975	1005	1.24	25.0

16898200 LUI RIVER AT MOUTH
(LAT 6 57 07 N. LONG 158 13 16 E.)

Nov. 26, 1974	1355	13.4	26.0
Dec. 19, 1974	1030	19.9	24.0
Jan. 17, 1975	1239	3.79	25.0
Jan. 18, 1975	1035	3.66	24.5
Jan. 19, 1975	1205	3.35	24.5
Jan. 20, 1975	0920	3.22	24.0
Jan. 21, 1975	0920	3.52	24.0
Jan. 22, 1975	1030	3.49	24.5
Feb. 4, 1975	1020	1.89	24.0
Feb. 18, 1975	1430	2.37	24.0
Mar. 4, 1975	1405	9.11	25.0
Apr. 3, 1975	1400	2.07	26.0
Apr. 18, 1975	1000	11.6	24.0
Apr. 30, 1975	1430	28.3	25.0
May 22, 1975	1500	16.2	24.0
June 3, 1975	1350	17.5	25.0
June 30, 1975	1050	19.1	24.0
July 16, 1975	1050	16.4	24.0
Aug. 1, 1975	1353	7.01	24.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)

CAROLINE ISLANDS, ISLAND OF PONAPE

16898300 TAWANNU RIVER
(LAT 6 56 57 N. LONG 158 12 50 E.)

Oct. 29, 1974	1440	3.77	24.0
Nov. 4, 1974	1020	3.96	23.0
Nov. 26, 1974	1055	3.89	25.0
Dec. 16, 1974	1030	10.8	24.0
Feb. 4, 1975	1255	.10	24.0
Feb. 18, 1975	1040	.77	24.0
Mar. 4, 1975	1050	3.68	25.0
Mar. 18, 1975	1055	5.75	24.0
Apr. 3, 1975	0915	.28	24.0
Apr. 15, 1975	1400	24.9	24.0
Apr. 29, 1975	1453	5.84	25.0
May 13, 1975	1405	3.53	25.0
June 3, 1975	1050	4.88	24.0
June 17, 1975	0949	5.75	26.0
June 30, 1975	1355	9.97	24.0
July 18, 1975	0935	14.4	25.0

16898600 LUPWOR RIVER
(LAT 6 54 15 N. LONG 158 09 45 E.)

Nov. 6, 1974	1235	3.01	25.0
Nov. 29, 1974	1210	7.88	25.0
Dec. 18, 1974	1120	6.62	24.0
Jan. 21, 1975	1433	1.79	25.0
Feb. 6, 1975	1145	.77	24.0
Feb. 20, 1975	1150	.68	25.0
Mar. 5, 1975	1055	3.06	25.0
Mar. 20, 1975	1115	3.84	24.0
Apr. 2, 1975	1015	1.18	25.0
May 2, 1975	1105	7.45	24.0
May 20, 1975	1005	7.56	24.0
June 5, 1975	1105	8.02	25.0
June 24, 1975	1100	9.69	25.0
July 1, 1975	1020	4.65	24.0
July 17, 1975	0930	7.50	24.0
July 30, 1975	1105	7.93	24.0

CAROLINE ISLANDS, ISLAND OF KUSAIE

16899500 MUTUNTE RIVER
(LAT 5 22 25 N. LONG 163 00 24 E.)

Nov. 20, 1974	1235	2.30	26.0
Dec. 4, 1974	1005	2.57	25.0
Jan. 22, 1975	1335	2.90	26.0
Feb. 4, 1975	1220	2.68	25.0
Feb. 11, 1975	1035	2.73	25.0
Mar. 4, 1975	1350	3.41	25.0
Mar. 11, 1975	1050	2.78	25.0
Mar. 19, 1975	1405	4.93	25.0
Mar. 25, 1975	1155	3.21	25.0
Mar. 31, 1975	1120	2.87	25.0
Apr. 7, 1975	1335	2.17	25.0
Apr. 14, 1975	1035	2.42	25.0
Apr. 22, 1975	1150	3.00	25.0
Apr. 28, 1975	1105	3.14	25.0
July 29, 1975	1005	5.66	26.0
Aug. 4, 1975	1020	3.91	25.0
Aug. 11, 1975	1505	4.96	26.0
Aug. 21, 1975	0920	3.48	28.0
Sept.10, 1975	1000	6.42	26.0
Sept.25, 1975	1500	2.67	26.0

16899600 OKAT RIVER
(LAT 5 20 32 N. LONG 162 59 30 E.)

Oct. 23, 1974	1235	9.14	26.0
Nov. 12, 1974	1310	17.9	26.0
Nov. 19, 1974	0845	5.42	26.0
Dec. 3, 1974	1435	6.21	26.0
Jan. 7, 1975	1235	18.6	26.0
Jan. 28, 1975	1535	6.90	26.0
Mar. 10, 1975	1535	7.24	25.0
Apr. 8, 1975	1525	7.54	25.0
Apr. 15, 1975	1110	37.3	26.0
Apr. 21, 1975	1355	12.1	25.0
Apr. 30, 1975	0950	12.0	25.0
Aug. 28, 1975	1030	8.52	25.0
Sept.25, 1975	0830	5.83	26.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
CAROLINE ISLANDS, ISLAND OF KUSAIE			
16899620 MELO RIVER (LAT 5 21 06 N. LONG 162 59 29 E.)			
Nov. 19, 1974	1240	1.04	26.0
Dec. 3, 1974	1235	2.74	26.0
Jan. 7, 1975	1515	2.65	26.0
Feb. 10, 1975	1235	2.13	25.0
Mar. 10, 1975	1405	1.94	25.0
Apr. 8, 1975	1350	3.04	25.0
Sept.25, 1975	1130	.99	26.0
16899750 MALEM RIVER (LAT 5 18 21 N. LONG 163 01 46 E.)			
Oct. 4, 1974	1035	6.89	26.0
Dec. 4, 1974	1505	2.24	25.0
Feb. 5, 1975	1335	4.44	25.0
Feb. 19, 1975	1120	4.89	25.0
Feb. 26, 1975	1105	5.09	25.0
Mar. 12, 1975	1235	7.22	26.0
Mar. 19, 1975	1005	7.88	25.0
Mar. 26, 1975	1150	4.68	25.0
Apr. 23, 1975	1330	25.2	26.0
July 16, 1975	0850	4.55	25.0
Aug. 7, 1975	1320	5.45	25.0
Aug. 13, 1975	1450	6.25	26.0
Aug. 26, 1975	1330	2.46	25.0
Sept. 9, 1975	1250	3.10	27.0
Sept.23, 1975	1000	2.43	26.0
16899800 TOFOL RIVER (LAT 5 19 53 N. LONG 163 01 25 E.)			
Oct. 8, 1974	----	9.74	26.0
Nov. 29, 1974	1440	3.59	25.0
Dec. 12, 1974	1405	7.10	26.0
Dec. 27, 1974	1050	7.50	26.0
Jan. 6, 1975	1420	4.33	26.0
Jan. 29, 1975	1350	5.39	25.0
Feb. 11, 1975	1450	3.16	25.0
Feb. 18, 1975	1600	3.65	25.0
Mar. 12, 1975	1050	3.75	25.0
Mar. 31, 1975	1520	4.14	25.0
Apr. 28, 1975	1420	4.55	25.0
July 29, 1975	1405	3.02	25.0
Aug. 21, 1975	1425	1.03	26.0
Sept.16, 1975	1405	2.16	26.0
SAMOA ISLANDS, ISLAND OF TUTUILA			
16912000 PAGO STREAM AT AFONO (LAT 14 16 03 S. LONG 170 39 02 W.)			
Oct. 31, 1974	0935	.23	26.0
Nov. 21, 1974	1010	.50	26.0
Jan. 20, 1975	1010	.42	27.0
Mar. 11, 1975	0955	1.81	25.0
May 7, 1975	1005	4.12	25.5
July 2, 1975	0945	.90	25.0
July 2, 1975	1010	.89	25.0
Aug. 14, 1975	0945	.87	25.0
16917500 LEELE STREAM AT MOUTH, AT FAGASA (LAT 14 17 28 S. LONG 170 43 09 W.)			
Oct. 11, 1974	0720	.07	25.0
Nov. 4, 1974	1055	.05	27.0
Nov. 20, 1974	0920	.22	25.5
Nov. 20, 1974	0945	.26	25.5
Dec. 3, 1974	0930	.14	26.0
Dec. 6, 1974	0645	.11	25.5
Dec. 17, 1974	1110	.90	25.5
Dec. 31, 1974	0850	.52	26.5
Jan. 9, 1975	0820	.36	26.0
Jan. 9, 1975	0840	.36	26.0
Jan. 14, 1975	1315	.42	28.0
Jan. 14, 1975	1400	.38	28.0
Feb. 6, 1975	0845	.82	25.0
Feb. 12, 1975	0920	.89	26.0
Feb. 12, 1975	0845	.85	26.0
Feb. 13, 1975	0735	.53	25.0
Feb. 13, 1975	0820	.43	26.0

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
SAMOA ISLANDS, ISLAND OF TUTUILA			
16917500 LEELE STREAM AT MOUTH, AT FAGASA--Continued (LAT 14 17 28 S. LONG 170 43 09 W.)			
Feb. 20, 1975	0840	3.59	25.5
Feb. 25, 1975	----	4.09	25.0
Mar. 4, 1975	0900	2.55	25.5
Mar. 10, 1975	0945	.76	25.0
Mar. 18, 1975	1150	.44	26.5
Mar. 20, 1975	0915	.42	25.5
Apr. 2, 1975	1025	16.1	25.0
Apr. 7, 1975	1100	10.7	26.0
Apr. 14, 1975	0800	.45	25.5
Apr. 16, 1975	----	.65	26.0
May 13, 1975	1315	.61	27.0
June 9, 1975	0955	.55	25.5
July 7, 1975	1005	.39	25.5
Aug. 6, 1975	0940	.43	25.0
Aug. 19, 1975	1100	.89	25.0
Sept.23, 1975	0910	.17	25.0
16920500 AASU STREAM AT AASU (LAT 14 17 51 S. LONG 170 45 30 W.)			
Oct. 11, 1974	0825	.26	25.0
Oct. 16, 1974	1035	.14	24.0
Dec. 6, 1974	0910	.95	25.5
Feb. 13, 1975	1020	3.83	25.5
Aug. 11, 1975	1010	2.81	24.5
16931000 ATAULOMA STREAM AT AFAO (LAT 14 20 10 S. LONG 170 48 02 W.)			
Oct. 17, 1974	1305	.06	30.0
Oct. 29, 1974	1015	.06	26.5
Nov. 8, 1974	1040	.07	27.0
Nov. 18, 1974	----	3.41	25.0
Dec. 3, 1974	1120	.27	28.0
Dec. 11, 1974	0945	8.66	25.0
Dec. 30, 1974	0950	.40	26.0
Jan. 13, 1975	0910	.45	27.0
Jan. 24, 1975	1350	.44	29.0
Jan. 30, 1975	1000	4.61	25.5
Jan. 30, 1975	1030	4.60	25.5
Jan. 30, 1975	1100	7.38	25.5
Feb. 10, 1975	0935	.80	25.5
Mar. 12, 1975	1115	.74	26.0
Mar. 26, 1975	1000	.63	26.5
Apr. 21, 1975	0855	7.84	26.0
Apr. 24, 1975	1230	.88	27.0
Apr. 30, 1975	0935	2.89	25.0
May 13, 1975	0910	1.24	25.5
May 21, 1975	0900	1.30	23.5
May 31, 1975	0905	1.29	25.0
July 1, 1975	1205	.67	25.0
July 8, 1975	1205	.51	25.0
July 23, 1975	1335	.45	26.0
July 31, 1975	0930	1.18	25.0
Aug. 13, 1975	0945	.44	25.0
Sept.30, 1975	1320	.23	26.5
16944200 PAPA STREAM AT NUUUL1 (LAT 14 18 48 S. LONG 170 42 33 W.)			
Nov. 18, 1974	1345	7.44	26.0
Dec. 18, 1974	1300	8.77	27.0
Jan. 7, 1975	1145	.24	26.0
Feb. 12, 1975	1055	1.34	26.0
Mar. 19, 1975	0925	.28	26.0
Apr. 30, 1975	1130	51.9	26.0
May 22, 1975	0830	3.63	23.5
May 22, 1975	0930	3.64	23.0
June 17, 1975	1035	4.68	25.0
July 8, 1975	1015	.24	24.5
July 15, 1975	0955	.38	24.5
July 29, 1975	0840	11.4	24.0
Aug. 18, 1975	1330	.82	25.5
Sept.26, 1975	0910	.19	24.5

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
SAMOA ISLANDS, ISLAND OF TUTUILA			
16948000 AFUELO STREAM AT MATUU (LAT 14 18 07 S. LONG 140 41 07 W.)			
Oct. 10, 1974	----	0.04	26.0
Nov. 15, 1974	1030	.11	25.5
Nov. 18, 1974	1450	1.97	26.0
Dec. 2, 1974	1110	.04	26.0
Dec. 17, 1974	1355	.42	27.0
Jan. 2, 1975	1140	.60	27.0
Jan. 2, 1975	1210	.56	27.0
Jan. 3, 1975	1105	.19	25.0
Jan. 28, 1975	1025	8.97	24.5
Mar. 7, 1975	1115	.55	26.0
Apr. 2, 1975	0830	1.40	25.0
Apr. 22, 1975	1310	1.61	26.0
June 3, 1975	1015	.44	25.0
June 5, 1975	1055	.37	24.5
June 24, 1975	1435	1.16	25.5
July 3, 1975	1320	.24	25.0
July 30, 1975	0920	1.07	24.5
Aug. 18, 1975	1130	.31	25.5
Sept. 10, 1975	1000	.02	25.5
16960000 ALEGA STEAM AT ALEGA (LAT 14 16 58 S. LONG 170 38 19 W.)			
Oct. 21, 1974	1030	.23	27.0
Dec. 23, 1974	1015	.58	25.0
Dec. 23, 1974	1035	.59	25.0
Jan. 16, 1975	0930	.33	27.0
Jan. 29, 1975	0830	5.05	25.0
Feb. 28, 1975	1000	1.11	27.0
Mar. 24, 1975	0930	.63	28.5
Mar. 24, 1975	1005	.60	28.0
Apr. 23, 1975	0850	1.38	25.0
Apr. 23, 1975	0925	1.42	25.0
May 27, 1975	0945	.92	25.0
June 30, 1975	1005	.53	24.0
July 9, 1975	0930	.41	24.0
Aug. 7, 1975	0905	.42	24.0
Aug. 20, 1975	1045	.41	24.5

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (°C)
SAMOA ISLANDS, ISLAND OF TUTUILA			
16963900 LEAFU STREAM NEAR AUASI (LAT 14 16 27 S. LONG 170 34 26 W.)			
Oct. 22, 1974	1035	0.02	27.0
Nov. 12, 1974	0820	.03	26.0
Nov. 19, 1974	1030	.09	26.0
Dec. 13, 1974	1045	.24	27.0
Jan. 6, 1975	1030	.05	26.0
Jan. 27, 1975	1020	10.8	26.0
Jan. 27, 1975	1105	9.82	26.0
Jan. 27, 1975	1140	8.13	26.0
Feb. 27, 1975	1005	.12	26.0
Mar. 25, 1975	0915	.06	26.5
Apr. 10, 1975	0905	.13	26.0
Apr. 22, 1975	0940	.23	26.0
May 24, 1975	0805	.08	25.5
May 28, 1975	1150	.08	26.5
June 10, 1975	0925	.13	25.0
July 1, 1975	0905	.08	25.0
July 9, 1975	1105	.09	25.5
Aug. 4, 1975	0935	.10	24.5
Sept. 4, 1975	0900	.04	25.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI

16019000 WAIALAE STREAM AT ALTITUDE 3,820 FT (1,164 M) NEAR WAIMEA (LAT 22°05'20" LONG 159°34'18")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 18...	0845	3.4	170	0	6.5	4.3	1.0	2.9	.3	7
JAN. 15...	1000	13	270	0	3.7	1.5	.6	3.0	.0	2
MAY 23...	0945	3.0	230	5	5.0	1.5	.4	3.2	.5	1
AUG. 22...	0935	2.4	290	0	5.1	4.2	.7	4.2	.3	7

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT. 18...	--	6	3.1	4.8	.1	.01	.01	27	.04	15
JAN. 15...	--	2	2.9	6.5	.0	.00	.02	20	.03	6
MAY 23...	0	1	1.8	5.7	.0	.00	.08	19	.03	5
AUG. 22...	0	6	2.9	5.9	.0	.04	.00	27	.04	13

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT. 18...	9	29	.3	38	6.6	16.0	70	2	2.8
JAN. 15...	5	51	.5	28	7.5	12.5	70	1	.1
MAY 23...	5	54	.6	32	6.4	15.5	45	1	.6
AUG. 22...	8	40	.5	32	6.5	16.5	100	1	3.5

16049000 HANAPEPE RIVER BELOW MANUAHI STREAM, NEAR ELEELE (LAT 21°57'29" LONG 159°33'13")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 03...	1000	30	30	0	21	6.1	6.0	8.0	.7	50
MAY 28...	1030	24	50	5	21	6.3	6.5	8.4	.7	53

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 03...	--	41	1.7	11	.0	.01	.01	79	.11	40
MAY 28...	0	43	1.5	12	.0	.01	.06	83	.11	43

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16049000 HANAPEPE RIVER BELOW MANUAHI STREAM, NEAR ELEELE--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
03...	0	30	.6	110	7.2	20.0	0	1	5.0
MAY									
28...	0	30	.6	120	7.3	21.0	0	1	4.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 7	1020	88.1	22.0
Jan. 24	1340	49.9	18.5
Feb. 5	1135	98.4	17.5
Mar. 7	1150	21.9	20.0
May 7	1125	115	19.5
June 12	1025	17.9	21.0
Aug. 1	1430	19.2	24.0
Sept. 18	1100	18.2	22.0

16052500 LAWAI STREAM NEAR KOLOA (LAT 21°54'11" LONG 159°30'21")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
03...	1400	5.0	210	8	16	6.5	7.8	18	1.0	54
MAY										
27...	1500	3.0	180	20	18	9.6	12	33	5.7	61

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHOROUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
03...	--	44	7.4	26	.1	.28	.00	111	.15	48
MAY										
27...	0	50	14	54	.1	.95	.24	182	.25	73

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
03...	4	44	1.1	200	8.0	24.0	20	5	.9
MAY									
27...	23	47	1.7	320	7.3	26.0	60	200	4.9

16055000 HULEIA STREAM NEAR LIHUE (LAT 21°57'20" LONG 159°25'23")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
03...	1330	45	150	17	13	6.5	5.5	9.9	.8	37
MAY										
28...	1300	15	240	20	13	6.7	6.1	12	.9	54

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16055000 HULEIA STREAM NEAR LIHUE--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 03...	--	30	4.4	16	.0	.30	.00	76	.10	39
MAY 28...	0	44	5.3	18	.1	.14	.00	92	.13	50

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 03...	9	35	.7	132	7.4	22.5	8	3	2.4
MAY 28...	6	34	.7	150	7.4	25.5	4	2	3.4

16060000 SOUTH FORK WAILUA RIVER NEAR LIHUE (LAT 22°02'24" LONG 159°22'58")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 06...	0900	63	100	10	15	4.5	5.2	6.8	.5	37
MAY 22...	1500	21	30	10	13	5.0	4.7	7.4	.6	39

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 06...	--	30	1.6	11	.0	.01	.01	63	.09	33
MAY 22...	0	32	6.8	7.6	.0	.02	.02	65	.09	32

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 06...	2	31	.5	103	7.8	20.0	5	10	.9
MAY 22...	0	33	.6	101	6.5	24.5	0	1	20

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1515	9.81	26.0
24	1335	8.78	23.0
Nov. 27	1325	102	21.5
Dec. 23	1450	227	20.5
Jan. 29	1400	82.6	19.5
Mar. 27	0945	9.03	20.5
Apr. 28	1040	309	20.5
May 29	0925	5.57	23.5
June 27	1255	5.66	27.5
July 23	1445	4.28	28.0
Aug. 26	1330	3.63	28.0
Sept. 26	1350	2.44	28.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16068000 EAST BRANCH OF NORTH FORK WAILUA RIVER NEAR LIHUE (LAT 22°04'19" LONG 159°25'05")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 06...	1200	28	100	10	15	4.2	4.4	7.1	.4	35
MAY 22...	1330	40	200	10	16	4.5	3.4	6.6	.6	27

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 06...	--	29	1.8	11	.0	.00	.02	61	.08	29
MAY 22...	0	22	2.0	11	.0	.00	.02	52	.07	25

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 06...	0	35	.6	102	7.2	20.0	5	2	3.5
MAY 22...	3	36	.6	80	6.7	21.0	25	6	8.6

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 24	0955	27.6	21.5
Nov. 25	0955	71.9	20.0
Dec. 24	0940	43.4	20.5
Jan. 27	0955	37.7	18.5
Feb. 24	0940	32.6	19.0
Mar. 24	1420	32.8	21.0
Apr. 24	0945	51.6	20.0
June 24	0935	20.0	21.5
July 25	1005	16.6	22.0
Aug. 25	0955	15.4	21.5
Sept. 24	0920	13.3	21.5

16071000 NORTH FORK WAILUA RIVER NEAR KAPAA (LAT 22°03'08" LONG 159°22'22")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 06...	1030	61	100	0	17	4.8	5.1	7.0	.5	41
MAY 27...	1300	20	130	5	17	5.4	5.9	8.8	.8	48

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 06...	--	34	1.6	11	.0	.00	.01	67	.09	33
MAY 27...	0	39	1.9	11	.0	.00	.03	75	.10	38

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16071000 NORTH FORK WAILUA RIVER NEAR KAPAA--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
06...	0	31	.5	120	7.9	20.0	5	9	.8
MAY									
27...	0	33	.6	120	7.2	24.5	4	1	4.8

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 9	1020	84.5	22.5
Mar. 6	1320	44.9	20.0
May 8	0940	108	20.0
June 11	1030	16.4	22.5
July 30	1410	7.09	23.0

16093200 ANAHOLA STREAM AT ANAHOLA (LAT 22°08'42" LONG 159°18'59")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
05...	0900	12	90	10	14	6.4	5.0	12	.6	41
MAY										
27...	1200	9.1	120	10	15	5.5	7.3	16	.8	51

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
05...	--	34	4.5	16	.1	.30	.02	80	.11	37
MAY										
27...	0	42	6.5	18	.1	.20	.04	95	.13	44

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
05...	3	41	.9	138	7.7	20.0	20	5	1.3
MAY									
27...	2	44	1.1	140	7.3	25.0	4	1	4.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1245	6.47	26.5
25	1405	6.81	25.0
Nov. 25	1105	62.8	20.5
Dec. 23	1005	45.3	19.5
Jan. 29	1055	20.2	17.5
Feb. 24	1020	16.9	19.0
Mar. 26	1030	13.2	20.0
Apr. 28	1010	41.2	19.0
May 30	0930	8.70	21.0
June 26	1010	7.20	21.5
July 24	1015	7.73	23.0
Aug. 29	1420	3.20	27.0
Sept. 24	1050	4.07	24.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16103000 HANALEI RIVER NEAR HANALEI (LAT 22°11'31" LONG 159°27'57")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 04...	1045	85	40	0	19	5.1	4.8	5.9	.4	43
MAY 27...	1000	54	130	5	18	7.9	5.6	6.9	.6	46

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 04...	--	35	1.4	7.0	.0	.50	.02	67	.09	33
MAY 27...	0	38	1.4	8.6	.0	.01	.00	72	.10	43

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 04...	0	28	.5	120	7.1	19.5	5	1	5.5
MAY 27...	5	26	.5	100	7.4	21.5	1	2	2.9

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 4	1050	73.8	21.5
Mar. 4	1100	69.4	18.5
Apr. 30	1125	155	20.5
June 9	0950	47.8	21.5
July 28	1030	43.7	22.5
Sept. 9	1005	26.9	22.5

16108000 WAINIHA RIVER NEAR HANALEI (LAT 22°08'20" LONG 159°33'38")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
JAN. 15...	1130	104	40	0	15	3.3	2.6	3.8	.3	24
MAY 23...	1145	63	30	5	17	4.5	2.9	4.2	.5	31

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
JAN. 15...	--	20	1.6	6.1	.0	.01	.02	45	.06	19
MAY 23...	0	25	1.0	4.7	.0	.01	.03	50	.07	23

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

16108000 WAINIHA RIVER NEAR HANALEI--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
JAN. 15...	0	30	.4	50	7.2	17.0	5	1	2.4
MAY 23...	0	28	.4	65	7.2	19.5	3	1	3.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 18	1040	58.0	19.0
Aug. 22	1150	57.6	20.0

HAWAII, ISLAND OF OAHU

16200000 NORTH FORK KAUKONAHUA STREAM ABOVE RIGHT BRANCH, NEAR WAHIAWA (LAT 21°31'09" LONG 157°56'53")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 12...	1400	3.3	50	10	9.7	4.7	2.2	3.8	.6	11
MAY 09...	1400	9.5	60	0	6.8	1.2	1.4	5.8	.4	9

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 12...	--	9	1.4	11	.0	.03	.01	39	.05	21
MAY 09...	0	7	1.7	11	.0	.01	.02	33	.04	9

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB. 12...	12	26	.4	51	7.4	19.0	3	1	.7
MAY 09...	1	56	.9	46	6.9	22.5	15	3	1.8

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 5	1445	4.73	21.5
Jan. 3	1213	49.6	18.0
3	1215	48.0	18.0
Apr. 1	1220	14.2	19.5
June 24	1250	3.65	20.5
Aug. 6	1305	2.31	22.5
Sept. 19	1440	.80	21.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16208000 SOUTH FORK KAUKONAHUA STREAM AT EAST PUMP RESERVOIR, NEAR WAHIAWA (LAT 21°29'32" LONG 157°59'53")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 27...	1400	4.4	270	60	5.4	5.0	2.0	6.3	.4	14
MAY 14...	1650	25	110	10	7.0	3.2	2.1	6.3	.5	10

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 27...	--	11	2.7	11	.0	.02	.05	40	.05	21
MAY 14...	0	8	1.5	11	.0	.00	.03	37	.05	17

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB. 27...	9	39	.6	60	6.6	22.0	50	10	5.6
MAY 14...	8	44	.7	57	6.8	22.5	5	4	2.5

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 15	1435	6.66	20.0
Dec. 31	1605	8.36	20.5
Apr. 2	1420	7.87	20.5
June 20	1615	3.01	24.5
Aug. 4	1425	3.43	25.0
Sept. 22	1625	0.47	24.5

16211600 MAKAHA STREAM NEAR MAKAHA (LAT 21°30'16" LONG 158°10'59")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 25...	1500	.84	220	0	23	6.2	4.5	9.0	1.3	41
MAY 15...	1620	.25	210	0	26	9.4	5.7	10	.9	51

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 25...	--	34	3.6	13	.0	.00	.03	81	.11	34
MAY 15...	0	42	2.6	13	.1	.15	.04	94	.13	47

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16211600 MAKAHA STREAM NEAR MAKAHA--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
25...	0	35	.7	110	7.6	19.0	20	2	1.6
MAY									
15...	5	31	.6	125	7.8	20.5	4	1	1.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1530	.44	22.0
Nov. 18	1630	1.48	20.0
Jan. 8	1130	.31	23.0
Apr. 4	1235	.77	19.0
June 25	1245	.06	20.0
Aug. 1	1505	.02	22.0

16212800 KIPAPA STREAM NEAR WAHIAWA (LAT 21°28'13" LONG 157°57'40")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
05...	1545	7.8	140	30	5.0	2.5	1.2	6.6	1.1	10
MAY										
06...	1345	12	150	0	3.3	1.8	1.6	7.4	1.3	10

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
05...	--	8	2.5	9.9	.0	1.3	.01	40	.05	11
MAY										
06...	0	8	3.3	16	.0	.01	.03	40	.05	11

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
05...	3	53	.9	55	6.7	21.0	40	20	3.2
MAY									
06...	3	56	1.0	70	6.9	21.5	70	22	2.0

16216000 WAIAWA STREAM NEAR PEARL CITY (LAT 21°23'57" LONG 157°58'51")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
13...	1430	12	60	90	35	20	12	50	3.9	94
MAY										
22...	0940	15	140	10	13	10	7.0	32	2.0	28

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16216000 WAIAWA STREAM NEAR PEARL CITY--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
13...	--	77	19	78	.1	1.6	1.6	276	.38	99
MAY										
22...	0	23	11	58	.0	.57	.22	150	.20	54

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
13...	22	51	2.2	440	7.3	24.0	10	30	7.5
MAY									
22...	31	55	1.9	290	6.7	21.5	20	--	8.9

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 18	1530	33.4	22.0
Jan. 2	1037	6.63	21.0
Apr. 10	1117	13.6	23.0
July 8	1235	3.43	24.0
11	1055	3.79	23.0
11	1203	3.75	23.0
Aug. 15	1010	2.89	23.0
Sept. 25	1045	3.74	24.0

16224500 KALAUAO STREAM AT MOANALUA ROAD, AT AIEA (LAT 21°23'07" LONG 157°56'22")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
13...	1115	2.0	60	60	24	13	9.8	25	2.0	88
MAY										
22...	1245	.11	30	20	46	25	22	70	3.5	174

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
13...	--	72	9.7	36	.0	.29	.02	164	.22	73
MAY										
22...	0	143	31	89	.0	.93	.10	379	.52	150

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
13...	1	42	1.3	260	7.1	22.0	20	8	11
MAY									
22...	10	49	2.5	650	7.1	26.0	2	--	22

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16224500 KALAUAO STREAM AT MOANALUA ROAD, AT AIEA--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 18	1255	4.12	21.0
Mar. 3	0947	.09	23.0
July 3	1455	.07	26.0

16228200 MOANALUA STREAM NEAR AIEA (LAT 21°22'37" LONG 157°53'03")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV. 21...	1340	425	50	20	13	6.8	1.7	11	1.1	27

DATE	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
NOV. 21...	22	3.9	16	.0	.47	.01	69	.09	24

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
NOV. 21...	2	49	1.0	98	6.7	21.0	50	70	8.6

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS,
WATER YEAR, OCTOBER 1974 TO SEPTEMBER 1975

DATE	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV.			
20...	15	43	3.2
21...	384	374	583
22...	15	35	7.6
JAN.			
11...	50	82	43
12...	82	107	68
FEB.			
01...	53	63	33

16229000 KALIHI STREAM NEAR HONOLULU (LAT 21°22'00" LONG 157°50'49")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV. 26...	1030	6.0	90	20	12	4.9	4.3	13	.5	34
JAN. 28	1335	3.0	90	10	13	5.0	4.2	13	.8	33
APR. 24...	1115	1.7	250	0	11	6.3	4.3	14	.8	37
MAY 27...	0910	1.4	270	10	11	8.4	5.0	14	.8	39

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16229000 KALIHI STREAM AT KALIHI--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
NOV.										
26...	--	28	5.2	21	.0	.89	.00	82	.11	30
JAN.										
28...	--	27	5.5	22	.0	.06	.00	80	.11	30
APR.										
24...	0	30	5.9	23	.0	.01	.01	84	.11	33
MAY										
27...	0	32	5.0	20	.0	.02	.02	84	.11	42

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
NOV.									
26...	2	48	1.0	120	7.2	21.0	0	3	3.4
JAN.									
28...	3	48	1.0	135	6.5	18.5	3	2	17
APR.									
24...	3	47	1.1	150	7.2	18.5	8	3	3.7
MAY									
27...	10	42	.9	150	7.1	19.5	9	--	5.0

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 24	1310	1.03	22.5
Feb. 24	1325	2.33	19.0
Mar. 25	1050	1.96	21.0
June 25	0930	.75	20.0
July 28	0935	.74	20.5
Sept. 25	1040	.26	21.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEARS OCTOBER 1973 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
1974				
MAY				
14...	1200	6.8	69	1.3
14...	1400	13	73	2.6
14...	1500	9.8	24	0.64
15...	1530	153	272	112
15...	1630	123	168	56
15...	1730	76	66	14
JULY				
18...	1430	5.6	5	0.08
18...	1500	5.6	10	0.15
18...	1530	5.1	5	0.07
SEP.				
04...	1645	170	247	113
1975				
SEP.				
04...	1715	50	140	19
04...	1745	42	88	10
04...	1815	33	43	3.8
04...	1845	26	37	2.6
18...	1730	155	213	89
18...	1800	80	179	39
18...	1830	48	166	22
18...	1900	32	98	8.5

NOTE: Unpublished 1974 water year record.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

16229000 KALIHI STREAM NEAR HONOLULU--Continued

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM
OCT.							
03...	1630	2.6	13	.09	--	--	--
03...	1730	3.2	10	.09	--	--	--
15...	1800	42	400	45	--	--	--
15...	1830	116	412	129	--	--	--
15...	1915	52	327	46	--	--	--
15...	1945	42	223	25	--	--	--
NOV.							
21...	0830	200	113	61	--	--	--
21...	0900	180	111	54	--	--	--
21...	0930	280	882	667	--	--	--
21...	0945	520	1720	2420	--	--	--
21...	1000	940	2180	5530	--	--	--
21...	1015	850	1270	2920	32	47	66
26...	1030	6.0	--	--	--	--	--
JAN.							
11...	1100	127	118	40	--	--	--
11...	1200	73	55	11	--	--	--
28...	1335	3.0	--	--	--	--	--
30...	0900	4.6	9	.11	--	--	--
30...	1000	5.9	20	.32	--	--	--
30...	1100	5.4	9	.13	--	--	--
30...	1230	4.6	5	.06	--	--	--
30...	1330	4.2	5	.06	--	--	--
30...	1430	4.2	15	.17	--	--	--
30...	1530	4.0	4	.04	--	--	--
MAR.							
28...	1345	35	62	5.9	--	--	--
28...	1415	43	56	6.5	--	--	--
28...	1445	38	45	4.6	--	--	--
28...	1515	35	28	2.6	--	--	--
APR.							
24...	1115	1.7	--	--	--	--	--
MAY							
27...	0910	1.4	--	--	--	--	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM
NOV.							
21...	80	88	92	95	98	99	100

16232000 NUUANU STREAM BELOW RESERVOIR 2 WASTEWAY, NEAR HONOLULU (LAT 21°20'57" LONG 157°49'40")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
11...	1415	5.3	100	10	12	5.4	5.0	11	1.1	35
MAY										
19...	1330	3.0	160	0	11	5.9	4.7	10	.6	34

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
11...	--	29	6.4	19	.0	.05	.04	78	.11	34
MAY										
19...	0	28	5.9	15	.0	.01	.02	70	.10	34

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16232000 NUUANU STREAM BELOW RESERVOIR 2 WASTEWAY, NEAR HONOLULU--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
11...	5	40	.8	120	6.8	21.0	8	3	8.9
MAY									
19...	6	38	.7	120	6.8	21.0	4	--	8.6

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 7	1310	2.32	21.5
Jan. 2	1515	2.76	20.0
Apr. 7	1032	4.94	21.5
July 1	1432	1.99	21.0
Aug. 11	1240	2.10	23.0
Sept. 22	1405	.48	21.0

16238500 WAIHI STREAM AT HONOLULU (LAT 21°19'55" LONG 157°48'12")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
11...	0945	1.8	70	20	16	7.1	6.2	10	1.2	51
MAY										
19...	0920	1.8	170	10	14	8.0	6.8	10	.9	51

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
11...	--	42	4.0	18	.0	.09	.02	86	.12	43
MAY										
19...	0	42	3.3	15	.0	.05	.04	84	.11	48

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
11...	1	33	.7	140	6.4	20.0	8	2	32
MAY									
19...	6	31	.6	140	6.9	20.0	8	--	10

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 7	0845	2.38	22.0
Apr. 7	1243	2.97	21.0
June 30	1135	1.10	20.5
Aug. 11	1535	1.98	21.0
Sept. 23	1520	.14	21.5

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16240500 WAIAKEAKUA STREAM AT HONOLULU (LAT 21°19'53" LONG 157°48'08")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 11...	1140	3.3	10	0	20	6.4	4.8	9.3	1.1	48
MAY 19...	1030	3.0	60	0	19	6.5	5.0	10	.7	49

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 11...	--	39	2.9	15	.0	.18	.02	84	.11	36
MAY 19...	0	40	2.8	12	.0	.06	.04	81	.11	37

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB. 11...	0	35	.7	100	6.9	20.5	3	1	9.7
MAY 19...	0	37	.7	135	7.2	20.5	3	--	4.9

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 7	1137	3.04	22.0
Dec. 26	1430	13.8	21.0
Apr. 7	1445	3.72	21.0
Aug. 11	1405	3.85	21.0
Sept. 22	1115	1.40	20.5

16247000 PALOLO STREAM NEAR HONOLULU (LAT 21°17'34" LONG 157°48'24")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 12...	0930	2.3	60	0	22	13	12	25	1.7	58
MAY 20...	0915	1.1	40	10	18	13	13	26	.9	36

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 12...	14	71	13	42	.1	1.1	.03	176	.24	82
MAY 20...	28	76	11	41	.0	.48	.04	171	.23	86

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16247000 PALOLO STREAM NEAR HONOLULU--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
12...	11	39	1.2	240	8.6	21.0	10	2	.3
MAY									
20...	10	39	1.2	317	9.5	23.5	15	--	.0

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 5	1030	.91	24.5
Dec. 27	0952	1.80	22.0
Apr. 8	1025	8.13	23.0
July 1	1140	.48	30.0
Aug. 14	1100	.64	27.0
Sept. 23	1400	.33	27.0

16247100 MANOA-PALOLO DRAINAGE CANAL AT MOILIILI (LAT 21°17'24" LONG 157°49'17")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
12...	1545	6.5	140	10	19	14	9.5	20	1.9	70
MAY										
20...	1515	6.7	270	10	17	11	8.9	18	1.4	61

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
12...	7	65	11	29	.0	.32	.02	146	.20	74
MAY										
20...	7	62	8.6	24	.0	.12	.06	127	.17	64

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
12...	5	36	1.0	230	8.4	23.0	5	2	.5
MAY									
20...	2	37	1.0	230	8.6	27.0	7	--	.3

16249000 WAIMANALO STREAM AT WAIMANALO (LAT 21°21'12" LONG 157°43'52")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
JAN.										
29...	1200	4.1	210	20	32	21	10	17	1.3	93
APR.										
28...	1230	3.1	180	10	29	15	10	24	1.0	97

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16249000 WAIMANALO STREAM AT WAIMANALO--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
JAN.										
29...	--	76	9.8	24	.0	.37	.08	163	.22	94
APR.										
28...	0	80	9.1	24	.1	.50	.28	163	.22	79

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
JAN.									
29...	17	28	.8	240	6.5	22.0	3	2	47
APR.									
28...	0	40	1.2	260	7.2	24.0	3	5	9.8

16260500 MAUNAWILI STREAM AT HIGHWAY 61, NEAR KAILUA (LAT 21°22'51" LONG 157°45'48")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
JAN.										
29...	1505	9.7	100	100	32	12	9.3	17	1.0	82
APR.										
28...	1530	5.6	140	60	28	12	9.1	18	.9	82

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
JAN.										
29...	--	67	6.4	22	.0	.40	.16	143	.19	68
APR.										
28...	0	67	5.8	22	.1	.37	.19	139	.19	67

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
JAN.									
29...	1	35	.9	200	--	22.0	10	2	--
APR.									
28...	0	36	1.0	220	7.3	22.0	8	4	6.6

16273900 KAMOOALII STREAM AT KANEOHE (LAT 21°24'51" LONG 157°48'13")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
03...	1420	20	150	60	22	13	7.8	14	2.3	68
APR.										
29...	1140	11	130	10	21	13	7.0	16	1.0	65

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16273900 KAMOOALII STREAM AT KANEOHE--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA+MG) (MG/L)
FEB.										
03...	--	56	6.8	21	.0	.57	.01	123	.17	65
APR.										
29...	0	53	5.2	20	.1	.35	.04	117	.16	61

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
03...	9	31	.8	170	7.0	24.0	5	2	11
APR.									
29...	8	36	.9	190	8.3	25.0	4	4	.5

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 31	1105	10.7	25.0
Dec. 20	1450	10.4	25.0
Mar. 14	1320	14.0	22.5
Apr. 29	1158	11.0	25.0
July 23	1130	7.28	25.0
Sept. 2	1020	5.33	25.0
29	1250	5.67	24.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS,
WATER YEAR, OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
FEB.					
03...	1500	21	24.0	2	0.11
MAR.					
28...	0830	142	--	173	66
APR.					
02...	1340	14	24.5	9	0.34
29...	1200	11	--	9	0.27
30...	1400	11	--	10	0.30
JUNE					
02...	1335	8.5	--	9	0.21
17...	1215	8.2	24.0	3	0.07
19...	0925	8.5	--	14	0.32
JULY					
09...	1800	7.6	--	19	0.39
23...	1025	8.5	--	5	0.11
24...	0845	18	23.5	51	2.5
AUG.					
26...	1140	6.7	24.5	15	0.27
SEP.					
02...	1315	6.4	24.0	10	0.17
29...	1320	6.4	25.0	7	0.12

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16275000 HAIKU STREAM NEAR HEEIA (LAT 21°24'46" LONG 157°49'33")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 20...	1015	1.7	170	50	23	10	6.0	13	.9	61
APR. 22...	1055	1.3	140	30	24	11	5.5	12	.9	63

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 20...	--	50	2.5	16	.0	.02	.01	102	.14	50
APR. 22...	0	52	2.6	16	.0	.05	.02	104	.14	50

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB. 20...	0	36	.8	160	6.9	21.0	20	1	12
APR. 22...	0	34	.7	165	7.5	20.0	2	1	3.2

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 22	1355	1.17	22.0
Dec. 19	1405	1.33	20.5
Jan. 27	1545	1.37	20.5
Mar. 13	1400	1.56	23.0
June 17	1007	1.11	21.0
July 23	1345	1.00	21.5
Aug. 28	1320	.91	22.5

16294900 WAIKANE STREAM AT ALTITUDE 75 FT (23 M), AT WAIKANE (LAT 21°30'00" LONG 157°51'54")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 20...	1120	5.8	170	30	25	7.4	6.1	14	.8	57
APR. 18...	1300	2.3	140	0	27	8.1	6.6	15	.9	62

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 20...	--	47	3.7	20	.0	.05	.02	106	.14	44
APR. 18...	0	51	4.7	20	.1	.11	.04	114	.16	47

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16294900 WAIKANE STREAM AT ALTITUDE 75 FT (23 M), AT WAIKANE--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
20...	0	41	.9	160	7.1	21.0	8	1	7.2
APR.									
16...	0	40	.9	175	7.2	20.5	3	2	6.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 23	1305	2.94	23.5
Dec. 19	1057	2.61	21.0
Jan. 27	1217	5.38	20.0
June 18	0940	1.91	22.0
July 24	1400	2.77	22.5
Sept. 9	1015	1.31	22.5

16296500 KAHANA STREAM AT ALTITUDE 30 FT (9.1 M), NEAR KAHANA (LAT 21°32'37" LONG 157°53'07")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
06...	1415	25	180	50	22	5.9	4.4	11	1.0	42
APR.										
21...	1345	16	220	20	22	6.6	4.4	11	.5	47

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
06...	--	34	2.0	15	.0	.07	.00	83	.11	33
APR.										
21...	0	39	2.2	15	.0	.00	.01	85	.12	35

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
06...	0	41	.8	115	6.4	21.0	10	2	27
APR.									
21...	0	40	.8	140	6.9	20.5	0	2	9.5

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 6	1440	16.9	22.0
Mar. 10	1022	16.4	19.5
June 20	1256	15.7	22.5
July 28	1405	13.7	22.5
Sept. 9	1410	12.9	22.0
26	1202	11.4	21.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16303000 PUNALUU STREAM NEAR PUNALUU (LAT 21°33'33" LONG 157°54'06")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
JAN. 30...	1335	28	90	10	20	4.8	3.2	8.5	.9	29
APR. 23...	1300	14	50	0	27	6.1	4.5	9.6	.9	46

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
JAN. 30...	--	24	2.5	13	.0	.05	.02	68	.09	25
APR. 23...	0	38	2.5	14	.0	.01	.03	87	.12	34

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
JAN. 30...	1	41	.7	85	6.0	19.5	30	7	46
APR. 23...	0	37	.7	125	6.9	19.5	0	1	9.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 21	1135	20.5	22.0
Dec. 9	1155	13.9	21.0
Jan. 30	1300	32.9	20.0
Mar. 12	1345	23.0	19.5
June 19	1345	9.01	21.5
July 29	1235	7.93	21.5
Aug. 29	1250	6.75	22.5

16304200 KALUANUI STREAM NEAR PUNALUU (LAT 21°35'22" LONG 157°54'38")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 06...	1110	.84	50	10	4.6	3.3	1.4	7.3	.3	9
MAY 01...	1120	1.4	60	0	4.0	2.5	1.4	8.5	.6	8

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 06...	--	7	3.2	14	.0	.05	.00	39	.05	14
MAY 01...	0	7	2.3	13	.0	.08	.01	37	.05	12

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16304200 KALUANUI STREAM NEAR PUNALUU--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
06...	7	52	.8	60	6.4	18.0	40	2	5.7
MAY									
01...	5	59	1.1	67	6.8	21.0	20	2	2.0

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 6	1045	1.75	22.0
Dec. 18	0915	.17	20.0
Mar. 20	0937	.75	20.0
June 23	1142	1.54	22.5
Aug. 13	1425	.39	23.0

16330000 KAMANANUI STREAM AT MAUNAWAI (LAT 21°38'20" LONG 158°03'27")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.										
25...	1545	6.8	260	0	7.6	3.2	2.2	8.9	1.1	14
MAY										
08...	1430	11	210	5	5.3	2.4	2.1	9.3	1.0	12

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB.										
25...	--	11	4.1	16	.0	.00	.03	50	.07	17
MAY										
08...	0	10	4.1	16	.0	.00	.03	49	.07	15

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
25...	6	51	.9	80	7.3	22.5	100	20	1.1
MAY									
08...	5	56	1.1	95	7.0	22.5	70	18	1.9

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 30	1340	5.04	25.5
Dec. 27	1610	11.7	21.5
Jan. 15	1017	39.8	20.0
Feb. 4	1328	42.9	21.0
Mar. 31	1140	7.79	20.0
June 18	1320	.85	24.5
July 31	1018	.06	22.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16343000 HELEMANO STREAM AT HALEIWA (LAT 21°34'40" LONG 158°06'12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 21...	1330	.70	90	10	13	5.0	4.1	14	1.3	32
MAY 12...	1600	.05	150	150	40	19	15	62	3.1	108

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 21...	--	26	5.7	24	.1	.14	.04	84	.11	29
MAY 12...	0	89	16	95	.0	.77	.08	307	.42	110

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB. 21...	3	50	1.1	135	6.6	22.5	100	20	13
MAY 12...	21	54	2.6	510	6.9	24.5	5	1	22

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 30	1030	.11	23.0
Dec. 26	1535	8.55	22.0
Feb. 4	1600	11.2	21.0
Mar. 27	1500	1.35	24.0
June 18	1535	.02	27.5
July 31	1420	.02	27.0

16345000 OPAEULA STREAM NEAR WAHIAWA (LAT 21°33'55" LONG 158°00'10")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB. 11...	1100	4.1	40	0	4.4	5.0	1.0	4.8	.8	4
MAY 14...	1345	2.6	80	0	1.5	1.2	1.6	6.9	.6	3

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
FEB. 11...	--	3	1.9	13	.0	.01	.00	33	.04	17
MAY 14...	0	2	1.9	14	.0	.00	.02	29	.04	10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

16345000 OPAEULA STREAM NEAR WAHIAWA--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
FEB.									
11...	13	37	.5	47	7.2	19.0	5	2	.4
MAY									
14...	7	59	1.0	57	6.8	25.0	20	2	.8

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 2	1415	.67	24.0
Dec. 26	1125	9.50	21.0
Mar. 27	1005	6.36	21.0
June 20	1235	.57	26.5
July 31	1225	.48	26.5
Sept. 19	1015	.05	23.5

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS,
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

16227900 MOANALUA STREAM TRIBUTARY NEAR AIEA (LAT 21°23'07" LONG 157°51'42")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
JAN.				
24...	1500	0.40	280	0.30
FEB.				
01...	0530	2.0	460	2.5
01...	0630	1.9	181	0.93
MAR.				
28...	1220	1.2	17	0.06
28...	1230	1.5	41	0.17

16228600 MOANALUA STREAM NEAR TRIPLER HOSPITAL (LAT 21°21'48" LONG 157°54'05")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV.					
21...	1430	330	21.5	127	113

HAWAII, ISLAND OF MOLOKAI

16404000 PELEKUNU STREAM NEAR PELEKUNU (LAT 21°08'11" LONG 156°52'43")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.										
21...	1630	3.0	10	0	27	13	3.5	9.7	1.1	44
APR.										
22...	1515	13	10	0	20	9.8	2.9	9.5	.7	37
JULY										
02...	1500	5.8	0	0	22	11	3.5	8.4	.7	41

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF MOLOKAI--Continued

16404000 PELEKUNU STREAM NEAR PELEKUNU--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT. 21...	--	36	13	10	.1	.16	.04	100	.14	47
APR. 22...	0	30	11	12	.1	.07	.05	85	.12	36
JULY 02...	0	34	13	10	.1	.02	.01	89	.12	42

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT. 21...	11	30	.6	140	8.0	21.5	3	1	.7
APR. 22...	6	36	.7	120	7.3	18.5	4	1	3.0
JULY 02...	8	30	.6	140	7.2	22.0	8	1	4.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 22	1420	2.97	22.0
Dec. 29	1230	14.5	19.0
Feb. 6	1520	14.8	18.5

16405500 WAIKOLU STREAM AT ALTITUDE 900 FT (274 M), NEAR KALAUPAPA (LAT 21°08'43" LONG 156°55'18")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 30...	1500	.70	50	0	36	7.9	3.0	9.0	1.7	40
APR. 08...	1330	5.5	80	0	12	4.9	1.7	6.3	1.0	16
AUG. 05...	1330	.14	0	20	35	6.0	2.9	9.5	1.7	42

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT. 30...	--	33	2.8	11	.1	.25	.06	93	.13	32
APR. 08...	0	13	4.2	10	.0	.59	.02	51	.07	19
AUG. 05...	0	34	1.2	9.1	.2	.19	.03	87	.12	27

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT. 30...	0	36	.7	105	7.6	20.5	3	1	1.6
APR. 08...	6	40	.6	60	6.9	19.5	40	1	3.2
AUG. 05...	0	42	.8	105	7.6	21.0	5	1	1.7

16405500 WAIKOLU STREAM AT ALTITUDE 900 FT (274 M), NEAR KALAUPAPA--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Dec. 12	1300	.76	19.0
Jan. 30	1300	2.42	17.5
June 10	1045	.73	19.0

HAWAII, ISLAND OF MAUI

16501000 PALIKEA STREAM BELOW DIVERSION DAM, NEAR KIPAHULU (LAT 20°41'03" LONG 1S6°04'10")

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.										
02...	1030	.05	70	0	4.3	1.5	1.0	3.4	.4	9
MAR.										
05...	1120	1.5	40	0	5.3	3.6	1.7	4.5	.3	11
JULY										
10...	1430	.03	70	0	6.5	6.1	1.7	4.4	.5	21

DATE	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)
OCT.										
02...	--	7	2.4	4.9	.0	.18	.00	23	.03	8
MAR.										
05...	0	9	1.4	7.4	.0	.02	.00	30	.04	16
JULY										
10...	0	17	1.3	6.1	.0	.03	.00	37	.05	22

DATE	NON-CAR-BONATE HARD-NESS (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
02...	0	47	.5	34	7.3	22.5	20	2	.7
MAR.									
05...	7	37	.5	48	6.8	18.0	5	1	2.8
JULY									
10...	5	30	.4	46	6.5	23.5	15	1	11

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 20	1210	52.5	18.0
Aug. 27	1225	.09	24.0

16508000 HANAWI STREAM NEAR NAHIKU (LAT 20°48'37" LONG 1S6°07'00")

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.										
03...	1115	1.4	30	0	12	1.9	.5	5.4	.9	19
MAR.										
06...	1040	11	30	0	5.1	2.0	.7	4.0	.3	8
JULY										
11...	1030	2.8	30	0	10	7.3	1.2	5.0	.7	25

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF MAUI--Continued

16508000 HANAWI STREAM NEAR NAHIKU--Continued

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT.										
03...	--	16	.9	4.9	.0	.01	.00	36	.05	7
MAR.										
06...	0	7	1.4	5.8	.0	.01	.00	23	.03	8
JULY										
11...	0	21	1.3	5.4	.0	.00	.01	43	.06	23

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
03...	0	60	.9	48	7.6	22.0	3	1	.8
MAR.									
06...	1	51	.6	36	6.8	16.5	5	1	2.0
JULY									
11...	3	31	.5	48	6.6	20.0	5	1	10

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Jan. 9	0940	91.8	16.0
Aug. 26	1505	3.54	19.5

16518000 WEST WAILUAIKI STREAM NEAR KEANAE (LAT 20°49'16" LONG 156°08'37")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.										
04...	1345	12	40	0	7.7	2.1	1.5	3.3	.2	11
JULY										
09...	1335	2.9	120	0	9.8	4.5	1.8	4.4	.5	23

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
MAR.										
04...	0	9	1.5	4.8	.0	.00	.00	27	.04	11
JULY										
09...	0	19	1.6	5.7	.0	.00	.00	40	.05	19

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
MAR.									
04...	2	38	.4	36	6.9	16.0	5	1	2.2
JULY									
09...	0	33	.4	42	6.8	21.0	15	1	5.8

16518000 WEST WAILUAIKI STREAM NEAR KEANAE--Continued

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1305	.94	23.5
3	1615	.85	23.0
Nov. 19	1430	7.30	17.5
Jan. 9	1215	40.4	17.5
May 13	1300	6.02	18.5
Aug. 26	1115	5.94	19.0

16570000 NAILILIHAELE STREAM NEAR HUELO (LAT 20°52'28" LONG 156°13'06")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.										
04...	1200	2.3	60	30	13	3.3	1.4	5.6	.6	22
MAR.										
06...	1315	20	60	0	5.6	2.2	1.9	4.3	.1	9

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT.										
04...	--	18	1.1	5.9	.0	.03	.01	42	.06	14
MAR.										
06...	0	7	1.9	6.9	.0	.00	.00	27	.04	13

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
04...	0	45	.7	56	7.7	21.5	3	1	.7
MAR.									
06...	6	41	.5	40	7.1	18.5	20	2	1.1

16588000 WAILOA DITCH AT HONOPOU, NEAR HUELO (LAT 20°53'20" LONG 156°15'19")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.										
04...	1530	22	50	0	13	2.6	1.4	5.5	.7	23
MAR.										
07...	1430	199	40	0	6.9	3.3	1.4	4.5	.7	11
JULY										
15...	1500	187	100	0	6.1	6.5	.7	4.1	.3	11

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT.										
04...	--	19	1.1	5.7	.0	.04	.01	42	.06	12
MAR.										
07...	0	9	1.5	6.3	.0	.00	.00	30	.04	14
JULY										
15...	0	9	2.4	6.1	.0	.01	.00	32	.04	19

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF MAUI--Continued

16588000 WAILOA DITCH AT HONOPOU, NEAR HUELO--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
04...	0	48	.7	57	7.6	21.0	3	1	.9
MAR.									
07...	5	40	.5	44	6.7	17.5	6	1	3.5
JULY									
15...	10	31	.4	40	6.6	20.5	30	3	4.4

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
May 16	1320	118	19.5

16599500 OPANA TUNNEL AT KAILIILI (LAT 20°51'04" LONG 156°16'17")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.										
11...	1215	.11	10	0	28	7.2	4.8	7.0	1.3	48
MAR.										
13...	1545	6.6	110	0	5.8	2.0	.9	3.6	.6	12
JULY										
23...	1450	.37	60	0	15	4.7	2.2	5.1	.8	23

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT.										
11...	--	39	4.6	7.6	.0	.11	.02	85	.12	38
MAR.										
13...	0	10	2.9	4.8	.1	.07	.00	27	.04	9
JULY										
23...	0	19	2.1	6.3	.2	.09	.00	48	.07	21

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
11...	0	28	.5	100	7.2	18.5	0	1	4.8
MAR.									
13...	0	45	.5	34	6.4	17.0	20	2	7.6
JULY									
23...	2	34	.5	68	6.5	20.0	4	2	12

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 27	1330	2.27	17.5
June 30	1115	.84	18.5

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF MAUI--Continued

16607000 IAO STREAM AT WAILUKU (LAT 20°53'38" LONG 156°30'27")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV. 05...	0915	17	10	0	24	7.5	2.9	5.5	.7	35
MAR. 18...	1115	90	10	0	12	6.2	1.6	4.1	.5	20
JULY 24...	1025	38	0	0	16	5.6	2.6	4.3	.5	22

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
NOV. 05...	--	29	6.3	5.1	.6	.50	.63	74	.10	31
MAR. 18...	0	16	2.4	5.8	.2	.02	.04	43	.06	22
JULY 24...	0	18	4.2	5.0	.1	.02	.00	49	.07	25

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
NOV. 05...	2	28	.4	90	8.0	20.0	3	1	.6
MAR. 18...	6	28	.4	62	7.1	17.5	3	1	2.5
JULY 24...	7	27	.4	70	7.2	19.5	9	1	2.2

16620000 HONOKOHAU STREAM NEAR HONOKOHAU (LAT 20°57'48" LONG 156°35'22")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV. 07...	1330	17	50	0	14	4.2	1.3	3.6	.6	19
MAR. 03...	1130	16	10	10	19	4.3	2.5	4.9	.8	24
JULY 16...	1430	13	20	0	21	8.1	1.7	4.7	.6	27

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
NOV. 07...	--	16	1.7	5.7	.0	.09	.08	41	.06	16
MAR. 03...	0	20	1.4	6.3	.0	.00	.01	51	.07	21
JULY 16...	0	22	3.9	5.1	.1	.07	.02	59	.08	27

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF MAUI--Continued

16620000 HONOKOHAU STREAM NEAR HONOKOHAU--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
NOV.									
07...	0	32	.4	52	7.4	20.5	10	1	1.2
MAR.									
03...	1	33	.5	64	7.1	17.0	0	1	3.1
JULY									
16...	5	27	.4	64	7.6	20.5	10	1	1.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Jan. 3	1330	46.1	18.0
May 2	1100	15.0	18.5
Sept. 4	1035	13.1	19.0

16646200 OLOWALU STREAM AT OLOWALU (LAT 20°49'23" LONG 156°37'15")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.										
09...	1530	3.0	20	0	45	23	11	16	1.2	95
MAR.										
18...	0900	13	10	0	27	14	6.3	9.2	.9	58
JULY										
17...	1510	1.0	50	0	38	23	7.5	13	1.0	64

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
OCT.										
09...	--	78	30	18	.1	.05	.05	192	.26	100
MAR.										
18...	0	48	9.2	12	.2	.05	.07	108	.15	61
JULY										
17...	0	69	22	16	.1	.08	.04	163	.22	88

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
OCT.									
09...	25	25	.7	280	8.2	22.5	4	2	1.0
MAR.									
18...	13	24	.5	160	7.9	18.0	5	1	1.2
JULY									
17...	19	24	.6	225	8.4	23.5	5	1	.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII

16700000 WAIAKEA STREAM NEAR MOUNTAIN VIEW (LAT 19°38'30" LONG 155°10'28")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 23...	1045	56	40	0	17	2.9	.9	3.3	.7	18
MAY 23...	1015	6.1	30	0	17	3.6	.2	3.5	.8	17

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 23...	--	15	1.5	.3	.0	.24	.01	37	.05	11
MAY 23...	0	14	1.3	2.2	.1	.16	.02	38	.05	10

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 23...	0	38	.4	40	6.6	17.0	3	1	7.2
MAY 23...	0	41	.5	39	6.4	17.0	0	2	11

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 24	1225	.21	18.0
Nov. 26	1135	13.6	17.0
Jan. 27	0950	8.71	16.0
Apr. 24	1055	19.4	17.0
May 1	1325	15.2	17.5
June 25	0920	.68	17.0
July 28	0945	.78	16.0
Aug. 25	1105	4.88	18.0
Sept. 24	1000	1.75	17.5

16717800 POHAKUPUKA STREAM NEAR PAPAALOA (LAT 19°57'20" LONG 155°11'20")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 06...	1115	.78	20	0	24	10	5.3	6.5	.5	62
MAY 27...	1100	3.9	50	10	27	13	6.4	7.5	.6	74

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 06...	--	51	2.2	8.0	.0	.22	.02	88	.12	47
MAY 27...	0	61	2.7	8.3	.0	.25	.07	103	.14	59

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

16717800 POHAKUPUKA STREAM NEAR PAPAALOA--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
06...	0	23	.4	125	7.2	19.0	0	1	6.3
MAY									
27...	0	22	.4	140	7.4	20.0	3	2	4.7

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	0915	.74	20.0
Nov. 5	1035	.74	21.0
Jan. 16	1020	17.2	19.0
Feb. 6	1120	14.2	19.0
Mar. 7	1257	10.9	17.0
Apr. 4	1055	10.8	19.5
May 6	0955	22.8	19.0
June 30	1440	2.14	20.0
Aug. 15	1045	6.06	17.0

16724800 UPPER HAMAKUA DITCH ABOVE AIAKAHI STREAM, NEAR KAMUELA (LAT 20°04'31" LONG 155°40'26")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
17...	1045	7.0	380	30	2.3	2.1	.9	3.5	.8	0
JUNE										
04...	1000	3.4	330	10	5.6	3.2	.6	2.9	2.8	6

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
17...	--	0	3.2	8.4	.0	.00	.02	22	.03	9
JUNE										
04...	0	5	2.5	4.9	.0	.00	.97	29	.04	10

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
17...	9	43	.5	34	5.0	13.0	70	1	.0
JUNE									
04...	6	31	.4	27	7.1	14.0	65	3	.8

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 21	0920	10.0	11.0
Jan. 23	1015	.02	13.0
Feb. 20	0950	4.39	10.0
Apr. 24	0935	14.6	13.0
May 2	0850	10.8	13.0
June 27	0815	2.19	15.0
Aug. 28	1000	3.20	15.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

16725000 AIAKAHI STREAM NEAR KAMUELA (LAT 20°04'27" LONG 155°40'25")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 17...	1100	3.2	400	10	3.5	1.1	1.5	3.7	.6	0
JUNE 04...	0930	1.4	270	20	6.0	2.8	1.6	3.8	1.7	12

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 17...	--	0	3.5	8.0	.0	.00	.01	22	.03	9
JUNE 04...	0	10	2.3	4.9	.0	.00	.46	33	.04	14

DATE	NONCARBONATE HARDNESS (MG/L)	SODIUM (PERCENT)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 17...	9	45	.5	37	4.9	14.0	90	1	.0
JUNE 04...	4	34	.4	39	7.2	14.0	45	1	1.2

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	0937	1.33	15.0
Nov. 21	0850	4.88	11.0
Jan. 23	0955	.55	13.0
Feb. 20	0915	3.74	10.0
Apr. 24	0900	10.7	13.0
May 2	1210	4.55	12.0
June 27	0750	2.56	15.0
Aug. 28	0935	2.19	15.0

16756000 KOHAKOHAU STREAM NEAR KAMUELA (LAT 20°03'02" LONG 155°40'58")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC. 17...	0945	2.3	340	0	3.6	1.1	1.3	4.3	.5	2
JUNE 27...	1110	.50	200	0	6.2	1.4	.6	3.4	.2	5

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC. 17...	--	2	3.0	7.0	.0	.00	.00	22	.03	8
JUNE 27...	0	4	3.7	6.6	.0	.01	.00	25	.03	6

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

16756000 KOHAKOHAU STREAM NEAR KAMUELA--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
17...	6	52	.7	38	5.0	14.0	60	3	32
JUNE									
27...	2	54	.6	34	6.8	15.0	50	2	1.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Nov. 22	1030	3.25	15.0
Jan. 23	1445	.18	14.0
Mar. 4	1140	4.35	13.0
July 17	1045	14.1	15.0

16758000 WAIKOLOA STREAM AT MARINE DAM, NEAR KAMUELA (LAT 20°02'48" LONG 155°39'58")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
17...	1015	3.2	470	10	14	1.9	2.7	4.7	.5	15
JUNE										
04...	1115	2.4	640	10	12	3.4	2.1	4.0	2.6	23

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
17...	--	12	1.8	4.5	.0	.00	.00	38	.05	16
JUNE										
04...	0	19	1.8	4.5	.1	.00	.99	46	.06	17

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
17...	4	36	.5	54	5.8	14.0	40	3	38
JUNE									
04...	0	33	.5	56	7.2	15.0	25	3	2.3

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 1	1510	1.90	15.0
Nov. 22	0930	4.76	15.0
Jan. 24	0935	2.07	15.0
Mar. 4	1100	8.91	13.0
Apr. 15	1135	2.78	15.5
July 17	0920	8.32	15.0
Sept. 10	0950	2.62	16.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

16759200 RIGHT BRANCH WAIAHA STREAM NEAR HOLUALOA (LAT 19°38'41" LONG 155°54'55")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
16...	1515	.01	20	10	6.3	3.1	2.4	3.5	.6	16
JUNE										
03...	1430	.14	130	20	4.5	3.1	2.3	2.6	1.8	18

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
16...	--	13	3.0	3.4	.0	.01	.00	30	.04	18
JUNE										
03...	0	15	2.6	3.5	.0	.00	.51	31	.04	17

DATE	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
16...	5	29	.4	55	--	15.0	20	1	--
JUNE									
03...	2	22	.3	40	7.4	17.0	20	2	1.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 3	1220	.06	17.0
Nov. 21	1145	.04	18.0
July 16	1500	.05	17.5
Sept. 9	1440	.09	19.0

16759800 KIIHAE STREAM NEAR HONAUNAU (LAT 19°24'52" LONG 155°50'56")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
16...	1235	.01	290	10	4.5	1.6	1.3	2.1	.3	3
JUNE										
03...	1145	.04	360	10	3.1	1.2	.3	1.5	1.7	1

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
16...	--	2	4.0	3.8	.0	.12	.00	20	.03	10
JUNE										
03...	0	1	3.0	3.0	.0	.00	.66	17	.02	4

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

16759800 KIILAE STREAM NEAR HONAUNAU--Continued

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
16...	7	31	.3	31	--	15.0	20	1	--
JUNE									
03...	3	34	.3	20	7.2	17.0	40	1	.1

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 3	0830	.01	17.0
Nov. 21	0915	.01	15.0
Jan. 23	1020	.07	13.0
Sept. 9	1205	.06	18.5

16764000 HILEA GULCH TRIBUTARY NEAR HONAPO (LAT 19°10'27" LONG 155°35'58")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC.										
12...	1020	.13	20	10	15	4.7	2.2	3.0	.4	20
MAY										
28...	1000	2.0	90	10	8.8	2.5	1.1	2.3	.4	8

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)
DEC.										
12...	--	16	6.3	3.3	.1	.08	.01	45	.06	21
MAY										
28...	0	7	4.5	3.4	.1	.00	.00	27	.04	11

DATE	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)
DEC.									
12...	4	23	.3	58	6.8	15.0	5	2	5.1
MAY									
28...	4	31	.3	32	6.1	13.0	8	1	10

PERIODIC DETERMINATIONS OF WATER TEMPERATURE, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME (24 HR)	DISCHARGE (CFS)	TEMP. (DEG C)
Oct. 2	1000	.50	17.0
Nov. 20	1000	.78	17.0
Jan. 22	1250	1.05	14.0
Feb. 28	1115	.35	14.0
Apr. 8	1125	2.76	14.5
July 1	1040	.96	17.0
Sept. 3	1135	1.04	17.5

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
2-0044-10	22 00 18	159 44 47	01	220018159444701	72-11-03	72	--	--	420
					72-11-03	--	--	--	--
					75-01-07	69	30	20	480
2-0120-01	22 01 36	159 20 55	01	220136159205501	72-09-26	70	--	--	22
					72-09-26	--	--	--	--
					75-01-10	77	40	20	32
2-0145-10	22 01 48	159 45 35	01	220148159453501	72-11-02	65	--	--	25
2-0145-11	22 01 48	159 45 35	02	220148159453502	72-11-02	59	--	--	36
					72-11-02	--	--	--	--
2-0320-01	22 03 54	159 20 56	01	220354159205601	72-12-17	--	--	--	--
					72-12-18	67	--	--	14
2-0345-04	22 03 41	159 45 39	01	220341159453901	72-10-31	64	--	--	23
					72-10-31	--	--	--	--
					75-01-07	72	10	0	39
2-0545-01	22 05 30	159 45 04	01	220530159450401	72-10-31	55	--	--	30
					72-10-31	--	--	--	--
					75-01-07	57	20	10	27
2-0618-05	22 06 15	159 18 37	01	220615159183701	72-10-02	36	--	--	13
					72-10-02	--	--	--	--
2-0620-01	22 06 04	159 20 14	01	220604159201401	72-10-03	30	--	--	12
					72-10-03	--	--	--	--
2-0818-01	22 08 27	159 18 54	01	220827159185401	72-09-26	28	--	--	10
					72-09-26	--	--	--	--
2-1020-03	22 10 38	159 20 38	01	221038159203801	72-10-02	36	--	--	11
2-1020-04	22 10 06	159 20 02	01	221006159200201	74-11-22	39	0	0	11
2-1126-02	22 11 51	159 26 50	01	221151159265001	72-10-05	32	--	--	13
					75-01-14	47	40	0	13

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
2-0044-10	72-11-03	--	--	5450	3400	3200	32	5.4
	72-11-03	--	--	--	--	--	--	--
	75-01-07	.75	.13	6440	3800	3700	35	6.6
2-0120-01	72-09-26	--	--	497	200	48	49	2.8
	72-09-26	--	--	--	--	--	--	--
	75-01-10	1.8	.09	530	220	47	48	2.8
2-0145-10	72-11-02	--	--	356	220	78	23	.9
2-0145-11	72-11-02	--	--	491	300	160	27	1.3
	72-11-02	--	--	--	--	--	--	--
2-0320-01	72-12-17	--	--	--	--	--	--	--
	72-12-18	--	--	250	97	0	44	1.6
2-0345-04	72-10-31	--	--	501	220	88	44	2.4
	72-10-31	--	--	--	--	--	--	--
	75-01-07	.96	.11	742	370	230	41	2.7
2-0545-01	72-10-31	--	--	506	260	39	40	2.2
	72-10-31	--	--	--	--	--	--	--
	75-01-07	1.4	.07	492	240	66	41	2.1
2-0618-05	72-10-02	--	--	169	82	16	36	1.0
	72-10-02	--	--	--	--	--	--	--
2-0620-01	72-10-03	--	--	177	79	0	41	1.3
	72-10-03	--	--	--	--	--	--	--
2-0818-01	72-09-26	--	--	167	70	0	44	1.3
	72-09-26	--	--	--	--	--	--	--
2-1020-03	72-10-02	--	--	139	73	1	29	.7
2-1020-04	74-11-22	.13	.05	147	73	0	29	.7
2-1126-02	72-10-05	--	--	125	62	0	29	.7
	75-01-14	.20	.09	143	68	0	27	.6

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
2-0044-10	72-11-03	560	720	10	134	0	110	396	3200	.0
	72-11-03	--	--	--	--	--	--	--	--	--
	75-01-07	630	940	12	132	--	108	440	3800	.0
2-0120-01	72-09-26	35	90	1.7	184	0	151	32	148	.1
	72-09-26	--	--	--	--	--	--	--	--	--
	75-01-10	33	94	2.4	206	--	169	32	150	.1
2-0145-10	72-11-02	38	31	1.4	172	0	141	16	90	.2
2-0145-11	72-11-02	52	51	1.7	174	0	143	27	175	.1
	72-11-02	--	--	--	--	--	--	--	--	--
2-0320-01	72-12-17	--	--	--	--	--	--	--	--	--
	72-12-18	15	36	1.9	126	0	103	13	40	.2
2-0345-04	72-10-31	40	83	2.8	164	0	135	30	175	.2
	72-10-31	--	--	--	--	--	--	--	--	--
	75-01-07	65	120	3.9	165	--	135	46	310	.1
2-0545-01	72-10-31	45	81	1.7	270	0	221	16	140	.2
	72-10-31	--	--	--	--	--	--	--	--	--
	75-01-07	42	76	1.6	212	--	174	17	160	.1
2-0618-05	72-10-02	12	21	.9	80	0	66	6.3	40	.2
	72-10-02	--	--	--	--	--	--	--	--	--
2-0620-01	72-10-03	12	26	1.8	98	0	80	18	28	.2
	72-10-03	--	--	--	--	--	--	--	--	--
2-0818-01	72-09-26	11	26	1.6	87	0	71	20	26	.2
	72-09-26	--	--	--	--	--	--	--	--	--
2-1020-03	72-10-02	11	14	.7	88	0	72	3.4	19	.2
2-1020-04	74-11-22	11	14	.7	89	--	73	4.3	22	.0
2-1126-02	72-10-05	7.2	12	1.0	85	0	70	2.6	15	.2
	75-01-14	8.7	12	.9	83	--	68	2.6	17	.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
2-0044-10	72-11-03	9830	7.8	--	3.4
	72-11-03	--	--	22.0	--
	75-01-07	9500	7.2	22.0	13
2-0120-01	72-09-26	810	8.0	--	2.9
	72-09-26	800	--	25.0	--
	75-01-10	650	7.7	24.5	6.6
2-0145-10	72-11-02	560	7.9	22.0	3.5
2-0145-11	72-11-02	893	7.7	--	5.6
	72-11-02	850	--	22.5	--
2-0320-01	72-12-17	320	--	26.0	--
	72-12-18	362	7.8	--	3.2
2-0345-04	72-10-31	864	7.8	--	4.2
	72-10-31	720	--	24.0	--
	75-01-07	1100	7.8	22.0	4.2
2-0545-01	72-10-31	897	8.0	--	4.3
	72-10-31	700	--	24.0	--
	75-01-07	800	7.3	22.0	17
2-0618-05	72-10-02	269	7.0	--	13
	72-10-02	260	--	24.5	--
2-0620-01	72-10-03	276	7.3	--	7.9
	72-10-03	280	--	26.6	--
2-0818-01	72-09-26	267	7.3	--	7.0
	72-09-26	275	--	23.5	--
2-1020-03	72-10-02	207	7.6	21.5	3.5
2-1020-04	74-11-22	217	--	20.8	--
2-1126-02	72-10-05	187	7.3	--	6.8
	75-01-14	200	7.7	23.5	2.6

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
2-1229-03	22 12 01	159 29 34	01	221201159293401	72-10-05	36	--	--	11
					72-10-05	--	--	--	--
					75-03-04	38	10	0	14
2-1333-01	22 13 18	159 33 59	01	221318159335901	72-10-04	30	--	--	9.6
					72-10-04	--	--	--	--
					75-01-13	33	20	0	11
2-5427-01	21 54 54	159 27 42	01	215454159274201	72-12-13	56	--	--	8.9
					75-01-09	59	10	0	9.8
2-5530-03	21 55 35	159 30 26	01	215535159302601	72-12-13	56	--	--	7.5
					72-12-13	--	--	--	--
					75-01-09	59	10	10	8.9
2-5533-01	21 55 43	159 33 45	01	215543159334501	74-09-27	49	40	5	12
2-5534-03	21 55 22	159 34 26	01	215522159342601	72-12-12	48	--	--	3.4
					72-12-12	--	--	--	--
					75-01-09	50	10	0	3.7
2-5631-01	21 56 29	159 31 41	01	215629159314101	74-12-20	42	10	0	9.2
2-5635-01	21 56 35	159 35 50	01	215635159355001	72-11-15	63	--	--	7.2
					72-11-15	--	--	--	--
2-5638-01	21 56 12	159 38 10	01	215612159381001	72-11-15	52	--	--	9.8
					72-11-15	--	--	--	--
2-5824-01	21 58 25	159 24 08	01	215825159240801	75-09-06	23	10	0	11
2-5840-02	21 58 03	159 40 12	01	215803159401201	72-11-14	70	--	--	7.5
					72-11-14	--	--	--	--
					75-01-08	73	50	10	8.6
2-5923-01	21 59 51	159 23 02	01	215951159230201	73-12-12	24	30	0	10
					74-01-18	23	20	40	9.0
2-5943-01	21 59 37	159 43 42	01	215937159434201	72-11-07	74	--	--	24
					72-11-07	--	--	--	--
					75-01-08	77	30	10	25

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
2-1229-03	72-10-05	--	--	139	69	0	31	.7
	72-10-05	--	--	--	--	--	--	--
	75-03-04	.22	.08	146	76	4	28	.7
2-1333-01	72-10-04	--	--	128	59	0	37	.9
	72-10-04	--	--	--	--	--	--	--
	75-01-13	.20	.05	139	65	0	37	1.0
2-5427-01	72-12-13	--	--	173	68	0	39	1.1
	75-01-09	.43	.14	179	66	0	40	1.1
2-5530-03	72-12-13	--	--	160	60	0	39	1.0
	72-12-13	--	--	--	--	--	--	--
	75-01-09	.51	.12	170	61	1	40	1.1
2-5533-01	74-09-27	.02	.04	179	84	10	36	1.0
2-5534-03	72-12-12	--	--	319	30	0	86	7.3
	72-12-12	--	--	--	--	--	--	--
	75-01-09	4.5	.25	325	30	0	86	7.4
2-5631-01	74-12-20	.25	.05	142	60	0	35	.8
2-5635-01	72-11-15	--	--	457	100	1	69	4.8
	72-11-15	--	--	--	--	--	--	--
2-5638-01	72-11-15	--	--	261	86	0	54	2.2
	72-11-15	--	--	--	--	--	--	--
2-5824-01	75-09-06	1.7	.11	203	77	0	53	2.1
2-5840-02	72-11-14	--	--	360	72	0	70	4.3
	72-11-14	--	--	--	--	--	--	--
	75-01-08	1.4	.21	363	71	0	71	4.3
2-5923-01	73-12-12	.15	.11	163	74	0	41	1.3
	74-01-18	.02	.09	174	68	0	50	1.8
2-5943-01	72-11-07	--	--	506	220	53	44	2.4
	72-11-07	--	--	--	--	--	--	--
	75-01-08	2.1	.16	570	240	75	46	2.8

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF KAUAI--Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
2-1229-03	72-10-05	10	14	.6	88	0	72	3.4	20	.2
	72-10-05	--	--	--	--	--	--	--	--	--
	75-03-04	9.9	14	.9	88	0	72	4.1	20	.2
2-1333-01	72-10-04	8.5	16	.9	84	0	69	3.0	18	.1
	72-10-04	--	--	--	--	--	--	--	--	--
	75-01-13	9.0	18	1.1	90	--	74	3.2	18	.1
2-5427-01	72-12-13	11	20	1.2	89	0	73	5.9	25	.1
	75-01-09	10	21	1.4	86	--	71	5.8	27	.1
2-5530-03	72-12-13	10	18	1.0	74	0	61	6.3	24	.2
	72-12-13	--	--	--	--	--	--	--	--	--
	75-01-09	9.4	19	1.4	73	--	60	8.7	25	.1
2-5533-01	74-09-27	13	22	1.4	89	--	73	9.3	28	.1
2-5534-03	72-12-12	5.2	92	2.4	156	0	128	26	46	.3
	72-12-12	--	--	--	--	--	--	--	--	--
	75-01-09	5.1	93	2.4	157	--	129	24	48	.3
2-5631-01	74-12-20	9.0	15	1.0	78	--	64	3.7	22	.1
2-5635-01	72-11-15	20	110	6.5	121	0	99	39	146	.4
	72-11-15	--	--	--	--	--	--	--	--	--
2-5638-01	72-11-15	15	48	3.3	180	0	148	14	20	.2
	72-11-15	--	--	--	--	--	--	--	--	--
2-5824-01	75-09-06	12	42	4.5	165	--	135	4.0	17	.2
2-5840-02	72-11-14	13	84	3.5	116	0	95	18	102	.2
	72-11-14	--	--	--	--	--	--	--	--	--
	75-01-08	12	84	3.5	118	--	97	17	100	.1
2-5923-01	73-12-12	12	25	3.6	136	0	112	3.4	17	.1
	74-01-18	11	34	3.8	148	0	121	2.8	16	.5
2-5943-01	72-11-07	39	82	4.0	202	1	167	28	145	.2
	72-11-07	--	--	--	--	--	--	--	--	--
	75-01-08	43	98	5.2	200	--	164	33	180	.1

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
2-1229-03	72-10-05	203	7.5	--	4.5
	72-10-05	210	--	23.5	--
	75-03-04	190	7.5	22.0	4.5
2-1333-01	72-10-04	198	7.2	--	8.5
	72-10-04	205	--	21.5	--
	75-01-13	200	7.4	21.5	5.7
2-5427-01	72-12-13	235	7.4	--	5.7
	75-01-09	240	7.6	24.0	3.5
2-5530-03	72-12-13	213	7.5	--	3.7
	72-12-13	180	--	23.0	--
	75-01-09	210	7.9	23.0	1.5
2-5533-01	74-09-27	251	--	--	--
2-5534-03	72-12-12	484	8.0	--	2.5
	72-12-12	440	--	23.0	--
	75-01-09	450	7.3	24.0	13
2-5631-01	74-12-20	201	--	--	--
2-5635-01	72-11-15	767	7.8	--	3.1
	72-11-15	750	--	23.0	--
2-5638-01	72-11-15	380	8.0	--	2.9
	72-11-15	380	--	23.0	--
2-5824-01	75-09-06	--	--	--	--
2-5840-02	72-11-14	565	7.7	--	3.7
	72-11-14	560	--	24.5	--
	75-01-08	510	7.9	24.0	2.4
2-5923-01	73-12-12	259	8.3	25.6	1.1
	74-01-18	289	8.3	26.5	1.2
2-5943-01	72-11-07	848	8.4	--	1.3
	72-11-07	825	--	25.5	--
	75-01-08	920	7.5	23.0	10

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
3-1646-01	21 16 40	157 46 52	01	211646157465201	75-05-20	40	50	10	19
3-1746-02	21 17 07	157 46 17	00	211707157461700	73-11-24	40	50	0	16
3-1847-01	21 18 37	157 47 29	01	211837157472901	74-09-04	40	60	0	15
3-2042-13	21 20 02	157 42 07	01	212038157422501	75-04-28	26	0	10	150
3-2153-02	21 21 06	157 53 37	01	212106157533701	75-05-23	41	50	10	16
3-2153-11	21 21 20	157 53 54	00	212120157535400	73-12-14	43	30	0	19
3-2155-04	21 21 55	157 55 10	01	212155157551001	72-02-03	45	0	0	19
					75-02-18	41	10	10	21
3-2255-35	21 22 59	157 55 42	01	212259157554201	75-05-23	49	20	10	29
3-2300-11	21 23 43	158 00 10	01	212343158001001	75-05-23	60	10	0	22
3-2356-59	21 23 20	157 56 04	00	212320157560400	73-11-03	52	10	0	19
3-2356-60	21 23 36	157 56 56	01	212336157565601	75-02-10	43	50	0	24
3-2356-61	21 23 27	157 56 43	01	212327157564301	75-03-07	39	70	0	17
3-2357-19	21 23 22	157 57 21	00	212322157572100	73-11-20	45	150	0	57
3-2357-21	21 23 27	157 57 39	01	212327157573901	75-05-23	42	20	0	35
3-2358-02	21 23 32	157 58 22	01	212332157582201	75-05-23	38	30	10	190
3-2358-22	21 23 42	157 58 43	01	212342157584301	75-05-23	43	50	0	24
3-2358-29	21 23 43	157 58 47	01	212343157584701	75-05-23	41	40	10	61
3-2358-48	21 23 31	157 58 21	01	212331157582101	75-01-22	40	40	20	87
					75-08-27	38	10	0	64
3-2359-05	21 23 36	157 59 18	01	212336157591801	75-05-23	59	10	0	79
3-2550-01	21 25 56	157 50 03	01	212556157500301	75-04-30	30	10	5	6.6

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
3-1646-01	75-05-20	.62	.10	438	140	76	59	3.6
3-1746-02	73-11-24	.33	.06	357	110	43	58	3.1
3-1847-01	74-09-04	.03	.03	161	74	0	37	1.0
3-2042-13	75-04-28	5.7	.11	3300	830	640	70	14
3-2153-02	75-05-23	.61	.10	241	98	30	46	1.7
3-2153-11	73-12-14	.61	.08	275	110	60	45	1.8
3-2155-04	72-02-03	.42	--	322	120	72	50	2.3
	75-02-18	.33	.05	320	130	77	49	2.2
3-2255-35	75-05-23	.98	.12	449	180	110	48	2.6
3-2300-11	75-05-23	1.9	.18	444	130	60	60	3.6
3-2356-59	73-11-03	1.4	.17	324	120	30	50	2.3
3-2356-60	75-02-10	.45	.04	287	150	110	32	1.2
3-2356-61	75-03-07	.28	.08	187	88	42	36	1.1
3-2357-19	73-11-20	.01	.08	589	360	330	27	1.4
3-2357-21	75-05-23	.64	.09	434	210	150	42	2.1
3-2358-02	75-05-23	.20	.09	3190	1300	1200	54	8.6
3-2358-22	75-05-23	.42	.13	360	150	100	48	2.3
3-2358-29	75-05-23	.32	.10	759	420	380	36	2.3
3-2358-48	75-01-22	1.6	.05	973	590	550	31	2.2
	75-08-27	.28	.04	742	440	400	33	2.1
3-2359-05	75-05-23	1.6	.13	978	530	470	38	2.8
3-2550-01	75-04-30	.11	.10	97	34	0	45	1.0

ANALYSES OF SAMPLES COLLECTED AT GROUND-WATER SITES

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
3-1646-01	75-05-20	23	98	4.6	81	0	66	30	180	.0
3-1746-02	73-11-24	18	75	4.0	87	0	71	19	140	.0
3-1847-01	74-09-04	8.8	20	1.6	93	--	76	5.1	24	.1
3-2042-13	75-04-28	110	920	36	224	0	184	220	1700	.2
3-2153-02	75-05-23	14	39	2.1	82	0	67	14	71	.0
3-2153-11	73-12-14	16	44	2.8	65	0	53	15	100	.1
3-2155-04	72-02-03	18	57	3.0	60	0	49	19	130	.0
	75-02-18	18	57	3.1	60	--	49	19	130	.0
3-2255-35	75-05-23	27	80	4.2	86	0	71	33	180	.1
3-2300-11	75-05-23	19	96	3.6	89	0	73	31	160	.0
3-2356-59	73-11-03	18	57	3.0	112	0	92	19	94	.1
3-2356-60	75-02-10	22	33	3.1	51	--	42	15	120	.0
3-2356-61	75-03-07	11	24	3.1	56	0	46	7.2	57	.0
3-2357-19	73-11-20	53	62	3.8	41	0	34	27	320	.1
3-2357-21	75-05-23	29	71	3.6	69	0	57	26	190	.0
3-2358-02	75-05-23	190	700	19	51	0	42	230	1800	.0
3-2358-22	75-05-23	22	64	2.7	59	0	48	23	150	.0
3-2358-29	75-05-23	65	110	4.9	51	0	42	50	400	.0
3-2358-48	75-01-22	90	120	5.2	44	--	36	62	540	.1
	75-08-27	68	100	4.7	47	0	39	53	390	.1
3-2359-05	75-05-23	80	150	7.3	65	0	53	63	500	.0
3-2550-01	75-04-30	4.3	13	.6	43	0	35	3.4	17	.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
3-1646-01	75-05-20	840	7.3	22.0	6.5
3-1746-02	73-11-24	654	7.4	21.0	5.5
3-1847-01	74-09-04	220	8.3	--	.7
3-2042-13	75-04-28	6000	7.4	25.0	14
3-2153-02	75-05-23	380	7.7	22.0	2.6
3-2153-11	73-12-14	483	7.9	21.0	1.3
3-2155-04	72-02-03	577	7.6	--	2.4
	75-02-18	520	7.1	23.0	7.6
3-2255-35	75-05-23	850	7.1	21.0	11
3-2300-11	75-05-23	780	6.8	22.0	23
3-2356-59	73-11-03	547	7.3	23.0	9.0
3-2356-60	75-02-10	495	7.2	22.0	5.1
3-2356-61	75-03-07	300	7.7	20.0	1.8
3-2357-19	73-11-20	1160	7.2	20.5	4.1
3-2357-21	75-05-23	850	7.1	21.0	8.8
3-2358-02	75-05-23	6000	6.9	20.5	10
3-2358-22	75-05-23	650	7.2	20.5	6.0
3-2358-29	75-05-23	1500	7.0	20.0	8.2
3-2358-48	75-01-22	1700	7.3	21.0	3.5
	75-08-27	1400	7.3	20.5	3.8
3-2359-05	75-05-23	2000	6.7	21.5	21
3-2550-01	75-04-30	145	6.2	22.5	43

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
3-2558-10	21 25 06	157 58 23	01	212506157582301	75-05-22	58	10	0	17
3-2603-01	21 26 17	158 03 38	01	212617158033801	75-05-27	74	20	10	20
3-2607-01	21 26 56	158 07 18	01	212656158071801	72-02-16	65	--	--	13
3-2808-01	21 28 13	158 08 02	01	212813158080201	72-02-16	63	--	--	66
3-2901-02	21 29 27	158 01 48	01	212927158014801	75-02-27	64	30	0	17
3-2902-01	21 29 48	158 02 18	01	212948158021801	74-07-26	81	30	0	8.6
3-3102-02	21 31 46	158 02 45	00	213146158024500	73-09-20	72	--	--	8.8
3-3203-01	21 32 16	158 03 42	01	213216158034201	74-11-21	69	30	0	9.3
3-3203-02	21 32 43	158 03 04	01	213243158030401	75-06-03	52	20	0	7.9
3-3251-01	21 32 43	157 51 00	01	213243157510001	72-04-26	43	--	--	24
					75-02-19	44	10	0	30
3-3352-01	21 33 27	157 52 44	01	213327157524401	72-04-21	39	--	--	13
					75-02-19	38	10	0	13
3-3353-02	21 33 15	157 53 11	01	213315157531101	75-02-03	40	10	10	14
3-3353-04	21 33 09	157 53 16	01	213309157531601	75-05-22	39	10	10	18
3-3404-02	21 34 47	158 04 49	01	213447158044901	75-02-05	15	20	0	11
3-3409-16	21 34 38	158 09 11	01	213438158091101	72-04-28	57	--	--	32
					75-02-21	53	10	0	37
3-3453-06	21 34 39	157 53 47	01	213439157534701	74-02-12	37	140	20	12
3-3453-07	21 34 39	157 53 47	02	213439157534702	74-10-22	38	10	0	13
3-3553-07	21 35 13	157 53 47	01	213513157534701	75-06-13	45	10	0	16
3-3655-01	21 36 56	157 55 04	01	213656157550401	75-05-02	37	20	5	10
3-3956-04	21 39 02	157 56 16	01	213902157561601	75-04-28	45	10	5	16
3-4057-01	21 40 50	157 57 33	01	214050157573301	75-06-12	48	10	0	25
3-4057-05	21 40 53	157 57 04	01	214053157570401	75-02-20	1.1	10	20	62
3-4100-01	21 41 57	158 00 01	01	214157158000101	75-05-02	45	10	0	47
3-4258-04	21 42 33	157 58 35	01	214233157583501	72-03-30	48	--	--	121
					75-02-19	41	30	10	120

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
3-2558-10	75-05-22	1.2	.19	366	100	49	62	3.4
3-2603-01	75-05-27	2.3	.27	261	110	43	34	1.1
3-2607-01	72-02-16	--	--	246	82	0	49	1.8
3-2808-01	72-02-16	--	--	711	280	200	48	3.1
3-2901-02	75-02-27	.64	.22	162	73	19	27	.7
3-2902-01	74-07-26	.93	.23	177	47	0	42	1.0
3-3102-02	73-09-20	.19	.23	170	54	0	37	.9
3-3203-01	74-11-21	.58	.21	166	52	3	41	1.0
3-3203-02	75-06-03	.28	.13	126	44	2	36	.8
3-3251-01	72-04-26	--	--	520	147	77	63	4.2
	75-02-19	.49	.03	539	170	100	59	4.0
3-3352-01	72-04-21	--	--	178	69	0	46	1.5
	75-02-19	.41	.05	172	68	0	44	1.3
3-3353-02	75-02-03	.37	.04	163	71	0	37	1.0
3-3353-04	75-05-22	.49	.06	169	79	4	37	1.1
3-3404-02	75-02-05	4.6	.99	148	53	0	50	1.5
3-3409-16	72-04-28	--	--	421	212	113	36	1.7
	75-02-21	2.6	.12	459	240	140	35	1.7
3-3453-06	74-02-12	.35	.06	141	63	21	37	.9
3-3453-07	74-10-22	.22	.06	146	65	31	37	1.0
3-3553-07	75-06-13	.46	.05	189	81	32	39	1.2
3-3655-01	75-05-02	.11	.09	155	59	0	47	1.4
3-3956-04	75-04-28	.55	.13	228	89	20	46	1.7
3-4057-01	75-06-12	.61	.09	284	140	82	37	1.4
3-4057-05	75-02-20	.01	.02	518	290	280	38	2.1
3-4100-01	75-05-02	.53	.11	732	320	260	48	3.4
3-4258-04	72-03-30	--	--	1020	607	558	32	2.3
	75-02-19	.37	.03	967	590	540	31	2.2

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF OAHU--Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
3-2558-10	75-05-22	14	78	3.0	62	0	51	19	140	.1
3-2603-01	75-05-27	15	27	2.2	84	0	69	21	49	.1
3-2607-01	72-02-16	12	38	2.8	113	0	93	8.5	46	.3
3-2808-01	72-02-16	28	120	3.4	97	0	80	222	160	.3
3-2901-02	75-02-27	7.4	13	1.7	66	--	54	4.4	18	.1
3-2902-01	74-07-26	6.1	16	1.4	63	--	52	11	17	.1
3-3102-02	73-09-20	7.7	15	1.6	72	0	59	9.2	18	.2
3-3203-01	74-11-21	6.9	17	1.8	59	--	48	11	19	.1
3-3203-02	75-06-03	5.9	12	1.2	51	0	42	5.7	14	.1
3-3251-01	72-04-26	21	118	5.4	85	0	70	34	232	.1
	75-02-19	24	120	5.7	84	--	69	32	240	.0
3-3352-01	72-04-21	8.8	28	1.4	85	0	70	6.9	38	.1
	75-02-19	8.7	25	1.4	84	--	69	5.8	37	.0
3-3353-02	75-02-03	8.6	20	1.8	95	--	78	3.7	26	.0
3-3353-04	75-05-22	8.3	22	1.2	92	0	75	4.5	28	.1
3-3404-02	75-02-05	6.1	25	1.8	71	--	58	10	21	.5
3-3409-16	72-04-28	32	56	4.5	120	0	98	23	150	.1
	75-02-21	35	59	4.6	120	--	98	30	170	.1
3-3453-06	74-02-12	7.9	17	1.4	51	0	42	5.5	33	.0
3-3453-07	74-10-22	7.9	18	1.5	42	--	34	6.0	40	.1
3-3553-07	75-06-13	10	24	1.4	60	0	49	7.5	53	.1
3-3655-01	75-05-02	8.3	25	1.0	74	0	61	4.4	32	.0
3-3956-04	75-04-28	12	36	1.2	85	0	70	10	63	.0
3-4057-01	75-06-12	19	38	1.5	72	0	59	14	100	.1
3-4057-05	75-02-20	33	82	3.4	10	0	8	1.0	330	.0
3-4100-01	75-05-02	49	140	5.2	67	0	55	50	360	.0
3-4258-04	72-03-30	74	130	4.3	60	0	49	43	570	.1
	75-02-19	70	120	4.3	60	--	49	40	540	.0

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
3-2558-10	75-05-22	650	6.8	21.5	16
3-2603-01	75-05-27	360	6.7	22.5	27
3-2607-01	72-02-16	350	7.5	24.3	5.7
3-2808-01	72-02-16	1260	7.8	--	2.5
3-2901-02	75-02-27	180	6.8	23.0	17
3-2902-01	74-07-26	185	7.2	23.0	6.4
3-3102-02	73-09-20	187	7.1	21.1	9.2
3-3203-01	74-11-21	190	7.6	22.0	2.4
3-3203-02	75-06-03	140	7.8	20.5	1.3
3-3251-01	72-04-26	931	7.8	22.5	2.2
	75-02-19	820	7.4	23.0	5.4
3-3352-01	72-04-21	269	7.6	22.7	3.4
	75-02-19	260	7.9	23.0	1.7
3-3353-02	75-02-03	230	7.3	21.5	7.6
3-3353-04	75-05-22	240	8.3	22.0	.7
3-3404-02	75-02-05	211	7.3	21.0	5.7
3-3409-16	72-04-28	715	7.9	22.0	2.4
	75-02-21	800	7.4	22.5	7.6
3-3453-06	74-02-12	219	8.0	20.0	.8
3-3453-07	74-10-22	210	7.7	21.0	1.3
3-3553-07	75-06-13	300	7.4	21.5	3.8
3-3655-01	75-05-02	250	6.8	21.0	19
3-3956-04	75-04-28	380	7.3	21.5	6.8
3-4057-01	75-06-12	500	7.2	21.5	7.3
3-4057-05	75-02-20	1050	--	21.0	.0
3-4100-01	75-05-02	1400	7.2	20.5	6.8
3-4258-04	72-03-30	1960	7.4	22.5	3.8
	75-02-19	1525	7.4	23.0	3.8

ANALYSES OF SAMPLES COLLECTED AT GROUND-WATER SITES

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
HAWAII, ISLAND OF MOLOKAI									
4-0449-01	21 04 02	156 49 58	01	210402156495801	74-10-16	47	10	0	9.2
4-0457-01	21 04 19	156 57 05	01	210419156570501	75-01-27	32	20	0	13
4-0601-01	21 06 05	157 01 20	01	210605157012001	75-01-29	28	10	0	13
4-0603-01	21 06 38	157 03 26	01	210638157032601	75-01-29	53	60	110	57
4-0700-01	21 07 11	157 00 05	01	210711157000501	74-06-11	47	20	0	19
					74-10-31	49	50	0	22
4-0801-01	21 08 56	157 01 12	01	210856157011201	75-01-29	44	130	10	8.8
4-0901-01	21 09 03	157 01 30	01	210903157013001	75-01-29	47	60	0	7.8
HAWAII, ISLAND OF MAUI									
6-3806-01	20 38 35	156 06 50	01	203835156065001	75-09-25	18	10	10	12
6-4126-02	20 41 26	156 26 21	01	204126156262101	72-03-16	45	--	--	33
					74-11-04	13	20	0	21
6-4600-01	20 46 01	156 00 15	01	204601156001501	72-03-15	42	--	--	1.4
					72-06-02	21	--	--	13
					74-10-01	28	70	0	15
6-4627-14	20 46 35	156 27 01	01	204635156270101	72-03-16	60	--	--	13
					74-11-18	59	40	0	13
6-4937-01	20 49 31	156 37 12	01	204931156371201	72-03-24	51	--	--	132
					74-12-04	52	10	0	160
6-5128-02	20 51 02	156 28 25	01	205102156282501	72-04-14	51	--	--	33
					73-07-19	48	--	--	36
					74-11-18	--	40	0	38
6-5130-02	20 51 54	156 30 38	01	205154156303801	74-02-05	34	10	10	12
6-5330-10	20 53 29	156 30 55	01	205329156305501	74-09-18	53	20	0	20
6-5330-11	20 53 30	156 30 54	01	205330156305401	72-03-14	76	--	--	18

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
HAWAII, ISLAND OF MOLOKAI								
4-0449-01	74-10-16	.23	.11	204	55	0	59	2.3
4-0457-01	75-01-27	.28	1.4	223	78	38	50	1.9
4-0601-01	75-01-29	.44	.07	170	78	0	41	1.2
4-0603-01	75-01-29	.75	1.0	1320	370	190	63	7.3
4-0700-01	74-06-11	3.7	.08	902	190	150	72	7.6
	74-10-31	.38	.06	883	200	170	70	7.3
4-0801-01	75-01-29	.39	.08	192	62	23	50	1.7
4-0901-01	75-01-29	.32	.08	159	52	16	45	1.3
HAWAII, ISLAND OF MAUI								
6-3806-01	75-09-25	2.3	.01	454	84	54	76	6.2
6-4126-02	72-03-16	--	--	1240	301	192	68	8.2
	74-11-04	3.9	4.8	958	170	68	76	9.4
6-4600-01	72-03-15	--	--	277	113	16	54	2.2
	72-06-02	--	--	232	99	0	48	1.9
	74-10-01	.11	.08	302	130	43	47	2.1
6-4627-14	72-03-16	--	--	828	124	0	78	9.6
	74-11-18	3.5	.29	799	110	0	80	10
6-4937-01	72-03-24	--	--	1630	705	583	49	5.2
	74-12-04	1.9	.07	1900	890	780	47	5.4
6-5128-02	72-04-14	--	--	1140	235	0	74	9.2
	73-07-19	--	--	1040	259	0	69	7.7
	74-11-18	.05	.02	1030	270	0	69	8.0
6-5130-02	74-02-05	2.8	.34	288	69	0	69	3.9
6-5330-10	74-09-18	1.1	.08	242	100	26	39	1.3
6-5330-11	72-03-14	--	--	255	99	16	39	1.3

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
HAWAII, ISIAND OF MOLOKAI--Continued										
4-0445-01	74-10-16	7.7	39	3.7	70	--	57	7.7	54	.1
4-0457-01	75-01-27	11	38	3.6	48	--	39	12	84	.0
4-0601-01	75-01-29	11	25	1.7	112	--	92	5.1	29	.2
4-0603-01	75-01-29	55	320	28	214	--	176	63	630	.2
4-0700-01	74-06-11	34	240	14	46	--	38	49	460	.1
	74-10-31	36	240	15	42	--	34	58	440	.1
4-0801-01	75-01-29	9.7	30	2.8	48	--	39	13	58	.1
4-0901-01	75-01-29	8.0	21	2.8	45	--	37	7.1	41	.1
HAWAII, ISIAND OF MAUI--Continued										
6-3806-01	75-09-25	13	130	5.7	36	0	30	27	220	.1
6-4126-02	72-03-16	53	325	21	133	0	109	93	590	.1
	74-11-04	28	280	16	122	--	100	57	450	.7
6-4600-01	72-03-15	19	46	3.8	119	0	98	15	78	.2
	72-06-02	16	44	3.6	124	0	102	11	62	.0
	74-10-01	22	54	3.6	104	--	85	17	110	.1
6-4627-14	72-03-16	21	240	20	240	0	197	47	295	.5
	74-11-18	18	240	20	239	--	196	44	270	.3
6-4937-01	72-03-24	91	320	12	148	0	121	96	845	.2
	74-12-04	120	370	14	141	--	116	110	1000	.1
6-5128-02	72-04-14	37	325	15	353	0	290	66	420	.5
	73-07-19	41	285	13	370	0	303	57	365	.4
	74-11-18	42	300	15	361	--	296	53	400	.0
6-5130-02	74-02-05	9.5	74	3.6	236	0	194	9.0	16	.5
6-5330-10	74-09-18	13	31	2.6	95	--	78	16	54	.1
6-5330-11	72-03-14	13	30	2.2	99	0	81	21	43	.1

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
HAWAII, ISIAND OF MOLOKAI--Continued					
4-0449-01	74-10-16	310	7.1	21.5	8.9
4-0457-01	75-01-27	380	6.3	23.0	38
4-0601-01	75-01-29	270	7.2	24.5	11
4-0603-01	75-01-29	2400	7.7	21.5	6.8
4-0700-01	74-06-11	1710	7.2	--	4.6
	74-10-31	1700	8.0	23.0	.7
4-0801-01	75-01-29	310	8.0	21.0	.8
4-0901-01	75-01-29	260	8.0	21.5	.7
HAWAII, ISIAND OF MAUI--Continued					
6-3806-01	75-09-25	831	6.8	--	9.1
6-4126-02	72-03-16	2290	7.5	--	6.7
	74-11-04	1850	8.1	20.0	1.6
6-4600-01	72-03-15	447	7.9	20.0	2.4
	72-06-02	417	7.0	--	20
	74-10-01	520	6.7	21.5	33
6-4627-14	72-03-16	1430	8.1	--	3.1
	74-11-18	1350	7.6	23.5	9.6
6-4937-01	72-03-24	3040	7.6	--	5.9
	74-12-04	3500	7.1	25.0	18
6-5128-02	72-04-14	1970	7.9	--	7.1
	73-07-19	1890	7.6	--	15
	74-11-18	1850	7.4	24.0	23
6-5130-02	74-02-05	461	8.1	--	3.0
6-5330-10	74-09-18	340	7.6	23.0	3.8
6-5330-11	72-03-14	339	7.6	22.5	4.0

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
				HAWAII, ISLAND OF MAUI--Continued					
6-5332-05	20 53 12	156 32 14	01	205312156321401	74-01-12	51	10	20	12
					74-02-01	29	10	0	12
6-5339-01	20 53 22	156 39 45	01	205322156394501	72-07-28	57	--	--	26
6-5339-02	20 53 20	156 39 45	01	205320156394501	72-05-12	53	--	--	25
					74-10-09	57	20	0	30
6-5339-04	20 53 41	156 39 23	00	205341156392300	73-12-12	44	80	0	11
					74-05-31	44	20	0	18
6-5430-01	20 54 30	156 30 44	01	205430156304401	75-04-27	54	20	0	18
6-5522-01	20 55 11	156 22 21	01	205511156222101	72-04-13	58	--	--	11
					74-11-18	52	230	10	14
6-5640-01	20 56 51	156 40 10	01	205651156401001	74-12-04	45	10	0	12
				HAWAII, ISLAND OF HAWAII					
8-0335-01	19 03 47	155 35 43	01	190347155354301	75-04-22	43	10	5	6.4
8-0831-02	19 08 32	155 31 09	01	190832155310901	74-08-27	43	20	0	13
8-1128-02	19 11 08	155 28 17	01	191108155281701	72-11-02	46	--	--	5.0
					74-08-27	47	10	0	6.1
8-1229-01	19 12 19	155 29 16	01	191219155291601	74-09-26	42	20	0	7.5
8-2753-02	19 27 31	155 53 41	01	192731155534101	72-03-16	52	--	--	9.6
					74-08-27	50	80	10	10
8-2986-01	19 29 24	154 56 47	01	192924154564701	72-03-03	50	--	--	2.7
8-2986-02	19 29 23	154 56 47	01	192923154564701	74-09-13	58	60	0	3.9

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
				HAWAII, ISLAND OF MAUI--Continued				
6-5332-05	74-01-12	.43	.06	155	59	0	38	1.0
	74-02-01	.32	.02	134	58	0	38	1.0
6-5339-01	72-07-28	--	--	600	176	57	59	3.9
6-5339-02	72-05-12	--	--	492	153	32	59	3.8
	74-10-09	1.4	.18	586	200	89	56	3.7
6-5339-04	73-12-12	.33	.11	123	51	0	31	.7
	74-05-31	.58	.08	196	86	35	36	1.1
6-5430-01	75-04-27	3.2	.13	272	90	9	49	1.9
6-5522-01	72-04-13	--	--	656	85	0	81	9.0
	74-11-18	3.9	.11	710	110	2	79	8.9
6-5640-01	74-12-04	1.8	.19	475	88	33	75	6.0
				HAWAII, ISLAND OF HAWAII				
8-0335-01	75-04-22	.28	.12	110	35	0	39	.8
8-0831-02	74-08-27	.26	.09	411	110	73	66	4.2
8-1128-02	72-11-02	--	--	104	25	0	50	1.0
	74-08-27	.28	.17	110	33	0	43	.9
8-1229-01	74-09-26	.86	.09	94	32	0	27	.4
8-2753-02	72-03-16	--	--	333	74	38	68	3.9
	74-08-27	.66	.15	348	74	34	68	4.0
8-2986-01	72-03-03	--	--	121	20	0	60	1.6
8-2986-02	74-09-13	.53	.14	126	20	0	60	1.6

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
				HAWAII, ISLAND OF MAUI--Continued						
6-5332-05	74-01-12	7.0	17	2.2	73	0	60	4.1	24	.0
	74-02-01	6.9	17	2.1	73	0	60	4.0	25	.1
6-5339-01	72-07-28	27	120	6.5	145	0	119	29	210	.2
6-5339-02	72-05-12	22	108	6.0	148	0	121	25	175	.1
	74-10-09	30	120	6.7	134	--	110	39	230	.2
6-5339-04	73-12-12	5.7	11	1.5	68	0	56	3.7	11	.1
	74-05-31	10	23	2.1	62	0	51	9.2	56	.0
6-5430-01	75-04-27	11	42	3.1	99	--	81	27	53	.1
6-5522-01	72-04-13	14	190	9.3	133	0	109	48	245	.4
	74-11-18	17	210	11	125	--	103	46	280	.4
6-5640-01	74-12-04	14	130	5.9	67	--	55	26	200	.2
				HAWAII, ISLAND OF HAWAII--Continued						
8-0335-01	75-04-22	4.6	11	1.5	42	0	34	13	8.4	.1
8-0831-02	74-08-27	18	100	5.9	41	--	34	29	180	.1
8-1128-02	72-11-02	3.0	12	1.4	42	0	34	7.3	8.0	.3
	74-08-27	4.3	12	1.2	41	--	34	7.5	9.9	.4
8-1229-01	74-09-26	3.3	5.7	1.3	40	--	33	6.6	3.2	.1
8-2753-02	72-03-16	12	77	4.8	44	0	36	25	129	.3
	74-08-27	12	80	4.7	43	--	35	26	140	.2
8-2986-01	72-03-03	3.3	17	3.4	50	0	41	13	6.0	.8
8-2986-02	74-09-13	2.4	16	3.2	48	--	39	13	5.8	.3

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
		HAWAII, ISLAND OF MAUI--Continued			
6-5332-05	74-01-12	211	8.1	23.5	.9
	74-02-01	209	7.4	21.0	4.7
6-5339-01	72-07-28	954	7.6	21.0	5.8
6-5339-02	72-05-12	842	7.7	20.0	4.7
	74-10-09	1000	7.6	21.5	5.4
6-5339-04	73-12-12	150	8.0	20.5	1.1
	74-05-31	317	7.9	20.0	1.2
6-5430-01	75-04-27	405	--	--	--
6-5522-01	72-04-13	1120	7.4	--	8.5
	74-11-18	1300	6.9	23.0	25
6-5640-01	74-12-04	850	7.9	20.5	1.3
		HAWAII, ISLAND OF HAWAII--Continued			
8-0335-01	75-04-22	122	7.8	18.5	1.1
8-0831-02	74-08-27	650	7.3	18.0	3.3
8-1128-02	72-11-02	112	7.1	19.0	5.3
	74-08-27	120	7.0	19.0	6.6
8-1229-01	74-09-26	93	--	--	--
8-2753-02	72-03-16	555	6.7	19.0	14
	74-08-27	535	6.8	18.5	11
8-2986-01	72-03-03	127	7.4	22.5	3.2
8-2986-02	74-09-13	125	6.4	22.5	31

ANALYSES OF SAMPLES COLLECTED AT GROUND-WATER SITES

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)
8-3080-02	19 30 17	154 50 21	01	193017154502101	72-03-03	39	--	--	72
					74-09-13	58	20	0	60
8-3557-01	19 35 10	155 57 08	01	193510155570801	72-03-16	49	--	--	7.2
					74-08-27	50	40	10	8.9
8-3802-03	19 38 05	155 02 02	01	193805155020201	74-08-16	36	10	0	6.9
8-3900-01	19 39 37	155 00 43	01	193937155004301	72-03-07	33	--	--	6.5
					74-08-16	39	10	0	7.8
8-4003-01	19 40 37	155 03 53	01	194037155035301	72-03-10	37	--	--	7.8
					73-04-13	34	--	--	6.8
8-4203-06	19 42 22	155 03 48	01	194222155034801	72-03-02	36	--	--	6.0
					74-09-11	37	20	0	11
8-5005-02	19 50 43	155 05 38	01	195043155053801	72-03-23	45	--	--	12
					74-09-12	29	10	0	11
8-5745-01	19 57 24	155 45 53	01	195724155455301	72-04-05	80	--	--	8.1
8-5814-01	19 58 57	155 14 23	01	195857155142301	73-04-13	34	--	--	12
					74-09-18	40	60	0	15
8-6049-03	20 00 39	155 49 40	01	200039155494001	72-05-17	50	--	--	58
					74-08-22	53	60	110	120
8-7446-01	20 14 28	155 46 49	01	201428155464901	72-03-28	63	--	--	60
					74-08-22	43	100	10	65
8-7650-01	20 16 03	155 50 22	01	201603155502201	73-03-27	42	--	--	6.6
					74-08-22	38	40	0	4.5
8-7652-01	20 16 03	155 52 18	01	201603155521801	73-03-27	51	--	--	16
					74-08-22	54	40	10	15

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
8-3080-02	72-03-03	--	--	498	307	0	28	1.4
	74-09-13	4.2	.28	548	280	6	38	2.1
8-3557-01	72-03-16	--	--	119	35	0	41	.9
	74-08-27	.96	.15	172	54	13	50	1.5
8-3802-03	74-08-16	.49	.07	85	30	0	30	.5
8-3900-01	72-03-07	--	--	183	40	4	65	2.7
	74-08-16	1.1	.07	197	51	22	60	2.3
8-4003-01	72-03-10	--	--	86	33	0	25	.4
	73-04-13	--	--	76	28	0	27	.4
8-4203-06	72-03-02	--	--	87	30	0	33	.6
	74-09-11	.01	.06	109	42	10	37	.8
8-5005-02	72-03-23	--	--	141	72	11	19	.4
	74-09-12	.03	.06	108	62	3	22	.5
8-5745-01	72-04-05	--	--	234	65	0	50	1.8
8-5814-01	73-04-13	--	--	223	79	33	51	2.0
	74-09-18	.44	.07	262	91	46	51	2.1
8-6049-03	72-05-17	--	--	3060	602	517	75	16
	74-08-22	1.1	.12	7990	1400	1300	77	28
8-7446-01	72-03-28	--	--	1730	446	365	67	9.3
	74-08-22	1.0	.06	1740	460	380	67	9.3
8-7650-01	73-03-27	--	--	438	49	0	83	8.0
	74-08-22	.88	.29	320	37	0	83	6.6
8-7652-01	73-03-27	--	--	1020	170	65	78	10
	74-08-22	1.6	.36	962	150	31	79	10

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1971 TO SEPTEMBER 1975

HAWAII, ISLAND OF HAWAII--Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
8-3080-02	72-03-03	31	57	7.6	393	6	332	11	54	.3
	74-09-13	31	80	7.0	331	--	272	19	110	.3
8-3557-01	72-03-16	4.0	12	2.1	49	0	40	9.9	7.0	.3
	74-08-27	7.6	26	3.0	49	--	40	12	35	.3
8-3802-03	74-08-16	3.1	6.5	2.0	36	0	30	6.2	3.6	.1
8-3900-01	72-03-07	5.9	39	3.7	44	0	36	12	58	.1
	74-08-16	7.7	38	3.8	35	0	29	14	64	.1
8-4003-01	72-03-10	3.3	5.3	1.6	50	0	41	1.4	4.0	.1
	73-04-13	2.7	5.1	1.8	45	0	37	.0	3.5	.0
8-4203-06	72-03-02	3.6	7.4	1.8	44	0	36	2.0	7.5	.1
	74-09-11	3.5	12	2.1	39	--	32	5.0	19	.0
8-5005-02	72-03-23	10	7.8	.6	74	0	61	17	12	.1
	74-09-12	8.5	8.4	.6	73	--	60	13	1.1	.0
8-5745-01	72-04-05	11	33	4.3	102	0	84	18	26	.4
8-5814-01	73-04-13	12	40	3.4	57	0	47	12	81	.2
	74-09-18	13	46	4.1	55	--	45	14	100	.1
8-6049-03	72-05-17	111	896	46	103	0	84	236	1610	.2
	74-08-22	270	2400	110	104	--	85	580	4400	.3
8-7446-01	72-03-28	72	450	20	98	0	80	120	890	.2
	74-08-22	73	460	19	98	--	80	110	920	.1
8-7650-01	73-03-27	8.0	130	5.3	72	0	59	35	170	.3
	74-08-22	8.2	92	4.4	91	--	75	26	99	.3
8-7652-01	73-03-27	32	305	12	130	0	107	73	465	.4
	74-08-22	27	290	13	144	--	118	63	420	.4

LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
8-3080-02	72-03-03	793	8.4	--	2.6
	74-09-13	775	8.5	25.0	167
8-3557-01	72-03-16	128	7.2	20.0	4.9
	74-08-27	200	7.1	19.5	6.2
8-3802-03	74-08-16	87	7.8	19.0	.9
8-3900-01	72-03-07	296	7.3	--	3.5
	74-08-16	300	7.1	18.5	4.4
8-4003-01	72-03-10	91	7.5	22.0	2.5
	73-04-13	86	7.5	20.0	2.3
8-4203-06	72-03-02	95	7.1	23.5	5.6
	74-09-11	140	6.2	19.5	39
8-5005-02	72-03-23	174	7.2	23.0	7.5
	74-09-12	170	5.7	23.0	233
8-5745-01	72-04-05	280	7.5	--	5.2
8-5814-01	73-04-13	392	7.3	20.5	4.6
	74-09-18	425	7.0	19.0	8.8
8-6049-03	72-05-17	5480	7.5	26.0	5.2
	74-08-22	13600	7.3	25.0	8.3
8-7446-01	72-03-28	3230	7.2	24.5	9.9
	74-08-22	2280	6.9	22.5	20
8-7650-01	73-03-27	770	7.8	21.0	1.8
	74-08-22	490	6.9	24.0	18
8-7652-01	73-03-27	1860	7.7	22.0	4.2
	74-08-22	1450	6.9	22.0	29

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF KAUAI			
2-0044-10	220018159444701	Nov. 5, 1974	2,800	8,500	21.5
		Jan. 7, 1975	3,600	9,500	22.0
		Mar. 11, 1975	3,600	9,200	21.0
		May 6, 1975	3,000	9,400	22.0
		June 12, 1975	2,180	6,660	22.5
		Aug. 7, 1975	1,780	5,400	22.5
		Sept. 12, 1975	1,980	5,800	22.0
2-0120-01	220136159205501	Nov. 4, 1974	a 155	860	25.0
		Jan. 10, 1975	144	650	24.5
		Mar. 10, 1975	146	700	24.5
		May 1, 1975	135	850	24.5
		June 11, 1975	a 148	860	24.5
		Sept. 11, 1975	155	900	25.0
2-0145-10	220148159453501	Nov. 5, 1974	a 750	2,740	21.0
		Aug. 7, 1975	a 330	1,250	21.5
		Sept. 12, 1975	a 440	1,700	22.0
2-0320-01	220354159205601	June 11, 1975	a 44	380	23.0
		Sept. 11, 1975	a 45	340	23.5
2-0345-04	220341159453901	Nov. 5, 1974	a 445	1,750	22.0
		Jan. 7, 1975	a 300	1,100	22.0
		Mar. 11, 1975	a 290	1,280	22.0
		June 12, 1975	a 375	1,400	23.5
		Aug. 7, 1975	a 410	1,650	22.5
		Sept. 12, 1975	a 415	1,600	22.5
2-0545-01	220530159450401	Jan. 7, 1975	a 145	800	22.0
		May 6, 1975	a 140	850	23.5
		June 12, 1975	a 155	900	23.5
		Sept. 12, 1975	a 148	710	23.0
2-0618-05	220615159183701	Jan. 10, 1975	38	260	23.5
		Mar. 6, 1975	39	270	22.0
		May 2, 1975	38	290	22.0
		June 10, 1975	39	270	23.5
		July 29, 1975	38	280	23.5
		Sept. 10, 1975	38	275	23.0
2-1020-03	221038159203801	June 10, 1975	a 20	220	21.5
2-1126-02	221151159265001	Jan. 14, 1975	16	200	23.5
		Mar. 5, 1975	a 16	205	23.0
		June 10, 1975	a 16	210	--
		Sept. 9, 1975	14	205	24.0
2-1229-03	221201159293401	Nov. 4, 1974	a 21	240	23.0
		Mar. 4, 1975	a 20	180	22.0
		June 9, 1975	a 21	220	23.0
		July 28, 1975	a 20	220	23.0
		Sept. 9, 1975	a 17	220	22.5
2-1333-01	221318159335901	Nov. 4, 1974	19	240	21.0
		Jan. 13, 1975	a 21	200	21.5
		Mar. 4, 1975	a 19	210	21.5
		Apr. 30, 1975	a 19	225	21.5
		June 9, 1975	19	170	23.0
		July 28, 1975	a 18	220	22.5
		Sept. 9, 1975	19	200	23.5
2-5427-01	215454159274201	Jan. 9, 1975	a 25	240	24.0
		June 11, 1975	a 27	250	22.5
		Aug. 11, 1975	a 26	265	23.0
		Sept. 17, 1975	26	250	23.0
2-5530-03	215535159302601	Nov. 7, 1974	a 24	260	22.0
		Jan. 9, 1975	a 23	210	23.0
		June 13, 1975	a 24	225	22.5
		Aug. 8, 1975	a 24	230	22.5
		Sept. 17, 1975	a 22	230	22.5

a Well being pumped.

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WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF KAUAI--Continued			
2-5534-03	215522159342601	Nov. 6, 1974	a 44	540	24.0
		Jan. 9, 1975	a 46	450	24.0
		Mar. 13, 1975	a 42	510	24.0
		May 7, 1975	a 43	480	24.0
		June 13, 1975	a 41	490	23.0
		Aug. 8, 1975	a 38	460	23.5
		Sept. 17, 1975	a 38	475	23.5
2-5635-01	215635159355001	Nov. 7, 1974	a 139	850	23.0
		May 7, 1975	149	760	23.5
		Aug. 8, 1975	146	625	22.5
2-5840-02	215803159401201	Nov. 6, 1974	a 106	670	23.5
		Jan. 8, 1975	a 97	510	24.0
		Mar. 11, 1975	a 74	490	24.0
		Aug. 7, 1975	a 68	440	24.5
2-5943-01	215937159434201	Nov. 5, 1974	a 238	1,160	24.0
		Jan. 8, 1975	180	920	23.0
		Mar. 11, 1975	a 168	950	24.0
		May 6, 1975	a 182	980	23.5
		June 12, 1975	a 220	1,050	24.0
		Aug. 7, 1975	a 205	1,000	24.0
		Sept. 12, 1975	a 210	1,030	24.0
		HAWAII, ISLAND OF OAHU			
3-1646-01	211646157465201	Feb. 18, 1975	172	700	23.5
		Apr. 8, 1975	a 180	800	23.0
		May 20, 1975	a 175	840	22.0
		July 2, 1975	235	950	21.5
		Aug. 14, 1975	a 245	1,000	23.0
		Sept. 26, 1975	252	1,030	21.5
3-2042-13	212038157422501	Nov. 14, 1974	a 2,100	5,000	25.0
		Jan. 29, 1975	1,950	5,500	25.5
		Apr. 28, 1975	a 1,720	6,000	25.0
		Oct. 14, 1975	a 1,680	5,000	25.5
3-2153-02	212106157533701	Apr. 11, 1975	a 76	440	21.5
		May 23, 1975	66	380	22.0
		July 2, 1975	a 74	390	21.0
3-2155-04	212155157551001	Nov. 20, 1974	a 130	540	23.5
		Feb. 18, 1975	a 129	520	23.0
		Apr. 11, 1975	a 121	600	22.5
		Sept. 26, 1975	a 125	564	22.0
3-2255-35	212259157554201	Apr. 11, 1975	a 170	850	22.5
		May 23, 1975	a 182	850	21.5
		July 8, 1975	168	825	22.0
		Aug. 18, 1975	172	775	22.5
		Sept. 26, 1975	a 198	831	21.0
3-2300-11	212343158001001	Nov. 20, 1974	167	740	23.0
		Feb. 18, 1975	162	650	23.0
		Apr. 11, 1975	a 162	775	22.0
		May 23, 1975	163	780	22.0
		July 7, 1975	160	759	21.5
		Aug. 15, 1975	155	760	23.0
		Sept. 26, 1975	170	758	21.5
3-2357-21	212327157573901	Nov. 20, 1974	198	750	22.0
		Feb. 18, 1975	205	750	22.0
		Apr. 11, 1975	200	850	21.0
		May 23, 1975	198	850	21.0
		July 7, 1975	190	798	20.5
		Aug. 15, 1975	185	790	22.0
		Sept. 24, 1975	188	764	20.5
3-2358-02	212332157582201	Nov. 20, 1974	1,420	4,000	21.5
		Apr. 11, 1975	1,900	6,500	20.0
		May 23, 1975	1,800	6,000	20.5
		July 7, 1975	1,400	4,530	20.0
		Aug. 15, 1975	360	1,275	21.0
		Sept. 25, 1975	322	1,190	19.5

a Well being pumped.

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF OAHU--Continued			
3-2358-22	212342157584301	Nov. 20, 1974	136	550	21.0
		Feb. 14, 1975	195	700	21.0
		Apr. 11, 1975	164	700	20.5
		May 23, 1975	154	650	20.5
		July 7, 1975	146	627	20.0
		Aug. 15, 1975	129	600	21.0
		Sept. 25, 1975	129	575	19.5
3-2358-29	212343157584701	Nov. 20, 1974	265	925	20.5
		Feb. 14, 1975	640	1,800	21.0
		Apr. 11, 1975	475	1,700	20.0
		May 23, 1975	405	1,500	20.0
		July 7, 1975	335	1,220	19.5
		Aug. 15, 1975	240	920	20.5
		Sept. 25, 1975	172	745	19.5
3-2359-05	212336157591801	Nov. 20, 1974	445	1,350	22.5
		Feb. 14, 1975	595	1,800	22.5
		Apr. 11, 1975	540	2,000	21.5
		May 23, 1975	520	2,000	21.5
		July 7, 1975	470	1,690	21.5
		Aug. 15, 1975	415	1,500	22.5
		Sept. 25, 1975	380	1,420	21.5
3-2550-01	212556157500301	Nov. 14, 1974	18	140	23.0
		Mar. 20, 1975	18	150	23.0
		Apr. 23, 1975	a 19	140	22.5
		Apr. 30, 1975	a 19	145	22.5
		June 13, 1975	19	140	23.0
		Sept. 11, 1975	a 18	150	23.5
3-2558-10	212506157582301	Nov. 20, 1974	156	600	22.0
		Feb. 18, 1975	158	600	22.0
		Apr. 11, 1975	149	650	21.0
		May 22, 1975	141	650	21.5
		July 7, 1975	a 147	630	21.0
		Aug. 18, 1975	158	675	22.0
		Sept. 25, 1975	a 160	683	21.0
3-2603-01	212617158033801	Nov. 21, 1974	20	340	22.0
		Feb. 18, 1975	50	330	23.0
		Apr. 14, 1975	47	350	22.0
		May 27, 1975	49	360	22.5
		July 7, 1975	a 49	302	22.0
3-2901-07	212927158014801	Oct. 4, 1974	18	160	22.5
		Nov. 21, 1974	19	170	22.5
		Jan. 15, 1975	18	185	23.0
		Feb. 28, 1975	19	180	23.0
		Mar. 28, 1975	18	170	23.0
		June 30, 1975	20	175	21.5
		Aug. 11, 1975	19	180	21.5
		Sept. 17, 1975	18	170	23.0
3-3251-01	213243157510001	Nov. 15, 1974	235	900	22.5
		Dec. 24, 1974	235	850	23.0
		Feb. 19, 1975	230	820	23.0
		Mar. 19, 1975	225	950	22.5
		Apr. 21, 1975	228	950	22.0
		June 13, 1975	230	950	23.0
		Sept. 11, 1975	235	925	23.0
3-3352-01	213327157524401	Nov. 15, 1974	38	260	23.0
		Dec. 23, 1974	36	260	23.0
		Feb. 19, 1975	37	260	23.0
		Mar. 19, 1975	37	280	22.0
		May 1, 1975	36	280	22.5
		June 13, 1975	36	265	23.0
		Sept. 11, 1975	37	270	23.0

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LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISIAND OF OAHU--Continued			
3-3409-16	213438158091101	Nov. 19, 1974	162	760	23.5
		Jan. 13, 1975	165	800	23.0
		Feb. 21, 1975	160	800	22.5
		Apr. 7, 1975	162	810	23.0
		May 16, 1975	164	755	23.0
		June 27, 1975	170	815	22.0
		Aug. 12, 1975	165	800	22.0
		Sept. 26, 1975	165	780	21.5
3-3553-07	213513157534701	Nov. 15, 1974	68	330	22.0
		June 13, 1975	52	300	21.5
		Sept. 11, 1975	62	320	22.0
3-3655-01	213656157550401	Nov. 15, 1974	54	280	24.5
		Dec. 24, 1974	34	225	22.0
		Feb. 19, 1975	34	225	22.0
		Mar. 19, 1975	34	240	21.5
		May 2, 1975	32	250	21.0
		June 12, 1975	34	235	21.5
		Sept. 11, 1975	a 34	250	22.0
3-3956-04	213902157561601	Nov. 15, 1974	57	340	22.0
		Dec. 23, 1974	58	320	22.5
		Feb. 19, 1975	59	340	22.0
		Mar. 19, 1975	60	370	21.5
		May 2, 1975	62	380	21.5
		June 12, 1975	70	400	22.0
		Sept. 10, 1975	78	400	22.5
3-4057-01	214050157573301	Dec. 23, 1974	a 104	460	22.0
		Mar. 19, 1975	a 98	530	21.0
		May 2, 1975	a 90	460	21.5
		June 12, 1975	a 83	500	21.5
		Sept. 11, 1975	a 117	520	21.0
3-4100-01	214157158000101	May 2, 1975	a 370	1,400	20.5
		Sept. 11, 1975	a 1,650	5,000	21.0
3-4258-04	214233157583501	Nov. 15, 1974	540	1,700	23.0
		Dec. 23, 1974	540	1,500	23.5
		Feb. 19, 1975	535	1,525	23.0
		Mar. 19, 1975	540	1,900	22.5
		May 2, 1975	540	2,000	22.5
		June 12, 1975	550	2,000	22.5
		Sept. 10, 1975	540	1,850	24.0
		HAWAII, ISIAND OF MOLOKAI			
4-0449-01	210402156495801	Oct. 16, 1974	a 53	310	21.5
		Jan. 28, 1975	a 56	300	21.0
		May 6, 1975	a 56	320	20.5
		July 7, 1975	a 60	330	21.0
4-0457-01	210419156570501	Oct. 16, 1974	a 84	400	22.5
		Jan. 27, 1975	a 82	380	23.0
		May 6, 1975	a 57	320	22.5
		July 7, 1975	a 72	340	23.0
4-0601-01	210605157012001	Oct. 18, 1974	32	340	23.5
		Dec. 13, 1974	28	300	24.0
		Jan. 29, 1975	30	270	24.5
		Apr. 9, 1975	28	280	23.5
		June 11, 1975	16	220	23.5
		Aug. 6, 1975	21	240	24.0
4-0603-01	210638157032601	Oct. 18, 1974	675	3,000	24.0
		Jan. 29, 1975	650	2,400	21.5
		May 6, 1975	590	2,400	22.0
		July 8, 1975	700	2,500	24.0

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CHEMICAL ANALYSES OF SAMPLES COLLECTED AT GROUND WATER SITES
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF MOLOKAI--Continued			
4-0700-01	210711157000501	Oct. 31, 1974	a 470	1,700	23.0
		June 10, 1975	110	475	--
4-0801-01	210856157011201	Dec. 12, 1974	77	374	--
		Jan. 29, 1975	63	310	21.0
		June 10, 1975	80	374	--
4-0901-01	210903157013001	Oct. 30, 1974	41	226	--
		Dec. 11, 1974	42	232	--
		Dec. 27, 1974	42	228	--
		Jan. 29, 1975	60	260	21.5
		Feb. 19, 1975	42	228	--
		Mar. 10, 1975	42	229	--
		Aug. 7, 1975	44	233	--
		Sept. 8, 1975	42	224	--
		HAWAII, ISIAND OF MAUI			
6-3806-01	203835156065001	Oct. 25, 1974	215	--	--
		Sept. 9, 1975	205	800	--
6-4126-02	204126156262101	Nov. 4, 1974	460	1,850	20.0
		Jan. 22, 1975	460	1,700	20.5
		Mar. 17, 1975	485	1,800	19.5
		May 22, 1975	465	1,800	20.5
		July 21, 1975	510	1,850	20.0
		Sept. 11, 1975	465	1,750	21.5
6-4600-01	204601156001501	Oct. 1, 1974	110	520	21.5
		Nov. 19, 1974	112	580	21.0
		Jan. 7, 1975	114	560	21.5
		Mar. 4, 1975	110	520	21.0
		May 13, 1975	98	540	21.0
		July 9, 1975	104	560	21.0
		Aug. 28, 1975	108	520	21.5
6-4627-14	204635156270101	Nov. 18, 1974	275	1,350	23.5
		Dec. 3, 1974	275	1,350	23.5
		Jan. 22, 1975	280	1,300	23.5
		Mar. 17, 1975	280	1,350	23.0
		July 21, 1975	275	1,325	23.5
6-4937-01	204931156371201	Nov. 1, 1974	1,400	4,660	--
		Dec. 4, 1974	1,000	3,500	25.0
		Jan. 31, 1975	1,180	3,950	--
		Feb. 28, 1975	530	2,020	--
		Mar. 27, 1975	540	2,060	--
		Apr. 25, 1975	640	2,350	--
		May 30, 1975	1,150	3,850	--
		June 27, 1975	1,200	4,000	--
		Aug. 1, 1975	1,250	4,090	--
		Aug. 28, 1975	1,250	3,910	--
6-5128-02	205102156282501	Oct. 15, 1974	400	1,880	--
		Nov. 18, 1974	400	1,850	24.0
		Dec. 16, 1974	420	2,080	--
		Apr. 16, 1975	430	2,000	--
		May 14, 1975	410	1,950	--
		June 16, 1975	420	1,920	--
		July 15, 1975	420	1,940	--
		Aug. 15, 1975	420	1,960	--
		Sept. 14, 1975	420	1,960	--
6-5330-10	205329156305501	Mar. 18, 1975	56	420	22.5
		May 23, 1975	55	380	23.0
		July 22, 1975	54	380	22.5
6-5339-02	205320156394501	Oct. 9, 1974	230	1,000	21.5
		Jan. 17, 1975	208	925	21.5
		Mar. 14, 1975	200	925	21.0
		July 17, 1975	298	1,100	21.0

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WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF MAUI--Continued			
6-5522-01	205511156222101	Oct. 15, 1974	290	1,250	--
		Nov. 18, 1974	290	1,300	23.0
		Dec. 16, 1974	225	1,060	--
		Apr. 16, 1975	265	1,170	--
		May 14, 1975	275	1,210	--
		June 18, 1975	295	1,240	--
		July 15, 1975	295	1,270	--
		Aug. 15, 1975	295	1,250	--
		Sept. 14, 1975	305	1,290	--
6-5640-01	205651156401001	Nov. 1, 1974	775	2,770	--
		Dec. 4, 1974	195	850	20.5
		Jan. 15, 1975	185	809	--
		Jan. 31, 1975	158	692	--
		Feb. 28, 1975	350	1,340	--
		Mar. 27, 1975	355	1,370	--
		Apr. 25, 1975	410	1,560	--
		May 30, 1975	450	1,670	--
		June 27, 1975	460	1,720	--
		Aug. 1, 1975	480	1,780	--
		Aug. 28, 1975	480	1,780	--
		HAWAII, ISLAND OF HAWAII			
8-0335-01	190347155354301	Mar. 3, 1975	a 9.0	123	19.0
		June 11, 1975	a 9.5	122	18.5
8-0831-02	190832155310901	Oct. 7, 1974	183	655	18.0
		Dec. 19, 1974	179	660	18.0
8-1128-02	191108155281701	Oct. 7, 1974	10	112	19.0
		Dec. 19, 1974	10	115	19.5
8-3080-02	193017154502101	June 26, 1975	90	825	25.0
8-3557-01	193510155570801	Feb. 5, 1975	a 20	170	20.0
		May 1, 1975	38	230	19.5
		Aug. 27, 1975	18	160	19.5
8-3802-03	193805155020201	Oct. 24, 1974	a 4	80	19.0
		Jan. 13, 1975	a 5.0	85	18.5
		Apr. 1, 1975	6.5	85	18.5
		May 13, 1975	5.0	86	18.5
		July 22, 1975	5.0	82	19.0
		Sept. 17, 1975	6.0	80	18.5
8-3900-01	193937155004301	Oct. 24, 1974	a 71	325	18.5
		Jan. 13, 1975	38	220	18.5
		Mar. 18, 1975	38	220	19.0
		May 13, 1975	42	225	19.0
8-4003-01	194037155035301	Nov. 7, 1974	a 4	80	22.0
		Jan. 17, 1975	a 4	86	20.0
		Apr. 1, 1975	8	93	20.5
8-4203-06	194222155034801	Feb. 11, 1975	a 13	118	20.5
		Sept. 11, 1975	19	122	23.5
8-5005-02	195043155053801	Dec. 18, 1974	a 20	190	22.0
		Feb. 12, 1975	a 14	170	22.5
		Mar. 27, 1975	13	170	22.0
		May 8, 1975	17	172	22.0
		June 27, 1975	16	172	22.5
		Aug. 22, 1975	17	170	22.0
8-5814-01	195857155142301	Dec. 17, 1974	107	450	19.0
		Feb. 12, 1975	a 96	395	18.5
		Mar. 27, 1975	89	380	18.5
		May 16, 1975	92	450	19.0
		July 17, 1975	93	430	19.0
		Sept. 18, 1975	100	450	18.5

a Well being pumped.

CHEMICAL ANALYSES OF SAMPLES COLLECTED AT GROUND WATER SITES
WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

LOCAL IDENTIFIER	STATION NUMBER	DATE	DISSOLVED CHLORIDE (CL) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
		HAWAII, ISLAND OF HAWAII--Continued			
8-6049-03	200039155494001	Oct. 22, 1974	a 4,620	13,500	25.0
		Dec. 9, 1974	2,750	8,500	25.0
		Apr. 10, 1975	5,000	14,000	25.0
		May 22, 1975	5,120	14,600	25.0
		July 17, 1975	5,250	15,000	25.0
8-7446-01	201428155464901	Oct. 17, 1974	980	2,350	22.5
		May 2, 1975	800	2,900	22.0
		July 9, 1975	850	2,800	22.5
		Aug. 26, 1975	825	2,600	22.0
8-7650-01	201603155502201	Oct. 17, 1974	99	480	24.0
		Dec. 10, 1974	106	480	23.0
		Feb. 7, 1975	150	680	22.0
		May 2, 1975	165	850	22.0
		July 9, 1975	205	1,050	23.0
		Aug. 26, 1975	195	940	23.0
8-7652-01	201603155521801	Oct. 17, 1974	440	1,475	22.0
		Dec. 10, 1974	430	1,450	22.0
		Feb. 7, 1975	480	1,500	22.0
		May 2, 1975	530	1,900	22.0
		July 9, 1975	520	1,820	22.0
		Aug. 26, 1975	450	1,900	22.0

a Well being pumped.

PART 3. GROUND-WATER RECORDS

ISIAND OF OAHU

211718157490801 (3-1749-07 tube E, formerly 25E) state of Hawaii. Kaimuki High School ground, Kaimuki Ave., Honolulu. Drilled observation artesian basal-water well in basalt of Koolau Volcanic Series, Pliocene (?) age, diam 3/4 in. (1.9 cm) sampling tube, depth 378 ft (115 m). MP top of iron cover 0.5 ft (.2 m) above ground, 14.85 ft (4.53 m) above msl. Highest water level, 28.88 ft (8.80 m) Feb. 6, 1957; lowest, 19.51 ft (5.95 m) Aug. 31, 1962. Records available: 1957, 1961-75.

Instantaneous water levels in feet above mean sea level

	1974		Feb.	18	23.70	July	2 25.76
Oct.	16	24.64		26	25.72		9 24.97
Nov.	19	25.05	Mar.	20	25.27	Aug.	13 24.42
	25	25.76	Apr.	8	25.35		18 24.81
Dec.	16	26.01		17	25.95	Sept.	30 24.40
	1975		May	27	25.95		
Jan.	21	26.22	June	18	25.76		

212154158015201 (3-2101-03, formerly 266) Hawaii Meat Co., Honouliuli. Drilled observation artesian basal-water well in basalt of Koolau Volcanic Series Pliocene (?) age, diam 10 in. (25 cm), depth 355 ft (108 m), cased to 165 ft (50 m). MP top of lowest horizontal flange 11.16 ft (3.40 m) above msl. Highest water level, 29.16 ft (8.89 m) April 1918; lowest, 11.51 ft (3.51 m) Oct. 15, 1973. Records available: 1910-21, 1923-75.

Instantaneous water levels in feet above mean sea level

	1974		Apr.	14	16.79	Sept.	29 13.48
Nov.	21	15.52	May	27	16.39		
	1975		July	7	15.63		
Feb.	18	18.08	Aug.	18	14.04		

212238157561101 (3-2256-10, formerly 187B) U. S. Navy, Aiea. Drilled industrial artesian basal-water well in basalt of Koolau Volcanic Series, Pliocene (?) age, diam 12 in. (30 cm), depth 173 ft (53 m), cased to 143 ft (44 m). MP top of 10 in. (25 cm) stilling pipe for water-level recorder, 26.15 ft (7.97 m) above msl (since Sept. 9, 1968). Highest water level 25.90 ft (7.89 m) by mercury piezometer Jan. 16, 1928; lowest, 14.02 ft (4.27 m) from recorder chart Oct. 11, 1973. Records available: 1928-31, 1934-75. Recording gage installed Sept. 9, 1968.

Maximum, mean, and minimum water levels for the day in feet above mean sea level from recorder chart

		Maximum	Mean	Minimum
1974				
Oct.	5	17.22	17.18	17.13
	10	17.24	17.19	17.16
	15	17.25	17.18	17.10
	20	17.37	17.34	17.30
	25	17.27	17.24	17.20
	31	17.35	17.32	17.25
Nov.	5	17.52	17.49	17.46
	10	17.58	17.54	17.50
	15	17.54	17.50	17.45
	20	17.57	17.55	17.52
	25	17.90	17.87	17.84
	30	18.14	18.10	18.03
Dec.	5	18.24	18.22	18.18
	10	18.24	18.16	18.09
	15	18.09	18.06	17.98
	20	18.17	18.15	18.12
	25	18.34	18.31	18.28
	31	18.41	18.38	18.32
1975				
Jan.	5	18.53	18.50	18.48
	10	18.62	18.59	18.54
	15	18.75	18.73	18.67
	20	18.93	18.92	18.89
	25	18.98	18.94	18.88
	31	19.03	18.98	18.93

212238157561101 (3-2256-10, formerly 187B)--Continued

		Maximum	Mean	Minimum
1975				
Feb.	5	19.45	19.41	19.38
	10	19.50	19.43	19.38
	15	19.35	19.31	19.26
	20	19.22	19.21	19.18
	25	19.15	19.11	19.03
	28	18.99	18.98	18.94
Mar.	5	18.93	18.91	18.89
	10	18.85	18.78	18.69
	15	18.64	18.62	18.58
	20	18.55	18.52	18.50
	25	18.54	18.50	18.43
	31	18.70	18.68	18.64
Apr.	5	18.67	18.64	18.63
	10	18.67	18.64	18.61
	15	18.59	18.57	18.55
	20	18.59	18.56	18.54
	25	18.55	18.50	18.46
	30	18.40	18.37	18.33
May	5	18.40	18.36	18.32
	10	18.37	18.32	18.26
	15	18.15	18.11	18.08
	20	18.07	18.02	17.94
	25	17.92	17.86	17.81
	31	17.72	17.68	17.64
June	5	17.63	17.61	17.56
	10	17.47	17.42	17.36
	15	17.33	17.31	17.28
	20	17.10	17.06	16.96
	25	17.11	17.08	17.02
	30	17.13	17.08	17.03
July	5	17.23	17.18	17.12
	10	16.92	16.87	16.79
	15	16.81	16.76	16.72
	20	16.83	16.76	16.72
	25	16.57	16.54	16.50
	31	16.39	16.36	16.32
Aug.	5	16.33	16.28	16.20
	10	16.25	16.22	16.17
	15	16.07	16.02	15.97
	20	15.98	15.91	15.85
	25	15.96	15.88	15.80
	31	15.88	15.84	15.77
Sept.	5	15.75	15.70	15.63
	10	15.70	15.65	15.60
	15	15.63	15.59	15.54
	20	15.51	15.47	15.42
	25	15.42	15.37	15.32
	30	15.37	15.33	15.30

212927158014807 (3-2901-07, formerly SH 4) U. S. Army. Kamehameha Highway and Wilikina Drive, Wahiawa. Dug domestic high-level water-table well in basalt of Koolau Volcanic Series, Pliocene (?) age, size 8 x 8 ft (2 x 2 m), length of 30-degree inclined shaft 1148 ft (350 m), lined with concrete in upper part, pump chamber at bottom of shaft. MP top of pump chamber floor at recorder, 287.00 ft (87.48 m) above msl. Highest water level, 284.40 ft (86.69 m) May 12, 1969; lowest, 273.17 ft (83.26 m) Mar. 11, 1946. Records available: 1936-75. Recording gage installed Nov. 1938.

Maximum non-pumping water levels for the day in feet above mean sea level from recorder chart

	1974			1975			May	1	279.86
Oct.	1	279.18	Jan.	1	278.97		June	1	280.27
Nov.	1	279.22	Feb.	1	279.18		July	2	280.30
	30	279.24	Mar.	1	279.30			13	280.20
Dec.	1	279.24	Apr.	1	279.46		Sept.	28	279.03

ISIAND OF OAHU--Continued

213455158065301 (3-3406-01, formerly 326) Waialua Sugar Co., Ltd. Weed Junction, Waialua. Drilled irrigation artesian basal-water well in basalt of Koolau Volcanic Series, Pliocene (?) age, diam 6 in. (15 cm), depth 201 ft (61 m), cased to 114 ft (35 m). MP top of blind flange on well, 4.69 ft (1.43 m) above msl. Highest water level, 13.35 ft (4.07 m) Dec. 1914; lowest, 9.19 ft (2.80 m) Apr. 24, 1946. Records available: 1911-21, 1924-75.

Instantaneous water levels in feet above mean sea level

	1974		Feb.	19	11.92	Aug.	12 10.90
Nov.	6	11.26	Apr.	7	11.59		
	1975		May	16	11.13		
Jan.	13	12.01	June	27	10.71		

213446158104901 (3-3410-08, formerly 286) Waialua Sugar Co., Ltd. Near Dillingham Air Force Base, Mokuleia. Drilled observation artesian basal-water well in basalt of Waianae Volcanic Series, Pliocene (?) age, diam 1 in. (2.5 cm), depth 447 ft (136 m), cased to 447 ft (136 m), perforated 410-447 ft (125-136 m). MP top of 12-in. (30 cm) stilling well, 20.53 ft (6.26 m) above msl. Highest water level, 19.98 ft (6.69 m) Jan. 5, 1969; lowest, 16.08 ft (4.90 m) Aug. 6, 1929. Records available: 1929-75. Recording gage was operated during the period Jan. 1963 to Feb. 1972.

Inetantaneous water levels in feet above mean sea level

	1974		Feb.	21	18.55	Aug.	12 18.18
Nov.	19	18.40	Apr.	7	18.10	Sept.	25 18.00
	1975		May	16	17.94		
Jan.	13	18.51	June	27	18.13		

ISIAND OF OAHU--Continued

214125158013401 (3-4101-03, formerly 337) State of Hawaii. Waialee, Kahuku. Drilled observation artesian basal-water well in basalt of Koolau Volcanic Series, Pliocene (?) age, diam 8 in. (20 cm), depth 61 ft (18 m), cased to 36 ft (11 m). MP top of 4-in. (10 cm) pipe, 21.89 ft (6.67 m) above msl. Highest water level, 15.60 ft (4.75 m) Nov. 14, 1932; lowest, 11.70 ft (3.57 m) May 27, 1947. Records available: 1929-75.

Instantaneous water levels in feet above mean sea level

	1974			1975		May	2 13.19
Nov.	15	13.12	Feb.	19	13.09	June	12 12.97
Dec.	23	13.17	Mar.	19	12.94	Sept.	10 13.27

ISIAND OF MOLOKAI

210605157012001 (4-0601-01, formerly 11) Molokai Ranch. Kaunakakai. Drilled observation basal water-table well in basalt of East Molokai Volcanic Series, Pliocene (?) age, diam 12 in. (30 cm), depth 59 ft (18 m), cased to 20 ft (6 m). MP top of 15-in. (38 cm) surface casing, 51.95 ft (15.83 m) above msl. Highest water level, 3.30 ft (1.01 m) Jan. 20, 1969; lowest, 1.6 ft (0.49 m) Jan. 20, 1969. Records available: 1954-75.

Instantaneous water levels in feet above mean sea level

	1974			1975		June	11 2.47
Oct.	18	2.78	Jan.	29	2.61	Aug.	6 2.51
Dec.	13	2.74	Apr.	9	2.57		

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