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Water Resources Data for Hawaii and other Pacific Areas

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Volume 2. Trust Territory of the Pacific Islands, Guam, American Samoa, and Northern Mariana Islands

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-80-2

WATER YEAR 1980

Prepared in cooperation with the Trust Territory of the Pacific Islands, the Governments of Guam, American Samoa, and Northern Mariana Islands, and with other agencies

CALENDAR FOR WATER YEAR 1980

1979

OCTOBER

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26 OCT 1981

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WATER YEAR 1980

Prepared in cooperation with the Trust Territory of the Pacific Islands, the Governments of Guam, American Samoa, and Northern Mariana Islands, and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Doyle G. Frederick, Acting Director

For information on the water program in Hawaii
and other Pacific Areas write to
District Chief, Water Resources Division
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6th Floor, Room 6110
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Honolulu, Hawaii 96850

1981

PREFACE

This report was prepared by personnel of the Hawaii district of the Water Resources Division of the U.S. Geological Survey under the supervision of Benjamin L. Jones, District Chief, and J. D. Bredehoeft, Regional Hydrologist, Western Region.

This report is one of a series issued by State. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and R. J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Hawaii and other Pacific Areas are in two volumes as follows:

Volume 1. State of Hawaii

Volume 2. Trust Territory of the Pacific Islands, Guam, Mariana Islands, Tutuila, American Samoa, and Saipan, Northern Mariana Islands

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Volume 2 of water resources data for the 1980 water year for other Pacific areas consist of records of stage, discharge, and water quality of streams; stage of a reservoir; and water levels in wells and springs. This report contains discharge records for 41 gaging stations; stage only record for 1 gaging station; water quality for 1 gaging station, 49 partial-record stations; water temperature for 23 gaging stations; water levels for 13 observation wells; tide level for 1 tide station; and 7 water level less tide level tables. Also included are 33 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Governments and Federal agencies in other Pacific areas.

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WATER RESOURCES DATA FOR HAWAII AND OTHER PACIFIC AREAS, 1980

Volume 2

INTRODUCTION

Water resources data for the 1980 water year for Hawaii and other Pacific areas, Volume 2, consist of records of stage, discharge, and water quality of streams; stage of a reservoir; and water-levels of wells and springs. This report contains discharge records for 41 gaging stations; stage only records for 1 gaging station; water quality for 1 gaging station; 49 partial-record stations; water temperature for 23 stations; water levels for 13 observation wells; tide level for 1 tide station; and 7 water level less tide level tables. Also included are data for 33 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Governments and Federal agencies in other Pacific areas.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960 (June 30, 1960, for Hawaii and other Pacific Areas), these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. The records for other Pacific areas were contained in one volume entitled "Surface Water Supply of Mariana, Caroline, and Samoa Islands." 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 the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia, 22202.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports 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 volume is identified as "U.S. Geological Survey Water-Data Report HI-80-2." 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, Virginia, 22161.

Additional information, including current prices, 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) 546-8331.

COOPERATION

The U.S. Geological Survey have had cooperative agreements for the systematic collection of streamflow records with the Territory of Guam since 1953, with the Territory of American Samoa since 1957, and with the Trust Territory of the Pacific Islands since 1968. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Trust Territory of the Pacific Islands, Adrian Winkle, high commissioner.
Government of American Samoa, P. T. Coleman, governor.
Government of Guam, P. E. Calvo, governor.
Government of Northern Mariana Islands, C. S. Camacho, governor.

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

DEFINITION OF TERMS

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

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet of 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, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

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

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

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

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 oven 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 expressed in the same units as for ash and dry mass.

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

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 (mL) or 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. Chlorphyll a and b are the two most common pigments in plants.

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.

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.

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. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Suspended recoverable is the amount of a given constituent that is in solution after the part of a representative 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 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.

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 constituent.

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 analyses because different 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. This 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 sediment mixture and that the analytical method determines all of the constituent in the sample.)

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".

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = \sum_{i=i}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

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 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.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Micrograms per gram ($\mu g/g$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, $\mu g/L$) 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.

Milligrams 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.

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

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

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

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

Partial-record station is a particular site where limited streamflow 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 sample 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} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

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

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

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are grazers in the aquatic environment, the zooplankton are a vital part of the aquatic feed web. The zooplankton community is dominated by small crustaceans and rotifers.

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.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2·time) for periphyton and macrophytes and mg C/(m^3·time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O_2/(m^2·time for periphyton and macrophytes and mg O_2/(m^3·time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that 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-sediment 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-weighted 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 micromhos 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 percent of the specific conductance (in micromhos). 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) and 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 streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations 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 quantities 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 (tons) 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 is the reduction of transparency due to the presence of particulate matter. In this report it is expressed Jackson turbidity units (JTU).

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State 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 a 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 abbreviation 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-stream 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 station numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 16884600 which appears just to the left of the station name includes the 2-digit number "16" plus the 6-digit downstream order number "884600." In this report, the records are listed in downstream order by islands.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

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

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2-digit number is a sequential number for a well or a miscellaneous site within a 1-second grid. In the event that there are more than one data site with the same latitude-longitude coordinates, different sequential numbers are assigned to each, "70", "71", etc., to obtain unique numbers. See figure 15.

The local well-numbering system for Guam was structured to contain seven digits based on a non-arbitrary, unique one-minute grid and 10-second subgrid 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 Guam.

To distinguish wells within a minute grid, 10-second parallel lines for both latitude and longitude are drawn and 10-second subgrids are established within each one-minute grid. Each subgrid is designated by a two-digit number. The first represents 10 seconds of latitude for that subgrid and the second represents 10 seconds of longitude for that subgrid. This establishes unique 10-second-subgrid numbers within a minute grid. The fifth and sixth digits of the local number are these unique 2-digit subgrid numbers. The seventh digit is a sequential number used to distinguish different wells within a 10-second subgrid. It is assigned chronologically with the oldest or the only well within the subgrid having a sequential number of zero. See figure 16.

SPECIAL NETWORKS AND PROGRAMS

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 stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from 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 intervals. 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 prepared 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 dams 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 mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is 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 relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method 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 compute daily discharge or contents. This happens when the recorder stops 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 bases 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. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent 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 stations 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 stations and 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 remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. 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 discharges 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 stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges 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"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. 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 stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage 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 stage 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 discharge 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 discharges have less than "fair" accuracy.

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease 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 available

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

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

Publications

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

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

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 temperatures, 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. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

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. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. 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 at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the 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 times 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 quantities 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 longitude and (2) a local number that is provided for local needs. See figures 15 and 16.

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 either for every fifth day and the end of each month (eom) or for each day. To show the intra-day 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 reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error 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.

HYDROLOGIC CONDITIONS

Based on available periods of records at 29 selected streams, monthly mean runoff during the 1980 water year in the area covered by this volume indicated a normal to excessive trend throughout the year. Annual mean runoff was mostly in the excessive range (flow in the upper 75 percent of record) on the islands of Guam, Yap, and Ponape. Annual mean runoff on the islands of Saipan, Babelthuap, Kosrae and Tutuila, was in the normal range (flow between 25 and 75 percent of record).

Streamflow at the South Fork Talofofo River, Saipan, Mariana Islands, was normal for 11 consecutive months and excessive in September. Annual mean runoff was in the normal range at 90 percent of the annual median.

At selected gaged rivers on Guam, Mariana Islands, monthly mean flow was predominantly in the excessive range throughout the year. Streamflow during October, February, and September was in the excessive range at all selected rivers and only at Imong River near Agat, streamflow was deficient (flow in the lower 25 percent of record) in January and August. Annual mean runoff at all selected rivers was in the excessive range and varied between 156 and 265 percent of the annual medians.

On February 26, 7.67 inches (195 mm) of rainfall was recorded in 12 hours at the Weather Service, Naval Air Station which caused considerable damage at two gaging stations on Guam. Maximum discharge for the three year period of record was exceeded at one gaging station, Ugum River above Talofofo Falls, near Talofofo.

Streamflow at the Ylig River near Yona Guam (fig. 1), was excessive for 6 of the 12 months and normal for the remainder of the year. Annual mean runoff was in the excessive range at 156 percent of the annual median.

On the island of Babelthuap, Caroline Islands, streamflow at selected gage rivers was predominantly in the normal range throughout the year. Monthly mean flow for February was excessive at all selected rivers and the maximum departure of 392 percent from the monthly median was recorded at the South Fork Ngardok River. There were no periods of deficient flow recorded during the year. At the Adeiddo River (fig. 1), monthly mean flow was normal for 10 months and excessive for 2 months. Annual mean runoff was normal and ranged between 84 to 113 percent of the annual medians.

On the island of Yap, Caroline Islands, streamflow was variable throughout the year. At all of the selected streams, streamflow was excessive in May and deficient in January. Annual mean runoff was mostly excessive and ranged between

111 and 124 percent of the annual medians. Streamflow at the Aringel Stream (fig. 2) was normal for 6 months, excessive for 4 months and deficient in January and August. Annual mean runoff was in the excessive range at 116 percent of the annual median.

Streamflow at three of the gaged rivers on the island of Ponape was mostly in the excessive range throughout the year. Monthly mean flows during January, February, May, and June were in the excessive range at all gaged rivers and the maximum departure of 259 percent from the monthly median occurred at the Lui River at mouth, in February. Annual mean runoff at all gaged rivers were mostly in the excessive range and varied between 134 to 143 percent of the annual medians. At the Nanepil River (fig. 2), streamflow was deficient for 3 months, normal for 5 months and excessive for 4 months. Annual mean runoff was in the normal range at 115 percent of the annual median.

On the island of Kosrae, streamflow at three selected streams indicated a normal to deficient trend throughout the year. Streamflow at all gaged streams were in the excessive range in June and in the deficient range in August and September. Annual mean runoff was in the normal range and varied between 85 and 126 percent of the annual medians. At the Okat River (fig. 3), monthly mean flow was normal for 7 months, excessive for 3 months and deficient in August and September. Annual mean discharge was in the normal range at 126 percent of the annual median.

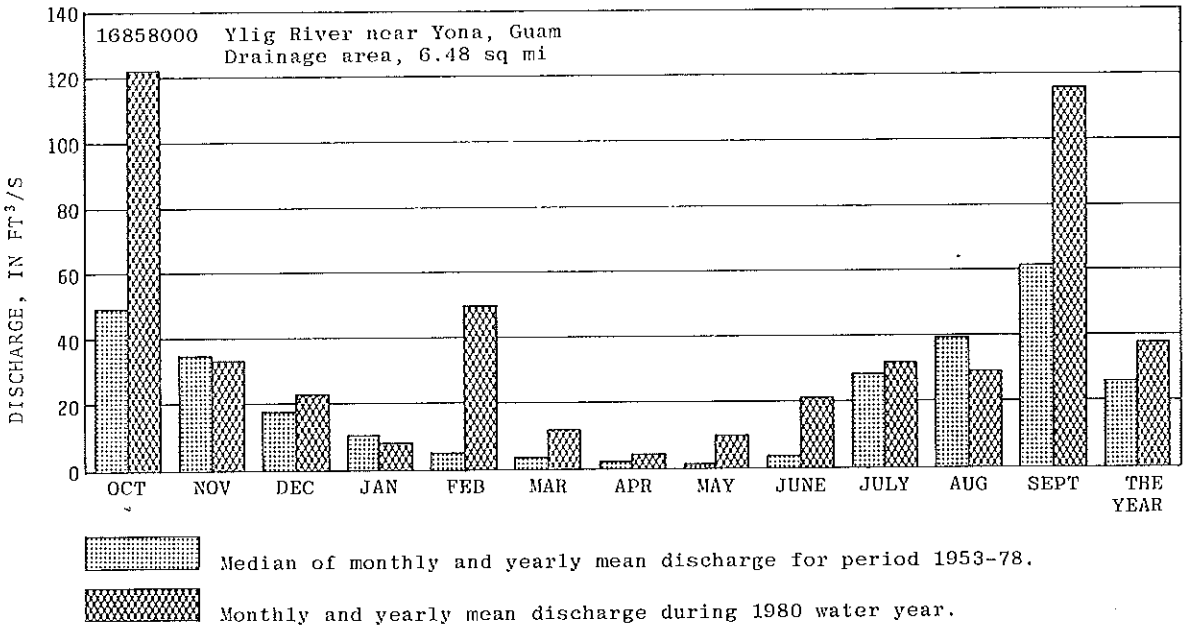
At selected gaged streams in Tutuila, American Samoa, streamflow was mostly in the normal range during the year. Annual mean runoff was also in the normal at most of the gaged streams and ranged between 99 and 111 percent of the annual medians. Streamflow was deficient from December to February and the maximum deviation of 26 percent from the monthly median occurred at Atauloma Stream at Afao in January. Excessive streamflow occurred at most of the streams during October, May, and September. The maximum deviation of 460 percent from the monthly median occurred in September at Pago Stream at Afono. Streamflow at Aasu Stream at Aasu (fig. 3), was in the normal range for 6 months, excessive for 3 months and deficient during December to February. Annual mean runoff was in the normal range at 106 percent of the annual median.

Monthly and annual mean discharges are compared with medians at representative gaged streams in figures 1 to 3 in the area covered by this report.

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on 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, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering 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-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-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-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-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.
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-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.



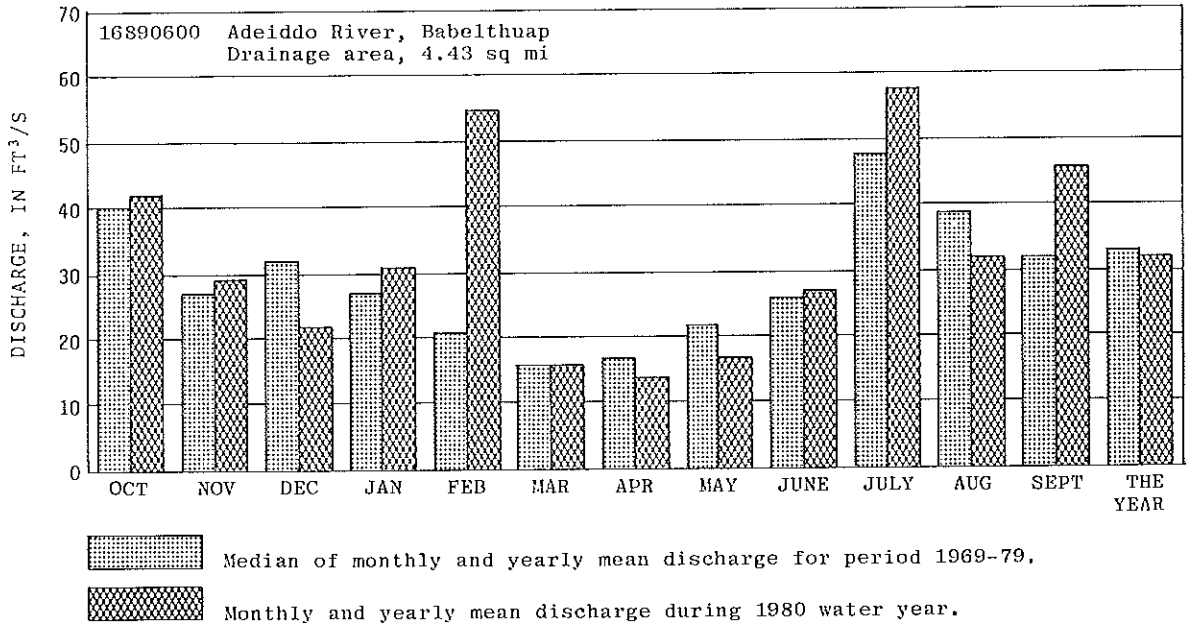
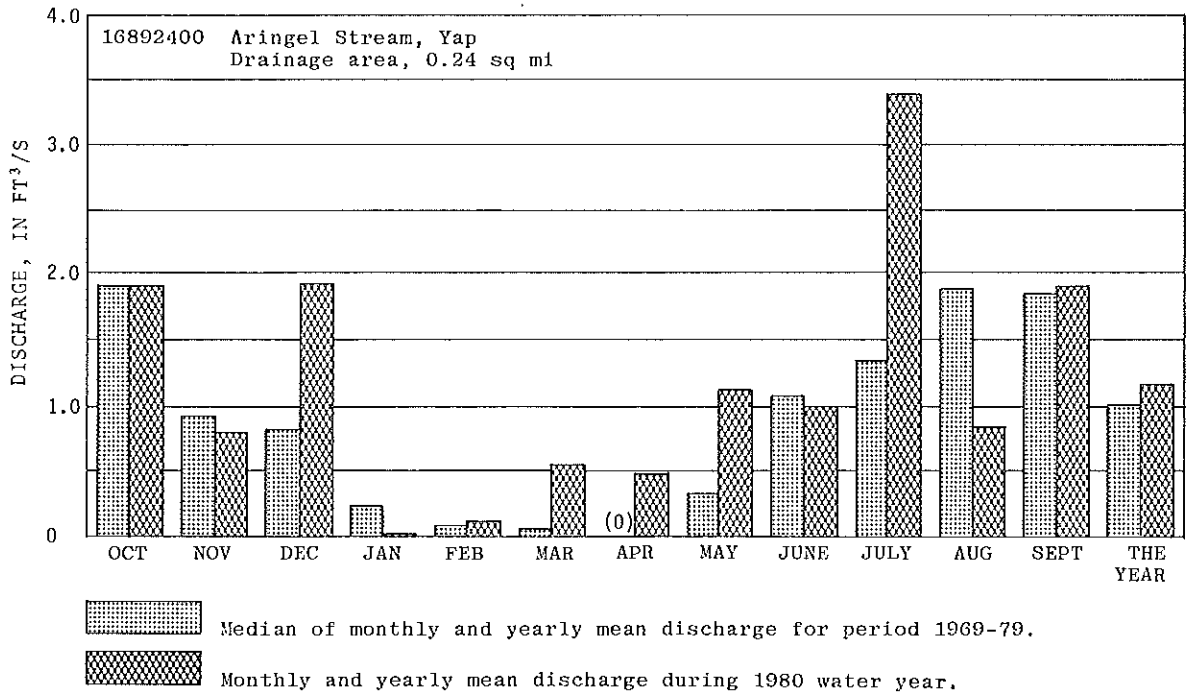


FIGURE 1.--DISCHARGE DURING 1980 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON GUAM AND BABELTHUAP.



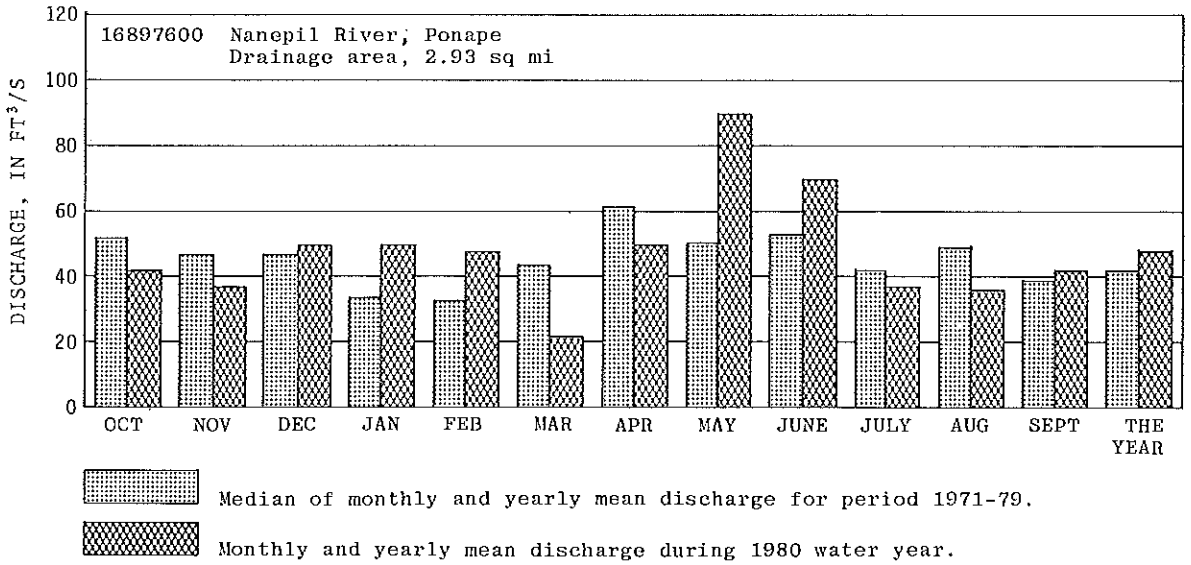
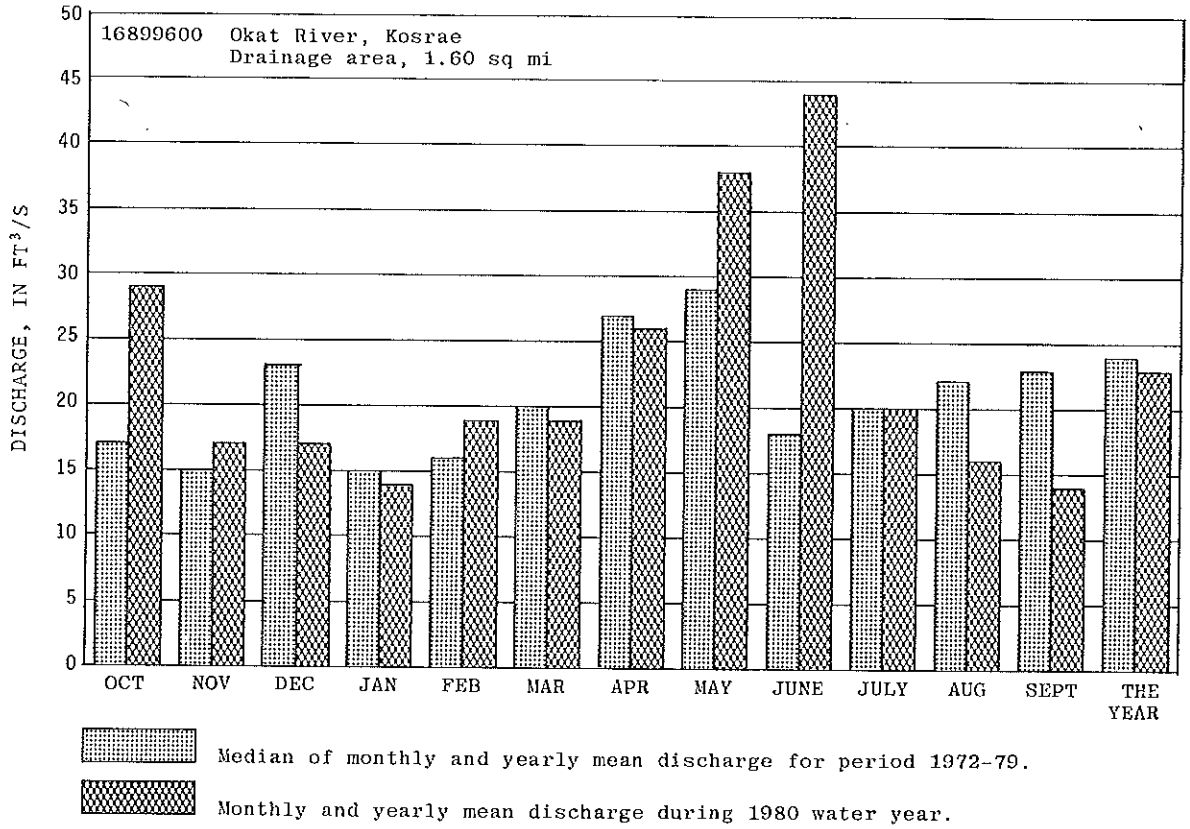


FIGURE 2.--DISCHARGE DURING 1980 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON YAP AND PONAPE.



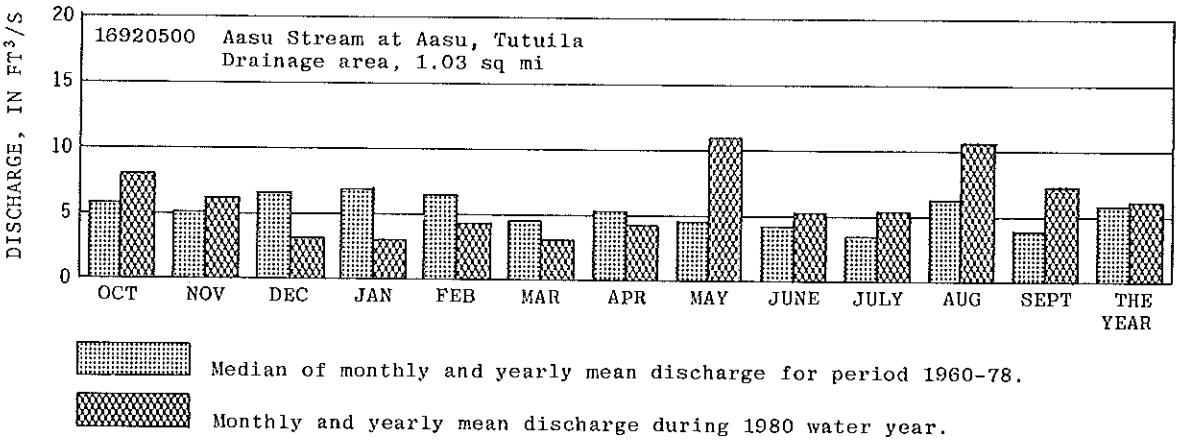


FIGURE 3.--DISCHARGE DURING 1980 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON KOSRAE AND TUTUILA.

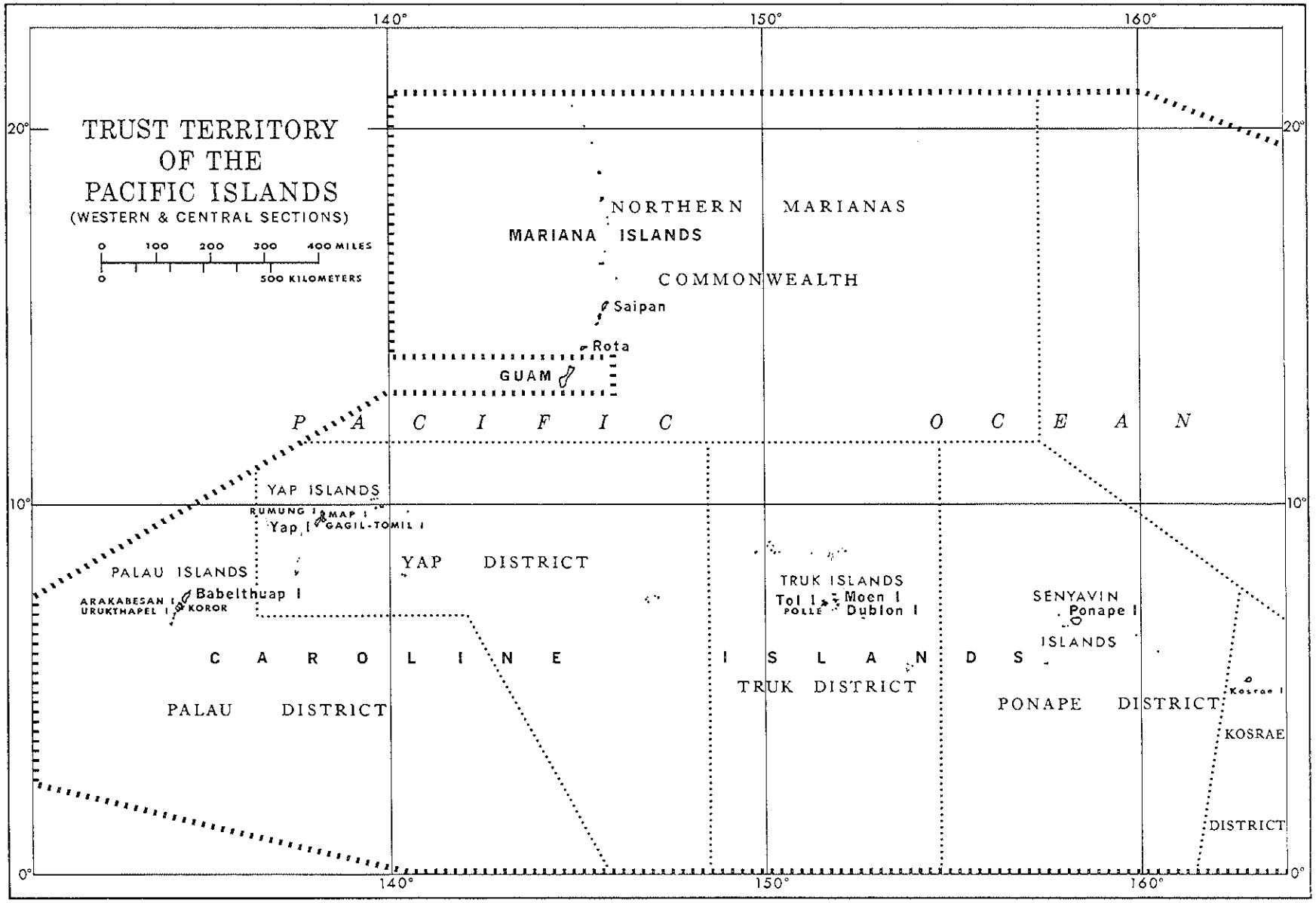


FIGURE 4.--MAP SHOWING LOCATIONS OF THE TRUST TERRITORY PACIFIC ISLANDS.

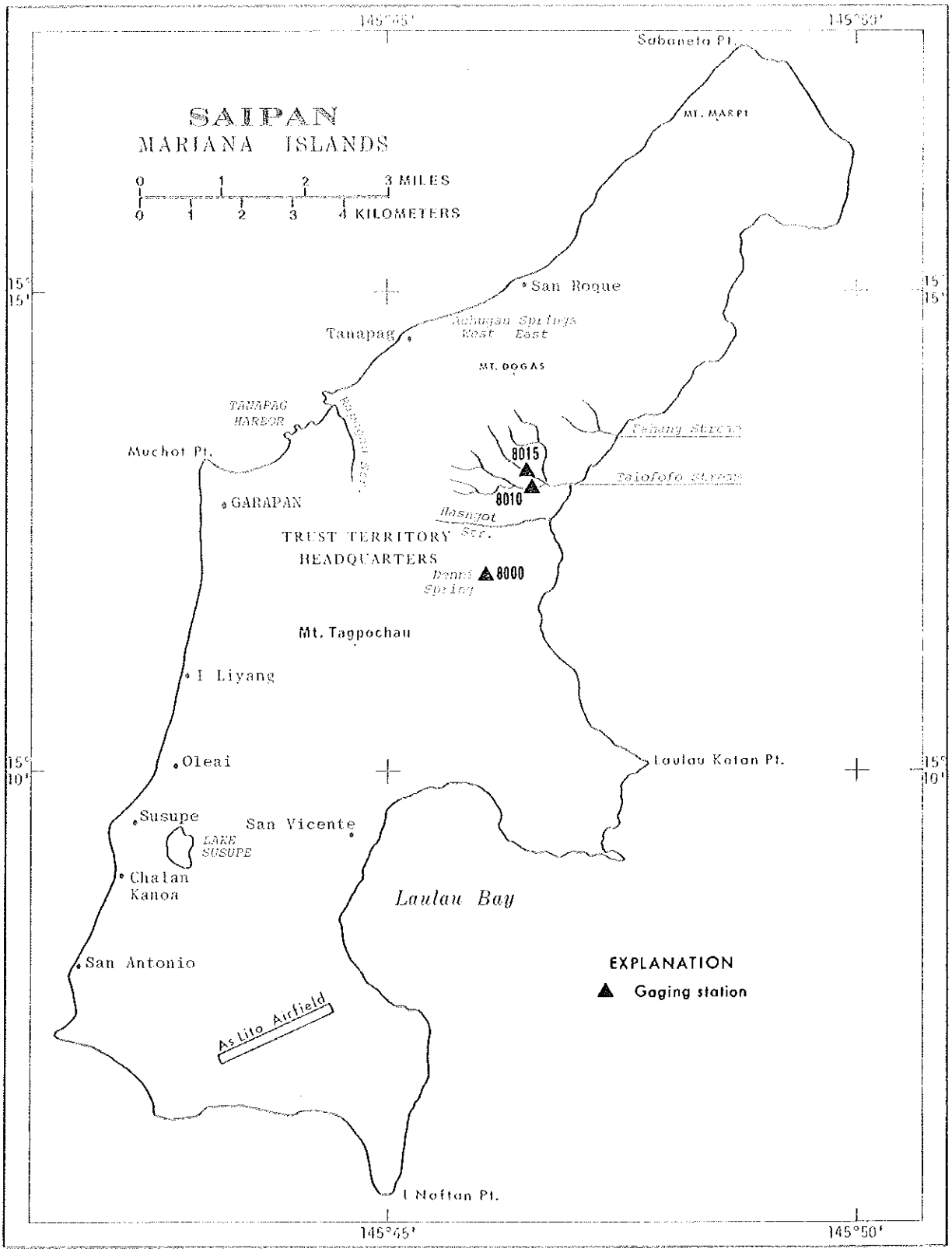


FIGURE 5.--MAP OF SAIPAN, MARIANA ISLANDS, SHOWING LOCATIONS OF GAGING STATIONS.

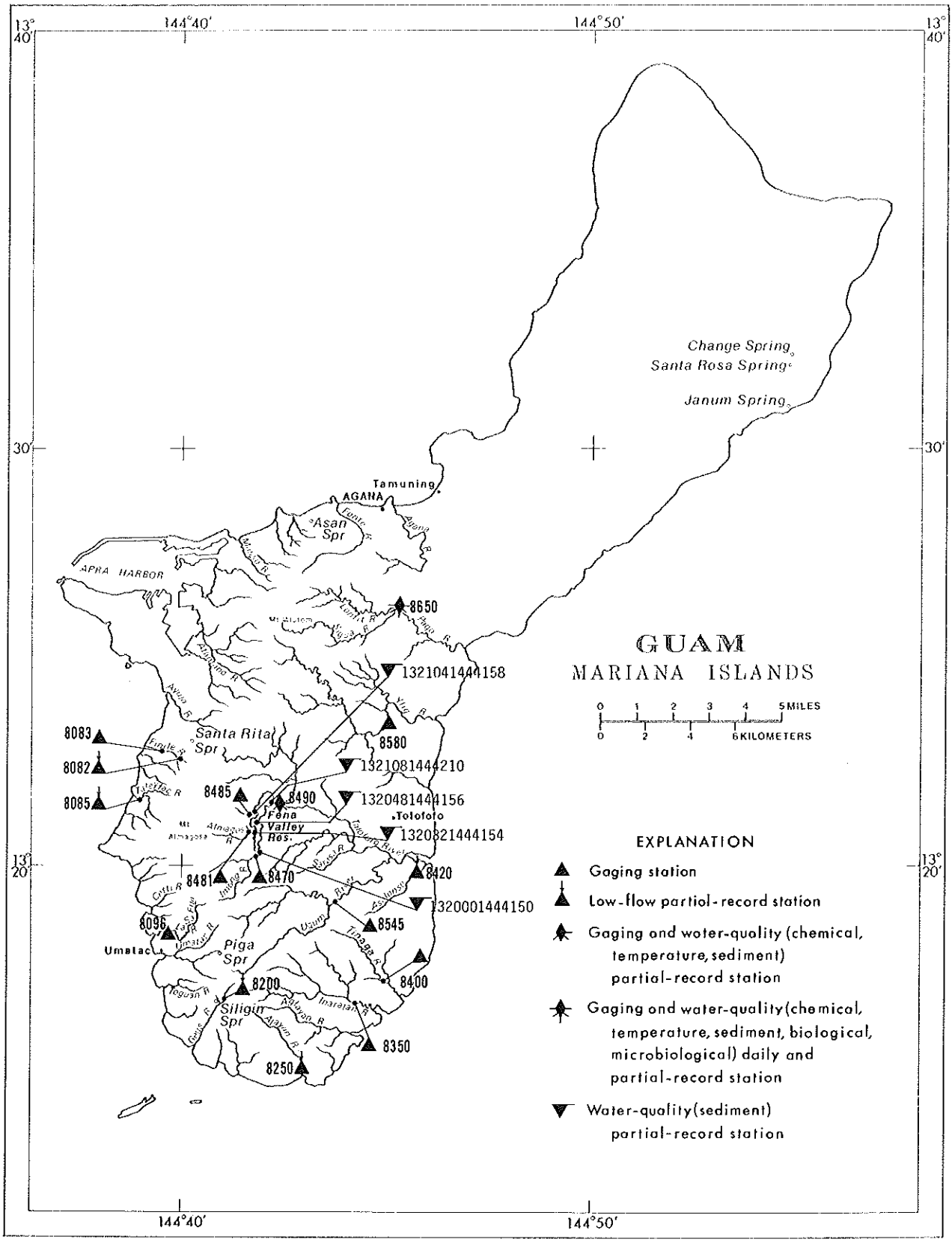


FIGURE 6.--MAP OF GUAM, MARIANA ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

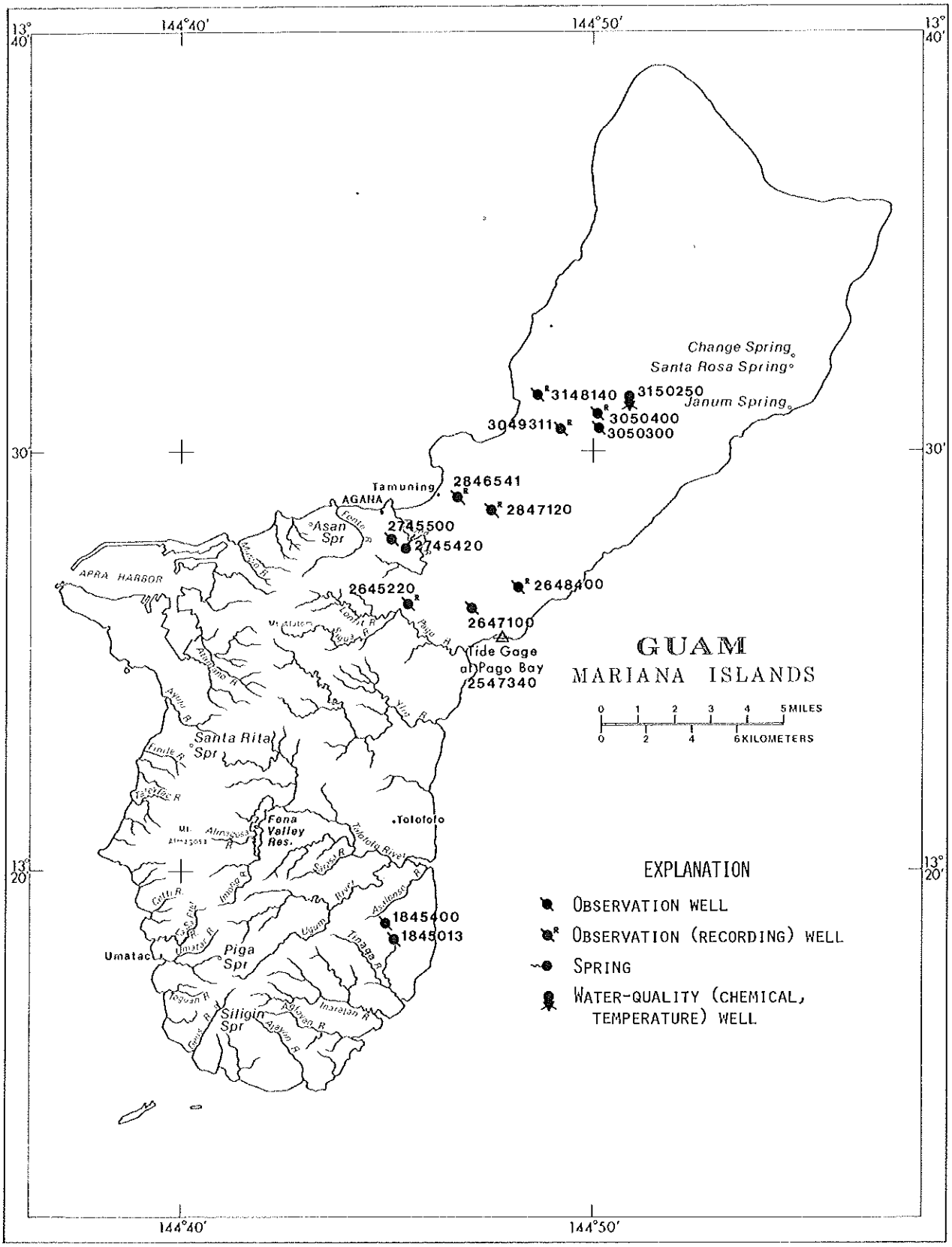


FIGURE 7.--MAP OF GUAM, MARIANA ISLANDS, SHOWING LOCATIONS OF OBSERVATION WELLS, AND GROUND-WATER-QUALITY SITE.

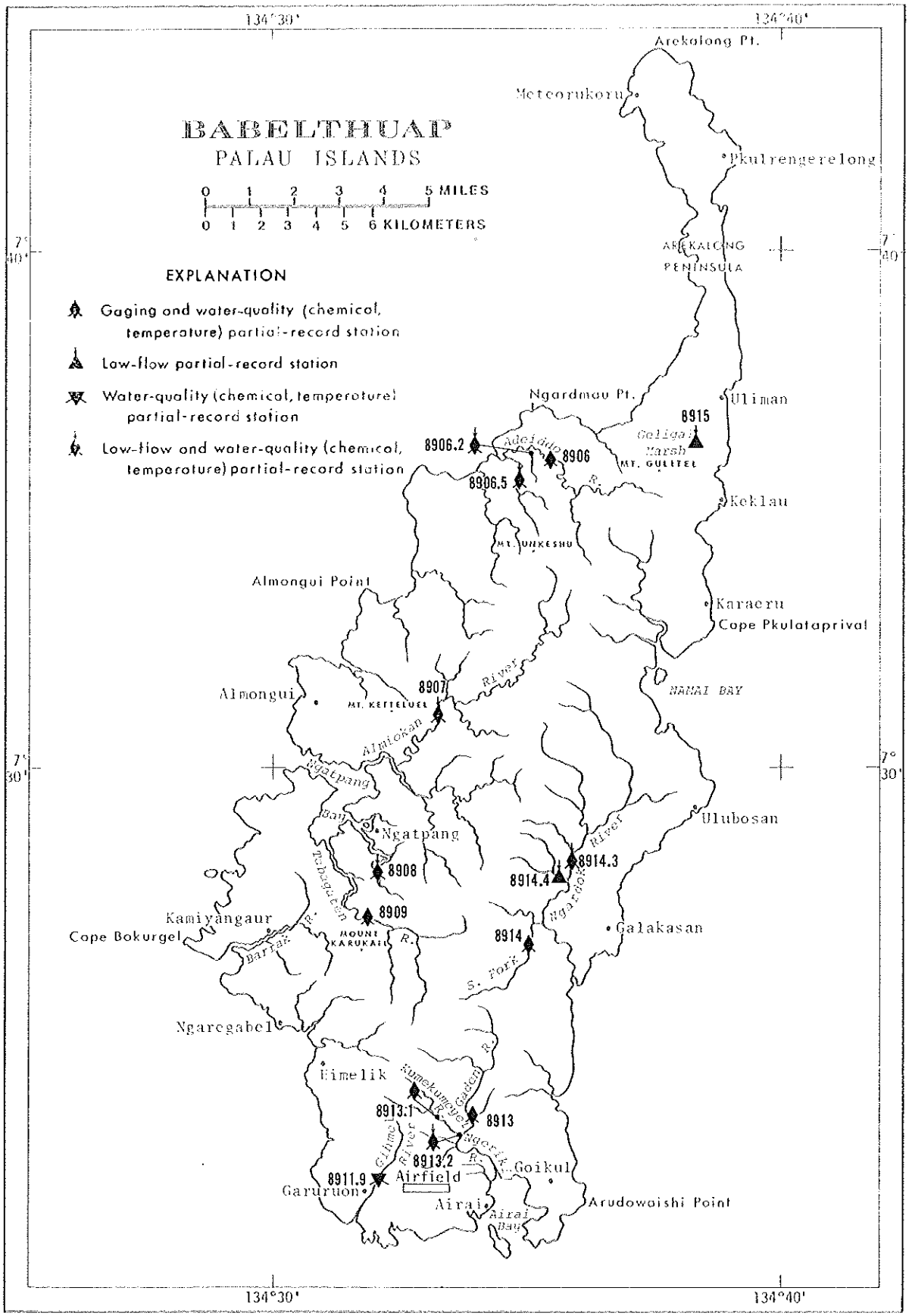


FIGURE 8.--MAP OF BABELTHUAP, PALAU ISLANDS, SHOWING LOCATIONS OF GAGING, WATER-QUALITY, AND PARTIAL-RECORD STATIONS.

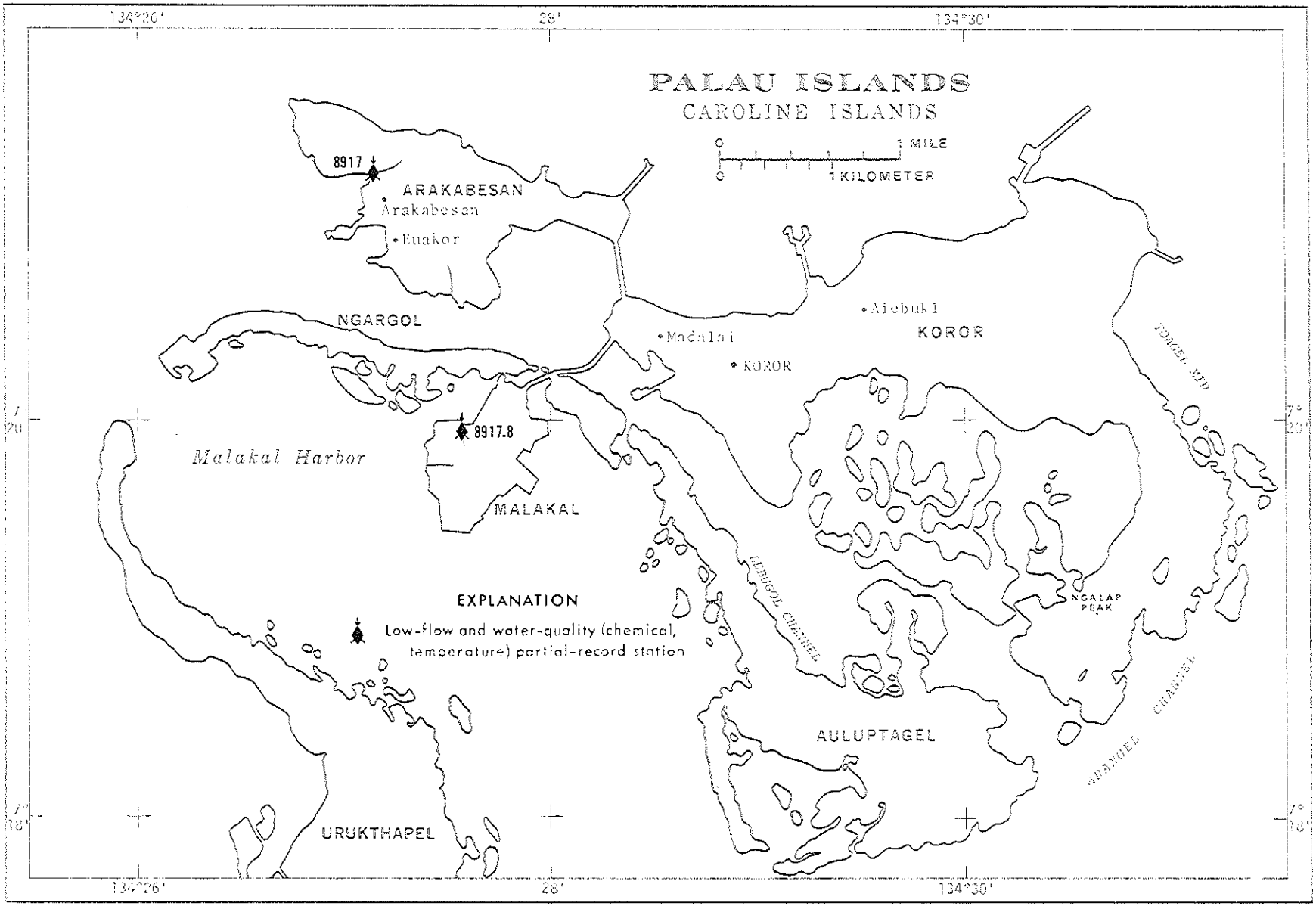


FIGURE 9.--MAP OF ARAKABESAN, MALAKAL, PALAU ISLANDS, SHOWING LOCATIONS OF LOW-FLOW AND WATER-QUALITY PARTIAL-RECORD STATIONS.

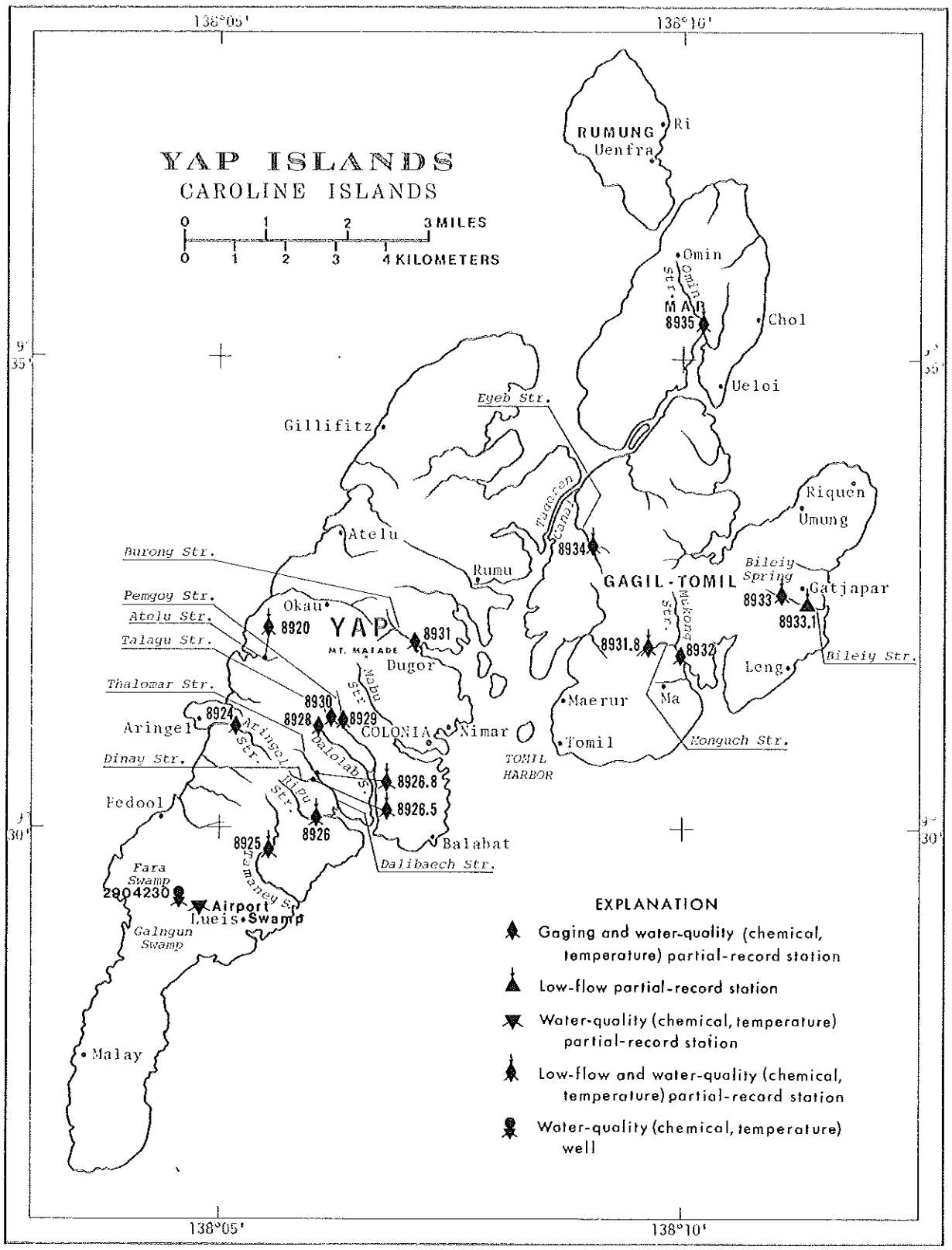


FIGURE 10.--MAP OF YAP ISLANDS, SHOWING LOCATIONS OF GAGING, LOW-FLOW AND WATER-QUALITY PARTIAL-RECORD STATIONS, AND GROUND-WATER-QUALITY SITE.

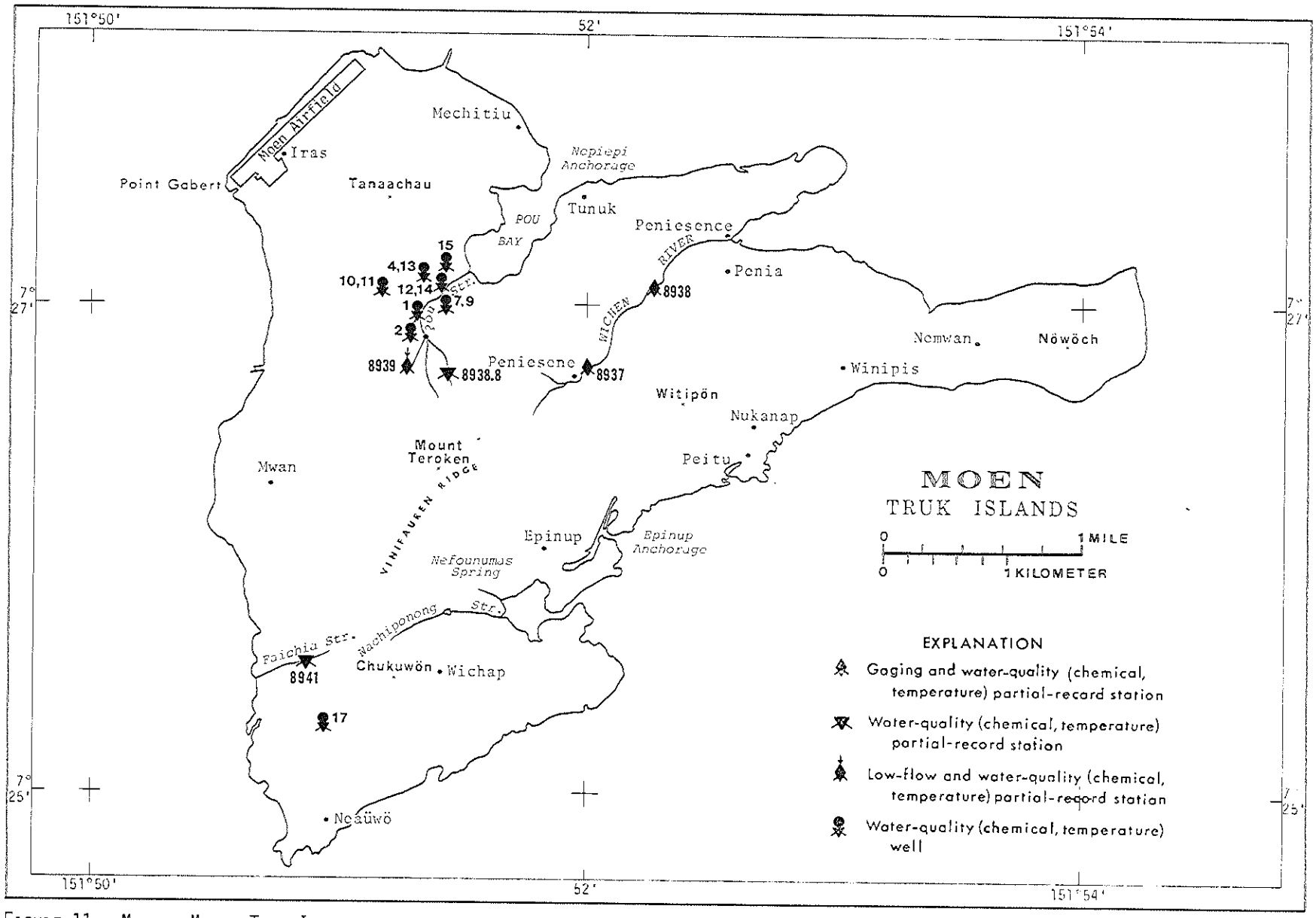


FIGURE 11.--MAP OF MOEN, TRUK ISLANDS, SHOWING LOCATIONS OF GAGING, LOW-FLOW AND WATER-QUALITY PARTIAL-RECORD STATIONS, AND GROUND-WATER-QUALITY SITES.

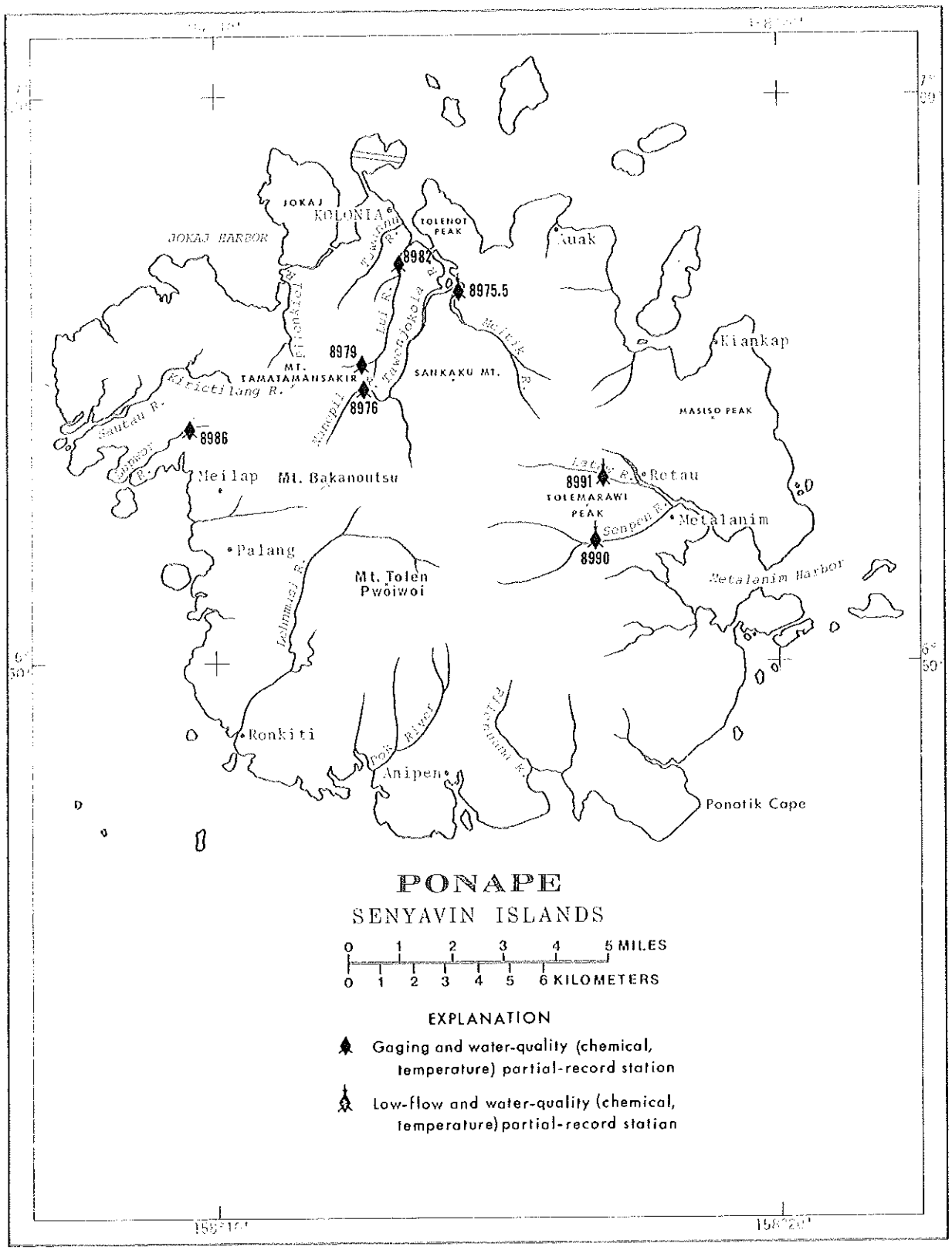


FIGURE 12. MAP OF PONAPE, SHOWING LOCATIONS OF GAGING, LOW-FLOW AND WATER-QUALITY PARTIAL-RECORD STATIONS.

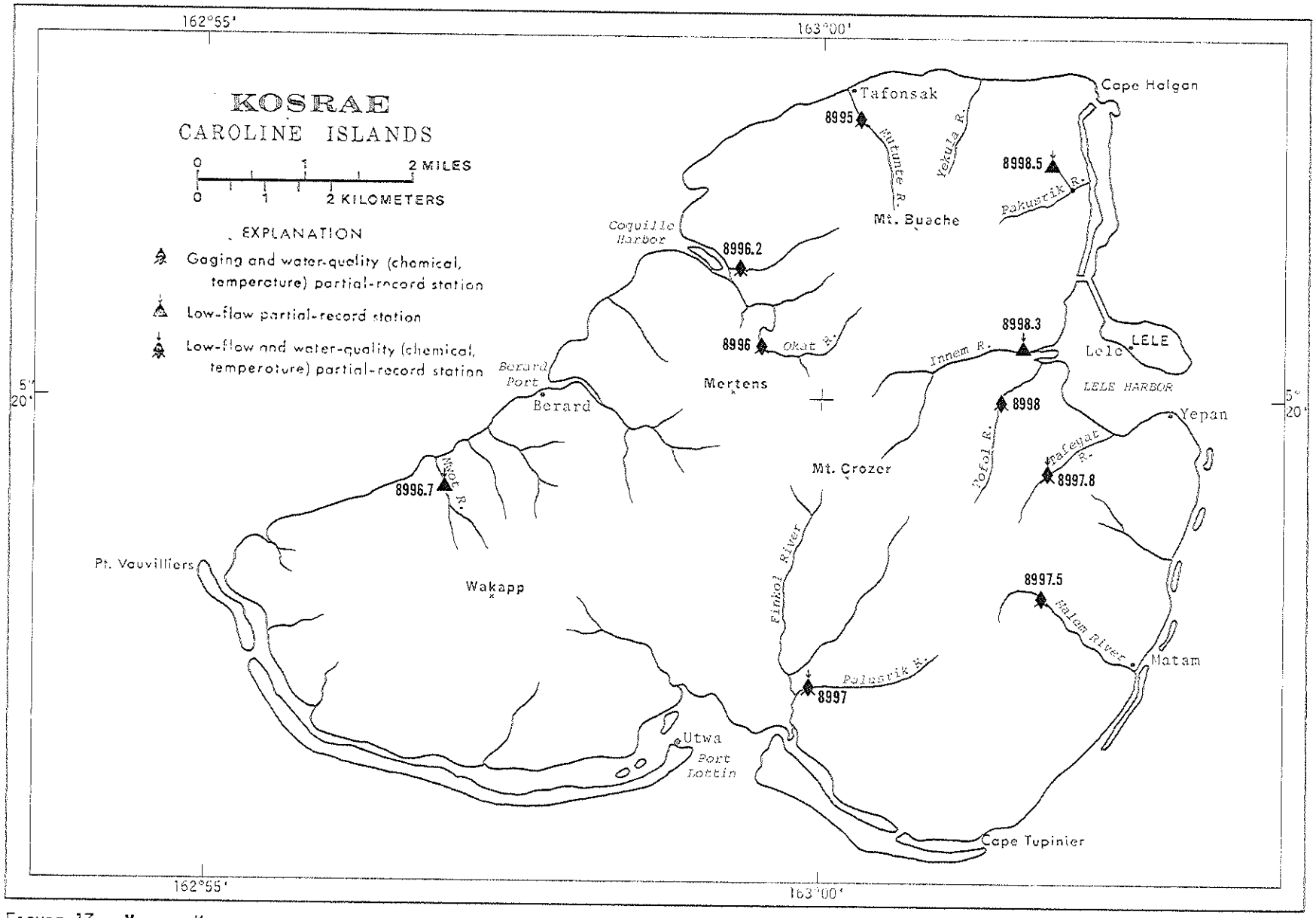
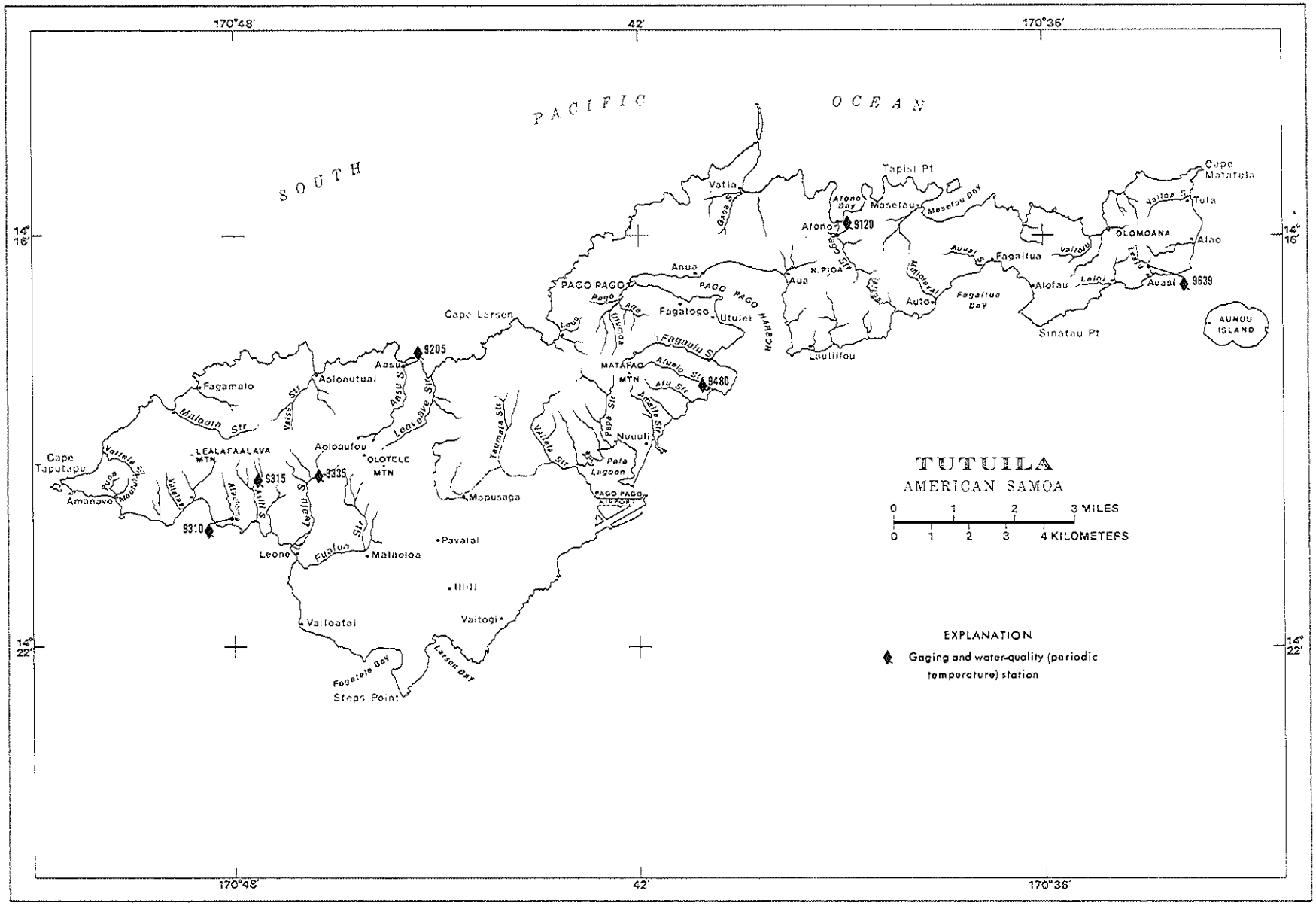


FIGURE 13.--MAP OF KOSRAE, SHOWING LOCATIONS OF GAGING, LOW-FLOW AND WATER-QUALITY PARTIAL-RECORD STATIONS.


170°48'
42'
170°36'
14° 16'
14° 22'
SOUTH PACIFIC OCEAN
TUTUILA
AMERICAN SAMOA
0 1 2 3 MILES
0 1 2 3 4 KILOMETERS
EXPLANATION
Gaging and water-quality (periodic temperature) station
Cape Taputapu
Amanave
Fagamalo
Aoloautual
Aoloaufou
LEALAFAALAVA MTN
OLOTELE MTN
Leone
Malaeloa
Pavaiai
Ili Ili
Vaitogi
Vaitoatai
Steps Point
Fagatele Bay
Larsen Bay
Cape Larsen
Mapusaga
Aasu
Leaveave
Leafu
Fuafua
Vaitogi
Vaitia
PAGO PAGO
Anua
PAGO PAGO HARBOR
Fagatogo
Utulei
MATAFAO MTN
Fagaulu
Atuela
Atu
Nuuuli
Pala Lagoon
PAGO PAGO AIRPORT
Afono
Afono Bay
Masefau
Masefau Bay
N. PIOA
Aua
Laulilfou
Auto
Fagaitua
Fagaitua Bay
Alofau
Sinatau Pt
Tapisi Pt
Cape Matatula
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OLOMOANA
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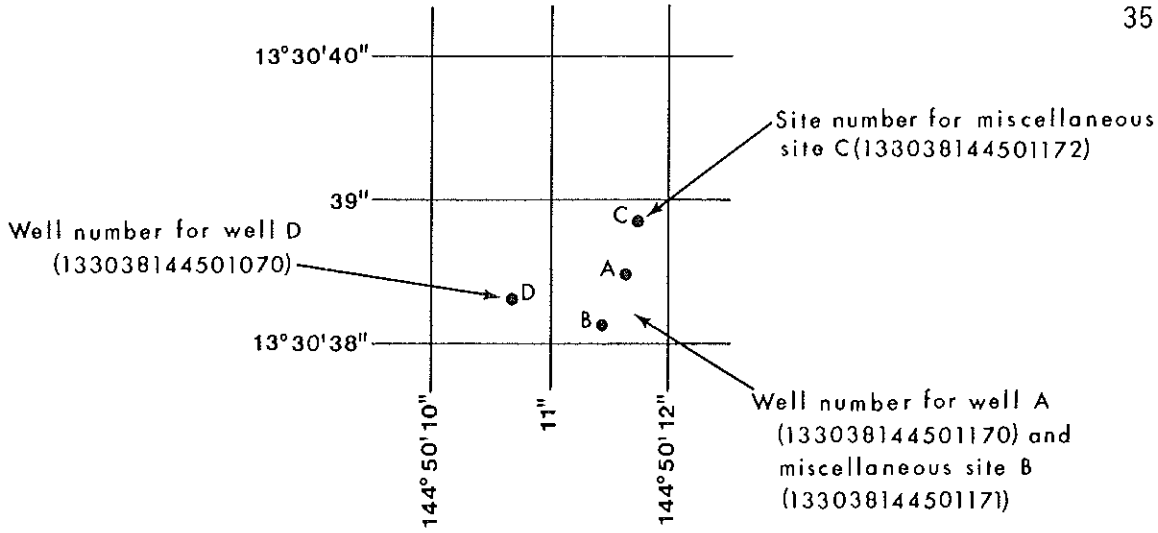

Figure 15. Sketch showing system for numbering wells and miscellaneous sites.

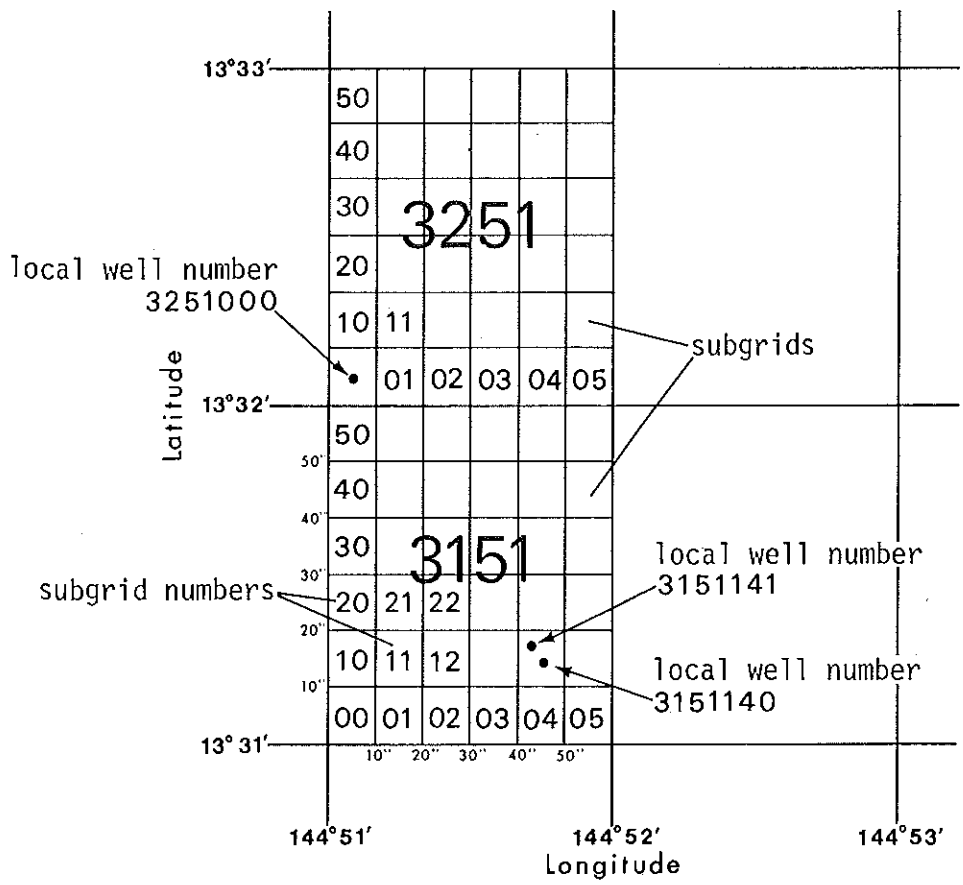

Figure 16. Sketch showing local well numbering system.

MARIANA ISLANDS, ISLAND OF SAIPAN

16800000 DENNI SPRING

LOCATION.--Lat 15°11'57" N., long 145°46'05" E., Hydrologic Unit 20100006, 2.8 mi (4.5 km) southeast of Tanapag, 3.1 mi (5.0 km) east of Garapan, and 5.6 mi (9.0 km) northeast of Chalan Kanoa.

PERIOD OF RECORD.--August 1952 to June 1954 (published as Donni Spring near Garapan), March 1968, January 1969 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 261 ft (79.6 m) from U.S. Navy.

REMARKS.--Records good except those above 2 ft^3/s (0.057 m^3/s) and those for May 29 to Aug. 17, which are poor.

AVERAGE DISCHARGE.--12 years (water years, 1953, 1970-80), 0.609 ft^3/s (0.017 m^3/s), 441 acre-ft/yr (544,000 m^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8.5 ft^3/s (0.24 m^3/s) Aug. 13, 1978; minimum daily, 0.02 ft^3/s (0.001 m^3/s) Sept. 16, 17, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3.5 ft^3/s (0.10 m^3/s) Sept. 12-14; minimum daily, about 0.12 ft^3/s (0.003 m^3/s) for some days during first week of July.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	1.1	.65	.53	.37	.45	.29	.17	.20	.12	.17	.45
2	1.1	1.0	.61	.53	.37	.45	.26	.17	.20	.12	.17	.41
3	1.2	.96	.61	.53	.37	.45	.26	.17	.23	.12	.20	.37
4	1.3	.90	.61	.53	.37	.41	.26	.17	.23	.14	.23	.37
5	1.2	.90	.57	.49	.37	.41	.26	.17	.20	.14	.23	.37
6	1.2	.85	.57	.49	.37	.41	.26	.17	.17	.17	.20	.73
7	1.2	.81	.57	.49	.37	.37	.26	.20	.17	.17	.20	.85
8	1.2	.81	.57	.49	.41	.37	.29	.20	.17	.20	.17	1.1
9	1.1	.77	.57	.49	.41	.37	.29	.20	.17	.23	.17	1.5
10	1.0	.77	.61	.49	.41	.37	.29	.20	.17	.23	.14	1.8
11	1.0	.77	.61	.45	.41	.37	.29	.20	.20	.20	.14	2.0
12	1.1	.77	.61	.45	.41	.37	.29	.20	.20	.20	.14	3.5
13	1.0	.77	.61	.45	.37	.37	.29	.20	.20	.17	.14	3.5
14	1.0	.77	.65	.45	.37	.37	.29	.23	.20	.17	.17	3.5
15	1.1	.77	.65	.45	.37	.37	.26	.23	.20	.20	.17	1.8
16	1.1	.77	.65	.45	.37	.33	.26	.23	.17	.20	.20	1.6
17	1.1	.77	.65	.45	.37	.33	.26	.23	.17	.17	.20	1.4
18	1.1	.77	.61	.45	.37	.33	.23	.23	.20	.17	.23	1.4
19	1.0	.73	.61	.45	.37	.29	.23	.23	.20	.14	.23	1.4
20	1.0	.73	.61	.45	.37	.29	.23	.23	.20	.14	.23	1.3
21	.96	.73	.61	.45	.37	.29	.23	.23	.20	.17	.23	1.2
22	.90	.73	.61	.45	.37	.29	.23	.23	.23	.17	.23	1.1
23	1.1	.73	.61	.41	.37	.29	.20	.20	.23	.17	.29	1.1
24	1.1	.69	.57	.41	.33	.29	.20	.20	.23	.20	.65	1.0
25	1.2	.69	.57	.41	.37	.29	.20	.23	.23	.17	.69	.96
26	1.3	.69	.57	.41	.41	.29	.20	.26	.23	.17	.65	.96
27	1.3	.69	.57	.41	.41	.29	.17	.26	.20	.17	.53	1.2
28	1.3	.65	.57	.41	.45	.29	.17	.23	.17	.20	.49	1.8
29	1.3	.65	.57	.37	.45	.29	.17	.20	.14	.20	.49	1.6
30	1.2	.65	.57	.37	---	.29	.17	.20	.14	.20	.45	1.6
31	1.1	---	.57	.37	---	.29	---	.20	---	.20	.45	---
TOTAL	34.72	23.39	18.59	14.03	11.13	10.67	7.29	6.47	5.85	5.42	8.88	41.87
MEAN	1.12	.78	.60	.45	.38	.34	.24	.21	.20	.17	.29	1.40
MAX	1.3	1.1	.65	.53	.45	.45	.29	.26	.23	.23	.69	3.5
MIN	.90	.65	.57	.37	.33	.29	.17	.17	.14	.12	.14	.37
AC-FT	69	46	37	28	22	21	14	13	12	11	18	83

CAL YR 1979 TOTAL 197.39 MEAN .54 MAX 1.3 MIN .20 AC-FT 392
WTR YR 1980 TOTAL 188.31 MEAN .51 MAX 3.5 MIN .12 AC-FT 374

NOTE.--No gage-height record May 29 to Aug. 17.

16801000 SOUTH FORK TALOFOFO STREAM

LOCATION.--Lat 15°12'58" N., long 145°46'31" E., Hydrologic Unit 20100006, on left bank 0.3 mi (0.5 km) upstream from confluence with Middle and North Forks, 1.4 mi (2.3 km) south of Ogso Dogas, and 2.2 mi (3.5 km) southeast of Tanapag.

DRAINAGE AREA.--0.69 mi² (1.79 km²). Area at site used prior to Mar. 31, 1971, 0.73 mi² (1.89 km²).

PERIOD OF RECORD.--October 1968 to current year. Low-flow records not equivalent prior to Mar. 31, 1971, due to undetermined amount of underflow between sites.

REVISED RECORDS.--WDR HI-78-2: 1976-77(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 31, 1971. Altitude of gage is 30 ft (9.1 m), from topographic map. Prior to Mar. 31, 1971, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--9 years, 1.42 ft³/s (0.040 m³/s), 1,030 acre-ft/yr (1.27 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft³/s (116 m³/s), Aug. 4, 1976, gage height, 8.15 ft (2.484 m), from rating curve extended above 59 ft³/s (1.67 m³/s) on basis of slope-area measurements at gage heights 7.30 and 8.15 ft (2.225 and 2.484 m); no flow at times prior to Mar. 31, 1971, at site then in use, and at present site, July 16, 17, 19, 20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 468 ft³/s (13.3 m³/s) Sept. 9, gage height, 4.67 ft (1.423 m), from rating curve extended as explained above; minimum, 0.02 ft³/s (<0.001 m³/s) July 1, 2, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	1.1	.46	.34	.16	.27	.08	.05	.07	.03	.12	.24
2	13	1.0	.46	.34	.16	.27	.08	.04	.19	.04	.19	.22
3	4.2	.88	.50	.30	.16	.24	.07	.08	.05	.04	.32	.20
4	2.7	.82	.50	.24	.16	.22	.07	.04	.05	.04	.12	.18
5	2.2	.82	.50	.39	.16	.22	.08	.04	.04	.05	.08	10
6	2.0	.82	.54	.24	.16	.22	.08	.04	.04	.19	.06	26
7	1.9	.82	.46	.24	.16	.22	.07	.04	.04	.07	.04	9.8
8	1.8	.76	.46	.24	.14	.24	.08	.07	.06	.10	.04	27
9	1.8	.76	.85	.24	.14	.20	.07	.05	.06	.10	.04	38
10	6.2	.76	.58	.22	.14	.18	.07	.04	.06	.11	.05	41
11	3.4	.70	.54	.22	.14	.18	.07	.05	.07	.04	.05	9.7
12	2.2	.66	.66	.22	.14	.18	.08	.04	.07	.04	.05	4.1
13	1.8	.66	.88	.22	.14	.18	.07	.04	.07	.06	.10	2.6
14	9.9	.62	.66	.22	.14	.16	.08	.07	.07	.36	.14	2.0
15	2.9	.58	.62	.22	.14	.16	.10	.06	.07	.06	.21	1.7
16	2.0	.54	.58	.24	.14	.16	.10	.07	.06	.06	.67	1.5
17	1.7	.54	.50	.24	.14	.16	.08	.10	.08	.08	.20	1.3
18	1.5	.54	.50	.22	.14	.16	.08	.08	.08	.06	.16	1.3
19	1.3	.54	.54	.20	.14	.18	.07	.10	.08	.06	.14	1.1
20	1.2	.50	.46	.20	.14	.16	.06	.11	.10	.08	.31	1.0
21	1.2	.50	.42	.20	.14	.14	.05	.10	.08	.10	.18	.94
22	7.6	.58	.42	.20	.14	.14	.11	.10	.08	.13	.43	1.5
23	3.3	.50	.38	.18	2.7	.12	.11	.08	.11	.06	15	.94
24	3.5	.50	.38	.18	1.0	.12	.10	.07	.12	.08	1.7	1.2
25	3.7	.50	.38	.20	2.0	.16	.08	.08	.10	.08	.88	1.1
26	2.4	.50	.50	.20	1.1	.12	.07	.07	.06	.08	.54	6.0
27	1.8	.92	.62	.18	.66	.11	.06	.07	.04	.10	.46	20
28	2.2	.66	.62	.18	.42	.11	.06	.06	.06	.12	.38	5.5
29	1.8	.50	.54	.18	.34	.10	.06	.06	.03	.12	.34	4.4
30	1.5	.46	.46	.18	---	.10	.05	.07	.04	.12	.30	7.2
31	1.3	---	.38	.18	---	.08	---	.06	---	.12	.27	---
TOTAL	98.2	20.04	16.35	7.05	11.44	5.26	2.29	2.03	2.13	2.78	23.57	227.72
MEAN	3.17	.67	.53	.23	.39	.17	.076	.065	.071	.090	.76	7.59
MAX	13	1.1	.88	.39	2.7	.27	.11	.11	.19	.36	15	41
MIN	1.2	.46	.38	.18	.14	.08	.05	.04	.03	.03	.04	.18
AC-FT	195	40	32	14	23	10	4.5	4.0	4.2	5.5	47	452

CAL YR 1979 TOTAL 279.00 MEAN .76 MAX 18 MIN .04 AC-FT 553
WTR YR 1980 TOTAL 418.86 MEAN 1.14 MAX 41 MIN .03 AC-FT 831

16801500 MIDDLE FORK TALOFOFO STREAM

LOCATION.--Lat 15°13'05" N., long 145°46'36" E., Hydrologic Unit 20100006, on left bank 700 ft (213 m) upstream from confluence with South and North Forks, 2.2 mi (3.5 km) southeast of Tanapag, and 3.7 mi (6.0 km) east of Garapan.

DRAINAGE AREA.--0.35 mi^2 (0.91 km^2).

PERIOD OF RECORD.--March 1968 to June 1980.

REVISED RECORDS.--WDR HI-76-1: 1968-69(P), 1970-71(M), 1972(P), 1973-75(M).

GAGE.--Water-stage recorder. Concrete control since Feb. 28, 1971. Altitude of gage is 25 ft (7.6 m), from topographic map.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. No diversion above station.

AVERAGE DISCHARGE.--11 years, 0.682 ft^3/s (0.019 m^3/s), 494 acre-ft/yr (609,000 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 840 ft^3/s (23.8 m^3/s) Aug. 12, 1978, gage height, 6.58 ft (2.006 m), from rating curve extended above 5.3 ft^3/s (0.150 m^3/s) on basis of slope-area measurements at gage heights 5.38 ft (1.640 m) and 6.58 ft (2.006 m); minimum, 0.05 ft^3/s (0.001 m^3/s) July 5, 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1979 to June 1980, 83 ft^3/s (2.35 m^3/s) Oct. 14, gage height 3.38 ft (1.030 m), no peak above base of 100 ft^3/s (2.83 m^3/s); minimum, about 0.10 ft^3/s (0.003 m^3/s) for some days of last week of May.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1979 TO JUNE 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.50	.50	.33	.24	.33	.24	.12	.12			
2	4.6	.45	.45	.33	.24	.30	.21	.11	.30			
3	1.9	.45	.50	.33	.27	.30	.21	.24	.25			
4	1.1	.40	.50	.30	.24	.30	.21	.24	.20			
5	.84	.40	.55	.30	.21	.27	.26	.24	.20			
6	.72	.40	.55	.30	.21	.24	.24	.24	.20			
7	.55	.41	.55	.30	.21	.24	.27	.27	.18			
8	.66	.41	.45	.30	.24	.27	.27	.24	.27			
9	.55	.45	.50	.30	.24	.30	.27	.15	.21			
10	2.2	.51	.45	.30	.21	.33	.27	.13	.18			
11	2.2	.50	.41	.30	.24	.33	.24	.12	.21			
12	.90	.50	.50	.30	.21	.30	.24	.11	.27			
13	.66	.50	.55	.30	.24	.30	.21	.11	.24			
14	2.8	.45	.50	.30	.24	.30	.21	.15	.18			
15	1.0	.45	.45	.27	.18	.30	.18	.13	.21			
16	.84	.45	.41	.27	.16	.33	.24	.15	.21			
17	.78	.45	.41	.27	.16	.33	.18	.20	.21			
18	.60	.45	.41	.27	.14	.33	.18	.15	.18			
19	.55	.45	.45	.30	.18	.33	.19	.20	.21			
20	.55	.45	.45	.30	.16	.30	.16	.20	.21			
21	.60	.45	.41	.30	.16	.33	.16	.20	.18			
22	2.5	.50	.37	.30	.16	.30	.24	.20	.24			
23	1.2	.45	.37	.27	1.8	.27	.20	.15	.24			
24	1.5	.50	.37	.27	.73	.24	.19	.12	.21			
25	1.5	.50	.37	.30	1.4	.33	.18	.15	.16			
26	1.0	.50	.41	.30	.72	.30	.17	.12	.24			
27	.80	.72	.37	.27	.50	.27	.16	.12	.21			
28	1.0	.55	.37	.30	.41	.24	.15	.10	.24			
29	.80	.50	.37	.30	.33	.24	.14	.10	.16			
30	.70	.50	.37	.27	---	.24	.13	.12	.21			
31	.60	---	.37	.24	---	.24	---	.10	---			
TOTAL	37.60	14.20	13.69	9.09	10.43	9.03	6.20	4.98	6.33			
MEAN	1.21	.47	.44	.29	.36	.29	.21	.16	.21			
MAX	4.6	.72	.55	.33	1.8	.33	.27	.27	.30			
MIN	.55	.40	.37	.24	.14	.24	.13	.10	.12			
AC-FT	75	28	27	18	21	18	12	9.9	13			

CAL YR 1979 TOTAL 198.48 MEAN .54 MAX 8.1 MIN .16 AC-FT 394

NOTE.--No gage-height record May 8 to June 7, July 1 to Sept. 30.

16808300 FINILE CREEK AT AGAT

LOCATION.--Lat 13°22'39" N., long 144°39'26" E., Hydrologic Unit 20100003, on right bank 0.4 mi (0.6 km) upstream from estuary and 0.4 mi (0.6 km) south of Agat School.

DRAINAGE AREA.--0.28 mi^2 (0.73 km^2).

PERIOD OF RECORD.--April 1960 to current year. Prior to October 1969, published as Finile River at Agat.

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

REMARKS.--Records good, except those for periods of no gage-height record, which are poor. No diversion above station.

AVERAGE DISCHARGE.--20 years, 1.43 ft^3/s (0.040 m^3/s), 1,040 acre-ft/yr (1.28 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 326 ft^3/s (9.23 m^3/s) May 21, 1976, gage height, 3.88 ft (1.183 m), from rating curve extended above 68 ft^3/s (1.93 m^3/s) on basis of slope-area measurement at gage height 3.66 ft (1.116 m); minimum, 0.04 ft^3/s (0.001 m^3/s) July 2-4, 6, 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft^3/s (4.81 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	0300	206	5.83	2.75	0.838
Feb. 26	1000	*232	6.57	*2.99	.911

Minimum discharge, 0.32 ft^3/s (0.009 m^3/s) Apr. 29 to May 10, May 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.0	1.3	1.1	.60	1.8	.70	.37	1.1	1.1	.70	.60
2	2.5	2.0	1.0	1.3	.60	1.6	.70	.37	1.5	.92	.70	.60
3	2.0	2.0	1.0	1.1	.60	1.6	.70	.37	.81	.92	.70	.51
4	10	1.7	1.5	1.0	.60	1.5	.70	.37	.70	.81	.60	3.7
5	50	1.7	1.0	1.0	.60	1.4	.65	.37	.70	2.2	.60	3.0
6	5.0	5.5	1.5	.92	.60	1.3	.65	.37	.70	4.4	.60	3.0
7	3.0	8.0	5.0	.92	.60	1.3	.65	.37	.70	4.1	.60	2.4
8	2.5	5.5	6.0	.92	.51	1.1	.65	.37	.60	1.5	.51	4.4
9	20	2.5	2.0	.81	.51	1.1	.80	.37	.60	1.1	.51	28
10	30	2.0	5.5	.81	.51	1.0	.85	.37	.51	.92	.51	6.8
11	40	2.0	1.7	.81	.51	1.0	.75	.70	.51	3.7	.70	3.2
12	7.5	2.0	1.6	.81	.60	1.1	.85	.51	.81	1.8	1.3	2.6
13	5.0	8.0	1.5	.81	.60	1.5	.75	.37	.92	1.4	.60	2.4
14	10	2.0	1.5	.70	.60	1.1	.70	.37	.81	1.3	.70	2.2
15	5.0	2.0	1.4	.70	.60	1.0	.70	.51	1.3	1.3	.51	2.1
16	3.5	1.7	1.4	.70	.60	1.0	.65	.81	.70	1.6	.51	1.9
17	3.0	1.7	1.4	.70	.60	.55	.70	1.3	.70	1.3	.51	1.6
18	2.5	1.5	1.3	.70	.70	1.0	.60	.92	.70	1.5	.51	1.6
19	2.3	1.5	2.4	.81	.70	1.1	.55	.70	.60	1.3	.81	1.5
20	2.0	4.0	1.5	.70	.60	.95	.60	.60	.60	1.1	.60	1.4
21	2.0	2.0	2.9	.70	.60	.90	.60	.51	.60	1.1	.51	1.4
22	2.0	1.5	1.5	.60	.70	.90	.55	.51	.60	1.3	.60	1.3
23	1.7	1.5	1.4	.60	1.1	.80	.55	.60	.60	1.1	2.4	1.1
24	1.7	5.0	1.4	.60	.92	.75	.50	.51	.70	1.4	.81	2.2
25	1.7	1.5	1.1	.60	1.8	.75	.50	1.9	.70	1.0	.92	2.6
26	5.0	2.0	1.1	.60	35	.70	.45	.70	1.3	1.0	.81	3.3
27	2.5	1.5	1.3	.70	2.8	.65	.50	1.9	2.2	.92	.81	4.6
28	7.0	5.0	1.1	.70	2.0	.65	.45	.92	2.2	.81	.60	1.9
29	7.0	1.5	1.1	.70	2.0	.70	.40	.60	1.5	.81	.81	4.7
30	2.5	1.5	1.0	.60	---	.70	.37	.60	1.0	.81	.60	10
31	2.0	---	1.0	.60	---	.65	---	.70	---	.70	.60	---
TOTAL	283.0	82.3	56.4	28.32	58.76	32.55	18.77	19.88	26.97	47.22	22.25	106.61
MEAN	7.84	2.74	1.82	.78	2.03	1.05	.63	.64	.90	1.52	.72	3.55
MAX	50	8.0	6.0	1.3	35	1.8	.85	1.9	2.2	4.4	2.4	28
MIN	1.7	1.5	1.0	.60	.51	.65	.37	.37	.51	.70	.51	.51
AC-FT	482	163	112	48	117	65	37	39	53	94	44	211

CAL YR 1979 TOTAL 568.91 MEAN 1.56 MAX 50 MIN .09 AC-FT 1130
WTR YR 1980 TOTAL 738.99 MEAN 2.02 MAX 50 MIN .37 AC-FT 1470

NOTE.--No gage-height record Oct. 2 to Dec. 10, Mar. 12 to Apr. 29.

16809600 LA SA FUA RIVER NEAR UMATAC

LOCATION.--Lat 13°18'23" N., long 144°39'45" E., Hydrologic Unit 20100003, on left bank 0.6 mi (1.0 km) north of Sanchez School in Umatac and 0.8 mi (1.3 km) upstream from mouth.

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

PERIOD OF RECORD.--April 1953 to July 1960, October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 120 ft (36.6 m), from topographic map.

REMARKS.--Records good. Water is diverted through 2-in (5.1-cm) pipe at coast highway above station for consumption in nearby homes.

AVERAGE DISCHARGE.--10 year (water years 1954-59, 1977-80), 4.44 ft^3/s (0.126 m^3/s), 3,220 acre-ft/yr (3.97 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft^3/s (40.8 m^3/s) Sept. 27, 1978, gage height, 6.05 ft (1.844 m), from rating curve extended above 109 ft^3/s (3.09 m^3/s) by test on model of station site; minimum, 0.12 ft^3/s (0.003 m^3/s) June 13, 1979, during short regulation of flow at diversion upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	0100	978	27.7	5.38	1.640	Aug. 23	0230	686	19.4	4.79	1.460
Oct. 11	1430	670	19.0	4.75	1.448	Sept. 6	2230	694	19.6	4.81	1.466
Feb. 26	1000	*1090	30.9	*5.57	1.698	Sept. 9	0800	765	21.7	4.97	1.515
June 1	1500	690	19.5	4.80	1.463	Sept. 30	0900	730	20.7	4.90	1.494
June 27	2300	920	26.0	5.28	1.609						

Minimum discharge, 0.39 ft^3/s (0.011 m^3/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.0	1.8	2.2	.82	3.0	.97	.85	83	5.0	1.6	1.6
2	8.1	2.6	1.7	4.1	1.1	2.0	.93	.52	33	3.0	1.7	1.5
3	3.5	2.3	1.6	3.0	.89	1.8	.82	.55	7.0	2.5	3.3	1.9
4	57	2.1	1.6	1.9	.79	1.9	1.2	.55	3.5	2.2	3.1	24
5	134	1.9	1.4	1.7	.76	1.7	.82	.45	2.7	29	5.1	26
6	10	8.8	2.4	1.5	.73	1.5	.73	.49	2.3	116	2.1	45
7	5.4	29	8.8	1.5	.73	1.3	.70	.55	2.1	20	1.7	25
8	4.2	31	6.3	1.4	.61	1.2	.67	.57	1.8	9.2	9.6	23
9	55	5.2	3.7	1.4	.61	1.1	1.1	.76	2.1	4.8	2.7	217
10	95	3.6	3.4	1.5	.61	1.0	1.1	.52	1.9	3.4	2.4	41
11	96	3.3	2.2	1.6	.61	1.0	.85	22	1.5	18	6.0	11
12	12	5.6	2.0	1.3	.61	.97	1.3	17	1.7	12	2.4	6.7
13	7.0	8.4	1.8	1.3	.55	1.9	1.1	2.4	2.2	8.5	1.9	6.3
14	37	4.2	1.8	1.2	.53	1.1	.82	1.2	1.7	7.1	1.7	19
15	8.1	3.4	1.6	1.2	.51	.97	.76	1.1	19	8.7	1.5	5.9
16	5.5	2.8	1.5	1.2	.48	1.0	.76	14	2.6	26	1.4	3.5
17	4.3	2.4	1.4	1.2	.48	.93	.79	40	2.6	48	1.5	3.0
18	3.5	2.7	1.5	1.1	.44	.97	.73	42	2.6	11	6.0	4.4
19	3.0	2.0	14	1.4	.46	1.2	.67	4.5	1.9	5.6	4.1	2.7
20	3.0	6.3	2.4	1.1	.53	1.1	.70	2.9	1.7	4.8	2.4	2.5
21	2.4	3.0	41	1.0	.53	1.0	.70	3.2	1.6	3.9	2.0	2.3
22	2.2	2.8	3.8	1.1	1.1	1.0	.61	2.7	1.5	3.6	1.7	2.2
23	2.0	2.2	2.6	1.0	35	.93	.58	4.3	1.5	9.6	42	2.4
24	2.6	6.5	2.2	.97	7.8	.89	.67	2.9	1.4	3.3	3.5	12
25	2.1	3.2	2.1	1.1	27	.89	.73	48	4.2	2.9	6.4	8.6
26	19	4.5	2.6	.97	205	.85	.61	9.2	51	2.5	3.3	21
27	4.7	2.9	2.0	.93	7.2	.85	.64	10	39	2.2	2.4	36
28	18	2.4	1.8	.89	3.9	.89	.55	3.5	43	2.0	2.1	8.9
29	28	2.1	1.8	1.0	4.0	.93	.52	2.5	15	1.9	2.3	38
30	6.2	1.9	1.8	.89	---	.97	.52	2.1	4.6	1.8	1.9	84
31	4.0	---	1.6	.85	---	.85	---	38	---	1.7	1.7	---
TOTAL	645.7	162.1	126.2	43.50	304.38	37.69	23.65	279.35	339.7	380.2	131.9	686.4
MEAN	20.8	5.40	4.07	1.40	10.5	1.22	.79	9.01	11.3	12.3	4.25	22.9
MAX	134	31	41	4.1	205	3.0	1.3	48	83	116	42	217
MIN	2.0	1.9	1.4	.85	.44	.85	.52	.49	1.4	1.7	1.4	1.5
AC-FT	1280	322	250	86	604	75	47	554	674	754	262	1360

CAL YR 1979 TOTAL 1749.20 MEAN 4.79 MAX 134 MIN .23 AC-FT 3470
WTR YR 1980 TOTAL 3160.77 MEAN 8.64 MAX 217 MIN .44 AC-FT 6270

16835000 INARAJAN RIVER NEAR INARAJAN

LOCATION.--Lat 13°16'41" N., long 144°44'15" E., Hydrologic Unit 20100003, on right bank 0.6 mi (1.0 km) northwest of Inarajan and 4.9 mi (7.9 km) east of Merizo.

DRAINAGE AREA.--4.42 mi^2 (11.45 km^2).

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

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good. Stage-discharge relation not determined above gage height 11.0 ft (3.35 m) owing to ungaged overbank flow. During dry periods water is diverted upstream for irrigation.

AVERAGE DISCHARGE.--28 years, 17.5 ft^3/s (0.496 m^3/s), 12,680 acre-ft/yr (15.6 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.90 ft (3.932 m) Oct. 11, 1963 (discharge not determined); minimum discharge, 0.42 ft^3/s (0.012 m^3/s) June 21, 22, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	0215	Unknown		12.11	3.691	Sept. 9	0545	Unknown		*12.59	3.837
Oct. 26	1930	Unknown		11.09	3.380	Sept. 13	1630	1780	50.4	10.84	3.304
Feb. 26	1130	Unknown		12.57	3.831	Sept. 14	1345	Unknown		12.28	3.743
Sept. 6	2300	Unknown		11.56	3.523	Sept. 30	0830	Unknown		11.51	3.508

Minimum discharge recorded 2.4 ft^3/s (0.068 m^3/s) Apr. 19, 22, 24, but may have been lower during period of no gage-height record May 4-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	10	9.8	4.7	29	6.8	4.4	30	14	9.6	10
2	13	13	10	9.9	5.2	20	6.8	3.8	16	9.8	9.6	9.7
3	11	13	10	9.5	5.0	18	6.1	12	10	8.8	14	10
4	77	11	17	8.3	4.5	19	7.0	4.0	8.6	8.3	13	26
5	351	10	9.9	7.9	4.3	16	6.7	3.5	8.0	27	12	60
6	33	26	11	7.5	4.1	14	6.0	3.5	8.0	106	10	214
7	23	73	26	7.4	4.6	13	5.8	3.5	7.2	30	9.1	164
8	22	72	18	7.3	4.1	12	5.6	3.0	6.8	19	57	100
9	137	26	13	7.1	4.0	11	6.1	3.0	7.7	18	12	1190
10	330	21	12	7.1	4.0	11	7.0	3.0	7.4	12	10	235
11	196	19	11	7.2	4.1	10	7.2	17	6.5	29	12	58
12	52	18	9.9	6.6	3.9	9.8	8.5	14	8.0	28	9.6	46
13	44	24	10	6.4	3.8	11	6.4	7.5	7.4	20	8.9	183
14	257	19	9.6	6.2	3.8	9.5	5.7	5.5	6.9	15	8.5	424
15	48	16	9.1	6.1	3.6	9.0	5.3	5.0	21	18	8.2	49
16	37	15	8.8	6.0	3.5	10	5.4	7.0	8.2	104	26	34
17	32	14	9.0	5.8	3.5	8.8	5.3	15	9.1	107	11	29
18	28	13	8.6	5.7	3.4	8.6	5.0	20	8.0	27	15	41
19	25	13	47	8.3	3.4	9.2	4.7	10	6.9	19	50	24
20	23	18	12	6.2	3.8	9.1	5.2	9.6	7.2	19	15	23
21	21	17	150	5.7	3.8	8.7	4.8	8.8	6.7	18	11	21
22	20	13	18	5.6	4.5	8.3	4.5	7.6	6.3	17	12	20
23	18	12	13	5.4	70	7.6	4.4	11	6.9	47	232	18
24	20	36	12	5.3	21	7.3	5.8	8.7	7.3	17	25	60
25	19	17	11	5.8	28	7.5	5.7	27	13	15	26	21
26	151	18	11	5.3	626	7.0	4.6	13	24	13	17	125
27	28	14	10	4.9	44	6.7	4.7	9.7	20	12	14	162
28	42	13	10	4.7	26	6.7	4.3	9.9	28	12	13	32
29	66	12	9.8	5.2	37	7.4	4.1	7.5	30	11	13	243
30	26	11	10	4.7	---	7.2	4.1	6.8	14	11	11	449
31	19	---	9.6	4.8	---	6.4	---	7.3	---	10	10	---
TOTAL	2180	612	536.3	203.7	941.6	338.8	169.6	271.6	355.1	817.9	684.5	4080.7
MEAN	70.3	20.4	17.3	6.57	32.5	10.9	5.65	8.76	11.8	26.4	22.1	136
MAX	351	73	150	9.9	626	29	8.5	27	30	107	232	1190
MIN	11	10	8.6	4.7	3.4	6.4	4.1	3.0	6.3	8.3	8.2	9.7
AC-FT	4320	1210	1060	404	1870	672	336	539	704	1620	1360	8090

CAL YR 1979 TOTAL 5614.5 MEAN 15.4 MAX 351 MIN 1.0 AC-FT 11140
WTR YR 1980 TOTAL 11191.8 MEAN 30.6 MAX 1190 MIN 3.0 AC-FT 22200

16840000 TINAGA RIVER NEAR IÑARAJAN

LOCATION.--Lat 13°17'10" N., long 144°45'04" E., Hydrologic Unit 20100003, on right bank 0.3 mi (0.5 km) upstream from mouth, 0.9 mi (1.4 km) northeast of Inarajan, and 4.5 mi (7.2 km) south of Talofofo.

DRAINAGE AREA.--1.89 mi² (4.90 km²).

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1969, published as Paulilluc River near Inarajan.

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--28 years, 5.74 ft³/s (0.163 m³/s), 4,160 acre-ft/yr (5.13 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Oct. 15, 1953, gage height, 13.11 ft (3.996 m), from rating curve extended above 210 ft³/s (5.95 m³/s); minimum, 0.15 ft³/s (0.004 m³/s) May 16, 21-23, 29, 1966, June 13, 29, 30, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 5	0415	566	16.0	5.11	1.558	Sept. 9	0530	a500	14.2	--	--
Feb. 26	1115	*1380	39.1	*8.93	2.722	Sept. 14	1600	541	15.3	4.97	1.515
Sept. 7	0030	414	11.7	4.21	1.283	Sept. 30	1130	422	12.0	4.26	1.298

Minimum discharge, 0.58 ft³/s (0.016 m³/s) Feb. 19-22, May 10.

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DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	7.2	3.5	3.5	1.1	6.8	1.5	1.1	51	3.8	3.1	3.6
2	4.5	6.6	3.3	3.5	1.1	5.3	1.6	.93	12	3.1	3.1	3.4
3	4.7	5.9	3.3	3.5	1.1	5.0	1.5	.93	4.0	2.6	4.0	3.6
4	14	5.3	4.0	3.2	1.1	5.2	1.6	.87	2.9	2.3	5.3	8.0
5	139	5.0	3.6	2.9	1.1	5.1	1.5	.87	2.6	4.4	3.8	15
6	11	8.5	3.6	2.6	1.1	4.4	1.4	.81	2.5	12	4.2	49
7	7.4	13	4.8	2.4	1.1	4.2	1.4	.71	2.3	6.9	3.4	102
8	6.8	22	5.6	2.3	1.0	4.1	1.2	.66	2.1	4.7	6.1	40
9	37	8.5	5.3	2.2	1.0	4.0	1.4	.62	2.2	3.8	4.5	400
10	99	6.4	9.2	2.3	.93	3.4	1.5	.62	2.0	3.1	3.6	80
11	84	6.0	5.3	2.3	.93	2.9	1.6	4.5	1.8	4.8	3.4	28
12	20	5.4	4.1	2.3	.87	2.6	2.1	4.1	1.8	8.2	3.4	35
13	19	7.2	4.9	2.2	.87	2.8	1.9	2.8	2.1	6.6	2.9	31
14	106	6.7	4.3	2.0	.81	2.8	1.6	1.6	2.0	5.0	2.8	99
15	20	5.6	3.9	1.9	.76	2.7	1.5	1.5	4.0	4.3	2.5	29
16	13	4.8	3.6	1.8	.71	2.7	1.6	2.3	2.6	11	4.0	14
17	10	4.3	3.3	1.8	.71	2.5	1.5	4.3	2.2	39	3.4	11
18	9.2	4.0	3.2	1.7	.66	2.3	1.3	5.3	2.1	7.8	3.6	10
19	8.4	3.9	16	2.7	.62	2.3	1.1	2.9	2.1	5.3	6.7	8.6
20	8.0	4.4	5.4	2.4	.62	2.3	1.1	2.6	2.1	4.5	4.3	9.1
21	7.3	4.9	39	2.1	.62	2.2	1.0	2.5	1.8	4.7	3.8	7.5
22	6.8	4.4	7.1	2.0	.66	2.2	1.0	2.5	1.8	5.3	4.6	7.5
23	6.1	4.3	4.9	1.9	5.9	2.0	.93	2.5	1.8	8.6	75	6.9
24	6.4	6.5	4.2	1.6	9.5	1.8	1.1	2.5	1.8	4.7	9.7	17
25	6.2	5.0	3.9	1.6	7.5	1.8	1.1	5.7	2.5	4.3	9.5	8.2
26	33	4.7	3.7	1.6	273	1.7	.93	3.8	5.0	3.8	7.2	33
27	18	4.9	3.7	1.5	16	1.6	1.0	2.8	4.2	3.4	5.3	53
28	14	4.4	3.6	1.3	8.3	1.5	.93	2.8	16	3.1	4.5	18
29	31	4.1	3.5	1.2	6.3	1.6	.93	2.2	9.1	2.9	4.2	68
30	13	3.8	3.6	1.1	---	1.5	1.0	2.0	4.0	2.8	4.2	151
31	8.2	---	3.7	1.1	---	1.4	---	1.8	---	2.9	3.8	---
TOTAL	775.3	187.7	181.1	66.5	385.97	92.7	39.82	70.92	158.4	189.7	209.9	1334.4
MEAN	25.0	6.26	5.84	2.15	11.9	2.99	1.33	2.29	5.15	6.12	6.77	44.8
MAX	139	22	39	3.5	273	6.8	2.1	5.7	51	39	75	400
MIN	4.3	3.8	3.2	1.1	.62	1.4	.93	.62	1.8	2.3	2.5	3.4
AC-FT	1540	372	359	132	686	184	79	141	306	376	416	2670

CAL YR 1979 TOTAL 1750.66 MEAN 4.80 MAX 139 MIN .22 AC-FT 3470
WTR YR 1980 TOTAL 3658.41 MEAN 10.0 MAX 400 MIN .62 AC-FT 7260

16847000 IMONG RIVER NEAR AGAT

LOCATION.--Lat 13°20'17" N., long 144°41'55" E., Hydrologic Unit 20100003, on left bank 500 ft (152 m) upstream from Fena Valley Reservoir, 1.4 mi (2.3 km) south of Fena Dam spillway, and 4.1 mi (6.6 km) southeast of Agat School.

DRAINAGE AREA.--1.95 mi² (5.05 km²).

PERIOD OF RECORD.--March 1960 to March 1971. October 1971 to current year.

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 120 ft (37 m), from topographic map.

REMARKS.--Records fair. No diversion above station.

AVERAGE DISCHARGE.--19 years (water years, 1961-70, 1972-80), 10.3 ft³/s (0.292 m³/s), 7,460 acre-ft/yr (9.20 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) Sept. 27, 1978, gage height, 11.3 ft (3.444 m), from outside floodmarks, and from rating curve extended above 58 ft³/s (1.64 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.37 ft³/s (0.010 m³/s) May 21, 22, 26, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*), from rating curve as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 5	0130	2480	70.2	7.32	2.231	Sept. 6	2215	1410	39.9	5.42	1.652
Oct. 11	1400	1620	45.9	5.85	1.783	Sept. 9	0715	2010	56.9	6.53	1.990
Feb. 26	0845	*2930	83.0	*7.95	2.423	Sept. 14	1800	2010	56.9	6.54	1.993
June 1	1430	1860	52.7	6.28	1.914	Sept. 30	0800	1700	48.1	6.01	1.832

Minimum discharge, 2.0 ft³/s (0.057 m³/s) May 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	6.8	5.1	2.8	7.7	3.4	2.5	94	7.8	4.7	3.8
2	11	9.7	8.8	6.0	3.8	6.1	3.1	2.1	23	6.8	6.2	3.8
3	9.2	9.2	8.8	6.8	3.0	5.5	2.9	2.2	6.0	6.0	10	4.7
4	73	8.8	6.3	4.8	3.0	5.8	3.5	2.2	5.5	5.7	8.1	27
5	221	8.3	5.1	4.4	2.8	5.2	3.1	2.2	4.5	14	8.5	25
6	20	20	7.8	4.1	2.8	4.9	2.9	2.2	4.0	99	5.7	65
7	13	38	17	3.8	2.8	4.7	2.8	2.3	3.5	55	5.0	41
8	11	38	14	3.5	2.8	4.4	2.8	2.4	3.5	30	15	39
9	81	20	9.2	3.2	2.8	4.4	3.6	2.6	4.5	13	6.8	300
10	162	13	15	3.2	2.8	4.1	3.2	2.3	4.0	8.3	5.4	100
11	142	9.7	6.3	3.5	2.8	4.1	2.9	6.5	3.5	69	6.1	26
12	60	12	5.7	3.5	2.6	3.8	4.1	5.4	4.0	59	5.2	12
13	64	24	5.7	3.5	2.6	5.6	3.2	3.0	4.5	36	4.8	12
14	105	14	5.4	3.2	2.6	4.0	2.8	2.6	4.0	35	4.6	115
15	52	12	5.1	3.2	2.6	3.7	2.7	2.5	7.5	23	4.3	60
16	31	11	4.8	3.2	2.4	3.5	2.6	5.7	4.0	33	4.1	32
17	18	12	4.8	3.2	2.4	3.5	2.8	13	3.5	93	5.0	18
18	13	14	5.1	3.2	2.4	3.5	2.7	12	3.5	39	6.2	15
19	10	12	22	3.5	2.2	3.8	2.5	8.2	3.5	15	7.3	10
20	8.8	18	6.3	3.2	2.2	3.7	2.7	4.9	3.8	10	5.1	8.3
21	8.8	13	32	3.2	2.2	3.8	2.6	4.2	3.2	8.3	4.5	7.8
22	8.3	9.7	8.3	3.0	3.2	3.7	2.4	3.6	3.2	7.8	4.6	7.3
23	7.8	9.2	6.0	3.0	20	3.5	2.4	5.2	3.5	18	26	6.8
24	10	17	5.7	3.0	11	3.2	2.5	4.5	3.8	9.2	7.7	14
25	8.3	11	5.7	3.2	24	3.0	2.6	15	4.6	6.7	12	13
26	33	16	6.0	3.0	300	2.8	2.3	7.7	23	6.0	6.9	81
27	15	13	5.7	3.0	29	2.8	2.3	6.4	55	5.7	5.5	129
28	30	11	6.0	2.8	10	2.8	2.3	4.4	42	5.5	4.8	45
29	40	9.2	5.4	3.0	9.8	3.0	2.2	3.6	19	5.3	4.5	63
30	23	8.8	5.1	2.8	---	3.3	2.2	3.2	9.7	5.2	4.3	184
31	16	---	4.8	2.8	---	3.2	---	4.0	---	4.9	4.0	---
TOTAL	1316.2	434.6	260.7	110.9	463.4	127.1	84.1	148.6	263.3	780.2	212.5	1468.5
MEAN	42.5	14.5	8.41	3.58	16.0	4.10	2.80	4.79	12.1	23.9	6.87	49.0
MAX	221	38	32	6.8	300	7.7	4.1	15	94	99	26	300
MIN	7.8	8.3	4.8	2.8	2.2	2.8	2.2	2.1	3.2	4.9	4.0	3.8
AC-FT	2610	862	517	220	919	252	167	295	721	1470	422	2910

CAL YR 1979 TOTAL 4063.95 MEAN 11.1 MAX 221 MIN .52 AC-FT 8060
WTR YR 1980 TOTAL 5730.50 MEAN 15.7 MAX 300 MIN 2.1 AC-FT 11370

16848100 ALMAGOSA RIVER NEAR AGAT

LOCATION.--Lat 13°20'43" N., long 144°41'36" E., Hydrologic Unit 20100003, on right bank 400 ft (122 m) upstream from Fena Valley Reservoir and 3.5 mi (5.6 km) southeast of Agat.

DRAINAGE AREA.--1.32 mi^2 (3.42 km^2).

PERIOD OF RECORD.--April 1972 to current year.

REVISED RECORD.--WDR HI-75-1: Drainage area. WDR HI-76-1: 1972(P), 1973(M), 1974-75(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 155 ft (47 m), from topographic map.

REMARKS.--Records good, except those for periods of no gage-height record, which are poor. Up to 3.9 ft^3/s (0.11 m^3/s) diverted upstream for domestic use.

AVERAGE DISCHARGE.--8 years, 6.48 ft^3/s (0.184 m^3/s), 4,690 acre-ft/yr (5.78 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,650 ft^3/s (75.0 m^3/s) Sept. 27, 1978, gage height, 7.78 ft (2.371 m), from rating curve extended above 81 ft^3/s (2.29 m^3/s) on basis of slope-area measurement at gage height 7.32 ft (2.231 m); minimum, 0.13 ft^3/s (0.004 m^3/s) June 27, July 11, 12, 14, 16, 17, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	a0300	*a2090	59.2	*a7.2	2.194	June 1	a1345	915	25.9	/5.51	1.679
Oct. 11	a1400	a1200	34.0	--	--	Sept. 9	a1615	966	27.4	/5.61	1.710
Feb. 26	a0900	1540	43.6	/6.50	1.981	Sept. 14	a1800	865	24.5	/5.41	1.649

Minimum discharge, 0.24 ft^3/s (0.007 m^3/s) May 2, 3, 5.

a About.
/ From floodmarks.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	6.2	4.7	.43	7.3	.74	.31	40	5.8	1.9	1.8
2	14	9.3	5.8	6.0	.68	5.0	.68	.24	9.5	4.5	2.1	1.6
3	11	8.5	5.8	5.3	.63	5.3	.58	.24	4.5	4.0	2.5	2.4
4	62	7.9	4.0	4.4	.58	6.0	.68	.27	4.0	4.0	2.8	25
5	170	7.1	3.5	4.2	.47	5.3	.68	.24	4.0	15	3.7	15
6	12	15	5.5	4.1	.47	4.8	.68	.27	3.5	40	2.2	40
7	7.0	24	12	3.9	.52	4.2	.63	.27	3.0	20	1.8	20
8	6.0	33	15	3.8	.47	2.6	.47	.83	3.0	10	10	30
9	70	16	9.6	3.8	.43	1.6	.63	.58	4.0	7.5	3.6	200
10	110	12	17	3.7	.43	1.3	.74	.87	3.0	5.5	2.1	40
11	130	9.0	10	3.8	.47	1.2	.63	1.3	2.5	15	2.1	10
12	30	8.5	7.9	3.4	.47	1.0	.95	.79	3.5	11	2.8	5.0
13	25	16	7.1	3.3	.43	1.6	.68	.47	4.5	9.6	2.2	5.0
14	50	8.5	6.2	3.2	.43	1.0	.58	.35	3.5	10	2.0	60
15	30	7.9	5.6	3.0	.39	.89	.52	.35	6.0	11	1.8	20
16	15	7.1	5.0	2.9	.35	.79	.52	.96	3.5	18	1.6	10
17	10	6.4	5.0	2.9	.31	.74	.52	2.6	3.0	45	1.8	7.5
18	8.0	6.6	4.7	2.6	.31	.74	.47	7.1	2.0	25	2.2	10
19	7.0	5.8	17	2.9	.31	.84	.43	3.8	1.5	13	2.9	7.5
20	6.5	12	5.0	1.9	.31	.79	.47	2.1	1.6	9.3	2.4	6.0
21	6.0	8.5	18	.79	.39	.68	.47	1.7	1.2	6.8	2.2	5.5
22	5.5	6.4	7.7	.74	.52	.79	.39	1.2	1.0	5.8	2.2	5.0
23	5.0	6.0	6.6	.63	3.5	.84	.39	3.0	1.0	6.4	17	5.0
24	5.5	13	5.8	.58	5.0	.95	.39	2.9	1.1	4.2	5.3	10
25	5.0	7.1	5.5	.63	16	.89	.43	6.5	2.5	4.1	8.8	15
26	16	9.0	5.7	.58	250	.89	.39	6.2	12	3.4	5.3	50
27	10	7.3	5.8	.47	25	.89	.39	15	12	3.0	4.4	60
28	22	11	6.0	.43	15	.84	.43	12	22	2.8	3.4	20
29	33	8.2	4.7	.43	10	.84	.43	3.0	13	2.5	2.9	40
30	21	7.1	4.5	.43	---	.79	.31	2.5	7.9	2.2	2.7	100
31	14	---	4.4	.43	---	.74	---	3.0	---	2.0	2.2	---
TOTAL	927.5	315.2	233.6	79.94	334.30	62.29	16.30	80.14	183.8	326.4	110.9	827.3
MEAN	29.9	10.5	7.54	2.58	11.5	2.01	.54	2.59	6.13	10.5	3.58	27.6
MAX	170	33	18	6.0	250	7.3	.95	15	40	45	17	200
MIN	5.0	5.8	3.5	.43	.31	.74	.31	.24	1.0	2.0	1.6	1.6
AC-FT	1840	625	463	159	663	124	32	159	365	647	220	1640

CAL YR 1979 TOTAL 2174.79 MEAN 5.96 MAX 170 MIN .14 AC-FT 4310
WTR YR 1980 TOTAL 3497.67 MEAN 9.56 MAX 250 MIN .24 AC-FT 6940

NOTE.--No gage-height record Oct. 5-25.

16848500 MAULAP RIVER NEAR AGAT

LOCATION.--Lat 13°21'14" N., long 144°41'44" E., Hydrologic Unit 20100003, on right bank 100 ft (30 m), from Fena Valley Reservoir and 3.2 mi (5.1 km) southeast of Agat.

DRAINAGE AREA.--1.15 mi^2 (2.98 km^2).

PERIOD OF RECORD.--January 1972 to current year.

REVISED RECORDS.--WRD Hawaii 1973: 1972. WRD HI-75-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 130 ft (40 m), from topographic map.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--8 years, 5.32 ft^3/s (0.151 m^3/s), 3,850 acre-ft/yr (4.75 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft^3/s (68.5 m^3/s) Sept. 27, 1978, gage height, 9.2 ft (2.804 m), from rating curve extended above 23 ft^3/s (0.65 m^3/s), on basis of slope-area measurements at gage heights 8.21 ft (2.502 m) and 9.2 ft (2.804 m); minimum, 0.33 ft^3/s (0.009 m^3/s) June 10-12, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	0300	1600	45.3	7.80	2.377	June 1	1345	696	19.7	5.62	1.713
Oct. 9	2230	681	19.3	5.57	1.698	Sept. 9	1615	754	21.4	5.81	1.771
Oct. 11	1400	1050	29.7	6.55	1.996	Sept. 14	1745	1126	31.9	6.74	2.054
Feb. 26	0900	*1700	48.1	*8.00	2.438						

Minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Feb 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.4	2.9	2.7	1.4	4.9	1.9	1.6	35	4.2	2.4	2.4
2	6.0	4.1	2.7	3.4	1.6	4.0	2.0	1.8	8.3	3.4	2.8	2.3
3	3.8	4.3	2.7	3.5	1.5	3.7	1.9	1.4	4.1	3.1	4.4	2.7
4	42	4.2	3.2	2.4	1.4	5.3	2.1	1.4	3.6	3.1	4.0	30
5	152	4.0	2.6	2.3	1.3	3.8	2.1	1.2	3.3	12	4.9	12
6	11	15	3.6	2.1	1.3	3.4	2.0	1.2	3.0	30	2.9	26
7	6.7	24	12	2.0	1.4	3.1	1.9	1.4	2.6	13	2.7	12
8	5.6	15	17	2.0	1.3	2.9	1.9	1.4	2.5	6.3	21	25
9	62	5.9	4.6	2.0	1.3	2.7	2.4	1.4	3.2	4.9	3.0	166
10	96	4.7	14	1.9	1.3	2.6	2.6	1.1	2.7	4.1	2.6	23
11	119	4.1	4.0	2.3	1.3	2.5	2.3	2.3	2.3	17	3.1	5.0
12	21	4.8	3.6	2.1	1.3	2.5	2.6	1.9	3.0	7.4	9.8	3.5
13	13	23	3.3	1.9	1.3	3.2	2.3	1.3	4.0	8.2	3.0	3.6
14	42	4.8	3.1	1.8	1.2	2.5	2.2	1.3	3.0	7.4	2.8	43
15	12	4.4	2.9	1.8	1.2	2.3	2.1	1.4	5.0	7.4	2.5	8.0
16	8.7	3.9	2.8	1.8	1.1	2.3	2.0	2.8	3.0	14	2.4	3.1
17	8.2	3.7	2.7	1.8	1.3	2.1	2.2	5.0	3.0	28	3.2	3.1
18	6.4	3.7	2.6	1.7	1.1	2.2	2.0	4.5	2.5	7.8	2.8	6.9
19	5.8	3.3	17	1.8	1.1	2.4	1.9	4.2	2.2	5.8	5.1	3.2
20	5.3	9.3	3.4	1.7	1.1	2.2	2.0	2.6	2.0	5.1	2.7	3.1
21	4.8	4.2	14	1.6	1.2	2.2	2.0	3.0	2.1	4.6	2.7	3.2
22	4.4	3.8	3.3	1.6	1.7	2.2	1.9	2.4	2.1	4.5	3.2	3.8
23	4.2	3.4	3.0	1.6	5.2	2.0	1.8	4.0	2.0	5.4	29	3.8
24	4.3	13	2.8	1.5	3.5	1.9	1.8	2.9	2.7	3.8	3.1	9.5
25	4.0	3.8	2.7	1.6	14	1.9	1.8	7.5	4.4	3.8	8.0	18
26	10	4.8	2.8	1.6	249	1.8	1.7	4.1	9.8	3.3	3.2	41
27	5.5	3.8	5.6	1.4	17	1.7	1.8	11	9.0	3.1	2.7	46
28	18	13	2.7	1.4	7.6	1.7	1.7	4.0	8.8	2.9	2.6	10
29	18	3.6	2.6	1.5	6.5	1.8	1.6	3.0	9.3	2.9	2.4	37
30	6.0	3.1	2.4	1.5	---	1.8	1.5	2.5	4.7	2.8	2.3	75
31	5.0	---	2.3	1.4	---	1.7	---	2.9	---	2.6	2.3	---
TOTAL	714.8	207.1	154.9	59.7	331.3	81.3	60.0	88.1	153.2	231.9	149.6	631.2
MEAN	23.1	6.90	5.00	1.93	11.4	2.62	2.00	2.84	5.11	7.48	4.83	21.0
MAX	152	24	17	3.5	249	5.3	2.6	11	35	30	29	166
MIN	3.8	3.1	2.3	1.4	1.1	1.7	1.5	1.1	2.0	2.6	2.3	2.3
AC-FT	1420	411	307	118	657	161	119	175	304	460	297	1250

CAL YR 1979 TOTAL 1717.92 MEAN 4.71 MAX 152 MIN .39 AC-FT 3410
WTR YR 1980 TOTAL 2863.10 MEAN 7.82 MAX 249 MIN 1.1 AC-FT 5680

16849000 FENA DAM SPILLWAY NEAR AGAT

LOCATION.--Lat 13°21'28" N., long 144°42'12" E., Hydrologic Unit 20100003, on left bank 3.5 mi (5.6 km) southeast of Agat and 5.8 mi (9.3 km) southwest of Yona.

DRAINAGE AREA.--5.88 mi^2 (15.23 km^2).

PERIOD OF RECORD.--September 1951 to July 1952, November 1952 to current year. Daily mean gage heights published since October 1973.

REVISED RECORDS.--WSP 2137: Drainage area. WDR HI-78-2: 1977(M, m).

GAGE.--Water-stage recorder and concrete-dam control. Datum of gage is 111.35 ft (33.939 m) above mean sea level (from U.S. Navy construction plans).

REMARKS.--Gage-height records good. About 10 ft^3/s (0.28 m^3/s) is diverted from Fena Valley Reservoir and tributary springs for military and civilian use. Discharge records represent flow over spillway only. Water-quality records for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--20 years (1953-73), 17.9 ft^3/s (0.507 m^3/s), 12,970 acre-ft/yr (16.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined, occurred Oct. 15, 1953 (gage height, at least 4.5 ft or 1.37 m); no flow for many days each year. Minimum recorded gage height, -21.36 ft (-6.51 m), Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.15 ft (0.960 m), Oct. 5; minimum, -3.32 ft (-1.012 m) May 16.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-.06	.02	.04	-.01	-1.07	.12	-.73	-2.42	-.79	.12	.05	.05
2	.01	.00	.04	.02	-1.09	.08	-.75	-2.52	.20	.08	.06	.03
3	.03	.00	.05	.04	-1.11	.07	-.83	-2.62	.10	.07	.13	.05
4	.27	-.01	.03	-.02	-1.15	.08	-.86	-2.70	.00	.05	.22	.38
5	1.03	-.02	.04	-.04	-1.20	.08	-.90	-2.80	-.04	.14	.19	.42
6	.24	.09	.07	-.07	-1.28	.06	-.96	-2.90	-.06	.35	.18	.37
7	.12	.27	.15	-.09	-1.33	.02	-1.02	-2.98	-.08	.30	.13	.66
8	.07	.33	.23	-.11	-1.40	.00	-1.06	-3.03	-.10	.23	.18	.47
9	.24	.20	.12	-.13	-1.48	-.01	-1.12	-3.10	-.10	.16	.27	1.56
10	1.04	.13	.19	-.15	-1.56	-.02	-1.14	-3.17	-.10	.12	.16	.87
11	.97	.11	.12	-.15	-1.64	-.03	-1.17	-3.14	-.11	.24	.15	.48
12	.38	.11	.07	-.18	-1.73	-.07	-1.17	-3.14	-.11	.27	.17	.37
13	.22	.28	.07	-.21	-1.83	-.03	-1.19	-3.17	-.06	.20	.17	.33
14	.44	.13	.06	-.26	-1.91	-.03	-1.24	-3.23	-.07	.19	.13	.66
15	.21	.10	.05	-.28	-2.01	-.09	-1.29	-3.27	-.05	.20	.08	.47
16	.13	.08	.04	-.31	-2.11	-.13	-1.36	-3.25	-.05	.24	.04	.33
17	.09	.07	.03	-.35	-2.19	-.16	-1.35	-3.13	-.07	.57	.04	.28
18	.08	.06	.01	-.39	-2.28	-.20	-1.49	-2.78	-.10	.32	.09	.30
19	.05	.06	.24	-.44	-2.37	-.20	-1.57	-2.67	-.14	.23	.13	.31
20	.05	.09	.08	-.47	-2.44	-.20	-1.63	-2.57	-.16	.19	.14	.27
21	.04	.14	.24	-.52	-2.52	-.18	-1.67	-2.54	-.20	.18	.11	.26
22	.01	.06	.10	-.57	-2.60	-.19	-1.74	-2.53	-.23	.17	.13	.25
23	.01	.05	.07	-.61	-2.51	-.26	-1.83	-2.51	-.27	.20	.42	.24
24	.01	.13	.04	-.67	-2.05	-.32	-1.90	-2.42	-.26	.17	.26	.34
25	.00	.06	.03	-.69	-1.60	-.35	-1.97	-2.25	-.19	.16	.25	.35
26	.11	.08	.04	-.73	.99	-.41	-2.02	-2.00	.15	.15	.24	.53
27	.12	.06	.06	-.80	.47	-.46	-2.11	-1.89	.22	.12	.19	.78
28	.19	.08	.03	-.85	.20	-.50	-2.18	-1.59	.38	.10	.15	.50
29	.25	.09	.02	-.90	.15	-.54	-2.27	-1.49	.26	.10	.13	.58
30	.14	.03	.01	-.95	---	-.61	-2.36	-1.47	.16	.08	.09	1.07
31	.06	---	-.01	-1.01	---	-.67	---	-1.48	---	.06	.06	---
MEAN	.21	.10	.08	-.38	-1.47	-.17	-1.43	-2.61	-.06	.19	.15	.45
MAX	1.04	.33	.24	.04	.99	.12	-.73	-1.47	.38	.57	.42	1.56
MIN	-.06	-.02	-.01	-1.01	-2.60	-.67	-2.36	-3.27	-.79	.05	.04	.03

WTR YR 1980 MEAN -.41 MAX 1.56 MIN -3.27

16854500 UGUM RIVER ABOVE TALOFOFO FALLS, NEAR TALOFOFO, GUAM

LOCATION.--Lat 13°19'16" N., long 144°44'01" E., Hydrologic Unit 20100003, about 300 ft (91 m) upstream from Talofofo Falls, 0.9 mi (1.4 km) north of NASA Tracking Station, and 3.5 mi (5.6 km) southwest of main intersection in Talofofo village.

DRAINAGE AREA.--5.76 mi² (14.92 km²).

PERIOD OF RECORD.--June 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (40 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft³/s (167 m³/s) Feb. 26, 1980, gage height, 14.2 ft (4.328 m), from floodmarks, from rating curve extended above 350 ft³/s (9.91 m³/s); on basis of slope-area measurement at gage height 14.2 ft (4.328 m); minimum, 3.4 ft³/s (0.10 m³/s), June 27, 1978, July 14, 18, 19, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24.1 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 5	0230	4340	123	12.29	3.746	Sept. 6	2300	2250	63.7	9.13	2.783
Oct. 9	2330	1260	35.7	7.04	2.146	Sept. 9	0600	4370	124	12.32	3.755
Oct. 26	2030	1010	28.6	6.43	1.960	Sept. 14	1815	3260	92.3	10.82	3.298
Feb. 26	a1200	*5890	167	*14.2	4.328	Sept. 30	0845	2140	60.6	8.92	2.719
June 28	1300	1250	35.4	7.02	2.140						

Minimum discharge, 9.0 ft³/s (0.25 m³/s) May 9.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	37	20	23	12	50	14	12	85	25	21	17
2	19	32	20	23	12	40	16	9.8	38	20	20	16
3	17	31	20	25	12	35	14	9.8	19	17	38	18
4	103	29	22	18	11	35	14	9.8	16	16	32	78
5	448	28	19	17	11	30	16	9.4	14	33	34	51
6	70	56	22	16	10	27	13	9.4	14	104	23	187
7	60	101	38	16	11	25	13	9.8	13	48	20	167
8	50	101	32	15	10	25	13	9.6	13	34	37	112
9	150	45	25	15	10	20	14	10	14	26	25	950
10	381	35	37	15	10	20	16	9.4	13	21	21	207
11	265	32	22	16	10	20	13	44	12	50	24	85
12	80	35	20	15	10	20	14	31	13	53	20	68
13	45	48	22	14	10	25	17	16	18	45	18	129
14	258	33	19	14	10	20	14	12	13	37	18	333
15	55	30	18	14	9.8	20	13	11	38	33	17	75
16	25	27	18	14	9.6	20	12	22	16	76	18	56
17	20	26	17	14	9.6	17	12	36	15	167	19	50
18	17	26	17	13	9.4	17	12	49	15	54	28	48
19	18	24	83	15	9.4	20	12	22	14	35	32	43
20	17	34	23	14	9.4	20	11	17	14	31	21	42
21	18	32	159	13	9.8	20	12	16	13	33	18	40
22	17	26	29	13	12	17	11	15	13	31	18	39
23	17	24	22	13	62	16	11	18	13	58	94	37
24	17	45	21	13	44	16	11	16	13	30	28	99
25	25	27	20	13	48	16	11	37	19	28	38	44
26	87	36	20	12	1000	16	10	25	48	25	26	118
27	50	27	19	12	100	15	11	17	41	24	21	187
28	77	25	19	12	50	15	10	16	50	23	21	63
29	112	23	19	12	50	15	9.8	14	50	22	23	211
30	50	21	20	12	---	15	10	13	30	22	19	387
31	40	---	18	12	---	14	---	13	---	21	17	---
TOTAL	2623	1096	880	463	1582.0	681	379.8	559.0	697	1282	809	3957
MEAN	84.6	36.5	28.4	14.9	54.6	22.0	12.7	18.0	23.2	40.1	26.1	132
MAX	448	101	159	25	1000	50	17	49	85	167	94	950
MIN	15	21	17	12	9.4	14	9.8	9.4	12	16	17	16
AC-FT	5200	2170	1750	918	3140	1350	753	1110	1380	2480	1600	7850

CAL YR 1979 TOTAL 7971.4 MEAN 21.8 MAX 448 MIN 3.5 AC-FT 15810
WTR YR 1980 TOTAL 14968.8 MEAN 40.9 MAX 1000 MIN 9.4 AC-FT 29690

NOTE.--No gage-height record Feb. 26 to Mar. 21.

16858000 YLIG RIVER NEAR YONA

LOCATION.--Lat 13°23'28" N., long 144°45'06" E., Hydrologic Unit 20100003, on right bank 2.2 mi (3.5 km) upstream from mouth, 1.9 mi (3.1 km) southwest of Yona, and 5.6 mi (9.0 km) south of Agana.

DRAINAGE AREA.--6.48 mi^2 (16.78 km^2).

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

REVISED RECORDS.--WSP 1937: 1957-58. WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--28 years, 28.7 ft^3/s (0.813 m^3/s), 20,790 acre-ft/yr (25.6 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft^3/s (139 m^3/s) Sept. 9, 1963, gage height, 19.77 ft (6.026 m), from floodmarks, from rating curve extended above 620 ft^3/s (17.6 m^3/s) on basis of slope-area measurements at gage heights 11.24 ft (3.426 m) and 15.87 ft (4.837 m), maximum gage height, 22.80 ft (6.949 m) Feb. 26, 1980; minimum, 0.07 ft^3/s (0.002 m^3/s) May 20, 1973, but may have been less during period of diversion from gage pool May 15 to June 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*), from rating curve extended above 155 ft^3/s:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 5	0500	3620	103	18.99	5.788
Feb. 26	a1100	*4760	135	*/22.80	6.949
Sept. 9	1815	2660	75.3	15.81	4.819

Minimum discharge, 2.2 ft^3/s (0.062 m^3/s), May 2-4.

/ From floodmarks.
a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	26	14	12	4.6	28	5.8	2.5	191	16	11	13
2	33	23	13	22	4.8	24	6.2	2.4	44	13	12	12
3	28	23	13	19	5.2	22	5.3	2.5	20	14	13	12
4	97	21	22	12	4.6	23	5.5	2.7	16	17	17	111
5	1050	18	13	11	4.1	20	5.7	2.7	14	36	39	73
6	62	27	20	10	4.0	17	5.2	2.4	12	85	15	85
7	45	182	33	9.4	4.4	16	4.8	2.4	11	33	12	78
8	40	76	69	9.0	3.9	15	4.6	2.6	11	27	12	123
9	195	36	34	8.9	3.7	14	5.0	3.4	11	21	13	1140
10	556	30	22	8.7	3.6	13	6.4	2.6	10	18	10	167
11	446	26	19	8.8	3.4	12	5.0	7.1	11	96	22	64
12	107	25	17	8.2	3.4	11	5.9	6.1	16	69	12	69
13	77	111	17	7.7	3.4	11	5.5	4.5	12	35	11	36
14	330	31	15	7.4	3.4	10	4.5	2.9	11	32	11	59
15	72	27	14	7.1	3.1	9.7	4.1	5.0	23	32	10	85
16	53	24	13	7.0	2.9	9.5	4.1	8.5	12	37	9.3	36
17	50	22	12	6.8	2.9	8.9	4.8	27	11	99	9.7	32
18	40	22	11	6.5	2.8	8.8	4.1	36	10	39	15	30
19	35	19	86	6.9	2.8	9.3	3.6	12	9.1	30	171	26
20	31	39	18	6.7	2.8	8.5	3.9	9.2	8.3	26	20	24
21	28	27	76	6.1	2.9	8.0	4.1	8.6	7.8	24	22	22
22	27	20	20	5.7	3.8	7.9	3.4	16	7.6	27	44	21
23	24	18	17	5.7	13	7.4	3.3	16	7.3	25	219	25
24	23	22	15	5.5	16	7.2	3.1	14	8.0	20	32	164
25	21	19	15	5.7	32	7.1	3.2	49	12	19	26	29
26	33	17	14	5.7	1160	7.1	3.1	18	16	18	21	80
27	26	20	18	5.2	67	6.4	3.0	13	12	16	19	202
28	62	19	13	4.9	39	6.2	2.8	12	32	15	17	52
29	100	16	12	4.7	36	6.9	2.5	9.4	43	14	17	194
30	35	15	12	4.7	---	6.1	2.5	8.3	19	13	15	405
31	28	---	11	4.5	---	5.9	---	7.8	---	12	13	---
TOTAL	3782	1001	698	253.5	1442.5	366.9	131.0	316.6	628.1	978	690.0	3479
MEAN	122	33.4	22.5	8.18	49.8	11.8	4.37	10.2	20.9	31.5	28.7	116
MAX	1050	182	86	22	1160	28	6.4	49	191	99	219	1140
MIN	21	15	11	4.5	2.8	5.9	2.5	2.4	7.3	12	9.3	12
AC-FT	7500	1990	1380	503	2860	728	260	628	1250	1940	1770	6900

CAL YR 1979 TOTAL 7992.31 MEAN 21.9 MAX 1050 MIN .46 AC-FT 15850
WTR YR 1980 TOTAL 13967.60 MEAN 38.2 MAX 1160 MIN 2.4 AC-FT 27700

16865000 PAGO RIVER NEAR ORDOT
(National stream-quality accounting network station)

LOCATION.--Lat 13°26'08" N., long 144°45'14" E., Hydrologic Unit 20100003, on left bank 0.8 mi (1.3 km) south of Ordot, 2.6 mi (4.2 km) south of Agana, and 3.6 mi (5.8 km) southeast of Asan.

DRAINAGE AREA.--5.67 mi² (14.69 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1951 to current year.

REVISED RECORDS.--WSP 1937: 1954(M), 1958(M). WSP 2137: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 25 ft (7.6 m), from topographic map. Prior to Apr. 10, 1972, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No diversion above station.

AVERAGE DISCHARGE.--29 years, 26.2 ft³/s (0.742 m³/s), 18,980 acre-ft/yr (23.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,090 ft³/s (286 m³/s) May 21, 1976, gage height, 20.15 ft (6.142 m), from floodmarks, from rating curve extended above 320 ft³/s (9.06 m³/s) on basis of slope-area measurements at gage heights 13.22 ft (4.029 m), 15.07 ft (4.593 m), and 18.87 ft (5.752 m); no flow for many days in 1959 and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 5	0100	6580	186	18.20	5.547	June 1	a1600	3990	113	/14.86	4.529
Oct. 9	2345	3600	102	13.93	4.246	Aug. 19	1130	2740	77.6	11.61	3.539
Feb. 26	1000	*9800	278	*20.02	6.102	Sept. 9	2030	3630	103	13.99	4.264

Minimum daily discharge, about 1.5 ft³/s (0.042 m³/s) May 1-3, 6, 7.

/ From floodmark.
a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	18	7.8	6.7	2.7	19	3.4	1.5	200	19	9.4	22
2	23	15	7.5	15	2.9	14	4.4	1.5	50	14	8.8	14
3	27	18	7.0	7.8	3.0	12	3.2	1.5	25	17	9.4	11
4	247	14	7.9	6.1	2.6	16	3.1	1.7	20	17	11	24
5	1360	12	6.7	5.7	2.4	13	3.3	1.7	18	34	22	72
6	106	17	13	5.4	2.3	11	3.1	1.5	17	51	10	94
7	69	211	24	4.7	2.4	9.6	2.8	1.5	14	35	7.4	75
8	105	86	101	4.7	2.3	8.7	2.7	2.0	19	27	7.1	151
9	390	34	30	4.7	2.3	7.7	10	2.5	26	20	7.1	1310
10	892	25	16	4.1	2.1	7.1	5.1	2.0	17	17	6.8	191
11	579	21	13	4.1	2.1	6.7	3.5	6.0	15	90	18	87
12	130	19	11	4.1	2.1	6.1	6.6	5.5	15	79	17	64
13	88	48	9.7	3.9	2.1	6.3	4.0	4.5	20	39	9.4	51
14	386	26	9.0	3.9	2.1	5.6	3.2	2.5	16	32	7.8	39
15	87	21	8.3	3.9	1.9	5.0	2.9	4.5	19	25	9.9	92
16	47	17	7.7	4.0	1.8	5.5	2.9	7.5	14	65	7.4	36
17	88	15	7.1	3.7	1.7	4.6	3.4	25	12	185	10	39
18	39	15	6.8	3.5	1.6	4.4	2.8	35	11	39	36	39
19	30	13	33	3.5	1.6	4.4	2.5	15	10	35	218	27
20	25	24	10	3.5	1.6	4.3	2.4	8.0	9.1	26	26	28
21	21	19	98	3.4	1.6	4.2	2.8	7.5	8.8	23	32	24
22	19	14	16	3.3	1.8	4.3	2.3	15	8.5	40	60	21
23	17	13	12	3.2	5.6	4.0	2.1	15	8.5	37	259	51
24	15	12	10	3.1	11	3.7	1.9	10	9.3	26	42	195
25	14	12	9.5	3.2	26	3.7	2.1	50	12	19	34	32
26	18	10	8.6	3.1	1640	3.8	2.1	20	19	16	26	129
27	16	10	8.7	2.9	1570	3.3	2.4	15	12	15	23	233
28	20	11	8.2	2.7	33	3.3	2.3	10	94	12	19	65
29	100	9.4	7.4	3.2	23	3.6	1.7	8.5	56	11	25	210
30	28	8.3	6.7	2.8	---	3.3	1.6	7.5	23	10	16	385
31	21	---	6.4	2.7	---	3.4	---	6.5	---	9.9	14	---
TOTAL	5029	787.7	528.0	136.6	3355.6	211.6	96.6	295.9	798.2	1044.9	1008.5	3811
MEAN	162	26.3	17.0	4.41	116	6.83	3.22	9.55	26.6	33.7	32.5	127
MAX	1360	211	101	15	1640	19	10	50	200	185	259	1310
MIN	14	8.3	6.4	2.7	1.6	3.3	1.6	1.5	8.5	9.9	6.8	11
AC-FT	9980	1560	1050	271	6660	420	192	587	1580	2070	2000	7560

CAL YR 1979 TOTAL 9192.85 MEAN 25.2 MAX 1360 MIN .37 AC-FT 18230
WTR YR 1980 TOTAL 17103.60 MEAN 46.7 MAX 1640 MIN 1.5 AC-FT 33920

NOTE.--No gage-height record May 1 to June 4.

16865000 PAGO RIVER NEAR ORDOT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT											
16...	1200	59	300	7.9	26.0	1.9	7.8	--	120	120	0
NOV											
28...	1000	9.4	360	8.1	26.0	.30	7.8	35	200	150	0
DEC											
19...	1200	24	225	7.9	25.0	11	7.8	K1600	5800	83	0
JAN											
16...	1200	3.7	385	7.9	24.8	1.0	8.2	K26	180	150	0
FEB											
21...	1230	1.8	365	7.9	26.0	.30	8.7	12	97	170	0
MAR											
24...	1330	4.3	--	8.0	28.0	.50	7.6	42	210	150	0
APR											
22...	1230	2.3	385	8.0	27.0	.65	6.4	5	150	150	0
JUN											
04...	1000	23	360	7.7	26.5	3.1	5.3	--	--	120	0
JUL											
01...	1030	18	300	8.0	27.0	3.1	7.2	82	860	120	0
22...	1230	28	325	8.0	28.0	9.8	7.8	670	4400	96	0
AUG											
26...	1015	24	340	7.8	26.5	2.6	7.2	--	--	130	0
26...	1030	--	--	--	--	--	--	92	--	--	--
SEP											
09...	1100	1270	150	8.1	25.5	95	--	>12000	>100000	36	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)
OCT											
16...	35	6.7	13	19	.5	15	1.9	120	6.2	15	.1
NOV											
28...	44	8.8	18	21	.6	20	1.7	160	10	15	.1
DEC											
19...	25	5.1	11	22	.5	12	1.3	91	6.4	10	.1
JAN											
16...	45	8.2	17	20	.4	18	1.4	170	1.4	14	.1
FEB											
21...	52	9.3	20	20	.7	22	1.6	180	7.4	17	.2
MAR											
24...	45	8.7	18	21	.6	--	1.8	150	2.8	15	.1
APR											
22...	45	8.7	19	22	.7	--	1.8	160	1.0	15	.1
JUN											
04...	37	7.7	16	22	.6	--	1.9	140	.7	14	.1
JUL											
01...	35	7.4	14	20	.6	--	1.5	140	2.0	14	.2
22...	29	5.8	12	21	.5	--	1.5	100	2.5	11	.2
AUG											
26...	39	7.9	17	22	.7	--	2.3	140	.2	19	.1
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	11	2.1	4.6	21	.3	--	1.5	40	5.0	4.7	.1

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

MARIANA ISLANDS, ISLAND OF GUAM

16865000 PAGO RIVER NEAR ORDOT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	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, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)
OCT											
18...	34	196	184	.27	28.6	.03	.05	.19	.20	.23	.26
NOV											
28...	38	216	232	.29	5.48	.03	.03	.02	.00	.02	.00
DEC											
19...	25	136	139	.19	8.81	.13	.13	.03	.02	.04	.03
JAN											
16...	37	228	226	.31	2.31	.02	.01	.00	.00	.00	.00
FEB											
21...	34	238	250	.32	1.16	.06	.03	.00	.02	.00	.03
MAR											
24...	36	218	217	.30	2.53	.08	.08	.04	.04	.05	.05
APR											
22...	33	230	220	.31	1.48	.01	.03	.04	.08	.05	.10
JUN											
04...	33	202	195	.27	12.5	.11	.16	.30	.33	.36	.43
JUL											
01...	33	195	191	.27	9.48	.00	.00	.06	.06	.07	.08
22...	30	173	153	.24	13.1	.10	.09	.19	.13	.23	.17
AUG											
26...	35	205	205	.28	13.3	.01	.00	.46	.45	.56	.58
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	13	66	67	.09	226	.38	.30	.01	.03	.01	.04

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT											
16...	.33	.19	.44	.52	.13	.39	.55	2.4	.010	.03	.000
NOV											
28...	.50	.52	.55	.52	.00	.52	.55	2.4	.000	.00	.000
DEC											
19...	.94	.80	.95	.97	.15	.82	1.1	4.9	.010	.03	.010
JAN											
16...	.61	.60	.61	.61	.01	.60	.63	2.8	.010	.03	.010
FEB											
21...	.00	.00	.03	.00	.00	.00	.04	.27	.010	.03	.000
MAR											
24...	.52	.52	.64	.56	.00	.56	.64	2.8	.020	.06	.020
APR											
22...	.51	.41	.52	.55	.06	.49	.56	2.5	.040	.12	.000
JUN											
04...	.62	.28	.77	.92	.31	.61	1.0	4.6	.030	.09	.010
JUL											
01...	.73	.14	.20	.79	.59	.20	.79	3.5	.010	.03	.010
22...	.78	.84	1.1	.97	.00	.97	1.1	4.7	.020	.06	.020
AUG											
26...	.74	.75	1.2	1.2	.00	1.2	1.2	4.9	.010	.03	.000
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	1.2	.62	.95	1.2	.55	.65	1.6	7.0	.060	.18	.010

16865000 PAGO RIVER NEAR ORDOT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
DEC											
19...	1200	0	0	0	100	90	6	<1	0	<1	0
MAR											
24...	1330	1	0	1	9	0	9	1	0	<1	20
JUL											
01...	1030	1	0	1	10	0	10	1	0	1	20
SEP											
09...	1100	1	0	1	--	--	7	--	--	<1	--

DATE	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)
DEC											
19...	0	0	<3	0	<3	0	0	0	540	480	60
MAR											
24...	20	0	2	0	<3	3	3	0	120	100	20
JUL											
01...	0	20	3	--	<3	19	16	3	240	190	50
SEP											
09...	--	0	--	--	<3	--	--	4	--	--	40

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
DEC										
19...	5	5	0	20	20	0	.0	.0	.0	0
MAR										
24...	2	2	0	50	10	40	.0	.0	.0	1
JUL										
01...	26	26	0	30	20	10	.1	.1	.0	20
SEP										
09...	--	--	0	--	--	2	.0	.0	.0	--

DATE	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC										
19...	0	0	0	0	0	0	0	7	0	7
MAR										
24...	1	0	0	0	0	1	0	60	57	<3
JUL										
01...	18	2	0	0	0	2	0	100	90	10
SEP										
09...	--	1	0	0	0	--	0	--	--	6

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

16865000 PAGO RIVER NEAR ORDOT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	DATE	TIME	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)
NOV			JUN		
28...	1000	0	04...	1000	0
DEC			JUL		
19...	1200	0	01...	1030	2
FEB			AUG		
21...	1230	0	26...	1015	0
MAR					
24...	1330	1			

DATE	TIME	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	DATE	TIME	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
OCT					APR				
16...	1200	2.2	--	--	22...	1230	5.5	--	--
NOV					JUN				
28...	1000	6.8	--	--	04...	1000	5.4	--	--
DEC					JUL				
19...	1200	--	4.6	.3	01...	1030	--	5.7	.1
JAN					22...	1230	4.0	--	--
16...	1200	3.8	--	--	AUG				
FEB					26...	1015	4.0	--	--
21...	1230	.8	--	--	SEP				
MAR					09...	1100	--	6.1	2.1
24...	1330	--	3.2	.1					

DATE	TIME	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	LENGTH OF EXPO-SURE (DAYS)
OCT								
16...	1200	360	--	--	--	--	--	--
NOV								
28...	1000	30	--	--	--	--	--	--
DEC								
19...	1200	86	.630	.550	.040	.000	2000	--
JAN								
16...	1200	55	--	--	--	--	--	--
FEB								
21...	1230	200	--	--	--	--	--	--
MAR								
24...	1330	130	--	--	--	--	--	--
APR								
22...	1230	13	--	--	--	--	--	--
JUN								
04...	1000	0	--	--	--	--	--	--
JUL								
01...	1600	1600	--	--	--	--	--	--
22...	1230	170	2.21	1.73	1.07	.260	449	21
AUG								
26...	1015	13	--	--	--	--	--	--
SEP								
09...	1100	260	--	--	--	--	--	--

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 .062 MM	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 .062 MM
OCT						APR					
16...	1200	54	2	.29	100	22...	1230	2.3	7	.04	100
NOV						JUN					
28...	1000	9.4	9	.23	100	04...	1000	23	8	.50	100
DEC						JUL					
19...	1200	24	19	1.2	100	01...	1030	18	4	.19	100
JAN						22...	1230	28	23	1.7	100
16...	1200	3.7	2	.02	100	AUG					
FEB						26...	1015	24	--	--	--
21...	1230	1.8	2	.01	100	26...	1030	--	5	--	100
MAR						SEP					
24...	1330	4.3	3	.03	100	09...	1100	1270	500	1710	67

MARIANA ISLANDS, ISLAND OF GUAM

16865000 PAGO RIVER NEAR ORDOT

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	OCT 16,79	NOV 28,79	DEC 19,79	JAN 16,80	FEB 21,80	MAR 24,80
TIME	1200	1000	1200	1200	1230	1330
TOTAL CELLS/ML	360	30	86	55	200	130
DIVERSITY: DIVISION	0.6	0.6	0.7	0.0	1.2	1.1
.CLASS	0.6	0.6	0.7	0.0	1.3	1.1
..ORDER	0.6	0.6	0.7	0.0	1.7	1.1
...FAMILY	0.6	2.0	2.4	0.8	2.4	2.6
....GENUS	0.6	2.1	2.6	0.8	2.4	2.7

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	5#	15	15#	18	--	-	5	2	20#	15
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	5	4
..OEDOGONIALES												
...OEDOGONIACEAE												
....OEDOGONIUM	--	-	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	5	2	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	51	14	--	-	--	-	--	-	25	13	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	1	4	25#	29	--	-	5	2	45#	35
....COCCONEIS	--	-	1	4	5	6	14#	25	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	--	-	--	-	--	-	5	4
....EPITHEMIA	--	-	--	-	--	-	--	-	5	2	--	-
....RHOPALODIA	--	-	--	-	--	-	--	-	10	5	--	-
...FRAGILARIACEAE												
....SYNEDRA	--	-	6#	19	15#	18	--	-	15	7	5	4
...GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	14#	46	5	6	41#	75	--	-	10	8
...NAVICULACEAE												
....NAVICULA	--	-	3	12	10	12	--	-	5	2	5	4
...NITZSCHIACEAE												
....NITZSCHIA	--	-	--	-	10	12	--	-	--	-	25#	19
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....OCHROMONAS	--	-	--	-	--	-	--	-	5	2	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-	10	8
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	15	7	--	-
...OSCILLATORIACEAE												
....OSCILLATORIA	310#	86	--	-	--	-	--	-	110#	52	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

16865000 PAGO RIVER NBAR ORDOT

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	APR 22,80	JUN 4,80	JUL 1,80	JUL 22,80	SEP 9,80
TIME	1230	1000	1030	1230	1100
TOTAL CELLS/ML	13	0	1600	170	260
DIVERSITY: DIVISION	0.0	0.0	0.1	1.1	0.3
.CLASS	0.0	0.0	0.1	1.1	0.3
..ORDER	0.0	0.0	0.2	1.1	0.3
...FAMILY	0.0	0.0	0.2	1.4	0.3
....GENUS	0.0	0.0	0.2	1.7	0.3

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	13	1	--	-	14	6
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
..OEDOGONIALES										
...OEDOGONIACEAE										
....OEDOGONIUM	--	-	--	-	--	-	13	8	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	13	8	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	--	-	--	-	--	-
....EPITHEMIA	--	-	--	-	--	-	--	-	--	-
....RHOPALODIA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	--	-	--	-	26#	15	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	--	-	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	13#100		--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	100#	62	--	-
....ANACYSTIS	--	-	--	-	39	2	13	8	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	1500#	97	--	-	240#	94

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

16890600 ADEIDDO RIVER, BABELTHUAP

LOCATION.--Lat 07°36'01" N., long 134°35'38" E., Hydrologic Unit 20100006, on right bank at Ngardmau, 0.3 mi (0.5 km) upstream from left-bank tributary, and 0.6 mi (1.0 km) northwest of Mount Megilon.

DRAINAGE AREA.--4.43 mi² (11.47 km²).

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR HI-75-1: 1970(M), 1972-73(P).

GAGE.--Water-stage recorder. Altitude of gage is 15 ft (4.6 km), from topographic map.

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

AVERAGE DISCHARGE.--11 years, 33.1 ft³/s (0.937 m³/s), 23,980 acre-ft/yr (29.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) Jan. 22, 1975, gage height, 15.44 ft (4.706 m), from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of field estimate at gage height 15.44 ft (4.706 m); minimum, 2.7 ft³/s (0.076 m³/s) Mar. 24, 25, 31, Apr. 1, 1973, Apr. 28, 29, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	1200	763	21.6	8.10	2.469	July 3	0530	*1660	47.0	*12.62	3.847
Jan. 29	0630	834	23.6	8.47	2.582	July 22	1100	842	23.8	8.51	2.594
Feb. 17	1330	795	22.5	8.27	2.521	Sept. 25	0300	663	18.8	7.56	2.304

Minimum discharge, 7.8 ft³/s (0.22 m³/s) Apr. 14.

CORRECTIONS.--Apr. 28, 29, 1977 were not included in the 1977-79 data reports as days with minimum discharge for the period of record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	17	20	23	49	27	9.5	15	13	36	28	40
2	125	16	20	21	43	25	9.7	14	12	83	36	30
3	71	17	19	20	39	23	9.7	14	12	405	23	25
4	56	20	18	20	36	21	12	13	12	121	20	67
5	47	18	18	19	39	20	11	17	12	92	42	107
6	43	50	17	32	35	20	10	16	12	79	24	106
7	43	117	17	25	30	19	12	35	12	72	23	95
8	58	40	17	21	31	19	11	24	15	60	22	74
9	47	38	17	19	79	16	9.2	19	15	50	20	60
10	49	29	16	19	55	16	9.2	17	20	44	32	51
11	41	26	16	19	46	18	10	16	42	61	30	45
12	39	25	15	19	40	16	8.4	16	59	51	22	40
13	48	23	15	22	34	16	8.2	17	28	34	51	36
14	48	22	14	19	34	17	8.0	17	22	32	82	33
15	43	22	14	17	30	14	8.4	14	20	29	41	30
16	39	21	26	17	28	13	12	15	20	28	36	29
17	36	22	17	19	295	12	18	14	19	28	41	26
18	38	24	31	27	98	12	18	16	19	26	34	25
19	31	20	28	24	99	18	9.9	14	18	33	30	30
20	31	19	41	21	72	18	9.0	20	21	24	27	25
21	29	17	27	19	61	14	8.6	14	49	22	26	22
22	27	16	25	18	53	15	8.4	13	40	135	24	20
23	25	15	39	16	49	14	39	14	33	41	23	20
24	23	15	39	22	49	15	14	14	51	34	24	23
25	22	15	27	16	40	12	12	13	35	30	24	110
26	21	78	23	20	36	12	12	39	30	29	62	58
27	22	43	21	28	34	12	67	25	30	28	25	47
28	21	31	20	37	31	11	23	17	34	26	26	34
29	19	25	19	229	28	11	18	15	39	25	22	31
30	20	22	31	77	---	10	16	14	57	23	22	48
31	20	---	31	58	---	9.7	---	14	---	22	35	---
TOTAL	1299	863	698	963	1593	495.7	431.2	535	801	1803	977	1387
MEAN	41.9	28.8	22.5	31.1	54.9	16.0	14.4	17.3	26.7	58.2	31.5	46.2
MAX	125	117	41	229	295	27	67	39	59	405	82	110
MIN	19	15	14	16	28	9.7	8.0	13	12	22	20	20
AC-FT	2580	1710	1380	1910	3160	983	855	1060	1590	3580	1940	2750

CAL YR 1979 TOTAL 12744.0 MEAN 34.9 MAX 604 MIN 6.1 AC-FT 25280
WTR YR 1980 TOTAL 11845.9 MEAN 32.4 MAX 405 MIN 8.0 AC-FT 23500

16890900 TABAGATEN RIVER, BABELTHUAP

LOCATION.--Lat 07°27'00" N., long 134°32'05" E., Hydrologic Unit 20100006, on left bank 0.3 mi (0.5 km) downstream from unnamed tributary, 0.7 mi (1.1 km) northeast of Mount Karukail, and 1.0 mi (1.6 km) south of Ngatpang.

DRAINAGE AREA.--6.34 mi² (16.42 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6.1 m), from topographic map.

REMARKS.--Records fair except those above 150 ft³/s (4.25 m³/s), which are poor. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 48.7 ft³/s (1.379 m³/s), 35,280 acre-ft/yr (43.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,580 ft³/s (101 m³/s) Dec. 23, 1973, gage height, 8.79 ft (2.679 m), from rating curve extended above 124 ft³/s (3.51 m³/s); minimum, 0.80 ft³/s (0.023 m³/s) Mar. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s), and maximum (*), from rating curve extended above 124 ft³/s (3.51 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 14	1530	1100	31.2	6.45	1.966	Feb. 17	1100	*2120	60.0	*7.70	2.347
Nov. 8	0030	975	27.6	6.19	1.887	Apr. 17	1900	1140	32.3	6.49	1.978
Dec. 23	2030	1100	31.2	6.44	1.963	Aug. 13	2330	970	27.5	6.14	1.871

Minimum discharge, 8.5 ft³/s (0.24 m³/s) Mar. 31, Apr. 1.

CORRECTIONS.--The peak above base Jan. 16, 1974: 1,580 ft³/s (44.7 m³/s) gage height, 7.15 ft (2.179 m) was not previously published.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	46	22	36	19	24	9.1	40	22	74	20	100
2	249	37	21	34	18	22	25	34	18	210	24	50
3	135	33	22	30	17	22	19	30	18	294	20	45
4	91	29	19	28	19	20	23	29	18	143	20	85
5	68	27	17	27	21	20	21	113	17	97	22	130
6	55	60	19	31	18	23	19	77	17	82	18	90
7	54	119	20	24	18	18	39	205	17	67	44	70
8	52	182	17	21	17	17	20	100	34	56	51	60
9	63	162	16	20	94	15	14	70	28	45	32	45
10	143	83	15	19	50	14	18	52	114	42	26	40
11	81	56	14	18	142	18	13	45	52	107	85	35
12	54	46	13	17	79	21	12	42	39	50	40	30
13	47	42	13	27	41	42	12	37	34	40	185	30
14	293	38	13	20	36	17	11	39	26	36	256	25
15	123	37	25	17	30	14	12	33	25	49	80	25
16	76	31	70	16	35	12	15	31	22	34	55	20
17	58	30	28	18	436	11	198	28	22	30	77	25
18	69	34	27	33	154	12	74	50	25	30	66	50
19	46	37	60	35	108	13	33	28	125	42	45	25
20	43	31	36	27	66	79	26	41	117	28	39	60
21	37	29	26	20	50	24	22	58	76	26	36	35
22	36	23	23	17	45	18	22	34	72	159	82	170
23	63	20	169	15	39	15	265	27	63	42	41	60
24	37	20	130	27	41	14	94	25	53	34	34	50
25	31	18	54	20	34	14	55	25	43	30	32	120
26	28	39	41	22	32	13	44	75	39	48	69	120
27	27	51	34	18	31	12	147	31	56	38	36	115
28	26	63	31	18	32	11	60	26	122	27	40	60
29	24	31	29	46	27	10	45	23	100	25	90	48
30	151	25	46	26	---	10	49	22	185	22	40	58
31	110	---	86	20	---	9.4	---	26	---	22	130	---
TOTAL	2601	1479	1156	747	1949	584.4	1416.1	1496	1599	2029	1835	1876
MEAN	83.9	49.3	37.3	24.1	67.2	18.9	47.2	48.3	53.3	65.5	59.2	62.5
MAX	293	182	169	46	636	79	265	205	185	294	256	170
MIN	24	18	13	15	17	9.4	9.1	22	17	22	18	20
AC-FT	5160	2930	2290	1480	3870	1160	2810	2970	3170	4020	3640	3720

CAL YR 1979 TOTAL 18754.2 MEAN 51.4 MAX 1280 MIN 6.5 AC-FT 37200
WTR YR 1980 TOTAL 18767.5 MEAN 51.3 MAX 636 MIN 9.1 AC-FT 37230

16891300 GADEN RIVER, BABELTHUAP

LOCATION.--Lat 07°22'56" N., long 134°33'42" E., Hydrologic Unit 20100006, on left bank 1,000 ft (305 m) upstream from confluence with Kumekumeyel River, 1.0 mi (1.6 km) southwest of Mount Kabekobekushi, and 1.8 mi (2.9 km) north of Airai.

DRAINAGE AREA.--4.23 mi² (10.96 km²).

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR HI-79-2: 1970-72(P), 1973(M), 1974-78(P).

GAGE.--Water-stage recorder. Altitude of zero of gage is 2 ft (0.6 m), from stadia survey. Prior to Dec. 9, 1974, at site 300 ft (91 m) downstream at datum 0.30 ft (0.09 m) lower.

REMARKS.--Records good. Small amount of water is pumped from site 300 ft (91 m) upstream from station for irrigation 0.5 mi (0.8 km) downstream. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report. Continuous record of rainfall is obtained near station.

AVERAGE DISCHARGE.--11 years, 32.3 ft³/s (0.915 m³/s), 23,400 acre-ft/yr (28.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) Apr. 13, 1979, gage height, 18.2 ft (5.54 m), from rating curve extended above 118 ft³/s (3.34 m³/s) on basis of measurement at gage height 13.0 ft (3.962 m); minimum, 1.6 ft³/s (0.045 m³/s) Mar. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s), and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 14	1530	824	23.3	11.20	3.414	Feb. 17	1200	*1390	39.4	*15.15	4.618
Nov. 9	1430	800	22.7	11.00	3.353	Aug. 13	2400	930	26.3	12.04	3.670
Dec. 23	2100	904	25.6	11.84	3.609						

Minimum discharge, 9.0 ft³/s (0.25 m³/s) Apr. 1, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	18	19	22	13	18	9.6	27	14	38	18	43
2	103	16	22	23	12	16	23	22	12	138	19	26
3	56	16	19	21	12	17	16	19	11	145	16	23
4	44	14	16	20	12	15	21	19	12	73	16	38
5	37	14	16	18	13	14	15	47	11	53	21	52
6	36	39	15	18	13	20	13	28	11	46	42	41
7	34	38	17	16	11	14	16	118	14	40	36	32
8	34	72	15	15	11	13	18	52	20	34	24	28
9	34	129	14	14	55	12	13	36	12	30	20	24
10	53	41	13	14	30	12	13	31	25	33	22	22
11	36	30	13	13	72	18	12	28	21	94	21	21
12	30	26	12	13	42	18	10	25	23	41	18	20
13	29	23	11	24	24	26	10	23	15	31	90	18
14	162	21	11	15	21	14	9.6	23	13	30	170	18
15	60	20	17	13	18	12	11	20	13	43	42	17
16	42	19	21	12	20	11	10	19	12	28	32	16
17	37	18	15	15	462	10	63	20	12	25	48	17
18	53	30	24	16	92	15	32	40	11	28	34	44
19	33	21	26	21	63	17	17	20	23	30	27	20
20	31	19	17	19	44	64	14	21	50	44	25	34
21	28	18	14	14	36	20	13	21	37	26	23	23
22	32	17	14	12	32	16	12	17	34	48	30	54
23	28	16	133	12	28	14	87	16	29	28	24	26
24	25	16	108	17	28	13	27	16	26	25	20	22
25	22	15	36	13	24	13	20	16	21	23	19	36
26	21	43	27	14	22	12	20	19	19	26	28	38
27	20	55	23	12	21	13	89	15	27	24	19	36
28	20	24	21	11	23	11	32	14	68	20	29	25
29	18	32	20	38	19	11	25	13	93	19	24	22
30	25	24	25	17	---	10	28	13	80	18	19	33
31	24	---	38	14	---	10	---	20	---	17	60	---
TOTAL	1299	884	792	516	1273	499	699.2	818	769	1298	1036	869
MEAN	41.9	29.5	25.5	16.6	43.9	16.1	23.3	26.4	25.6	41.9	33.4	29.0
MAX	162	129	133	38	462	64	89	118	93	145	170	54
MIN	18	14	11	11	11	10	9.6	13	11	17	16	16
AC-FT	2580	1750	1570	1020	2520	990	1390	1620	1530	2570	2050	1720

CAL YR 1979 TOTAL 12133.1 MEAN 33.2 MAX 1000 MIN 4.7 AC-FT 24070
WTR YR 1980 TOTAL 10752.2 MEAN 29.4 MAX 462 MIN 9.6 AC-FT 21330

16891310 KUMBKUMBYBL RIVER, BABBLTHUAP

LOCATION.--Lat 07°23'15" N., long 134°33'05" E., Hydrologic Unit 20100006, 0.75 mi (1.2 km) upstream from confluence with Gaden River and 1.6 mi (2.6 km) west of Mount Kabekobekushi.

DRAINAGE AREA.--1.27 mi² (3.29 km²).

PERIOD OF RECORD.--September 1978 to current year. Low-flow partial-record station operated "at mouth" 1970-78.

GAGE.--Water-stage recorder. Altitude of gage is 96.44 ft (29.39 m), from stadia survey.

REMARKS.--Records good. No diversion above gage. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,560 ft³/s (44.2 m³/s) Apr. 13, 1979, gage height, 10.53 ft (3.210 m), from rating curve extended above 106 ft³/s (3.00 m³/s) on basis of slope-area measurement at gage height 10.53 ft (3.210 m); minimum, 1.1 ft³/s (0.031 m³/s) Feb. 26, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (99.1 m³/s) and maximum (*), from rating curve as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 14	1430	559	15.8	6.87	2.094	Dec. 23	2000	409	11.6	6.07	1.850
Nov. 7	2330	434	12.3	6.21	1.893	Feb. 17	1100	*840	23.8	*8.15	2.484
Nov. 9	1300	409	11.6	6.07	1.850	Aug. 13	2300	595	16.9	7.05	2.149
Nov. 27	1300	391	11.1	5.97	1.820						

Minimum discharge, 2.2 ft³/s (0.062 m³/s) Mar. 30 to Apr. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	7.0	6.2	6.8	3.7	4.6	2.2	8.0	3.7	16	4.3	16
2	24	6.0	5.8	7.0	3.5	4.3	4.6	6.2	3.4	59	4.3	9.1
3	14	5.6	5.4	6.2	3.2	4.4	3.4	5.2	3.2	55	3.7	8.2
4	11	5.2	4.6	6.2	3.2	3.7	6.9	6.3	3.0	28	3.4	16
5	9.4	4.6	4.3	5.2	3.5	3.5	3.9	12	2.7	20	4.2	20
6	9.5	12	4.1	5.6	3.2	5.0	3.9	8.8	2.7	16	9.4	15
7	8.2	25	4.6	4.4	2.8	3.4	4.1	36	4.8	13	11	12
8	8.8	23	3.9	4.3	2.7	3.0	5.8	16	5.8	11	17	9.4
9	6.6	51	3.7	4.1	22	2.8	3.7	14	3.4	8.6	7.8	8.2
10	13	18	3.5	3.7	9.2	2.7	3.5	9.6	16	9.7	8.5	7.3
11	8.9	13	3.4	3.7	19	4.5	4.3	8.2	5.4	36	6.0	6.4
12	7.3	10	3.2	3.5	15	4.3	3.0	6.8	6.0	13	5.2	6.0
13	7.3	8.4	3.2	7.6	7.7	7.5	2.7	6.4	4.1	8.9	31	5.4
14	48	7.5	2.8	3.9	6.8	3.2	2.6	6.8	3.5	8.5	42	5.0
15	17	6.8	6.1	3.4	5.2	2.8	2.8	5.6	3.5	12	12	4.3
16	11	6.2	8.6	3.2	7.9	2.6	2.7	5.0	4.6	7.3	9.6	3.9
17	9.4	5.8	4.4	4.4	163	2.4	19	5.6	3.7	6.4	14	4.1
18	14	9.0	7.4	4.4	31	3.0	9.2	19	4.4	9.9	9.4	9.0
19	8.4	7.2	8.7	6.3	21	4.9	5.0	6.8	4.5	9.5	7.5	9.2
20	8.2	6.2	5.6	4.8	14	20	4.1	5.8	16	9.3	7.6	6.4
21	7.0	5.9	4.6	3.7	11	5.0	3.9	6.4	15	6.4	6.2	5.2
22	9.0	4.4	4.1	3.4	9.4	3.9	3.5	5.2	13	12	9.8	36
23	11	4.1	33	3.2	8.2	3.4	27	4.6	11	6.8	7.5	11
24	7.7	4.1	37	4.3	8.2	3.0	8.0	4.3	8.7	6.0	5.8	7.5
25	6.2	3.7	12	3.4	6.8	2.8	5.8	4.4	7.0	5.6	5.2	13
26	5.6	13	8.9	3.7	6.0	2.7	5.8	6.8	6.0	7.0	10	15
27	5.6	32	7.3	3.4	5.8	3.0	36	4.3	14	6.3	5.6	12
28	5.6	10	6.4	3.4	6.1	2.4	11	3.7	33	4.6	8.8	8.4
29	4.8	7.3	6.2	12	5.0	2.4	8.2	3.7	40	4.4	7.9	7.7
30	23	6.8	6.8	5.0	---	2.2	7.5	3.5	30	5.6	5.8	11
31	11	---	11	3.9	---	2.2	---	5.6	---	3.9	20	---
TOTAL	364.5	328.8	236.8	148.1	414.1	125.6	214.1	250.6	287.1	425.7	310.5	307.7
MEAN	11.8	11.0	7.64	4.78	14.3	4.05	7.14	8.08	9.40	13.7	10.0	10.3
MAX	48	51	37	12	163	20	36	36	40	59	42	36
MIN	4.8	3.7	2.8	3.2	2.7	2.2	2.2	3.5	2.7	3.9	3.4	3.9
AC-FT	723	652	470	294	821	249	425	497	560	844	616	610

CAL YR 1979 TOTAL 3622.3 MEAN 9.92 MAX 397 MIN 1.2 AC-FT 7180
WTR YR 1980 TOTAL 3408.6 MEAN 9.31 MAX 163 MIN 2.2 AC-FT 6760

16891400 SOUTH FORK NGARDOK RIVER, BABELTHUAP

LOCATION.--Lat 07°26'15" N., long 134°35'03" E., Hydrologic Unit 20100006, on right bank 0.3 mi (0.5 km) from left-bank tributary, 0.6 mi (1.0 km) northwest of Garasho Mountain, and 1.3 mi (2.1 km) west of village of Ngarsul.

DRAINAGE AREA.--2.26 mi^2 (5.85 km^2).

PERIOD OF RECORD.--March 1971 to current year.

REVISED RECORDS.--WDR HI-75-1: 1971(M), 1972, 1973(P), 1974.

GAGE.--Water-stage recorder. Altitude of gage is 65 ft (20 m), from topographic map.

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

AVERAGE DISCHARGE.--9 years, 19.5 ft^3/s (0.552 m^3/s), 14,130 acre-ft/yr (17.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft^3/s (163 m^3/s), Dec. 13, 1974, gage height, 9.19 ft (2.801 m), from rating curve extended above 65 ft^3/s (1.84 m^3/s) on basis of field estimate at gage height 7.57 ft (2.307 m); minimum, 0.55 ft^3/s (0.016 m^3/s) Mar. 9, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft^3/s (21.2 m^3/s), revised, and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 14	1500	1660	47.0	5.38	1.640	Apr. 17	1800	770	21.8	3.98	1.213
Nov. 9	1330	982	27.8	4.37	1.332	June 19	1500	770	21.8	3.98	1.213
Dec. 23	2000	2020	57.2	5.83	1.777	July 22	1030	904	25.6	4.24	1.292
Feb. 17	1030	*2160	61.2	*5.99	1.826	Aug. 13	2300	1320	37.4	4.90	1.494

Minimum discharge, 2.6 ft^3/s (0.074 m^3/s) June 6-8.

CORRECTIONS.--The peak above base Jan. 17, 1974: 1,510 ft^3/s (42.8 m^3/s) gage height, 5.17 ft (1.576 m) was not previously published. The date of the minimum discharge for period of record is Mar. 9, 1973. The date published in WDR HI-76, 77-2, 78-2, 79-2 was incorrect. The date of peak above base Dec. 29, 1975 was published as Dec. 30 in WRD HI-75. The discharge and gage height of peak above base of Dec. 20, 1975 are 1,130 ft^3/s (32.0 m^3/s) 4.62 ft (1.408 m). The previously published figures were incorrect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	10	8.7	13	6.2	9.3	4.4	20	4.0	23	11	38
2	70	9.9	9.9	12	5.7	8.0	11	12	3.2	79	11	19
3	40	8.7	8.0	10	5.2	8.0	7.9	10	3.6	113	9.3	16
4	30	8.0	7.4	9.9	6.2	7.4	8.0	15	3.2	43	8.7	28
5	25	7.4	6.2	9.9	6.8	6.8	6.2	59	2.9	30	9.3	57
6	23	15	8.0	11	5.2	8.4	4.8	19	2.9	28	11	32
7	22	23	6.4	8.0	4.8	6.2	12	70	2.9	21	35	27
8	24	35	6.2	8.7	4.8	6.2	7.4	31	6.6	18	13	20
9	36	95	6.2	8.0	39	5.2	5.2	20	4.6	14	12	17
10	113	21	5.2	7.4	22	5.2	6.8	17	10	14	11	15
11	41	15	4.8	7.4	85	8.2	4.8	14	10	37	30	13
12	28	13	4.8	6.8	29	10	4.4	12	11	18	15	12
13	25	10	4.8	11	16	15	4.4	12	6.2	12	136	11
14	239	9.9	4.0	7.4	13	6.8	4.0	11	4.4	15	140	10
15	54	9.3	8.5	6.2	10	5.7	5.2	9.9	4.4	23	32	9.9
16	36	8.7	11	5.2	13	5.2	4.8	8.7	4.0	14	23	9.3
17	27	8.7	7.4	6.2	463	4.8	105	8.0	3.6	10	54	10
18	31	9.3	11	8.7	54	6.2	24	11	4.0	11	25	18
19	20	8.7	16	15	38	10	11	7.4	60	15	18	10
20	19	8.0	9.3	9.9	24	40	9.3	6.8	31	25	16	28
21	17	8.0	7.4	7.4	19	12	8.0	6.8	23	12	14	14
22	20	6.2	6.8	5.2	17	8.7	8.0	6.2	32	90	16	55
23	15	5.7	184	5.7	14	6.8	109	5.7	20	21	13	20
24	14	5.7	60	11	14	6.2	20	5.2	17	18	11	19
25	12	5.7	26	7.5	12	5.7	14	7.4	14	15	10	40
26	10	37	22	6.8	10	5.2	13	9.9	15	20	20	40
27	10	28	12	6.2	10	5.7	58	6.2	16	16	12	31
28	10	11	10	5.2	11	4.4	20	4.8	40	12	12	18
29	9.3	22	9.9	20	9.3	4.8	14	4.8	58	11	19	15
30	28	9.9	18	9.3	---	4.4	20	4.8	61	10	11	21
31	14	---	34	6.8	---	4.4	---	4.4	---	9.9	54	---
TOTAL	1122.3	472.8	544.3	272.8	967.2	250.9	534.6	440.0	478.5	797.9	812.3	673.2
MEAN	36.2	15.8	17.6	8.80	33.4	8.09	17.8	14.2	16.0	25.7	26.2	22.4
MAX	239	95	184	20	463	40	109	70	61	113	140	57
MIN	9.3	5.7	4.0	5.2	4.8	4.4	4.0	4.4	2.9	9.9	8.7	9.3
AC-FT	2230	938	1080	541	1920	498	1060	873	949	1580	1610	1340

CAL YR 1979 TOTAL 7818.0 MEAN 21.4 MAX 923 MIN 2.0 AC-FT 15510
WTR YR 1980 TOTAL 7366.8 MEAN 20.1 MAX 463 MIN 2.9 AC-FT 14610

CAROLINE ISLANDS, YAP ISLANDS

16892400 ARINGEL STREAM, YAP

LOCATION.--Lat 09°31'01" N., long 138°05'11" E., Hydrologic Unit 20100006, on right bank at Aringel and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.24 mi² (0.62 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 35 ft (10.7 m), from topographic map.

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

AVERAGE DISCHARGE.--12 years, 1.08 ft³/s (0.031 m³/s), 782 acre-ft/yr (965,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 520 ft³/s (14.7 m³/s) Sept. 14, 1978, gage height, 7.05 ft (2.149 m), from floodmark in well, from rating curve extended above 20 ft³/s (0.57 m³/s); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*), from rating curve extended above 20 ft³/s (0.57 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	2400	202	5.72	4.93	1.503	July 1	0100	373	10.56	6.12	1.865
May 22	1000	240	6.80	5.23	1.594	July 4	0400	*374	10.59	*6.13	1.868

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	.19	.03	.04	.00	.02	.28	.04	.65	24	.03	.14
2	21	1.0	.02	.10	.00	.01	2.1	.02	.47	1.3	.03	.08
3	1.4	9.3	.01	.04	.00	.01	11	.01	.16	1.4	2.2	.07
4	.29	5.3	.01	.04	.00	.00	.53	.01	.06	16	.21	5.5
5	.19	.44	.01	.04	.00	.00	.17	.01	.04	.65	.10	9.5
6	7.1	.21	.01	.04	.00	.00	.07	.01	.03	.87	.05	2.6
7	6.0	2.0	.01	.03	.00	.00	.04	.01	.02	2.3	.06	1.9
8	6.8	.93	.01	.02	.01	.00	.03	.01	.13	.93	.05	.65
9	2.0	.53	.01	.01	1.1	.00	.02	1.6	.23	1.3	.03	.27
10	3.3	.41	.03	.01	.70	.00	.01	1.3	.14	.53	.02	.14
11	.65	.21	.06	.01	.11	.00	.01	.27	.45	.33	.02	.07
12	.31	.10	.03	.01	.06	.00	.01	.85	.16	.19	.03	.08
13	.16	.06	.01	.01	.03	.00	.00	.85	.06	.11	.03	2.1
14	.10	.04	.01	.00	.02	.00	.00	.19	.03	15	.02	.44
15	.07	.02	.01	.00	.02	.00	.00	.10	.03	.73	.01	.39
16	.04	.02	.01	.00	.01	.00	.01	.10	.08	2.3	.01	.23
17	.03	.01	.01	.00	.01	.00	.00	.11	.08	7.4	.23	3.6
18	.02	.01	12	.00	.01	.51	.00	.06	.04	6.1	.21	1.2
19	.02	.01	14	.00	.00	4.8	.00	.03	.04	.73	5.1	.29
20	.01	.01	.77	.00	.00	9.2	.00	.02	.24	8.2	.77	.14
21	.01	.01	.44	.00	.00	2.0	.00	.02	3.6	8.0	2.7	.61
22	.01	.00	2.1	.00	.00	.29	.00	28	1.8	4.0	.69	.54
23	.01	.00	6.8	.00	.66	.13	.00	.65	.37	.44	.37	.63
24	.01	.01	22	.00	.44	.06	.00	.17	3.2	.25	.19	1.1
25	.01	.01	.69	.00	.21	.03	.00	.10	1.5	.11	4.1	.53
26	.01	.01	.25	.00	.08	.02	.00	.08	.53	.11	1.1	1.1
27	.03	2.4	.14	.00	.04	.02	.01	.08	3.1	.08	3.3	3.5
28	.02	.41	.10	.00	.02	.01	.01	.05	7.9	.22	.61	2.2
29	.14	.13	.07	.00	.02	.01	.01	.03	4.6	.13	1.7	.41
30	5.7	.05	.04	.00	---	.01	.14	.03	.86	.06	1.4	16
31	.65	---	.04	.00	---	.01	---	.23	---	.04	.44	---
TOTAL	58.49	23.83	59.73	.40	3.55	17.14	14.45	35.04	30.60	103.81	25.81	56.01
MEAN	1.89	.79	1.93	.013	.12	.55	.48	1.13	1.02	3.35	.83	1.87
MAX	21	9.3	22	.10	1.1	9.2	11	28	7.9	24	5.1	16
MIN	.01	.00	.01	.00	.00	.00	.00	.01	.02	.04	.01	.07
AC-FT	116	47	118	.8	7.0	34	29	70	61	206	51	111

CAL YR 1979 TOTAL 391.81 MEAN 1.07 MAX 26 MIN .00 AC-FT 777
WTR YR 1980 TOTAL 428.86 MEAN 1.17 MAX 28 MIN .00 AC-FT 851

16892800 DALOLAB STREAM, YAP

LOCATION.--Lat 09°31'04" N., long 138°06'04" E., Hydrologic Unit 20100006, on left bank at Talagu and 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--0.07 mi² (0.18 km²).

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

REVISED RECORDS.--WDR HI-79-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 150 ft (46 m), from topographic map.

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

AVERAGE DISCHARGE.--12 years, 0.364 ft³/s (0.010 m³/s), 264 acre-ft/yr (326,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180 ft³/s (5.10 m³/s) Sept. 15, 1973, gage height, 4.80 ft (1.463 m), from floodmark in well, from rating curve extended above 17 ft³/s (0.48 m³/s); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s (2.12 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	2230	*128	3.62	*4.24	1.292	July 1	0100	114	3.23	4.06	1.237
Oct. 30	1600	79	2.24	3.55	1.082	July 4	0430	116	3.29	4.08	1.244
May 22	0930	89	2.52	3.70	1.128						

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	.02	.00	.01	.00	.01	.01	.00	.17	8.7	.01	.04
2	5.9	.45	.00	.01	.00	.01	.08	.00	.14	.49	.01	.02
3	.22	3.2	.00	.00	.00	.00	2.7	.00	.03	.83	1.6	.01
4	.03	1.4	.00	.00	.00	.00	.12	.00	.03	6.5	.05	2.0
5	.01	.10	.00	.00	.00	.00	.02	.00	.02	.22	.02	2.5
6	2.6	.03	.00	.00	.00	.00	.01	.00	.01	.27	.01	1.2
7	2.0	1.0	.00	.00	.00	.00	.00	.00	.01	.96	.02	1.0
8	1.9	.24	.00	.00	.00	.00	.00	.00	.04	.33	.02	.25
9	.49	.17	.00	.00	.18	.00	.00	.78	.04	.56	.02	.08
10	.46	.05	.00	.00	.08	.00	.00	.40	.03	.14	.01	.04
11	.12	.02	.00	.00	.01	.00	.00	.02	.08	.06	.01	.02
12	.02	.01	.00	.00	.01	.00	.00	.51	.03	.03	.01	.10
13	.01	.02	.00	.00	.01	.00	.00	.12	.02	.01	.01	1.0
14	.01	.02	.00	.00	.00	.00	.00	.02	.01	4.8	.01	.30
15	.00	.01	.00	.00	.00	.00	.00	.01	.01	.19	.01	.20
16	.00	.01	.00	.00	.00	.00	.00	.02	.08	.78	.01	.05
17	.00	.01	.00	.00	.00	.00	.00	.02	.10	3.1	.02	1.0
18	.00	.01	3.1	.00	.00	.26	.00	.01	.03	2.4	.01	.36
19	.00	.01	4.4	.00	.00	1.6	.00	.00	.03	.22	1.4	.05
20	.00	.00	.24	.00	.00	3.4	.00	.00	.26	2.6	.12	.03
21	.00	.00	.19	.00	.00	.76	.00	.00	1.3	2.2	.41	.18
22	.00	.00	.70	.00	.00	.04	.00	8.1	.40	1.4	.12	.19
23	.00	.00	6.6	.00	.14	.02	.00	.12	.12	.08	.04	.17
24	.00	.00	6.4	.00	.10	.01	.00	.02	1.1	.04	.02	.04
25	.00	.00	.14	.00	.04	.01	.00	.02	.54	.02	3.8	.04
26	.00	.00	.01	.00	.02	.00	.00	.01	.22	.02	.30	.15
27	.01	.27	.01	.00	.01	.00	.00	.01	.98	.03	1.5	.30
28	.00	.04	.01	.00	.01	.00	.00	.01	2.4	.06	.22	.03
29	.01	.01	.00	.00	.01	.00	.00	.01	2.3	.03	.81	.02
30	2.9	.00	.00	.00	---	.00	.00	.01	.48	.02	1.3	2.4
31	.14	---	.00	.00	---	.00	---	.11	---	.02	.14	---
TOTAL	21.13	7.10	21.80	.02	.62	6.12	2.94	10.33	11.01	37.11	12.04	13.77
MEAN	.68	.24	.70	.001	.021	.20	.098	.33	.37	1.20	.39	.46
MAX	5.9	3.2	6.6	.01	.18	3.4	2.7	8.1	2.4	8.7	3.8	2.5
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.01	.01
AC-FT	42	14	43	.04	1.2	12	5.8	20	22	74	24	27

CAL YR 1979 TOTAL 127.90 MEAN .35 MAX 9.0 MIN .00 AC-FT 254
WTR YR 1980 TOTAL 143.99 MEAN .39 MAX 8.7 MIN .00 AC-FT 286

16892900 PEMGOY STREAM, YAP

LOCATION.--Lat 09°31'07" N., long 138°06'18" E., Hydrologic Unit 20100006, on right bank at Talagu, 100 ft (30 m) upstream from Talagu Stream, and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--0.14 mi^2 (0.36 km^2).

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

REVISED RECORDS.--WDR HI-79-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Mar. 30, 1974. Altitude of gage is 100 ft (30 m), from topographic map.

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

AVERAGE DISCHARGE.--12 years, 0.585 ft^3/s (0.017 m^3/s), 424 acre-ft/yr (523,000 m^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 314 ft^3/s (8.89 m^3/s) Sept. 14, 1978, gage height, 5.26 ft (1.603 m), from floodmarks, from rating curve extended above 15 ft^3/s (0.42 m^3/s); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft^3/s (1.98 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	2300	*234	6.63	*4.68	1.426	July 1	a0100	a150	4.25	-	-
Oct. 30	1500	90	2.55	3.28	1.000	July 4	a0400	179	5.07	4.22	1.286
May 22	0830	88	2.49	3.25	.991						

No flow Feb. 2.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	.09	.01	.02	.01	.01	.02	.01	.18	14	.03	.08
2	9.9	.66	.01	.02	.00	.01	.10	.01	.09	.75	.03	.05
3	1.4	4.5	.01	.01	.01	.01	3.1	.01	.03	1.0	2.8	.04
4	.14	2.7	.01	.01	.01	.01	.32	.01	.02	10	.10	2.6
5	.07	.24	.01	.02	.01	.01	.03	.01	.02	.35	.05	5.6
6	3.6	.08	.01	.02	.01	.01	.02	.01	.02	.40	.04	2.1
7	3.7	1.9	.01	.01	.01	.01	.01	.01	.01	1.5	.04	1.5
8	3.2	.75	.01	.01	.01	.01	.01	.01	.06	.50	.04	.38
9	2.1	.38	.01	.01	.15	.01	.01	.75	.06	.90	.03	.11
10	1.1	.11	.01	.01	.16	.01	.01	.89	.03	.20	.03	.06
11	.42	.06	.03	.01	.02	.01	.01	.03	.12	.10	.02	.03
12	.11	.04	.02	.01	.01	.01	.01	.69	.05	.05	.03	.15
13	.07	.03	.01	.01	.01	.01	.01	.50	.03	.03	.03	1.7
14	.05	.03	.01	.01	.01	.01	.01	.04	.02	7.5	.03	.64
15	.04	.02	.01	.01	.01	.01	.01	.02	.02	.30	.02	.34
16	.03	.02	.01	.01	.01	.01	.02	.02	.12	1.2	.02	.11
17	.03	.01	.01	.02	.01	.01	.01	.02	.15	5.0	.09	1.9
18	.03	.01	4.3	.01	.01	.29	.01	.01	.05	3.5	.08	1.2
19	.03	.01	6.3	.01	.01	2.5	.01	.01	.05	.35	1.9	.16
20	.02	.01	.65	.01	.01	3.4	.01	.01	.40	4.0	.34	.09
21	.02	.01	.94	.01	.01	1.8	.01	.01	2.0	3.5	.34	.12
22	.02	.01	1.2	.01	.01	.08	.01	13	.65	2.0	.24	.12
23	.01	.01	2.2	.02	.29	.03	.01	.34	.20	.10	.07	.21
24	.01	.01	11	.01	.16	.02	.01	.03	1.8	.08	.05	.11
25	.01	.02	.38	.01	.05	.01	.01	.02	.85	.07	4.9	.09
26	.01	.03	.04	.01	.02	.01	.01	.03	.35	.05	.94	.12
27	.05	.27	.03	.01	.01	.01	.01	.02	1.5	.05	2.0	.34
28	.02	.09	.02	.01	.01	.01	.02	.01	3.5	.84	.56	.09
29	.11	.03	.01	.01	.01	.01	.02	.01	3.5	.12	1.3	.06
30	4.1	.02	.01	.01	---	.01	.01	.01	.75	.07	2.0	2.6
31	.71	---	.01	.01	---	.01	---	.11	---	.05	.34	---
TOTAL	38.71	12.15	27.29	.37	1.06	8.36	3.86	16.66	16.63	58.56	18.49	22.70
MEAN	1.25	.41	.88	.012	.037	.27	.13	.54	.55	1.89	.60	.76
MAX	9.9	4.5	11	.02	.29	3.4	3.1	13	3.5	14	4.9	5.6
MIN	.01	.01	.01	.01	.00	.01	.01	.01	.01	.03	.02	.03
AC-FT	77	24	54	.7	2.1	17	7.7	33	33	116	37	45

CAL YR 1979 TOTAL 219.42 MEAN .60 MAX 15 MIN .00 AC-FT 435
WTR YR 1980 TOTAL 224.84 MEAN .61 MAX 14 MIN .00 AC-FT 446

NOTE.--No gage-height record June 4 to July 24.

16893100 BURONG STREAM, YAP

LOCATION.--Lat 09°31'59" N., long 138°07'05" E., Hydrologic Unit 20100006, on left bank at Dugor and 0.1 mi (0.2 km) upstream from mouth.

DRAINAGE AREA.--0.23 mi² (0.60 km²).

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

REVISED RECORDS.--WDR HI-79-2: Drainage area, 1968-78(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

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

AVERAGE DISCHARGE.--12 years, 0.924 ft³/s (0.026 m³/s), 669 acre-ft/yr (825,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 505 ft³/s (14.3 m³/s) July 4, 1980, gage height, 5.30 ft (1.615 m), from rating curve extended above 15 ft³/s (0.42 m³/s); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s), and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	2200	256	7.25	4.36	1.329	July 1	0100	150	4.25	3.77	1.149
Dec. 24	0130	110	3.12	3.48	1.061	July 4	0330	*505	14.3	*5.30	1.615

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	.14	.06	.08	.00	.01	.01	.00	.27	22	.07	.34
2	22	.34	.03	.08	.00	.00	.63	.00	.20	1.9	.05	.22
3	3.0	4.1	.02	.04	.00	.00	11	.00	.07	2.1	2.8	.18
4	.57	2.6	.01	.02	.00	.00	.90	.00	.03	25	.30	5.5
5	.27	.44	.01	.06	.00	.00	.20	.00	.02	.85	.14	7.6
6	5.4	.18	.01	.08	.00	.00	.09	.00	.02	.50	.09	3.6
7	3.0	1.4	.01	.04	.00	.00	.05	.00	.01	1.4	.07	2.5
8	2.4	1.1	.01	.02	.00	.00	.02	.00	.05	1.2	.06	.85
9	3.6	.80	.01	.02	.11	.00	.01	.29	.04	.78	.05	.37
10	.80	.30	.05	.01	.14	.00	.01	1.0	.02	.53	.05	.18
11	.47	.14	.20	.01	.02	.00	.00	.09	.39	.24	.03	.13
12	.27	.11	.08	.01	.01	.00	.00	5.6	.13	.14	.03	.70
13	.18	.07	.03	.01	.01	.00	.00	1.4	.06	.10	.04	2.2
14	.13	.05	.02	.01	.00	.00	.00	.20	.02	9.6	.05	9.1
15	.09	.05	.02	.00	.00	.00	.00	.11	.03	1.1	.04	.98
16	.07	.03	.04	.00	.00	.00	.00	.09	.02	.53	.03	.30
17	.06	.02	.10	.00	.00	.00	.00	.06	.05	5.9	.07	4.0
18	.04	.02	12	.00	.00	.32	.00	.04	.02	5.4	.08	2.4
19	.03	.01	15	.00	.00	3.5	.00	.02	.15	1.2	1.8	.40
20	.02	.01	1.8	.00	.00	10	.00	.02	.75	.28	.95	.20
21	.02	.01	3.2	.00	.00	2.9	.00	.01	1.0	6.7	.73	.16
22	.01	.01	2.8	.00	.00	.24	.00	18	1.1	4.3	.53	.13
23	.01	.01	4.0	.00	.20	.40	.00	.85	.40	.65	.18	.10
24	.01	.01	22	.00	.22	.13	.00	.22	3.5	.30	.10	.26
25	.00	.03	1.1	.00	.11	.06	.00	.14	1.0	.18	9.3	.30
26	.00	.59	.30	.00	.06	.03	.00	.09	.70	.16	1.6	.18
27	.01	1.2	.16	.00	.04	.02	.00	.05	3.0	.13	2.6	.60
28	.01	.37	.13	.00	.02	.01	.00	.03	4.8	.24	.90	.18
29	.50	.16	.11	.00	.01	.00	.00	.02	7.6	.18	1.2	.09
30	.93	.11	.10	.00	---	.00	.00	.01	1.2	.54	1.0	2.6
31	.40	---	.09	.00	---	.00	---	.02	---	.11	.75	---
TOTAL	57.30	14.41	63.50	.49	.95	17.62	12.92	28.36	26.65	94.24	25.69	41.35
MEAN	1.85	.48	2.05	.016	.033	.57	.43	.91	.89	3.04	.83	1.38
MAX	22	4.1	22	.08	.22	10	11	18	7.6	25	9.3	7.6
MIN	.00	.01	.01	.00	.00	.00	.00	.00	.01	.10	.03	.09
AC-FT	114	29	126	1.0	1.9	35	26	56	53	187	51	82

CAL YR 1979 TOTAL 355.09 MEAN .97 MAX 22 MIN .00 AC-FT 704
WTR YR 1980 TOTAL 383.48 MEAN 1.05 MAX 25 MIN .00 AC-FT 761

16893200 MUKONG STREAM, GAGIL-TOMIL

LOCATION.--Lat 09°32'06" N., long 138°09'59" E., Hydrologic Unit 20100006, on right bank 0.2 mi (0.3 km) upstream from mouth and 1.6 mi (2.6 km) southwest of Gatjapar.

DRAINAGE AREA.--0.50 mi² (1.29 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1972-75, December 1974 to June 1978, July to September 1978, stage-discharge relation indefinite due to blocked control. October 1978 to current year.

REVISED RECORDS.--WDR HI-79-2: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5 ft (1.5 m), from topographic map.

REMARKS.--Records fair to poor. At times some water is pumped from above station for village use. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39 ft³/s (1.10 m³/s) Jan. 22, 1975, gage height, 2.69 ft (0.820 m), from rating curve extended above 11 ft³/s (0.31 m³/s); maximum gage height, 3.40 ft (1.036 m), from floodmark, Sept. 14, 1978; minimum discharge, 0.07 ft³/s (0.002 m³/s) Apr. 9, 1979, Mar. 15, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft³/s (0.71 m³/s), and maximum (*), from rating curve extended above 11 ft³/s (0.31 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 24	0500	25	0.71	3.27	0.997	July 1	0430	29	0.82	3.43	1.045
Mar. 20	2400	29	.82	3.37	1.027	July 4	0630	*35	.99	*3.80	1.158
May 22	1000	26	.74	3.28	1.000						

Minimum discharge, 0.07 ft³/s (0.002 m³/s) Mar. 15.

CORRECTIONS.--The phrase, minimum daily discharge, published in the 1979 report under extremes for period of record and current year was in error. The word, daily, should be omitted.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	.63	1.2	.93	.33	.55	1.4	.43	1.4	18	1.5	1.3
2	11	1.0	.87	.75	.33	.59	2.2	.39	1.6	5.0	1.4	1.2
3	6.3	4.7	.67	.67	.30	.51	8.4	.35	.87	3.9	2.3	1.1
4	2.2	3.4	.59	.59	.30	.51	2.6	.30	.87	16	1.7	6.6
5	1.4	1.6	.55	.93	.28	.47	1.5	.30	.75	3.2	2.0	4.6
6	4.0	1.2	.55	.87	.25	.43	1.1	.30	1.1	2.9	2.5	3.4
7	2.9	2.2	.47	.81	.28	.47	1.0	.28	1.0	2.9	1.7	3.6
8	2.5	1.5	.39	.81	.39	.47	.93	.28	1.4	2.6	1.8	2.3
9	2.7	1.4	.47	.81	.85	.43	.75	.22	1.6	2.4	1.7	1.9
10	1.2	1.4	1.3	.75	.99	.47	.71	3.3	1.3	1.8	1.4	1.6
11	1.0	1.2	1.2	.71	.47	.39	.71	.71	1.7	1.7	1.2	1.6
12	.93	1.1	.71	.67	.39	.28	.71	1.2	1.0	1.7	1.1	1.7
13	.81	.99	.63	.63	.35	.22	.71	.51	.67	1.6	2.5	2.8
14	.75	.93	.55	.59	.33	.20	.75	.30	.55	5.7	1.4	9.4
15	.71	.87	.47	.55	.33	.18	.71	.28	.47	2.6	1.2	3.6
16	.67	.81	.82	.51	.35	.20	1.0	.72	.59	1.8	1.0	2.4
17	.63	.75	1.2	.51	.33	.20	.71	.47	.67	5.3	1.9	4.0
18	.59	.67	8.6	.51	.30	.65	.63	.30	.59	3.9	1.4	3.8
19	.55	.63	10	.60	.28	4.1	.59	.25	1.0	2.3	3.0	2.4
20	.55	.59	4.2	.55	.25	5.2	.55	.22	2.1	1.8	5.0	2.2
21	.47	.55	4.9	.55	.22	8.1	.51	.20	2.3	2.9	4.2	1.8
22	.43	.47	4.7	.50	.25	1.8	.48	11	2.2	3.2	2.3	1.6
23	.43	.51	3.5	.51	1.6	1.6	.43	2.1	2.3	1.8	1.5	1.7
24	.43	.51	12	.47	1.3	.93	.43	.87	4.9	1.6	1.0	1.6
25	.39	.59	2.2	.39	.93	.81	.47	.87	4.3	1.4	5.0	1.6
26	.35	1.1	1.2	.39	.75	.67	.47	1.2	2.4	1.4	2.5	1.8
27	.59	2.3	.99	.35	.63	.59	.43	.81	4.9	1.2	3.0	1.9
28	.47	1.0	.81	.35	.59	.59	.43	.55	5.1	1.4	2.0	1.5
29	1.8	1.8	.71	.39	.59	.59	.39	.59	6.9	1.8	2.5	1.4
30	1.2	1.7	.67	.40	---	.67	.55	.55	3.3	2.3	3.0	2.3
31	1.4	---	.67	.39	---	.71	---	1.3	---	1.8	1.6	---
TOTAL	53.45	38.10	67.79	18.44	14.54	33.58	32.25	31.15	59.83	107.9	66.3	78.7
MEAN	1.72	1.27	2.19	.59	.50	1.08	1.08	1.00	1.99	3.48	2.14	2.62
MAX	11	4.7	12	.93	1.6	8.1	8.4	11	6.9	18	5.0	9.4
MIN	.35	.47	.39	.35	.22	.18	.39	.20	.47	1.2	1.0	1.1
AC-FT	106	76	134	37	29	67	64	62	119	214	132	156

CAL YR 1979 TOTAL 531.26 MEAN 1.46 MAX 12 MIN .09 AC-FT 1050
WTR YR 1980 TOTAL 602.03 MEAN 1.64 MAX 18 MIN .18 AC-FT 1190

16893700 NICHEN RIVER AT ALTITUDE 55 M, MOEN

LOCATION.--Lat 07°26'45" N., long 151°52'02" E., Hydrologic Unit 20100006, on left bank at Peniesence, 1.0 mi (1.6 km) upstream from mouth, and 1.6 mi (2.6 km) west of Saint Xaviers Academy.

DRAINAGE AREA.--0.21 mi² (0.54 km²), revised.

PERIOD OF RECORD.--June 1968 to September 1978, October 1979 to January 1980, May to September 1980.

REVISED RECORDS.--WDR HI-77-2: 1974-76(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 180 ft (55 m), from topographic map.

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

AVERAGE DISCHARGE.--10 years, 1.03 ft³/s (0.029 m³/s), 746 acre-ft/yr (920,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 338 ft³/s (9.57 m³/s) Sept. 27, 1978, gage height, 4.25 ft (1.295 m), from floodmark, from rating curve extended above 4.6 ft³/s (0.13 m³/s); minimum, 0.01 ft³/s (<0.001 m³/s) Mar. 29-31, 1969, for several days in March and April 1973, for many days in February and March 1975, in February, March, April 1977, Jan. 14, 15, and Mar. 27 to Apr. 10, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges recorded above base of 70 ft³/s (1.98 m³/s) and maximum (*) during period October 1979 to Jan. 1980 and May to September 1980, from rating curve extended above 4.6 ft³/s (0.13 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 6	0800	80	2.27	2.66	0.811
Nov. 26	2100	*92	2.60	*2.77	.844

Minimum recorded discharge, about 0.15 ft³/s (0.004 m³/s) Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.3	2.4	.70				1.0	5.0	3.0	1.2	.67
2	1.1	1.6	1.8	2.5				.80	3.4	5.0	4.0	.83
3	3.2	1.1	2.3	2.5				.70	2.3	7.5	2.0	.92
4	7.4	.92	1.8	1.5				1.5	1.6	5.0	2.4	1.1
5	4.9	1.2	3.2	1.0				3.0	1.3	12	2.8	2.8
6	18	3.8	5.2	2.0				1.8	1.1	5.5	2.3	1.4
7	10	3.2	2.6	1.2				1.1	1.0	3.0	1.7	2.0
8	7.6	2.0	1.8	4.5				.83	1.1	2.5	3.2	1.6
9	8.8	1.4	1.1	2.5				.67	.83	1.7	4.1	1.1
10	6.4	1.3	.92	1.5				.59	.67	1.5	4.5	.83
11	4.5	1.1	.67	5.0				3.8	.75	1.3	4.9	.75
12	2.9	6.4	.59	3.0				4.7	.59	3.5	4.1	.67
13	2.0	2.8	.52	2.0				4.9	.59	2.8	3.4	.67
14	1.4	1.8	.59	1.3				4.3	1.7	5.0	2.4	.59
15	1.4	1.3	.46	2.0				2.4	1.0	4.5	1.8	.46
16	5.3	1.0	.40	2.0				1.7	.75	2.5	1.3	.52
17	2.3	.83	.52	1.7				5.9	.92	2.0	1.1	.46
18	1.4	2.9	.46	1.3				3.1	.83	1.7	.92	2.1
19	1.1	1.3	.40	1.0				2.1	.59	8.0	1.0	1.0
20	.75	.92	.40	.80				4.5	.59	4.5	1.0	.59
21	.67	.75	.83	.60				2.3	.52	2.5	.75	.59
22	.52	.75	.75	8.0				1.7	.46	1.7	1.8	.57
23	.46	.59	.90	2.5				1.4	1.5	1.3	1.0	.55
24	.34	.46	.65	1.5				1.4	2.1	2.5	.75	.53
25	.29	1.1	.45	1.0				1.4	1.1	4.0	.59	.50
26	.34	3.4	.35	.80				4.3	3.3	2.0	.52	.40
27	.25	7.6	.30	.60				2.3	2.0	1.5	.52	.35
28	.25	4.1	.25	1.5				1.6	1.5	1.7	1.0	.30
29	3.5	7.3	.20	.80				1.2	2.0	1.5	.67	.25
30	7.0	3.6	.15	.60				1.1	3.2	1.0	.52	.20
31	3.9	---	.30	.50				1.1	---	.80	.46	---
TOTAL	108.97	68.82	33.26	58.40				69.19	44.29	103.00	58.70	25.30
MEAN	3.52	2.29	1.07	1.88				2.23	1.48	3.32	1.89	.84
MAX	18	7.6	5.2	8.0				5.9	5.0	12	4.9	2.8
MIN	.25	.46	.15	.50				.59	.46	.80	.46	.20
AC-FT	216	137	66	116				137	88	204	116	50

NOTE.--No gage-height record Dec. 22 to Apr. 30, June 27 to July 31.

16893800 WICHEN RIVER AT ALTITUDE 18 M, MOEN

LOCATION.--Lat 07°27'05" N., long 151°52'18" E., Hydrologic Unit 20100006, on left bank at Peniesence and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--0.57 mi^2 (1.48 km^2).

PERIOD OF RECORD.--April 1955 to March 1956 (published as "at Peniesence"), June 1968 to January 1980, May to September 1980. All figures of discharge above 3 ft^3/s (0.085 m^3/s) prior to April 1956, published in WSP 1751, are unreliable and should not be used.

REVISED RECORDS.--WSP 2137, WDR-HI-79-2: Drainage area.

GAGE.--Water-stage recorder and concrete control since Mar. 29, 1973. Altitude of gage is 60 ft (18 m), from topographic map. Prior to Apr. 1, 1956, nonrecording gage at site 100 ft (30 m) downstream at different datum.

REMARKS.--Records fair to poor. No diversion above station. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--11 years, 2.98 ft^3/s (0.084 m^3/s), 2,160 acre-ft/yr (2.66 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 910 ft^3/s (25.8 m^3/s) June 4, 1972, gage height, 6.80 ft (2.073 m), from rating curve extended above 28 ft^3/s (0.79 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) Apr. 16-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges recorded above base of 200 ft^3/s (5.66 m^3/s) and maximum (*), during period October 1979 to January 1980 and May to September 1980, from rating curve extended above 28 ft^3/s (0.79 m^3/s):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 6	0800	414	11.7	4.63	1.411	Nov. 26	2130	*414	11.7	*4.66	1.420
Oct. 7	0100	248	7.02	3.51	1.070	May 14	0730	288	8.16	3.82	1.164

Minimum recorded discharge, 0.37 ft^3/s (0.010 m^3/s) Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	8.0	6.5	1.5				3.0	20	8.4	2.3	1.6
2	5.0	5.6	4.3	6.4				2.5	10	12	12	2.0
3	14	4.5	5.8	6.0				2.0	5.6	20	4.3	2.1
4	34	3.3	4.8	3.6				5.0	4.3	14	5.3	3.1
5	18	4.8	18	3.0				10	3.3	29	6.8	7.1
6	78	20	18	5.7				6.0	3.1	15	5.6	3.6
7	42	11	6.5	3.3				3.3	2.8	7.7	4.0	6.2
8	26	5.6	4.3	12				2.4	2.4	6.8	8.8	4.0
9	30	4.3	2.8	6.8				1.8	2.1	4.5	11	3.1
10	21	4.0	2.3	4.0				1.7	1.8	4.0	12	2.1
11	13	3.3	1.8	14				21	2.0	3.6	12	1.8
12	7.7	29	1.5	7.7				18	1.6	9.6	9.2	1.8
13	5.6	8.0	1.5	4.8				18	1.8	7.1	7.4	1.8
14	4.5	5.0	1.5	3.3				16	4.5	13	5.3	1.6
15	5.1	3.8	1.2	5.9				7.3	2.6	12	3.8	1.3
16	18	2.8	.88	5.0				4.6	2.1	7.1	3.1	1.5
17	7.1	2.3	1.3	4.3				35	2.3	4.8	2.4	1.6
18	4.8	8.0	1.0	3.6				11	2.3	4.5	2.1	5.0
19	3.8	3.8	.88	2.4				6.8	2.0	21	2.1	3.6
20	2.8	2.6	1.2	2.0				19	2.1	11	2.3	2.3
21	2.4	2.3	2.3	1.6				7.7	1.6	6.2	1.6	2.1
22	2.1	2.4	2.0	21				5.3	1.5	4.5	4.0	2.1
23	2.0	2.1	2.4	5.6				4.8	4.8	3.3	2.4	2.0
24	1.5	1.6	2.0	3.6				4.3	5.9	6.6	1.8	2.1
25	1.3	3.7	1.3	2.8				3.3	3.3	11	1.3	1.6
26	1.6	40	.88	2.0				11	10	4.5	1.2	1.3
27	1.3	30	.88	1.6				5.0	5.6	4.3	1.3	1.2
28	1.2	12	.65	4.3				3.8	4.0	4.5	3.1	1.0
29	12	29	.55	2.1				2.8	5.0	3.8	2.0	.80
30	30	10	.45	1.5				2.4	8.8	2.6	1.5	.66
31	14	---	.65	1.3				2.6	---	2.4	1.6	---
TOTAL	414.8	272.8	100.12	152.7				247.4	129.2	268.8	143.6	72.06
MEAN	13.4	9.09	3.23	4.93				7.98	4.31	8.67	4.63	2.40
MAX	78	40	18	21				35	20	29	12	7.1
MIN	1.2	1.6	.45	1.3				1.7	1.5	2.4	1.2	.66
AC-FT	823	541	199	303				491	256	533	285	143

CAL YR 1979 TOTAL 1789.60 MEAN 4.90 MAX 78 MIN .09 AC-FT 3550

NOTE.--No gage-height record Jan. 30 to May 5.

16897600 NANEPIL RIVER

LOCATION.--Lat 06°55'11" N., long 158°12'36" E., Hydrologic Unit 20100006, on left bank 1.4 mi (2.3 km) northeast of Mount Tamatamansakir and 1.4 mi (2.3 km) southeast of Rekisau.

DRAINAGE AREA.--2.93 mi² (7.59 km²).

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR HI-76-1: 1970(M), 1971-72(P), 1973(M), 1974(P), 1975(M).

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map.

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

AVERAGE DISCHARGE.--10 years, 49.1 ft³/s (1.391 m³/s), 35,570 acre-ft/yr (43.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,820 ft³/s (250 m³/s) Aug. 4, 1976, gage height, 9.68 ft (2.950 m), from rating curve extended above 168 ft³/s (4.76 m³/s) on basis of slope-area measurement at gage height 9.68 ft (2.950 m); minimum, 1.6 ft³/s (0.045 m³/s) Nov. 17-23, 1972, Feb. 6, Oct. 21, 22, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (90.6 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	1700	4500	127	8.36	2.548	May 8	1015	3800	108	8.05	2.454
Jan. 9	1245	3600	102	7.95	2.420	May 12	0545	*4700	133	*8.44	2.573
Feb. 4	1930	3660	104	7.96	2.414	June 3	1045	3260	92.3	7.81	2.380

Minimum discharge, 3.8 ft³/s (0.108 m³/s) Apr. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	53	36	100	12	12	121	121	102	61	19	48
2	78	34	413	88	9.0	27	57	27	190	49	36	96
3	102	53	95	45	7.0	19	22	17	251	33	20	46
4	119	44	147	26	249	15	12	29	47	99	19	29
5	32	26	66	32	59	10	12	22	55	36	69	25
6	33	30	28	91	20	7.6	7.6	206	77	25	41	41
7	89	25	19	42	84	6.8	6.5	136	46	18	23	50
8	42	29	12	56	320	5.6	5.4	329	315	28	17	43
9	85	46	9.4	187	40	5.1	350	94	41	28	23	22
10	16	57	7.3	57	78	11	4.2	59	24	147	37	17
11	10	47	6.2	33	61	15	9.4	191	24	32	34	16
12	7.8	51	17	25	30	46	14	330	31	22	20	16
13	6.9	23	13	20	18	31	40	41	23	37	14	15
14	6.4	27	8.3	72	13	113	15	188	179	57	17	37
15	6.8	60	6.5	113	46	68	27	133	59	34	40	19
16	130	50	5.4	79	22	29	164	37	72	19	38	28
17	25	19	4.8	39	13	53	37	26	33	15	40	181
18	12	57	55	46	21	44	20	93	34	83	44	33
19	8.7	27	13	66	14	24	28	84	48	32	48	25
20	7.6	18	9.4	48	137	12	149	33	31	20	18	53
21	6.1	17	24	47	56	21	89	28	31	49	131	51
22	33	87	52	56	17	28	113	52	75	23	36	90
23	12	25	130	23	17	15	32	91	109	14	33	41
24	25	33	113	15	9.4	10	19	34	38	14	19	21
25	22	22	121	10	9.4	8.0	14	39	23	31	25	14
26	55	16	25	59	7.6	7.6	12	192	16	33	22	26
27	20	31	19	18	40	12	13	43	13	30	129	76
28	54	73	19	11	9.4	10	54	48	19	26	58	64
29	73	24	17	13	8.3	7.3	23	26	59	19	22	18
30	90	13	18	10	---	8.0	17	19	22	15	32	13
31	33	---	35	29	---	17	---	25	---	12	17	---
TOTAL	1312.3	1117	1544.3	1556	1387.1	698.0	1487.1	2793	2087	1141	1131	1254
MEAN	42.3	37.2	49.8	50.2	47.8	22.5	49.6	90.1	69.6	36.8	36.5	41.8
MAX	130	87	413	187	320	113	350	330	315	147	131	181
MIN	6.1	13	4.8	10	7.0	5.1	4.2	17	13	12	14	13
AC-FT	2600	2220	3060	3090	2750	1380	2950	5540	4140	2260	2240	2490

CAL YR 1979 TOTAL 15872.0 MEAN 43.5 MAX 413 MIN 3.9 AC-FT 31480
WTR YR 1980 TOTAL 17507.8 MEAN 47.8 MAX 413 MIN 4.2 AC-FT 34730

CAROLINE ISLANDS, ISLAND OF PONAPE

16897900 LUI RIVER

LOCATION.--Lat 06°55'36" N., long 158°12'55" E., Hydrologic Unit 20100006, on right bank 300 ft (91 m) upstream from right-bank tributary and 1.3 mi (2.1 km) southeast of Rekisau.

DRAINAGE AREA.--0.47 mi^2 (1.22 km^2).

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

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

AVERAGE DISCHARGE.--10 years, 5.59 ft^3/s (0.158 m^3/s), 4,050 acre-ft/yr (4.99 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft^3/s (33.7 m^3/s) Aug. 4, 1976, gage height, 5.92 ft (1.804 m), from rating curve extended above 37 ft^3/s (1.05 m^3/s), on basis of slope-area measurement at gage height 5.92 ft (1.804 m); minimum, 0.13 ft^3/s (0.004 m^3/s) Feb. 2-4, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	1900	644	18.2	4.58	1.396	May 12	0600	531	15.0	4.24	1.292
May 8	1015	*692	19.6	*4.74	1.445	May 26	1100	612	17.3	4.50	1.372

Minimum discharge, 0.38 ft^3/s (0.011 m^3/s) Mar. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	4.3	4.7	8.6	1.1	1.5	14	13	13	8.1	2.8	7.3
2	12	3.8	82	7.8	.81	3.7	7.0	3.2	30	8.4	2.1	8.8
3	15	8.4	10	5.5	.66	2.8	2.4	2.1	37	15	2.6	5.7
4	19	7.0	21	2.6	32	2.0	1.3	12	5.9	15	1.6	3.4
5	4.4	4.2	9.9	3.6	8.4	1.1	.97	5.7	5.9	7.0	10	3.2
6	5.4	4.0	5.3	9.4	2.3	.89	.66	41	9.0	3.9	5.0	5.2
7	9.3	3.0	3.8	4.6	2.7	.73	.60	27	5.3	3.3	3.1	7.9
8	7.8	4.8	2.8	7.3	64	.66	.60	68	59	5.7	2.1	7.0
9	12	6.1	2.2	33	5.5	.60	.60	10	6.7	7.3	3.1	3.4
10	2.6	5.7	1.7	8.4	6.1	.97	.60	5.7	3.7	17	4.9	2.5
11	1.7	11	1.5	4.4	9.8	1.2	1.1	28	3.1	5.1	3.4	2.1
12	1.2	5.7	2.8	3.1	3.9	2.0	1.4	46	2.3	2.7	2.0	1.8
13	1.2	4.0	2.2	2.5	2.3	2.7	2.2	5.5	1.8	4.4	1.5	2.3
14	1.3	13	1.5	6.6	1.7	11	1.1	21	18	3.9	1.3	1.7
15	1.1	7.8	.97	11	2.7	7.6	1.5	22	5.9	2.7	3.2	1.2
16	12	9.1	.89	15	2.0	4.6	19	5.1	9.0	2.8	5.3	3.0
17	4.4	3.4	.72	5.3	1.2	5.3	4.0	3.4	5.5	2.1	5.0	3.6
18	2.1	17	1.0	6.7	1.6	2.3	2.6	13	3.4	12	10	3.0
19	1.6	4.8	.81	5.1	1.1	1.6	3.2	13	5.5	4.4	7.4	2.3
20	1.2	3.2	.73	4.0	16	1.1	20	4.8	3.6	2.5	2.6	5.1
21	.89	4.4	1.0	4.2	7.3	1.8	11	5.3	4.0	7.3	14	4.8
22	1.3	16	4.7	5.3	2.3	2.5	21	8.7	6.1	3.9	5.0	7.4
23	.81	5.2	18	2.6	12	1.3	5.0	7.6	10	2.2	2.5	5.0
24	6.2	5.9	17	1.7	2.3	.89	3.7	5.5	5.5	2.5	1.7	2.5
25	3.1	3.0	15	1.4	2.3	.66	2.3	4.2	3.3	6.7	1.5	1.6
26	15	2.2	2.8	4.6	1.5	.54	1.6	35	2.2	4.0	1.4	5.1
27	3.7	4.5	2.5	2.0	1.4	.66	1.5	6.1	1.6	2.6	11	4.6
28	13	9.8	2.2	1.2	1.2	.60	7.5	12	2.2	2.5	3.8	5.3
29	11	4.7	1.8	1.3	1.1	.48	2.6	4.4	8.4	2.6	2.0	2.4
30	9.9	3.0	1.7	1.0	---	.43	1.7	2.8	3.1	2.8	1.7	1.6
31	4.8	---	2.8	2.5	---	3.1	---	4.4	---	2.0	1.8	---
TOTAL	194.10	189.0	226.02	182.3	197.27	67.31	142.73	445.5	280.0	172.4	125.4	120.8
MEAN	6.26	6.30	7.29	5.88	6.80	2.17	4.76	14.4	9.33	5.56	4.05	4.03
MAX	19	17	82	33	64	11	21	68	59	17	14	8.8
MIN	.81	2.2	.72	1.0	.66	.43	.60	2.1	1.6	2.0	1.3	1.2
AC-FT	385	375	448	362	391	134	283	884	555	342	249	240

CAL YR 1979 TOTAL 2199.16 MEAN 6.03 MAX 103 MIN .48 AC-FT 4360
WTR YR 1980 TOTAL 2342.83 MEAN 6.40 MAX 82 MIN .43 AC-FT 4650

16898200 LUI RIVER AT MOUTH

LOCATION.--Lat 06°57'07" N., long 158°13'16" E., Hydrologic Unit 20100006, on right bank 0.4 mi (0.6 km) upstream from mouth and 1.3 mi (2.1 km) west of Tolenot Peak.

DRAINAGE AREA.--2.06 mi^2 (5.34 km^2).

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR HI-76-1: 1970(P), 1971-75.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records good. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 25.8 ft^3/s (0.731 m^3/s), 18,690 acre-ft/yr (23.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,360 ft^3/s (180 m^3/s) Aug. 4, 1976, gage height, 8.91 ft (2.716 m), from rating curve extended above 288 ft^3/s (8.16 m^3/s) on basis of slope-area measurement at gage height 8.91 ft (2.716 m); minimum, 0.26 ft^3/s (0.007 m^3/s) Jan. 20, 1973, during short regulation of flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	1800	*2260	64.0	*5.91	1.801
May 8	1100	2110	59.8	5.76	1.756

Minimum discharge, 1.1 ft^3/s (0.031 m^3/s) Apr. 4 during short regulation of flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	19	20	24	7.3	7.0	32	48	49	36	14	24
2	35	20	338	29	6.2	12	26	24	142	45	12	27
3	57	26	52	24	5.6	11	12	20	138	71	19	22
4	81	29	83	15	114	8.6	7.5	26	35	91	12	19
5	23	23	39	14	45	6.8	6.7	33	35	36	34	19
6	24	21	23	40	16	6.0	5.7	143	42	24	25	22
7	37	16	18	24	15	5.4	5.1	114	29	20	18	25
8	21	19	13	32	323	5.0	4.6	351	291	22	15	31
9	63	25	11	105	33	4.6	4.4	55	38	28	18	20
10	18	25	9.9	47	28	5.2	4.2	44	23	60	24	18
11	13	50	8.4	26	38	6.0	5.4	136	18	28	20	13
12	10	24	10	19	22	6.8	6.2	115	15	20	15	12
13	9.4	22	10	15	16	8.9	7.0	33	12	22	12	13
14	13	68	8.3	16	12	31	5.6	126	53	20	12	10
15	11	40	7.2	40	14	28	6.2	113	32	20	16	8.8
16	31	42	6.6	48	12	23	54	32	29	15	18	14
17	19	22	6.2	28	10	21	19	23	24	13	19	48
18	12	82	6.0	31	10	12	12	50	19	42	38	23
19	10	29	5.8	24	7.9	9.9	14	70	22	25	41	14
20	8.6	20	5.8	21	45	7.7	82	30	18	18	18	19
21	7.3	22	6.9	18	34	8.1	49	27	18	40	42	18
22	7.0	70	14	22	15	9.4	94	40	22	26	26	22
23	6.2	26	72	15	34	7.0	26	36	67	18	18	21
24	20	34	66	11	14	6.0	22	28	31	16	13	14
25	12	19	84	9.4	13	5.2	17	22	20	24	11	11
26	8.9	14	21	17	10	4.8	12	120	15	20	11	44
27	17	21	16	11	8.7	4.5	12	37	12	16	61	47
28	42	37	14	8.2	7.9	4.5	35	84	12	14	23	33
29	53	20	12	7.7	6.7	3.9	19	30	30	13	16	19
30	34	14	10	6.9	---	3.8	13	21	17	15	13	14
31	21	---	10	11	---	6.4	---	23	---	12	12	---
TOTAL	760.4	899	1007.1	759.2	923.3	289.5	618.6	2054	1308	870	646	644.8
MEAN	24.5	30.0	32.5	24.5	31.8	9.34	20.6	66.3	43.6	28.1	20.8	21.5
MAX	81	82	338	105	323	31	94	351	291	91	61	48
MIN	6.2	14	5.8	6.9	5.6	3.8	4.2	20	12	12	11	8.8
AC-FT	1510	1780	2000	1510	1830	574	1230	4070	2590	1730	1280	1280

CAL YR 1979 TOTAL 9301.2 MEAN 25.5 MAX 394 MIN 2.8 AC-FT 18450
WTR YR 1980 TOTAL 10779.9 MEAN 29.5 MAX 351 MIN 3.8 AC-FT 21380

CAROLINE ISLANDS, ISLAND OF PONAPE

16898600 LUPWOR RIVER

LOCATION.--Lat 06°54'15" N., long 158°09'45" E., Hydrologic Unit 20100006, on left bank about 300 ft (91 m) upstream from 50-ft (15-m) waterfall, 1.8 mi (2.9 km) above mouth, and 2.1 mi (3.4 km) west of Mount Tamatamansakir.

DRAINAGE AREA.--1.12 mi² (2.90 km²).

PERIOD OF RECORD.--September 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 100 ft (30 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Water-quality analyses and periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years, 9.19 ft³/s (0.260 m³/s), 6,660 acre-ft/yr (8.21 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft³/s (87.5 m³/s) Aug. 4, 1976, gage height, 8.26 ft (2.518 m), from rating curve extended above 47 ft³/s (1.33 m³/s), on basis of estimate of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Feb. 18, 19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21.2 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	1900	1140	32.3	6.30	1.920	May 26	1115	775	21.9	5.67	1.728
Jan. 9	a1300	a1000	a28.3	>6.0	>1.83	June 2	0445	1090	30.9	6.22	1.896
Feb. 4	a1930	a1000	a28.3	>6.0	>1.83	June 3	1115	800	22.7	5.72	1.743
May 8	1000	846	24.0	5.81	1.771	June 14	1415	1090	30.9	6.22	1.896
May 12	0530	*1760	49.8	*7.15	2.179	Aug. 21	1130	800	22.7	5.72	1.743

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Feb. 3.

> Greater than.
a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	10	13	2.0	2.8	19	18	19	21	4.7	27
2	15	7.8	142	10	1.5	3.3	8.0	5.5	55	13	22	41
3	30	13	22	6.9	1.3	3.0	4.5	4.1	57	7.6	6.3	16
4	34	10	33	5.2	50	2.7	3.2	3.8	11	19	5.1	14
5	11	7.1	19	7.1	10	2.2	3.0	3.9	10	8.6	17	8.2
6	11	6.8	6.8	14	3.5	1.9	2.4	48	13	6.4	23	7.7
7	22	5.2	5.1	6.9	8.0	1.6	2.1	27	8.9	5.1	8.2	12
8	8.8	8.0	3.9	10	60	1.5	1.9	83	97	5.1	6.6	11
9	22	9.4	3.3	40	7.0	1.4	1.7	20	12	4.5	9.0	6.2
10	6.6	16	3.0	10	15	2.2	1.6	13	7.7	24	14	6.8
11	5.1	11	2.8	6.0	10	2.2	1.8	37	6.5	6.9	8.1	6.1
12	4.3	7.8	4.0	4.5	5.5	5.0	2.4	96	6.3	5.3	5.6	5.2
13	3.7	5.7	3.7	3.5	3.5	4.5	3.8	9.8	5.2	10	4.6	7.3
14	3.4	4.7	3.0	10	2.5	24	2.3	30	64	11	6.0	8.1
15	3.3	7.2	2.6	20	6.7	15	4.4	24	12	7.6	6.3	4.8
16	10	12	2.6	15	4.5	6.0	35	8.6	10	5.9	13	8.5
17	4.2	5.9	2.3	7.0	3.4	8.8	7.3	7.1	7.3	5.8	16	53
18	2.9	15	24	8.0	3.7	5.8	5.1	16	6.0	22	17	9.6
19	3.7	7.8	5.0	10	3.0	4.5	5.1	14	9.6	9.2	12	8.0
20	3.1	6.4	3.6	8.5	33	3.4	19	7.1	6.2	6.0	5.8	7.5
21	2.9	6.7	4.7	8.5	12	3.5	12	11	6.0	8.3	53	12
22	7.3	16	6.1	10	5.2	4.7	18	16	24	5.9	9.7	11
23	4.1	8.3	28	4.0	3.9	3.5	6.9	32	28	4.6	26	8.0
24	13	8.8	25	2.5	3.1	2.6	5.6	9.5	9.8	4.4	7.6	5.6
25	6.4	6.6	26	2.0	2.9	2.3	4.2	8.2	6.8	8.8	5.8	4.6
26	19	5.3	7.1	10	2.6	2.0	3.4	56	5.3	6.8	5.0	4.6
27	6.5	7.4	5.3	3.0	2.4	2.3	3.4	11	4.6	9.4	33	14
28	11	18	4.6	2.5	2.2	2.0	7.3	8.2	5.6	6.6	21	11
29	25	8.2	3.9	2.0	2.7	1.8	4.2	6.3	11	5.9	7.5	5.1
30	22	5.7	3.5	2.0	---	1.8	3.2	5.1	5.7	4.7	9.1	4.1
31	9.3	---	4.2	5.0	---	4.6	---	5.1	---	3.9	5.7	---
TOTAL	342.6	268.8	420.1	267.1	271.1	132.9	201.8	644.3	530.5	273.3	393.7	348.0
MEAN	11.1	8.96	13.6	8.62	9.35	4.29	6.73	20.8	17.7	8.82	12.7	11.6
MAX	34	18	142	40	60	24	35	96	97	24	53	53
MIN	2.9	4.7	2.3	2.0	1.3	1.4	1.6	3.8	4.6	3.9	4.6	4.1
AC-FT	680	533	833	530	538	264	400	1280	1050	542	781	690

CAL YR 1979 TOTAL 3887.40 MEAN 10.7 MAX 142 MIN .80 AC-FT 7710
WTR YR 1980 TOTAL 4094.20 MEAN 11.2 MAX 142 MIN 1.3 AC-FT 8120

NOTE.--No gage-height record Jan. 8 to Feb. 14.

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899500 MUTUNTE RIVER

LOCATION.--Lat 05°22'25" N., long 163°00'24" E., Hydrologic Unit 20100006, on left bank at dam, 0.3 mi (0.5 km) upstream from mouth, and 1.1 mi (1.8 km) northwest of Mount Buache.

DRAINAGE AREA.--0.60 mi² (1.55 km²).

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 46 ft (14.0 m) from stadia survey.

REMARKS.--Records fair. Water is diverted from diversion dam above station through a 12-in (0.30-m) pipe for domestic use in Tafunsak. Water-quality analyses for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 5.71 ft³/s (0.162 m³/s), 4,140 acre-ft/yr (5.10 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) July 16, 1976, gage height, 2.94 ft (0.896 m), from rating curve extended above 140 ft³/s (3.96 m³/s); minimum, 0.15 ft³/s (0.004 m³/s) Feb. 15, 1980, during short regulation of flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*), from rating curve extended above 140 ft³/s (3.96 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 6	1730	695	19.7	2.55	0.777
May 9	0115	*932	26.4	*2.67	0.814

Minimum discharge, 0.15 ft³/s (0.004 m³/s) Feb. 15, during short regulation of flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.5	2.1	1.6	3.5	2.4	2.7	1.7	2.3	2.1	2.1	6.2
2	2.0	20	2.0	1.8	1.5	.82	12	1.4	2.1	3.2	1.7	2.7
3	1.6	8.5	1.8	8.5	5.6	3.6	1.5	1.7	7.8	3.8	2.5	2.7
4	1.8	4.5	20	3.6	2.1	15	.95	1.7	25	8.4	3.0	3.4
5	3.4	4.0	12	6.6	1.5	6.3	.78	16	7.0	2.5	2.0	10
6	56	3.5	7.0	4.9	1.3	26	.71	4.1	3.0	3.8	2.0	7.1
7	7.9	3.0	2.7	3.8	5.6	3.8	.71	2.1	2.7	2.3	1.8	4.7
8	3.8	2.0	9.8	2.7	7.5	.95	.71	3.0	47	2.0	1.7	2.7
9	2.3	2.5	3.5	2.1	3.2	2.0	1.2	78	5.6	4.1	3.0	1.6
10	2.1	3.5	2.1	1.6	2.3	2.1	1.5	11	11	5.4	2.7	1.8
11	8.2	1.5	1.8	2.0	1.8	1.3	1.1	6.3	21	4.0	5.4	1.5
12	12	1.0	4.5	2.0	1.5	4.7	.95	9.9	23	7.5	2.0	1.3
13	5.7	1.0	11	1.8	1.2	6.0	2.1	11	8.9	3.7	1.5	1.2
14	4.7	.90	3.0	4.5	1.1	1.7	1.4	4.7	22	7.8	1.5	1.3
15	3.8	20	2.0	3.4	.71	1.4	8.9	7.0	12	10	1.6	.95
16	2.7	3.5	1.7	2.1	.86	1.2	8.4	14	4.9	7.0	6.4	2.4
17	3.6	2.5	1.4	2.3	1.0	1.1	1.7	19	3.7	4.0	17	2.0
18	2.5	1.5	1.3	3.8	.86	9.5	1.1	7.8	12	4.1	3.6	1.5
19	2.3	1.5	1.5	11	1.2	2.3	.86	4.1	6.3	4.0	2.3	1.5
20	2.1	2.0	3.0	7.0	6.0	.51	.71	3.0	4.0	3.8	2.0	3.3
21	2.5	15	2.3	3.6	12	.35	.95	2.3	2.7	4.3	3.7	5.0
22	2.1	6.5	1.7	2.5	4.2	11	12	3.2	4.1	2.1	6.3	4.6
23	5.4	4.0	1.5	2.1	42	16	2.7	3.0	3.7	4.5	4.6	2.2
24	6.4	3.0	2.5	1.8	7.0	1.7	.86	2.3	18	3.0	2.1	1.6
25	3.8	4.0	6.3	1.5	2.1	19	25	6.7	3.5	2.0	1.6	1.4
26	3.8	1.5	2.9	1.3	.95	1.5	1.5	8.4	3.2	1.8	1.5	1.3
27	3.0	1.4	3.5	1.3	.64	1.1	1.1	2.5	2.7	1.5	3.5	1.5
28	7.1	1.4	3.4	1.2	.57	.57	3.5	2.1	4.9	4.1	2.3	1.4
29	7.0	1.3	2.5	1.2	.49	.57	3.7	2.1	5.4	4.9	2.1	1.4
30	4.0	2.3	1.8	1.2	---	.64	1.5	2.0	2.7	2.0	2.1	1.1
31	3.0	---	1.6	1.4	---	.95	---	3.2	---	1.7	1.5	---
TOTAL	178.9	129.80	124.2	96.2	120.28	146.06	102.79	245.3	278.2	125.4	97.1	81.35
MEAN	5.77	4.33	4.01	3.10	4.15	4.71	3.43	7.91	9.27	4.05	3.13	2.71
MAX	56	20	20	11	42	26	25	78	47	10	17	10
MIN	1.6	.90	1.3	1.2	.49	.35	.71	1.4	2.1	1.5	1.5	.95
AC-FT	355	257	246	191	239	290	204	487	552	249	193	161

CAL YR 1979 TOTAL 2072.48 MEAN 5.68 MAX 56 MIN .78 AC-FT 4110
WTR YR 1980 TOTAL 1725.58 MEAN 4.71 MAX 78 MIN .35 AC-FT 3420

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899600 OKAT RIVER

LOCATION.--Lat 05°20'32" N., long 162°59'30" E., Hydrologic Unit 20100006, on left bank 1.6 mi (2.6 km) upstream from mouth and 1.9 mi (3.1 km) northwest of Mount Crozer.

DRAINAGE AREA.--1.60 mi² (4.14 km²).

PERIOD OF RECORD.--July 1971 to current year.

REVISED RECORDS.--WDR Hawaii 1974: 1971-72(P), 1973(M).

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (3.0 m), from topographic map.

REMARKS.--Records fair to poor. No diversion above station. Water-quality analyses for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 21.4 ft³/s (0.606 m³/s), 15,500 acre-ft/yr (19.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) Aug. 2, 1976, gage height, 8.22 ft (2.505 m), from rating curve extended above 230 ft³/s (6.51 m³/s); minimum, 1.4 ft³/s (0.040 m³/s) Mar. 11, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*), from rating curve extended above 230 ft³/s (6.51 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 6	1800	788	22.3	7.04	2.146	June 8	0230	754	21.4	6.95	2.118
May 9	0130	*805	22.8	*7.12	2.170	June 12	2130	701	19.9	6.68	2.036

Minimum discharge, 4.3 ft³/s (0.122 m³/s) Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	10	8.5	9.3	9.6	11	35	10	16	12	10	17
2	12	76	7.0	6.7	5.3	32	64	9.3	15	13	8.2	9.3
3	9.0	30	7.4	42	29	17	13	9.6	42	14	22	7.8
4	8.6	18	81	14	12	30	10	8.2	89	31	23	14
5	16	14	40	17	12	16	8.2	65	32	14	10	61
6	122	12	39	12	9.3	57	6.3	14	19	19	14	40
7	53	11	27	12	31	17	5.4	9.3	18	13	10	22
8	58	9.6	30	8.5	26	8.9	4.8	14	190	12	8.5	13
9	30	11	16	6.3	17	10	6.0	190	54	18	58	9.6
10	25	12	12	5.7	13	8.5	13	79	65	31	36	13
11	68	6.3	10	5.7	11	7.4	10	44	99	16	39	14
12	69	5.4	32	5.7	10	21	6.0	56	94	25	14	9.6
13	48	5.4	27	5.1	8.9	17	7.8	48	59	16	11	8.9
14	40	4.6	14	13	8.5	7.8	5.4	33	87	37	11	8.2
15	26	71	10	6.7	8.2	7.4	53	32	45	30	10	7.8
16	23	12	8.2	5.1	8.5	5.4	56	45	27	18	20	7.0
17	32	10	17	5.7	8.2	4.8	16	55	23	12	11	10
18	19	8.5	7.8	16	8.2	30	15	40	30	20	8.9	7.4
19	16	8.5	7.0	68	5.6	17	20	27	28	22	8.2	8.2
20	14	8.9	11	48	24	7.0	19	22	22	21	7.4	27
21	13	47	11	21	54	5.7	9.3	18	17	13	16	14
22	19	24	7.0	20	25	41	57	30	45	9.6	40	16
23	32	15	9.6	13	76	41	35	25	28	22	16	9.3
24	22	13	17	10	44	15	16	19	32	23	9.3	7.8
25	16	16	13	11	21	70	158	117	20	16	8.2	10
26	19	8.5	8.5	11	14	19	32	48	27	17	7.8	7.8
27	12	7.8	8.9	11	13	14	20	26	19	9.6	13	10
28	21	7.4	17	9.3	10	11	39	23	38	73	7.8	7.0
29	25	6.3	12	8.9	10	9.3	22	17	25	29	7.8	6.3
30	16	11	6.3	8.5	---	8.2	13	14	14	13	12	6.0
31	11	---	5.7	8.5	---	10	---	17	---	10	9.6	---
TOTAL	908.6	500.2	527.9	444.7	540.3	580.4	775.2	1164.4	1319	629.2	487.7	409.0
MEAN	29.3	16.7	17.0	14.3	18.6	18.7	25.8	37.6	44.0	20.3	15.7	13.6
MAX	122	76	81	68	76	70	158	190	190	73	58	61
MIN	8.6	4.6	5.7	5.1	8.2	4.8	4.8	8.2	14	9.6	7.4	6.0
AC-FT	1800	992	1050	882	1070	1150	1540	2310	2620	1250	967	811

CAL YR 1979 TOTAL 9943.3 MEAN 27.2 MAX 265 MIN 4.6 AC-FT 19720
WTR YR 1980 TOTAL 8286.6 MEAN 22.6 MAX 190 MIN 4.6 AC-FT 16440

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899620 MELO RIVER

LOCATION.--Lat 05°21'06" N., long 162°59'29" E., Hydrologic Unit 20100006, on left bank 0.35 mi (0.56 km) upstream from mouth and 1.7 mi (2.7 km) southwest of Mount Buache.

DRAINAGE AREA.--0.48 mi² (1.24 km²).

PERIOD OF RECORD.--October 1974 to September 1979, June to September 1980.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 20 ft (6.1 m), from topographic map.

REMARKS.--Records fair. Water-quality analyses for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years, 7.01 ft³/s (0.199 m³/s), 5,080 acre-ft/yr (6.26 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 784 ft³/s (22.2 m³/s) Mar. 22, 1976, gage height, 5.78 ft (1.762 m), from rating curve extended above 17 ft³/s (0.48 m³/s); minimum, 0.65 ft³/s (0.018 m³/s) about Mar. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*) during period June to September, from rating curve extended above 17 ft³/s (0.48 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 8	0230	476	13.5	4.32	1.317	July 10	1200	*678	19.2	*4.97	1.515
June 12	2030	488	13.8	4.36	1.329	Aug. 17	1000	334	9.46	3.77	1.149
June 14	0030	386	10.9	3.98	1.213	Sept. 5	1800	449	12.7	4.28	1.304

Minimum discharge, 0.91 ft³/s (0.026 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, JUNE 1980 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									4.8	4.8	2.9	6.3
2									4.3	5.6	2.2	3.1
3									12	5.3	5.5	2.9
4									26	9.3	6.3	5.1
5									9.1	4.6	2.8	32
6									5.8	5.1	4.0	14
7									6.1	3.6	2.4	8.4
8									50	3.4	2.2	5.0
9									8.8	9.4	8.1	3.6
10									14	20	5.4	4.6
11									21	6.7	10	3.3
12									28	8.5	3.3	2.6
13									13	5.3	2.6	2.2
14									31	12	2.2	1.9
15									15	9.2	2.1	1.8
16									8.8	5.8	3.6	2.0
17									7.6	4.6	11	2.9
18									14	4.1	3.7	1.6
19									8.7	3.4	2.4	2.2
20									6.3	4.0	2.4	5.2
21									5.3	3.8	4.4	3.8
22									8.3	2.8	9.7	4.1
23									6.4	6.9	4.6	2.2
24									11	4.0	2.9	1.8
25									5.0	3.3	2.4	2.4
26									12	2.8	2.2	1.6
27									5.3	2.4	4.0	2.3
28									12	13	2.8	1.6
29									7.2	5.8	3.8	1.2
30									4.8	3.1	4.0	1.1
31									---	2.6	2.4	---
TOTAL									367.6	185.2	128.3	132.8
MEAN									12.3	5.97	4.14	4.43
MAX									50	20	11	32
MIN									4.3	2.4	2.1	1.1
AC-FT									729	367	254	263

NOTE.--No gage-height record Oct. 1 to May 31.

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899750 MALEM RIVER

LOCATION.--Lat 05°18'21" N., long 163°01'46" E., Hydrologic Unit 20100006, on left bank 1.2 mi (1.9 km) upstream from mouth and 1.8 mi (2.9 km) southeast of Mount Crozer.

DRAINAGE AREA.--0.48 mi² (1.24 km²).

PERIOD OF RECORD.--July 1971 to current year.

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

REMARKS.--Records fair. Water is diverted through 6-in (0.2-m) pipe from dam above station for domestic use in village of Malem. Water-quality analyses for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 7.17 ft³/s (0.203 m³/s), 5,190 acre-ft/yr (6.40 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s (43.9 m³/s) Mar. 22, 1976, gage height, 6.20 ft (1.890 m), from rating curve extended above 110 ft³/s (3.12 m³/s); minimum, 0.14 ft³/s (0.004 m³/s) Nov. 20, 1974, during flushing at dam upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (14.2 m³/s), revised, and maximum (*), from rating curve extended above 110 ft³/s (3.12 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 10	1500	368	10.4	4.62	1.408
June 12	2030	*396	11.2	*4.69	1.430
June 13	1700	356	10.1	4.59	1.399

Minimum discharge, 0.31 ft³/s (0.009 m³/s) Feb. 20, during short regulation of flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.5	3.5	3.5	1.9	2.6	15	5.3	6.1	3.8	2.6	1.9
2	2.4	30	3.0	2.4	1.6	4.6	29	4.3	5.5	4.0	2.4	1.8
3	2.0	10	2.6	16	3.8	3.0	6.7	20	14	3.6	9.3	1.6
4	2.8	6.5	39	3.6	2.6	16	4.7	6.7	38	7.1	6.9	1.4
5	4.8	5.0	19	2.8	1.9	6.1	3.9	19	13	3.3	3.0	1.3
6	38	4.0	11	3.3	1.4	25	3.3	8.4	7.2	4.7	3.9	2.0
7	11	3.5	6.0	3.3	5.2	6.9	3.0	5.5	5.9	3.0	3.3	7.8
8	4.6	2.5	5.5	2.8	7.5	4.3	2.6	6.6	31	2.8	3.4	3.3
9	5.1	2.5	4.3	2.1	3.5	6.1	2.5	77	9.7	2.5	14	1.6
10	3.3	4.0	3.3	1.8	4.4	4.9	2.5	50	19	2.5	8.3	5.5
11	5.8	2.5	3.0	1.9	2.8	3.9	3.7	16	26	2.5	9.3	3.9
12	15	1.5	9.4	1.8	1.8	9.0	2.4	24	31	8.5	4.1	2.0
13	14	1.5	9.0	1.7	1.6	7.4	2.8	16	16	12	2.9	1.6
14	7.5	1.3	4.4	4.2	1.5	3.9	2.0	11	22	8.6	2.6	1.5
15	5.1	25	3.5	2.1	1.4	3.0	18	8.5	11	9.2	2.3	2.8
16	4.4	4.0	2.9	1.7	2.4	2.8	19	16	7.9	7.4	2.0	3.7
17	4.7	2.5	7.2	2.0	1.4	2.4	6.5	17	7.9	4.1	3.5	5.1
18	3.5	2.0	3.2	3.0	1.5	7.5	6.0	12	10	3.5	2.1	1.9
19	2.9	2.0	2.8	22	1.7	3.9	4.9	8.6	14	2.9	1.7	1.6
20	3.1	2.5	4.2	20	1.8	2.8	4.7	7.2	8.9	3.0	1.7	5.1
21	2.4	20	3.0	5.1	14	2.3	3.3	5.5	5.9	2.8	4.6	14
22	4.1	9.0	2.9	3.6	5.3	11	9.6	13	9.2	2.4	6.9	10
23	7.6	5.0	2.5	2.8	12	18	5.9	7.4	8.9	9.9	3.9	3.5
24	7.6	4.0	4.4	2.4	14	7.8	3.9	7.2	12	3.6	2.1	2.5
25	7.5	5.5	4.7	2.5	4.3	31	34	37	5.9	2.6	1.8	2.1
26	4.9	2.0	2.8	2.0	2.9	6.5	7.6	15	4.7	3.6	2.4	2.8
27	3.6	1.9	3.7	1.9	2.6	4.7	5.1	7.4	4.1	2.5	8.0	2.3
28	9.1	1.7	5.2	1.8	2.0	4.1	5.6	6.1	11	21	3.2	1.6
29	10	1.6	3.0	1.6	2.0	3.3	6.1	5.7	8.4	9.5	2.5	1.5
30	5.5	2.4	2.1	1.6	---	2.9	3.6	5.1	3.9	3.9	1.9	1.3
31	3.5	---	1.9	1.6	---	13	---	6.5	---	2.9	1.6	---
TOTAL	208.7	168.4	183.0	128.9	110.8	230.7	227.9	455.4	378.1	163.7	128.2	99.0
MEAN	6.73	5.61	5.90	4.16	3.82	7.44	7.60	14.7	12.6	5.28	4.14	3.30
MAX	38	30	39	22	14	31	34	77	38	21	14	14
MIN	2.0	1.3	1.9	1.6	1.4	2.3	2.0	4.3	3.9	2.4	1.6	1.3
AC-FT	414	334	363	256	220	458	452	903	750	325	254	196

CAL YR 1979 TOTAL 2722.5 MEAN 7.46 MAX 69 MIN 1.1 AC-FT 5400
WTR YR 1980 TOTAL 2482.8 MEAN 6.78 MAX 77 MIN 1.3 AC-FT 4920

16899800 TOFOL RIVER

LOCATION.--Lat 05°19'53" N., long 163°01'25" E., Hydrologic Unit 20100006, on left bank 25 ft (7.6 m) downstream from right-bank tributary, 0.7 mi (1.1 km) upstream from mouth, and 1.2 mi (1.9 km) northeast of Mount Crozer.

DRAINAGE AREA.--0.44 mi^2 (1.14 km^2).

PERIOD OF RECORD.--June 1971 to September 1979, March to September 1980.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 98 ft (29.9 m) from stadia survey.

REMARKS.--Records fair to poor. Water is diverted through 8-in (20-cm) pipe from dam above station for domestic use. Water-quality analyses for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years, 5.94 ft^3/s (0.168 m^3/s), 4,300 acre-ft/yr (5.30 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft^3/s (36.0 m^3/s) Mar. 22, 1976, gage height, 5.56 ft (1.695 m), from rating curve extended above 79 ft^3/s (2.24 m^3/s); minimum, 0.70 ft^3/s (0.020 m^3/s) Aug. 21, 22, Dec. 12, 1977, during short regulation of flow at dam upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges during period March to September above base of 450 ft^3/s (12.7 m^3/s), and maximum (*), from rating curve extended above 79 ft^3/s (2.24 m^3/s):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 9	a0130	*a800	22.7	--	--
June 8	0200	770	21.8	4.78	1.457
June 12	2100	548	15.5	4.32	1.317

Minimum discharge, 1.1 ft^3/s (0.03 m^3/s), Sept. 19.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH 1980 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						3.0	15	5.5	6.1	3.5	2.5	2.9
2						5.4	30	4.5	5.5	4.5	2.5	2.2
3						3.3	7.0	20	13	3.6	9.0	1.9
4						8.4	5.0	6.5	26	7.4	7.0	1.9
5						4.8	4.0	20	11	3.3	3.0	1.9
6						18	3.5	8.5	7.1	4.2	3.1	2.3
7						5.9	3.0	5.5	6.2	2.8	2.7	7.7
8						4.2	2.5	6.5	42	2.6	2.6	2.7
9						6.0	2.5	80	12	2.3	9.0	1.9
10						4.7	2.5	50	18	2.5	6.4	5.9
11						3.6	3.5	15	24	2.5	7.4	3.3
12						7.8	2.5	25	28	8.5	3.3	2.0
13						5.9	3.0	15	17	12	2.6	1.8
14						3.8	2.0	8.9	27	8.5	2.3	1.5
15						3.2	20	8.3	13	9.0	2.1	1.2
16						2.7	20	11	10	7.5	2.2	1.2
17						2.5	6.6	16	9.3	4.0	2.5	2.7
18						7.4	5.9	11	9.7	3.5	1.9	1.3
19						3.8	5.2	8.1	10	3.0	1.7	1.5
20						3.0	4.7	6.6	7.8	3.0	1.6	3.7
21						2.5	3.8	5.5	5.5	3.0	2.7	9.2
22						10	14	8.3	10	2.5	4.5	7.7
23						20	6.8	6.2	8.8	10	3.2	2.7
24						8.0	4.8	5.9	9.8	3.5	2.0	2.0
25						30	31	26	4.8	2.5	1.9	1.9
26						6.5	8.6	12	4.2	3.5	1.6	1.9
27						4.5	6.8	7.1	3.8	2.5	3.5	2.1
28						4.0	7.5	6.6	8.0	20	1.9	1.6
29						3.5	6.8	5.2	6.7	9.0	2.8	1.5
30						3.0	4.8	4.3	3.6	4.0	3.0	1.5
31						15	---	6.5	---	3.0	2.7	---
TOTAL						214.4	243.3	425.5	367.9	161.7	105.2	83.6
MEAN						6.92	8.11	13.7	12.3	5.22	3.39	2.79
MAX						30	31	80	42	20	9.0	9.2
MIN						2.5	2.0	4.3	3.6	2.3	1.6	1.2
AC-FT						425	483	844	730	321	209	166

NOTE.--No gage-height record Oct. 1 to Feb. 29, May 1-13.

SAMOA ISLANDS, ISLAND OF TUTUILA

16912000 PAGO STREAM AT AFONO

LOCATION.--Lat 14°16'03" S., long 170°39'02" W., Hydrologic Unit 20100001, on left bank 0.2 mi (0.3 km) south of Afono and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.60 mi^2 (1.55 km^2).

PERIOD OF RECORD.--October 1958 to current year. Prior to July 1960, published as Afono Stream at Afono.

REVISED RECORDS.--WSP 1937: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 30 ft (9 m), from topographic map.

REMARKS.--Records fair except for periods of backwater and no gage-height record, which are poor. About 0.06 ft^3/s (0.002 m^3/s) is diverted above station for domestic use in Afono. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years (water years 1960-80), 3.38 ft^3/s (0.096 m^3/s), 2,450 acre-ft/yr (3.02 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s (38.2 m^3/s) July 5, 1969, gage height, 5.49 ft (1.673 m), from rating curve extended above 52 ft^3/s (1.47 m^3/s); minimum, 0.15 ft^3/s (0.004 m^3/s) Oct. 25, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 210 ft^3/s (5.95 m^3/s), from rating curve extended above 52 ft^3/s (1.47 m^3/s), and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 8	0800	210	5.95	3.28	1.000	Sept. 18	0800	321	9.09	3.67	1.119
May 8	2400	*474	13.4	*4.06	1.237	Sept. 24	0300	258	7.31	3.46	1.055
May 13	1230	418	11.8	3.92	1.195						

Minimum discharge, 0.28 ft^3/s (0.008 m^3/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	7.6	1.2	2.2	1.2	.71	4.5	.87	2.3	1.9	1.4	1.4
2	.87	4.2	1.1	4.1	1.3	.63	6.0	.79	2.2	1.5	1.3	1.4
3	1.1	3.4	1.1	4.8	1.1	.63	28	.87	2.0	3.6	2.0	1.5
4	.71	2.9	1.0	2.4	.95	.63	6.5	.79	1.9	2.7	1.8	1.3
5	.63	2.4	.95	1.8	.87	.63	4.2	.79	1.8	2.0	2.3	1.3
6	2.6	1.9	.87	1.5	.87	8.9	3.1	.79	1.6	1.4	1.9	1.3
7	1.3	4.2	.87	1.3	2.3	7.5	2.6	17	1.5	1.2	3.1	1.4
8	.79	4.0	.79	1.9	8.6	1.9	2.3	22	1.3	1.1	1.8	1.3
9	.71	26	1.1	1.4	12	1.2	2.0	81	1.8	1.0	1.4	1.3
10	.55	21	4.5	1.2	4.0	1.0	1.8	9.8	3.7	1.0	11	1.3
11	.50	12	3.8	1.1	2.0	1.0	1.6	6.4	5.2	1.0	3.8	1.2
12	.50	7.2	2.3	1.0	1.4	.79	1.5	4.9	3.6	.95	9.3	1.1
13	.44	4.7	1.4	1.7	1.5	1.0	1.5	45	3.4	1.1	16	1.1
14	.44	3.6	1.1	2.8	1.2	.95	1.5	6.5	3.1	15	4.2	1.5
15	.44	3.4	.95	3.4	1.0	1.1	1.4	4.9	3.2	4.7	2.6	1.9
16	.44	6.1	.87	1.8	1.3	1.1	1.4	4.5	2.7	3.8	3.5	1.8
17	.38	1.3	.79	1.3	1.1	2.3	1.2	4.0	2.3	2.2	2.3	1.9
18	.38	1.4	.79	1.1	1.2	5.9	1.1	9.9	2.0	4.0	2.3	35
19	.38	1.6	.71	1.2	1.2	4.4	1.1	5.7	1.9	4.2	2.2	4.9
20	9.2	1.2	.71	1.2	1.0	2.4	1.2	5.4	1.7	2.3	2.0	4.5
21	5.9	1.1	.71	1.0	.87	1.8	1.4	4.9	1.6	5.2	2.0	4.2
22	11	.95	.71	.79	.87	1.3	1.2	4.7	1.5	30	1.9	11
23	11	1.2	4.7	2.3	.79	2.3	3.8	3.8	1.5	7.5	2.0	5.2
24	5.2	1.0	3.1	3.4	.79	2.7	1.6	3.1	1.4	2.6	1.9	77
25	3.6	5.0	3.1	2.0	1.0	18	1.2	2.9	1.3	2.3	2.0	7.5
26	9.9	9.2	2.4	1.2	1.0	5.7	1.2	8.5	1.4	1.9	1.8	5.4
27	9.5	3.8	1.6	1.1	.79	11	1.2	3.8	1.3	1.5	1.6	4.9
28	48	2.3	3.1	1.4	.79	7.2	1.1	3.1	1.3	2.3	1.5	4.9
29	21	1.6	6.4	1.0	.71	4.5	1.1	2.6	2.3	2.0	1.4	4.6
30	18	1.5	4.0	1.4	---	2.9	1.0	3.8	2.2	1.6	1.4	4.2
31	19	---	2.0	1.5	---	2.4	---	2.4	---	1.5	1.4	---
TOTAL	185.33	147.75	58.72	56.29	53.70	104.47	89.3	275.50	65.0	115.05	95.1	197.3
MEAN	5.98	4.93	1.89	1.82	1.85	3.37	2.98	8.89	2.17	3.71	3.07	6.58
MAX	48	26	6.4	4.8	12	18	28	81	5.2	30	16	77
MIN	.38	.95	.71	.79	.71	.63	1.0	.79	1.3	.95	1.3	1.1
AC-FT	368	293	116	112	107	207	177	546	129	228	189	391

CAL YR 1979 TOTAL 1265.67 MEAN 3.47 MAX 56 MIN .34 AC-FT 2510
WTR YR 1980 TOTAL 1443.51 MEAN 3.94 MAX 81 MIN .38 AC-FT 2860

16920500 AASU STREAM AT AASU

LOCATION.--Lat 14°17'51" S., long 170°45'30" W., Hydrologic Unit 20100001, on right bank at Aasu and 200 ft (61 m) upstream from mouth.

DRAINAGE AREA.--1.03 mi² (2.67 km²).

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

REVISED RECORDS.--WSP 1937: Drainage area. WSP 2137: 1959-60(P), 1961(M), 1962-65(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5 ft (1.5 m) by hand levels from high-tide mark.

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

AVERAGE DISCHARGE.--21 years (water years 1960-80), 6.01 ft³/s (0.170 m³/s), 4,350 acre-ft/yr (5.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 498 ft³/s (14.1 m³/s) Sept. 7, 1972, gage height, 5.16 ft (1.573 m), from rating curve extended above 20 ft³/s (0.57 m³/s) on basis of slope-area measurement at gage height 4.57 ft (1.393 m); minimum, 0.12 ft³/s (0.003 m³/s) Oct. 21, 23, 24, 27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 390 ft³/s (11.0 m³/s) Oct. 28, gage height, 4.71 ft (1.436 m), no other peak above base of 180 ft³/s (5.10 m³/s); minimum, 0.95 ft³/s (0.027 m³/s) Mar. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	13	3.6	3.0	2.4	2.4	13	3.2	9.9	3.8	3.8	4.9
2	2.2	11	3.4	4.9	2.1	2.2	8.5	2.1	8.1	3.2	3.6	4.3
3	2.8	9.2	3.2	3.8	2.1	1.9	11	1.9	7.1	6.0	6.1	3.8
4	1.9	8.1	3.2	3.2	3.1	1.8	8.1	1.9	6.4	5.1	4.9	3.8
5	1.8	7.1	3.0	2.8	3.6	1.8	6.7	1.8	5.8	3.8	4.6	3.6
6	6.0	6.1	2.7	2.8	3.4	2.5	6.1	2.4	5.2	3.6	7.1	3.0
7	2.7	5.5	2.7	2.7	12	3.9	5.5	15	4.6	3.2	8.5	12
8	2.2	4.6	2.5	3.0	9.5	2.5	4.6	13	4.1	3.0	5.8	8.1
9	1.9	8.2	3.6	4.1	9.5	1.8	4.6	33	9.2	2.8	4.6	4.9
10	1.8	6.5	6.7	3.0	6.4	1.7	3.8	17	8.1	2.7	20	3.8
11	1.7	6.4	4.3	2.7	5.2	1.6	3.4	28	9.9	2.7	12	3.6
12	1.6	4.9	3.4	2.5	5.7	1.7	3.2	21	8.1	2.5	16	3.4
13	1.5	3.8	2.8	2.5	6.1	1.6	3.2	17	5.8	2.5	26	3.2
14	1.4	3.4	2.7	2.4	4.6	1.7	3.0	14	5.2	7.6	25	3.4
15	1.4	3.2	2.5	2.2	3.8	1.6	2.8	12	5.8	4.1	20	4.8
16	1.4	3.2	2.2	2.1	3.6	1.4	2.7	12	4.9	3.2	17	6.9
17	1.3	3.0	2.1	3.6	3.6	1.4	2.5	12	4.1	2.8	13	6.4
18	1.3	4.5	2.1	2.5	5.3	1.3	2.2	20	4.3	5.4	13	12
19	1.2	11	1.9	2.5	4.6	1.3	2.1	14	3.8	3.4	11	8.8
20	3.2	5.8	1.9	2.2	3.4	1.1	2.1	11	3.6	3.2	13	7.8
21	5.2	4.6	1.9	2.2	3.0	1.1	2.1	11	3.6	5.0	11	7.8
22	4.9	4.3	1.9	3.4	2.8	1.0	1.8	8.8	3.6	22	9.5	11
23	6.3	5.2	8.6	5.8	2.8	1.3	3.5	8.1	3.2	13	13	8.8
24	7.1	4.3	3.6	4.9	2.8	1.1	2.1	11	2.8	9.5	13	19
25	3.6	7.6	3.2	3.2	3.0	14	1.8	8.5	2.7	7.8	9.9	13
26	22	10	2.8	2.7	3.0	14	1.9	12	2.8	7.1	8.8	11
27	15	7.1	3.0	2.4	2.7	9.5	2.2	9.9	2.8	6.1	8.1	11
28	72	6.1	3.6	3.0	2.5	6.1	1.7	8.1	3.0	5.8	7.1	9.5
29	30	4.9	3.0	2.5	2.5	5.5	4.7	7.4	6.1	6.4	6.4	8.5
30	22	4.1	2.5	2.4	---	4.9	3.6	13	4.9	5.2	5.8	7.4
31	17	---	3.2	2.2	---	5.2	---	14	---	4.1	5.5	---
TOTAL	246.9	186.7	97.8	93.2	125.1	100.9	128.5	364.1	159.5	166.6	333.1	219.5
MEAN	7.96	6.22	3.15	3.01	4.31	3.25	4.15	11.7	5.32	5.37	10.7	7.32
MAX	72	13	8.6	5.8	12	14	13	33	9.9	22	26	19
MIN	1.2	3.0	1.9	2.1	2.1	1.0	1.7	1.8	2.7	2.5	3.6	3.0
AC-FT	490	370	194	185	248	200	247	722	316	330	661	435

CAL YR 1979 TOTAL 1903.15 MEAN 5.21 MAX 72 MIN .95 AC-FT 3770
WTR YR 1980 TOTAL 2217.90 MEAN 6.06 MAX 72 MIN 1.0 AC-FT 4400

16931000 ATAULOMA STREAM AT AFAO

LOCATION.--Lat 14°20'10" S., long 170°48'02" W., Hydrologic Unit 20100001, on left bank at Afao, 100 ft (30 m) upstream from highway bridge, and 300 ft (91 m) upstream from mouth.

DRAINAGE AREA.--0.24 mi^2 (0.62 km^2).

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

REVISED RECORDS.--WSP 1937: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) by hand levels from high-tide mark.

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

AVERAGE DISCHARGE.--21 years (water years 1960-80), 1.42 ft^3/s (0.040 m^3/s), 1,030 acre-ft/yr (1.27 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 815 ft^3/s (23.1 m^3/s) Oct. 28, 1979, gage height, 4.47 ft (1.362 m), from rating curve extended above 30 ft^3/s (0.85 m^3/s); minimum, 0.04 ft^3/s (0.001 m^3/s) Oct. 24-26, Oct. 28-31, Nov. 1, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft^3/s (4.53 m^3/s), from rating curve extended above 30 ft^3/s (0.85 m^3/s), and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 28	0800	*815	23.1	*4.47	1.362
Feb. 7	0700	285	8.07	3.08	.939
May 11	1415	225	6.37	2.84	.866

Minimum discharge, 0.08 ft^3/s (0.002 m^3/s) Oct. 13-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	1.4	.39	.62	.18	.14	3.1	.29	1.0	.52	.18	.52
2	.14	1.1	.32	.87	.16	.16	2.3	.23	.80	.48	.18	.39
3	.32	.93	.32	1.3	.38	.12	2.3	.23	.68	1.3	1.1	.32
4	.14	.74	.29	.68	.35	.28	1.2	.20	.68	2.3	.52	.35
5	.16	.68	.29	.57	.20	.14	.87	.18	.57	1.1	.57	.43
6	.48	.62	.26	.39	1.1	.20	.62	2.1	.57	.68	3.9	.29
7	.18	.57	.23	.35	12	.46	.52	8.4	.57	.52	1.4	1.5
8	.14	.52	.20	.87	1.3	.29	.43	6.1	.52	.48	.74	.62
9	.14	1.1	.64	.87	.74	.18	.39	12	4.8	.39	.68	.48
10	.12	.57	1.4	.87	.57	.16	.35	2.5	1.8	.35	5.0	.35
11	.10	.73	.68	.57	.52	.20	.32	17	1.6	.32	3.5	.32
12	.10	.52	.48	.39	.55	.18	.35	4.3	1.2	.32	6.0	.29
13	.09	.48	.35	.35	.48	.14	.35	3.0	.87	.29	17	.23
14	.08	.43	.29	.35	.35	.23	.39	1.7	.74	.51	8.0	.23
15	.08	.39	.26	.32	.32	.16	.39	2.4	.74	.29	3.8	.64
16	.08	.43	.23	.26	.39	.14	.43	4.7	.84	.26	2.8	.52
17	.08	.57	.23	.29	.59	.16	.32	2.2	.62	.26	1.7	.68
18	.08	1.8	.20	.26	.80	.14	.23	3.9	.60	.48	2.0	.87
19	.08	3.3	.18	.26	.52	.14	.20	3.0	.54	.29	1.4	.87
20	.37	1.3	.18	.23	.29	.12	.32	1.7	.48	.57	1.3	.57
21	.74	.93	.18	.29	.20	.12	.23	1.6	.52	.57	1.2	.73
22	.20	.80	.18	.20	.32	.27	.20	1.2	.48	1.5	1.0	1.7
23	.14	.80	1.4	.56	.23	.23	.39	1.1	.43	.93	2.0	1.0
24	.16	.74	.52	.26	.16	.20	.23	1.3	.39	.68	1.7	4.8
25	.14	1.8	.75	.20	.18	4.7	.18	1.4	.35	.48	1.2	2.5
26	5.0	1.9	.52	.18	.20	7.2	2.3	1.5	.48	.35	.94	1.5
27	2.1	.93	.43	.20	.16	3.3	.46	1.2	.62	.32	.88	1.3
28	73	.62	.72	.38	.14	5.5	.26	1.0	.62	.26	.62	.80
29	6.3	.48	.52	.20	.14	3.5	.68	.87	1.2	.29	.52	.57
30	3.7	.39	.35	.20	---	1.4	.48	1.4	.62	.26	.48	.62
31	2.2	---	1.7	.18	---	1.2	---	1.4	---	.20	.39	---
TOTAL	96.82	27.57	14.69	13.52	23.52	31.76	20.79	90.00	25.93	17.55	72.70	25.99
MEAN	3.12	.92	.47	.44	.81	1.02	.69	2.90	.86	.57	2.35	.87
MAX	73	3.3	1.7	1.3	12	7.2	3.1	17	4.8	2.3	17	4.8
MIN	.08	.39	.18	.18	.19	.12	.18	.18	.35	.20	.18	.23
AC-FT	192	55	29	27	47	63	41	179	51	35	144	52

CAL YR 1979 TOTAL 508.98 MEAN 1.39 MAX 73 MIN .08 AC-FT 1010
WTR YR 1980 TOTAL 460.84 MEAN 1.26 MAX 73 MIN .08 AC-FT 914

16931500 ASILI STREAM AT ALTITUDE 330 FT (100 M) NEAR ASILI

LOCATION.--Lat 14°19'34" S., long 170°47'38" W., Hydrologic Unit 20100001, on right bank 1.3 mi (2.1 km) northwest of Leone, 1.5 mi (2.4 km) southwest of Aoloaufou and 0.8 mi (1.2 km) upstream from mouth.

DRAINAGE AREA.--0.32 mi^2 (0.83 km^2).

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 330 ft (100 m), from topographic map.

REMARKS.--Records fair. Periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 635 ft^3/s (18.0 m^3/s), Oct. 28, 1980, gage height, 4.73 ft (1.442 m), from rating curve extended above 14 ft^3/s (0.40 m^3/s); minimum, 0.48 ft^3/s (0.014 m^3/s) July 19, 20, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft^3/s (3.11 m^3/s), and maximum (*), from rating curve extended above 14 ft^3/s (0.40 m^3/s):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 28	0700	*635	18.0	*4.73	1.442	May 11	1420	225	6.37	3.58	1.091
Feb. 7	0700	225	6.37	3.58	1.091	Aug. 13	1820	265	7.50	3.74	1.140

Minimum discharge, 0.56 ft^3/s (0.016 m^3/s) Oct. 19-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	4.0	1.6	1.3	.81	.84	6.2	1.2	2.7	1.6	1.3	1.4
2	.81	3.1	1.6	2.0	.78	.88	7.2	1.1	2.2	1.5	1.3	1.2
3	.91	2.2	1.5	2.3	.93	.81	7.1	1.0	1.9	2.4	2.8	1.2
4	.74	1.9	1.5	1.5	.91	1.1	5.3	.98	1.7	2.6	1.9	1.1
5	.93	1.7	1.6	1.4	.88	.74	3.8	.91	1.5	1.8	1.7	1.2
6	1.5	1.6	1.5	1.2	2.0	.88	2.9	3.1	1.4	1.6	3.5	.91
7	.84	1.5	1.4	1.2	11	1.3	2.3	10	1.2	1.4	3.2	5.1
8	.78	1.4	1.4	1.7	4.4	.91	1.9	8.3	1.2	1.3	2.2	1.7
9	.78	2.4	2.4	1.7	3.1	.74	1.7	12	4.4	1.2	1.9	1.3
10	.74	1.6	3.1	1.2	2.4	.71	1.5	7.1	2.7	1.1	8.5	1.1
11	.71	2.1	1.7	.98	3.0	.71	1.4	17	3.0	1.0	5.5	1.0
12	.71	1.5	1.8	.95	2.2	.67	1.4	9.3	2.2	.98	9.5	.98
13	.67	1.4	1.5	.88	2.1	.67	1.3	6.7	1.8	.94	25	.91
14	.64	1.2	1.4	.84	1.7	.71	1.4	4.8	1.6	2.2	12	.91
15	.64	1.2	1.3	.84	1.5	1.1	1.3	4.4	1.6	1.4	7.1	2.0
16	.64	1.2	1.3	.84	1.4	.71	1.4	5.5	1.8	1.3	7.6	1.8
17	.61	1.3	1.2	.88	2.1	.67	1.1	4.7	1.3	1.2	4.5	1.7
18	.58	3.0	1.1	.88	3.3	.64	.95	9.1	1.3	1.8	4.9	2.4
19	.58	3.4	1.0	.81	2.2	.61	.88	6.7	1.3	1.2	3.0	1.8
20	1.5	1.6	.98	.78	1.6	.58	1.3	5.2	1.2	1.3	3.5	1.5
21	1.7	1.5	.98	.91	1.5	.58	.91	3.8	1.3	1.7	3.8	2.6
22	.81	1.4	.98	.78	1.6	.66	.84	2.7	1.2	6.0	3.2	5.3
23	1.2	1.4	3.4	1.3	1.3	.64	1.3	2.2	1.1	3.5	6.4	3.7
24	1.0	1.2	1.2	.88	1.2	.60	.91	3.8	1.0	2.9	5.9	8.8
25	1.0	2.9	1.9	.81	1.1	5.6	.81	2.8	1.0	2.3	4.2	5.3
26	7.3	2.8	1.5	.78	1.1	6.7	1.2	3.9	1.1	1.9	3.2	4.0
27	5.6	1.9	1.2	.81	.98	5.3	1.0	2.6	1.3	1.8	2.6	3.7
28	53	1.8	2.0	2.2	.91	4.5	1.1	2.2	1.5	1.7	2.1	2.6
29	11	1.7	1.5	.95	.88	3.6	2.8	1.9	3.2	1.8	1.8	2.2
30	8.2	1.6	1.2	.91	---	2.7	1.5	3.8	1.7	1.6	1.6	1.8
31	7.3	---	1.7	.81	---	2.8	---	4.1	---	1.4	1.5	---
TOTAL	114.26	57.5	48.44	35.32	58.88	49.66	64.70	152.89	52.4	56.42	147.2	71.21
MEAN	3.69	1.92	1.56	1.14	2.03	1.60	2.16	4.93	1.75	1.82	4.75	2.37
MAX	53	4.0	3.4	2.3	11	6.7	7.2	17	4.4	6.0	25	8.8
MIN	.58	1.2	.98	.78	.78	.58	.81	.91	1.0	.94	1.3	.91
AC-FT	227	114	96	70	117	99	128	303	104	112	292	141

CAL YR 1979 TOTAL 804.84 MEAN 2.21 MAX 53 MIN .58 AC-FT 1600
WTR YR 1980 TOTAL 908.88 MEAN 2.48 MAX 53 MIN .58 AC-FT 1800

16933500 LEAFU STREAM AT ALTITUDE 370 FT (113 M) NEAR LEONE

LOCATION.--Lat 14°19'31" S., long 170°46'50" W., Hydrologic Unit 20100001, on left bank 900 ft (274 m) upstream from village stream intake, 1.1 mi (1.8 km) north of Leone, and 1.0 mi (1.6 km) southwest of Aoloaufou.

DRAINAGE AREA.--0.31 mi^2 (0.80 km^2).

PERIOD OF RECORD.--October 1977 to current year.

REVISED RECORDS.--WDR HI-79-2: 1978 (P).

GAGE.--Water-stage recorder. Altitude of gage is 370 ft (113 m), from topographic map.

REMARKS.--Records fair. Periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 188 ft^3/s (5.04 m^3/s) Sept. 1, 1978, gage height, 4.58 ft (1.396 m) revised, from rating curve extended above 48.0 ft^3/s (1.36 m^3/s); minimum, 0.71 ft^3/s (0.020 m^3/s) July 18-20, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft^3/s (3.40 m^3/s) revised, and maximum (*) from rating curve extended as explained above:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 28	0700	*183	5.18	*4.53	1.381	Aug. 6	1700	146	4.13	4.15	1.265
May 11	1400	181	5.13	4.51	1.375	Aug. 13	1700	176	4.98	4.46	1.359

Minimum discharge, 0.78 ft^3/s (0.022 m^3/s) Mar. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	7.0	2.1	2.1	1.3	1.3	9.4	1.5	4.4	2.7	1.7	2.6
2	1.2	5.8	1.9	4.5	1.1	1.5	8.9	1.4	3.8	2.5	1.6	2.1
3	1.3	4.6	1.8	3.0	1.3	1.3	10	1.4	3.4	4.4	3.9	2.0
4	1.2	3.7	1.7	2.3	1.3	1.4	6.6	1.3	3.0	4.8	2.5	1.9
5	1.3	3.1	1.7	2.1	1.3	1.2	5.1	1.3	2.6	3.2	2.2	2.0
6	2.1	2.6	1.5	2.0	13	1.3	4.1	5.7	2.4	2.8	6.8	1.7
7	1.3	2.3	1.4	2.0	12	2.0	3.4	21	2.1	2.5	4.6	9.1
8	1.2	1.9	1.3	2.4	4.2	1.3	2.8	16	2.0	2.3	3.2	3.2
9	1.1	4.1	3.4	2.4	3.4	1.1	2.4	34	7.8	2.0	2.9	2.4
10	1.1	2.7	4.3	1.8	2.9	1.1	2.1	17	4.5	1.9	16	2.1
11	1.0	3.6	2.6	1.7	3.8	1.1	2.0	38	4.7	1.8	8.0	2.1
12	1.0	2.1	2.1	1.6	3.2	1.1	2.1	26	3.7	1.7	16	2.0
13	.99	2.0	1.9	1.5	2.9	.99	1.9	16	3.0	1.6	44	1.9
14	.96	1.7	1.7	1.4	2.4	1.1	1.8	9.8	3.0	2.6	29	1.8
15	.92	1.6	1.6	1.3	2.1	1.0	1.8	7.5	3.3	1.7	16	4.3
16	.92	1.8	1.6	1.3	2.0	.92	1.9	9.3	2.9	1.4	14	3.1
17	.88	2.0	1.5	2.6	4.1	.92	1.5	7.2	2.4	1.4	7.7	3.0
18	.85	6.4	1.4	1.5	4.3	.88	1.5	17	2.4	2.3	10	6.8
19	.85	7.3	1.3	1.4	3.3	.85	1.3	13	2.2	1.5	6.3	4.4
20	2.3	3.8	1.3	1.3	2.5	.82	1.6	8.8	2.0	1.9	6.2	3.7
21	2.0	3.2	1.2	1.8	2.3	.82	1.2	6.5	2.2	2.4	5.6	4.7
22	1.8	2.8	1.3	1.4	2.3	.92	1.2	4.7	2.0	11	4.8	8.6
23	2.1	2.6	7.7	2.5	2.0	.92	1.6	3.8	1.8	5.3	9.3	4.7
24	2.0	2.3	1.9	1.6	1.9	.85	1.3	6.6	1.7	4.4	8.1	17
25	2.0	4.4	3.5	1.6	1.8	8.1	1.1	6.0	1.5	3.7	6.0	9.0
26	17	3.7	2.4	1.3	1.7	10	1.7	13	1.7	3.1	4.8	7.0
27	11	2.7	2.1	1.4	1.6	6.0	1.3	7.0	2.1	2.7	4.1	6.9
28	64	2.6	2.4	1.9	1.5	5.2	1.7	5.1	2.6	2.4	3.5	4.8
29	26	2.3	2.0	1.3	1.4	3.9	3.3	4.9	5.6	2.6	3.0	4.0
30	19	2.1	1.8	1.4	---	3.4	2.0	6.7	2.9	2.1	2.6	3.4
31	12	---	3.0	1.3	---	4.2	---	6.3	---	1.8	2.5	---
TOTAL	182.67	98.8	67.4	57.7	88.9	67.49	88.6	323.8	89.7	88.5	256.9	132.3
MEAN	5.89	3.29	2.17	1.86	3.07	2.18	2.95	10.4	2.99	2.85	8.29	4.41
MAX	64	7.3	7.7	4.5	13	10	10	38	7.8	11	44	17
MIN	.85	1.6	1.2	1.3	1.1	.82	1.1	1.3	1.5	1.4	1.6	1.7
AC-FT	362	196	134	114	176	134	176	642	178	176	510	262

CAL YR 1979 TOTAL 1307.54 MEAN 3.58 MAX 64 MIN .82 AC-FT 2590
WTR YR 1980 TOTAL 1542.76 MEAN 4.22 MAX 64 MIN .82 AC-FT 3060

16948000 AFUBLO STREAM AT MATUU

LOCATION.--Lat 14°18'07" S., long 170°41'07" W., Hydrologic Unit 20100001, on left bank 0.2 mi (0.3 km) northwest of Matuu and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.25 mi² (0.65 km²).

PERIOD OF RECORD.--March 1958 to current year. Prior to July 1960, published as Matuu Stream at Matuu.

REVISED RECORDS.--WSP 1937: Drainage area. WSP 2137: 1958-65.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (24.4 m), from topographic map.

REMARKS.--Records good. Small diversion above station for domestic use since September 1972. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--22 years, 1.46 ft³/s (0.041 m³/s), 1,060 acre-ft/yr (1.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 502 ft³/s (14.2 m³/s) Apr. 29, 1975, gage height, 4.59 ft (1.399 m), from rating curve extended above 26 ft³/s (0.74 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 16, 17, 20-26, 28, 29, 1975, Apr. 5-7, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.53 m³/s) and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	1230	166	4.70	2.94	0.896	Aug. 16	0230	268	7.59	3.53	1.076
Mar. 6	0700	183	5.18	3.05	0.930	Sept. 18	0600	225	6.37	3.30	1.006
May 9	0030	*332	9.40	*3.86	1.177						

Minimum discharge, 0.05 ft³/s (0.001 m³/s) Oct. 11, Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	1.1	.18	.33	.12	.13	9.4	.12	1.1	.28	.12	.20
2	.18	.63	.18	1.9	.11	.17	1.8	.12	.72	.28	.11	.17
3	.17	.42	.17	.78	.11	.11	6.2	.13	.53	.53	.99	.18
4	.13	.30	.15	.45	.37	.23	1.7	.11	.45	.95	.45	.18
5	.12	.33	.13	.33	.23	.44	.84	.10	.42	.42	.49	.18
6	1.4	.28	.12	.28	.70	11	.58	.12	.36	.42	2.0	.13
7	.25	.50	.11	.20	13	4.9	.45	6.6	.30	.25	1.5	1.1
8	.13	.45	.11	.22	.90	.84	.36	7.0	.28	.18	.42	.30
9	.11	3.2	.67	.45	.58	.39	.39	31	8.8	.13	.20	.12
10	.11	4.5	2.3	1.5	.30	.28	.28	5.3	12	.11	5.0	.09
11	.06	.72	1.1	1.1	.22	.28	.20	3.0	8.1	.10	3.4	.10
12	.07	.42	.49	.91	.40	.20	.20	2.5	1.8	.10	8.0	.08
13	.08	.28	.30	1.7	.18	.15	.22	9.5	1.1	.12	8.1	.07
14	.10	.20	.17	2.1	.15	.15	.43	2.6	.98	.55	2.5	.33
15	.12	.18	.13	1.8	.13	.31	.25	5.2	1.6	.13	1.1	1.7
16	.12	.40	.12	.58	.51	.22	.22	3.7	1.1	.12	15	1.7
17	.08	.43	.10	.42	.20	.13	.20	1.5	.67	.10	1.4	2.2
18	.07	1.6	.09	.30	.63	.44	.18	6.0	2.6	.26	.98	21
19	.08	2.2	.08	.58	.45	.88	.17	2.2	1.8	.12	.63	1.2
20	.98	.91	.07	.42	.18	.40	.17	1.8	.78	.17	.78	.84
21	.87	.39	.07	.20	.15	.20	.15	1.7	.67	.52	.67	.58
22	3.2	.22	.09	.17	.22	.25	.15	.78	.36	5.2	.58	5.6
23	5.5	.20	3.7	.63	.33	.78	.39	.53	.30	1.2	7.1	1.3
24	1.3	.20	.84	.21	.33	.72	.36	.91	.12	.42	4.4	25
25	.40	2.4	1.6	.16	.28	18	.17	4.1	.10	.20	.91	2.6
26	13	3.3	.91	.13	.25	3.0	.20	18	.10	.12	.53	1.2
27	3.2	1.1	.36	.18	.17	2.8	2.3	4.3	.09	.17	.33	2.2
28	18	.58	2.8	.39	.18	2.6	.33	1.8	.20	.18	.28	.98
29	6.7	.33	2.6	.17	.13	1.4	.30	1.2	.80	1.5	.20	.58
30	8.9	.28	1.1	.15	---	.78	.18	4.6	.33	.45	.20	.45
31	2.5	---	.45	.14	---	1.9	---	2.1	---	.20	.20	---
TOTAL	68.23	28.05	21.29	18.88	21.51	54.08	28.77	128.62	48.56	15.48	68.57	72.36
MEAN	2.20	.94	.69	.61	.74	1.74	.96	4.15	1.62	.50	2.21	2.41
MAX	18	4.5	3.7	2.1	13	18	9.4	31	12	5.2	15	25
MIN	.06	.18	.07	.13	.11	.11	.15	.10	.09	.10	.11	.07
AC-FT	135	56	42	37	43	107	57	255	96	31	136	144

CAL YR 1979 TOTAL 515.51 MEAN 1.41 MAX 32 MIN .06 AC-FT 1020
WTR YR 1980 TOTAL 574.40 MEAN 1.57 MAX 31 MIN .06 AC-FT 1140

16963900 LEAFU STREAM NEAR AUASI

LOCATION.--Lat 14°16'27" S., long 170°34'26" W., Hydrologic Unit 20100001, on right bank 35 ft (11 m) upstream from upper village intake, 0.1 mi (0.2 km) north of Auasi, and 0.2 mi (0.3 km) upstream from mouth.

DRAINAGE AREA.--0.11 mi² (0.28 km²).

PERIOD OF RECORD.--February 1972 to current year.

REVISED RECORDS.--WDR HI-75-1: 1972(P), 1973-74.

GAGE.--Water-stage recorder. Altitude of gage is 120 ft (37 m), from topographic map.

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

AVERAGE DISCHARGE.--8 years, 0.33 ft³/s (0.009 m³/s), 239 acre-ft/yr (295,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134 ft³/s (3.79 m³/s) Nov. 12, 1979, gage height, 3.71 ft (1.131 m), from recorded range in stage, from rating curve extended above 19 ft³/s (0.54 m³/s); minimum, 0.02 ft³/s (0.001 m³/s) Sept. 17-19, 26-30, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft³/s (0.71 m³/s) and maximum (*), from rating curve extended above 19 ft³/s (0.54 m³/s):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 30	1000	*39	1.10	*2.41	0.735	May 13	1000	26	0.74	2.16	0.658
Apr. 2	2400	32	.91	2.28	.695	Sept. 18	0900	37	1.05	2.39	0.728
May 7	0300	26	.74	2.16	.658						

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Sept. 14-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.45	.12	.09	.16	.08	.18	.12	.30	.09	.16	.09
2	.08	.22	.12	.12	.12	.08	.92	.12	.22	.09	.14	.09
3	.08	.14	.10	.21	.10	.09	2.8	.12	.18	.09	.16	.09
4	.08	.14	.10	.12	.10	.09	.70	.14	.18	.12	.14	.12
5	.08	.12	.10	.10	.10	.08	.30	.14	.16	.10	.14	.14
6	.12	.12	.10	.12	.10	.52	.22	.18	.16	.10	.35	.12
7	.08	.12	.10	.10	.16	.14	.16	5.4	.16	.10	.26	.08
8	.08	.12	.10	.18	.16	.09	.14	.65	.14	.10	.16	.07
9	.08	.28	.12	.18	.12	.09	.12	4.1	.26	.10	.52	.07
10	.08	.14	.18	.14	.10	.08	.10	1.1	.51	.10	1.4	.07
11	.08	.12	.22	.12	.10	.08	.09	2.1	.35	.10	.76	.07
12	.08	.12	.10	.10	.10	.08	.09	1.7	.26	.10	.76	.07
13	.08	.09	.12	.10	.12	.08	.10	6.8	.18	.14	1.9	.07
14	.09	.09	.12	.10	.10	.08	.09	3.5	.18	1.0	.70	.08
15	.08	.09	.10	.12	.10	.08	.09	2.7	.34	.16	.30	.16
16	.08	.09	.10	.10	.12	.08	.09	2.4	.18	.14	.22	.08
17	.08	.10	.09	.10	.10	.08	.09	.76	.16	.12	.16	.12
18	.09	.12	.12	.10	.14	.14	.09	2.0	.14	.30	.16	4.3
19	.09	.10	.12	.14	.12	.09	.09	.76	.14	.14	.12	1.7
20	.14	.10	.14	.10	.10	.08	.09	.45	.14	.16	.12	1.2
21	.18	.10	.16	.10	.10	.09	.09	.40	.16	1.0	.12	1.1
22	.22	.10	.22	.10	.09	.09	.09	.30	.14	2.5	.10	1.3
23	.16	.10	.18	.37	.09	.14	.43	.26	.14	.76	.99	1.0
24	.14	.12	.12	3.3	.08	.10	.12	.22	.12	.35	.57	3.4
25	.14	.47	.12	.16	.09	1.4	.10	.22	.12	.18	.22	2.9
26	.16	.63	.10	.14	.09	.45	.28	.22	.12	.16	.16	2.0
27	.22	.30	.09	.14	.08	1.2	.30	.18	.10	.14	.12	2.6
28	2.4	.16	.38	.14	.08	.63	.14	.18	.10	.50	.10	2.0
29	3.3	.14	.18	.10	.08	.35	.12	.18	.10	.96	.10	1.7
30	4.0	.14	.10	.12	---	.18	.12	1.2	.10	.35	.10	1.1
31	1.3	---	.09	.16	---	.16	---	.57	---	.18	.09	---
TOTAL	13.95	5.13	4.11	7.27	3.10	7.00	8.34	39.17	5.54	10.43	11.30	27.89
MEAN	.45	.17	.13	.23	.11	.23	.28	1.26	.18	.34	.36	.93
MAX	4.0	.63	.38	3.3	.16	1.4	2.8	6.8	.51	2.5	1.9	4.3
MIN	.08	.09	.09	.09	.08	.08	.09	.12	.10	.09	.09	.07
AC-FT	28	10	8.2	14	6.1	14	17	78	11	21	22	55

CAL YR 1979 TOTAL 129.70 MEAN .36 MAX 4.4 MIN .07 AC-FT 257
WTR YR 1980 TOTAL 143.23 MEAN .39 MAX 6.8 MIN .07 AC-FT 284

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area mi^2 (km^2)	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		Mariana Islands, Island of Guam				
16808200	Faata Springs at Agat	Lat 13°22'35" N., long 144°39'47" E., 0.7 mi (1.1 km) south of Agat Junior High School and 0.8 mi (1.3 km) southwest of Santa Rita Catholic Church.		1963-73, 1975-78, 1980	8-14-80	0.18
16808500	Taleyfac River Agat	Lat 13°21'35" N., long 144°38'57" E., 800 ft (244 m) upstream from bridge on Highway 2 at Biyae and 1.7 mi (2.7 km) south of Mount Carmel School in Agat.	1.96 (5.08)	1959-70, 1972-73, 1975-77, 1980	8-14-80	1.7
16820000	Geus River above Siligin Spring tributary, near Merizo	Lat 13°16'38" N., long 144°40'56" E., 100 ft (30 m) upstream from Siligin Spring tributary, 0.1 mi (0.2 km) upstream from dam, and 1.5 mi (2.4 km) northeast of Merizo School.	.51 (1.32)	1960-80	8-12-80	1.0
16825000	Ajayan River near Inarajan	Lat 13°15'16" N., long 144°42'56" E., 0.4 mi (0.6 km) upstream from mouth and 2.4 mi (3.9 km) southwest of Inarajan Catholic Church.	1.16 (3.00)	1962-73, 1975-78, 1980	8-21-80	1.4
16842000	Asalonso River Talofofo	Lat 13°19'43" N., long 144°45'34" E., 10 ft (3.0 m) downstream from left-bank tributary, 500 ft (152 m) downstream from bridge on Highway 4, and 1.6 mi (2.6 km) south of Talofofo.	1.85 (4.79)	1952, 1961-73, 1975-77, 1980	9-21-80	.57
		Caroline Islands, Palau Islands				
16890620	Ngechutrong River, Babelthuap	Lat 07°36'08" N., long 134°35'25" E., 300 ft (91 m) upstream from Adeiddo River and 0.9 mi (1.4 km) northwest of Mount Megilon.	.24 (.62)	1974-80	10- 5-79	3.4
					12- 4-79	.73
					1-10-80	1.3
					3-20-80	.83
					4-28-80	1.1
					6- 5-80	.62
					8-25-80	1.2
					9-25-80	2.9
16890650	Galkatan River, Babelthuap	Lat 07°35'45" N., long 134°34'49" E., 0.9 mi (1.4 km) upstream from Adeiddo River and 1.5 mi (2.4 km) west of Mount Megilon.	1.50 (3.88)	1974-77, 1980	1-29-80	67
					2-29-80	11
					4- 2-80	10
					5- 7-80	11
					6-17-80	8.6
					7-22-80	62
					9-25-80	27
16890700	Almiokan River, Babelthuap	Lat 07°31'12" N., long 134°33'51" E., 0.5 mi (0.8 km) upstream from unnamed tributary and 4.6 mi (7.4 km) northeast of Ngatpang village.	7.05 (18.26)	1973-80	10- 8-79	72
					1- 4-80	38
					1-17-80	32
					1-25-80	23
					2-28-80	46
					4- 1-80	17
					5- 6-80	83
					7-21-80	31

Discharge measurements made at low-flow partial-record stations during water year 1980--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Measurements Date	Measurements Discharge (ft³/s)
		Caroline Islands, Palau Islands--Continued				
16890800	Ngatpang River, Babelthuap	Lat 07°27'40" N., long 134°32'15" E., 0.2 mi (0.3 km) upstream from unnamed tributary and 0.4 mi (0.6 km) southeast of Ngatpang village.	.35 (.91)	1973-80	10- 4-79 1-15-80 1-24-80 2-21-80 3-18-80 4-25-80 5- 3-80 7- 2-80 8-29-80	3.8 .62 1.2 2.2 .49 2.8 .76 6.4 7.0
16891430	North Fork Ngardok River, Babelthuap	Lat 07°27'50" N., long 134°35'49" E., 500 ft (152 m) upstream from right-bank tributary, 1.4 mi (2.3 km) upstream from confluence with South Fork Ngardok River, and 2.5 mi (4.0 km) upstream from mouth.	9.37 (24.27)	1975-80	10- 7-79 1- 3-80 1-18-80 1-23-80 2-27-80 3-27-80 6-13-80 7-18-80 9-24-80	114 44 56 24 55 19 76 37 60
16891440	North Fork Ngardok River tributary, Babelthuap	Lat 07°27'49" N., long 134°35'47" E., 5 ft (1.5 m) upstream of North Fork Ngardok River and 2.4 mi (3.9 km) north of Ngarsol mountain.	1.73 (4.48)	1975-80	10- 7-79 1- 3-80 1-18-80 1-23-80 2-27-80 3-27-80 6-16-80 7-18-80 9-24-80	10 7.2 16 5.1 9.2 4.2 8.9 8.6 14
16891500	Geligal Marsh outlet, Babelthuap	Lat 07°36'07" N., long 134°38'08" E., 0.7 mi (1.1 km) northeast of Mount Gulitel and 1.6 mi (2.6 km) southwest of Uliman village.	.34 (.88)	1971-75, 1977, 1980	3- 6-80 4- 8-80 6-19-80 7-25-80	1.1 .58 .90 1.6
16891700	Unnamed west coast stream, Arakabesan	Lat 07°21'14" N., long 134°27'10" E., 0.1 mi (0.2 km) upstream from mouth and 0.15 mi (0.24 km) north of village of Arakabesan.	.03 (.08)	1970-80	1-24-80	.03
16891780	Unnamed north coast stream, Malakal	Lat 07°19'51" N., long 134°27'33" E., 0.2 mi (0.3 km) upstream from mouth and 1.3 mi (2.1 km) southwest of Malakal.	.02 (.05)	1971-80	1-21-80 9-22-80	.02 No flow
		Caroline Islands, Yap Islands				
16892000	Atelu Stream	Lat 09°32'56" N., long 138°06'17" E., 2.6 mi (4.2 km) northwest of Colonia Village and 1.2 mi (1.9 km) north of Mt. Matada.	.31 (.80)	1980	9-20-80	.18
16892500	Tamaney Stream, Yap	Lat 09°29'45" N., long 138°05'34" E., at abandoned German dam, 0.5 mi (0.8 km) northwest of Inuf, and 2.3 mi (3.7 km) southwest of Colonia.	.17 (.44)	1968-80	12-27-79 9-17-80	.16 1.4
16892600	Ripu Stream, Yap	Lat 09°30'05" N., long 138°06'02" E., 1,000 ft (305 m) upstream from mouth and 1.6 mi (2.6 km) southwest of Colonia.	.29 (.75)	1968-80	12-27-79 9-17-80	.09 1.5
16892650	Dinay Stream, Yap	Lat 09°30'29" N., long 138°06'02" E., 0.5 mi (0.8 km) northwest of Water Treatment Plant and 1.5 mi (2.4 km) southwest of Colonia Village.	.04 (.10)	1980	9-18-80	.14
16892680	Thalomar Stream, Yap	Lat 09°30'32" N., long 138°06'03" E., 0.5 mi (0.8 km) northwest of Water Treatment Plant and 1.4 mi (2.3 km) southwest of Colonia Village.	.10 (.26)	1965, 1968-74, 1980	9-18-80	.43
16893180	Monguch Stream, Gagil-Tomil	Lat 09°31'54" N., long 138°09'34" E., 1.0 mi (1.6 km) southwest of Coast Guard Loran Station.	.18 (.47)	1980	9-16-80	1.3

Discharge measurements made at low-flow partial-record stations during water year 1980--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Measurements Date	Measurements Discharge (ft³/s)
		Caroline Islands, Yap Islands--Continued				
16893300	Bileiy Spring, Gagil-Tomil	Lat 09°32'19" N., long 138°10'59" E., on right bank at Binau, 200 ft (61 m) downstream from main spring, and 0.6 mi (1.0 km) upstream from mouth.	-	1968-74≠, 1975-80	12-27-79 9-16-80	0.18 .40
16893310	Bileiy Stream, Gagil-Tomil	Lat 09°32'15" N., long 138°11'11" E., 0.3 mi (0.5 km) downstream from Bileiy Spring, 0.4 mi (0.6 km) upstream from mouth, and 0.4 mi (0.6 km) south of Gatjapar.	.15 (.39)	1968-80	12-27-79	.18
16893400	Byeb Stream, Gagil-Tomil	Lat 09°33'02" N., long 138°09'03" E., 1.2 mi (1.9 km) northwest of Coast Guard Loran Station, 0.6 mi (1.0 km) southeast of Tageren Canal bridge.	.22 (.57)	1980	9-19-80	1.9
16893500	Amin Stream, Map	Lat 09°35'30" N., long 138°10'05" E., 1.1 mi (1.8 km) northwest of Chol and 1.5 mi (2.4 km) northeast of Mt. Orile.	.30 (.78)	1980	9-19-80	.49
		Caroline Islands, Island of Truk				
16893900	Pou Stream, Moen	Lat 07°26'53" N., long 151°51'21" E., 0.6 mi north of Mount Teroken and 0.4 mi upstream from mouth.	.17 (.44)	1968-70, 1972, 1980	5- 7-80	.19
		Caroline Islands, Island of Ponape				
16897550	Meitik River	Lat 06°56'24" N., long 158°13'58" E., 0.3 mi (0.5 km) upstream from mouth and 1.4 mi (2.2 km) south of Tolenot Peak.	5.27 (13.65)	1971, 1973, 1977, 1980	5-20-80	1.1
16899000	Senpen River	Lat 06°52'33" N., long 158°16'53" E., 0.1 mi (0.2 km) downstream of confluence of two branches 0.6 mi (1.0 km) southeast of Tolemarawi Peak, and 1.4 mi (2.3 km) southwest of Retau.	6.13 (15.88)	1971, 1973, 1976-77, 1980	5-20-80	194
16899100	Lataw River	Lat 06°53'04" N., long 158°16'52" E., 0.1 mi (0.2 km) upstream from left-bank tributary, 0.5 mi (0.8 km) northeast of Tolemarawi Peak, and 1.3 mi (2.1 km) west of Retau.	2.54 (6.58)	1971, 1973, 1976-77, 1980	5-22-80	76
		Caroline Islands, Island of Kosrae				
16899670	Mwot River	Lat 05°19'12" N., long 162°56'52" E., 0.4 mi (0.6 km) southeast of Insief Village and 1.3 mi (2.1 km) west-northwest of Mount Wakapp.	.57 (1.48)	1980	5-17-80	9.7
16899700	Palusrik River	Lat 05°17'38" N., long 163°00'06" E., 50 ft (15 m) downstream from diversion dam, 0.7 mi (1.1 km) northeast of Utwe Village, and 2.0 mi (3.2 km) south of Mount Crozer.	.56 (1.45)	1971-72≠, 1980	5-16-80	16
16899780	Tafeyat River	Lat 05°19'20" N., long 163°01'45" E., 100 ft (30 m) downstream from former Japanese dam, 1.0 mi (1.6 km) upstream from mouth, and 1.4 mi (2.2 km) east of Mount Crozer.	.47 (1.22)	1974-75, 1977-80	1-28-80 2- 8-80 2-20-80 3-18-80 4-17-80 5-12-80 6-26-80 8-21-80	1.2 5.4 1.6 4.2 3.5 8.5 1.6 1.1

≠ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1980--Continued

Station No.	Station name	Location	Drainage area mi² (km²)	Period of record	Measurements Date	Measurements Discharge (ft³/s)
		Caroline Islands, Island of Kosrae--Continued				
16899830	Innem River	Lat 05°20'25" N., long 163°01'43" E., at concrete road bridge, 0.3 mi (0.48 km) upstream from mouth, and (1.9 mi (3.1 km) northeast of Mount Crozer.	2.51 (6.50)	1971-74, 1978-80	1-29-80	4.7
					2-11-80	6.8
					2-20-80	9.5
					4-17-80	20
					5-13-80	25
					6-26-80	12
					7- 8-80	7.3
					8- 7-80	8.1
					8-19-80	5.9
16899850	Pakusrik River	Lat 05°21'40" N., long 163°01'45" E., 20 ft (6.1 m) upstream from diversion dam, 0.5 mi (0.8 km) upstream from mouth, 0.9 mi (1.4 km) east of Mount Buacha.	.40 (1.04)	1974-75, 1980	1-28-80	.16
					2-13-80	.15
					3-18-80	5.5
					4-18-80	.69
					5-13-80	3.2
					8- 7-80	.75

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. The data are collected usually less than quarterly.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MARIANA ISLANDS, ISLAND OF GUAM

16849000 FENÀ DAM SPILLWAY NEAR AGAT

LOCATION.--Lat 13°21'28" N., long 144°42'12" E., Hydrologic Unit 20100003, on left bank 3.5 mi (5.6 km) southeast of Agat and 5.8 mi (9.3 km) southwest of Yona.

DRAINAGE AREA.--5.88 mi² (25.23 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	SAMPLING DEPTH (FT)	PH (UNITS)	TEMPERATURE, WATER (DEG C)
NOV				
20...	1110	60	7.2	26.3
20...	1111	.0	8.3	29.2
20...	1116	.0	8.3	29.2
20...	1117	18	7.7	26.9
20...	1118	27	7.5	26.5
20...	1119	45	7.3	26.4
20...	1121	9.0	8.1	28.2
20...	1325	.0	8.4	29.5
20...	1326	45	7.3	26.3
20...	1327	60	7.2	26.3
20...	1328	9.0	8.3	28.7
20...	1330	15	8.1	27.7
20...	1332	.0	8.4	29.5
20...	1450	.0	8.5	30.1
20...	1453	9.0	8.5	28.9

DATE	TIME	SAMPLING DEPTH (FT)	PH (UNITS)	TEMPERATURE, WATER (DEG C)
NOV				
20...	1455	18	7.9	27.4
20...	1456	.0	8.6	30.1
20...	1457	30	7.6	26.5
20...	1548	30	7.6	26.6
20...	1549	15	8.2	27.9
20...	1555	.0	8.6	30.1
20...	1556	30	7.5	26.6
20...	1557	15	8.1	27.9
20...	1558	.0	8.4	30.1
20...	1559	.0	8.7	30.1
20...	1640	.0	8.5	29.7
20...	1641	.0	8.5	29.7
20...	1642	9.0	8.4	28.9

DATE	TIME	SAMPLING DEPTH (FT)	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)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
NOV									
20...	1110	60	--	--	--	--	--	--	--
20...	1111	.0	--	--	--	--	--	--	--
20...	1116	.0	74	0	23	3.9	8.3	19	.4
20...	1117	18	--	--	--	--	--	--	--
20...	1118	27	--	--	--	--	--	--	--
20...	1119	45	--	--	--	--	--	--	--
20...	1121	9.0	--	--	--	--	--	--	--
20...	1325	.0	77	0	24	4.2	9.1	20	.5
20...	1326	45	--	--	--	--	--	--	--
20...	1327	60	--	--	--	--	--	--	--
20...	1328	9.0	--	--	--	--	--	--	--
20...	1330	15	--	--	--	--	--	--	--
20...	1332	.0	--	--	--	--	--	--	--
20...	1450	.0	--	--	--	--	--	--	--
20...	1453	9.0	--	--	--	--	--	--	--
20...	1455	18	--	--	--	--	--	--	--
20...	1456	.0	75	0	23	4.3	9.1	20	.5
20...	1457	30	--	--	--	--	--	--	--
20...	1548	30	--	--	--	--	--	--	--
20...	1549	15	--	--	--	--	--	--	--
20...	1555	.0	--	--	--	--	--	--	--
20...	1556	30	--	--	--	--	--	--	--
20...	1557	15	--	--	--	--	--	--	--
20...	1558	.0	76	0	23	4.5	9.4	20	.5
20...	1559	.0	--	--	--	--	--	--	--
20...	1640	.0	--	--	--	--	--	--	--
20...	1641	.0	69	0	19	4.0	9.1	23	.5
20...	1642	9.0	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MARIANA ISLANDS, ISLAND OF GUAM--Continued

16849000 FENA DAM SPILLWAY NEAR AGAT--Continued

DATE	SODIUM+ POTASSIUM DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS 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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV									
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	11	2.7	83	4.2	10	.0	12	114	.16
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	12	2.8	80	4.1	9.8	.1	13	115	.16
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	12	2.6	80	2.8	10	.1	13	113	.15
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	12	2.7	81	5.6	14	.1	14	122	.17
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	12	2.8	82	.4	10	.0	13	108	.15
20...	--	--	--	--	--	--	--	--	--

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV									
20...	.01	.00	.00	.46	.47	.46	.029	.009	--
20...	.01	.00	.00	.51	.52	.51	.009	.000	8.2
20...	.01	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	.019	--	4.9
20...	--	--	--	--	--	--	.018	--	9.4
20...	--	--	--	--	--	--	.021	--	8.0
20...	--	--	--	--	--	--	.018	--	9.6
20...	.01	.09	.12	.25	.41	.34	.013	.012	7.9
20...	--	--	--	--	--	--	.020	--	4.6
20...	--	--	--	--	--	--	.024	--	6.4
20...	.05	.02	.03	.24	.31	.26	.008	.002	4.8
20...	.02	.02	.03	.34	.38	.36	.008	.004	6.0
20...	.03	.03	.04	.34	.40	.37	.004	.000	4.0
20...	.01	.01	.01	.49	.51	.50	.003	.000	5.2
20...	.01	.00	.00	.39	.40	.39	.002	.001	7.8
20...	--	--	--	--	--	--	.006	--	--
20...	.02	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	.007	--	6.3
20...	.02	.01	.01	.42	.45	.43	--	.011	--
20...	.02	.01	.01	.39	.42	.40	--	.015	--
20...	--	--	--	--	--	--	.011	--	4.8
20...	--	--	--	--	--	--	.206	--	5.7
20...	--	--	--	--	--	--	.008	--	7.8
20...	.02	--	--	--	--	--	--	--	--
20...	.02	.02	.03	.31	.35	.33	--	.006	--
20...	.01	.01	.01	.42	.44	.43	--	.004	4.1
20...	.01	--	--	--	--	--	--	--	--
20...	.02	.01	.01	.61	.64	.62	.008	.000	5.8

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MARIANA ISLANDS, ISLAND OF GUAM--Continued

16849000 FENA DAM SPILLWAY NEAR AGAT--Continued

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)
DEC								
06...	1030	13	2310	2330	700	44	.0	44
06...	1045	23	3500	3520	630	40	.9	41
06...	1100	7.9	18100	18100	700	45	1.3	46
06...	1115	8.8	3060	3070	700	31	13	44
06...	1130	19	3250	3270	530	22	.4	22

132000144415070 FENA RESERVOIR BELOW IMONG RIVER NEAR AGAT (LAT 13°20'00" N. LONG 144°41'50" E.)

DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM
NOV					
20...	1710	13	89	99	100

132032144415470 FENA RESERVOIR BELOW ALMAGOSA RIVER NEAR AGAT (LAT 13°20'32" N. LONG 144°41'54" E.)

DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
NOV				
20...	1620	45	99	100

132048144415670 FENA RESERVOIR BETWEEN MAULAP AND ALMAGOSA RIVER NEAR AGAT (LAT 13°20'48" N. LONG 144°41'56" E.)

DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
NOV			
20...	1510	79	100

132104144415870 FENA RESERVOIR BELOW MAULAP RIVER NEAR AGAT (LAT 13°21'04" N. LONG 144°41'58" E.)

DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
NOV			
20...	1430	81	100

132108144421070 FENA RESERVOIR ABOVE SCREENHOUSE NEAR AGAT (LAT 13°21'08" N. LONG 144°42'10" E.)

DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
NOV			
20...	1300	96	100

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS

16890600 ADEIDDO RIVER, BABELTHUAP

LOCATION.--Lat 07°36'01" N., long 134°35'38" E., Hydrologic Unit 20100006, on right bank at Ngardmau, 0.3 mi (0.5 km) upstream from left-bank tributary, and 0.6 mi (1.0 km) northwest of Mount Megilon.

DRAINAGE AREA.--4.43 mi² (11.47 km²).

PERIOD OF RECORD.--Water years 1979 to current.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
29...	1155	350	31	6.7	25.5	--	--	9	1
SEP									
25...	1430	44	40	--	26.0	4.6	7.6	16	4

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
29...	2.0	1.0	2.1	33	.3	2.4	.3	8	1.1
SEP									
25...	4.0	1.5	2.3	23	.2	--	.3	12	.6

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
29...	2.9	.0	6.8	22	.03	20.8	.12	90	9
SEP									
25...	3.9	.0	9.6	29	.04	3.45	.01	100	10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16890620 NGECHUTRONG RIVER, BABELTHUAP

LOCATION.--Lat 07°36'08" N., long 134°35'25" E., Hydrologic Unit 20100006, 300 ft (91 m) upstream from Adeiddo River and 0.9 mi (1.4 km) northwest of Mount Megilon.

DRAINAGE AREA.--0.24 mi² (0.62 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN									
29...	1230	--	--	26.0	--	--	6	0	1.4
SEP									
25...	1530	2.9	30	26.0	1.9	7.2	7	--	1.5

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JAN									
29...	.7	2.2	42	.4	2.4	.2	6	.7	3.6
SEP									
25...	.9	2.2	39	.4	--	.1	--	.8	3.0

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN								
29...	.0	6.3	19	--	--	.01	50	20
SEP								
25...	.0	9.4	--	--	--	--	150	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16890650 GALKATAN RIVER, BABELTHUAP

LOCATION.--Lat 07°35'45" N., long 134°34'49" E., Hydrologic Unit 20100006, 0.9 mi (1.4 km) upstream from Adeiddo River and 1.5 mi (2.4 km) west of Mount Megilon.

DRAINAGE AREA.--1.50 mi² (3.88 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
29...	--	--	--	--	--	--	--	--	--
29...	1025	65	30	6.4	25.5	--	--	8	0
SEP									
25...	1000	27	30	--	26.0	4.5	7.3	9	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
29...	--	--	--	--	--	--	--	--	--
29...	1.7	.9	2.2	37	.3	2.5	.3	8	.5
SEP									
25...	1.8	1.1	2.1	33	.3	--	.2	--	1.4

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
29...	--	--	--	--	--	--	--	--	--
29...	3.3	.0	7.1	21	.03	3.69	.01	100	10
SEP									
25...	4.1	.0	8.9	20	.03	1.46	.01	70	10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16890700 ALMIOKAN RIVER, BABELTHUAP

LOCATION.--Lat 07°31'12" N., long 134°33'51" E., Hydrologic Unit 20100006, 0.5 mi (0.8 km) upstream from unnam tributary and 4.6 mi (7.4 km) northeast of Ngatpang village.

DRAINAGE AREA.--7.05 mi² (18.26 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN								
25...	1030	23	73	7.2	25.5	6.8	24	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
25...	4.3	3.2	4.3	28	.4	4.5	.2	25	.4

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN								
25...	4.7	.0	20	56	.08	3.48	240	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16890800 NGATPANG RIVER, BABELTHUAP

LOCATION.--Lat 07°27'40" N., long 134°32'15" E., Hydrologic Unit 20100006, 0.2 mi (0.3 km) upstream from unnamed tributary and 0.4 mi (0.6 km) southeast of Ngatpang village.

DRAINAGE AREA.--0.35 mi^2 (0.91 km^2).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN									
24...	1205	1.2	68	7.0	25.0	7.2	22	0	4.4

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JAN									
24...	2.6	5.1	33	.5	5.5	.4	26	1.0	4.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN								
24...	.0	24	58	.08	.19	.01	260	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16890900 TABAGATEN RIVER, BABELTHUAP

LOCATION.--Lat 07°27'00" N., long 134°32'05" E., Hydrologic Unit 20100006, on left bank 0.3 mi (0.5 km) downstream from unnamed tributary, 0.7 mi (1.1 km) northeast of Mount Karukail, and 1.0 mi (1.6 km) south of Ngatpang.

DRAINAGE AREA.--6.34 mi² (16.42 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
24...	1010	30	76	7.4	25.0	--	8.0	24	0
SEP									
27...	1000	130	45	--	25.5	6.6	8.2	14	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
24...	4.3	3.3	4.1	27	.4	4.4	.3	27	.3
SEP									
27...	2.2	2.0	2.9	31	.3	--	.3	14	3.8

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
24...	3.9	.0	22	55	.07	4.46	.01	190	7
SEP									
27...	3.7	.0	14	37	.05	13.0	.00	90	7

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891190 GIHMEL RESERVOIR, BABELTHUAP

LOCATION.--Lat 07°22'01" N., long 134°32'09" E., Hydrologic Unit 20100006, on right bank at Garuruon, at dam and 0.5 mi (0.8 km) upstream from coast road.

PERIOD OF RECORD.-- Water year 1980.

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
JAN								
27...	0905	76	7.4	29.5	--	7.4	28	0
SEP								
23...	1500	65	--	30.0	6.2	6.9	22	1

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	SODIUM+POTASSIUM DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
JAN									
27...	5.8	3.2	4.2	25	.3	4.5	.3	29	.3
SEP									
23...	4.8	2.5	3.7	26	.3	--	.6	21	5.5

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
27...	4.9	.0	21	58	.08	.16	260	2
SEP								
23...	4.8	.0	17	52	.07	.00	300	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891300 GADEN RIVER, BABELTHUAP

LOCATION.--Lat 07°22'56" N., long 134°33'42" E., Hydrologic Unit 20100006, on left bank 1,000 ft (305 m) upstream from confluence with Kumekumeyel River, 1.0 mi (1.6 km) southwest of Mount Kabekobekushi, and 1.8 mi (2.9 km) north of Airai.

DRAINAGE AREA.--4.23 mi^2 (10.96 km^2).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
22...	1335	13	83	7.9	25.5	--	7.0	30	0
SEP									
23...	1100	29	65	--	26.5	9.1	7.4	21	1

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
22...	5.8	3.8	3.5	20	.3	3.7	.2	34	.2
SEP									
23...	4.1	2.5	3.0	24	.3	--	.3	20	5.2

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
22...	5.1	.0	21	60	.08	2.11	.03	150	5
SEP									
23...	4.0	.0	15	46	.06	3.60	.01	110	7

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891310 KUMEKUMEYEL RIVER, BABELTHUAP

LOCATION.--Lat 07°23'01" N., long 134°33'34" E., Hydrologic Unit 20100006, 100 ft (30 m) upstream from confluence with Gaden River, 1.1 mi (1.8 km) west of Mount Kabekobekushi, and 1.9 mi (3.1 km) north of Airai.

DRAINAGE AREA.--1.55 mi² (4.02 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
22...	0950	3.7	86	7.5	25.0	--	8.0	34	0
SEP									
23...	1330	9.9	70	--	26.0	5.1	8.2	26	2

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
22...	7.2	4.0	4.0	20	.3	4.3	.3	34	.6
SEP									
23...	6.1	2.6	3.2	21	.3	--	.3	24	4.9

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
22...	4.4	.0	25	66	.09	.66	.01	200	10
SEP									
23...	4.6	.0	17	53	.07	1.42	.00	80	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891400 SOUTH FORK NGARDOK RIVER, BABELTHUAP

LOCATION.--Lat 07°26'15" N., long 134°35'03" E., Hydrologic Unit 20100006, on right bank 0.3 mi (0.5 km) from left-bank tributary, 0.6 mi (1.0 km) northwest of Garasho Mountain, and 1.3 mi (2.1 km) west Ngarsul village.

DRAINAGE AREA.--2.26 mi² (5.85 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
23...	1100	5.8	61	7.3	25.0	--	7.8	23	0
SEP									
24...	1100	13	45	--	26.0	1.5	8.1	15	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
23...	4.6	2.9	3.1	22	.3	3.3	.2	23	.3
SEP									
24...	2.7	2.0	2.9	29	.3	--	.1	15	3.1

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
23...	4.2	.0	18	47	.06	.74	.01	190	6
SEP									
24...	3.8	.0	15	39	.05	1.37	.01	120	6

16891430 NORTH FORK NGARDOK RIVER, BABELTHUAP

LOCATION.--Lat 07°27'50" N., long 134°35'49" E., Hydrologic Unit 20100006, 500 ft (152 m) upstream from right-bank tributary, 1.4 mi (2.3 km) upstream from confluence with South Fork Ngardok River, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--9.37 mi² (24.27 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
23...	1310	24	60	7.4	26.0	--	8.0	21	0
SEP									
24...	1530	60	--	--	26.0	3.4	7.2	16	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
23...	3.8	2.8	4.4	31	.4	4.5	.1	23	.2
SEP									
24...	2.8	2.2	4.8	39	.5	--	.1	21	3.1

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
23...	4.4	.0	17	47	.06	3.05	.01	350	20
SEP									
24...	4.0	.0	14	44	.06	7.10	--	160	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891700 UNNAMED WEST COAST STREAM, ARAKABESAN

LOCATION.--Lat 07°21'14" N., long 134°27'10" E., Hydrologic Unit 20100006, 0.1 mi (0.2 km) upstream from mouth and 0.15 mi (1.0 km) southeast of Arakabesan village.

DRAINAGE AREA.--0.03 mi² (0.08 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN								
24...	1545	.03	73	6.7	25.0	20	1	4.4

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JAN									
24...	2.2	5.9	39	.6	6.2	.3	19	2.9	8.6

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN								
24...	.0	21	57	.08	.00	.08	150	8

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891780 UNNAMED NORTH COAST STREAM, MALAKAL

LOCATION.--Lat 07°19'51" N., long 134°27'35" E., Hydrologic Unit 20100006, 0.2 mi (0.3 km) upstream from mouth and 1.3 mi (2.1 km) southwest of Madalai.

DRAINAGE AREA.--0.02 mi² (0.05 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP 22...	1600	<.01	65	27.0	2.4	7.2	20	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP 22...	4.5	2.2	5.0	34	.5	.4	21	.2	8.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP 22...	.0	19	53	<.07	<.01	.00	60	50

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

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS

16892000 ATELU STREAM, YAP

LOCATION.--Lat 09°32'56" N., long 138°06'19" E., Hydrologic Unit 20100006, 2.6 mi (4.2 km) northwest of Colonia and 1.2 mi (1.9 km) northwest of Mount Matade.

DRAINAGE AREA.--0.31 mi² (0.80 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
20...	1230	.18	125	26.5	5.9	7.0	47	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
20...	5.6	8.1	6.8	29	.4	.3	51	.7	11

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
20...	.0	23	86	.12	.04	.03	360	6

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTMEBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892400 ARINGEL STREAM, YAP

LOCATION.--Lat 09°31'01" N., long 138°05'11" E., Hydrologic Unit 20100006, on right bank at Aringel and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--0.24 mi^2 (0.62 km^2).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
31...	0900	<.01	220	6.8	24.5	--	5.0	74	8
SEP									
15...	1430	.47	95	7.8	27.0	9.3	7.2	34	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
31...	8.0	13	17	33	.9	18	.6	66	2.9
SEP									
15...	4.0	5.9	5.1	24	.4	--	.2	36	.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
31...	23	.0	25	147	<.20	<.01	3.9	90	3
SEP									
15...	7.7	.0	19	64	.09	.08	.00	190	7

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892500 TAMANEY STREAM, YAP

LOCATION.--Lat 09°29'45" N., long 138°05'34" E., Hydrologic Unit 20100006, at abandoned German dam, 0.5 mi (0.8 km) northwest of Inuf, and 2.3 mi (3.7 km) southwest of Colonia.

DRAINAGE AREA.--0.21 mi² (0.54 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
17...	1630	1.4	138	27.0	12	6.4	62	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
17...	13	7.2	4.3	13	.2	.1	66	.6	5.4

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
17...	.0	18	89	.12	.34	.12	330	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892600 RIPU STREAM, YAP

LOCATION.--Lat 09°30'05" N., long 138°06'02" E., Hydrologic Unit 20100006, 1,000 ft (305 m) upstream from mouth and 1.6 mi (2.6 km) southwest of Colonia.

DRAINAGE AREA.--0.24 mi² (0.62 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
17...	1530	1.5	112	27.0	19	7.7	48	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
17...	6.9	7.4	5.2	19	.3	.4	51	.9	6.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
17...	.0	20	79	.11	.32	.22	250	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892650 DINAY STREAM, YAP

LOCATION.--Lat 09°30'29" N., long 138°06'02" E., Hydrologic Unit 20100006, 0.5 mi (0.8 km) northwest of the water treatment plant and 1.5 mi (2.4 km) southwest of Colonia.

DRAINAGE AREA.--0.04 mi² (0.10 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
18...	1630	.14	92	26.0	22	7.5	35	2

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
18...	4.1	6.1	4.8	23	.4	.2	33	.9	6.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
18...	.1	20	64	.09	.02	.07	450	30

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892680 THALOMAR STREAM ABOVE RESERVOIR, YAP

LOCATION.--Lat 09°30'32" N., long 138°06'03" E., Hydrologic Unit 20100006, 0.5 mi (0.8 km) northwest of the water treatment plant and 1.4 mi (2.3 km) southwest of Colonia.

DRAINAGE AREA.--0.10 mi² (0.26 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
18...	1500	.43	130	26.5	27	7.6	44	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
18...	6.4	6.9	6.2	23	.4	.3	50	.2	8.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
18...	.0	19	78	.11	.09	.00	240	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892800 DALOLAB STREAM, YAP

LOCATION.--Lat 09°31'04" N., long 138°06'04" E., Hydrologic Unit 20100006, on left bank at Talagu and 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--0.07 mi² (0.18 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JAN									
31...	1015	<.01	210	7.0	25.5	--	1.6	81	1
SEP									
17...	1400	.56	112	--	26.0	30	7.5	39	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN									
31...	9.2	14	10	21	.5	10	.2	80	.7
SEP									
17...	4.7	6.7	6.1	25	.4	--	.3	34	1.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
JAN									
31...	16	.0	28	127	<.17	<.01	.13	150	20
SEP									
17...	13	.0	16	69	.09	.10	.11	370	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892900 PEMGOY STREAM, YAP

LOCATION.--Lat 09°31'07" N., long 138°06'18" E., Hydrologic Unit 20100006, on right bank at Talagu, 100 ft (30 m) upstream from Talagu Stream, and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--0.14 mi² (0.36 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB									
01...	0915	<.01	345	7.5	25.5	--	4.6	140	0
SEP									
17...	1000	.27	118	7.5	26.5	8.4	7.9	41	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB									
01...	15	25	13	17	.5	14	.5	150	.4
SEP									
17...	5.2	6.9	6.3	25	.4	--	.4	54	.2

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
FEB									
01...	14	.0	51	210	<.29	<.01	.29	260	30
SEP									
17...	10	.0	18	79	.11	.06	.00	150	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893000 TALAGU STREAM, YAP

LOCATION.--Lat 09°31'08" N., long 138°06'13" E., Hydrologic Unit 20100006, on left bank at Talagu, 300 ft (91 m) upstream fom mouth, and 0.9 mi (1.4 km) upstream from mouth of Pemgoy Stream.

DRAINAGE AREA.--0.08 mi² (0.21 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB									
01...	0830	<.01	134	6.6	25.5	--	1.6	46	3
SEP									
17...	1100	.56	112	7.1	26.5	6.9	7.4	40	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB									
01...	5.4	7.8	7.0	25	.5	7.1	.1	43	.3
SEP									
17...	4.4	7.0	5.8	24	.4	--	.4	43	.6

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
FEB									
01...	14	.0	21	82	<.11	<.01	.16	30	4
SEP									
17...	11	.0	20	75	.10	.11	.01	140	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893100 BURONG STREAM, YAP

LOCATION.--Lat 09°31'59" N., long 138°07'05" E., Hydrologic Unit 20100006, on left bank at Dugor and 0.1 mi (0.2 km) upstream from mouth.

DRAINAGE AREA.--0.23 mi^2 (0.60 km^2).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB									
01...	1645	<.01	154	7.0	26.5	--	--	55	3
SEP									
18...	1030	2.0	105	--	26.0	26	7.4	39	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB									
01...	8.0	8.4	7.3	22	.4	7.8	.5	52	.4
SEP									
18...	5.2	6.2	5.6	24	.4	--	.3	43	1.1

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
FEB									
01...	13	.0	20	94	<.13	<.01	1.2	60	20
SEP									
18...	8.2	.0	5.6	60	.08	.32	.36	380	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893180 MONGUCH STREAM, GAGIL-TOMIL

LOCATION.--Lat 09°31'54" N., long 138°09'34" E., Hydrologic Unit 20100006, 1.0 mi (1.6 km) southwest of the Coast Guard Loran Station, 0.62 mi (1.0 km) northwest of Ma village.

DRAINAGE AREA.--0.18 mi² (0.47 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP									
16...	1430	1.3	33	5.9	28.0	2.3	5.2	7	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
16...	.8	1.1	3.7	53	.6	.6	8	1.8	6.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
16...	.0	6.7	26	.04	.09	.00	1000	110

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893200 MUKONG STREAM, GAGIL-TOMIL

LOCATION.--Lat 09°32'06" N., long 138°09'59" E., Hydrologic Unit 20100006, on right bank 0.2 mi (0.3 km) upstream from mouth and 1.6 mi (2.6 km) southwest of Gatjapar.

DRAINAGE AREA.--0.50 mi² (1.29 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB									
01...	1510	.32	81	6.7	28.0	--	5.6	25	0
SEP									
16...	0930	2.5	72	6.8	26.0	3.6	6.3	29	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB									
01...	4.1	3.6	5.2	31	.5	5.3	.1	30	.4
SEP									
16...	4.2	4.4	4.6	26	.4	--	.3	28	4.0

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
FEB									
01...	6.6	.0	9.3	48	.07	.04	.06	290	560
SEP									
16...	6.1	.1	9.3	50	.07	.34	.23	950	200

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893300 BILBIY SPRING, GAGIL-TOMIL

LOCATION.--Lat 09°32'19" N., long 138°10'59" E., Hydrologic Unit 20100006, on right bank at Binau, 200 ft (61 m) downstream from main spring, and 0.6 mi (1.0 km) upstream from mouth.

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP									
16...	1130	.40	105	6.6	27.0	.50	6.2	34	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
16...	3.1	6.3	6.3	29	.5	.4	29	.4	9.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
16...	.0	15	63	.09	.07	.88	100	20

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893400 EYED STREAM, GAGIL-TOMIL

LOCATION.--Lat 09°33'02" N., long 138°09'03" E., Hydrologic Unit 20100006, 1.2 mi (1.9 km) northwest of the Coast Guard Loran Station and 0.6 mi (0.97 km) southeast of the Tageren Canal.

DRAINAGE AREA.--0.22 mi² (0.57 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP 19...	1130	1.9	69	26.5	1.4	6.9	21	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP 19...	5.6	1.7	4.1	29	.4	.3	16	6.9	6.0

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP 19...	.0	7.2	44	.06	.23	.43	390	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS--Continued

16893500 OMIN STREAM, YAP

LOCATION.--Lat 09°35'30" N., long 138°10'05" E., Hydrologic Unit 20100006, 0.8 mi (1.3 km) northwest of Chol and 0.7 mi (1.1 km) southeast of Omin.

DRAINAGE AREA.--0.30 mi² (0.78 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
SEP								
19...	1600	.49	131	27.0	15	6.4	42	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
SEP									
19...	6.8	6.1	9.5	33	.6	.3	43	5.0	15

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
SEP								
19...	.0	19	83	.11	.11	.12	320	20

092910138045070 AIRPORT SWAMP, YAP

LOCATION.--Lat 09°29'10" N., long 138°04'50" E., Hydrologic Unit 20100006, at Yap Airport, 0.5 mi (0.8 km) northwest of Lueis, and 0.5 mi (0.8 km) northeast of Lamer.

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)
FEB												
02...	0930	26.0	125	7.7	41	1	13	2.1	5.5	22	.4	6.0
SEP												
20...	1030	33.0	110	--	43	2	14	2.0	4.5	18	.3	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)
FEB											
02...	.5	40	4.7	9.2	.0	2.3	61	.08	.01	50	9
SEP											
20...	.7	41	3.3	7.8	.1	2.3	61	.08	.36	70	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, TRUK ISLANDS

16893700 WICHEN RIVER AT ALTITUDE 55 M, MOEN

LOCATION.--Lat 07°26'45" N., long 151°52'02" E., Hydrologic Unit 20100006, on left bank at Peniesence, 1.0 mi (1.6 km) upstream from mouth, and 1.6 mi (2.6 km) west of Saint Xaviers Academy.

DRAINAGE AREA.--0.23 mi² (0.60 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
31...	1230	3.3	40	7.3	26.0	--	7.6	7	2
MAY									
05...	1530	8.1	52	7.0	26.5	17	8.1	9	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
31...	1.4	.9	4.6	57	.7	4.8	.2	5	5.0
MAY									
05...	1.7	1.1	5.1	54	.8	--	.4	9	1.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
31...	6.3	.1	10	32	.04	.29	.04	130	9
MAY									
05...	7.4	.1	11	34	.05	.74	.07	150	8

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, TRUK ISLANDS--Continued

16893800 WICHEN RIVER AT ALTITUDE 18 M, MOEN

LOCATION.--Lat 07°27'05" N., long 151°52'18" E., Hydrologic Unit 20100006, on left bank at Peniesence and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--0.57 mi² (1.48 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
31...	1000	11	39	7.2	26.5	--	7.6	8	1
MAY									
05...	1200	43	--	6.9	26.5	24	7.5	8	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
31...	1.4	1.0	4.2	54	.7	4.4	.2	7	5.3
MAY									
05...	1.5	1.0	13	77	2.0	--	.5	23	2.0

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
31...	5.8	.1	10	33	.04	.98	.04	170	7
MAY									
05...	6.5	.1	9.5	48	.07	5.57	.07	150	8

16893880 POU RESERVOIR (OUTFLOW), MOEN

LOCATION.--Lat 07°26'44" N., long 151°51'22" E., Hydrologic Unit 20100006, 0.5 mi (0.8 km) north of Mount Teroken and 0.6 mi (1.0 km) west of Peniesene.

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	TUR-BID-ITY (NTU)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-STUM, DIS-SOLVED (MG/L AS K)
MAY										
07...	1500	7.4	17	5	4.5	1.3	5.3	41	.6	.2

DATE	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)	ALKA-LINITY (MG/L AS CACO3)	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)
MAY										
07...	.3	11	.1	11	41	.06	12	.06	140	3

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, TRUK ISLANDS--Continued

16893900 POU STREAM, MOEN

LOCATION.--Lat 07°26'53" N., long 151°51'21" E., Hydrologic Unit 20100006, 0.6 mi (1.0 km) north of Mount Teroken and 0.4 mi (0.6 km) above mouth.

DRAINAGE AREA.--0.17 mi² (0.44 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
MAY								
07...	1530	.19	89	28.5	4.3	7.8	28	1

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
MAY									
07...	5.4	3.5	6.2	32	.5	.2	29	2.0	8.4

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY								
07...	.1	17	60	.08	.03	.23	80	3

16894100 FAICHIA STREAM, MOEN

LOCATION.--Lat 07°25'36" N., long 151°50'52" E., Hydrologic Unit 20100006, 100 ft (30 m) upstream from road and 0.4 mi (0.6 km) west of Mount Chukuwon.

DRAINAGE AREA.--0.05 mi² (0.13 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
MAY									
07...	1000	.03	53	7.5	27.5	6.5	8.0	15	2

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
MAY									
07...	2.6	2.1	4.5	39	.5	.1	13	1.1	5.7

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY								
07...	.1	17	42	.06	.00	.05	310	2

CAROLINE ISLANDS, ISLAND OF PONAPE

16897550 MEITIK RIVER

LOCATION.--Lat 06°56'24" N., long 158°13'58" E., Hydrologic Unit 20100006, 0.3 mi (0.5 km) upstream from mouth and 1.4 mi (2.3 km) south of Tolenot Peak.

DRAINAGE AREA.--5.27 mi² (13.65 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
20...	1630	55	27.5	1.0	7.8	16	0	1.9	2.8	2.3	23	.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
20...	.2	17	.1	3.6	.1	12	33	.04	4.90	.02	110	5

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16897600 NANEPIL RIVER

LOCATION.--Lat 06°55'11" N., long 158°12'36" E., Hydrologic Unit 20100006, on left bank 1.4 mi (2.3 km) northeast of Mount Tamatamansakir and 1.4 mi (2.3 km) southeast of Rekisau.

DRAINAGE AREA.--2.93 mi² (7.59 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
27...	1030	21	21	7.5	25.0	--	7.6	6	2
MAY									
20...	1100	26	--	--	25.0	.60	8.9	8	4

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
27...	1.0	.8	2.1	44	.4	2.2	.1	4	3.9
MAY									
20...	2.0	.8	1.9	33	.3	--	.2	4	.1

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
27...	2.9	.0	5.3	19	.03	1.08	.01	60	2
MAY									
20...	4.9	.1	4.9	17	.02	1.19	.02	40	<3

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16897900 LUI RIVER

LOCATION.--Lat 06°55'36" N., long 158°12'55" E., Hydrologic Unit 20100006, on right bank 300 ft (91 m) upstream from right-bank tributary and 1.3 mi (2.1 km) southeast of Rokisau.

DRAINAGE AREA.--0.47 mi² (1.22 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
27...	1330	3.3	30	6.6	26.5	--	7.6	10	3
MAY									
20...	1300	4.2	--	--	26.5	2.4	7.8	10	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
27...	1.5	1.5	2.1	31	.3	2.2	.1	7	4.9
MAY									
20...	1.4	1.5	2.1	32	.3	--	.1	10	1.0

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
27...	3.1	.0	8.1	26	.04	.23	.01	90	3
MAY									
20...	3.3	.1	7.9	23	.03	.26	.02	60	3

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16898200 LUI RIVER AT MOUTH

LOCATION.--Lat 06°57'07" N., long 158°13'16" E., Hydrologic Unit 20100006, on right bank 0.4 mi (0.6 km) upstream from mouth and 1.3 mi (2.1 km) west of Tolenot Peak.

DRAINAGE AREA.--2.06 mi^2 (5.34 km^2).

PERIOD OF RECORD.--Water years 1978 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
26...	1500	10	53	7.6	26.5	--	7.9	20	4
26...	1600	223	--	6.8	25.0	--	--	9	5
MAY									
10...	1330	51	--	--	26.5	4.3	8.2	10	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
26...	3.0	3.1	3.3	26	.3	3.5	.2	16	5.7
26...	1.4	1.3	1.9	30	.3	2.5	.6	4	6.1
MAY									
10...	1.5	1.5	2.0	30	.3	--	.2	5	4.2

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
26...	4.4	.1	13	43	.06	1.16	.02	110	5
26...	2.8	.0	4.3	21	.03	12.6	.02	170	7
MAY									
10...	3.0	.1	6.2	22	.03	3.03	.05	90	4

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16898600 LUPWOR RIVER

LOCATION.--Lat 06°54'15" N., long 158°09'45" E., Hydrologic Unit 20100006, on left bank about 300 ft (91 m) upstream from 50-ft (15-m) waterfall, 1.8 mi (2.9 km) above mouth, and 2.1 mi (3.4 km) west of Mount Tamatamansakir.

DRAINAGE AREA.--1.12 mi² (2.90 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT									
29...	1030	11	36	7.6	26.0	--	6.1	14	3
MAY									
21...	1100	5.6	--	--	27.0	1.0	8.4	14	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT									
29...	2.9	1.7	2.0	23	.2	2.1	.1	11	4.7
MAY									
21...	2.8	1.8	2.5	27	.3	--	.2	14	1.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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									
29...	2.7	.0	8.8	30	.04	.89	.01	100	4
MAY									
21...	3.0	.1	12	32	.04	.48	.02	100	8

16899000 SENPEN RIVER

LOCATION.--Lat 06°52'33" N., long 158°16'53" E., Hydrologic Unit 20100006, 0.6 mi (1.0 km) southeast of Tolemarawi Peak and 1.4 mi (2.3 km) southwest of Retau.

DRAINAGE AREA.--6.13 mi² (15.88 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
MAY												
22...	1230	195	27.0	2.6	7	1	1.2	1.0	2.0	37	.3	.2

DATE	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY											
22...	6	1.9	2.7	.1	6.7	19	.03	10.0	.02	80	4

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16899100 LATAW RIVER

LOCATION.--Lat 06°53'04" N., long 158°16'52" E., Hydrologic Unit 20100006, 0.5 mi (0.8 km) northeast of Tolemarawi Peak and 1.3 mi (2.1 km) west of Retau.

DRAINAGE AREA.--2.54 mi² (6.58 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
MAY												
22...	1130	77	25.0	2.6	6	0	1.1	.9	1.9	38	.3	.3

DATE	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY											
22...	6	.5	2.8	.1	5.5	17	.02	3.52	.05	80	9

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899500 MUTUNTE RIVER

LOCATION.--Lat 05°22'25" N., long 163°00'24" E., Hydrologic Unit 20100006, on left bank at dam, 0.3 mi (0.5 km) upstream from mouth, and 1.1 mi (1.8 km) northwest of Mount Buache.

DRAINAGE AREA.--0.60 mi² (1.55 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
14...	1400	4.9	26.0	1.6	8.0	23	5	3.5	3.5	3.1	22	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
14...	.3	18	2.5	4.4	.0	15	43	.06	.57	.00	20	<3

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF KOSRAE--Continued

16899600 OKAT RIVER

LOCATION.--Lat 05°20'32" N., long 162°59'30" E., Hydrologic Unit 20100006, on left bank 1.6 mi (2.6 km) upstream from mouth and 1.9 mi (3.1 km) northwest of Mount Crozer.

DRAINAGE AREA.--1.60 mi² (4.14 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY 15...	0800	29	26.0	4.4	7.6	27	0	5.4	3.3	3.0	19	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY 15...	.7	27	4.0	3.8	.1	15	52	.07	4.07	.03	280	20

16899620 MBLO RIVER

LOCATION.--Lat 05°21'06" N., long 162°59'29" E., Hydrologic Unit 20100006, on left bank 0.35 mi (0.56 km) upstream from mouth and 1.7 mi (2.7 km) southwest of Mount Buache.

DRAINAGE AREA.--0.48 mi² (1.24 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY 15...	1100	8.6	27.0	2.3	8.0	36	8	7.0	4.4	3.3	17	.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY 15...	.6	28	8.6	3.5	.1	17	62	.08	1.44	.00	150	6

16899700 PALUSRIK RIVER

LOCATION.--Lat 05°17'38" N., long 163°00'06" E., Hydrologic Unit 20100006, on right bank 0.4 mi (0.6 km) upstream from Pinkol River, 0.7 mi (1.1 km) northeast of Utive village, and 2.0 mi (0.3 km) south of Mount Crozer.

DRAINAGE AREA.--0.56 mi² (1.45 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
16...	1230	16	25.0	5.4	8.2	12	3	2.0	1.8	2.4	29	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
16...	.2	9	2.2	3.9	.0	8.9	27	.04	1.17	.00	140	9

16899750 MALBM RIVER

LOCATION.--Lat 05°18'21" N., long 163°01'46" E., Hydrologic Unit 20100006, on left bank 1.2 mi (1.9 km) upstream from mouth and 1.8 mi (2.9 km) southeast of Mount Crozer.

DRAINAGE AREA.--0.48 mi² (1.24 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
12...	1500	26	26.5	9.2	8.2	23	7	4.1	3.0	2.9	21	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
12...	.6	18	5.6	5.0	.0	12	43	.06	3.02	.00	120	6

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF KOSRAE--Continued

16899780 TAFEYAT RIVER

LOCATION.--Lat 05°19'20" N., long 163°01'45" E., Hydrologic Unit 20100006, 100 ft (30 m) downstream from former Japanese dam, 1.0 mi (1.6 km) upstream from mouth, and 1.4 mi (2.2 km) east of Mount Crozer.

DRAINAGE AREA.--0.47 mi² (1.22 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY 12...	1630	8.5	26.5	4.3	8.2	57	10	13	6.0	4.7	15	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY 12...	1.1	47	9.2	5.1	.1	21	88	.12	2.02	.01	230	20

16899800 TOFOL RIVER

LOCATION.--Lat 05°19'53" N., long 163°01'25", Hydrologic Unit 20100006, on left bank 25 ft (7.6 m) downstream from right-bank tributary, 0.7 mi (1.1 km) upstream from mouth, and 1.2 mi (1.9 km) northeast of Mount Crozer.

DRAINAGE AREA.--0.44 mi² (1.14 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY 13...	1000	9.9	26.5	1.6	8.2	40	9	8.1	4.7	4.3	19	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY 13...	.8	31	9.8	4.4	.1	24	75	.10	2.00	.03	90	4

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF KOSRAE--Continued

16899830 INNEM RIVER

LOCATION.--Lat 05°20'25" N., long 163°01'43" E., Hydrologic Unit 20100006, at concrete road bridge 0.3 mile upstream from mouth and 1.9 mi northeast of Mount Crozer.

DRAINAGE AREA.--2.51 mi² (6.50 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
13...	1100	25	26.5	38	8.2	35	11	6.7	4.4	3.8	19	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
13...	.7	24	10	4.6	.1	18	63	.09	4.25	.05	190	20

16899850 PAKUSRIK RIVER

LOCATION.--Lat 05°21'40" N., long 163°01'45" E., Hydrologic Unit 20100006, 80 ft (24 m) downstream from new diversion dam, 0.5 mi (0.8 km) upstream from mouth, 0.9 mi (1.4 km) east of Mount Buache.

DRAINAGE AREA.--0.40 mi² (1.04 km²).

PERIOD OF RECORD.--Water year 1980.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAY												
13...	1500	3.2	25.0	3.1	8.2	39	9	6.6	5.5	4.7	20	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)
MAY												
13...	.5	30	4.9	6.2	.1	19	66	.09	.57	.00	90	4

PERIODIC DETERMINATIONS OF TEMPERATURES

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, PALAU ISLANDS

16890600 - ADEIODO RIVER, BABELTHUAP, PALAU ISLANDS (LAT 07 36 01 LONG 134 35 38)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
05...	1230	51	29.5	26.5
NOV				
08...	1210	39	29.0	26.0
DEC				
04...	1140	19	28.0	25.5
JAN , 1980				
29...	1155	350	--	25.5
FEB				
26...	1430	32	28.0	26.0
APR , 1980				
28...	1325	23	27.0	25.0
JUN				
05...	1340	13	28.0	25.5
JUL				
17...	1425	29	26.0	25.5
AUG				
25...	1200	25	27.5	25.5
SEP				
25...	1430	44	27.5	26.0

16890900 - TABAGATEN RIVER, BABELTHUAP, PALAU ISLANDS (LAT 07 27 00 LONG 134 32 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
04...	0840	93	28.0	26.0
NOV				
06...	1020	76	27.0	25.5
JAN , 1980				
15...	1025	17	27.5	25.0
24...	1010	30	--	25.0
FEB				
21...	1120	53	28.0	25.0
MAR				
18...	1020	12	25.5	24.5
APR , 1980				
25...	1105	57	27.0	25.0
JUN				
03...	1055	17	28.5	25.0
AUG				
21...	1055	35	27.0	25.0
SEP				
27...	1000	130	26.5	25.5

16891300 - GADEN RIVER, BABELTHUAP, PALAU ISLANDS (LAT 07 22 56 LONG 134 33 42)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
31...	1200	19	28.0	25.0
NOV				
29...	1120	20	27.0	25.5
JAN , 1980				
22...	1335	13	--	25.5
22...	1340	13	27.0	25.5
FEB				
13...	1055	26	27.0	25.0
MAR , 1980				
17...	1110	10	27.0	24.5
APR				
15...	1020	9.1	28.0	26.0
AUG				
05...	1455	50	27.0	25.0
SEP				
12...	1230	22	28.0	25.5
23...	1100	29	--	26.5

16891310 - KUMEKUMEYEL RIVER, BABELTHUAP, PALAU ISLANDS (LAT 07 23 15 LONG 134 33 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
09...	1615	6.9	27.0	26.0
NOV				
21...	1020	7.8	28.0	26.0
JAN , 1980				
22...	1010	3.7	27.0	25.0
FEB				
13...	1325	8.1	27.0	25.0
MAR				
17...	1335	2.6	28.0	25.0
APR , 1980				
15...	1245	5.5	28.0	26.0
JUN				
25...	1220	7.4	28.0	26.0
AUG				
06...	1200	3.4	28.0	26.0
SEP				
18...	1105	3.5	28.0	25.0

16891400 - SOUTH FORK NGARDOK RIVER, BABELTHUAP,PALAU IS (LAT 07 26 15 LONG 134 35 03)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979				
15...	1125	11	30.0	26.5
JAN , 1980				
16...	0950	5.4	27.0	25.0
23...	1100	5.8	--	25.0
FEB				
27...	1150	10	29.0	26.0
MAR				
27...	1250	7.4	30.0	26.0
MAY				
02...	1140	12	30.0	26.5
JUN , 1980				
10...	1300	9.3	29.0	26.0
JUL				
18...	1155	11	26.0	25.0
AUG				
28...	1155	12	26.0	25.0
SEP				
24...	1100	13	28.5	26.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, YAP ISLANDS

16892400 - ARINGEL STREAM, YAP, YAP ISLANDS (LAT 09 31 01 LONG 138 05 11)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
DEC , 1979				
26...	1010	.21	27.0	25.0
JAN , 1980				
31...	0900	.00	--	24.5
MAY				
19...	1025	.07	27.5	26.0
JUN				
03...	1405	.17	30.0	26.5
30...	1030	.35	27.5	25.5
JUL , 1980				
24...	0900	.26	25.5	25.0
31...	1055	.06	30.0	25.5
SEP				
02...	0940	.07	27.0	25.5
15...	1430	.47	30.0	27.0

16892800 - DALOLAB STREAM, YAP, YAP ISLANDS (LAT 09 31 04 LONG 138 06 08)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
10...	0925	.12	27.5	26.5
DEC				
26...	1055	.02	26.5	25.0
JAN , 1980				
31...	1015	.00	--	25.5
JUN				
03...	1500	.03	30.5	27.0
30...	1020	.07	29.0	26.0
JUL , 1980				
23...	1040	.08	29.0	26.0
31...	1020	.02	29.0	26.0
SEP				
02...	0940	--	27.0	--
02...	1025	.03	--	25.5
17...	1400	.56	--	26.0

16892900 - PEMGOY STREAM, YAP, YAP ISLANDS (LAT 09 31 07 LONG 138 06 18)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
05...	1130	.08	28.0	26.5
30...	1000	.05	27.0	25.5
DEC				
28...	0955	.03	27.0	25.0
FEB , 1980				
01...	0915	<.01	--	25.5
23...	1010	.03	27.0	25.5
JUN , 1980				
04...	0955	.02	26.5	25.5
30...	1225	.30	30.5	26.0
JUL				
24...	1000	.12	27.0	25.0
SEP				
02...	1145	.04	26.5	25.5
17...	1000	.27	--	26.5

16893100 - RUROMG STREAM, YAP, YAP ISLANDS (LAT 09 31 59 LONG 138 07 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
30...	1520	.10	27.5	25.0
DEC				
27...	1135	.07	32.0	26.0
FEB , 1980				
01...	1645	.00	--	26.5
MAR				
26...	1010	.04	28.5	25.5
MAY				
20...	1445	.03	35.0	27.5
JUN , 1980				
30...	0900	.44	27.5	25.5
JUL				
23...	0925	.42	28.5	26.0
AUG				
30...	1310	2.1	27.0	25.0
SEP				
18...	1030	2.0	--	26.0

16893200 - MUKONG STREAM, GAGIL-TOMIL, YAP ISLANDS (LAT 09 32 06 LONG 138 09 59)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
10...	1415	1.5	27.0	26.0
NOV				
19...	1410	.60	33.0	28.0
DEC				
05...	1010	.56	29.5	26.0
JAN , 1980				
22...	1420	.51	32.5	27.0
FEB				
01...	1510	.32	28.0	28.0
MAR				
28...	1110	.58	29.5	26.0
APR , 1980				
23...	0930	.46	30.0	26.5
MAY				
16...	1830	1.2	31.0	27.5
JUN				
19...	1015	.52	32.5	27.5
JUL				
24...	1305	1.5	32.0	28.0
AUG				
30...	1130	7.1	27.0	26.0
SEP				
16...	0930	2.5	28.0	26.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, TRUK ISLANDS

16893700 - WICHEN R AT ALTITUDE 55M, MOEN, TRUK ISLANDS (LAT 07 26 45 LONG 151 52 02)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
31...	1205	3.3	--	26.0
31...	1230	3.3	--	26.0
MAY , 1980				
05...	1530	8.1	27.0	26.5
JUL , 1980				
31...	1100	.87	--	26.0

16893800 - WICHEN RIVER AT ALT 18M, MOEN, TRUK ISLANDS (LAT 07 27 05 LONG 151 52 18)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
31...	1000	11	--	26.5
31...	1015	13	--	26.5
MAY , 1980				
05...	1145	19	26.5	25.5
MAY , 1980				
05...	1200	43	--	26.5
JUL				
31...	1230	2.2	32.0	28.0

CAROLINE ISLANDS, ISLAND OF PONAPE

16897600 - NANEPIL RIVER, PONAPE (LAT 06 55 11 LONG 158 12 36)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
02...	1220	70	27.0	25.0
27...	1030	21	--	25.0
DEC				
17...	1410	5.3	27.0	25.0
JAN , 1980				
30...	1255	10	28.0	24.0
FEB				
27...	1420	6.5	30.0	25.0
MAR				
11...	1150	14	29.0	24.5
APR				
10...	1220	4.4	29.0	25.0
MAY , 1980				
20...	1045	26	30.0	25.0
20...	1100	26	--	25.0
JUN				
04...	1305	33	28.0	24.0
JUL				
03...	1235	23	31.0	24.0
AUG				
14...	1150	13	30.0	24.5
SEP				
10...	1320	16	29.0	24.0

16897900 - LUI RIVER, PONAPE (LAT 06 55 36 LONG 158 12 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
02...	1000	16	27.0	24.0
27...	1330	3.3	--	26.5
NOV				
15...	1215	9.5	27.0	26.0
DEC				
27...	1205	2.7	28.0	25.0
JAN , 1980				
30...	1430	.87	28.0	24.0
FEB				
27...	1230	1.2	30.0	25.0
APR				
10...	1015	.68	29.0	24.0
MAY , 1980				
20...	1300	4.2	--	26.5
20...	1320	4.2	29.0	26.5
JUN				
18...	1045	3.0	29.0	25.0
JUL				
03...	1030	4.2	29.0	25.0
AUG				
14...	0945	1.1	31.5	24.0
SEP				
25...	1030	1.7	29.0	24.0

16898200 - LUI RIVER AT MOUTH, PONAPE (LAT 06 57 07 LONG 158 13 16)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
05...	1420	24	27.0	26.0
26...	1500	10	--	26.5
26...	1600	223	--	25.0
NOV				
20...	1335	20	29.0	27.0
DEC				
13...	1450	10	28.0	26.0
JAN , 1980				
29...	1300	7.8	29.0	26.0
FEB				
28...	1350	7.6	31.0	26.0
MAR				
12...	1400	6.4	29.0	26.0
APR , 1980				
08...	1050	4.8	32.0	26.0
MAY				
10...	1330	51	27.5	26.5
JUN				
05...	1440	42	28.0	26.0
JUL				
01...	1120	14	31.0	26.0
AUG				
29...	0930	16	29.0	24.0
SEP				
29...	0950	20	29.0	25.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16898600 - LUPWOR RIVER, PONAPE (LAT 06 59 15 LONG 158 09 45)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
05...	1235	10	27.0	25.0
29...	1030	11	--	26.0
NOV				
19...	1420	4.5	29.0	27.0
DEC				
11...	1300	2.8	29.0	27.0
FEB , 1980				
26...	1415	2.5	29.0	26.0
MAR				
13...	1430	4.9	29.0	25.0
APR				
09...	1340	1.8	30.0	26.0
MAY , 1980				
21...	1100	5.6	--	27.0
21...	1130	5.3	28.0	27.0
JUN				
09...	1150	19	31.0	25.0
JUL				
02...	1330	6.2	30.0	26.0
AUG				
15...	1500	6.9	29.0	29.0
SEP				
24...	1200	6.0	31.0	26.0

SAMOA ISLANDS, ISLAND OF TUTUILA

16912000 - PAGO STREAM AT AFONO, TUTUILA (LAT 14 16 03 LONG 170 39 02)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
10...	0715	.66	25.0	24.0
NOV				
20...	0820	1.2	25.0	24.0
JAN , 1980				
03...	1025	4.8	26.0	24.0
FEB				
06...	0800	.64	25.0	24.0
MAR				
07...	0740	8.9	24.0	23.5
APR , 1980				
02...	0730	2.7	24.0	23.0
JUN				
23...	1450	1.4	29.0	26.0
AUG				
01...	0805	1.6	24.0	24.0
25...	1055	2.1	24.5	23.5

16920500 - AASU STREAM AT AASU, TUTUILA (LAT 14 17 51 LONG 170 45 30)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
12...	1015	1.7	25.5	25.0
NOV				
30...	0945	3.9	27.0	23.0
APR , 1980				
08...	0930	5.0	25.5	23.5
JUL , 1980				
07...	1005	3.2	24.0	23.0
10...	1435	2.5	30.5	26.0

16931000 - ATAULOMA STREAM AT AFAO, TUTUILA (LAT 14 20 10 LONG 170 48 02)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
10...	1230	.12	25.5	25.0
NOV				
01...	1050	1.5	27.0	25.0
29...	1030	.53	27.0	24.0
FEB , 1980				
08...	1110	1.4	27.0	24.0
26...	0930	.20	26.5	24.0
APR				
01...	1100	2.7	26.0	24.0
MAY , 1980				
09...	1135	7.7	23.0	23.0
21...	1015	1.5	26.0	24.0
JUN				
24...	1110	.37	26.0	25.0
JUL				
31...	0855	.50	23.0	23.0
AUG				
29...	1045	.62	27.0	25.0

16931500 - ASILI STREAM AT ALT 330 FT (100M) NR ASILI TU (LAT 14 19 34 LONG 170 47 38)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
18...	0850	.51	22.5	20.5
NOV				
06...	1130	1.7	25.0	23.0
DEC				
12...	1130	1.7	25.0	23.0
JAN , 1980				
15...	0945	.79	24.0	23.0
FEB				
20...	0935	1.8	24.5	23.0
MAR , 1980				
26...	0915	2.0	23.0	23.0
MAY				
02...	0935	1.1	24.0	23.0
JUN				
10...	0955	2.6	26.5	24.0
JUL				
14...	1040	2.4	24.0	23.0
AUG				
18...	0940	5.2	24.0	24.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

SAMOA ISLANDS, ISLAND OF TUTUILA--Continued

16933500 - LEAFU STREAM AT ALT 370FT (113M) NR LEONE TU (LAT 14 19 31 LONG 170 46 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
16...	0900	1.1	25.0	24.0
NOV				
14...	0905	1.6	24.0	22.0
29...	0920	2.6	25.0	24.0
JAN , 1980				
04...	0835	2.4	24.0	23.0
FEB				
11...	0925	2.7	24.0	23.0
MAR , 1980				
18...	0810	.87	23.0	23.0
APR				
23...	0740	2.1	24.5	23.0
MAY				
28...	1010	5.5	26.5	24.0
AUG				
11...	1035	1.6	24.0	24.0

16948000 - AFUELO STREAM AT MATUU, TUTUILA (LAT 14 18 07 LONG 170 41 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979				
16...	0730	.34	24.0	23.0
29...	1125	.38	25.0	24.0
JAN , 1980				
08...	1010	.30	25.0	23.0
FEB				
13...	1100	.21	26.0	24.0
MAR , 1980				
20...	1005	.49	25.0	24.0
APR				
29...	0940	1.1	27.0	25.0
AUG				
12...	0950	1.9	26.0	25.0

16963900 - LEAFU STREAM NEAR AUASI, TUTUILA (LAT 14 16 27 LONG 170 34 26)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979				
10...	0910	.05	25.0	24.5
NOV				
15...	1045	.06	26.0	24.0
JAN , 1980				
03...	0845	.14	24.0	24.0
FEB				
08...	0815	.21	24.0	23.0
MAR				
12...	0830	.06	26.0	24.0
APR , 1980				
16...	0900	.08	26.0	24.0
JUL				
01...	0940	.07	25.0	24.0
AUG				
14...	1445	.55	27.0	26.5
15...	1045	.11	25.0	24.0

MARIANA ISLANDS, ISLAND OF GUAM

132534144474871. Local number, 2547340 Tide Gage, Pago Bay.
LOCATION.--Lat 13°25'34" N., long 144°47'48" E., Hydrologic Unit 20100003, at University of Guam Marine Laboratory, Pago Bay, Mangilao, Guam. Owner: University of Guam Marine Laboratory.
WELL CHARACTERISTICS.--Concrete wet pit, 18 ft (5.5 m) deep.
DATUM--Altitude of land-surface datum is 7.70 ft (2.347 m). Measuring point: Edge of wet pit manhole, 8.80 ft (2.682 m) above mean sea level.
REMARKS.--The wet pit is connected to the open ocean through an inlet pipe which terminates at the edge of the reef.
PERIOD OF RECORD.--April to September 1976 records available in subdistrict office. October 1976 to current year.
EXTREMES FOR CURRENT YEAR.--Highest recorded tide level, 0.72 ft (0.219 m) above mean sea level, July 3, 1979; lowest recorded, -0.59 ft (-0.180 m) Feb. 11, 1979.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	-.02	-.19	-.13	-.12	-.08	.04	.08	.08	.28	.07	-.01
2	.26	.11	-.21	-.20	-.29	-.12	.07	.09	.11	.28	.16	.05
3	.32	.07	-.15	-.10	-.21	-.06	.03	.16	.04	.29	.10	.08
4	.31	.09	-.15	-.25	-.10	-.11	.10	.14	.16	.28	.15	.14
5	.22	.06	-.09	-.24	-.08	-.07	-.04	.12	.09	.43	.10	.34
6	.15	.13	---	-.27	-.12	-.14	.04	.18	.09	.54	.11	.20
7	.13	.15	---	-.17	-.10	-.13	.04	.12	.16	.26	.23	.36
8	.09	-.05	---	-.39	-.15	-.09	.10	.12	.18	.13	.29	.21
9	---	-.03	---	-.34	-.15	-.11	.05	.30	.20	.05	.31	.09
10	---	-.12	---	-.31	-.08	-.12	.06	.35	.12	.10	.18	-.04
11	---	-.06	---	-.37	-.06	-.13	.14	.33	-.03	.07	.22	-.07
12	.15	-.06	---	-.47	-.13	-.15	.18	.35	.02	.06	.24	-.13
13	-.03	-.19	---	-.34	-.12	-.01	.30	.42	-.10	.07	.21	-.03
14	-.26	-.26	-.36	-.30	-.17	.03	.29	.43	-.09	.08	.23	.06
15	-.39	-.23	-.40	-.28	-.13	.13	.22	.38	-.09	.06	.16	.02
16	-.41	-.09	-.47	-.27	-.09	.15	.14	.33	-.02	.06	.24	-.04
17	-.41	-.10	-.50	-.17	-.12	.27	.13	.49	.02	.36	.25	-.10
18	-.42	-.10	-.38	-.16	-.06	.32	.12	.35	.03	.13	.26	-.04
19	-.43	-.15	-.36	-.19	-.07	.15	.13	.19	.02	.05	.23	.00
20	-.40	-.10	-.34	-.12	-.05	.05	.12	.15	.00	.13	.21	-.08
21	-.37	-.06	-.31	-.08	-.05	.09	.24	.21	.03	.16	.21	-.08
22	-.36	-.04	-.22	-.16	.01	.05	.25	.12	.04	.09	.17	-.03
23	-.30	-.01	-.15	-.21	.02	-.06	.24	.28	.02	.00	.15	.09
24	-.43	.08	-.18	-.29	.01	-.07	.28	.12	.06	-.09	.20	.01
25	-.37	.04	-.23	-.26	-.06	-.12	.13	.17	.13	-.09	.18	.08
26	-.26	.01	-.26	-.28	.15	-.07	.17	.10	.17	-.26	.14	.19
27	-.27	.07	-.28	-.21	-.07	-.12	.12	.08	.14	-.14	.09	.19
28	-.22	.03	-.32	-.14	-.04	-.09	.12	.21	.19	.17	.10	.17
29	-.16	.06	-.27	-.10	-.13	-.03	.10	.22	.23	.20	.11	.01
30	-.10	-.15	-.20	-.11	---	.02	.09	.24	.19	.20	.06	.08
31	-.03	---	-.24	-.15	---	.14	---	.07	---	.07	.00	---
MEAN	---	-.03	---	-.23	-.09	-.02	.13	.22	.07	.13	.17	.06
MAX	---	.15	---	-.08	.15	.32	.30	.49	.23	.54	.31	.36
MIN	---	-.26	---	-.47	-.29	-.15	-.04	.07	-.10	-.26	.00	-.13

MARIANA ISLANDS, ISLAND OF GUAM

132624144452771. Local number, 2645220 Ordot well A-20.
LOCATION.--Lat 13°26'24" N., long 144°45'27" E., Hydrologic Unit 20100003, at Ordot School, 1.4 mi (2.3 km) west of junction of Routes 4 and 10, Ordot, Guam. Owner: Government of Guam.
AQUIFER.--Mariana Linestone and Alutom formation.
WELL CHARACTERISTICS.--Drilled parabasal water-table well, diameter 6 in (0.2 m), depth reported 120 ft (36.6 m).
DATUM.--Altitude of land-surface datum is 137 ft (41.8 m). Measuring point: Top of casing, 141.74 ft (43.202 m), revised, above mean sea level.
REMARKS.--Recording gage installed January 1974.
PERIOD OF RECORD.--January 1974 to September 1976 records available in files of district office; October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 53.15 ft (16.200 m), revised, above mean sea level, Aug. 25-26, 1976; lowest, 33.03 ft (10.068 m), revised, above mean sea level, June 15-16, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.30	46.30	45.74	43.54	40.30	38.20	40.95	38.98	38.67	39.31	41.39	43.10
2	36.59	46.30	45.66	43.44	40.09	38.47	40.87	38.93	38.63	39.37	41.41	43.20
3	36.83	46.27	45.58	43.35	39.98	38.86	40.80	38.86	38.68	39.41	41.42	43.25
4	37.06	46.24	45.47	43.25	39.87	39.30	40.72	38.80	38.75	39.46	41.43	43.30
5	37.32	46.20	45.34	43.15	39.75	39.74	40.63	38.75	38.81	39.49	41.44	43.40
6	37.84	46.13	45.27	43.08	39.67	40.16	40.55	38.70	38.86	39.53	41.47	43.50
7	38.23	46.04	45.20	42.97	39.57	40.50	40.47	38.64	38.90	39.58	41.49	43.60
8	38.48	45.97	45.12	42.89	39.46	40.81	40.37	38.58	38.94	38.68	41.49	43.70
9	38.69	46.03	44.97	42.77	39.35	41.06	40.27	38.52	38.97	39.76	41.44	43.90
10	38.94	46.11	44.87	42.67	39.25	41.27	40.19	38.47	39.02	39.82	41.38	44.18
11	39.06	46.16	44.84	42.56	39.16	41.43	40.14	38.41	39.08	39.87	41.32	44.58
12	40.34	46.20	44.82	42.45	39.08	41.55	40.10	38.37	39.14	39.92	41.26	44.92
13	40.95	46.21	44.78	42.36	38.98	41.64	40.08	38.32	39.19	40.02	41.24	45.26
14	41.43	46.21	44.74	42.23	38.88	41.71	40.06	38.31	39.21	40.21	41.23	45.64
15	42.14	46.24	44.66	42.07	38.79	41.77	40.04	38.31	39.31	40.26	41.22	45.98
16	42.94	46.26	44.58	42.00	38.71	41.80	40.01	38.31	39.37	40.36	41.25	46.33
17	43.59	46.31	44.49	41.90	38.62	41.83	39.94	38.30	38.63	40.44	41.29	46.71
18	44.18	46.32	44.41	41.76	38.55	41.84	39.86	38.29	39.46	40.55	41.29	47.09
19	44.73	46.29	44.32	41.66	38.45	41.82	39.79	38.29	39.47	40.70	41.31	47.43
20	45.27	46.29	44.21	41.55	38.37	41.78	39.70	38.33	39.45	40.79	41.37	47.73
21	45.70	46.21	44.13	41.44	38.28	41.76	39.64	38.37	39.41	40.91	41.48	47.98
22	46.01	46.19	44.10	41.33	38.21	41.72	39.58	38.40	39.36	40.97	41.61	48.23
23	46.22	46.17	44.07	41.21	38.13	41.66	39.51	38.43	39.31	41.05	41.75	48.39
24	46.34	46.14	44.04	41.11	38.06	41.58	39.44	38.47	39.27	41.13	41.96	48.56
25	46.41	46.13	44.01	40.98	37.98	41.53	39.36	38.53	39.23	41.19	42.19	48.70
26	46.42	46.11	43.98	40.87	37.91	41.45	39.28	38.60	39.20	41.27	42.33	48.88
27	46.39	46.08	43.91	40.75	37.82	41.37	39.23	38.67	39.19	41.30	42.46	49.00
28	46.34	46.03	43.85	40.65	37.84	41.29	39.16	38.72	39.19	41.31	42.68	49.19
29	46.32	45.93	43.77	40.55	37.98	41.22	39.11	38.75	39.20	41.32	42.77	49.43
30	46.31	45.83	43.69	40.43	---	41.13	39.05	38.74	39.25	41.35	42.90	49.64
31	46.29	---	43.60	40.30	---	41.04	---	38.71	---	41.37	43.04	---
MEAN	42.25	46.16	44.59	41.98	38.87	41.01	39.96	38.54	39.11	40.35	41.69	46.16
MAX	46.42	46.32	45.74	43.54	40.30	41.84	40.95	38.98	39.47	41.37	43.04	49.64
MIN	36.30	45.83	43.60	40.30	37.82	38.20	39.05	38.29	38.63	38.68	41.22	43.10

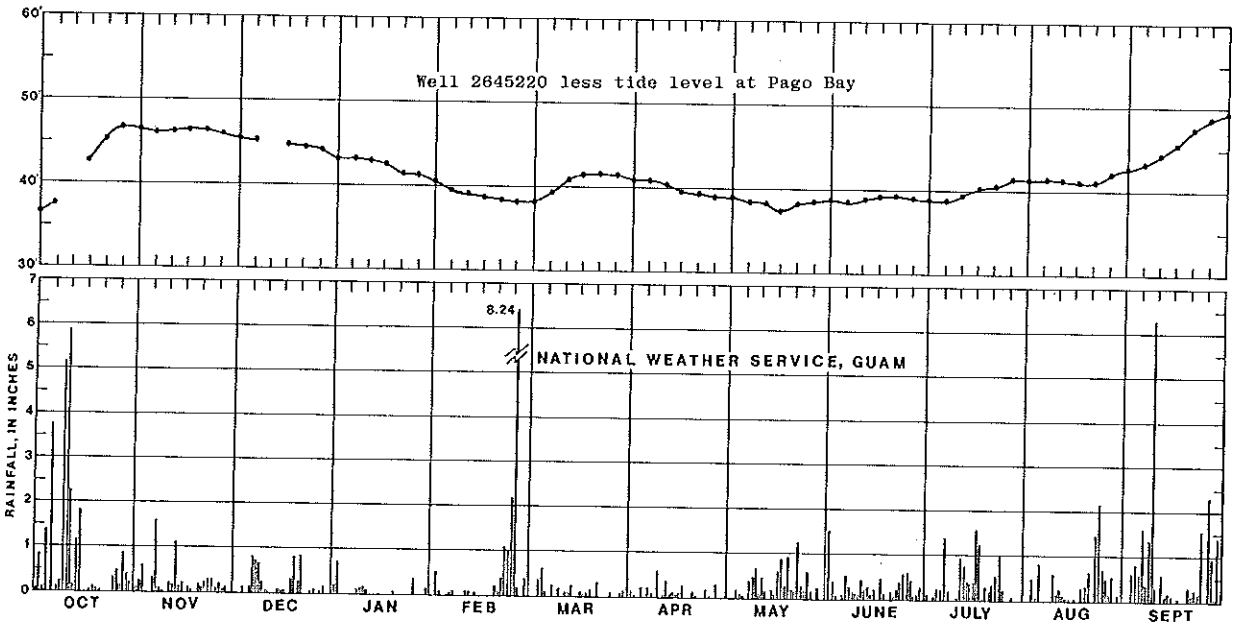
WTR YR 1980 MEAN 41.72 MAX 49.64 MIN 36.30

MARIANA ISLANDS, ISLAND OF GUAM

132624144452773. Well 2645220 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.14	46.32	45.93	43.67	40.42	38.28	40.91	38.90	38.59	39.03	41.32	43.11
2	36.33	46.19	45.87	43.64	40.38	38.59	40.80	38.84	38.52	39.09	41.25	43.15
3	36.51	46.20	45.73	43.45	40.19	38.92	40.77	38.70	38.64	39.12	41.32	43.17
4	36.75	46.15	45.62	43.50	39.97	39.41	40.62	38.66	38.59	39.18	41.28	43.16
5	37.10	46.14	45.43	43.39	39.83	39.81	40.67	38.63	38.72	39.06	41.34	43.06
6	37.69	46.00	---	43.35	39.79	40.30	40.51	38.52	38.77	38.99	41.36	43.30
7	38.10	45.89	---	43.14	39.67	40.63	40.43	38.52	38.74	39.32	41.26	43.24
8	38.39	46.02	---	43.28	39.61	40.90	40.27	38.46	38.76	38.55	41.20	43.49
9	---	46.06	---	43.11	39.50	41.17	40.22	38.22	38.77	39.71	41.13	43.81
10	---	46.23	---	42.98	39.33	41.39	40.13	38.12	38.90	39.72	41.20	44.22
11	---	46.22	---	42.93	39.22	41.56	40.00	38.08	39.11	39.80	41.10	44.65
12	40.19	46.26	---	42.92	39.21	41.70	39.92	38.02	39.12	39.86	41.02	45.05
13	40.98	46.40	---	42.70	39.10	41.65	39.78	37.90	39.29	39.95	41.03	45.29
14	41.69	46.47	45.10	42.53	39.05	41.68	39.77	37.88	39.30	40.13	41.00	45.58
15	42.53	46.47	45.06	42.35	38.92	41.64	39.82	37.93	39.40	40.20	41.06	45.96
16	43.35	46.35	45.05	42.27	38.80	41.65	39.87	37.98	39.39	40.30	41.01	46.37
17	44.00	46.41	44.99	42.07	38.74	41.56	39.81	37.81	38.61	40.08	41.04	46.81
18	44.60	46.42	44.79	41.92	38.61	41.52	39.74	37.94	39.43	40.42	41.03	47.13
19	45.16	46.44	44.68	41.85	38.52	41.67	39.66	38.10	39.45	40.65	41.08	47.43
20	45.67	46.39	44.55	41.67	38.42	41.73	39.58	38.18	39.45	40.66	41.16	47.81
21	46.07	46.27	44.44	41.52	38.33	41.67	39.40	38.16	39.38	40.75	41.27	48.06
22	46.37	46.23	44.32	41.49	38.20	41.67	39.33	38.28	39.32	40.88	41.44	48.26
23	46.52	46.18	44.22	41.42	38.11	41.72	39.27	38.15	39.29	41.05	41.60	48.30
24	46.77	46.06	44.22	41.40	38.05	41.65	39.16	38.35	39.21	41.22	41.76	48.55
25	46.78	46.09	44.24	41.24	38.04	41.65	39.23	38.36	39.10	41.28	42.01	48.62
26	46.68	46.10	44.24	41.15	37.76	41.52	39.11	38.50	39.03	41.53	42.19	48.69
27	46.66	46.01	44.19	40.96	37.89	41.49	39.11	38.59	39.05	41.44	42.37	48.81
28	46.56	46.00	44.17	40.79	37.88	41.38	39.04	38.51	39.00	41.14	42.58	49.02
29	46.48	45.87	44.04	40.65	38.11	41.25	39.01	38.53	38.97	41.12	42.66	49.42
30	46.41	45.98	43.89	40.54	---	41.11	38.96	38.50	39.06	41.15	42.84	49.56
31	46.32	---	43.84	40.45	---	40.90	---	38.44	---	41.30	43.04	---
MEAN	---	46.19	---	42.20	38.95	41.02	39.83	38.32	39.03	40.22	41.51	46.10
MAX	---	46.47	---	43.67	40.42	41.73	40.91	38.90	39.45	41.53	43.04	49.56
MIN	---	45.87	---	40.45	37.76	38.28	38.96	37.81	38.52	38.55	41.00	43.06



MARIANA ISLANDS, ISLAND OF GUAM

132644144480871. Local number, 2648400 BPM Well 1.
LOCATION.--Lat 13°26'44" N., long 144°48'08" E., Hydrologic Unit 20100003, on lot number 2287, 0.2 mi (0.3 km) southeast of junction of Routes 15 and 10, Mangilao, Guam. Owner: Ana P. Diaz.
AQUIFER.--Coralline Limestone, probably Miocene age.
WELL CHARACTERISTICS.--Drilled basal water-table well, diameter 12 in (0.30 m), depth reported 235 ft (71.6 m).
DATUM.--Altitude of land-surface datum is 210 ft (64.0 m). Measuring point: Top edge of casing, 209.90 ft (63.978 m) above mean sea level.
REMARKS.--Recording gage installed January 1974.
PERIOD OF RECORD.--February 1972 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.45 ft (1.356 m) above mean sea level, May 22, 1976; lowest recorded, 2.20 ft (0.671 m) above mean sea level, Jan. 12, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.56	2.67	2.57	2.34	2.33	2.93	2.55	2.64	2.71	2.81	2.73	2.75
2	2.61	2.69	2.54	2.33	2.32	2.92	2.55	2.63	2.71	2.82	2.74	2.75
3	2.66	2.69	2.53	2.33	2.31	2.91	2.56	2.64	2.71	2.84	2.76	2.76
4	2.68	2.68	2.53	2.33	2.33	2.87	2.58	2.66	2.72	2.85	2.77	2.77
5	2.72	2.68	2.53	2.33	2.35	2.85	2.58	2.65	2.72	2.86	2.77	2.80
6	2.79	2.68	2.52	2.34	2.36	2.82	2.57	2.69	2.71	2.88	2.77	2.84
7	2.85	2.71	2.53	2.34	2.35	2.78	2.58	2.66	2.70	2.87	2.79	2.85
8	2.88	2.71	2.56	2.30	2.34	2.76	2.61	2.68	2.69	2.85	2.82	2.85
9	2.91	2.73	2.58	2.26	2.34	2.75	2.63	2.70	2.69	2.83	2.84	2.86
10	3.16	2.74	2.53	2.26	2.35	2.73	2.64	2.70	2.69	2.81	2.85	3.11
11	3.24	2.73	2.47	2.25	2.36	2.70	2.65	2.70	2.69	2.80	2.87	3.33
12	3.32	2.72	2.41	2.21	2.35	2.68	2.65	2.65	2.69	2.79	2.86	3.40
13	3.31	2.68	2.37	2.22	2.34	2.67	2.67	2.70	2.69	2.80	2.85	3.47
14	3.28	2.63	2.37	2.24	2.32	2.66	2.70	2.70	2.68	2.79	2.85	3.51
15	3.22	2.59	2.37	2.23	2.31	2.66	2.71	2.73	2.67	2.77	2.82	3.53
16	3.19	2.59	2.36	2.23	2.31	2.67	2.71	2.75	2.66	2.75	2.80	3.49
17	3.11	2.59	2.33	2.26	2.31	2.69	2.70	2.75	2.66	2.80	2.81	3.38
18	3.05	2.61	2.32	2.29	2.31	2.71	2.69	2.77	2.65	2.82	2.82	3.30
19	2.94	2.60	2.33	2.32	2.33	2.74	2.69	2.77	2.65	2.80	2.83	3.25
20	2.87	2.60	2.33	2.33	2.35	2.74	2.69	2.76	2.65	2.79	2.83	3.22
21	2.83	2.60	2.33	2.35	2.37	2.71	2.69	2.73	2.64	2.81	2.83	3.16
22	2.79	2.60	2.35	2.36	2.39	2.68	2.69	2.71	2.64	2.81	2.82	3.13
23	2.76	2.62	2.38	2.34	2.42	2.65	2.70	2.69	2.64	2.78	2.82	3.12
24	2.72	2.64	2.39	2.33	2.42	2.62	2.71	2.67	2.65	2.77	2.85	3.11
25	2.68	2.67	2.40	2.36	2.41	2.56	2.71	2.67	2.66	2.74	2.89	3.09
26	2.66	2.68	2.41	2.34	2.47	2.52	2.70	2.67	2.68	2.72	2.90	3.09
27	2.65	2.69	2.41	2.33	2.73	2.51	2.69	2.67	2.70	2.72	2.88	3.11
28	2.64	2.68	2.39	2.35	2.88	2.50	2.66	2.67	2.74	2.72	2.85	3.18
29	2.64	2.66	2.37	2.37	2.93	2.49	2.65	2.69	2.77	2.71	2.82	3.22
30	2.65	2.60	2.36	2.38	---	2.50	2.65	2.71	2.80	2.73	2.80	3.25
31	2.66	---	2.35	2.36	---	2.53	---	2.71	---	2.73	2.76	---
MEAN	2.87	2.66	2.43	2.31	2.40	2.69	2.65	2.69	2.69	2.79	2.82	3.12
MAX	3.32	2.74	2.58	2.38	2.93	2.93	2.71	2.77	2.80	2.88	2.90	3.53
MIN	2.56	2.59	2.32	2.21	2.31	2.49	2.55	2.63	2.64	2.71	2.73	2.75

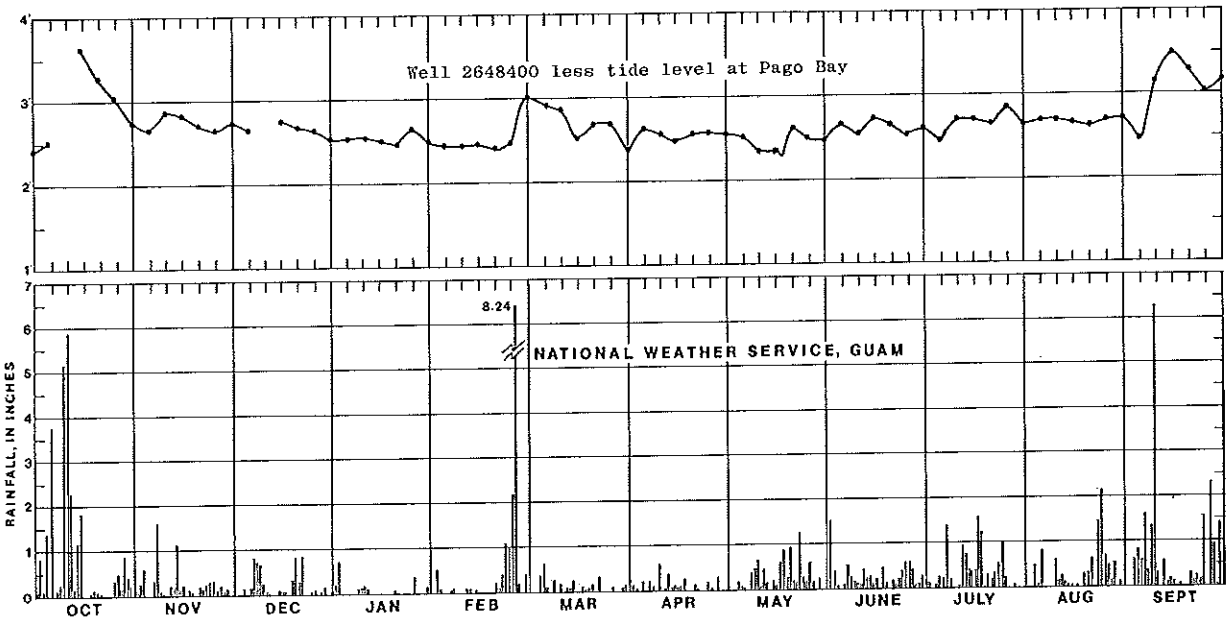
WTR YR 1980 MEAN 2.68 MAX 3.53 MIN 2.21

MARIANA ISLANDS, ISLAND OF GUAM

132644144480873. Well 2648400 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.40	2.69	2.76	2.47	2.45	3.01	2.51	2.56	2.63	2.53	2.66	2.76
2	2.35	2.58	2.75	2.53	2.61	3.04	2.48	2.54	2.60	2.54	2.58	2.70
3	2.34	2.62	2.68	2.43	2.52	2.97	2.53	2.48	2.67	2.55	2.66	2.68
4	2.37	2.59	2.68	2.58	2.43	2.98	2.48	2.52	2.56	2.57	2.62	2.63
5	2.50	2.62	2.62	2.57	2.43	2.92	2.62	2.53	2.63	2.43	2.67	2.46
6	2.64	2.55	---	2.61	2.48	2.96	2.53	2.46	2.62	2.34	2.66	2.64
7	2.72	2.56	---	2.51	2.45	2.91	2.54	2.54	2.54	2.61	2.56	2.49
8	2.79	2.76	---	2.69	2.49	2.85	2.51	2.56	2.51	2.72	2.53	2.64
9	---	2.76	---	2.60	2.49	2.86	2.58	2.40	2.49	2.78	2.53	2.77
10	---	2.86	---	2.57	2.43	2.85	2.58	2.35	2.57	2.71	2.67	3.15
11	---	2.79	---	2.62	2.42	2.83	2.51	2.37	2.72	2.73	2.65	3.40
12	3.17	2.78	---	2.68	2.48	2.83	2.47	2.34	2.67	2.73	2.62	3.53
13	3.34	2.87	---	2.56	2.46	2.68	2.37	2.28	2.79	2.73	2.64	3.50
14	3.54	2.89	2.73	2.54	2.49	2.63	2.41	2.27	2.77	2.71	2.62	3.45
15	3.61	2.82	2.77	2.51	2.44	2.53	2.49	2.35	2.76	2.71	2.66	3.51
16	3.60	2.68	2.83	2.50	2.40	2.52	2.57	2.42	2.68	2.69	2.56	3.53
17	3.52	2.69	2.83	2.43	2.43	2.42	2.57	2.26	2.64	2.44	2.56	3.48
18	3.47	2.71	2.70	2.45	2.37	2.39	2.57	2.42	2.62	2.69	2.56	3.34
19	3.37	2.75	2.69	2.51	2.40	2.59	2.56	2.58	2.63	2.75	2.60	3.25
20	3.27	2.70	2.67	2.45	2.40	2.69	2.57	2.61	2.65	2.66	2.62	3.30
21	3.20	2.66	2.64	2.43	2.42	2.62	2.45	2.52	2.61	2.65	2.62	3.24
22	3.15	2.64	2.57	2.52	2.38	2.63	2.44	2.59	2.60	2.72	2.65	3.16
23	3.06	2.63	2.53	2.55	2.40	2.71	2.46	2.41	2.62	2.78	2.67	3.03
24	3.15	2.56	2.57	2.62	2.41	2.69	2.43	2.55	2.59	2.86	2.65	3.10
25	3.05	2.63	2.63	2.62	2.47	2.68	2.58	2.50	2.53	2.83	2.71	3.01
26	2.92	2.67	2.67	2.62	2.32	2.59	2.53	2.57	2.51	2.98	2.76	2.90
27	2.92	2.62	2.69	2.54	2.80	2.63	2.56	2.59	2.56	2.86	2.79	2.92
28	2.86	2.65	2.71	2.49	2.92	2.59	2.54	2.46	2.55	2.55	2.75	3.01
29	2.80	2.60	2.64	2.47	3.06	2.52	2.55	2.47	2.54	2.51	2.71	3.21
30	2.75	2.75	2.56	2.49	---	2.48	2.56	2.47	2.61	2.53	2.74	3.17
31	2.69	---	2.59	2.51	---	2.39	---	2.64	---	2.66	2.76	---
MEAN	---	2.69	---	2.54	2.49	2.71	2.52	2.47	2.62	2.66	2.65	3.07
MAX	---	2.89	---	2.69	3.06	3.04	2.62	2.64	2.79	2.98	2.79	3.53
MIN	---	2.55	---	2.43	2.32	2.39	2.37	2.26	2.49	2.34	2.53	2.46



MARIANA ISLANDS, ISLAND OF GUAM

132824144464271. Local number, 2846541 ACEORP Tunnel.
LOCATION.--Lat 13°28'24" N., long 144°46'42" E., Hydrologic Unit 20100003, behind Navy Telephone Exchange, 0.35 mi (0.56 km) southwest of junction of Routes 1 and 14, Tamuning, Guam. Owner: U. S. Navy, Public Works Department.
AQUIFER.--Mariana Limestone.
WELL CHARACTERISTICS.--Dug basal water-table well consisting of an inclined shaft, three skimming tunnels, and a large pump room. Tunnels 1 and 2 are 150 ft (45.7 m) each and tunnel 3 is 700 ft (213 m) in length.
DATUM.--Altitude of land-surface datum is 180 ft (54.9 m). Measuring point: Top of wooden recorder shelf, 9.28 ft (2.829 m) above mean sea level.
REMARKS.--Recording gage installed October 1954.
PERIOD OF RECORD.--October 1954 to December 1959, September 1960 to May 1965, March 1973 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.95 ft (1.509 m) above mean sea level, May 22, 1976; lowest recorded, 1.98 ft (0.604 m) above mean sea level, Feb. 23, 1979.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.56	2.46	2.42	2.26	2.24	2.59	2.42	2.45	2.60	2.67	2.58	2.55
2	2.61	2.46	2.41	2.24	2.23	2.57	2.42	2.45	2.63	2.68	2.61	2.56
3	2.62	2.47	2.42	2.23	2.28	2.55	2.42	2.47	2.61	2.71	2.66	2.57
4	2.66	2.47	2.47	2.24	2.30	2.48	2.44	2.49	2.61	2.72	2.69	2.57
5	3.06	2.48	2.51	2.25	2.27	2.47	2.42	2.49	2.60	2.71	2.64	2.62
6	3.08	2.52	2.51	2.26	2.24	2.48	2.42	2.48	2.56	2.74	2.63	2.68
7	2.94	2.55	2.50	2.28	2.21	2.46	2.47	2.51	2.55	2.76	2.65	2.71
8	2.84	2.70	2.51	2.26	2.22	2.45	2.50	2.53	2.53	2.72	2.67	2.70
9	2.80	2.62	2.50	2.23	2.28	2.45	2.50	2.54	2.54	2.68	2.69	2.90
10	3.33	2.58	2.46	2.26	2.30	2.45	2.49	2.55	2.55	2.67	2.72	3.36
11	3.50	2.55	2.40	2.23	2.29	2.46	2.49	2.58	2.54	2.66	2.72	3.29
12	3.44	2.53	2.38	2.14	2.28	2.46	2.50	2.57	2.54	2.70	2.73	3.16
13	3.32	2.49	2.37	2.14	2.30	2.47	2.55	2.55	2.55	2.69	2.70	3.09
14	3.24	2.41	2.37	2.20	2.27	2.49	2.62	2.58	2.51	2.66	2.67	3.00
15	3.19	2.37	2.38	2.19	2.24	2.51	2.60	2.60	2.49	2.60	2.63	2.92
16	3.03	2.45	2.43	2.18	2.24	2.53	2.56	2.61	2.48	2.59	2.60	2.83
17	2.93	2.50	2.40	2.22	2.24	2.51	2.54	2.62	2.48	2.67	2.62	2.75
18	2.80	2.51	2.38	2.26	2.23	2.54	2.54	2.71	2.50	2.68	2.64	2.74
19	2.73	2.49	2.36	2.27	2.28	2.58	2.53	2.70	2.49	2.64	2.64	2.80
20	2.68	2.47	2.36	2.28	2.33	2.55	2.52	2.65	2.49	2.62	2.64	2.76
21	2.68	2.50	2.38	2.34	2.34	2.51	2.55	2.60	2.48	2.64	2.64	2.70
22	2.64	2.52	2.39	2.33	2.33	2.50	2.57	2.56	2.47	2.63	2.66	2.69
23	2.56	2.55	2.39	2.29	2.33	2.45	2.56	2.54	2.48	2.62	2.71	2.70
24	2.47	2.56	2.38	2.28	2.36	2.40	2.55	2.50	2.49	2.59	2.76	2.69
25	2.41	2.58	2.37	2.33	2.37	2.36	2.54	2.53	2.52	2.56	2.76	2.70
26	2.38	2.59	2.37	2.31	2.78	2.37	2.52	2.53	2.56	2.54	2.74	2.73
27	2.39	2.57	2.38	2.27	2.99	2.36	2.48	2.52	2.59	2.55	2.68	2.83
28	2.39	2.57	2.36	2.28	2.84	2.35	2.46	2.53	2.63	2.56	2.65	2.93
29	2.38	2.52	2.35	2.29	2.69	2.35	2.46	2.57	2.66	2.57	2.63	2.96
30	2.43	2.48	2.34	2.31	---	2.35	2.47	2.58	2.67	2.57	2.60	3.06
31	2.44	---	2.32	2.27	---	2.41	---	2.59	---	2.58	2.57	---
MEAN	2.79	2.52	2.41	2.26	2.36	2.47	2.50	2.55	2.55	2.64	2.66	2.82
MAX	3.50	2.70	2.51	2.34	2.99	2.59	2.62	2.71	2.67	2.76	2.76	3.36
MIN	2.38	2.37	2.32	2.14	2.21	2.35	2.42	2.45	2.47	2.54	2.57	2.55

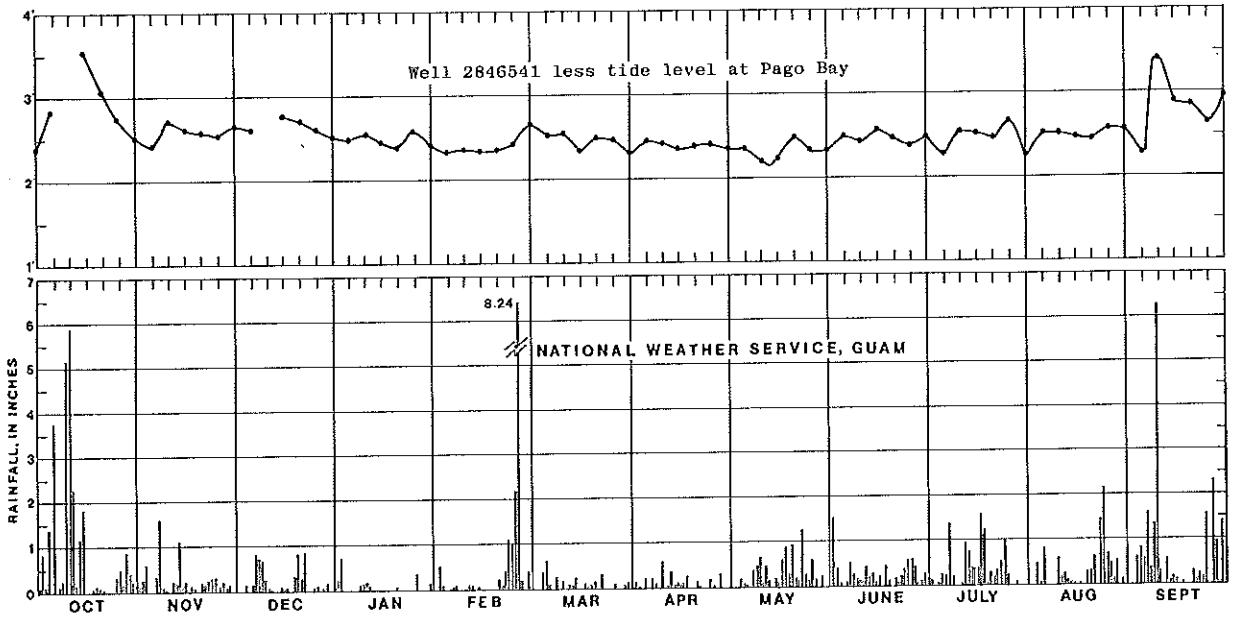
WTR YR 1980 MEAN 2.54 MAX 3.50 MIN 2.14

MARIANA ISLANDS, ISLAND OF GUAM

132824144464273. Well 2846541 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.40	2.48	2.61	2.39	2.36	2.67	2.38	2.37	2.52	2.39	2.51	2.56
2	2.35	2.35	2.62	2.44	2.52	2.69	2.35	2.36	2.52	2.40	2.45	2.51
3	2.30	2.40	2.57	2.33	2.49	2.61	2.39	2.31	2.57	2.42	2.56	2.49
4	2.35	2.38	2.62	2.49	2.40	2.59	2.34	2.35	2.45	2.44	2.54	2.43
5	2.84	2.42	2.60	2.49	2.35	2.54	2.46	2.37	2.51	2.28	2.54	2.28
6	2.93	2.39	---	2.53	2.36	2.62	2.38	2.30	2.47	2.20	2.52	2.48
7	2.81	2.40	---	2.45	2.31	2.59	2.43	2.39	2.39	2.50	2.42	2.35
8	2.75	2.75	---	2.65	2.37	2.54	2.40	2.41	2.35	2.59	2.38	2.49
9	---	2.65	---	2.57	2.43	2.56	2.45	2.24	2.34	2.63	2.38	2.81
10	---	2.70	---	2.57	2.38	2.57	2.43	2.20	2.43	2.57	2.54	3.40
11	---	2.61	---	2.60	2.35	2.59	2.35	2.25	2.57	2.59	2.50	3.36
12	3.29	2.59	---	2.61	2.41	2.61	2.32	2.22	2.52	2.64	2.49	3.29
13	3.35	2.68	---	2.48	2.42	2.48	2.25	2.13	2.65	2.62	2.49	3.12
14	3.50	2.67	2.73	2.50	2.44	2.46	2.33	2.15	2.60	2.58	2.44	2.94
15	3.58	2.60	2.78	2.47	2.37	2.38	2.38	2.22	2.58	2.54	2.47	2.90
16	3.44	2.54	2.90	2.45	2.33	2.38	2.42	2.28	2.50	2.53	2.36	2.87
17	3.34	2.60	2.90	2.39	2.36	2.24	2.41	2.13	2.46	2.31	2.37	2.85
18	3.22	2.61	2.76	2.42	2.29	2.22	2.42	2.36	2.47	2.55	2.38	2.78
19	3.16	2.64	2.72	2.46	2.35	2.43	2.40	2.51	2.47	2.59	2.41	2.80
20	3.08	2.57	2.70	2.40	2.38	2.50	2.40	2.50	2.49	2.49	2.43	2.84
21	3.05	2.56	2.69	2.42	2.39	2.42	2.31	2.39	2.45	2.48	2.43	2.78
22	3.00	2.56	2.61	2.49	2.32	2.45	2.32	2.44	2.43	2.54	2.39	2.72
23	2.86	2.56	2.54	2.50	2.31	2.51	2.32	2.26	2.46	2.62	2.56	2.61
24	2.90	2.48	2.56	2.57	2.35	2.47	2.27	2.38	2.43	2.68	2.56	2.68
25	2.78	2.54	2.60	2.59	2.43	2.48	2.41	2.36	2.39	2.65	2.58	2.62
26	2.64	2.58	2.63	2.59	2.63	2.44	2.35	2.43	2.39	2.80	2.60	2.54
27	2.66	2.50	2.66	2.48	3.06	2.48	2.36	2.44	2.45	2.69	2.59	2.64
28	2.61	2.54	2.68	2.42	2.88	2.44	2.34	2.32	2.44	2.39	2.55	2.76
29	2.54	2.46	2.62	2.39	2.82	2.38	2.36	2.35	2.43	2.37	2.52	2.95
30	2.53	2.63	2.54	2.42	---	2.33	2.38	2.34	2.48	2.37	2.54	2.98
31	2.47	---	2.56	2.42	---	2.27	---	2.52	---	2.51	2.57	---
MEAN	---	2.55	---	2.48	2.44	2.48	2.37	2.33	2.47	2.51	2.49	2.76
MAX	---	2.75	---	2.65	3.06	2.69	2.46	2.52	2.65	2.80	2.60	3.40
MIN	---	2.35	---	2.33	2.29	2.22	2.25	2.13	2.34	2.20	2.36	2.28



MARIANA ISLANDS, ISLAND OF GUAM

132813144472771. Local number, 2847120 Barrigada Well 2 (A-16).
LOCATION.--Lat 13°28'13" N., long 144°47'27" E., Hydrologic Unit 20100003, at Carbullido School, 0.60 mi (0.97 km) west of junction of Routes 8 and 10, Barrigada, Guam. Owner: Public Utility Agency of Guam.
AQUIFER.--Mariana Limestone, probably Pliocene age.
WELL CHARACTERISTICS.--Drilled basal water-table well, diameter 12 in (0.30 m), depth reported 215 ft (65.5 m).
DATUM.--Altitude of land-surface datum is 207 ft (63.1 m) above mean sea level. Measuring point: Top of casing, 208.00 ft (63.398 m) above mean sea level.
REMARKS.--Recording gage installed June 1974.
PERIOD OF RECORD.--June 1974 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.71 ft (2.045 m) May 22, 1976; lowest recorded, 3.09 ft (0.942 m) above mean sea level, Dec. 7, 8, 1974.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.47	3.60	3.55	3.35	3.29	3.86	3.45	3.51	3.62	3.66	3.59	3.60
2	3.52	3.61	3.54	3.33	3.28	3.79	3.45	3.50	3.67	3.67	3.61	3.59
3	3.55	3.61	3.55	3.32	3.30	3.72	3.46	3.52	3.67	3.70	3.69	3.61
4	3.57	3.62	3.58	3.32	3.32	3.66	3.48	3.53	3.66	3.71	3.68	3.61
5	3.98	3.62	3.59	3.33	3.31	3.64	3.48	3.53	3.65	3.71	3.66	3.64
6	4.23	3.64	3.59	3.34	3.30	3.64	3.47	3.53	3.62	3.73	3.65	3.70
7	4.10	3.68	3.58	3.34	3.28	3.62	3.50	3.55	3.63	3.77	3.65	3.72
8	3.98	3.95	3.59	3.34	3.27	3.61	3.54	3.56	3.63	3.74	3.68	3.73
9	3.90	3.94	3.59	3.32	3.30	3.60	3.55	3.56	3.62	3.70	3.69	3.94
10	4.59	3.85	3.55	3.32	3.31	3.58	3.55	3.57	3.61	3.69	3.71	5.05
11	5.11	3.79	3.50	3.32	3.32	3.57	3.54	3.59	3.60	3.68	3.73	4.87
12	4.98	3.76	3.44	3.25	3.30	3.56	3.54	3.60	3.60	3.70	3.73	4.57
13	4.73	3.70	3.40	3.23	3.31	3.55	3.58	3.58	3.59	3.70	3.72	4.41
14	4.63	3.63	3.40	3.25	3.30	3.55	3.61	3.59	3.57	3.68	3.70	4.31
15	4.60	3.59	3.48	3.26	3.28	3.55	3.62	3.60	3.55	3.64	3.66	4.21
16	4.39	3.60	3.50	3.25	3.28	3.56	3.62	3.61	3.55	3.61	3.64	4.13
17	4.25	3.62	3.45	3.27	3.26	3.55	3.59	3.63	3.55	3.67	3.64	4.03
18	4.11	3.64	3.40	3.30	3.25	3.56	3.59	3.67	3.53	3.71	3.64	4.00
19	4.02	3.63	3.39	3.31	3.27	3.58	3.58	3.70	3.53	3.69	3.68	4.05
20	3.93	3.60	3.39	3.32	3.31	3.57	3.58	3.68	3.52	3.66	3.68	4.02
21	3.91	3.60	3.40	3.34	3.31	3.54	3.59	3.65	3.51	3.66	3.68	3.99
22	3.90	3.63	3.42	3.35	3.32	3.52	3.60	3.61	3.50	3.66	3.70	3.94
23	3.84	3.64	3.41	3.34	3.32	3.51	3.61	3.59	3.50	3.66	3.74	3.90
24	3.78	3.66	3.41	3.33	3.33	3.46	3.60	3.57	3.51	3.65	3.82	3.91
25	3.68	3.68	3.40	3.34	3.34	3.44	3.59	3.56	3.52	3.62	3.83	3.91
26	3.63	3.68	3.39	3.34	3.84	3.43	3.57	3.57	3.54	3.59	3.81	3.91
27	3.61	3.67	3.40	3.32	4.67	3.41	3.54	3.56	3.57	3.57	3.76	4.02
28	3.60	3.67	3.39	3.32	4.28	3.40	3.52	3.57	3.61	3.57	3.71	4.11
29	3.59	3.65	3.37	3.32	4.02	3.39	3.52	3.59	3.65	3.57	3.69	4.15
30	3.58	3.61	3.36	3.34	---	3.39	3.53	3.61	3.66	3.58	3.65	4.28
31	3.58	---	3.36	3.33	---	3.43	---	3.61	---	3.59	3.62	---
MEAN	4.01	3.67	3.46	3.31	3.42	3.56	3.55	3.58	3.58	3.66	3.69	4.03
MAX	5.11	3.95	3.59	3.35	4.67	3.86	3.62	3.70	3.67	3.77	3.83	5.05
MIN	3.47	3.59	3.36	3.23	3.25	3.39	3.45	3.50	3.50	3.57	3.59	3.59

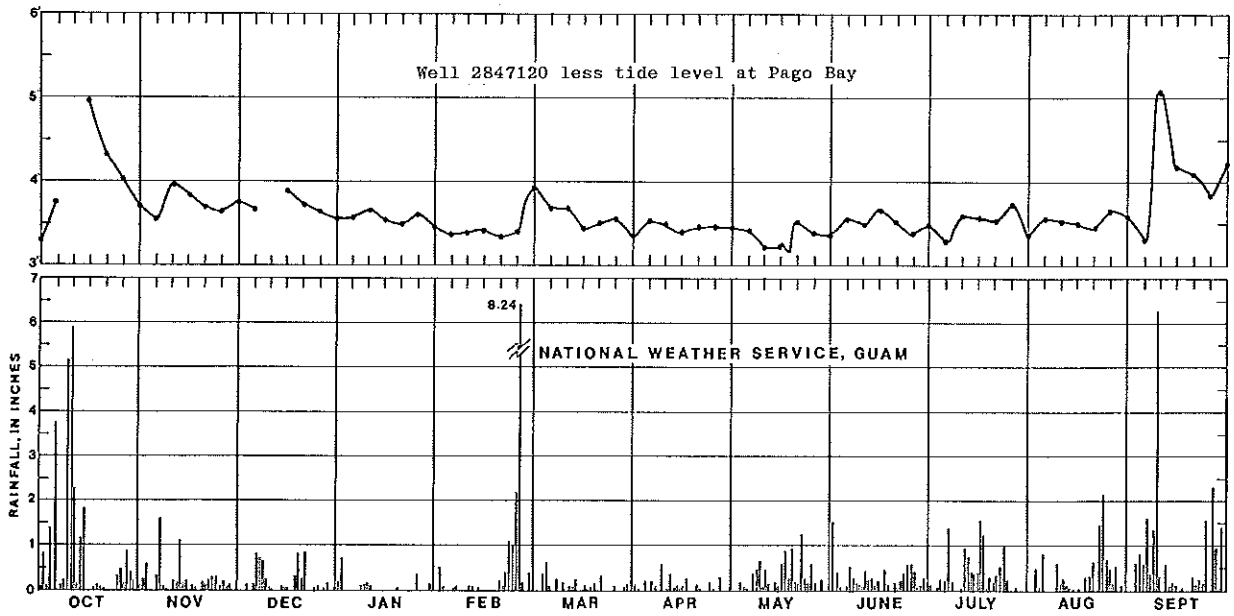
WTR YR 1980 MEAN 3.63 MAX 5.11 MIN 3.23

MARIANA ISLANDS, ISLAND OF GUAM

132813144472773. Well 2847120 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.31	3.62	3.74	3.48	3.41	3.94	3.41	3.43	3.54	3.38	3.52	3.61
2	3.26	3.50	3.75	3.53	3.57	3.91	3.38	3.41	3.56	3.39	3.45	3.54
3	3.23	3.54	3.70	3.42	3.51	3.78	3.43	3.36	3.63	3.41	3.54	3.53
4	3.26	3.53	3.73	3.57	3.42	3.77	3.38	3.39	3.50	3.43	3.53	3.47
5	3.76	3.56	3.68	3.57	3.39	3.71	3.52	3.41	3.56	3.28	3.56	3.30
6	4.08	3.51	---	3.61	3.42	3.78	3.43	3.35	3.53	3.19	3.54	3.50
7	3.97	3.53	---	3.51	3.38	3.75	3.46	3.43	3.47	3.51	3.42	3.36
8	3.89	4.00	---	3.73	3.42	3.70	3.44	3.44	3.45	3.61	3.39	3.52
9	---	3.97	---	3.66	3.45	3.71	3.50	3.26	3.42	3.65	3.38	3.85
10	---	3.97	---	3.63	3.39	3.70	3.49	3.22	3.49	3.59	3.53	5.09
11	---	3.85	---	3.69	3.38	3.70	3.40	3.26	3.63	3.61	3.51	4.94
12	4.83	3.82	---	3.72	3.43	3.71	3.36	3.25	3.58	3.64	3.49	4.70
13	4.76	3.89	---	3.57	3.43	3.56	3.28	3.16	3.69	3.63	3.51	4.44
14	4.89	3.89	3.76	3.55	3.47	3.52	3.32	3.16	3.66	3.60	3.47	4.25
15	4.99	3.82	3.88	3.54	3.41	3.42	3.40	3.22	3.64	3.58	3.50	4.19
16	4.80	3.69	3.97	3.52	3.37	3.41	3.48	3.28	3.57	3.55	3.40	4.17
17	4.66	3.72	3.95	3.44	3.38	3.28	3.46	3.14	3.53	3.31	3.39	4.13
18	4.53	3.74	3.78	3.46	3.31	3.29	3.47	3.32	3.50	3.58	3.38	4.04
19	4.45	3.78	3.75	3.50	3.34	3.43	3.45	3.51	3.51	3.64	3.45	4.05
20	4.33	3.70	3.73	3.44	3.36	3.52	3.46	3.53	3.52	3.53	3.47	4.10
21	4.28	3.66	3.71	3.42	3.36	3.45	3.35	3.44	3.48	3.50	3.47	4.07
22	4.26	3.67	3.64	3.51	3.31	3.47	3.35	3.49	3.46	3.57	3.53	3.97
23	4.14	3.65	3.56	3.55	3.30	3.57	3.37	3.31	3.48	3.66	3.59	3.81
24	4.21	3.58	3.59	3.62	3.32	3.53	3.32	3.45	3.45	3.74	3.62	3.90
25	4.05	3.64	3.63	3.60	3.40	3.56	3.46	3.39	3.39	3.71	3.65	3.83
26	3.89	3.67	3.65	3.62	3.69	3.50	3.40	3.47	3.37	3.85	3.67	3.72
27	3.88	3.60	3.68	3.53	4.74	3.53	3.42	3.48	3.43	3.71	3.67	3.83
28	3.82	3.64	3.71	3.46	4.32	3.49	3.40	3.36	3.42	3.40	3.61	3.94
29	3.75	3.59	3.64	3.42	4.15	3.42	3.42	3.37	3.42	3.37	3.58	4.14
30	3.68	3.76	3.56	3.45	---	3.37	3.44	3.37	3.47	3.38	3.59	4.20
31	3.61	---	3.60	3.48	---	3.29	---	3.54	---	3.52	3.62	---
MEAN	---	3.70	---	3.54	3.51	3.57	3.42	3.36	3.51	3.53	3.52	3.97
MAX	---	4.00	---	3.73	4.74	3.94	3.52	3.54	3.69	3.85	3.67	5.09
MIN	---	3.50	---	3.42	3.30	3.24	3.28	3.14	3.37	3.19	3.38	3.30



MARIANA ISLANDS, ISLAND OF GUAM

133032144491871. Local number, 3049311 Harmon Loop School Well M-10A.
LOCATION.--Lat 13°30'32" N., long 144°49'18" E., Hydrologic Unit 20100003, at Harmon Loop School, Dededo, Guam. Owner: Public Utility Agency of Guam.
AQUIFER.--Mariana or Barrigada Limestone of Miocene or Pliocene age.
WELL CHARACTERISTICS.--Drilled basal water-table well, diameter 8 in (0.2 m), depth reported 288 ft (87.8 m).
DATUM.--Altitude of land-surface datum is 227 ft (69.2 m) above mean sea level. Measuring point: Top edge of shelter floor, 228.70 ft (69.708 m) above mean sea level.
REMARKS.--Well was abandoned in 1973 because of oil taste and high iron content. Recording gage installed January 1974.
PERIOD OF RECORD.--January 1974 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.61 ft (1.405 m) above mean sea level, May 23, 1976; lowest recorded, 2.27 ft (0.692 m) above mean sea level, Feb. 23, 24, 1979.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.63	2.66	2.63	2.34	2.44	2.63	2.57	2.68	2.75	2.85	2.78	2.79
2	2.68	2.67	2.61	2.36	2.43	2.63	2.58	2.67	2.74	2.86	2.83	2.78
3	2.72	2.68	2.64	2.37	2.47	2.64	2.58	2.68	2.73	2.87	2.87	2.79
4	2.80	2.69	2.67	2.37	2.48	2.63	2.60	2.68	2.73	2.88	2.88	2.80
5	2.92	2.68	2.68	2.48	2.46	2.63	2.61	2.69	2.74	2.89	2.87	2.85
6	3.06	2.71	2.68	2.39	2.45	2.63	2.60	2.69	2.72	2.89	2.85	2.89
7	3.03	2.70	2.65	2.39	2.42	2.63	2.62	2.72	2.71	2.89	2.86	2.90
8	2.96	2.74	2.65	2.38	2.41	2.62	2.66	2.76	2.71	2.88	2.88	2.92
9	2.92	2.74	2.64	2.38	2.43	2.62	2.67	2.74	2.71	2.87	2.89	2.94
10	3.03	2.72	2.59	2.39	2.45	2.62	2.68	2.75	2.71	2.87	2.90	3.21
11	3.38	2.72	2.52	2.36	2.44	2.63	2.68	2.77	2.71	2.86	2.90	3.30
12	3.57	2.71	2.48	2.30	2.43	2.62	2.68	2.76	2.72	2.86	2.90	3.28
13	3.57	2.70	2.45	2.31	2.44	2.63	2.70	2.75	2.72	2.86	2.89	3.27
14	3.48	2.64	2.53	2.32	2.43	2.65	2.70	2.76	2.70	2.84	2.88	3.22
15	3.46	2.60	2.65	2.31	2.41	2.66	2.70	2.77	2.69	2.81	2.86	3.12
16	3.36	2.62	2.63	2.34	2.39	2.67	2.73	2.77	2.69	2.77	2.85	3.08
17	3.28	2.66	2.56	2.38	2.38	2.67	2.72	2.77	2.69	2.83	2.85	3.01
18	3.15	2.67	2.48	2.40	2.38	2.67	2.73	2.79	2.69	2.86	2.86	2.96
19	3.07	2.66	2.46	2.42	2.39	2.70	2.73	2.80	2.71	2.85	2.85	2.98
20	2.98	2.64	2.45	2.45	2.42	2.72	2.72	2.79	2.70	2.85	2.85	2.97
21	2.97	2.66	2.42	2.47	2.46	2.70	2.74	2.79	2.70	2.85	2.84	2.91
22	2.91	2.69	2.41	2.50	2.47	2.65	2.75	2.78	2.70	2.85	2.85	2.90
23	2.82	2.70	2.40	2.47	2.46	2.62	2.74	2.77	2.69	2.84	2.87	2.90
24	2.73	2.72	2.40	2.46	2.46	2.61	2.74	2.73	2.69	2.80	2.90	2.90
25	2.66	2.73	2.41	2.48	2.46	2.57	2.73	2.71	2.70	2.77	2.92	2.89
26	2.62	2.74	2.42	2.49	2.52	2.54	2.71	2.70	2.72	2.75	2.92	2.90
27	2.61	2.74	2.43	2.46	2.58	2.53	2.70	2.69	2.75	2.75	2.89	2.96
28	2.60	2.74	2.42	2.45	2.64	2.52	2.69	2.71	2.78	2.75	2.87	3.09
29	2.59	2.70	2.41	2.46	2.63	2.51	2.68	2.73	2.83	2.76	2.86	3.16
30	2.62	2.66	2.40	2.47	---	2.50	2.69	2.75	2.84	2.76	2.84	3.27
31	2.63	---	2.38	2.45	---	2.55	---	2.76	---	2.77	2.82	---
MEAN	2.96	2.69	2.52	2.41	2.46	2.62	2.68	2.74	2.72	2.83	2.87	3.00
MAX	3.57	2.74	2.68	2.50	2.64	2.72	2.75	2.80	2.84	2.89	2.92	3.30
MIN	2.59	2.60	2.38	2.30	2.38	2.50	2.57	2.67	2.69	2.75	2.78	2.78

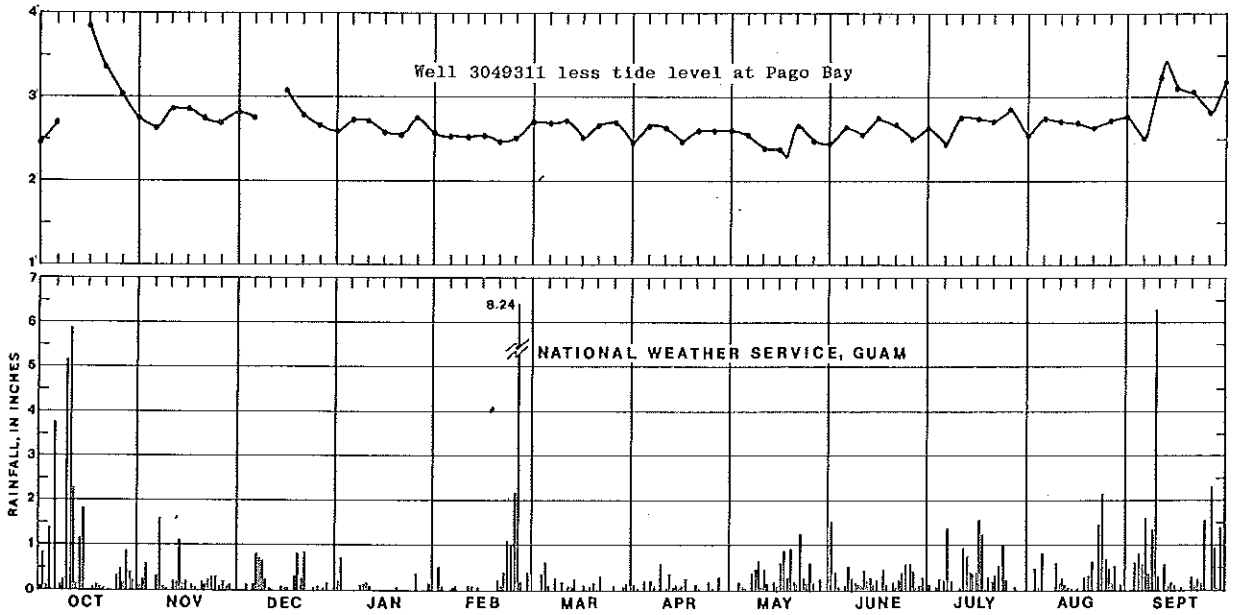
WTR YR 1980 MEAN 2.71 MAX 3.57 MIN 2.30

MARIANA ISLANDS, ISLAND OF GUAM

133032144491873. Well 3049311 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.47	2.68	2.82	2.47	2.56	2.71	2.53	2.60	2.67	2.57	2.71	2.80
2	2.42	2.56	2.82	2.56	2.72	2.75	2.51	2.58	2.63	2.58	2.67	2.73
3	2.40	2.61	2.79	2.47	2.68	2.70	2.55	2.52	2.69	2.58	2.77	2.71
4	2.49	2.60	2.82	2.62	2.58	2.74	2.50	2.54	2.57	2.60	2.73	2.66
5	2.70	2.62	2.77	2.72	2.54	2.70	2.65	2.57	2.65	2.46	2.77	2.51
6	2.91	2.58	---	2.66	2.57	2.77	2.56	2.51	2.63	2.35	2.74	2.69
7	2.90	2.55	---	2.56	2.52	2.76	2.58	2.60	2.55	2.63	2.63	2.59
8	2.87	2.79	---	2.77	2.56	2.71	2.56	2.64	2.53	2.75	2.59	2.71
9	---	2.77	---	2.72	2.58	2.73	2.62	2.44	2.51	2.82	2.58	2.85
10	---	2.84	---	2.70	2.53	2.74	2.62	2.40	2.59	2.77	2.72	3.25
11	---	2.78	---	2.73	2.50	2.76	2.54	2.44	2.74	2.79	2.68	3.37
12	3.42	2.77	---	2.77	2.56	2.77	2.50	2.41	2.70	2.80	2.66	3.41
13	3.60	2.89	---	2.65	2.56	2.64	2.40	2.33	2.82	2.79	2.68	3.30
14	3.74	2.90	2.89	2.62	2.60	2.62	2.41	2.33	2.79	2.76	2.65	3.16
15	3.85	2.83	3.05	2.59	2.54	2.53	2.48	2.39	2.78	2.75	2.70	3.10
16	3.77	2.71	3.10	2.61	2.48	2.52	2.59	2.44	2.71	2.71	2.61	3.12
17	3.69	2.76	3.06	2.55	2.50	2.40	2.59	2.28	2.67	2.47	2.60	3.11
18	3.57	2.77	2.86	2.56	2.44	2.35	2.61	2.44	2.66	2.73	2.60	3.00
19	3.50	2.81	2.82	2.61	2.46	2.55	2.60	2.61	2.69	2.80	2.62	2.98
20	3.38	2.74	2.79	2.57	2.47	2.67	2.60	2.64	2.70	2.72	2.64	3.05
21	3.34	2.72	2.73	2.55	2.51	2.61	2.50	2.58	2.67	2.69	2.63	2.99
22	3.27	2.73	2.63	2.66	2.46	2.60	2.50	2.66	2.66	2.76	2.68	2.93
23	3.12	2.71	2.55	2.68	2.44	2.68	2.50	2.49	2.67	2.84	2.72	2.81
24	3.16	2.64	2.58	2.75	2.45	2.68	2.46	2.61	2.63	2.89	2.70	2.89
25	3.03	2.69	2.64	2.74	2.52	2.69	2.60	2.54	2.57	2.86	2.74	2.81
26	2.88	2.73	2.68	2.77	2.37	2.61	2.54	2.60	2.55	3.01	2.78	2.71
27	2.88	2.67	2.71	2.67	2.65	2.65	2.58	2.61	2.61	2.89	2.80	2.77
28	2.82	2.71	2.74	2.59	2.68	2.61	2.57	2.50	2.59	2.58	2.77	2.92
29	2.75	2.64	2.68	2.56	2.76	2.54	2.58	2.51	2.60	2.56	2.75	3.15
30	2.72	2.81	2.60	2.58	---	2.48	2.60	2.51	2.65	2.56	2.78	3.19
31	2.66	---	2.62	2.60	---	2.41	---	2.69	---	2.70	2.82	---
MEAN	---	2.72	---	2.63	2.54	2.63	2.55	2.52	2.65	2.70	2.69	2.94
MAX	---	2.90	---	2.77	2.76	2.77	2.65	2.69	2.82	3.01	2.82	3.41
MIN	---	2.55	---	2.47	2.37	2.35	2.40	2.28	2.51	2.35	2.58	2.51



MARIANA ISLANDS, ISLAND OF GUAM

133047144500171. Local number, 3050400 Well M-11.
LOCATION.--Lat 13°30'47" N., long 144°50'01" E., Hydrologic Unit 20100003, at intersection of Harmon Loop School Road and Route 1 at Dededo, Guam. Owner: Public Utility Agency of Guam.
AQUIFER.--Barrigada Limestone.
WELL CHARACTERISTICS.--Drilled basal water-table well, diameter 8 in (0.2 m), depth reported 325 ft (99.1 m).
DATUM.--Altitude of land-surface datum is 294 ft (89.6 m) above mean sea level. Measuring point: Top of casing, 295.82 ft (90.166 m) above mean sea level.
REMARKS.--Recording gage installed July 1977.
PERIOD OF RECORD.--July 1977 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.67 ft (1.423 m) above mean sea level, Sept. 10, 1980; lowest recorded, 2.78 ft (0.847 m) above mean sea level, Feb. 19, 1979.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.16	3.21	3.17	2.92	2.97	3.16	3.13	3.23	3.32	3.38	3.38	3.40
2	3.22	3.23	3.16	2.91	2.96	3.16	3.14	3.23	3.30	3.40	3.40	3.39
3	3.26	3.24	3.18	2.93	3.00	3.17	3.14	3.24	3.30	3.42	3.44	3.39
4	3.39	3.26	3.20	2.93	3.02	3.15	3.16	3.24	3.29	3.44	3.47	3.39
5	3.56	3.24	3.22	2.94	3.00	3.14	3.17	3.25	3.30	3.45	3.45	3.42
6	3.76	3.28	3.21	2.94	2.97	3.15	3.16	3.25	3.29	3.46	3.43	3.45
7	3.73	3.27	3.19	2.96	2.95	3.15	3.18	3.26	3.27	3.46	3.42	3.48
8	3.64	3.32	3.18	2.95	2.94	3.15	3.22	3.28	3.26	3.45	3.45	3.50
9	3.58	3.32	3.18	2.94	2.97	3.16	3.23	3.29	3.24	3.43	3.46	3.53
10	3.73	3.29	3.14	2.95	2.98	3.16	3.24	3.29	3.23	3.43	3.48	4.35
11	4.40	3.29	3.07	2.96	2.98	3.17	3.24	3.30	3.24	3.41	3.48	4.38
12	4.57	3.28	3.03	2.90	2.96	3.16	3.24	3.30	3.25	3.41	3.47	4.13
13	4.46	3.27	3.00	2.86	2.98	3.17	3.25	3.29	3.23	3.41	3.45	4.05
14	4.31	3.19	3.04	2.88	2.97	3.19	3.31	3.31	3.21	3.40	3.44	3.97
15	4.29	3.18	3.15	2.89	2.96	3.20	3.32	3.33	3.20	3.38	3.42	3.90
16	4.13	3.18	3.17	2.87	2.94	3.22	3.30	3.34	3.20	3.35	3.40	3.83
17	4.03	3.21	3.10	2.89	2.93	3.22	3.28	3.36	3.20	3.38	3.41	3.74
18	3.87	3.23	3.03	2.94	2.93	3.23	3.29	3.43	3.22	3.42	3.42	3.67
19	3.78	3.22	3.01	2.95	2.94	3.27	3.29	3.45	3.22	3.44	3.42	3.67
20	3.67	3.21	2.99	2.96	2.99	3.28	3.28	3.42	3.23	3.43	3.40	3.66
21	3.62	3.21	2.98	3.01	3.01	3.24	3.29	3.39	3.22	3.44	3.39	3.62
22	3.55	3.24	2.97	3.03	3.01	3.23	3.30	3.34	3.21	3.43	3.39	3.57
23	3.43	3.25	2.97	3.00	3.01	3.21	3.31	3.30	3.22	3.42	3.41	3.56
24	3.30	3.26	2.97	2.98	3.01	3.17	3.30	3.26	3.22	3.38	3.60	3.55
25	3.22	3.27	2.97	3.01	3.01	3.12	3.29	3.26	3.23	3.37	3.64	3.54
26	3.15	3.28	2.95	3.03	3.05	3.11	3.28	3.26	3.25	3.36	3.61	3.53
27	3.15	3.28	2.99	2.99	3.16	3.09	3.27	3.25	3.28	3.36	3.56	3.58
28	3.13	3.26	2.99	2.98	3.20	3.08	3.25	3.26	3.31	3.36	3.51	3.75
29	3.11	3.24	2.97	2.99	3.18	3.07	3.24	3.27	3.34	3.37	3.48	3.87
30	3.15	3.21	2.94	3.00	---	3.07	3.25	3.30	3.37	3.37	3.45	3.95
31	3.17	---	2.93	3.00	---	3.10	---	3.32	---	3.37	3.43	---
MEAN	3.63	3.25	3.07	2.95	3.00	3.17	3.25	3.30	3.26	3.41	3.46	3.69
MAX	4.57	3.32	3.22	3.03	3.20	3.28	3.32	3.45	3.37	3.46	3.64	4.38
MIN	3.11	3.18	2.93	2.86	2.93	3.07	3.13	3.23	3.20	3.35	3.38	3.39

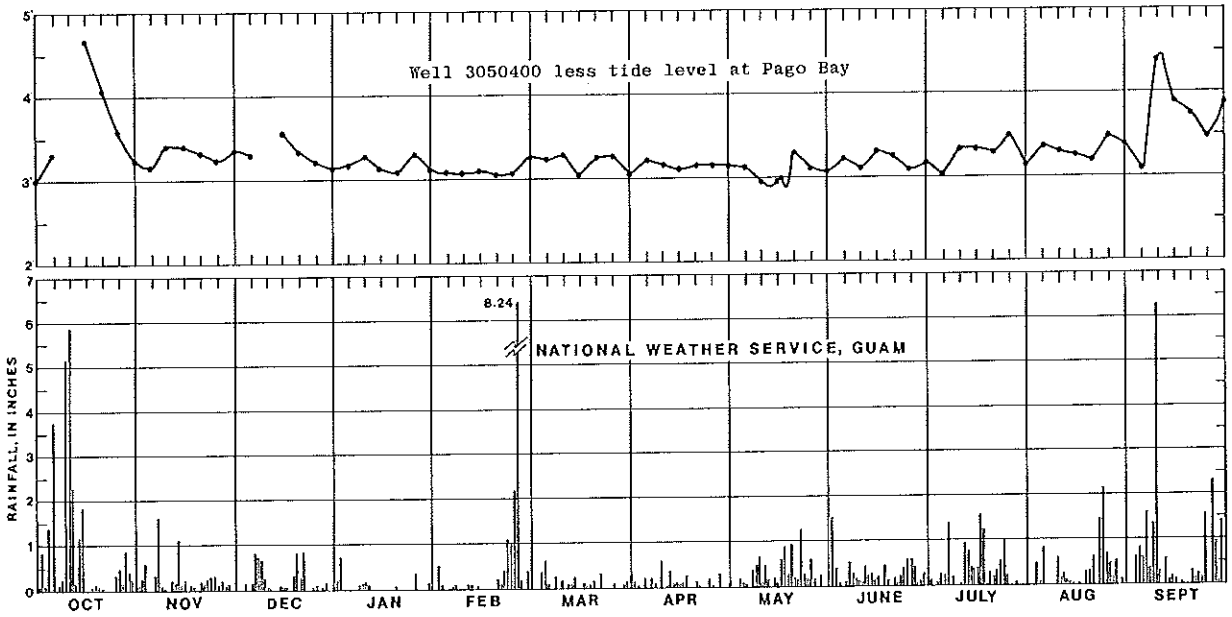
WTR YR 1980 MEAN 3.29 MAX 4.57 MIN 2.86

MARIANA ISLANDS, ISLAND OF GUAM

133047144500173. Well 3050400 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.00	3.23	3.36	3.05	3.09	3.24	3.09	3.15	3.24	3.10	3.31	3.41
2	2.96	3.12	3.37	3.11	3.25	3.28	3.07	3.14	3.19	3.12	3.24	3.34
3	2.94	3.17	3.33	3.03	3.21	3.23	3.11	3.08	3.26	3.13	3.34	3.31
4	3.08	3.17	3.35	3.18	3.12	3.26	3.06	3.10	3.13	3.16	3.32	3.25
5	3.34	3.18	3.31	3.18	3.08	3.21	3.21	3.13	3.21	3.02	3.35	3.08
6	3.61	3.15	---	3.21	3.09	3.29	3.12	3.07	3.20	2.92	3.32	3.25
7	3.60	3.12	---	3.13	3.05	3.28	3.14	3.14	3.11	3.20	3.19	3.12
8	3.55	3.37	---	3.34	3.09	3.24	3.12	3.16	3.08	3.32	3.16	3.29
9	---	3.35	---	3.28	3.12	3.27	3.18	2.99	3.04	3.38	3.15	3.34
10	---	3.41	---	3.26	3.06	3.28	3.18	2.94	3.11	3.33	3.30	4.39
11	---	3.35	---	3.33	3.04	3.30	3.10	2.97	3.27	3.34	3.26	4.45
12	4.42	3.34	---	3.37	3.09	3.31	3.06	2.95	3.23	3.35	3.23	4.26
13	4.49	3.46	---	3.20	3.10	3.18	2.95	2.87	3.33	3.34	3.24	4.08
14	4.57	3.45	3.40	3.18	3.14	3.16	3.02	2.88	3.30	3.32	3.21	3.91
15	4.68	3.41	3.55	3.17	3.09	3.07	3.10	2.95	3.29	3.32	3.26	3.88
16	4.54	3.27	3.64	3.14	3.03	3.07	3.16	3.01	3.22	3.29	3.16	3.87
17	4.44	3.31	3.60	3.06	3.05	2.95	3.15	2.87	3.18	3.02	3.16	3.84
18	4.29	3.33	3.41	3.10	2.99	2.91	3.17	3.08	3.19	3.29	3.16	3.71
19	4.21	3.37	3.37	3.14	3.01	3.12	3.16	3.26	3.20	3.39	3.19	3.67
20	4.07	3.31	3.33	3.08	3.04	3.23	3.16	3.27	3.23	3.30	3.19	3.74
21	3.99	3.27	3.29	3.09	3.06	3.15	3.05	3.18	3.19	3.28	3.18	3.70
22	3.91	3.28	3.19	3.19	3.00	3.18	3.05	3.22	3.17	3.34	3.22	3.60
23	3.73	3.26	3.12	3.21	2.99	3.27	3.07	3.02	3.20	3.42	3.26	3.47
24	3.73	3.18	3.15	3.27	3.00	3.24	3.02	3.14	3.16	3.47	3.40	3.53
25	3.59	3.23	3.20	3.27	3.07	3.24	3.16	3.09	3.10	3.46	3.46	3.46
26	3.41	3.27	3.21	3.31	2.90	3.18	3.11	3.16	3.08	3.62	3.47	3.34
27	3.42	3.21	3.27	3.20	3.23	3.21	3.15	3.17	3.14	3.50	3.47	3.39
28	3.35	3.23	3.31	3.12	3.24	3.17	3.13	3.05	3.12	3.19	3.41	3.58
29	3.27	3.18	3.24	3.09	3.31	3.10	3.14	3.05	3.11	3.17	3.37	3.86
30	3.25	3.36	3.14	3.11	---	3.05	3.16	3.06	3.18	3.17	3.39	3.87
31	3.20	---	3.17	3.15	---	2.96	---	3.25	---	3.30	3.43	---
MEAN	---	3.28	---	3.18	3.09	3.18	3.11	3.08	3.18	3.28	3.28	3.64
MAX	---	3.46	---	3.37	3.31	3.31	3.21	3.27	3.33	3.62	3.47	4.45
MIN	---	3.12	---	3.03	2.90	2.91	2.95	2.87	3.04	2.92	3.15	3.08



MARIANA ISLANDS, ISLAND OF GUAM

133115144484971. Local number, 3148140 Harmon Well 1 (107).
LOCATION.--Lat 13°31'15" N., long 144°48'49" E., Hydrologic Unit 2010003, 500 ft (150 m) north of junction of Routes 1 and 16, Dededo, Guam. Owner: Government of Guam.
AQUIFER.--Mariana Limestone.
WELL CHARACTERISTICS.--Drilled basal water-table well, diameter 10 in (0.25 m), depth measured 289 ft (88.1 m).
DATUM.--Altitude of land-surface datum is 268 ft (81.7 m) above mean sea level. Measuring point: Top of casing, 267.96 ft (81.674 m) above mean sea level.
REMARKS.--Recording gage installed March 1973.
PERIOD OF RECORD.--March 1973 to September 1977 records available in files of district office; October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.34 ft (1.323 m) above mean sea level, May 22, 1976; lowest recorded, 2.17 ft (0.661 m) above mean sea level, Feb. 23, 24, 26, 27, 1979.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.54	2.56	2.53	2.35	2.38	2.58	2.54	2.66	2.76	2.86	2.78	2.73
2	2.58	2.57	2.55	2.34	2.38	2.61	2.55	2.66	2.74	2.88	2.83	2.73
3	2.62	2.57	2.59	2.37	2.45	2.61	2.56	2.67	2.73	2.91	2.90	2.74
4	2.73	2.58	2.62	2.37	2.45	2.57	2.58	2.69	2.74	2.94	2.92	2.76
5	2.91	2.58	2.63	2.39	2.41	2.57	2.56	2.68	2.75	2.95	2.86	2.80
6	2.94	2.60	2.61	2.40	2.39	2.58	2.57	2.69	2.72	2.95	2.85	2.88
7	2.86	2.59	2.57	2.41	2.36	2.57	2.62	2.72	2.71	2.94	2.87	2.89
8	2.82	2.63	2.58	2.42	2.37	2.58	2.64	2.75	2.70	2.91	2.91	2.92
9	2.88	2.58	2.56	2.38	2.45	2.58	2.65	2.74	2.70	2.89	2.90	2.92
10	2.98	2.59	2.48	2.42	2.45	2.57	2.65	2.75	2.70	2.89	2.93	3.07
11	3.20	2.58	2.43	2.40	2.43	2.59	2.65	2.76	2.70	2.87	2.92	3.12
12	3.40	2.58	2.39	2.28	2.41	2.58	2.66	2.73	2.71	2.88	2.90	3.10
13	3.41	2.56	2.40	2.29	2.45	2.60	2.71	2.73	2.70	2.85	2.88	3.12
14	3.30	2.49	2.54	2.35	2.41	2.61	2.78	2.76	2.68	2.85	2.86	3.04
15	3.28	2.49	2.68	2.33	2.39	2.62	2.75	2.77	2.66	2.80	2.82	2.96
16	3.17	2.53	2.60	2.32	2.38	2.64	2.72	2.78	2.66	2.80	2.81	2.91
17	3.09	2.58	2.47	2.36	2.37	2.62	2.70	2.81	2.66	2.85	2.82	2.84
18	2.96	2.58	2.42	2.38	2.37	2.67	2.71	2.89	2.68	2.85	2.83	2.83
19	2.89	2.56	2.40	2.39	2.42	2.69	2.69	2.90	2.68	2.83	2.81	2.89
20	2.87	2.55	2.41	2.40	2.47	2.67	2.69	2.84	2.70	2.84	2.80	2.84
21	2.88	2.57	2.38	2.49	2.47	2.64	2.72	2.81	2.69	2.85	2.78	2.80
22	2.79	2.62	2.39	2.45	2.47	2.63	2.73	2.75	2.69	2.84	2.79	2.78
23	2.65	2.62	2.38	2.42	2.48	2.58	2.74	2.72	2.69	2.81	2.81	2.80
24	2.56	2.64	2.38	2.43	2.50	2.55	2.73	2.69	2.70	2.75	2.84	2.79
25	2.50	2.64	2.38	2.49	2.50	2.51	2.73	2.70	2.72	2.73	2.85	2.78
26	2.48	2.66	2.39	2.46	2.58	2.53	2.71	2.68	2.76	2.71	2.84	2.80
27	2.47	2.65	2.47	2.41	2.66	2.50	2.67	2.68	2.79	2.72	2.79	2.88
28	2.47	2.65	2.42	2.40	2.67	2.48	2.66	2.71	2.81	2.73	2.79	3.03
29	2.47	2.60	2.39	2.42	2.62	2.47	2.67	2.74	2.84	2.74	2.78	3.10
30	2.50	2.57	2.38	2.44	---	2.47	2.68	2.76	2.85	2.75	2.76	3.17
31	2.53	---	2.35	2.40	---	2.53	---	2.77	---	2.77	2.74	---
MEAN	2.83	2.59	2.48	2.39	2.45	2.58	2.67	2.74	2.72	2.84	2.84	2.90
MAX	3.41	2.66	2.68	2.49	2.67	2.69	2.78	2.90	2.85	2.95	2.93	3.17
MIN	2.47	2.49	2.35	2.28	2.36	2.47	2.54	2.66	2.66	2.71	2.74	2.73

WTR YR 1980 MEAN 2.67 MAX 3.41 MIN 2.28

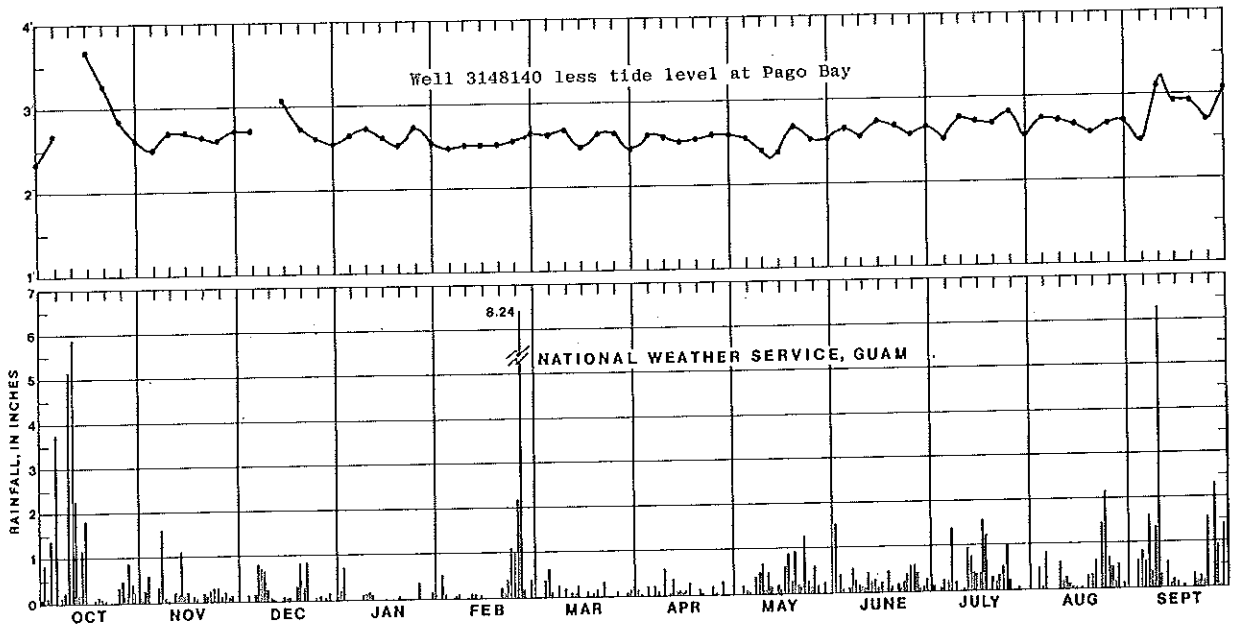
GROUND-WATER LEVELS

MARIANA ISLANDS, ISLAND OF GUAM

133115144484973. Well 3148140 less Tide Gage, Pago Bay.
PERIOD OF RECORD.--Current year.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.38	2.58	2.72	2.48	2.50	2.66	2.50	2.58	2.68	2.58	2.71	2.74
2	2.32	2.46	2.76	2.54	2.67	2.73	2.48	2.57	2.63	2.60	2.67	2.68
3	2.30	2.50	2.74	2.47	2.66	2.67	2.53	2.51	2.69	2.62	2.80	2.66
4	2.42	2.49	2.77	2.62	2.55	2.68	2.48	2.55	2.58	2.66	2.77	2.62
5	2.69	2.52	2.72	2.63	2.49	2.64	2.60	2.56	2.66	2.52	2.76	2.46
6	2.79	2.47	---	2.67	2.51	2.72	2.53	2.51	2.63	2.41	2.74	2.68
7	2.73	2.44	---	2.58	2.46	2.70	2.58	2.60	2.55	2.68	2.64	2.53
8	2.73	2.68	---	2.81	2.52	2.67	2.54	2.63	2.52	2.78	2.62	2.71
9	---	2.61	---	2.72	2.60	2.69	2.60	2.44	2.50	2.84	2.59	2.83
10	---	2.71	---	2.73	2.53	2.69	2.59	2.40	2.58	2.79	2.75	3.11
11	---	2.64	---	2.77	2.49	2.72	2.51	2.43	2.73	2.80	2.70	3.19
12	3.25	2.64	---	2.75	2.54	2.73	2.48	2.38	2.69	2.82	2.66	3.23
13	3.44	2.75	---	2.63	2.57	2.61	2.41	2.31	2.80	2.78	2.67	3.15
14	3.56	2.75	2.90	2.65	2.58	2.58	2.49	2.33	2.77	2.77	2.63	2.98
15	3.67	2.72	3.08	2.61	2.52	2.49	2.53	2.39	2.75	2.74	2.66	2.94
16	3.58	2.62	3.07	2.59	2.47	2.49	2.58	2.45	2.68	2.74	2.57	2.95
17	3.50	2.68	2.97	2.53	2.49	2.35	2.57	2.32	2.64	2.49	2.57	2.94
18	3.38	2.68	2.80	2.54	2.43	2.35	2.59	2.54	2.65	2.72	2.57	2.87
19	3.32	2.71	2.76	2.58	2.49	2.54	2.56	2.71	2.66	2.78	2.58	2.89
20	3.27	2.65	2.75	2.52	2.52	2.62	2.57	2.69	2.70	2.71	2.59	2.92
21	3.25	2.63	2.69	2.57	2.52	2.55	2.48	2.60	2.66	2.69	2.57	2.88
22	3.15	2.66	2.61	2.61	2.46	2.58	2.48	2.63	2.65	2.75	2.62	2.81
23	2.95	2.63	2.53	2.63	2.46	2.64	2.50	2.44	2.67	2.81	2.66	2.71
24	2.99	2.56	2.56	2.72	2.49	2.62	2.45	2.57	2.64	2.84	2.64	2.78
25	2.87	2.60	2.61	2.75	2.56	2.63	2.60	2.53	2.59	2.82	2.67	2.70
26	2.74	2.65	2.65	2.74	2.83	2.60	2.54	2.58	2.59	2.97	2.70	2.61
27	2.74	2.58	2.75	2.62	2.73	2.62	2.55	2.60	2.65	2.86	2.70	2.69
28	2.69	2.62	2.74	2.54	2.71	2.57	2.54	2.50	2.62	2.56	2.69	2.86
29	2.63	2.54	2.66	2.52	2.75	2.50	2.57	2.52	2.61	2.54	2.67	3.09
30	2.60	2.72	2.58	2.55	---	2.45	2.59	2.52	2.66	2.55	2.70	3.09
31	2.56	---	2.59	2.55	---	2.39	---	2.70	---	2.70	2.74	---
MEAN	---	2.62	---	2.62	2.54	2.60	2.53	2.52	2.65	2.71	2.66	2.84
MAX	---	2.75	---	2.81	2.75	2.73	2.60	2.71	2.80	2.97	2.80	3.23
MIN	---	2.44	---	2.47	2.43	2.35	2.41	2.31	2.50	2.41	2.57	2.46



MARIANA ISLANDS, ISLAND OF GUAM

131809144451671. Local number, 1845013 Malojloj Well 2.
LOCATION.--Lat 13°18'09" N., long 144°45'16" E., Hydrologic Unit 20100003, at Malojloj well field, 1.7 mi (2.7 km) north of Inarajan Bay, Inarajan, Guam. Owner: Public Utility Agency of Guam.
AQUIFER.--Umatac Formation, Maemong limestone member.
WELL CHARACTERISTICS.--Drilled perched water-table well, diameter 8 in (0.2 m), depth 110 ft (33.5 m).
DATUM.--Altitude of land-surface datum is 253 ft (77.1 m). Measuring point: Top of casing 254.40 ft (77.541 m) above mean sea level.
PERIOD OF RECORD.--October 1972 to September 1976 records available in files of district office; October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 219.53 ft (66.913 m) above mean sea level, Nov. 4, 1978; lowest measured, 168.33 ft (51.307 m) above mean sea level, May 7, 1979, Apr. 24, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980

DATE	WATER LEVEL
APR 24	168.33

131842144450571. Local number, 1845400 Dan Dan Test Well.
LOCATION.--Lat 13°18'42" N., long 144°45'05" E., Hydrologic Unit 20100003, on road to N.A.S.A. Satellite Tracking Station, Inarajan, Guam.
AQUIFER.--Umatac Formation, probably the Bolanos pyroclastic member.
WELL CHARACTERISTICS.--Drilled water-table-test well, diameter 8 in (0.2 m), cased to 50 ft (15 m), drilled depth 365 ft (111 m), measured depth, 238.8 ft (72.79 m) in 1975.
DATUM.--Altitude of land-surface datum is 314 ft (95.7 m). Measuring point: Top of casing 316.00 ft (96.317 m) above mean sea level.
REMARKS.--Well was abandoned because of extremely low yield.
PERIOD OF RECORD.--April 1972 to September 1976 records available in files of district office; October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 200.69 ft (61.170 m) above mean sea level, Oct. 7, 1976, lowest measured, 185.56 ft (56.559 m) above mean sea level, July 3, 1973.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL
APR 24	193.11

132615144470571. Local number, 2647100 Father Duenas Well.
LOCATION.--Lat 13°26'15" N., long 144°47'05" E., Hydrologic Unit 20100003, at Father Duenas Memorial School, Chalan Pago-Ordot, Guam.
AQUIFER.--Mariana Limestone.
WELL CHARACTERISTICS.--Drilled parabasal water-table well, diameter 8 in (0.2 m).
DATUM.--Altitude of land-surface datum is 179 ft (54.6 m). Measuring point: Top of casing, 179.86 ft (54.821 m) above mean sea level.
PERIOD OF RECORD.--March 1973 to May 1976 records available in files of district office; June 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.0 ft (3.05 m) above mean sea level, Sept. 3, 1976; lowest measured, 6.08 ft (1.853 m) above mean sea level, Aug. 5, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	8.42	JAN 2	7.14	MAR 4	7.93	MAY 8	7.35	AUG 5	6.08
NOV 16	6.78	FEB 1	7.06	APR 15	7.51	JUN 19	7.27	SEP 25	9.16

132742144445297I. Local number, 2745420 Agana Springs.
LOCATION.--Lat 13°27'42" N., long 144°45'29" E., Hydrologic Unit 20100003, near Sinajana on the edge of Agana Swamp.
AQUIFER.--Mariana Limestone.
WELL CHARACTERISTICS.--Basal ground water issues from an opening in the Mariana Limestone. The water level is measured in a pool with a concrete spillway.
DATUM.--Altitude of land-surface datum is 10 ft (3.0 m) above mean sea level. Measuring point: Edge of concrete spillway, 8.80 ft (2.682 m), revised, above mean sea level.
REMARKS.--Spring supplied Agana with up to one million gallons per day. Not in use at present.
PERIOD OF RECORD.--April 1974 to September 1976 records available in files of district office; October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Lowest water level measured, 6.95 ft (2.118 m), revised, above mean sea level, July 2, 1975.
REVISIONS.--Water levels for 1978-79 published in WDR HI-77-2, HI-79-2 have been revised as follows:

WATER YEAR	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1977	MAR 16	8.44	APR 7	8.21	MAY 2	7.73	MAY 24	7.63	JUN 9	7.41
1978	FEB 2	8.59	MAR 16	7.96	APR 20	7.36	JUN 20	7.11	JUL 21	7.84
1979	APR 3	8.52	MAY 7	7.88	JUN 22	7.04	JUL 26	7.05	SEP 5	7.69

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	j	JAN 2	j	APR 15	8.61	JUN 19	8.40	AUG 6	8.77	SEP 25	j
NOV 16	j	FEB 1	8.80	MAY 8	8.19	JUL 24	j				

j Water overflowing spillway.

MARIANA ISLANDS, ISLAND OF GUAM

132758144450571. Local number, 2745500 Agana 147 Well.
LOCATION.--Lat 13°27'58" N., long 144°45'05" E., Hydrologic Unit 20100003, on Route 4, 0.65 mi (1.0 km) south of junction of Routes 1 and 4 in Agana, Guam.
AQUIFER.-- Mariana Limestone.
WELL CHARACTERISTICS.--Drilled basal water-table test well, casing diameter 6 in (0.2 m), depth when drilled, 186 ft (56.7 m), when measured in May 1973, 29 ft (8.8 m).
DATUM.--Altitude of land-surface datum is 33 ft (10 m). Measuring point: Top rim of casing, 33.22 ft (10.125 m) above mean sea level.
REMARKS.--Water levels in this well reflect changes in the regional fresh water head of the discharge area surrounding Agana Swamp.
PERIOD OF RECORD.--August 1955 to May 1960, January 1972 to September 1976 records available in files of district office; October 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.42 ft (9.577 m) above mean sea level, Oct. 14, 1955; lowest measured, 6.83 ft (2.082 m) above mean sea level, June 20, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	15.48	OCT 29	10.92	JAN 3	9.07	MAR 3	9.97	MAY 8	9.75	AUG 6	9.71
OCT 19	12.71	NOV 16	10.69	FEB 1	8.83	APR 15	8.58	JUN 19	9.48	SEP 25	11.29

133034144500871. Local number 3050300 Well M-11A.
LOCATION.--Lat 13°30'34" N., long 144°50'08" E., Hydrologic Unit 20100003, in Macheche area, Dededo.
AQUIFER.--Barrigada Limestone.
WELL CHARACTERISTICS.--Drilled basal ground-water test well. Uncased hole diameter 12 in (0.30 m). Sounded depth 407 ft (124 m).
DATUM.--Altitude of land-surface datum is 309 ft (94.2 m) above mean sea level. Measuring point: Top of 5 ft (2 m) long metal casing set in hole 310.44 ft (94.622 m), revised, above mean sea level.
REMARKS.--Well yield insufficient for development.
PERIOD OF RECORD.--February 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.09 ft (1.247 m), revised, above mean sea level, Aug. 16, 1978; lowest measured 3.13 ft (0.954 m), revised, above mean sea level, Feb. 26, 1979.
REVISIONS.--Water levels for 1978-79 published in WDR HI-79-2 have been revised as follows:

WATER YEAR	DATE	WATER LEVEL (ft)
1978	May 9, 1978	3.63
1978	June 20, 1978	3.60
1978	July 21, 1978	3.87
1978	Aug. 16, 1978	4.09
1978	Sep. 19, 1978	3.65
1979	Feb. 26, 1979	3.13
1979	Apr. 3, 1979	3.47
1979	May 7, 1979	3.47

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16	3.15	FEB 1	2.98	MAR 25	3.15	JUN 18	3.31	AUG 6	3.43	SEP 29	3.62
JAN 3	3.46	MAR 3	3.22	MAY 8	3.32						

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MARIANA ISLANDS, ISLAND OF GUAM

LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	TIME	SAMPLING DEPTH (FT)	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE (MICROMHOS)
3150250 GHURA-DEDEDO MONITOR	13 31 20	144 50 54	71	133120144505471	79-10-17	1335	475	785	2050
					79-10-17	1445	525	785	8900
					79-10-18	1415	550	785	43000
					79-10-18	1520	600	785	48000
					79-10-19	1305	750	785	45500
					80-04-04	1100	420	785	--
					80-04-04	1200	475	785	--
					80-04-04	1300	530	785	--
					80-04-04	1400	570	785	--
					80-04-04	1515	620	785	--
					80-08-21	1315	530	785	--

DATE OF SAMPLE	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	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)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
79-10-17	--	--	--	--	--	--	--	--	--	--	210	69
79-10-17	--	--	--	--	--	--	--	--	--	--	230	390
79-10-18	--	28.5	--	--	--	--	--	--	--	--	190	2300
79-10-18	--	28.0	--	--	--	--	--	--	--	--	160	2700
79-10-19	--	27.5	--	--	--	--	--	--	--	--	140	2500
80-04-04	7.6	27.0	--	--	--	--	--	--	--	--	200	19
80-04-04	7.4	27.0	--	--	--	--	--	--	--	--	210	27
80-04-04	7.3	26.5	--	--	--	--	--	--	--	--	250	360
80-04-04	7.2	26.0	--	--	--	--	--	--	--	--	200	2600
80-04-04	7.0	26.0	--	--	--	--	--	--	--	--	150	2600
80-08-21	--	--	1000	780	170	150	1300	72	18	55	260	370

DATE OF SAMPLE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
79-10-17	480	.1	1.1	--	--	1.5	--	--
79-10-17	2800	.2	2.0	--	--	1.6	--	--
79-10-18	16000	.9	8.3	--	--	.32	--	--
79-10-18	19000	1.1	9.5	--	--	.06	--	--
79-10-19	18000	1.1	8.0	--	--	.13	--	--
80-04-04	120	.1	1.4	--	--	1.2	--	--
80-04-04	190	.1	1.8	--	--	1.4	--	--
80-04-04	2400	.2	2.7	--	--	.73	--	--
80-04-04	19000	.5	8.0	--	--	.64	--	--
80-04-04	19000	.6	8.5	--	--	.21	--	--
80-08-21	2400	.3	2.2	4610	6.27	.38	130	100

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINB ISLANDS, YAP ISLANDS

LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)
2904230 COMMUNICATION BLDG	09 29 20	138 04 35	70	092920138043570	80-02-02	1100	81	7.7	26.0

DATE OF SAMPLE	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
80-02-02	25	0	4.4	3.4	6.3	35	.5	6.7	.4	30	1.2	8.2

DATE OF SAMPLE	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)
80-02-02	.0	29	72	.10	.11	60	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CAROLINE ISLANDS, TRUK ISLANDS

LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	STATION NUMBER	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)
WELL 1 MOEN, TRUK IS.	07 26 58	151 51 19	70	072658151511970	80-05-06	0900	194	6.3	28.5
WELL 2 MOEN, TRUK IS.	07 26 54	151 51 18	70	072654151511870	80-05-06	1000	165	--	28.5
WELL 4 MOEN, TRUK IS.	07 27 07	151 51 20	70	072707151512070	80-05-06	1600	--	--	29.0
WELL 7 MOEN, TRUK IS.	07 27 02	151 51 25	70	072702151512570	80-05-06	1500	--	--	29.0
WELL 9 MOEN, TRUK IS.	07 27 01	151 51 27	70	072701151512770	80-05-06	1050	1450	--	29.0
WELL 10 MOEN, TRUK IS.	07 27 04	151 51 10	70	072704151511070	80-05-06	1625	--	--	28.5
WELL 11 MOEN, TRUK IS.	07 27 07	151 51 10	70	072707151511070	80-05-06	1640	--	--	28.0
WELL 12 MOEN, TRUK IS.	07 27 06	151 51 24	70	072706151512470	80-05-06	1510	--	--	29.0
WELL 13 MOEN, TRUK IS.	07 27 08	151 51 21	70	072708151512170	80-05-06	1540	--	--	29.0
WELL 14 MOEN, TRUK IS.	07 27 05	151 51 26	70	072705151512670	80-05-06	1430	379	--	29.0
WELL 15 MOEN, TRUK IS.	07 27 10	151 51 25	70	072710151512570	80-05-06	1400	--	--	29.0
WELL 17 MOEN, TRUK IS.	07 25 17	151 50 57	70	072517151505770	80-05-08	0900	--	--	--

DATE OF SAMPLE	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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (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)
80-05-06	62	0	10	9.1	13	31	.7	1.0	68	1.1	11	.1
80-05-06	62	2	9.8	9.1	8.9	24	.5	.7	60	3.5	11	.1
80-05-06	120	34	17	18	14	20	.6	2.3	83	3.2	38	.1
80-05-06	150	24	27	21	13	15	.5	1.6	130	2.3	31	.1
80-05-06	340	210	65	43	160	50	3.8	6.6	130	49	370	.1
80-05-06	80	20	14	11	8.7	19	.4	1.0	60	6.8	25	.1
80-05-06	56	0	8.9	8.3	6.1	19	.4	.6	56	1.2	7.7	.1
80-05-06	140	42	22	21	11	14	.4	1.2	99	5.7	41	.1
80-05-06	100	15	16	15	8.3	15	.4	1.1	87	5.0	17	.1
80-05-06	150	57	22	22	12	15	.4	1.0	89	7.6	49	.1
80-05-06	84	13	12	13	7.7	17	.4	.5	71	7.3	13	.1
80-05-08	66	0	10	9.9	7.5	20	.4	.7	66	1.1	8.6	.1

DATE OF SAMPLE	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)
80-05-06	33	122	.17	.86	10	<1
80-05-06	28	109	.15	.41	10	3
80-05-06	29	175	.24	.60	690	10
80-05-06	35	211	.29	.47	60	20
80-05-06	28	802	1.09	.36	320	40
80-05-06	27	131	.18	.27	<10	<1
80-05-06	29	96	.13	.25	<10	<1
80-05-06	30	194	.26	.47	40	<1
80-05-06	33	151	.21	.69	<10	<1
80-05-06	24	192	.26	.19	20	110
80-05-06	28	126	.17	.46	20	<1
80-05-08	36	114	.16	.16	<10	<1

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

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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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