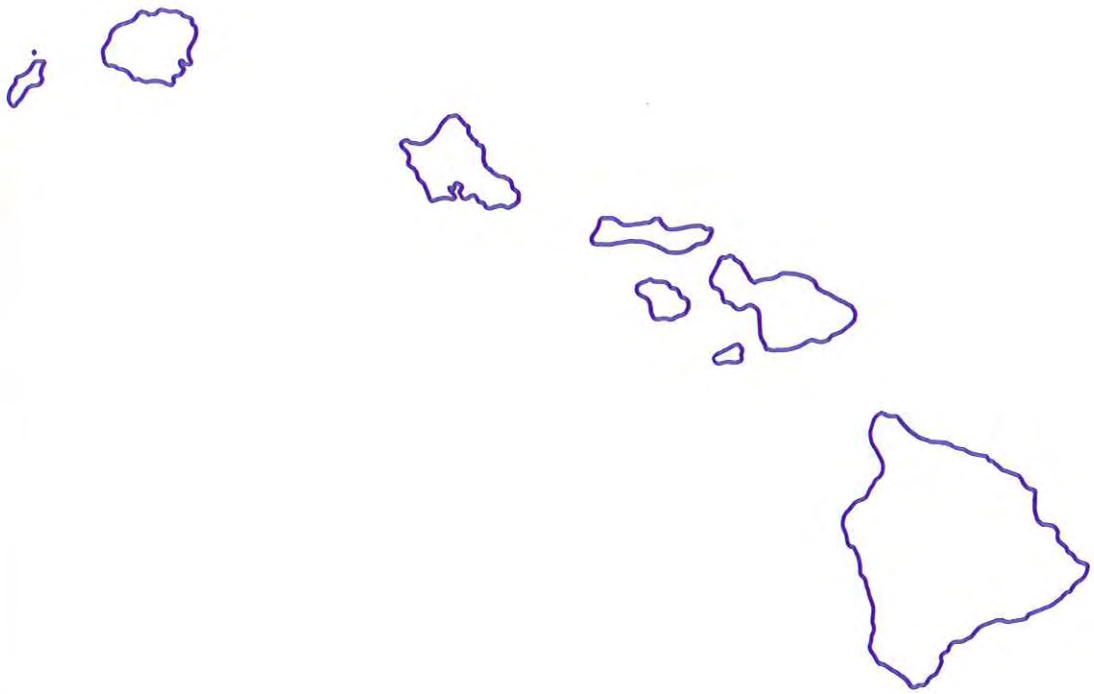
Water Resources Data Hawaii and other Pacific Areas Water Year 1986

Volume 1. Hawaii



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-86-1
Prepared in cooperation with the State of Hawaii Department of Land and Natural Resources, Division of Water and Land Development and with other agencies

CALENDAR FOR WATER YEAR 1986

1985

OCTOBER

S	M	T	W	T	F	S
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1986

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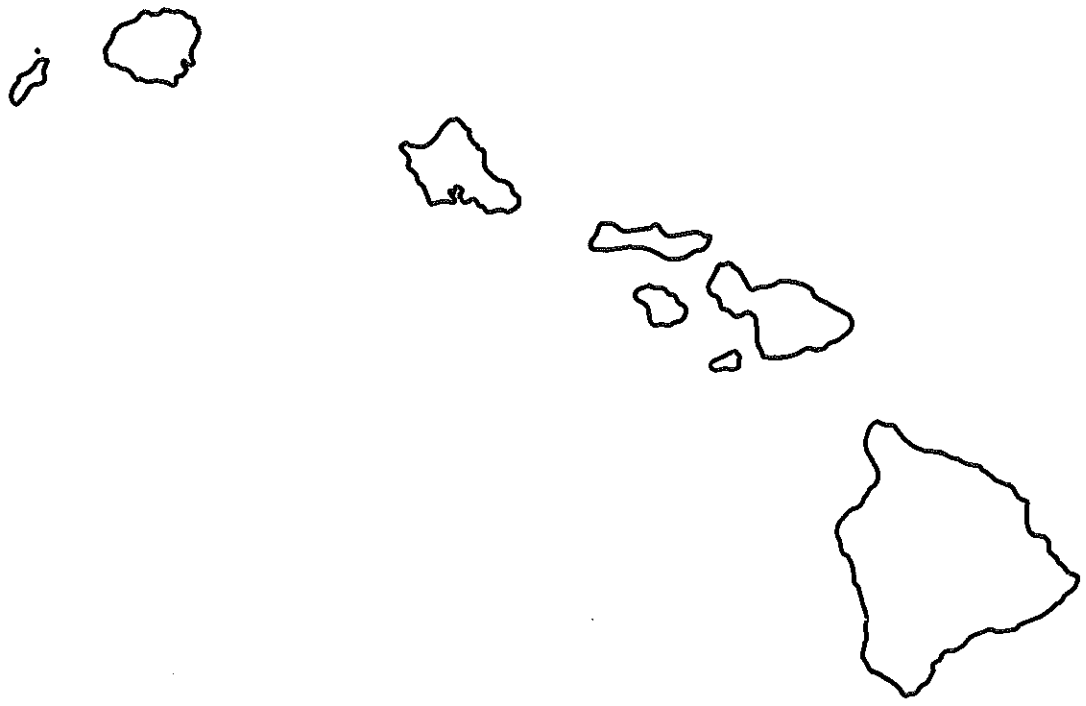
Water Resources Data Hawaii and other Pacific Areas Water Year 1986

Volume 1. Hawaii

by Salwyn S. Chinn, Grace A. Tateishi, and Johnson J.S. Yee



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-86-1
Prepared in cooperation with the State of Hawaii Department of Land and Natural Resources, Division of Water and Land Development and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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Honolulu, Hawaii 96850

1988

PREFACE

This volume of the annual hydrologic data report of Hawaii and other Pacific Areas is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Hawaii and other Pacific Areas are contained in two volumes:

Volume 1. Hawaii
Volume 2. Guam, Northern Mariana Islands, Federated States of Micronesia, Palau, and American Samoa.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

Reuben Lee
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Eugene S. Capellas
Lodie P. Celebrado
Richard H. Nakahara
Roy I. Taogoshi
Isao Yamashiro
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This report was prepared in cooperation with the State of Hawaii, the Governments of Guam, Northern Mariana Islands, Federated States of Micronesia, Palau, American Samoa, and with other agencies under the general supervision of William Meyer, District Chief, Hawaii.

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Water resources data for the 1986 water year for Hawaii and other Pacific Areas consist of records of stage, discharge, and water quality of streams and springs; and water levels and water quality in wells. This report, volume 1, contains discharge records for 83 gaging stations; water quality for 13 gaging stations, 73 partial-record flow stations, and 172 wells; and water levels for 40 observations wells. Also included are 107 crest-stage partial-record stations and 10 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, 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, Federal, and other agencies in Hawaii.

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SURFACE-WATER AND WATER-QUALITY STATIONS,
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

Letters after station name designate type of data:
(d) discharge, (c) chemical, (m) microbiological,
(t) water temperature, (s) sediment

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Letters after well number designate type of data:
(c) chemical, (t) water temperature, (w) water level

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WATER RESOURCES DATA FOR HAWAII AND OTHER PACIFIC AREAS, 1986

Volume 1

INTRODUCTION

Water resources data for the 1986 water year for Hawaii and other Pacific areas consist of records of stage, discharge, and water quality of streams, ditches, and springs; and water-levels and water quality of wells. This report, Volume 1, contains discharge records for 83 gaging stations; water quality for 13 gaging stations, 73 partial-record flow stations, and 172 wells; and water levels for 40 observation wells. Also included are 107 creat-stage partial-record stations and 10 low-flow partial-record stationa. Additional water data were collected at various sites, not part of the syatematic data collection program, 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, Federal, and other agencies in Hawaii.

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. Gaological 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 yeer 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." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

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 bases. 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.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a state-boundary basis. These official Survey reports 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-86-1." For archiving and general distribution, the reports for water years 1971-74 are also indentified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (808) 541-2820.

COOPERATION

The U.S. Geological Survey and organizations of the State of Hawaii have had cooperative agreements for the systematic collection of streamflow and ground water-level records since 1909, and for water-quality records since 1967. Organizations that supplied data are acknowledged in station descriptions. Organizations thet assisted in collecting data through cooperative sgreement with the Survey are:

Haweii Department of Land and Natural Resouroes, Division of Water and Land Development, Manabu Tagomori, Manager-Chief Engineer.
Hawaii Department of Health, John C. Lewin, Director.
City and County of Honolulu, Board of Water Supply, Kazu Hayashida, Manager and Chief Engineer.
City and County of Honolulu, Department of Public Works, Alfred J. Thiede, Director and Chief Engineer.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army and the Public Works, U.S. Navy.

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.

SUMMARY OF HYDROLOGIC CONDITIONS

Runoff during the 1986 year was deficient (lower 25 percent of record) at the index station on the island of Hawaii, normal on the stations on the islands of Kauai and Oahu, and excessive (upper 25 percent of record) at the station on the island of Maui.

Although streamflow at Kalihi Stream near Honolulu, Oahu, was deficient for December, January and February, ground-water levels at two index well sites on Oahu showed that the water level was only slightly below the normal range during the year.

Monthly and yearly mean discharges of tha four index stations are compared with their medians in figure 1.

Diesolved-solids concentrations at the six NASQAN (National Stream Quality Accounting Network) stations showed little change during the 1986 year from the previous year. Samples collected every other month showed dissolved-solids concentratione ranged from 13 to 321 mg/L (milligrams per liter) during 1986. Waikele Stream at Waipahu, Oahu, had the highest concentration values.

Average dissolved-oxygen concentrations ranged from 86 to 100 percent saturation. Waikele and Kalihi streems were the lowest at 70 and 81 percent, respectively.

Concentrations of trace metals were less than the maximum contaminant levels established by EPA (Environmental Protection Agency). Fecal coliform densities increased at five of the six NASQAN sites in Hawaii. Fecal coliform decreased about 52 percent only at the Halawa site on Molokai. Waikele Stream at Waipahu, Oahu had the highest fecal coliform density. The geometric-values were:

	Fecal Coliform (colonies per 100 milliliters)	
NASQAN Station	1985	1986
Waimea River at Waimea, Kauai	280	470
Waikele Stream at Waipahu, Oahu	7,900	14,200
Kalihi Stream at Kalihi, Oahu	6,600	8,430
Halawa Stream near Halawa, Molokai	120	58
Kahakuloa Stream at Kahakuloa, Maui	21	28
Wailuku River at Hilo, Hawaii	46	61
Benchmark Station		
Honolii Stream near Papaikou, Hawaii	14	27

Analyses of water samples taken at more than 140 basal water-table wells generally did not show significant changes in chloride concentration.

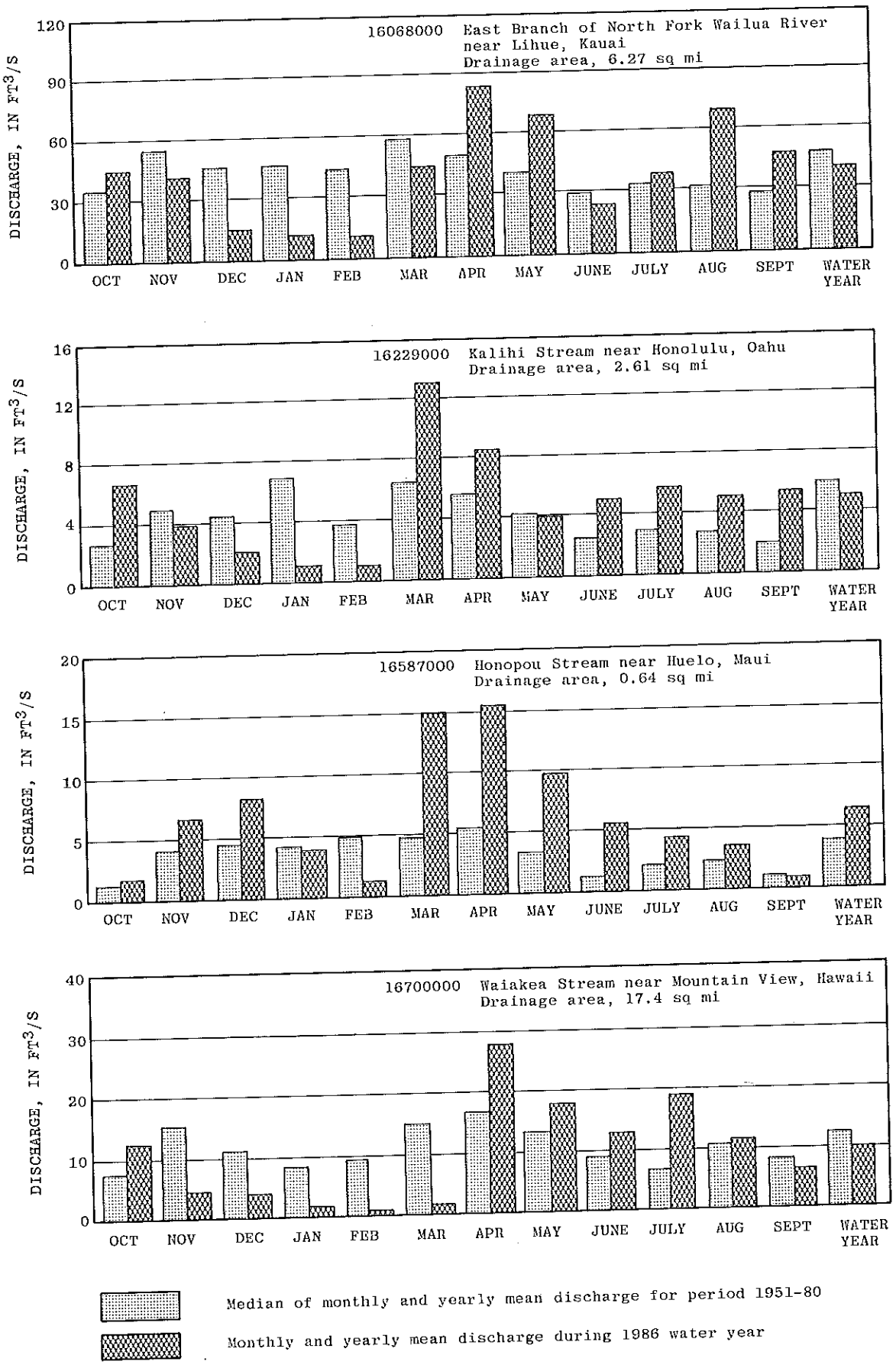

FIGURE 1. DISCHARGE DURING 1986 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR PERIOD 1951-80 FOR FOUR REPRESENTATIVE GAGING STATIONS.

DEFINITION OF TERMS

Definition of terms related to streamflow, water-quality, and other hydrologic data 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 meters.

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

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, 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 withing 24 hours when incubated at 35°C ± 0.5°C on M-Endoagar (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 warm-blooded 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 agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliter of of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacterial 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 ± 0.5°C on KF Streptococcus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

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

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

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

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

Wet mass is the mass of living matter plus contained water.

Bottom material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

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 multicelled and are counted according to the number of contained cells per sample, usually milliliters of liters (L).

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 2,447 cubic meters.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common 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 milliliters is determined by the immediate or delayed incubation membrane filter method.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

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.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (FT^3/S, ft^3/s) 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 meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic average of individual daily mean discharges during a specified 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 table is "DISCHARGE (CFS)."

Dissolved is that material in a representative water sample which passes through a 0.45 micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at a specific 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 river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more 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 hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Microgram per gram (µg/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Microgram per liter (µG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligram per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

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 all particles in transport in the stream. Most of the organic material 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 ssmple or population, in terms of types, numbers, mass, or volume.

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

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} radio-active disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

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 atreams are influenced by environmental factora. Some major factors are degree of slope, length of slope, soil charscteristics, 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 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 par liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment pasaes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, thst passes a section in a given time. It is computed by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total-sediment discharge (tons/day) is the sum of the suspended-aediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

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

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. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 porcent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) snd volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as stresmflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sedimsnt mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended recoverable is the amount of s given constituent that is insolution after the part of a rospresentative water-suspended sediment sample that is retained on a 0.45 micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparibility of anslytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituents.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyaes because diggerent digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. Thia term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended aediment mixture and that the analytical method determines all of the constituent in the sample.)

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrationa of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantitiss of water from the stream each day for the year.

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

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

Total load (tona) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Turbidity of a sample ia the reduction of transparency dur to the presence of particulate matter. in thie report it is expressed Nephelometric turbidity units (NTU).

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing s given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

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 main-stresm stations are listed before the first main-stream 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 sstation numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, the station number for a partial-record station inidcated 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 sstation, such as 16200000 which appears just

to the left of the station name includes the 2-digit number "16" plus the 6-digit downstream order number "200000." In this report, the records are listed in downstream order by islands. Locations of the stations are shown in figures 2, 4, 6, 8, and 10.

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 end 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 12.

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 13 and 14.

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.

Well locations on the islands of Kauai, Oahu, Molokai, Maui, and Hawaii are shown in figures 3, 5, 7, 9, and 11.

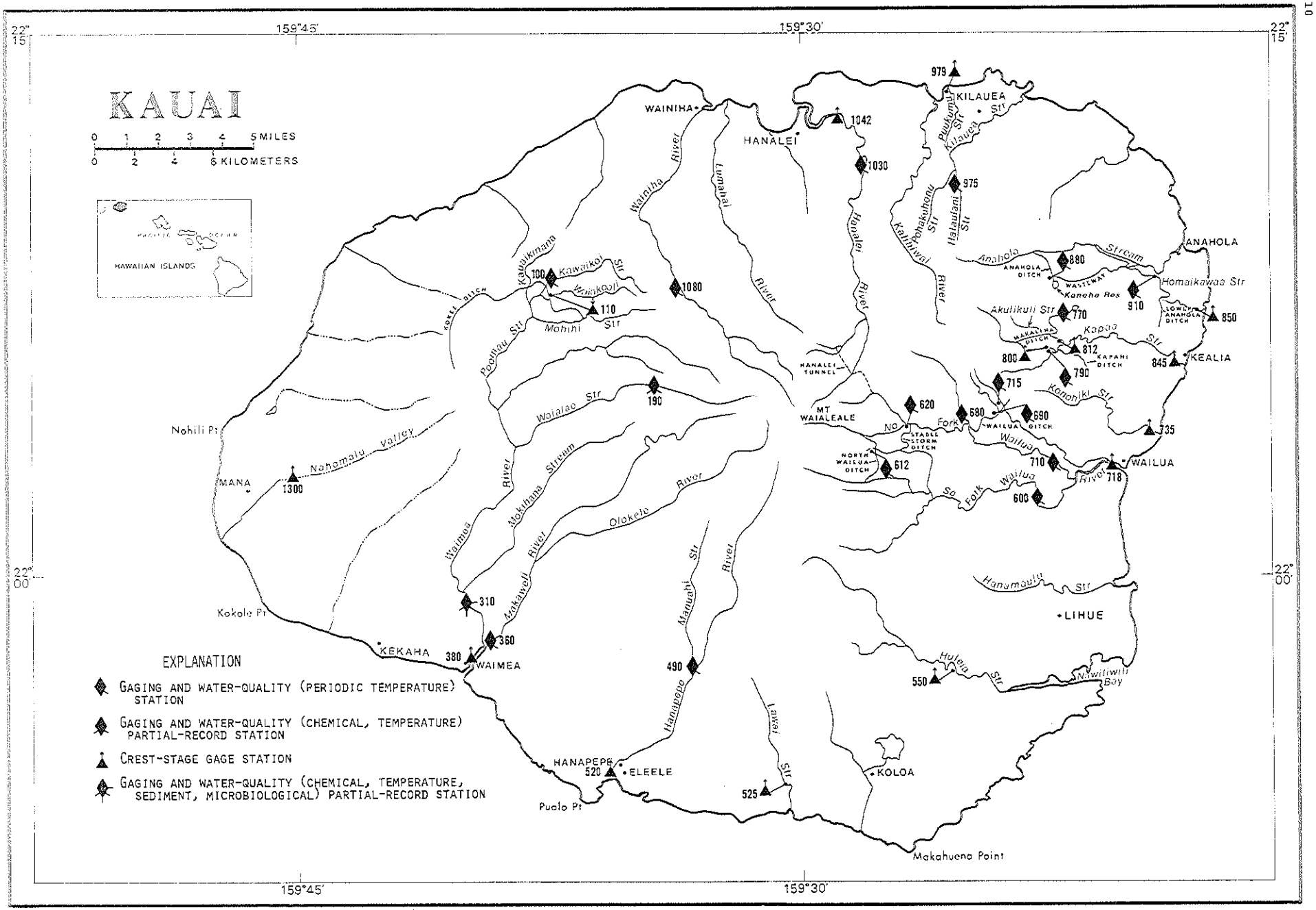

FIGURE 2.--LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS ON KAUAI.

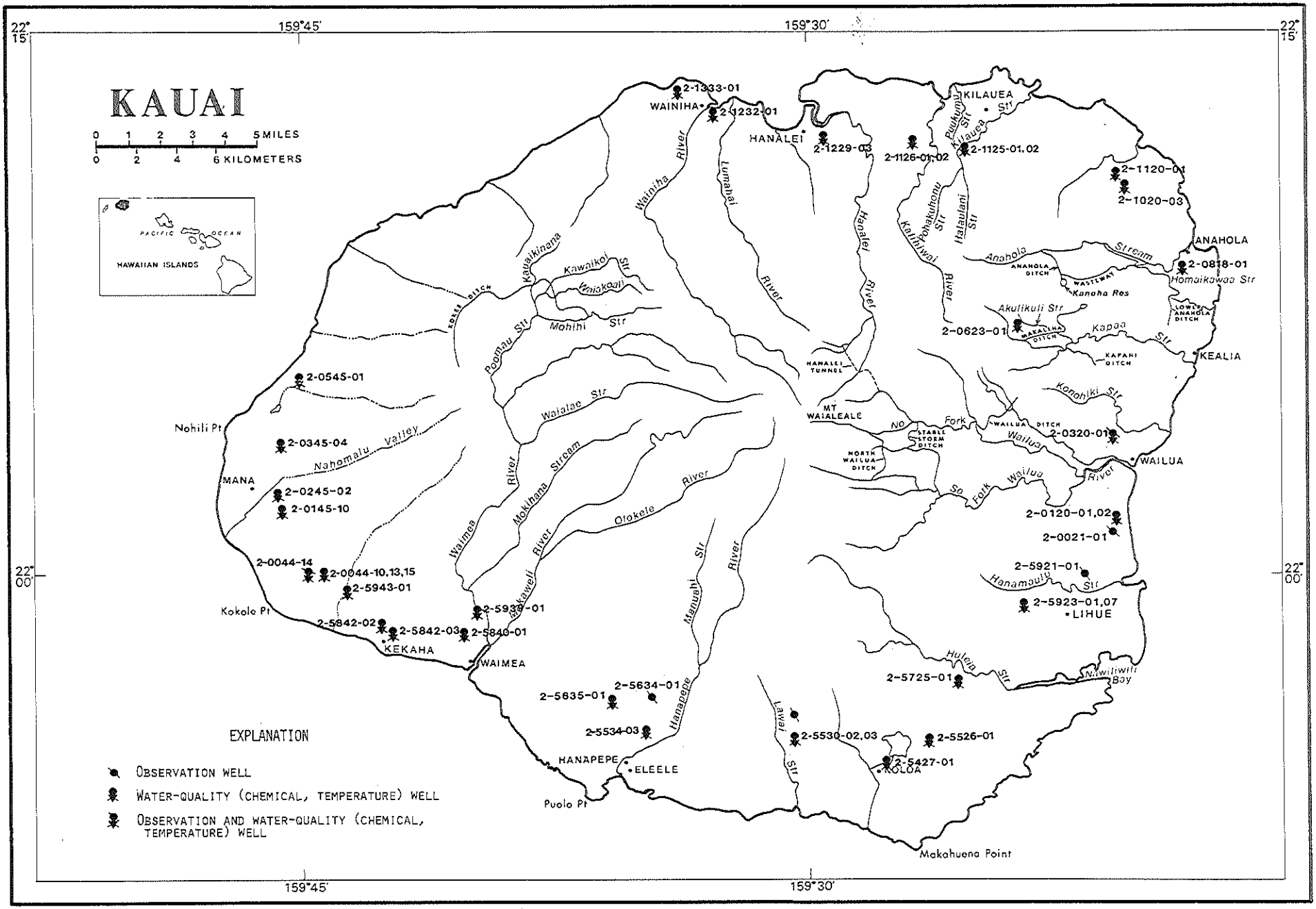

FIGURE 3.--LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER QUALITY SAMPLING SITES ON KAUAI.

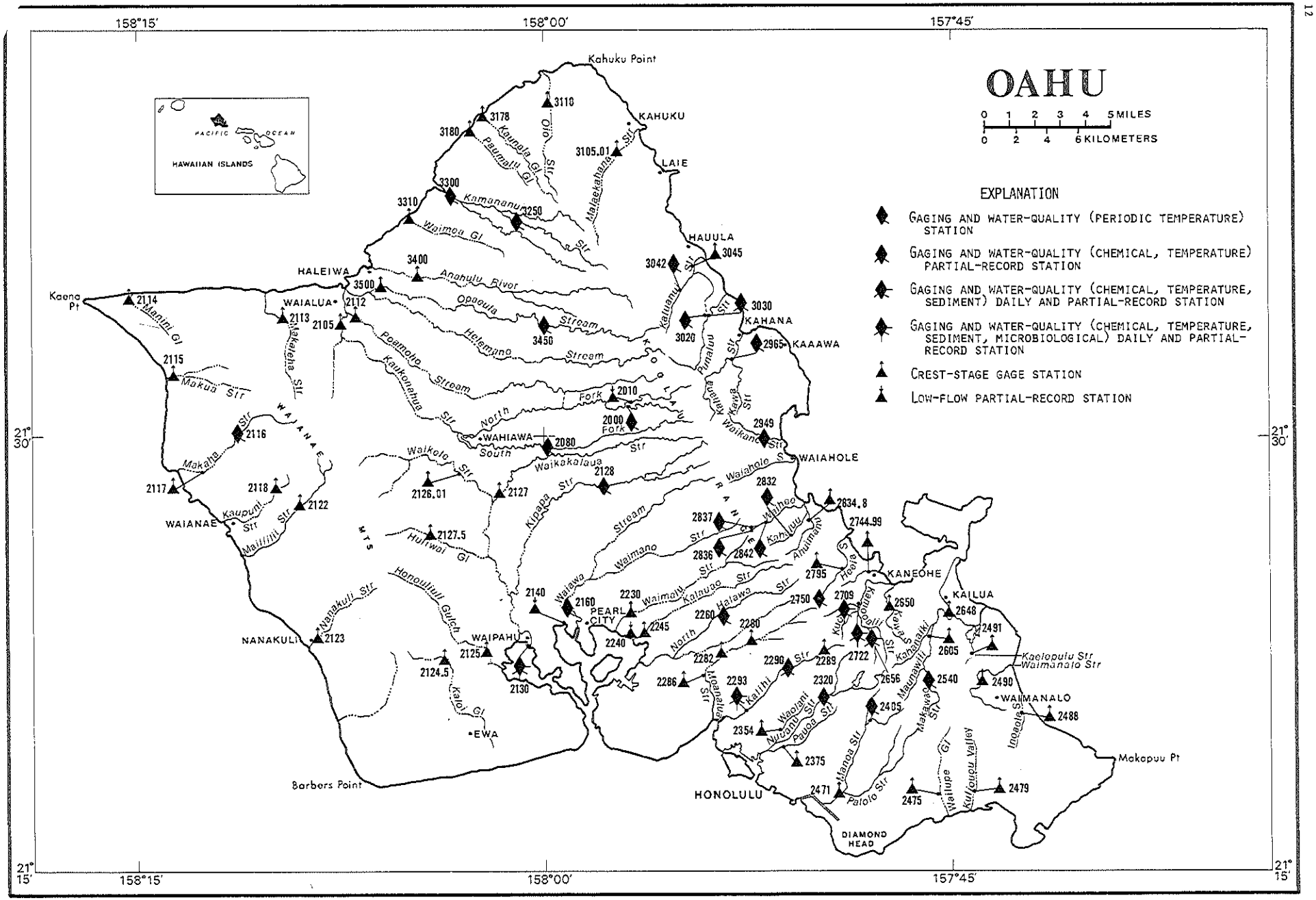

FIGURE 4.--LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS ON OAHU.

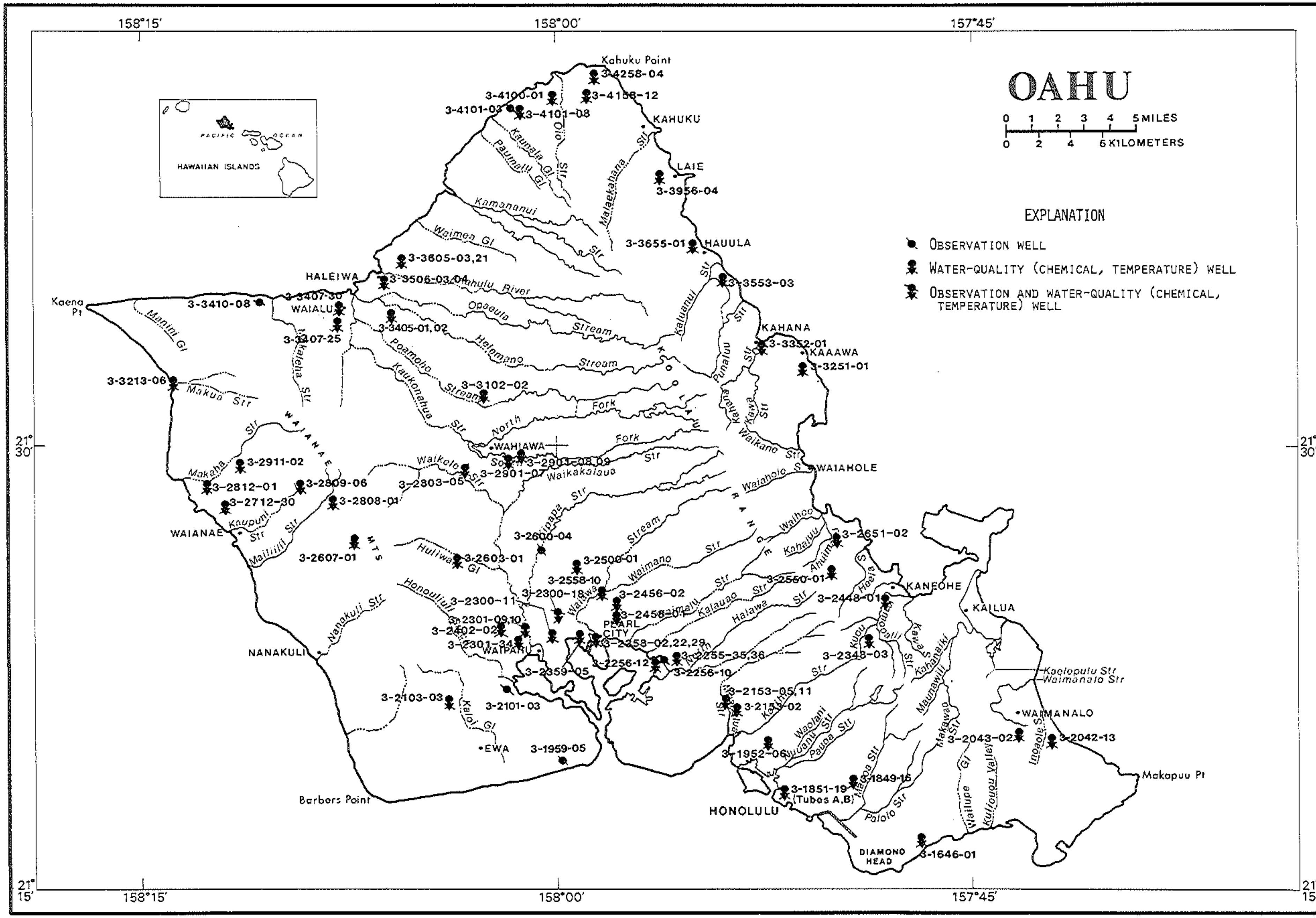

Figure 5.--Locations of observation wells and ground-water quality sampling sites on Oahu.

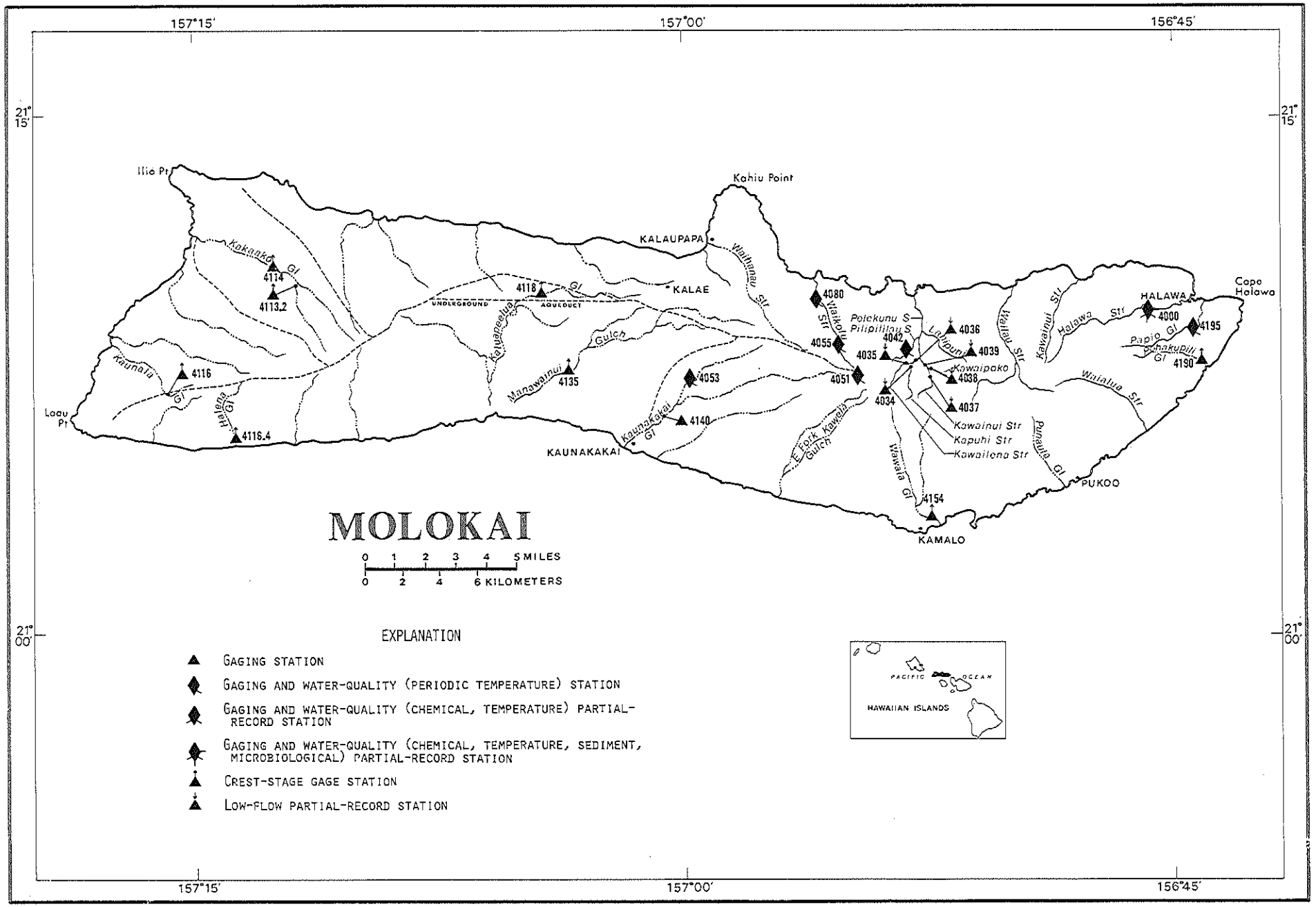

FIGURE 6.--LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS ON MOLOKAI.

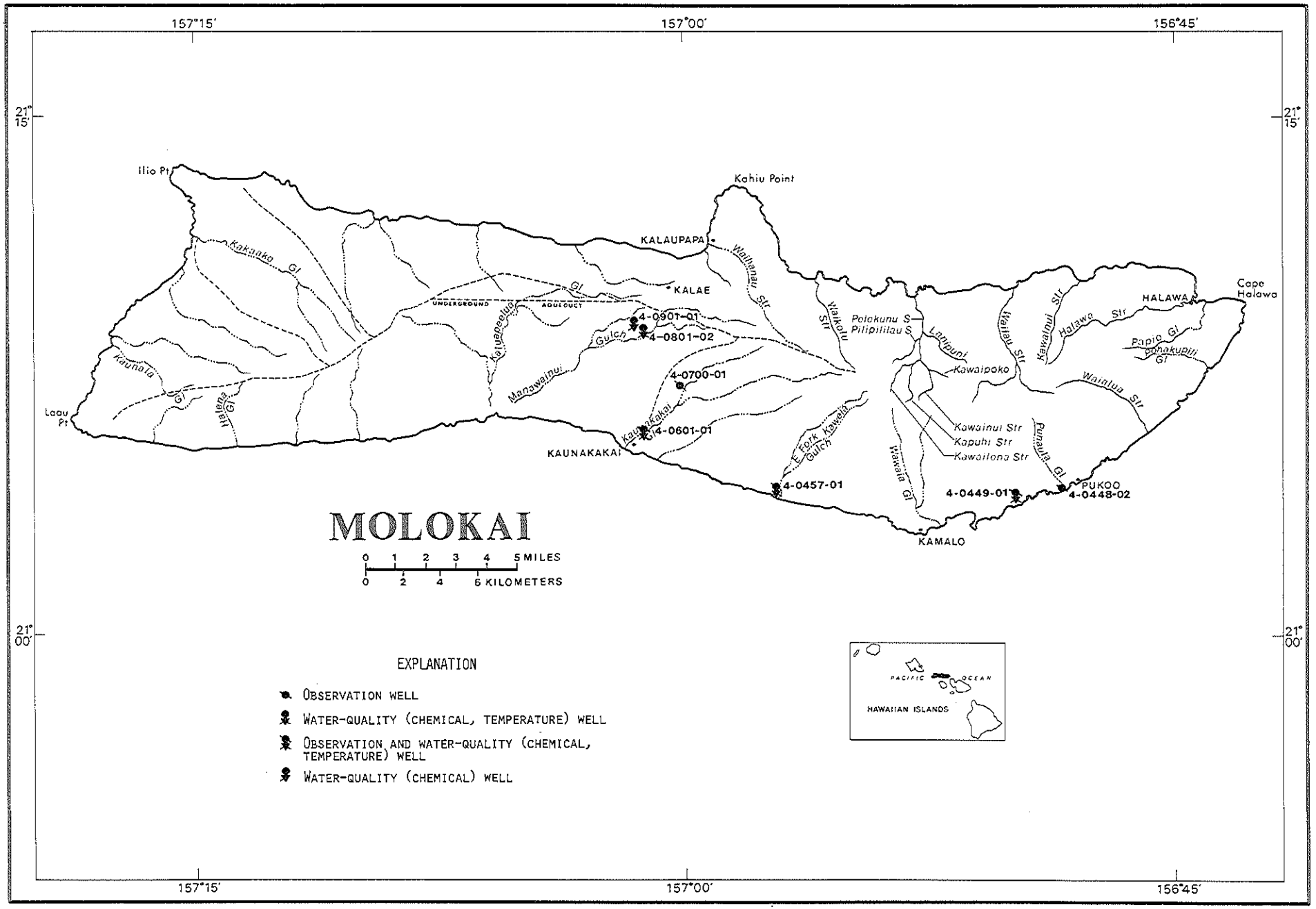

FIGURE 7.--LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER QUALITY SAMPLING SITES ON MOLOKAI.

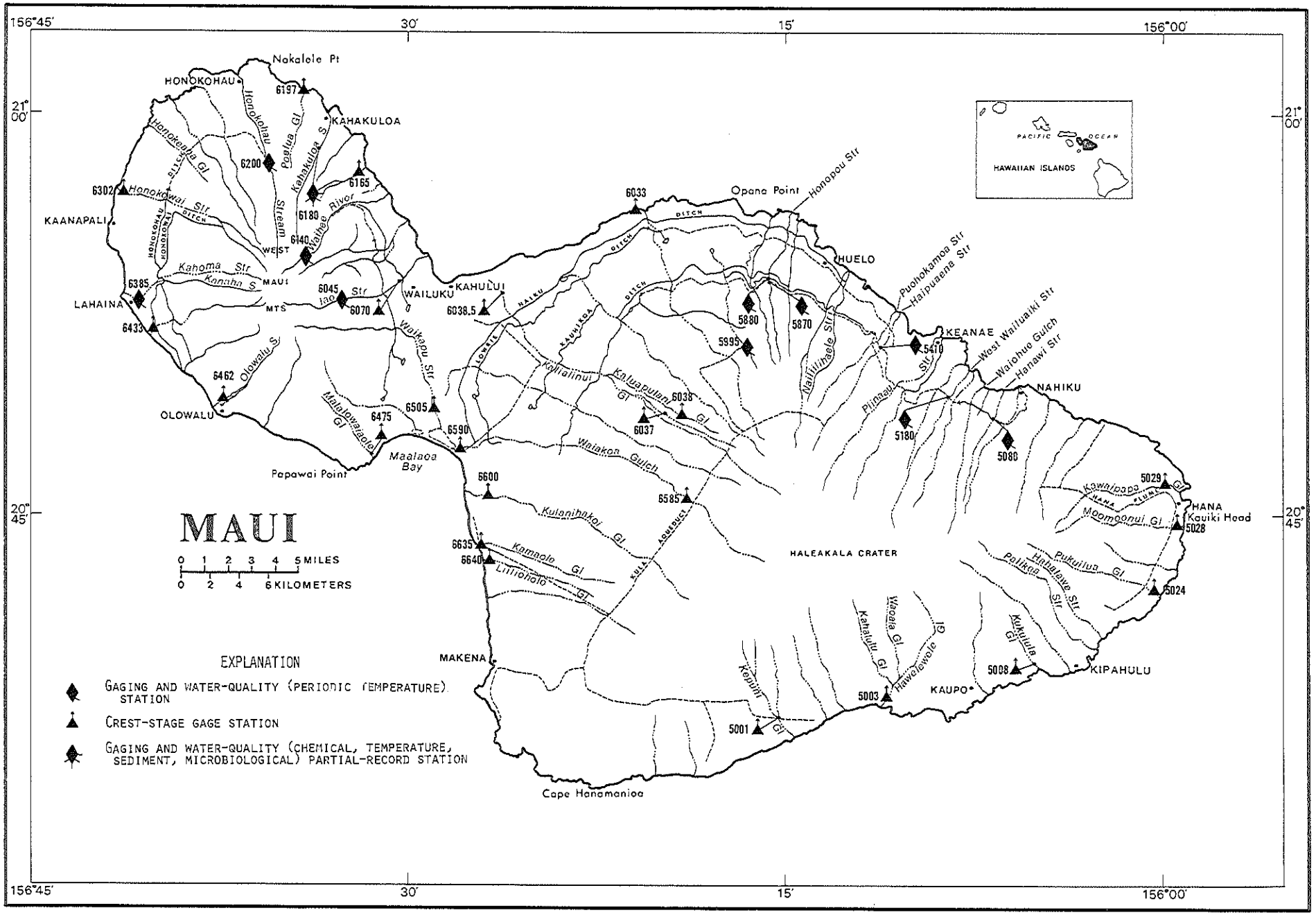

FIGURE 8.--LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS ON MAUI.

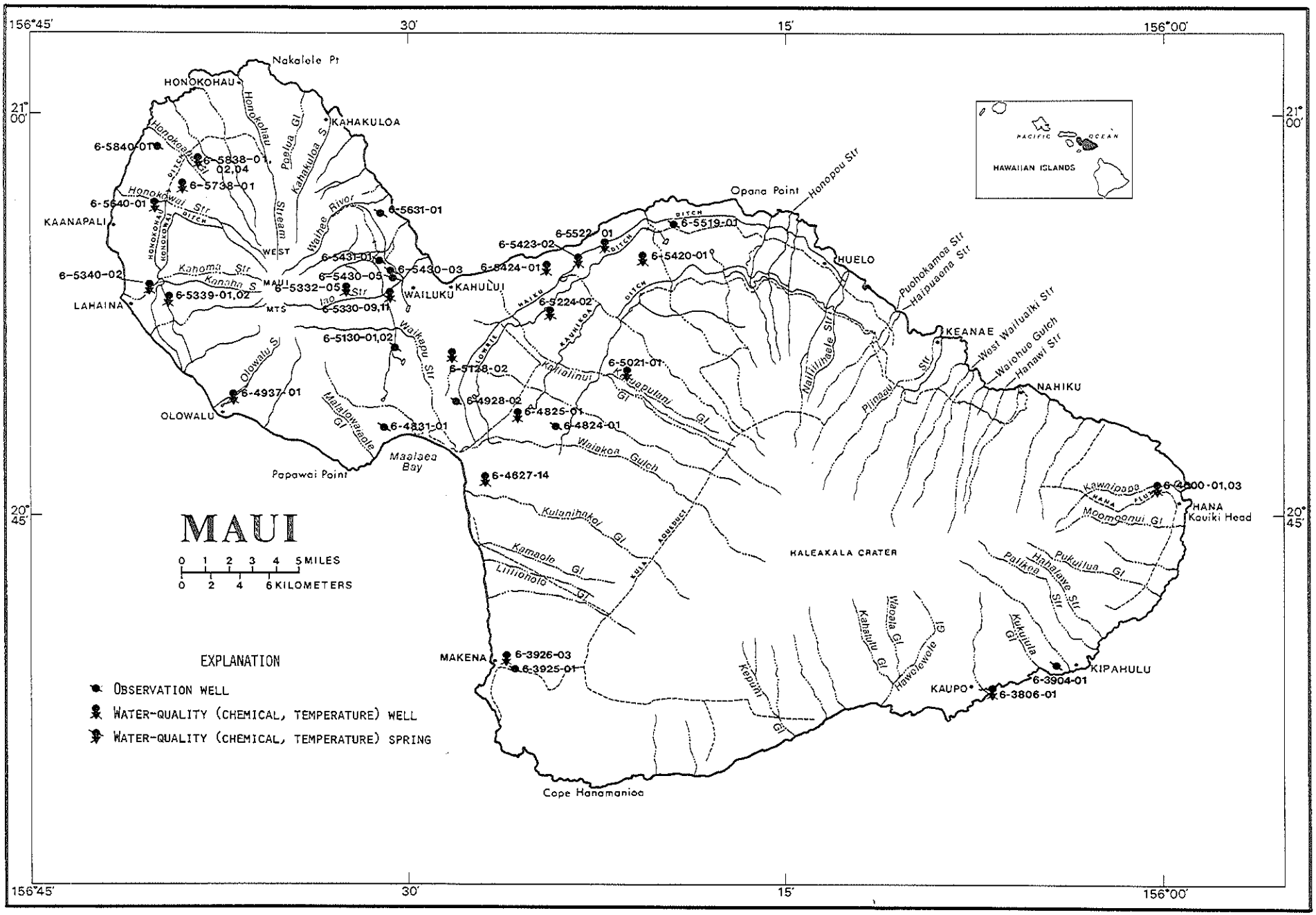

FIGURE 9.--LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER QUALITY SAMPLING SITES ON MAUI.

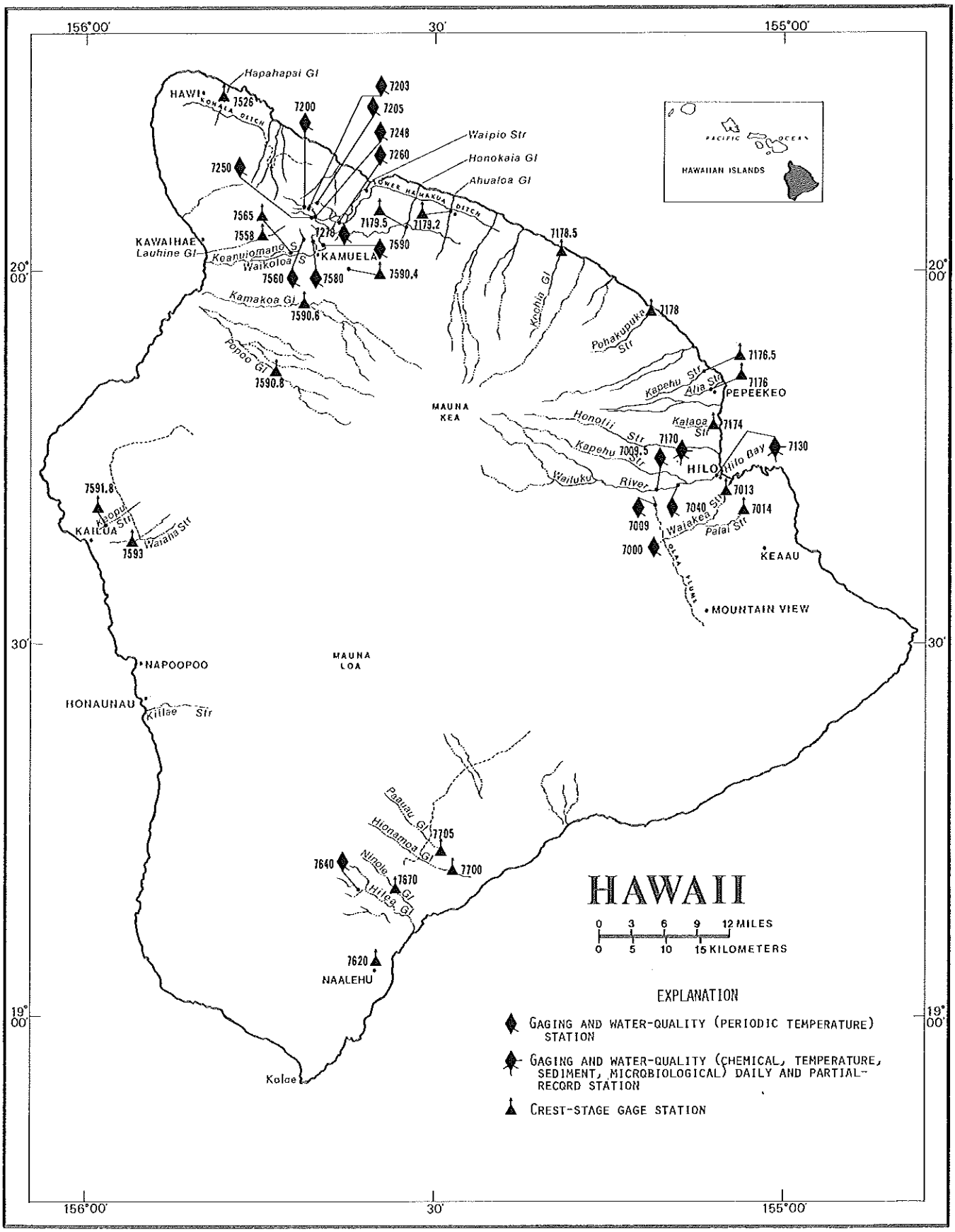

FIGURE 10.--LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS ON HAWAII.

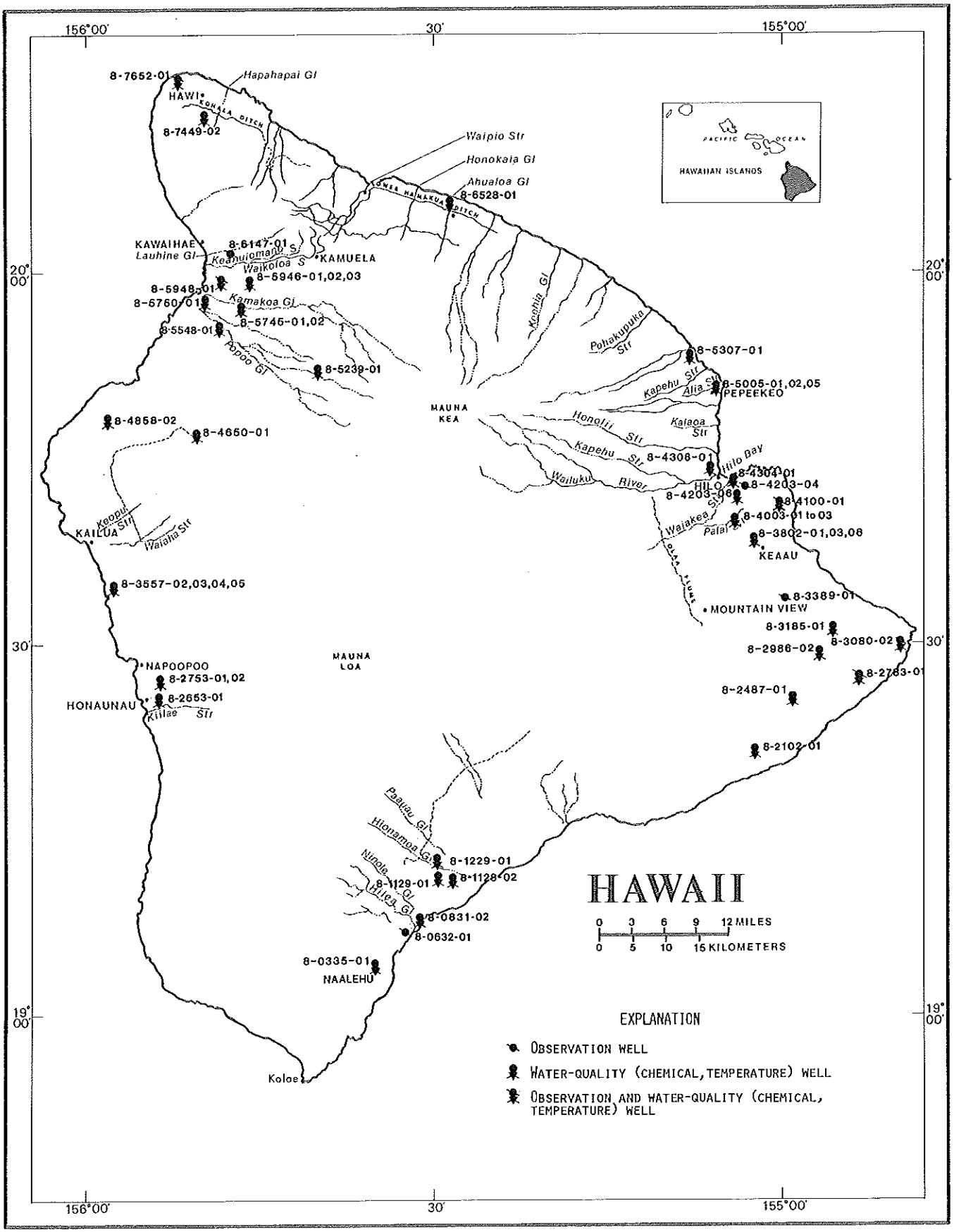

FIGURE 11.--LOCATIONS OF OBSERVATION WELLS AND GROUND-WATER QUALITY SAMPLING SITES ON HAWAII.

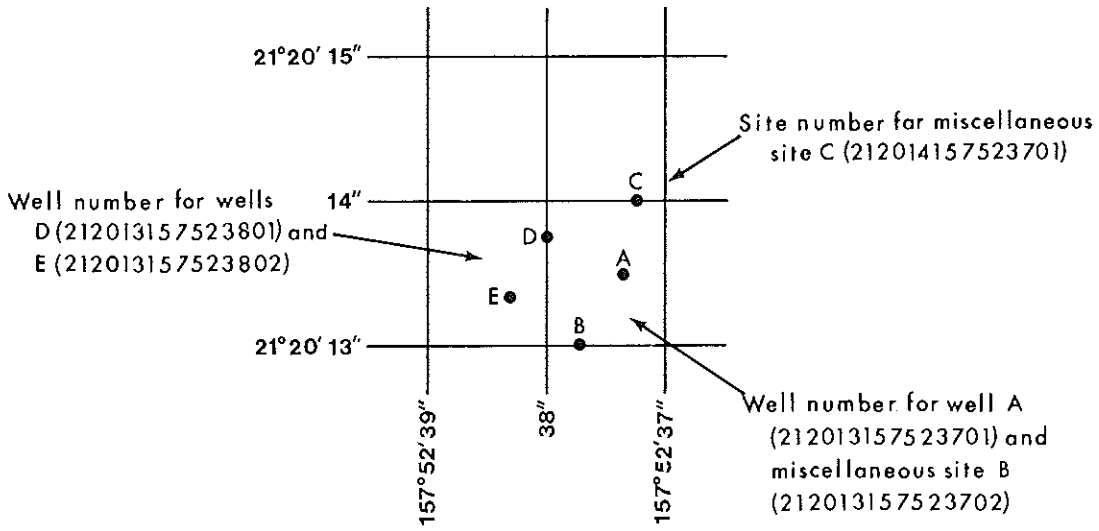

Figure 12. Sketch showing system for numbering wells and miscellaneous sites

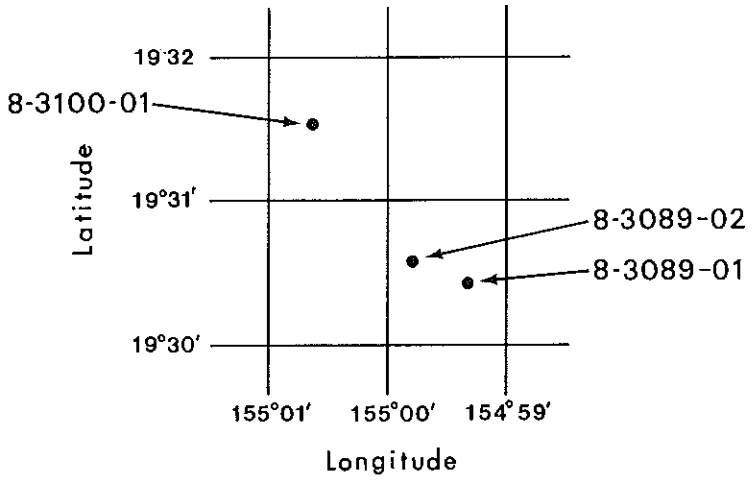

Figure 13. Sketch showing local well numbering system

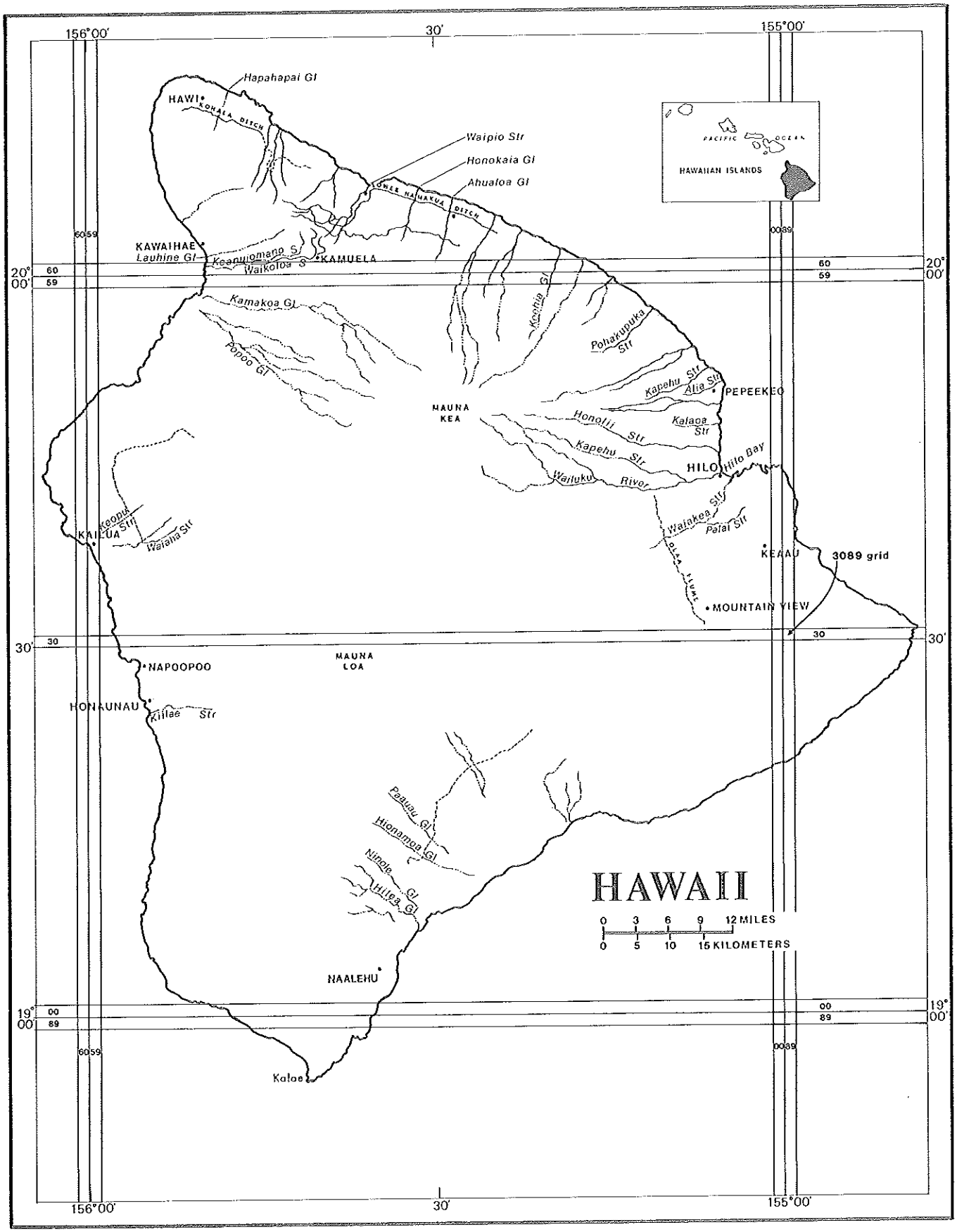

FIGURE 14.--MAP OF HAWAII SHOWING SYSTEM FOR NUMBERING LOCAL WELL NUMBERS.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely to be governed solely by natual conditions. Data collected at a bench-mark station may be used to aeparate 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 the 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.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stationa consist of records of stage and measurements of discharge of streams or csnals, and stage, surface area, and contents of lskes 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 either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intarvals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard text books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepsred from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dsms or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mesn discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent of continual change in the physical features that form the control, the daily mesn discharge is computed 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 rslation 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.

At some stream-gaging stations, the stsge-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope msthod in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

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 computed daily discharge or contents. This happens when the recorder stop or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations, in the same or nearby basins. Likewiae daily contents may be estimated on the basis of operator's log, prior and subssquent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging station on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow ststions snd for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general ramarks, average discharge, and extremes of discharge or contsnts. 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."

Previously published streamflow 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 "REVISED RECORDS" 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 water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the 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 discharge were revised. If the drainage area has been revised, the report in which the revised figures was first published is given.

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.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

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 station where changes to water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean diecharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will 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. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, 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 also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods 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 relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected.

For most gaging station on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of atage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge 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 atage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of diacharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow 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 interpretations 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 are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily dischsrges have less than "fair" accuracy.

Figures of daily mean discharge in thia report sre 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.

Diacharge at many stations, as indicsted by the monthly mesn, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decreass in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Records of discharge collected by agencies other than the Geological Survey

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintains an index of water-data sites not published by the Geological Survey. Information on records available at specific sites can be obtained upon request.

Other data availsble

Information of a more detailed nature than that published for most of the gaging stations such ss observations of water temperature, discharge measurements, gage-height records, and rating tables ia on file in the district office. Also most gsging-station records are availsble in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical anslyses may be obtained from the district office.

Publications

In each water-supply psper 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 srea. 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 ths 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 record not contsined in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gsps 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 Pscific areas are compiled in Water-Supply Paper 1319 through June 1950, in 1739 snd 1751 for July 1950 to June 1960, in 1937 for October 1959 to September 1965, and 2137 for October 1966 to September 1970.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The water-quality records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives periods of record for the various types of water-quality data (chemical, specific conductance, biological determination, water temperaturee, sediment discharge), period of record, and extremes of pertinent data, and general remarks.

For ground-water records, 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.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

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 through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating 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.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained several verticals in the cross section, or a single 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 subdivided 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 time 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were 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 were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, 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 qusntities of suspended sediment, records of the 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	2160
1965	1966	1968	2016		
1966	1996	1969	2150		

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitiude and (2) a local number that is provided for local needs. See figure 13.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

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 height of the measuring point (MP) above or below land-surface datum is given in each well description. 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 variation 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 reportd 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 in 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
1938	817	1943	991	1950	1170	1961-65	1855
1937	840	1944	1021	1951	1196	1966-70	2010
1938	845	1945	1028	1952	1228	1971-74	2162
1939	886	1946	1076	1953	1270		
1940	911	1947	1101	1954	1326		
1941	941	1948	1131	1955	1409		

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and RETrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

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General inquiries sbout WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open- File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A13. *Computation of continuous records of streamflow,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge,* by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*. by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*. edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*. by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*. by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*. by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*. by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

HAWAII, ISLAND OF KAUAI

16010000 KAWAIKOI STREAM NEAR WAIMEA

LOCATION.--Lat 22°08'09", long 159°37'22", Hydrologic Unit 20070000, on left bank 0.2 mi upstream from Kokee-Mohihi Road crossing, 2.5 mi east of Kokee Lodge, and 12.5 mi north of Waimea.

DRAINAGE AREA.--3.95 mi^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.

REVISED RECORDS.--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.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,420 ft, by barometer. Prior to May 26, 1910, nonrecording gage at site 300 ft downstream at different datum.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--69 years (water years 1912, 1914, 1920-86), 34.3 ft^3/s (24,850 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s Jan. 13, 1967, gage height, 15.33 ft, from rating curve extended above 470 ft^3/s on basis of slope-area measurements at gage heights 12.12 ft and 13.43 ft; minimum, 1.14 ft^3/s Sept. 21, 22, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,710 ft^3/s Nov. 15, gage height, 7.16 ft, no peak greater than base discharge of 2,100 ft^3/s; minimum, 2.8 ft^3/s Nov. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	2.9	94	6.4	6.7	6.9	14	12	12	16	7.2	11
2	7.6	2.8	32	6.4	5.8	6.5	65	9.7	14	13	7.9	8.8
3	5.6	3.0	20	6.3	4.4	6.3	151	9.1	16	11	14	8.0
4	4.4	3.1	17	6.4	31	7.4	168	96	18	13	9.2	7.6
5	3.7	6.3	15	6.5	10	6.2	48	92	37	11	7.1	7.6
6	3.5	5.1	13	12	6.2	5.6	80	21	15	8.4	6.2	7.1
7	9.2	5.5	12	14	5.0	5.4	222	13	12	7.1	5.8	7.1
8	5.6	175	11	8.2	4.4	5.0	317	11	10	16	6.1	7.4
9	3.8	68	9.9	6.6	4.6	4.6	315	12	7.8	85	7.9	6.8
10	3.3	21	9.2	6.0	5.0	4.5	637	37	7.3	54	37	18
11	33	11	8.5	5.6	26	4.3	148	13	11	40	79	16
12	20	7.9	8.0	5.9	9.4	21	54	10	12	39	45	12
13	6.0	6.6	7.6	5.8	6.0	221	40	8.9	7.8	170	14	25
14	4.2	8.5	7.3	5.1	5.0	80	29	8.6	6.9	44	24	16
15	15	301	7.5	4.7	43	42	24	8.9	7.1	32	15	7.9
16	13	44	7.7	4.9	23	37	21	8.3	17	17	13	6.4
17	12	19	7.2	56	8.6	23	21	7.6	155	22	9.0	5.8
18	5.8	14	6.6	19	6.3	155	26	7.3	29	26	7.6	5.4
19	4.2	20	6.2	8.4	5.5	28	18	7.0	39	18	67	5.2
20	6.5	13	6.0	6.4	4.9	94	16	6.6	39	14	36	5.0
21	14	10	7.5	5.6	20	243	15	6.2	35	11	12	135
22	5.8	8.5	6.8	5.1	154	123	15	6.0	14	9.2	8.5	22
23	4.2	7.6	57	4.7	18	76	14	5.9	24	8.3	7.4	11
24	3.8	7.1	134	5.1	10	48	14	6.8	52	16	6.9	7.8
25	3.6	131	26	5.1	33	42	12	13	65	22	6.6	7.3
26	3.3	68	13	4.4	13	110	11	10	24	12	6.2	6.5
27	3.1	153	9.7	4.2	8.6	45	11	18	23	8.8	5.9	5.9
28	3.0	82	8.3	4.0	7.4	21	10	28	14	10	38	6.1
29	2.9	35	7.6	4.7	---	16	9.7	79	14	12	159	6.7
30	3.1	90	7.1	5.0	---	16	13	60	18	11	60	5.7
31	3.0	---	6.5	5.7	---	18	---	20	---	8.0	15	---
TOTAL	239.2	1329.9	589.2	254.2	484.8	1521.7	2538.7	651.9	756.0	784.8	743.5	408.1
MEAN	7.72	44.3	19.0	8.20	17.3	49.1	84.6	21.0	25.2	25.3	24.0	13.6
MAX	33	301	134	56	154	243	637	96	155	170	159	135
MIN	2.9	2.8	6.0	4.0	4.4	4.3	9.7	5.9	6.9	7.1	5.8	5.0
AC-FT	474	2640	1170	504	962	3020	5040	1290	1500	1560	1470	809

CAL YR 1985	TOTAL	12472.0	MEAN	34.2	MAX	444	MIN	2.8	AC-FT	24740
WTR YR 1986	TOTAL	10302.0	MEAN	28.2	MAX	637	MIN	2.8	AC-FT	20430

16019000 WAIALAE STREAM AT ALTITUDE 3,820 FT, NEAR WAIMEA

LOCATION.--Lat 22°05'20", long 159°34'18", Hydrologic Unit 20070000, on left bank 5.0 mi northeast of mouth, 6.4 mi southeast of Kokee Lodge, and 11 mi northeast of Waimea.

DRAINAGE AREA.--1.79 mi^2.

WATER-DISCHARGE RECORDS

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 near Waimea.

REVISED RECORDS.--WSP 1937: 1921, 1922-32(M), 1953(M), 1954. WSP 2137: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,820 ft, from topographic map.

REMARKS.--Records good. No diversion upstream.

AVERAGE DISCHARGE.--45 years (water years 1921-31, 1953-86), 22.0 ft^3/s (15,940 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,530 ft^3/s Jan. 16, 1921, gage height, 8.44 ft, from rating curve extended above 1,100 ft^3/s on basis of slope-area measurement at gage height 4.60 ft; minimum, 0.99 ft^3/s May 17, 18, May 30 to June 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 870 ft^3/s Mar. 16, gage height, 3.74 ft, no peak greater than base discharge of 1,300 ft^3/s; minimum, 2.2 ft^3/s Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	2.3	42	3.0	2.8	3.4	11	6.8	5.0	9.2	4.0	4.0
2	5.2	2.2	16	3.0	2.6	3.2	32	5.2	4.5	6.0	3.8	3.5
3	6.8	2.3	8.8	2.9	2.4	3.0	64	5.0	4.0	4.5	3.8	3.0
4	4.8	2.3	6.4	2.9	39	3.4	156	28	3.8	33	3.5	3.0
5	3.0	2.6	5.5	2.8	6.4	3.0	38	67	5.2	11	3.5	2.9
6	2.6	2.6	4.8	2.9	3.8	2.9	36	10	5.2	6.0	2.9	2.8
7	8.9	12	4.2	2.8	3.2	2.9	71	6.8	4.8	4.8	2.8	2.9
8	4.5	131	3.8	2.8	2.9	2.8	124	5.2	4.5	6.4	4.7	11
9	2.9	40	3.5	2.8	3.0	2.6	90	15	3.8	33	5.8	4.8
10	2.6	6.4	3.5	2.6	2.8	2.6	401	30	3.5	25	19	9.0
11	26	5.0	3.2	2.4	3.0	2.4	248	8.0	4.0	38	84	11
12	13	3.8	3.2	2.4	2.6	2.8	34	14	3.8	19	45	6.8
13	4.5	3.2	3.0	2.3	2.6	13	36	10	3.4	18	20	9.5
14	3.8	21	2.9	2.3	3.0	32	17	11	3.4	14	22	7.6
15	3.4	156	3.0	2.3	27	29	14	11	4.0	178	9.6	7.1
16	7.7	18	3.0	3.0	6.4	146	12	8.8	5.5	20	6.4	6.8
17	11	8.8	2.8	91	3.8	15	20	6.4	23	12	4.8	4.0
18	4.0	10	2.8	12	3.0	40	28	5.5	39	13	4.2	3.4
19	2.9	11	2.8	5.2	2.9	11	9.2	5.2	14	8.4	65	3.0
20	30	6.0	2.6	4.0	2.6	9.6	8.4	4.8	10	6.8	32	2.9
21	19	4.8	2.6	3.4	75	49	6.4	4.0	27	5.8	8.4	2.6
22	5.8	3.8	2.6	3.0	96	31	8.8	3.5	11	5.0	5.6	3.5
23	3.5	3.5	89	3.0	11	16	19	3.4	8.4	4.8	4.8	8.0
24	3.4	3.2	62	2.9	6.4	9.2	16	3.8	8.8	5.2	4.0	8.0
25	5.0	7.3	11	2.8	5.8	7.6	29	3.5	37	14	3.5	6.4
26	4.8	14	6.4	2.8	5.0	10	15	3.4	11	8.4	3.2	3.8
27	3.2	89	4.8	2.6	3.8	12	24	3.4	6.8	6.0	3.0	3.0
28	2.8	62	4.0	2.6	3.5	6.4	23	3.4	5.5	5.5	4.2	4.0
29	2.8	14	3.5	2.9	---	5.2	12	8.1	5.0	7.6	19	3.8
30	2.6	56	3.4	2.8	---	18	8.8	18	25	6.8	27	4.2
31	2.4	---	3.0	2.8	---	16	---	6.8	---	4.8	6.0	---
TOTAL	212.5	686.1	320.1	187.0	332.3	511.0	1615.6	325.0	299.9	540.0	435.5	156.3
MEAN	8.85	22.9	10.3	6.03	11.9	16.5	53.9	10.5	10.0	17.4	14.0	5.21
MAX	30	156	89	91	96	146	401	67	39	178	84	11
MIN	2.4	2.2	2.6	2.3	2.4	2.4	8.4	3.4	3.4	4.5	2.8	2.6
AC-FT	421	1360	835	371	659	1010	3200	645	595	1070	864	310

CAL YR 1985	TOTAL	7257.1	MEAN	19.9	MAX	648	MIN	1.5	AC-FT	14390
WTR YR 1986	TOTAL	5621.3	MEAN	15.4	MAX	401	MIN	2.2	AC-FT	11150

16019000 WAIALAE STREAM AT ALTITUDE 3,820 FT, NEAR WAIMEA--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
16...	1000	3.2	36	6.20	16.0	8	5	1.2	1.2	4.2	52	.7
DEC												
20...	0945	2.5	--	6.60	12.5	7	3	1.0	1.0	4.0	55	.7
APR												
01...	0950	12	28	5.80	14.5	7	4	.99	1.0	3.7	52	.6
JUN												
02...	1040	4.4	32	5.70	15.0	9	5	1.8	1.1	4.0	47	.6
AUG												
22...	1000	5.9	27	5.80	18.0	6	0	.90	.90	3.7	55	.7

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
16...	.40	3.0	9.9	7.1	<.10	4.1	30	.04	<.10	290	2
DEC											
20...	.50	4.0	3.6	7.7	<.10	6.8	27	.04	<.10	140	4
APR											
01...	.70	3.0	14	7.2	<.10	3.1	33	.04	<.10	600	4
JUN											
02...	.50	4.0	11	6.2	<.10	4.1	32	.04	<.10	510	4
AUG											
22...	.50	6.0	13	5.8	<.10	4.3	33	.04	<.10	460	4

< Actual value is known to be less than value shown.

16031000 WAIMEA RIVER NEAR WAIMEA
(National stream-quality accounting network station)

LOCATION.--Lat 21°59'02", long 159°39'47", Hydrologic Unit 20070000, on right bank 1.3 mi upstream from Makaweli River and 1.9 mi north of Waimea Post Office.

DRAINAGE AREA.--57.8 mi^2.

WATER-DISCHARGE RECORDS

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 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 20.0 ft above mean sea level (Department of Water, County of Kauai bench mark). Prior to Oct. 5, 1911, nonrecording gage at site 1.0 mi downstream at different datum. Oct. 5, 1911, to Oct. 31, 1919, nonrecording gage at present site at different datum.

REMARKS.--Records good. Several upstream diversions for power and irrigation.

AVERAGE DISCHARGE.--45 years (water years 1911-17, 1945-68, 1970-72, 1976-86), 126 ft^3/s (91,290 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft^3/s Feb. 7, 1949, gage height, 19.3 ft, from rating curve extended above 5,200 ft^3/s on basis of slope-area measurements at gage heights 10.28 ft and 18.7 ft; practically no flow occasionally owing to upstream diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 19, 1974, which destroyed the station reached a stage of 19.05 ft, from floodmarks, discharge, 29,100 ft^3/s, from rating curve extended above 2,200 ft^3/s on basis of slope-area measurement at gage height 19.05 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,080 ft^3/s Nov. 15, gage height, 10.34 ft, no peak greater than base discharge of 8,700 ft^3/s; minimum, 4.9 ft^3/s Jan. 14, Mar. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	7.5	246	6.3	9.3	15	15	8.3	10	38	10	9.4
2	12	7.6	128	6.1	8.1	11	18	7.5	7.7	9.4	9.4	8.1
3	9.0	7.9	41	6.3	7.4	9.9	185	6.2	7.2	6.8	9.8	7.7
4	13	7.7	19	6.4	158	11	603	6.5	6.7	11	11	7.6
5	9.6	7.8	12	6.4	67	9.7	233	301	7.0	48	11	7.9
6	7.3	8.1	9.6	6.2	23	8.5	149	47	8.9	11	9.5	7.7
7	6.8	14	8.5	6.5	10	7.5	223	10	8.1	7.4	9.2	7.9
8	11	827	7.7	6.7	8.6	6.8	1270	7.0	7.4	6.6	9.2	9.3
9	8.4	518	7.2	6.7	10	6.4	468	9.7	7.1	39	13	18
10	6.6	71	7.0	6.4	9.6	5.9	1920	96	7.6	76	19	18
11	6.4	17	6.7	7.0	11	5.9	1380	35	8.7	57	356	26
12	55	9.5	6.5	7.1	10	6.2	221	14	8.3	43	390	26
13	13	7.2	6.5	6.8	8.8	110	149	21	8.1	66	49	20
14	8.0	7.3	6.1	5.8	8.4	202	84	16	7.0	136	57	57
15	7.2	1880	6.4	6.2	85	87	51	18	6.7	328	30	17
16	7.5	276	7.0	6.4	60	341	33	14	7.0	74	11	12
17	10	106	7.7	342	23	125	46	11	252	15	8.1	10
18	11	61	8.1	148	11	228	79	9.0	90	17	7.4	8.6
19	7.3	67	7.4	44	8.5	77	37	8.0	38	13	222	7.8
20	11	41	6.2	16	7.7	16	25	8.3	10	9.9	321	7.4
21	74	26	6.2	12	47	314	15	8.3	31	9.3	37	44
22	20	19	6.2	9.7	815	352	12	7.9	29	7.6	12	47
23	9.3	14	103	8.6	137	124	12	7.6	8.4	7.2	8.2	7.4
24	7.4	12	810	7.8	63	47	33	8.8	7.0	7.2	7.4	9.6
25	7.5	82	153	7.9	98	26	41	8.8	72	21	7.1	9.4
26	9.4	50	48	8.4	86	18	34	8.9	38	28	6.9	8.3
27	10	435	19	7.7	69	94	14	7.7	10	13	6.8	7.0
28	8.5	550	12	7.0	47	23	54	8.7	7.8	10	6.9	14
29	7.4	149	8.5	9.4	---	10	22	9.0	7.0	10	29	13
30	7.7	302	7.4	9.7	---	8.0	11	87	13	15	249	12
31	7.6	---	7.0	9.4	---	37	---	30	---	13	23	---
TOTAL	396.8	5587.6	1734.9	750.9	1906.4	2342.8	7447	846.2	736.7	1154.4	1955.9	465.1
MEAN	12.8	186	56.0	24.2	68.1	75.6	248	27.3	24.6	37.2	63.1	15.5
MAX	74	1880	810	342	815	352	1920	301	252	328	390	57
MIN	6.4	7.2	6.1	5.8	7.4	5.9	11	6.2	6.7	6.6	6.8	7.0
AC-FT	787	11080	3440	1490	3780	4650	14770	1680	1460	2290	3880	923

CAL YR 1985	TOTAL	38569.4	MEAN	106	MAX	2200	MIN	4.4	AC-FT	76500
WTR YR 1986	TOTAL	25324.7	MEAN	69.4	MAX	1920	MIN	5.8	AC-FT	50230

16031000 WAIMEA RIVER NEAR WAIMEA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, November 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT 15...	1115	763	6.8	148	7.60	24.0	3.9	9.6	114	170
DEC 09...	1045	765	6.2	--	7.10	22.0	5.6	9.6	109	180
FEB 18...	1045	765	9.2	138	7.40	19.0	5.7	9.0	97	370
APR 15...	1000	763	48	80	7.40	22.0	4.0	9.2	105	490
MAY 12...	0830	--	14	--	--	--	--	--	--	--
JUN 16...	1030	764	7.1	190	7.40	25.0	4.1	9.2	111	630
AUG 11...	1015	764	40	108	7.30	23.0	7.8	8.6	100	3100

DATE	TIME	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT 15...	1115	240	66	4	8.1	11	8.4	22	.5	.80
DEC 09...	1045	700	65	0	8.0	11	9.0	23	.5	.80
FEB 16...	1045	1100	53	1	6.6	8.8	8.9	27	.5	.80
APR 15...	1000	880	27	3	3.6	4.4	5.6	28	.5	3.6
JUN 16...	1030	580	68	1	9.2	11	10	24	.5	1.0
AUG 11...	1015	1500	49	12	8.2	6.8	7.2	24	.5	.80

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT 15...	83	62	68	7.5	12	<.10	26	106	110	.14
DEC 09...	80	62	66	4.8	14	<.10	25	103	110	.14
FEB 18...	63	50	51	13	11	<.10	23	104	100	.14
APR 15...	30	27	25	7.9	8.5	<.10	16	58	65	.08
JUN 16...	82	69	68	15	9.5	<.10	25	109	120	.15
AUG 11...	48	46	40	6.7	9.3	<.10	22	79	83	.11

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT 15...	1115	<.10	.010	.010	.19	.20	.020	.010	<.010
FEB 18...	1045	<.10	.030	.030	.27	.30	.030	<.010	.010
APR 15...	1000	<.10	.010	.030	.29	.30	.010	<.010	<.010
MAY 12...	0830	<.10	.020	.020	.28	.30	.010	<.010	<.010
JUN 16...	1030	<.10	<.010	.020	--	.20	.010	<.010	<.010
AUG 11...	1015	<.10	.020	.010	.48	.50	.030	.010	<.010

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 15...	1115	30	<1	12	<.5	<1	<1	<3	3	130	3
FEB 18...	1045	60	<1	6	<.5	<1	<1	<3	4	22	<1
APR 15...	1000	100	<1	7	<.5	<1	<10	<3	3	150	1
AUG 11...	1015	0	<1	13	<.5	<1	<1	<3	3	97	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 15...	<4	16	<.1	<10	3	<1	<1	49	<6	9
FEB 18...	<4	19	.3	<10	2	<1	1	44	<6	<3
APR 15...	<4	6	<.1	<10	3	<1	<1	24	<6	6
AUG 11...	<4	15	.2	<10	4	<1	<1	35	<6	37

DATE	TIME	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 15...	1115	7	.13	100
DEC 16...	1035	4	--	100
FEB 18...	1045	6	.15	100
APR 15...	1000	3	.39	100
JUN 16...	1030	8	.15	100
AUG 11...	1015	15	1.6	100

< Actual value is known to be less than the value shown.

16036000 MAKAWELI RIVER NEAR WAIMEA

LOCATION.--Lat 21°58'31", long 159°38'55", Hydrologic Unit 20070000, on left bank 0.7 mi upstream from mouth and 1.9 mi northeast of Waimea.

DRAINAGE AREA.--26.0 mi^2.

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

REVISED RECORDS.--WSP 2137: Drainage area.

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

REMARKS.--Records good except for estimated daily discharges, which are fair. Olokele ditch diverts all low flow from the headwaters of the Olokele River 9 mi upstream for irrigation in vicinity of Makaweli. A 5 ft^3/s capacity ditch diverts water from upstream of the station for irrigation of taro in the vicinity of the station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--43 years, 88.7 ft^3/s (62,810 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft^3/s Jan. 31, 1975, gage height, 15.51 ft, from rating curve extended above 3,200 ft^3/s on basis of slope-area measurement at gage height 10.65 ft; minimum, 3.15 ft^3/s July 19, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,460 ft^3/s July 15, gage height, 7.32 ft, no peak greater than base discharge of 4,700 ft^3/s; minimum, 9.6 ft^3/s Mar. 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	PEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	e44	13	12	14	16	20	14	22	13	20
2	21	11	31	13	12	13	33	18	14	13	13	18
3	15	11	21	13	11	12	84	18	13	12	13	18
4	16	10	19	13	108	14	470	108	13	62	13	17
5	16	9.9	18	12	26	13	227	286	18	29	12	19
6	17	9.9	16	12	16	12	109	39	15	14	12	17
7	16	38	16	12	14	12	56	32	15	12	12	17
8	15	491	15	12	13	11	280	28	13	23	52	65
9	13	193	14	12	14	10	140	42	12	53	17	20
10	12	38	14	12	12	10	790	164	18	32	94	19
11	53	25	14	11	12	9.9	1540	34	16	189	530	22
12	36	20	14	12	12	9.6	227	135	15	52	319	22
13	16	18	13	11	11	26	303	55	14	43	204	69
14	14	23	13	11	11	81	218	74	12	43	e120	38
15	13	348	13	10	82	156	145	54	12	1030	e54	23
16	35	65	14	11	24	536	48	46	13	162	e32	25
17	29	36	13	208	16	120	45	28	140	47	e36	20
18	16	34	18	44	14	49	146	25	66	56	e26	19
19	13	34	36	22	13	28	38	28	24	e41	e240	18
20	87	24	15	18	12	21	37	19	21	e38	e90	17
21	59	21	14	15	74	51	29	18	68	e34	e36	18
22	20	19	14	14	144	50	33	16	24	e27	e25	51
23	16	18	41	13	36	22	55	16	17	e24	e21	29
24	22	17	166	13	22	18	64	18	15	e38	e18	40
25	102	e17	30	13	20	16	84	18	67	e190	e17	25
26	20	18	21	12	17	20	36	16	21	e50	e16	18
27	16	e74	18	12	15	18	39	16	15	e36	e15	17
28	14	110	16	12	14	14	54	15	13	e30	e18	40
29	13	33	15	14	---	14	29	16	12	e50	e60	26
30	12	e28	14	14	---	32	23	20	160	e20	96	31
31	11	---	13	13	---	28	---	16	---	14	24	---
TOTAL	774	1804.8	733	627	787	1440.5	5398	1438	890	2486	2248	798
MEAN	25.0	60.2	23.6	20.2	28.1	46.5	180	46.4	29.7	80.2	72.5	26.6
MAX	102	491	166	208	144	536	1540	286	160	1030	530	69
MIN	11	9.9	13	10	11	9.6	16	15	12	12	12	17
AC-FT	1540	3580	1450	1240	1560	2860	10710	2850	1770	4930	4460	1580

CAL YR 1985 TOTAL 23293.8 MEAN 63.8 MAX 3160 MIN 9.0 AC-FT 46200
WTR YR 1986 TOTAL 19424.3 MEAN 53.2 MAX 1540 MIN 9.6 AC-FT 38530

e Estimated

16049000 HANAPEPE RIVER BELOW MANUAHI STREAM, NEAR ELEELE

LOCATION.--Lat 21°57'29", long 159°33'13", Hydrologic Unit 20070000, on left bank 200 ft downstream from Manuahi Stream and 4.0 mi northeast of Eleele.

DRAINAGE AREA.--18.5 mi^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 upstream not equivalent owing to intervening inflow.

REVISED RECORDS.--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.

GAGE.--Water-stage recorder. Datum of gage is 222 ft 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 recordar, at same site at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Koula ditch diverts 3.0 mi upstream for irrigation in vicinity of Makaweli. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--62 years (water years 1918-20, 1928-86), 85.3 ft^3/s (61,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/s Apr. 15, 1963, gage height, 14.87 ft, from rating curve extended above 7,600 ft^3/s on basis of slope-area measurement of peak flow; minimum, 5.1 ft^3/s May 21, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 15	0530	4,380	6.52	Aug. 11	1800	*6,470	*7.76

Minimum discharge, 10 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	13	11	10	11	27	30	13	26	22	26
2	21	14	13	11	10	11	71	27	13	16	26	22
3	14	13	13	11	11	11	123	29	13	14	23	20
4	13	13	13	11	39	11	452	251	13	37	20	20
5	13	13	13	11	12	11	442	403	19	20	18	19
6	14	13	13	11	11	11	152	70	13	14	15	18
7	17	163	13	11	10	11	61	42	16	14	15	21
8	13	525	13	11	10	11	117	35	13	36	83	104
9	13	159	13	11	10	11	88	71	13	40	49	23
10	13	35	12	11	10	11	836	312	77	27	162	19
11	60	23	14	11	11	11	1600	70	35	210	799	21
12	25	19	14	11	10	11	320	111	15	84	335	42
13	15	17	12	11	10	18	510	353	14	87	250	98
14	14	16	11	11	10	65	489	313	14	88	184	36
15	13	108	11	11	28	172	333	114	14	1460	101	23
16	35	35	11	11	11	479	103	149	14	171	66	21
17	16	22	11	34	11	123	87	62	121	98	73	19
18	13	19	11	14	10	36	114	56	58	79	51	19
19	13	17	12	11	10	17	59	54	24	53	490	19
20	84	15	12	10	10	13	50	34	23	50	205	19
21	41	14	12	10	30	37	35	30	66	45	e76	21
22	17	14	12	10	64	48	52	28	23	34	e50	125
23	18	14	17	10	16	44	100	28	16	31	e38	54
24	30	27	38	10	11	31	114	27	15	47	e32	56
25	171	23	11	11	11	15	150	28	139	235	e27	44
26	35	16	11	11	11	32	57	25	25	59	e23	24
27	19	27	11	11	11	21	51	19	16	48	e20	23
28	18	28	11	11	11	11	51	14	14	38	24	99
29	16	15	11	11	---	12	49	14	14	100	46	64
30	14	14	11	11	---	42	35	16	128	35	110	168
31	13	---	11	11	---	31	---	14	---	32	34	---
TOTAL	827	1444	404	362	419	1379	6728	2827	991	3328	3467	1287
MEAN	26.7	48.1	13.0	11.7	15.0	44.5	224	91.2	33.0	107	112	42.9
MAX	171	525	38	34	64	479	1600	403	139	1460	799	168
MIN	13	13	11	10	10	11	27	14	13	14	15	18
AC-FT	1640	2860	801	718	831	2740	13340	5610	1970	6600	6880	2550

CAL YR 1985	TOTAL	18037	MEAN	49.4	MAX	1330	MIN	11	AC-FT 35780
WTR YR 1986	TOTAL	23463	MEAN	64.3	MAX	1600	MIN	10	AC-FT 46540

e Estimated

16060000 SOUTH FORK WAILUA RIVER NEAR LIHUE

LOCATION.--Lat 22°02'24", long 159°22'58", Hydrologic Unit 20070000, on right bank 0.2 mi upstream from Wailua Falls and 4.3 mi north of Lihue.

DRAINAGE AREA.--22.4 mi^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.

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

GAGE.--Water-stage recorder. Elevation of gage is 240 ft, from topographic map. Prior to Nov. 18, 1918, at site 0.3 mi upstream at different datum. Nov. 18, 1918, to June 30, 1957, at site 10 ft downstream from present site at datum 2.50 ft higher and July 1, 1957, to June 23, 1958, st present datum.

REMARKS.--Records good. Lihue and Hanamaulu ditches divert upatream for irrigation of sugarcane in vicinity of Lihue. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--69 years (water years 1913-18, 1920, 1922-24, 1926-56, 1959-86), 114 ft^3/s (82,590 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,300 ft^3/s Apr. 15, 1963, gage height, 22.90 ft, from rating curve extended above 13,000 ft^3/s on basis of elope-area measurement of peak flow; minimum, 1.5 ft^3/s Aug. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft^3/s May 10, gage height, 16.76 ft, no other peak greater than base discharge of 5,800 ft^3/s; minimum, 2.4 ft^3/s Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	8.8	8.8	4.4	4.2	2.6	18	8.9	9.7	35	18	16
2	68	7.3	8.5	4.4	4.2	2.9	25	8.0	8.9	9.5	15	12
3	35	12	7.3	4.2	4.1	3.0	37	8.7	8.4	8.3	14	11
4	12	8.8	6.7	4.2	31	2.7	188	105	8.0	11	13	14
5	8.2	8.2	41	4.1	22	2.6	534	510	8.0	13	12	17
6	8.8	6.9	15	4.2	5.0	2.6	316	84	10	8.8	10	12
7	8.5	128	24	4.2	4.2	2.6	136	21	35	7.8	9.4	34
8	7.5	766	24	4.2	3.9	2.6	204	20	23	13	77	270
9	6.5	318	22	4.2	3.8	2.7	97	36	22	13	53	52
10	6.1	65	8.2	4.2	3.8	2.6	242	1410	39	10	241	13
11	10	26	15	4.1	3.6	2.6	751	176	90	141	874	11
12	31	17	15	3.9	3.6	2.6	278	155	19	97	473	9.7
13	6.9	10	15	3.9	3.5	3.7	506	757	23	93	348	44
14	6.1	8.8	14	3.9	3.5	63	408	594	9.3	146	277	29
15	5.7	114	14	3.8	6.7	87	353	284	8.1	783	205	9.7
16	39	78	13	3.9	5.9	461	130	212	7.6	156	131	23
17	37	54	6.9	7.2	3.9	356	86	145	76	85	200	12
18	8.8	37	5.2	14	3.6	47	263	104	24	97	124	11
19	11	9.0	4.9	6.1	3.5	8.4	98	103	10	51	590	10
20	360	7.5	4.9	5.3	3.5	7.5	72	63	8.1	56	259	9.1
21	191	7.1	5.0	4.5	3.5	42	61	42	42	61	120	8.5
22	81	6.7	5.0	4.2	76	103	49	27	13	19	87	198
23	72	8.8	11	4.4	10	64	91	20	8.3	14	76	97
24	95	9.0	67	4.2	4.4	146	92	19	7.2	204	61	39
25	218	19	8.0	4.1	3.4	65	115	29	76	559	37	52
26	54	9.5	5.2	4.4	3.0	46	46	15	21	152	15	20
27	20	25	4.7	4.1	2.9	44	21	12	9.5	105	14	10
28	30	56	4.7	3.9	2.7	14	14	11	7.6	66	21	212
29	47	16	4.7	3.9	---	9.2	14	11	7.2	127	52	84
30	40	10	4.7	4.1	---	9.8	12	30	102	41	76	97
31	26	---	4.4	4.2	---	13	---	13	---	38	26	---
TOTAL	1559.6	1857.4	397.8	144.4	233.4	1621.7	5255	5033.6	740.9	3220.4	4528.4	1437.0
MEAN	50.3	61.9	12.8	4.66	8.34	52.3	175	162	24.7	104	146	47.9
MAX	360	766	67	14	76	461	751	1410	102	783	874	270
MIN	5.7	6.7	4.4	3.8	2.7	2.6	12	8.0	7.2	7.8	9.4	8.5
AC-FT	3090	3680	789	286	463	3220	10420	9980	1470	6390	8980	2850

CAL YR 1985	TOTAL	18006.5	MEAN	49.3	MAX	766	MIN	3.4	AC-FT	35720
WTR YR 1986	TOTAL	26029.6	MEAN	71.3	MAX	1410	MIN	2.6	AC-FT	51630

16061200 NORTH WAILUA DITCH BELOW WAIKOKO STREAM, NEAR LIHUE

LOCATION.--Lat 22°03'34", long 159°28'00", Hydrologic Unit 20070000, on left bank 380 ft downstream from Waikoko Stream, 8.1 mi west of Wailua, and 8.4 mi northwest of Lihue.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,070 ft, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. 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 elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 23.2 ft^3/s (16,810 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 58 ft^3/a Oct. 11, 1966; no flow Jan. 1-18, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 38 ft^3/s May 13; minimum daily, 15 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	25	e27	18	e15	e15	30	30	27	30	30	29
2	29	26	e25	17	e15	e16	31	28	26	28	29	26
3	28	23	e24	17	e15	e15	31	30	25	31	30	25
4	26	19	e23	17	e17	e15	33	33	24	30	30	28
5	24	20	e22	16	e16	e15	33	34	28	29	29	27
6	27	18	e22	17	e15	e15	32	31	24	29	27	26
7	27	27	e21	16	e15	e15	31	30	29	30	27	30
8	24	34	e20	16	e15	e15	31	31	27	31	31	32
9	22	31	e20	16	e15	e15	31	33	24	31	32	30
10	22	e29	e20	16	e15	e15	33	33	27	33	33	30
11	27	e27	e20	16	e15	e15	36	31	32	32	35	15
12	26	e30	e19	16	e15	e15	33	32	31	32	33	17
13	24	e25	e19	16	e15	e25	34	38	30	32	33	29
14	22	e23	e19	16	e15	e31	34	33	28	36	32	30
15	21	e30	e18	16	e16	e29	33	33	28	32	32	29
16	25	e28	e17	17	e15	e32	31	33	27	27	31	28
17	26	e27	e17	29	e15	e33	31	32	31	31	33	26
18	23	e26	17	22	e15	e31	32	32	31	31	31	26
19	21	e25	17	21	e15	30	31	31	29	31	35	25
20	32	e24	17	18	e15	30	32	31	31	33	32	24
21	31	e23	17	17	e15	32	31	30	31	31	22	26
22	30	e22	18	20	e19	31	31	28	29	31	25	31
23	30	e22	30	17	e16	32	32	27	29	30	30	30
24	31	e22	30	17	e15	32	32	29	31	34	30	30
25	33	e30	23	17	e15	30	32	30	31	33	29	30
26	31	e26	20	e17	e15	31	31	28	29	28	28	28
27	31	e28	19	e16	e15	30	31	27	27	28	26	27
28	30	e30	19	e15	e15	29	30	26	26	28	28	32
29	29	e26	18	e15	---	30	30	29	31	32	30	31
30	28	e30	18	e15	---	31	30	31	32	31	30	31
31	26	---	17	e15	---	30	---	28	---	30	29	---
TOTAL	832	776	633	534	429	760	953	952	855	955	932	828
MEAN	26.8	25.9	20.4	17.2	15.3	24.5	31.8	30.7	28.5	30.8	30.1	27.6
MAX	33	34	30	29	19	33	36	38	32	36	35	32
MIN	21	18	17	15	15	15	30	26	24	27	22	15
AC-FT	1650	1540	1260	1060	851	1510	1890	1890	1700	1890	1850	1640

CAL YR 1985	TOTAL	8487.0	MEAN	23.3	MAX	34	MIN	9.0	AC-FT	16830
WTR YR 1986	TOTAL	9439	MEAN	25.9	MAX	38	MIN	15	AC-FT	18720

e Estimated

16062000 STABLE STORM DITCH NEAR LIHUE

LOCATION.--Lat 22°04'09", long 159°26'46", Hydrologic Unit 20070000, on left bank 100 ft downstream from intake, 7.8 mi northwest of Lihue, and 7.9 mi west of Kapaa.

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

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 710 ft, by barometer.

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 elsewhere in this report.

AVERAGE DISCHARGE.--49 years (water years 1938-86), 10.9 ft^3/s (7,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 71 ft^3/s Apr. 3, 1948; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maxiumum daily discharge, 62 ft^3/s Mar. 16; no flow Nov. 8-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	.65	36	20	16	18	.80	.50	.23	.80	.65	.80
2	30	17	31	18	15	18	.80	.50	.23	.80	.65	.80
3	12	28	29	18	15	17	.80	.50	.23	.80	.65	23
4	1.2	28	28	18	29	17	1.0	.50	.17	.80	.65	37
5	1.2	11	14	17	16	17	1.0	.65	.17	.80	.65	34
6	1.2	1.0	.80	18	16	16	1.0	.65	20	.80	.65	32
7	1.4	.39	.80	17	15	16	.80	.65	35	.65	14	44
8	1.2	.20	.80	17	15	16	.80	.65	28	.65	29	51
9	1.2	.00	.80	17	16	16	.80	.92	26	.65	28	15
10	1.2	.00	18	17	15	16	.80	.17	33	19	30	1.0
11	1.0	.00	24	16	16	16	.80	.17	17	46	34	1.0
12	1.0	.00	23	17	15	18	.65	.12	1.0	46	15	.80
13	1.0	.00	22	16	15	35	.80	.23	1.0	44	1.0	.80
14	.80	.00	22	16	15	48	.80	.23	1.0	23	.80	.65
15	.80	.00	21	16	22	53	.80	.23	.65	1.0	.65	24
16	1.0	.00	20	16	16	62	.65	.17	20	.50	.50	32
17	.80	.00	20	38	16	59	.65	.17	40	.50	.50	32
18	23	.00	20	20	15	26	.65	.17	13	.50	.39	32
19	35	.00	20	23	15	26	.65	.17	1.2	.50	.50	32
20	54	.00	20	18	15	43	.50	.17	1.2	.50	.39	31
21	47	.00	20	17	30	16	.50	.17	1.2	.50	.39	32
22	42	12	20	20	40	1.4	.50	.17	1.2	.50	.39	12
23	40	25	36	18	20	1.4	.65	.17	1.2	.50	.39	1.2
24	46	26	37	17	18	1.4	.65	.17	1.2	.50	.39	1.2
25	31	34	23	17	18	1.2	.65	.23	1.2	.50	.39	1.2
26	1.6	31	20	16	17	1.2	.50	.23	1.0	.50	.31	1.2
27	1.2	42	20	16	17	1.2	.50	.23	.80	.50	25	1.2
28	1.0	42	20	16	17	1.0	.50	.23	.80	.50	38	1.2
29	1.0	34	20	16	---	1.0	.50	.31	.80	.50	13	1.2
30	.80	38	20	16	---	1.0	.50	.23	1.0	.50	.80	1.0
31	.65	---	18	16	---	1.0	---	.23	---	.65	.80	---
TOTAL	409.25	370.24	625.20	558	505	580.8	21.00	9.89	249.48	193.90	238.49	478.25
MEAN	13.2	12.3	20.2	18.0	18.0	18.7	.70	.32	8.32	6.25	7.69	15.9
MAX	54	42	37	38	40	62	1.0	.92	40	46	38	51
MIN	.65	.00	.80	16	15	1.0	.50	.12	.17	.50	.31	.65
AC-FT	812	734	1240	1110	1000	1150	42	20	495	385	473	949

CAL YR 1985	TOTAL	6215.88	MEAN	17.0	MAX	56	MIN	.00	AC-FT	12330
WTR YR 1986	TOTAL	4239.50	MEAN	11.6	MAX	62	MIN	.00	AC-FT	8410

16068000 EAST BRANCH OF NORTH FORK WAILUA RIVER NEAR LIHUE

LOCATION.--Lat 22°04'19", long 159°25'05", Hydrologic Unit 20070000, on right bank 1,200 ft upstream from mouth and 7.2 mi northwest of Lihue.

DRAINAGE AREA.--6.27 mi^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.

REVISED RECORDS.--WSP 770: 1932-33. WSP 1719: 1916. WSP 1937: 1918. WSP 2137: Drainage area.

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

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--71 years (water years 1913-14, 1918-17, 1920-86), 48.1 ft^3/s (34,850 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s Nov. 12, 1955, gage height, 14.7 ft, from floodmarks, from rating curve extended above 2,700 ft^3/s; minimum, 6.8 ft^3/s July 3, 13, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,590 ft^3/s Oct. 20, gage height, 6.53 ft, no other peak greater than base discharge of 1,900 ft^3/s; minimum, 8.0 ft^3/s Feb. 16, 17, Mar. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	22	25	12	9.3	8.6	28	30	28	22	30	32
2	65	21	22	12	9.3	8.9	36	27	26	18	30	28
3	43	21	20	12	9.3	8.6	52	33	25	18	31	26
4	28	20	19	11	10	8.6	100	83	24	34	29	35
5	25	19	18	11	9.3	8.6	122	122	30	23	25	28
6	28	18	18	12	8.9	8.3	109	46	24	18	23	25
7	30	76	17	12	8.9	8.3	86	38	27	18	22	111
8	22	311	16	11	8.9	8.3	134	42	25	22	50	150
9	20	97	16	11	8.9	8.0	86	53	22	23	40	52
10	18	50	16	11	8.6	8.0	141	130	55	20	77	42
11	31	41	16	11	8.6	8.0	204	52	37	26	235	36
12	25	44	15	11	8.6	8.8	114	51	22	47	148	36
13	20	35	15	11	8.3	31	165	405	19	41	103	41
14	19	30	15	11	8.3	40	134	190	18	58	83	33
15	18	43	15	11	8.9	35	125	145	18	91	80	33
16	65	30	14	11	8.3	112	108	92	17	43	55	29
17	36	26	14	12	8.0	140	104	71	40	42	59	27
18	26	24	14	12	8.3	68	150	59	27	44	53	26
19	22	23	14	16	8.3	26	79	53	20	33	404	25
20	313	21	14	11	8.3	42	62	46	24	28	134	23
21	136	20	14	11	8.9	153	53	40	35	27	85	24
22	51	20	14	10	12	111	49	37	23	24	68	72
23	42	18	15	10	9.3	97	55	35	20	23	56	44
24	40	18	18	10	8.6	85	45	37	20	78	49	39
25	52	40	13	10	8.6	55	47	36	31	132	45	33
26	35	25	13	10	8.6	82	38	30	22	48	40	29
27	30	30	13	10	8.6	50	34	30	20	40	36	31
28	27	34	12	9.3	8.6	34	32	28	19	36	37	241
29	27	22	12	9.3	---	29	30	42	18	49	48	55
30	25	33	12	9.3	---	40	30	52	32	40	43	51
31	23	---	12	9.3	---	29	---	30	---	38	33	---
TOTAL	1368	1232	481	340.2	248.5	1359.8	2552	2165	768	1204	2251	1457
MEAN	44.1	41.1	15.5	11.0	8.87	43.9	85.1	69.8	25.6	38.8	72.6	48.6
MAX	313	311	25	16	12	153	204	405	55	132	404	241
MIN	18	18	12	9.3	8.0	8.0	28	27	17	18	22	23
AC-FT	2710	2440	954	675	493	2700	5060	4290	1520	2390	4460	2890

CAL YR 1985	TOTAL	13243	MEAN	36.3	MAX	337	MIN	12	AC-FT	26270
WTR YR 1986	TOTAL	15426.5	MEAN	42.3	MAX	405	MIN	8.0	AC-FT	30600

16069000 WAILUA DITCH NEAR KAPAA

LOCATION.--Lat 22°04'34", long 159°24'04", Hydrologic Unit 20070000, on right bank 2,000 ft downstream from Wailua Reservoir, 5.2 mi west of Kapaa, and 7.0 mi 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 above mean sea level (by stadia survey).

REMARKS.--Records good except for estimated daily discharges, which are fair. Ditch diverts water from North Fork Wailua River to reservoir, 2,000 ft upstream and thence to fields for irrigation of sugarcane in vicinity of Kapaa. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--49 years (water years 1938-88), 15.7 ft^3/s (11,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 63 ft^3/s June 4, 1937; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 37 ft^3/s Apr. 12, Aug. 12-13; minimum daily, 0.03 ft^3/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	e16	e19	18	12	11	33	33	23	29	23	36
2	22	e16	e19	18	12	10	33	27	23	28	23	36
3	21	e16	e19	18	12	10	33	24	22	28	23	36
4	20	e16	e19	18	13	9.8	33	24	22	28	23	36
5	19	e16	e19	18	13	9.8	33	24	22	28	31	35
6	18	e17	e18	17	13	9.2	22	25	27	28	34	35
7	18	e17	e17	17	13	8.6	15	25	30	28	20	35
8	19	e19	e17	17	12	8.1	16	25	31	28	25	36
9	20	e20	e17	16	12	7.1	.28	18	30	28	36	36
10	20	e20	e19	16	12	6.4	.24	14	30	28	36	34
11	20	e20	e20	16	12	5.3	16	14	32	27	36	33
12	21	e19	e20	16	11	5.3	37	20	33	27	37	32
13	21	e19	e20	15	10	7.7	27	23	34	28	37	31
14	21	e19	20	15	9.0	12	.39	24	34	28	36	30
15	20	e20	20	15	9.4	15	.32	24	35	29	23	29
16	20	e20	20	14	9.8	19	12	25	35	29	13	29
17	20	e19	20	14	11	21	29	25	35	29	33	28
18	20	e19	20	15	10	19	30	24	31	30	32	28
19	20	e19	20	15	9.0	26	30	24	30	30	31	28
20	20	e19	19	15	7.9	32	30	24	30	30	30	28
21	19	e18	19	15	8.5	31	21	24	30	30	28	28
22	17	e18	19	14	12	30	14	24	30	30	25	29
23	17	e18	19	14	12	29	21	24	30	30	23	30
24	17	e18	20	14	12	29	29	24	30	30	18	31
25	17	e19	20	14	12	29	28	24	30	15	9.4	23
26	17	e19	20	14	12	30	28	24	30	.11	21	20
27	17	e20	19	14	11	31	28	24	29	.03	26	20
28	17	e20	19	13	11	31	32	23	29	19	28	21
29	17	e20	19	13	---	32	34	23	29	32	31	21
30	17	e19	19	13	---	32	33	23	29	32	34	20
31	16	---	18	13	---	32	---	23	---	22	38	---
TOTAL	590	555	593	474	313.6	588.1	698.23	726	885	808.14	861.4	894
MEAN	19.0	18.5	19.1	15.3	11.2	19.0	23.3	23.4	29.5	26.1	27.8	29.8
MAX	22	20	20	18	13	32	37	33	35	32	37	36
MIN	16	16	17	13	7.9	5.3	.24	14	22	.03	9.4	20
AC-FT	1170	1100	1180	940	622	1170	1380	1440	1760	1600	1710	1770

CAL YR 1985	TOTAL	7250.1	MEAN	19.9	MAX	33	MIN	2.2	AC-FT	14380
WTR YR 1986	TOTAL	7986.47	MEAN	21.9	MAX	37	MIN	.03	AC-FT	15840

e Estimated

16071000 NORTH FORK WAILUA RIVER NEAR KAPAA

LOCATION.--Lat 22°03'08", long 159°22'22", Hydrologic Unit 20070000, on right bank 1.1 mi upstream from confluence with South Fork, 3.7 mi southwest of Kapaa, and 5.0 mi north of Lihue.

DRAINAGE AREA.--17.9 mi^2.

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

REVISED RECORDS.--WSP 2137: Drainage area. WDR HI-75-1: 1974.

GAGE.--Water-stage recorder. Elevation of gage is 18 ft, from topographic map.

REMARKS.--Records good. Wailua ditch (station 16069000) diverts upstream for irrigation of sugarcane in vicinities of Kapaa and Wailua. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 123 ft^3/s (89,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,200 ft^3/s Nov. 12, 1955, gage height, 19.88 ft in gage well, 20.8 ft, from floodmarks, from rating curve extended above 3,700 ft^3/s on basis of slope-area measurement of peak flow; minimum, 2.1 ft^3/s Oct. 28, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,390 ft^3/s Oct. 20, gage height, 6.57 ft, no peak greater than base discharge of 4,100 ft^3/s; minimum, 3.8 ft^3/s Mar. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	45	20	5.6	5.3	3.9	50	53	51	62	66	49
2	123	41	21	5.6	5.2	4.5	69	47	49	39	66	45
3	94	27	15	5.6	5.0	4.6	97	54	48	36	67	38
4	81	23	14	5.6	14	4.6	248	147	46	70	61	27
5	68	12	13	6.9	5.9	4.6	289	326	53	54	54	27
6	81	25	31	7.6	5.0	4.4	273	95	34	38	49	19
7	54	122	31	7.6	5.0	4.1	188	70	12	40	42	81
8	37	709	31	7.8	5.4	3.8	301	84	11	48	88	264
9	31	278	30	7.9	5.8	3.8	195	132	9.7	52	73	76
10	29	125	26	7.6	6.0	3.8	303	451	25	42	186	93
11	53	84	11	7.6	6.0	5.2	690	147	67	51	621	73
12	52	80	9.3	7.6	5.8	4.6	300	171	31	57	373	66
13	36	68	8.8	7.5	5.0	9.8	496	891	28	45	299	117
14	42	60	8.2	7.2	5.2	30	458	510	20	94	232	76
15	43	115	8.0	7.2	6.0	39	363	326	19	325	214	54
16	128	73	7.5	7.2	5.2	233	204	248	18	128	151	34
17	87	60	5.9	7.7	4.7	366	167	186	40	96	194	28
18	50	56	5.6	12	4.6	167	292	155	25	103	142	17
19	26	50	5.6	7.7	4.6	71	150	136	30	76	778	15
20	560	36	5.3	7.4	4.6	46	128	99	36	103	314	14
21	228	34	5.3	7.2	4.7	265	103	85	74	98	207	13
22	80	31	5.3	6.9	20	254	110	76	43	61	178	128
23	63	13	5.6	6.5	5.8	214	145	71	33	54	137	73
24	73	11	35	6.3	4.4	201	130	70	32	229	122	57
25	207	29	7.2	6.0	4.0	103	137	85	84	352	99	47
26	98	17	6.0	6.0	3.8	134	88	66	54	192	53	38
27	81	48	6.0	6.0	3.8	90	76	62	46	154	27	47
28	69	56	6.0	5.8	3.8	52	67	55	39	102	19	240
29	60	24	8.0	5.6	---	44	60	77	36	132	36	147
30	53	31	6.0	5.5	---	77	53	105	148	85	60	128
31	48	---	5.8	5.3	---	54	---	58	---	80	36	---
TOTAL	2757	2383	401.4	214.0	164.6	2501.7	6230	5138	1241.7	3098	5024	2131
MEAN	88.9	79.4	12.9	6.90	5.88	80.7	208	166	41.4	99.9	162	71.0
MAX	560	709	35	12	20	366	690	891	148	352	778	264
MIN	22	11	5.3	5.3	3.8	3.8	50	47	9.7	36	19	13
AC-FT	5470	4730	796	424	326	4960	12360	10190	2460	6140	9970	4230

CAL YR 1985 TOTAL 24477.8 MEAN 67.1 MAX 709 MIN 4.9 AC-FT 48550
WTR YR 1986 TOTAL 31284.4 MEAN 85.7 MAX 891 MIN 3.8 AC-FT 62050

16071500 LEFT BRANCH OPAEKAA STREAM NEAR KAPAA

LOCATION.--Lat 22°04'43", long 159°23'55", Hydrologic Unit 20070000, on left bank 0.4 mi upstream from mouth, 0.8 mi northeast of Wailua Reservoir, and 4.9 mi west of Kapaa.

DRAINAGE AREA.--0.65 mi^2.

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

REVISED RECORDS.--WSP 2137: Drainage area.

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

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

AVERAGE DISCHARGE.--26 years, 2.59 ft^3/s (1,1880 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 724 ft^3/s Jan. 31, 1975, gage height, 5.58 ft, from rating curve extended above 415 ft^3/s on basis of slope-area measurement at gage height 5.01 ft; minimum, 0.09 ft^3/s Sept. 27-30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum dischsrge, 45 ft^3/s May 15, gage height, 1.97 ft, no peak greater than base discharge of 70 ft^3/s; minimum discharge, 0.48 ft^3/s Feb. 2-6, Mar. 3-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	1.4	1.3	.93	.52	.48	.93	2.0	1.8	1.6	1.7	2.2
2	3.3	1.4	1.3	.86	.52	.52	.93	1.8	1.8	1.4	1.7	2.2
3	2.0	1.4	1.3	.88	.46	.46	1.1	1.8	1.7	1.4	1.7	2.0
4	1.3	1.3	1.3	.86	.46	.46	1.4	2.0	1.6	1.6	1.7	2.4
5	1.1	1.2	1.3	.79	.46	.46	2.2	2.7	1.7	1.5	1.6	2.2
6	1.1	1.2	1.3	.79	.46	.46	2.4	2.0	1.6	1.3	1.6	2.0
7	1.0	1.8	1.3	.79	.52	.46	1.8	1.8	1.6	1.3	1.6	2.2
8	.93	4.7	1.3	.79	.52	.52	2.6	1.8	1.5	1.3	2.0	2.8
9	.86	3.6	1.2	.72	.52	.52	2.0	2.3	1.5	1.3	1.7	2.2
10	.86	2.2	1.2	.72	.52	.52	2.0	3.9	1.8	1.3	2.0	2.0
11	.93	2.0	1.2	.72	.52	.52	2.0	2.5	1.8	1.3	5.7	2.0
12	.93	1.8	1.2	.72	.52	.52	1.8	2.2	1.6	1.6	4.8	2.0
13	.86	1.8	1.1	.72	.52	.65	2.0	6.6	1.7	1.6	3.2	1.8
14	.86	1.7	1.1	.58	.52	.79	1.8	5.1	1.7	1.7	3.2	1.8
15	.79	2.6	1.1	.58	.65	.65	1.7	13	1.6	1.7	3.1	1.8
16	1.5	2.0	1.0	.58	.52	.86	2.5	5.5	1.6	1.6	2.8	1.8
17	1.4	1.8	.93	.72	.52	2.2	4.6	4.6	2.0	1.5	2.6	1.8
18	1.0	1.7	.93	.79	.52	.86	9.5	3.9	1.8	1.6	2.5	1.8
19	.93	1.7	.93	.86	.46	.72	5.0	3.8	1.7	1.6	9.6	1.7
20	5.7	1.6	.93	.79	.46	.72	3.9	3.4	1.6	1.5	4.8	1.7
21	6.5	1.6	.93	.72	.46	1.8	3.2	3.1	1.8	1.4	3.9	1.7
22	2.7	1.6	.93	.72	.65	2.2	2.9	2.9	1.7	1.3	3.4	1.8
23	2.2	1.5	.93	.72	.46	1.6	2.8	2.7	1.6	1.3	3.1	1.8
24	2.0	1.4	1.1	.65	.46	2.0	2.6	2.7	1.6	1.7	2.8	1.8
25	1.8	1.4	.93	.65	.46	1.6	2.5	2.5	2.0	3.6	2.7	1.8
26	1.8	1.4	1.0	.65	.46	1.3	2.2	2.4	1.7	2.2	2.6	1.8
27	1.6	1.6	1.0	.58	.46	1.2	2.2	2.2	1.6	1.8	2.6	2.4
28	1.6	1.6	1.0	.58	.46	1.0	2.0	2.0	1.6	1.8	2.5	3.8
29	1.6	1.4	1.0	.58	---	.93	2.0	2.0	1.6	2.0	2.6	2.4
30	1.5	1.4	.93	.58	---	.93	2.0	2.0	1.7	2.0	2.5	2.2
31	1.5	---	.93	.58	---	.93	---	1.8	---	1.8	2.4	---
TOTAL	52.67	53.8	33.90	22.18	14.04	28.62	76.56	99.0	50.6	50.6	90.7	61.9
MEAN	1.70	1.79	1.09	.72	.50	.92	2.55	3.19	1.69	1.63	2.93	2.06
MAX	6.5	4.7	1.3	.93	.65	2.2	9.5	13	2.0	3.6	9.6	3.8
MIN	.52	1.2	.93	.58	.46	.46	.93	1.8	1.5	1.3	1.6	1.7
AC-FT	104	107	67	44	28	57	152	196	100	100	180	123

CAL YR 1985	TOTAL	615.87	MEAN	1.69	MAX	6.5	MIN	.40	AC-FT	1220
WTR YR 1986	TOTAL	634.57	MEAN	1.74	MAX	13	MIN	.46	AC-FT	1260

16077000 MAKALEHA DITCH NEAR KEALIA

LOCATION.--Lat 22°07'06", long 159°22'04", Hydrologic Unit 20070000, on left bank at end of last tunnel from which flow enters Mimino Reservoir, 3.9 mi northwest of Kealia, and 4.0 mi northwest of Kapaa.

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

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

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 elsewhere in this report.

AVERAGE DISCHARGE.--49 years (water years 1938-86), 6.82 ft^3/s (4,940 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 31 ft^3/s Aug. 1, 1981, June 30, 1982; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 22 ft^3/s May 13; minimum daily, 1.2 ft^3/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.4	7.7	3.4	4.3	3.2	11	9.3	1.4	9.8	10	7.7
2	11	3.8	6.5	3.4	4.3	3.0	11	8.1	5.8	7.6	10	6.8
3	7.7	4.6	5.6	3.1	4.0	2.9	14	10	8.0	7.5	11	6.1
4	5.7	4.9	5.3	3.0	4.2	2.8	16	16	8.2	14	12	13
5	4.9	7.6	5.7	2.9	4.0	2.5	16	17	12	10	8.9	10
6	6.9	6.0	5.3	4.1	4.0	2.4	15	9.7	8.4	8.9	7.7	8.2
7	6.6	13	5.1	3.9	3.8	2.3	13	9.3	13	8.9	8.2	15
8	4.6	19	5.0	3.7	3.8	2.3	16	12	11	11	18	14
9	4.3	8.6	4.9	3.5	4.2	2.1	14	16	7.7	10	14	11
10	3.9	5.7	4.9	3.5	4.3	2.8	17	20	13	9.7	18	8.4
11	7.0	5.4	4.3	3.4	4.4	3.4	9.5	13	12	11	19	8.2
12	5.1	9.8	3.5	3.8	4.3	4.0	3.4	13	9.3	14	10	8.4
13	5.2	8.9	3.4	3.3	4.0	8.6	2.7	22	7.7	12	1.9	11
14	5.2	7.5	3.4	2.8	3.9	9.2	9.9	13	7.4	13	1.8	9.3
15	4.3	10	3.2	2.8	4.0	10	13	2.1	8.1	8.5	11	7.4
16	7.3	8.6	3.0	2.7	4.0	10	16	5.7	7.9	4.5	12	6.9
17	6.4	7.5	2.9	3.6	3.9	9.2	14	7.8	16	4.1	14	7.0
18	5.1	8.7	2.8	3.4	3.7	14	11	7.5	15	9.0	6.7	6.9
19	4.3	6.3	2.9	3.6	3.8	11	7.0	9.3	11	9.9	3.3	7.0
20	12	5.9	2.8	2.4	3.7	15	4.6	8.9	14	8.9	2.5	6.3
21	10	5.8	3.1	2.0	3.9	19	3.8	7.7	14	9.0	4.2	6.0
22	8.9	5.7	2.8	2.0	5.0	18	3.6	6.9	8.6	8.0	7.4	10
23	6.4	5.4	3.1	2.0	4.2	18	3.6	6.6	6.7	8.6	6.3	9.2
24	6.6	5.4	4.0	1.9	3.8	17	6.3	13	6.4	17	5.9	9.2
25	7.7	11	3.5	1.8	3.7	7.3	13	13	9.4	10	5.3	8.2
26	5.1	7.5	3.4	1.7	3.5	2.6	9.0	11	8.5	1.6	5.6	8.7
27	4.4	10	3.4	1.6	3.4	2.2	7.7	10	9.8	1.2	6.9	9.4
28	4.1	11	3.4	1.6	3.4	2.0	5.6	7.8	11	7.2	9.2	15
29	4.6	7.0	3.4	1.6	---	5.0	6.1	17	9.0	18	14	10
30	4.0	10	3.4	1.5	---	10	8.6	9.3	14	13	11	15
31	3.5	---	3.1	3.0	---	7.2	---	1.6	---	14	8.2	---
TOTAL	186.8	232.0	124.8	87.0	111.5	229.0	301.4	333.6	294.3	299.9	284.0	280.3
MEAN	6.03	7.73	4.03	2.81	3.98	7.39	10.0	10.8	9.81	9.67	9.16	9.34
MAX	12	19	7.7	4.1	5.0	19	17	22	16	18	19	15
MIN	3.5	3.4	2.8	1.5	3.4	2.0	2.7	1.6	1.4	1.2	1.8	6.0
AC-FT	371	460	248	173	221	454	598	662	584	595	563	556

CAL YR 1985	TOTAL	2307.84	MEAN	6.32	MAX	19	MIN	.50	AC-FT	4580
WTR YR 1986	TOTAL	2784.6	MEAN	7.57	MAX	22	MIN	1.2	AC-FT	5480

16079000 KAPAHI DITCH NEAR KEALIA

LOCATION.--Lat 22°08'09", long 159°22'28", Hydrologic Unit 20070000, on right bank 500 ft downstream from intake and 4.0 mi 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 1914 and as "at Kapahi, near Kealia" January to December 1913.

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

REMARKS.--Records good except for estimated daily discharges, which are fair. Ditch diverts from Kapaa Stream for irrigation of sugarcane in vicinity of Kapaa. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--68 years (water years 1918-20, 1922-86), 6.18 ft^3/s (4,480 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 138 ft^3/s Feb. 6, 1913; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 28 ft^3/s Mar. 18; minimum daily, 0.19 ft^3/s Dec. 12-18, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	6.2	5.8	4.6	2.5	2.4	.66	4.7	1.8	5.6	5.7	6.2
2	.86	6.6	4.7	4.1	2.4	2.9	.58	5.1	5.2	4.2	5.0	6.1
3	1.1	7.4	3.8	3.8	2.3	2.8	.58	7.4	4.6	3.8	5.6	5.0
4	.90	5.0	5.3	3.6	2.5	2.8	.58	4.8	4.2	6.4	5.7	2.5
5	.58	3.5	4.6	3.8	2.3	3.0	.71	.46	7.0	5.7	4.4	.25
6	.45	3.2	3.6	7.3	2.3	3.3	.51	.25	4.4	4.2	4.1	.25
7	1.1	8.9	3.3	5.0	2.3	3.3	.74	5.1	6.3	4.1	3.8	.38
8	.74	12	3.2	3.9	2.3	3.5	4.8	9.2	4.7	5.2	11	.25
9	.58	1.7	1.3	3.6	2.4	3.5	14	6.4	3.9	5.4	10	.19
10	.51	1.7	.25	3.6	2.5	2.4	15	2.1	5.5	5.4	4.4	1.6
11	.38	9.6	.25	3.5	2.6	1.9	16	4.0	1.4	5.7	1.1	4.9
12	.25	10	.19	4.1	2.3	2.3	15	8.4	2.4	13	.43	4.6
13	.25	6.2	.19	3.5	1.8	16	15	22	4.7	13	.45	7.5
14	2.8	4.9	.19	3.6	1.8	18	13	7.2	4.1	5.7	.38	4.9
15	6.1	12	.19	3.6	1.8	18	9.4	.82	3.9	5.6	2.5	4.1
16	10	8.2	.19	3.8	1.7	25	13	.90	3.8	5.0	8.8	3.8
17	12	5.2	.19	6.3	1.7	25	15	1.3	3.8	4.9	14	3.6
18	4.6	4.7	.19	5.7	1.7	28	24	1.1	1.6	5.2	10	e3.6
19	.51	4.1	1.9	9.9	1.7	8.4	12	.90	2.4	5.0	4.0	e3.6
20	1.7	3.8	1.5	5.9	1.7	25	12	.82	6.2	5.2	1.4	e4.0
21	1.3	3.5	3.5	5.4	2.0	19	4.0	.58	11	6.2	1.1	e4.5
22	.99	3.5	4.9	5.2	2.4	2.4	.51	.58	8.0	4.9	4.3	e5.2
23	.74	3.3	5.6	5.2	2.0	.99	.45	3.4	6.1	4.6	11	e5.2
24	.74	3.2	7.5	5.0	2.0	.66	3.9	4.9	6.6	9.4	9.4	e1.5
25	.66	13	4.2	5.0	1.9	.99	8.0	1.4	11	4.0	8.2	e.25
26	.58	6.4	3.9	5.0	2.0	1.7	6.1	4.8	.31	.31	7.2	e.25
27	.51	11	3.9	5.0	2.0	.90	5.6	6.8	.25	3.1	5.2	e.25
28	.38	11	4.1	4.9	2.2	.82	6.7	7.0	.25	8.8	6.6	e.30
29	.31	5.0	4.1	5.0	---	.74	6.0	6.1	1.2	16	12	e.25
30	2.9	9.3	4.1	4.9	---	.74	4.4	2.5	7.2	9.0	9.5	e.25
31	6.4	---	3.8	3.8	---	.74	---	2.0	---	9.8	6.6	---
TOTAL	63.72	194.1	90.43	147.4	59.1	227.18	228.22	133.01	133.81	194.21	183.86	85.27
MEAN	2.06	6.47	2.92	4.75	2.11	7.33	7.61	4.29	4.46	6.26	5.93	2.84
MAX	12	13	7.5	9.9	2.6	28	24	22	11	16	14	7.5
MIN	.25	1.7	.19	3.5	1.7	.66	.45	.25	.25	.31	.38	.19
AC-FT	126	385	179	292	117	451	453	264	265	385	365	169

CAL YR 1985	TOTAL	1557.30	MEAN	4.27	MAX	21	MIN	.06	AC-FT	3090
WTR YR 1986	TOTAL	1740.31	MEAN	4.77	MAX	28	MIN	.19	AC-FT	3450

e Estimated

16088000 ANAHOLA DITCH ABOVE KANEHA RESERVOIR, NEAR KEALIA

LOCATION.--Lat 22°08'10", long 159°22'28", Hydrologic Unit 20070000, on left bank at point of discharge into Kaneha Reservoir, 500 ft below wasteway gates, and 4.8 mi northwest of Kealia.

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

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

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

AVERAGE DISCHARGE.--62 years (water years, 1923-25, 1928-86), 4.26 ft^3/s (3,090 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 62 ft^3/s Nov. 12, 1947; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 32 ft^3/s Mar. 13, 16; minimum daily, 0.42 ft^3/s Mar. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	2.9	3.7	1.2	1.3	.47	8.4	7.3	5.2	5.5	5.7	5.0
2	13	3.1	3.3	1.3	.81	.47	11	4.7	4.7	4.4	8.1	4.1
3	7.6	3.1	2.9	1.2	.59	.47	20	7.7	5.0	4.0	14	3.8
4	4.7	2.6	3.2	1.0	.59	.47	25	30	4.7	8.0	6.0	16
5	3.7	4.6	3.1	1.0	.53	.47	8.5	22	9.5	4.9	5.2	5.8
6	8.7	2.6	2.3	4.6	.53	.47	8.2	8.4	4.7	3.8	4.4	4.7
7	8.1	7.2	2.2	2.6	.53	.47	10	6.6	7.1	4.1	4.7	29
8	4.0	15	2.1	1.3	.53	.47	22	12	5.2	4.3	19	22
9	3.3	10	2.1	1.2	2.3	.47	11	19	4.0	4.6	12	12
10	3.0	8.0	1.9	1.0	1.6	.47	29	17	17	4.1	29	6.6
11	8.5	8.4	1.8	.97	5.1	.42	25	4.1	8.2	4.0	19	5.7
12	4.9	8.8	1.8	1.8	1.6	.47	13	7.0	5.0	12	12	4.9
13	3.3	6.2	1.6	1.0	.81	32	13	27	4.3	19	8.7	7.1
14	3.6	4.9	1.6	.89	.73	19	11	17	4.0	19	6.2	4.7
15	3.1	6.8	1.4	.81	.81	16	14	24	3.7	29	8.3	4.1
16	7.0	4.6	1.4	.73	.65	32	16	12	3.6	13	4.3	3.7
17	6.4	3.7	1.4	.81	.65	26	13	9.2	13	13	6.1	3.8
18	3.7	3.4	1.4	1.8	.59	29	20	8.4	8.3	13	8.7	3.6
19	3.0	3.1	1.3	4.9	.59	9.1	10	9.6	4.7	8.0	17	3.4
20	28	2.9	1.3	1.8	.53	30	7.4	6.4	13	6.2	8.8	3.0
21	15	2.9	2.2	1.2	.53	30	8.4	5.5	14	8.2	8.8	3.1
22	8.4	2.7	1.3	.97	.65	15	9.4	4.9	5.7	5.2	7.8	12
23	6.6	2.6	1.2	.89	.59	15	13	4.6	4.6	5.2	6.4	14
24	7.7	2.5	1.6	.89	.53	15	9.4	8.4	5.0	18	5.5	5.2
25	10	9.1	1.2	.89	.53	9.4	10	8.7	18	12	4.9	5.0
26	4.0	5.2	1.0	.81	.47	15	6.8	5.4	5.8	5.7	4.6	4.1
27	.65	6.2	1.0	.73	.47	10	5.8	5.4	5.4	5.8	4.1	6.1
28	1.7	6.6	1.0	.65	.47	6.0	5.4	4.1	8.1	5.5	6.4	30
29	3.6	4.0	1.0	.65	---	8.6	4.9	19	6.7	13	18	11
30	3.3	6.1	1.0	.65	---	15	5.7	14	13	9.4	10	10
31	3.0	---	.97	.65	---	8.2	---	6.0	---	9.6	5.5	---
TOTAL	199.15	159.8	55.27	40.89	25.61	343.89	374.3	345.4	221.2	281.5	289.2	253.5
MEAN	6.42	5.33	1.78	1.32	.91	11.1	12.5	11.1	7.37	9.08	9.33	8.45
MAX	28	15	3.7	4.9	5.1	32	29	30	18	29	29	30
MIN	.65	2.5	.97	.65	.47	.42	4.9	4.1	3.6	3.8	4.1	3.0
AC-FT	395	317	110	81	51	682	742	685	439	558	574	503

CAL YR 1985	TOTAL	1945.20	MEAN	5.33	MAX	28	MIN	.15	AC-FT	3860
WTR YR 1986	TOTAL	2589.71	MEAN	7.10	MAX	32	MIN	.42	AC-FT	5140

16091000 LOWER ANAHOLA DITCH NEAR KEALIA

LOCATION.--Lat 22°08'14", long 159°19'31", Hydrologic Unit 20070000, on left bank 100 ft downstream from last wasteway, 1.5 mi southwest of mouth of Anahola Stream, and 2.8 mi northwest of Kealia.

PERIOD OF RECORD.--December 1938 to September 1983, October 1984 to current year.

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

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 elsewhere in this report.

AVERAGE DISCHARGE.--48 years (water years 1938-83, 1986), 2.78 ft^3/s (2,010 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 18.6 ft^3/s June 1, 1938; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6.4 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	1.6	.11	1.0	.75	.35	1.6	.80	.00	.60	.11	.08
2	1.7	1.5	.14	1.0	.75	.39	1.6	.80	.00	.60	.14	.08
3	1.9	1.6	.14	1.0	.75	.43	2.3	.75	.00	.55	.17	.05
4	1.5	1.7	.14	1.0	.70	.55	1.8	.80	.00	.55	.27	.03
5	1.2	2.2	.46	1.0	.87	.55	.47	.65	.00	.51	.23	.03
6	1.4	2.2	1.0	1.1	.85	.55	.39	.47	.00	.60	.20	.03
7	1.6	2.9	.95	1.0	.75	.51	1.5	.70	.00	.43	.23	.05
8	1.5	3.6	1.1	1.0	.60	.55	3.7	.85	.00	.35	.23	.05
9	1.3	1.4	1.2	1.0	.65	.60	3.7	1.5	.00	.35	.20	.05
10	1.2	.23	1.3	1.0	.75	.60	3.4	.14	.00	.55	.20	.05
11	1.4	.51	1.3	1.0	.85	.65	1.2	.00	.00	.60	.17	.05
12	1.6	.47	1.2	1.0	.90	.70	.23	.00	.00	.80	.14	.05
13	1.4	.47	.90	1.0	.85	1.3	.17	.00	.00	.70	.14	.05
14	1.2	.35	.65	1.0	.80	1.8	.96	.00	.00	.65	.11	.05
15	1.2	.20	.80	.95	.80	.95	1.9	.00	.00	.80	.08	.05
16	1.6	.20	1.0	1.0	.85	.70	2.0	.00	.00	.65	.11	.05
17	2.0	.17	1.0	1.0	.85	1.3	2.6	.00	.00	.65	.11	.03
18	1.7	.14	1.0	1.0	.70	1.7	1.1	.00	.00	.60	.11	.01
19	1.6	.11	1.0	1.0	.51	1.2	.20	.00	.00	.60	.11	.00
20	3.3	1.0	1.0	1.0	.51	.85	.17	.00	.00	.60	.08	.00
21	3.1	2.3	1.2	1.0	.55	5.3	.15	.00	.00	.23	.08	.00
22	2.5	2.3	1.2	1.0	.55	6.4	.31	.00	.00	.24	.08	.01
23	2.2	2.2	1.1	1.0	.55	2.0	.31	.00	.00	.35	.08	.03
24	2.2	2.2	1.3	.85	.51	.05	.31	.73	.00	.39	.08	.05
25	2.1	1.2	1.9	.80	.39	2.0	.31	.00	.03	.55	.08	.08
26	1.3	.60	1.6	.80	.27	3.1	.39	.00	.03	.31	.08	.05
27	.51	.47	1.2	.80	.31	2.0	.60	.00	.03	.27	.08	.05
28	.55	.20	1.1	.80	.35	2.2	.75	.00	.20	.23	.08	.05
29	1.4	.17	1.0	.80	---	.75	.75	.00	.43	.20	.05	.06
30	1.7	.08	1.0	.80	---	.31	.82	.00	.55	.08	.05	.00
31	1.6	---	1.0	.80	---	1.4	---	.00	---	.08	.05	---
TOTAL	50.11	34.27	29.99	29.50	18.52	41.74	35.49	8.19	1.27	14.67	3.83	1.22
MEAN	1.62	1.14	.97	.95	.66	1.35	1.18	.26	.042	.47	.13	.041
MAX	3.3	3.6	1.9	1.1	.90	6.4	3.7	1.5	.55	.80	.27	.08
MIN	.51	.08	.11	.80	.27	.05	.15	.00	.00	.08	.05	.00
AC-FT	99	68	59	59	37	83	70	16	2.5	29	7.8	2.4

CAL YR 1985	TOTAL	441.51	MEAN	1.21	MAX	5.1	MIN	.00	AC-FT	876
WTR YR 1986	TOTAL	268.90	MEAN	.74	MAX	6.4	MIN	.00	AC-FT	533

16097500 HALAULANI STREAM AT ALTITUDE 400 FT, NEAR KILAUEA

LOCATION.--Lat 22°10'54", long 159°25'17", Hydrologic Unit 20070000, on left bank 0.5 mi upstream from confluence with Pohakuhonu Stream and 2.3 mi south of Kilauea.

DRAINAGE AREA.--1.9 mi^2.

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

REVISED RECORDS.--WSP 2137: Drainage area.

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

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--28 years (water years 1959-86), 11.4 ft^3/s (8,260 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft^3/s Aug. 6, 1959, gage height, 8.30 ft, from rating curve extended above 190 ft^3/s on basis of slope-area measurement of peak flow; minimum, 1.8 ft^3/s Sept. 6-8, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0700	864	5.44	May 9	2300	*969	*5.74

Minimum discharge, 2.9 ft^3/s Feb. 27, Mar. 5-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.9	4.4	3.5	3.4	3.1	11	6.0	6.8	8.8	8.4	7.4
2	7.2	5.1	4.3	3.4	3.2	3.0	12	6.2	6.6	7.8	8.7	7.2
3	5.3	4.8	4.3	3.4	3.2	3.0	23	11	6.4	7.7	9.5	7.0
4	4.7	4.8	4.2	3.4	3.2	3.0	34	55	6.2	8.9	9.2	11
5	4.7	5.1	4.2	3.3	3.1	3.0	34	45	9.4	7.7	8.2	7.6
6	5.6	4.7	4.1	3.9	3.2	3.0	20	15	6.6	7.2	7.6	7.0
7	5.4	6.7	4.0	3.5	3.2	3.0	13	10	8.0	7.1	7.4	29
8	4.6	14	4.0	3.4	3.2	3.0	18	11	8.0	7.4	21	23
9	4.5	9.3	3.9	3.3	3.3	3.0	11	34	6.8	7.0	22	13
10	4.4	6.6	3.9	3.3	3.2	3.0	23	33	20	6.9	40	9.0
11	6.9	11	3.8	3.3	4.6	3.0	34	12	9.4	7.2	54	8.2
12	5.6	7.4	3.8	3.3	3.4	3.2	21	9.6	7.6	13	40	7.8
13	4.8	6.1	3.8	3.3	3.2	44	28	12	7.2	17	24	7.6
14	4.6	5.8	3.7	3.3	3.2	25	15	12	6.8	43	23	7.2
15	4.5	6.6	3.7	3.3	3.2	11	11	14	6.8	69	29	7.0
16	8.7	5.6	3.7	3.2	3.1	21	9.7	9.2	6.4	20	17	7.0
17	7.4	5.3	3.7	3.9	3.1	35	8.7	8.0	12	21	14	6.8
18	5.4	5.1	3.7	3.6	3.1	14	17	7.6	9.0	17	11	6.8
19	4.9	4.8	3.7	6.0	3.1	7.4	9.9	8.0	7.6	11	35	6.6
20	94	4.7	3.7	3.6	3.1	28	8.9	7.0	14	9.7	16	6.6
21	29	4.6	3.7	3.3	3.1	88	8.2	6.4	15	9.0	12	6.4
22	9.3	4.5	3.6	3.3	3.1	41	8.0	6.4	9.4	8.4	9.9	6.8
23	7.8	4.4	3.6	3.3	3.0	36	9.0	6.4	8.2	7.9	9.1	8.2
24	7.3	4.4	3.8	3.4	3.0	40	9.0	7.9	8.2	13	8.6	7.6
25	8.9	5.4	3.6	3.3	3.0	21	8.6	8.0	16	15	8.4	7.0
26	6.5	4.6	3.5	3.3	3.0	52	7.2	6.6	8.7	8.8	8.0	6.6
27	5.9	5.2	3.4	3.2	3.0	24	7.0	6.4	7.8	8.5	7.8	6.6
28	5.5	6.0	3.4	3.2	3.0	12	6.8	6.0	7.6	8.2	8.0	32
29	5.5	4.8	3.4	3.2	---	10	6.4	13	9.4	15	9.2	9.6
30	5.2	4.8	3.4	3.2	---	18	6.2	10	13	11	8.6	8.0
31	5.0	---	3.4	3.2	---	10	---	7.2	---	9.2	7.8	---
TOTAL	294.0	177.1	117.4	107.1	89.5	573.7	438.6	409.9	274.7	418.4	502.4	291.6
MEAN	9.48	5.90	3.79	3.45	3.20	18.5	14.6	13.2	9.16	13.5	16.2	9.72
MAX	94	14	4.4	6.0	4.6	88	34	55	20	69	54	32
MIN	4.4	4.4	3.4	3.2	3.0	3.0	6.2	6.0	6.2	6.9	7.4	6.4
AC-FT	583	351	233	212	178	1140	870	813	545	830	997	578

CAL YR 1985	TOTAL	2862.7	MEAN	7.84	MAX	94	MIN	3.4	AC-FT	5680
WTR YR 1986	TOTAL	3694.4	MEAN	10.1	MAX	94	MIN	3.0	AC-FT	7330

16103000 HANALEI RIVER NEAR HANALEI

LOCATION.--Lat 22°11'31", long 159°27'57", Hydrologic Unit 20070000, on right bank 2.6 mi southeast of Hanalei School and 4.9 mi upstream from mouth.

DRAINAGE AREA.--19.1 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area. WSP 2137: 1962(M), 1963-65(P). WDR HI-77-1: 1970-76(M), 1975-76.

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

REMARKS.--Records fair except for estimated daily discharges, which are poor. Since 1925, Hanalei tunnel (sta. 16100000) has diverted from Hanalei River and its tributary Kaapoko Stream upstream to North Branch of North Fork Wailua River for irrigation. China ditch upstream diverts for irrigation of taro in vicinity of Hanalei. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE (since diversion to Hanalei tunnel).--23 years (water years 1964-86), 212 ft^3/s (153,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft^3/s Apr. 19, 1974, gage height, 14.28 ft, from rating curve extended above 9,600 ft^3/s; minimum, 31 ft^3/s Sept. 30, Oct. 1, 2, 5, 12, 13, Nov. 3, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,600 ft^3/s Oct. 20, gage height, 13.82 ft, no other peak greater than base discharge of 9,200 ft^3/s; minimum, 40 ft^3/s Feb. 27 to Mar. 1, Mar. 5-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	82	210	52	47	41	e150	97	91	124	108	e110
2	112	80	140	53	45	43	e350	90	86	97	113	e100
3	78	79	90	52	44	41	e450	116	82	90	136	e90
4	62	76	76	51	58	41	e1000	510	80	164	113	e120
5	58	83	75	51	46	40	681	634	109	106	99	e105
6	89	73	72	58	45	40	484	178	82	90	93	e90
7	101	130	69	54	44	40	349	136	101	90	92	e150
8	65	240	67	50	44	40	618	137	87	101	220	e400
9	58	148	66	50	52	40	486	178	75	116	181	e110
10	56	105	64	49	48	40	1020	344	108	104	351	e120
11	121	93	63	48	54	40	1390	137	120	157	1190	e150
12	94	90	62	50	46	49	474	212	80	216	644	e120
13	68	83	62	48	44	e400	690	493	74	358	362	e150
14	67	78	60	48	44	e420	600	293	71	422	295	e120
15	61	143	60	47	48	e550	439	204	71	1090	246	e105
16	163	91	59	47	43	e1100	220	182	70	274	180	e95
17	102	79	58	58	42	e250	174	138	151	232	192	e92
18	72	77	58	56	42	e430	193	137	109	214	152	e88
19	64	74	58	57	42	e170	148	132	100	162	424	e86
20	1600	71	58	50	42	e300	142	102	175	206	180	e84
21	307	70	60	48	43	e800	128	93	212	170	137	e110
22	148	68	57	47	93	e450	143	86	124	132	125	e250
23	125	66	59	49	47	e350	170	83	101	119	110	e170
24	134	65	102	47	44	e250	170	96	102	265	103	e240
25	291	403	59	46	43	e140	208	116	202	282	99	e130
26	128	161	55	46	43	e330	131	97	112	148	95	e110
27	110	260	54	44	42	e180	125	95	98	132	92	e100
28	102	220	54	44	40	e110	112	84	92	122	e200	e150
29	95	140	54	44	---	e130	102	185	93	194	e400	e110
30	90	230	53	44	---	e270	98	185	261	144	e230	e100
31	85	---	52	45	---	e150	---	104	---	124	e130	---
TOTAL	4793	3658	2186	1533	1315	7275	11445	5674	3319	6245	7092	3955
MEAN	155	122	70.5	49.5	47.0	235	382	183	111	201	229	132
MAX	1600	403	210	58	93	1100	1390	634	261	1090	1190	400
MIN	56	65	52	44	40	40	98	83	70	90	92	84
AC-FT	9510	7260	4340	3040	2610	14430	22700	11250	6580	12390	14070	7840

CAL YR 1985	TOTAL	55260	MEAN	151	MAX	1600	MIN	50	AC-FT	109600
WTR YR 1986	TOTAL	58490	MEAN	160	MAX	1600	MIN	40	AC-FT	116000

e Estimated

16108000 WAINIHA RIVER NEAR HANALEI

LOCATION.--Lat 22°08'20", long 159°33'38", Hydrologic Unit 20070000, on left bank at Puwainui Falls, 1.5 mi upstream from Wainiha powerplant intake, and 6.0 mi southwest of Hanalei.

DRAINAGE AREA.--10.2 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 960 ft, from topographic map.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years (water years 1953-55, 1959-86), 139 ft^3/s (100,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,100 ft^3/s Apr. 19, 1974, gage height, 9.47 ft, from rating curve extended above 1,100 ft^3/s on basis of slope-area measurement at gage height 7.72 ft; minimum, 32 ft^3/s Oct. 21-23, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 17, 1956, which destroyed the station, reached a stage of 14.1 ft, from floodmarks, discharge, about 40,000 ft^3/s, from unit-discharge study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 3,620 ft^3/s Aug. 11, gage height 5.24 ft, no other peak greater than base discharge of 3,600 ft^3/s; minimum, 33 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	49	196	51	39	37	97	72	74	82	59	66
2	85	53	101	46	37	37	217	59	71	70	68	59
3	57	56	89	42	37	36	298	77	65	76	86	55
4	52	48	58	40	93	36	652	409	63	202	70	68
5	47	61	54	39	42	35	316	434	102	82	59	61
6	78	47	50	44	38	35	286	99	62	73	54	53
7	97	91	48	46	37	35	448	72	98	80	64	83
8	62	254	46	42	36	35	644	83	62	108	173	222
9	54	103	45	40	37	34	477	122	55	166	131	62
10	55	63	45	39	36	34	1470	131	58	112	234	66
11	186	52	44	38	37	34	1460	68	69	194	671	87
12	83	50	43	40	36	42	293	224	56	168	375	67
13	68	47	42	38	35	256	422	144	58	251	288	81
14	60	70	42	37	35	278	279	131	66	202	203	69
15	57	270	42	37	71	368	205	99	74	753	156	60
16	82	83	42	37	41	702	82	116	89	134	89	56
17	66	59	42	150	37	170	93	75	249	151	99	53
18	51	68	41	61	36	277	110	107	175	118	72	52
19	47	59	40	46	35	108	63	98	110	90	177	51
20	209	49	40	42	35	194	86	58	145	75	89	50
21	78	47	40	39	96	522	69	54	170	68	65	67
22	56	45	39	44	227	303	111	51	92	59	66	145
23	67	45	123	42	55	218	189	52	78	59	59	105
24	118	45	158	39	44	148	183	68	101	78	56	124
25	243	160	56	38	44	95	202	76	193	117	55	74
26	75	119	47	38	40	213	90	67	95	59	53	61
27	116	253	44	37	37	119	132	74	82	83	52	56
28	74	200	44	37	37	70	98	68	69	63	94	85
29	62	97	43	38	---	85	85	197	69	160	223	64
30	54	224	43	38	---	174	74	171	348	82	152	62
31	53	---	41	37	---	98	---	88	---	73	80	---
TOTAL	2588	2867	1808	1382	1410	4828	9231	3644	3098	4088	4172	2264
MEAN	83.5	95.6	58.3	44.6	50.4	156	308	118	103	132	135	75.5
MAX	243	270	196	150	227	702	1470	434	348	753	671	222
MIN	47	45	39	37	35	34	63	51	55	59	52	50
AC-FT	5130	5690	3590	2740	2800	9580	18310	7230	6140	8110	8280	4490

CAL YR 1985	TOTAL	43350	MEAN	119	MAX	2340	MIN	39	AC-FT	85980
WTR YR 1986	TOTAL	41380	MEAN	113	MAX	1470	MIN	34	AC-FT	82080

16200000 NORTH FORK KAUKONAHUA STREAM ABOVE RIGHT BRANCH, NEAR WAHIAWA

LOCATION.--Lat 21°31'09", long 157°56'53", Hydrologic Unit 20060000, on left bank 140 ft upstream from Mauka ditch intake and Right Branch, and 4.5 mi northeast of Wahiawa.

DRAINAGE AREA.--1.38 mi^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 Auguat 1953, published as Left Branch of North Fork Kaukonahua Stream near Wahiawa.

REVISED RECORDS.--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.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,150 ft, from topographic map.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--63 years (water years 1914-24, 1927-52, 1961-86), 16.4 ft^3/s (11,880 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,640 ft^3/s Oct. 28, 1981, gage height, 13.2 ft, from rating curve extended above 68 ft^3/s on basis of slope-area measurement at gage height, 12.46 ft; minimum, 0.12 ft^3/s Mar. 2, 13, 1941.

EXTREMES FOR CURRENT YEAR.--Peak dischargee greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2200	1,800	7.16	July 14	1930	1,400	6.44
May 10	0130	*3,330	*9.72	Sept. 29	0730	2,770	8.79
June 10	1600	1,340	6.33				

Minimum discharge, 0.13 ft^3/s Mar. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	4.4	48	.51	.21	.15	16	6.3	4.4	12	11	8.2
2	25	3.9	4.9	.47	.21	.14	17	14	4.2	8.7	7.4	6.5
3	6.3	4.1	3.8	.47	.19	.14	50	67	4.7	17	28	5.5
4	4.9	4.7	3.1	.47	2.4	.14	82	78	3.9	35	44	9.0
5	24	4.4	2.7	.44	.85	.14	173	73	9.1	11	17	5.1
6	15	3.2	2.5	.44	.32	.13	28	14	12	23	7.9	14
7	5.5	3.0	2.3	.63	.23	.13	21	13	13	22	7.5	9.9
8	5.9	2.8	2.1	.75	.21	.13	19	20	25	20	22	7.4
9	4.2	2.7	1.9	.51	.19	.13	21	34	28	14	56	7.3
10	3.8	3.2	1.8	.41	.17	.13	111	314	135	9.6	72	7.3
11	50	4.8	1.7	.38	.21	.13	131	15	15	15	23	4.7
12	9.0	6.5	1.6	.38	.17	.17	36	14	10	15	22	4.4
13	25	4.1	1.5	.35	.16	15	58	85	7.0	36	34	5.6
14	6.3	2.6	1.4	.35	.15	1.9	22	64	10	156	107	5.9
15	5.1	4.9	1.4	.35	.38	57	21	108	7.0	25	32	3.8
16	4.7	3.8	1.6	.32	.19	58	16	19	5.3	34	16	3.3
17	4.1	2.4	1.3	.38	.17	31	12	16	7.3	72	24	3.1
18	3.8	8.8	1.2	.35	.15	21	11	23	7.0	18	12	3.0
19	55	4.8	1.1	.32	.14	9.0	9.3	11	5.9	31	11	2.7
20	92	2.2	1.0	.29	.15	68	8.7	9.6	29	12	9.3	2.6
21	8.2	1.9	.96	.29	.16	118	9.6	8.4	21	10	18	13
22	5.7	1.8	.90	.29	.80	32	20	7.7	9.0	11	10	44
23	11	3.7	1.1	.26	2.3	101	34	7.0	5.9	18	8.2	11
24	28	3.4	5.3	.26	.32	48	17	6.3	43	51	11	25
25	19	7.0	1.4	.26	.19	65	9.6	6.1	45	34	6.7	14
26	6.1	3.0	.90	.26	.17	21	7.7	7.0	8.4	11	6.1	9.6
27	13	21	.80	.23	.16	20	6.7	11	7.2	27	5.5	13
28	6.3	15	.71	.23	.15	8.7	7.9	5.7	14	9.6	7.3	51
29	5.3	4.1	.67	.21	---	40	9.3	16	14	27	34	175
30	4.4	13	.63	.21	---	36	9.9	7.5	68	10	22	27
31	4.4	---	.55	.21	---	12	---	4.9	---	9.0	14	---
TOTAL	480.0	155.2	100.82	11.28	11.10	764.26	992.7	1085.5	578.3	803.9	705.9	501.9
MEAN	15.5	5.17	3.25	.36	.40	24.7	33.1	35.0	19.3	25.9	22.8	16.7
MAX	92	21	48	.75	2.4	118	173	314	135	156	107	175
MIN	3.8	1.8	.55	.21	.14	.13	6.7	4.9	3.9	8.7	5.5	2.6
AC-FT	952	308	200	22	22	1520	1970	2150	1150	1590	1400	996

CAL YR 1985	TOTAL	4159.36	MEAN	11.4	MAX	167	MIN	.55	AC-FT	8250
WTR YR 1986	TOTAL	6190.86	MEAN	17.0	MAX	314	MIN	.13	AC-FT	12280

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

LOCATION.--Lat 21°29'32", long 157°59'54", Hydrologic Unit 20060000, on right bank on upstream side of dam at East Pump Reservoir, 2.3 mi east of Wahiawa Post Office, and 7.1 mi north of Waipahu.

DRAINAGE AREA.--4.04 mi^2.

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 above mean sea level.

REMARKS.--Records good. Prior to 1960, diversions from reservoirs upstream for use at Schofield Barracks. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years (water years, 1961-62, 1965-86), 21.2 ft^3/s (15,360 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,460 ft^3/s Apr. 15, 1963, gage height, 11.33 ft, from rating curve extended above 1,100 ft^3/s on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,170 ft^3/s May 10, gage height, 8.29 ft, no other peak greater than base discharge of 1,100 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	6.3	90	.61	.00	.00	12	8.7	4.1	22	19	11
2	27	5.6	11	.61	.00	.00	29	6.3	3.8	14	14	8.4
3	9.6	4.9	5.9	.59	.00	.00	109	79	4.9	16	47	7.5
4	5.8	8.0	4.7	.55	.00	.00	77	97	5.3	36	26	11
5	19	5.8	3.7	.51	.53	.00	177	69	18	25	24	7.4
6	57	4.9	3.2	.49	.91	.00	68	21	6.2	19	12	12
7	11	3.9	2.9	.47	.40	.00	39	15	21	23	11	15
8	6.2	3.7	2.6	1.1	.23	.00	37	22	8.8	37	19	7.1
9	5.3	3.6	2.4	1.2	.14	.00	62	19	6.5	38	59	6.6
10	5.0	3.5	2.3	.67	.07	.00	122	412	61	23	135	5.8
11	90	4.4	2.1	.48	.01	.00	161	27	17	33	38	5.2
12	24	7.0	2.0	.41	.00	.00	49	20	8.0	42	26	4.7
13	21	5.4	2.0	.35	.00	36	50	42	5.7	48	27	4.8
14	9.6	3.4	1.9	.29	.00	14	32	51	13	43	83	7.8
15	7.4	3.5	1.9	.26	.00	3.8	25	48	7.1	45	55	4.8
16	9.8	4.6	2.1	.23	.00	32	22	20	7.0	37	28	3.9
17	6.1	3.7	1.9	.30	.00	62	16	14	11	85	33	3.7
18	5.3	4.0	1.7	.54	.00	18	14	20	13	35	18	3.5
19	28	13	1.6	.48	.00	18	12	11	13	40	15	3.2
20	257	3.7	1.2	.37	.00	53	11	9.1	36	23	13	3.0
21	24	2.5	1.1	.29	.00	149	10	8.4	26	17	13	39
22	13	2.2	1.1	.25	.00	47	14	8.3	14	15	12	52
23	13	2.0	1.6	.20	.00	92	17	7.0	11	19	11	13
24	17	3.7	4.5	.16	.03	54	11	6.5	38	97	10	18
25	23	5.8	3.9	.14	.34	127	9.8	5.9	114	69	9.2	14
26	9.3	7.4	1.7	.11	.20	29	7.2	6.6	21	22	8.0	19
27	7.9	21	1.2	.09	.08	38	6.6	11	14	34	7.3	12
28	8.2	29	.80	.06	.01	13	6.3	6.9	38	19	7.2	63
29	6.8	8.0	.79	.01	---	12	16	6.9	24	24	37	114
30	6.1	20	.69	.00	---	21	16	19	41	14	40	34
31	5.4	---	.62	.00	---	11	---	5.2	---	16	18	---
TOTAL	779.8	204.5	165.20	11.82	2.95	829.80	1237.9	1104.8	611.4	1031	874.7	514.4
MEAN	25.2	6.82	5.33	.38	.11	26.8	41.3	35.6	20.4	33.3	28.2	17.1
MAX	257	29	90	1.2	.91	149	177	412	114	97	135	114
MIN	5.0	2.0	.62	.00	.00	.00	6.3	5.2	3.8	14	7.2	3.0
AC-FT	1550	406	328	23	5.9	1650	2460	2190	1210	2040	1730	1020

CAL YR 1985	TOTAL	5117.38	MEAN	14.0	MAX	257	MIN	.62	AC-FT	10150
WTR YR 1986	TOTAL	7368.27	MEAN	20.2	MAX	412	MIN	.00	AC-FT	14610

16211800 MAKAHA STREAM NEAR MAKAHA

LOCATION.--Lat 21°30'16", long 158°10'59", Hydrologic Unit 20080000, on right bank 1.5 mi northeast of Kaneaki Heiau and 3.4 mi northeast of Makaha.

DRAINAGE AREA.--2.31 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area.

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

REMARKS.--Records good. Wells and water-development tunnels in the vicinity and upstream may affect low-flow records. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 1.89 ft^3/s (1,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft^3/s Jan. 6, 1982, gage height, 7.40 ft, from floodmarks, from rating curve extended above 51 ft^3/s on basis of slope-area measurements at gage heights 6.50 ft and 7.40 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1953, about 7.8 ft Nov. 24, 1954, from information by local resident. Discharge, about 1,700 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 356 ft^3/s Oct. 20, gage height, 4.02 ft, no other peak greater than base discharge of 200 ft^3/s; minimum, 0.09 ft^3/s Sept. 25, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	.47	15	.52	.80	.79	1.4	.74	.54	.21	.46	.33
2	.70	.44	8.1	.52	.59	.75	1.3	.68	.46	.19	.41	.28
3	.62	.42	5.8	.51	.48	.76	3.2	.67	.43	.17	.36	.23
4	.58	.41	4.4	.48	4.4	.70	2.6	.97	.39	.15	.32	.20
5	.47	.61	3.5	.47	1.5	.61	2.0	1.3	.36	.15	.28	1.2
6	.41	.65	2.9	1.1	.91	.56	1.8	.89	1.3	.13	.24	1.9
7	.36	.56	2.4	1.4	.71	.52	3.0	.72	2.3	.13	.22	2.2
8	.29	.51	2.0	.85	.61	.48	2.9	.63	2.3	.13	1.1	2.1
9	.28	2.4	1.8	.64	.62	.47	5.0	.59	2.3	.12	2.2	1.3
10	.24	4.1	1.6	.56	.76	.46	17	.74	3.2	1.2	2.2	.33
11	.90	1.6	1.5	.50	1.4	1.1	11	.68	2.9	2.1	.99	.29
12	1.8	1.1	1.4	.47	.89	1.6	6.1	.61	2.5	2.1	.25	.25
13	1.8	.89	1.2	.44	.71	6.1	4.4	.75	2.3	2.1	.32	.22
14	1.8	.77	1.1	.42	.60	3.3	3.5	.75	2.2	2.2	1.2	.19
15	1.8	.73	1.3	.39	2.6	2.0	2.9	.98	2.0	2.2	1.1	.17
16	.87	1.4	1.5	.38	1.3	1.6	2.5	.82	1.0	1.0	.61	.15
17	.27	.88	1.1	1.9	.90	1.6	2.2	.66	.29	.57	.47	.14
18	.26	6.3	.95	1.5	.74	12	2.0	.61	.27	.60	.41	.13
19	.27	4.4	.87	.79	.63	8.2	1.8	.56	.27	.46	.35	1.4
20	52	2.4	.83	.60	.61	8.7	1.6	.52	1.4	.42	.32	2.1
21	6.0	1.7	.77	.49	.58	16	1.5	.47	2.2	.37	.27	2.1
22	2.8	1.4	.72	.45	5.8	9.9	1.4	1.5	2.2	.30	.23	1.3
23	1.8	1.1	.77	.39	3.1	6.3	1.4	2.5	2.2	1.5	.21	.14
24	1.3	.96	2.8	.39	1.8	4.9	1.3	2.5	2.2	4.7	.19	.13
25	.94	20	1.5	.36	1.4	3.8	1.2	2.4	2.6	7.4	.17	.11
26	.81	12	.96	.35	1.1	3.1	1.2	2.4	2.4	3.5	1.5	.11
27	.69	8.9	.77	.33	.92	3.0	1.1	2.3	2.3	3.0	2.1	.10
28	.62	7.0	.69	.30	.83	2.4	.97	2.3	2.2	1.6	2.1	.40
29	.57	5.3	.62	.32	---	2.0	.91	1.7	2.0	.73	1.1	.79
30	.52	18	.57	.31	---	1.7	.90	.98	1.1	.60	.42	.64
31	.51	---	.55	.31	---	1.5	---	.65	---	.53	.37	---
TOTAL	83.02	107.40	69.97	18.44	37.29	106.80	90.08	34.55	50.11	40.56	22.47	20.93
MEAN	2.68	3.58	2.26	.59	1.33	3.45	3.00	1.11	1.67	1.31	.72	.70
MAX	52	20	15	1.9	5.8	16	17	2.5	3.2	7.4	2.2	2.2
MIN	.24	.41	.55	.30	.48	.46	.90	.47	.27	.12	.17	.10
AC-FT	165	213	139	37	74	212	179	69	99	80	45	42

CAL YR 1985	TOTAL	619.31	MEAN	1.70	MAX	52	MIN	.09	AC-FT	1230
WTR YR 1986	TOTAL	681.72	MEAN	1.87	MAX	52	MIN	.10	AC-FT	1350

16212800 KIPAPA STREAM NEAR WAHIAWA

LOCATION.--Lat 21°28'13", long 157°57'40", Hydrologic Unit 20060000, on left bank 1,700 ft downstream from forest-reserve boundary, 4.9 mi southeast of Wahiawa Post Office, and 6.3 mi northeast of Waipahu.

DRAINAGE AREA.--4.29 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 690 ft, from topographic map.

REMARKS.--Records good. At times, a small amount of water is diverted from the gage pool for domestic use. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--29 years, 10.6 ft^3/s (7,680 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,680 ft^3/s May 14, 1963, gage height, 12.29 ft, from rating curve extended above 300 ft^3/s on basis of slope-area measurements at gage heights 7.96 ft and 12.29 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base diacharge of 930 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0930	1,340	7.77	July 24	0100	1,030	7.13
May 10	0200	*1,500	*8.09				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	2.6	65	.39	.00	.00	3.9	4.5	1.9	6.1	6.1	4.1
2	25	1.9	8.5	.35	.00	.00	8.8	3.2	1.7	3.7	4.3	3.1
3	4.5	2.1	5.6	.50	.00	.00	31	17	1.9	3.6	25	2.4
4	2.6	5.6	3.7	.54	.00	.00	35	48	2.0	11	17	4.7
5	3.1	2.5	2.6	.35	1.7	.00	68	19	2.0	4.5	12	3.1
6	26	2.2	2.0	.27	.40	.00	31	7.7	1.8	4.7	5.0	8.2
7	4.7	1.4	1.7	.54	.14	.00	18	6.1	12	13	4.1	5.9
8	2.5	1.2	1.4	1.6	.00	.00	18	11	8.0	7.6	4.5	3.6
9	1.8	1.3	1.1	.75	.00	.00	18	14	18	5.4	4.1	2.6
10	1.5	1.8	.99	.42	.00	.00	56	112	67	4.1	25	2.2
11	30	3.4	.87	.27	.00	.00	98	11	14	6.6	12	1.7
12	13	5.2	.81	.17	.00	.00	26	8.5	6.9	4.3	6.4	1.4
13	11	4.3	.69	.13	.00	.00	36	7.7	4.5	28	5.2	3.2
14	4.5	1.7	.59	.10	.00	.00	17	5.9	6.1	17	14	9.3
15	2.9	1.9	.64	.03	.81	.00	14	6.6	3.7	14	18	2.0
16	2.4	8.7	.81	.00	1.4	48	12	5.6	2.9	6.6	9.4	1.3
17	2.0	2.1	.64	.00	.30	100	8.0	4.1	5.3	23	19	1.1
18	1.8	1.7	.54	.50	.00	27	8.2	9.4	6.4	8.5	6.1	.93
19	18	7.4	.46	2.3	.00	22	6.1	4.5	5.0	11	4.3	.75
20	154	1.6	.42	1.5	.00	50	5.2	3.4	3.4	5.9	3.7	.69
21	16	.87	.42	.46	.00	105	4.5	2.9	12	4.1	3.9	3.2
22	6.4	.59	.42	.39	.00	44	5.4	2.6	5.9	3.6	6.9	38
23	4.7	.69	.54	.20	2.7	33	11	2.5	3.6	22	3.9	6.4
24	24	3.1	.87	.15	.93	31	6.1	2.2	6.2	73	3.2	3.2
25	16	7.4	.93	.02	.30	128	5.6	2.1	24	68	2.9	2.6
26	4.7	3.9	.69	.00	.17	19	4.1	3.1	5.9	13	2.2	3.7
27	3.9	21	.50	.01	.05	16	3.6	11	4.1	16	1.9	8.0
28	3.2	16	.42	.02	.00	7.7	3.4	3.9	10	7.7	2.1	53
29	2.6	4.5	.39	.00	---	6.4	3.6	2.9	5.6	16	22	40
30	2.2	27	.39	.00	---	5.4	5.9	8.7	18	5.6	14	25
31	2.0	---	.46	.00	---	4.7	---	2.5	---	7.6	6.6	---
TOTAL	444.0	145.65	105.09	11.96	8.90	647.20	571.4	353.6	289.8	425.2	274.8	245.37
MEAN	14.3	4.85	3.39	.39	.32	20.9	19.0	11.4	8.99	13.7	8.86	8.18
MAX	154	27	65	2.3	2.7	128	98	112	67	73	25	53
MIN	1.5	.59	.39	.00	.00	.00	3.4	2.1	1.7	3.6	1.9	.69
AC-FT	881	289	208	24	18	1280	1130	701	535	843	545	487

CAL YR 1985	TOTAL	2672.60	MEAN	7.32	MAX	154	MIN	.11	AC-FT	5300
WTR YR 1986	TOTAL	3502.97	MEAN	9.60	MAX	154	MIN	.00	AC-FT	6950

16213000 WAIKELE STREAM AT WAIPAHU
(National stream-quality accounting network station)

LOCATION.--Lat 21°23'11", long 158°00'49", Hydrologic Unit 20060000, on left bank 300 ft upstream from bridge on Highway 90 and 0.3 mi southwest of sugar refinery at Waipahu.

DRAINAGE AREA.--45.7 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1639: 1955(M). WSP 1937: Drainage area. WSP 2137: 1965.

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

REMARKS.--Records good. Diversions upstream for irrigation of sugarcane in vicinity of Waipahu.

AVERAGE DISCHARGE.--33 years (water years 1953-59, 1961-85), 37.9 ft^3/s (27,460 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s Nov. 28, 1954, gage height, 14.82 ft, site and datum then in use, from rating curve extended above 730 ft^3/s on basis of slope-area measurement of peak flow; no flow for part of Feb. 25, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0630	*6,370	*9.08	May 10	0630	1,760	5.26

Minimum discharge, 3.2 ft^3/s Feb. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.2	125	15	14	15	16	18	9.1	23	17	28
2	39	14	45	15	15	19	14	12	7.4	13	17	17
3	22	14	20	15	15	20	23	9.8	7.3	9.8	37	11
4	11	16	15	15	15	14	82	80	7.0	20	38	9.2
5	8.2	14	17	15	15	9.3	90	50	7.3	21	29	10
6	47	8.6	18	15	13	9.7	120	26	6.8	14	20	7.9
7	21	9.5	17	15	14	9.1	48	17	14	19	12	19
8	11	9.4	16	14	15	14	55	21	15	17	10	13
9	8.8	16	15	15	15	16	101	28	18	16	10	11
10	7.0	15	15	16	15	13	100	299	100	15	27	9.7
11	12	8.4	16	16	15	10	260	48	45	13	37	8.6
12	46	9.5	15	15	14	9.0	85	32	20	14	23	10
13	21	13	14	16	15	9.4	68	26	13	17	16	84
14	23	10	15	16	15	7.3	55	23	9.8	57	22	23
15	13	9.5	15	15	16	12	36	20	9.7	38	57	14
16	8.4	19	16	15	15	23	34	18	8.5	22	25	10
17	5.8	19	14	15	15	140	26	14	7.9	25	25	5.8
18	6.8	22	15	15	18	41	21	14	9.6	35	32	6.7
19	78	35	16	14	9.2	50	23	19	11	17	20	5.9
20	1320	18	15	13	12	52	17	12	10	25	16	5.9
21	76	9.7	15	14	15	164	15	9.8	18	14	12	6.1
22	46	8.5	15	14	15	108	15	9.3	22	8.3	11	35
23	33	11	15	14	15	52	18	8.6	16	14	11	25
24	22	11	17	15	15	65	19	8.4	11	119	8.9	12
25	53	9.4	15	14	15	216	15	8.3	45	150	8.7	10
26	22	15	15	14	15	57	15	10	27	52	8.9	9.7
27	16	19	15	13	15	56	15	12	14	28	7.1	14
28	15	58	15	13	15	32	16	18	13	31	6.9	83
29	13	40	15	14	---	26	14	9.7	33	27	18	97
30	11	41	15	16	---	24	12	15	22	21	31	74
31	10	---	15	14	---	21	---	14	---	17	26	---
TOTAL	2039.0	511.7	621	455	410.2	1313.8	1428	909.9	557.4	912.1	639.5	675.5
MEAN	65.8	17.1	20.0	14.7	14.7	42.4	47.6	29.4	18.6	29.4	20.6	22.5
MAX	1320	58	125	16	18	216	260	299	100	150	57	97
MIN	5.8	8.4	14	13	9.2	7.3	12	8.3	6.8	8.3	6.9	5.8
AC-FT	4040	1010	1230	902	814	2610	2830	1800	1110	1810	1270	1340

CAL YR 1985	TOTAL	9238.7	MEAN	25.3	MAX	1320	MIN	4.4	AC-FT	18320
WTR YR 1986	TOTAL	10473.1	MEAN	28.7	MAX	1320	MIN	5.8	AC-FT	20770

16213000 WAIKELE STREAM AT WAIPAHU--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-72. April 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to September 1981.
WATER TEMPERATURE: April 1973 to September 1981.
SUSPENDED SEDIMENT DISCHARGE: July 1972 to current year.

INSTRUMENTATION.--Water-quality monitor April 1973 to September 1981. Automatic pumping sediment sampler since July 1972.

REMARKS.--In addition to the sediment record, water-quality samples were collected bi-monthly.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 796 micromhos/cm Dec. 1, 1980; minimum, 30 micromhos/cm Apr. 19, 1974.
WATER TEMPERATURES: Maximum, 30.0 °C May 6, 1973; minimum, 16.0 °C Mar. 16, 1976.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,420 mg/L Feb. 7, 1976; minimum daily mean, 5 mg/L for many days in 1983.
SEDIMENT DISCHARGE: Maximum daily, 32,900 tons Apr. 19, 1974; minimum daily, 0.07 ton Sept. 4, Oct. 1, 1975.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,430 mg/L Oct. 20; minimum daily mean, 6 mg/L Dec. 10-11, 14.
SEDIMENT DISCHARGE: Maximum daily, 11,500 tons Oct. 20; minimum daily, 0.17 ton Oct. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT										
29...	0940	764	14	430	7.00	22.5	5.0	7.3	84	7200
DEC										
16...	1035	757	16	490	7.20	21.5	1.4	7.4	85	4800
FEB										
25...	0945	761	16	500	7.10	21.5	2.0	7.4	84	4300
APR										
29...	0940	765	16	528	7.40	24.5	2.0	7.3	87	18000
JUN										
24...	0940	765	12	412	7.30	24.0	2.5	7.2	85	19000
AUG										
18...	1130	759	33	204	7.20	24.0	15	7.4	89	16000

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT									
29...	2700	73	9	13	9.9	57	62	3	2.6
DEC									
16...	--	75	9	12	11	67	65	3	2.7
FEB									
25...	960	73	6	11	11	68	66	4	2.7
APR									
29...	2000	82	21	13	12	64	62	3	2.8
JUN									
24...	4100	66	9	11	9.4	50	61	3	2.0
AUG									
18...	--	32	0	5.4	4.4	25	62	2	1.6

16213000 WAIKELE STREAM AT WAIPAHU--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
OCT 29...	78	61	64	22	71	.10	53	270	270
DEC 16...	81	68	67	17	93	.20	65	300	310
FEB 25...	82	67	67	29	85	.20	65	309	310
APR 29...	74	63	60	17	100	.20	53	321	300
JUN 24...	70	57	57	17	70	.10	47	252	240
AUG 18...	38	33	31	10	34	<.10	24	126	120

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT 29...	.37	1.6	.060	.060	.14	.20	.180	.160	.160
DEC 16...	.41	2.0	.040	.050	.26	.30	.220	.210	.220
FEB 25...	.42	.22	.050	.070	.35	.40	.230	.230	.070
APR 29...	.44	1.5	.070	.060	.33	.40	.200	.180	.170
JUN 24...	.34	1.3	.080	.050	.22	.30	.180	.150	.150
AUG 18...	.17	.61	.060	.050	.14	.20	.100	.070	.070

DATE	TIME	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 29...	0940	10	<1	13	<.5	<1	<1	<3	4	18	1
FEB 25...	0945	<10	<1	11	<.5	<1	1	<3	1	19	<1
JUN 24...	0940	30	2	11	<.5	<1	1	<3	<1	42	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 29...	<4	89	<.1	<10	4	2	<1	87	27	6
FEB 25...	<4	53	<.1	<10	1	2	<1	84	39	7
JUN 24...	<4	48	<.1	<10	1	1	<1	80	26	5

< Actual value is known to be less than the value shown.

16213000 WAIKELE STREAM AT WAIPAHU--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	0940	5	.19	100
DEC 16...	1035	4	.17	100
FEB 25...	0945	4	.17	100
APR 29...	0940	6	.26	100
JUN 24...	0940	8	.26	100
AUG 18...	1130	19	1.7	100

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		OCTOBER			NOVEMBER			DECEMBER	
1	13	18	.63	9.2	9	.22	125	90	30
2	39	24	2.5	14	12	.45	45	15	1.8
3	22	20	1.2	14	10	.38	20	12	.65
4	11	16	.48	16	9	.39	15	9	.36
5	8.2	15	.33	14	12	.45	17	9	.41
6	47	32	4.1	8.6	15	.35	18	9	.44
7	21	18	1.0	9.5	12	.31	17	8	.37
8	11	15	.45	9.4	9	.23	16	7	.30
9	8.8	12	.29	16	9	.39	15	8	.32
10	7.0	11	.21	15	10	.40	15	6	.24
11	12	18	.58	8.4	10	.23	16	6	.26
12	46	36	4.5	9.5	10	.26	15	7	.28
13	21	16	.91	13	11	.39	14	7	.26
14	23	14	.87	10	12	.32	15	6	.24
15	13	12	.42	9.5	20	.51	15	7	.28
16	8.4	12	.27	19	28	1.4	16	12	.52
17	5.8	11	.17	19	28	1.4	14	16	.60
18	6.8	10	.18	22	40	2.4	15	22	.89
19	78	120	268	35	65	6.1	16	32	1.4
20	1320	1430	11500	18	25	1.2	15	34	1.4
21	76	75	15	9.7	20	.52	15	30	1.2
22	46	26	3.2	8.5	20	.46	15	16	.65
23	33	17	1.5	11	19	.56	15	13	.53
24	22	16	.95	11	17	.50	17	12	.55
25	53	40	5.7	9.4	17	.43	15	11	.45
26	22	20	1.2	15	16	.65	15	14	.57
27	16	17	.73	19	18	.92	15	18	.73
28	15	15	.61	58	45	7.0	15	12	.49
29	13	12	.42	40	15	1.6	15	10	.40
30	11	12	.36	41	35	3.9	15	10	.40
31	10	11	.30	---	---	---	15	10	.40
TOTAL	2039.0	---	11817.06	511.7	---	34.32	621	---	47.39
		JANUARY			FEBRUARY			MARCH	
1	15	13	.53	14	13	.49	15	17	.69
2	15	14	.57	15	13	.53	19	14	.72
3	15	9	.36	15	13	.53	20	14	.76
4	15	9	.36	15	14	.57	14	19	.72
5	15	11	.45	15	14	.57	9.3	18	.45
6	15	12	.49	13	14	.49	9.7	10	.26
7	15	13	.53	14	19	.72	9.1	11	.27
8	14	15	.57	15	22	.89	14	17	.64
9	15	15	.61	15	15	.61	16	17	.73
10	16	15	.65	15	14	.57	13	11	.39
11	16	15	.65	15	12	.49	10	12	.32
12	15	13	.53	14	11	.42	9.0	11	.27
13	16	13	.56	15	11	.45	8.4	13	.33
14	16	12	.52	15	12	.49	7.3	12	.24
15	15	13	.53	16	18	.78	12	10	.32
16	15	17	.69	15	17	.69	23	15	.93
17	15	16	.85	15	11	.45	140	79	33
18	15	18	.73	18	9	.44	41	20	2.2
19	14	25	.94	9.2	10	.25	50	30	4.0
20	13	18	.63	12	11	.36	52	70	9.8
21	14	14	.53	15	12	.49	164	100	44
22	14	14	.53	15	12	.49	108	35	10
23	14	14	.53	15	12	.49	52	22	3.1
24	15	14	.57	15	10	.40	65	23	4.0
25	14	13	.49	15	9	.36	216	360	566
26	14	13	.49	15	10	.40	57	40	6.2
27	13	15	.53	15	11	.45	56	25	3.8
28	13	12	.42	15	14	.57	32	20	1.7
29	14	14	.53	---	---	---	26	15	1.1
30	16	16	.89	---	---	---	24	15	.97
31	14	13	.49	---	---	---	21	15	.85
TOTAL	455	---	17.35	410.2	---	14.44	1313.8	---	698.76

16213000 WAIKELE STREAM AT WAIPAHU--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		APRIL			MAY			JUNE	
1	16	e10	.43	18	15	.73	9.1	14	.34
2	14	e10	.38	12	16	.52	7.4	13	.26
3	23	e15	.93	9.8	17	.45	7.3	14	.28
4	82	e55	12	80	46	9.9	7.0	17	.32
5	90	e50	12.	50	16	2.2	7.3	18	.35
6	120	e60	19	28	12	.84	6.8	15	.28
7	48	e20	2.6	17	11	.50	14	15	.57
8	55	e30	4.5	21	14	.79	15	12	.49
9	101	e55	15	28	18	1.4	18	12	.58
10	100	47	13	299	877	1650	100	92	28
11	260	103	78	48	60	7.8	45	25	3.0
12	85	35	8.0	32	24	2.1	20	14	.76
13	68	25	4.6	26	20	1.4	13	12	.42
14	55	23	3.4	23	19	1.2	9.8	12	.32
15	36	21	2.0	20	19	1.0	9.7	12	.31
16	34	20	1.8	18	21	1.0	8.5	10	.23
17	26	16	1.1	14	18	.68	7.9	10	.21
18	21	12	.68	14	16	.60	9.6	11	.29
19	23	16	.99	19	17	.87	11	11	.33
20	17	13	.60	12	17	.55	10	10	.27
21	15	11	.45	9.8	15	.40	18	14	.68
22	15	14	.57	9.3	15	.38	22	12	.71
23	18	14	.68	8.6	14	.33	16	10	.43
24	19	18	.92	8.4	14	.32	11	9	.27
25	15	14	.57	8.3	14	.31	45	26	3.2
26	15	13	.53	10	13	.35	27	14	1.0
27	15	14	.57	12	13	.42	14	10	.38
28	16	16	.69	18	14	.68	13	12	.42
29	14	12	.45	9.7	14	.37	33	20	1.8
30	12	14	.45	15	18	.73	22	16	.95
31	---	---	---	14	16	.60	---	---	---
TOTAL	1428	---	186.89	909.9	---	1689.42	557.4	---	47.45
		JULY			AUGUST			SEPTEMBER	
1	23	13	.81	17	30	1.4	28	26	2.0
2	13	12	.42	17	25	1.1	17	22	1.0
3	9.8	11	.29	37	35	3.5	11	24	.71
4	20	12	.65	38	30	3.1	9.2	18	.45
5	21	10	.57	29	32	2.5	10	14	.38
6	14	8	.30	20	29	1.6	7.9	12	.26
7	19	12	.62	12	23	.75	19	17	.87
8	17	12	.55	10	22	.59	13	12	.42
9	16	12	.52	10	21	.57	11	12	.36
10	15	10	.40	27	30	2.2	9.7	11	.29
11	13	9	.32	37	24	2.4	8.6	10	.23
12	14	10	.38	23	21	1.3	10	8	.22
13	17	10	.46	16	20	.86	84	410	398
14	57	45	6.9	22	25	1.5	23	104	7.7
15	38	20	2.1	57	65	10	14	22	.83
16	22	16	.95	25	30	2.0	10	14	.38
17	25	17	1.1	25	31	2.1	5.8	12	.19
18	35	20	1.9	32	24	2.1	6.7	12	.22
19	17	15	.69	20	24	1.3	5.9	12	.19
20	25	18	1.2	16	23	.99	5.9	11	.18
21	14	14	.53	12	24	.78	6.1	11	.18
22	8.3	13	.29	11	21	.62	35	60	5.7
23	14	19	.72	11	20	.59	25	22	1.5
24	119	494	192	8.9	18	.43	12	13	.42
25	150	236	107	8.7	16	.38	10	12	.32
26	52	50	7.0	8.9	16	.38	9.7	12	.31
27	28	30	2.3	7.1	15	.29	14	13	.49
28	31	35	2.9	6.9	14	.26	83	139	46
29	27	37	2.7	18	22	1.1	97	130	41
30	21	30	1.7	31	23	1.9	74	55	11
31	17	30	1.4	26	25	1.8	---	---	---
TOTAL	912.1	---	339.67	639.5	---	50.39	675.5	---	521.8
YEAR	10473.1		15464.94						

16213000 WAIKELE STREAM AT WAIPAHU--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .002 MM	SED. SUSP FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT 20...	0620	6110	5500	90700	35	39	55
MAY 10...	0630	1760	3800	18100	32	49	64

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT 20...	71	81	86	93	96	98	100
MAY 10...	81	95	97	99	100	--	--

16216000 WAIAWA STREAM NEAR PEARL CITY

LOCATION.--Lat 21°23'57", long 157°58'51", Hydrologic Unit 20060000, on left bank 100 ft upstream from lower bridge on Highway 90, 0.6 mi northwest of Pearl City, and 2.0 mi northeast of Waipahu.

DRAINAGE AREA.--26.4 mi^2.

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

REVISED RECORDS.--WSP 1569: Drainage area.

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

REMARKS.--Records good except those above 200 ft^3/s which are poor. Low flow affected by effluent from sewage treatment plant and occasional small irrigation diversion and return flow upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 32.8 ft^3/s (23,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft^3/s Oct. 28, 1981, gage height, 26.46 ft, from rating curve extended above 1,100 ft^3/s on basis of slope-area measurements at gage heights 17.1 ft and 20.56 ft; minimum, 1.1 ft^3/s for several days in 1984 and 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0600	*9,000	*14.69	Sept. 28	1030	2,750	9.37
Mar. 25	1100	3,390	10.14				

Minimum discharge, 1.2 ft^3/s Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	139	1.8	1.6	1.6	6.8	18	1.4	29	8.9	7.0
2	37	2.1	28	1.8	1.6	1.6	4.7	6.5	1.4	15	6.9	3.4
3	11	2.0	12	1.8	1.6	1.6	44	5.9	1.4	9.9	126	2.4
4	4.1	2.0	7.3	1.7	2.4	1.6	122	120	1.3	33	70	1.4
5	2.4	1.9	4.2	1.7	1.6	1.6	202	61	1.3	17	40	1.4
6	7.5	1.9	3.0	1.7	1.6	1.5	148	22	1.3	6.9	13	1.4
7	4.5	1.9	2.6	1.7	1.5	1.5	41	11	2.7	15	7.6	1.4
8	2.3	1.8	2.2	1.6	1.5	1.5	37	9.1	2.9	18	8.2	4.8
9	1.7	1.8	2.0	1.6	1.6	1.5	129	12	8.1	22	6.9	4.1
10	1.5	1.8	1.9	1.6	1.6	1.5	234	121	266	16	74	4.4
11	6.8	1.8	1.9	1.6	1.6	1.5	568	20	103	17	31	2.2
12	31	1.8	1.9	1.6	1.7	1.5	94	10	25	19	14	1.5
13	13	4.5	1.9	1.6	1.8	1.6	70	6.9	10	25	12	28
14	9.8	2.7	1.9	1.6	1.7	1.5	47	7.2	13	89	79	23
15	3.7	2.0	1.9	1.6	2.1	1.5	27	17	10	72	105	4.2
16	2.4	14	1.8	1.6	1.7	89	23	14	5.2	18	29	2.1
17	1.9	3.8	1.7	1.7	1.7	358	12	6.0	4.9	67	26	1.7
18	1.5	2.7	1.7	1.6	1.6	34	11	4.0	5.8	35	15	1.5
19	22	2.8	1.8	1.7	1.6	12	7.8	5.3	5.2	15	6.3	1.5
20	2420	2.2	1.8	1.7	1.8	330	5.7	3.2	4.4	14	4.2	1.4
21	65	2.1	1.7	1.6	1.6	807	4.8	2.5	3.7	5.7	3.4	1.4
22	27	1.8	1.7	1.6	1.8	257	11	1.8	13	3.8	2.7	81
23	19	1.8	1.7	1.7	1.6	110	22	1.6	11	7.8	3.6	11
24	66	1.8	1.8	1.8	1.6	192	12	1.5	6.6	132	2.3	3.6
25	62	2.3	1.7	1.6	1.6	586	15	1.4	94	344	2.1	2.3
26	15	6.1	1.7	1.6	1.5	63	9.4	1.4	35	41	2.2	2.9
27	5.8	18	1.7	1.6	1.5	26	5.4	1.4	17	19	2.4	2.5
28	3.9	43	1.7	1.6	1.5	14	3.2	2.4	21	15	2.4	325
29	3.2	13	1.7	1.6	---	8.7	2.3	1.8	29	22	30	70
30	2.7	17	1.8	1.6	---	12	5.9	1.4	57	8.9	29	29
31	2.3	---	1.7	1.6	---	11	---	1.4	---	8.2	14	---
TOTAL	2857.8	164.6	239.4	51.2	46.6	2932.8	1925.0	496.7	761.6	1160.2	777.1	627.5
MEAN	92.2	5.49	7.72	1.65	1.66	94.6	64.2	16.0	25.4	37.4	25.1	20.9
MAX	2420	43	139	1.8	2.4	807	568	121	266	344	126	325
MIN	1.5	1.8	1.7	1.6	1.5	1.5	2.3	1.4	1.3	3.8	2.1	1.4
AC-FT	5670	326	475	102	92	5820	3820	985	1510	2300	1540	1240

CAL YR 1985	TOTAL	7507.4	MEAN	20.6	MAX	2420	MIN	1.2	AC-FT	14890
WTR YR 1986	TOTAL	12040.5	MEAN	33.0	MAX	2420	MIN	1.3	AC-FT	23880

16226000 NORTH HALAWA STREAM NEAR AIEA

LOCATION.--Lat 21°23'46", long 157°53'37", Hydrologic Unit 20060000, on left bank 2.7 mi upstream from confluence with South Halawa Stream and 2.7 mi northeast of Aiea Post Office.

DRAINAGE AREA.--3.45 mi^2.

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

REVISED RECORDS.--WSP 1319: Drainage area. WSP 1719: 1954-55(P), 1956, 1957(P), 1958-59.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft, from topographic map.

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

AVERAGE DISCHARGE.--36 years (water years 1930-32, 1954-86), 4.84 ft^3/s (3,510 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,650 ft^3/s Feb. 28, 1932, gage height, 13.36 ft, from rating curve extended above 420 ft^3/s; maximum gage height, 13.46 ft May 14, 1963; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 734 ft^3/s Oct. 20, gage height, 9.38 ft, no other peak greater than base discharge of 570 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.13	14	.00	.00	.00	1.0	2.5	.55	3.8	.67	3.3
2	.33	.26	4.7	.00	.00	.00	.86	1.1	.36	1.8	.52	1.5
3	.43	.15	2.0	.00	.00	.00	20	2.3	.20	2.3	15	.81
4	.31	.08	1.0	.00	.00	.00	22	26	.10	2.9	10	1.1
5	.16	.05	.65	.00	.00	.00	19	15	.07	1.5	5.7	.72
6	1.9	.03	.44	.00	.00	.00	19	5.2	.05	1.3	2.1	.56
7	.40	.03	.28	.00	.00	.00	8.8	2.9	.06	1.5	1.1	2.8
8	.25	.02	.16	.00	.00	.00	5.5	2.0	.34	1.3	.72	2.4
9	.09	.02	.09	.00	.00	.00	18	1.6	.79	1.2	.65	.76
10	.05	5.9	.06	.00	.00	.00	39	15	18	1.1	12	.45
11	2.7	2.2	.04	.00	.00	.00	50	4.5	12	4.7	3.9	.30
12	3.5	2.3	.03	.00	.00	.00	14	2.6	6.1	5.0	1.9	.17
13	2.3	1.3	.02	.00	.00	.00	10	2.1	3.1	16	1.2	.21
14	1.5	.50	.01	.00	.00	.00	6.7	1.8	2.5	14	7.3	.90
15	.62	.34	.01	.00	.00	.00	4.1	3.1	1.8	6.4	9.4	.42
16	.44	.17	.01	.00	.00	6.7	3.0	4.8	1.2	3.9	4.1	.29
17	.54	.07	.01	.00	.00	21	2.1	2.3	.87	13	11	.13
18	.49	.88	.01	.00	.00	3.1	1.5	1.7	.73	7.5	2.9	.06
19	24	1.8	.01	.00	.00	.62	1.2	1.3	.63	5.8	1.5	.04
20	112	.41	.01	.00	.00	88	.93	.82	.48	3.2	.90	.03
21	13	.27	.01	.00	.00	108	.75	.64	.49	1.7	.82	7.5
22	4.4	.11	.01	.00	.00	37	.73	.51	.84	1.1	.88	19
23	2.3	.05	.01	.00	.00	36	.88	.37	.63	.83	.50	5.5
24	7.2	.04	.00	.00	.00	43	1.1	.26	1.6	15	.38	2.9
25	5.7	4.2	.00	.00	.00	79	.71	.18	4.5	27	.48	2.1
26	1.5	4.1	.00	.00	.00	17	.56	1.4	2.6	6.3	.33	2.1
27	.79	14	.00	.00	.00	8.4	.42	1.8	1.4	3.4	.19	2.7
28	.52	14	.00	.00	.00	4.0	.31	1.2	5.0	2.2	12	46
29	.39	3.5	.00	.00	---	2.4	.28	.64	3.1	4.3	9.5	12
30	.25	4.2	.00	.00	---	1.8	2.0	2.0	7.1	1.5	7.6	9.4
31	.16	---	.00	.00	---	1.5	---	.82	---	.90	5.8	---
TOTAL	188.38	61.11	23.57	.00	.00	457.52	254.43	108.44	77.19	182.53	131.04	126.15
MEAN	6.08	2.04	.76	.00	.00	14.8	8.48	3.50	2.57	5.24	4.23	4.20
MAX	112	14	14	.00	.00	108	50	28	18	27	15	46
MIN	.05	.02	.00	.00	.00	.00	.28	.18	.05	.83	.19	.03
AC-FT	374	121	47	.00	.00	907	505	215	153	322	260	250

CAL YR 1985	TOTAL	945.60	MEAN	2.59	MAX	112	MIN	.00	AC-FT	1880
WTR YR 1986	TOTAL	1590.36	MEAN	4.36	MAX	112	MIN	.00	AC-FT	3150

16229000 KALIHI STREAM NEAR HONOLULU

LOCATION.--Lat 21°22'00", long 157°50'48", Hydrologic Unit 20060000, on right bank 1.9 mi upstream from Kamanaiki Stream and 4.1 mi north of Honolulu Post Office.

DRAINAGE AREA.--2.61 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--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.

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

REMARKS.--Records good. No diversion upstream.

AVERAGE DISCHARGE.--72 years (water years 1915-86), 6.61 ft^3/s (4,790 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,400 ft^3/s Nov. 18, 1930, gage height, 13.81 ft, from rating curve extended above 280 ft^3/s on basis of indirect measurements at gage heights 8.9 ft, 10.96 ft, and 11.27 ft; minimum, 0.09 ft^3/s Oct. 22, 1933, July 29, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 782 ft^3/s Sept. 28, gage height, 7.53 ft, no other peak greater than base discharge of 700 ft^3/s; minimum, 0.33 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	3.4	4.4	1.0	1.7	.46	6.5	3.8	2.3	3.6	3.8	3.8
2	3.2	2.8	3.4	1.0	.91	.46	5.6	3.6	2.0	3.2	3.2	3.2
3	2.4	2.6	3.0	1.1	.82	.46	11	6.2	1.9	3.6	4.7	2.8
4	2.3	2.6	2.8	1.0	1.7	.41	12	8.4	1.8	3.2	7.3	2.6
5	4.8	2.6	2.4	1.0	.91	.41	14	7.4	1.8	2.8	5.4	2.4
6	4.2	2.3	2.3	1.0	.82	.41	13	5.4	2.2	3.8	4.0	2.4
7	2.8	2.4	2.2	1.1	.73	.41	8.4	4.9	2.3	3.6	3.4	3.0
8	2.4	3.8	2.0	1.0	.65	.41	9.5	4.2	2.8	3.4	3.4	2.4
9	2.0	3.2	1.9	1.0	.65	.41	12	3.8	8.2	3.4	3.7	2.3
10	1.9	4.3	1.9	1.0	.82	.41	26	8.0	20	3.0	9.5	2.2
11	3.8	4.0	1.9	.91	.82	.41	23	4.9	15	4.9	4.6	1.9
12	2.8	4.6	1.8	.91	.73	.41	12	4.9	6.8	4.2	3.6	1.8
13	2.6	3.6	1.6	.82	.65	1.0	12	4.2	5.1	14	4.5	1.8
14	2.2	2.8	1.5	.91	.57	.73	9.1	3.8	6.0	13	7.6	1.6
15	2.0	2.8	1.6	1.0	1.9	2.1	8.4	4.0	4.2	8.4	8.7	1.6
16	2.3	2.4	1.5	.91	.82	14	7.4	3.4	3.6	6.6	5.4	1.6
17	3.9	2.3	1.5	.82	.65	11	6.8	3.0	4.6	17	8.6	1.6
18	2.2	5.3	1.5	.73	.57	4.0	5.9	4.0	3.8	8.4	5.4	1.5
19	8.1	4.0	1.5	.82	.57	2.6	5.1	3.2	3.2	6.2	4.9	1.5
20	74	2.8	1.5	.91	.73	53	4.9	2.8	2.8	5.4	4.2	1.3
21	14	2.4	1.4	.73	.65	90	4.4	2.6	3.8	4.4	4.6	1.6
22	7.4	2.2	1.8	.73	.82	24	4.2	2.3	3.2	3.6	3.8	29
23	5.9	2.8	1.6	.73	.91	25	4.4	2.2	3.2	3.8	4.0	4.6
24	e8.0	2.3	1.6	.82	.57	41	4.2	2.0	4.7	4.9	4.6	4.0
25	8.7	3.7	1.2	.73	.57	65	3.8	2.6	10	10	3.8	3.0
26	6.2	6.1	1.2	.73	.50	21	3.4	2.4	5.1	5.9	3.2	2.6
27	5.1	8.7	1.2	.73	.46	13	3.0	3.4	4.0	5.1	2.6	6.1
28	4.0	8.2	1.3	.65	.46	9.1	3.0	2.8	4.4	4.4	3.2	44
29	3.8	4.9	1.2	.65	---	8.0	3.2	3.3	3.8	5.1	8.2	9.7
30	3.4	5.1	1.1	.65	---	7.4	4.8	3.0	4.4	4.0	8.7	8.4
31	3.4	---	1.0	.65	---	7.1	---	2.4	---	3.8	5.1	---
TOTAL	205.1	111.0	56.8	26.74	22.66	404.10	251.0	122.9	147.0	176.7	157.7	156.3
MEAN	6.62	3.70	1.83	.86	.81	13.0	8.37	3.96	4.90	5.70	5.09	5.21
MAX	74	8.7	4.4	1.1	1.9	90	26	8.4	20	17	9.5	44
MIN	1.9	2.2	1.0	.65	.46	.41	3.0	2.0	1.8	2.8	2.6	1.3
AC-FT	407	220	113	53	45	802	498	244	292	350	313	310

CAL YR 1985	TOTAL	1420.06	MEAN	3.89	MAX	113	MIN	.65	AC-FT	2820
WTR YR 1986	TOTAL	1838.00	MEAN	5.04	MAX	90	MIN	.41	AC-FT	3650

e Estimated

16229000 KALIHI STREAM NEAR HONOLULU--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972, 1974 to current year.

REMARKS.--Miscellaneous chemical analyses published for this station for 1969, 1973 water years.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
NOV 26...	0915	2.8	125	7.70	18.5	31	9	5.0	4.4	12	45	1
FEB 26...	1050	.46	170	7.40	18.0	43	8	7.0	8.2	14	41	.9
MAY 28...	1100	2.8	140	7.40	20.5	32	5	5.2	4.7	13	46	1
AUG 27...	1330	2.6	145	7.50	23.5	33	5	5.2	4.9	14	47	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 26...	.80	22	7.7	18	<.10	13	74	.10	.24	120	11
FEB 28...	1.3	35	11	22	<.10	15	98	.13	<.10	280	10
MAY 28...	.80	27	7.9	--	<.10	12	74	--	<.10	100	7
AUG 27...	.80	28	7.5	18	<.10	13	80	.11	<.10	200	16

< Actual value is known to be less than the value shown.

16229300 KALIHI STREAM AT KALIHI
(National stream-quality accounting network station)

LOCATION.--Lat 21°20'29", long 157°52'36", Hydrologic Unit 20060000, on right bank at Kalihi, 0.4 mi northwest of Bishop Museum, and 2.4 mi northwest of Honolulu Post Office.

DRAINAGE AREA.--5.18 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--24 years, 10.4 ft^3/s (7,530 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,110 ft^3/s Apr. 19, 1974, gage height, 9.98 ft from rating curve extended above 180 ft^3/s on basis of slope-area measurement at gage height 9.98 ft; minimum, 0.16 ft^3/s June 24, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 14, 1960, reached a stage of 8.0 ft from floodmarks, present site and datum, discharge, 6,350 ft^3/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 986 ft^3/s Oct. 19, gage height, 4.01 ft, no peak greater than base discharge of 1,600 ft^3/s; minimum, 0.58 ft^3/s several days in March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	3.1	14	1.4	3.4	.75	7.0	4.6	2.7	4.2	4.2	4.6
2	3.3	2.9	5.2	1.4	1.3	.75	6.1	3.8	2.7	3.6	3.7	4.0
3	2.7	2.9	3.9	1.5	1.1	.75	17	7.1	2.7	4.4	5.9	3.7
4	2.4	2.8	3.4	1.4	5.5	.66	20	14	2.3	4.3	8.9	3.6
5	5.8	2.9	3.1	1.4	1.4	.66	25	13	2.5	3.6	6.0	3.4
6	5.3	2.6	2.8	1.3	1.2	.66	23	7.8	2.5	5.7	4.4	3.3
7	2.9	3.1	2.7	1.3	1.1	.66	14	6.0	2.9	5.1	3.8	3.9
8	2.6	6.6	2.5	1.2	.94	.66	22	4.7	3.6	5.3	3.8	3.0
9	2.5	5.6	2.5	1.2	.86	.66	42	4.0	11	5.8	4.6	2.9
10	2.2	4.3	2.3	1.2	.85	.58	70	20	43	4.3	14	2.9
11	4.8	3.5	2.3	1.2	.95	.58	57	6.7	26	8.2	6.1	3.0
12	3.3	5.1	2.3	1.1	.89	.91	23	6.9	10	5.9	4.7	2.9
13	2.9	3.6	2.2	1.1	.84	4.6	19	5.2	6.4	13	6.3	4.2
14	2.4	3.0	2.0	1.1	.84	2.2	15	5.0	9.1	16	11	2.7
15	2.2	3.4	2.3	1.1	6.2	3.7	12	5.5	5.4	16	11	2.3
16	2.3	3.1	2.2	1.1	1.2	14	9.4	4.1	4.5	9.8	6.6	2.3
17	7.7	2.4	1.7	1.3	.89	11	7.5	3.5	7.0	24	8.5	2.3
18	2.5	10	1.7	1.2	.90	4.0	6.3	4.6	4.9	14	6.2	2.3
19	27	5.3	1.7	1.1	.94	2.8	5.6	3.6	4.1	9.2	5.2	2.2
20	169	3.1	1.7	1.1	1.6	57	5.3	3.2	3.7	6.9	3.8	2.1
21	21	2.7	1.7	.94	1.4	143	4.8	3.1	4.0	5.6	4.8	2.7
22	9.6	2.5	1.7	.94	1.6	39	5.1	2.8	3.5	4.9	3.8	41
23	6.8	2.8	1.6	.94	.94	30	5.6	2.7	4.7	5.1	3.8	6.2
24	9.3	2.6	2.3	.84	.75	59	5.6	2.6	8.8	11	3.8	5.5
25	10	3.6	1.7	.84	.75	80	4.1	3.3	19	25	3.1	3.7
26	5.6	6.8	1.7	.84	.75	26	3.6	3.0	8.1	10	2.9	3.1
27	5.2	15	1.6	.84	.75	14	3.5	3.6	5.3	8.0	2.9	5.9
28	4.1	10	1.5	.84	.75	9.8	3.5	3.1	5.3	6.1	3.8	57
29	3.8	5.6	1.5	.84	---	9.0	4.6	3.7	4.4	6.5	14	16
30	3.4	14	1.4	.84	---	8.9	10	3.3	5.0	4.9	17	14
31	3.3	---	1.4	.84	---	7.5	---	2.7	---	4.3	7.9	---
TOTAL	342.6	144.9	80.6	34.24	40.59	533.78	456.6	167.2	225.1	280.7	197.5	216.7
MEAN	11.1	4.83	2.60	1.10	1.45	17.2	15.2	5.39	7.50	8.41	6.37	7.22
MAX	169	15	14	1.5	6.2	143	70	20	43	25	17	57
MIN	2.2	2.4	1.4	.84	.75	.58	3.5	2.6	2.3	3.6	2.9	2.1
AC-FT	680	287	160	68	81	1060	906	332	446	517	392	430

CAL YR 1985	TOTAL	2215.58	MEAN	6.07	MAX	169	MIN	.98	AC-FT	4390
WTR YR 1986	TOTAL	2700.51	MEAN	7.40	MAX	169	MIN	.58	AC-FT	5360

16229300 KALIHI STREAM AT KALIHI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-74, 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT 29...	1320	761	3.8	210	7.70	23.0	3.0	8.7	102	5900
FEB 25...	1230	759	1.0	305	7.80	23.0	23	7.6	89	5700
APR 28...	1030	762	3.8	221	7.80	22.0	2.5	7.8	89	15000
AUG 19...	0945	758	5.6	185	7.70	23.0	10	7.7	91	10000

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT 29...	5100	55	11	11	6.6	19	42	1	1.2
FEB 25...	4100	85	1	16	11	29	42	1	1.8
APR 28...	19000	55	10	10	7.2	21	45	1	1.2
AUG 19...	19000	47	4	8.9	6.1	16	42	1	1.1

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CAC03)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT 29...	53	40	43	10	29	<.10	16	120	120
FEB 25...	103	81	84	11	38	<.10	19	176	180
APR 28...	54	48	44	10	31	<.10	15	126	120
AUG 19...	54	46	44	9.3	23	<.10	14	103	100

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
OCT 29...	.16	.10	.030	.030	--	<.20	.040	.020	.020
FEB 25...	.24	1.2	.060	.050	.34	.40	.120	.120	.020
APR 28...	.17	.17	.050	.040	.35	.40	.070	.040	.030
AUG 19...	.14	.19	.040	<.010	.26	.30	.060	.040	.030

< Actual value is known to be less than the value shown.

16229300 KALIHI STREAM AT KALIHI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
OCT 29...	1320	50	<1	9	<.5	<1	<1	<3	4	140	1
FEB 25...	1230	10	<1	14	<.5	<1	<1	<3	2	52	1
APR 28...	1030	10	<1	11	<.5	<1	<1	<3	3	89	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 29...	<4	7	<.1	<10	3	<1	<1	78	<6	10
FEB 25...	<4	24	<.1	<10	2	<1	<1	160	<6	7
APR 28...	<4	11	<.1	<10	<1	<1	<1	91	<6	7

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	1320	1	.01	100
FEB 25...	1230	3	.00	100
APR 28...	1030	6	.06	100
AUG 19...	0945	14	.21	100

< Actual value is known to be less than the value shown.

16232000 NUUANU STREAM BELOW RESERVOIR 2 WASTEWAY, NEAR HONOLULU

LOCATION.--Lat 21°20'57", long 157°49'40", Hydrologic Unit 20060000, on right bank beside Old Pali Road in upper Nuuanu Valley, 0.2 mi downstream from reservoir 2 wasteway, and 3.5 mi northeast of Honolulu Post Office.

DRAINAGE AREA.--3.35 mi^2.

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

REVISED RECORDS.--WSP 985: 1921-35(M). WSP 1319: 1931. WSP 1569: Drainage area. WSP 1639: 1931, 1935.

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

REMARKS.--Records good. Low-flow regulation by reaervoirs 2, 3, and 4, capacities, 21 acre-ft, 34 acre-ft, and 1,630 acre-ft, respectively. Honolulu Board of Water Supply diverts ground water from tunnels in drainage area. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--70 years (water yeara 1915-16, 1918-20, 1922-86), 6.93 ft^3/s (5,020 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft^3/s Jan. 16, 1921, gage height, 8.74 ft, from floodmarks, from rating curve extended above 420 ft^3/s by test of model of station site; minimum, 0.09 ft^3/s Sept. 10, 11, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 303 ft^3/s Mar. 25, gage height, 3.84 ft, no other peak greater than base discharge of 240 ft^3/s; minimum, 0.77 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.7	4.5	2.3	2.0	1.1	5.8	5.6	3.8	3.8	4.0	3.5
2	2.9	3.6	3.5	2.2	1.5	1.1	5.6	5.6	3.8	3.8	3.8	3.3
3	2.7	3.5	3.6	2.2	1.5	1.0	7.3	5.5	3.7	4.1	4.1	3.2
4	2.6	3.5	3.6	2.2	1.9	1.1	7.3	5.6	3.7	3.8	5.7	3.2
5	4.9	3.5	3.5	2.2	1.6	1.0	9.1	5.3	3.8	3.7	4.1	3.2
6	4.0	3.5	3.5	2.3	1.5	.92	8.2	5.2	3.6	4.0	3.8	3.3
7	2.4	3.7	3.5	2.3	1.5	1.1	7.2	5.3	3.6	3.6	3.6	3.4
8	2.5	3.8	3.5	2.1	1.4	1.1	8.5	5.1	4.7	3.6	3.5	3.1
9	2.5	3.5	3.4	2.1	1.4	1.1	9.6	5.0	6.5	3.7	4.0	3.1
10	2.4	4.4	3.3	2.4	1.4	1.0	17	5.1	15	3.6	5.6	3.0
11	3.3	3.6	3.3	2.4	1.4	1.1	16	4.9	12	4.4	4.0	2.9
12	2.7	3.4	3.3	2.4	1.3	.97	11	5.0	5.6	3.8	3.7	2.9
13	2.7	3.3	3.2	2.3	1.3	1.5	12	5.1	5.1	4.7	4.5	3.1
14	2.4	3.3	3.1	2.1	1.3	1.1	10	4.9	5.3	8.8	5.1	2.9
15	2.3	3.4	3.1	1.8	2.0	1.9	9.0	6.0	4.7	8.2	4.7	2.7
16	2.3	3.4	2.5	1.8	1.4	4.7	8.4	4.9	4.4	4.7	3.9	2.7
17	3.8	3.2	2.8	1.8	1.3	3.5	8.0	4.7	4.7	9.4	4.2	2.7
18	2.5	6.3	2.9	1.8	1.2	1.7	7.5	4.8	4.4	6.4	3.6	2.7
19	5.8	4.1	2.8	1.8	1.2	1.8	7.1	4.7	4.2	5.5	3.8	2.7
20	48	3.3	2.8	1.8	1.2	18	7.0	4.6	4.2	4.5	3.6	2.7
21	9.4	3.2	2.9	1.6	1.2	48	6.7	4.5	4.2	4.4	4.0	2.9
22	5.8	3.1	2.8	1.8	1.5	15	6.0	4.4	4.1	4.3	3.6	5.7
23	5.0	3.2	2.6	1.7	1.3	13	5.9	4.4	4.3	4.3	3.6	2.8
24	6.4	3.0	2.5	1.7	1.2	16	5.8	4.3	4.6	4.5	3.6	2.9
25	5.2	5.2	2.3	1.7	1.2	39	5.6	4.4	5.0	6.9	3.3	2.9
26	4.3	4.7	2.3	1.7	1.1	10	5.6	4.4	4.2	4.6	3.3	2.9
27	4.2	6.9	2.3	1.6	1.1	7.9	5.6	4.4	3.9	4.6	3.3	2.9
28	4.0	5.8	2.3	1.6	1.1	6.9	5.6	4.1	4.2	4.1	3.3	19
29	3.9	3.9	2.4	1.7	---	7.3	5.9	4.3	3.9	4.1	4.1	3.9
30	3.8	5.0	2.3	1.6	---	6.9	5.9	4.0	4.5	4.0	5.2	5.6
31	3.8	---	2.2	1.5	---	5.7	---	3.8	---	3.9	3.9	---
TOTAL	162.1	118.0	92.6	60.5	39.0	222.49	240.2	149.9	149.7	147.8	124.5	111.8
MEAN	5.23	3.93	2.99	1.95	1.39	7.18	8.01	4.84	4.99	4.77	4.02	3.73
MAX	48	6.9	4.5	2.4	2.0	48	17	6.0	15	9.4	5.7	19
MIN	2.3	3.0	2.2	1.5	1.1	.92	5.6	3.8	3.6	3.6	3.3	2.7
AC-FT	322	234	184	120	77	441	476	297	297	293	247	222

CAL YR 1985	TOTAL	1224.19	MEAN	3.35	MAX	48	MIN	.93	AC-FT	2430
WTR YR 1986	TOTAL	1618.59	MEAN	4.43	MAX	48	MIN	.92	AC-FT	3210

16240500 WAIAKEAKUA STREAM AT HONOLULU

LOCATION.--Lat 21°19'53", long 157°48'12", Hydrologic Unit 20060000, on right bank 5 ft downstream from bridge on Waaloa Way, 500 ft upstream from confluence with Waihi Stream, and 4.2 mi northeast of Honolulu Post Office.

DRAINAGE AREA.--1.06 mi^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.

REVISED RECORDS.--WSP 1319: 1919(M), 1930-33(M). WSP 1569: Drainage area. WSP 1937: 1949(M), 1960(M).

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

REMARKS.--Records fair. Honolulu Board of Water Supply at times diverts a small amount of ground water from tunnel upstream. Occasional small diversions for irrigation upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--68 years (water years 1914-20, 1926-86), 5.02 ft^3/s (3,640 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft^3/s Jan. 16, 1921, gage height, 10.4 ft, from floodmarks, site and datum then in use, from rating curve extended above 58 ft^3/s. Current peak discharges are derived from rating curve extended above 1,760 ft^3/s on the basis of slope-area measurement at gage height 5.28 ft; minimum, 0.6 ft^3/s June 7, 8, 1926.

EXTREMES FOR CURRENT YEAR.--Meximum discherge, 406 ft^3/s Oct. 19, gage height, 3.53 ft, no other peak greater than base discharge of 310 ft^3/s; minimum, 0.92 ft^3/s for aeveral days in February and March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	2.4	2.9	1.4	1.3	1.1	3.5	3.7	2.7	4.3	3.7	4.4
2	3.1	2.3	2.2	1.4	1.2	1.1	3.3	3.8	2.7	3.8	3.7	3.9
3	2.3	2.2	2.1	1.4	1.2	1.1	6.3	11	3.1	3.8	5.4	3.7
4	2.0	2.1	2.0	1.4	1.8	1.1	6.2	12	2.6	3.8	7.3	4.3
5	4.8	2.4	1.9	1.4	1.3	1.1	8.0	6.5	2.8	3.6	5.1	3.6
6	3.1	2.0	1.9	1.4	1.2	1.1	8.1	4.6	3.4	4.2	3.9	4.7
7	2.1	3.4	1.9	1.6	1.2	1.1	4.8	4.5	3.4	3.5	3.7	5.0
8	1.9	2.3	1.8	1.4	1.2	1.1	6.0	3.8	8.1	4.1	3.7	4.7
9	1.9	3.1	1.7	1.3	1.2	1.1	13	3.6	6.1	4.4	4.8	3.7
10	1.8	4.4	1.7	1.3	1.2	1.1	18	4.8	11	3.7	9.1	3.6
11	3.5	3.7	1.7	1.3	1.2	1.1	11	3.6	12	6.2	4.9	3.4
12	2.2	4.2	1.7	1.3	1.2	1.1	6.8	3.4	4.8	5.2	4.2	3.4
13	2.1	2.4	1.6	1.3	1.2	2.6	7.9	4.0	3.8	7.7	8.2	3.3
14	1.8	2.1	1.6	1.2	1.2	1.3	6.0	3.8	5.9	8.5	7.8	3.2
15	1.8	2.2	1.6	1.2	2.7	2.5	5.4	9.8	3.8	5.7	8.7	3.2
16	1.8	2.2	1.6	1.2	1.3	10	4.5	6.6	3.5	4.7	5.1	3.1
17	14	2.0	1.6	1.3	1.2	14	4.0	4.1	5.5	6.9	9.3	3.1
18	3.1	7.6	1.6	1.3	1.2	3.1	3.8	4.0	4.0	5.2	5.0	3.0
19	13	3.1	1.6	1.3	1.2	3.3	3.8	3.6	3.5	4.8	4.9	2.9
20	46	2.1	1.6	1.2	1.2	35	3.8	3.3	3.5	4.0	4.0	2.9
21	8.1	2.0	1.5	1.2	1.2	51	3.3	3.2	3.4	3.8	5.3	3.1
22	4.4	1.9	1.5	1.2	1.3	9.9	3.5	3.2	3.4	3.8	4.0	6.5
23	4.3	3.0	1.5	1.2	1.2	22	4.5	3.0	4.1	5.0	4.0	3.3
24	6.5	2.0	1.6	1.2	1.2	22	3.8	3.0	8.9	5.9	4.6	3.8
25	4.1	4.7	1.5	1.2	1.2	33	3.4	3.0	9.6	11	3.8	3.2
26	3.2	5.9	1.5	1.2	1.1	9.5	3.2	3.0	4.9	4.8	3.6	3.1
27	3.1	7.6	1.5	1.2	1.1	6.8	3.0	3.7	4.2	5.9	3.5	3.1
28	2.8	5.3	1.5	1.2	1.1	5.2	2.8	2.9	10	4.5	3.9	11
29	2.6	2.7	1.5	1.2	---	4.5	3.9	3.9	5.1	5.3	8.2	4.1
30	2.5	3.4	1.4	1.2	---	4.1	5.3	3.2	5.4	4.0	7.6	5.5
31	2.6	---	1.4	1.2	---	3.7	---	2.8	---	3.7	6.3	---
TOTAL	160.9	96.7	52.7	39.8	35.6	256.7	170.9	139.4	155.2	155.8	167.3	119.8
MEAN	5.19	3.22	1.70	1.28	1.27	8.28	5.70	4.50	5.17	5.03	5.40	3.99
MAX	46	7.6	2.9	1.6	2.7	51	18	12	12	11	9.3	11
MIN	1.8	1.9	1.4	1.2	1.1	1.1	2.8	2.8	2.6	3.5	3.5	2.9
AC-FT	319	192	105	79	71	509	339	276	308	309	332	238

CAL YR 1985	TOTAL	1070.1	MEAN	2.93	MAX	57	MIN	1.2	AC-FT	2120
WTR YR 1986	TOTAL	1550.8	MEAN	4.25	MAX	51	MIN	1.1	AC-FT	3080

16254000 MAKAWAO STREAM NEAR KAILUA

LOCATION.--Lat 21°21'49", long 157°46'02", Hydrologic Unit 20060000, on left bank 650 ft upstream from mouth, 2.7 mi southwest of Kailua, and 4.3 mi southeast of Kaneohe Courthouse.

DRAINAGE AREA.--2.04 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area.

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

REMARKS.--Records good. Maunawili ditch diverts 1.5 mi upstream for irrigation in vicinity of Waimanalo. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years (water years 1914-15, 1959-86), 4.94 ft^3/s (3,580 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,000 ft^3/s Feb. 4, 1965, gage height, 12.41 ft, from rating curve extended above 470 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.43 ft^3/s Sept. 8-12, 14, 16-20, 22, 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 390 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2400	494	5.33	Sept. 30	1000	*668	*5.88

Minimum discharge, 1.4 ft^3/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.8	6.6	2.4	2.4	2.4	4.0	3.0	2.4	2.0	2.0	2.0
2	1.6	2.7	5.4	2.4	2.1	2.5	3.8	2.9	2.4	1.9	2.0	1.9
3	1.6	2.7	3.9	2.5	2.0	2.2	4.0	3.1	2.4	1.9	2.1	1.9
4	1.5	2.6	3.9	2.4	2.3	2.3	4.0	3.2	2.3	1.9	2.4	2.1
5	2.2	2.9	3.9	2.4	2.0	2.2	3.8	2.9	2.3	1.9	2.1	1.9
6	1.9	2.4	3.8	2.4	2.0	2.1	4.0	2.8	2.4	2.0	2.0	2.1
7	1.6	3.2	3.8	2.4	2.0	1.8	3.9	2.7	2.5	1.9	2.0	2.2
8	1.6	2.5	3.8	2.4	2.0	1.8	3.9	2.7	2.4	2.0	2.0	2.0
9	1.6	3.0	3.4	2.3	2.0	1.8	4.6	2.6	2.3	2.1	2.0	1.9
10	1.6	3.4	3.8	2.3	2.0	1.8	4.8	2.7	2.3	2.0	2.0	1.9
11	1.8	5.0	3.4	2.3	2.0	1.8	3.9	2.6	4.9	2.2	2.0	1.9
12	1.8	7.4	3.4	2.3	2.0	1.8	3.8	2.6	2.7	1.9	2.1	1.9
13	1.8	7.0	3.3	2.3	2.0	1.9	3.6	2.7	2.4	2.2	2.3	1.9
14	1.8	4.3	3.2	2.3	2.0	1.9	3.3	2.5	2.6	2.0	2.3	1.9
15	1.8	3.9	3.3	2.3	5.3	2.0	3.3	2.9	2.4	1.9	3.3	1.9
16	1.8	3.5	3.2	2.3	2.5	2.3	3.2	2.6	2.3	1.9	2.2	1.9
17	12	3.3	2.9	2.3	2.1	2.9	3.2	2.5	2.4	2.0	2.4	1.9
18	3.9	9.3	2.9	2.3	2.1	2.5	2.9	2.7	2.3	2.0	2.1	1.9
19	18	9.0	2.9	2.3	2.2	2.4	2.9	2.6	2.3	2.1	2.3	1.9
20	47	6.7	2.9	2.3	2.3	32	3.1	2.5	2.3	2.2	2.2	1.9
21	9.8	5.3	2.8	2.2	2.6	23	2.9	2.4	2.4	2.0	2.5	2.0
22	6.0	4.0	2.8	2.2	2.7	9.5	3.1	2.3	2.4	1.9	2.3	2.9
23	4.8	5.2	2.8	2.1	2.2	11	3.1	2.3	2.6	2.0	2.2	2.2
24	4.9	4.4	2.8	2.2	2.1	14	3.1	2.3	2.5	2.3	2.2	2.4
25	3.4	6.6	2.7	2.2	2.0	36	3.0	3.0	2.2	5.3	2.1	2.4
26	3.2	7.8	2.7	2.2	2.1	13	3.0	2.7	2.1	2.3	2.1	2.4
27	3.1	9.3	2.5	2.1	2.3	10	3.0	3.1	2.0	2.3	2.0	13
28	2.9	9.1	2.5	2.0	2.2	7.0	3.0	2.5	2.0	2.1	2.0	17
29	2.8	7.2	2.5	2.0	---	6.1	3.1	2.7	2.0	2.1	2.4	8.8
30	2.8	6.3	2.5	2.0	---	5.5	3.0	2.5	2.1	2.1	2.3	33
31	2.8	---	2.5	2.0	---	4.8	---	2.4	---	2.0	2.1	---
TOTAL	155.1	152.8	102.8	70.1	63.5	212.3	104.1	83.0	72.8	66.4	66.0	125.0
MEAN	5.00	5.09	3.32	2.26	2.27	6.85	3.47	2.68	2.42	2.14	2.19	4.17
MAX	47	9.3	6.6	2.5	5.3	36	4.8	3.2	4.9	5.3	3.3	33
MIN	1.5	2.4	2.5	2.0	2.0	1.8	2.9	2.3	2.0	1.9	2.0	1.9
AC-FT	308	303	204	139	126	421	206	165	144	132	135	248

CAL YR 1965	TOTAL	1478.4	MEAN	4.05	MAX	208	MIN	1.4	AC-FT	2930
WTR YR 1986	TOTAL	1275.7	MEAN	3.50	MAX	47	MIN	1.5	AC-FT	2530

16285600 RIGHT BRANCH KAMOOALII STREAM NEAR KANEOHE

LOCATION.--Lat 21°23'22", long 157°47'44", Hydrologic Unit 20060000, on left bank 0.3 mi south of Hawaiian Memorial Park cemetary, 1.0 mi northwest of Pali Golf Course, and 1.3 mi south of Castle High School.

DRAINAGE AREA.--1.11 mi^2.

PERIOD OF RECORD.--February 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 210 ft, from topographic map.

REMARKS.--Records fair except for daily discharges above 10 ft^3/s, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 842 ft^3/s, Feb. 14, 1985, gage height, 10.40 ft from rating curve extended above 100 ft^3/s on basis of slope-conveyance computation; minimum, 0.03 ft^3/s for several days in November, December 1984 and January 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 713 ft^3/s Sept. 27, gage height, 9.35 ft; minimum, 0.25 ft^3/s Oct. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.43	.40	.41	.62	.44	.40	.47	.41	.40	.54	.38
2	.35	.43	.40	.41	.39	.44	.41	.48	.43	.45	.49	.37
3	.32	.41	.40	.37	.42	.43	.71	.49	.43	.48	.57	.38
4	.35	.41	.38	.37	.62	.43	.43	.51	.41	.51	.79	.43
5	.89	.43	.38	.38	.41	.41	.41	.51	.43	.54	.57	.41
6	.34	.41	.38	.37	.41	.41	.41	.51	.47	.57	.59	.41
7	.32	.41	.38	.38	.41	.40	.38	.49	.45	.54	.62	.40
8	.33	.47	.38	.38	.41	.40	.43	.49	.47	.49	.57	.41
9	.33	.49	.38	.38	.42	.40	.42	.47	.46	.47	.54	.40
10	.34	.57	.38	.38	.43	.40	.43	.48	.45	.47	.51	.38
11	.43	.45	.38	.40	.41	.38	.40	.47	.47	.51	.49	.37
12	.33	.54	.38	.40	.41	.38	.40	.49	.47	.47	.51	.37
13	.34	.43	.36	.40	.41	.40	.40	.49	.47	1.0	.51	.40
14	.34	.41	.38	.40	.43	.38	.43	.48	.48	.47	.47	.37
15	.38	.45	.41	.41	3.1	.43	.45	.49	.47	.47	.57	.38
16	.31	.41	.37	.41	.42	.49	.47	.49	.49	.51	.47	.38
17	2.5	.41	.38	.41	.40	.42	.41	.49	.47	.87	.59	.37
18	.32	4.6	.38	.41	.40	.42	.43	.51	.47	.47	.51	.38
19	12	.41	.38	.40	.42	.42	.42	.45	.47	.49	.45	.37
20	41	.40	.38	.40	.42	2.9	.43	.45	.47	.49	.49	.38
21	.45	.40	.40	.40	.42	1.6	.44	.49	.47	.51	.83	.59
22	.38	.40	.40	.40	.49	.43	.45	.49	.41	.54	.45	9.6
23	.38	.45	.40	.40	.42	.88	.47	.49	.41	.54	.43	.37
24	.40	.38	.43	.41	.42	.62	.45	.49	.40	.71	.40	.35
25	.40	.59	.40	.42	.43	52	.47	.47	.43	1.6	.40	.35
26	.41	1.4	.40	.41	.42	.51	.49	.42	.40	.51	.40	.37
27	.40	7.0	.40	.40	.42	.41	.48	.46	.43	.54	.40	53
28	.41	.83	.41	.41	.42	.40	.48	.44	.43	.47	.75	54
29	.41	.38	.40	.42	---	.40	.49	.45	.43	.51	.51	.49
30	.37	.38	.40	.43	---	.41	.51	.45	.38	.51	.40	3.8
31	.40	---	.40	.44	---	.41	---	.41	---	.49	.37	---
TOTAL	66.39	25.18	12.12	12.41	14.80	68.85	13.40	14.80	13.34	17.61	16.19	130.66
MEAN	2.14	.84	.39	.40	.53	2.22	.45	.48	.44	.57	.52	4.36
MAX	41	7.0	.43	.44	3.1	52	.71	.51	.49	1.8	.83	54
MIN	.31	.38	.37	.37	.39	.38	.38	.41	.38	.40	.37	.35
AC-FT	132	50	24	25	29	137	27	29	26	35	32	259

CAL YR 1985	TOTAL	362.60	MEAN	.99	MAX	121	MIN	.05	AC-FT	719
WTR YR 1986	TOTAL	405.75	MEAN	1.11	MAX	54	MIN	.31	AC-FT	805

16265600 RIGHT BRANCH KAMOOALII STREAM NEAR KANEOHE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1983 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: February 1983 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since February 1983.

REMARKS.--Water-quality samples were also collected at this site.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,230 mg/L Apr. 19, 1984; minimum daily mean, 3 mg/L for many days.
SEDIMENT DISCHARGE: Maximum daily, 452 tons Feb. 14, 1985; minimum daily, less than 0.01 ton for many days.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 158 mg/L Mar. 25; minimum daily mean, 7 mg/L for many days.
SEDIMENT DISCHARGE: Maximum daily, 129 tons Mar. 25; minimum daily, 0.01 ton for many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)
JAN 28...	1250	754	.41	229	8.70	23.0	2.4	4.3
MAR 25...	1015	758	18	125	7.00	21.0	60	7.8

DATE	TIME	OXYGEN, DISSOLVED (PERCENT SATUR-	COLIFORM, FECAL, 0.7 UM-MF (COLS./	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED	NITROGEN, NO2+NO3 TOTAL (MG/L	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L	NITROGEN, TOTAL (MG/L	PHOSPHORUS, TOTAL (MG/L
JAN 28...	1250	51	K290	4	.70	.30	1.0	.050
MAR 25...	1015	88	2800	78	.30	.90	1.2	.200

K Results based on colony count outside the acceptable range (non-ideal colony count).

16265600 RIGHT BRANCH OF KAMOOALII STREAM NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		OCTOBER			NOVEMBER			DECEMBER	
1	.46	e10	.01	.43	e8	.01	.40	e8	.01
2	.35	e10	.01	.43	e8	.01	.40	e8	.01
3	.32	e10	.01	.41	e8	.01	.40	e8	.01
4	.35	e10	.01	.41	e8	.01	.38	e8	.01
5	.89	65	.79	.43	e8	.01	.38	e8	.01
6	.34	e10	.01	.41	e8	.01	.38	e8	.01
7	.32	e10	.01	.41	e8	.01	.38	e8	.01
8	.33	e10	.01	.47	e8	.01	.38	e8	.01
9	.33	e10	.01	.49	e8	.01	.38	e8	.01
10	.34	e10	.01	.57	e20	.03	.38	e8	.01
11	.43	e10	.01	.45	e8	.01	.38	e8	.01
12	.33	e10	.01	.54	e10	.01	.38	e8	.01
13	.34	e10	.01	.43	e8	.01	.38	e8	.01
14	.34	e10	.01	.41	e8	.01	.38	e8	.01
15	.38	e10	.01	.45	e8	.01	.41	e10	.01
16	.31	e10	.01	.41	e8	.01	.37	e8	.01
17	2.5	75	8.0	.41	e8	.01	.38	e8	.01
18	.32	8	.01	4.6	77	3.8	.38	e8	.01
19	12	99	28	.41	e8	.01	.38	e8	.01
20	41	120	52	.40	e8	.01	.38	e8	.01
21	.45	e10	.01	.40	e8	.01	.40	e8	.01
22	.38	e8	.01	.40	e8	.01	.40	e8	.01
23	.38	e8	.01	.45	e8	.01	.40	e8	.01
24	.40	e8	.01	.38	e8	.01	.43	15	.02
25	.40	e8	.01	.59	e20	.03	.40	e8	.01
26	.41	e8	.01	1.4	24	.41	.40	e8	.01
27	.40	e8	.01	7.0	152	8.9	.40	e8	.01
28	.41	e8	.01	.83	39	.22	.41	e8	.01
29	.41	1e8	.01	.38	e8	.01	.40	e8	.01
30	.37	e8	.01	.38	e8	.01	.40	e8	.01
31	.40	e8	.01	---	---	---	.40	e8	.01
TOTAL	66.39	---	89.06	25.18	---	13.63	12.12	---	.32
		JANUARY			FEBRUARY			MARCH	
1	.41	e8	.01	.62	528	.19	.44	e8	.01
2	.41	e8	.01	.39	e8	.01	.44	e8	.01
3	.37	e8	.01	.42	e8	.01	.43	e8	.01
4	.37	e8	.01	.62	e22	.04	.43	e8	.01
5	.38	e8	.01	.41	e8	.01	.41	e8	.01
6	.37	e8	.01	.41	e8	.01	.41	e8	.01
7	.38	e8	.01	.41	e8	.01	.40	e8	.01
8	.38	e8	.01	.41	e8	.01	.40	e8	.01
9	.38	e8	.01	.42	e8	.01	.40	e8	.01
10	.38	e8	.01	.43	e8	.01	.40	e8	.01
11	.40	e8	.01	.41	e8	.01	.38	e8	.01
12	.40	e8	.01	.41	e8	.01	.38	e8	.01
13	.40	e8	.01	.41	e8	.01	.40	e8	.01
14	.40	e8	.01	.43	e8	.01	.38	e8	.01
15	.41	e8	.01	3.1	69	2.5	.43	e10	.01
16	.41	e8	.01	.42	e8	.01	.49	e10	.01
17	.41	e8	.01	.40	e8	.01	.42	e10	.01
18	.41	e8	.01	.40	e8	.01	.42	e10	.01
19	.40	e8	.01	.42	e8	.01	.42	e15	.02
20	.40	e8	.01	.42	e8	.01	2.9	45	.64
21	.40	e8	.01	.42	e8	.01	1.6	50	.63
22	.40	e8	.01	.49	e15	.02	.43	e10	.01
23	.40	e8	.01	.42	e8	.01	.88	e10	.02
24	.41	e8	.01	.42	e8	.01	.62	e8	.01
25	.42	e8	.01	.43	e8	.01	52	158	129
26	.41	e8	.01	.42	e8	.01	.51	e8	.01
27	.40	e8	.01	.42	e8	.01	.41	e8	.01
28	.41	e8	.01	.42	e8	.01	.40	e8	.01
29	.42	e8	.01	---	---	---	.40	e8	.01
30	.43	e8	.01	---	---	---	.41	e8	.01
31	.44	e8	.01	---	---	---	.41	e8	.01
TOTAL	12.41	---	.31	14.80	---	2.97	68.85	---	130.57

e Estimated

16265600 RIGHT BRANCH OF KAMOOALII STREAM NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		APRIL			MAY			JUNE	
1	.40	e8	.01	.47	7	.01	.41	8	.01
2	.41	e8	.01	.49	7	.01	.43	8	.01
3	.71	20	.05	.49	7	.01	.43	8	.01
4	.43	8	.01	.51	7	.01	.41	8	.01
5	.41	8	.01	.51	7	.01	.43	8	.01
6	.41	8	.01	.51	7	.01	.47	8	.01
7	.38	8	.01	.49	7	.01	.45	8	.01
8	.43	8	.01	.49	7	.01	.47	8	.01
9	.42	8	.01	.47	7	.01	.46	8	.01
10	.43	8	.01	.49	7	.01	.45	8	.01
11	.40	8	.01	.47	7	.01	.47	8	.01
12	.40	8	.01	.49	7	.01	.47	8	.01
13	.40	8	.01	.49	7	.01	.47	8	.01
14	.43	8	.01	.49	7	.01	.49	8	.01
15	.45	8	.01	.49	7	.01	.47	8	.01
16	.47	8	.01	.49	7	.01	.49	8	.01
17	.41	7	.01	.49	7	.01	.47	8	.01
18	.43	7	.01	.51	7	.01	.47	8	.01
19	.42	7	.01	.45	7	.01	.47	8	.01
20	.43	7	.01	.45	7	.01	.47	8	.01
21	.44	7	.01	.49	7	.01	.47	8	.01
22	.45	7	.01	.49	7	.01	.41	8	.01
23	.47	7	.01	.49	7	.01	.41	8	.01
24	.45	7	.01	.49	7	.01	.40	8	.01
25	.47	7	.01	.47	7	.01	.43	8	.01
26	.49	7	.01	.42	7	.01	.40	8	.01
27	.48	7	.01	.46	7	.01	.43	8	.01
28	.48	7	.01	.44	7	.01	.43	8	.01
29	.49	7	.01	.45	7	.01	.43	8	.01
30	.51	7	.01	.45	7	.01	.38	8	.01
31	---	---	---	.41	7	.01	---	---	---
TOTAL	13.40	---	.34	14.80	---	.31	13.34	---	.30
		JULY			AUGUST			SEPTEMBER	
1	.40	e10	.01	.54	e10	.01	.38	e10	.01
2	.45	e10	.01	.49	e10	.01	.37	e10	.01
3	.49	e10	.01	.57	20	.03	.38	e10	.01
4	.51	e10	.01	.79	25	.05	.43	e10	.01
5	.54	e10	.01	.57	e10	.02	.41	e10	.01
6	.57	e10	.02	.59	e10	.02	.41	e10	.01
7	.54	e10	.01	.62	e10	.02	.40	e10	.01
8	.49	e10	.01	.57	e10	.02	.41	e10	.01
9	.47	e10	.01	.54	e10	.01	.40	e10	.01
10	.47	e10	.01	.51	e10	.01	.38	e10	.01
11	.51	e10	.01	.49	e10	.01	.37	e10	.01
12	.47	e10	.01	.51	e10	.01	.37	e10	.01
13	.0	30	.08	.51	e10	.01	.40	e10	.01
14	.47	e10	.01	.47	e10	.01	.37	e10	.01
15	.47	e10	.01	.57	e10	.02	.38	e10	.01
16	.51	10	.01	.47	e10	.01	.38	e10	.01
17	.87	20	.05	.59	e10	.02	.37	e10	.01
18	.47	e10	.01	.51	e10	.01	.38	e10	.01
19	.49	e10	.01	.45	e10	.01	.37	e10	.01
20	.49	e10	.01	.49	e10	.01	.38	e10	.01
21	.51	e10	.01	.83	e10	.02	.59	50	.08
22	.54	e10	.01	.45	e10	.01	9.6	143	35
23	.54	e10	.01	.43	e10	.01	.37	10	.01
24	.71	30	.06	.40	e10	.01	.35	10	.01
25	.6	30	.13	.40	e10	.01	.35	10	.01
26	.51	e10	.01	.40	e10	.01	.37	10	.01
27	.54	e10	.01	.40	e10	.01	53	151	128
28	.47	e10	.01	.75	e10	.02	54	138	68
29	.51	e10	.01	.51	e10	.01	.49	25	.03
30	.51	e10	.01	.40	e10	.01	3.8	55	1.9
31	.49	e10	.01	.37	e10	.01	---	---	---
TOTAL	17.61	---	.60	16.19	---	.45	130.66	---	233.22
YEAR	405.75		472.08						

16265600 RIGHT BRANCH KAMOOALII STREAM NEAR KANEOHE--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .002 MM	SED. SUSP FALL DIAM. % FINER THAN .004 MM
MAR 25...	0605	410	1120	1240	23	31

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR 25...	53	70	89	96	99	100

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE

LOCATION.--Lat 21°23'42", long 157°48'44", Hydrologic Unit 20060000, on right bank 0.5 mi upstream from mouth, 1.4 mi southwest of Castle High School, and 1.9 mi south of Kaneohe Post Office.

DRAINAGE AREA.--0.44 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1960-63 (low-flow measurements), 1965-71, 1971-84 (annual maximum), April 1984 to current year. Prior to April 1984, the station was located 400 ft upstream.

GAGE.--Water-stage recorder and wooden control. Elevation of gage is 200 ft (from Corps of Engineers).

REMARKS.--Records fair. Honolulu Boerd of Water Supply diverts water from tunnel in drainage area.

AVERAGE DISCHARGE.--6 yeare (water years 1968-71, 1986), 1.39 ft^3/s (1,010 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 651 ft^3/s Nov. 26, 1970 (gage height, 6.18 ft for datum and site then in use), from rating curve extended above 10 ft^3/a on basis of slope-area measurement at gage height 6.09 ft; minimum, 0.03 ft^3/s for many days 1984-85.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 232 ft^3/s Sept. 28, gage height, 3.47 ft, from rating curve extended above 30 ft^3/s; minimum, 0.04 ft^3/a Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.34	.39	.18	.17	.15	.81	.41	.32	.26	.26	.34
2	.14	.30	.34	.22	.13	.13	.75	.41	.32	.26	.30	.39
3	.11	.34	.34	.22	.12	.12	1.0	.48	.30	.27	.44	.39
4	.08	.34	.34	.22	.28	.13	.95	.54	.30	.28	.50	.44
5	.22	.39	.34	.14	.16	.13	.89	.44	.32	.28	.39	.39
6	.18	.39	.30	.14	.14	.15	.90	.41	.33	.31	.26	.44
7	.14	.44	.30	.14	.15	.14	.79	.39	.29	.28	.26	.44
8	.12	.50	.30	.14	.16	.12	.87	.34	.28	.28	.34	.44
9	.09	.76	.30	.18	.15	.10	.82	.35	.32	.28	.22	.44
10	.10	.69	.30	.14	.13	.11	.85	.47	.31	.25	.34	.39
11	.13	.50	.30	.11	.14	.11	.73	.35	.36	.31	.34	.39
12	.08	.50	.30	.14	.14	.14	.72	.34	.30	.34	.34	.34
13	.10	.44	.22	.11	.13	.14	.70	.30	.26	.72	.30	.34
14	.10	.39	.30	.14	.15	.12	.62	.32	.29	.44	.30	.34
15	.08	.39	.30	.14	.43	.13	.59	.33	.28	.30	.30	.34
16	.09	.34	.22	.18	.22	.45	.61	.34	.24	.30	.30	.34
17	.17	.30	.22	.18	.17	.44	.63	.35	.28	.39	.39	.30
18	.13	.39	.22	.18	.18	.20	.57	.34	.22	.26	.30	.30
19	.94	.30	.22	.18	.16	.16	.56	.31	.22	.34	.30	.30
20	4.0	.26	.22	.18	.16	3.0	.51	.30	.24	.30	.26	.30
21	.62	.22	.26	.18	.15	1.8	.53	.31	.28	.30	.30	.30
22	.44	.22	.26	.22	.19	.64	.54	.31	.22	.30	.22	2.2
23	.30	.34	.26	.18	.17	.88	.50	.30	.26	.30	.26	.53
24	.44	.30	.26	.18	.16	1.4	.54	.30	.27	.50	.30	.48
25	.34	.39	.22	.18	.16	9.8	.49	.32	.29	.90	.30	.41
26	.26	.76	.18	.14	.15	1.6	.44	.33	.22	.34	.30	.42
27	.18	.76	.14	.14	.13	1.3	.46	.32	.26	.34	.34	1.1
28	.18	.69	.14	.17	.16	.93	.42	.32	.30	.26	.44	7.2
29	.18	.44	.14	.15	---	.83	.45	.35	.27	.26	.34	1.3
30	.34	.39	.14	.13	---	.83	.46	.33	.30	.28	.30	.83
31	.30	---	.18	.16	---	.82	---	.29	---	.26	.34	---
TOTAL	10.80	12.81	7.95	5.09	4.74	27.00	19.70	11.00	8.45	10.47	9.88	22.16
MEAN	.35	.43	.26	.16	.17	.87	.66	.35	.28	.34	.32	.74
MAX	4.0	.76	.39	.22	.43	9.8	1.0	.54	.36	.90	.50	7.2
MIN	.08	.22	.14	.11	.12	.10	.42	.29	.22	.25	.22	.30

CAL YR 1985	TOTAL	161.76	MEAN	.44	MAX	13	MIN	.07
WTR YR 1986	TOTAL	150.05	MEAN	.41	MAX	9.8	MIN	.08

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1984 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: April 1984 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since April 1984.

REMARKS.--Water-quality samples were also collected at this site.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 468 mg/L Sept. 28, 1988; minimum daily mean, 2 mg/L Mar. 2-4, 1985.
SEDIMENT DISCHARGE: Maximum daily, 47 tons Sept. 28, 1986; minimum daily, less than 0.01 ton for many days each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 468 mg/L Sept. 28; minimum daily mean, 4 mg/L for many days.
SEDIMENT DISCHARGE: Maximum daily, 47 tons Sept. 28; minimum daily, less than 0.01 ton for many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARDNESS (MG/L AS CACO3)
JAN 28...	1100	755	.16	159	7.10	19.5	1.1	7.7	85	K110	--
MAR 25...	1140	757	10	159	7.20	23.0	10	8.1	95	610	46

DATE	TIME	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
MAR 25...	1140	8.9	5.8	10	30	.7	3.1	7.7	20	<.10

DATE	TIME	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
JAN 28...	1100	--	--	--	--	5	.30	.30	.60	.010
MAR 25...	1140	21	138	96	.19	27	1.3	.80	2.1	.060

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
MAR 25...	1140	1600	30	2	<1	100	7	<10.0	<.5	<1	<1	<10

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
MAR 25...	<1	3	<3	8	2	1700	75	4	<1	<10	<4	60

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)
MAR 25...	19	<.10	<.1	1	<10	1	<1	<1	<1	<1	<1	61

DATE	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
MAR 25...	<6	20	10	4.3	<1	<.1	<.010	<.1	<.010	<.010	<.010

DATE	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
MAR 25...	<.01	<.010	<.010	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 25...	<.01	<.01	<.10	<.1	<.01	<1	<.01	<.01	<.01	<.01	<.01

< Actual value is known to be lass than the value shown.

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		OCTOBER			NOVEMBER			DECEMBER	
1	.22	4	.00	.34	5	.00	.39	5	.01
2	.14	4	.00	.30	5	.00	.34	5	.00
3	.11	4	.00	.34	5	.00	.34	5	.00
4	.08	4	.00	.34	5	.00	.34	5	.00
5	.22	4	.00	.39	5	.01	.34	5	.00
6	.18	4	.00	.39	5	.01	.30	5	.00
7	.14	4	.00	.44	5	.01	.30	5	.00
8	.12	4	.00	.50	8	.01	.30	5	.00
9	.09	4	.00	.76	10	.02	.30	5	.00
10	.10	4	.00	.69	12	.02	.30	5	.00
11	.13	4	.00	.50	6	.01	.30	5	.00
12	.08	4	.00	.50	6	.01	.30	5	.00
13	.10	4	.00	.44	6	.01	.22	5	.00
14	.10	4	.00	.39	6	.01	.30	5	.00
15	.08	4	.00	.39	6	.01	.30	5	.00
16	.09	4	.00	.34	6	.01	.22	5	.00
17	.17	4	.00	.30	6	.00	.22	5	.00
18	.13	4	.00	.39	20	.02	.22	5	.00
19	.94	28	.30	.30	7	.01	.22	5	.00
20	4.0	174	7.7	.26	7	.00	.22	5	.00
21	.62	10	.02	.22	7	.00	.26	5	.00
22	.44	6	.01	.22	7	.00	.26	5	.00
23	.30	6	.01	.34	7	.01	.26	5	.00
24	.44	6	.01	.30	7	.01	.26	5	.00
25	.34	6	.01	.39	7	.01	.22	5	.00
26	.26	6	.00	.76	62	.38	.18	5	.00
27	.18	6	.00	.76	25	.05	.14	5	.00
28	.18	6	.00	.69	20	.04	.14	5	.00
29	.18	6	.00	.44	7	.01	.14	5	.00
30	.34	6	.01	.39	7	.01	.14	5	.00
31	.30	6	.00	---	---	---	.18	5	.00
TOTAL	10.80	---	8.07	12.81	---	.69	7.95	---	.01
		JANUARY			FEBRUARY			MARCH	
1	.18	5	.00	.17	5	.00	.15	5	.00
2	.22	5	.00	.13	5	.00	.13	5	.00
3	.22	5	.00	.12	5	.00	.12	5	.00
4	.22	5	.00	.28	5	.00	.13	5	.00
5	.14	5	.00	.16	5	.00	.13	5	.00
6	.14	5	.00	.14	5	.00	.15	5	.00
7	.14	5	.00	.15	5	.00	.14	5	.00
8	.14	5	.00	.16	5	.00	.12	5	.00
9	.18	5	.00	.15	5	.00	.10	5	.00
10	.14	5	.00	.13	5	.00	.11	5	.00
11	.11	5	.00	.14	5	.00	.11	5	.00
12	.14	5	.00	.14	5	.00	.14	5	.00
13	.11	5	.00	.13	5	.00	.14	5	.00
14	.14	5	.00	.15	5	.00	.12	5	.00
15	.14	5	.00	.43	25	.03	.13	5	.00
16	.18	5	.00	.22	5	.00	.45	25	.03
17	.18	5	.00	.17	5	.00	.44	15	.02
18	.18	5	.00	.18	5	.00	.20	5	.00
19	.18	5	.00	.16	5	.00	.16	5	.00
20	.18	5	.00	.16	5	.00	3.0	33	.35
21	.18	5	.00	.15	5	.00	1.8	10	.05
22	.22	5	.00	.19	5	.00	.64	8	.01
23	.18	5	.00	.17	5	.00	.88	10	.02
24	.18	5	.00	.16	5	.00	1.4	10	.04
25	.18	5	.00	.16	5	.00	9.8	216	28
26	.14	5	.00	.15	5	.00	1.6	8	.03
27	.14	5	.00	.13	5	.00	1.3	6	.02
28	.17	5	.00	.16	5	.00	.93	4	.01
29	.15	5	.00	---	---	---	.83	4	.01
30	.13	5	.00	---	---	---	.83	4	.01
31	.16	5	.00	---	---	---	.82	4	.01
TOTAL	5.09	---	.00	4.74	---	.03	27.00	---	28.61

HAWAII, ISLAND OF OAHU

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		APRIL			MAY			JUNE	
1	.81	4	.01	.41	5	.01	.32	5	.00
2	.75	4	.01	.41	5	.01	.32	5	.00
3	1.0	10	.03	.48	5	.01	.30	5	.00
4	.95	4	.01	.54	5	.01	.30	5	.00
5	.89	4	.01	.44	5	.01	.32	5	.00
6	.90	4	.01	.41	5	.01	.33	5	.00
7	.79	4	.01	.39	5	.01	.29	5	.00
8	.87	4	.01	.34	5	.00	.28	5	.00
9	.82	4	.01	.35	5	.00	.32	5	.00
10	.85	4	.01	.47	5	.01	.31	5	.00
11	.73	4	.01	.35	5	.00	.36	5	.00
12	.72	4	.01	.34	5	.00	.30	5	.00
13	.70	4	.01	.30	5	.00	.26	5	.00
14	.62	4	.01	.32	5	.00	.29	5	.00
15	.59	4	.01	.33	5	.00	.28	5	.00
16	.61	4	.01	.34	5	.00	.24	5	.00
17	.63	4	.01	.35	5	.00	.28	5	.00
18	.57	4	.01	.34	5	.00	.22	5	.00
19	.56	4	.01	.31	5	.00	.22	5	.00
20	.51	4	.01	.30	5	.00	.24	5	.00
21	.53	4	.01	.31	5	.00	.28	5	.00
22	.54	4	.01	.31	5	.00	.22	5	.00
23	.50	4	.01	.30	5	.00	.26	5	.00
24	.54	4	.01	.30	5	.00	.27	5	.00
25	.49	4	.01	.32	5	.00	.29	5	.00
26	.44	4	.01	.33	5	.00	.22	5	.00
27	.46	4	.01	.32	5	.00	.26	5	.00
28	.42	4	.01	.32	5	.00	.30	5	.00
29	.45	4	.01	.35	5	.00	.27	5	.00
30	.46	4	.01	.33	5	.00	.30	5	.00
31	---	---	---	.29	5	.00	---	---	---
TOTAL	19.70	---	0.32	11.00	---	0.08	8.45	---	0.00
		JULY			AUGUST			SEPTEMBER	
1	.26	6	.00	.26	6	.00	.34	6	.01
2	.26	6	.00	.30	6	.00	.39	6	.01
3	.27	6	.00	.44	6	.01	.39	6	.01
4	.28	6	.00	.50	6	.01	.44	6	.01
5	.28	6	.00	.39	6	.01	.39	6	.01
6	.31	6	.01	.26	6	.00	.44	6	.01
7	.28	6	.00	.26	6	.00	.44	6	.01
8	.28	6	.00	.34	6	.01	.44	6	.01
9	.28	6	.00	.22	6	.00	.44	6	.01
10	.25	6	.00	.34	6	.01	.39	6	.01
11	.31	6	.01	.34	6	.01	.39	6	.01
12	.34	6	.01	.34	6	.01	.34	6	.01
13	.72	6	.01	.30	6	.00	.34	6	.01
14	.44	6	.01	.30	6	.00	.34	6	.01
15	.30	6	.00	.30	6	.00	.34	6	.01
16	.30	6	.00	.30	6	.00	.34	6	.01
17	.39	6	.01	.39	6	.01	.30	6	.00
18	.26	6	.00	.30	6	.00	.30	6	.00
19	.34	6	.01	.30	6	.00	.30	6	.00
20	.30	6	.00	.26	6	.00	.30	6	.00
21	.30	6	.00	.30	6	.00	.30	6	.00
22	.30	6	.00	.22	6	.00	2.2	209	4.6
23	.30	6	.00	.26	6	.00	.53	10	.01
24	.50	6	.01	.30	6	.00	.48	6	.01
25	.90	10	.02	.30	6	.00	.41	6	.01
26	.34	6	.01	.30	6	.00	.42	6	.01
27	.34	6	.01	.34	6	.01	1.1	90	1.2
28	.26	6	.00	.44	6	.01	7.2	468	47
29	.26	6	.00	.34	6	.01	1.3	20	.07
30	.26	6	.00	.30	6	.00	.83	8	.02
31	.26	6	.00	.34	6	.01	---	---	---
TOTAL	10.47	---	.12	9.88	---	.12	22.16	---	53.09
YEAR	150.05		91.14						

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .002 MM	SED. SUSP FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
SEP 28...	0630	222	5200	3120	36	42	58

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
SEP 28...	71	90	92	95	97	98	100

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE

LOCATION.--Lat 21°23'47", long 157°48'23", Hydrologic Unit 20080000, on left bank 300 ft downstream from Luluku Stream, 1.0 mi southwest of Castle High School, and 1.9 mi northwest of the intersection of State Highways 61 and 83.

DRAINAGE AREA.--3.81 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder and concrete control.

REMARKS.--Records good. Flow regulated by a flood-control dam upstream.

AVERAGE DISCHARGE.--9 years, 10.5 ft^3/s (7,610 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft^3/s Mar. 18, 1980, gage height, 5.50 ft, from rating curve extended above 200 ft^3/s; minimum, 0.25 ft^3/s several days in October 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 470 ft^3/s Mar. 25, gage height, 3.70 ft; minimum, 0.44 ft^3/s for several days in Oct. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	6.6	8.8	6.3	7.6	4.8	11	7.6	6.3	5.6	5.8	5.9
2	7.3	6.0	8.3	6.3	5.7	5.1	11	7.3	6.3	5.4	5.5	5.6
3	6.0	6.0	7.9	6.6	5.4	4.8	14	7.9	6.3	5.9	7.5	5.5
4	5.4	6.0	7.9	6.3	8.6	4.8	14	8.6	6.3	5.6	8.3	6.0
5	5.1	6.7	7.9	6.3	5.7	4.6	11	7.9	6.0	5.4	6.5	5.7
6	4.8	6.0	7.6	6.3	5.4	4.6	11	7.6	6.6	6.1	5.9	6.2
7	4.8	6.0	7.6	6.0	5.4	4.6	10	7.6	6.6	5.8	5.6	6.2
8	6.3	6.3	7.6	6.0	5.7	4.6	11	7.6	6.0	5.7	5.7	5.7
9	11	7.9	7.3	6.0	5.4	4.6	11	7.6	6.3	5.8	5.8	5.4
10	.44	11	7.6	6.0	5.1	4.6	12	8.3	6.9	5.4	7.5	6.0
11	2.8	9.3	7.6	5.7	5.4	4.6	11	7.3	7.3	6.4	6.0	6.0
12	4.8	10	7.3	5.7	5.1	4.6	10	7.3	6.3	5.8	5.9	6.6
13	5.1	8.3	7.3	5.7	4.8	4.8	9.7	7.3	6.0	9.1	6.1	6.6
14	4.8	7.6	7.3	5.7	4.8	4.8	9.7	7.3	6.3	7.8	6.4	5.4
15	4.8	7.9	7.9	5.7	12	6.0	9.3	6.9	5.7	6.3	7.1	6.0
16	4.8	7.3	7.6	5.7	6.0	8.3	9.7	6.9	5.6	6.1	6.0	5.4
17	9.3	6.9	6.9	5.7	5.1	7.6	8.6	6.9	6.4	8.9	8.0	5.4
18	5.4	12	6.9	6.0	5.1	6.3	8.6	7.9	5.9	7.0	6.8	5.4
19	11	11	6.9	6.3	5.1	6.3	8.6	6.9	5.7	6.6	6.4	5.4
20	72	7.6	6.9	6.0	5.1	28	8.6	6.9	5.8	6.2	6.0	5.4
21	16	7.3	6.9	5.7	5.1	26	8.3	6.9	6.7	5.9	7.2	6.0
22	8.6	6.9	6.9	5.7	5.4	12	8.3	6.6	5.9	5.8	6.1	29
23	7.9	9.0	6.6	5.7	5.7	14	8.6	6.6	6.1	5.9	6.1	9.0
24	8.6	7.9	7.6	6.0	4.8	20	8.3	6.6	6.3	6.3	6.3	8.3
25	8.3	9.3	6.6	6.0	4.6	97	7.9	7.9	6.7	13	5.7	7.3
26	6.9	12	6.6	5.7	4.8	20	7.9	7.6	5.9	7.3	5.3	7.3
27	6.9	18	6.6	5.4	4.8	16	7.9	7.9	5.6	6.7	5.2	36
28	6.3	16	6.6	5.4	4.8	14	7.6	7.3	5.9	6.2	6.4	99
29	5.7	10	6.6	5.4	---	12	7.9	7.6	5.7	6.6	7.6	17
30	5.7	9.3	6.3	5.4	---	12	8.3	6.9	6.6	6.0	6.9	14
31	6.0	---	6.3	5.7	---	12	---	6.6	---	5.7	6.1	---
TOTAL	271.14	262.1	224.5	182.4	158.5	383.4	290.8	228.1	186.0	202.3	197.7	348.7
MEAN	8.75	8.74	7.24	5.88	5.66	12.4	9.69	7.36	6.20	6.53	6.38	11.6
MAX	72	18	8.6	6.6	12	97	14	8.6	7.3	13	8.3	99
MIN	.44	6.0	6.3	5.4	4.6	4.6	7.6	6.6	5.6	5.4	5.2	5.4
AC-FT	538	520	445	362	314	760	577	452	369	401	392	692

CAL YR 1985	TOTAL	2684.24	MEAN	7.35	MAX	163	MIN	.44	AC-FT	5320
WTR YR 1986	TOTAL	2935.64	MEAN	8.04	MAX	99	MIN	.44	AC-FT	5820

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1976 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: November 1976 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since November 1976.

REMARKS.--In addition to the sediment sampler record, observations of specific conductance, pH, and water temperature were collected during the year.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 879 mg/L Mar. 18, 1980; minimum daily mean, 2 mg/L several days in 1981, 1983, 1984.
SEDIMENT DISCHARGE: Maximum daily, 1,380 tons Mar. 18, 1980; minimum daily, 0 ton Oct. 9-11, 1981.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 272 mg/L Sept. 28; minimum daily mean, 3 mg/L Dec. 5, 6, 9.
SEDIMENT DISCHARGE: Maximum daily, 169 tons Sept. 28; minimum daily, less than 0.01 ton for many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)
JAN								
06...	0950	756	5.2	194	7.30	22.5	2.5	8.4
MAR								
25...	0920	762	410	123	7.20	21.5	110	8.4
25...	0930	762	376	123	7.20	21.5	120	8.4
25...	0935	762	--	123	7.20	21.5	--	8.4
25...	1000	762	302	145	7.50	22.0	65	--
25...	1030	762	247	153	7.50	22.0	50	--
25...	1100	762	213	155	7.50	22.5	40	--

DATE	TIME	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
JAN								
06...	0950	98	K26	5	.40	.40	.80	.020
MAR								
25...	0920	95	--	304	.60	2.3	2.9	.320
25...	0930	95	--	340	.60	2.5	3.1	.420
25...	0935	95	--	--	--	--	--	--
25...	1000	--	--	182	.70	1.5	2.2	.280
25...	1030	--	--	104	.80	1.0	1.8	.300
25...	1100	--	--	52	.70	.90	1.6	.160

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAR										
25...	0935	12000	7	100	<10.0	<1	<10	20	36	14000

< Actual value is known to be less than the value shown.
K Results baaed on colony count outside the acceptable range (non-ideal colony count).

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR 25...	0935	52	<10	630	<.10	<1	19	<1	<1	70

< Actual value is known to be less than the value shown.

16272200 KAMOOALII STREAM BELOW LULUKU STREAM, NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		OCTOBER			NOVEMBER			DECEMBER	
1	8.3	e20	.45	6.6	8	.14	8.6	8	.19
2	7.3	e14	.28	6.0	8	.13	8.3	5	.11
3	6.0	e12	.19	6.0	7	.11	7.9	5	.11
4	5.4	e12	.17	6.0	7	.11	7.9	4	.09
5	5.1	e12	.17	6.7	7	.13	7.9	3	.06
6	4.8	e12	.16	6.0	7	.11	7.6	3	.06
7	4.8	12	.16	6.0	7	.11	7.6	4	.08
8	6.3	14	.25	6.3	6	.10	7.6	4	.08
9	11	13	.70	7.9	8	.17	7.3	3	.06
10	.44	e5	.01	11	8	.24	7.6	4	.08
11	2.8	e7	.05	9.3	4	.10	7.6	4	.08
12	4.8	e7	.09	10	4	.11	7.3	4	.08
13	5.1	e7	.10	8.3	4	.09	7.3	5	.10
14	4.8	e7	.09	7.6	5	.10	7.3	5	.10
15	4.8	e7	.099	7.9	5	.11	7.9	6	.13
16	4.8	e7	.09	7.3	5	.10	7.6	8	.16
17	9.3	e10	.25	6.9	6	.11	6.9	7	.13
18	5.4	e8	.12	12	10	.32	6.9	6	.11
19	11	e12	.36	11	9	.27	6.9	7	.13
20	72	32	8.7	7.6	8	.16	6.9	8	.15
21	16	18	.78	7.3	6	.12	6.9	8	.15
22	8.6	e10	.23	6.9	5	.09	6.9	9	.17
23	7.9	e10	.21	9.0	8	.19	6.6	10	.18
24	8.6	e10	.23	7.9	5	.11	7.6	11	.23
25	8.3	e10	.22	9.3	6	.15	6.6	9	.16
26	6.9	e9	.17	12	10	.32	6.6	7	.12
27	6.9	9	.17	18	13	.78	6.6	7	.12
28	6.3	8	.14	16	10	.43	6.6	7	.12
29	5.7	8	.12	10	8	.22	6.6	7	.12
30	5.7	8	.12	9.3	8	.20	6.3	7	.12
31	6.0	8	.13	---	---	---	6.3	7	.12
TOTAL	271.14	---	1500	262.1	---	5.43	224.5	---	3.70
		JANUARY			FEBRUARY			MARCH	
1	6.3	7	.12	7.6	12	.25	4.8	e10	.13
2	6.3	12	.20	5.7	8	.12	5.1	e10	.14
3	6.6	14	.25	5.4	e8	.12	4.8	e10	.13
4	6.3	14	.24	8.6	13	.33	4.8	e10	.13
5	6.3	14	.24	5.7	7	.11	4.6	e10	.12
6	6.3	14	.24	5.4	10	.15	4.6	e8	.10
7	6.0	16	.26	5.4	e10	.15	4.6	e8	.10
8	6.0	e12	.19	5.7	e10	.15	4.6	e8	.10
9	6.0	10	.16	5.4	e10	.15	4.6	e8	.10
10	6.0	11	.18	5.1	e10	.14	4.6	e8	.10
11	5.7	e11	.17	5.4	e10	.15	4.6	e8	.10
12	5.7	12	.18	5.1	e10	.14	4.6	e8	.10
13	5.7	12	.18	4.8	e8	.10	4.8	e8	.10
14	5.7	11	.17	4.8	e8	.10	4.8	8	.10
15	5.7	e11	.17	12	e15	.49	6.0	8	.13
16	5.7	e11	.17	6.0	e10	.16	8.3	9	.20
17	5.7	12	.18	5.1	e10	.14	7.6	8	.16
18	6.0	12	.19	5.1	e10	.14	6.3	9	.15
19	6.3	10	.17	5.1	e10	.14	6.3	10	.17
20	6.0	10	.16	5.1	e10	.14	28	29	2.5
21	5.7	12	.18	5.1	e10	.14	26	14	1.1
22	5.7	14	.22	5.4	e10	.15	12	8	.26
23	5.7	e14	.22	5.7	e10	.15	14	e10	.38
24	6.0	12	.19	4.8	e8	.10	20	e12	.65
25	6.0	10	.16	4.6	e8	.10	97	84	51
26	5.7	10	.15	4.8	10	.13	20	15	.81
27	5.4	e10	.15	4.8	e10	.13	16	7	.30
28	5.4	10	.15	4.8	e10	.13	14	6	.23
29	5.4	e10	.15	---	---	---	12	6	.19
30	5.4	e10	.15	---	---	---	12	5	.16
31	5.7	e10	.15	---	---	---	12	5	.16
TOTAL	182.4	---	5.69	158.5	---	4.40	363.4	---	60.10

e Estimated

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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)
		APRIL			MAY			JUNE	
1	11	4	.12	7.6	6	.12	6.3	6	.10
2	11	4	.12	7.3	7	.14	6.3	5	.09
3	14	9	.34	7.9	6	.13	6.3	4	.07
4	14	9	.34	8.6	5	.12	6.3	4	.07
5	11	8	.24	7.9	4	.09	6.0	5	.08
6	11	6	.18	7.6	4	.08	6.6	5	.09
7	10	8	.22	7.6	4	.08	6.6	6	.11
8	11	e8	.24	7.6	5	.10	6.0	6	.10
9	11	8	.24	7.6	5	.10	6.3	6	.10
10	12	7	.23	8.3	4	.09	6.9	8	.15
11	11	8	.24	7.3	4	.08	7.3	7	.14
12	10	7	.19	7.3	4	.08	6.3	7	.12
13	9.7	e8	.21	7.3	3	.06	6.0	7	.11
14	9.7	10	.26	7.3	4	.08	6.3	8	.14
15	9.3	8	.20	6.9	4	.07	5.7	8	.12
16	9.7	7	.18	6.9	5	.09	5.6	10	.15
17	8.6	8	.19	6.9	6	.11	6.4	10	.17
18	8.6	7	.16	7.9	6	.13	5.9	9	.14
19	8.6	e7	.16	6.9	6	.11	5.7	10	.15
20	8.6	e7	.16	6.9	6	.11	5.8	e10	.16
21	8.3	e7	.16	6.9	6	.11	6.7	12	.22
22	8.3	10	.22	6.6	5	.09	5.9	e10	.16
23	8.6	e10	.23	6.6	5	.09	6.1	8	.13
24	8.3	e10	.22	6.6	6	.11	6.3	8	.14
25	7.9	e7	.15	7.9	6	.13	6.7	8	.14
26	7.9	e7	.15	7.6	4	.08	5.9	7	.11
27	7.9	e7	.15	7.9	5	.11	5.6	9	.14
28	7.6	e7	.14	7.3	4	.08	5.9	8	.13
29	7.9	8	.17	7.6	5	.10	5.7	8	.12
30	8.3	6	.13	6.9	5	.09	6.6	8	.14
31	---	---	---	6.6	6	.11	---	---	---
TOTAL	290.8	---	5.94	228.1	---	3.07	186.0	---	3.79
		JULY			AUGUST			SEPTEMBER	
1	5.6	e8	.12	5.8	e8	.13	5.9	5	.08
2	5.4	e8	.12	5.5	e8	.12	5.6	e5	.08
3	5.9	e8	.13	7.5	10	.20	5.5	e5	.07
4	5.6	e10	.15	8.3	12	.27	6.0	6	.10
5	5.4	10	.15	6.5	9	.16	5.7	5	.08
6	6.1	e10	.16	5.9	7	.11	6.2	6	.10
7	5.8	e8	.13	5.6	6	.09	6.2	6	.10
8	5.7	e8	.12	5.7	e6	.09	5.7	6	.09
9	5.8	e8	.13	5.8	6	.09	5.4	40	.58
10	5.4	6	.09	7.5	8	.16	6.0	25	.40
11	6.4	e8	.14	6.0	5	.08	6.0	20	.32
12	5.8	e7	.11	5.9	5	.08	6.6	20	.36
13	9.1	9	.22	6.1	e5	.08	6.6	20	.36
14	7.8	6	.13	6.4	6	.10	5.4	15	.22
15	6.3	5	.09	7.1	6	.12	6.0	15	.24
16	6.1	5	.08	6.0	5	.08	5.4	14	.20
17	8.9	10	.24	8.0	10	.22	5.4	14	.20
18	7.0	10	.19	6.8	8	.15	5.4	14	.20
19	6.6	10	.18	6.4	8	.14	5.4	14	.20
20	6.2	8	.13	6.0	7	.11	5.4	14	.20
21	5.9	6	.10	7.2	6	.12	6.0	12	.19
22	5.8	e6	.09	6.1	6	.10	29	131	17
23	5.9	e6	.10	6.1	7	.12	9.0	10	.24
24	6.3	7	.12	6.3	7	.12	8.3	10	.22
25	13	20	.70	5.7	7	.11	7.3	11	.22
26	7.3	8	.16	5.3	e7	.10	7.3	12	.24
27	6.7	6	.11	5.2	7	.10	36	41	12
28	6.2	7	.12	6.4	8	.14	98	272	169
29	6.6	7	.12	7.6	7	.14	17	44	2.3
30	6.0	8	.13	6.9	8	.15	14	16	.60
31	5.7	8	.12	6.1	5	.08	---	---	---
TOTAL	202.3	---	4.68	197.7	---	3.86	348.7	---	206.19
YEAR	2935.64		321.85						

e Estimated

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .002 MM	SED. SUSP FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR 25...	0800	390	350	369	29	36	--
SEP 27...	1900	179	235	114	37	52	66

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
MAR 25...	68	--	88	94	98	100
SEP 27...	73	75	86	95	100	--

16275000 HAIKU STREAM NEAR HEEIA

LOCATION.--Lat 21°24'46", long 157°49'33", Hydrologic Unit 20060000, on left bank 1.7 mi west of Kaneohe Post Office and 1.8 mi southwest of Heeia.

DRAINAGE AREA.--0.97 mi^2.

PERIOD OF RECORD.--January 1914 to October 1919, July 1939 to September 1977, October 1982 to current year.

REVISED RECORDS (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, 1957-58. WSP 1937: 1940-45(M), 1947(M), 1948-50(P), 1951, 1952(P), 1953(M), 1955-57(P), 1958-59, 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 271.9 ft 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.

REMARKS.--Records fair. Honolulu Board of Water Supply has diverted ground water from tunnel in drainage area since 1943. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE (since diversion from tunnel began).--38 years (water years 1944-77, 1984-86), 2.12 ft^3/s (1,540 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,740 ft^3/s May 2, 1965, gage height, 7.94 ft, from rating curve extended above 57 ft^3/s on basis of slope-area measurements at gage heights 3.87 ft, 3.88 ft, and 7.94 ft; minimum, 0.20 ft^3/s July 20, 1957, Sept. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 340 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0830	*850	*3.44	Sept. 28	0600	630	3.42

Minimum, 1.1 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	1.7	1.3	1.2	1.2	1.8	1.5	1.4	1.3	1.5	1.3
2	1.3	1.1	1.6	1.3	1.2	1.2	1.7	1.5	1.3	1.3	1.6	1.3
3	1.3	1.1	1.6	1.3	1.2	1.2	2.4	1.5	1.3	1.3	2.0	1.3
4	1.2	1.1	1.5	1.3	1.4	1.1	2.8	1.6	1.3	1.3	2.1	1.4
5	1.7	1.2	1.5	1.3	1.2	1.1	2.2	1.5	1.3	1.3	2.0	1.4
6	1.6	1.2	1.5	1.3	1.2	1.1	2.1	1.5	1.3	1.3	1.8	1.6
7	1.5	1.2	1.5	1.3	1.2	1.2	2.0	1.5	1.3	1.3	1.7	1.6
8	1.3	1.2	1.5	1.3	1.2	1.2	1.9	1.5	1.3	1.3	1.7	1.5
9	1.3	1.3	1.5	1.3	1.2	1.3	1.8	1.5	1.3	1.3	1.7	1.5
10	1.2	2.2	1.5	1.3	1.1	1.3	1.9	1.6	1.4	1.2	1.8	1.5
11	1.3	2.5	1.5	1.3	1.1	1.3	2.1	1.6	1.4	1.2	1.8	1.5
12	1.2	2.5	1.5	1.3	1.1	1.2	2.0	1.5	1.3	1.2	1.7	1.5
13	1.3	2.1	1.5	1.2	1.1	1.3	1.8	1.5	1.3	1.5	1.6	1.5
14	1.2	1.7	1.4	1.2	1.1	1.3	1.7	1.5	1.3	1.8	1.7	1.5
15	1.2	1.6	1.4	1.3	1.3	1.3	1.7	1.4	1.3	1.5	1.8	1.5
16	1.2	1.5	1.4	1.2	1.1	1.4	1.7	1.4	1.3	1.4	1.6	1.5
17	1.3	1.5	1.4	1.3	1.1	2.6	1.6	1.4	1.3	1.5	1.7	1.5
18	1.2	1.6	1.4	1.3	1.1	2.0	1.6	1.4	1.4	1.5	1.6	1.5
19	6.0	1.6	1.4	1.3	1.1	1.5	1.5	1.4	1.4	1.5	1.5	1.5
20	16	1.5	1.4	1.3	1.1	13	1.5	1.4	1.4	1.5	1.4	1.5
21	3.3	1.5	1.3	1.3	1.1	11	1.5	1.3	1.4	1.4	1.5	1.5
22	1.8	1.5	1.3	1.3	1.2	4.0	1.6	1.3	1.4	1.4	1.4	2.4
23	1.5	1.5	1.3	1.3	1.2	5.8	1.6	1.3	1.4	1.3	1.4	1.9
24	1.4	1.5	1.4	1.3	1.1	9.4	1.6	1.3	1.4	4.9	1.4	1.8
25	1.5	1.8	1.3	1.3	1.1	39	1.6	1.4	1.4	5.8	1.4	1.7
26	1.4	3.2	1.3	1.3	1.1	7.8	1.5	1.4	1.4	2.1	1.4	1.7
27	1.3	3.5	1.3	1.3	1.1	3.6	1.5	1.5	1.3	1.7	1.4	1.9
28	1.2	3.3	1.3	1.2	1.1	2.6	1.5	1.4	1.3	1.6	1.8	23
29	1.2	2.5	1.3	1.2	---	2.2	1.5	1.5	1.3	1.6	1.6	4.5
30	1.2	2.0	1.2	1.2	---	2.0	1.6	1.5	1.3	1.6	1.5	3.0
31	1.2	---	1.2	1.2	---	1.9	---	1.4	---	1.5	1.4	---
TOTAL	62.6	53.1	43.9	39.6	32.3	128.1	53.3	45.0	40.2	52.4	50.5	72.8
MEAN	2.02	1.77	1.42	1.28	1.15	4.13	1.78	1.45	1.34	1.69	1.63	2.43
MAX	16	3.5	1.7	1.3	1.4	39	2.8	1.8	1.4	5.8	2.1	23
MIN	1.2	1.1	1.2	1.2	1.1	1.1	1.5	1.3	1.3	1.2	1.4	1.3
AC-FT	124	105	87	79	64	254	106	89	80	104	100	144

CAL YR 1985	TOTAL	638.0	MEAN	1.75	MAX	40	MIN	1.1	AC-FT	1270
WTR YR 1986	TOTAL	673.8	MEAN	1.85	MAX	39	MIN	1.1	AC-FT	1340

16283200 KAHALUU STREAM NEAR AHUIMANU

LOCATION.--Lat 21°26'32", long 157°50'47", Hydrologic Unit 20060000, on left bank 1.1 mi west of Valley of the Temples Memorial Park, 1.3 mi south of Kahaluu School, and 2.7 mi northwest of Heeia Elementary School, and 2.7 mi northwest of Heeia Elementary School.

DRAINAGE AREA.--0.99 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 150 ft, from topographic map. Honolulu Board of Water Supply).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Honolulu Board of Water Supply has diverted ground water from tunnel in drainage area aince 1947. Periodic determinations of water temperature for the current year are published elsewhere in thia report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft^3/s Sept. 23, 1985, gage height, 5.10 ft; minimum, 0.58 ft^3/s several days in September, October, November 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base disoharge of 180 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2400	346	4.58	Sept. 28	0730	392	4.81
Mar. 25	0730	*408	*4.89				

Minimum discharge, 0.80 ft^3/s October 15-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.1	e1.2	.97	1.0	.85	1.7	1.2	1.2	1.1	1.3	1.3
2	1.1	e1.0	e1.2	.97	1.0	.85	1.6	1.2	1.1	1.0	1.3	1.3
3	1.0	e1.0	1.2	.97	1.0	.85	5.0	1.3	1.1	1.0	8.2	1.3
4	.97	e1.0	1.1	.97	1.4	.85	2.6	1.8	1.1	1.0	2.2	1.3
5	1.1	e1.0	1.1	.97	1.0	.85	2.1	1.3	1.1	1.0	1.7	1.2
6	1.0	e1.0	1.1	.97	1.0	.85	1.9	1.3	1.1	1.0	1.4	1.3
7	.97	e1.0	1.0	.97	1.0	.85	1.7	1.3	1.2	1.0	1.3	1.3
8	.91	e.97	1.0	.91	1.0	.85	1.6	1.3	1.1	.97	1.2	1.4
9	.91	e.97	1.0	.91	1.0	.85	1.5	1.3	1.1	.97	1.2	1.2
10	.91	e.97	1.1	.91	.97	.91	1.5	3.1	1.4	.97	1.6	1.2
11	.97	e.97	1.1	.85	.97	.91	1.4	1.4	1.2	.97	1.3	1.2
12	.91	e3.4	1.1	.85	.97	.91	1.4	1.4	1.1	.97	1.3	1.2
13	.91	e1.2	1.1	.91	1.0	.91	1.4	1.3	1.0	1.2	1.3	3.6
14	.85	e1.1	1.1	.91	1.0	.91	1.3	1.3	1.0	1.1	2.1	2.3
15	.85	e1.1	1.3	.91	1.7	.91	1.4	1.3	.97	1.1	1.6	1.3
16	.80	e1.0	1.3	.91	1.0	1.7	1.5	1.3	.97	1.1	1.5	1.3
17	.80	e1.0	1.2	.91	1.0	3.1	1.4	1.3	.97	1.1	1.4	1.3
18	.80	e1.0	1.1	.91	1.0	1.2	1.4	1.2	.97	1.1	1.3	1.2
19	11	e1.0	1.1	.91	1.0	1.1	1.3	1.2	.97	1.1	1.3	1.2
20	29	.97	1.1	.97	1.0	34	1.3	1.2	.97	1.1	1.3	1.2
21	2.7	.97	1.1	.97	1.0	21	1.3	1.2	.97	1.1	1.3	1.6
22	1.7	.97	1.1	.97	1.3	4.3	1.3	1.2	.97	1.1	1.3	4.8
23	1.4	2.7	1.0	.97	1.0	10	1.3	1.2	.97	1.0	1.3	1.8
24	1.3	e1.1	1.1	1.0	.97	18	1.3	1.1	.97	5.0	1.3	1.5
25	1.3	e1.2	1.0	1.1	.97	28	1.3	1.1	.97	14	1.2	1.3
26	1.3	e1.1	1.0	1.0	.91	5.2	1.2	1.2	.97	2.8	1.2	2.4
27	1.3	e2.8	1.0	.97	.91	2.9	1.2	1.3	.97	1.8	1.2	2.5
28	1.1	e1.3	.97	.97	.85	2.3	1.2	1.2	.97	1.6	1.3	e22
29	1.1	e1.2	.97	.97	---	2.1	1.2	1.2	1.0	1.4	1.8	e8.4
30	1.2	e1.2	.97	.97	---	1.9	1.2	1.2	1.3	1.3	1.5	5.2
31	1.1	---	.97	.97	---	1.8	---	1.2	---	1.3	1.3	---
TOTAL	72.26	37.29	33.68	29.42	28.92	151.71	47.5	41.1	31.68	53.25	50.5	80.1
MEAN	2.33	1.24	1.09	.95	1.03	4.89	1.58	1.33	1.06	1.72	1.63	2.67
MAX	29	3.4	1.3	1.1	1.7	34	5.0	3.1	1.4	14	8.2	22
MIN	.80	.97	.97	.85	.85	.85	1.2	1.1	.97	.97	1.2	1.2
AC-FT	143	74	67	58	57	301	94	82	63	106	100	159

CAL YR 1985	TOTAL	570.16	MEAN	1.56	MAX	60	MIN	.75	AC-FT	1130
WTR YR 1986	TOTAL	657.41	MEAN	1.80	MAX	34	MIN	.80	AC-FT	1300

e Estimated

16283600 SOUTH FORK WAIHEE STREAM NEAR HEEIA

LOCATION.--Lat 21°26'47", long 157°52'12", Hydrologic Unit 20060000, on left bank 0.2 mi upstream from confluence with North Fork, 3.0 mi southwest of Waiahole School, and 4.0 mi northwest of Heeia.

DRAINAGE AREA.--0.03 mi^2.

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

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

REMARKS.--Records good. Honolulu Board of Water Supply diverts water from wells in drainage area. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 1.49 ft^3/s (1,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 430 ft^3/s Oct. 28, 1981, gage height, 4.68 ft, from rating curve extended above 4.8 ft^3/s; no flow July 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 47 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0100	60	2.32	Sept. 13	2230	103	2.81
Mar. 25	0830	78	2.55	21	1100	85	2.62
July 24	2200	90	2.68	28	0730	*176	*3.34
Sept. 8	0300	74	2.50				

Minimum discharge, 0.51 ft^3/s Dec. 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	.98	.80	.85	.80	.70	.85	.85	.98	.98	1.0
2	1.1	1.1	.98	.80	.85	.75	.70	.85	.85	.98	.98	1.0
3	1.1	1.1	.98	.80	.85	.75	1.1	.92	.85	1.0	1.8	1.0
4	1.0	1.1	.98	.75	1.0	.75	.85	1.1	.85	1.0	1.4	1.0
5	1.2	1.1	.98	.75	.85	.75	1.1	.91	.85	.98	1.2	1.0
6	.98	1.0	.98	.75	.80	.75	.80	.91	.91	.98	1.0	1.0
7	.98	1.0	.98	.75	.80	.75	.75	.85	.85	1.1	1.0	1.1
8	.98	1.0	.98	.75	.80	.75	.75	.85	.85	1.0	.98	2.4
9	.98	1.2	.91	.75	.80	.75	.75	.85	.97	.98	1.0	.98
10	.98	1.0	.60	.80	.80	.75	.80	1.3	1.6	.98	1.4	.98
11	1.1	1.1	.51	.80	.80	.75	.80	.85	.98	.98	1.0	.91
12	.98	1.5	.51	.80	.80	.75	.75	.85	.98	.98	1.0	.91
13	.98	1.2	.51	.80	.75	.75	.80	.85	.98	1.2	1.0	3.0
14	.98	1.0	.51	.80	.75	.75	.80	.98	.98	1.7	1.5	1.1
15	.98	1.0	.56	.80	.91	.80	.75	.91	.98	1.0	1.1	.98
16	.98	1.0	.60	.80	.70	1.5	.75	.85	.98	.98	1.0	.98
17	.98	1.0	.75	.80	.70	1.6	.75	.85	.98	1.1	1.1	.98
18	.98	1.0	.75	.80	.70	.80	.75	.85	.98	.98	1.0	.98
19	1.8	1.0	.75	.80	.75	.80	.75	.85	.98	.98	1.0	.98
20	4.7	.98	.75	.80	.75	5.0	.75	.85	.98	.98	1.0	.98
21	1.1	.98	.75	.80	.75	3.1	.75	.85	.98	.98	1.0	2.2
22	1.1	.98	.75	.80	1.2	.85	.75	.85	.98	.98	1.0	2.1
23	1.0	1.2	.80	.80	.85	1.8	.75	.85	.98	1.2	1.0	1.0
24	1.7	1.0	.80	.80	.80	1.6	.75	.85	1.1	5.6	1.0	1.0
25	1.3	1.3	.80	.80	.80	3.7	.75	.85	1.1	1.9	1.0	1.0
26	1.2	1.1	.80	.80	.80	.75	.75	.85	.98	1.0	1.0	1.2
27	1.2	1.5	.80	.80	.80	.70	.75	.85	.98	.98	1.0	1.1
28	1.2	1.2	.80	.80	.80	.70	.75	.85	.98	.98	1.1	7.4
29	1.2	1.0	.80	.80	---	.70	.80	.85	1.0	1.0	1.4	1.6
30	1.1	1.0	.80	.80	---	.70	.80	.85	1.3	.98	1.1	1.4
31	1.1	---	.80	.80	---	.70	---	.85	---	.98	1.0	---
TOTAL	38.06	32.74	24.25	24.50	22.81	36.35	23.55	27.43	29.61	37.44	34.04	43.26
MEAN	1.23	1.09	.78	.79	.81	1.17	.78	.88	.99	1.21	1.10	1.44
MAX	4.7	1.5	.98	.80	1.2	5.0	1.1	1.3	1.6	5.6	1.8	7.4
MIN	.98	.98	.51	.75	.70	.70	.70	.85	.85	.98	.98	.91
AC-FT	75	65	48	49	45	72	47	54	59	74	68	86

CAL YR 1985	TOTAL	366.22	MEAN	1.00	MAX	5.9	MIN	.51	AC-FT	726
WTR YR 1986	TOTAL	374.04	MEAN	1.02	MAX	7.4	MIN	.51	AC-FT	742

16283700 NORTH FORK WAIHEE STREAM NEAR HEEIA

LOCATION.--Lat 21°26'48", long 157°52'18", Hydrologic Unit 20060000, on left bank 0.3 mi upstream from confluence with South Fork, 2.8 mi southwest of Waiahole School, and 4.3 mi northwest of Heeia.

DRAINAGE AREA.--0.03 mi^2.

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

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

REMARKS.--Records good. Honolulu Board of Water Supply diverts water from wells in South Fork Waihee which affects the low flow at thia station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 1.62 ft^3/s (1,170 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 376 ft^3/s Feb. 4, 1985, gage height, 3.38 ft, from rating curve extended above 19 ft^3/s; no flow July 7, 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 24	2200	48	1.77	Sept. 28	0730	*88	*2.14

Minimum discharge, 0.98 ft^3/s Dec. 11-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.4	1.4	1.2	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.6
2	1.5	1.4	1.4	1.2	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.6
3	1.4	1.4	1.4	1.2	1.3	1.3	1.7	1.3	1.3	1.4	1.9	1.6
4	1.4	1.4	1.4	1.2	1.4	1.3	1.4	1.6	1.3	1.5	1.8	1.6
5	1.5	1.4	1.4	1.2	1.3	1.3	1.7	1.4	1.3	1.4	1.6	1.6
6	1.4	1.4	1.4	1.2	1.3	1.3	1.4	1.3	1.3	1.4	1.4	1.6
7	1.4	1.4	1.4	1.2	1.3	1.3	1.4	1.3	1.3	1.6	1.4	1.6
8	1.4	1.4	1.4	1.2	1.3	1.3	1.4	1.3	1.3	1.4	1.4	2.1
9	1.4	1.4	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.4
10	1.4	1.4	1.1	1.2	1.3	1.3	1.4	1.5	1.7	1.4	1.8	1.4
11	1.5	1.4	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.4	1.5	1.4
12	1.4	1.7	1.0	1.2	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.4
13	1.3	1.5	1.0	1.3	1.3	1.3	1.4	1.3	1.3	1.6	1.5	2.3
14	1.4	1.4	1.0	1.3	1.3	1.3	1.3	1.4	1.3	2.1	1.8	1.4
15	1.4	1.4	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.6	1.6	1.4
16	1.4	1.4	1.1	1.3	1.3	1.9	1.3	1.3	1.3	1.5	1.6	1.4
17	1.4	1.4	1.2	1.3	1.2	2.2	1.3	1.3	1.3	1.6	1.6	1.4
18	1.4	1.4	1.3	1.3	1.2	1.4	1.3	1.3	1.3	1.5	1.6	1.4
19	2.0	1.4	1.3	1.3	1.2	1.4	1.3	1.3	1.3	1.5	1.6	1.4
20	4.0	1.4	1.2	1.3	1.2	4.2	1.3	1.3	1.3	1.5	1.5	1.4
21	1.4	1.3	1.2	1.3	1.2	3.0	1.3	1.3	1.3	1.5	1.5	2.0
22	1.4	1.3	1.2	1.3	1.5	1.4	1.3	1.3	1.3	1.5	1.5	2.2
23	1.4	1.5	1.2	1.3	1.3	2.2	1.3	1.3	1.4	1.6	1.5	1.5
24	1.9	1.4	1.2	1.3	1.2	2.1	1.3	1.3	1.5	4.0	1.5	1.5
25	1.5	1.6	1.2	1.3	1.2	3.1	1.2	1.3	1.5	2.2	1.5	1.5
26	1.4	1.4	1.2	1.3	1.2	1.4	1.2	1.3	1.4	1.5	1.5	1.6
27	1.4	1.8	1.2	1.3	1.2	1.4	1.2	1.3	1.4	1.5	1.5	1.5
28	1.4	1.7	1.2	1.3	1.2	1.4	1.2	1.3	1.4	1.5	1.6	4.5
29	1.4	1.5	1.2	1.3	---	1.3	1.3	1.3	1.4	1.5	1.8	1.9
30	1.4	1.4	1.2	1.3	---	1.3	1.3	1.3	1.6	1.5	1.6	1.7
31	1.4	---	1.2	1.3	---	1.3	---	1.3	---	1.4	1.6	---
TOTAL	47.4	43.3	37.9	39.1	35.7	50.3	40.1	41.1	40.7	49.7	48.5	50.9
MEAN	1.53	1.44	1.22	1.26	1.27	1.62	1.34	1.33	1.36	1.60	1.56	1.70
MAX	4.0	1.8	1.4	1.3	1.5	4.2	1.7	1.6	1.7	4.0	1.9	4.5
MIN	1.3	1.3	1.0	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4
AC-FT	94	86	75	78	71	100	80	82	81	99	96	101

CAL YR 1985	TOTAL	492.7	MEAN	1.35	MAX	4.7	MIN	1.0	AC-FT	977
WTR YR 1986	TOTAL	524.7	MEAN	1.44	MAX	4.5	MIN	1.0	AC-FT	1040

16284200 WAIHEE STREAM NEAR KAHALUU

LOCATION.--Lat 21°27'04", long 157°51'36", Hydrologic Unit 20060000, on right bank 0.2 mi downstream from forest-reserve boundary, 1.0 mi south of Kahaluu School, and 1.6 mi west of Ahuimanu sewage treatment plant.

DRAINAGE AREA.--0.97 mi^2.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 170 ft, from topographic map.

REMARKS.--Records good except for estimated daily diachsrges, which are poor. Honolulu Board of Water Supply diverts water from tunnel and wells in drainage area. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 5.74 ft^3/s (4,160 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft^3/s Mar. 14, 1982, gage height, 7.52 ft, from rating curve extended above 100 ft^3/s; minimum, 1.1 ft^3/s Apr. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0100	331	5.21	Sept. 13	2300	191	4.57
Mar. 25	0830	380	5.40	Sept. 28	0730	*940	*7.00
July 24	2200	451	5.66				

Minimum diecharge, 4.6 ft^3/s Dec. 11-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.2	5.8	5.0	5.1	4.9	e6.0	5.0	5.2	5.8	5.4	6.3
2	5.8	5.2	5.7	5.1	5.0	4.9	e5.8	5.0	5.2	5.6	5.4	6.2
3	5.5	5.2	5.6	5.1	5.0	4.9	e6.6	5.2	5.2	5.9	8.4	6.2
4	5.2	5.1	5.6	5.0	5.7	4.9	5.8	5.9	5.2	6.1	7.4	6.3
5	5.4	5.1	5.6	5.0	5.2	4.9	6.6	5.2	5.2	5.6	6.4	6.3
6	5.4	5.0	5.6	5.0	5.2	4.9	5.8	5.2	5.3	5.3	5.9	6.3
7	5.2	5.0	5.5	5.0	5.1	4.9	5.6	5.0	5.2	5.9	5.9	6.6
8	5.1	5.1	5.5	5.0	5.1	4.9	5.4	5.2	5.2	5.4	5.9	8.1
9	5.1	5.4	5.3	5.0	5.0	4.9	5.4	5.2	5.3	5.4	5.9	6.2
10	5.0	5.2	4.8	5.0	5.0	4.9	5.6	6.8	6.8	5.4	7.1	6.0
11	5.3	5.4	4.6	5.0	5.0	5.0	5.6	5.3	5.3	5.6	6.1	5.9
12	5.1	7.9	4.6	5.0	5.0	5.0	5.3	5.2	5.3	5.4	5.9	5.9
13	5.3	7.1	4.6	5.0	5.0	5.0	5.4	5.0	5.3	6.1	5.9	13
14	5.1	5.8	4.8	5.0	5.0	5.0	5.3	5.3	5.2	7.2	5.9	7.5
15	5.1	5.7	4.7	5.0	5.5	5.0	5.3	5.2	5.2	6.3	6.7	6.3
16	5.0	5.5	4.7	5.0	5.1	7.4	5.2	5.2	5.2	5.9	6.3	6.3
17	5.0	5.4	5.0	5.2	5.0	8.5	5.2	5.2	5.2	6.4	6.4	6.3
18	5.0	5.4	5.0	5.0	5.0	5.4	5.2	5.2	5.2	5.9	6.3	6.3
19	9.6	5.4	5.0	5.2	5.0	5.1	5.0	5.2	5.2	8.1	6.3	6.3
20	33	5.3	5.0	5.2	5.0	43	5.0	5.2	5.2	5.9	6.3	6.3
21	7.5	5.2	5.0	5.0	5.0	32	4.9	5.2	5.2	5.9	6.3	9.2
22	6.2	5.2	5.0	5.0	6.1	9.1	4.9	5.2	5.2	5.9	6.3	12
23	5.8	5.8	5.1	5.0	5.3	11	5.0	5.2	5.3	6.4	6.3	6.9
24	7.1	5.5	5.2	5.0	5.0	18	4.9	5.2	5.6	19	6.3	6.7
25	5.8	6.3	5.0	5.1	5.0	33	4.9	5.2	5.8	17	6.3	6.6
26	5.6	5.8	5.0	5.0	4.9	e8.8	4.9	5.2	5.3	7.2	6.2	6.9
27	5.5	7.2	5.0	5.0	4.9	e7.6	4.9	5.2	5.3	6.1	6.1	7.1
28	5.3	7.2	5.0	5.0	4.9	e7.0	4.9	5.2	5.4	5.8	6.4	54
29	5.2	8.3	5.0	5.0	---	e6.4	5.0	5.2	5.4	5.4	7.1	12
30	5.2	6.1	5.0	5.0	---	e6.2	5.0	5.2	6.6	5.4	6.5	7.9
31	5.2	---	5.0	5.0	---	e6.2	---	5.2	---	5.3	6.3	---
TOTAL	200.9	171.0	158.1	155.9	143.1	288.7	160.4	162.9	161.2	206.6	195.9	263.9
MEAN	6.48	5.70	5.10	5.03	5.11	9.31	5.35	5.25	5.37	6.66	6.32	8.80
MAX	33	7.9	5.8	5.2	6.1	43	6.6	6.8	6.8	19	8.4	54
MIN	5.0	5.0	4.6	5.0	4.9	4.9	4.9	5.0	5.2	5.3	5.4	5.9
AC-FT	398	339	314	309	284	573	318	323	320	410	389	523

CAL YR 1985	TOTAL	1976.7	MEAN	5.42	MAX	54	MIN	3.6	AC-FT	3920
WTR YR 1986	TOTAL	2268.6	MEAN	6.22	MAX	54	MIN	4.6	AC-FT	4500

e Estimated

16294900 WAIKANE STREAM AT ALTITUDE 75 FT, AT WAIKANE

LOCATION.--Lat 21°30'00", long 157°51'54", Hydrologic Unit 20060000, on right bank 0.3 mi downstream from Waikeekee Stream, 0.7 mi west of Waikane, and 1.2 mi northwest of Waiahole School.

DRAINAGE AREA.--2.22 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 75 ft, from topogrephic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Waiahole tunnel diverts from two tributaries upstream for irrigation in vicinity of Waipahu. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years (water years 1961-86), 8.31 ft^3/s (6,020 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft^3/s Feb. 4, 1965, gage height, 10.76 ft, from rating curve extended above 120 ft^3/s on basis of slope-area measurements at gage heights 4.88 ft, 9.46 ft, and 10.76 ft; minimum, 0.76 ft^3/s Oct. 27, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2200	1,180	5.80	July 24	0330	3,140	8.23
May 10	0200	910	5.30	Sept. 28	0600	*4,910	*9.70

Minimum discharge, 1.3 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	4.5	11	2.7	2.0	e1.4	8.4	3.6	2.9	3.3	5.2	4.2
2	9.3	4.0	8.3	2.9	e2.0	e1.4	7.9	3.4	2.7	2.7	4.7	3.8
3	4.6	4.4	7.6	2.7	e2.0	e1.4	11	6.0	2.7	2.7	9.9	3.6
4	3.8	4.1	7.0	2.7	e2.4	e1.4	11	18	2.5	5.2	5.8	4.9
5	5.4	4.6	6.7	2.7	e2.1	e1.4	17	7.5	2.5	3.3	5.2	3.7
6	8.5	3.8	6.4	3.1	e2.0	e1.4	13	5.0	4.7	3.3	4.4	9.3
7	4.2	3.7	6.0	3.3	e2.0	e1.4	9.5	4.2	3.7	3.3	3.9	6.5
8	3.6	3.5	5.8	2.6	e2.0	e1.4	8.3	3.7	3.1	3.3	3.7	4.2
9	3.4	3.8	5.6	2.5	e1.9	e1.4	7.4	3.8	4.2	2.9	3.9	3.8
10	3.2	4.8	5.4	2.5	e1.8	e1.4	7.0	54	5.0	2.5	7.8	3.6
11	5.7	6.8	5.2	2.5	e1.8	e1.4	7.0	6.1	3.3	2.7	6.4	3.4
12	4.1	21	4.8	2.5	e1.8	e1.4	6.5	5.0	2.7	2.9	4.7	6.2
13	3.9	16	4.6	2.4	e1.8	1.8	6.7	4.2	2.5	15	4.2	15
14	3.3	7.3	4.5	2.3	e1.8	1.6	6.3	3.9	2.5	8.8	12	7.1
15	3.2	7.8	4.6	2.4	e2.1	1.8	6.0	3.9	2.4	4.8	7.8	4.4
16	3.1	12	4.4	2.3	e1.9	3.3	7.2	3.7	2.2	4.3	5.5	3.9
17	3.0	6.9	4.1	2.7	e1.8	42	5.7	3.3	2.5	9.5	16	3.6
18	2.9	8.4	3.9	2.6	e1.8	12	5.1	3.5	2.5	5.4	6.6	3.5
19	60	7.1	3.9	2.7	e1.7	11	4.9	3.3	2.4	5.9	5.6	3.4
20	101	5.8	3.8	2.7	e1.6	109	4.6	3.1	2.7	4.2	4.9	3.2
21	15	5.3	3.7	2.4	e1.6	126	4.4	3.2	3.3	3.7	5.1	4.8
22	8.9	5.1	3.7	2.3	e2.1	44	4.3	2.9	2.5	3.6	4.8	29
23	8.1	6.4	3.7	2.3	e1.8	42	4.4	2.9	2.2	7.1	4.3	7.8
24	7.7	5.2	3.9	2.4	e1.6	37	4.2	2.9	3.1	112	4.2	6.2
25	6.8	19	3.3	2.4	e1.6	112	4.0	2.9	4.2	48	4.0	5.1
26	6.0	11	3.3	2.4	e1.5	26	3.8	3.3	2.9	12	3.8	34
27	5.6	15	3.1	2.3	e1.4	19	3.7	6.4	2.5	12	3.7	17
28	5.1	16	3.1	2.2	e1.4	14	3.9	3.5	3.7	7.5	3.9	378
29	4.9	10	3.1	2.2	---	11	3.7	4.4	3.1	8.6	8.4	55
30	4.5	10	2.7	2.2	---	9.5	3.7	3.9	4.4	5.8	5.1	25
31	4.4	---	2.7	2.1	---	8.6	---	3.1	---	5.2	4.3	---
TOTAL	321.1	243.3	149.9	78.0	51.3	648.4	200.6	188.6	91.6	321.5	179.8	663.2
MEAN	10.4	8.11	4.84	2.52	1.83	20.9	6.69	6.08	3.05	10.4	5.80	22.1
MAX	101	21	11	3.3	2.4	126	17	54	5.0	112	16	378
MIN	2.9	3.5	2.7	2.1	1.4	1.4	3.7	2.9	2.2	2.5	3.7	3.2
AC-FT	637	483	297	155	102	1290	398	374	182	638	357	1320

CAL YR 1985	TOTAL	2585.9	MEAN	7.08	MAX	266	MIN	1.9	AC-FT	5130
WTR YR 1986	TOTAL	3137.3	MEAN	8.60	MAX	378	MIN	1.4	AC-FT	6220

e Estimated

16296500 KAHANA STREAM AT ALTITUDE 30 FT, NEAR KAHANA

LOCATION.--Lat 21°32'37", long 157°53'07", Hydrologic Unit 20060000, on right bank 600 ft upstream from Kawa Stream, 1.1 mi southwest of Kahana, and 2.2 mi southwest of Swanzy Beach Park in Kaaawa.

DRAINAGE AREA.--3.74 mi^2.

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

REVISED RECORDS.--WSP 1937: 1959-60.

GAGE.--Water-stage recorder and concrete-masonry control. Elevation of gage is 30 ft, from topographic map.

REMARKS.--Records fair. Waiahole tunnel diverts water from tributaries and tunnels at 800-ft elevation upstream. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years (water years 1960-86), 35.8 ft^3/s (25,940 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft^3/s Apr. 15, 1963, gage height, 8.10 ft, from rating curve extended above 530 ft^3/s on basis of computation of peak flow over submerged weir; minimum, 10 ft^3/s Sept. 17, 18, 20, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2230	3,060	6.29	July 24	0100	2,510	5.77
Mar. 25	0930	1,990	5.22	Sept. 28	0630	3,510	6.68
May 10	0130	*4,310	*7.30				

Minimum discharge, 12 ft^3/s several days in March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	26	45	16	16	12	32	22	23	26	32	25
2	145	25	28	16	14	12	33	22	23	24	29	24
3	38	26	26	16	14	12	52	30	23	26	50	23
4	31	25	25	16	18	12	59	70	22	38	40	28
5	62	26	25	17	15	12	142	48	22	27	35	23
6	56	24	24	15	14	12	69	31	26	31	28	26
7	30	24	23	17	14	12	49	30	28	31	27	29
8	26	22	22	15	14	12	41	28	29	29	27	26
9	25	22	22	15	13	12	36	59	29	28	28	28
10	23	23	21	15	13	12	45	685	107	25	48	27
11	40	30	21	15	13	12	73	69	48	25	33	24
12	27	44	20	15	13	12	43	64	60	26	30	28
13	37	47	20	15	13	14	81	150	35	60	32	62
14	25	27	19	15	13	13	53	190	32	94	66	33
15	23	27	19	15	14	25	60	177	29	56	52	26
16	22	27	19	15	13	110	84	75	27	37	36	24
17	22	24	19	15	13	279	45	54	26	71	68	24
18	21	29	18	15	12	52	38	56	26	40	34	23
19	146	26	18	17	12	37	34	41	25	68	32	22
20	222	23	18	15	12	253	32	35	28	39	30	22
21	49	22	18	15	13	322	30	33	32	32	36	51
22	37	22	18	15	16	141	28	31	26	29	29	119
23	34	24	18	15	15	187	32	30	24	54	28	48
24	111	22	20	15	13	180	29	28	29	222	27	38
25	74	43	18	15	13	284	26	27	34	111	25	33
26	40	30	17	14	12	85	25	27	25	53	24	85
27	36	55	17	14	12	67	24	29	23	66	23	69
28	32	46	17	14	12	48	24	25	27	42	24	365
29	30	31	16	14	---	44	23	28	23	48	38	233
30	28	30	16	14	---	39	23	27	43	35	28	104
31	27	---	16	14	---	33	---	24	---	33	27	---
TOTAL	1555	872	643	469	379	2357	1365	2245	954	1526	1066	1692
MEAN	50.2	29.1	20.7	15.1	13.5	76.0	45.5	72.4	31.8	49.2	34.4	56.4
MAX	222	55	45	17	18	322	142	885	107	222	68	365
MIN	21	22	16	14	12	12	23	22	22	24	23	22
AC-FT	3080	1730	1280	930	752	4680	2710	4450	1890	3030	2110	3360

CAL YR 1985	TOTAL	10611	MEAN	29.1	MAX	704	MIN	13	AC-FT	21050
WTR YR 1986	TOTAL	15123	MEAN	41.4	MAX	685	MIN	12	AC-FT	30000

16302000 PUNALUU DITCH NEAR PUNALUU

LOCATION.--Lat 21°33'41", long 157°54'10", Hydrologic Unit 20060000, on right bank 800 ft downstream from intake, 1.5 mi west of Kshana, and 1.7 mi southwest of Punaluu.

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 1719: 1954-55.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft, from topographic map.

REMARKS.--Records poor. Ditch diverts from Punaluu Stream for irrigation in Punaluu Valley. Periodic determinations of water tsmperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 7.06 ft^3/s (5,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 54 ft^3/s Oct. 31, 1964; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9.2 ft^3/s July 16; minimum daily, 0.28 ft^3/s Oct. 20, Mar. 22-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.0	4.6	1.8	3.6	3.4	1.4	4.8	1.6	3.7	2.1	4.9
2	3.4	4.4	3.8	4.2	2.9	2.9	5.6	5.3	2.8	3.8	5.3	7.6
3	3.0	4.8	3.6	5.5	2.5	2.6	5.4	6.5	3.1	3.9	6.0	5.9
4	2.7	3.9	3.4	5.1	1.9	2.2	2.2	5.0	4.8	5.0	4.4	4.8
5	2.5	3.6	3.1	4.1	3.0	4.2	1.8	3.7	3.4	6.5	3.8	4.4
6	1.3	3.0	2.9	3.6	5.5	4.5	1.4	3.2	3.6	5.2	3.6	3.9
7	1.4	4.4	2.7	3.9	4.5	4.0	1.2	3.1	3.8	6.2	3.4	3.7
8	3.6	5.1	3.3	4.5	5.0	4.9	1.1	3.0	2.7	4.9	3.2	3.4
9	5.9	3.6	3.8	3.2	5.2	4.8	1.1	2.8	2.0	3.4	3.1	3.1
10	5.3	3.2	3.1	2.9	4.8	4.4	1.0	4.3	2.8	3.0	3.0	2.0
11	4.1	2.9	2.8	2.8	3.7	3.6	1.1	3.3	4.2	2.3	2.8	2.0
12	3.3	2.4	2.5	2.5	3.1	3.1	.97	3.8	5.3	1.9	4.9	2.0
13	5.0	2.0	2.3	2.4	2.6	2.7	1.1	4.1	4.1	1.6	7.3	4.8
14	5.8	1.9	2.3	4.1	2.3	2.0	1.0	3.0	3.3	.64	5.6	6.8
15	5.3	1.6	2.7	4.5	1.7	1.7	1.1	2.2	3.5	4.3	4.0	5.5
16	4.7	1.9	3.2	3.8	1.5	1.3	3.8	1.8	4.4	9.2	3.8	4.8
17	3.9	2.8	2.8	2.9	1.5	.65	6.0	1.4	3.3	8.3	3.6	4.5
18	3.6	2.3	2.5	2.4	3.7	.53	5.2	1.2	2.4	6.0	3.2	4.0
19	3.5	3.6	2.2	2.0	4.0	.53	5.6	3.3	1.8	5.5	3.1	3.9
20	.28	5.5	1.9	4.2	3.6	.78	5.6	3.8	3.3	4.5	2.9	6.4
21	4.0	4.8	2.0	4.8	3.6	.43	4.7	2.5	2.8	4.1	2.8	5.7
22	4.5	3.9	2.6	3.9	2.5	.28	5.2	2.3	2.8	3.9	2.8	3.4
23	3.3	3.6	2.8	3.3	1.8	.28	6.2	1.8	3.4	4.0	3.5	3.1
24	3.2	4.1	4.1	2.5	1.6	.40	6.0	1.6	4.3	3.3	3.4	3.0
25	1.7	3.6	4.8	2.1	1.3	.57	5.6	2.0	3.9	2.4	4.5	5.2
26	3.0	2.0	4.1	1.7	3.0	5.0	5.0	2.4	3.6	2.3	6.0	6.9
27	3.4	1.6	3.7	1.6	5.6	6.0	4.5	2.2	2.8	2.3	5.6	4.3
28	2.4	1.1	3.3	1.4	4.5	4.6	5.2	2.0	2.6	2.2	4.4	4.4
29	2.1	5.6	3.1	4.0	---	3.4	5.8	1.9	2.4	2.2	3.1	7.6
30	2.0	7.1	2.7	5.2	---	2.7	5.2	1.7	2.3	2.1	2.8	1.2
31	1.8	---	2.2	4.0	---	2.0	---	1.6	---	2.1	2.5	---
TOTAL	104.08	103.1	94.9	104.9	90.5	80.45	107.07	91.6	96.9	120.74	120.5	133.2
MEAN	3.36	3.44	3.06	3.38	3.23	2.60	3.57	2.95	3.23	3.89	3.89	4.44
MAX	5.9	7.1	4.8	5.5	5.6	6.0	6.2	6.5	5.3	9.2	7.3	7.6
MIN	.28	1.1	1.9	1.4	1.3	.28	.97	1.2	1.6	.64	2.1	1.2
AC-FT	206	204	188	208	180	160	212	182	192	239	239	264

CAL YR 1985	TOTAL	1366.33	MEAN	3.74	MAX	8.8	MIN	.10	AC-FT	2710
WTR YR 1986	TOTAL	1247.94	MEAN	3.42	MAX	9.2	MIN	.28	AC-FT	2480

16303000 PUNALUU STREAM NEAR PUNALUU

LOCATION.--Lat 21°33'33", long 157°54'06", Hydrologic Unit 20060000, on left bank at Punaluu ditch diversion dam, 1.4 mi west of Kahana, and 1.8 mi southwest of Punaluu.

DRAINAGE AREA.--2.78 mi^2.

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 1569: Drainage area. WRD Hawaii 1974: 1971-72(P), 1973(M). WDR HI-78-1: 1954(M), 1955-70(P).

GAGE.--Water-stage recorder and masonry control. Elevation of gage is 212 ft, from topographic map.

REMARKS.--Records good. Records do not include flow of Punaluu ditch (see sta. 16302000). Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 17.6 ft^3/s (12,750 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft^3/s July 17, 1974, gage height, 7.60 ft, from rating curve extended above 170 ft^3/s on basis of slope-area measurements at gage heights 5.77 ft and 7.60 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 930 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2230	1,840	4.75	Sept. 28	0600	1,370	4.11
May 9	2330	*2,190	*5.18				

Minimum discharge, 4.5 ft^3/s Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	21	10	10	8.1	18	11	16	12	18	12
2	17	11	15	8.1	8.6	8.1	14	11	14	12	14	9.1
3	12	11	14	6.8	9.1	8.1	19	12	14	14	16	10
4	12	12	13	7.2	14	8.1	28	22	12	13	16	15
5	26	12	12	8.1	8.6	6.3	47	19	13	9.1	16	12
6	19	12	12	8.6	6.9	6.3	34	14	13	11	15	18
7	14	10	12	8.6	7.2	6.8	28	15	14	9.7	14	19
8	11	9.1	11	7.7	6.8	5.5	24	21	16	11	14	19
9	8.1	11	11	8.6	6.3	5.5	22	101	17	12	15	24
10	8.6	12	12	9.1	6.8	5.9	25	220	32	12	19	18
11	18	16	12	9.1	8.1	6.3	45	33	18	13	15	16
12	12	19	12	9.1	8.1	6.8	24	29	13	15	12	19
13	13	19	12	9.1	8.6	8.1	42	29	13	26	12	14
14	8.6	15	12	7.7	9.1	8.1	28	38	14	38	21	12
15	8.6	19	11	7.7	11	12	39	33	13	27	18	12
16	8.6	16	11	8.1	10	41	32	24	12	12	15	12
17	9.7	13	11	9.1	10	54	21	22	13	20	22	12
18	9.7	24	12	9.1	7.7	25	19	27	14	15	16	13
19	78	14	12	10	6.8	22	16	18	14	21	15	13
20	102	10	12	7.2	7.7	125	15	16	13	15	15	10
21	25	10	12	6.8	7.2	120	15	18	15	14	17	15
22	18	11	11	8.1	14	54	14	17	13	14	15	50
23	16	12	11	8.1	11	62	14	17	12	20	14	22
24	65	11	11	9.1	11	68	14	17	17	59	14	19
25	38	29	8.6	9.7	10	53	13	16	16	43	12	14
26	21	21	8.6	9.7	8.1	29	13	16	12	24	10	23
27	18	36	8.6	10	5.9	23	13	18	13	27	11	33
28	16	31	9.1	10	6.8	20	12	16	14	21	12	136
29	16	17	9.1	7.2	---	20	11	16	14	22	18	208
30	16	14	9.1	6.8	---	19	11	16	18	19	15	65
31	15	---	9.7	7.7	---	18	---	16	---	19	16	---
TOTAL	669.9	471.1	357.8	262.2	245.4	861.0	870	898	442	599.8	472	874.1
MEAN	21.6	15.7	11.5	8.46	8.76	27.8	22.3	29.0	14.7	19.3	15.2	29.1
MAX	102	36	21	10	14	125	47	220	32	59	22	208
MIN	8.1	9.1	8.6	6.8	5.9	5.5	11	11	12	9.1	10	9.1
AC-FT	1330	934	710	520	487	1710	1330	1780	877	1190	936	1730

CAL YR 1985	TOTAL	5252.1	MEAN	14.4	MAX	250	MIN	5.3	AC-FT	10420
WTR YR 1986	TOTAL	8823.3	MEAN	18.7	MAX	220	MIN	5.5	AC-FT	13530

16304200 KALUANUI STREAM NEAR PUNALUU

LOCATION.--Lat 21°35'22", long 157°54'38", Hydrologic Unit 20060000, on right bank 0.8 mi downstream from Sacred Falls, 1.6 mi west of Punaluu Beach Park, and 1.7 mi south of cemetery in Hauula.

DRAINAGE AREA.--1.11 mi^2.

PERIOD OF RECORD.--May 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 110 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion upstream. Periodic determinations of water temperature for the currant year are published elsewhere in this report.

AVERAGE DISCHARGE.--19 years, 4.10 ft^3/s (2,970 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft^3/s Jan. 6, 1982, gage height, 11.90 ft, from rating curve extended above 14 ft^3/s on basis of slope-area measurements at gage heights 8.85 ft and 10.0 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2215	*1,070	*9.80	Sept. 29	0645	597	8.72
May 9	2345	1,040	9.73				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	1.4	5.9	.01	4.9	.00	e.95	e1.5	.50	1.6	2.2	1.3
2	6.6	.69	1.3	.01	.49	.01	e.80	e1.1	.41	2.0	1.2	.95
3	1.1	1.2	1.0	.01	.18	.01	e2.5	e5.0	.53	5.0	12	.81
4	.72	1.7	.91	.01	5.5	.00	e6.0	e19	.39	5.4	4.1	6.1
5	10	4.2	.74	.00	.64	.00	e13	e2.9	.98	1.6	5.3	.87
6	4.6	.66	.64	.49	.49	.00	e7.0	1.7	2.8	3.8	1.3	6.1
7	1.0	.46	.54	2.0	.37	e.00	e3.5	2.3	2.5	2.8	1.1	5.6
8	.72	.39	.49	.31	.18	e.00	e2.5	5.2	9.4	4.0	3.7	1.3
9	.56	.46	.41	.10	.37	e.00	e1.7	29	.95	2.2	1.8	1.9
10	.48	8.9	1.5	.05	.59	e.00	e1.3	81	12	1.4	14	3.2
11	5.9	12	1.7	.02	.74	e.00	e20	3.1	5.6	3.4	2.0	.98
12	1.4	14	.91	.02	.41	e.00	e7.0	2.9	1.4	3.1	1.9	.87
13	2.0	5.5	.49	.00	.16	e1.0	e18	3.4	.91	21	6.2	1.2
14	.75	1.3	.34	.00	.08	e4.0	e5.0	3.4	1.6	5.5	16	.80
15	4.3	3.5	.49	.00	.85	e8.0	e3.0	2.7	.79	5.9	3.5	.73
16	.88	6.7	.74	.00	.37	e13	e19	1.7	.69	4.8	3.1	.43
17	.53	.99	.25	.00	.08	e16	e5.0	1.2	4.0	14	3.7	.35
18	.41	13	.20	.10	.04	e3.5	e2.4	5.1	2.3	2.9	1.5	.31
19	31	2.6	.18	3.3	.00	e2.5	e1.2	1.7	1.1	5.9	1.7	.28
20	36	1.0	.16	.91	.00	e40	e1.0	1.0	6.7	2.0	1.3	.24
21	2.4	.72	.14	.22	.00	e50	e.80	2.0	5.2	1.5	1.9	2.6
22	1.2	.58	.12	.10	4.7	e13	e.72	.83	2.4	1.6	2.2	21
23	1.5	2.4	.28	.20	1.4	e4.0	e6.0	.67	1.4	6.6	3.0	2.5
24	28	1.2	2.4	.12	.22	e16	e2.5	.57	11	22	2.5	2.7
25	6.4	30	.69	.07	.08	e6.0	e1.5	1.3	4.6	15	1.0	1.2
26	1.5	8.1	.25	.02	.02	e4.0	e1.0	3.0	1.6	2.4	.74	4.0
27	2.0	14	.14	.00	.01	e2.5	e.80	4.8	1.4	7.2	.63	6.1
28	1.2	8.7	.08	.00	.00	e1.9	e.70	.93	1.2	1.8	7.3	51
29	1.4	2.1	.07	.00	---	e1.5	e.62	5.0	1.6	7.2	12	106
30	.79	3.5	.05	.00	---	e1.3	e4.0	1.6	10	2.0	3.9	9.7
31	.97	---	.04	.00	---	e1.1	---	.67	---	3.8	2.2	---
TOTAL	159.61	151.95	23.15	8.07	22.87	189.32	139.49	196.27	95.93	169.4	124.97	241.12
MEAN	5.15	5.06	.75	.26	.82	6.11	4.65	6.33	3.20	5.46	4.03	8.04
MAX	36	30	5.9	3.3	5.5	50	20	81	12	22	16	106
MIN	.41	.39	.04	.00	.00	.00	.62	.57	.39	1.4	.63	.24
AC-FT	317	301	46	16	45	376	277	389	190	336	248	478

CAL YR 1985	TOTAL	1324.01	MEAN	3.63	MAX	96	MIN	.00	AC-FT 2630
WTR YR 1986	TOTAL	1522.15	MEAN	4.17	MAX	106	MIN	.00	AC-FT 3020

e Estimated

16325000 KAMANANUI STREAM AT PUPUKEA MILITARY ROAD, NEAR MAUNAWAI

LOCATION.--Lat 21°37'25", long 158°01'04", Hydrologic Unit 20060000, on left bank 75 ft upstream from Pupukea Military Road and 3.5 mi southeast of Maunawai.

DRAINAGE AREA.--3.13 mi^2.

PERIOD OF RECORD.--June 1963 to current year. Occasional low-flow measurements, water years 1961 and 1963.

GAGE.--Water-stage recorder and combination pipe culverts and paved road control. Elevation of gage is 590 ft, from topographic map.

REMARKS.--Records fair. No diversion upstream. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 10.2 ft^3/s (7,390 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft^3/s Jan. 30, 1975, gage height, 10.06 ft, from rating curve extended above 42 ft^3/s on basis of slope-area measurement at gage height 10.06 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 602 ft^3/s Sept. 29, gage height, 6.42 ft, no peak greater than base discharge of 950 ft^3/s; no flow for several days in March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.5	24	.52	5.5	.01	5.6	3.0	2.1	4.2	6.3	4.7
2	2.9	1.6	6.6	.52	2.8	.00	7.2	2.9	1.9	2.4	5.8	3.4
3	1.6	1.5	4.0	.52	.98	.00	9.5	7.8	2.1	2.4	7.6	3.0
4	.82	2.0	3.0	.49	8.3	.00	22	32	1.8	8.4	8.7	3.2
5	1.2	6.7	2.5	.47	4.2	.00	19	11	1.8	4.4	6.9	3.2
6	7.7	2.5	2.2	.48	1.4	.00	16	5.5	1.8	2.8	5.0	2.9
7	3.6	1.5	2.0	.64	.81	.00	8.4	4.2	2.2	2.9	4.2	7.0
8	2.1	1.1	1.9	.86	.49	.00	9.1	5.3	4.8	5.0	8.4	3.8
9	1.7	1.1	1.8	.69	.32	.00	8.7	12	3.7	4.8	8.9	2.5
10	1.4	8.0	1.8	.49	.26	.00	17	50	15	4.1	17	14
11	2.2	8.0	1.7	.40	.39	.00	120	7.6	10	7.2	9.8	4.7
12	8.8	3.7	1.6	.37	.71	.00	23	5.8	5.0	4.5	5.8	2.8
13	3.1	2.2	1.5	.37	1.0	.00	23	5.0	2.6	18	8.7	2.5
14	2.9	1.6	1.4	.32	.47	4.2	16	4.5	5.6	19	22	2.2
15	4.3	1.2	1.3	.29	.30	11	12	4.2	3.4	13	16	2.2
16	5.7	1.5	1.4	.28	.23	36	9.3	3.7	2.2	6.3	8.7	2.0
17	4.6	1.6	1.3	.32	.19	28	7.4	3.2	2.2	23	6.9	2.0
18	3.2	5.8	1.2	.48	.30	26	6.7	4.1	4.0	13	5.9	1.8
19	2.7	13	1.1	.52	.22	14	5.9	3.8	3.3	13	4.8	1.8
20	89	2.6	1.0	.42	.14	138	5.9	3.0	2.4	8.0	4.5	1.8
21	8.2	1.5	.99	.40	.10	170	5.6	2.6	8.2	5.3	4.4	2.3
22	2.9	1.2	.95	.47	.11	46	5.5	2.5	4.1	4.5	4.1	5.5
23	2.0	1.1	.90	.42	.10	53	12	2.4	2.6	6.7	3.8	3.8
24	9.1	1.1	1.5	.69	.05	42	7.4	2.2	5.1	41	4.5	2.8
25	14	27	2.3	.66	.02	16	6.3	2.2	12	28	4.2	3.4
28	2.9	9.5	1.3	.50	.02	11	4.2	2.5	4.1	11	3.3	3.0
27	1.8	20	.92	.38	.06	16	4.0	4.7	2.5	13	3.0	2.5
28	1.7	18	.77	.34	.02	8.5	3.7	3.4	2.4	8.9	3.2	4.1
29	1.8	6.9	.70	.26	---	9.2	3.6	4.8	2.5	10	16	114
30	1.6	6.6	.65	.25	---	10	3.4	9.1	7.8	7.0	13	15
31	1.5	---	.58	.26	---	6.7	---	2.7	---	7.0	6.9	---
TOTAL	198.22	161.6	74.86	14.08	29.49	647.61	407.4	217.7	129.2	308.8	238.3	227.9
MEAN	6.39	5.39	2.41	.45	1.05	20.9	13.6	7.02	4.31	9.96	7.69	7.60
MAX	89	27	24	.86	8.3	170	120	50	15	41	22	114
MIN	.82	1.1	.58	.25	.02	.00	3.4	2.2	1.8	2.4	3.0	1.8
AC-FT	393	321	148	28	58	1280	808	432	256	613	473	452

CAL YR 1985	TOTAL	2051.51	MEAN	5.62	MAX	168	MIN	.07	AC-FT	4070
WTR YR 1986	TOTAL	2655.16	MEAN	7.27	MAX	170	MIN	.00	AC-FT	5270

16330000 KAMANANUI STREAM AT MAUNAWAI

LOCATION.--Lat 21°38'20", long 158°03'27", Hydrologic Unit 20060000, on right bank 0.5 mi upstream from Kamehameha Highway, 4.9 mi northeast of Waialua School, and 7.3 mi southwest of Kahuku School.

DRAINAGE AREA.--12.38 mi^2, revised, including that of Elehaha Stream which is mostly diverted into Kamananui Stream since June 14, 1975.

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

REVISED RECORDS.--WSP 1937: 1958-60. WRD Hawaii 1974: 1971(P), 1972-73(M). WDR HI-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft, from topographic map. Prior to May 13, 1965, at datum 2.00 ft higher and May 13, 1965, to May 17, 1966, at datum 1.00 ft higher.

REMARKS.--Records good. Small diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--28 years, 17.0 ft^3/s (12,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft^3/s Mar. 18, 1980, gage height, 11.46 ft, from rating curve extended above 150 ft^3/s on basis of slope-area measurements at gege heights 5.68 ft and 11.46 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft^3/s Oct. 20, gage height, 5.07 ft, no paak greater than base discharge of 1,300 ft^3/s; minimum, 0.02 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.97	51	.21	.55	.02	8.9	3.5	2.5	7.5	7.3	6.2
2	1.6	1.0	15	.18	5.3	.02	9.8	3.1	1.9	3.3	6.5	3.9
3	1.5	.89	6.5	.15	1.9	.02	8.6	6.1	1.9	2.3	6.5	3.2
4	.89	.79	3.8	.16	6.7	.02	48	34	1.8	7.2	9.0	3.0
5	.51	4.2	2.7	.12	9.0	.02	30	19	1.6	6.9	8.4	3.2
6	2.9	3.4	2.2	.10	2.4	.02	26	9.1	1.6	3.3	6.2	2.8
7	3.8	1.6	2.0	.13	1.1	.02	16	5.5	1.7	3.0	4.7	5.8
8	1.5	.96	1.6	.14	.58	.02	17	4.6	2.6	3.5	7.3	5.5
9	.77	.73	1.5	.37	.35	.02	16	16	5.6	6.2	9.4	3.0
10	.45	3.8	1.3	.38	.21	.02	25	100	18	5.5	16	13
11	.37	10	1.3	.23	.16	.02	352	15	13	7.3	18	7.3
12	4.5	6.8	1.1	.14	.09	.02	49	8.5	8.2	7.3	7.9	3.5
13	2.7	3.1	.97	.08	.06	.04	33	6.5	3.8	16	7.0	2.6
14	1.5	2.7	.89	.05	.32	.02	28	5.8	4.8	42	24	2.1
15	1.6	1.4	.84	.04	.38	4.7	18	5.0	5.4	23	39	2.1
16	3.2	1.1	.84	.03	.21	52	15	4.5	3.0	11	12	1.7
17	2.1	1.2	.92	.04	.10	43	12	3.8	2.5	28	8.2	1.7
18	1.4	1.7	.78	.03	.05	31	9.4	3.8	2.7	30	7.3	1.6
19	.88	20	.70	.03	.05	23	8.1	4.8	4.9	18	5.3	1.3
20	311	4.2	.66	.02	.05	286	7.6	3.4	3.0	14	4.5	1.2
21	21	1.8	.58	.02	.04	458	7.3	2.9	7.6	7.6	4.1	1.2
22	7.9	1.1	.53	.02	.04	103	6.7	2.6	7.6	5.8	3.9	3.9
23	4.2	.82	.53	.02	.03	74	13	2.4	3.7	5.8	3.5	3.9
24	3.7	.64	.59	.02	.03	78	11	2.3	4.5	127	3.7	2.7
25	24	34	1.5	.02	.03	25	8.7	2.2	14	61	4.1	2.8
26	6.9	16	1.2	.02	.03	16	6.1	2.3	6.8	24	3.2	2.6
27	3.8	19	.75	.06	.03	19	5.1	3.3	3.4	18	2.7	3.9
28	2.6	27	.54	.04	.02	14	4.7	5.2	2.7	16	2.6	4.1
29	1.8	13	.42	.03	---	11	4.3	3.2	2.7	13	15	236
30	1.3	7.8	.34	.02	---	15	3.8	13	6.0	10	20	33
31	1.1	---	.27	.02	---	12	---	4.3	---	8.2	10	---
TOTAL	422.14	191.70	103.85	2.92	29.81	1265.00	808.1	305.7	149.5	541.7	287.3	368.8
MEAN	13.6	6.39	3.35	.09	1.06	40.8	26.9	9.86	4.98	17.5	9.27	12.3
MAX	311	34	51	.38	9.0	458	352	100	18	127	39	236
MIN	.37	.64	.27	.02	.02	.02	3.8	2.2	1.6	2.3	2.6	1.2
AC-FT	837	380	206	5.8	59	2510	1600	606	297	1070	570	732

CAL YR 1985	TOTAL	3980.81	MEAN	10.9	MAX	563	MIN	.01	AC-FT 7900
WTR YR 1986	TOTAL	4476.52	MEAN	12.3	MAX	458	MIN	.02	AC-FT 8880

16345000 OPAEULA STREAM NEAR WAHIAWA

LOCATION.--Lat 21°33'55", long 158°00'10", Hydrologic Unit 20600000, on left bank 4.3 mi northeast of Leilehua High School in Wahiawa and 8.1 mi east of Waialua School.

DRAINAGE AREA.--2.98 mi^2.

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

REVISED RECORDS.--WSP 1937: 1960.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,120 ft, from topographic map.

REMARKS.--Records good. No diversion upstream. Periodic determinationa of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 13.4 ft^3/s (9,710 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft^3/s July 17, 1974, gage height, 11.94 ft from rating curve extended above 110 ft^3/s on basis of slope-area measurements at gage heights 6.74 ft and 10.12 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	2400	2,080	7.75	Sept. 29	0830	2,960	8.95
May 10	0230	*3,060	*9.08				

No flow Mar. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.8	118	.43	.10	.22	7.3	6.6	3.0	8.1	6.9	5.5
2	10	3.3	11	.40	1.3	.19	12	4.7	2.5	4.7	5.3	3.7
3	5.9	2.4	5.8	.38	1.7	.14	20	9.7	2.7	7.8	33	2.9
4	2.7	3.1	4.8	.34	4.6	.10	53	63	2.7	13	14	9.5
5	1.9	5.0	3.7	.33	6.8	.07	69	29	2.6	7.3	11	4.9
6	22	4.0	3.0	.36	2.1	.05	44	8.8	5.1	9.4	5.8	11
7	4.8	2.2	2.6	10	1.0	.04	15	6.0	14	8.5	4.1	9.7
8	2.6	1.8	2.3	4.4	.58	.01	17	7.6	23	8.5	7.1	4.9
9	2.1	1.5	2.1	1.9	.40	.00	20	11	7.6	7.8	6.0	4.7
10	1.8	2.3	1.9	1.0	.30	.00	46	258	17	6.3	30	3.8
11	23	11	1.7	.65	.32	.00	137	11	7.4	7.1	12	3.9
12	16	9.2	1.6	.50	.27	.00	22	17	4.5	7.1	5.6	2.6
13	4.3	7.3	1.6	.39	.24	1.8	43	8.9	3.1	35	9.5	2.3
14	5.7	3.5	1.5	.32	.32	11	22	8.5	3.8	26	34	2.4
15	3.6	2.0	1.4	.27	.66	22	29	13	4.1	35	23	2.2
16	5.8	12	1.3	.24	1.0	80	18	10	2.6	12	11	1.8
17	2.5	4.4	1.3	.23	1.6	59	9.7	5.4	4.9	35	11	1.6
18	1.8	16	1.3	.24	.79	22	7.7	11	6.5	16	7.6	1.5
19	22	22	1.0	.24	.47	25	6.5	7.7	5.0	11	4.7	1.3
20	210	4.3	.89	.21	.32	124	6.0	4.8	6.8	10	4.7	1.3
21	12	2.3	.82	.23	.25	222	6.0	4.0	16	5.5	4.2	1.2
22	5.4	1.7	.74	.72	.24	75	5.1	3.6	6.2	4.8	5.1	15
23	3.8	1.5	.78	.48	9.3	77	15	3.3	4.5	4.8	4.1	11
24	33	4.6	2.1	.40	2.9	67	7.9	3.0	12	61	4.7	5.0
25	40	33	4.9	.32	1.3	25	8.9	2.7	38	36	4.9	5.3
26	6.8	14	2.0	.49	.68	13	4.8	8.2	9.1	11	3.0	3.0
27	4.2	31	1.2	.34	.42	20	4.1	9.8	4.9	18	2.6	4.4
28	5.8	30	.85	.24	.28	10	4.3	6.2	4.2	9.4	2.5	35
29	3.7	9.1	.66	.18	---	13	6.1	6.3	4.9	12	36	494
30	3.4	16	.56	.16	---	28	12	20	24	6.0	16	30
31	2.5	---	.47	.13	---	11	---	4.5	---	6.7	7.1	---
TOTAL	472.3	263.1	183.87	26.52	40.24	906.62	678.4	573.3	252.7	450.8	336.5	685.4
MEAN	15.2	8.77	5.93	.86	1.44	29.2	22.6	18.5	8.42	14.5	10.9	22.8
MAX	210	33	118	10	9.3	222	137	258	38	61	36	494
MIN	1.8	1.5	.47	.13	.10	.00	4.1	2.7	2.5	4.7	2.5	1.2
AC-FT	937	522	365	53	80	1800	1350	1140	501	894	667	1360

CAL YR 1985	TOTAL	3690.17	MEAN	10.1	MAX	292	MIN	.22	AC-FT	7320
WTR YR 1986	TOTAL	4869.75	MEAN	13.3	MAX	494	MIN	.00	AC-FT	9660

16400000 HALAWA STREAM NEAR HALAWA
(National stream-quality accounting network station)

LOCATION.--Lat 21°09'31", long 156°45'53", Hydrologic Unit 20050000, on right bank 600 ft downstream from Hipuapua Stream and 1.5 mi west of Halawa.

DRAINAGE AREA.--4.62 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1917 to July 1932, November 1937 to current year.

REVISED RECORDS.--WSP 1319: 1928, 1929(M), 1930-31, 1938-50(M), drainege area. WSP 1719: 1954.

GAGE.--Water-stage recorder. Elevation of gage is 210 ft, from topographic map. Prior to June 25, 1923, at site 350 ft 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 higher.

REMARKS.--Records fair. No diversion upstream.

AVERAGE DISCHARGE.--62 years (water years 1918-31, 1939-86), 29.1 ft^3/s (21,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum diacharge, 26,900 ft^3/s Feb. 4, 1965, gage height, 19.91 ft, from floodmarks, from rating curve extended above 163 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.78 ft^3/s about Nov. 23, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	0230	*2,500	*9.12	July 24	1600	2,400	9.02

Minimum discharge, 2.4 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	19	128	3.4	159	9.4	10	55	5.8	14	25	6.9
2	75	8.5	15	3.9	11	67	8.7	48	5.2	18	12	5.9
3	19	14	19	3.6	46	8.7	12	163	46	28	77	5.9
4	11	37	10	3.2	22	4.9	17	97	7.8	20	74	8.9
5	31	59	8.2	3.0	9.2	3.8	40	28	22	26	22	5.3
6	16	9.2	7.2	46	6.9	3.2	23	14	19	41	9.2	5.9
7	11	7.4	6.9	175	5.2	3.0	34	14	28	37	14	10
8	8.8	8.9	6.1	76	4.4	2.8	59	24	40	26	23	5.6
9	8.3	30	5.5	43	21	2.8	78	21	88	40	91	4.6
10	7.8	187	5.2	9.2	15	2.8	284	30	9.2	17	52	4.3
11	58	163	66	6.5	5.0	2.6	164	11	11	32	23	4.0
12	18	49	32	12	4.6	2.8	32	9.8	8.5	38	11	5.5
13	26	17	9.4	5.8	3.8	28	61	8.2	8.5	135	25	4.7
14	11	12	7.2	4.7	3.4	6.5	22	7.8	68	96	73	4.7
15	35	9.6	6.1	4.3	98	24	44	9.4	22	24	44	3.6
16	12	8.5	11	4.0	28	88	30	8.2	14	19	23	3.2
17	203	7.4	8.2	3.9	6.3	58	61	7.4	46	28	14	3.2
18	387	7.2	5.3	40	4.9	18	15	20	37	32	10	3.2
19	49	36	4.7	11	4.8	310	12	7.8	20	230	8.0	3.2
20	20	7.2	4.3	8.7	4.0	384	12	6.1	14	38	7.0	66
21	13	5.9	4.2	5.0	3.8	308	21	5.9	9.2	14	7.0	16
22	9.8	5.6	4.0	9.8	4.4	141	29	5.3	6.3	17	7.6	5.9
23	16	9.8	3.9	11	4.3	139	26	4.9	8.5	22	18	4.3
24	102	6.5	11	4.9	3.4	59	32	4.6	19	219	43	16
25	23	154	19	4.7	8.7	23	13	5.6	40	45	7.4	6.5
26	10	126	5.2	5.3	6.1	68	9.6	46	22	16	5.9	6.3
27	22	59	4.0	3.8	3.5	151	8.5	42	13	12	5.3	7.8
28	12	66	3.8	3.4	3.2	30	7.8	9.8	56	11	5.6	165
29	13	13	4.0	3.2	---	30	7.4	14	24	12	64	24
30	7.8	177	4.0	3.2	---	15	83	21	30	10	42	7.6
31	43	---	3.5	3.0	---	12	---	8.0	---	8.5	10	---
TOTAL	1392.5	1317.7	431.9	524.5	499.7	2004.1	1256.0	756.8	748.0	1325.5	853.0	424.0
MEAN	44.9	43.9	13.9	16.9	17.8	64.6	41.9	24.4	24.9	42.8	27.5	14.1
MAX	387	187	128	175	159	384	284	163	88	230	91	165
MIN	7.8	5.6	3.5	3.0	3.2	2.6	7.4	4.6	5.2	8.5	5.3	3.2
AC-FT	2780	2610	857	1040	991	3980	2490	1500	1480	2630	1690	841

CAL YR 1985	TOTAL	9279.8	MEAN	25.4	MAX	387	MIN	2.1	AC-FT 18410
WTR YR 1986	TOTAL	11533.7	MEAN	31.6	MAX	387	MIN	2.6	AC-FT 22880

16400000 HALAWA STREAM NEAR HALAWA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT									
15...	1150	757	121	43	6.80	21.5	75	8.4	96
DEC									
09...	1300	757	5.6	64	7.20	19.0	2.0	9.0	98
FEB									
03...	1150	759	29	46	6.70	19.5	39	8.7	95
MAY									
20...	1130	759	6.0	65	7.30	21.5	2.0	8.6	98
JUL									
15...	1230	759	24	43	6.60	22.0	17	8.4	97

DATE	TIME	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT										
15...	1150	140	6700	6	0	1.0	.80	5.2	63	1
DEC										
09...	1300	9	620	13	7	2.9	1.5	8.5	56	1
FEB										
03...	1150	2800	4900	6	4	.90	1.0	6.0	64	1
MAY										
20...	1130	20	1100	9	2	1.3	1.4	7.9	63	1
JUL										
15...	1230	60	1100	5	2	.77	.85	5.6	67	1
SEP										
09...	1420	K9	2000	8	0	1.1	1.2	7.4	65	1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT										
15...	.80	--	2.0	--	7.4	8.5	<.10	5.4	38	33
DEC										
09...	1.0	8.0	6.0	6.0	4.3	14	<.10	9.1	41	45
FEB										
03...	.70	3.0	4.0	3.0	--	9.4	<.10	4.3	42	35
MAY										
20...	.90	8.0	7.0	6.0	4.4	11	<.10	7.9	41	39
JUL										
15...	.50	4.0	4.0	4.0	7.0	9.5	<.10	4.9	32	31
SEP										
09...	--	--	--	--	4.5	9.6	--	8.9	--	39

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

16400000 HALAWA STREAM NEAR HALAWA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT										
15...	1150	.05	<.10	.110	.020	1.4	1.5	.220	.020	<.010
DEC										
09...	1300	.06	<.10	.050	.050	.35	.40	.030	.020	.020
FEB										
03...	1150	.06	<.10	.060	.040	.54	.60	.080	.010	.010
MAY										
20...	1130	.06	<.10	.020	.020	.18	.20	.010	.010	<.010
JUL										
15...	1230	.04	<.10	.040	.040	.26	.30	.050	.030	.010

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
15...	1150	330	<1	7	<.5	<1	<1	<3	4	360	3
FEB											
03...	1150	290	<1	5	<.5	<1	<1	<3	<1	410	<1
MAY											
20...	1130	70	<1	5	<.5	<1	<1	<3	1	79	<1
SEP											
09...	1420	50	<1	4	<.5	<1	<1	<3	3	77	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
15...	<4	5	<.1	<10	1	<1	<1	10	<6	12
FEB										
03...	<4	4	<.1	<10	<1	<1	<1	14	<6	9
MAY										
20...	<4	3	<.1	<10	<1	<1	<1	18	<6	10
SEP										
09...	<4	2	.2	<10	<1	<1	<1	17	<6	5

DATE	TIME	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT				
15...	1150	129	42	--
DEC				
09...	1300	6	.09	100
FEB				
03...	1150	32	2.5	100
MAY				
20...	1130	2	.03	100
JUL				
15...	1230	6	.39	100
SEP				
09...	1420	2	--	100

< Actual value is known to be less than the value shown.

16404200 PILIPILILAU STREAM NEAR PELEKUNU

LOCATION.--Lat 21°08'08", long 156°53'09", Hydrologic Unit 20050000, on right bank 500 ft downstream from left-bank tributary, 1.9 mi south of former village of Pelekunu, and 5.8 mi north of Kamalo.

DRAINAGE AREA.--0.49 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,000 ft, from topographic map.

REMARKS.--Records fair. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years, 1.49 ft^3/s (1,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 835 ft^3/s Jan. 25, 1982, gage height, 4.25 ft, from rating curve extended above 6.2 ft^3/s on basis of slope-area measurement at gage height, 4.25 ft; minimum, 0.50 ft^3/s Sept. 2-8, 21-29, 1975, Nov. 26 to Dec. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 30	1430	*330	*3.60	Feb. 15	1030	165	3.20

Minimum discharge, 0.64 ft^3/s, Oct. 3-10, 12-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.80	12	1.0	5.6	1.1	2.2	2.4	1.5	1.4	1.3	1.0
2	.72	.76	5.4	1.0	1.4	1.4	2.0	2.2	1.6	1.3	1.3	.99
3	.68	.76	4.1	1.0	1.2	1.2	2.1	3.1	1.6	1.5	1.3	.99
4	.64	.99	3.2	.99	2.0	1.1	2.0	3.7	1.5	1.4	1.3	.99
5	.68	.99	2.8	.99	1.3	1.0	2.0	2.4	1.6	1.3	1.2	.94
6	.64	.80	2.6	1.3	1.2	1.0	3.2	2.2	1.5	1.3	1.2	.94
7	.64	.76	2.3	1.7	1.2	.99	3.5	2.1	1.4	1.3	1.2	.94
8	.64	.76	2.1	1.3	1.1	.99	7.4	2.0	1.4	1.5	1.2	.94
9	.64	.84	2.2	1.6	1.2	.94	8.5	2.0	1.4	1.5	1.4	.94
10	.64	2.0	2.0	1.1	1.1	.94	9.9	2.0	1.3	1.4	1.3	.94
11	.80	1.6	1.8	1.0	1.2	.94	6.1	1.9	1.3	1.4	1.2	.99
12	.64	1.1	1.7	1.0	1.2	1.9	4.5	1.9	1.3	1.7	1.1	.94
13	.64	.94	1.5	.99	1.0	2.4	4.0	2.0	1.3	5.1	1.2	1.0
14	.64	.84	1.4	.99	1.0	2.4	3.4	1.9	1.4	2.0	1.3	.94
15	.68	.80	1.6	.99	10	1.8	3.1	1.8	1.7	1.6	1.3	.94
16	.66	.80	1.5	.99	2.8	1.6	2.9	1.8	1.6	1.6	1.2	.94
17	3.8	.80	1.3	.99	1.8	1.4	3.0	1.8	1.6	1.4	1.1	.94
18	7.7	.94	1.3	1.0	1.5	1.7	2.6	1.7	1.8	1.6	1.1	.94
19	2.0	1.2	1.2	.94	1.3	5.5	2.5	1.7	1.9	3.0	1.0	.94
20	1.3	.80	1.2	.94	1.3	7.7	2.4	1.7	1.6	1.8	1.0	.94
21	1.0	.76	1.2	.94	1.2	12	2.4	1.7	1.4	1.6	1.0	.89
22	.94	.76	1.2	.94	1.4	9.0	2.3	1.6	1.4	1.5	1.0	.89
23	.89	.76	1.2	.94	1.3	5.4	2.3	1.6	1.3	1.6	1.1	.89
24	.99	.76	2.0	.94	1.2	4.0	2.4	1.6	1.7	2.7	1.0	.94
25	.84	8.0	1.4	1.0	1.3	3.4	2.2	1.6	2.2	1.9	1.0	.89
26	.80	4.8	1.2	.94	1.2	3.5	2.1	1.6	1.7	1.6	.99	.89
27	.80	5.6	1.2	.94	1.1	3.8	2.1	1.6	1.6	1.5	.99	.99
28	.80	5.9	1.2	.89	1.0	3.0	2.0	1.6	1.6	1.4	1.0	1.2
29	.76	2.3	1.1	.89	---	2.6	2.0	1.9	1.4	1.3	1.6	.94
30	.76	51	1.1	.94	---	2.4	2.4	1.8	1.4	1.3	1.1	.94
31	.89	---	1.1	.89	---	2.3	---	1.6	---	1.3	1.0	---
TOTAL	35.14	99.92	67.1	32.06	50.1	89.40	99.5	60.5	46.0	52.8	35.98	28.58
MEAN	1.13	3.33	2.16	1.03	1.79	2.88	3.32	1.95	1.53	1.70	1.16	.95
MAX	7.7	51	12	1.7	10	12	9.9	3.7	2.2	5.1	1.6	1.2
MIN	.64	.76	1.1	.89	1.0	.94	2.0	1.6	1.3	1.3	.99	.89
AC-FT	70	198	133	64	99	177	197	120	91	105	71	57

CAL YR 1985	TOTAL	514.03	MEAN	1.41	MAX	51	MIN	.61	AC-FT	1020
WTR YR 1986	TOTAL	697.08	MEAN	1.91	MAX	51	MIN	.64	AC-FT	1380

16405100 MOLOKAI TUNNEL AT EAST PORTAL

LOCATION.--Lat 21°08'38", long 156°55'16", Hydrologic Unit 20050000, on left bank 100 ft downstream from the east portal, 5.3 mi southeast of Kalaupapa, and 7.5 mi northeast of Kaunakakai.

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 989 ft, from tunnel plans.

REMARKS.--Records fair. Tunnel diverts from Waikolu Stream and two tributsries; diversion is augmented by water pumped from two wells and from the stream at elevation 728 ft in Wsikolu Valley near the east portal. Water is used for irrigation in west-central Molokai. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--20 years, 3.76 ft^3/s (2,720 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 41 ft^3/s Mar. 19, 1986; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 41 ft^3/s Mar. 19; minimum daily, 2.3 ft^3/s Dec. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	6.7	23	4.0	26	5.8	4.6	16	3.3	7.2	5.7	2.9
2	6.1	5.5	11	4.4	7.5	6.9	4.4	7.2	3.2	8.4	5.7	3.7
3	5.4	5.1	8.2	5.1	5.1	6.4	5.0	22	4.7	7.9	6.5	4.1
4	5.1	9.1	6.9	5.9	12	5.9	8.3	23	3.7	11	6.5	4.0
5	5.1	9.2	6.8	5.6	5.8	5.7	8.3	7.8	7.2	5.9	6.1	4.0
6	5.1	5.6	6.6	10	3.7	5.7	26	5.7	4.7	6.4	5.8	4.0
7	5.0	5.1	6.4	24	3.3	5.6	28	5.2	5.1	7.0	5.0	4.0
8	4.9	5.0	6.0	12	3.2	5.6	39	5.0	4.8	14	5.9	2.9
9	4.8	5.2	6.0	18	3.2	5.6	39	4.8	3.9	14	8.9	2.4
10	4.8	23	4.8	7.4	3.2	5.6	37	5.0	5.4	9.0	12	2.4
11	7.8	20	5.2	6.3	3.3	5.5	24	6.9	4.5	13	5.8	2.4
12	6.2	11	4.7	6.6	4.4	16	11	5.5	5.3	11	4.8	2.4
13	5.2	6.2	3.3	5.5	3.7	27	14	4.2	4.3	31	7.5	2.5
14	5.0	5.5	2.7	2.9	3.2	20	6.5	4.8	8.0	11	12	2.4
15	4.9	5.2	3.5	2.7	20	14	6.8	4.0	16	7.9	8.4	4.9
16	4.0	5.1	4.6	2.7	7.3	11	6.6	3.8	15	7.3	5.1	5.4
17	27	5.1	2.3	3.0	3.8	9.1	9.4	3.8	11	8.4	3.4	5.4
18	30	5.2	3.5	3.6	3.5	13	8.9	5.2	17	8.9	4.1	5.4
19	9.1	15	3.4	3.2	4.5	41	5.6	3.6	16	21	4.3	5.4
20	6.0	6.1	4.1	2.9	6.1	39	7.2	2.6	9.4	8.6	4.2	5.4
21	4.1	5.2	4.6	2.4	6.1	37	6.9	3.4	6.6	6.8	4.2	5.4
22	5.7	5.1	4.5	3.5	6.2	34	7.7	3.4	5.8	6.4	4.1	4.3
23	5.6	5.0	4.6	4.3	9.0	18	12	3.4	6.3	7.1	4.2	3.8
24	7.7	4.9	9.8	4.3	8.4	8.6	14	3.3	16	18	4.2	3.2
25	6.9	20	9.3	4.5	6.6	5.8	7.4	4.4	25	13	3.0	3.8
26	5.5	23	6.5	4.5	6.7	15	5.3	3.8	10	6.8	2.5	3.8
27	5.6	20	6.7	4.3	5.3	26	6.8	4.1	7.0	6.3	2.5	3.9
28	6.7	18	5.8	4.2	5.9	7.9	4.7	3.2	10	6.1	2.5	7.3
29	5.6	5.9	6.2	4.3	---	7.1	4.8	9.2	7.7	5.8	12	6.4
30	5.2	25	3.3	4.2	---	8.2	16	12	6.2	5.8	7.4	6.5
31	6.4	---	3.1	4.2	---	4.9	---	4.6	---	5.7	3.5	---
TOTAL	227.5	296.0	187.4	180.5	185.0	426.9	385.2	200.7	251.1	306.7	177.8	124.4
MEAN	7.34	9.87	6.05	5.82	6.61	13.8	12.8	6.47	8.37	9.89	5.74	4.15
MAX	30	25	23	24	26	41	39	23	25	31	12	7.3
MIN	4.0	4.9	2.3	2.4	3.2	4.9	4.4	2.6	3.2	5.7	2.5	2.4
AC-FT	451	587	372	358	367	847	764	398	498	608	353	247

CAL YR 1985	TOTAL	2410.2	MEAN	6.60	MAX	34	MIN	2.3	AC-FT	4780
WTR YR 1986	TOTAL	2949.2	MEAN	8.08	MAX	41	MIN	2.3	AC-FT	5850

16405300 MOLOKAI TUNNEL AT WEST PORTAL

LOCATION.--Lat 21°07'27", long 156°59'50", Hydrologic Unit 20050000, on left bank 50 ft upstream from the west portal, 2.5 mi northeast of Kaunakakai, and 4.7 mi south of Kalaupapa.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 970 ft, from tunnel plans.

REMARKS.--Records good. Tunnel diverts from Waikolu Stream and two tributaries; diversion is augmented by water pumped from two wells and from the stream at elevation 728 ft 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 elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 6.14 ft^3/s (4,450 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 39 ft^3/s Apr. 8, 9, 1986; minimum daily, 1.8 ft^3/s Oct. 15, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 39 ft^3/s Apr. 8, 9; minimum daily, 4.8 ft^3/s Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.8	26	6.4	26	8.2	7.3	20	7.6	11	9.4	6.2
2	8.2	7.4	13	6.6	11	9.4	7.5	10	7.1	12	9.2	7.0
3	7.1	7.1	11	7.1	7.8	9.1	7.6	23	8.5	11	10	7.7
4	6.9	10	9.7	8.5	13	8.2	12	26	7.4	14	10	7.4
5	6.9	11	9.4	8.2	8.9	7.9	11	11	10	9.5	9.7	7.4
6	6.9	7.7	9.1	11	6.0	7.9	27	9.0	8.4	9.7	9.5	7.4
7	6.6	7.4	8.5	26	5.7	7.9	28	8.7	8.8	10	8.2	7.4
8	6.6	7.4	8.2	14	5.6	7.7	39	8.6	8.3	16	9.1	6.7
9	6.4	7.7	8.2	21	5.5	7.7	39	8.3	7.1	16	10	5.9
10	6.6	24	6.7	11	5.5	7.7	38	8.4	9.4	12	16	5.6
11	9.0	23	7.8	9.4	5.4	7.7	29	11	8.1	16	9.5	5.5
12	7.9	15	7.1	9.7	6.3	15	14	9.3	8.4	14	8.3	5.5
13	7.1	8.8	5.8	8.8	8.1	28	17	8.1	7.9	32	9.5	5.5
14	6.9	7.9	5.4	5.8	5.5	23	9.4	8.4	9.3	16	15	5.5
15	6.9	7.4	5.5	5.4	19	16	9.6	7.6	18	12	12	7.8
16	6.0	7.4	5.4	5.4	9.8	13	9.9	7.3	18	11	8.9	8.5
17	26	7.1	5.4	5.6	5.9	12	11	7.3	12	12	6.7	8.5
18	32	6.9	5.7	6.1	5.4	14	13	8.9	18	11	7.3	8.5
19	12	17	5.8	5.6	6.4	38	8.8	7.3	20	24	8.0	8.5
20	8.8	8.2	6.6	5.3	8.2	38	11	6.1	13	13	7.7	8.5
21	5.9	7.4	7.1	4.8	8.2	39	9.9	7.1	10	11	7.7	8.2
22	7.9	7.1	7.1	5.5	8.5	35	11	7.3	9.1	10	7.7	7.2
23	7.4	7.1	7.1	6.6	11	20	15	7.3	10	10	7.7	6.6
24	9.2	7.1	11	6.5	9.4	11	17	7.3	17	19	7.7	5.8
25	9.4	21	13	6.7	9.1	8.1	12	8.4	29	18	6.6	6.4
26	7.4	25	10	7.2	9.4	15	9.0	7.8	14	11	5.9	6.4
27	7.1	23	9.1	6.9	7.8	28	11	8.0	11	10	5.8	6.4
28	8.5	22	8.8	6.9	8.5	11	8.2	7.4	13	9.6	5.7	9.4
29	7.4	8.8	9.1	7.1	---	9.7	8.3	11	12	9.6	14	8.5
30	7.1	27	6.5	7.1	---	11	17	19	9.5	9.5	12	9.7
31	7.9	---	5.4	7.1	---	7.9	---	9.4	---	9.5	7.0	---
TOTAL	282.0	392.7	264.3	259.3	244.9	479.1	467.5	314.3	349.9	409.4	281.8	215.6
MEAN	9.10	12.1	8.53	8.39	8.75	15.5	15.6	10.1	11.7	13.2	9.09	7.19
MAX	32	27	26	26	26	38	39	28	29	32	16	9.7
MIN	5.9	6.9	5.4	4.8	5.4	7.7	7.3	6.1	7.1	9.5	5.7	5.5
AC-FT	559	719	524	514	486	950	927	623	694	812	559	428

CAL YR 1985	TOTAL	3205.8	MEAN	8.78	MAX	34	MIN	3.5	AC-FT	6390
WTR YR 1986	TOTAL	3930.8	MEAN	10.8	MAX	39	MIN	4.8	AC-FT	7800

16405500 WAIKOLU STREAM AT ALTITUDE 900 FT, NEAR KALAUPAPA

LOCATION.--Lat 21°08'43", long 156°55'18", Hydrologic Unit 20050000, on right bank 1.8 mi southwest of Haupu Bay, 2.3 mi upstream from mouth, and 5.2 mi southeast of Kalaupapa.

DRAINAGE AREA.--1.99 mi^2.

PERIOD OF RECORD.--May 1956 to October 1961, July 1962 to current year.

REVISED RECORDS.--WSP 1719: 1959. WSP 2137: 1965(P).

GAGE.--Water-stage recorder. Elevation of gage is 900 ft, from topographic map. Prior to July 1, 1962, at site 200 ft upstream at datum 6.14 ft higher.

REMARKS.--Records fair. Since Nov. 16, 1960, water diverted upstream at times, either into or from Molokai tunnel. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE (since Molokai tunnel diversion began).--25 years (water years 1961, 1963-86), 6.76 ft^3/s (4,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,570 ft^3/s Jan. 25, 1982, gage height, 6.64 ft, from rating curve extended above 43 ft^3/s on basis of slope-area measurement at gage height 5.25 ft; no flow at times since 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 31, 1961, reached a stage of 13.62 ft, from floodmarks, former site and datum, discharge, 6,220 ft^3/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater then base discharge of 590 ft^3/s and maximum (*):

Date	Time	Diacharge (ft^3/s)	Gage height (ft)	Date	Time	Discherge (ft^3/s)	Gage height (ft)
Nov. 25	1400	680	3.86	Feb. 15	1100	1,440	4.91
Nov. 30	1430	*2,050	*5.52				

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	57	.00	57	.00	.00	4.2	.94	1.1	.80	.66
2	.00	.00	1.8	.00	.00	.00	.00	1.0	.94	1.4	.80	.66
3	.00	.00	.27	.00	.00	.00	.00	11	1.0	1.3	.80	.80
4	.00	.00	.00	.00	4.9	.00	.70	13	.94	2.4	.80	.80
5	.00	.00	.00	.00	.00	.00	1.0	.87	1.7	1.1	.80	.80
6	.00	.00	.00	6.3	.00	.00	14	.52	1.1	1.1	.66	.94
7	.00	.00	.00	17	.00	.00	12	.49	1.3	1.3	.66	.94
8	.00	.00	.00	.21	.00	.00	65	.52	1.1	3.9	.80	.94
9	.00	.00	.00	6.4	.00	.00	75	.56	.95	2.8	1.8	.94
10	.00	25	.00	.00	.00	.00	63	.63	.94	.94	2.9	.80
11	.00	7.7	.00	.00	.00	.00	9.9	.61	.94	1.8	1.1	.66
12	.00	.17	.00	.00	.00	25	2.1	.57	.99	2.5	.80	.80
13	.00	.00	.00	.00	.00	14	3.6	.52	.95	43	1.4	.94
14	.00	.00	.00	.00	.00	10	.94	.59	1.0	1.4	3.1	.94
15	.00	.00	.06	.00	95	1.8	.73	.66	3.5	.80	1.8	.94
16	.00	.00	.34	.00	2.7	.70	.58	.77	4.1	.80	1.1	.94
17	26	.00	.00	.00	.00	.12	1.6	.81	3.0	.94	.80	.94
18	54	.00	.00	.00	.00	2.0	1.1	.84	7.7	1.4	.80	.94
19	.18	1.8	.00	.00	.00	61	.51	.91	5.2	12	.94	.94
20	.01	.00	.00	.00	.00	50	.55	.99	1.6	1.1	1.1	1.1
21	.00	.00	.00	.00	.00	107	.85	.73	1.2	.80	1.1	1.1
22	.00	.00	.00	.00	.00	47	1.2	.66	1.1	.80	1.3	.94
23	.00	.00	.00	.00	1.2	4.4	2.8	.64	1.1	.80	1.3	.94
25	.00	.00	4.0	.00	.00	.85	3.3	.62	7.9	11	1.3	.66
25	.00	98	1.7	.00	.00	.00	1.1	.63	13	2.0	1.3	.40
26	.00	30	.00	.00	.00	9.1	.61	.66	1.6	.80	1.1	.40
27	.00	25	.00	.00	.00	11	.66	.80	1.1	.80	1.1	.40
28	.00	25	.00	.00	.00	.34	.70	1.0	1.6	.80	1.1	.94
29	.00	.00	.00	.00	---	.00	.97	5.3	1.1	.80	5.3	.66
30	.00	418	.00	.00	---	.00	6.9	4.8	1.1	.80	1.1	.66
31	.00	---	.00	.00	---	.00	---	1.0	---	.80	.66	---
TOTAL	80.19	629.67	65.17	29.91	160.80	344.31	271.42	56.90	70.69	103.28	40.42	25.52
MEAN	2.59	21.0	2.10	.96	5.74	11.1	9.05	1.84	2.36	3.33	1.30	.82
MAX	54	418	57	17	95	107	75	13	13	43	5.3	1.1
MIN	.00	.00	.00	.00	.00	.00	.00	.49	.94	.80	.66	.40
AC-FT	159	1250	129	59	319	683	538	113	140	205	80	49

CAL YR 1985	TOTAL	1164.40	MEAN	3.19	MAX	418	MIN	.00	AC-FT	2310
WTR YR 1986	TOTAL	1877.28	MEAN	5.14	MAX	418	MIN	.00	AC-FT	3720

16408000 WAIKOLU STREAM BELOW PIPELINE CROSSING, NEAR KALAUPAPA

LOCATION.--Lat 21°09'45", long 156°55'54", Hydrologic Unit 20050000, on left bank 0.7 mi upstream from mouth and 4.4 mi southeast of Molokai Lighthouse near Kalaupapa.

DRAINAGE AREA.--3.68 mi^2.

PERIOD OF RECORD.--July 1918 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."

REVISED RECORDS.--WSP 1155: 1932(M), 1938-44(M), 1946-48(M). WSP 1319: 1923(M), 1930(M), 1932, 1938-40, 1945(M), 1974-81(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252 ft above mean sea level (hand levels by Bureau of Reclamation). Prior to Nov. 19, 1930, at site 500 ft 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 higher, and July 30, 1948, to June 30, 1982, at present site at datum 1.00 ft higher.

REMARKS.--Records fair. Diversion upstream for domestic use in Kalaupapa, and since Nov. 16, 1960, water has bsen diverted upstream both to and from Molokai tunnel. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE (since Molokai tunnel diversion begen).--26 years (water years 1961-86), 15.0 ft^3/s (10,870 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,740 ft^3/s Mar. 31, 1982, gage height, 7.63 ft, from rating curve extended above 58 ft^3/s on basis of slope-area messurement at gage height 6.68 ft; minimum, 2.0 ft^3/s Nov. 1, 2, 1926, June 5, 1926.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	1300	1,730	5.05	Mar. 21	0500	1,320	4.73
Nov. 25	1400	1,700	5.03	Apr. 9	0130	1,130	4.57
Nov. 30	1430	*3,130	*5.85	July 13	1030	1,270	4.69
Feb. 1	0730	828	4.26	July 19	0700	724	4.13
Feb. 15	1100	2,210	5.37				

Minimum discharge, 1.9 ft^3/s on Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.5	267	4.4	155	4.6	12	24	12	10	8.0	10
2	2.5	2.5	14	4.4	6.8	5.4	12	14	12	10	8.0	8.0
3	2.2	2.6	7.7	4.1	5.6	3.5	12	41	12	9.6	9.2	7.4
4	2.2	2.8	6.5	4.1	12	3.3	11	58	12	10	10	7.4
5	2.2	3.3	5.9	4.1	5.6	3.3	11	18	16	9.6	8.0	7.4
6	2.0	2.6	5.6	29	5.1	3.1	34	14	13	8.8	8.0	7.4
7	2.2	2.5	5.4	77	5.1	2.8	31	14	13	8.8	9.2	7.4
8	2.2	2.5	5.4	12	4.8	2.8	157	14	12	11	9.2	8.0
9	2.5	3.5	5.1	17	5.1	2.8	226	14	10	10	10	9.2
10	2.3	123	5.6	6.8	4.8	2.8	196	13	9.6	8.8	12	9.2
11	2.6	46	5.9	5.9	4.6	2.6	43	13	9.6	8.8	9.2	9.2
12	2.3	11	5.4	5.9	4.6	100	20	13	9.6	9.6	8.0	9.2
13	2.3	6.5	5.1	5.4	4.6	148	20	12	9.6	153	9.2	9.2
14	2.3	4.8	5.1	5.4	4.8	45	17	12	9.6	14	12	9.2
15	2.3	4.4	5.1	5.6	185	11	14	12	13	10	14	7.7
16	2.2	3.9	5.1	5.1	10	7.4	14	12	17	9.6	11	6.5
17	61	3.7	4.8	4.6	5.4	5.9	14	12	13	9.6	11	6.5
18	165	3.7	4.6	6.8	4.8	6.8	14	12	29	9.6	10	6.2
19	5.6	4.6	4.6	4.8	4.6	183	14	12	31	71	8.0	5.9
20	3.7	3.5	4.6	4.6	4.6	243	14	12	19	12	8.0	5.9
21	3.1	3.3	4.6	4.6	4.6	488	14	11	11	10	8.0	5.9
22	2.8	3.3	4.6	4.6	5.1	205	14	11	10	10	8.0	6.8
23	2.8	3.1	4.6	4.4	5.1	39	14	11	9.6	10	8.0	7.4
24	2.9	3.1	8.4	4.4	4.8	20	17	11	35	35	8.0	7.7
26	2.8	238	5.4	4.6	4.4	14	14	11	59	12	9.2	7.7
26	2.6	105	4.4	4.4	3.3	39	13	12	14	10	10	7.7
27	2.8	59	4.4	4.4	3.1	71	13	12	12	9.2	10	7.7
28	2.8	77	4.4	4.4	3.1	18	13	11	14	9.2	10	9.2
29	2.6	5.6	4.4	4.4	---	14	13	21	12	9.2	20	6.8
30	2.6	937	4.1	4.4	---	14	34	27	11	8.0	12	5.9
31	2.8	---	4.4	4.4	---	13	---	13	---	8.0	10	---
TOTAL	303.3	1674.3	432.2	266.0	476.2	1722.1	1045	497	469.6	534.4	305.2	229.7
MEAN	9.78	55.8	13.9	8.58	17.0	55.6	34.8	16.0	15.7	17.2	9.85	7.66
MAX	165	937	267	77	185	488	226	58	59	153	20	10
MIN	2.0	2.5	4.1	4.1	3.1	2.6	11	11	9.6	8.0	8.0	5.9
AC-FT	602	3320	857	528	945	3420	2070	986	931	1060	605	456

CAL YR 1985	TOTAL	4176.0	MEAN	11.4	MAX	937	MIN	2.0	AC-FT	8280
WTR YR 1986	TOTAL	7955.0	MEAN	21.8	MAX	937	MIN	2.0	AC-FT	15780

16414000 KAUNAKAKAI GULCH AT KAUNAKAKAI

LOCATION.--Lat 21°06'21", long 157°00'34", Hydrologic Unit 20050000, on left bank 0.6 mi upstream from Molokai Ranch pipeline crossing, 1.3 mi northeast of Kaunakakai Post Office, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--6.57 mi^2.

PERIOD OF RECORD.--December 1949 to current year. Prior to July 1958, published as Kaunakakai Stream at Kaunakakai.

REVISED RECORDS.--WSP 1289: 1950-51. WSP 1569: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 240 ft, from topographic map.

REMARKS.--Records good. Flow has been augmented by occasional spillage from Molokai tunnel since May 1965.

AVERAGE DISCHARGE.--36 years (water years 1951-86), 1.62 ft^3/s (1,170 acre-ft/yr)..

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,060 ft^3/s Oct. 31, 1961, gage height, 8.30 ft, from rating curve extended above 620 ft^3/s on basis of slope-area measurements at gage heights 7.22 ft and 9.30 ft; no flow most of the time each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	1500	405	5.00	Nov. 30	1500	*1,770	*7.63
Nov. 28	0200	299	4.66	Feb. 15	1200	730	5.80

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	113	.00	.51	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	11	.00	.03	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	55	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	133	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	91	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	41	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	6.4	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	2.4	.00	.00	2.4	.00	.00
14	.00	.00	.00	.00	.00	.00	.58	.00	.00	.71	.00	.00
15	.00	.00	.00	.00	106	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	.00	.00
17	1.5	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
18	59	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	3.2	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00
20	.01	.00	.00	.00	.00	23	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	58	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	48	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00
25	.00	15	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
26	.00	8.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	51	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.63	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	456	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	63.71	545.33	125.53	.00	117.64	157.03	329.38	.00	.00	3.11	.00	.00
MEAN	2.06	18.2	4.05	.00	4.20	5.07	11.0	.00	.00	.10	.00	.00
MAX	59	456	113	.00	106	58	133	.00	.00	2.4	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	126	1080	249	.00	233	311	653	.00	.00	6.2	.00	.00

CAL YR 1985	TOTAL	864.25	MEAN	2.37	MAX	458	MIN	.00	AC-FT 1710
WTR YR 1986	TOTAL	1341.73	MEAN	3.68	MAX	458	MIN	.00	AC-FT 2660

16419500 PAPIO GULCH AT HALAWA

LOCATION.--Lat 21°08'55", long 156°44'16", Hydrologic Unit 20050000, on left bank 200 ft downstream from wooden bridge on Highway 45 and 0.8 mi south of Halawa.

DRAINAGE AREA.--0.94 mi^2.

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft, from topographic map.

REMARKS.--Recorda good except for estimated daily discharges, which are poor. Diversion upstream for domestic use at Puu O Hoku Ranch. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 0.761 ft^3/s (551 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,720 ft^3/s Apr. 13, 1965, gage height, 11.25 ft, from rating curve extended above 37 ft^3/s on basis of slope-area measurements at gage heights 4.60 ft, 7.15 ft, and 11.25 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 792 ft^3/s Oct. 18, gage height, 6.28 ft, no other peak greater than base discharge of 210 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.31	.83	.00	1.1	.02	.14	.36	.01	.14	.30	.04
2	.00	e.24	.27	.00	.27	.35	.14	.18	.01	.14	.24	.05
3	.00	e.28	.24	.00	1.1	.21	.14	2.5	.01	.16	.73	.02
4	.00	e.66	.21	.01	.18	.06	.12	1.5	.02	.16	1.3	.03
5	.00	e.78	.16	.02	.16	.02	.12	.33	.01	.10	.48	.06
6	.00	e.26	.16	.01	.04	.02	.16	.18	.02	.52	.24	.06
7	.00	e.21	.14	2.2	.02	.01	.12	.14	.10	.36	.24	.06
8	.00	e.18	.14	.44	.02	.01	.26	.14	.08	.21	.21	.02
9	.00	e1.0	.12	.33	.02	.01	.68	.16	3.2	.30	.35	.05
10	.00	3.7	.12	.16	.08	.00	6.6	.14	.30	.21	1.2	.08
11	.00	13	.14	.10	.06	.00	3.2	.14	.10	.12	.36	.06
12	.00	2.9	.67	.04	.03	.00	.68	.12	.03	.78	.27	.06
13	.00	.36	.18	.04	.02	.00	.44	.12	.02	2.6	.21	.08
14	.00	.33	.16	.03	.01	.00	.33	.12	.56	1.0	.33	.10
15	.00	.30	.14	.02	5.8	.00	.27	.12	.21	.40	.44	.12
16	.00	.21	.16	.02	1.2	.00	.24	.10	.10	.30	.48	.12
17	8.4	.16	.14	.01	.27	.32	.21	.08	.12	.27	.27	.10
18	62	.14	.12	.12	.14	.18	.21	.08	.16	.21	.24	.12
19	3.8	1.8	.10	.10	.10	4.8	.18	.06	.16	11	.21	.16
20	e1.6	.33	.10	.04	.08	11	.16	.04	.10	1.3	.16	.12
21	e.35	.24	.08	.02	.08	5.9	.16	.03	.06	.48	.18	.24
22	e.29	.18	.08	.02	.10	1.3	.18	.03	.03	.36	.16	.04
23	e.27	.16	.08	.02	.08	.98	.18	.03	.02	.33	.21	.03
24	e2.1	.12	.16	.01	.03	.83	.16	.03	.06	8.7	.36	.03
25	e.50	1.1	.18	.01	.03	.36	.16	.12	.16	2.2	.21	.10
26	e.27	5.5	.08	.01	.02	.47	.14	.14	.12	.64	.14	.03
27	e.30	2.9	.04	.01	.02	1.7	.14	.24	.10	.44	.14	.04
28	e.29	3.4	.03	.01	.02	.52	.16	.12	.75	.27	.14	2.0
29	e.31	1.6	.02	.00	---	.30	.18	.04	.21	.14	.49	.27
30	e.22	2.0	.02	.00	---	.24	.24	.02	.18	.14	.40	.10
31	e.68	---	.01	.00	---	.16	---	.02	---	.14	.14	---
TOTAL	81.38	44.15	5.08	3.80	11.08	29.77	16.10	7.43	7.01	34.12	10.83	4.39
MEAN	2.63	1.47	.16	.12	.40	.96	.54	.24	.23	1.10	.35	.15
MAX	62	13	.83	2.2	5.8	11	6.6	2.5	3.2	11	1.3	2.0
MIN	.00	.12	.01	.00	.01	.00	.12	.02	.01	.10	.14	.02
AC-FT	161	88	10	7.5	22	59	32	15	14	68	21	8.7

CAL YR 1985	TOTAL	192.14	MEAN	.53	MAX	62	MIN	.00	AC-FT	381
WTR YR 1986	TOTAL	255.14	MEAN	.70	MAX	62	MIN	.00	AC-FT	506

e Estimated

16508000 HANAWI STREAM NEAR NAHIKU

LOCATION.--Lat 20°48'37", long 156°07'00", Hydrologic Unit 20020000, on left bank 200 ft upstream from Koolau ditch intake and trail, 1.9 mi southwest of Nahiku, and 4.5 mi southeast of Keanae.

DRAINAGE AREA.--3.49 mi^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.

REVISED RECORDS.--WSP 1045: 1922-43(M). WSP 1569: Drainage area. WSP 1719: 1915(M), 1922, 1924-25, 1927, 1930-35, 1937, 1939-40, 1942-43.

GAGE.--Water-stage recorder. Datum of gage is 1,318 ft above mean sea level (by vertical angles). Prior to Nov. 1, 1921, at site 50 ft downstream at datum 0.12 ft lower.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--64 years (water years 1923-86), 23.1 ft^3/s (16,740 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 5,570 ft^3/s Jan. 18, 1916, gage height, 11.6 ft, present site and datum, from rating curve extended above 814 ft^3/s by physical model of station site; minimum, 0.90 ft^3/s Oct. 28 to Nov. 1, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 30	1700	*3,470	*9.38	Mar. 21	0500	2,540	7.97

Minimum discharge, 1.6 ft^3/s, Mar. 5-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	4.3	556	4.5	4.1	1.7	7.6	95	10	9.2	8.5	3.8
2	8.2	3.7	37	8.8	2.9	2.1	13	22	7.9	13	12	3.6
3	5.3	3.6	22	10	2.6	2.0	27	301	27	38	18	3.5
4	4.3	3.4	9.6	3.9	2.5	1.7	75	82	12	27	22	3.4
5	3.8	3.3	7.0	3.3	2.6	1.7	110	44	14	12	7.9	3.2
6	4.0	3.3	5.9	20	2.6	1.6	147	14	12	11	6.5	3.3
7	4.4	3.1	5.1	122	2.4	1.6	82	11	11	11	6.6	3.4
8	7.2	2.9	4.6	43	2.4	1.6	454	9.7	13	45	11	3.1
9	12	2.9	4.3	37	2.8	1.6	403	8.7	6.6	27	46	3.0
10	11	34	4.7	8.8	2.6	1.6	1050	21	5.7	22	61	2.9
11	19	108	6.2	6.3	2.4	1.6	152	10	5.1	28	9.6	2.8
12	7.6	11	6.3	5.2	2.3	1.6	46	13	4.7	47	8.4	2.8
13	5.5	5.9	5.1	4.4	2.2	39	40	9.2	5.4	38	11	2.8
14	4.2	4.7	4.7	4.0	2.2	181	19	8.5	14	13	44	2.7
15	5.3	4.1	4.5	3.7	2.3	46	16	8.0	34	10	21	2.6
16	4.0	4.7	4.4	3.6	2.3	5.8	16	8.2	21	26	16	2.6
17	4.1	3.7	4.3	3.4	2.2	4.8	16	7.9	12	15	11	2.6
18	75	3.6	4.2	3.6	2.1	5.6	16	9.6	81	14	8.5	2.5
19	7.8	39	4.0	3.1	2.1	146	15	7.1	116	25	6.8	2.5
20	7.8	3.9	3.9	3.0	2.0	496	14	6.5	63	12	5.9	2.4
21	4.8	3.5	3.8	2.9	1.9	976	20	6.2	17	9.3	5.3	2.4
22	3.9	8.2	3.7	2.9	1.9	293	20	5.9	11	8.7	4.9	2.6
23	4.4	4.2	3.6	2.7	1.9	144	17	5.6	13	35	4.8	2.5
24	6.3	3.6	3.5	4.2	1.9	23	46	5.3	65	12	4.4	4.0
25	4.3	45	3.4	8.0	1.9	9.2	17	5.1	109	8.8	4.2	2.6
26	4.8	26	3.3	5.6	1.8	8.2	12	9.0	33	7.8	3.9	2.4
27	12	16	3.3	3.3	1.8	93	22	6.2	14	8.0	3.8	2.3
28	11	66	3.4	3.0	1.8	13	50	8.4	16	7.4	3.7	3.0
29	5.2	8.8	4.9	2.9	---	15	24	60	13	6.6	7.7	2.5
30	4.9	835	3.6	2.8	---	15	134	111	11	6.3	8.6	2.3
31	4.3	---	3.6	2.7	---	10	---	23	---	6.1	4.4	---
TOTAL	333.4	1269.4	743.9	342.6	64.5	2544.0	3080.6	942.1	777.4	559.2	397.4	86.1
MEAN	10.8	42.3	24.0	11.1	2.30	82.1	103	30.4	25.9	18.0	12.8	2.87
MAX	75	835	556	122	4.1	976	1050	301	116	47	61	4.0
MIN	3.8	2.9	3.3	2.7	1.8	1.6	7.6	5.1	4.7	6.1	3.7	2.3
AC-FT	661	2520	1480	680	128	5050	6110	1870	1540	1110	788	171

CAL YR 1985	TOTAL	10550.7	MEAN	28.9	MAX	835	MIN	1.6	AC-FT	20930
WTR YR 1986	TOTAL	11140.6	MEAN	30.5	MAX	1050	MIN	1.6	AC-FT	22100

16518000 WEST WAILUAIKI STREAM NEAR KEANAE

LOCATION.--Lat 20°49'16", long 156°08'37", Hydrologic Unit 20020000, on left bank 500 ft upstream from Koolau ditch crossing and trail bridge and 2.8 mi south of Keanae Post Office.

DRAINAGE AREA.--3.66 mi^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.

REVISED RECORDS.--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), 1960(P), 1961(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 1,343.1 ft above mean sea level (by vertical angles). Prior to Oct. 3, 1974, at present site at datum 0.50 ft higher.

REMARKS.--Records good. No diversion upstream. Water is diverted by Koolau ditch, 500 ft downstream, for domestic supply and irrigation of sugarcane in central Maui. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--66 years (water years 1915, 1917, 1923-86), 35.1 ft^3/s (25,430 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,900 ft^3/s Jan. 14, 1923, gage height, 13.5 ft, from floodmarks, from rating curve extended above 660 ft^3/s by logarithmic plotting; minimum, 0.5 ft^3/s July 26, 1922.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 30	1700	*5,680	*11.38	Apr. 10	0700	2,180	8.06
Mar. 21	0530	4,500	10.46				

Minimum discharge, 1.6 ft^3/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	5.1	815	10	15	2.0	12	122	17	16	12	5.0
2	16	4.4	51	14	5.6	3.1	17	31	13	21	14	4.5
3	9.4	4.1	34	16	3.9	5.0	38	432	33	40	24	4.2
4	7.1	4.1	19	6.3	3.7	2.5	97	119	17	30	27	4.0
5	6.1	4.3	15	4.9	3.8	2.2	150	64	23	17	10	3.7
6	8.9	4.5	12	21	3.9	2.0	216	20	17	15	8.3	3.7
7	7.1	3.6	10	162	3.1	1.9	196	15	16	15	8.5	3.8
8	8.8	3.2	9.5	52	3.0	1.8	850	12	18	50	15	3.4
9	17	3.0	8.7	56	3.4	1.9	642	10	10	36	48	3.3
10	18	56	9.4	15	3.9	2.0	1400	15	8.9	29	73	3.1
11	33	160	13	10	2.9	1.7	151	11	7.8	33	13	3.0
12	13	22	13	8.6	2.8	3.7	49	11	7.2	52	11	2.9
13	9.2	11	8.6	7.2	2.6	76	38	8.2	8.7	52	13	2.9
14	7.5	8.6	7.3	6.4	2.5	241	23	7.3	21	23	48	3.1
15	7.4	7.0	6.7	5.8	2.9	60	17	6.8	50	17	25	2.9
16	6.1	11	6.4	5.3	7.5	12	14	6.8	36	31	21	2.7
17	7.6	6.6	5.8	4.9	3.0	8.4	12	6.8	22	20	15	2.6
18	73	5.8	5.4	6.4	2.7	12	11	8.2	95	25	13	2.5
19	19	40	5.1	4.7	2.8	101	9.7	5.8	143	67	9.8	2.5
20	13	8.8	4.8	4.2	2.6	763	9.1	5.2	86	23	8.6	3.6
21	8.3	6.8	4.6	4.3	2.4	1630	15	5.4	25	14	7.7	3.4
22	6.3	16	4.3	4.3	2.3	449	16	6.3	18	13	7.0	3.3
23	6.9	7.6	4.1	3.7	2.4	187	11	5.5	22	18	6.9	2.8
24	7.4	7.2	4.0	5.2	2.5	38	21	4.6	75	13	6.0	4.4
25	5.4	69	4.0	15	2.3	19	12	5.3	170	10	5.5	2.9
26	6.7	41	4.0	10	2.2	21	9.4	12	45	9.1	5.1	2.4
27	18	26	4.3	5.0	2.1	138	18	7.5	28	9.5	5.2	2.4
28	14	113	4.5	4.1	2.0	28	37	12	29	8.4	5.0	3.2
29	7.1	15	7.5	3.7	---	24	28	89	22	7.2	13	2.6
30	6.7	1310	4.2	3.5	---	22	157	130	18	6.8	14	2.4
31	5.8	---	5.1	3.3	---	15	---	34	---	7.6	6.1	---
TOTAL	485.8	1984.7	1110.3	482.8	99.8	3964.2	4276.2	1228.7	1101.6	728.6	498.7	97.2
MEAN	15.7	66.2	35.8	15.6	3.56	128	143	39.6	36.7	23.5	16.1	3.24
MAX	106	1310	815	162	15	1630	1400	432	170	67	73	5.0
MIN	5.4	3.0	4.0	3.3	2.0	1.7	9.1	4.6	7.2	6.8	5.0	2.4
AC-FT	964	3940	2200	958	198	7860	8480	2440	2190	1450	989	193

CAL YR 1985	TOTAL	14327.7	MEAN	39.3	MAX	1310	MIN	1.5	AC-FT	28420
WTR YR 1986	TOTAL	16058.6	MEAN	44.0	MAX	1630	MIN	1.7	AC-FT	31850

16541000 KOOLAU DITCH AT HAIPUAENA, NEAR HUELO

LOCATION.--Lat 20°51'17", long 156°11'19", Hydrologic Unit 20020000, on right bank at Haipuaena Stream, 1,000 ft upstream from intake at Puohokamoa Stream, 3.3 mi southeast of Kailua, and 4.5 mi southeast of Huelo.

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

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 1,240 ft, from topographic map. Prior to Mar. 21, 1933, at datum 1.94 ft lower, and Mar. 21, 1933, to Mar. 20, 1935, at datum 0.25 ft lower than present datum.

REMARKS.--Records good. 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 elsewhere in this report.

AVERAGE DISCHARGE.--54 years, 115 ft^3/s (83,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 300 ft^3/s July 1, 17, 1963; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 275 ft^3/s Mar. 21; minimum daily, 18 ft^3/s Mar. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	66	261	62	81	21	118	258	151	141	108	56
2	135	59	192	91	51	29	144	208	119	158	132	53
3	88	56	161	115	40	34	164	272	210	219	172	50
4	71	54	103	52	38	22	248	251	162	198	178	47
5	67	57	86	44	38	21	263	240	179	160	109	45
6	75	54	78	71	43	20	263	186	155	147	88	44
7	70	49	73	259	35	20	250	165	146	142	87	45
8	96	45	65	236	33	19	269	140	148	211	144	41
9	142	44	64	214	38	19	219	123	103	197	203	39
10	126	130	76	127	42	19	264	143	93	187	219	38
11	198	259	127	97	32	18	233	130	83	195	139	37
12	116	163	113	80	31	19	159	144	75	204	120	35
13	90	98	81	70	29	221	159	109	83	209	135	37
14	75	80	73	63	29	265	180	97	179	181	225	35
15	78	70	66	58	29	206	173	90	212	153	196	33
16	67	84	46	53	43	97	153	91	176	200	195	32
17	74	62	58	51	28	74	139	91	145	181	157	31
18	177	57	31	62	27	104	130	117	212	159	130	30
19	135	138	52	48	27	189	121	82	249	221	106	30
20	112	68	51	44	26	272	115	74	232	177	93	30
21	82	59	48	43	24	275	148	70	183	139	84	30
22	68	159	46	44	24	273	158	71	161	128	77	33
23	77	83	44	40	24	258	137	66	166	165	76	30
24	109	74	43	48	24	170	176	60	237	147	68	53
25	75	140	42	116	23	178	150	61	263	115	63	34
26	80	200	41	88	22	159	124	128	221	102	59	28
27	167	171	41	49	22	259	155	83	196	104	58	28
28	131	241	43	43	21	201	194	101	198	95	56	37
29	83	148	62	40	---	192	193	205	178	83	103	30
30	77	202	41	38	---	194	265	268	163	78	114	27
31	70	---	44	37	---	146	---	196	---	79	65	---
TOTAL	3247	3170	2352	2483	924	3994	5464	4320	5078	4875	3759	1118
MEAN	105	106	75.9	80.1	33.0	129	182	139	169	157	121	37.3
MAX	236	259	261	259	81	275	269	272	263	221	225	56
MIN	67	44	31	37	21	18	115	60	75	78	56	27
AC-FT	6440	6290	4670	4930	1830	7920	10840	8570	10070	9670	7460	2220

CAL YR 1985	TOTAL	40644	MEAN	111	MAX	267	MIN	17	AC-FT	80620
WTR YR 1986	TOTAL	40784	MEAN	112	MAX	275	MIN	18	AC-FT	80900

16587000 HONOPOU STREAM NEAR HUELO

LOCATION.--Lat 20°53'20", long 156°15'20", Hydrologic Unit 20020000, on left bank 75 ft upstream from Wailoa ditch intake, 2.2 mi southwest of Huelo, and 2.5 mi west of Kailua.

DRAINAGE AREA.--0.64 mi^2.

PERIOD OF RECORD.--December 1910 to current year. Monthly discharge only for some periods, published in WSP 1319.

REVISED RECORDS.--WSP 1219: 1914(M), 1916-50(M). WSP 1249: 1948-50(P). WSP 1569: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,208 ft above mean sea level (by vertical angles). Prior to June 19, 1914, nonrecording gage at same site and datum.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--75 years (water years 1912-86), 4.67 ft^3/s (3,380 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,710 ft^3/s Nov. 18, 1930, gage height, 7.28 ft from rating curve extended above 110 ft^3/s by test of model of station site; minimum, 0.02 ft^3/s several days in 1933, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 432 ft^3/s Dec. 1, gage height, 3.34 ft, no other peak greater than base discharge of 270 ft^3/s; minimum, 0.43 ft^3/s on Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.5	120	1.3	1.8	.60	8.0	28	2.5	4.3	1.9	1.5
2	.99	1.5	22	1.7	1.4	.88	7.9	10	2.2	4.2	2.0	1.4
3	.86	1.5	15	1.9	1.2	.69	7.0	49	5.2	11	3.5	1.4
4	.79	1.5	11	1.3	1.6	.60	10	38	3.3	7.2	5.5	1.3
5	.80	2.2	9.2	1.1	1.4	.60	15	49	3.8	4.5	2.0	1.2
6	.82	1.4	7.7	2.1	1.4	.60	21	17	3.6	4.3	1.8	1.1
7	.89	1.3	6.6	27	1.1	.58	12	12	2.9	4.0	1.8	1.1
8	.95	1.3	5.6	11	1.1	.51	24	9.5	3.0	6.6	2.4	1.1
9	1.7	1.1	4.8	12	1.1	.54	19	8.0	2.5	4.8	7.1	1.0
10	1.2	10	4.8	5.6	1.0	.51	126	7.0	2.5	4.2	8.8	.98
11	3.9	22	7.8	4.6	.95	.51	51	6.4	2.3	4.1	2.7	.90
12	1.5	5.4	4.4	4.1	.97	.53	24	5.4	2.3	9.3	2.5	.90
13	1.2	4.2	3.6	3.7	.90	1.5	20	4.7	2.8	5.4	2.9	1.0
14	1.1	3.7	3.2	3.3	.86	5.6	14	4.2	3.9	4.5	18	.87
15	1.4	3.3	2.9	3.0	2.4	3.7	11	3.8	5.2	4.0	5.7	.79
16	1.1	3.0	2.8	2.8	1.9	1.3	9.3	3.6	3.4	6.7	4.6	.79
17	1.3	2.8	2.5	2.6	.96	1.1	7.9	3.4	3.1	4.4	3.8	.79
18	1.9	2.7	2.3	4.5	.90	1.7	6.7	4.2	9.7	4.3	3.4	.75
19	1.6	3.2	2.1	2.5	.88	29	5.8	2.9	11	4.1	3.2	.69
20	1.6	2.3	2.0	2.2	.79	79	5.1	2.6	12	3.4	3.0	.69
21	1.3	2.2	1.9	2.0	.79	86	4.9	2.4	6.1	3.2	2.8	.66
22	1.2	4.6	1.8	3.3	.75	63	4.7	2.2	5.0	3.5	2.6	.69
23	1.4	2.7	1.6	2.1	.74	57	3.9	2.0	4.8	4.3	2.5	.65
24	2.4	2.1	1.6	1.9	.69	31	5.2	1.9	6.4	3.4	2.3	.77
25	1.5	9.4	1.5	1.9	.75	17	3.5	2.0	18	2.9	2.1	.65
26	1.7	18	1.4	1.8	.69	14	3.2	3.9	8.0	2.6	2.0	.54
27	2.8	7.3	1.4	1.6	.69	22	4.2	1.9	6.6	2.6	1.9	.51
28	2.2	23	1.4	1.5	.67	12	4.9	1.8	6.7	2.4	1.8	.52
29	1.8	7.5	1.7	1.4	---	11	4.8	3.7	5.5	2.1	2.2	.49
30	1.6	39	1.3	1.4	---	14	19	7.8	4.8	2.0	1.8	.43
31	1.6	---	1.4	1.3	---	9.0	---	3.2	---	1.9	1.6	---
TOTAL	47.30	191.7	257.3	118.5	30.38	466.05	463.0	301.5	159.1	136.2	110.2	26.16
MEAN	1.53	6.39	8.30	3.82	1.08	15.0	15.4	9.73	5.30	4.39	3.55	.87
MAX	3.9	39	120	27	2.4	86	126	49	18	11	18	1.5
MIN	.79	1.1	1.3	1.1	.67	.51	3.2	1.8	2.2	1.9	1.6	.43
AC-FT	94	380	510	235	60	924	918	598	316	270	219	52

CAL YR 1985	TOTAL	1694.21	MEAN	4.64	MAX	120	MIN	.35	AC-FT	3360
WTR YR 1986	TOTAL	2307.39	MEAN	6.32	MAX	126	MIN	.43	AC-FT	4580

16588000 WAILOA DITCH AT HONOPOU, NEAR HUELO

LOCATION.--Lat 20°53'20", long 156°15'19", Hydrologic Unit 20020000, on right bank 100 ft downstream from intake at Honopou Stream, 0.5 mi west of Lupi, and 2.2 mi southwest of Huelo.

PERIOD OF RECORD.--November 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,208 ft above mean sea level (by vertical angles).

REMARKS.--Records good. Wailoa ditch receives water from Koolau ditch at Alo Stream and from all streams from there west to Halehaku Gulch at elevation of about 1,200 ft. Water is used for domestic supply, power, and irrigation in central Maui. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--63 years (water years 1924-86), 170 ft^3/s (123,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 328 ft^3/s Nov. 24, 1981; no flow Jan. 24-27, 1923.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 307 ft^3/s Mar. 22, Apr. 11, June 25; minimum daily, 14 ft^3/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	136	222	139	144	38	270	301	271	278	201	103
2	229	120	218	168	108	55	287	302	230	287	236	89
3	172	112	218	212	75	61	280	304	289	299	278	91
4	139	113	213	110	84	41	303	303	284	300	287	87
5	123	158	208	88	87	37	299	302	290	292	224	82
6	150	110	188	120	103	36	300	301	283	285	176	81
7	145	100	167	302	69	35	303	298	272	283	170	81
8	186	92	150	304	64	34	304	289	273	297	259	74
9	226	86	142	290	65	34	302	260	214	298	290	72
10	213	171	154	269	73	35	303	274	200	296	296	69
11	277	287	213	214	60	33	307	258	191	297	267	66
12	224	285	213	177	59	35	303	265	158	297	242	63
13	186	223	168	150	57	277	302	210	161	299	244	76
14	151	176	144	133	53	297	301	185	290	295	300	68
15	160	151	130	120	64	289	299	168	296	289	295	59
16	134	156	106	110	155	188	294	172	286	296	290	56
17	167	124	113	102	61	159	289	177	270	296	284	55
18	240	115	83	158	54	175	274	232	296	290	266	53
19	243	192	98	103	53	239	249	158	304	294	226	52
20	224	126	95	91	50	296	224	136	303	287	195	51
21	162	111	90	90	47	306	262	127	300	266	174	51
22	131	218	86	107	45	307	287	124	291	259	157	56
23	151	211	82	94	45	306	254	116	289	286	153	25
24	246	150	79	84	44	305	291	106	303	281	138	14
25	185	170	82	165	43	304	271	108	307	241	123	33
26	169	194	76	154	41	300	231	250	305	205	113	50
27	270	208	77	97	40	306	266	152	302	206	109	51
28	251	230	88	81	39	303	298	158	299	188	106	59
29	180	221	163	75	---	302	296	281	296	160	164	51
30	162	222	87	71	---	303	303	302	291	147	207	44
31	145	---	85	68	---	300	---	290	---	142	119	---
TOTAL	5931	4968	4238	4446	1882	5736	8552	6909	8144	8236	6589	1862
MEAN	191	166	137	143	67.2	185	285	223	271	266	213	62.1
MAX	290	287	222	304	155	307	307	304	307	300	300	103
MIN	123	86	76	68	39	33	224	106	158	142	106	14
AC-FT	11760	9850	8410	8820	3730	11380	16960	13700	16150	16340	13070	3690

CAL YR 1985 TOTAL 65603 MEAN 180 MAX 311 MIN 38 AC-FT 130100
WTR YR 1986 TOTAL 67493 MEAN 185 MAX 307 MIN 14 AC-FT 133900

16599500 OPANA TUNNEL AT KAILIILI

LOCATION.--Lat 20°51'04", long 156°16'17", Hydrologic Unit 20020000, on left bank at tunnel outlet, 0.3 mi north of Kailiili, and 2.7 mi east of Makawao.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,340 ft, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Tunnel diverts from Opana Gulch for domestic use in the Kokomo, Makawao, and Pukalani areas. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 3.06 ft^3/s (2,220 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 18 ft^3/s Mar. 31, 1982; minimum daily, 0.11 ft^3/s Nov. 5-10, 1973, Oct. 5, 6, 25, 26, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 18 ft^3/s Apr. 12, minimum daily, 0.27 ft^3/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	.67	13	1.8	1.3	.47	6.2	10	e3.2	e6.0	2.4	1.1
2	3.1	.59	8.5	2.4	1.3	.46	6.2	8.2	e2.7	5.8	2.4	.97
3	1.4	.53	7.2	4.1	1.1	.45	6.5	11	e5.0	6.5	3.1	.91
4	.97	.53	6.5	2.2	1.5	.42	9.3	11	e4.1	7.0	3.2	.86
5	.74	.46	6.0	1.6	1.8	.39	10	10	e4.8	5.8	2.4	.83
6	.79	.44	5.6	2.2	1.2	.37	11	8.8	e4.3	5.3	2.1	.79
7	.76	.41	5.2	8.5	.98	.36	11	8.1	e3.8	4.9	2.0	.77
8	.60	.36	4.6	6.4	.90	.32	15	7.7	e3.5	6.7	2.0	.72
9	.80	.35	4.2	7.8	.86	.32	15	e7.2	e3.3	7.4	2.7	.71
10	1.3	2.0	3.8	5.3	.81	.32	17	e6.8	e3.1	6.8	6.6	.65
11	3.7	8.6	3.6	3.9	.79	.32	17	e6.5	e3.0	7.1	3.4	.65
12	2.4	4.9	3.5	3.4	.89	.45	18	e6.0	e3.0	6.4	2.5	.62
13	1.4	2.6	3.4	3.0	1.1	6.8	15	e5.4	e3.6	7.4	2.2	.73
14	.97	1.7	3.4	2.6	.83	10	12	e5.1	e4.8	7.5	4.0	.64
15	.78	1.4	3.2	2.4	2.3	7.9	8.4	e4.8	e5.6	6.8	6.1	.57
16	.66	1.1	3.1	2.3	6.3	4.6	7.8	e4.5	e4.5	6.5	3.5	.52
17	1.0	.94	2.8	2.2	2.0	4.4	7.5	e4.3	e4.2	6.2	2.9	.52
18	1.3	.91	2.6	2.2	1.3	5.0	7.5	e4.6	e10	5.4	2.4	.47
19	3.9	2.7	2.4	2.0	.97	7.4	7.1	e4.1	e11	5.6	2.1	.47
20	3.2	1.6	2.3	1.9	.82	13	6.6	e3.5	e11	5.3	e1.9	.42
21	1.5	1.1	2.2	1.8	.75	15	6.5	e3.0	e8.6	4.5	e1.8	.42
22	1.1	1.6	2.1	1.9	.67	13	6.4	e2.6	e7.0	4.2	e1.7	.42
23	.91	1.3	1.9	1.7	.62	11	5.7	e2.4	e6.0	3.8	e1.6	.37
24	2.3	1.1	1.9	1.6	.58	9.4	5.7	e2.4	e6.6	4.1	e1.5	.37
25	2.3	4.3	2.1	1.6	.61	8.3	5.3	e2.6	e13	3.8	e1.4	.37
26	1.0	8.6	1.8	1.6	.54	7.7	4.8	e3.9	e11	3.3	e1.3	.37
27	1.5	6.3	1.6	1.6	.51	9.3	5.0	e2.8	e8.0	3.2	e1.2	.37
28	1.5	9.8	1.6	1.4	.47	7.8	5.9	e2.4	e7.9	3.0	1.1	.32
29	.96	5.5	1.8	1.2	---	7.2	6.4	e3.8	e6.8	2.8	1.4	.32
30	.81	11	1.5	1.2	---	6.8	11	e7.1	e6.2	2.6	1.7	.27
31	.72	---	1.5	1.1	---	6.5	---	e4.2	---	2.5	1.3	---
TOTAL	50.87	83.39	114.9	84.9	33.80	165.75	276.8	174.8	178.6	164.2	75.9	17.52
MEAN	1.64	2.78	3.71	2.74	1.21	5.35	9.23	5.64	5.99	5.30	2.45	.58
MAX	6.5	11	13	8.5	6.3	15	18	11	13	7.5	6.6	1.1
MIN	.60	.35	1.5	1.1	.47	.32	4.8	2.4	2.7	2.5	1.1	.27
AC-FT	101	165	228	168	67	329	549	347	356	326	151	35

CAL YR 1985	TOTAL	1070.27	MEAN	2.93	MAX	13	MIN	.17	AC-FT	2120
WTR YR 1986	TOTAL	1422.43	MEAN	3.90	MAX	18	MIN	.27	AC-FT	2820

e Estimated

16604500 IAO STREAM AT KEPANIWAI PARK, NEAR WAILUKU

LOCATION.--Lat 20°53'08", long 156°32'32", Hydrologic Unit 20020000, on left bank of Maniania and Waikapu ditch intake, 0.3 mi upstream from Kepaniwai Park, 0.5 mi downstream from Iao Valley State Park, and 2.3 mi west of Wailuku Post Office.

DRAINAGE AREA.--5.98 mi^2.

PERIOD OF RECORD.--May 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 780 ft, from topographic map.

REMARKS.--Records fair. No appreciable diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,320 ft^3/s Oct. 18, 1985, gage height, 6.62 ft, from rating curve extended above 153 ft^3/s on basis of slope-area measurement at gage height 6.48 ft; minimum, 11 ft^3/s for several days in October and November 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known, 7,540 ft^3/s Dec. 3, 1950, from rating curve based on model study of site 2.3 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	0900	*3,320	*6.62	Apr. 10	1130	1,130	3.92
Nov. 30	1830	2,400	5.64				

Minimum discharge, 17 ft^3/s Feb. 14, 15, Mar. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	37	832	38	39	22	86	242	59	56	38	37
2	37	33	235	40	24	22	70	130	54	56	46	36
3	31	35	175	34	22	22	72	458	104	91	92	34
4	29	40	108	28	24	21	104	406	76	73	82	33
5	30	36	79	26	23	21	212	322	72	79	49	32
6	31	30	64	34	24	20	273	189	72	62	40	32
7	30	28	54	171	21	20	249	123	57	63	40	32
8	33	26	48	121	20	20	372	90	56	78	51	31
9	40	25	42	87	20	20	382	74	59	62	116	31
10	32	74	38	57	19	19	913	65	143	48	116	30
11	98	90	54	43	20	18	385	62	77	48	54	29
12	40	55	59	40	25	30	265	56	64	76	49	29
13	32	40	40	33	20	165	244	62	60	134	72	53
14	29	33	34	31	18	261	145	49	62	169	184	36
15	29	31	41	29	240	262	119	45	75	87	148	32
16	26	29	41	28	141	176	92	43	48	167	96	31
17	140	28	33	26	54	79	76	46	59	123	70	30
18	618	41	30	25	40	67	139	64	96	103	52	29
19	184	121	29	25	33	213	94	42	153	84	45	28
20	128	51	28	24	30	452	74	38	226	62	40	34
21	88	40	26	25	26	756	74	36	92	52	37	29
22	70	37	25	31	30	476	70	33	76	49	37	26
23	90	36	24	24	46	566	59	32	60	43	65	24
24	182	36	43	22	30	395	70	31	113	40	46	34
25	98	56	30	23	36	168	56	32	306	38	37	31
26	79	48	25	22	29	149	51	60	134	36	33	25
27	91	93	29	21	25	306	48	38	115	38	31	30
28	67	208	31	20	23	150	48	36	102	34	30	26
29	51	92	60	19	---	128	65	122	81	32	60	22
30	45	784	29	19	---	125	267	156	67	31	42	20
31	43	---	34	19	---	85	---	88	---	30	38	---
TOTAL	2585	2313	2420	1185	1102	5234	5174	3270	2818	2144	1936	926
MEAN	83.4	77.1	78.1	38.2	39.4	169	172	105	93.9	69.2	62.5	30.9
MAX	618	784	832	171	240	756	913	458	306	169	184	53
MIN	26	25	24	19	18	18	48	31	48	30	30	20
AC-FT	5130	4590	4800	2350	2190	10380	10260	6490	5590	4250	3840	1840

CAL YR 1985	TOTAL	20893	MEAN	57.2	MAX	832	MIN	12	AC-FT 41440
WTR YR 1986	TOTAL	31107	MEAN	85.2	MAX	913	MIN	18	AC-FT 61700

16614000 WAIHEE RIVER AT DAM NEAR WAIHEE

LOCATION.--LAT 20°56'21", long 156°32'59", Hydrologic Unit 20020000, on right bank at dam 8 ft upstream from the abandoned Waihee canal intake, 2.6 mi southwest from Waihee Point, and 4.4 mi northwest from Wailuku Post Office.

DRAINAGE AREA.--4.20 mi^2.

PERIOD OF RECORD.--November 1910 to December 1913, November 1983 to current year. Low-flow records not equivalent prior to Dec. 31, 1913, due to Waihee canal diverted water upstream.

GAGE.--Water-stage recorder. Elevation of gage is 605 ft, from topographic map.

REMARKS.--Records fair. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 7,550 ft^3/s Oct. 18, 1985, gage height, 8.70 ft, from rating curve extended above 280 ft^3/s on basis of slope-area measurement of peak flow; minimum, 22 ft^3/s Jan. 18-22, 24, 25, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*), from rating curve extended above 280 ft^3/s on basis as explained above:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	0800	*7,550	*6.70	June 19	2400	2,690	4.77
Apr. 5	1830	2,550	4.70				

Minimum discharge, 36 ft^3/s, Mar. 7-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	42	517	55	89	38	81	232	76	73	69	59
2	46	39	84	61	74	42	68	147	88	73	98	58
3	40	42	94	54	44	39	82	600	165	106	171	58
4	37	48	53	46	47	38	103	258	85	86	130	56
5	41	64	52	44	46	37	226	253	85	122	73	56
6	40	40	48	78	47	37	143	187	91	83	64	56
7	43	38	47	228	40	36	144	113	83	78	66	58
8	39	38	46	157	39	36	193	89	82	92	74	54
9	56	39	46	86	40	37	240	80	115	93	157	53
10	42	151	46	54	39	36	880	97	294	71	104	52
11	112	167	114	48	39	36	209	89	80	73	66	52
12	43	52	84	48	42	50	134	87	90	95	66	52
13	43	43	52	46	38	177	164	139	83	156	82	93
14	37	40	48	44	38	179	89	83	85	197	294	56
15	42	39	50	44	173	186	115	89	116	74	175	53
16	39	38	47	44	58	146	80	101	71	213	100	53
17	194	38	46	44	42	56	76	90	94	107	76	53
18	990	44	44	47	40	65	146	109	113	96	68	52
19	59	61	44	44	39	286	76	80	172	89	64	52
20	61	38	44	43	38	561	73	74	321	71	62	80
21	43	38	44	44	38	722	76	71	80	69	61	54
22	42	47	44	89	40	372	82	69	78	73	68	53
23	71	58	44	47	48	553	71	69	66	74	120	52
24	200	53	55	43	38	241	83	68	136	68	82	75
25	48	134	44	44	42	84	71	72	208	66	62	69
26	50	85	44	43	38	157	69	148	117	64	59	54
27	64	81	48	42	38	298	69	98	135	66	59	66
28	52	104	53	42	38	87	69	78	103	64	59	53
29	44	43	74	40	---	87	80	214	91	62	89	52
30	42	657	46	40	---	100	298	173	80	61	62	52
31	44	---	54	40	---	69	---	96	---	64	59	---
TOTAL	2843	2401	2156	1829	1372	4888	4290	4153	3481	2779	2839	1736
MEAN	91.7	80.0	69.5	59.0	49.0	158	143	134	116	89.6	91.6	57.9
MAX	990	657	517	228	173	722	880	600	321	213	294	93
MIN	37	38	44	40	38	36	68	68	66	61	59	52
AC-FT	5640	4760	4280	3630	2720	9700	8510	8240	6900	5510	5630	3440

CAL YR 1985	TOTAL	25452	MEAN	69.7	MAX	990	MIN	22	AC-FT	50480
WTR YR 1986	TOTAL	34767	MEAN	95.3	MAX	990	MIN	36	AC-FT	68960

16618000 KAHAKULOA STREAM NEAR HONOKOHAU
(National stream-quality accounting network station)

LOCATION.--Lat 20°58'54", long 156°33'26", Hydrologic Unit 20020000, on right bank 0.5 mi downstream from Kapuna Stream, 1.3 mi south of Kahakuloa, 2.0 mi west of Puu Makawana, and 4.3 mi southeast of Honokohau.

DRAINAGE AREA.--3.47 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1939 to August 1943, September 1947 to November 1970, December 1974 to current year. Records for January 1913 to December 1914 (fragmentary) at site 1.0 mi upstream not equivalent owing to difference in drainage areas.

REVISED RECORDS.--WSP 1319: 1948, 1949(M). WSP 1569: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 330 ft, from topographic map.

REMARKS.--Records good. No diversion upstream.

AVERAGE DISCHARGE.--37 years (1940-42, 1948-70, 1976-86), 17.1 ft^3/s (12,390 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft^3/s Nov. 25, 1970, gage height, 10.57 ft from flood-marks, from rating curve extended above 510 ft^3/s, on basis of slope-area measurements at gage heights 6.70 ft, 8.48 ft, and 10.57 ft; minimum, 2.7 ft^3/s Jan. 22, 28, 29, Feb. 10, 12, 13, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	0730	*2,020	*7.45	Mar. 21	0200	640	5.48
Dec. 1	0300	541	5.29	Apr. 10	1200	514	5.21

Minimum discharge, 4.7 ft^3/s Oct. 9, Nov. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	8.4	161	8.9	66	5.0	11	94	12	11	8.6	7.8
2	8.0	6.6	21	10	27	7.8	10	31	12	11	18	7.4
3	5.6	8.3	22	12	11	7.3	14	189	62	14	58	7.4
4	5.1	13	10	6.1	13	5.2	23	71	17	20	45	7.8
5	4.9	26	8.6	5.5	8.8	5.0	39	82	13	17	15	7.3
6	5.4	7.2	7.8	19	10	5.0	22	19	15	19	9.8	7.6
7	7.2	6.0	7.2	136	6.7	4.9	29	19	17	11	9.6	7.6
8	5.1	5.5	6.9	86	6.0	4.8	55	15	16	12	14	8.9
9	8.7	5.8	6.5	45	6.6	5.0	66	12	11	25	33	7.2
10	7.0	106	6.3	12	6.9	5.2	322	12	71	11	27	7.0
11	29	99	50	9.0	5.8	4.8	83	11	17	11	10	7.0
12	8.7	19	44	8.7	6.3	4.9	24	10	12	11	9.5	6.8
13	6.0	9.9	10	7.4	5.8	48	26	19	11	52	10	11
14	6.0	7.8	8.0	6.8	5.3	24	17	17	14	54	105	9.5
15	7.9	7.0	7.3	6.4	57	38	21	17	27	15	75	7.0
16	5.8	6.3	9.6	8.2	19	17	15	13	12	49	34	6.8
17	47	5.8	6.7	6.1	7.0	11	12	12	17	30	15	6.8
18	243	5.8	6.3	16	6.0	14	18	19	17	16	12	6.6
19	17	10	6.1	7.2	5.7	154	13	12	28	22	10	6.6
20	11	5.4	5.9	6.3	5.5	308	10	9.4	52	12	9.6	16
21	8.0	4.7	5.7	6.1	5.3	290	9.9	8.9	15	10	10	11
22	6.7	11	5.6	27	5.4	158	12	8.6	12	11	9.1	6.9
23	9.5	17	5.5	11	6.9	187	9.4	8.5	11	13	17	6.6
24	33	13	7.4	6.6	5.6	115	9.5	8.3	20	11	14	11
25	9.3	94	6.8	6.2	5.4	25	9.3	8.7	49	9.8	9.2	10
26	6.7	51	5.5	6.1	5.3	46	8.8	83	40	8.9	8.4	8.6
27	9.2	17	5.5	5.6	5.2	148	8.7	28	37	8.7	8.0	7.0
28	13	35	8.6	5.5	5.0	26	8.7	13	30	8.3	7.8	7.4
29	7.2	8.3	11	5.3	---	20	9.1	49	19	8.2	18	6.7
30	6.6	166	6.3	5.3	---	19	79	36	15	8.0	12	6.5
31	6.2	---	6.1	5.2	---	13	---	22	---	7.7	8.2	---
TOTAL	590.8	783.6	485.2	510.5	329.5	1725.9	994.4	957.4	701	527.6	649.8	241.8
MEAN	19.1	26.1	15.7	16.5	11.8	55.7	33.1	30.9	23.4	17.0	21.0	8.06
MAX	243	166	161	136	66	308	322	189	71	54	105	16
MIN	4.9	4.7	5.5	5.2	5.0	4.8	8.7	8.3	11	7.7	7.8	6.5
AC-FT	1170	1550	962	1010	654	3420	1970	1900	1390	1050	1290	480

CAL YR 1985 TOTAL 5595.4 MEAN 15.3 MAX 243 MIN 2.7 AC-FT 11100
WTR YR 1986 TOTAL 8497.5 MEAN 23.3 MAX 322 MIN 4.7 AC-FT 16850

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BARO-METRIC PRES-SURE (MM OF HG)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT										
07...	1145	754	8.6	67	7.40	22.0	1.0	8.0	93	78
DEC										
16...	1200	756	8.4	67	7.60	17.5	1.2	8.8	93	31
FEB										
18...	1215	753	5.9	79	7.60	18.5	.80	8.7	94	K5
APR										
14...	1315	752	16	69	6.50	19.5	1.1	9.2	102	43
JUN										
10...	1140	752	11	73	7.40	21.0	1.4	8.5	97	K16
AUG										
12...	1000	753	8.9	80	7.70	22.0	.60	9.0	104	59

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT									
07...	1700	17	0	3.3	2.1	6.8	45	.7	.90
DEC									
16...	830	16	0	3.0	2.0	6.6	46	.7	.80
FEB									
18...	400	21	0	4.1	2.7	7.5	42	.7	.90
APR									
14...	360	16	1	3.0	2.0	6.8	47	.8	.80
JUN									
10...	770	18	0	3.4	2.2	7.0	45	.7	.80
AUG									
12...	670	20	0	3.7	2.5	7.5	46	.8	.00

DATE	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT									
07...	22	16	18	3.9	8.8	<.10	18	59	55
DEC									
16...	21	15	17	4.9	8.1	<.10	15	51	51
FEB									
18...	27	21	22	3.4	9.6	<.10	20	57	62
APR									
14...	18	16	15	3.0	9.7	<.10	15	47	49
JUN									
10...	22	20	18	3.4	9.1	<.10	17	48	54
AUG									
12...	30	22	24	3.1	9.5	<.10	19	59	60

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

16618000 KAHAKULOA STREAM NEAR HONOKOHAU--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT									
07...	.08	<.10	.060	.020	.14	.20	.020	.020	.010
DEC									
16...	.07	.18	.030	.040	--	<.20	.020	.030	.020
FEB									
18...	.08	.10	.030	.040	.17	.20	.020	.020	.020
APR									
14...	.06	<.10	<.010	.030	--	.20	.020	.020	<.010
JUN									
10...	.07	<.10	.020	.030	.18	.20	.020	.020	.020
AUG									
12...	.08	<.10	<.010	<.010	--	.20	.030	.030	.020

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
07...	1145	50	<1	5	<.5	<1	<1	<3	2	33	1
FEB											
18...	1215	30	<1	5	<.5	<1	<1	<3	1	16	<1
APR											
14...	1315	40	<1	3	<.5	<1	<10	<3	1	32	1
AUG											
12...	1000	0	0	3	<.5	<1	<1	<3	3	16	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
07...	<4	2	.2	<10	3	<1	<1	21	<6	<3
FEB										
18...	<4	<1	<.1	<10	<1	<1	<1	28	<6	<3
APR										
14...	<4	<1	<.1	<10	1	<1	<1	21	<6	5
AUG										
12...	<4	1	.2	<10	1	<1	<1	26	<6	5

DATE	TIME	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT				
07...	1145	1	.02	100
DEC				
16...	1200	1	.02	100
FEB				
18...	1215	1	.02	100
APR				
14...	1315	1	.04	100
JUN				
10...	1140	1	.03	100
AUG				
12...	1000	1	.02	100

< Actual value is known to be less than the value shown.

16620000 HONOKOHAU STREAM NEAR HONOKOHAU

LOCATION.--Lat 20°57'48", long 156°35'22", Hydrologic Unit 20020000, on right bank 1,000 ft upstream from intake of Honokohau ditch and 4.1 mi southeast of Honokohau.

DRAINAGE AREA.--4.11 mi^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.

REVISED RECORDS.--WSP 1937: Drainage area. WDR HI-79-1: 1927-48(M), 1949-78(P).

GAGE.--Water-stage recorder and masonry control. Elevation of gage is 870 ft, from topographic map. Prior to Mar. 7, 1913, nonrecording gage at site just below Honokohau ditch intake at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion upstream. All medium and low flow, together with the inflow from two development tunnels downstream of station, is diverted into Honokohau ditch. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--70 years (water years 1914-19, 1923-86) 39.3 ft^3/s (28,470 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft^3/s revised, Dec. 14, 1942, gage height, 8.40 ft, from rating curve extended above 547 ft^3/s, on basis of slope-area measurement at gage height 6.76 ft; minimum, 8.4 ft^3/s May 1, 1945, Jan. 5, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 18	0800	*2,680	*6.45	Nov. 30	1830	1,600	5.65

Minimum discharge, 13 ft^3/s Mar. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	18	e460	e21	61	13	43	135	30	28	35	24
2	17	15	e54	e26	21	14	32	65	29	29	38	20
3	14	15	e56	e30	17	13	38	336	68	71	81	20
4	14	21	e27	e17	25	13	75	174	43	58	68	21
5	14	19	e21	e15	18	13	133	189	42	49	34	19
6	16	15	e19	e50	17	13	92	112	40	39	26	19
7	18	14	e18	e210	15	13	71	51	39	35	27	20
8	17	14	e17	e62	15	13	137	34	47	53	40	22
9	35	14	e16	e32	15	13	179	32	61	42	123	20
10	18	77	e15	e27	15	13	635	36	174	28	79	20
11	103	67	e93	e23	15	13	128	47	40	31	28	20
12	19	23	e72	e20	17	18	91	41	30	54	32	20
13	17	16	e24	e18	15	133	107	52	38	93	52	24
14	14	15	e20	e16	15	165	43	35	55	131	176	23
15	15	15	e18	16	142	162	50	34	68	34	83	21
16	14	14	e20	16	31	77	32	39	32	155	38	21
17	74	14	e18	16	16	25	29	42	54	63	28	21
18	339	14	e17	16	15	24	47	71	71	46	26	20
19	25	40	e16	15	15	139	33	33	104	45	25	20
20	38	15	e15	15	14	269	30	31	148	28	25	23
21	18	14	e14	15	14	655	36	29	37	27	24	23
22	16	15	e14	24	14	177	45	29	32	31	27	20
23	38	21	e14	17	23	221	30	29	28	34	65	20
24	122	15	e20	16	15	102	45	28	86	26	42	31
25	21	93	e16	15	16	31	30	29	156	26	25	26
26	22	45	e14	15	14	55	28	51	48	25	24	22
27	44	43	e14	15	14	128	29	33	47	27	24	29
28	27	63	e19	15	13	33	30	30	53	26	23	22
29	17	17	e24	15	---	55	38	82	37	25	47	20
30	17	619	e16	15	---	62	202	83	33	25	29	20
31	20	---	e15	15	---	26	---	38	---	24	28	---
TOTAL	1261	1400	1196	838	637	2701	2538	2050	1770	1408	1422	651
MEAN	40.7	46.7	38.6	27.0	22.8	87.1	84.6	66.1	59.0	45.4	45.9	21.7
MAX	339	619	460	210	142	655	635	336	174	155	176	31
MIN	14	14	14	15	13	13	28	28	28	24	23	19
AC-FT	2500	2780	2370	1660	1260	5360	5030	4070	3510	2790	2820	1290

CAL YR 1985	TOTAL	12007.6	MEAN	32.9	MAX	619	MIN	8.5	AC-FT 23820
WTR YR 1986	TOTAL	17872	MEAN	49.0	MAX	655	MIN	13	AC-FT 35450

e Estimated

16638500 KAHOMA STREAM AT LAHAINA

LOCATION.--Lat 20°53'10", long 156°40'36", Hydrologic Unit 20020000, on right bank 0.2 mi west of Kelawea, 0.6 mi northeast of Lahaina, 0.6 mi downstream from Kanaha Stream, and 0.9 mi upstream from mouth.

DRAINAGE AREA.--5.22 mi^2.

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

REVISED RECORDS.--WSP 2137: 1963-65(P).

GAGE.--Water-stage recorder. Elevation of gage is 90 ft, from topographic map.

REMARKS.--Records fair. Diversions upstream by Pioneer Mill Co. for irrigation of sugarcane and from Kanaha Stream 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 elsewhere in this report.

AVERAGE DISCHARGE.--23 years (water years 1964-86), 3.31 ft^3/s (2,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft^3/s July 11, 1965, gage height, 11.03 ft, from rating curve extended above 332 ft^3/s on basis of slope-area measurements at gage heights 7.39 ft, 7.58 ft, 8.07 ft, 9.12 ft, and 11.03 ft; no flow many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 13, 1960, reached a discharge of 7,750 ft3/s, by slope-area measurement, 0.6 mi upstream from station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 898 ft^3/s Oct. 18, gage height, 7.75 ft, no other peak greater than base discharge of 590 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	52	.00	.00	.00	.00	.23	.00	.00	.00	.00
2	.00	.00	.01	.00	.00	.00	.09	.00	.00	.00	.00	.28
3	.00	.00	.00	.00	.00	.00	.00	6.4	.00	24	.00	.76
4	.00	.00	.00	.00	.00	.00	6.8	33	.00	8.3	.00	.00
5	.00	.00	.00	.00	.00	.00	.92	37	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	14	1.2	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	1.5	.05	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	93	.00	.00	.41	.00	.00
9	.00	.00	.00	.00	.00	.00	140	.00	.00	.00	1.6	.00
10	.00	.00	.00	.00	.00	.00	176	.00	1.2	.00	5.5	.00
11	.12	.00	.00	.00	.00	.00	21	.00	.46	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	9.2	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	23	5.9	.00	.00	3.1	.00	.00
14	.00	.00	.00	.00	.00	72	.10	.00	5.4	7.3	.46	.00
15	.00	.00	.00	.00	6.3	12	.01	.00	.00	.08	.11	.00
16	.00	.00	.00	.00	2.7	.11	.00	.00	1.1	4.2	.00	.00
17	.66	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	.00
18	154	.00	.00	.00	.00	.00	.00	.00	20	.00	.00	.00
19	2.8	.00	.00	.00	.00	.00	.00	.00	23	.00	.00	.00
20	6.7	.00	.00	.00	.00	.00	.00	.00	29	.00	.00	.00
21	.42	.00	.00	.00	.00	1.3	.00	.00	.01	.00	.00	.00
22	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	3.6	.00	.00	.00	.00	.00	.00	.00	3.2	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	64	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.79	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	72	.00	.00	---	.00	3.9	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	168.30	72.00	52.01	.00	9.00	108.42	475.21	77.88	147.42	47.63	7.67	1.04
MEAN	5.43	2.40	1.68	.00	.32	3.50	15.8	2.51	4.91	1.54	.25	.035
MAX	154	72	52	.00	6.3	72	178	37	64	24	5.5	.76
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	334	143	103	.00	18	215	943	154	292	94	15	2.1

CAL YR 1985	TOTAL	911.65	MEAN	2.50	MAX	165	MIN	.00	AC-FT	1810
WTR YR 1986	TOTAL	1166.58	MEAN	3.20	MAX	178	MIN	.00	AC-FT	2310

16700000 WAIAKEA STREAM NEAR MOUNTAIN VIEW

LOCATION.--Lat 19°38'30", long 155°10'28", Hydrologic Unit 20010000, on left bank 200 ft upstream from Olaa Flume Road, 7.3 mi northwest of Mountain View, and 8.0 mi southwest of Hilo Post Office.

DRAINAGE AREA.--17.4 mi^2.

PERIOD OF RECORD.--September 1930 to current year. Prior to July 1960, published as "at middle flume house, near Mountain View."

REVISED RECORDS.--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).

GAGE.--Water-stage recorder and combined Parshall flume and concrete-weir control. Datum of gage is 1,934 ft above mean sea level (by stadia survey). Prior to Jan. 21, 1938, at datum 0.23 ft lower.

REMARKS.--Records good. No diveraion upstream. Large part of flow comes from 3 tunnels. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--58 yeara, 11.7 ft^3/s (8,480 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 585 ft^3/s Mar. 14, 1942, Aug. 26, 1970, from rating curve extended above 160 ft^3/s; maximum gage height, 4.45 ft Aug. 26, 1970; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum diacharge, 89 ft^3/s Apr. 10, gage height, 3.39 ft, no peak greater than base discharge of 100 ft^3/s; no flow Mar. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	9.9	16	.75	.40	.01	6.3	27	12	14	13	7.5
2	16	9.3	10	1.2	.28	.01	5.7	26	12	13	12	6.9
3	16	8.7	7.5	1.9	.20	.01	13	24	12	14	12	6.5
4	15	8.1	6.6	1.0	.16	.01	21	22	12	24	11	6.3
5	14	7.5	6.0	.80	.12	.00	18	19	12	22	9.9	5.8
6	13	6.9	5.5	.75	.08	.00	24	19	12	23	9.3	5.5
7	13	6.3	5.0	2.6	.05	.01	24	23	12	22	8.5	5.2
8	17	6.0	4.8	3.9	.05	.01	33	18	11	24	8.5	5.3
9	15	5.8	4.4	5.5	.05	.03	50	18	11	24	8.4	4.8
10	15	5.2	4.2	5.0	.05	.01	66	19	10	23	7.8	4.6
11	16	4.8	4.1	4.1	.08	.01	86	18	9.7	22	7.1	4.3
12	15	4.4	4.0	3.5	.08	.01	58	20	9.3	21	7.0	4.3
13	14	4.2	3.8	2.9	.08	.03	48	20	8.8	19	6.7	5.4
14	13	4.0	3.5	2.4	.08	.05	53	20	10	19	22	4.6
15	13	4.7	3.3	2.2	.08	.08	31	21	10	20	20	4.1
16	12	4.5	3.2	2.0	.08	2.0	28	20	11	19	18	3.9
17	12	3.8	3.0	1.9	.05	.40	27	20	11	18	18	3.8
18	11	3.4	2.7	1.6	.05	.36	24	18	11	17	17	4.7
19	10	3.2	2.5	1.4	.08	.18	22	18	16	19	16	8.2
20	11	3.0	2.2	1.2	.08	.20	19	18	17	17	15	10
21	9.9	2.8	2.0	1.2	.08	2.3	18	17	19	16	13	9.0
22	9.4	2.4	1.9	1.0	.05	4.2	17	17	18	16	12	8.2
23	9.2	2.3	1.8	1.0	.05	6.4	18	16	18	26	11	7.5
24	13	2.0	1.7	.85	.05	4.6	17	15	18	22	11	8.1
25	12	1.9	1.5	.90	.05	3.0	16	14	18	21	9.9	8.9
26	13	1.8	1.4	.80	.05	2.1	19	13	17	19	9.2	9.1
27	13	2.8	1.2	.75	.03	3.3	21	12	17	18	8.3	16
28	13	2.4	1.0	.70	.03	3.1	25	11	16	17	7.6	16
29	12	2.0	1.2	.60	---	3.5	26	10	15	16	8.3	15
30	11	1.7	.85	.52	---	5.4	27	14	14	15	8.8	15
31	11	---	.70	.44	---	6.5	---	12	---	14	8.2	---
TOTAL	404.5	135.6	117.55	55.46	2.55	47.80	841.0	559	399.8	594	354.5	224.5
MEAN	13.0	4.52	3.79	1.79	.091	1.54	28.0	18.0	13.3	19.2	11.4	7.48
MAX	17	9.9	18	5.5	.40	6.5	68	27	19	26	22	16
MIN	9.2	1.7	.70	.44	.03	.00	5.7	10	8.8	13	6.7	3.8
AC-FT	802	289	233	110	5.1	95	1670	1110	793	1180	703	445

CAL YR 1985	TOTAL	4072.85	MEAN	11.2	MAX	60	MIN	.12	AC-FT	8080
WTR YR 1986	TOTAL	3738.26	MEAN	10.2	MAX	66	MIN	.00	AC-FT	7410

16700900 OLAA FLUME SPRING NEAR KAUMANA

LOCATION.--Lat 19°41'59", long 155°11'13", Hydrologic Unit 20010000, on left bank 58 ft downstream from tunnel entrance, 3.3 mi northwest of Kaumana School, and 6.5 mi southwest of Hilo Post Office.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,970 ft, from topographic map.

REMARKS.--Records good. County of Hawaii, Department of Water Supply, diverts by 16-inch pipeline 50 ft upstream for domestic use in the Kaumana and Piihonua areas since Oct. 2, 1978. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 7.39 ft^3/s (5,350 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft^3/s Jan. 8, 1975; minimum daily, 0.02 ft^3/s Mar. 24, 26-30, Apr. 1, 1983, Sept. 19, 1984, and for many days in 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 22 ft^3/s Apr. 10, 11; minimum daily, 0.03 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.0	.07	.03	.10	.10	9.1	7.2	5.2	5.4	4.9	4.1
2	8.3	2.7	.84	.04	.10	.15	7.2	8.7	4.2	5.6	4.6	4.0
3	8.1	2.5	.44	.04	.10	.10	6.0	5.2	3.5	6.3	5.6	3.5
4	8.0	2.4	.05	.04	.10	.07	13	5.1	4.4	8.8	6.3	3.4
5	4.4	2.0	.68	.04	.10	.07	15	4.7	5.8	12	5.2	3.2
6	3.5	1.8	1.4	.03	.10	.05	14	4.1	6.3	12	4.4	3.0
7	2.8	.84	.60	.03	.10	.10	14	4.4	3.0	12	3.6	3.0
8	3.4	.07	.10	.04	.07	.07	15	7.0	4.0	13	3.5	2.8
9	7.2	.07	.04	.04	.07	.07	18	6.1	4.4	13	3.5	3.2
10	8.3	.07	.04	.10	.05	.05	22	6.1	4.0	13	4.2	3.2
11	7.4	.07	.04	.10	.05	.05	22	7.0	2.6	14	4.2	3.1
12	7.2	.07	.03	.10	.05	.05	20	11	1.5	9.1	3.5	1.7
13	6.1	.05	.03	.10	.07	.05	17	16	1.0	6.3	3.1	.44
14	4.6	.05	.03	.10	.10	.07	14	14	1.4	9.7	6.3	.28
15	4.2	.05	.03	.10	.05	.10	13	13	3.8	12	15	.36
16	4.1	.05	.03	.10	.04	.15	12	13	7.6	14	14	.36
17	2.6	.05	.03	.10	.04	.15	11	13	8.6	14	12	.36
18	2.0	.05	.03	.10	.05	.15	10	13	6.3	12	11	.36
19	2.5	.05	.03	.10	.05	.15	9.4	12	6.5	9.7	8.3	.36
20	2.0	.05	.03	.10	.10	.15	9.1	12	12	4.1	7.2	2.8
21	2.5	.05	.03	.10	.10	.15	9.4	13	11	4.9	7.6	6.1
22	3.4	.05	.03	.10	.07	.28	9.4	11	10	3.6	6.3	5.2
23	3.5	.05	.03	.10	.07	8.7	8.6	9.7	10	5.8	5.2	4.7
24	2.7	.05	.03	.10	.07	11	8.6	8.1	12	12	4.4	4.1
25	5.1	.05	.03	.10	.07	9.7	9.7	6.3	12	12	3.8	4.4
26	7.2	.05	.03	.10	.07	6.7	10	5.2	12	11	3.6	4.1
27	5.1	.05	.03	.10	.10	4.6	10	4.4	11	7.6	3.5	8.3
28	5.2	.05	.03	.10	.15	5.2	11	3.6	8.3	7.2	2.8	12
29	5.2	.05	.03	.10	---	5.2	12	2.6	7.2	7.4	2.5	12
30	4.2	.05	.03	.10	---	7.4	9.1	1.9	5.8	6.1	2.6	13
31	3.4	---	.03	.10	---	9.7	---	5.2	---	5.6	3.0	---
TOTAL	148.2	16.49	4.90	2.53	2.19	70.53	368.6	251.6	195.4	289.0	175.7	117.42
MEAN	4.78	.55	.16	.082	.078	2.28	12.3	8.12	6.51	9.32	5.67	3.91
MAX	8.3	3.0	1.4	.10	.15	11	22	16	12	14	15	13
MIN	2.0	.05	.03	.03	.04	.05	6.0	1.9	1.0	3.6	2.5	.28
AC-FT	294	33	9.7	5.0	4.3	140	731	499	388	573	349	233

CAL YR 1985	TOTAL	1303.80	MEAN	3.57	MAX	22	MIN	.02	AC-FT	2590
WTR YR 1986	TOTAL	1642.56	MEAN	4.50	MAX	22	MIN	.03	AC-FT	3260

18700950 LYMAN SPRINGS NO. 2 NEAR PIIHONUA

LOCATION.--Lat 19°42'02", long 155°10'36", Hydrologic Unit 20010000, on right bank 3 ft downstream from tunnel entrance, 2.7 mi southwest of Piihonua, and 5.8 mi southwest of Hilo Post Office.

PERIOD OF RECORD.--February 1981 to current year.

GAGE.--Water-stage recorder and concrete control. Elavation of gage is 1,700 ft, from topographic map.

REMARKS.--Records good except for estimatsd daily discharges, which are fair. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this raport.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily diacharge, 23 ft^3/s Apr. 10, 1988; minimum daily, 0.03 ft^3/s Mar. 23, 24, 31, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 23 ft^3/s Apr. 10; minimum daily, 0.07 ft^3/a Mar. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.0	4.5	7.9	1.2	.90	.11	5.7	e8.5	5.1	5.3	5.2	4.4
2	e7.5	4.4	4.5	1.4	.78	.11	5.4	e8.0	4.9	5.1	5.3	4.4
3	e7.5	4.3	4.2	2.0	.73	.13	9.2	e8.0	5.8	5.6	5.7	4.3
4	e7.0	4.3	4.1	1.6	.70	.11	12	e7.5	5.3	9.0	5.1	4.3
5	e7.0	e4.5	4.1	1.4	.66	.11	8.1	e7.0	5.8	7.8	4.9	4.1
6	e8.5	e4.0	4.1	1.2	.66	.09	10	e7.0	5.1	8.3	4.9	4.0
7	e6.5	e4.0	4.0	1.8	.62	.09	7.9	e7.5	5.1	6.0	4.8	4.0
8	e8.0	e4.0	4.0	4.3	.61	.09	12	e7.0	5.3	8.0	4.9	4.4
9	e7.5	e3.5	3.9	3.6	.58	.09	16	e7.0	5.2	6.1	4.9	4.0
10	e7.0	e3.5	3.9	3.8	.54	.09	23	e7.0	4.9	6.1	5.2	4.0
11	e7.5	e3.5	3.9	3.5	.49	.09	20	e6.5	4.8	5.8	4.8	4.0
12	e7.0	e3.0	3.8	3.5	.45	.07	16	e8.5	4.5	5.6	5.2	4.0
13	e6.5	e3.0	3.6	3.4	.42	.07	15	e6.5	4.5	6.0	5.2	3.9
14	e6.5	e3.0	3.5	3.2	.40	.34	16	e8.0	5.4	5.8	12	3.6
15	e6.0	e3.5	3.4	3.1	.38	.60	14	e6.0	5.4	6.3	7.2	3.5
16	e6.0	e3.5	3.2	3.0	.38	.99	e12	e6.0	5.8	6.0	6.3	3.8
17	e5.5	e3.0	3.1	2.9	.34	1.2	e10	6.6	5.2	5.6	6.3	3.8
18	e5.5	e3.0	3.1	2.8	.29	1.1	e9.0	6.2	5.4	5.4	5.8	3.6
19	e5.0	e2.5	3.0	2.5	.23	1.1	e8.5	6.5	7.8	5.3	5.4	3.9
20	e5.5	e2.5	2.9	2.3	.20	2.1	e8.0	6.7	6.5	5.2	5.2	5.3
21	e5.0	e2.0	2.7	2.1	.20	5.1	e7.5	5.9	6.1	5.1	5.1	5.1
22	e4.8	e2.5	2.4	2.0	.20	6.2	e7.5	5.8	5.7	5.1	4.9	4.9
23	4.8	e2.5	2.2	1.8	.19	7.9	e7.5	5.6	6.0	8.5	4.9	4.6
24	7.1	e3.0	2.0	1.7	.16	5.6	e7.0	5.5	5.7	6.7	4.7	4.6
25	5.7	e3.0	1.8	1.6	.13	5.2	e7.0	5.3	6.0	6.0	4.7	5.0
26	5.5	3.0	1.7	1.6	.13	5.0	e7.5	5.3	5.8	5.6	4.5	6.0
27	5.2	3.0	1.5	1.3	.13	5.7	e7.5	5.2	5.6	5.4	4.5	7.8
28	5.2	2.2	1.5	1.2	.11	5.2	e8.0	5.0	5.3	5.3	4.4	6.4
29	4.9	1.7	1.5	1.1	---	5.4	e8.5	4.9	5.1	5.2	5.3	6.1
30	4.8	2.4	1.4	1.0	---	5.9	e8.5	6.4	5.2	5.2	4.9	5.5
31	4.6	---	1.3	.95	---	5.8	---	5.3	---	5.2	4.5	---
TOTAL	191.1	96.8	98.2	68.65	11.61	71.68	314.3	198.2	163.9	183.6	166.7	137.3
MEAN	6.16	3.23	3.17	2.21	.41	2.31	10.5	6.39	5.46	5.92	5.38	4.58
MAX	8.0	4.5	7.9	4.3	.90	7.9	23	8.5	7.6	9.0	12	7.8
MIN	4.8	1.7	1.3	.95	.11	.07	5.4	4.9	4.5	5.1	4.4	3.5
AC-FT	379	192	195	136	23	142	623	393	325	364	331	272

CAL YR 1985	TOTAL	1850.41	MEAN	5.07	MAX	21	MIN	.82	AC-FT	3670
WTR YR 1986	TOTAL	1702.04	MEAN	4.66	MAX	23	MIN	.07	AC-FT	3380

s Estimated

16704000 WAILUKU RIVER AT PIIHONUA

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

DRAINAGE AREA.--230 mi^2, of which 81 mi^2 probably is noncontributing.

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

REVISED RECORDS.--WSP 865: 1928-36(M). WSP 965: 1941. WDR HI-80-1: 1929-79(P). WDR HI-81-1: 1940(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft, from topographic map. Prior to Nov. 16, 1977, at opposite site on left bank at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Hawaii County Department of Water Supply diverts about 6 ft^3/s upstream for domestic supply. Kapehu ditch diverted from Kapehu Stream into Wailuku River upstream 1938-63. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--55 years (water years 1929-39, 1942-47, 1949-86), 281 ft^3/s (203,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,200 ft^3/s, revised, Aug. 11, 1940, gage height, 28.8 ft, from floodmarks, from rating curve extended above 13,000 ft^3/s; minimum, 0.15 ft^3/s Jan. 20, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,700 ft^3/s end maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	2030	31,200	21.49	Apr. 10	1300	*40,500	*23.11

Minimum discharge, 0.45 ft^3/s Feb. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	72	388	6.0	1.4	.63	188	507	116	154	106	e80
2	238	62	172	7.1	1.4	.67	131	417	96	139	110	e45
3	167	53	90	14	1.4	1.1	e3500	355	134	234	171	e35
4	137	47	78	10	1.3	.68	e2000	261	140	910	112	34
5	115	41	83	6.9	1.2	.63	1090	205	166	903	89	34
6	102	36	60	4.9	1.1	.62	1490	200	113	834	76	34
7	106	34	48	10	1.3	1.2	821	541	109	393	70	33
8	414	37	40	62	1.2	1.2	e2500	273	189	334	79	32
9	305	30	35	78	1.1	.82	e5000	369	156	320	85	32
10	228	28	32	71	1.1	.73	e17000	706	128	366	107	32
11	232	23	29	35	1.1	.70	e9000	670	102	287	71	32
12	192	21	26	24	1.1	.67	e2000	1230	87	228	96	30
13	144	19	24	19	.93	.68	1250	524	78	400	109	29
14	126	17	21	16	.74	2.6	1080	352	255	300	702	e35
15	131	35	19	13	.72	7.8	787	403	218	337	887	e25
16	111	126	18	12	.82	251	545	383	334	453	474	e20
17	102	43	16	10	.62	104	410	399	191	247	346	e17
18	103	25	15	8.8	.53	31	310	316	177	189	295	e14
19	428	23	14	8.3	.76	18	249	278	778	158	214	e15
20	385	22	12	8.5	.64	27	322	422	739	137	181	e150
21	73	18	11	9.0	.84	189	288	280	528	109	130	e110
22	126	17	9.7	8.3	.66	452	234	226	351	100	108	e75
23	109	27	9.4	6.5	.63	1090	204	190	323	884	e90	e40
24	340	21	8.6	4.6	.64	342	570	154	295	537	e75	e35
25	330	17	7.4	4.0	.62	180	551	130	292	406	e60	e70
26	293	17	7.1	4.0	.60	98	331	110	265	260	e50	e200
27	201	18	7.0	3.8	.81	111	481	95	208	213	e40	e1000
28	160	23	7.4	3.1	.67	113	1610	85	172	179	e35	e400
29	124	17	9.1	2.7	---	176	816	76	142	138	e100	e600
30	103	9.8	8.5	1.7	---	277	567	279	156	124	e175	e350
31	85	---	6.1	1.5	---	267	---	149	---	112	e90	---
TOTAL	8102	978.8	1311.3	473.7	25.53	3726.73	55305	10585	7038	10183	5313	3638
MEAN	197	32.6	42.3	15.3	.91	120	1844	341	235	328	171	121
MAX	428	126	388	78	1.4	1090	17000	1230	778	910	887	1000
MIN	73	9.8	6.1	1.5	.53	.62	131	76	78	100	35	14
AC-FT	12100	1940	2600	940	51	7390	109700	21000	13960	20200	10540	7220

CAL YR 1985 TOTAL 103709.84 MEAN 284 MAX 12500 MIN .97 AC-FT 205700
WTR YR 1986 TOTAL 104680.06 MEAN 287 MAX 17000 MIN .53 AC-FT 207600

e Estimated

16713000 WAILUKU RIVER AT HILO
(National stream-quality accounting network station)

LOCATION.--Lat 19°43'43", long 155°05'40", Hydrologic Unit 20010000, on right bank 500 ft upstream from Wailuku bridge and 0.2 mi west of Hilo Post Office.

DRAINAGE AREA.--256 mi^2, of which 81 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1977 to September 1979, June 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft, from topographic map.

REMARKS.--Records good. Hilo Electric Light Co. diverts upstream for Hydro-plant use.

AVERAGE DISCHARGE.--8 years (water years 1978, 1979, 1981-86), 390 ft^3/s (282,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,500 ft^3/s Nov. 17, 1979, gage height, 34.57 ft, from floodmarks and from rating curve extended above 6,840 ft^3/s on basis of slope-area measurements at gage heights 23.30 ft and 34.57 ft; minimum, 4.6 ft^3/s July 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft^3/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	2030	*59,100	*32.18	Aug. 14	1930	14,950	15.11
Apr. 10	1330	55,300	30.78				

Minimum discharge, 7.6 ft^3/s, Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	692	112	866	13	16	15	370	960	216	319	162	93
2	494	79	435	14	15	14	230	810	175	272	171	59
3	355	60	210	31	14	17	5060	700	242	477	304	37
4	258	45	188	21	13	14	3380	530	262	1490	171	31
5	210	35	192	13	12	12	2190	418	295	1480	120	24
6	188	30	134	12	12	11	2710	493	200	1100	91	25
7	157	28	104	76	11	14	1640	1260	210	725	77	28
8	788	27	83	200	11	13	4450	600	355	626	136	124
9	620	30	72	210	9.6	12	7510	861	295	620	118	95
10	432	34	64	180	9.0	11	21100	1330	226	676	141	39
11	452	26	59	69	7.9	10	12800	1170	179	548	76	26
12	385	23	52	38	11	10	3060	1920	153	432	105	20
13	280	25	46	25	20	11	1820	1380	130	805	169	21
14	222	22	40	18	19	21	1660	648	459	628	2640	42
15	230	46	36	16	18	46	1220	725	370	668	1580	33
16	190	268	30	20	17	431	925	710	600	850	810	23
17	166	105	26	37	16	288	710	700	340	491	608	22
18	155	57	26	39	17	81	568	568	322	379	533	19
19	773	51	23	38	18	47	468	512	1240	307	385	20
20	843	44	21	37	18	54	552	725	1140	265	292	264
21	307	37	19	37	17	757	505	502	825	206	228	210
22	198	30	19	39	17	962	452	410	584	186	184	105
23	164	43	21	33	16	2160	385	352	580	1410	150	55
24	662	40	19	29	17	750	887	283	533	985	120	52
25	660	30	17	26	17	410	925	242	540	700	92	120
26	596	26	16	26	16	280	588	206	491	470	69	412
27	388	24	14	25	15	319	788	177	397	400	52	1700
28	313	30	15	23	16	316	3350	157	331	334	45	759
29	222	26	18	21	---	388	1910	139	275	226	170	945
30	182	17	21	19	---	552	940	534	310	200	263	536
31	136	---	16	17	---	540	---	286	---	175	167	---
TOTAL	11698	1450	2902	1402	415.5	8566	83151	20308	12275	18432	10228	5939
MEAN	377	48.3	93.6	45.2	14.8	276	2772	655	409	595	330	198
MAX	843	268	866	210	20	2160	21100	1920	1240	1490	2640	1700
MIN	136	17	14	12	7.9	10	230	139	130	175	45	19
AC-FT	23200	2660	5760	2780	824	16990	164900	40260	24350	36560	20290	11780

CAL YR 1985 TOTAL 176451.5 MEAN 483 MAX 16600 MIN 8.6 AC-FT 350000
WTR YR 1986 TOTAL 176767.5 MEAN 484 MAX 21100 MIN 7.9 AC-FT 350600

18713000 WAILUKU RIVER AT HILO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1982 to April 1984, June 1984 to April 1985, June 1985 to September 1985 (discontinued).
WATER TEMPERATURE: October 1982 to April 1984, June 1984 to September 1985 (discontinued).
SUSPENDED SEDIMENT DISCHARGE: March 1977 to September 1979. June 1980 to December 1983.

INSTRUMENTATION.--Automatic pumping sediment sampler March 1977 to December 1983.

REMARKS.--Water-quality samples were collected at this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 166 microsiemens/cm at 25°C Nov. 15, 1983; minimum, 6 microsiemens/cm at 25°C Mar. 6, 1985.
WATER TEMPERATURES: Maximum, 25.5°C July 18, 19, Oct. 7, 8, 1984, July 14, 15, 1985; minimum, 16.5°C Feb. 27, 28, Mar. 1, 6, 7, 1985.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 292 mg/L Sept. 21, 1980; minimum daily mean, 0 mg/L on several days in 1981, 1982, and 1983.
SEDIMENT DISCHARGE: Maximum daily, 14,100 tons Feb. 20, 1979; minimum daily, 0 ton on several days in 1981, 1982, and 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT 29...	0830	760	230	49	7.00	19.0	1.3	9.3	101	70
DEC 16...	1230	755	32	70	7.60	20.0	.90	9.0	100	57
FEB 24...	0900	755	18	90	7.50	20.0	.50	9.0	100	K11
MAY 12...	0815	755	2600	25	6.50	19.0	2.1	9.2	100	110
JUN 17...	0830	755	346	34	6.80	19.0	1.8	9.2	100	78
AUG 18...	0845	755	552	40	6.70	18.5	1.0	9.3	100	140

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT 29...	130	17	0	3.4	2.1	3.0	27	.3	.40
DEC 16...	120	26	2	5.2	3.1	4.0	25	.4	.80
FEB 24...	1800	36	2	6.9	4.6	5.1	23	.4	.70
MAY 12...	520	6	1	1.2	.80	2.0	39	.4	.30
JUN 17...	300	11	2	2.1	1.3	2.3	31	.3	.30
AUG 18...	630	13	1	2.7	1.8	2.9	31	.4	.40

K Results based on colony count outside the acceptable range (non-ideal colony count).

16713000 WAILUKU RIVER AT HILO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CAC03)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT 29...	20	15	16	4.8	3.8	<.10	11	44	39
DEC 16...	29	25	24	4.0	5.1	<.10	16	44	53
FEB 24...	42	34	35	3.2	6.2	<.10	17	74	65
MAY 12...	6.0	6.0	5.0	4.3	3.4	<.10	4.3	24	20
JUN 17...	10	11	10	4.6	3.2	<.10	7.3	27	26
AUG 18...	15	14	12	3.4	3.4	.00	10	35	32

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
OCT 29...	.06	.18	.130	.130	--	<.20	.050	.050	.030
DEC 16...	.06	.17	.040	.040	--	<.20	<.010	<.010	.010
FEB 24...	.10	.13	.050	.040	.15	.20	<.010	<.010	<.010
MAY 12...	.03	.12	.100	.100	.20	.30	.030	.050	.040
JUN 17...	.04	<.10	.080	.080	.22	.30	.010	<.010	<.010
AUG 18...	.05	.13	.050	.070	--	<.20	.010	.020	<.010

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
DEC 16...	1230	40	<1	5	<.5	<1	<1	<3	2	100	2	<4
FEB 24...	0900	20	<1	6	<.5	<1	2	<3	5	66	4	<4
AUG 18...	0845	40	<1	5	<.5	<10	<1	<3	3	83	<5	<4

DATE	TIME	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
DEC 16...	1230	4	--	<.1	<10	1	<1	<1	32	<6	6
FEB 24...	0900	--	--	<.1	<10	5	<1	<1	49	<6	12
JUN 17...	0630	--	<.10	--	--	--	--	--	--	--	--
AUG 18...	0645	3	--	<.1	<10	<1	0	<1	20	<6	8

< Actual value is known to be less than the value shown.

HAWAII, ISLAND OF HAWAII

16713000 WAILUKU RIVER AT HILO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	0830	2	1.2	100
DEC 16...	1230	1	.09	100
FEB 24...	0900	1	.05	100
MAY 12...	0815	12	84	100
JUN 17...	0830	2	1.9	--
AUG 18...	0845	1	1.5	100

16717000 HONOLII STREAM NEAR PAPAIKOU
(Hydrologic bench-mark station)

LOCATION.--Lat 19°46'00", long 155°09'16", Hydrologic Unit 20010000, on left bank 0.7 mi downstream from Pohakupaa Stream, 4.1 mi west of Papaikou, and 4.8 mi northwest of Hilo Post Office.

DRAINAGE AREA.--11.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1911 to March 1913 (published as "at Kaiwiki, near Hilo"), February 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gege is 1,540 ft, 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 upstream at different datum.

REMARKS.--Records good. No diversion upstream. During period 1911-13, Honolii ditch diverted an average of about 3.2 ft^3/s upstream for fluming cane and domestic use.

AVERAGE DISCHARGE.--20 years, 126 ft^3/s (91,290 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft^3/s May 23, 1978, gege height, 20.00 ft, from floodmarks and from rating curve extended above 4,610 ft^3/s on basis of slope-area measurement at gage height 20.00 ft; minimum, 0.8 ft^3/s Jan. 31, 1912.

EXTREMES FOR CURRENT YEAR.--Peak dischsrges greater than base discharge of 4,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 3	2030	*20,800	*19.85	Apr. 10	1300	9,700	16.10

Minimum discharge, 5.3 ft^3/s, Mar. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	26	579	15	8.4	5.8	76	247	71	93	63	57
2	87	23	128	26	8.3	6.0	47	162	54	88	72	40
3	59	21	61	43	8.0	6.2	2320	117	96	198	145	34
4	45	20	74	18	7.8	5.7	966	78	84	757	74	34
5	40	19	56	14	7.5	5.7	576	61	101	367	57	30
6	45	18	33	12	7.7	7.1	1000	74	55	205	50	30
7	52	17	24	43	7.4	7.2	341	274	79	118	51	29
8	233	27	21	105	7.2	5.8	2320	94	120	161	78	47
9	154	17	18	148	7.2	5.7	2750	278	84	144	71	43
10	92	17	17	93	7.1	5.5	5640	335	57	149	65	30
11	116	15	17	40	7.0	5.5	2930	284	43	131	46	28
12	88	15	19	26	7.0	5.4	407	508	37	98	74	28
13	54	14	15	20	6.7	5.6	222	118	36	285	83	27
14	46	13	15	17	6.7	14	267	86	175	143	838	27
15	50	22	14	16	6.5	34	161	153	137	228	321	27
16	52	66	13	15	6.4	251	114	134	183	198	151	27
17	50	26	12	13	6.4	74	95	136	76	89	115	27
18	42	18	12	13	6.4	24	72	99	78	72	102	27
19	322	16	11	13	6.4	14	62	101	503	62	80	33
20	201	16	10	14	6.2	19	82	189	268	60	69	40
21	80	14	10	15	6.3	455	93	90	191	51	60	49
22	51	13	9.9	17	6.2	725	104	73	112	50	50	31
23	44	15	11	13	6.2	691	82	64	139	570	45	35
24	234	15	9.7	11	6.2	117	370	54	134	251	41	41
25	149	14	9.3	10	5.9	49	212	49	149	141	36	66
26	135	13	9.0	12	5.8	32	101	41	127	84	33	193
27	74	14	9.2	13	6.0	68	271	35	87	87	31	440
28	73	13	11	11	6.0	59	938	34	70	88	31	171
29	46	13	19	9.8	---	131	338	34	61	63	87	185
30	38	12	14	9.2	---	224	204	248	81	63	90	82
31	31	---	11	8.8	---	144	---	99	---	64	81	---
TOTAL	2963	562	1272.1	833.8	191.0	3202.2	23161	4350	3488	5156	3190	1958
MEAN	95.6	18.7	41.0	26.9	6.82	103	772	140	116	166	103	65.3
MAX	322	66	579	148	8.4	725	5640	508	503	757	838	440
MIN	31	12	9.0	8.8	5.9	5.4	47	34	36	50	31	27
AC-FT	5880	1110	2520	1650	379	6350	45940	8630	6920	10230	6330	3880

CAL YR 1985	TOTAL	47774.9	MEAN	131	MAX	4360	MIN	6.0	AC-FT	94760
WTR YR 1986	TOTAL	50327.1	MEAN	138	MAX	5640	MIN	5.4	AC-FT	99820

16717000 HONOLII STREAM NEAR PAPAIKOU--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT 29...	0830	724	45	39	6.70	18.0	2.0	9.0	100	19
DEC 16...	1045	724	13	78	7.80	18.0	.60	9.0	100	13
FEB 24...	0930	724	6.0	112	7.60	20.0	.50	8.6	100	K3
MAY 12...	0830	724	774	17	5.20	18.0	2.0	9.0	100	94
JUN 17...	0930	724	79	28	6.60	18.0	1.5	9.0	100	100
AUG 18...	0800	724	109	28	6.40	17.5	2.0	9.1	100	62

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT 29...	200	14	1	2.9	1.7	2.3	25	.3	.40
DEC 16...	150	35	0	7.7	3.8	3.6	18	.3	.50
FEB 24...	200	54	0	12	5.8	5.1	17	.3	.50
MAY 12...	500	9	7	2.7	.50	1.7	29	.3	.20
JUN 17...	80	10	1	1.9	1.2	1.9	29	.3	.20
AUG 18...	400	10	0	1.9	1.2	1.8	28	.3	.30

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT 29...	16	13	13	6.0	2.7	<.10	9.0	25	33
DEC 16...	42	35	34	2.6	3.5	<.10	19	59	61
FEB 24...	68	54	58	1.5	3.8	<.10	26	83	88
MAY 12...	2.0	3.0	1.0	5.8	3.1	<.10	1.8	13	17
JUN 17...	10	10	8.0	5.2	2.7	<.10	5.7	33	24
AUG 18...	--	10	--	5.1	2.4	<.10	6.3	30	25

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

16717000 HONOLII STREAM NEAR PAPAIKOU--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
OCT 29...	.03	.10	.150	.150	--	<.20	.040	.040	.020
DEC 16...	.08	<.10	.030	.040	--	<.20	.010	.010	.010
FEB 24...	.11	<.10	.080	.050	.42	.50	.020	.010	<.010
MAY 12...	.02	<.10	.050	.060	.25	.30	.010	.020	<.010
JUN 17...	.04	<.10	.030	.050	.17	.20	.010	<.010	<.010
AUG 18...	.04	<.10	.050	.060	--	<.20	.010	.010	<.010

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
OCT 29...	0830	80	<1	3	<.5	<1	<1	<3	3	190	<1	<4
FEB 24...	0930	<10	<1	4	<.5	<1	2	<3	2	14	<1	<4

DATE	TIME	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 29...	0830	<1	--	<.1	<10	1	<1	<1	20	<6	11
DEC 16...	1045	--	<.10	--	--	--	--	--	--	--	--
FEB 24...	0930	2	--	.1	<10	4	<1	<1	74	<6	9
JUN 17...	0930	--	<.10	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 16...	1045	<.4	<.6	.7	<.6	.6	<.6	.04	<.10	--
AUG 18...	0800	--	--	--	--	--	--	--	--	<.10

DATE	TIME	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	0830	1	.12	100
DEC 16...	1045	0	.00	100
FEB 24...	0930	1	.02	100
MAY 12...	0830	2	4.2	100
JUN 17...	0930	1	.21	100
AUG 18...	0800	1	.29	100

< Actual value is known to be less than the value shown.

16720000 KAWAINUI STREAM NEAR KAMUELA

LOCATION.--Lat 20°05'18", long 155°40'58", Hydrologic Unit 20010000, on left bank 250 ft upstream from Upper Hamakua ditch intake and 4.5 mi north of Kamuela.

DRAINAGE AREA.--1.58 mi^2.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft, from topographic map.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--22 years, 14.7 ft^3/s (10,650 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft^3/s Nov. 18, 1979, gage height, 10.03 ft, from rating curve extended above 53 ft^3/s on basis of computations of peak flow over dam and slope-area measurement at gage height 10.03 ft; minimum, 0.01 ft^3/s Jan. 20, 21, 24-28, Feb. 20-22, 1977, Dec. 16-20, 1977, Feb. 23, 24, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 440 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	0230	684	5.78	Apr. 8	1330	1,405	7.55
Mar. 20	2300	904	6.46	Apr. 10	1100	1,240	7.23
Mar. 23	1630	*1,620	*7.95	May 6	1630	571	5.47
Apr. 5	1700	616	5.62	Sept. 9	1600	656	5.76

Minimum discharge, 0.15 ft^3/s Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	4.4	166	62	.40	.30	36	44	8.4	5.9	8.1	3.6
2	5.0	2.6	29	68	.37	.27	20	17	4.0	5.3	17	2.7
3	2.1	2.2	13	41	.33	.26	67	28	25	33	30	2.1
4	1.4	1.9	7.3	5.6	.30	.22	66	18	25	32	26	4.4
5	1.2	1.5	3.1	2.8	.44	.20	87	12	30	14	15	2.4
6	2.8	1.3	2.0	2.0	2.7	.18	64	57	6.8	9.8	10	1.9
7	2.4	1.1	1.6	62	1.1	.17	78	17	16	43	15	1.5
8	22	1.0	1.2	72	.73	.16	310	4.9	12	47	27	1.3
9	20	.85	1.0	100	.55	.48	242	2.9	29	35	18	43
10	5.2	.75	.92	18	.44	.59	463	2.5	18	27	8.5	9.7
11	31	.71	.90	4.8	.39	.34	158	7.7	9.0	8.3	3.5	2.5
12	8.8	.82	.84	2.9	64	.37	48	13	3.5	10	5.6	1.8
13	3.5	.56	.82	2.1	9.2	.96	35	4.4	25	14	12	1.4
14	1.8	.52	.86	1.7	2.6	9.8	28	2.5	45	4.6	41	1.7
15	2.2	6.9	.67	1.4	59	9.8	20	2.0	44	8.6	23	1.5
16	2.2	38	4.1	1.2	109	3.0	6.4	6.9	39	16	17	1.2
17	7.6	3.2	1.8	1.1	5.5	2.2	3.5	20	6.5	6.8	5.8	1.0
18	16	1.8	1.2	.89	2.5	1.8	3.4	12	30	4.0	3.3	1.0
19	6.3	61	.86	.82	1.9	2.5	4.0	11	115	8.2	2.4	.82
20	6.6	4.6	.68	.69	1.4	86	3.6	15	32	5.5	2.0	.72
21	4.4	2.2	.57	2.0	1.1	192	13	3.8	19	3.0	1.7	.64
22	3.1	3.5	.48	5.1	.90	180	21	2.7	8.1	7.6	7.9	.58
23	5.8	3.6	.43	2.2	.73	182	28	2.4	8.9	9.2	36	.47
24	15	2.0	.43	1.5	.57	27	23	1.9	31	3.4	28	.42
25	8.5	5.0	1.1	1.3	.52	6.0	15	1.4	82	2.3	5.8	.44
26	19	27	1.1	1.1	.47	3.1	15	1.3	34	2.2	2.8	.46
27	29	6.3	3.4	.88	.39	14	35	7.6	24	4.2	10	.46
28	29	3.9	16	.70	.34	15	59	7.2	13	9.0	9.7	.46
29	6.5	3.0	50	.58	---	81	27	23	13	3.0	14	.46
30	6.9	4.5	11	.51	---	89	49	122	7.9	2.2	16	.44
31	3.8	---	8.0	.44	---	54	---	28	---	2.0	9.7	---
TOTAL	323.1	196.51	330.38	467.31	267.67	942.30	2025.9	497.1	784.1	384.1	431.8	91.07
MEAN	10.4	8.55	10.7	15.1	9.57	30.4	67.5	16.0	25.5	12.4	13.9	3.04
MAX	44	61	166	100	109	192	463	122	115	47	41	43
MIN	1.2	.52	.43	.44	.30	.16	3.4	1.3	3.5	2.0	1.7	.42
AC-FT	641	390	655	927	531	1870	4020	986	1520	762	856	181

CAL YR 1985	TOTAL	4877.11	MEAN	13.4	MAX	243	MIN	.16	AC-FT	9670
WTR YR 1986	TOTAL	6721.54	MEAN	18.4	MAX	463	MIN	.16	AC-FT	13330

16720300 KAWAIKI STREAM NEAR KAMUELA

LOCATION.--Lat 20°05'13", long 155°40'59", Hydrologic Unit 20010000, on right bank 0.2 mi upstream from Upper Hamakua ditch intake and 4.4 mi north of Kamuela.

DRAINAGE AREA.--0.45 mi^2.

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

REVISED RECORDS.--WDR HI-80-1: 1969-79(P).

GAGE.--Water-stage recorder. Elevation of gage is 4,090 ft, from topographic map.

REMARKS.--Records good. No diversion upstream. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years, 4.27 ft^3/s (3,090 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,470 ft^3/s Nov. 18, 1979, gage height, 8.32 ft, from rating curve extended above 33 ft^3/s on basis of slope-area measurement at gage height 8.32 ft; minimum, 0.01 ft^3/s Mar. 10-15, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	0200	117	2.86	Apr. 5	1700	172	3.41
Feb. 18	0300	134	3.04	Apr. 8	1200	346	4.48
Mar. 20	2300	300	4.25	Apr. 10	1100	316	4.33
Mar. 23	1700	*450	*5.00	May 8	1530	238	3.84

Minimum discharge, 0.13 ft^3/s Mar. 5-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	2.7	44	18	.29	.18	9.5	8.9	2.0	1.6	2.7	.83
2	2.7	1.2	9.0	19	.25	.17	3.8	4.2	.98	1.4	5.1	.55
3	1.3	.97	5.6	11	.25	.17	14	6.2	7.7	8.4	6.4	.55
4	.87	.75	3.7	2.4	.25	.15	18	4.1	7.0	7.1	5.3	1.5
5	.79	.61	1.7	1.4	.31	.15	21	2.6	5.9	3.4	4.2	.53
6	2.7	.48	1.0	1.0	.48	.13	16	17	1.7	2.4	2.9	.37
7	2.3	.47	.71	19	.26	.13	18	3.2	4.8	10	4.3	.32
8	8.7	.41	.56	20	.23	.13	94	.90	2.7	10	6.7	.28
9	8.8	.40	.47	27	.21	.26	65	.54	9.0	9.2	4.7	11
10	3.9	.35	.47	8.5	.19	.44	119	.88	4.2	5.3	2.2	2.1
11	12	.35	.42	2.4	.18	.23	39	2.0	2.1	1.8	.79	.54
12	4.6	.32	.40	1.6	17	.26	8.6	2.3	.72	2.3	1.7	.39
13	2.6	.30	.41	1.2	3.7	.86	6.5	.80	7.3	2.9	3.6	.77
14	1.4	.30	.49	.98	1.0	4.5	5.8	.51	8.5	.93	9.7	.62
15	1.2	2.0	.40	.65	14	3.6	4.6	.43	13	1.9	5.6	.38
16	.86	13	3.8	.50	25	1.3	1.3	2.0	7.4	4.5	4.3	.29
17	2.3	1.7	1.0	.46	2.1	.84	.71	4.7	1.4	2.3	1.7	.24
18	6.8	.81	.55	.40	.82	.56	.71	2.5	7.3	1.1	.87	.22
19	3.2	17	.43	.40	.55	2.5	1.1	2.8	35	2.9	.51	.20
20	2.0	2.1	.39	.39	.40	30	1.1	3.4	6.0	1.6	.38	.19
21	1.9	1.0	.35	1.7	.34	52	4.2	.82	4.1	.88	.31	.18
22	1.4	2.4	.31	2.7	.29	44	5.1	.60	1.9	2.4	2.2	.18
23	2.9	2.4	.30	1.0	.25	45	5.1	.58	2.5	1.5	9.2	.17
24	5.9	1.1	.29	.62	.22	5.0	4.0	.43	8.2	.87	6.2	.16
25	3.2	2.4	.50	.85	.22	1.1	2.9	.38	19	.52	1.1	.18
26	6.0	6.0	.43	.53	.21	.80	3.4	.38	8.7	.53	.52	.16
27	8.8	3.4	3.5	.43	.19	4.0	7.3	1.4	4.7	1.4	2.8	.16
28	6.6	1.8	7.7	.36	.19	4.5	12	1.5	2.7	2.8	1.9	.17
29	2.7	1.2	16	.35	---	15	8.5	7.0	3.2	.77	2.9	.16
30	3.5	1.4	4.2	.30	---	19	10	31	1.8	.55	5.4	.14
31	2.1	---	4.2	.30	---	11	---	5.8	---	.51	2.4	---
TOTAL	130.62	71.32	113.28	144.40	89.39	247.78	508.12	119.39	187.48	94.58	108.58	23.53
MEAN	4.21	2.38	3.65	4.66	2.48	7.99	18.9	3.85	8.25	3.05	3.50	.78
MAX	15	17	44	27	25	52	119	31	35	10	9.7	11
MIN	.79	.30	.29	.30	.19	.13	.71	.36	.72	.51	.31	.14
AC-FT	259	141	225	288	138	491	1010	237	372	188	215	47

CAL YR 1985	TOTAL	1599.16	MEAN	4.38	MAX	65	MIN	.11	AC-FT	3170
WTR YR 1986	TOTAL	1818.43	MEAN	4.98	MAX	119	MIN	.13	AC-FT	3610

16720500 UPPER HAMAKUA DITCH BELOW KAWAIKI STREAM, NEAR KAMUELA

LOCATION.--Lat 20°05'15", long 155°40'42", Hydrologic Unit 20010000, on right bank 800 ft downstream from Kawaiki Stream intake and 4.4 mi north of Kamuela.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,020 ft, from topographic map.

REMARKS.--Records good. Ditch diverts from Kawainui and Kawaiki Streams for irrigation in vicinity of Kamuela. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--22 years, 7.05 ft^3/s (5,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 49 ft^3/s Nov. 2, 1967; no flow Nov. 18, 1979 to Oct. 23, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 23 ft^3/s Mar. 23; minimum daily, 0.24 ft^3/s Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	5.8	18	16	.45	.50	16	12	11	8.2	11	3.9
2	8.2	2.9	16	16	.42	.45	15	10	5.8	7.4	14	2.4
3	3.5	2.3	13	16	.42	.42	16	16	13	14	16	1.9
4	2.3	1.8	11	8.5	.38	.38	16	15	15	16	16	5.6
5	1.3	1.4	4.3	3.2	.50	.34	17	12	15	14	14	2.1
6	6.2	1.2	2.6	2.3	2.6	.31	17	10	10	12	12	1.3
7	5.0	.94	1.8	14	.84	.28	16	14	14	16	14	.94
8	15	.84	1.4	16	.62	.24	19	8.6	12	16	16	.89
9	15	.72	1.1	17	.50	.72	18	3.8	10	15	16	6.8
10	11	.67	.89	13	.42	1.0	21	3.3	15	15	10	11
11	16	.62	.78	5.9	.42	.62	17	9.4	11	10	4.3	3.4
12	13	.50	.72	3.6	9.7	.72	13	14	4.7	8.8	8.2	2.1
13	7.2	.45	.72	2.5	9.8	1.7	10	5.8	10	13	12	2.7
14	3.8	.42	.78	2.0	2.9	6.7	7.8	3.1	16	5.8	16	2.6
15	3.2	2.1	.67	1.4	4.4	10	8.4	2.3	14	7.4	16	1.5
16	2.0	14	8.1	1.1	16	3.9	2.1	4.8	15	14	15	1.2
17	4.3	4.1	1.8	.89	6.5	2.9	1.3	15	8.8	16	7.4	.94
18	11	2.0	.94	.78	2.9	1.8	1.3	12	16	5.6	4.1	.89
19	8.0	14	.72	.72	1.9	5.0	1.9	7.4	18	11	2.3	.84
20	6.8	4.6	.62	.67	1.4	16	5.7	14	16	7.2	1.7	.78
21	5.2	2.6	.50	2.6	1.1	18	7.7	5.2	16	4.3	1.3	.72
22	3.6	4.8	.45	6.5	.89	18	6.8	3.5	10	10	4.9	.67
23	6.0	5.2	.45	2.4	.84	23	1.9	3.0	11	9.9	16	.62
24	13	2.8	.45	1.4	.67	9.9	5.6	2.0	16	4.1	16	.62
25	8.5	3.8	.89	1.4	.67	4.8	3.8	1.5	17	2.7	6.4	.67
26	15	15	.89	.94	.67	3.8	4.8	1.5	16	2.6	2.9	.62
27	15	8.6	5.5	.78	.62	10	8.8	6.5	16	5.5	6.5	.62
28	14	5.2	15	.67	.58	13	11	9.2	13	11	9.6	.62
29	7.8	3.8	16	.62	---	17	7.6	15	12	3.4	9.7	.62
30	8.9	4.2	11	.56	---	17	11	17	10	2.7	12	.56
31	4.6	---	7.8	.50	---	16	---	18	---	2.6	9.8	---
TOTAL	258.4	117.16	142.67	157.93	88.89	204.48	306.3	270.7	387.3	291.2	321.2	60.12
MEAN	8.34	3.91	4.60	5.09	2.46	6.60	10.2	8.73	12.9	9.39	10.4	2.00
MAX	16	15	18	17	18	23	21	17	16	16	16	11
MIN	1.3	.42	.45	.50	.38	.24	1.3	1.5	4.7	2.6	1.3	.56
AC-FT	513	232	283	313	137	406	608	537	768	578	637	119

CAL YR 1985	TOTAL	2769.08	MEAN	7.59	MAX	19	MIN	.17	AC-FT	5490
WTR YR 1986	TOTAL	2586.35	MEAN	7.09	MAX	23	MIN	.24	AC-FT	5130

16724800 UPPER HAMAKUA DITCH ABOVE ALAKAHI STREAM, NEAR KAMUELA

LOCATION.--Lat 20°04'31", long 155°40'26", Hydrologic Unit 20010000, on right bank 0.1 mi upstream from Alakahi Stream and 3.8 mi north of Kamuela.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,890 ft, from topographic map.

REMARKS.--Records good. Ditch diverts from Kawainui and Kawaiki Streams for irrigation in vicinity of Kamuela. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years, 5.02 ft^3/s (3,640 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 41 ft^3/s Aug. 18, 1972; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 31 ft^3/s Apr. 10; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	3.1	19	12	.00	.00	14	11	7.8	5.5	4.1	2.5
2	4.4	1.4	11	12	.00	.00	12	8.4	4.2	5.0	6.6	1.5
3	1.6	.85	9.1	11	.00	.00	14	13	9.1	10	8.4	.79
4	.73	1.0	6.9	4.5	.00	.00	16	12	11	12	9.7	2.7
5	.32	.52	3.0	2.0	.00	.00	17	9.8	11	10	7.9	1.0
6	2.3	.27	1.6	1.1	.03	.00	17	9.9	6.5	7.9	6.8	.36
7	1.9	.15	.92	10	.00	.00	18	12	9.7	12	7.2	.16
8	6.2	.08	.52	13	.00	.00	28	5.6	8.8	12	10	.05
9	7.0	.07	.29	15	.00	.01	28	3.1	7.9	12	9.3	2.9
10	5.0	.07	.16	9.9	.00	.01	31	2.5	11	12	6.0	6.0
11	8.2	.07	.11	3.9	.00	.00	29	6.2	7.8	7.7	2.3	1.9
12	6.7	.07	.05	2.1	4.3	.00	20	9.3	3.5	6.1	3.4	.83
13	3.9	.07	.01	1.3	5.2	.01	15	4.4	6.7	9.4	5.7	1.1
14	1.7	.07	.04	.75	1.0	1.3	11	2.3	12	4.2	11	1.2
15	1.3	.69	.00	.46	1.9	3.9	9.1	1.5	10	4.8	11	.33
16	.81	9.7	2.1	.27	12	.82	3.7	2.5	12	9.8	9.9	.13
17	1.0	2.7	.73	.14	3.9	.21	2.5	9.9	6.2	6.6	5.0	.03
18	5.0	.98	.17	.06	1.2	.00	2.1	8.4	11	3.3	2.6	.00
19	4.1	10	.04	.02	.43	.89	2.3	4.8	19	6.1	1.4	.00
20	2.8	4.3	.00	.00	.09	9.4	2.1	9.5	13	4.2	.79	.00
21	2.5	1.7	.00	.53	.00	18	3.8	4.0	12	1.8	.41	.00
22	1.6	2.8	.00	3.3	.00	19	6.3	2.4	8.2	4.7	1.8	.00
23	2.2	3.3	.00	1.0	.00	19	5.4	2.1	7.4	4.8	9.1	.00
24	6.2	1.4	.00	.33	.00	8.6	4.5	1.3	12	2.0	9.6	.00
25	2.9	1.6	.00	.20	.00	3.6	3.4	.82	15	.96	4.1	.00
26	6.7	9.5	.00	.04	.00	2.3	3.1	.70	13	.75	1.7	.00
27	7.8	5.6	1.1	.00	.00	7.1	5.7	2.9	12	2.1	3.0	.00
28	8.4	3.0	6.7	.00	.00	9.2	9.7	5.5	9.8	5.3	5.4	.00
29	4.6	2.3	10	.00	---	14	8.5	8.6	8.4	1.7	4.8	.00
30	4.9	1.7	6.6	.00	---	15	11	17	7.5	.88	6.6	.00
31	2.8	---	4.2	.00	---	14	---	12	---	.52	6.0	---
TOTAL	124.66	69.06	84.34	104.90	30.05	146.35	351.2	203.42	293.5	185.91	181.60	23.48
MEAN	4.02	2.30	2.72	3.38	1.07	4.72	11.7	6.56	9.78	6.00	5.86	.78
MAX	9.3	10	19	15	12	19	31	17	19	12	11	6.0
MIN	.32	.07	.00	.00	.00	.00	2.1	.70	3.5	.52	.41	.00
AC-FT	247	137	167	208	60	290	697	403	582	369	360	47

CAL YR 1985	TOTAL	1375.92	MEAN	3.77	MAX	19	MIN	.00	AC-FT	2730
WTR YR 1986	TOTAL	1798.47	MEAN	4.93	MAX	31	MIN	.00	AC-FT	3570

16725000 ALAKAHI STREAM NEAR KAMUELA

LOCATION.--Lat 20°04'27", long 155°40'25", Hydrologic Unit 20010000, on right bank 25 ft upstream from upper Hamakua ditch intake and 3.5 mi north of Kamuela.

DRAINAGE AREA.--0.87 mi^2.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,900 ft, from topographic map.

REMARKS.--Records fair. Parker Ranch pipeline diverts from tributary 0.4 mi upstream for ranch use in Kamuela area. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--22 yeara, 6.82 ft^3/s (4,940 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft^3/s Nov. 18, 1979, gage height, 9.90 ft, from rating curve extended above 28 ft^3/s on basis of computations of peak flow over dam and slope-area measurement at gage height 9.90 ft; minimum, 0.03 ft^3/s on several days in 1985.

EXTREMES FOR CURRENT YEAR.--Psak discharges greater than base discharge of 120 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	0500	125	4.46	Apr. 5	1800	173	4.88
Feb. 16	0300	205	5.10	Apr. 8	1230	498	6.53
Mar. 20	2330	460	6.40	Apr. 10	1130	*532	*6.64
Mar. 23	1700	470	6.50	May 6	1600	270	5.50

Minimum discharge, 0.22 ft^3/s Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	3.9	64	35	.40	.30	17	18	4.4	3.2	3.4	3.0
2	4.1	2.7	14	30	.37	.29	8.3	7.3	2.8	3.3	8.3	2.4
3	2.6	2.2	8.2	20	.34	.27	18	11	13	15	9.6	1.9
4	2.1	1.8	4.1	3.4	.31	.25	30	7.1	11	14	9.0	3.0
5	1.8	1.5	2.4	2.4	.34	.24	29	4.4	12	7.0	6.8	2.2
6	3.2	1.2	1.8	1.7	.53	.24	29	32	3.6	4.4	5.2	1.6
7	2.8	1.2	1.4	30	.40	.23	32	7.1	8.5	17	6.5	1.3
8	9.6	1.0	1.1	35	.31	.22	139	2.9	5.9	16	11	1.2
9	10	.90	.95	41	.30	.60	86	2.1	15	15	8.1	12
10	4.0	.90	.75	9.2	.28	1.1	175	1.8	8.9	11	4.4	5.1
11	13	.80	.65	3.2	.27	.54	61	3.2	5.3	3.7	2.6	2.4
12	6.2	.70	.60	2.4	21	.48	20	3.7	2.5	3.8	2.8	1.8
13	3.8	.65	.60	1.9	5.0	1.1	15	2.4	11	5.2	5.1	2.6
14	2.7	.60	.60	1.6	2.3	2.8	11	1.8	15	2.7	16	3.1
15	2.5	2.4	.46	1.2	17	3.7	10	1.5	16	2.9	11	1.9
16	1.9	20	3.2	1.0	38	1.7	3.5	2.9	14	8.1	8.5	1.4
17	1.8	2.8	1.8	.88	3.2	1.0	2.4	9.5	3.2	4.7	3.9	1.1
18	7.5	1.9	1.0	.73	2.0	1.1	2.1	5.6	9.7	2.9	2.7	.98
19	4.5	28	.70	.67	1.4	2.6	2.6	4.1	58	4.8	2.1	.91
20	2.9	3.3	.60	.61	.99	46	2.8	6.3	10	3.8	1.6	.87
21	2.9	2.1	.50	1.2	.75	84	4.6	2.5	7.0	2.4	1.4	.83
22	2.5	2.5	.46	2.7	.62	87	7.3	2.0	4.1	3.3	2.2	.80
23	2.6	3.0	.40	1.6	.55	75	6.6	1.9	3.7	2.6	14	.77
24	7.3	2.0	.36	.98	.53	12	5.5	1.5	9.8	2.0	14	.75
25	3.7	2.6	.38	1.1	.46	4.4	4.8	1.3	30	1.8	3.6	.76
26	6.7	11	.70	.83	.42	2.2	4.3	1.1	13	1.5	2.4	.76
27	11	3.9	2.8	.68	.35	8.3	8.9	2.1	10	2.2	4.4	.72
28	15	2.4	8.1	.56	.33	7.2	20	3.2	5.4	5.1	4.4	.71
29	3.9	1.8	26	.53	---	30	13	8.4	6.3	2.5	4.6	.71
30	4.4	1.5	5.2	.48	---	33	20	46	4.1	1.9	8.5	.69
31	3.4	---	3.8	.40	---	23	---	11	---	1.5	5.5	---
TOTAL	177.2	109.25	155.39	232.93	98.75	410.87	788.7	215.7	321.0	175.3	193.6	58.26
MEAN	5.72	3.64	5.01	7.51	3.53	13.3	26.3	6.96	10.7	5.65	6.25	1.94
MAX	27	28	64	41	38	84	175	46	58	17	16	12
MIN	1.6	.60	.36	.40	.27	.22	2.1	1.1	2.5	1.5	1.4	.69
AC-FT	351	217	308	462	196	815	1560	428	637	348	384	116

CAL YR 1985	TOTAL	2219.72	MEAN	6.08	MAX	107	MIN	.19	AC-FT	4400
WTR YR 1986	TOTAL	2936.95	MEAN	8.05	MAX	175	MIN	.22	AC-FT	5830

16726000 UPPER HAMAKUA DITCH ABOVE WAIMEA RESERVOIR DIVERSION, NEAR KAMUELA

LOCATION.--Lat 20°03'31", long 155°37'40", Hydrologic Unit 20010000, on left bank 120 ft upstream from diversion intake leading to Waimea Reservoir and 3.7 mi northeast of Kamuela Post Office.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,020 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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 elsewhere in this report.

AVERAGE DISCHARGE.--12 years, 10.6 ft^3/s (7,680 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 57 ft^3/s Mar. 6, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 43 ft^3/s Apr. 10; no flow Feb. 8-10, Mar. 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e35	22	40	35	.27	.23	31	33	25	19	18	11
2	e12	8.5	31	35	.22	.21	28	27	19	18	33	8.5
3	e10	4.2	25	35	.12	.18	30	32	28	25	30	9.0
4	e7.0	2.5	18	31	.05	.10	33	30	32	32	32	9.8
5	e6.0	1.9	14	25	.01	.03	32	26	32	29	30	3.9
6	e7.0	1.4	9.8	13	.00	.00	35	22	21	24	25	2.2
7	e8.0	1.0	3.0	33	.00	.00	35	27	27	34	28	1.9
8	e30	.75	2.1	35	.00	.00	39	24	27	32	31	1.5
9	25	.58	1.6	35	.00	3.8	38	16	24	28	29	21
10	29	.49	1.3	35	.00	2.0	43	14	32	28	20	13
11	26	.41	1.1	31	6.7	.53	37	23	26	21	8.3	9.8
12	23	.32	.97	26	8.9	.38	23	26	17	21	17	3.3
13	16	.24	.87	20	2.9	.55	22	9.0	21	26	24	13
14	14	.20	.98	5.3	5.5	3.2	22	5.4	32	17	30	19
15	6.5	.17	.73	2.7	17	11	36	3.8	28	18	29	7.6
16	2.9	24	11	2.1	17	2.0	21	8.8	32	28	27	2.2
17	1.9	8.4	3.1	1.6	4.2	.97	12	27	22	22	18	1.6
18	15	3.0	1.4	1.4	1.5	.74	10	22	27	15	12	1.3
19	20	23	.88	1.2	.83	6.8	14	12	37	19	10	1.1
20	12	17	.85	1.0	e.59	22	15	23	33	17	3.7	.98
21	13	7.7	.54	2.5	e.95	33	18	9.7	31	14	2.8	.89
22	6.4	10	.47	11	.77	35	26	6.4	23	18	14	.84
23	8.5	16	.37	3.3	.82	32	23	16	19	15	25	.77
24	19	5.6	.33	1.7	.53	18	19	5.9	30	11	25	.70
25	11	7.4	.52	1.5	.47	17	17	3.0	36	8.6	18	.71
26	19	27	1.5	1.1	.41	15	15	2.7	36	8.2	9.5	.68
27	23	19	13	.80	.35	21	21	11	34	13	11	.60
28	29	12	26	.62	.29	25	31	22	28	22	16	.58
29	19	8.5	34	.48	---	34	25	25	26	14	19	.55
30	22	3.4	22	.36	---	34	34	39	22	8.0	23	.50
31	15	---	14	.32	---	33	---	33	---	5.3	19	---
TOTAL	491.2	236.66	280.19	427.98	70.18	351.72	785	584.7	827	610.1	637.3	148.50
MEAN	15.8	7.89	9.04	13.8	2.51	11.3	26.2	18.9	27.6	19.7	20.6	4.95
MAX	35	27	40	35	17	35	43	39	37	34	33	21
MIN	1.9	.17	.33	.32	.00	.00	10	2.7	17	5.3	2.8	.50
AC-FT	974	469	556	849	139	698	1560	1160	1640	1210	1260	295

CAL YR 1985	TOTAL	5849.39	MEAN	16.0	MAX	57	MIN	.00	AC-FT	11600
WTR YR 1986	TOTAL	5450.53	MEAN	14.9	MAX	43	MIN	.00	AC-FT	10810

e Estimated

16727000 UPPER HAMAKUA DITCH ABOVE PUUKAPU RESERVOIR, NEAR KAMUELA

LOCATION.--Lat 20°02'53", long 155°37'17", Hydrologic Unit 20010000, on right bank 25 ft downstream from pipe railed bridge and 4.0 mi northeast of Kamuela Post Office.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,890 ft, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Ditch diverts into Waimea Reservoir for use in vicinity of Kamuela. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 2.43 ft^3/s (1,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 42 ft^3/s Apr. 16, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 33 ft^3/s Dec. 1, May 30; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	5.3	33	28	.00	e.00	19	15	16	6.4	2.4	3.6
2	8.0	.98	25	30	.00	e.00	19	10	5.8	7.3	18	1.2
3	1.0	.41	20	17	.00	e.00	21	11	20	12	22	.10
4	.10	.08	12	7.7	.00	e.00	20	18	20	18	25	2.9
5	.00	.00	4.6	3.4	.00	e.00	15	15	9.2	16	20	.45
6	.31	.00	1.9	1.2	.00	e.00	15	11	6.0	14	15	.01
7	.11	.00	.50	29	.00	e.00	22	18	7.1	13	15	.00
8	9.7	.00	.08	17	.00	e.00	10	7.5	6.9	7.3	12	.00
9	15	.00	.00	12	.00	e.75	14	3.4	14	7.7	8.3	5.7
10	20	.00	.00	11	.00	e.10	10	2.2	26	10	7.5	6.0
11	15	.00	.00	8.9	.00	e.00	7.7	6.6	17	8.8	2.9	3.4
12	12	.00	.00	5.4	5.0	e.00	17	11	6.2	7.3	5.0	1.3
13	5.6	.00	.00	2.0	.81	e.00	16	2.5	6.6	9.2	11	7.1
14	.90	.00	.00	.52	.00	e.45	17	2.4	10	5.2	18	6.2
15	.15	.00	.00	.00	.56	e2.0	28	.75	10	6.2	18	1.9
16	.00	9.7	.00	.00	3.4	e.10	9.8	1.8	18	20	8.3	.65
17	.00	.01	.00	.00	5.4	e.00	4.0	22	8.3	11	5.0	.14
18	4.2	.00	.00	.00	1.4	e.00	3.8	18	17	4.1	3.4	.00
19	5.6	15	.00	.00	.08	e1.0	5.4	5.8	8.6	9.2	.70	.00
20	3.4	5.3	.02	.00	.00	e10	4.8	16	5.5	8.3	.08	.00
21	3.0	2.3	.00	.00	.00	e23	8.9	4.8	6.9	2.5	.10	.00
22	1.2	2.8	.00	.00	.00	e25	19	3.4	6.6	6.2	.96	.00
23	.64	4.8	.00	.00	e.00	e23	13	4.0	8.6	5.8	18	.00
24	11	1.6	.00	.00	e.00	e10	9.2	1.6	20	2.4	19	.00
25	1.5	2.5	.00	.00	e.00	e3.0	6.9	1.0	17	.80	8.3	.00
26	7.7	19	.00	.00	e.00	e1.5	4.2	.15	9.2	.04	2.1	.00
27	12	9.2	.86	.00	e.00	16	12	1.2	11	1.4	3.7	.00
28	19	3.0	16	.02	e.00	19	24	6.0	10	12	8.6	.00
29	8.2	1.7	30	.00	---	27	15	16	9.8	2.3	7.3	.00
30	6.6	.19	12	.00	---	27	25	33	10	.30	11	.00
31	3.4	---	4.0	.00	---	17	---	29	---	.02	11	---
TOTAL	197.31	83.87	159.98	173.14	18.45	205.90	415.7	295.90	347.1	234.56	307.64	40.65
MEAN	6.36	2.80	5.16	5.59	.59	6.64	13.9	9.55	11.8	7.57	9.92	1.35
MAX	28	19	33	30	5.4	27	28	33	26	20	25	7.1
MIN	.00	.00	.00	.00	.00	.00	3.8	.15	5.5	.02	.08	.00
AC-FT	391	166	317	343	33	408	825	587	688	465	610	81

CAL YR 1985	TOTAL	2216.71	MEAN	8.07	MAX	42	MIN	.00	AC-FT	4400
WTR YR 1986	TOTAL	2478.18	MEAN	6.79	MAX	33	MIN	.00	AC-FT	4920

e Estimated

16756000 KOHAKOHAU STREAM NEAR KAMUELA

LOCATION.--Lat 20°02'38", long 155°41'10", Hydrologic Unit 20010000, on left bank 0.6 mi upstream from Oolamakapehu Gulch and 1.7 mi northwest of Kamuela.

DRAINAGE AREA.--2.51 mi^2.

PERIOD OF RECORD.--March 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,273 ft 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 upstream at different datum.

REMARKS.--Records good. Parker Ranch pipeline diverts upstream at elevation 4,250 ft. Hawaii Department of Water Supply diverts by pipeline 0.3 mi upstream at elevation 3,400 ft for domestic use in the Kamuela and Kawaihae areas since Aug. 20, 1973. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years, 8.51 ft^3/s (6,170 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,880 ft^3/s Aug. 7, 1958, gage height, 10.76 ft, site and datum then in use, from rating curve extended above 70 ft^3/s by test of model of station site; no flow at times in 1968, 1971-86.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 310 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	0300	435	4.85	Apr. 8	1230	611	4.93
Mar. 20	2400	328	4.42	Apr. 10	1100	*960	*5.34
Mar. 23	1730	466	4.71				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	.00	76	44	.00	.00	19	32	.31	.38	.00	.03
2	.16	.00	25	41	.00	.00	17	4.8	.01	.31	.89	.01
3	.00	.00	7.2	32	.00	.00	20	7.2	5.4	16	2.7	.00
4	.00	.00	.83	4.3	.00	.00	65	5.2	7.8	22	.73	.00
5	.00	.00	.00	2.2	.00	.00	42	.06	16	10	.68	.00
6	.00	.00	.72	1.4	.00	.00	50	27	.07	2.8	1.1	.00
7	.00	.00	1.1	30	.00	.00	56	18	2.8	27	.83	.00
8	1.9	.00	.89	50	.00	.00	252	2.7	3.9	27	4.4	.00
9	4.0	.00	.74	62	.00	.00	168	.57	18	21	.84	9.6
10	.07	.00	.39	15	.00	.00	344	.04	12	25	.00	3.5
11	5.6	.00	.00	4.4	.00	.00	123	.03	1.9	3.3	.00	.00
12	1.8	.00	.00	2.7	30	.00	49	.01	.04	1.5	.00	.00
13	.00	.00	.00	1.8	3.0	.00	34	.00	4.3	2.7	.00	.41
14	.00	.00	.00	1.4	.00	.00	18	.00	26	.46	12	.23
15	.00	.00	.00	.87	27	.00	17	.00	13	.06	3.2	.00
16	.00	20	.00	.01	104	.00	3.1	.00	29	4.6	2.7	.00
17	.00	.00	.00	.00	5.0	.00	.16	.67	.19	1.7	.01	.00
18	.00	.00	.00	.00	1.2	.00	.14	1.7	10	.30	.00	.00
19	.00	46	.00	.00	.01	.00	.12	.02	74	1.5	.00	.00
20	.00	4.2	.00	.00	.00	21	.11	.02	21	1.8	.00	.00
21	.00	2.0	.00	.00	.00	113	.39	.01	4.8	.12	.00	.00
22	.00	1.6	.00	.59	.00	98	4.3	.01	.33	.08	.00	.00
23	.00	1.5	.00	.74	.00	98	7.2	.02	.48	.08	.04	.00
24	.00	1.1	.00	.41	.00	23	4.6	.01	12	.01	8.5	.00
25	.00	.85	.00	.01	.00	.17	1.3	.00	47	.00	.07	.00
26	.00	3.1	.00	.00	.00	.05	.04	.00	28	.00	.00	.00
27	1.5	2.0	.00	.00	.00	3.9	7.5	.00	18	.00	.00	.00
28	13	1.2	5.0	.00	.00	5.2	38	.00	7.3	1.2	.09	.00
29	.00	1.0	28	.00	---	46	9.6	.00	3.8	.13	.51	.00
30	.00	.62	5.7	.00	---	58	29	56	2.6	.01	.69	.00
31	.00	---	2.0	.00	---	45	---	14	---	.00	.96	---
TOTAL	58.03	85.37	153.57	284.83	170.21	509.32	1379.78	170.07	369.83	171.08	40.74	13.78
MEAN	1.87	2.85	4.95	9.51	6.08	16.4	46.0	5.49	12.3	5.52	1.31	.46
MAX	30	46	76	62	104	113	344	56	74	27	12	9.6
MIN	.00	.00	.00	.00	.00	.00	.04	.00	.01	.00	.00	.00
AC-FT	115	169	305	585	338	1010	2740	337	734	339	81	27

CAL YR 1985	TOTAL	1590.44	MEAN	4.36	MAX	152	MIN	.00	AC-FT	3150
WTR YR 1986	TOTAL	3416.59	MEAN	9.36	MAX	344	MIN	.00	AC-FT	6780

16758000 WAIKOLOA STREAM AT MARINE DAM, NEAR KAMUELA

LOCATION.--Lat 20°02'48", long 155°39'58", Hydrologic Unit 20010000, on right bank 160 ft upstream from Marine Dam, 0.4 mi east of Puu Ohu, and 1.6 mi north of Kamuela.

DRAINAGE AREA.--1.18 mi^2.

PERIOD OF RECORD.--May 1947 to current year.

REVISED RECORDS.--WSP 1569: Drainage area. WSP 1937: 1948(M), 1949-51(P), 1952(M), 1954(M), 1955, 1956-57(P), 1958-60.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,460 ft, from topographic map.

REMARKS.--Records good. Diversion upstream for livestock and domestic use. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--39 years, 8.91 ft^3/s (6,460 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,410 ft^3/s Nov. 16, 1979, gage height, 8.64 ft, from rating curve extended above 120 ft^3/s on basis of computations of flow over dam at gage heights 5.46 ft and 5.96 ft; minimum, 0.59 ft^3/s Oct. 3-8, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 1	0730	220	3.46	Apr. 8	1230	416	4.04
Feb. 16	0300	226	3.48	Apr. 10	1200	*964	*4.93
Mar. 20	2330	243	3.54				

Minimum discharge, 1.5 ft^3/s Mar. 4-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	7.1	106	40	2.4	1.8	21	27	11	7.7	5.2	4.3
2	7.1	4.3	20	46	2.3	1.7	14	16	7.2	6.8	11	3.4
3	5.2	3.9	12	34	2.3	1.7	25	19	18	18	12	3.0
4	4.7	3.7	7.4	7.7	2.2	1.8	45	16	19	19	13	3.9
5	4.0	3.3	4.7	5.3	2.1	1.5	28	9.8	18	14	12	3.1
6	4.5	3.1	4.1	4.3	2.2	1.5	38	26	6.8	10	10	2.9
7	4.3	2.9	3.4	43	2.1	1.6	55	13	14	24	10	2.6
8	7.5	2.7	3.2	66	2.4	1.7	189	7.7	12	18	13	2.3
9	11	2.8	2.9	75	2.1	2.2	145	8.0	25	20	11	6.3
10	6.2	2.5	2.8	21	2.0	2.1	372	5.6	18	16	7.9	5.6
11	9.8	2.3	2.8	8.7	2.0	1.8	112	8.5	12	8.8	5.7	3.0
12	9.2	2.2	2.7	8.7	12	1.7	33	6.4	7.2	9.9	5.5	2.5
13	7.0	2.3	2.7	5.4	5.9	1.8	25	5.2	14	11	8.1	9.7
14	4.8	2.3	2.9	4.4	3.1	2.1	15	4.6	19	7.0	22	5.7
15	4.4	3.5	2.8	3.9	19	3.1	17	4.2	18	7.9	17	3.1
16	4.2	21	8.1	3.8	58	2.4	9.5	8.1	22	14	15	2.7
17	3.4	4.3	3.8	3.4	5.2	2.6	7.2	14	8.2	8.8	8.8	2.4
18	3.4	3.2	3.0	3.4	3.3	3.0	8.3	10	12	6.5	6.2	2.1
19	3.5	29	2.8	3.1	2.9	3.8	6.7	6.6	68	9.1	4.4	2.1
20	3.4	5.3	2.5	2.9	2.6	47	6.9	8.3	19	7.1	3.1	2.3
21	3.5	3.5	2.5	3.5	2.5	104	8.4	5.7	14	5.5	2.8	2.1
22	3.3	4.0	2.5	4.9	2.5	103	13	5.5	8.8	5.8	3.0	1.9
23	3.2	4.3	2.2	3.7	2.2	73	11	5.6	7.9	5.8	8.8	1.9
24	7.1	3.3	2.4	3.1	1.9	16	8.7	4.8	11	4.9	17	1.9
25	4.0	3.2	2.8	3.6	1.9	6.8	7.2	4.0	29	4.5	5.9	1.8
26	4.8	11	2.8	3.1	1.8	4.5	6.3	3.8	26	4.5	3.9	1.8
27	9.4	5.6	8.0	2.8	1.7	12	8.4	4.1	27	4.8	4.2	1.9
28	17	3.7	15	2.5	1.7	13	18	4.8	16	7.9	5.0	2.1
29	6.1	2.9	33	2.5	---	39	18	10	12	5.3	8.6	2.0
30	6.5	2.8	8.4	2.5	---	41	33	83	9.8	4.3	7.6	1.9
31	5.0	---	5.0	2.5	---	35	---	22	---	4.0	8.9	---
TOTAL	206.3	155.8	283.0	422.5	152.3	534.0	1300.6	370.9	511.9	300.7	272.6	92.3
MEAN	6.65	5.19	9.13	13.6	5.44	17.2	43.4	12.0	17.1	9.70	8.79	3.08
MAX	29	29	106	75	58	104	372	83	88	24	22	9.7
MIN	3.2	2.2	2.2	2.5	1.7	1.5	6.3	3.8	7.2	4.0	2.8	1.8
AC-FT	409	309	561	838	302	1060	2580	736	1020	596	541	183

CAL YR 1985	TOTAL	2955.1	MEAN	8.10	MAX	121	MIN	1.2	AC-FT	5860
WTR YR 1986	TOTAL	4602.9	MEAN	12.6	MAX	372	MIN	1.5	AC-FT	9130

16759000 HAUANI GULCH NEAR KAMUELA

LOCATION.--Lat 20°02'28", long 155°39'05", Hydrologic Unit 20010000, on left bank 800 ft downstream from small tributary and 1.8 mi northeast of Kamuela.

DRAINAGE AREA.--0.47 mi^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 above mean sea level (Hawaii County Department of Water Supply bench mark).

REMARKS.--Records good. Diversion upstream for livestock and domestic use. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years, 1.57 ft^3/s (1,140 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 822 ft^3/s Nov. 18, 1979, gage height, 4.56 ft, from rating curve extended above 11 ft^3/s on basis of slope-conveyance study; maximum gage height, 4.85 ft Oct. 23, 1957; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 78 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 1	0700	85	2.63	Apr. 10	1000	*332	*3.63
Apr. 8	1000	235	3.35				

Minimum discharge, 0.10 ft^3/s Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	.95	38	11	.22	.16	2.5	4.5	1.4	1.1	.63	.78
2	.83	.54	4.3	10	.21	.16	1.8	2.3	.91	1.0	1.3	.68
3	.44	.43	1.6	8.3	.20	.16	4.3	3.1	3.3	2.5	1.2	.62
4	.29	.40	.95	1.1	.20	.14	11	2.6	3.4	2.5	1.8	.74
5	.23	.38	.62	.69	.20	.12	2.7	1.4	3.1	1.9	3.2	.59
6	.36	.34	.45	.51	.20	.12	6.4	2.7	1.2	1.5	1.8	.53
7	.32	.32	.36	13	.19	.12	14	1.6	2.7	5.4	1.5	.50
8	.43	.30	.32	19	.18	.12	62	.95	1.8	3.6	1.5	.49
9	1.5	.28	.29	24	.18	.24	38	.78	4.7	3.2	1.2	1.2
10	1.1	.28	.26	4.0	.17	.28	104	.73	2.8	2.5	.98	.88
11	1.2	.28	.24	1.5	.19	.17	26	.77	1.8	1.4	.77	.58
12	.91	.27	.24	1.1	1.0	.17	6.7	.73	.99	1.6	.77	.52
13	.73	.25	.24	.81	.43	.16	4.6	.80	3.0	1.6	1.5	4.2
14	.48	.25	.23	.65	.25	.16	2.4	.53	2.8	.94	3.5	1.3
15	.40	.35	.21	.54	4.7	.17	2.7	.48	3.9	1.1	2.4	.67
16	.36	2.4	.53	.46	12	.20	1.5	.98	4.1	1.5	1.9	.54
17	.34	.49	.28	.39	.70	.32	1.0	1.6	1.2	.94	1.1	.48
18	.67	.36	.22	.38	.41	.28	.99	1.1	1.8	.78	.84	.45
19	.61	4.7	.20	.36	.35	.74	1.0	.68	18	.78	.74	.43
20	.43	.72	.19	.32	.29	11	.92	.76	3.8	.72	.69	.41
21	.42	.40	.18	.49	.25	25	1.6	.63	2.4	.72	.62	.41
22	.38	.32	.18	.61	.24	31	2.3	.71	1.5	.72	.76	.39
23	.38	.30	.16	.38	.22	17	1.7	.71	1.3	.70	1.6	.37
24	.95	.24	.18	.32	.20	2.8	1.1	.54	1.4	.63	2.8	.37
25	.44	.26	.24	.35	.19	1.0	.85	.50	2.8	.59	1.1	.38
26	.38	1.1	.21	.30	.18	.70	.81	.45	4.1	.69	.79	.36
27	1.0	.55	.56	.29	.17	1.7	.95	.44	4.9	.75	1.2	.38
28	2.4	.30	1.5	.25	.17	2.0	2.4	.45	2.3	1.1	1.0	.37
29	.77	.23	4.8	.25	---	6.6	2.0	1.3	1.7	.71	1.2	.38
30	.80	.38	.98	.23	---	6.4	5.6	21	1.3	.60	1.1	.31
31	.68	---	.50	.22	---	5.9	---	3.3	---	.55	.96	---
TOTAL	23.71	18.35	57.00	101.80	23.89	115.09	313.82	58.92	90.50	44.32	42.43	20.29
MEAN	.76	.81	1.84	3.28	.85	3.71	10.5	1.90	3.02	1.43	1.37	.68
MAX	3.5	4.7	36	24	12	31	104	21	18	5.4	3.5	4.2
MIN	.23	.23	.16	.22	.17	.12	.81	.44	.91	.55	.62	.31
AC-FT	47	36	113	202	47	228	622	117	180	88	84	40

CAL YR 1985	TOTAL	429.03	MEAN	1.18	MAX	36	MIN	.00	AC-FT	851
WTR YR 1986	TOTAL	910.12	MEAN	2.49	MAX	104	MIN	.12	AC-FT	1810

16764000 HILEA GULCH TRIBUTARY NEAR HONUAPO

LOCATION.--Lat 19°10'27", long 155°35'58", Hydrologic Unit 20010000, on right bank 0.5 mi upstream from mouth, 6.6 mi northwest of Honuapo, and 6.7 mi west of Punaluu.

DRAINAGE AREA.--9.17 mi^2.

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,940 ft, from topographic map.

REMARKS.--Records fair. No diversion upstream. Recording rain gage located at station. Periodic determinations of water temperature for the current year are published elsewhere in thie report.

AVERAGE DISCHARGE.--20 years, 7.77 ft^3/s (5,630 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,400 ft^3/s Mar. 18, 1980, gage height, 8.00 ft, from rating curve extended above 75 ft^3/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	0430	710	5.25	Apr. 10	1530	*758	*5.37

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	.06	.00	.00	.00	.00	.06	29	.35	2.1	.49	.47
2	1.1	.00	.00	.00	.00	.00	.00	33	.46	.61	.87	.12
3	.57	.00	.00	.00	.00	.00	.02	4.7	6.5	.67	.65	.07
4	.30	.00	.00	.00	.00	.00	.00	.75	1.5	34	.43	.16
5	1.3	.00	.00	.00	.00	.00	5.8	.56	.51	40	.34	1.8
6	.53	.00	.00	.00	.00	.00	9.5	11	.31	4.6	.32	6.2
7	.26	.00	.00	.00	.00	.00	.28	6.2	6.3	3.1	.26	1.4
8	20	.00	.00	.00	.00	.00	.00	1.7	15	1.3	.34	17
9	1.5	.00	.00	.00	.00	.00	4.1	17	3.9	.56	.30	.46
10	.46	.00	.04	.00	.00	.00	330	45	1.2	.59	.17	.30
11	2.2	.00	.09	.00	.00	.00	209	26	.43	14	.02	.35
12	.72	.00	.02	.00	.00	.00	7.4	12	.41	2.2	.17	.28
13	.53	.00	.00	.00	.00	.00	2.2	3.2	.34	1.1	.24	.19
14	1.8	.00	.00	.00	.00	.00	23	2.4	2.1	2.8	5.9	.08
15	.49	3.3	.00	.00	.00	.00	17	20	.38	16	.85	.04
16	.27	28	.00	.00	.00	.00	4.2	8.1	.13	2.8	1.4	.06
17	.90	.15	.00	.00	.00	.00	.77	16	.01	18	2.1	.00
18	3.9	.00	.00	.00	.00	.00	44	3.3	.01	25	1.7	.00
19	.76	54	.00	.00	.00	.00	5.3	18	.01	4.2	.46	.00
20	26	.28	.00	.00	.00	2.4	16	7.3	.01	1.4	1.5	19
21	2.3	.00	.00	.00	.00	5.5	3.4	1.3	.01	.67	.82	.86
22	2.0	.27	.00	.00	.00	6.6	1.1	.91	.01	3.1	.31	.54
23	.81	.49	.00	.00	.00	.36	.66	.78	.01	73	.16	.36
24	28	.30	.00	.00	.00	.04	3.4	.66	.01	35	.01	.56
25	3.0	.09	.00	.00	.00	.03	2.2	.64	15	12	.00	1.1
26	1.3	.00	.00	.00	.00	.01	.59	.66	1.5	1.7	.00	29
27	.51	.00	.00	.00	.00	13	.52	.66	.53	.94	.00	66
28	.34	.00	.00	.00	.00	.42	4.9	.74	.20	.72	.00	14
29	.24	.00	.00	.00	---	.00	5.9	.63	1.1	.60	12	2.6
30	.20	.00	.00	.00	---	.00	1.7	.45	8.9	.60	5.0	.58
31	.16	---	.00	.00	---	.31	---	.38	---	.53	1.6	---
TOTAL	109.65	86.94	.15	.00	.00	28.67	703.02	273.02	67.13	303.89	38.51	163.58
MEAN	3.54	2.90	.00	.00	.00	.92	23.4	8.81	2.24	9.80	1.24	5.45
MAX	28	54	.09	.00	.00	13	330	45	15	73	12	66
MIN	.16	.00	.00	.00	.00	.00	.00	.38	.01	.53	.00	.00
AC-FT	218	172	.3	.00	.00	57	1390	542	133	603	76	324

CAL YR 1985	TOTAL	1663.37	MEAN	4.56	MAX	320	MIN	.00	AC-FT	3300
WTR YR 1986	TOTAL	1774.76	MEAN	4.86	MAX	330	MIN	.00	AC-FT	3520

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 flood-flow 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 base flow 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 miscelleneous 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 thia 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 1986

Station No.	Station name	Location	Drainage area mi^2	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Hawaii, Island of Oahu				
16201000	Right Branch of North Fork Kaukonahua Stream	Lat 21°31'11", long 157°56'53", 200 ft abova confluence with Left Branch snd 4.5 mi east of Leilehua High School in Wahiawa.	1.17	1913-53≠, 1960-62, 1968, 1968-86	2-12-86	0.19
16214000	Pearl Harbor Springa at Waiawa, near Pearl City	Lat 21°23'36", long 157°59'11", 0.7 mi west of Pearl City and 1.5 mi east of Waipahu Post Office.	-	1931-34≠, 1937-64≠, 1967-68, 1970-86	3-27-86 7-21-86	13.4 12.2
16224000	Pearl Harbor Springs at Kalauao, near Aiea	Lat 21°23'05", long 157°56'46", 300 ft downetream from Highway 90 and 0.8 mi west of Aiea Post Office.		1931-62≠, 1964-65≠, 1966-68, 1970-86	3-28-86 7-22-86	12.7 11.7
		Hawaii, Island of Molokai				
16403400	Kapuhi Stream at altitude 1,000 ft, near Pelekunu	Lat 21°07'50", long 156°53'02", 500 ft upstream from Kawailena Stream, 2.2 mi south of former village of Pelekunu, and 5.4 mi north of Kamalo.	.51	1968-86	12-11-85 2- 6-86 4- 1-86 5-22-86 9-11-86	2.04 1.38 2.62 1.70 .81
16403500	Kawailena Stream near Pelekunu	Lat 20°07'52", long 156°53'05", 800 ft upstream from mouth, 2.2 mi south of former village of Pelekunu, and 5.5 mi north of Kamalo.	.65	1968-88	12-11-85 2- 6-86 4- 1-86 5-22-86 9-11-86	3.17 2.15 3.42 2.10 1.76
16403600	Kapuhi Stream near Pelekunu	Lat 21°07'57", long 158°52'56", on left bank 400 ft downstream from Kawailena Stream, 2.1 mi south of former village of Pelekunu, and 5.6 mi north of Kamalo.	1.20	1968-70≠, 1974-86	12-11-85 2- 6-86 4- 1-86 5-22-86 9-11-86	4.84 1.74 6.23 4.02 2.70
16403700	Kawainui Stream at altitude 1,000 ft, near Pelekunu	Lat 20°07'46", long 156°52'31", 400 ft upstream from Kawaipoko Stream, 2.4 mi south of former village of Pelekunu, and 5.4 mi north of Kamalo.	.79	1968-86	12-11-85 2- 6-86 4- 1-86 5-22-86 9-11-86	3.19 1.80 4.31 2.92 1.65
16403800	Kawaipoko Stream near Pelekunu	Lat 21°07'48", long 156°52'30", 300 ft upstream from mouth, 2.4 mi south of former village of Pelekunu, and 5.4 mi north of Kamalo.	.28	1968-86	12-11-85 2- 6-86 4-01-86 5-22-86 9-11-86	.76 .65 1.15 .86 .38
16403900	Kawainui Stream near Pelekunu	Lat 21°07'58", long 156°52'38", on right bank 900 ft upstream from confluence with Kapuhi Stream, 2.1 mi south of former village of Pelekunu, and 5.7 mi north of Kamalo.	1.17	1968-79≠, 1980-86	12-11-85 2- 6-86 4- 1-86 5-22-86 9-11-86	4.58 3.28 7.11 4.30 1.91

≠ Operated as a continuous-record gaging station.
e Estimated.

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 stsge-discharge relation for each gsge 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 lowsr floods 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 annusl maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1986

Station no.	Station name	Location	Drainsge area mi^2	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Kauai					
16038000	Waimea River at Waimea	Lat 21°57'23", long 159°39'59", 150 ft upstream from highway bridge at Waimea and 0.2 mi upstream from mouth.	86.5	1944-86b	8-11-86	5.99	-
16052000	Hanapepe River at Hanapepe	Lat 21°54'47", long 159°35'33", 400 ft upstream from bridge on Highway 50 and 0.5 mi upstream from mouth.	26.6	1950-86b	8-11-86	4.72	-
16052500	Lawai Stream near Koloa	Lat 21°54'11", long 159°30'21", on right bank at private road bridge, 0.9 mi upstream from mouth, and 2.4 mi southwest of Koloa.	6.82	1962-63, 1964-72≠, 1973-86	8-11-86	2.69	426
16055000	Huleia Stream near Lihue	Lat 21°57'20", long 159°25'23", at highway bridge, 3.7 mi southwest of Lihue, and 4.5 mi upstream from mouth.	17.6	1912-15≠, 1962-67, 1968-70≠, 1971-86	8-11-86	5.60	530
16071800	Wailua River near Kapsa	Lat 22°03'00", long 159°20'28", at State Park 600 ft upstream from highway bridge, 850 ft upstream from mouth, and 2.5 mi southwest of Kapaa.	52.6	1962-86b	5-10-86	6.30	-
16073500	Konohiki Stream near Kapaa	Lat 22°04'01", long 159°20'21", at culvert on private road, 1.8 mi upstream from mouth, and 2.4 mi southwest of Kapaa High School.	3.38	1964-67, 1970-86	8-11-86	5.85	30
16080000	Kapaa Stream near Kapaa	Lat 22 06'15", long 159 22'29", on right bank at Kapahi ditch intake, 3.8 mi northwest of Kapaa, and 4.3 mi northwest of Wailua.	3.86	1936-85≠, 1988	8-19-86	2.47	1,220
16081200	Akulikuli Stream near Kapaa	Lat 22°06'25", long 159°22'07", at Kahuna road crossing, 800 ft upstream from mouth, and 3.5 mi northwest of Kapaa armory.	.40	1964-86	8-19-86	4.91	158
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 upstream from road crossing, 1.4 mi northwest of Kealia, and 2.1 mi upstream from mouth.	14.0	1962-88	11- 8-85	8.45	1,670
16085000	Homaikawaa Stream near Kealia	Lat 22°07'23", long 159°18'12", at culvert on Highway 56, 1.6 mi southeast of Anahola School, and 1.6 mi north of Kealia.	.85	1964-86	5-13-86	1.96	40
16097900	Puukumu Stream near Kilauea	Lat 22°13'01", long 159°25'18", at culvert on Highway 56, 0.8 mi northwest of Kilauea School, and 0.9 mi upstream from mouth.	.91	1964-68, 1971-86	10-20-85	<2.96	25
16104200	Hanalei River at Highway 56 bridge near Hanalei	Lat 22°12'50", long 159°28'43", at highway bridge, 1.6 mi northeast of Hanalei, and 2.4 mi upstream from mouth.	21.0	1963-86b	10-20-85	10.77	-
16130000	Nahomalu Valley near Mana	Lat 22°02'41", long 159°45'17", on left bank 1.1 mi northeast of Mana, and 5.3 mi northwest of Kekaha School.	3.81	1962-63, 1964-71≠, 1972-86	2-22-86	3.84	199

≠ Operated as a continuous-record gaging station.
< Actual value is known to be less than the value shown.
b Gage height only.

Annual maximum discharge at crest-stage partial-record stations during water year 1988--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Annual maximum Gage height (ft)	Annual maximum Discharge (ft^3/a)
		Hawaii, Island of Oahu					
16210500	Kaukonahua Stream at Waialua	Lat 21°33'56", long 158°07'26", 0.2 mi upatream from Highway 99, 0.4 mi southeast of Waialua High School, and 1.3 mi southwest of Weed Circle.	38.7	1963, 1968-86	5-10-86	19.64	2,130
16211200	Poamoho Stream at Waialua	Lat 21°34'00", long 158°06'40", at culvert crossing of Kaheaka Road, 0.2 mi upstream from Highway 83, and 1.1 mi east of Waialua High School.	10.9	1967-86	10-20-85	11.11	e400
16211300	Makaleha Stream near Waialua	Lat 21°33'49", long 158°09'21", 1.0 mi southwest of Dillingham Ranch and 1.9 mi southwest of sugar mill at Waialua.	4.15	1958-63, 1964-65≠, 1966-86	10-20-85	5.69	536
16211400	Manini Gulch at Kaena	Lat 21°34'50", long 158°15'12", 180 ft upstream from Highway 99, 1.7 mi west of Camp Erdman, and 2.0 mi east of Kaena Point.	1.08	1974-86	10-20-85	-	e40
16211500	Makua Stream at Makua	Lat 21°31'59", long 158°13'49", on left bank 20 ft upstream from old concrete highway ford, 140 ft downstream from Farrington Highway box culvert, 0.1 mi north of Makua cemetery, and 4.5 mi southeast of Kaena Point lighthouse.	4.28	1958-86	10-20-85	7.48	e100
16211700	Makaha Stream at Makaha	Lat 21°28'47", long 158°12'31", 0.9 mi upstream from Farrington Highway and 1.1 mi north of junction of Farrington Highway and Makaha Valley Road.	5.25	1966-86	10-20-85	10.93	1,150
16211800	Kaupuni Stream at altitude 372 ft, near Waianae	Lat 21°28'20", long 158°09'26", at abandoned diversion dam, 2.6 mi northeast of Waianae cemetery, and 2.8 mi northeast of junction of Waianae Valley Road and Farrington Highway.	3.58	1981-72≠, 1973-86	10-20-85	5.87	e400
16212200	Maililili Stream near Waianae	Lat 21°27'34", long 158°08'05", at bridge at Lualualei Naval Reservation and 3.4 mi east of cemetery near Waianae.	1.51	1958-88	10-20-85	2.47	762
16212300	Nanakuli Stream at Nanakuli	Lat 21°23'08", long 158°08'11", 0.7 mi upstream from Highway 90 and 0.6 mi northeast of Nanakuli Post Office.	3.98	1968-86	10-20-85	26.28	e2,500
16212450	Kaloi Gulch tributary near Honouliuli	Lat 21°22'41", long 158°03'45", at culvert on private road, 1.8 mi west of Honouliuli, and 2.8 mi northwest of Ewa Post Office.	1.70	1968-86	10-20-85	4.41	246
16212500	Honouliuli Stream near Waipahu	Lat 21°22'40", long 158°02'10", at bridge on Farrington Highway and 1.8 mi west of Waipahu Post Office.	11.0	1956-86	10-20-85	5.52	1,540
16212601	Waikele Stream at Wheeler Field	Lat 21°28'44", long 158°03'07", at culvert 0.3 mi weat of east-west runway at Wheeler Field and 1.9 mi southwest of Wahiawa Post Office.	6.35	1958, 1960-86	10-20-85	6.00	295
16212700	Waikakalaua Stream near Wahiawa	Lat 21°27'50", long 158°01'38", 0.2 mi downstream from Kamehameha Highway and 2.4 mi south of Wahiawa Post Office.	7.49	1958-86	5-10-86	11.46	2,110
16212750	Huliwai Gulch near Kunia Camp	Lat 21°26'43", long 158°03'47", 200 ft upstream from Highwey 75 and 1.2 mi south of Kunia Camp.	.84	1974-86	10-20-85	11.53	e50

≠ Operated aa a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-atage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Oahu--Continued					
16223000	Waimalu Stream near Aiea	Lat 21°23'48", long 157°56'56", 1,300 ft upstream from bridge on Moanalua Road and 1.2 mi northwest of Aiea High School.	5.97	1952-70≠, 1973-86	9-28-86	3.32	1,810
16224500	Kaleuao Stream at Moanalua Road, at Aiea	Lat 21°23'07", long 157°58'22", on left bank at downstream side of Moanalua Road bridge, 0.4 mi northwest of Aiea Post Office, and 2.3 mi southeast of Pearl City Post Office.	2.59	1957-82≠, 1984-86	9-28-86	5.77	1,710
16228000	Moanalua Stream near Honolulu	Lat 21°22'53", long 157°52'22", on left bank 1.8 mi northeast of Tripler Hospital and 5.0 mi north of Honolulu Post Office.	2.73	1927-78≠, 1979-86	10-20-85	5.56	660
16228200	Moanalua Stream near Aiea	Lat 21°22'37", long 157°53'03", on right bank 1.1 mi northeast of Tripler Hospital and 2.9 mi east of Aiea augar refinery.	3.34	1989-88	10-20-85	4.78	1,120
16228600	Moanalua Stream at Tripler Hospital	Lat 21°21'52", long 157°54'05", on right bank 0.5 mi west of Tripler Hospital and 1.6 mi northeast of Aliamanu School.	4.44	1971-86	10-20-85	14.67	865
16228900	Kalihi Stream near Kaneohe	Lat 21°22'35", long 157°49'32", on right bank 800 ft downstream from Likelike Highway and 2.8 mi southwest of Castle High School in Kaneohe.	.60	1967-71≠, 1972-86	9-28-86	-	e290
16235400	Waolani Stream at Honolulu	Lat 21°20'00", long 157°51'04", at Wyllie Street bridge and 1.8 mi northeast of Honolulu Post Office.	1.28	1958-86	3-25-86	.64	e100
16237500	Pauoa Stream at Honolulu	Lat 21°19'18", long 157°51'03", at Lusitana Street bridge and 1.1 mi northeast of Honolulu Post Office.	1.43	1958-86	3-25-86	-	e200
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 downstream from confluence of Manoa and Palolo Streams, and 0.6 mi upstream from point of discharge into Ala Wai Canal.	9.35	1968-86	10-20-85	6.24	1,940
16247500	Wailupe Gulch at Aina Haina	Lat 21°17'46", long 157°45'29", at Ani Street bridge and 1.0 mi upstream from Kalanianaole Highway in Aina Haina.	2.35	1958-86	10-20-85	1.13	319
16247900	Kuliouou Valley at Kuliouou	Lat 21°17'50", long 157°43'35", at Kuliouou, 300 ft downstream of aingle-lane wooden bridge, and 0.6 mi upstream from Highway 72.	1.18	1958-59, 1970-86	10-20-85	-	e150
16248800	Inoaole Stream at Waimanalo	Lat 21°29'31", long 157°42'40", 30 ft upstream from culvert on Hihimanu Street and 0.8 mi northwest of Waimanalo Post Office.	1.21	1958-86	10-20-85	-	e100
16249000	Waimanalo Stream at Waimanalo	Lat 21°21'12", long 157°43'52", on right bank 40 ft upstream from Highway 72 and 2.3 mi northwest of Waimanalo Post Office.	2.16	1967-70≠, 1971-88	10-20-85	6.31	e1,100
16249100	Kaelepulu Stream tributary at Kailua	Lat 21°21'44", long 157°44'22", 30 ft upstream from Kalanianaole Highway, 1.6 mi northwest of Waimanalo School, and 2.4 mi south of Kailua Post Office.	.16	1963-86	11-18-85	1.76	34

≠ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/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 west of Maunawili School, and 1.6 mi southwest of Kailua Post Office.	5.34	1958-67, 1968-71≠, 1972-86	9-30-86	9.00	1,550
16264800	Kawainui Canal at Kailua	Lat 21°24'15", long 157°45'28", at head of canal and 1.2 mi northwest of Kailua Post Office.	11.0	1957-60, 1963-64, 1967-86b	2-27-86	1.93	-
16265000	Kawa Stream at Kaneohe	Lat 21°24'32", long 157°47'36", 50 ft upstream from bridge on Kaneohe Bay Drive at Kaneohe, 0.2 mi northeast of Castle High School, and 0.6 mi upstream from mouth.	1.19	1965, 1988-74, 1977-86	10-19-85	5.92	446
16274499	Keaahala Stream at Kamehameha Highway, at Kaneohe	Lat 21°25'12", long 157°48'15", 35 ft upstream from bridge on Kamehameha Highway in Kaneohe.	.62	1959-86	3-25-86	3.27	e570
16279500	Heeia Stream at Kaneohe	Lat 21°25'17", long 157°49'01", 60 ft downstream from culvert on Kahekili Highway, 0.7 mi west of Kaneohe Post Office, and 0.8 mi southwest of Heeia.	1.80	1965-66, 1966-86	3-25-86	-	e960
16283480	Ahuimanu Stream near Kahaluu	Lat 21°27'04", long 157°50'13", at bridge on Ahuimanu Road and 0.8 mi south of Kahaluu.	2.31	1963-86	3-25-86	-	1,000
16304500	Kaluanui Stream at Hauula	Lat 21°35'57", long 157°54'24", on left downstream wingwall of concrete bridge, 1.2 mi southeast of cemetery in Hauula, and 1.4 mi northeast of Sacred Falls.	2.12	1958-86	10-19-85	4.99	2,290
16310501	Malaekahana Stream at altitude 30 ft, near Kahuku	Lat 21°39'47", long 157°57'11", at abandonsd plantation railroad bridge, 1.1 mi southwest of junction of plantation road and Highway 83, and 1.2 mi south of Kahuku Hospital.	4.05	1958-86	9-28-86	4.28	e60
16311000	Oio Stream near Kahuku	Lat 21°41'32", long 157°59'48", 0.6 mi southwest of junction of plantation road and Highway 83 and 2.7 mi west of Kahuku Hoapital.	2.13	1958-86	10-20-85	4.92	e60
16317800	Kaunala Gulch near Sunaet Beach	Lat 21°40'59", long 158°02'12", on downatream left bank wingwall of road bridge on Highway 83 near Sunset Beach and 2.9 mi northeast of Waimea.	1.98	1973-86	10-20-85	2.68	e50
16318000	Paumalu Gulch at Sunset Beach	Lat 21°40'19", long 158°02'28", 0.4 mi upstream from Highway 83 at Sunset Bsach and 2.2 mi northeast of Walmea.	2.59	1968-86	10-20-85	2.29	e140
16331000	Waimea Gulch near Kawailoa Camp	Lat 21°37'29", long 158°04'58", at culvert on Ashley Road, 0.1 mi upstream from Highway 83, and 1.1 mi north of Kawailoa Camp.	2.23	1968-86	10-20-85	2.86	112
16340000	Anahulu River near Haleiwa	Lat 21°35'28", long 158°04'45", 1.7 mi southeast of junction of Emerson Road and Kamehameha Highway and 2.5 mi east of Waialua School at Haleiwa.	13.5	1958-86	10-20-85	4.37	1,050
16350000	Opaeula Stream near Haleiwa	Lat 21°35'09", long 158°06'01", 0.6 mi upatream from Kamehameha Highway and 2.1 mi northeaat of Waialua.	5.96	1956-86	5-10-86	13.46	1,680

≠ Operated as a continuous-record gaging station.
e Estimated.
b Gage height only.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Molokai					
16411320	Kakaako Gulch above Kamakahi Gulch, near Mauna Loa	Lat 21°10'11", long 157°11'56", 0.1 mi upstream from Kamakahi Gulch, 1.7 mi downstream from Highway 46, and 2.5 mi northeast of Mauna Loa.	1.40	1964-86	10-18-85	-	e1
16411400	Kakaako Gulch near Mauna Loa	Lat 21°10'39", long 157°12'31", on left bank 1.0 mi downstream from Kamakahi Gulch, and 3.0 mi north of Mauna Loa School.	5.34	1963-72≠, 1973-86	10-18-85	2.81	128
16411600	Kaunala Gulch near Mauna Loa	Lat 21°07'01", long 157°15'43", at Sand Haul Road, 3.2 mi east of Laau Point lighthouse, and 3.3 mi southwest of Mauna Loa.	.28	1964-86	10-18-85	2.31	57
16411640	Halena Gulch near Mauna Loa	Lat 21°05'53", long 157°13'47", 2.7 mi southwest of Mauna Loa and 5.5 mi east of Laau Point.	2.07	1965-86	10-18-85	2.53	302
18411800	Kaluapeelua Gulch at Hoolehua	Lat 21°09'55", long 157°04'22", 0.4 mi south of Hoolehua and 2.1 mi west of Kualapuu.	1.46	1964-86	-	-	No flow
18413500	Manawainui Gulch near Kualapuu	Lat 21°07'42", long 157°03'25", at bridge on Highway 46, 0.5 mi south of Holomua School, and 2.3 mi southwest of Kualapuu.	10.4	1965-86	11-30-85	6.10	309
16415400	Wawaia Gulch at Kamalo	Lat 21°03'25", long 156°52'20", at Highway 45, 0.3 mi upstream from mouth, and 0.5 mi northeast of Kamalo.	2.12	1984-86	11-30-85	1.40	415
16419000	Pohakupili Gulch near Halawa	Lat 21°07'59", long 156°44'15", at Highway 45, 0.5 mi upstream from mouth, and 1.9 mi south of Halawa.	.48	1964-86	10-18-85	6.87	234
		Hawaii, Island of Maui					
16500100	Kepuni Gulch near Kahikinui House	Lat 20°37'21", long 156°15'16", on right bank 120 ft upstream from bridge on Highway 31, 400 ftr upstream from Kamole Gulch, 1.1 mi east of Kahikinui House, and 8.5 mi west of Kaupo.	1.91	1963-72≠, 1973-86	3-16-86	6.80	602
16500300	Hawelewele Gulch near Kaupo	Lat 20°38'01", long 156°11'08", 700 ft upstream from Piilani Highway 31 and 3.9 mi west of Kaupo.	11.3	1967-86	11-19-85	9.26	3,220
16500800	Kukuiula Gulch near Kipahulu	Lat 20°39'18", long 156°04'44", at Highway 31, 1.3 mi west of Kipahulu, and 3.2 mi east of Kaupo.	.76	1963-68≠, 1969-86	10-18-85	-	e1
16502400	Pukuilua Gulch near Hana	Lat 20°42'00", long 156°00'14", at Highway 31, 0.4 mi southwest of Puuiki, and 4.0 mi south of Hana.	.48	1963-86	10-18-85	-	e1
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 south of Hana.	.90	1963-86	10-18-85	7.70	339
16502900	Kawaipapa Gulch at Hana	Lat 20°46'08", long 158°00'04", 1,000 ft upstream from Highway 36 and 0.3 mi northwest of Hana Hospital.	5.83	1965-86	4-10-86	6.54	2,600

≠ Operated as a continuous-record gaging atation.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Maui--Continued					
16603300	Unnamed gulch at Maliko Bay	Lat 20°56'26", long 156°21'04", at Hana Highway, 0.5 mi west of Maliko Bay, and 1.3 mi north of Hamakuapoko.	.43	1963-86	10-18-85	1.65	10
16603700	Kalialinui Gulch tributary near Pukalani	Lat 20°49'02", long 156°19'44", at Lower Kula Road and 1.4 mi south of Pukalani.	1.17	1967-86	10-18-85	1.14	7
16603800	Kaluapulani Gulch tributary near Pukalani	Lat 20°48'52", long 156°18'32", at Haleakala Highway, 1.5 mi west of Olinda Prison Camp, and 2.3 mi southeast of Pukalani.	.45	1963-86	10-18-85	2.04	46
16603850	Kalialinui Gulch near Kahului	Lat 20°52'47", long 156°26'06", 600 ft upstream from Hansen Road, 0.5 mi northeast of Puunene Hospital, and 2.5 mi southeast of Kahului Post Office.	17.9	1967-86	11-30-85	4.22	55
16607000	Iao Stream at Wailuku	Lat 20°53'38", long 156°30'27", 580 ft upstream from Market Street bridge at Wailuku and 1.9 mi upstream from mouth.	8.24	1951≠, 1952-86	10-18-85	5.26	3,750
16616500	Unnamed gulch at Maluhia Camp	Lat 20°57'26", long 156°31'41", at Kahekili Highway, 0.6 mi east of Maluhia Camp, and 1.8 mi northwest of Waihee.	.12	1964-86	10-18-85	-	e1
16619700	Poelua Gulch near Kahakuloa	Lat 21°00'58", long 158°34'58", at Highway 30 (bypass), 1.3 mi southeast of Nakalele Point lighthouse, and 2.2 mi northwest of Kahakuloa.	1.18	1965-86	10-18-85	10.95	437
16630200	Honokowai Stream at Honokowai	Lat 20°56'58", long 156°41'07", 0.5 mi southeast of Honokowai, and 1.1 mi northwest of Puukolii.	5.59	1962-63, 1965-86	10-18-85	4.96	666
16643300	Kauaula Stream near mouth, near Lahaina	Lat 20°52'09", long 156°39'43", 0.7 mi upstream from Honoapiilani Highway (bypass) and 1.3 mi southeast of Lahaina Lighthouse.	4.12	1960, 1962, 1964-86	10-18-85	4.45	532
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 northeast of Olowalu, and 5.5 mi southeast of Lahaina.	4.08	1962-72≠, 1973-86	10-18-85	3.92	474
16647500	Malalowaiaole Gulch near Maalaea	Lat 20°46'56", long 156°31'32", at Honoapiilani Highway, 200 ft upstream from mouth, 0.2 mi north of McGregor Point, and 1.2 mi southwest of Maalaea.	.64	1964-86	10-18-85	5.18	61
16650500	Waikapu Stream near Kihei	Lat 20°49'02", long 156°29'00", at railroad bridge beside Lower Maalaea Road, 2.5 mi northeast of Maalaea, and 2.5 mi northwest of Kihei.	6.97	1963-86	10-18-85	6.30	910

≠ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Maui--Continued					
16658500	Waiakoa Gulch tributary near Waiakoa	Lat 20°44'56", long 156°19'22", at Upper Kula Road, 1.0 mi southeast of Waiakoa, and 1.0 mi northeast of junction of Lower and Upper Kula Roads.	.98	1964-86	5- 5-86	2.67	66
16659000	Waiakoa Gulch at Kihei	Lat 20°47'14", long 156°27'41", 0.3 mi northeaat of Kihei and 0.4 mi upstream from mouth.	10.1	1983-86	11-19-85	5.38	57
16660000	Kulanihakoi Gulch near Kihei	Lat 20°46'06", long 156°27'03", on right bank 0.5 mi northeast of Lihue Cemetery, 0.8 mi upstream from mouth, and 1.3 mi southeast of Kihei.	14.4	1963-70≠, 1971-86	11-19-85	-	e40
16663500	Kamaole Gulch at Kamaole	Lat 20°43'36", long 156°27'02", at Kihei Road, 350 ft upatream from mouth, and 0.2 mi south of Kamaole.	4.28	1972-86	11-19-85	-	e5
16664000	Liilioholo Gulch at Kamaole	Lat 20°43'04", long 156°26'55", on upstream side of Kihei Road, 300 ft upstream from mouth, and 0.8 mi south of Kamaole.	4.12	1972-86	11-19-85	-	e10
		Hawaii, Island of Hawaii					
16701300	Waiakea Stream at Hilo	Lat 19°42'38", long 155°05'02", 0.3 mi upatream from Kinoole Street bridge and 1.3 mi southeast of Hilo Post Office.	35.8	1968-86	4-10-86	4.33	376
16701400	Palai Stream at Hilo	Lat 19°40'56", long 155°04'04", at Highway 11, 300 ft south of Palai Street intersection, and 3.5 mi southeast of Hilo Post Office.	5.08	1965-86	4-10-86	4.31	352
16717400	Kalaoa Mauka Stream near Hilo	Lat 19°48'07", long 155°08'03", at culvert on Highway 19, 1.0 mi north of Papaikou, and 5.1 mi north of Hilo Post Office.	.24	1963-86	4-10-86	5.51	106
16717600	Alia Stream near Hilo	Lat 19°50'38", long 155°06'21", on left bank 10 ft downstream from culvert on Highway 19 at Pepeekeo, 2.0 mi south of Honomu, and 8.0 mi north of Hilo.	.58	1962-72≠, 1973-86	4-10-86	4.54	570
16717650	Kapehu Stream near Pepeekeo	Lat 19°51'52", long 155°06'11", at culvert on Highway 19, 1.0 mi southeast of Honomu, 2.2 mi north of Pepeekeo, and 9.4 mi north of Hilo.	1.09	1963-86	4-10-86	8.61	844
16717800	Pohakupuka Stream near Papaaloa	Lat 19°57'20", long 155°11'20", on right bank 200 ft downatream from Highway 19, 2.8 mi northwest of Honohina, and 3.0 mi southwest of Papaaloa.	2.76	1963-80≠, 1983-86	4-10-86	7.82	1,450
16717850	Keehia Gulch near Ookala	Lat 20°01'08", long 155°18'45", at culvert on Highway 19, 1.7 mi west of Ookala, and 4.1 mi southeast of Paauilo.	.62	1963-86	4-10-86	5.11	187
16717920	Ahualoa Gulch at Honokaa	Lat 20°05'12", long 155°29'17", at Highway 24, 1.1 mi northwest of Honokaa Hospital, and 1.5 mi upstream from mouth.	2.27	1963-86	-	-	No flow
16717950	Honokaia Gulch tributary near Honokaa	Lat 20°02'58", long 155°32'19", at culvert 4.8 mi aouthwest of Honokaa Hospital, and 5.5 mi southeast of Kukuihaele.	2.42	1963-86	4-10-86	-	e2
16752600	Hapahapai Gulch at Kapaau	Lat 20°14'00", long 155°46'00", at Highway 27, 300 ft east of Kapaau Post Office.	1.52	1963-86	4-10-86	5.81	92
18755800	Luahine Gulch near Waimea	Lat 20°03'11", long 155°44'35", at culvert 5.1 mi northwest of Waimea and 5.7 mi east of Kawaihae.	.32	1963-86	4- 3-86	3.88	170

≠ Operated as a continuous-record gaging station.
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1986--Continued

Station no.	Station name	Location	Drainage area mi^2	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		Hawaii, Island of Hawaii--Continued					
16756500	Keanuiomano Stream near Kamuela	Lat 20°01'48", long 155°42'05", on left bank 150 ft upstream from Highway 25 at Waiaka and 2.0 mi west of Kamuela.	4.3	1964-72≠, 1973-86	4-10-86	7.00	1,640
16759040	Paiakuli Reservoir tributary near Waimea	Lat 20°02'16", long 155°38'08", at Highway 19, 2.1 mi west of Puukapu Reservoir, and 2.6 mi northeast of Waimea.	.27	1983-86	4-10-86	4.48	227
16759060	Kamakoa Gulch near Waimea	Lat 19°57'32", long 155°41'02", at bridge, 1.4 mi north of Saddle Road Junction, and 4.5 mi aouth of Waimea.	50.6	1963-86	10-18-85	3.06	47
16759080	Popoo Gulch near Waikii	Lat 19°52'11", long 155°43'51", at bridge on Highway 19, 2.0 mi north of Keamuku, and 5.2 mi weat of Waikii.	33.1	1963-86	10-18-85	4.89	896
16759180	Keopu Stream near Kailua	Lat 19°38'54", long 155°58'15", at county road bridge, 1.9 mi east of Kailua, and 2.3 mi northweat of Holualoa Post Office.	2.61	1962, 1965-86	2-16-86	-	e5
16759300	Waiaha Stream at Luawai, near Holualoa	Lat 19°38'12", long 155°55'45", on right bank at Luawai, 1.8 mi northeast of Holualoa School, and 4.2 mi southeaat of Honokohau School.	8.74	1961-71≠, 1972-86	2-16-86	2.62	46
16762000	Alapai Gulch at Naalehu	Lat 19°04'00", long 155°35'19", at debria catchment outlet of Naalehu Watershed Protection Project and 0.2 mi upstream from Highway 11 at Naalehu.	2.87	1963-86	4-10-86	5.47	1,240
16767000	Ninole Gulch near Punaluu	Lat 19°10'44", long 155°33'46", on right bank 300 ft downatream from forest-reserve boundary, 4.6 mi northwest of Punaluu, and 6.0 mi north of Honuapo.	15.5	1966-82≠, 1983-86	4-10-86	5.22	726
16770000	Hionamoa Gulch at Pahala	Lat 19°11'45", long 155°29'11", at bridge, 0.6 mi southweat of Pahala, and 4.1 mi north of Punaluu.	9.41	1963-86	4-10-86	12.90	4,220
16770500	Paauau Gulch at Pahala	Lat 19°12'39", long 155°28'48", on right bank 100 ft downstream from bridge on Wood Valley Road and 0.7 mi north of Pahala.	1.74	1962-79≠, 1980-86	4-10-86	4.67	392

e Estimated.
≠ Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during water year 1986

Stream	Tributary to	Location	Drainage area mi^2	Measured previously (water yeara)	Measurements	
					Date	Discharge (ft^3/s)
		Hawaii, Island of Oahu				
Manoa Stream	Pacific Ocean	Lat 21°19'04", long 157°48'31", 0.2 mi east of Manoa School, 1.1 mi downstream from confluence of Waihi and Waiakeakua Streams, and 3.6 mi east of Honolulu Post Office.	-	1985	11-21-85	3.64
					12-18-85	2.65
					1- 6-86	1.84
					1- 6-86	4.80
					1- 7-86	2.58
					1- 7-86	2.07
Manoa Stream	Pacific Ocean	Lat 21°19'01", long 157°48'33", 0.3 mi southeast of Manoa School, 1.1 mi downstream from confluence of Waihi and Waiakeakua Streams, and 3.5 mi northeaat of Honolulu Post Office.	-	1985	11-21-85	3.65
					12-18-85	2.67
					1- 6-86	1.81
					1- 6-86	4.25
					1- 7-86	2.85
					1- 7-86	2.19
Wailuanui Stream (16521000)	Pacific Ocean	Lat 20°50'10", long 156°08'30", 500 ft down atream from highway, 1.2 mi south of Keanae School, and 3.1 mi northwest of Nahiku.	2.51	1932-35, 1939-47, 1982	8-26-86	1.19
Waikamilo Stream at #2 diversion	Pacific Ocean	Lat 20°5'39", long 156°08'44", 0.2 mi west of Keanae Valley Lookout Park and 0.7 mi south of Keanae School.	-	1976	8- 5-86	8.41

Water-quality partial-record stations are particular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrologic analyses. A schematic diagram showing water-quality stations in Kamooalii Stream basin, Kaneohe, Oahu is shown in figure 15 and the data are listed in downstream order.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU

16265600 RIGHT BRANCH KAMOOALII STREAM NEAR KANEOHE (LAT 21°23'22" LONG 157°47'44")

Streamflow and water-quality data for this station are published in pages 73-77.

212335157482601 HOOMALUHIA RESERVOIR SEC 1-1 NEAR KANEOHE (LAT 21°23'35" LONG 157°46'26")

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)
JAN								
28...	1310	755	1.00	186	7.80	23.0	2.0	8.1
28...	1312	755	3.00	186	7.79	22.9	--	8.1
28...	1315	755	5.00	186	7.76	23.0	2.0	8.2
28...	1317	755	7.00	186	7.78	22.8	--	8.2
28...	1320	755	9.00	186	7.80	22.5	2.1	8.3
MAR								
24...	1350	760	1.00	179	8.00	23.1	--	9.4
24...	1352	760	3.00	179	8.13	22.8	--	9.6
24...	1354	760	5.00	179	7.93	22.5	--	9.3
24...	1356	760	7.00	178	7.82	22.4	--	8.7
24...	1357	760	9.00	176	7.54	22.2	--	8.1
JUL								
07...	1129	761	1.00	191	7.90	26.5	1.5	7.2
07...	1131	761	3.00	190	7.84	26.5	--	7.2
07...	1133	761	5.00	190	7.80	26.5	1.2	7.1
07...	1134	761	7.00	190	7.73	26.2	--	6.9
07...	1136	761	9.00	190	7.70	26.0	1.5	6.4
SEP								
16...	1226	755	1.00	194	7.90	28.5	0.8	7.5
16...	1227	755	3.00	194	7.89	28.2	--	7.2
16...	1229	755	5.00	194	7.80	28.0	1.0	6.8
16...	1231	755	7.00	196	7.53	27.7	--	4.7
16...	1234	755	9.00 10.0 (bottom)	196	7.40	27.5	1.0	4.9

DATE	TIME	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
JAN							
28...	1310	K1	8	0.30	0.3	0.6	0.02
28...	1315	K3	4	0.40	0.3	0.7	0.02
28...	1320	K8	2	0.40	0.4	0.8	0.02
JUL							
07...	1129	K4	3	0.10	0.4	0.5	0.02
07...	1133	K5	6	0.10	0.3	0.4	0.02
07...	1136	K3	7	0.10	0.4	0.5	0.03
SEP							
16...	1226	K5	1	0.10	0.4	0.5	0.03
16...	1229	K140	2	0.10	0.5	0.6	0.03
16...	1234	K4	2	0.20	0.3	0.5	0.04

K Results based on colony count outside the acceptable range (non-ideal colony count).

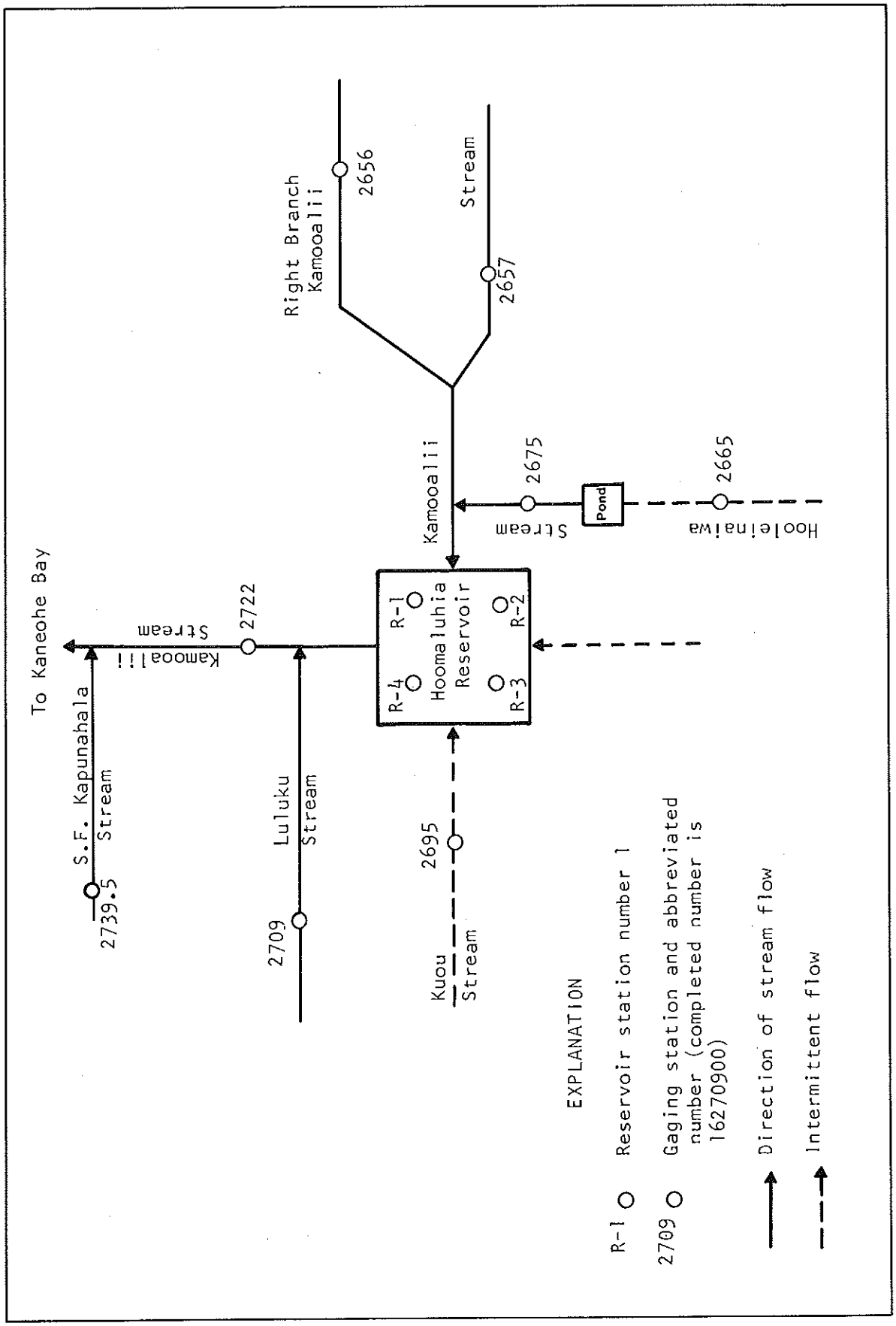

Figure 15.--Schematic diagram showing water-quality stations in Kamooalii Stream basin, Kaneohe, Oahu.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1988

HAWAII, ISLAND OF OAHU--Continued

212335157462602 HOOMALUHIA RESERVOIR SEC 1-2 NEAR KANEOHE (LAT 21°23'35" LONG 157°48'28")

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
JAN							
28...	1328	754	1.00	187	7.89	22.8	8.3
28...	1330	754	3.00	187	7.82	22.6	6.2
28...	1331	754	5.00	187	7.80	22.5	8.2
28...	1333	754	7.00	186	7.83	22.4	8.4
28...	1335	754	9.00	186	7.83	22.3	8.5
MAR							
24...	1341	760	1.00	179	8.02	23.2	9.4
24...	1343	760	3.00	179	8.11	22.8	9.6
24...	1345	760	5.00	182	7.69	22.4	8.7
24...	1347	760	7.00	179	7.58	22.3	8.3
24...	1349	760	9.00	179	7.45	22.2	7.9
JUL							
07...	1120	761	1.00	189	7.90	28.8	7.3
07...	1121	761	3.00	189	7.88	26.8	7.3
07...	1122	761	5.00	190	7.84	26.7	7.3
07...	1123	761	7.00	190	7.69	26.5	6.5
07...	1125	761	9.00	192	7.58	26.0	5.8
SEP							
16...	1219	755	1.00	194	7.95	28.6	7.5
16...	1221	755	3.00	194	7.91	28.3	7.4
16...	1222	755	5.00	194	7.76	28.0	6.4
16...	1224	755	7.00	196	7.39	27.8	4.2
16...	1225	755	9.00	196	7.32	27.3	4.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212335157482603 HOOMALUHIA RESERVOIR SEC 1-3 NEAR KANEOHE (LAT 21°23'35" LONG 157°48'26")

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG)	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
JAN									
28...	1350	754	1.00	186	7.90	23.0	1.6	8.3	K1
28...	1351	754	3.00	186	7.88	22.8	--	8.3	--
28...	1353	754	5.00	186	7.85	22.7	--	8.2	--
28...	1355	754	7.00	186	7.90	22.5	1.9	8.3	K1
28...	1357	754	9.00	186	7.83	22.4	--	8.3	--
28...	1359	754	11.0	186	7.59	21.7	--	7.6	--
28...	1400	754	12.0	187	7.50	21.5	2.3	7.4	K2
28...	1405	754	--	186	7.80	22.5	--	8.0	--
			13.5 (bottom)						
MAR									
24...	1308	760	1.00	179	8.00	22.5	1.2	9.5	K11
24...	1310	760	3.00	179	7.92	22.7	--	9.4	--
24...	1312	760	5.00	182	7.70	22.4	--	8.5	--
24...	1314	760	7.00	180	7.40	22.0	1.2	7.6	56
24...	1316	760	9.00	183	7.24	22.2	--	6.8	--
24...	1318	760	11.0	182	7.15	22.0	--	6.4	--
24...	1319	760	12.0	181	7.10	22.0	1.2	6.3	210
			13.5 (bottom)						
JUL									
07...	1043	761	1.00	180	7.40	27.0	1.2	7.6	K7
07...	1045	761	3.00	189	7.82	26.7	--	7.3	--
07...	1047	761	5.00	189	7.80	26.7	--	7.2	--
07...	1049	761	7.00	189	7.80	26.5	1.2	7.1	K3
07...	1052	761	9.00	190	7.47	26.4	--	5.6	--
07...	1054	761	11.0	192	7.30	26.0	2.0	4.4	20
07...	1056	761	12.0	192	7.21	25.6	--	4.5	--
			13.1 (bottom)						
SEP									
16...	1143	755	1.00	198	7.70	29.0	0.6	7.4	--
16...	1145	755	3.00	195	7.80	28.2	--	7.4	--
16...	1146	755	5.00	195	7.66	28.0	--	6.8	--
16...	1148	755	7.00	196	7.50	27.5	1.2	5.7	K6
16...	1149	755	9.00	197	7.36	27.3	--	4.6	--
16...	1151	755	11.0	197	7.30	26.5	2.0	4.8	110
16...	1153	755	12.0	197	7.28	25.9	--	3.6	--
			13.1 (bottom)						

DATE	TIME	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAT (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
JAN										
28...	1405	2	9.3	9.3	16	36	0.9	0.8	53	7.3

K Results based on colony count outside the acceptable range (non-ideal colony count).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212335157482603 HOOMALUHIA RESERVOIR SEC 1-3 NEAR KANEOHE--Continued

DATE	TIME	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
JAN											
28...	1350	--	--	--	--	--	5	0.30	0.4	0.7	0.02
28...	1355	--	--	--	--	--	3	0.40	0.3	0.7	0.02
28...	1400	--	--	--	--	--	6	0.50	0.3	0.8	0.02
28...	1405	21	0.1	23	110	120	--	--	--	--	--
MAR											
24...	1308	--	--	--	--	--	1	0.30	0.4	0.7	0.02
24...	1314	--	--	--	--	--	1	0.30	0.5	0.8	0.03
24...	1319	--	--	--	--	--	2	0.40	0.4	0.8	0.03
JUL											
07...	1043	--	--	--	--	--	5	0.10	0.4	0.5	0.05
07...	1049	--	--	--	--	--	5	0.10	0.5	0.6	0.03
07...	1054	--	--	--	--	--	4	0.30	0.4	0.7	0.03
SEP											
16...	1143	--	--	--	--	--	1	0.10	0.2	0.3	0.08
16...	1148	--	--	--	--	--	2	0.20	0.5	0.7	0.04
16...	1151	--	--	--	--	--	2	0.30	0.3	0.6	0.04

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)
JAN											
28...	1405	100	10	<1	<1	12	<100	<10	<0.5	<1	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)
JAN										
28...	<10	<1	<1	<3	4	<1	480	41	6	2

DATE	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)
JAN										
28...	<10	<4	40	5	<0.1	<0.1	2	<10	1	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212335157482603 HOOMALUHIA RESERVOIR SEC 1-3 NEAR KANEOHE--Continued

DATE	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
JAN 28...	<1	<1	1	<1	89	<8	60	6

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)
JAN 28...	1.4	<1	<0.1	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)
JAN 28...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	MIREX, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN 28...	<0.01	<0.1	<0.1	<0.01	<1	<0.01	0.01	<0.01	<0.01	<0.01

< Actual value is known to be leas than the value shown.

16270900 LULUKU STREAM AT ALTITUDE 220 FT, NEAR KANEOHE (LAT 21°23'42" LONG 157°48'46")

Streamflow and water-quality data for this station are published in pages 78-83.

16272200 KAMOOALII STREAM BELOW LULUKU STREAM NEAR KANEOHE (LAT 21°23'47" LONG 157°48'23")

Streamflow and water-quality data for this station are published in pages 84-89.

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16010000 - KAWAIKOI STREAM NR WAIMEA, KAUAI, HI (LAT 22 08 09 LONG 159 37 22)							
OCT , 1985				APR , 1986			
30...	1025	3.1	16.5	23...	0945	14	18.0
DEC				JUN			
12...	1035	8.2	15.0	20...	0930	37	16.0
FEB , 1986				AUG			
05...	1135	9.8	11.5	01...	0950	6.8	20.0
MAR				28...	0940	5.5	19.0
07...	0945	5.2	16.5				
16036000 - MAKAWELI RIVER NR WAIMEA, KAUAI, HI (LAT 21 58 31 LONG 159 38 55)							
OCT , 1985				APR , 1986			
31...	1250	11	21.0	24...	1335	67	21.0
DEC				JUN			
11...	1330	13	21.0	09...	1335	13	26.0
FEB , 1986				JUL			
06...	1405	17	21.5	30...	1210	16	25.0
MAR				AUG			
14...	1150	111	21.0	29...	1310	78	26.5
16049000 - HANAPEPE RIVER BL MANUAHI STR NR ELEELE, KAUAI, HI (LAT 21 57 29 LONG 159 33 13)							
OCT , 1985				APR , 1986			
31...	1010	14	20.0	24...	1005	129	20.0
DEC				JUN			
11...	1015	12	19.0	09...	1010	13	21.5
FEB , 1986				JUL			
06...	1045	10	19.0	30...	0955	37	22.5
MAR				AUG			
14...	0945	84	20.0	29...	0915	23	22.5
16060000 - SF WAILUA RIVER NR LIHUE, KAUAI, HI (LAT 22 02 24 LONG 159 22 58)							
OCT , 1985				MAY , 1986			
01...	1425	9.4	26.0	02...	1240	7.9	23.5
NOV				JUN			
06...	1405	6.9	22.5	12...	1450	14	26.0
DEC				26...	1310	14	21.0
17...	1240	6.4	19.5	JUL			
JAN , 1986				31...	1145	59	25.0
31...	1155	4.0	20.0	SEP			
MAR				02...	0930	12	25.5
18	1515	62	22.0				
16061200 - N WAILUA DITCH BL WAIKOKO STR NR LIHUE, KAUAI, HI (LAT 22 03 34 LONG 159 28 00)							
OCT , 1985				MAY , 1986			
02...	1050	28	20.0	02...	1050	28	18.0
NOV				JUN			
06...	1155	18	18.5	17...	1210	31	20.0
DEC				JUL			
17...	1050	17	15.5	25...	1045	34	20.0
JAN , 1986				SEP			
31...	1020	15	17.0	02...	1215	28	20.5
MAR							
18...	1100	31	18.5				
16062000 - STABLE STORM DITCH NR LIHUE, KAUAI, HI (LAT 22 04 09 LONG 159 26 46)							
OCT , 1985				MAY , 1986			
02...	0915	34	19.0	02...	0920	.49	20.0
NOV				JUN			
06...	1030	1.0	18.5	17...	1050	45	20.0
DEC				JUL			
17...	0925	20	16.0	25...	0910	.51	21.0
JAN , 1986				SEP			
31...	0850	16	17.0	02...	1035	.74	22.0
MAR							
18...	0910	58	18.5				

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16068000 - EB OF NF WAILUA RIVER NR LIHUE, KAUAI, HI (LAT 22 04 19 LONG 159 25 05)							
OCT , 1985				APR , 1986			
28...	0920	28	21.0	25...	1105	45	21.5
NOV				MAY			
26...	0950	21	19.0	27...	1020	29	20.5
DEC				JUN			
24...	0950	20	21.0	25...	0945	43	21.0
JAN , 1986				JUL			
28...	0950	9.4	17.0	29...	1100	60	23.0
FEB				AUG			
25...	1100	9.1	19.5	27...	1120	34	22.5
MAR				SEP			
26...	0915	57	20.0	26...	0915	28	22.0
16069000 - WAILUA DITCH NR KAPAA, KAUAI, HI (LAT 22 04 34 LONG 159 24 04)							
OCT , 1985				MAY , 1986			
02...	1410	22	22.0	05...	1035	25	23.5
NOV				JUN			
01...	1100	16	23.0	12...	1135	33	26.0
DEC				JUL			
13...	1425	19	22.0	29...	1345	34	25.0
JAN , 1986				SEP			
29...	1235	13	23.0	05...	0915	36	25.5
MAR							
18...	1320	18	22.0				
16071000 - NF WAILUA RIVER NR KAPAA, KAUAI, HI (LAT 22 03 08 LONG 159 22 22)							
NOV , 1985				APR , 1986			
01...	0950	46	21.0	25...	0930	156	20.0
DEC				JUN			
13...	0955	9.1	19.0	12...	0925	28	22.5
JAN , 1986				JUL			
29...	0905	5.8	19.5	29...	0910	151	23.0
MAR				AUG			
19...	0910	91	20.0	27...	0840	28	24.0
16071500 - LEFT BRANCH OPAEKAA STREAM NR KAPAA, KAUAI, HI (LAT 22 04 44 LONG 159 23 55)							
OCT , 1985				MAY , 1986			
28...	1050	1.5	22.0	05...	1150	2.7	21.5
DEC				JUN			
13...	1210	1.1	20.0	12...	1235	1.6	23.0
JAN , 1986				JUL			
29...	1350	.59	20.0	29...	1300	2.1	23.0
MAR				SEP			
19...	1150	.63	21.0	05...	1020	2.1	22.5
16077000 - MAKALEHA DITCH NR KEALIA, KAUAI, HI (LAT 22 07 06 LONG 159 22 04)							
OCT , 1985				APR , 1986			
02...	1035	10	20.0	30...	1110	7.8	20.0
NOV				JUN			
05...	1100	7.9	19.5	11...	0920	13	20.0
DEC				JUL			
18...	1100	3.0	18.0	22...	1040	7.4	20.5
JAN , 1986				SEP			
30...	1035	1.7	19.0	03...	1040	6.6	20.5
MAR							
17...	1050	10	20.0				
16079000 - KAPAHI DITCH NR KEALIA, KAUAI, HI (LAT 22 06 09 LONG 159 22 28)							
OCT , 1985				APR , 1986			
02...	0915	.40	20.5	30...	0945	4.6	20.0
NOV				JUN			
05	0930	3.7	20.5	11...	1240	1.3	23.0
DEC				JUL			
16...	0930	.23	17.5	22...	0910	4.8	22.5
JAN , 1986				SEP			
30...	0905	5.6	18.5	03...	0910	5.1	22.0
MAR							
17...	0925	34	20.0				

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16088000 - ANAHOLA DITCH AB KANEHA RES NR KEALIA, KAUAI, HI (LAT 22 08 10 LONG 159 22 28)							
OCT , 1985				APR , 1986			
02...	1320	20	21.0	30...	1330	9.3	20.0
NOV				JUN			
05...	1355	3.8	20.0	11...	1115	7.8	21.0
DEC				JUL			
16...	1330	1.4	18.0	22...	1300	5.40	22.5
JAN , 1988				SEP			
30...	1320	.67	19.5	03...	1330	3.8	22.5
MAR							
17...	1335	20	20.0				
16091000 - LOWER ANAHOLA DITCH NR KEALIA, KAUAI, HI (LAT 22 08 14 LONG 159 19 31)							
OCT , 1985				MAR , 1986			
02...	1215	1.8	20.0	17...	1235	1.3	22.0
NOV				APR			
05...	1230	2.0	22.0	30...	1225	.91	22.0
DEC				JUL			
16...	1215	1.1	19.0	22...	1150	.27	24.5
JAN , 1986				SEP			
30...	1215	.86	20.0	03...	1150	.06	24.5
16097500 - HALAULANI STR AT ALT 400 FT NR KILAUEA, KAUAI, HI (LAT 22 10 54 LONG 159 25 17)							
OCT , 1985				APR , 1986			
29...	1320	5.5	22.0	21...	1320	6.2	21.0
DEC				JUN			
10...	1330	3.8	21.0	03...	1250	6.4	21.0
FEB , 1986				JUL			
03...	1305	3.2	19.0	23...	1325	7.9	23.5
MAR				AUG			
12...	1200	3.5	20.0	25...	1155	8.4	23.0
16103000 - HANALEI RIVER NR HANALEI, KAUAI, HI (LAT 22 11 31 LONG 159 27 57)							
OCT , 1985				APR , 1986			
29...	1030	95	21.0	21...	1015	127	21.0
DEC				JUN			
10...	1045	62	20.0	03...	1010	81	21.0
FEB , 1986				JUL			
03...	1045	43	19.5	23...	1015	122	23.0
MAR				AUG			
12...	1015	40	20.5	25...	1005	95	24.5
16108000 - WAINIHA RIVER NEAR HANALEI, KAUAI, HI (LAT 22 08 20 LONG 159 33 38)							
NOV , 1985				JUN , 1986			
04...	1040	46	18.5	13...	1045	51	23.5
DEC				JUL			
19...	1105	39	17.5	28...	1055	70	19.0
APR , 1986				AUG			
28...	1135	97	19.0	26...	1145	54	20.0

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16200000 - NF KAUKONANUA STR AB RB NR WAHIAWA, OAHU, HI (LAT 21 31 09 LONG 157 56 53)			
OCT , 1985			
30...	1255	4.3	20.0
DEC			
19...	1340	.99	18.0
FEB , 1986			
12...	1315	.16	22.0
APR , 1986			
02...	1400	16	19.5
SEP			
05...	1350	5.3	24.5
16208000 - S F KAUKONAHUA STR AT E PUMP RE WAHIAWA, OAHU, HI (LAT 21 29 32 LONG 157 59 54)			
OCT , 1985			
01...	1610	59	22.0
NOV			
04...	1230	9.5	21.5
DEC			
20...	1330	1.1	18.5
FEB , 1986			
07...	1550	.32	20.0
MAR , 1986			
24...	1345	38	23.0
24...	1450	34	23.0
JUL			
11...	1530	34	21.5
AUG			
29...	1430	24	24.5
16211600 - MAKAHA STREAM NR MAKAHA, OAHU, HI (LAT 21 30 16 LONG 158 10 59)			
NOV , 1985			
05...	1610	.77	20.5
27...	1250	7.6	18.5
27...	1450	8.6	19.0
JAN , 1986			
21...	1320	.47	19.0
MAR , 1986			
14...	1210	2.5	19.5
JUL			
07...	1125	.11	21.5
16212800 - KIPAPA STREAM NR WAHIAWA, OAHU, HI (LAT 21 28 13 LONG 157 57 40)			
OCT , 1985			
28...	1330	3.2	23.0
DEC			
20...	1050	.40	18.0
FEB , 1986			
07...	1120	.18	18.5
MAR , 1986			
31...	1155	4.6	21.0
MAY			
14...	1345	5.1	27.0
SEP			
04...	1605	8.0	28.5
16216000 - WAIAWA STREAM NR PEARL CITY, OAHU, HI (LAT 21 23 57 LONG 157 58 51)			
OCT , 1985			
18...	1100	1.5	23.0
16226000 - NORTH HALAWA STREAM NR AIEA, OAHU, HI (LAT 21 23 46 LONG 157 53 37)			
OCT , 1985			
16...	1205	.43	22.0
16232000 - NUUANU STR BL RES 2 WASTEWAY NR HONOLULU, OAHU, HI (LAT 21 20 57 LONG 157 49 40)			
OCT , 1985			
22...	1420	5.7	22.5
JAN , 1986			
23...	1225	1.7	20.0
JUL , 1986			
23...	1010	4.3	23.5
16240500 - WAIAKEAKUA STREAM AT HONOLULU, OAHU, HI (LAT 21 19 53 LONG 157 48 08)			
OCT , 1985			
21...	1600	6.5	22.5
NOV			
21...	1530	2.0	21.0
DEC			
18...	1205	1.7	19.5
JAN , 1986			
06...	0930	1.4	20.0
JAN , 1986			
07...	0915	1.7	18.5
07...	1505	1.6	19.5
08...	1005	1.5	19.0
08...	1540	1.5	20.0
MAR			
05...	1030	1.1	21.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16254000 - MAKAWAO STREAM NEAR KAILUA, OAHU, HI (LAT 21 21 49 LONG 157 46 02)							
OCT , 1985				MAR , 1986			
04...	1440	1.4	22.5	04...	1055	2.4	21.5
NOV				JUN			
13...	1125	7.0	22.0	24...	1030	2.5	22.0
JAN , 1986							
09...	1045	2.2	20.0				
16275000 - HAIKU STREAM NEAR HEEIA, OAHU, HI (LAT 21 24 46 LONG 157 49 33)							
NOV , 1985				APR , 1986			
08...	1305	1.3	21.0	01...	1205	1.9	21.0
DEC				MAY			
27...	1215	1.3	19.5	06...	1110	1.6	20.5
FEB , 1986				JUL			
10...	1235	1.1	20.0	09...	1030	1.4	20.5
16283200 - KAHALUU STREAM NEAR AHUIMANU, OAHU, HI (LAT 21 26 32 LONG 157 50 47)							
NOV , 1985				JUN , 1986			
08...	1015	1.0	22.0	20...	1450	1.0	22.0
JAN , 1988				AUG			
15...	1525	.96	21.5	04...	1520	1.8	23.5
MAR							
04...	1330	.83	22.0				
16283600 - SF WAIHEE STR NR HEEIA, OAHU, HI (LAT 21 26 47 LONG 157 52 12)							
NOV , 1985				FEB , 1986			
07...	1020	1.1	20.0	28...	0950	.85	19.0
JAN , 1986				JUN			
02...	1315	.81	18.5	17...	0940	.98	21.0
16283700 - NF WAIHEE STREAM NR HEEIA, OAHU, HI (LAT 21 26 48 LONG 157 52 18)							
NOV , 1985				APR , 1986			
08...	1040	1.4	19.5	25...	1130	1.2	19.5
JAN , 1986				JUN			
02...	1220	1.2	18.5	17...	1030	1.3	19.0
FEB				JUL			
28...	1055	1.3	19.5	31...	1140	1.6	19.5
16284200 - WAIHEE STREAM NR KAHALUU, OAHU, HI (LAT 21 27 04 LONG 157 51 36)							
NOV , 1985				FEB , 1986			
08...	1305	5.1	21.0	28...	1400	5.1	20.5
JAN , 1986							
13...	1225	4.9	20.0				
16294900 - WAIKANE STREAM AT ALT 75 FT AT WAIKANE, OAHU, HI (LAT 21 30 00 LONG 157 51 54)							
OCT , 1985				MAR , 1986			
03...	1040	4.7	21.5	12...	1115	1.4	21.5
NOV				AUG			
08...	1520	3.3	22.0	01...	1340	5.1	23.5
JAN , 1986							
07...	1520	3.0	19.5				
16296500 - KAHANA STR AT ALT 30 FT NR KAHANA, OAHU, HI (LAT 21 32 37 LONG 157 53 07)							
NOV , 1985				MAY , 1986			
20...	1315	22	21.0	05...	1500	39	21.5
JAN , 1986				JUN			
08...	1410	17	21.0	23...	1500	23	22.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16302000 - PUNALUU DITCH NR PUNALUU, OAHU, HI (LAT 21 33 41 LONG 157 54 10)							
NOV , 1985				MAR , 1986			
12...	1055	2.5	22.0	03...	1500	2.7	22.0
16303000 - PUNALUU STREAM NR PUNALUU, OAHU, HI (LAT 21 33 33 LONG 157 54 06)							
OCT , 1985				MAR , 0986			
01...	1220	12	22.5	03...	1250	8.1	21.5
NOV				JUN			
12...	1320	21	22.0	19...	1230	15	21.5
JAN , 1986				AUG			
07...	1250	8.8	22.0	05...	1215	17	23.0
16304200 - KALUANUI STREAM NR PUNALUU, OAHU, HI (LAT 21 35 22 LONG 157 54 38)							
OCT , 1985				MAY , 1986			
09...	0940	.62	22.5	05...	1050	4.2	22.5
NOV				JUN			
15...	1030	14	21.0	23...	1130	1.5	23.0
JAN , 1986				AUG			
08...	1025	.33	19.0	06...	1010	1.5	24.0
16325000 - KAMANANUI STR AT PUPUKEA MIL RD NR MAUNAWAI, OAHU, HI (LAT 21 37 25 LONG 158 01 04)							
OCT , 1985				APR , 1986			
29...	1150	1.8	23.5	03...	1205	4.8	21.5
DEC				JUL			
17...	1430	1.2	19.5	08...	1215	3.3	25.0
FEB , 1986							
05...	1155	3.5	18.5				
16330000 - KAMANANUI STREAM AT MAUNAWAI, OAHU, HI (LAT 21 38 20 LONG 158 03 27)							
OCT , 1985				JUL , 1986			
29...	1625	1.8	23.5	08...	1500	3.1	25.5
DEC				SEP			
23...	1505	.52	23.0	03...	1510	3.1	26.5
FEB , 1986							
03...	1450	1.6	22.0				
16345000 - OPAEULA STREAM NR WAHIAWA, OAHU, HI (LAT 21 33 55 LONG 158 00 10)							
NOV , 1985				APR , 1986			
04...	1510	3.0	22.5	03...	1615	8.2	21.0
DEC				SEP			
23...	1115	.84	19.5	03...	1130	3.1	25.5
FEB , 1986							
05...	1650	4.5	20.0				

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16404200 - PILIPILILAU STREAM NR PELEKUNU, MOLOKAI, HI (LAT 21 08 08 LONG 156 53 09)							
OCT , 1985				MAY , 1986			
17...	0820	1.1	20.0	22...	0910	1.6	20.5
DEC				JUL			
11...	1100	1.6	19.0	17...	0915	1.4	21.0
FEB , 1986				SEP			
06...	0830	1.2	18.0	11...	0925	.97	22.0
APR							
01...	0900	2.2	19.0				
16405100 - MOLOKAI TUNNEL AT EAST PORTAL, MOLOKAI, HI (LAT 21 08 38 LONG 156 55 16)							
OCT , 1985				MAY , 1986			
16...	0940	4.7	19.0	21...	1040	2.2	18.5
FEB , 1986				JUL			
04...	1225	4.0	18.5	16...	1030	5.3	21.0
APR				SEP			
02...	0950	2.6	18.0	10...	1010	1.7	19.5
16405300 - MOLOKAI TUNNEL AT WEST PORTAL, MOLOKAI, HI (LAT 21 07 27 LONG 156 59 50)							
OCT , 1985				MAY , 1986			
16...	1515	2.9	19.0	21...	1530	5.7	18.5
FEB , 1986				SEP			
04...	1525	7.0	18.5	10...	1535	4.7	19.0
APR							
02...	1525	5.6	18.0				
16405500 - WAIKOLU STR AT ALT 900 FT NR KALAUPAPA, MOLOKAI, HI (LAT 21 08 43 LONG 156 55 18)							
MAY , 1986				SEP , 1986			
21...	1225	.59	20.0	10...	1240	.64	19.0
JUL							
16...	1230	.70	23.0				
16408000 - WAIKOLU STR BL PIPE CROSS NR KALAUPAPA, MOLOKAI, HI (LAT 21 09 45 LONG 156 55 54)							
OCT , 1985				MAY , 1986			
16...	1110	2.5	22.0	21...	1125	12	22.0
DEC				JUL			
10...	1210	6.0	20.0	16...	1235	9.2	22.0
FEB , 1986				SEP			
04...	1050	5.4	20.0	10...	1130	9.2	21.0
APR							
02...	1300	12	21.0				
16419500 - PAPIO GULCH AT HALAWA, MOLOKAI, HI (LAT 21 08 55 LONG 156 44 16)							
DEC , 1985				FEB , 1986			
09...	1640	.14	20.0	03...	1520	1.3	20.0

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)

16508000 - HANAWI STREAM NEAR NAHIKU, MAUI, HI (LAT 20 48 37 LONG 156 07 00)

OCT , 1985			
01...	1340	78	19.0
NOV			
18...	1540	3.6	20.0
JAN , 1986			
07...	1225	73	16.0
FEB			
19...	1335	2.0	18.0
APR , 1986			
08...	1445	704	16.0
MAY			
13...	1355	10	18.5
JUL			
01...	1315	8.0	20.0
AUG			
19...	1430	6.8	22.0

16518000 - WEST WAILUAIKI STREAM NEAR KEANAE, MAUI, HI (LAT 20 49 16 LONG 156 08 37)

OCT , 1985			
01...	1100	253	18.5
NOV			
18...	1015	5.8	19.5
JAN , 1986			
07...	1050	239	16.0
FEB			
19...	0900	2.7	17.5
APR , 1986			
08...	1230	882	16.0
MAY			
13...	1005	8.5	19.5
JUL			
01...	0925	15	20.0
AUG			
19...	0920	10	22.0

16541000 - KOOLAU DITCH AT HAIPUAENA NR HUELO, MAUI, HI (LAT 20 51 17 LONG 156 11 19)

OCT , 1985			
04...	1245	73	18.5
NOV			
14...	1150	79	18.0
JAN , 1986			
09...	1300	208	18.0
FEB			
26...	1050	24	18.5
MAY , 1986			
07...	1125	163	18.0
JUL			
01...	1135	129	18.5
AUG			
19...	1310	104	20.0

16587000 - HONOPOU STREAM NR HUELO, MAUI, HI (LAT 20 53 20 LONG 156 15 20)

OCT , 1985			
02...	1235	.98	22.0
NOV			
25...	1320	2.0	20.0
JAN , 1986			
15...	1320	2.9	18.0
28...	1000	1.6	17.0
FEB			
25...	1100	.76	20.0
MAR			
26...	1030	12	19.5
APR			
16...	1345	9.2	21.5
APR , 1986			
27...	1035	5.0	19.5
MAY			
27...	0950	1.9	19.5
JUN			
25...	1020	12	19.5
JUL			
29...	1050	2.2	22.0
AUG			
27...	1010	2.2	22.0
SEP			
26...	1050	.52	24.0

16588000 - WAILOA DITCH AT HONOPOU NR HUELO, MAUI, HI (LAT 20 53 20 LONG 156 15 19)

OCT , 1985			
02...	1050	212	19.0
NOV			
25...	1105	135	19.5
JAN , 1986			
15...	1200	122	17.0
FEB			
25...	1035	43	18.5
MAR			
12...	1035	34	18.5
APR , 1986			
16...	1105	287	19.0
MAY			
09...	1040	258	18.0
JUL			
03...	1100	284	19.0
AUG			
27...	1250	111	20.0
SEP			
23...	1115	11	22.0

16599500 - OPANA TUNNEL NR KAILIILI, MAUI, HI (LAT 20 51 04 LONG 156 16 17)

OCT , 1985			
08...	1440	.63	20.0
NOV			
14...	1030	1.7	17.5
FEB , 1988			
20...	1050	.84	15.0
APR			
15...	1100	8.6	18.0
MAY , 1986			
08...	0920	7.8	17.5
JUL			
02...	1045	5.8	19.0
24...	0945	3.6	20.0
AUG			
28...	1040	1.2	20.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI-Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16604500 - IAO STREAM AT KEPANIWAI PARK NR WAILUKU, MAUI, HI (LAT 20 53 08 LONG 156 32 32)							
OCT , 1985				APR			
03...	1105	29	19.5	07...	1020	136	19.0
25...	1000	94	20.0	MAY			
30...	1440	45	20.0	06...	0850	132	18.5
NOV				JUN			
12...	1140	54	20.5	19...	1325	64	20.0
JAN , 1986				JUL			
06...	1215	24	18.5	22	1115	51	22.0
FEB , 1986				AUG			
21...	1310	25	19.5	18...	1400	51	22.0
16814000 - WAIHEE RIVER AT DAM NR WAIHEE, MAUI, HI (LAT 20 56 20 LONG 156 32 58)							
OCT , 1985				MAR , 1986			
03...	1035	40	19.0	14...	1000	256	19.5
21...	1000	44	19.5	25...	1105	83	19.0
NOV				MAY			
08...	1450	39	20.0	05...	0945	138	19.0
DEC				JUN			
24...	1005	45	18.5	19...	0905	81	19.5
JAN , 1986				JUL			
21...	1125	47	19.0	21...	1120	88	20.0
FEB				AUG			
21...	0925	37	17.0	18...	1100	83	19.0
MAR				SEP			
10...	1120	35	21.0	17...	1210	51	21.0
16620000 - HONOKOHAU STREAM NR HONOKOHAU, MAUI, HI (LAT 20 57 48 LONG 156 35 22)							
OCT , 1985				APR , 1986			
09...	1220	79	19.0	17...	1110	30	19.5
NOV				MAY			
21...	1200	14	18.5	14...	1115	35	19.0
JAN , 1986				JUL			
14...	1135	16	17.5	07...	1240	35	20.5
FEB				AUG			
27...	1255	13	20.0	21...	1220	24	21.0
16638500 - KAHOMA STREAM AT LAHAINA, MAUI, HI (LAT 20 53 10 LONG 156 40 36)							
APR , 1986				APR , 1986			
09...	1110	109	18.0	30...	1145	5.5	19.0
11...	0945	33	19.0				

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16700000 - WAIAKEA STREAM NR MOUNTAIN VIEW, HAWAII, HI (LAT 19 38 30 LONG 155 10 28)			
OCT , 1985			
28...	0915	12	17.0
NOV			
26...	0950	1.8	17.0
DEC			
28...	1305	1.4	12.0
JAN , 1986			
23...	1045	1.0	17.0
MAR			
27...	0850	1.8	17.0
MAY , 1986			
05...	1425	20	17.0
JUN			
24...	0915	18	17.0
JUL			
28...	0850	17	17.0
AUG			
26...	0950	9.2	17.0
SEP			
26...	1310	8.2	17.0
16700900 - OLAA FLUME SPRING NR KAUMANA, HAWAII, HI (LAT 19 41 59 LONG 155 11 13)			
OCT , 1985			
01...	1510	5.2	17.0
NOV			
05...	1425	1.8	17.0
DEC			
05...	1055	.05	15.0
MAR , 1988			
24...	1045	11	16.0
25...	1045	12	16.0
28...	1405	6.2	17.0
APR			
04...	1305	15	17.0
11...	1400	22	17.0
APR , 1988			
30...	1150	8.1	17.0
JUN			
05	0920	6.2	17.0
13	0910	2.0	17.0
JUL			
07...	0920	11	17.0
22...	1300	3.2	17.0
AUG			
28...	0850	2.7	17.0
SEP			
03...	1425	3.7	17.0
16700950 - LYMAN SPRINGS NO. 2 NEAR PIIHONUA, HAWAII, HI (LAT 19 42 02 LONG 155 10 36)			
OCT , 1985			
22...	1425	4.8	17.0
NOV			
26...	1400	3.0	17.0
DEC			
23...	1035	2.4	17.0
JAN , 1986			
27...	1100	1.4	17.0
FEB , 1988			
28...	1105	.12	17.0
MAY			
16...	1145	6.1	17.0
AUG			
29...	0935	4.1	17.0
16704000 - WAILUKU RIVER AT PIIHONUA, HAWAII, HI (LAT 19 42 58 LONG 155 09 12)			
NOV , 1985			
12...	1045	21	17.0
DEC			
05...	1150	84	16.0
JAN , 1986			
07...	1510	11	19.0
FEB			
07...	1000	1.3	18.0
MAR , 1986			
14...	1350	1.5	20.0
AUG			
11...	1330	70	19.0
SEP			
03...	1020	33	19.0
18720000 - KAWAINUI STREAM NR KAMUELA, HAWAII, HI (LAT 20 05 18 LONG 155 40 58)			
OCT , 1985			
15...	1155	2.8	18.0
NOV			
07...	1255	1.1	16.0
DEC			
10...	1235	.98	12.0
JAN , 1986			
15...	1320	1.4	14.0
FEB			
17...	1300	4.6	14.0
MAR , 1986			
26...	1450	3.0	15.0
MAY			
09...	1305	3.0	15.0
JUN			
26...	1205	22	15.0
AUG			
19...	1155	2.5	15.0
16720300 - KAWAIKI STREAM NEAR KAMUELA, HAWAII, HI (LAT 20 05 13 LONG 155 40 59)			
OCT , 1985			
15...	1045	1.2	17.0
NOV			
07...	1150	.45	16.0
JAN , 1988			
15...	1130	.53	14.0
FEB			
17...	1115	2.0	12.0
MAR			
28...	1250	.61	15.0
APR , 1986			
02...	1205	3.1	14.0
MAY			
02...	1035	3.0	15.0
JUN			
26...	1050	4.0	15.0
AUG			
19...	1050	.49	15.0

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16720500 - UPPER HAMAKUA DITCH BL KAWAIKI STR NR KAMUELA, HAWAII, HI (LAT 20 05 15 LONG 155 40 42)							
OCT , 1985				MAR , 1986			
15...	1015	3.4	16.0	26...	1135	3.6	14.0
NOV				MAY			
07...	0950	.90	15.0	09...	1135	3.7	15.0
DEC				JUN			
10...	1045	.85	12.0	26...	1000	16	15.0
JAN , 1986				AUG			
15...	1040	1.3	12.0	19...	0955	2.6	15.0
FEB							
17...	1030	6.3	11.0				
16724800 - UP HAMAKUA DITCH AB ALAKAHI STR NR KAMUELA, HAWAII, HI (LAT 20 04 31 LONG 155 40 26)							
OCT , 1985				MAY , 1986			
09...	1100	8.7	14.0	20...	1130	10	14.0
NOV				JUN			
19...	1115	12	16.0	26...	0940	12	15.0
JAN , 1986				AUG			
17...	0930	.15	12.0	19...	0925	1.5	15.0
MAR							
15...	1220	4.0	15.0				
16725000 - ALAKAHI STREAM NEAR KAMUELA, HAWAII, HI (LAT 20 04 27 LONG 155 40 25)							
OCT , 1985				APR , 1986			
15...	1425	2.7	15.0	25...	1120	4.6	14.0
DEC				MAY			
19...	1045	.65	12.0	20...	1035	5.7	15.0
JAN , 1986				JUN			
17...	0950	.91	13.5	26...	1030	8.3	14.0
MAR				AUG			
15...	1325	3.0	15.0	19...	1000	2.2	15.0
16726000 - UP HAMAKUA DITCH AB WAIMEA RES DIV NR KAMUELA, HAWAII, HI (LAT 20 03 31 LONG 155 37 40)							
OCT , 1985				APR , 1986			
08...	1525	37	16.0	18...	1305	16	16.0
NOV				MAY			
21...	1430	4.2	16.0	21...	1020	9.2	15.0
DEC				JUL			
19...	1450	.90	17.0	21...	1145	13	16.0
JAN , 1986				SEP			
29...	1050	.51	16.0	17...	0955	1.5	15.0
FEB							
21...	1435	1.0	15.0				
16727000 - UPPER HAMAKUA D AB PUUKAPU RES NR KAMUELA, HAWAII, HI (LAT 20 02 53 LONG 155 37 17)							
OCT , 1985				JUN , 1986			
08...	1340	15	16.0	20...	1145	7.1	17.0
NOV				JUL			
21...	0930	2.6	16.0	21...	1210	2.1	16.0
MAR , 1986				SEP			
21...	1405	23	15.0	10...	1035	1.7	16.0
MAY							
21...	0935	3.6	16.0				
16758000 - KOHAKOHAU STREAM NEAR KAMUELA, HAWAII, HI (LAT 20 02 38 LONG 155 41 10)							
NOV , 1985				JUN , 1986			
19...	1320	39	15.0	20...	1000	20	16.0
APR , 1986				SEP			
25...	1225	.45	15.0	10...	0855	1.4	15.0

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)
16758000 - WAIKOLOA STR AT MARINE DAM NR KAMUELA, HAWAII, HI (LAT 20 02 48 LONG 155 39 58)			
OCT , 1985			
08...	1200	11	15.0
NOV			
19...	1350	18	15.0
DEC			
23...	1245	2.4	17.0
JAN , 1986			
17...	1205	3.0	14.5
FEB			
21...	1155	2.3	15.0
MAY , 1986			
21...	1245	5.1	16.0
JUN			
20...	0835	17	16.0
JUL			
21...	0925	5.2	16.0
AUG			
19...	1155	3.4	17.0
16759000 - HAUANI GULCH NEAR KAMUELA, HAWAII, HI (LAT 20 02 28 LONG 155 39 05)			
OCT , 1985			
09...	1305	2.3	15.0
NOV			
21...	1150	.31	16.0
DEC			
19...	1340	.21	16.0
JAN , 1986			
29...	1235	.26	15.0
FEB			
21...	1400	.25	15.0
APR , 1986			
16...	1050	1.6	15.0
MAY			
21...	1345	.58	15.0
JUN			
26...	1150	2.4	15.0
JUL			
21...	1030	.67	16.0
SEP			
17...	0830	.52	15.0
16764000 - HILEA GULCH TRIBUTARY NEAR HONUAPO, HAWAII, HI (LAT 19 10 27 LONG 155 35 58)			
OCT , 1985			
31...	1205	.17	17.0
APR , 1986			
14...	1225	.97	17.0
MAY			
23...	1325	.79	17.0
JUL , 1986			
08...	1025	.86	17.0
AUG			
06...	1015	.15	17.0

HAWAII, ISLAND OF KAUAI

220057159210301. Local number 2-0021-01.

LOCATION.--Lat 22°00'57", long 159°21'04", Hydrologic Unit 20070000, 1.0 mi south southwest of Wailua County Golf Course, and 1.3 mi north of Hanamaulu Park. Owner: State of Hawaii, DOWALD

AQUIFER.--Waimea Canyon Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water table, depth 276 ft, casing diameter 8 in., cased to 196 ft.

DATUM.--Elevation of land surface datum is 166 ft. Measuring point: Top of 4-in. galvanized copling, 166.70 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 15.71 ft above mean sea level Nov. 19, 1982; lowest measured, 13.39 ft above mean sea level, Aug. 25, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	15.15	FEB 07	14.44	MAY 02	14.77	JUN 13	14.55	JUL 22	14.20	AUG 26	14.12
DEC 13	14.82	MAR 19	14.62								

HAWAII, ISLAND OF KAUAI--Continued

220019159444801. Local number 2-0044-14.

LOCATION.--Lat 22°00'19", long 159°44'48", Hydrologic Unit 20070000, 1.8 mi northeast of Kokole Point, and 2.8 mi northwest of Kekaha School. Owner: Kekaha Sugar Co.

AQUIFER.--Waimea Canyon Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled artesian well, depth 245 ft, casing diameter 12 in., cased to 164 ft.

DATUM.--Elevation of land-surface datum is 8 ft. Measuring point: Top of standpipe, 11.49 ft above mean sea level. Prior to June 1979 nonrecording gage at datum 0.25 ft lower.

PERIOD OF RECORD.--Occasional measurements, 1937 to 1962 (measured by Kekaha Sugar Co.).
Water-level recorder, June 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.07 ft above mean sea level, Dec. 20, 1937; lowest measured, 7.52 ft above mean sea level, Aug. 15, 1947.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.95	8.98	9.74	9.66	9.63	9.12	8.95	9.35	8.96	8.77	8.64	9.19
10	8.83	9.42	9.72	9.40	9.62	9.49	9.10	9.43	8.89	8.70	8.60	9.21
15	8.98	9.37	9.62	9.32	9.26	9.45	9.31	9.44	8.83	8.67	8.64	9.30
20	9.30	9.62	9.25	9.70	9.20	9.12	9.45	9.23	8.77	8.64	8.98	8.92
25	9.13	9.67	9.47	9.80	9.14	9.03	9.04	9.03	8.75	8.72	9.28	8.92
EOM	9.06	9.67	9.51	9.48	9.13	8.97	9.03	8.94	8.71	8.68	9.23	8.93

WTR YEAR 1986 MAX 10.01 JAN 24 MIN 8.40 JUL 18, 19

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV , 1985				
06...	1100	575	24.0	110
DEC				
16...	1100	529	24.0	99
FEB , 1986				
14...	1000	590	24.0	110
MAR , 1986				
07...	1345	600	23.0	110
APR				
23...	1310	590	24.0	110
JUN				
20	1340	600	24.5	110

HAWAII, ISLAND OF KAUAI--Continued

220354159205601. Local number, 2-0320-01.

LOCATION.--Lat 22°03'54", long 159°20'56", Hydrologic Unit 20070000, 0.6 mi east of Sleeping Giant Mountain, and 1.3 mi northwest of Wailua River bridge. Owner: Kauai County, Department of Water.

AQUIFER.--Koloa Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 240 ft, casing diameter 8 in., caaed to 193 ft.

DATUM.--Elevation of land-surface datum ia 155 ft. Measuring point: Top edge of steel pump-base at breather hole, 155.98 ft above mean sea level.

REMARKS.-- Water from this well ie used for public supply. Water level affected by pumping of nearby well.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, February 1960, June 1973 to current year.
WATER QUALITY: 1960, 1966, 1972-80, 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level meaaured, 20.04 ft above mean aea level, Feb. 17, 1960; lowest measured, 3.31 ft below mean sea level, May 27, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	7.52	FEB 07	6.44	MAR 19	5.20	MAY 02	5.23	JUN 13	4.84	SEP 05	5.42
DEC 13	7.92										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
JUN , 1986					JUL , 1986				
10...	0900	440	24.0	49	22...	0900	450	24.0	51

HAWAII, ISLAND OF KAUAI--Continued

215606159344301. Local number 2-5634-01.

LOCATION.--Lat 21°56'06", long 159°34'43", Hydrologic Unit 20070000, 2.7 mi north of Well Point and 3.3 mi northeast of Puolo Point. Owner: State of Hawaii.

AQUIFER.--Koloa Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 508 ft, casing diameter 8 in., cased to 507 ft.

DATUM.--Elevation of land-surface datum is 439 ft. Measuring point: Top of casing 440.62 ft above mean sea level.

PERIOD OF RECORD.--Water level recorder, February 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.73 ft above mean sea level May 23, 1986; lowest 15.99 ft above mean sea level Mar. 9-13.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5					--	16.09	16.20	16.54	16.61	16.50	16.53	16.62
10					--	16.04	16.30	16.58	16.58	16.47	16.56	16.63
15					--	16.05	16.33	16.64	16.47	16.52	16.57	16.61
20					16.05	16.09	16.36	16.68	16.46	16.52	16.59	16.61
25					16.07	16.12	16.41	16.67	16.47	16.50	16.64	16.63
EOM					16.11	16.17	16.47	16.62	16.49	16.55	16.62	16.63

WTR YEAR 1986 MAX 16.73 MAY 23 MIN 15.99 MAR 9-13

215959159214301. Local number 2-5921-01.

LOCATION.--Lat 21°59'59", long 159°21'43", Hydrologic Unit 20070000, 1.0 mi west of Hanamaulu Beach Park and 3.3 mi south southwest of Lydgate State Park. Owner: Kauai County, Department of Water.

AQUIFER.--Waimea Canyon Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 540 ft, casing diameter 14 in., cased to 315 ft.

DATUM.--Elevation of land-surface datum is 302 ft. Measuring point: Top of tee flange, elevation 303.77 ft, from County Department of Water.

PERIOD OF RECORD.--Occasional measurements, July 1980 to September 1985.
Water-level recorder, October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.69 ft Nov. 26, 1985; lowest measured, 13.39 ft Aug. 25, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	17.56	17.41	17.08	16.94	17.01	17.08	16.95	16.77	16.47	16.28	16.23
10	--	17.48	17.33	17.11	17.01	17.01	17.13	16.89	16.77	16.42	16.28	16.27
15	--	17.62	17.40	17.15	17.05	16.98	17.11	16.90	16.69	16.37	16.25	16.23
20	--	17.53	17.22	17.07	17.08	16.96	17.05	16.90	16.65	16.33	16.23	16.17
25	17.58	17.52	17.17	17.11	17.05	16.97	17.02	16.84	16.59	16.28	16.23	16.19
EOM	17.53	17.40	17.13	16.99	17.06	17.03	16.98	16.81	16.55	16.30	16.21	16.16

WTR YEAR 1986 MAX 17.69 NOV 26 MIN 16.12 SEP 30

HAWAII, ISLAND OF OAHU

211907157594701. Local number, 3-1859-05.

LOCATION.--Lat 21°19'06", long 157°59'46", Hydrologic Unit 20060000, 600 ft northwest of Ewa Beach Park, and 1.2 mi southeast of Campbell High School. Owner: Hawaii Institute of Geophysics.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1110 ft, 5-inch PVC casing, bottom 12 ft perforated.

DATUM.--Elevation of land surface datum is 6 ft. Measuring point: Top of 5-inch PVC casing, 6.40 ft above mean sea level.

REMARKS.--Geophysical log and water-quality records are available in files of district office.

PERIOD OF RECORD.--Water-level recorder, December 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.38 ft above mean sea level, Jan. 17, 1969; lowest, 2.81 ft below mean sea level, Aug. 25, 1977.

WATER LEVEL IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	-1.51	-1.01	-.46	-.20	-.32	-.31	-.73	-1.05	-1.27	-1.33	-1.01	-1.35
10	-1.52	-.89	-.43	-.36	-.13	-.45	-.67	-1.08	-1.18	-1.36	-1.25	-1.38
15	-1.33	-1.00	-.26	-.36	-.27	-.53	-.54	-1.01	-1.20	-1.45	-1.29	-1.26
20	-1.22	-.64	-.37	-.42	-.31	-.58	-.77	-1.08	-1.28	-1.44	-1.23	-1.29
25	-.74	-.66	-.26	-.47	-.10	-.63	-.91	-1.12	-1.42	-1.34	-1.27	-1.28
EOM	-.97	-.39	-.27	-.52	-.22	-.65	-.99	-1.23	-1.35	-1.13	-1.31	-.84

WTR YEAR 198Y MAX 0.41 FEB 24 MIN -1.68 OCT 11

212154158015201. Local number, 3-2101-03.

LOCATION.--Lat 21°21'54", long 158°01'52", Hydrologic Unit 20060000, 0.4 mi southeast of Honouliuli, and 0.5 mi north of Ewa Hospital. Owner: State of Hawaii.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled artesian well, depth 355 ft, 6 inch-PVC casing, cased to 165 ft. Well was modified in January 1958 and May 1982.

DATUM.--Elevation of land-surface datum is 15 ft. Measuring point: Top of horizontal flange below petcock, 13.31 ft above mean sea level.

REMARKS.--Water-quality records for 1910-16, 1920-21, 1923-75, 1978-81, are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, April 1910 to June 1921, September 1923 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.16 ft above mean sea level, April 1918; lowest observed, less than 11.2 ft, above mean sea level (below petcock then in use), Sept. 2, and Oct. 19, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 1	14.20	FEB 5	15.81	APR 23	14.03	JUN 6	13.27	JUL 24	12.99	SEP 5	12.76
DEC 18	15.45	MAR 11	15.08								

HAWAII, ISLAND OF OAHU--Continued

212123157535501. Local number, 3-2153-05.

LOCATION.--Lat 21°21'23", long 157°53'55", Hydrologic Unit 20060000, 0.4 mi northwest of Moanalua Elementary School, and 0.5 mi southwest of Tripler Hospital, in Moanalua. Owner: Honolulu Board of Water Supply.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1246 ft, 6-inch PVC casing, cased to 24 ft, perforated from 24 to 1246 ft. Well was modified and deepened August 1980.

DATUM.--Elevation of land-surface datum is 35 ft. Measuring point: Top of 6-inch PVC casing, 37.90 ft, revised, above mean sea level.

REMARKS.--Geophysical logs are available in files of district office.

PERIOD OF RECORD.--
WATER LEVEL: Water-level recorder, March 1981 to current year.
WATER QUALITY: 1985, 1986.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.53 ft above mean sea level Jan. 9, 1983; lowest 16.56 ft above mean sea level, July 24, 1986.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.04	17.37	17.71	17.85	17.69	17.72	17.53	17.24	16.82	16.80	16.96	16.73
10	17.03	17.48	17.76	17.81	17.67	17.63	17.53	17.11	16.90	16.81	16.81	16.68
15	17.11	17.42	17.88	17.69	17.74	17.60	17.59	e17.2	16.97	16.78	16.86	16.77
20	17.16	17.55	17.81	17.70	17.77	17.55	17.45	17.08	16.94	16.71	16.82	16.68
25	17.34	17.57	17.87	17.63	17.81	17.48	17.29	17.00	16.95	16.71	16.83	16.75
EOM	17.41	17.74	17.81	17.54	17.75	17.53	17.25	16.89	16.88	16.86	16.88	16.95

WTR YEAR 1986 MAX 17.95 DEC 15, 22 MIN 16.56 JUL 24

e Estimated.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB 12...	j0910	300	890	230
12...	j0930	500	1,540	430
12...	j0955	650	5,270	1,700
12...	j1020	700	9,420	3,200
12...	j1045	750	14,600	5,200
12...	j1110	800	27,200	10,000
FEB 12...	j1145	850	32,300	12,000
12...	j1215	900	37,600	14,000
12...	j1245	950	40,300	15,000
12...	j1315	1,050	44,700	17,000
12...	j1345	1,300	45,000	17,000

j Collected by non-USGS agency.

HAWAII, ISLAND OF OAHU--Continued

212238157561101. Local number, 3-2256-10.

LOCATION.--Lat 21°22'38", long 157°56'11", Hydrologic Unit 20060000, 0.4 mi southwest of Aiea School, and 0.5 mi east of McGrew Point. Owner: U.S. Navy.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled artesian well, depth 173 ft, casing diameter 12 in., cased to 143 ft.

DATUM.--Elevation of land-surface datum is 10 ft. Measuring point: Top of 10-inch stilling pipe for water-level recorder, 26.15 ft above mean saa leval.

REMARKS.--Water-quality records for 1923, 1928-30, 1934-68, 1972, 1974-75 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, January 1928 to February 1931, September 1934 to August 1966. Water-level recorder, September 1966 to currant year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.90 ft above mean sea level, Jan. 16, 1928; lowest, 12.97 ft above mean sea level, Oct. 5, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.11	14.42	14.94	15.08	14.84	14.94	14.60	14.31	13.96	13.87	14.02	13.72
10	14.04	14.46	14.94	14.91	14.98	14.86	14.61	14.25	13.98	13.80	14.00	13.69
15	14.10	14.44	15.03	14.88	14.92	14.77	14.71	14.29	14.06	13.73	13.88	13.79
20	14.19	14.63	14.94	14.91	14.92	14.72	14.60	14.20	14.02	13.75	13.81	13.75
25	14.50	14.73	15.05	14.89	15.12	14.70	14.42	14.18	14.00	13.73	13.81	13.82
EOM	14.41	14.90	15.04	14.77	15.04	14.67	14.35	14.10	13.89	14.01	113.83	14.00

WTR YEAR 1986 MAX 15.16 FEB 25 MIN 13.62 JUL 21

HAWAII, ISLAND OF OAHU--Continued

212340158001901. Local number, 3-2300-18.

LOCATION.--Lat 21°23'40", long 158°00'19", Hydrologic Unit 20060000, 700 ft south of August Ahrens School, and 1400 ft northeast of L'Orange Park, Waipahu. Owner: Honolulu Board of Water Supply.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled basal-water table well, depth 1090 ft, casing diameter 12 in., cased to 38 ft. Well was deepened May 1980 and modified Feb. 1984. Prior to May 1980, well depth 205 ft.

DATUM.--Elevation of land-surface datum is 26 ft. Measuring point: Top of casing, 27.73 ft above mean sea level.

REMARKS.--Gsophysical logs are available in files of district office.

PERIOD OF RECORD.--
WATER LEVEL: Water-level recorder, November 1982 to July 1983, March 1984 to current year.
WATER QUALITY: 1930, 1942-45, 1947-49, 1951-54, 1968, 1983, 1985, 1986.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 22.40 ft above mean sea level, Jan. 4, 1983; lowest 14.01 ft above mean sea level, Sept. 14, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.50	15.21	16.19	16.74	16.52	16.34	15.55	15.06	14.77	14.65	15.03	14.42
10	14.51	15.36	16.35	18.49	16.78	16.14	15.65	15.07	14.95	14.56	14.53	14.36
15	14.77	15.20	18.58	16.52	16.52	15.87	15.98	e15.1	14.85	14.41	14.47	14.60
20	15.00	16.00	16.44	16.30	16.46	15.88	15.55	15.03	14.70	14.44	14.66	14.47
25	15.62	15.84	16.63	16.20	16.74	15.86	15.24	15.08	14.63	14.56	14.54	14.47
EOM	15.29	16.41	16.63	16.07	16.60	15.81	15.21	14.87	14.58	14.82	e14.6	15.16

WTR YEAR 1986 MAX 16.94 FEB 24 MIN 14.34 for several days

e Estimated.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB				
07...	j0955	400	682	180
07...	j1020	500	1,760	500
07...	j1050	550	4,010	1,200
07...	j1120	600	9,670	3,200
07...	j1150	650	16,400	5,800
07...	j1210	700	22,000	7,800
07...	j1240	750	27,200	9,600
07...	j1305	800	30,900	11,000
07...	j1335	850	35,000	13,000
07...	j1400	900	39,600	14,000
07...	j1430	950	42,700	16,000
07...	j1505	990	44,300	16,000

j Collected by non-USGS agency.

HAWAII, ISLAND OF OAHU--Continued

212659158004102. Local number, 3-2600-04.

LOCATION.--Lat 21°26'59", long 158°00'41", Hydrologic Unit 20060000, 30 ft south of Waiahole ditch, and 1.1 mi east southeast of Kipapa School in Mililani. Owner: Honolulu Board of Water Supply.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 815 ft, casing diameter 16 in., cased to 705 ft.

DATUM.--Elevation of land-surface datum is 665 ft. Measuring point: Top of 16-inch casing, 888.82 ft, revised, above mean sea level.

PERIOD OF RECORD.--Water-level recorder, October 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 20.94 ft above mean sea level, Oct. 1, 1983; lowest 16.74 ft above mean sea level, Sept. 14, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.32	18.09	19.10	19.50	19.23	29.60	18.77	18.24	17.82	17.46	17.60	17.38
10	17.30	18.06	19.18	19.50	19.43	29.43	18.72	18.13	17.74	17.46	17.57	e17.3
15	17.30	18.17	19.30	19.46	19.47	29.28	18.83	18.13	17.71	17.37	17.49	e17.4
20	17.32	18.38	19.31	19.39	29.55	29.17	18.74	18.11	17.69	17.30	17.49	e17.4
25	17.73	18.82	19.38	19.33	29.61	19.02	18.55	18.04	17.58	17.26	17.49	e17.4
EOM	18.05	18.80	19.48	19.19	29.63	18.91	18.36	17.93	17.53	17.59	17.41	e17.8

WTR YEAR 1986 MAX 19.73 MAR 3 MIN 17.2 JUL 25

e Estimated.

HAWAII, ISLAND OF OAHU-Continued

212927158014801. Local number, 3-2901-07.

LOCATION.--Lat 21°29'27", long 158°01'48", Hydrologic Unit 20060000, across the main gage of Wheeler AFB, and 1200 ft south of Wahiawa bridge on Kaukonohua Stream. Owner: U.S. Army.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Dug high-level water-table well, size 8 x 8 ft, length of 30-degree inclined shaft 1,148 ft.

DATUM.--Elevation of land-surface datum is 850 ft. Measuring point: Top of pump chamber floor at recorder, 287.00 ft above mean sea level.

REMARKS.--Water-level recorder is located on the pump chamber floor at the bottom of shaft. Water from this wall is used for public supply.

PERIOD OF RECORD.--
WATER LEVEL: Water-level recorder, November 1938 to current year.
WATER QUALITY: 1966-72, 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 284.40 ft above mean sea level, May 12, 1969; lowest, 269.52 ft above mean sea level, Dec. 5, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	*271.28	271.52	271.55	*271.40	*271.29	*271.17	270.98	271.02	271.05	270.99	271.16	270.46
10	*271.18	271.43	271.57	*271.46	*271.34	*271.18	270.97	271.00	271.04	270.99	271.20	271.30
15	*271.47	271.63	271.62	*271.44	271.30	271.12	270.93	271.63	271.03	271.01	271.22	271.32
20	*271.29	271.64	271.52	*271.30	*271.29	271.07	270.92	271.12	271.03	271.18	271.27	271.32
25	*271.37	271.55	271.67	*271.34	*271.29	271.04	270.97	271.07	271.03	271.04	271.29	271.32
EOM	*271.44	271.68	271.64	*271.24	*271.24	271.01	270.97	271.09	271.01	271.13	271.20	271.40

* Taken from Operator's Log Book at Schofield Shaft. Operators read staff gage on graphic recorder twice a day at about 1500 hrs. and 2300 hrs. No record on these days, recorder malfunctioned.
Note: Well being pumped throughout the year.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
NONPUMPING VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	271.38	JAN 1	271.66	MAR 1	271.42	MAY 1	271.12	JUN 1	271.26	JUL 21	271.20
NOV 1	271.54	FEB 1	271.44	APR 1	271.02						

Note: Water levels are measured after all pumps being shut off for 2 hours.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV , 1985				
04...	1000	170	21.5	20
JAN , 1986				
16...	1130	160	22.0	20
FEB				
14...	1130	165	22,0	20
MAY , 1986				
21...	1330	167	22.0	20
JUL				
15...	1020	170	22.0	19
SEP				
16...	1130	170	22.5	19

HAWAII, ISLAND OF OAHU--Continued

213327157524401. Local number, 3-3352-01.

LOCATION.--Lat 21°33'27", long 157°52'44", Hydrologic Unit 20060000, at mouth of Kahana Valley, and 700 ft southwest of Kamehameha Highway, Kahana. Owner: Mary E. Foster Estate.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICES.--Drilled artesian well, depth 441 ft, casing diameter 10 in., caeed to 177 ft.

DATUM.--Elevation of land-surface datum is 6 ft. Measuring point: Top of "T", 7.31 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, April 1935 to current year.
WATER QUALITY: 1935 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.3 ft above mean sea level, Mar. 29, 1966; lowest measured, 12.61 ft above mean sea level, July 5, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.82	JAN 15	13.18	MAR 7	13.07	MAY 7	13.33	JUN 25	13.02	AUG 6	13.24
NOV 15	13.23										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT , 1985					MAY , 1986				
15...	1410	260	22.5	36	07...	1445	260	23.0	37
NOV					JUN				
15...	1330	260	22.5	38	25...	1420	270	23.0	38
JAN , 1986					AUG				
15...	1400	260	23.0	41	08...	1440	265	23.0	36
MAR									
07...	1430	250	23.0	31					

HAWAII, ISLAND OF OAHU--Continued

213446158104901. Local number, 3-3410-08.

LOCATION.--Lat 21°34'46", long 158°10'49", Hydrologic Unit 20060000, 0.5 mi east of Dillingham Airfield, and 1.1 mi southeast of Mokuleia Beach Park. Owner: Waialua Sugar Co., Inc.

AQUIFER.--Basalt of Waianae Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled artesian well, depth 447 ft, casing diameter 1-inch, cased to 410 ft, perforated from 410 to 447 ft.

DATUM.--Elevation of land-surface datum is 12 ft. Measuring point: Top 12-inch stilling well, 20.53 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Water-level recorder, January 1963 to February 1972.
Occasional measurements, January 1929 to December 1962, March 1972 to current year.
WATER QUALITY: 1929 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.98 ft above mean sea level, Jan. 5, 1969; lowest measured, 16.08 ft above mean sea level, Aug. 6, 1929.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	18.56	DEC 30	18.59	APR 7	18.19	MAY 22	18.08	JUL 16	17.89	SEP 9	18.23
NOV 22	18.53										

214125158013401. Local number, 3-4101-03.

LOCATION.--Lat 21°41'25", long 158°01'34", Hydrologic Unit 20060000, 1500 ft northeast of UH agriculture experiment Station in Waialee and 1.9 mi northaast of Sunset Beach. Owner: State of Hawaii.

AQUIFER.--Basalt of Koolau Volcanic Series, Tertiary age.

WELL CHARACTERISTICS.--Drilled artesian well, depth 61 ft, casing diamter 8 in., cased to 36 ft.

DATUM.--Elevation of land-aurface datum is 22 ft. Measuring point: Top of 4-inch pipe, 21.89 ft above mean sea level.

REMARKS.--Water-quality records for 1929-74 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, February 1929 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.60 ft above mean sea level, Nov. 14, 1932; lowest measured, 10.97 ft above mean sea level, July 1, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 19	12.87	JAN 15	12.61	MAR 6	12.67	MAY 7	12.26	JUN 25	11.98	AUG 11	12.44

HAWAII, ISLAND OF MOLOKAI

210425156483001. LOCAL NUMBER, 4-0448-02.

LOCATION.--Lat 21°04'25", long 156°48'30", Hydrologic Unit 20050000, 100 ft north of Highway 45, and 0.8 mi west of Pukoo. Owner: P. Friel.

AQUIFER.--East Molokai Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Dug basal water-table well, size 4 x 6 ft, depth 22 ft.

DATUM.--Elevation of land-surface datum is 19 ft. Measuring point: Top of 2 x 2 in. steel plate bolted to top of concrete wall of well, 21.23 ft above mean sea level.

REMARKS.-- Water-quality records for 1970-1973 are available in files of district office.

PERIOD OF RECORD.-- Water-level recorder, August 1970 to January 1973.
Occasional measurements, February 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.11 ft above mean sea level, Nov. 26, 1970; Lowest measured, 3.67 ft above mean sea level, Feb. 8, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	4.08	FEB 2	3.89	MAR 30	3.93	MAY 19	3.79	JUl 14	3.80	SEP 8	3.96
DEC 8	4.39										

HAWAII, ISLAND OF MOLOKAI--Continued

210402156495801. Local number, 4-0449-01.

LOCATION.--Lat 21°04'02", long 156°49'58", Hydrologic Unit 20050000, 1,800 ft north of Ualapue Fishpond, and 0.5 mi northeast of Kilohana School. Owner: County of Maui.

AQUIFER.--East Molokai Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Dug basal water-table well, size 4 x 6 ft, depth 42 ft, lined with concrete to 42 ft; two infiltration tunnels, total length 214 ft.

DATUM.--Elevation of land-surface datum is 42 ft. Measuring point: Top of steel plate, 42.42 ft above mean sea level.

REMARKS.--Water from this well is used for public supply.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, 1938-39, 1941-63, November 1972 to current year.
WATER QUALITY: 1948, 1952-56, 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.05 ft above mean sea level, Jan. 19, 1950; lowest measured, 2.09 ft above mean sea level, Sept. 16, 1975.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	3.17	FEB 2	2.95	MAR 30	2.89	MAY 19	2.88	JUL 14	2.87	SEP 7	3.05
DEC 8	3.22										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)
OCT , 1985				MAY , 1986			
14...	1455	330	21.0	19...	1140	340	20.5
DEC				JUL			
08...	1635	320	21.0	14...	1220	330	21.0
FEB , 1986				SEP			
02...	1600	320	21.0	07...	1550	340	21.5
MAR							
30...	1525	330	21.0				

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
SEP									
07...	1600	340	6.90	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210402156495801 - 4-0449-01 S6 CNTY, UALAPUE MOLOKAI--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOIAL (UG/L)
SEP 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210402156495801 - 4-0449-01 S6 CNTY, UALAPUE MOLOKAI--Continued

DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
SEP 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01	<0.01

DATE	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)
SEP 07...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001

DATE	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
SEP 07...	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
SEP 07...	<01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 07...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

< Actual value is known to be less thsn the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

HAWAII, ISLAND OF MOLOKAI--Continued

210419156570501. Local number, 4-0457-01.

LOCATION.--Lat 21°04'19", long 156°57'05", Hydrologic Unit 20050000, 0.5 mi northwest of Kakahaia Fishpond, and 0.5 mi northeast of Moku. Owner: County of Maui.

AQUIFER.--Basalt of East Molokai Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Dug basal water-table well, size 4 x 4 ft, depth 38 ft, lined with concrete to 38 ft; two infiltration tunnels, total length 229 ft.

DATUM.--Elevation of land-surface datum is 38 ft. Measuring point: Top of steel plate, 37.37 ft, revised, above mean sea level.

REMARKS.--Water from this well is used for public supply.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, June 1947 to November 1960, January 1962 to February 1963, November 1972 to current year.
WATER QUALITY: 1948, 1954-56, 1960, 1982, 1971, 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.88 ft above mean sea level, Dec. 5, 1950; lowest measured, 1.47 ft above mean aea level, June 24, 1955.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	1.97	FEB 2	1.79	MAR 30	1.76	MAY 19	1.67	JUL 14	1.81	SEP 7	1.83
DEC 8	1.89										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)
OCT , 1985				MAY , 1986			
14...	1535	390	23.0	19...	1320	320	23.5
DEC				JUL			
08...	1430	350	23.0	14...	1335	230	23.5
FEB , 1986				SEP			
02...	1505	400	22.5	07...	1505	290	23.0
MAR							
30...	1505	340	22.5				

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
SEP									
07...	1435	290	7.00	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

< Actuel value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210419156570501 - 4-0457-01 S4 CNTY, KAWELA--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
SEP 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.3	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)
SEP 07...	<0.2	13	1.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)
SEP 07...	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210419156570501 - 4-0457-01 S4 CNTY, KAWELA--Continued

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)
SEP 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01

DATE	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL
SEP 07...	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
SEP 1986 07...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

HAWAII, ISLAND OF MOLOKAI--Continued

210805157012001. Local number, 4-0801-01.

LOCATION.--Lat 21°08'05", long 157°01'20", Hydrologic Unit 20050000, 0.6 mi north of Kaunakakai School, and 0.9 mi east of Kalanianaole Colony. Owner: Molokai Ranch.

AQUIFER.--Basalt of East Molokai Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 59 ft, casing diameter 12 in., cased to 20 ft.

DATUM.--Elevation of land-surface datum is 51 ft. Measuring point: Top of 15-inch surface casing, 51.95 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, May 1954 to current year.
WATER QUALITY: 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.30 ft above mean sea level, Jan. 20, 1969; lowest measured, 1.80 ft above mean sea level, Dec. 5, 1964.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	2.79	FEB 5	2.55	MAR 31	2.42	MAY 19	2.34	JUL 14	2.35	SEP 8	2.55
DEC 11	2.57										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT , 1985				
18...	0715	310	24.0	42
DEC				
11...	1720	210	24.0	18
FEB , 1986				
05...	1415	270	24.0	25
MAR				
31...	1645	210	24.0	16
MAY , 1986				
19...	1355	235	24.0	18
JUL				
14...	1400	270	24.0	22
SEP				
08...	1045	310	24.5	28

HAWAII, ISLAND OF MOLOKAI--Continued

210711157000501. Local number, 4-0700-01.

LOCATION.--Lat 21°07'11", long 157°00'05", Hydrologic Unit 20050000, 2.3 mi northeast of Kaunakakai, and 2.4 mi north of Kamiloloa. Owner: Kaluakoi Corporation.

AQUIFER.--East Molokai Volcanic Series.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1,080 ft, casing diameter 20 in., cased to 956 ft, perforated from 956 to 1056 ft.

DATUM.--Measuring point: Top of casing, 979.00 ft, land-surface datum.

REMARKS.--Water-quality records for 1973-75 are available in files of district office.

PERIOD OF RECORD.--Occasional meassurements, July 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 975.40 ft below land-surface datum, Jan. 25, 1983; lowest measured, 976.23 ft below land-surface datum, Sept. 10, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	976.04	FEB 4	976.10	MAY 21	976.22	SEP 10	976.23

HAWAII, ISLAND OF MAUI

203908156041201. Local number, 6-3804-01.

LOCATION.--Lat 20°39'08", long 156°04'12", Hydrologic Unit 20020000, 1300 ft northwest of Kakanoni Point, and 0.7 mi west of Kipahulu School. Owner: Cordelia May.

AQUIFER.--Hana Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, dspth 150 ft, casing diameter 4 in.

DATUM.--Elevation of land-surface datum is 133 ft. Measuring point: Top of 1-inch pipe nipple, 133.61 ft above meen sea level.

REMARKS.--Water-quality records for 1978 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, July 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measursd, 2.73 ft above mean sea level, Jan. 9, 1985; lowest measured, 0.70 ft above mean sea level, July 2, 1986.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 7	2.27	FEB 20	1.62	APR 8	1.14	MAY 14	1.11	JUL 2	0.70	AUG 20	1.10
JAN 8	1.89										

HAWAII, ISLAND OF MAUI--Continued

203912156255901. Local number, 6-3925-01.

LOCATION.--Lat 20°39'12", long 156°25'59", Hydrologic Unit 20020000, 0.8 mi east of Keawalai Church, and 0.9 mi southeast of intersection of Kihei and Makena roads. Owner: State of Hawaii.

AQUIFER.--Hana Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 382 ft, casing diameter 8 in., cased to 343 ft, perforated from 343 to 363 ft.

DATUM.--Elevation of land-surface datum is 352 ft. Measuring point: Top of 2-inch pipe attached to the casing cover, 352.29 ft above mean sea level.

REMARKS.--Water-quality records for 1964 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, August 1964, June 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.47 ft above mean sea level, Aug. 24, 1964; lowest measured, 0.41 ft below mean sea level, May 4, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26	-0.01	MAR 5	0.03	MAY 15	-0.40	JUL 29	-0.07

204827156242201. Local number, 6-4824-01.

LOCATION.--Lat 20°48'27", long 156°24'22", Hydrologic Unit 20020000, on Waiakoa Road 1,000 ft south of intersection with Kalaloa Gulch, and 4 mi east of Kihei. Owner: State of Hawaii.

AQUIFER.--Kula Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 647 ft, casing diameter 12 in., cased to 598 ft, screened from 598 to 638 ft.

DATUM.--Elevation of land-surface datum is 593 ft. Measuring point: Top of 3-inch pipe attached to the steel casing cover, 594.75 ft above mean sea level.

REMARKS.--Water-quality records for 1971, 1973 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, March 1971 and May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.20 ft above mean sea level, Jan. 17, 1974; lowest measured, 3.65 ft above mean sea level, Jan. 27, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	4.25	JAN 13	4.06	APR 21	4.10	MAY 28	4.08	JUL 9	4.20	AUG 14	4.28
NOV 27	4.28	MAR 4	4.06								

HAWAII, ISLAND OF MAUI--Continued

204818156310301. Local number, 6-4831-01.

LOCATION.--Lat 20°48'18", long 156°31'03", Hydrologic Unit 20020000, on sugar plantation road 0.7 mi north of Maalaea, and 0.9 mi southwest of intersection of Honoapoolani Highway and Kihei Road. Owner: State of Hawaii.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 219 ft, casing diameter 8 in., cased to 187 ft.

DATUM.--Elevation of land-surface datum is 188 ft. Measuring point: Top of 8-inch casing, 166.60 ft above mean sea level.

REMARKS.--Water-quality records for 1985-87 are available in files of district office.

PERIOD OF RECORD.--Water-level recorder, January to July 1974.
Occasional measurements, September 1972 to December 1973, August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.76 ft above mean sea level, Nov. 30, 1983; lowest measured, 4.74 ft above mean sea level, Mar. 16, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	5.23	JAN 10	5.17	APR 16	5.12	MAY 15	5.11	JUL 8	5.00	AUG 26	5.30
NOV 22	5.34	MAR 3	5.27								

204909156281401. Local number, 6-4928-02.

LOCATION.--Lat 20°48'27", long 156°28'14", Hydrologic Unit 20020000, at Puunene Airport on Mokulele Highway 2.3 mi north of interaection with Kihei Road, Kihei. Owner: Hawaiian Commercial and Sugar Co.

AQUIFER.--Honomanu Volcanic Series, Pliocene sge.

WELL CHARACTERISTICS.--Dug basal water-table well, 6 x 9 ft vertioal shaft, depth 53 ft.

DATUM.--Elevation of land-surface datum is 50 ft. Measuring point: Top of angle iron at well, 50.08 ft above mean sea level.

REMARKS.--Water-quality records for 1973 are available in files of district office.

PERIOD OF RECORD.--Water-level recorder, March 1972 to September 1984.
Occasional measurements, October 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.09 ft above mean aea level, Jan. 12, 1980; lowest, 3.05 ft above mean sea level, Mar. 5-6, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	3.52	JAN 10	3.62	APR 18	3.73	MAY 15	3.78	JUL 8	3.69	AUG 28	3.88
NOV 22	3.85	MAR 3	3.73								

HAWAII, ISLAND OF MAUI--Continued

205140156304501. Local number, 6-5130-01.

LOCATION.--Lat 20°51'40", long 156°30'45", Hydrologic Unit 20020000, 0.5 mi northwest of Waikapu, and 1.0 mi southeast of Wailuku Heights. Owner: State of Hawaii.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 757 ft, casing diameter 8 in., cesed to 569 ft, perforated from 569 to 609 ft.

DATUM.--Elevation of land-surface datum is 551 ft. Measuring point: Top of 6-inch pipe coupling, 551.33 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, June 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.90 ft above mean sea level, Oct. 13, 1982; lowest measured, 11.36 ft above mean sea level, Jan. 27, 1976.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	15.45	JAN 13	19.66	APR 21	24.28	MAY 28	23.00	JUL 9	20.04	AUG 14	18.79
NOV 27	17.64	FEB 28	20.87								

205154156303801. Local number, 6-5130-02.

LOCATION.--Lat 20°51'54", long 156°30'38", Hydrologic Unit 20020000, 0.6 mi northwest of Waikapu, and 1.0 mi southeast of Wailuku Heights. Owner: State of Hawaii.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1020 ft, casing diameter 20 in., cased to 520 ft, perforated from 520 to 570 ft.

DATUM.--Elevation of land-surface datum is 518 ft. Measuring point: Top of casing, 519.33 ft above mean sea level.

REMARKS.--Water-quality records for 1974 are availsble in files of district office.

PERIOD OF RECORD.--Water-level recorder, August 1983 to September 1984.
Occasional messurements, October 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.42 ft above mean sea level, Aug. 8, 1983; lowest, 13.48 ft above mean sea level, April 8, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	13.56	JAN 13	13.57	APR 21	13.98	MAY 28	14.31	JUL 9	14.38	AUG 14	14.27
NOV 27	13.73	FEB 28	13.74								

HAWAII, ISLAND OF MAUI--Continued

205419156304401. Local number, 6-5430-03.

LOCATION.--Lat 20°54'19", long 156°30'44", Hydrologic Unit 20020000, 2,000 ft north of Puuohala Village, and 0.5 mi northwest of Wailuku Sugar Mill reservoir. Owner: Wailuku Sugar Co.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 580 ft, 1.5-inch PVC casing, cased to 400 ft, perforated from 400 to 580 ft.

DATUM.--Elevation of land-surface datum is 415 ft. Measuring point: Top of 1-inch galvanized pipe, 416.75 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, August 1982 to February 1984.
Occasional measurements, March 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.09 ft above mean sea level, Dec. 31, 1982; lowest measured, 14.67 ft above mean sea level, Oct. 11, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	14.67	JAN 16	15.87	APR 22	15.38	MAY 16	15.19	JUL 8	15.04	AUG 22	15.06
NOV 29	15.67	FEB 28	15.76								

205405156305401. Local number, 6-5430-05.

LOCATION.--Lat 20°54'59", long 156°30'56", Hydrologic Unit 20020000, 1.0 mi southwest of intersection of Malaihi Road and Highway 33, and 1.2 mi south of Waihee. Owner: State of Hawaii.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1400 ft, casing diameter 10 in., cased to 400 ft.

DATUM.--Elevation of land-surface datum is 380 ft. Measuring point: Top of 10-inch casing, 380.84 ft, revised, above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, August 1983 to May 1986.
Water-level recorder, June 1986 to current year.

WATER QUALITY: 1982, 1985.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.68 ft above mean sea level, Aug. 5, 1983; lowest measured, 13.04 ft above mean sea level, Oct. 11, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DATE	WATER LEVEL
OCT 11	13.04+
APR 22	13.59+
MAY 21	13.40+

DAY	JUN	JUL	AUG	SEP
5		13.41	13.46	13.75
10		13.34	13.55	13.82
15		13.38	13.60	13.92
20	13.40	13.38	13.62	13.93
25	13.42	13.48	13.67	14.00
EOM	13.45	13.52	13.72	14.08

+ Instantaneous measurement.

HAWAII, ISLAND OF MAUI--Continued

205437156310501. Local number, 6-5431-01.

LOCATION.--Lat 20°54'37", long 156°31'05", Hydrologic Unit 20020000, 0.5 mi southwest of Waiehu Village, and 1.4 mi southwest of intersection of Malaihi Road and Kahekili Highway. Owner: Wailuku Sugar Co.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 555 ft, 1.5-inch PVC casing, cased to 515 ft, perforated from 515 to 555 ft.

DATUM.--Elevation of land-surface datum is 493 ft. Measuring point: Top of 1.5-inch PVC casing, 492.51 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, August 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.52 ft above mean sea level, Jan. 2, 1983; lowest 12.63 ft above mean sea level, Oct. 14, 15, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.78	13.15	13.70	13.71	13.80	13.65	13.30	13.33	12.94	12.97	12.91	13.20
10	12.73	13.18	13.71	13.80	13.80	13.51	13.42	13.32	13.02	12.91	13.05	13.30
15	12.71	13.28	13.78	13.81	13.80	13.49	13.50	13.13	13.05	12.96	13.08	13.41
20	13.07	13.44	13.77	13.81	13.72	13.45	13.41	13.02	12.92	12.95	13.10	13.41
25	13.16	13.54	13.81	13.68	13.73	13.43	13.17	13.01	12.98	13.00	13.14	13.50
EOM	13.09	13.61	13.75	13.72	13.74	13.41	13.15	13.01	13.03	13.02	13.20	13.59

WTR YEAR 1986 MAX 13.91 JAN 19 MIN 12.63 OCT 14, 15

205552156193101. Local number, 6-5519-01.

LOCATION.--Lat 20°55'52", long 156°19'31", Hydrologic Unit 20020000, at Haiku School 1.0 mi north of Haiku, and 2.7 mi northeast of Paia. Owner: State of Hawaii.

AQUIFER.--Kula Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 400 ft, casing diameter 8 in., cased to 363 ft, perforated from 363 to 383 ft.

DATUM.--Elevation of land-surface datum is 365 ft. Measuring point: Top of 2.5-inch pipe coupling attached to the casing cover, 366.26 ft above mean sea level.

REMARKS.--Water-quality records for 1967, 1980 are available in files of district office.
Pump installed in well May 1986.

PERIOD OF RECORD.--Occasional measurements, May 1967, December 1970, May 1972 to May 1986, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.08 ft above mean sea level, Nov. 23, 1982; lowest measured, 4.75 ft above mean sea level, Mar. 7, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	5.55	NOV 27	5.66	JAN 13	5.35	MAR 4	5.48	APR 21	5.16	MAY 28	5.23

HAWAII, ISLAND OF MAUI--Continued

205617156311101. Local number, 6-5631-01.

LOCATION.--Lat 20°56'17", long 156°31'11", Hydrologic Unit 20020000, 2,000 ft southwest of Waihee Farm, and 1.3 mi northwest of Waiehu Golf Course. Owner: Wailuku Sugar Co.

AQUIFER.--Wailuku Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 300 ft, 1.5-inch PVC casing, cased to 260 ft, perforated from 260 to 300 ft.

DATUM.--Elevation of land-surface datum is 248 ft. Measuring point: Top of 1.5-inch PVC pipe, 248.05 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, August 1982 to September 1984.
Occasional measurements, October 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.83 ft above mean sea level, Dec. 6, 1982; lowest measured 14.51 ft above mean sea level, Oct. 11, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	14.51	JAN 16	14.90	APR 22	14.84	MAY 16	14.92	JUL 8	14.91	AUG 22	15.26
NOV 29	14.70	FEB 28	14.97								

205856156400101. Local number, 6-5840-01.

LOCATION.--Lat 20°58'56", long 156°40'01", Hydrologic Unit 20020000, on sugar plantation road 0.9 mi east of Kahana, and 1.5 mi southwest of Honokahua. Owner: State of Hawaii.

AQUIFER.--Honolua Volcanic Series, Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 274 ft, casing diameter 8 in., cased to 264 ft, perforated from 264 to 274 ft. Hole was drilled to depth of 284 ft but plugged back 10 ft with cement.

DATUM.--Elevation of land-surface datum is 257 ft. Measuring point: Top of 8-inch casing, 257.34 ft above mean sea level.

REMARKS.--Water-quality records for 1964, 1980 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, March 1972 to July 1975.
Water-level recorder, August 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.68 ft above mean sea level, Sept. 20, 1981; lowest, 2.40 ft above mean sea level May 4, 5, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.05	2.99	2.87	e2.7	2.90	3.04	2.70	2.71	2.77	2.64	2.89	3.00
10	2.99	3.00	2.86	2.74	2.86	2.91	2.81	2.77	2.83	2.64	2.94	3.01
15	3.07	3.07	2.85	2.77	2.92	2.85	2.85	2.74	2.77	2.68	2.94	3.03
20	3.15	2.95	2.73	2.85	2.87	2.70	2.67	2.68	2.71	2.77	2.97	3.14
25	3.13	2.90	2.85	2.88	2.98	2.78	2.73	2.74	2.82	2.85	3.07	3.10
EOM	3.04	2.89	2.67	2.95	2.95	2.70	2.67	2.69	2.63	2.80	2.97	3.05

WTR YEAR 1988 MAX 3.33 OCT 19 MIN 2.44 JUL 7, 8

e Estimated.

HAWAII, ISLAND OF HAWAII

190602155325901. Local number, 8-0632-01.

LOCATION.--Lat 19°06'02", long 155°32'59", Hydrologic Unit 20010000, 0.9 mi north of Whittington Park, and 3.3 mi northeast of Naalehu. Owner: Kau Agribusiness (formerly Kau Sugar Company).

AQUIFER.--Ninole Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table, depth 140 ft, casing diameter 14 in., cased to 105 ft, perforated from 105 to 125 ft.

DATUM.--Elevation of land-surface datum is 102 ft. Measuring point: 1-inch hole in pump base, 103.26 ft above mean sea level.

REMARKS.--Water-quality records for 1972 and 1973 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, April 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.39 ft above mean sea level, October 19, 1978; lowest measured, 0.58 ft below mean sea level, July 29, 1981.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	1.87	JAN 27	1.02	MAY 6	0.96	JUN 23	0.10	AUG 5	0.67	SEP 17	0.81
DEC 2	1.29	MAR 25	.48								

HAWAII, ISLAND OF HAWAII--Continued

192728154530101. Local number, 8-2783-01.

LOCATION.--Lat 19°27'28", long 154°53'01", Hydrologic Unit 20010000, 0.8 mi southeast of Pawai crater in Keahialaka, and 1.9 mi north of Opihikao road junction, south Pahoa. Owner: State of Hawaii.

AQUIFER.--Hilina Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 319 ft, casing diameter 8 in., cased to 279 ft, perforated from 279 to 319 ft.

DATUM.--Elevation of land-surface datum is 273 ft. Measuring point: Top of casing, 273.00 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, March 1972 to current year.
WATER QUALITY: 1962, 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.87 ft above mean aea level, Sept. 17, 1985; lowest measured, 0.97 ft above mean sea level, July 26, 1976.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 22	1.95	MAR 10	2.01	APR 16	1.60	JUN 6	1.55	JUL 25	2.02	SEP 10	2.52
JAN 14	2.38										

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV , 1985				
22...	0910	13800	54.0	5200
JAN , 1986				
14...	0835	15000	54.0	5800
MAR				
10...	1010	16000	55.0	--
APR				
16...	1140	12500	54.0	--
JUN , 1986				
06...	1320	9480	54.0	3000
JUL				
25...	0915	8660	53.0	2000
SEP				
10...	1200	15900	54.0	5400

HAWAII, ISLAND OF HAWAII--Continued

193017154502101. Local number, 8-3080-02.

LOCATION.--Lat 19°30'17", long 154°50'21", Hydrologic Unit 20010000, 0.5 mi south of intersection of Highway 132, and Highway 137 near Pahoa. Owner: County of Hawaii.

AQUIFER.--Puna Volcanic Series, Holocene age.

WELL CHARACTERISTICS.--Dug basal water-table well, depth 46 ft, casing diameter 66 in., with two horizontal infiltration tunnels 2 x 50 ft extending in opposite directions from 3 ft above bottom of well.

DATUM.--Elevation of land-surface datum is 39 ft. Measuring point: Top of steel manhole cover at 1-inch hole, 39.50 ft above mean sea level.

REMARKS.--Water from this well is used for public supply and at times, water level affected by pumping.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, March 1972 to current yesr.
WATER QUALITY: 1972-81, 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.16 ft above mean sea level, Dec. 6, 1982; lowest measured, 1.18 ft above mean sea level, June 3, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL
SEP 10	3.88

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV , 1985				
21...	1430	1450	25.5	300
JAN , 1986				
14...	0940	1440	25.5	280
MAR				
10...	1100	1400	25.5	280
APR , 1986				
16	1045	1270	25.5	240
JUN				
06...	1230	1350	25.5	270
JUL				
25...	1015	1250	26.0	230

HAWAII, ISLAND OF HAWAII--Continued

193339154594801. Local number, 8-3389-01.

LOCATION.--Lat 19°33'39", long 154°59'48", Hydrologic Unit 20010000, 3.5 mi northwest of Pahoa airstrip, and 5.5 mi southeast of Keaau. Owner: County of Hawaii.

AQUIFER.--Puna Volcanic Series, Holocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 475 ft, casing diameter 8 in., cased to 403 ft, perforated from 403 to 475 ft.

DATUM.--Elevation of land-surface datum is 427 ft. Measuring point: Top of casing, 428.14 ft above mean sea level.

REMARKS.--Water-quality records for 1961 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level meaaured, 26.37 ft above mean sea level, Mar. 28, 1979; lowest measured, 15.99 ft above mean sea level, Apr. 25, 1978, Mar. 10, 1986.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	17.16	MAR 10	15.99	APR 16	19.90	JUN 6	18.71	JUL 25	17.63	SEP 10	18.52
JAN 14	16.57										

HAWAII, ISLAND OF HAWAII--Continued

194134155005601. Local number, 8-4100-01.

LOCATION.--Lat 19°41'34", long 155°00'56", Hydrologic Unit 20010000, 5.5 mi southeast of Hilo Post Office, and 5.0 mi northeast of Keaau. Owner: Hawaiian Paradise Park Corporation.

AQUIFER.--Kau Volcanic Series, Holocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 55 ft, casing diameter 10 in., cased to 39 ft, perforated from 39 to 55 ft.

DATUM.--Elevation of land-surface datum is 45 ft. Measuring point: Top of casing, 46.84 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, November 1971 to current year.
WATER QUALITY: 1971, 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.73 ft above mean sea level, Apr. 9, 1980; lowest measured, 2.24 ft above mean sea level, Mar. 9, 1972.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 27	4.90	JAN 17	4.84	MAR 7	4.00	MAY 29	4.70	AUG 12	5.17

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV 27...	0920	1400	19.0		MAY 29...	0905	1400	19.5	
JAN 17...	0910	1450	19.0		AUG 12...	0940	1450	19.0	
MAR 07...	0915	1540	19.5						

HAWAII, ISLAND OF HAWAII--Continued

194222155035101. Local number, 8-4203-04.

LOCATION.--Lat 19°42'22", long 155°03'51", Hydrologic Unit 20010000, 0.5 mi east of Hawaii Technical School, and 1.0 mi south of Hilo airport terminal. Owner: Hawaii Electric Light Company.

AQUIFER.--Kahuku Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 201 ft, casing diameter 16 in., cased to 63 ft.

DATUM.--Elevation of land-surface datum is 47 ft. Measuring point: Top of 3-inch nipple above casing; 46.54 ft above mean sea level.

REMARKS.--Water-quality records for 1961 are available in files of district office. Water level affected by pumping of nearby industrial wells.

PERIOD OF RECORD.--Occasional measurements, July 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.67 ft above mean sea level, Mar. 11, 1979; lowest measured, 5.80 ft above mean sea level, Mar. 12, 1986.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	6.52	MAR 12	5.80	APR 22	7.51	JUN 10	6.80	AUG 1	6.80	SEP 11	7.31
JAN 15	6.15										

HAWAII, ISLAND OF HAWAII--Continued

195947155485801. Local number, 8-5948-01.

LOCATION.--Lat 19°59'47", long 155°48'58", Hydrologic Unit 20010000, 0.7 mi east of Hapuna Beach Park, and 3.1 mi southeast of Kawaihae. Owner: State of Hawaii.

AQUIFER.--Hamakua Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 268 ft, casing diameter 10 in., cased to 246 ft, screened from 246 to 266 ft.

DATUM.--Elevation of land-surface datum is 244 ft. Measuring point: Hole in pumpbase, 246.47 ft above mean sea level.

REMARKS.--Water from this well is used for irrigation.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, April 1970, March 1973 to current year.
WATER QUALITY: 1970, 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft above mean sea level, Sept. 26, 1984; lowest measured, 1.40 ft, above mean sea level, June 22, 1973, June 3, 1974.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	a4.07	JAN 31	a3.95	MAR 19	a3.69	APR 17	a3.56	AUG 8	a3.95	SEP 18	a4.00
DEC 23	a3.84										

a Well being pumpad.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT , 1985				
02...	1340	1650	26.0	460
DEC				
23...	1030	1700	25.0	470
JAN , 1986				
31...	1020	1650	26.0	470
MAR				
19...	1250	1700	26.0	470
APR , 1986				
17...	1315	1700	26.0	470
JUN				
06...	1310	1700	26.0	470
AUG				
08...	0835	1600	25.5	460
SEP				
18...	1105	1750	26.0	460

HAWAII, ISLAND OF HAWAII--Continued

200132155471001. Local number, 8-6147-01.

LOCATION.--Lat 20°01'32", long 155°47'10", Hydrologic Unit 20010000, on Highway 26, 3.1 mi east of Kawaihae, and 2.8 mi northeast of Hapuna Beach Park. Owner: State of Hawaii.

AQUIFER.--Pololu Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth 1,008 ft, casing diameter 8 in., cased to 997 ft, perforated from 997 to 1,008 ft. Hole was drilled to 1,040 ft but was finally plugged back to 1,008 ft.

DATUM.--Elevation of land-surface datum is 982 ft. Measuring point: Top of pipe coupling on casing cover 982.8 ft, revised, above mean sea level.

REMARKS.--Water-quality records for 1963-64 are available in files of district office.

PERIOD OF RECORD.--Occasional measurements, June to July 1963, June 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.15 ft above mean sea level, Sept. 22, 1983, lowest measured, 4.82 ft above mean sea level Sept. 20, 1976.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	5.88	JAN 31	5.88	APR 24	5.65	JUN 4	5.82	AUG 8	5.76	SEP 23	5.81
DEC 23	5.84	MAR 11	5.79								

HAWAII, ISLAND OF HAWAII--Continued

201603155521801. Local number, 8-7652-01.

LOCATION.--Lat 20°16'03", long 155°52'18", Hydrologic Unit 20010000, 0.3 mi west of Upolu Point Airfield, 3.1 mi northwest of Hawi, and 1.9 mi west of Hoea Camp. Owner: Kohala Corporation.

AQUIFER.--Pololu Volcanic Series, Pleistocene age.

WELL CHARACTERISTICS.--Dug basal water-table well, with horizontal infiltration tunnels from pump sump.

DATUM.--Elevation of land-surface datum is 33 ft. Measuring point: Top of 4-inch steel I-beam placed across sump, 7.75 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, March 1973 to current year.
WATER QUALITY: 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.09 ft above mean sea level, Aug. 22, 1974; lowest measured, 1.45 ft above mean sea level, July 9, 1975, Jan. 16, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	2.58	JAN 29	2.29	APR 17	1.95	JUN 11	1.80	AUG 20	2.20	SEP 18	2.45
NOV 26	2.33	MAR 6	2.25								

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)	DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT , 1985					APR , 1986				
02...	1215	2350	21.5	600	17...	0945	2400	22.0	660
NOV					JUN				
26...	1200	2400	22.0	640	11...	1145	2300	22.0	670
JAN , 1986					AUG				
29...	1530	2400	22.5	660	20..	1320	2400	22.0	630
MAR					SEP				
06...	0945	2400	21.5	670	18...	1315	2400	22.0	610

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
			HAWAII, ISLAND OF KAUAI					
220018159444701	2-0044-10	22 00 18	159 44 47	11-08-85	1050	500	24.0	79
				12-16-85	1050	532	24.0	82
				02-14-86	0950	560	21.5	100
				03-07-86	1335	540	24.0	98
				04-23-86	1310	550	24.0	97
				08-20-86	1335	580	22.0	96
220018159444702	2-0044-13	22 00 18	159 44 47	11-06-85	1055	500	24.0	81
				12-16-85	1055	441	24.0	86
				02-14-86	0955	520	23.0	89
				03-07-88	1340	520	23.0	85
				04-23-86	1310	520	24.0	87
				08-20-86	1340	550	24.0	91
				08-01-88	1310	540	22.5	91
				08-28-86	1320	508	23.5	--
220018159442701	2-0044-15	22 00 16	159 44 27	11-06-85	1010	3,900	24.0	1,200
				12-16-85	1010	1,500	24.0	360
				02-13-88	1005	700	24.0	140
				03-08-86	0930	790	23.5	180
				04-22-88	1010	1,800	24.5	500
				06-19-88	1000	3,700	25.0	1,100
				07-31-86	0930	4,100	24.5	1,200
				08-27-86	0830	3,180	24.5	850
220136159205501	2-0120-01	22 01 36	159 20 55	03-19-86	1400	840	25.0	160
				05-02-86	1515	850	25.0	160
				06-13-86	1450	845	25.5	160
220134159205401	2-0120-02	22 01 34	159 20 54	11-01-85	1445	810	25.0	120
				12-13-85	1505	810	24.5	120
				07-28-86	1410	730	24.5	110
				08-26-86	0900	742	25.0	110
220148159453501	2-0145-10	22 01 48	159 45 35	02-13-86	1050	560	24.5	110
				03-06-86	1135	630	24.0	120
				04-22-86	1130	640	24.5	120
				06-19-88	1030	1,000	25.0	230
				08-27-86	0930	1,010	24.0	210
220341159453901	2-0345-04	22 03 41	159 45 39	11-08-85	1210	1,820	24.0	440
				02-13-88	1130	710	24.5	150
				03-06-86	1005	690	23.5	150
				04-22-88	1225	900	24.0	200
				06-19-86	1110	1,100	25.0	220
				07-31-86	1100	1,650	24.0	350
				08-27-86	1015	1,790	24.5	420
220530159450401	2-0545-01	22 05 30	159 45 04	11-06-85	1230	680	24.0	120
				12-16-85	1245	789	24.0	150
				02-13-86	1235	585	24.0	110
				03-06-86	1030	750	24.0	160
				04-22-88	1240	650	24.0	110
				06-19-86	1130	780	25.0	220
				07-31-86	1030	820	25.0	140
				08-27-86	1030	715	24.5	230

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF KAUAI--Continued								
220827159185401	2-0818-01	22 08 27	159 18 54	11-01-85	0900	233	23.5	20
				02-07-88	1035	225	24.5	23
				04-29-86	0850	220	24.5	22
				08-10-86	1005	230	24.0	21
				08-28-86	1030	243	24.0	22
221030159202803	2-1020-03	22 10 30	159 20 28	02-07-86	1015	210	23.0	22
				03-25-86	1410	210	23.0	22
				04-29-86	0910	220	23.0	21
				06-10-88	1040	230	23.5	22
				07-22-86	1120	315	24.0	24
				09-05-86	1215	209	24.0	20
221141159252501	2-1125-01	22 11 41	159 25 25	02-07-86	0945	170	23.5	16
				03-11-88	1320	140	23.5	17
				04-29-86	1010	170	23.5	17
				06-10-88	1100	180	24.0	16
				07-22-86	1100	170	24.5	16
221141159252502	2-1125-02	22 11 41	159 25 25	11-01-85	0930	155	24.5	14
				12-13-85	1120	150	24.0	15
				07-22-86	1120	180	24.5	15
				08-26-86	1120	160	24.0	15
221150159264501	2-1126-01	22 11 50	159 26 45	12-13-85	1200	173	22.5	16
				02-07-86	0900	190	22.0	18
				04-28-86	0840	180	22.0	18
				06-13-86	0820	190	23.0	18
				08-26-86	0900	172	23.0	--
221151159265001	2-1126-02	22 11 51	159 26 50	11-01-85	1005	197	23.5	16
				03-11-86	0835	160	23.5	20
				07-28-86	0900	190	24.5	16
221201159293401	2-1229-03	22 12 01	159 29 34	11-04-85	1410	215	24.0	25
				12-13-85	1235	227	23.5	26
				02-04-86	1400	225	24.0	27
				03-25-86	1300	225	23.5	28
				04-29-86	1100	220	23.5	24
				06-10-86	1140	230	24.0	21
				07-22-86	1200	210	24.0	20
				08-26-86	1210	258	24.0	25
221247159324801	2-1232-01	22 12 47	159 32 48	12-13-85	1315	140	22.5	21
				02-04-86	1330	138	24.5	20
				03-11-86	1005	132	23.5	22
				08-26-86	1350	130	24.0	19
221318159335901	2-1333-01	22 13 18	159 33 59	11-01-85	1115	210	22.5	20
				12-13-85	1330	210	22.0	22
				02-04-86	1300	205	23.0	22
				03-11-86	1125	164	22.0	23
				04-29-88	1205	215	22.0	22
				06-10-86	1425	225	23.0	22
				07-22-88	1420	200	23.5	20
				08-26-86	1430	246	24.0	22

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
HAWAII, ISLAND OF KAUAI--Continued								
225454159274201	2-5427-01	22 54 54	159 27 42	03-20-86	0815	230	23.0	27
				05-01-86	0850	220	23.0	26
				06-06-86	0800	220	23.5	26
				07-25-86	0820	220	23.5	24
				08-28-86	0900	231	24.0	24
215536159263501	2-5526-01	21 55 36	159 26 35	02-14-86	1350	225	22.5	24
				06-23-86	1010	250	23.5	24
				08-04-86	1040	280	24.0	22
215528159303001	2-5530-02	21 55 28	159 30 30	12-17-85	1050	251	23.0	28
				02-05-86	1510	248	22.5	29
				03-20-86	1345	245	23.0	30
				04-22-86	1425	250	23.0	30
				07-25-86	0930	221	23.5	24
				08-28-86	1000	210	24.0	25
215535159302801	2-5530-03	21 55 35	159 30 26	11-05-85	1050	220	24.0	24
				02-05-86	1500	220	22.0	26
				03-20-86	1350	220	23.0	27
				04-22-86	1435	245	23.0	30
				06-06-86	1430	225	23.5	26
				07-25-86	0940	220	23.5	22
				08-28-86	1005	210	24.0	26
215522159342601	2-5534-03	21 55 22	159 34 26	12-17-85	0940	526	23.0	46
				02-14-86	1150	520	23.0	46
				03-20-86	0935	510	23.0	45
				05-01-86	1020	510	23.0	48
				06-06-86	0950	480	23.0	44
				07-25-86	1020	500	23.0	40
				08-28-86	1030	390	23.5	42
215635159355001	2-5635-01	21 56 35	159 35 50	11-05-85	0830	950	24.0	140
				12-17-85	0840	718	23.0	140
				02-13-86	1400	700	24.0	140
				03-06-86	1500	873	23.0	150
				04-23-86	1500	720	23.0	140
				06-06-86	1345	830	23.5	180
				07-25-86	1050	830	23.5	150
				08-28-86	1055	867	24.0	190
215803159401201	2-5840-01	21 58 03	159 40 12	11-06-85	1420	785	24.0	--
				12-16-85	1405	768	24.0	--
				03-20-86	1305	775	24.0	--
				05-01-86	1245	750	24.0	--
				06-06-86	1215	740	24.0	--
				07-25-85	1225	830	24.0	--
				08-28-85	1235	780	24.5	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF KAUAI--Continued								
215854159424601	2-5842-02	21 58 54	159 42 46	12-16-85	0910	529	24.0	94
				02-13-86	0920	600	24.0	110
				03-06-86	1245	810	24.5	93
				04-22-86	0850	630	24.5	110
				06-19-86	1400	800	25.0	160
				07-31-86	1250	815	24.5	140
				08-27-86	1255	1,140	24.5	230
215843159422901	2-5842-03	21 58 43	159 42 29	12-16-85	0845	675	24.0	120
				02-13-86	0900	605	24.0	110
				03-06-86	1305	765	25.0	150
				04-22-86	0830	970	25.0	200
				06-19-86	1435	1,050	25.0	230
				07-31-86	1320	1,200	25.0	220
				08-27-86	1300	1,590	24.5	380
215901159235301	2-5923-01	21 59 01	159 23 50	02-14-86	1520	195	23.5	26
				03-19-86	1520	190	24.0	32
				06-10-86	0740	170	24.0	21
				07-22-86	0805	200	24.0	20
				08-26-86	0805	237	24.0	18
215901159235201	2-5923-07	21 59 01	159 23 52	11-05-85	1500	195	24.0	21
				12-18-85	1520	194	24.5	20
				02-14-86	1510	190	23.5	20
				03-19-86	1500	180	24.0	21
				05-05-86	0825	192	24.0	20
				06-10-86	0800	195	24.0	22
				08-27-86	1445	170	24.0	20
215906159395601	2-5939-01	21 59 08	159 39 56	11-06-85	1425	680	24.0	120
				12-16-85	1420	472	24.0	76
				02-05-86	1415	620	23.5	110
				03-20-86	1120	630	23.0	120
				05-01-86	1215	880	24.0	170
				06-06-86	1145	830	24.0	170
				07-25-86	1200	1,000	24.0	220
				08-28-86	1200	864	24.0	180
215937159434201	2-5943-01	21 59 37	159 43 42	11-06-85	1000	830	24.0	230
				12-16-85	1000	1,030	24.0	190
				02-13-86	1000	880	24.0	180
				03-06-86	0910	940	24.0	180
				04-22-86	0950	970	25.0	200
				06-19-86	1245	1,100	25.0	220
				07-31-86	1210	1,200	24.5	220
				08-27-86	1125	1,140	24.5	240

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF OAHU								
211646157465201	3-1646-01	21 16 46	157 46 52	06-10-88	0950	960	21.5	--
				07-23-88	1100	950	21.5	--
211832157515501	3-1851-19A	21 18 32	157 51 55	11-01-85	1600	27,000	23.5	9,800
				12-18-85	0915	26,000	23.0	9,900
				01-23-86	1320	27,500	23.5	10,000
				03-11-86	1535	27,000	23.5	10,000
				04-23-86	1430	27,000	23.5	10,000
				06-10-86	1600	26,000	23.5	9,900
				07-24-86	1540	27,000	23.5	9,800
				09-05-86	1500	28,000	23.5	10,000
211832157515502	3-1851-19B	21 18 32	157 51 55	11-01-85	1615	4,700	23.5	--
				12-18-85	0925	4,800	23.0	--
				01-23-86	1330	4,900	23.5	--
				03-11-86	1545	5,000	23.5	--
				04-23-86	1440	5,000	23.0	--
				06-10-86	1550	5,300	23.0	--
				07-24-86	1530	5,400	23.0	--
				09-05-86	1455	5,500	23.5	--
212038157422501	3-2042-13	21 20 02	157 42 06	10-04-85	1100	12,000	25.5	3,800
				11-13-85	1445	12,000	25.5	4,100
				01-03-86	1400	12,000	25.5	4,200
				05-06-86	1320	10,500	25.5	4,200
				08-07-88	1100	14,000	25.5	4,400
212133158035501	3-2103-03	21 21 33	158 03 55	02-07-88	0900	1,100	23.0	240
				03-13-86	0900	1,100	23.0	250
				06-11-86	0900	1,150	23.0	250
				07-24-86	0840	1,110	23.0	250
				08-07-86	0950	--	--	240
				09-05-86	0805	1,120	23.0	240
212106157533701	3-2153-02	21 21 06	157 53 37	11-01-85	1520	395	21.5	72
				12-12-85	1450	390	21.5	73
				01-24-86	1330	380	21.5	71
				04-23-86	1310	395	21.5	74
				07-28-88	0935	390	21.5	89
				09-05-86	1350	395	21.5	68
212259157554201	3-2255-35	21 22 59	157 55 42	02-10-86	1000	1,070	21.5	--
				03-06-86	1400	1,100	21.5	--
				08-11-86	1405	1,100	21.5	--
212238157581102	3-2256-12	21 22 39	157 56 09	10-25-85	1200	720	25.5	180
				12-12-85	1415	750	23.0	200
				01-27-86	1515	710	23.0	180
				03-07-88	1215	760	23.0	200
				04-23-86	1220	780	23.5	200
				08-11-86	1335	780	23.5	200
				07-24-86	1415	770	24.5	190
				09-05-86	1235	780	24.0	190

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
HAWAII, ISLAND OF OAHU--Continued								
212343158001001	3-2300-11	21 23 43	158 00 10	11-01-85	1040	860	22.0	--
				12-12-85	1150	875	22.0	--
				02-05-86	1250	850	22.0	--
				03-11-86	1425	860	22.0	--
				04-23-86	1055	890	22.0	--
				06-10-86	1245	890	22.0	--
				07-24-86	1205	900	22.0	--
				09-04-86	1125	900	22.0	--
212358158010901	3-2301-09 TO 10	21 23 58	158 01 09	11-01-85	1055	530	21.5	--
				12-12-85	1120	580	22.0	--
				01-27-86	1430	530	22.0	--
				03-11-86	1300	580	22.0	--
				04-23-86	1025	570	22.0	--
				06-10-86	1140	500	22.0	--
				07-24-86	1105	460	22.0	--
				09-02-86	0950	420	22.0	--
212332157582201	3-2358-02	21 23 32	157 58 22	10-21-85	1300	1,650	20.0	--
				03-11-86	1445	2,850	20.0	--
				04-17-86	1205	2,500	20.0	--
				06-05-86	1400	1,400	20.0	--
				07-18-86	1300	1,300	20.0	--
				09-05-86	1135	1,220	20.0	--
212342157584301	3-2358-22	21 23 42	157 58 43	11-01-85	1110	980	20.0	--
				12-12-85	1200	1,080	20.0	--
				02-05-86	1225	1,100	20.0	--
				03-06-86	1450	1,190	20.0	--
				04-22-86	1345	1,100	20.0	--
				06-11-86	1130	1,000	20.0	--
				07-24-86	1220	930	20.0	--
				09-04-86	1140	920	20.0	--
212343157584701	3-2358-29	21 23 43	157 58 47	11-01-85	1105	1,170	20.0	--
				12-12-85	1210	1,400	20.0	--
				02-05-86	1230	1,520	20.0	--
				03-06-86	1445	1,700	20.0	--
				04-22-86	1340	1,430	20.0	--
				06-11-86	1125	1,200	20.0	--
				07-24-86	1215	1,100	20.0	--
				09-04-86	1135	1,100	20.0	--
212336157591801	3-2359-05	21 23 36	157 59 18	11-01-85	1130	2,300	22.0	--
				12-12-85	1220	2,400	22.0	--
				02-05-86	1240	2,500	22.0	--
				03-06-86	1500	2,600	22.0	--
				04-22-86	1355	2,480	22.0	--
				06-11-86	1115	2,350	22.0	--
				07-24-86	1230	2,200	22.0	--
				09-04-86	1150	2,200	22.0	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
			HAWAII, ISLAND OF OAHU--Continued					
212422157485601	3-2446-01	21 24 22	157 48 56	07-30-86	1425	185	21.0	20
212556157500301	3-2550-01	21 25 56	157 50 03	11-13-85	1555	120	23.5	19
				01-17-86	1320	125	23.0	20
				05-12-86	0900	130	23.0	19
				08-13-86	1000	130	23.0	18
212506157582301	3-2558-10	21 25 06	157 58 23	11-01-85	1300	415	21.0	--
				12-12-85	1235	400	21.0	--
				02-05-86	1105	395	21.0	--
				03-06-86	1225	400	21.0	--
				04-22-86	1320	380	21.0	--
				08-11-86	1210	380	21.0	--
				07-24-86	1400	370	21.0	--
				08-29-86	1100	360	21.0	--
212617158033801	3-2603-01	21 26 17	158 03 38	12-18-85	1045	350	22.0	50
				03-13-86	1035	355	22.0	52
				06-11-86	0935	360	22.0	50
				08-25-86	0905	325	22.5	46
212656158071801	3-2607-01	21 26 56	158 07 16	11-12-85	1345	350	24.5	--
				01-16-86	1210	345	24.5	--
212613158080201	3-2608-01	21 28 13	158 08 04	11-12-85	1245	1,200	26.5	160
				01-16-86	1340	1,220	26.5	170
				03-19-86	1410	1,360	26.0	180
				05-29-86	1130	1,320	26.5	180
				07-15-86	1320	1,300	26.5	170
212828158092001	3-2809-06	21 28 27	158 09 20	01-10-86	1230	370	22.5	--
				05-23-86	1125	375	22.5	--
				08-02-86	1300	395	22.5	33
212859158124301	3-2812-01	21 28 59	158 12 43	11-05-85	1230	630	25.5	--
				01-10-86	1120	620	25.5	--
				03-19-86	1145	650	25.0	--
				05-23-86	1300	680	25.0	--
				07-07-86	1445	670	25.5	--
				08-08-86	1040	650	25.5	--
212945158014301	3-2901-09	21 29 45	158 01 43	11-04-85	1650	185	21.5	22
				01-16-86	1030	185	21.5	22
				05-15-86	1700	185	21.5	22
				08-11-86	1445	185	22.0	21
212939158112301	3-2911-02	21 29 39	158 11 23	01-21-86	1015	245	21.0	28
				05-07-86	1310	245	21.0	26
				07-07-86	1230	255	21.0	26
213224158135901	3-3213-06	21 32 24	158 13 59	11-05-85	1055	830	25.0	210
				01-10-86	1030	620	23.5	220
				03-19-86	1100	850	23.5	220
				05-23-86	1345	870	24.5	200
				07-07-86	1415	840	23.5	200
				08-08-86	1010	815	23.5	200

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF OAHU--Continued								
213243157510001	3-3251-01	21 32 43	157 51 00	10-15-85	1450	850	22.5	240
				11-15-85	1345	900	23.0	220
				01-15-86	1410	850	22.5	240
				03-07-86	1500	900	22.5	240
				05-07-86	1510	850	22.5	230
				06-25-86	1510	950	23.5	230
				08-06-86	1505	890	23.0	220
213428158055501	3-3405-01	21 34 29	158 05 55	11-22-85	1045	470	22.5	--
				12-30-85	1515	540	22.0	--
				05-22-86	1530	520	22.5	--
213427158055501	3-3405-02	21 34 27	158 05 55	11-04-85	1615	520	22.5	--
				07-16-86	0850	570	22.5	--
				09-09-86	1535	560	22.5	--
213411158074501	3-3407-25	21 34 11	158 07 45	10-01-85	0930	2,350	23.0	--
				12-30-85	1015	2,400	22.5	--
				04-08-86	0840	2,200	23.0	--
				05-22-86	1500	2,300	23.0	--
				07-16-86	1100	2,400	23.0	--
				09-12-86	1045	2,450	23.0	--
213444158075501	3-3407-30	21 34 44	158 07 55	10-01-85	1000	7,100	25.0	2,100
				03-17-86	1450	3,200	24.0	780
				05-22-86	1455	6,200	24.5	1,700
				07-16-86	0955	8,700	25.0	2,000
				09-09-86	1130	7,500	25.0	2,200
213512158061601	3-3506-03 TO 04	21 35 12	158 08 16	12-23-85	1230	560	22.0	--
				02-14-86	1345	580	22.0	--
				04-02-86	1715	580	22.0	--
				07-10-86	1300	575	23.0	--
				09-15-86	1120	560	22.5	--
213636158053701	3-3605-03	21 36 36	158 05 37	10-29-85	0900	1,850	21.5	--
				12-30-85	1415	1,820	21.0	--
				03-13-86	1430	2,400	21.5	--
				05-22-86	1100	2,200	21.5	--
				07-10-86	1410	2,200	21.5	--
				09-15-86	0840	2,930	21.5	--
213636158053702	3-3605-21	21 36 35	158 05 40	10-29-85	0930	1,760	21.5	--
				12-30-85	1430	1,580	21.5	--
				03-13-86	1550	1,600	21.5	--
				05-22-86	1130	1,600	21.5	--
				07-10-86	1420	1,500	21.5	--
				09-15-85	0900	1,600	21.5	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF OAHU--Continued								
213656157550401	3-3655-01	21 38 56	157 55 04	11-19-85	1450	235	21.0	35
				01-15-86	1330	230	21.5	36
				03-06-86	1310	240	21.0	36
				05-07-86	1410	240	21.0	35
				06-25-86	1400	240	21.5	34
				08-11-86	1500	235	21.5	34
213902157561601	3-3956-04	21 39 02	157 56 16	11-19-85	1420	650	21.5	--
				01-15-86	1315	650	21.5	--
				03-06-86	1245	660	21.5	--
				05-07-86	1350	650	21.5	--
				06-25-86	1330	680	21.5	--
				08-11-86	1430	650	21.0	--
214157158000101	3-4100-01	21 41 57	158 00 01	06-25-86	1030	340	21.5	63
214131158011601	3-4101-08	21 41 31	158 01 16	03-06-86	1135	210	21.0	36
				06-25-86	1150	230	21.0	34
				08-25-88	1400	230	20.5	--
214233157583501	3-4258-04	21 42 33	157 58 35	01-15-88	1000	1,600	21.5	520
				03-06-86	1010	1,650	22.0	520
				05-07-86	1020	1,850	25.0	520
				06-25-86	1000	1.900	26.0	560
				08-11-86	1025	1,900	23.0	510
HAWAII, ISLAND OF MOLOKAI								
210857156010701	4-0801-02	21 08 57	157 01 07	10-16-85	j1500	--	--	74
				12-10-85	j0845	--	--	69
				02-04-86	j1330	--	--	75
				04-02-86	j0815	--	--	71
				05-15-86	j1420	--	--	72
				07-14-86	j1430	--	--	71
				09-08=86	0815	340	21.5	70
210903157013001	4-0901-01	21 09 03	157 01 30	10-17-85	j0800	--	--	48
				04-02-86	j0830	--	--	50
				05-19-86	j1300	--	--	51
				07-14-86	j1100	--	--	53
				09-08-86	j1100	--	--	52

j Collected by non-USGS agency.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
			HAWAII, ISLAND OF MAUI					
203835156085001	6-3806-01	20 38 35	156 06 50	11-07-85	1500	520	20.5	130
				01-08-86	0840	640	21.0	160
				06-12-86	1235	540	21.0	140
203947156281201	6-3926-03	20 39 47	156 26 13	11-26-85	0950	2,900	19.0	900
				03-03-86	1100	2,900	18.5	750
				05-15-86	1030	2,900	19.0	800
				08-28-86	1320	2,600	19.0	690
204601156001501	6-4600-01	20 46 01	156 00 15	10-01-85	1550	640	21,0	120
				11-19-85	0750	590	21.5	120
				01-07-86	1435	570	21.0	120
				02-19-86	1635	590	21.5	120
				04-08-86	1845	620	21.0	120
				05-13-86	1630	520	21.5	100
				07-01-86	1440	580	21.5	100
				08-19-86	1600	600	21.5	99
204833156003201	6-4600-03	20 48 36	156 00 30	10-01-85	1700	610	19.5	150
				11-19-85	0730	540	19.0	140
				01-07-86	1600	520	19.0	130
				02-20-86	0710	615	19.0	160
				04-06-86	1745	610	19.0	150
				05-14-86	0700	290	19.0	66
				08-20-86	0645	270	19.5	52
204635156270101	6-4627-14	20 46 35	156 27 01	01-10-86	1300	1,700	23.5	350
				04-18-86	1020	1,700	23.0	340
				07-08-86	1115	1,700	23.5	340
				08-29-86	1030	1,700	24.0	340
204855156255001	6-4825-01	20 48 45	156 25 50	03-03-86	1345	1,240	23.5	--
				05-28-86	0945	1,240	23.5	--
204931156371201	6-4937-01	20 49 31	156 37 12	07-08-86	1030	740	24.0	120
				08-22-86	1435	1,650	24.0	400
205014156212701	6-5021-01	20 50 14	156 21 27	04-02-86	1420	2,000	21.5	560
				07-04-86	0730	2,200	--	540
				08-05-86	1325	2,050	21.5	550
205102156282501	6-5128-02	20 51 02	156 28 25	03-04-86	0925	1,360	23.5	--
				03-06-86	1105	1,540	23.5	--
205243156243201	6-5224-02	20 52 43	156 24 32	03-03-86	1515	1,220	23.0	240
				05-28-86	1245	1,400	23.0	300
				08-14-86	1325	1,380	23.5	280
205329156305502	6-5330-09	20 53 29	156 30 55	10-03-85	1355	750	22.0	--
				07-08-86	1205	690	22.0	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF MAUI--Continued								
205330156305401	6-5330-11	20 53 30	158 30 54	10-03-85	1350	600	22.5	--
				11-12-85	1440	610	22.5	--
				01-06-86	1530	610	22.5	--
				02-28-86	1100	630	23.0	--
				04-18-86	1210	640	22.5	--
				05-06-86	1335	620	22.5	--
				07-08-86	1210	630	22.5	--
				08-26-86	1300	630	23.0	--
205320156394501	6-5339-01	20 53 20	156 39 45	10-09-85	1125	1,000	22.0	--
				11-20-85	1500	990	22.0	--
205320156394501	6-5339-02	20 53 20	158 39 45	01-09-86	1420	1,040	21.0	--
				02-24-86	1350	920	21.5	--
				04-18-86	0910	990	22.0	--
205343156401101	6-5340-02	20 53 43	156 40 11	10-09-85	1105	3,000	23.5	--
				02-24-86	1050	1,550	22.5	--
				08-07-86	1100	1,120	22.0	--
				08-22-86	1030	1,170	22.0	--
205416156244301	6-5424-01	20 54 16	156 24 43	03-10-88	0855	2,100	23.0	--
				05-28-86	1230	2,200	23.5	--
205511156222101	6-5522-01	20 55 11	156 22 21	05-28-86	1215	1,180	21.5	260
205651156401001	6-5640-01	20 56 51	156 40 10	10-09-85	1040	1,100	21.0	--
205837156385601	6-5838-01	20 58 37	156 38 46	10-09-85	1055	700	20.5	170
				11-08-85	1430	720	20.5	170
				01-07-86	1340	730	21.0	180
				03-01-86	1350	700	21.0	160
				03-28-86	1320	750	20.5	180
				05-09-86	1255	720	20.5	170
				08-19-86	1245	750	21.0	180
205838156383101	6-5838-02	20 58 38	156 36 31	10-09-85	1335	440	20.0	100
				11-20-85	1415	450	20.0	110
				01-09-86	1315	470	19.5	--
				02-24-86	1235	390	20.5	87
				04-16-86	1050	480	20.0	110
				05-12-86	1335	440	--	98
205858156383601	6-5838-04	20 58 48	156 38 36	03-28-86	1435	790	20.0	200
				05-09-86	1325	760	20.0	190
				07-01-86	1415	750	20.5	180

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
			HAWAII, ISLAND OF HAWAII					
190347155354301	8-0335-01	19 03 47	155 35 43	03-25-86	1125	150	19.0	12
				08-22-86	0950	162	19.5	12
190832155310901	8-0831-02	19 08 32	155 31 09	10-07-85	1025	650	18.5	170
				12-02-85	1120	660	18.5	180
				01-27-86	1105	650	18.5	160
				03-25-86	1000	700	18.5	180
				05-06-88	1315	730	18.5	190
				08-23-88	1015	700	18.5	180
				08-05 86	0940	690	18.5	180
191108155281701	8-1128-02	19 11 08	155 28 17	10-07-85	0930	113	19.0	12
				12-02-85	1045	118	19.0	14
				03-25-86	0905	118	19.0	14
				05-06-86	1420	118	19.0	14
				06-23-88	0915	111	19.0	12
191114155284801	8-1129-01	19 11 14	155 28 48	10-07-85	0955	88	18.0	5.5
				01-27-86	1040	90	18.0	5.5
				03-25-86	0930	88	18.0	6.5
				05-06-86	1340	90	18.0	6.0
				06-23-86	0940	86	18.5	4.0
				08-05-86	0915	88	18.5	5.0
191219155291601	8-1229-01	19 12 25	155 29 22	01-27-86	1000	89	17.5	6.0
192108155021201	8-2102-01	19 21 08	155 02 12	11-22-85	1100	1,100	26.0	--
				01-14-86	1130	1,050	26.0	--
				03-10-86	1235	1,250	26.0	--
				04-16-86	0915	380	25.0	--
				06-06-86	1100	900	26.0	--
				07-25-86	1110	1,200	26.0	--
				09-10-86	1030	1,150	26.0	--
192456154571901	8-2487-01	19 24 57	154 57 18	04-16-86	0820	570	25.0	130
				06-06-86	1015	540	25.0	120
192646155532001	8-2653-01	19 26 46	155 53 20	10-07-85	1310	250	19.5	43
				12-02-85	1355	270	19.0	48
192738155534201	8-2753-01	19 27 31	155 53 42	01-27-86	1435	640	19.5	160
				03-18-86	1040	660	19.5	180
				05-05-86	1125	680	19.5	170
				06-23-86	1320	710	19.0	180
				08-06-86	1240	780	19.5	180
192731155534101	8-2753-02	19 27 22	155 53 38	01-27-86	1410	940	19.5	260
				03-18-86	1050	1,200	19.5	340
192923154564701	8-2986-02	19 29 23	154 56 47	11-22-85	0815	115	23.0	7.0
				01-14-86	1225	120	23.0	7.0
				03-10-86	0925	116	23.0	8.0
				06-06-86	1425	115	23.0	8.0
				07-25-86	0815	115	23.0	7.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF HAWAII--Continued								
193113154555801	8-3185-01	19 31 13	154 55 58	11-25-85	1000	130	21.0	19
				01-14-86	1250	132	21.0	19
				03-10-86	1340	140	21.0	21
				06-10-86	0955	130	21.0	19
				07-25-86	1350	135	21.0	18
				09-16-86	1345	130	21.0	18
193505155570801	8-3557-02	19 35 05	155 57 08	01-27-86	1520	400	20.0	88
				03-18-86	1325	330	20.0	68
193508155570701	8-3557-03	19 35 08	155 57 07	01-27-86	1545	215	20.0	32
				03-18-86	1300	190	20.0	23
				05-05-86	1310	165	20.0	22
				06-24-86	0815	155	20.0	20
				08-07-86	0840	165	20.0	20
193505155570701	8-3557-04	19 35 05	155 57 07	12-03-85	1155	300	20.0	56
				01-27-86	1510	275	20.5	49
				05-05-86	1245	300	20.0	53
				06-24-86	0850	295	20.5	52
				08-07-86	0905	310	20.5	53
193502155572301	8-3557-05	19 35 02	155 57 23	10-07-85	1515	600	20.0	150
				12-03-85	1245	620	20.0	160
				01-28-86	1055	700	20.0	180
				03-18-86	1355	750	20.0	200
				05-05-86	1340	750	20.0	200
				06-23-86	1410	680	20.0	170
				08-07-86	0930	800	20.0	190
				08-22-86	1200	810	20.0	200
193803155020201	8-3802-01	19 38 03	155 02 02	03-12-86	0805	80	19.0	6.5
193805155020201	8-3802-03	19 38 05	155 02 02	11-25-85	1040	82	19.0	5.0
				01-15-86	0925	78	19.0	6.5
				03-12-86	0825	78	19.0	7.0
				04-16-86	1405	82	19.5	7.0
				06-10-86	1040	82	19.5	7.0
				08-01-86	0750	82	19.0	6.0
193818155022201	8-3802-06	19 38 18	155 02 22	07-21-86	0955	100	20.0	8.0
194037155035301	8-4003-01	19 40 37	155 03 53	11-22-85	1345	85	20.0	6.0
				01-15-86	0840	80	20.0	6.5
				03-12-86	0910	80	20.0	7.0
				04-22-86	0940	80	20.0	7.0
				06-10-86	0905	82	20.0	6.5
				09-11-86	1420	86	20.0	5.5
194040155035201	8-4003-02	19 40 40	155 03 52	03-12-86	0905	78	20.0	6.5
				06-10-86	0855	80	20.0	6.5
				08-01-86	0810	85	20.0	6.5
				09-11-86	1415	86	20.0	5.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
			HAWAII, ISLAND OF HAWAII--Continued					
194039155035601	8-4003-03	19 40 32	155 03 54	11-22-85	1355	80	20.0	5.5
				01-15-86	0900	80	20.0	6.5
				03-12-86	0925	77	20.0	7.5
				04-22-86	0945	80	20.0	7.0
194222155034801	8-4203-06	19 42 22	155 03 48	11-25-85	1135	145	25.0	26
				01-15-86	1020	160	25.5	31
				03-12-86	1000	200	26.0	45
				04-22-86	1020	170	24.0	32
				06-10-86	1255	125	24.5	18
				08-01-86	0840	120	24.5	17
				09-11-86	1350	112	23.0	14
194337155041801	8-4304-01	19 43 37	155 04 18	11-25-85	1305	15,000	22.5	5,000
				01-15-86	1045	20,800	21.5	8,100
				03-12-86	1025	25,000	22.0	8,100
				04-22-86	1045	42,100	21.0	15,000
				06-10-86	1325	16,000	22.0	6,400
				08-21-86	0900	36,000	22.0	14,000
194318155061801	8-4306-01	19 43 17	155 06 18	09-02-86	0910	87	17.5	3.5
194640155504301	8-4650-01	19 46 55	155 50 39	07-18-86	1030	260	26.0	22
194818155582301	8-4858-02	19 48 18	155 58 23	10-08-85	1145	2,000	20.5	450
				12-03-85	1345	2,000	20.5	460
				01-28-86	1315	2,000	20.5	460
				03-19-86	1150	2,100	20.5	460
				05-05-86	1430	2,000	21.0	440
				06-24-86	1340	1,950	21.0	450
				08-07-86	1330	2,300	20.5	440
195035155054501	8-5005-01	19 50 35	155 05 45	11-25-85	1430	200	20.5	14
				01-15-86	1320	190	20.0	14
				03-12-86	1305	190	20.0	--
				04-22-86	1315	170	21.5	16
				06-10-86	1430	180	21.5	16
				08-01-86	1500	200	21.5	13
				09-12-86	0855	200	21.5	14
195043155053801	8-5005-02	19 50 43	155 05 38	11-25-85	1355	280	21.0	30
				01-15-86	1310	280	21.0	32
				03-12-86	1255	305	20.5	43
				04-22-86	1305	200	22.0	16
				06-10-86	1415	230	22.0	20
				08-01-86	1450	240	22.0	22
				09-12-86	0910	230	22.0	23

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
HAWAII, ISLAND OF HAWAII--Continued								
195051155051501	8-5005-05	19 50 51	155 05 15	11-25-85	140 5	14,500	18.5	5,200
				01-15-86	1335	14,800	18.0	5,500
				03-12-86	1400	15,100	18.0	5,600
				04-22-86	1330	5,950	18.0	1,800
				06-10-86	1400	14,000	18.0	5,400
				08-01-86	1440	15,000	18.0	5,400
				09-12-86	0925	16,000	18.0	5,300
195225155394401	8-5239-01	19 52 25	155 39 44	11-26-85	0910	440	29.0	24
				01-22-86	1225	450	30.0	23
195331155074201	8-5307-01	19 53 31	155 07 42	03-12-86	1420	150	20.5	14
195546155480301	8-5548-01	19 55 46	155 48 03	12-04-85	0855	2,100	28.5	580
				06-12-86	1130	2,050	28.5	580
195724155455301	8-5745-01	19 57 24	155 45 53	09-23-86	0920	280	27.0	25
195722155455201	8-5745-02	19 57 22	155 45 52	10-09-85	0920	300	26.5	29
				01-22-86	1050	280	28.5	28
				03-11-86	0935	300	26.5	29
				04-28-86	0950	290	26.5	28
195736155501001	8-5750-01	19 57 36	155 50 10	09-04-86	1025	3,150	27.5	850
195929155462501	8-5946-01	19 59 30	155 46 30	10-02-85	1440	460	26.0	85
				09-18-86	1200	485	26.0	86
195912155464201	8-5946-02	19 59 12	155 46 43	10-02-85	1420	370	26.0	57
				12-23-85	1115	380	26.0	57
				04-17-86	1220	330	28.0	42
				06-04-86	1045	360	26.0	52
195939155464201	8-5946-03	19 59 35	155 46 45	01-31-86	0935	460	26.0	84
				03-11-86	1050	480	26.0	84
				08-08-86	1005	410	26.5	90
				08-27-86	1120	520	26.0	98
				09-18-86	1145	520	26.0	98

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI

220210159452501 - 2-0245-02 S15 KSC, MANA KAUAI

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 19...	0930	510	7.40	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METNYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

220210159452501 - 2-0245-02 S15 KSC, MANA KAUAI--Continued

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 19...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)
AUG 19...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

220628159233101 - 2-0623-01 TU6 CNTY, MAKALEHA KAUAI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 20...	0900	140	7.60	20.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 20...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 20...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

220628159233101 - 2-0623-01 TU6 CNTY, MAKALEHA KAUAI--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 20...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 20...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 20...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 20...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 20...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 20...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 20...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

220628159233101 - 2-0623-01 TU6 CNTY, MAKALEHA KAUAI--Continued

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 20...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

221111159203101 - 2-1120-01 TU3 CNTY, MOLOAA KAUAI

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 19...	1330	240	5.20	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

221111159203101 - 2-1120-01 TU3 CNTY, MOLOAA KAUAI--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 19...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 19...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI

215635159355001 - 2-5635-01 S7 KAUMAKANI KAUAI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 19...	1050	680	7.70	23.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLOROETHYL-VINYL-ETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

215635159355001 - 2-5635-01 S7 KAUMAKANI KAUAI--Continued

DATE	2, 4-DP TOTAL (UG/L)	FRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 19...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 19...	<5.0	<6.0	<6.0	<8.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

215747159253401 - 2-5725-01 TU9 CNTY, PUHI KAUAI

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 19...	1200	200	7.30	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

215747159253401 - 2-5725-01 TU9 PUHI KAUAI--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIEHE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	0.3	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
AUG 19...	<0.01	<0.1	<0.1	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

DATE	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)
AUG 19...	<0.01	<1	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	METHYL TRITHION, TOTAL (UG/L)	PARACHLORO-META CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)
AUG 19...	<0.01	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not repreaent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

215906159395601 - 2-5939-01 S9 CNTY, WAIMEA KAUAI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 19...	1020	890	6.90	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 19...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF KAUAI--Continued

215906159385601 - 2-5938-01 S9 CNTY, WAIMEA KAUAI--Continued

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 19...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 19...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)
AUG 19...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU

211813157494706 - 3-1849-16 W36-F CNTY, MAKIKI OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 26...	1305	290	7.90	22.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZO(GHI)PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYLHEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

211813157494706 - 3-1849-16 W36-F CNTY, MAKIKI OAHU--Continued

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 26...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 26...	0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 26...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 26...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

211953157522701 - 3-1952-06 W128-F OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 26...	1220	410	7.40	21.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

211953157522701 - 3-1952-06 W126-F OAHU--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 26...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 26...	<0.001	0.001	<0.1	<0.001	<0.001	<0.001	0.006	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 26...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

211953157522701 - 3-1952-06 W128-F OAHU--Continued

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 26...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

212012157432201 - 3-2043-02 W420 OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 25...	0915	400	6.50	24.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212012157432201 - 3-2043-02 W420 OAHU--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

212120157535400 - 3-2153-11 MOANALUA OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 26...	1100	485	7.10	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212120157535400 - 3-2153-11 MOANALUA OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO -SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO -SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	PRO-PAZINE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1

DATE	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)
AUG 26...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212120157535400 - 3-2153-11 MOANALUA OAHU--Continued

DATE	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
AUG 26...	<0.1	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 26...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 26...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212258157554201 - 3-2255-36 W169-3B OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)
SEP 02...	0900	850	7.00	22.5	<0.2	<0.2	<0.2	<0.2

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2

DATE	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212258157554201 - 3-2255-36 W189-3B OAHU--Continued

DATE	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
SEP 02...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.001	<0.001	<0.1	<0.001

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
SEP 02...	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001	<0.01

DATE	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

212358158010901 - 3-2301-09,10 W247-IJ OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)
SEP 02...	0950	420	7.10	22.0	<0.2	<0.2	<0.2	<0.2

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212358158010901 - 3-2301-09,10 W247-IJ OAHU--Continued

DATE	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
SEP 02...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	0.001	<0.001	<0.1	<0.001

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
SEP 02...	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001	<0.01

DATE	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

212321158013701 - 3-2301-34 W256-3A OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
SEP 02...	1015	690	6.80	22.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212321158013701 - 3-2301-34 W256-3A Oahu--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
SEP 02...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212321158013701 - 3-2301-34 W256-3A OAHU--Continued

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212322157485201 - 3-2348-03 W416-2 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 26...	1350	200	7.70	21.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212322157485201 - 3-2348-03 W416-2 OAHU--Continued

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
AUG 26...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
AUG 26...	0.001	<0.1	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 26...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 26...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212408158020101 - 3-2402-02 W256-4B OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
SEP 02...	1030	580	6.90	22.5	<5.0	<5.0	<5.0	<10.0	<10.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212408158020101 - 3-2402-02 W256-4B OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO -SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO -SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHIHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAH-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212408158020101 - 3-2402-02 W256-4B OAHU--Continued

DATE	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
SEP 02...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPNENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHOCRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212411157564601 - 3-2456-02 NEWTOWN 2 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 26...	1030	195	7.50	20.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212411157584601 - 3-2456-02 NEWTOWN 2 OAHU--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHEHYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 26...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
AUG 26...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001

DATE	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METNYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 26...	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212411157584601 - 3-2456-02 NEWTOWN 2 OAHU--Continued

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 26...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212407157582501 - 3-2458-01 S9 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 26...	1000	305	7.20	21.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

212407157582501 - 3-2458-01 S9 OAHU--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 26...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)
AUG 26...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.01	<1	<0.001

DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 26...	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 26...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212522158003001 - 3-2500-01 WAIPIO 1 OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 26...	0855	260	6.70	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212522158003001 - 3-2500-01 WAIPIO 1 OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 26...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 26...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 26...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212522158003001 - 3-2500-01 WAIPIO 1 OAHU--Continued

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
AUG 26...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001

DATE	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLORO-META CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 26...	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 26...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212617158033801 - 3-2603-01 W330-8 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	0905	325	6.70	22.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212617158033801 - 3-2603-01 W330-8 OAHU--Continued

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
AUG 25...	<0.01	<0.1	<0.1	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

DATE	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
AUG 25...	<0.01	<1	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<0.01	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

212658157514001 - 3-2651-02 TU WAIHEE OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 25...	1015	158	7.60	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212658157514001 - 3-2651-02 TU WAIHEE OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212658157514001 - 3-2651-02 TU WAIHEE OAHU--Continued

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

212752158120201 - 3-2712-30 KAMAILE 1 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
SEP 02...	1120	675	7.20	25.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZO(GHI)PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212752158120201 - 3-2712-30 KAMAILE 1 OAHU--Continued

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
SEP 02...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212836158032701 - 3-2803-05 W330-7C OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	1015	225	6.60	23.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	0.4

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVIHYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.2	<0.2	<0.01	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212838156032701 - 3-2803-05 W330-7C OAHU--Continued

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

212828158092001 - 3-2809-06 TU WAIANAE OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
SEP 02...	1300	395	7.20	22.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212628158092001 - 3-2809-06 TU WAIANAE OAHU--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYL VINYL ETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
SEP 02...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

212828158092001 - 3-2809-08 TU WAIANAE OAHU--Continued

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

212944158014401 - 3-2801-08 W330-3 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	1050	185	8.40	22.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	0.4

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

212944158014401 - 3-2901-08 W330-3 OAHU--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	0.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

213146158024500 - 3-3102-02 OAHU

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	AHTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 25...	1345	175	6.70	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

213146158024500 - 3-3102-02 OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)
AUG 25...	<0.2	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
AUG 25...	<0.1	<0.1	<0.1	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

DATE	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
AUG 25...	<0.01	<1	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<0.01	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

213512158061601 - 3-3506-03 TO 04 W329 A-B WSCO P8 A-C OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STAHDARD UNITS)	TEMPERATURE (DEG C)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)
AUG 25...	1420	550	6.60	22.5	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2

DATE	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PERTHANE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.04	<0.01	<0.01	<0.01	<0.1

DATE	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 25...	<0.1	<0.001	0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

213527157535401 - 3-3553-03 W402-2A OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	1145	518	7.70	21.0	<5.0	<5.0	<5.0	<10.0	<10.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination, which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

213527157535401 - 3-3553-03 W402-2A OAHU--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

213527157535401 - 3-3553-03 W402-2A OAHU--Continued

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

214131158011601 - 3-4101-08 W337-6 OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	1400	230	7.20	20.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination, which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

214131158011601 - 3-4101-08 W337-8 OAHU--Continued

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

214136157584701 - 3-4158-12 W339-A OAHU

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 25...	1330	680	7.20	22.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 25...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 25...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF OAHU--Continued

21413615758470l - 3-4158-12 W339-A OAHU--Continued

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 25...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 25...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 25...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210857156010701 - 4-0801-02 STATE, KALAE MOLOKAI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
SEP 19 08...	0820	340	8.00	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
SEP 08...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
SEP 08...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
SEP 08...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
SEP 08...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
SEP 08...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MOLOKAI--Continued

210857156010701 - 4-0801-02 STATE, KALAE MOLOKAI--Continued

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 08...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 08...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
SEP 08...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
SEP 08...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 08...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI

205014156212701 - 6-5021-01 LANDCO, PUKALANI MAUI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 05...	1325	2050	7.60	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2 CHLOROISOPROPYL) ETHER TOTAL (UG/L)	HEXAN-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	CHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 05...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 05...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 05...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 05...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 05...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
AUG 05...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI

205014156212701 - 6-5021-01 LANDCO, PUKALANI MAUI--Continued

DATE	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)
AUG 05...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001	<0.1

DATE	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)
AUG 05...	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001	<0.01

DATE	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	GUTHION TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLORO-META CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 05...	<0.1	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PNORATE OTAL (UG/L)
AUG 05...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

205312156321401 - 6-5332-05 STATE, WAILUKU MAUI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 06...	0825	170	8.10	21.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI

205312156321401 - 6-5332-05 STATE, WAILUKU MAUI--Continued

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
AUG 06...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
AUG 06...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

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205312156321401 - 6-5332-05 STATE, WAILUKU MAUI--Continued

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	GUTHION TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 06...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 06...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.0

205458156205401 - 6-5420-01 W35 MAUI HI SCH, HAMAKUAPOKO MAUI

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 06...	1330	560	7.90	22.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 06...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI--Continued

205458156205401 - 6-5420-01 W35 MAUI HI SCH, HAMAKUAPOKO MAUI--Continued

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 06...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DF TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
AUG 06...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
AUG 06...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	GUTHION TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 06...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 06...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI--Continued

205449156231001 - 6-5423-02 S30 HC&S, PAIA MAUI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)
AUG 06...	1100	1800	6.70	25.5	<0.01	<0.01	<0.01	<0.01	<0.1

DATE	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)
AUG 06...	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001

DATE	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
AUG 06...	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 06...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

205725156385901 - 6-5738-01 AMFAC, P-5 KAANAPALI MAUI

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 08...	1055	215	7.90	19.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)
AUG 08...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)
AUG 08...	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI--Continued

205725156385901 - 6-5738-01 AMFAC, P-5 KAANAPALI MAUI--Continued

DATE	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)
AUG 08...	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)
AUG 08...	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)
AUG 08...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYL ETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMO ETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)
AUG 08...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)
AUG 08...	<0.2	<0.2	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.001	<0.001	<0.1

DATE	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)
AUG 08...	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001	<0.01

DATE	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	GUTHION TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 08...	<0.1	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI--Continued

205725156385901 - 6-5738-01 AMFAC, P-5 KAANAPALI MAUI--Continued

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSION TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 08...	<6.0	<6.0	<8.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

205837156384601 - 6-5838-01 CNTY, NAPILI MAUI

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 07...	1015	780	8.10	20.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 07...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF MAUI--Continued

205837156384601 - 6-5838-01 CNTY, NAPILI MAUI--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 07...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
AUG 07...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
AUG 07...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	GUTHION TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 07...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 07...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII

190347155354301 - 8-0335-01 CNTY, NAALEHU HAWAII

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 22...	0935	162	7.40	18.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROFANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

190347155354301 - 8-0335-01 CNTY, NAALEHU HAWAII--Continued

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 22...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
AUG 22...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
AUG 22...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 22...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

193502155572301 - 8-3557-05 CNTY, KAHALUU HAWAII

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 22...	1200	810	7.60	20.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	PLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contaminstion for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

193502155572301 - 8-3557-05 CNTY, KAHALUU HAWAII--Continued

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 22...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 22...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
AUG 22...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
AUG 22...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
AUG 22...	<0.001	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

193502155572301 - 8-3557-05 CNTY, KAHALUU HAWAII--Continued

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)
AUG 22...	<5.0	<6.0	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0

194318155061801 - 8-4306-01 CNTY, PIIHONUA HAWAII

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
SEP 02...	0915	87	7.70	17.5	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
SEP 02...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

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WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

194318155061801 - 8-4306-01 CNTY, PIIHONUA HAWAII--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 02...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)
SEP 02...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
SEP 02...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
SEP 02...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

195939155464201 - 8-5946-03 STATE, LALAMILO C HAWAII

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)
AUG 27...	1130	520	7.90	26.0	<5.0	<5.0	<5.0	<10.0	<10.0

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

195939155464201 - 8-5946-03 STATE, LALAMILO C HAWAII--Continued

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZO(GH I PERYL ENE)1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO A ANTHRAC ENE)1,2-BENZANT HRACENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROM-OFORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL CHLOR-IDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-DIBROMO ETH-YLENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 27...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

195938155464201 - 8-5946-03 STATE, LALAMILO C HAWAII--Continued

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
AUG 27...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001

DATE	HEPTACHLOR EPOXIDE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 27...	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHOCRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 27...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

200518155281601 - 8-6528-01 STATE, HAINA HAWAII

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 27...	1305	420	7.60	21.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYLHEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

200518155281601 - 8-6528-01 STATE, HAINA HAWAII--Continued

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMO ETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	<0.01

DATE	2, 4-DP TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	AMETRYNE TOTAL	PERTHANE TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
AUG 27...	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001

DATE	LINDANE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
AUG 27...	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001	<0.001

DATE	METHOXYCHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)
AUG 27...	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	DISYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 27...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

201428155494201 - 8-7449-02 CNTY, HAWI HAWAII

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	ACENAPHTHYLENE TOTAL (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)
AUG 27...	1020	170	7.40	22.0	<5.0	<5.0	<5.0	<10.0	<10.0

DATE	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PYRENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<5.0

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBON TETRACHLORIDE TOTAL (UG/L)
AUG 27...	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<0.2

DATE	1,2-DICHLOROETHANE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYL CHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0

DATE	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CHLOROETHYLENE TOTAL (UG/L)	1,3-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	1,2-DIBROMOETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	XYLENE WATER WHOLE TOT REC (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
AUG 27...	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

HAWAII, ISLAND OF HAWAII--Continued

201428155494201 - 8-7448-02 CNTY, HAWI HAWAII--Continued

DATE	SILVEX, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	PER-THANE TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)
AUG 27...	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)
AUG 27...	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<1	<0.001

DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)
AUG 27...	<0.001	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<5.0	<6.0

DATE	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	DI-SYSTON TOTAL (UG/L)	PHORATE OTAL (UG/L)
AUG 27...	<6.0	<6.0	<6.0	<20.0	<5.0	<30.0	<30.0	<6.0	<30.0	<0.01	<0.01

< Actual value is known to be less than the detection limit shown, and is a preliminary determination which does not represent conclusive findings of contamination for State of Hawaii regulatory purposes.

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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