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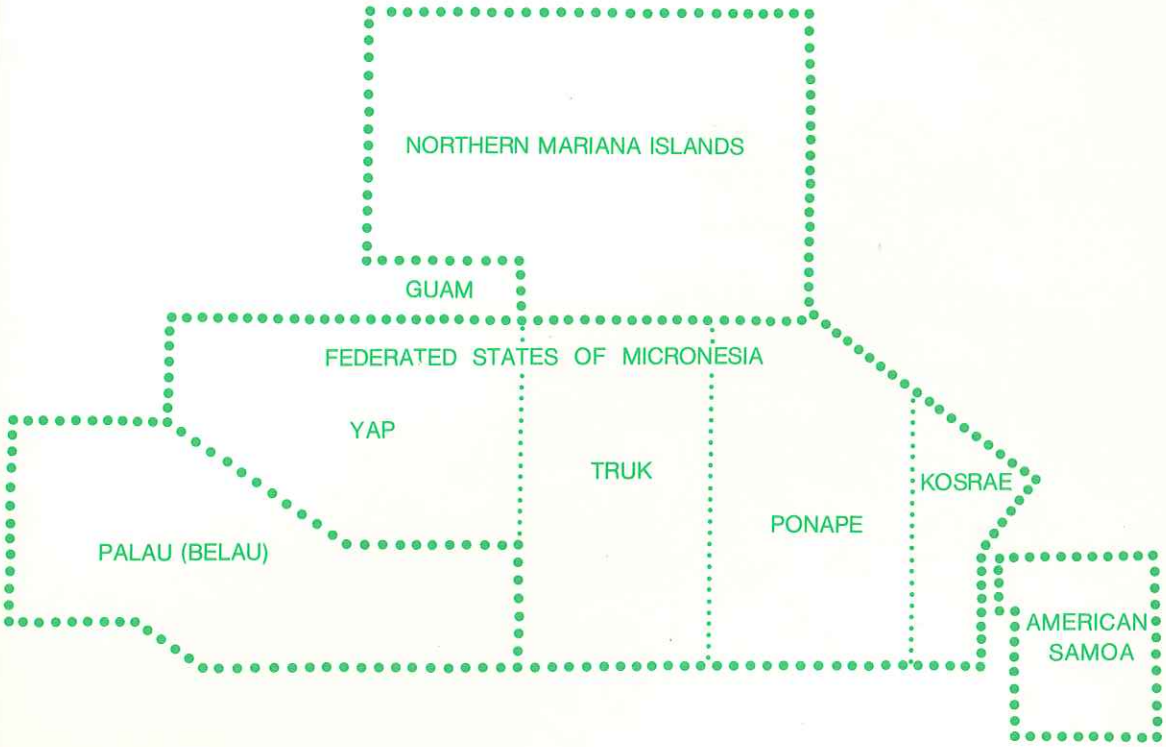
Water Resources Data Hawaii and other Pacific Areas Water Year 1985

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

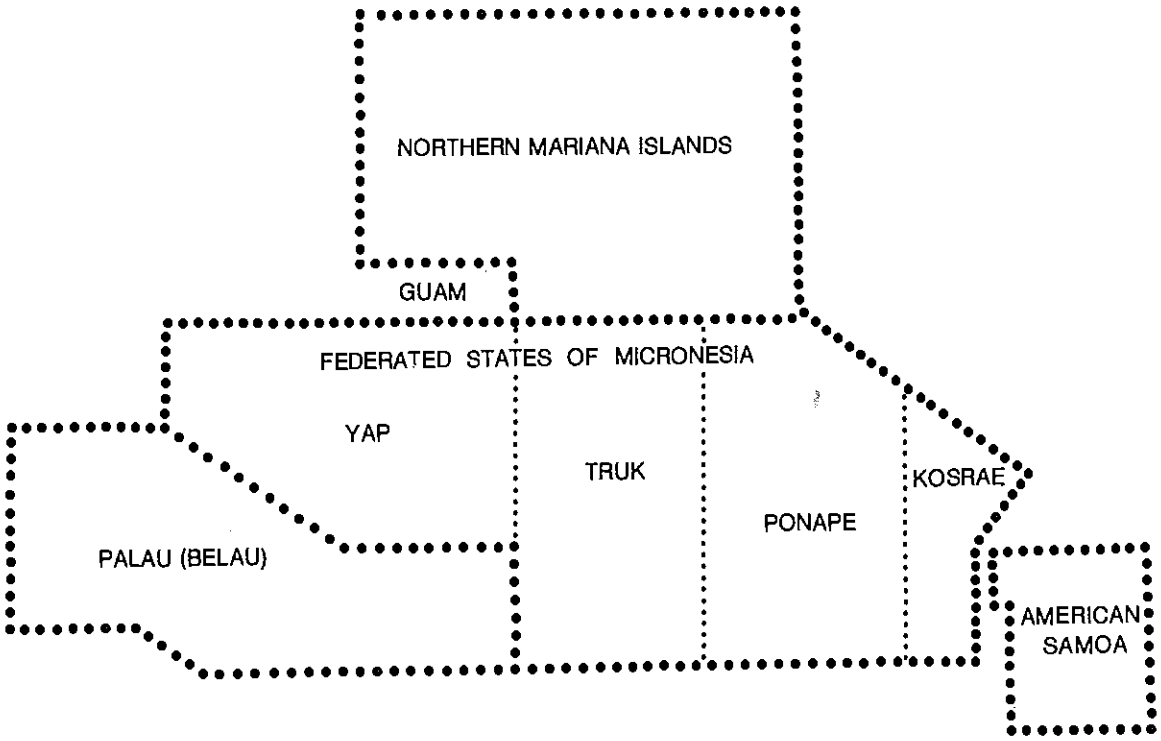


U.S. GEOLOGICAL SURVEY WATER-DATA REPORT HI-85-2
Prepared in cooperation with the Governments of Guam, Northern Mariana Islands, Federated States of Micronesia, Palau, American Samoa, and with other agencies

Water Resources Data Hawaii and other Pacific Areas Water Year 1985

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

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



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UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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and other Pacific Areas write to
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Honolulu, Hawaii 96850

1987

PREFACE

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

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

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

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Gregg N. Ikehara
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This report was prepared in cooperation with the Governments of Guam, Northern Mariana Islands, Federated States of Micronesia, Palau, American Samoa, and with other agencies under the general supervision of Stanley F. Kapustka, District Chief, Hawaii.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/218	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for Hawaii and other Pacific Areas, Water Year 1985. Volume 2.			5. Report Date February 1987 6.
7. Author(s) Salwyn S. Chinn, Grace A. Tateishi, and Johnson J. S. Yee			8. Performing Organization Rept. No. USGS-WDR-HI-85-02
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 300 Ala Moana Blvd., Room 6110 Honolulu, Hawaii 96850			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 300 Ala Moana Blvd., Room 6110 Honolulu, Hawaii 96850			13. Type of Report & Period Covered Annual - Oct. 1, 1984 to Sept. 30, 1985 14.

15. Supplementary Notes

Prepared in cooperation with the Governments of Guam, Northern Mariana Islands, Federated States of Micronesia, Palau Islands, American Samoa, and with other agencies.

16. Abstract (Limit: 200 words)

Volume 2 of water resources data for the 1985 water year for other Pacific areas consists of records of stage, discharge, and water quality of streams and springs; stage of 2 lakes and a reservoir; and water levels and water quality in wells. This report contains discharge records for 31 gaging stations; stage only record for 3 gaging stations; water quality for 8 gaging stations; 6 partial-record stations; water temperature for 31 gaging stations; and water levels for 35 observation wells and water quality for 110 ground-water sites. Also included are 19 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.

17. Document Analysis a. Descriptors

*Pacific area, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Chemical analyses, Sediments, Reservoirs, Water temperatures, Sampling sites, Water levels.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service Springfield, VA 22161	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 142
	20. Security Class (This Page) UNCLASSIFIED	22. Price

(See ANSI-Z39.18) See Instructions on Reverse OPTIONAL FORM 272 (4-77) (Formerly NTIS-35) Department of Commerce

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GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

Letters after station name designate type of data:
(d) discharge, (e) stage or gage height, (c) chemical,
(t) temperature

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

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ISLAND OF SAIPAN
(14-0742-08) 150723145431170 (ct) 91
(14-0742-07) 150737145431070 (ct) 91
(14-0742-09) 150732145431270 (ct 91
(14-0742-13) 150736145425370 (ct) 85
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(14-1045-09) 151032145460370 (w) 83
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ISLAND OF GUAM
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(18-2647-01) 132615144470571 (w) 103
(18-2647-12) 132626144471771 (ctw) 104
(18-2648-02) 132644144480871 (w) 93
(18-2745-03) 132758144450571 (w) 105
(18-2745-07) 132742144452971 (w) 105
(18-2746-06) 132736144461671 (ctw) 106
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(18-2848-03) 132806144481871 (ctw) 96
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(18-3049-03) 133032144491871 (w) 98
(18-3049-05) 133047144500171 (w) 99
(18-3050-01) 133047144504671 (c) 116
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(18-3051-02) 133041144515271 (c) 116
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(18-3552-05) 133513144523771 (ct) 114
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(18-3851-05) 133628144513271 (ctw) 110
(18-3654-01) 133601144541571 (ct) 116

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(25-2904-01) 092919138045670 (ctw) 117
(25-2904-02) 092918138045470 (ctw) 118

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(25-2905-02) 092920138050270 (ctw) 120
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TRUK ISLANDS
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(50-0802-02) 070850171021901 (c) 131
(50-0802-03) 070849171011001 (ctw) 129
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(50-0902-03) 070917171021103 (ct) 134
SAMOA ISLANDS
ISLAND OF TUTUILA
(90-1639-08) 141623170393801 (ct) 138
(90-1740-01) 141703170405301 (ct) 139
(90-1943-06) 141945170435301 (ct) 139
(90-1943-20) 141928170435201 (ct) 139
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WATER RESOURCES DATA FOR HAWAII AND OTHER PACIFIC AREAS, 1985

Volume 2

INTRODUCTION

Water resources data for the 1985 water year for Hawaii and other Pacific areas consist of records of stage, discharge, and water quality of streams, springs, and reservoir; and water-levels and water quality of wells. This report contains discharge records for 31 gaging stations; stage only records for 3 gaging stations; water quality for 8 gaging stations, 6 partial-record stations, water temperature for 31 stations; and water levels for 35 observation wells and water quality for 110 ground-water sites. Also included are data for 19 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, Territorial, and Federal agencies in the 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 are available 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-85-2."

In this volume, the spelling of names, drainage areas, and locations for most stations in Palau, Yap, Truk, Ponape, and Kosrae differ from those used in "Water Resources Data for Hawaii and other Pacific Areas", 1968 to 1980. These had been based on 1954 U.S. Army Map Service series W 656 maps with a scale of 1:25,000 and 10-meter contours (International spheroid). The revised names and figures were based on the 1981 USGS maps with 1:10,000 scale and 5-meter contours (Clarke spheroid of 1866).

The 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) 541-2820.

COOPERATION

The U.S. Geological Survey has had cooperative agreements for the systematic collection of streamflow records with the Government of Guam since 1953, with the Government of American Samoa since 1957, and with the other 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:

Government of Guam, Joseph P. Ada, Governor.
Government of Northern Mariana Islands, P. P. Tenorio, Governor.
Federated States of Micronesia, T. Nakayama, President.
  State of Yap, Petrus Tun, Governor.
  State of Truk, Gideon Doone, Governor.
  State of Ponape, Resio Moses, Governor.
  State of Kosrae, Yosiwo George, Governor.
Republic of Palau, Lazarus Salii, President.
Government of American Samoa, A. P. Lutali, Governor.

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

SUMMARY OF HYDROLOGIC CONDITIONS

Based on the records at six index streams in the area covered by this volume, as shown in figure 1; the annual mean runoff for 1985 water year was in the normal range at the index stations on Guam, Babelthuap, Ponape, and Kosrae, and in the excessive range (flow in the upper 25 percent of record) at the stations on Yap and Tutuila.

Streamflow at the Ylig River near Yona, Guam (fig. 2) was excessive for November, January, May, and June; normal for December, February through April, and July through September; and deficient (flow in the lower 25 peroent of record) for the October. Annual mean runoff was 119 percent of the median.

At the Diongradid River (fig. 2) on the island of Babelthuap, Palau Islands, monthly mean was excessive for October, January, and September; normal for November, February through August; and deficient for December. Annual mean runoff wae 102 percent of the annual median.

On the island of Yap, Caroline Islands, streamflow at the Qaringeel Stream (fig. 3) wss excessive for October, November, January, June, and August; normal for February through May, July, and September; and deficient for December. Annual mean runoff was 149 percent of the annual median.

Streamflow at the Nanpil River in Ponape (fig. 3) was excessive for November, January, and February; normal for October, December, April, June, and August; and deficient for March, May, July, and September. Annual mean discharge was 96 percent of the annual median.

On the island of Kosrae, streamflow at the Melo River (fig. 4) was excessive for February and June; normal for October through Januery, and March through May; and deficient for July through September. Annual mean discharge was 97 percent of the annual median.

At Tutuila, American Samoa, streamflow at Aasu (fig. 4) was excessive for December, January, April, and June; normal for October, November, February, March, May, and July through September. Annual mean runoff was 130 percent of the annual median.

DEFINITION OF TERMS

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies withing 24 hours when incubated at 35°C ± 0.5°C on M-Endoagar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

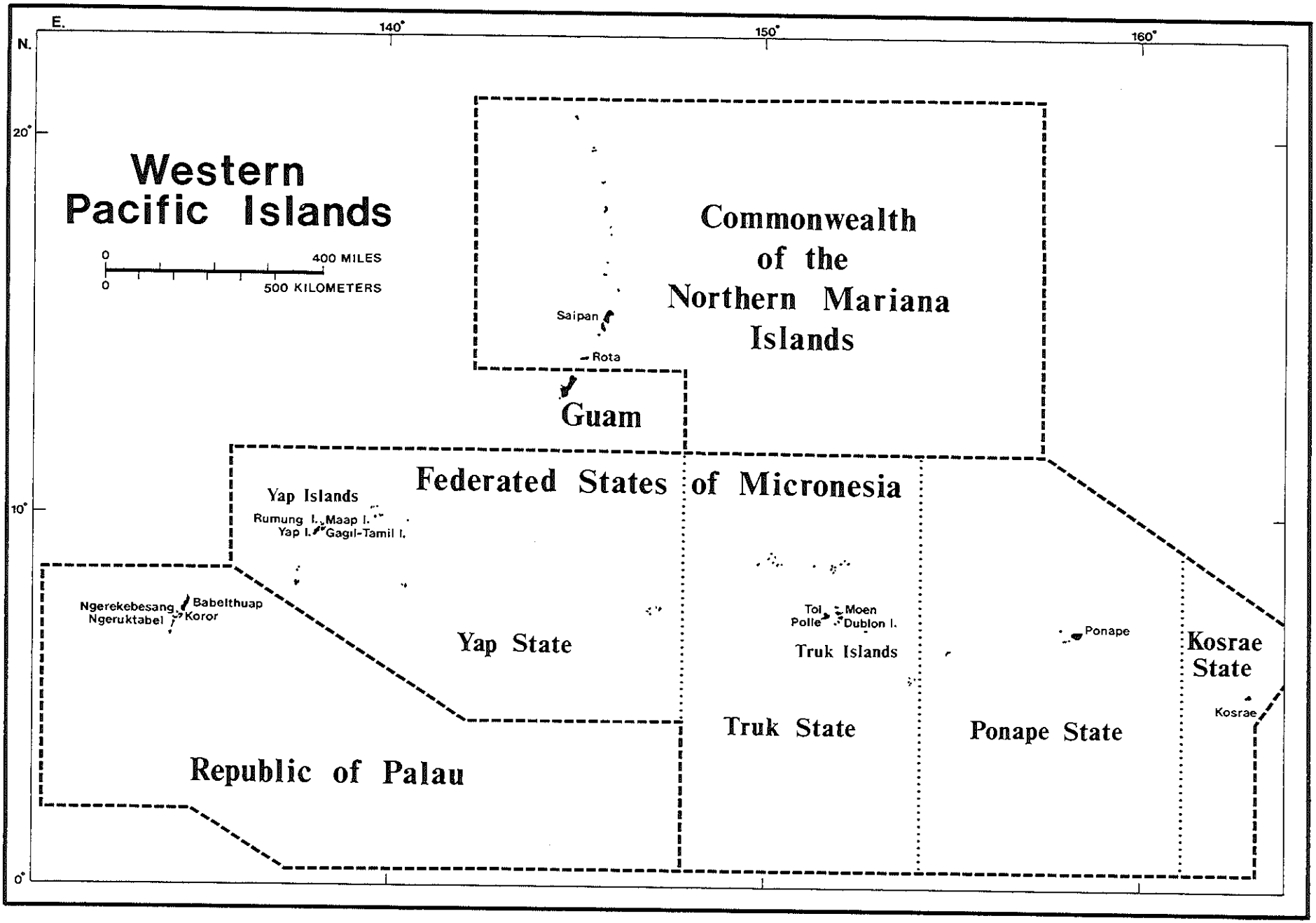
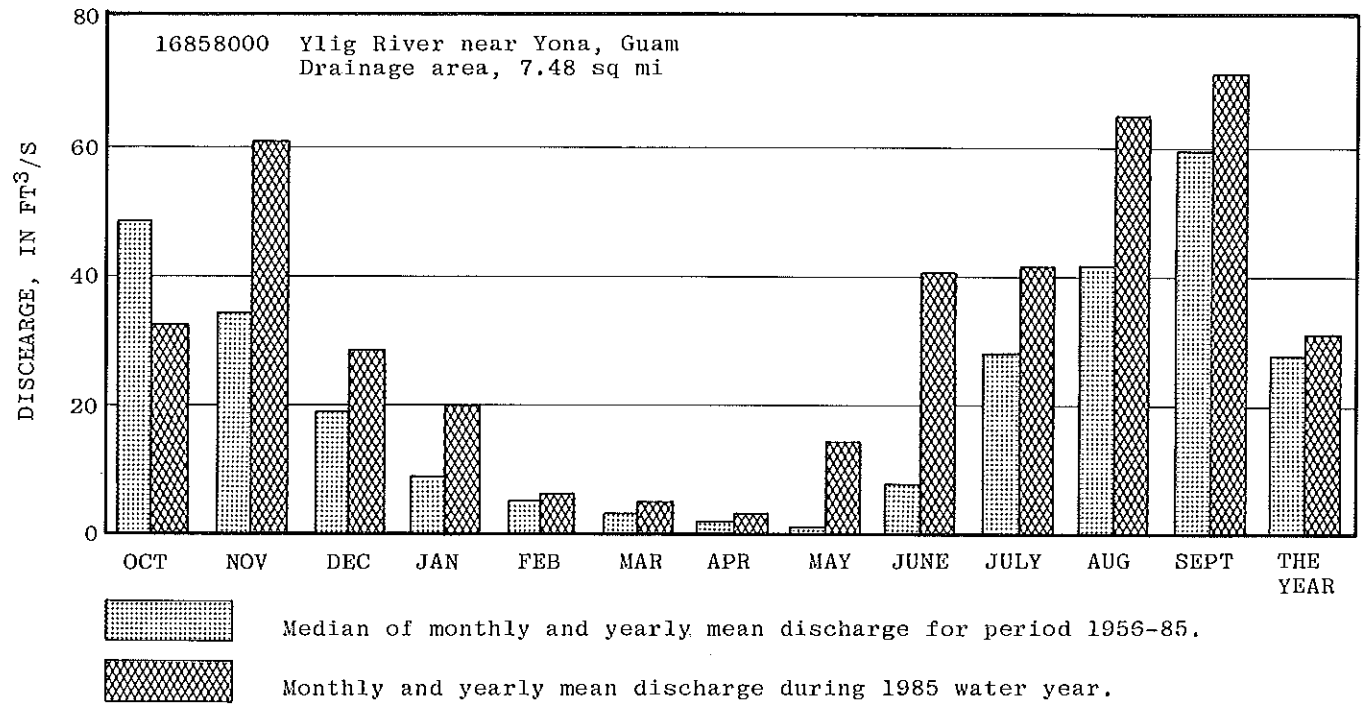


FIGURE 1.--LOCATIONS OF WESTERN PACIFIC ISLANDS.



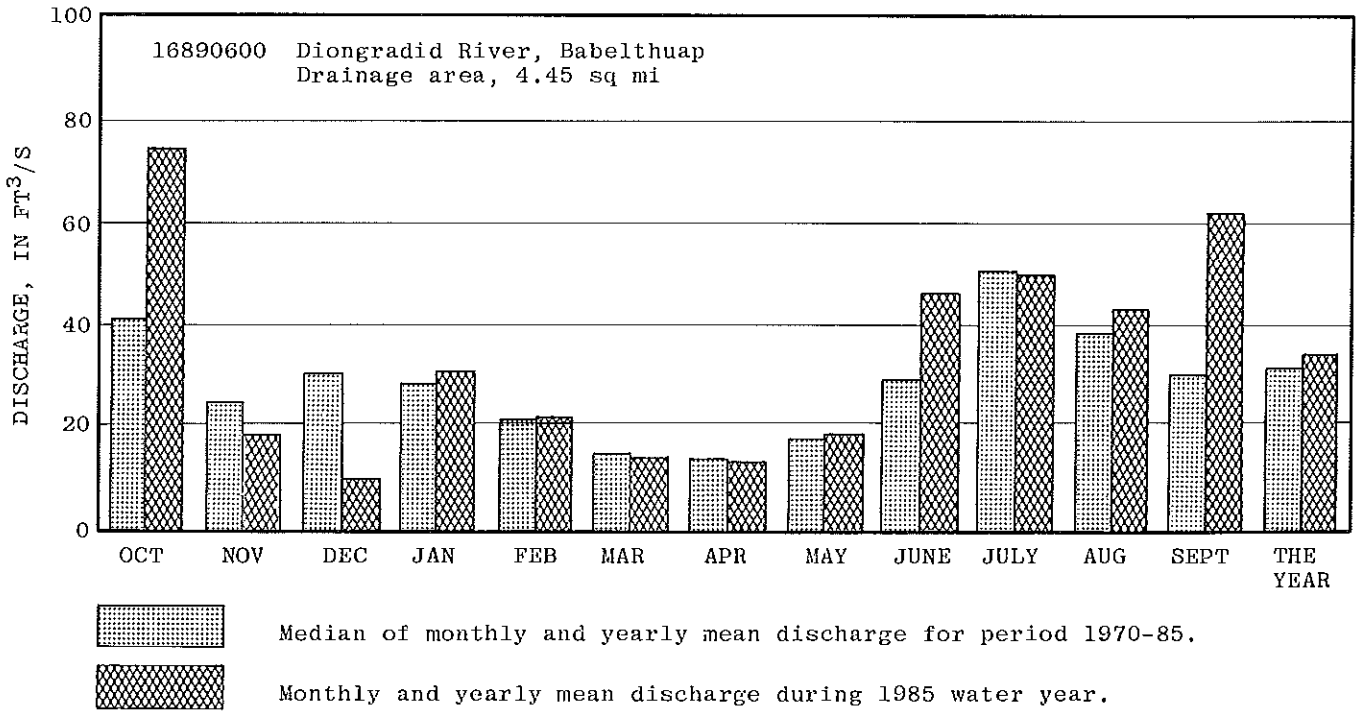
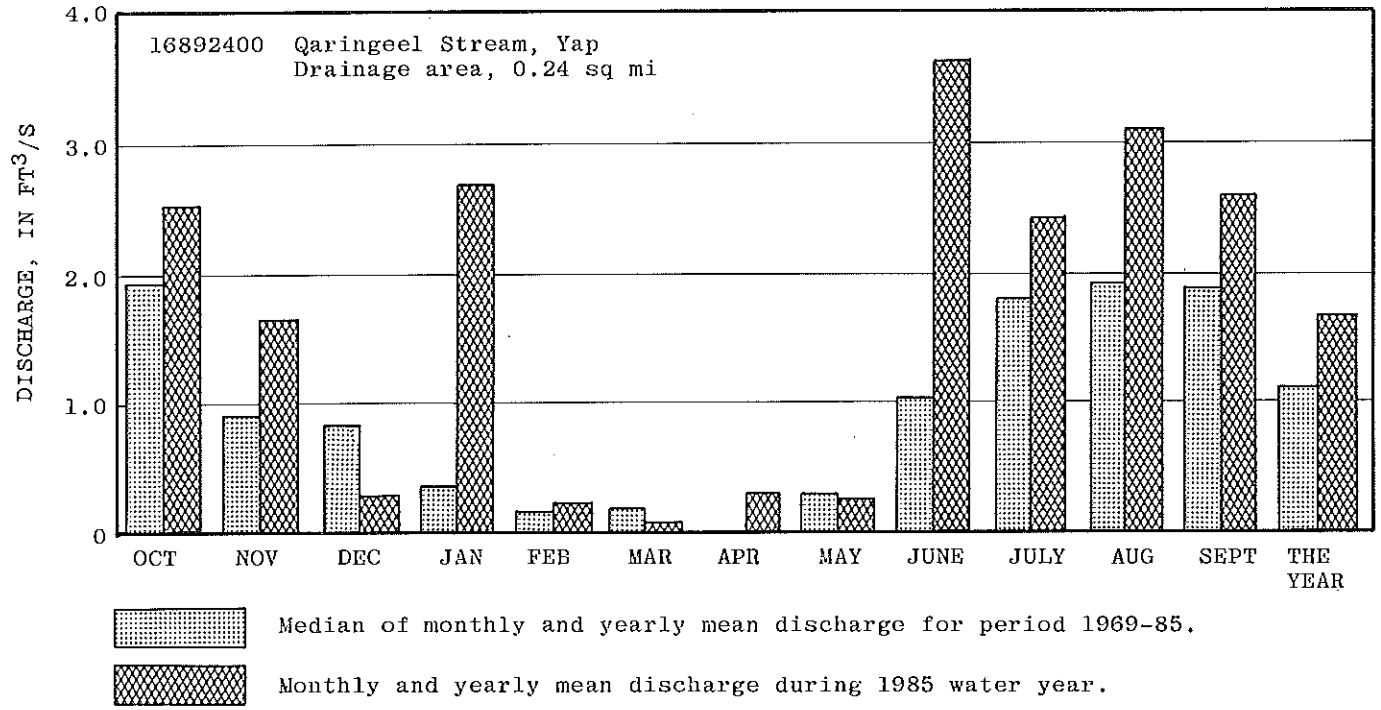


FIGURE 2.--DISCHARGE DURING 1985 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON GUAM AND BABELTHUAP.



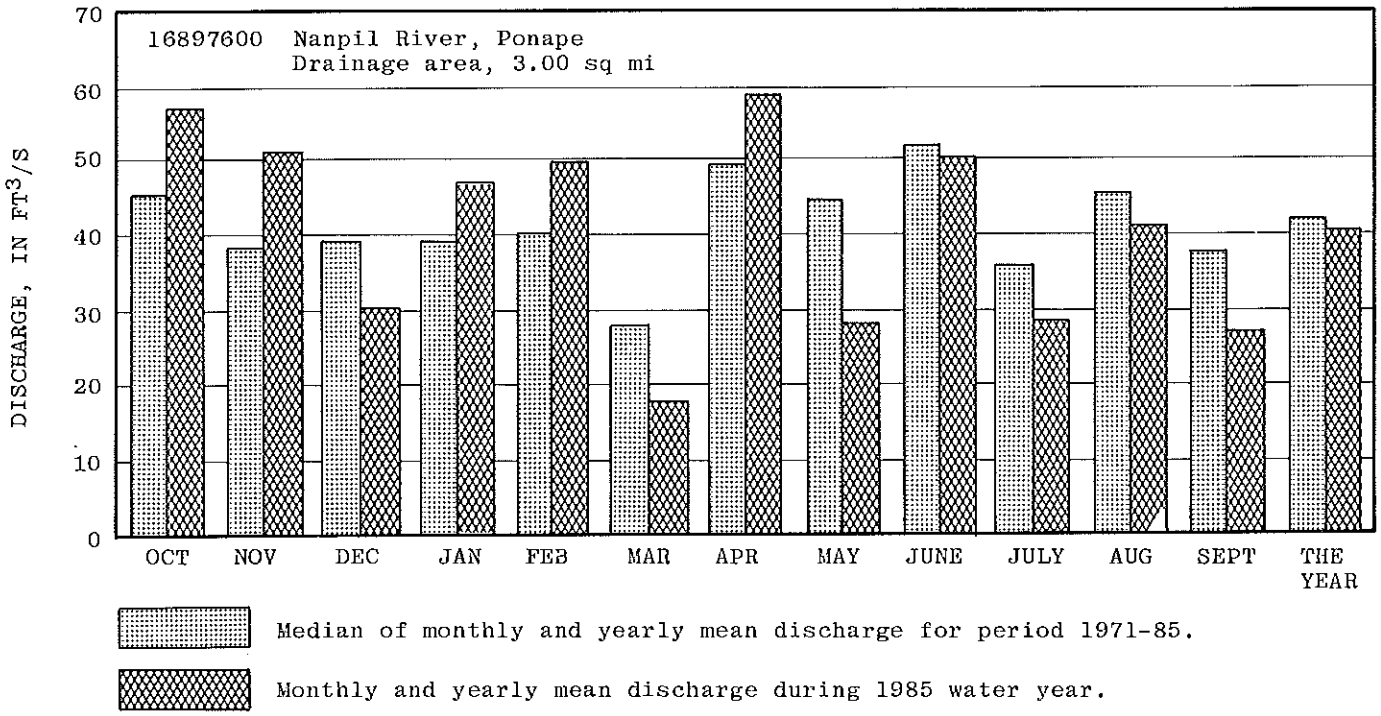
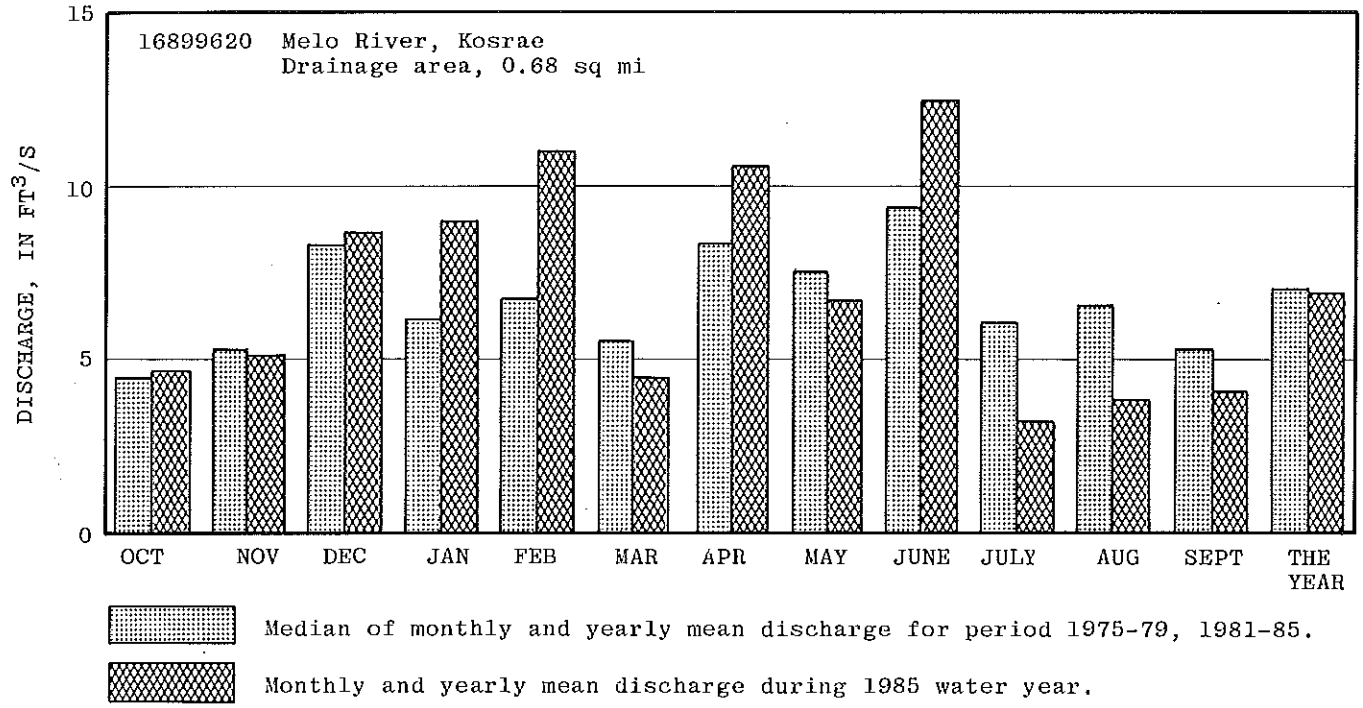


FIGURE 3.--DISCHARGE DURING 1985 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON YAP AND PONAPE.



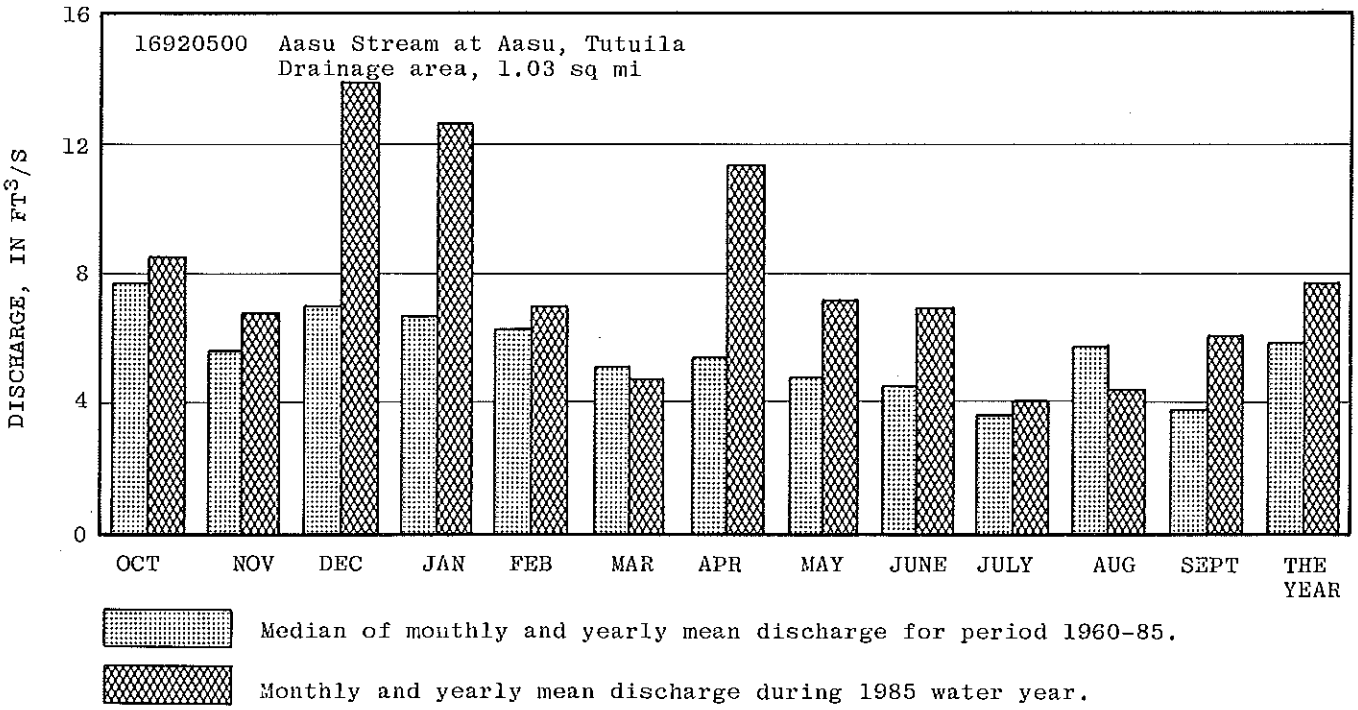


FIGURE 4.--DISCHARGE DURING 1985 WATER YEAR COMPARED WITH MEDIAN DISCHARGE FOR REPRESENTATIVE STREAMS ON KOSRAE AND TUTUILA.

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacterial which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 0.5°C on KF Streptococcus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

Dry mass refers to the mass of residue present after drying in an 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.

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

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

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

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters of liters (L).

CFS-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, or 646,317 gallons or 2,447 cubic meters.

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

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

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

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

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

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.

2. When water temperature records include observations taken one or more times daily.

3. When sediment discharge records include those periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

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

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

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

Mean discharge (MEAN) is the arithmetic average of individual daily mean discharges during a specified period.

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

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

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

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

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

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

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

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

Microgram per liter ($\mu G/L$, $\mu g/L$) 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.

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

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

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

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

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

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

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total 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} radio-active disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in 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-weight concentration of suspended sediment passing a stream section during a 24-hour day.

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

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

Stage-discharge relation is the relation between gage height (stage) 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.

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.

Suspended recoverable is the amount of a given constituent that is in solution after the part of a respresentative 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 anslyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituents.

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

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 Nephelometric turbidity units (NTU).

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 thie report to indicate discharge-weighted averege. It is computed by multiplying the discharge for a ssmpling 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 "Watsr-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 "Wetsr-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 stationa 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 16858000 which appears just to the left of the station name includes the 2-digit number "16" plus the 6-digit downstream order number "858000." In this report, the records are listed in downstream order by islands. Locations of the stations are shown in figures 5-13.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscelleneous sites where only random water-quality samples or discharge measurements are tsken.

The well and miscellaneoue site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 14.

The local well-numbering system for Pacific Areas was restructured to contain eight digits based on a non-arbitrary, unique one-minute grid system. One-minute parallel lines for both latitude and longitude are drawn on the map resulting in one-minute grids. Each grid is designated by a four-digit number. The first two digits represent minutes of latitude for the grid and the second two digits represent minutes of longitude for that grid.

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

Since it is possible to have a same 6-digit number for wells on different islands, a 2-digit number distinguishing each of the islands or geographic areas is added in front of the 6-digit number with a dash separator. For example, in the number 18-2647-01, the first two digits designate an island of geographic area, then the 4-digit minute-grid numbers followed by a 2-digit sequential number. See figure 15.

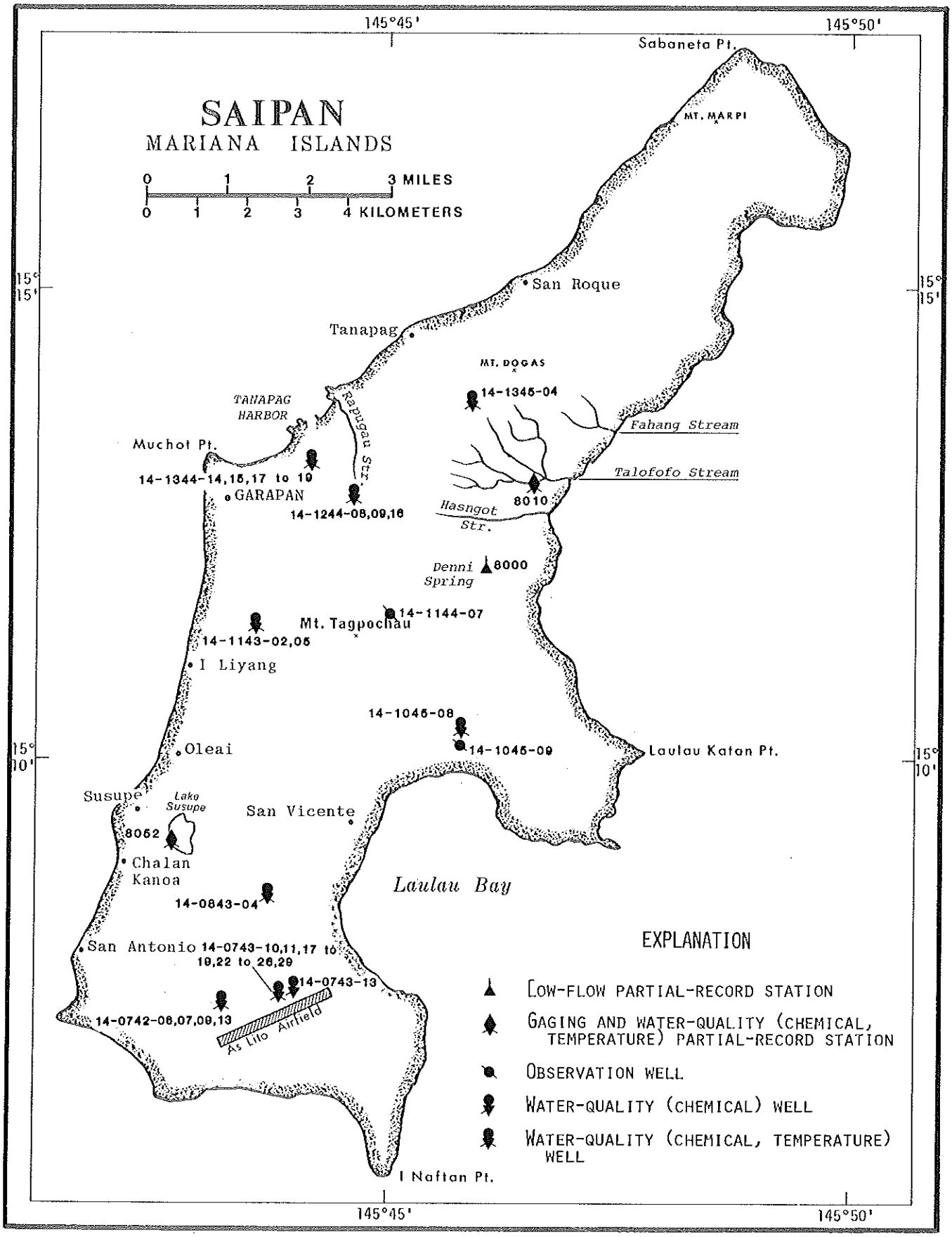


FIGURE 5.--LOCATIONS OF GAGING STATIONS, OBSERVATION WELLS, AND WATER-QUALITY SAMPLING SITES ON SAIPAN.

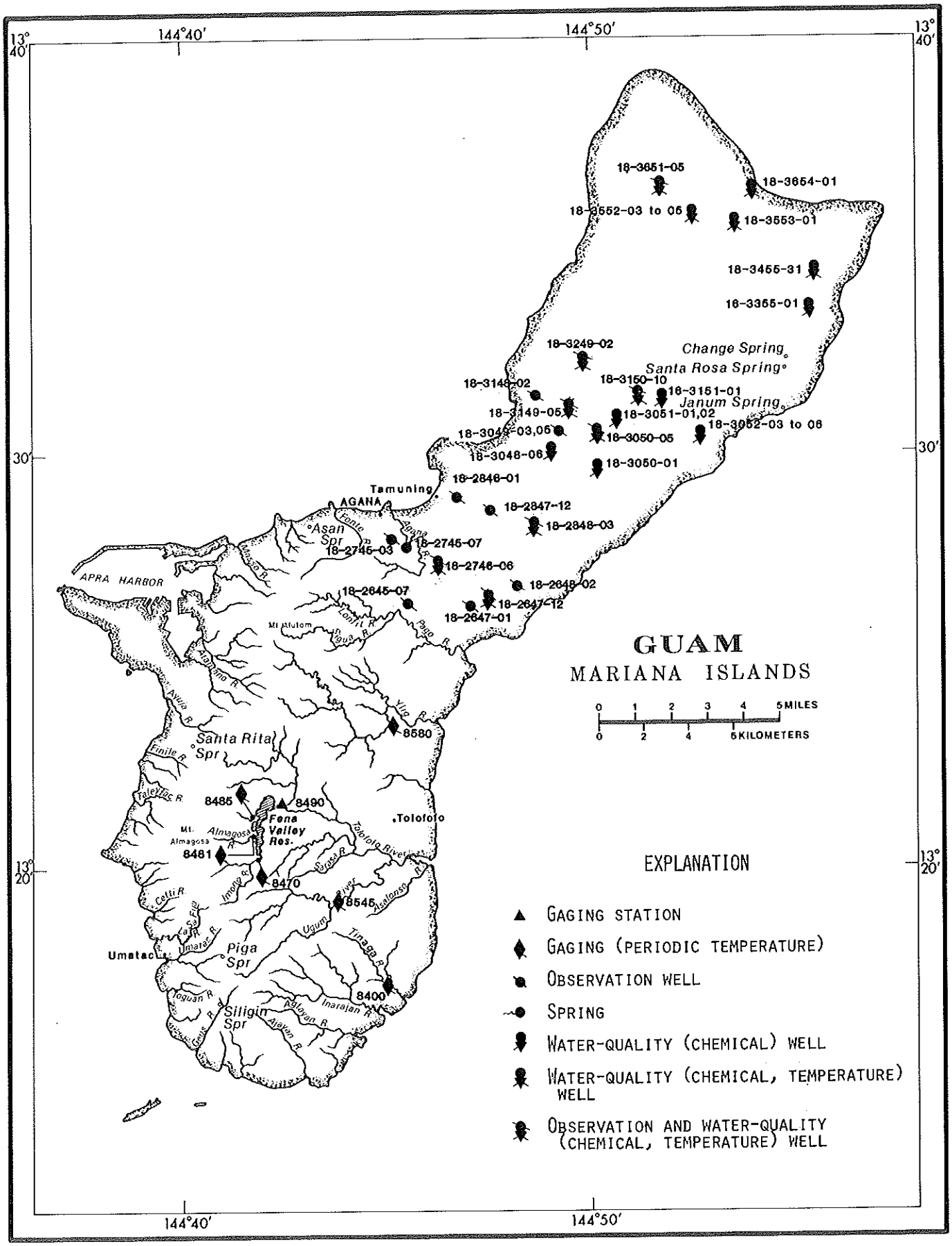


FIGURE 6.--LOCATIONS OF GAGING STATIONS, OBSERVATION WELLS, AND WATER-QUALITY SAMPLING SITES ON GUAM.

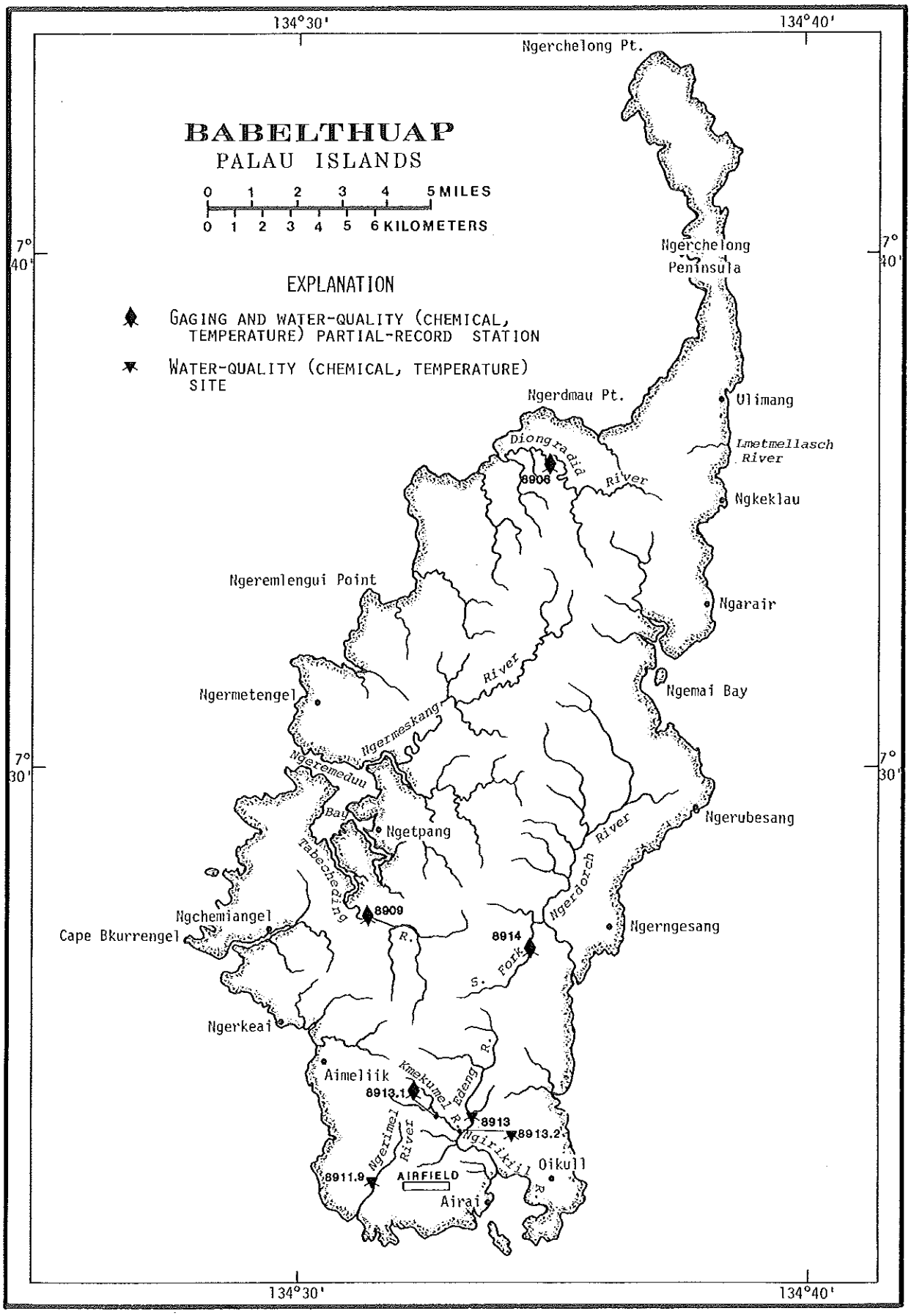


FIGURE 7.--LOCATIONS OF GAGING STATIONS AND WATER-QUALITY SITES ON BABELTHUAP.

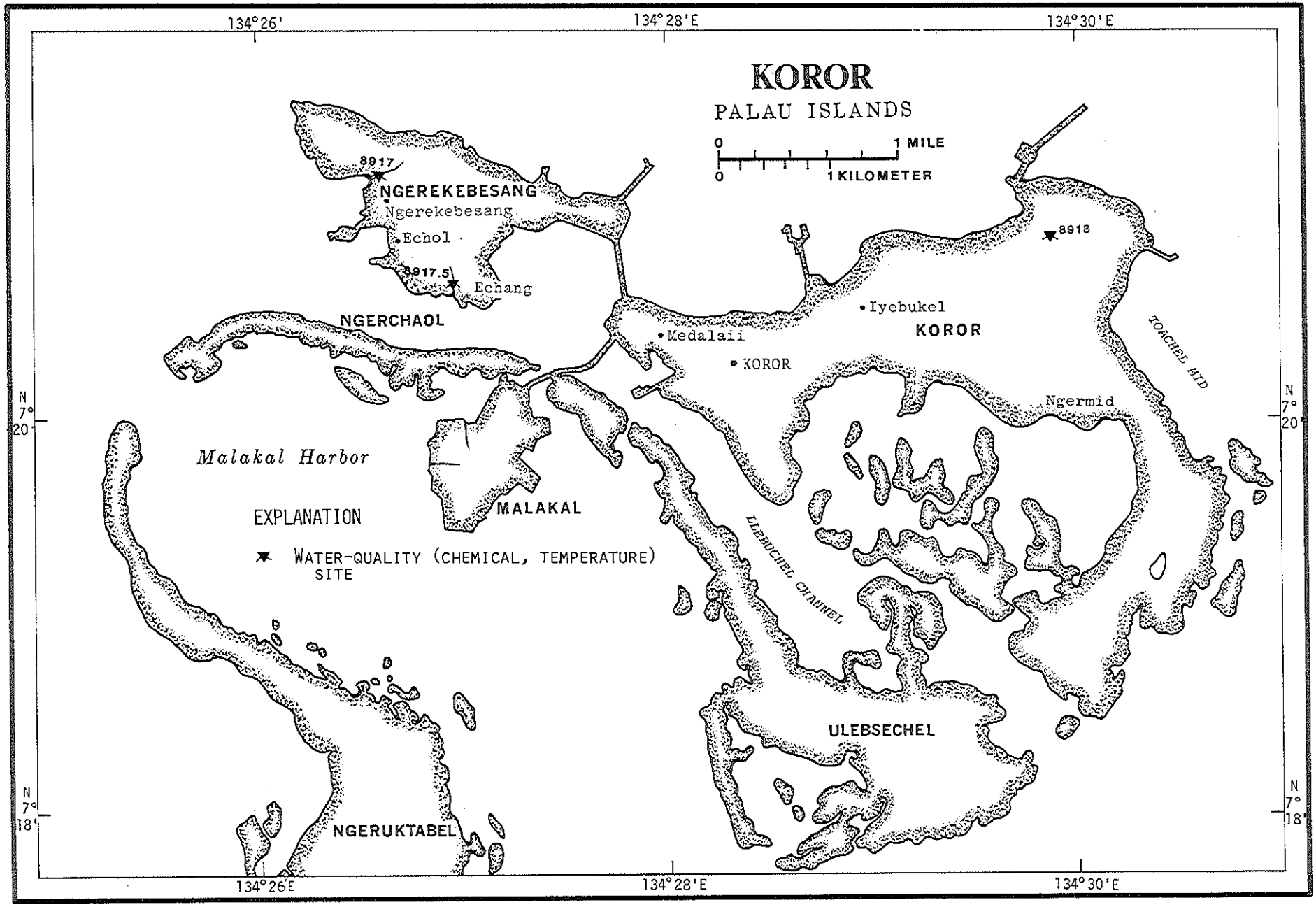


FIGURE 8.--LOCATIONS OF WATER-QUALITY SITES ON KOROR.

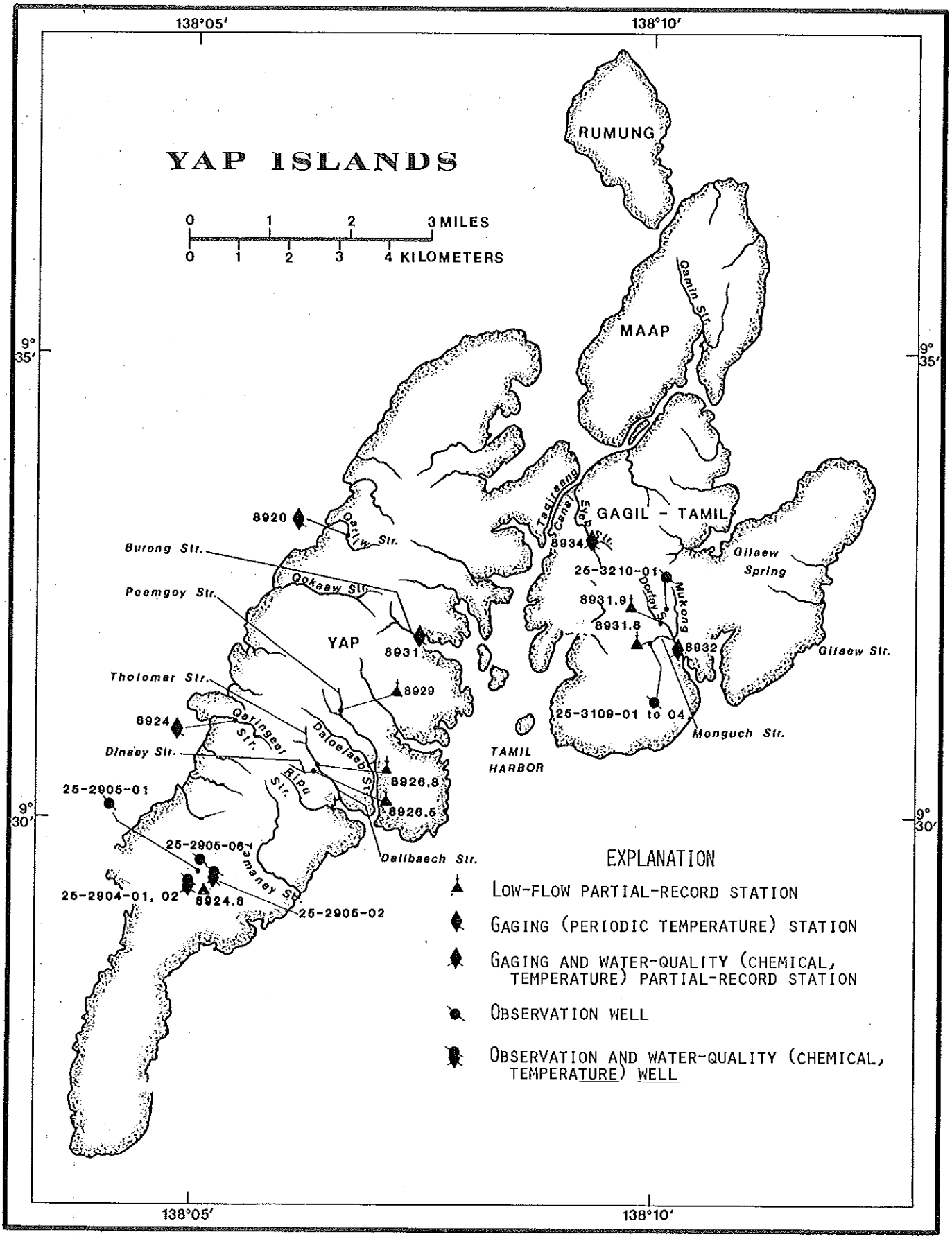


FIGURE 9.--LOCATIONS OF GAGING, LOW-FLOW PARTIAL-RECORD STATIONS, OBSERVATION WELLS AND WATER-QUALITY SITES ON YAP ISLANDS.

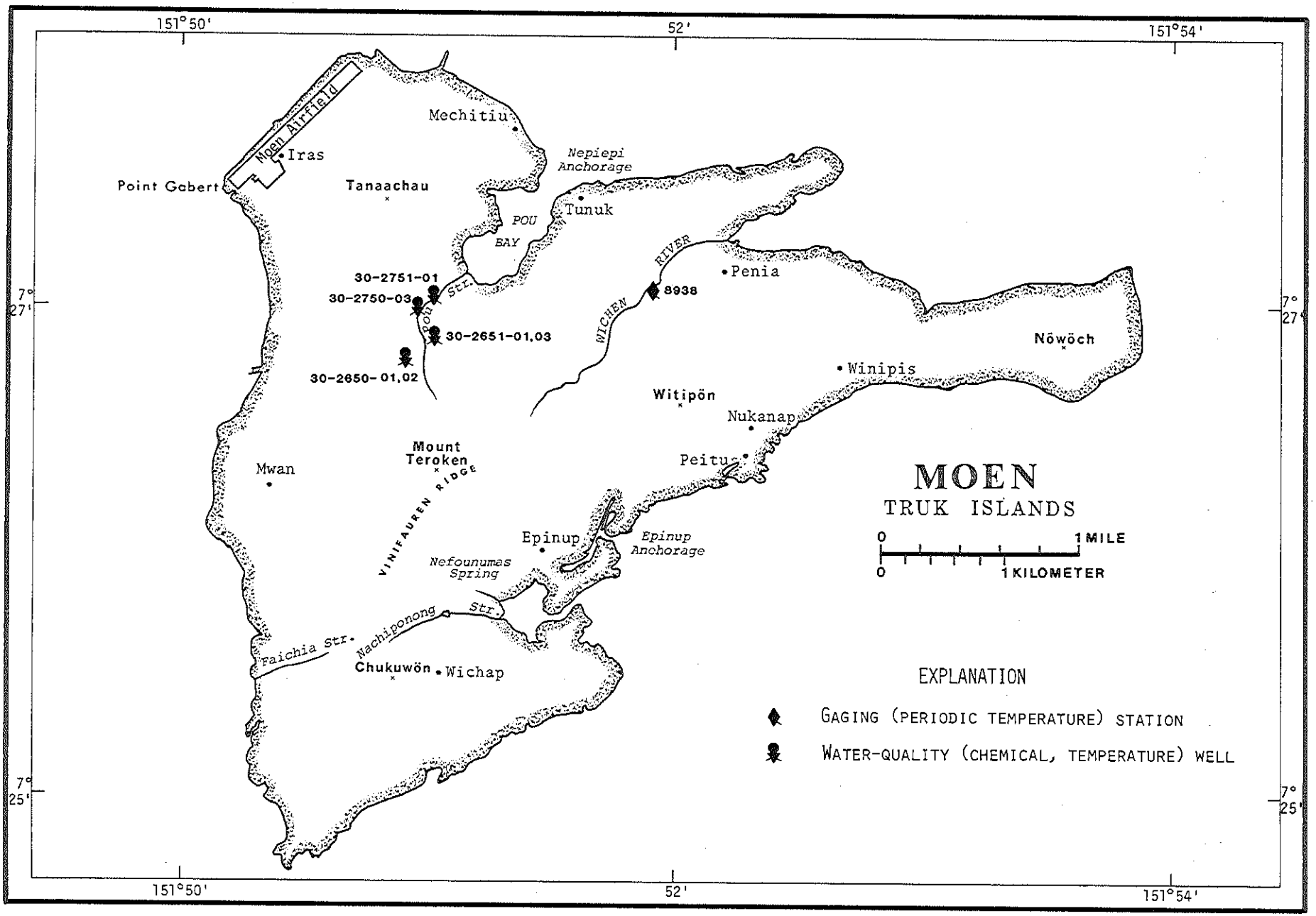


FIGURE 10.--LOCATIONS OF GAGING STATION, WELLS, AND WATER-QUALITY SAMPLING SITES ON MOEN.

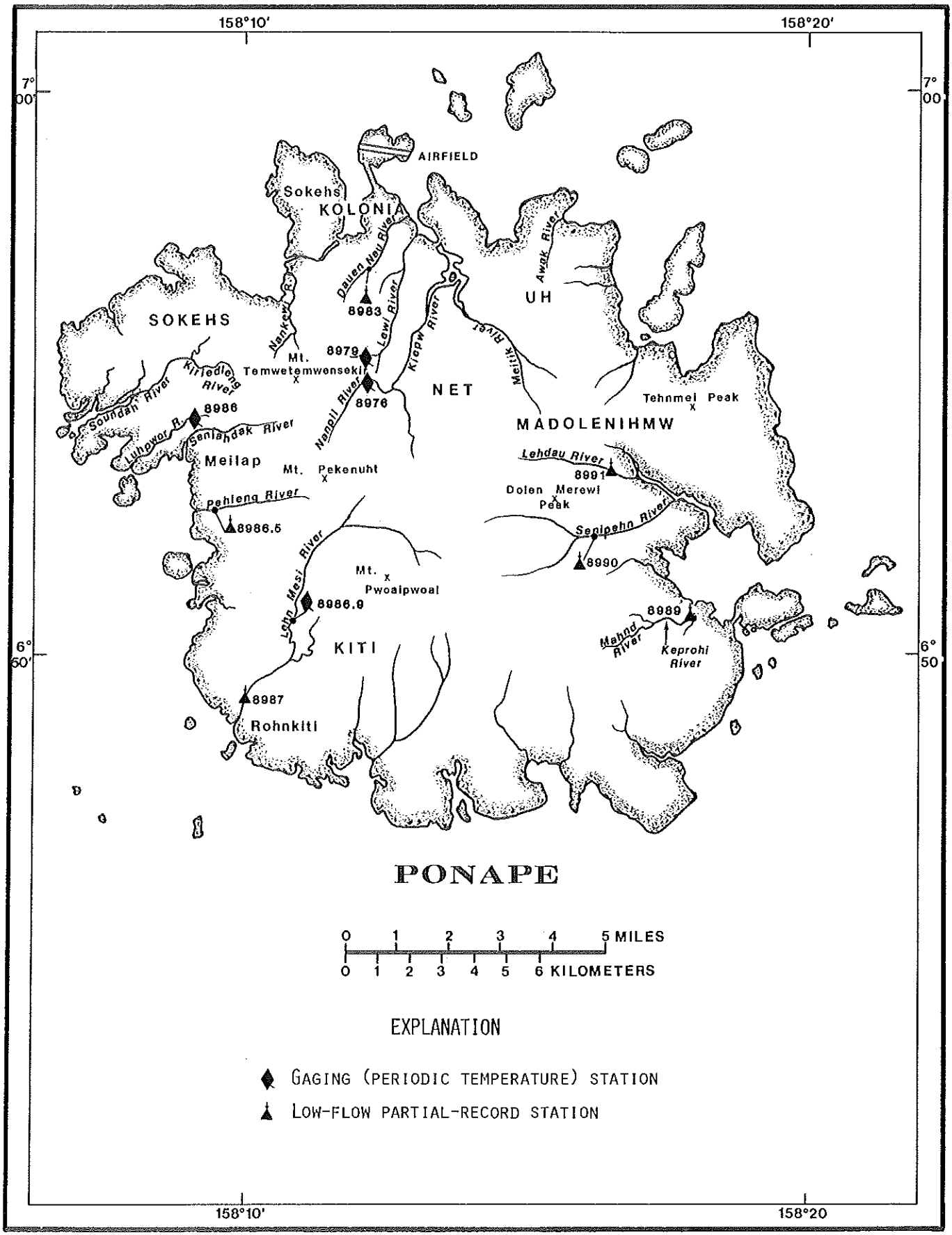


FIGURE 11.--LOCATIONS OF GAGING AND LOW-FLOW PARTIAL-RECORD STATIONS ON PONAPE.

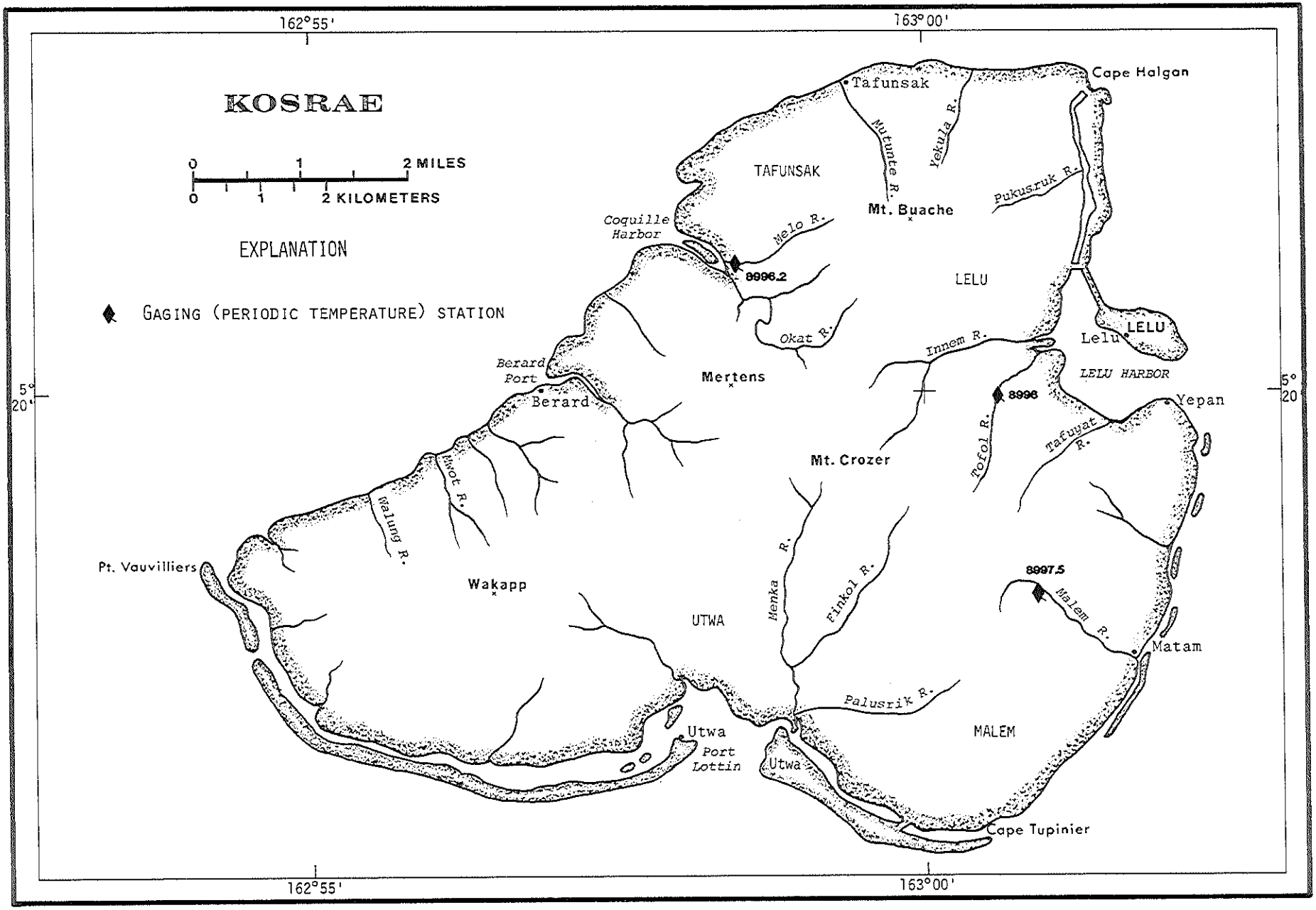


FIGURE 12.--LOCATIONS OF GAGING STATIONS ON KOSRAE.

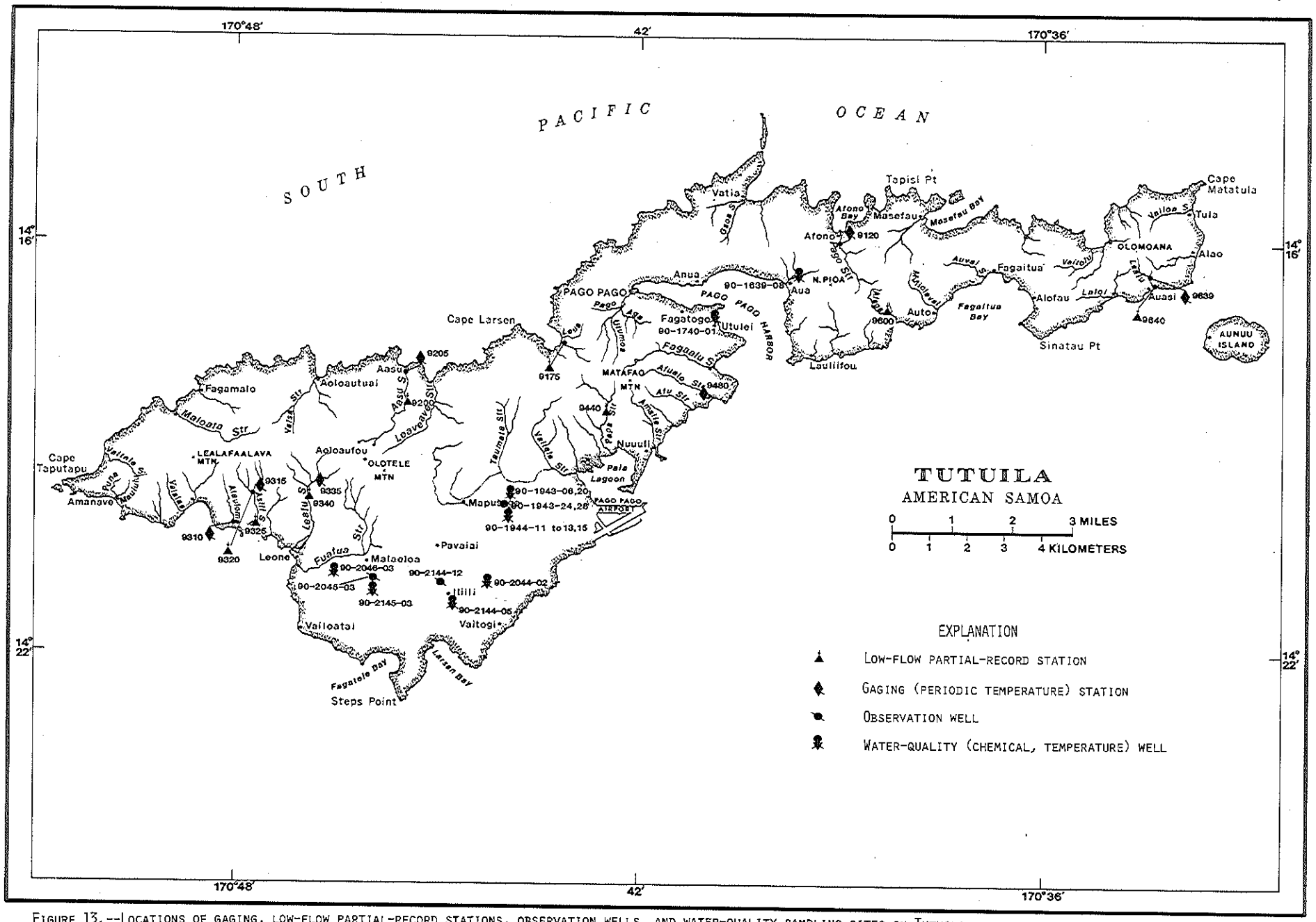


FIGURE 13.--LOCATIONS OF GAGING, LOW-FLOW PARTIAL-RECORD STATIONS, OBSERVATION WELLS, AND WATER-QUALITY SAMPLING SITES ON TUTUILA.

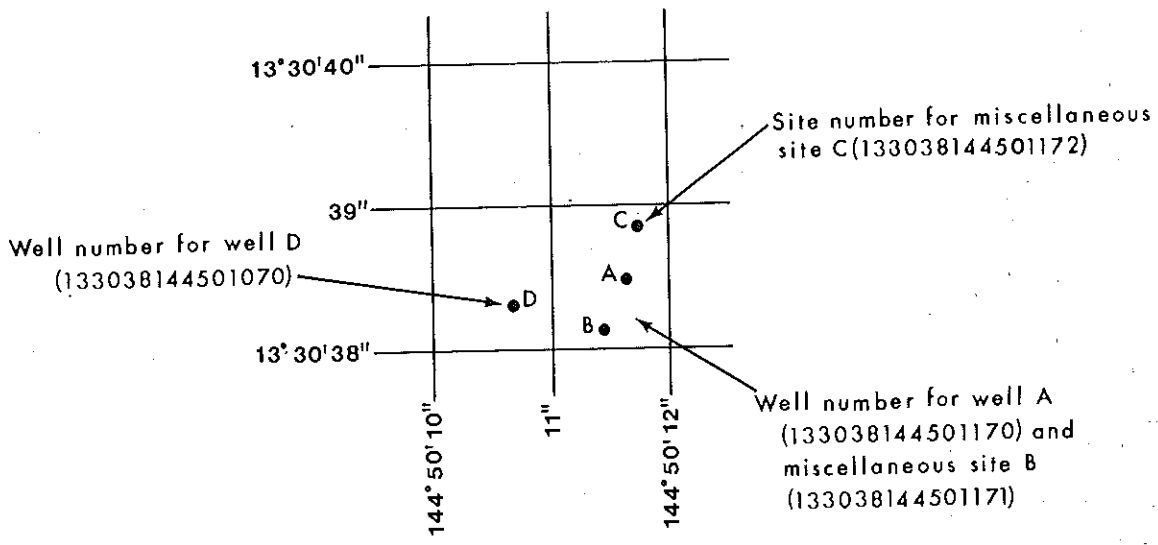


FIGURE 14.--SKETCH SHOWING SYSTEM FOR NUMBERING WELLS AND MISCELLANEOUS SITES.

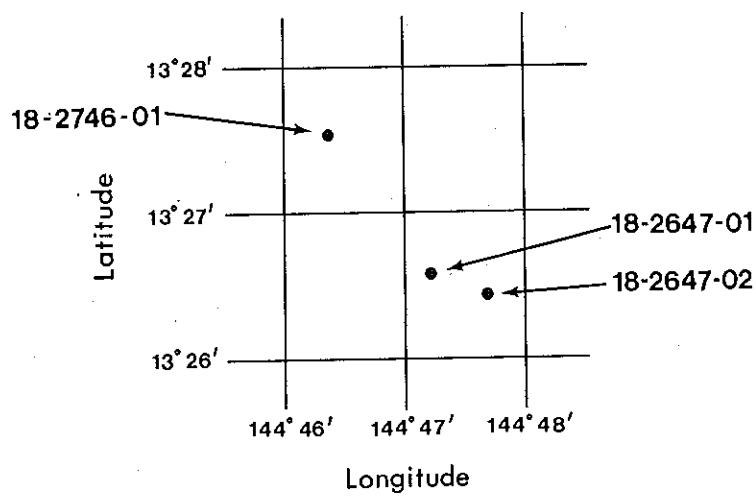


FIGURE 15.--SKETCH SHOWING LOCAL WELL NUMBERING SYSTEM.

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 computed 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 basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations, in the same or nearby basins. 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 station on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow 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 discharge were revised. If the drainage area has been revised, the report in which the revised figures was first published is given.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotea "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unlesa 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 extremea 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 correaponding 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 station on lakes and reservoirs, the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoira 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 sitea. Data for partial-record discharge stations are presented in two tables. The first is a table of diacharge 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 tsbles 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.

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.

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

Water temperature

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

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration time 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

In addition to the records of the 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 14 snd 15.

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 levsls is based; land-surface datum is a datum plane that is approximately at lsnd surface at each well. If known, the altitude of the land-surface datum above msan 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 levsls in wells equipped with recording gages are reported for every fifth dsy and the end of each month (eom). To show the intraday variation in the ground-water levels caused by local pumping and tidal fluctuations, instantaneous maximum and minimum water levels are given with the mean water levels for ths day.

Water levels are reported to as many significant figures as can be justified by the locsl conditions. For example, in a measurement of a depth to water of sevsral hundred feet, the error in determining the absolute value of the total depth to water may be a fsw tenths of a foot, whereas the error in determining the net changs 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.

ACCESS TO WATSTORE DATA

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

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MARIANA ISLANDS, ISLAND OF SAIPAN

16801000 SOUTH FORK TALOFOFO STREAM

LOCATION.--Lat 15°12'48" N., long 145°48'17" E., Hydrologic Unit 20100006, on left bank 0.4 mi upstream from confluence with Middle and North Forks, 1.4 mi south of Ogso Dogas, and 2.2 mi southeast of Tanapag.

DRAINAGE AREA.--0.64 mi^2. Area at site used prior to Mar. 31, 1971, 0.73 mi^2.

PERIOD OF RECORD.--October 1966 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), WDR HI-82-2: Drainage srea.

GAGE.--Water-stage recorder. Concrete control since Mar. 31, 1971. Elevation of gage is 60 ft, from topographic map. Prior to Mar. 31, 1971, at site 0.2 mi downstream at different datum.

REMARKS.--Records fsir except for estimated daily discharges, which are poor. No divsrsion upstream.

AVERAGE DISCHARGE.--14 years (water years 1972-85), 1.34 ft^3/s (971 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft^3/s, Aug. 4, 1976, gsge height, 8.15 ft, from rating curve extended above 59 ft^3/s on basis of slope-area measurements at gage heights 7.30 snd 8.15 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,520 ft^3/s Aug. 30, gage height, 6.25 ft, no other peak greater than base discharge of 400 ft^3/s; minimum, 0.01 ft^3/s, Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.87	.93	.23	.69	.16	.04	.04	.30	.38	.94	6.2
2	1.5	.81	.87	.23	.47	.11	.04	.04	.27	.34	.76	3.6
3	1.2	.81	.64	.16	.39	.09	.07	.04	.27	.34	.70	2.7
4	1.1	.75	.58	.14	.39	.09	.04	.03	.27	.38	.66	2.2
5	1.0	.75	.75	.13	.35	.08	.03	.04	.24	.30	.62	1.4
6	.98	.64	.58	.14	.29	.07	.02	.04	.22	.27	.94	2.1
7	.93	.64	.52	.14	.26	.07	.02	.03	.20	.24	.70	1.8
8	.87	.52	.47	.14	.23	.06	.02	.02	.18	.24	7.8	1.7
9	.87	.58	.43	.19	.21	.06	.03	.04	.18	.27	e1.7	2.2
10	.75	.52	.43	.64	.21	.11	.08	.06	.34	.24	e1.0	1.7
11	.75	.47	.47	1.3	.19	.07	.11	.04	.24	.24	e.90	1.4
12	1.1	.52	.39	.39	.19	.07	.09	.03	.22	.27	e.80	20
13	.81	.52	.35	.32	.16	.08	.09	.03	3.3	.26	e.80	12
14	.98	.52	.35	.26	.16	.06	.08	.02	3.9	.30	e.75	4.9
15	.81	1.4	.32	.26	.39	.06	.08	.02	1.4	.27	e7.0	3.6
16	.75	.64	.32	.23	.23	.07	.08	.16	1.9	.24	e2.0	3.3
17	.69	3.0	.29	.21	.21	.08	.09	.47	1.1	.22	e1.7	2.8
18	.64	1.8	.29	.21	.19	.05	.08	.11	1.9	.50	e1.5	2.3
19	7.2	1.1	.26	.21	.19	.09	.08	10	1.5	.40	e7.0	2.1
20	20	.93	.26	.19	.16	.06	.07	2.9	.94	.30	e2.0	1.9
21	3.1	.81	.23	.82	.16	.05	.07	2.0	.70	.27	e3.0	1.8
22	2.0	.75	.23	.47	.14	.04	.08	1.0	.62	.38	e2.0	9.4
23	1.6	.81	.23	.29	.14	.04	.08	1.7	.58	.38	e1.7	3.4
24	1.4	.64	.23	.26	.13	.04	.13	1.7	.50	.70	e1.3	2.3
25	2.5	.58	.21	.23	.14	.04	.06	1.0	.42	.94	e1.1	2.0
26	1.3	.52	.21	.23	.14	.04	.08	.70	.42	8.3	e1.0	1.8
27	1.2	1.4	.19	.21	.14	.04	.05	.58	.38	1.5	e1.3	3.5
28	1.3	.64	.19	.19	.13	.03	.05	.50	.38	1.0	e1.0	3.5
29	1.1	.58	.16	.19	---	.03	.04	.46	.38	.82	1.5	6.2
30	.98	.52	.14	2.0	---	.03	.05	.38	.50	2.1	71	4.3
31	.93	---	.13	.47	---	.03	---	.34	---	1.1	6.8	---
TOTAL	62.14	25.04	11.65	11.08	6.68	1.96	1.91	24.52	23.75	23.49	131.97	118.1
MEAN	2.00	.83	.38	.36	.24	.063	.064	.79	.79	.76	4.26	3.94
MAX	20	3.0	.93	2.0	.69	.16	.13	10	3.9	8.3	71	20
MIN	.64	.47	.13	.13	.13	.03	.02	.02	.18	.22	.62	1.4
AC-FT	123	50	23	22	13	3.9	3.8	49	47	47	262	234

CAL YR 1984	TOTAL	333.30	MEAN	.91	MAX	31	MIN	.00	AC-FT	661
WTR YR 1985	TOTAL	442.29	MEAN	1.21	MAX	71	MIN	.02	AC-FT	877

e Estimated

16801000 SOUTH FORK TALOFOFO STREAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984					MAR , 1985				
03...	1025	--	--	25.5	01...	1225	.28	--	25.0
03...	1050	1.2	--	25.5	JUN				
DEC					20...	1040	.96	30.0	27.0
14...	0950	.40	28.0	26.5	AUG				
JAN , 1985					28...	1545	1.1	--	26.0
30...	1000	1.9	26.0	25.0	28...	1550	1.1	--	26.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
03...	1025	--	--	8.0	25.5	150	6	52	6.0	25	26	.9
AUG												
28...	1545	1.1	414	8.1	26.0	160	15	53	6.0	25	26	.9

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
03...	.80	149	16	33	.10	29	250	.34	<.10	17	22
AUG											
28...	.80	142	15	33	.10	28	246	.33	<.10	32	14

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

16805200 LAKE SUSUPE

LOCATION.--Lat 15°09'15" N., long 145°42'42" E., Hydrologic Unit 20100006, on west shore, at the end of Sugar Mill Road, 0.5 mi southeast from the Administration building, Northern Marianas Government.

PERIOD OF RECORD.--February 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Water-level records good.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.61 ft, Oct. 19, 1982; lowest, 0.70 ft, June 13, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 12, 1978, reached a stage of 7.6 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Highest water level, 3.21 ft, Sept. 1; lowest, 1.47 ft, Apr. 23-24.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.17	2.83	2.51	2.19	2.51	2.18	1.76	1.62	2.35	2.35	2.65	3.20
2	3.07	2.80	2.50	2.29	2.50	2.19	1.75	1.62	2.33	2.34	2.63	3.16
3	2.99	2.76	2.48	2.29	2.49	2.18	1.76	1.62	2.30	2.34	2.60	3.09
4	2.94	2.72	2.50	2.27	2.49	2.17	1.77	1.62	2.28	2.36	2.57	3.02
5	2.88	2.69	2.50	2.27	2.48	2.16	1.75	1.63	2.26	2.35	2.54	2.96
6	2.83	2.67	2.47	2.26	2.46	2.14	1.73	1.62	2.24	2.33	2.53	2.89
7	2.79	2.64	2.46	2.24	2.45	2.13	1.72	1.61	2.22	2.31	2.51	2.84
8	2.74	2.61	2.46	2.22	2.41	2.10	1.71	1.60	2.19	2.29	2.70	2.78
9	2.73	2.61	2.45	2.22	2.38	2.08	1.71	1.63	2.17	2.29	2.75	2.75
10	2.73	2.62	2.43	2.36	2.36	2.09	1.70	1.65	2.15	2.29	2.72	2.73
11	2.72	2.60	2.43	2.42	2.34	2.11	1.68	1.64	2.13	2.27	2.69	2.69
12	2.74	2.58	2.42	2.42	2.34	2.10	1.67	1.63	2.13	2.25	2.68	2.80
13	2.76	2.57	2.41	2.40	2.32	2.09	1.65	1.63	2.26	2.24	2.68	2.91
14	2.74	2.58	2.40	2.39	2.30	2.08	1.63	1.63	2.33	2.22	2.67	2.93
15	2.72	2.62	2.37	2.37	2.34	2.07	1.61	1.62	2.38	2.25	2.74	2.90
16	2.68	2.61	2.36	2.36	2.35	2.05	1.58	1.64	2.41	2.25	2.79	2.89
17	2.67	2.66	2.36	2.33	2.33	2.02	1.57	1.76	2.44	2.23	2.82	2.96
18	2.63	2.68	2.34	2.34	2.31	2.01	1.56	1.82	2.49	2.24	2.85	2.95
19	2.68	2.65	2.32	2.36	2.29	2.01	1.56	2.01	2.48	2.29	2.83	2.92
20	2.95	2.63	2.30	2.34	2.27	1.99	1.54	2.30	2.45	2.32	2.80	2.89
21	2.96	2.61	2.29	2.34	2.24	1.97	1.52	2.47	2.43	2.30	2.76	2.87
22	2.93	2.59	2.27	2.41	2.23	1.95	1.50	2.49	2.40	2.31	2.80	2.83
23	2.89	2.61	2.27	2.39	2.22	1.94	1.48	2.51	2.38	2.34	2.83	2.82
24	2.87	2.62	2.26	2.38	2.20	1.91	1.54	2.56	2.36	2.37	2.79	2.82
25	2.92	2.59	2.25	2.38	2.19	1.90	1.59	2.53	2.34	2.43	2.78	2.77
26	2.90	2.56	2.25	2.37	2.19	1.86	1.62	2.50	2.33	2.69	2.77	2.73
27	2.87	2.56	2.24	2.35	2.18	1.84	1.64	2.46	2.34	2.74	2.74	2.76
28	2.87	2.55	2.21	2.33	2.16	1.81	1.64	2.43	2.33	2.73	2.73	2.91
29	2.89	2.54	2.19	2.32	---	1.80	1.64	2.41	2.35	2.69	2.70	3.01
30	2.87	2.51	2.18	2.44	---	1.79	1.62	2.40	2.36	2.71	3.00	2.99
31	2.86	---	2.15	2.49	---	1.77	---	2.37	---	2.69	3.18	---
MEAN	2.84	2.63	2.36	2.34	2.33	2.02	1.64	1.97	2.32	2.38	2.74	2.89
MAX	3.17	2.63	2.51	2.49	2.51	2.19	1.77	2.56	2.49	2.74	3.18	3.20
MIN	2.63	2.51	2.15	2.19	2.16	1.77	1.48	1.60	2.13	2.22	2.51	2.69

CAL YR 1984 MEAN 2.43 MAX 3.56 MIN 1.77
WTR YR 1985 MEAN 2.37 MAX 3.20 MIN 1.48

16805200 LAKE SUSUPE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
02...	1300	5380	8.2	35.0	660	500	99	100	890	74	15
AUG											
30...	1255	4200	7.7	30.0	570	420	91	84	580	68	11

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
02...	28	158	190	1600	.10	4.0	3000	4.1	<.10	70	20
AUG											
30...	23	157	140	1200	.10	3.2	2200	3.0	<.10	110	30

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

16840000 TINAGA RIVER NEAR INARAJAN

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

DRAINAGE AREA.--1.89 mi^2.

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

REVISED RECORDS.--WSP 2137: Drainage area.

GAGE.--Water-stage racorder and concrete control. Elevation of gage is 15 ft, from topographic map.

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

AVERAGE DISCHARGE.--33 years, 5.62 ft^3/s (4,070 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft^3/s Oct. 15, 1953, gage height, 13.11 ft, from rating curve extended above 210 ft^3/s; minimum, 0.15 ft^3/s May 16, 21-23, 29, 1966, June 13, 29, 30, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 475 ft^3/s Nov. 13, gage height, 4.59 ft, no other peak greater then base discharge of 400 ft^3/s; minimum, 0.62 ft^3/s for several days in April and May.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	11	5.2	3.5	1.9	1.3	.93	.75	1.8	3.4	5.1	16
2	5.3	13	5.7	3.5	1.9	1.2	.91	.77	1.8	5.3	4.3	25
3	4.7	7.9	5.1	3.2	1.9	1.2	.88	.79	2.6	5.3	4.2	17
4	4.5	8.9	50	3.1	1.8	1.2	.87	.86	2.6	4.2	4.6	9.0
5	5.8	6.2	36	2.8	1.9	1.1	.85	.76	2.2	3.8	6.4	6.8
6	18	14	12	2.7	1.8	1.3	.81	.74	2.0	3.3	6.3	6.8
7	10	6.9	8.3	2.6	1.7	1.3	.79	.69	1.8	3.6	22	6.4
8	5.3	5.9	7.1	2.5	1.7	1.3	.76	.66	1.7	3.6	9.1	6.2
9	5.2	5.6	6.1	5.5	1.7	1.2	.75	.66	1.6	3.3	5.6	5.8
10	8.4	5.9	5.6	10	1.6	1.4	.74	.66	1.5	3.1	6.1	5.5
11	6.1	5.6	5.6	4.3	1.7	1.3	.75	.69	1.4	4.0	6.1	5.7
12	4.9	5.3	5.1	3.7	1.6	1.2	.77	.64	1.3	7.2	6.7	25
13	4.4	e70	5.1	3.5	1.6	1.1	.74	.62	1.5	4.0	4.4	35
14	5.3	13	4.8	3.2	1.6	3.7	.69	.74	1.7	3.4	4.0	8.5
15	32	8.1	4.4	3.0	1.5	2.9	.67	.77	4.0	3.1	3.9	68
16	12	16	4.2	2.8	1.5	2.0	.68	1.5	4.3	2.9	3.8	9.6
17	7.6	37	4.0	2.7	1.5	1.7	.66	7.8	39	3.6	3.9	7.1
18	16	14	4.0	2.7	1.6	1.6	.66	6.8	23	3.4	20	7.1
19	39	11	3.9	2.7	1.7	1.5	.67	9.0	7.5	3.4	6.5	5.7
20	10	9.0	3.7	2.6	1.7	1.4	.64	18	4.5	3.1	23	5.1
21	9.2	7.3	3.4	2.4	1.6	1.3	.63	23	29	2.8	19	4.9
22	7.3	6.8	3.2	2.3	1.6	1.2	.62	10	13	3.1	12	5.6
23	6.5	6.3	3.0	2.4	1.8	1.2	.82	4.5	25	3.1	7.1	9.2
24	26	5.9	3.0	2.2	1.5	1.1	.76	3.6	8.6	5.3	5.5	5.7
25	26	5.6	2.9	2.3	1.4	1.2	.91	2.9	5.9	3.8	4.8	4.8
26	9.6	5.1	3.2	3.8	1.3	1.1	.88	2.6	5.3	48	5.8	4.4
27	7.4	12	3.1	2.8	1.2	1.1	1.1	2.2	4.5	13	30	81
28	10	6.1	3.2	2.5	1.4	1.0	1.0	2.0	4.2	6.0	6.1	48
29	7.6	7.3	3.0	2.3	---	.97	.88	1.8	3.8	4.5	5.0	31
30	6.0	7.2	3.0	2.2	---	.96	.79	1.8	3.4	21	38	11
31	8.9	---	3.6	2.0	---	.99	---	1.8	---	5.3	21	---
TOTAL	335.1	341.9	220.5	97.8	45.5	43.02	23.41	109.70	210.5	192.7	310.3	486.9
MEAN	10.8	11.4	7.11	3.15	1.62	1.39	.78	3.54	7.02	6.22	10.0	16.2
MAX	39	70	50	10	1.9	3.7	1.1	23	39	48	38	61
MIN	4.4	5.1	2.9	2.0	1.2	.96	.62	.62	1.3	2.8	3.8	4.4
AC-FT	665	678	437	194	90	85	46	218	418	382	615	966

CAL YR 1984	TOTAL	1838.01	MEAN	5.02	MAX	102	MIN	.40	AC-FT	3650
WTR YR 1985	TOTAL	2417.33	MEAN	6.62	MAX	81	MIN	.62	AC-FT	4790

e Estimated

16847000 IMONG RIVER NEAR AGAT

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

DRAINAGE AREA.--1.95 mi^2.

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. Elevation of gage is 120 ft, from topographic map.

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

AVERAGE DISCHARGE.--24 years (water years 1961-70, 1972-85), 10.0 ft^3/s (7,240 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft^3/s Sept. 27, 1978, gage height, 11.3 ft, from outside floodmarks, and from rating curve extended above 58 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.37 ft^3/s May 21, 22, 26, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 31	2000	1510	5.62	Sept. 13	0615	2000	6.51
Aug. 7	0800	1720	6.03	Sept. 15	0800	1580	5.76
Sept. 6	1330	*2680	*7.61				

Minimum discharge, 1.6 ft^3/s for several days in April and May.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	14	12	6.7	4.3	3.2	2.4	1.8	5.0	6.8	17	43
2	7.8	23	12	5.9	4.1	3.2	2.4	1.8	4.6	15	11	60
3	7.3	14	11	5.7	4.1	3.0	2.2	2.0	17	9.2	10	23
4	7.5	11	84	5.7	4.1	3.2	2.2	2.0	8.0	7.8	9.5	26
5	7.1	11	47	5.3	4.7	2.8	2.2	1.8	6.0	7.3	11	14
6	14	13	20	5.0	4.2	3.2	2.0	1.8	5.3	8.3	24	110
7	8.7	11	15	5.1	4.0	3.0	2.0	1.8	4.9	13	97	22
8	7.6	9.4	13	4.9	3.8	3.0	2.0	2.0	4.6	8.8	22	19
9	41	22	11	14	3.8	2.8	2.0	2.0	4.6	7.8	15	e20
10	15	12	10	20	3.8	3.2	2.0	1.8	4.6	7.8	14	e13
11	13	11	9.9	7.7	3.9	3.0	1.8	2.0	4.3	9.2	16	18
12	10	13	9.4	8.0	3.8	3.0	1.8	1.8	4.8	13	9.9	57
13	9.0	171	9.2	9.0	3.6	3.0	1.8	1.8	4.4	8.3	9.0	e130
14	9.2	23	8.9	6.4	3.2	15	1.8	2.6	8.5	7.8	8.5	e40
15	32	16	8.7	5.6	3.2	4.4	1.8	2.8	16	8.3	8.2	e70
16	28	37	8.3	8.1	3.0	3.2	1.6	21	17	13	9.2	e30
17	17	53	8.2	5.6	3.2	3.0	1.6	25	69	7.8	11	e20
18	19	25	8.2	5.3	3.5	3.0	1.6	27	29	7.8	44	e15
19	34	18	7.7	4.9	3.5	3.0	2.0	14	11	7.8	31	e13
20	16	15	6.8	4.7	3.2	2.8	1.8	65	8.8	7.8	63	e11
21	15	13	6.3	4.6	3.0	2.6	1.6	38	39	8.3	23	e10
22	11	13	6.0	4.4	3.0	2.6	1.6	18	26	8.3	31	e20
23	9.7	13	6.1	8.4	3.0	2.8	1.8	9.6	37	17	14	e17
24	46	12	6.2	5.6	3.2	2.8	3.8	7.0	15	19	12	e10
25	37	11	6.0	8.3	3.2	3.0	2.8	6.0	11	8.3	11	e9.0
26	23	11	6.2	8.1	3.0	3.2	2.4	5.4	8.8	51	22	e8.0
27	20	13	6.0	5.4	3.0	2.8	6.3	5.6	9.2	28	32	e35
28	18	11	6.5	4.9	4.1	2.8	2.2	5.1	7.8	12	12	e50
29	14	20	5.9	5.0	---	2.8	2.0	4.9	7.3	9.8	10	e30
30	11	15	5.8	4.6	---	2.6	1.8	4.6	6.8	41	53	e20
31	11	---	7.1	4.4	---	2.4	---	6.0	---	49	27	---
TOTAL	527.3	654.4	388.4	207.3	100.5	104.4	65.3	292.0	405.3	434.3	687.3	963.0
MEAN	17.0	21.8	12.5	6.69	3.59	3.37	2.18	9.42	13.5	14.0	22.2	32.1
MAX	46	171	84	20	4.7	15	6.3	65	69	51	97	130
MIN	7.1	9.4	5.8	4.4	3.0	2.4	1.6	1.8	4.3	6.8	8.2	8.0
AC-FT	1050	1300	770	411	199	207	130	579	804	861	1360	1910

CAL YR 1984	TOTAL	3165.2	MEAN	8.65	MAX	171	MIN	1.6	AC-FT	6280
WTR YR 1985	TOTAL	4829.5	MEAN	13.2	MAX	171	MIN	1.6	AC-FT	9580

e Estimated

16848100 ALMAGOSA RIVER NEAR AGAT

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

DRAINAGE AREA.--1.32 mi^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. Elevation of gage is 155 ft, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Up to 3.9 ft^3/s diverted upstream for domestic use. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 6.00 ft^3/s (4,350 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,650 ft^3/s Sept. 27, 1978, gage height, 7.78 ft, from rating curve extended above 46 ft^3/a on basis of alope-area measurement at gage height 7.32 ft; minimum, 0.13 ft^3/s June 27, July 11, 12, 14, 16, 17, 1979, June 3-9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 984 ft^3/s Sept. 6, gage height, 5.64 ft, no other peak greater than base discharge of 700 ft^3/s; minimum, 0.43 ft^3/s Apr. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	7.4	6.3	2.4	1.5	1.1	.57	.52	1.4	2.9	21	24
2	4.0	12	6.1	2.1	1.4	.98	.57	.52	1.0	7.4	12	56
3	4.0	8.6	6.0	1.8	1.4	.93	.57	.54	11	3.9	9.3	27
4	3.2	6.9	43	1.7	1.3	.88	.64	.55	5.5	2.9	7.5	16
5	2.9	5.6	46	1.6	1.4	.84	.62	.52	3.5	2.5	7.1	11
6	4.8	5.6	27	1.5	1.3	.95	.61	.51	2.4	3.0	6.3	50
7	3.0	5.2	14	1.5	1.2	.89	.55	.47	1.7	5.7	60	15
8	2.5	4.6	10	1.5	1.2	.79	.52	.47	1.3	4.1	24	13
9	22	22	7.8	6.6	1.2	.74	.52	.47	1.0	3.6	18	13
10	8.3	12	6.3	9.0	1.2	.79	.52	.57	1.2	3.6	15	9.4
11	6.5	7.8	5.5	4.1	1.2	.74	.50	.67	.93	4.5	11	10
12	4.7	8.2	5.3	3.7	1.1	.68	.60	.57	1.3	6.7	8.5	42
13	4.0	125	5.0	4.4	1.1	.69	.56	.54	.95	3.8	6.7	90
14	4.0	29	4.7	3.7	1.0	3.4	.52	.76	2.1	3.2	5.6	27
15	12	16	4.2	3.1	1.0	1.2	.50	1.0	5.2	2.8	5.0	48
16	15	21	3.8	4.4	1.0	.86	.51	12	7.5	6.3	5.3	20
17	15	36	3.7	3.0	1.1	.78	.50	24	45	2.8	5.3	13
18	12	24	3.4	2.7	1.2	.80	.47	20	26	3.3	30	11
19	23	14	3.2	2.3	1.1	.81	.53	11	11	2.9	15	8.7
20	14	11	2.9	2.0	1.0	.76	.47	31	6.9	2.1	34	7.5
21	10	8.8	2.7	1.7	.98	.73	.46	35	23	1.8	27	e6.5
22	6.3	7.2	2.4	1.6	.95	.72	.43	20	18	1.6	20	e12
23	5.0	6.4	2.1	3.7	.95	.76	.47	9.5	25	5.6	11	e10
24	29	5.6	2.1	2.6	.95	.71	1.1	5.4	15	5.9	9.0	e6.0
25	34	5.3	1.9	3.0	.93	.74	.91	3.9	9.3	3.3	7.2	e5.0
26	23	5.1	1.8	4.6	.88	.79	.90	2.8	6.4	45	18	e4.5
27	16	8.1	1.9	2.9	.84	.69	4.7	2.2	5.2	24	10	e20
28	13	5.6	2.1	2.5	1.2	.63	.84	1.8	4.2	11	6.0	32
29	9.1	11	1.9	2.2	---	.61	.67	1.3	3.6	7.6	5.3	24
30	7.2	6.2	1.8	2.0	---	.57	.55	1.0	3.1	63	27	14
31	6.1	---	2.7	1.7	---	.57	---	2.5	---	35	15	---
TOTAL	328.2	451.4	239.6	91.6	31.58	27.13	21.88	192.08	249.68	281.8	462.1	645.6
MEAN	10.6	15.0	7.73	2.95	1.13	.88	.73	6.20	8.32	9.09	14.9	21.5
MAX	34	125	48	9.0	1.5	3.4	4.7	35	45	63	60	90
MIN	2.5	4.6	1.8	1.5	.84	.57	.43	.47	.93	1.6	5.0	4.5
AC-FT	651	895	475	182	63	54	43	381	495	559	917	1280

CAL YR 1984	TOTAL	1832.53	MEAN	5.01	MAX	125	MIN	.13	AC-FT	3630
WTR YR 1985	TOTAL	3022.65	MEAN	8.28	MAX	125	MIN	.43	AC-FT	6000

e Estimated

16848500 MAULAP RIVER NEAR AGAT

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

DRAINAGE AREA.--1.15 mi^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. Elevation of gage is 130 ft, from topographic map.

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

AVERAGE DISCHARGE.--13 years, 5.17 ft^3/s (3,750 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft^3/s Sept. 27, 1978, gage height, 9.2 ft, from rating curve extended above 23 ft^3/s, on basis of slope-area measurements at gage heights 8.21 ft and 9.2 ft; minimum, 0.31 ft^3/s June 28 to July 1, 1983.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 9	1130	1010	6.44	Aug. 5	0800	1360	7.32
Oct. 24	1815	747	5.79	Sept. 6	1330	*1380	*7.36
Nov. 13	0330	1050	6.55	Sept. 13	0615	954	6.31

Minimum discharge, 0.75 ft^3/s Apr. 18-23, May 7-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	9.2	8.0	3.4	2.0	1.6	1.3	1.0	2.3	3.7	e17	e25
2	4.4	12	7.2	3.1	2.0	1.3	.96	1.0	2.1	12	e10	e43
3	4.0	6.2	4.6	2.7	1.9	1.3	.96	1.0	16	9.2	e8.0	e20
4	3.8	5.8	50	2.6	1.9	1.3	1.1	1.0	4.1	4.6	e7.0	e13
5	3.6	4.9	39	2.5	2.5	1.2	.96	.89	3.2	4.0	e6.5	e10
6	4.6	4.9	12	2.4	2.0	1.6	1.0	.82	2.7	4.4	e6.0	e40
7	3.7	6.2	9.2	2.5	1.9	1.6	.89	.82	2.4	12	e45	e12
8	3.5	4.3	7.3	2.3	1.8	1.3	.89	.82	2.2	4.5	e10	e8.0
9	35	33	6.4	10	1.8	1.2	.89	.82	2.1	3.8	22	e7.0
10	5.7	6.7	5.8	11	1.8	1.3	.82	.82	2.0	5.1	9.1	e6.5
11	7.0	5.4	5.9	4.0	1.9	1.3	.82	1.0	1.8	7.3	4.6	9.5
12	5.3	7.4	5.2	3.3	1.7	1.1	1.2	.89	2.9	9.9	3.5	40
13	4.9	117	4.8	3.4	1.7	1.1	.96	.89	2.1	4.4	3.1	73
14	5.2	13	4.5	2.9	1.6	5.9	.89	1.1	3.6	3.9	3.1	11
15	14	8.0	4.4	2.9	1.6	2.1	.89	1.6	4.8	4.0	2.9	29
16	9.1	14	4.2	4.4	1.6	1.5	.89	15	7.7	8.3	3.5	9.2
17	8.3	28	4.0	2.8	1.6	1.3	.89	8.9	36	3.9	3.3	8.2
18	10	10	4.0	2.7	1.7	1.3	.82	12	14	4.2	27	6.4
19	20	8.3	3.8	2.5	1.6	1.3	.96	5.4	6.7	4.0	8.3	5.7
20	7.9	6.3	3.6	2.4	1.5	1.2	.82	31	6.3	3.2	32	5.6
21	7.3	6.3	3.5	2.3	1.5	1.2	.75	29	25	3.2	6.0	5.8
22	5.4	5.2	3.3	2.4	1.3	1.1	.75	11	17	3.1	15	12
23	4.6	4.9	3.2	4.5	1.3	1.3	.75	6.1	15	5.1	4.6	8.7
24	43	4.3	3.2	2.8	1.3	1.6	2.3	4.2	9.5	6.9	4.1	4.9
25	24	4.1	3.0	5.2	1.3	1.3	1.6	9.2	7.2	4.1	13	4.4
26	12	3.9	3.2	7.0	1.3	1.6	1.3	4.0	5.7	e40	e9.0	4.0
27	7.4	13	3.1	2.8	1.3	1.3	6.1	3.2	5.1	e20	e7.0	27
28	10	4.1	3.2	2.4	2.3	1.3	1.3	2.7	4.4	e10	e5.5	30
29	6.1	16	3.1	2.3	---	1.2	1.1	2.5	3.9	e7.0	e5.0	18
30	5.4	5.2	2.9	2.2	---	1.2	1.0	2.3	3.8	e50	e25	6.9
31	5.2	---	3.7	2.2	---	1.2	---	3.3	---	e25	e14	---
TOTAL	295.2	377.4	229.3	109.9	47.7	46.1	35.86	164.27	221.6	290.8	340.1	503.8
MEAN	9.52	12.6	7.40	3.55	1.70	1.49	1.20	5.30	7.39	9.38	11.0	16.0
MAX	43	117	50	11	2.5	5.9	6.1	31	36	50	45	73
MIN	3.5	3.9	2.9	2.2	1.3	1.1	.75	.82	1.8	3.1	2.9	4.0
AC-FT	586	749	455	218	95	91	71	326	440	577	675	999

CAL YR 1984	TOTAL	1735.84	MEAN	4.74	MAX	117	MIN	.51	AC-FT	3440
WTR YR 1985	TOTAL	2662.03	MEAN	7.29	MAX	117	MIN	.75	AC-FT	5280

e Estimated

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 southeast of Agat and 5.8 mi southwest of Yona.

DRAINAGE AREA.--5.88 mi^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 above mean sea level (from U.S. Navy construction plans).

REMARKS.--Gage-height records good except for estimated daily gage-heights, which are fair. About 10 ft^3/s is diverted from Fena Valley Reservoir and tributary springs for military and civilian use. Discharge records represent flow over spillway only.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined, occurred Oct. 15, 1953 (gage height, at least 4.5 ft); no flow for many days each year. Minimum recorded gage height, -21.86 ft, Aug. 4, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 2.10 ft, Nov. 13; minimum, -6.33 ft May 16.

GAGE HEIGHT (FEET AT DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.30	.21	.24	.18	.07	-0.79	-2.69	-5.04	-0.91	.09	.60	.53
2	e.25	.28	.25	.18	.03	-0.82	-2.78	-5.15	-0.93	.18	.33	.91
3	e.20	.23	.21	.15	.01	-0.87	-2.88	-5.25	-0.64	.22	.24	.62
4	e.20	.20	.58	.14	-0.01	-0.93	-2.97	-5.35	-0.39	.14	.21	.50
5	e.15	.18	.70	.12	-0.01	-1.01	-3.08	-5.44	-0.36	.09	.22	.45
6	e.20	.18	.43	.10	.01	-1.05	-3.17	-5.54	-0.37	.08	.23	.80
7	e.20	.18	.32	.11	-0.02	-1.07	-3.26	-5.64	-0.39	.15	.83	.40
8	e.15	.16	.26	.10	-0.05	-1.16	-3.36	-5.75	-0.43	.18	.51	.31
9	e.35	.35	.23	.23	-0.08	-1.25	-3.47	-5.84	-0.48	.12	.41	.36
10	e.30	.29	.22	.41	-0.11	-1.33	-3.57	-5.93	-0.51	.10	.38	.28
11	e.25	.21	.21	.26	-0.13	-1.37	-3.67	-5.98	-0.55	.15	.34	.25
12	e.25	.21	.20	.20	-0.17	-1.47	-3.75	-6.07	-0.59	.20	.32	.65
13	e.20	1.12	.20	.20	-0.21	-1.55	-3.81	-6.17	-0.62	.14	.24	.87
14	e.20	.42	.18	.19	-0.25	-1.42	-3.91	-6.23	-0.61	.10	.21	.40
15	e.25	.30	.17	.18	-0.29	-1.32	-4.02	-8.29	-0.45	.08	.20	.69
16	e.25	.37	.17	.23	-0.32	-1.37	-4.12	-6.16	-0.18	.16	.22	.37
17	.24	.52	.17	.19	-0.33	-1.43	-4.23	-5.19	.57	.14	.25	.28
18	.21	.37	.17	.16	-0.38	-1.50	-4.13	-4.62	.47	.11	.56	.25
19	.36	.28	.17	.14	-0.36	-1.56	-4.42	-4.30	.27	.12	.50	.22
20	.22	.24	.16	.13	-0.39	-1.63	-4.52	-3.55	.17	.08	.58	.21
21	.19	.22	.16	.12	-0.44	-1.72	-4.63	-2.24	.44	.06	.65	.21
22	.15	.22	.15	.10	-0.50	-1.80	-4.74	-1.29	.39	.05	.53	.26
23	.13	.21	.14	.16	-0.55	-1.89	-4.85	-1.09	.43	.09	.40	.35
24	.37	.19	.15	.19	-0.56	-1.98	-4.81	-0.99	.32	.28	.33	.22
25	.50	.19	.14	.16	-0.62	-2.02	-4.85	-0.91	.24	.17	.28	.18
26	.32	.20	.15	.28	-0.69	-2.08	-4.87	-0.82	.19	.68	.41	.16
27	.25	.28	.16	.18	-0.76	-2.14	-4.73	-0.82	.15	.55	.42	.40
28	.26	.20	.17	.14	-0.78	-2.25	-4.74	-0.84	.13	.34	.35	.60
29	.20	.30	.15	.12	---	-2.35	-4.83	-0.87	.10	.26	.28	.47
30	.17	.28	.15	.09	---	-2.48	-4.93	-0.90	.08	.75	.62	.32
31	.16	---	.18	.07	---	-2.59	---	-0.89	---	.55	.50	---
MEAN	.24	.29	.22	.17	-0.28	-1.55	-3.99	-3.91	-0.15	.21	.39	.42
MAX	.50	1.12	.70	.41	.07	-0.79	-2.69	-0.82	.57	.75	.83	.91
MIN	.13	.16	.14	.07	-0.78	-2.59	-4.93	-6.29	-0.93	.05	.20	.16

CAL YR 1984 MEAN -6.69 MAX 1.12 MIN -18.25
WTR YR 1985 MEAN -0.66 MAX 1.12 MIN -6.29

e Estimated

16854500 UGUM RIVER ABOVE TALOFOFO FALLS, NEAR TALOFOFO

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

DRAINAGE AREA.--5.76 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 130 ft, from topographic map.

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

AVERAGE DISCHARGE.--8 years, 24.5 ft^3/s (17,750 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft^3/s Feb. 26, 1980, gege height, 14.2 ft, from flood-marks, from rating curve extended above 350 ft^3/s on basis of slope-area measurement st gage height 14.2 ft; minimum, 3.4 ft^3/s, June 27, 1978, July 14, 18, 19, 1979.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 13	0400	1630	7.90	Sept. 15	0930	*2350	*9.30
Aug. 20	2000	1720	8.07				

Minimum discharge, 5.7 ft^3/s May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	54	34	21	12	10	7.6	6.3	9.9	18	40	65
2	28	62	43	19	12	9.2	7.6	6.3	9.7	29	26	e115
3	25	40	32	19	11	9.0	7.5	6.8	23	21	22	49
4	25	33	203	e18	11	9.0	7.3	6.8	13	18	23	34
5	27	31	131	e17	12	8.9	7.3	6.2	11	17	31	32
6	39	55	59	e17	12	9.7	7.3	6.1	9.9	17	85	e100
7	27	34	49	e16	11	9.1	7.2	6.1	9.6	20	125	39
8	24	30	40	e16	11	8.6	7.0	8.1	9.5	19	52	30
9	56	109	36	e43	11	8.5	7.0	5.9	9.4	17	34	33
10	37	39	33	62	11	10	7.0	5.9	9.5	23	32	28
11	31	36	33	23	11	9.2	7.0	6.6	9.2	22	41	35
12	26	34	30	35	11	8.9	7.3	6.4	9.0	40	29	e155
13	22	415	30	45	10	8.5	7.2	6.4	9.2	20	25	e145
14	25	63	28	21	10	33	6.9	7.5	11	17	22	44
15	81	49	27	19	9.9	14	6.8	7.5	24	16	21	e300
16	56	85	26	19	10	10	6.7	41	27	17	22	49
17	45	165	25	e18	11	9.4	6.8	71	139	17	33	39
18	95	68	25	e17	12	9.0	6.6	61	68	15	75	36
19	140	54	23	e16	11	9.2	7.1	53	26	15	61	33
20	51	47	22	e16	9.9	8.8	6.7	147	19	14	169	32
21	43	44	22	e15	9.7	8.5	6.3	87	117	14	69	49
22	34	40	e22	e14	9.8	8.5	6.3	40	62	14	87	47
23	30	39	21	e14	9.6	8.6	8.4	20	85	16	39	68
24	130	37	21	e13	9.7	8.5	11	15	44	27	32	e35
25	102	36	e20	e13	9.6	9.6	9.4	13	31	16	28	e30
26	61	37	e20	27	9.2	9.5	10	12	26	131	28	27
27	47	53	20	e16	9.0	8.8	9.2	12	27	51	45	181
28	49	36	21	e14	11	8.2	7.7	11	23	26	27	148
29	37	59	20	e13	---	8.0	6.9	10	20	20	22	99
30	33	42	20	e12	---	7.7	6.6	10	18	98	135	51
31	36	---	22	12	---	8.0	---	11	---	58	68	---
TOTAL	1491	1926	1158	640	297.4	305.9	221.7	710.9	908.9	863	1528	2128
MEAN	48.1	64.2	37.4	20.6	10.6	9.87	7.39	22.9	30.3	27.8	49.3	70.9
MAX	140	415	203	62	12	33	11	147	139	131	169	300
MIN	22	30	20	12	9.0	7.7	6.3	5.9	9.0	14	21	27
AC-FT	2960	3820	2300	1270	590	607	440	1410	1800	1710	3030	4220

CAL YR 1984	TOTAL	8798.6	MEAN	24.0	MAX	415	MIN	4.0	AC-FT	17450
WTR YR 1985	TOTAL	12178.8	MEAN	33.4	MAX	415	MIN	5.9	AC-FT	24160

e Estimated

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 upstream from mouth, 1.9 mi southwest of Yona, and 5.6 mi south of Agana.

DRAINAGE AREA.--6.48 mi^2.

PERIOD OF RECORD.--June 1952 to September 1985 (discontinued).

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 20 ft, from topographic map.

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

AVERAGE DISCHARGE.--33 years, 28.1 ft^3/s (20,360 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft^3/s Sept. 9, 1963, gage height, 19.77 ft, from floodmarks, from rating curve extended above 830 ft^3/s on basis of slope-area measurements at gage heights 11.24 ft and 15.87 ft, maximum gage height, 22.80 ft Feb. 26, 1980; minimum, 0.07 ft^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 greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 13	0600	*2870	*16.50	Aug. 30	0730	2260	14.35
July 31	1500	2260	14.33				

Minimum discharge, 1.4 ft^3/s Apr. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	33	26	22	8.8	6.3	2.5	2.8	8.1	17	54	120
2	23	71	43	11	8.0	5.9	2.3	2.6	7.8	18	36	124
3	23	27	22	13	8.0	5.7	2.3	3.6	34	18	28	69
4	20	23	222	9.7	7.6	5.5	2.3	4.8	13	15	25	47
5	19	22	117	9.2	7.8	5.3	2.7	2.9	10	14	72	33
6	31	21	40	8.6	8.3	5.5	2.4	2.8	8.7	17	148	44
7	19	23	32	8.6	7.6	5.1	2.3	2.6	7.9	31	92	57
8	18	19	28	8.1	7.6	4.0	2.1	2.3	7.6	15	39	30
9	72	53	25	71	7.3	3.7	2.1	3.0	12	14	32	123
10	24	21	23	128	7.3	3.7	2.0	2.5	9.9	13	33	31
11	20	19	22	23	8.0	3.9	2.0	2.8	9.0	21	25	31
12	18	24	20	18	6.8	3.7	2.3	2.6	7.9	24	24	173
13	19	700	19	16	6.6	3.4	2.4	2.3	7.2	14	23	97
14	18	50	18	25	6.1	22	2.1	2.4	12	13	20	52
15	41	36	17	14	5.9	9.5	1.9	6.5	23	40	25	74
16	23	77	18	13	5.9	6.1	1.8	10	23	14	23	41
17	19	122	15	11	5.7	5.0	1.9	32	221	13	24	32
18	19	59	14	9.7	6.3	4.5	1.7	129	49	12	122	28
19	90	50	14	8.8	6.8	4.4	1.6	20	26	11	67	25
20	31	35	13	8.8	6.1	4.2	1.6	14	22	11	71	23
21	26	31	12	8.6	5.5	3.9	1.5	26	398	9.8	56	23
22	102	27	11	8.6	4.9	3.6	1.4	14	48	9.8	88	22
23	30	27	11	9.1	4.9	4.7	1.5	12	51	15	30	53
24	101	24	11	8.6	4.7	3.6	4.1	9.7	35	19	28	21
25	35	22	10	8.3	5.1	4.1	4.5	90	36	11	24	19
26	30	21	10	84	4.7	3.7	5.4	20	26	209	40	18
27	24	106	9.8	15	4.5	3.6	25	14	47	85	53	380
28	27	23	10	12	5.9	3.1	6.1	12	24	25	24	138
29	22	27	9.9	11	---	2.8	4.0	11	21	20	21	192
30	20	23	9.2	10	---	2.5	3.1	9.7	19	140	560	41
31	20	---	14	8.8	---	2.6	---	8.7	---	407	107	---
TOTAL	1010	1816	863.9	620.5	182.7	155.6	98.9	478.6	1222.1	1295.6	2012	2161
MEAN	32.6	60.5	27.9	20.0	6.52	5.02	3.30	15.4	40.7	41.8	64.9	72.0
MAX	102	700	222	128	8.8	22	25	129	396	407	560	380
MIN	18	19	9.2	8.1	4.5	2.5	1.4	2.3	7.2	9.8	20	18
AC-FT	2000	3600	1710	1230	362	309	196	949	2420	2570	3990	4290

CAL YR 1984	TOTAL	9274.34	MEAN	25.3	MAX	700	MIN	.30	AC-FT	18400
WTR YR 1985	TOTAL	11916.9	MEAN	32.6	MAX	700	MIN	1.4	AC-FT	23640

16890600 DIONGRADID RIVER, BABELTHUAP

LOCATION.--Lat 07°36'04" N., long 134°35'02" E., Hydrologic Unit 20100006, on right bank 0.3 mi upstream from left-bank tributary, 0.8 mi southeast of Ngetbong village achool, and 2.4 mi upstream from confluence with Ngerchetang River.

DRAINAGE AREA.--4.45 mi^2.

PERIOD OF RECORD.--October 1969 to current year. Frior to October 1980, published as Adeiddo River.

REVISED RECORDS.--WDR HI-75-1: 1970(M), 1972-73(P). WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 15 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion upstream.

AVERAGE DISCHARGE.--16 years, 32.5 ft^3/s (23,550 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft^3/s Jan. 22, 1975, gage height, 15.44 ft, from rating curve extended above 410 ft^3/s on basis of field estimate at gage height 15.44 ft; minimum, 2.1 ft^3/s Apr. 14-17, 1983.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 12	0400	*1290	*10.77	Sept. 24	0900	681	7.66

Minimum discharge, 6.8 ft^3/s Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	30	10	7.4	17	23	11	13	20	60	77	29
2	50	28	9.9	7.4	26	21	12	28	e50	48	68	29
3	e40	29	9.7	7.9	30	19	9.7	15	e40	47	58	29
4	e37	31	10	11	20	20	11	13	29	42	52	31
5	e35	27	13	14	19	20	15	12	26	47	49	31
6	e85	24	13	9.9	18	18	14	12	e40	54	64	30
7	60	23	10	16	17	19	41	20	34	80	47	26
8	64	22	9.1	29	16	18	23	15	30	61	53	26
9	158	22	8.9	19	16	17	16	15	27	54	44	87
10	145	21	8.6	35	15	18	16	20	27	49	40	43
11	116	19	8.6	60	14	16	14	21	33	48	38	36
12	132	18	8.6	166	14	15	12	23	28	51	41	263
13	100	18	8.4	69	13	15	11	22	30	45	40	81
14	110	17	10	50	25	14	11	17	28	47	48	82
15	89	18	16	46	15	14	12	19	33	41	e65	80
16	82	16	9.7	38	21	14	11	20	e45	42	48	63
17	143	15	8.9	34	28	13	15	20	46	38	44	56
18	108	13	8.4	36	19	12	12	24	41	35	39	52
19	91	13	7.9	40	18	12	16	28	38	36	38	48
20	80	13	7.4	32	16	12	12	27	42	50	e35	45
21	69	13	7.2	29	18	11	11	23	e65	36	e33	42
22	61	13	7.9	27	18	13	11	20	58	34	30	39
23	61	12	7.2	26	16	12	10	19	49	39	29	38
24	60	12	7.2	29	47	11	9.7	19	e70	37	39	144
25	53	12	7.9	26	38	11	19	18	e110	35	34	100
26	46	15	12	23	27	11	23	18	93	40	32	61
27	43	12	9.1	21	28	11	21	18	80	46	30	60
28	38	12	10	19	24	11	15	18	66	78	26	52
29	36	15	9.9	19	---	11	13	16	58	56	25	61
30	36	12	8.9	19	---	10	12	17	52	103	31	57
31	31	---	7.9	18	---	11	---	17	---	70	33	---
TOTAL	2305	545	291.3	983.6	593	453	439.4	587	1388	1549	1330	1821
MEAN	74.4	18.2	9.40	31.7	21.2	14.6	14.6	18.9	46.3	50.0	42.9	60.7
MAX	158	31	16	166	47	23	41	28	110	103	77	263
MIN	31	12	7.2	7.4	13	10	9.7	12	20	34	25	26
AC-FT	4570	1080	578	1950	1180	899	872	1160	2750	3070	2640	3610

CAL YR 1984	TOTAL	11189.9	MEAN	30.6	MAX	200	MIN	7.2	AC-FT	22200
WTR YR 1985	TOTAL	12285.3	MEAN	33.7	MAX	263	MIN	7.2	AC-FT	24370

e Estimated

16890600 DIONGRADID RIVER, BABELTHUAP--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
24...	1030	52	--	25.0
NOV				
20...	1325	13	30.0	26.5
DEC				
20...	1325	7.7	28.0	26.0
JAN , 1985				
22...	1200	26	28.0	25.0
FEB				
27...	1155	27	28.0	26.0
APR , 1985				
04...	1245	11	28.0	26.0
24...	1150	10	29.0	25.5
MAY				
21...	1320	23	--	26.0
JUL				
10...	1325	51	28.0	26.0
AUG				
22...	1235	32	28.0	25.5

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
24...	1030	52	42	6.8	25.0	15	0	2.8	1.9	3.1	31	.4

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
24...	.20	15	2.4	4.3	<.10	13	37	.05	.10	57	7

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

16890900 TABECHEDING RIVER, BABELTHUAP

LOCATION.--Lat 07°27'03" N., long 134°31'29" E., Hydrologic Unit 20100006, on left bank 0.2 mi downstream from waterfall, 1.5 mi upstream from boat landing, and 1.6 mi east of forestry station.

DRAINAGE AREA.--6.07 mi^2.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1980, published as Tabagaten River.

REVISED RECORDS.--WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft, from topographic map.

REMARKS.--Records fair except those above 500 ft^3/s and for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--15 years, 46.7 ft^3/s (35,280 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,580 ft^3/s Dec. 23, 1973, gage height, 8.79 ft, from rating curve extended above 290 ft^3/s; minimum, 0.57 ft^3/s Apr. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 6	-	*3000	-	Sept. 12	0230	1360	6.83
July 30	0300	1080	6.27	Sept. 24	0800	1220	6.58

Minimum discharge, 13 ft^3/s for several days in March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e25	20	19	20	17	e60	e15	36	23	58	e80	125
2	e20	27	16	19	38	e45	e17	32	97	46	e100	119
3	e20	22	16	28	43	e35	e18	27	31	42	e65	125
4	e25	27	31	30	23	e35	e15	25	23	36	e55	82
5	e20	34	32	34	20	e30	e20	23	36	47	e50	82
6	e60	23	34	26	19	e30	e25	21	23	73	e130	102
7	e50	27	26	63	19	e25	e90	21	20	72	e60	68
8	e700	20	21	108	16	e25	e30	23	17	55	e60	70
9	e400	82	19	68	16	e23	e25	35	16	46	e50	135
10	e180	44	18	234	16	e21	e20	24	15	39	e45	74
11	e110	31	21	242	15	e20	e17	23	58	56	e40	63
12	e110	26	17	e314	14	e20	e17	53	26	68	e40	386
13	e80	24	16	e110	17	e18	e15	39	23	46	e45	e140
14	e100	22	36	e80	83	e16	e17	30	26	39	e40	e250
15	e65	20	69	e80	22	e15	e15	68	78	36	e70	e150
16	e60	19	31	e55	22	e15	e45	51	59	55	85	e100
17	e130	18	24	e50	42	e15	e60	76	56	41	42	e80
18	e100	16	21	e60	25	e15	e30	94	44	37	34	e100
19	e80	17	20	e45	22	e13	e25	151	34	33	30	e100
20	e65	15	19	e40	22	e13	e23	102	52	54	27	e70
21	e55	14	17	e35	25	e15	e23	65	37	32	25	e60
22	e50	14	18	e30	109	e17	e20	45	33	28	23	e50
23	e60	14	15	e30	54	e20	e20	35	33	25	23	e45
24	69	14	16	e40	80	e15	e22	31	91	51	106	382
25	58	23	17	e35	96	e13	e35	29	221	36	94	195
26	42	100	75	26	53	e15	e60	25	93	42	79	106
27	42	33	24	24	46	e20	e90	22	73	54	50	80
28	34	23	52	22	e85	e13	e60	20	96	85	44	66
29	29	20	32	20	---	e13	51	20	59	62	62	88
30	26	19	24	19	---	e13	41	25	48	e280	70	70
31	23	---	20	18	---	e25	---	23	---	e90	272	---
TOTAL	2868	808	814	2005	1059	668	961	1294	1543	1764	1996	3563
MEAN	93.2	26.9	26.3	64.7	37.8	21.5	32.0	41.7	51.4	56.9	64.4	119
MAX	700	100	75	314	109	60	90	151	221	280	272	386
MIN	20	14	15	18	14	13	15	20	15	25	23	45
AC-FT	5730	1600	1610	3980	2100	1320	1910	2570	3060	3500	3960	7070

CAL YR 1984	TOTAL	17744	MEAN	48.5	MAX	700	MIN	10	AC-FT	35200
WTR YR 1985	TOTAL	19363	MEAN	53.0	MAX	700	MIN	13	AC-FT	38410

e Estimated

16890900 TABECHEDING RIVER, BABELTHUAP--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
23...	0955	49	--	25.5
NOV				
19...	1410	17	28.0	27.0
JAN , 1985				
25...	1115	35	27.0	25.5
FEB				
26...	1050	48	28.0	26.0
APR				
03...	1115	17	28.0	26.5
23...	1130	20	29.0	26.5
MAY , 1985				
22...	1140	45	28.0	26.0
JUL				
05...	1145	34	27.5	26.0
AUG				
15...	1135	54	--	25.5
SEP				
23...	1340	41	28.0	26.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
23...	0955	49	46	7.3	25.5	17	0	2.8	2.4	3.3	30	.4

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
23...	.10	19	1.6	3.6	<.10	17	42	.08	<.10	29	7

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

16891310 KMEKUMEL RIVER, BABELTHUAP

LOCATION.--Lat 07°23'14" N., long 134°32'42" E., Hydrologic Unit 20100006, 0.5 mi upstream from confluence with Edeng River and 1.1 mi north of Palau Mission Academy.

DRAINAGE AREA.--1.44 mi^2.

PERIOD OF RECORD.--September 1978 to current year. Low-flow partial-record station operated "at mouth" 1970-78. Prior to October 1980, published as Kumekumeyel River.

REVISED RECORDS.--WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 96.44 ft, from stadia survey.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion upstream.

AVERAGE DISCHARGE.--7 years, 9.37 ft^3/s (6,790 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,560 ft^3/s Apr. 13, 1979, gage height, 10.53 ft, from rating curve extended above 106 ft^3/s on basis of slope-area measurement at gage height 10.53 ft; minimum, 0.18 ft^3/s Apr. 14-17, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 8	2200	573	6.94	Sept. 12	-	500	-
June 16	1530	*651	*7.31	Sept. 24	-	450	-

Minimum discharge, 1.8 ft^3/s Mar. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.8	4.3	4.8	4.1	12	4.8	5.9	5.7	e11	19	14
2	4.1	4.8	3.7	4.4	8.2	8.6	5.5	5.2	19	e9.5	e25	20
3	3.9	4.6	3.7	5.3	7.7	7.5	4.6	5.0	7.0	8.6	16	16
4	7.9	4.8	4.3	6.2	4.8	6.8	3.5	5.0	6.1	7.9	13	12
5	5.0	4.3	5.0	6.4	4.3	6.2	6.7	5.7	7.9	9.9	15	13
6	8.2	4.8	5.5	7.1	4.3	5.5	6.8	5.0	4.8	12	20	15
7	13	5.7	3.9	12	4.1	5.2	20	5.2	5.3	11	13	11
8	54	4.3	3.7	21	3.5	5.0	10	5.0	5.0	8.6	12	11
9	54	7.4	3.4	14	3.5	4.8	8.1	5.7	4.8	7.3	9.9	e40
10	31	8.5	4.3	e60	3.4	5.0	7.0	5.2	5.7	6.8	9.2	15
11	19	5.3	3.9	e50	3.2	4.3	5.9	4.4	14	7.5	8.4	14
12	15	4.3	3.0	e70	2.9	3.7	5.3	5.9	6.4	9.4	7.7	e100
13	34	8.8	3.0	27	2.9	3.5	5.0	4.8	5.3	6.4	9.6	20
14	25	5.3	7.4	20	9.6	3.2	4.8	4.1	7.2	6.1	9.8	51
15	16	4.3	9.0	21	4.1	3.0	4.8	5.2	28	6.6	8.6	28
16	16	4.1	4.4	14	3.9	2.9	8.2	7.6	57	9.0	11	21
17	24	3.9	4.3	12	5.3	2.9	7.3	6.8	23	7.5	7.5	16
18	23	3.7	3.7	12	3.7	2.6	5.3	9.2	16	6.2	6.6	17
19	18	3.7	3.5	9.7	4.8	2.4	5.3	30	e13	6.1	6.2	14
20	14	3.4	3.4	8.6	3.9	2.2	5.0	16	e13	6.8	5.7	12
21	12	3.2	3.2	7.7	5.0	2.2	4.6	12	e10	5.2	5.5	8.6
22	10	3.2	3.0	7.0	25	3.4	4.3	9.0	e9.0	5.0	5.2	11
23	11	3.0	2.9	6.6	10	3.0	4.1	7.7	e9.0	12	5.2	9.7
24	9.0	3.2	2.9	7.0	11	2.2	3.7	6.6	e18	7.7	9.4	e80
25	8.1	7.4	3.2	6.1	18	2.1	17	6.6	e50	5.9	6.1	18
26	7.5	12	18	5.5	10	2.7	11	5.5	e18	15	5.2	16
27	7.7	6.6	5.7	5.2	11	5.0	13	5.3	e13	20	5.0	13
28	6.4	5.3	7.0	5.0	13	2.5	10	5.2	e18	30	5.0	12
29	5.9	4.4	6.1	4.6	---	2.5	7.9	5.0	e11	e15	e15	17
30	5.5	4.3	5.5	4.4	---	2.1	6.4	5.5	e10	e70	10	16
31	5.3	---	4.4	4.1	---	8.5	---	5.2	---	21	e25	---
TOTAL	477.8	153.4	147.3	448.7	195.2	133.5	215.7	220.5	420.0	371.0	329.8	661.3
MEAN	15.4	5.11	4.75	14.5	6.97	4.31	7.19	7.11	14.0	12.0	10.6	22.0
MAX	54	12	16	70	25	12	20	30	57	70	25	100
MIN	3.9	3.0	2.9	4.1	2.9	2.1	3.5	4.1	4.6	5.0	5.0	8.6
AC-FT	948	304	292	890	387	265	428	437	833	736	654	1310

CAL YR 1984	TOTAL	3645.5	MEAN	9.96	MAX	55	MIN	2.4	AC-FT	7230
WTR YR 1985	TOTAL	3774.2	MEAN	10.3	MAX	100	MIN	2.1	AC-FT	7490

e Estimated

16891310 KMEKUMEL RIVER, BABELTHUAP--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
26...	0945	7.6	--	25.5
NOV				
28...	1155	5.4	28.0	26.0
JAN , 1985				
30...	1125	4.3	28.0	25.5
MAR				
04...	1105	6.4	29.0	26.0
APR				
02...	1205	5.1	28.0	26.5
MAY , 1985				
03...	1340	4.9	29.0	26.0
29...	1205	5.0	29.5	26.5
JUL				
02...	1220	9.3	28.0	26.0
AUG				
12...	1200	8.1	28.0	26.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
26...	0945	7.6	69	7.3	25.5	31	3	7.0	3.4	3.9	21	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
26...	.20	29	1.2	4.3	<.10	22	59	.08	<.10	67	7

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

16891400 SOUTH FORK NGERDORCH RIVER, BABELTHUAP

LOCATION.--Lat 07°28'19" N., long 134°34'28" E., Hydrologic Unit 20100006, on right bank 0.3 mi from left-bank tributary, 1.3 mi west of Rrai village, and 1.5 mi upstream from confluence with North Fork Ngerdorch River.

DRAINAGE AREA.--2.44 mi^2.

PERIOD OF RECORD.--March 1971 to current year. Prior to October 1980, published as South Fork Ngardok River.

REVISED RECORDS.--WDR HI-75-1: 1971(M), 1972, 1973(P), 1974. WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 25 ft, revised, from topographic map.

REMARKS.--Records good. No diversion upstream.

AVERAGE DISCHARGE.--14 years, 19.1 ft^3/s (13,840 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft^3/s Dec. 13, 1974, gage height, 9.19 ft, from rating curve extended above 65 ft^3/s on basis of field estimate at gage height 7.57 ft; minimum, 0.48 ft^3/s Apr. 16-17, 1983.

EXTREMES FOR CURRENT YEAR.--Peak dischargee greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 8	2030	*3180	*7.02	Sept. 24	0800	1070	4.52
Sept. 12	0330	1320	4.92				

Minimum discharge, 3.8 ft^3/s Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	9.3	5.9	7.1	7.1	26	6.3	9.3	7.5	19	33	38
2	8.1	8.7	5.4	8.7	12	18	6.7	8.7	22	15	40	43
3	7.5	8.7	5.0	8.7	12	15	6.7	7.5	9.3	14	26	40
4	10	9.3	7.5	9.3	8.1	14	6.3	7.1	7.5	13	22	27
5	8.7	8.1	7.1	9.9	7.1	12	7.5	7.1	12	23	20	24
6	24	8.1	8.1	9.3	6.7	11	9.3	7.1	8.7	37	50	20
7	21	8.7	5.9	24	6.7	9.9	34	6.7	7.1	31	23	17
8	346	7.1	5.0	33	6.3	9.3	14	8.1	6.7	23	23	20
9	159	15	5.0	25	5.9	8.7	9.9	9.3	6.3	20	19	92
10	72	9.9	5.0	107	5.9	8.7	8.1	6.7	6.3	16	16	27
11	42	8.7	5.9	81	5.9	8.1	7.1	6.3	7.5	18	14	21
12	42	7.5	4.6	117	5.4	7.5	6.7	8.1	6.7	20	12	227
13	33	7.1	4.6	46	5.9	7.1	8.3	6.7	9.3	16	15	56
14	39	6.7	13	33	27	6.7	6.7	6.3	8.1	14	13	101
15	26	6.7	14	31	7.5	6.3	6.3	9.9	64	16	18	66
16	24	6.3	7.1	23	7.5	6.3	17	8.1	18	23	23	38
17	52	5.9	5.9	21	9.9	5.9	22	9.3	17	21	13	32
18	42	5.4	5.9	24	6.7	5.9	11	12	16	17	12	39
19	33	5.9	5.9	19	7.1	5.4	9.9	43	12	14	9.9	39
20	26	5.4	5.0	16	6.7	5.4	8.7	37	14	15	9.3	27
21	22	5.2	5.0	14	10	5.9	7.5	19	11	12	8.7	23
22	18	5.0	5.0	13	38	7.1	6.7	14	10	12	8.1	23
23	19	5.0	4.2	12	18	7.5	6.3	12	9.9	10	8.7	22
24	20	5.0	4.6	15	26	5.9	6.3	11	29	15	19	176
25	19	5.9	5.4	12	29	5.0	7.1	10	75	12	45	55
26	16	29	24	9.9	18	5.9	21	9.3	28	16	20	36
27	16	16	8.1	9.9	16	7.5	32	8.7	23	20	16	31
28	13	8.1	8.7	8.7	35	5.0	16	8.1	27	37	19	25
29	12	7.1	13	8.1	---	5.4	12	7.5	19	27	17	27
30	11	6.3	8.7	8.1	---	5.0	9.9	9.3	16	116	25	25
31	9.9	---	7.1	7.5	---	9.3	---	7.1	---	34	116	---
TOTAL	1200.5	251.1	225.6	769.2	357.4	266.7	335.3	340.3	511.9	696	713.7	1437
MEAN	38.7	8.37	7.28	24.8	12.8	8.60	11.2	11.0	17.1	22.5	23.0	47.9
MAX	346	29	24	117	38	26	34	43	75	116	116	227
MIN	7.5	5.0	4.2	6.7	5.4	5.0	6.3	6.3	6.3	10	8.1	17
AC-FT	2380	498	447	1530	709	529	665	675	1020	1380	1420	2850

CAL YR 1984	TOTAL	6576.0	MEAN	18.0	MAX	346	MIN	3.8	AC-FT	13040
WTR YR 1985	TOTAL	7104.7	MEAN	19.5	MAX	346	MIN	4.2	AC-FT	14090

16891400 SOUTH FORK NGERDORCH RIVER, BABELTHUAP--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
25...	1045	17	--	26.0
NOV				
21...	1045	5.2	29.0	25.5
JAN , 1985				
28...	1220	9.0	30.0	27.0
FEB				
28...	1115	14	28.0	28.5
APR				
11...	1135	6.9	--	26.0
25...	1050	6.2	29.5	26.0
MAY , 1985				
23...	1200	12	30.0	27.0
JUL				
11...	1320	14	--	27.0
AUG				
23...	1200	7.8	29.0	27.0
SEP				
24...	1325	112	27.0	26.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
25...	1045	17	41	7.3	26.0	15	0	2.7	2.0	3.1	31	.4

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
25...	.10	17	2.4	4.5	<.10	15	40	.05	<.10	49	6

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

16892000 QATLIW STREAM, YAP

LOCATION.--Lat 09°32'58" N., long 138°06'41" E., Hydrologic Unit 20100006, on right bank 90 ft below confluence with major tributary, 0.5 mi upstream from mouth, and 2.6 mi northwest of Colonia.

DRAINAGE AREA.--0.31 mi^2.

PERIOD OF RECORD.--January 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 40 ft, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 874 ft^3/s June 21, 1982, gage height, 5.96 ft, from rating curve extended above 10 ft^3/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and msximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	2200	365	4.22	Aug. 13	0830	253	3.65
Aug. 4	1530	*430	*4.48				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.13	.11	3.8	.03	.00	.04	.30	3.2	.08	1.7	.51
2	.02	7.8	.05	9.7	.08	.01	.03	.06	.13	.08	.94	5.1
3	.02	7.7	.03	7.5	.04	.02	.02	.05	4.4	.08	.63	1.2
4	.02	.88	.06	1.5	.02	.02	.03	.04	3.7	.06	23	.34
5	.02	.23	8.3	.57	.02	.02	.06	.03	.39	.96	9.7	7.4
6	.05	.13	2.9	.39	.01	.01	.05	.01	.88	.19	1.7	.76
7	.88	.08	.39	2.6	.01	.01	.01	.01	3.2	4.3	.30	.16
8	2.2	.08	.13	7.8	.01	.01	.03	.00	.34	.94	.11	.11
9	1.5	.11	.08	2.8	.02	.01	.28	.00	.13	.45	.10	.08
10	1.2	.05	.05	5.0	6.5	.02	.11	.01	.06	.34	.04	.08
11	4.2	.08	.05	5.4	1.3	.02	.05	.03	.05	1.3	.03	.57
12	.51	.06	.05	1.6	.16	.01	.02	.03	.13	1.4	.03	.88
13	.16	.05	.05	5.1	.08	.01	.01	.94	.13	.19	14	.51
14	.08	.04	.06	.63	.06	.00	.00	.19	.11	1.2	3.5	1.8
15	.08	.04	.05	.94	.03	.01	.00	.08	.76	.23	.45	1.2
16	12	.04	.52	.34	.02	.06	.00	.30	.70	.06	9.1	10
17	3.8	21	.23	.13	.02	.06	.00	2.6	35	.23	3.0	.51
18	2.0	8.0	.05	2.8	.02	.10	.02	.83	13	.05	.45	.16
19	1.8	.88	.04	1.8	.02	.08	.10	.82	5.2	.03	.13	.13
20	3.5	.23	.04	.27	.03	.11	.16	.19	1.3	.05	.11	.10
21	8.1	.11	.03	.10	.03	.11	.11	.13	9.5	.03	.08	.06
22	12	.08	.02	.23	.03	.10	.11	.08	2.7	.02	.08	.06
23	3.7	.10	.02	.19	.04	.06	.06	.04	2.3	.01	.92	2.8
24	.70	3.0	.02	17	.05	.04	.06	.03	26	.01	.39	1.5
25	5.5	2.0	.02	6.3	.04	.06	.05	.82	9.5	.03	.10	.34
26	1.3	.30	.02	3.3	.02	.13	.00	.10	.88	5.4	.45	.10
27	8.5	.11	.03	.88	.01	.05	.00	.05	1.1	1.4	1.8	.06
28	1.4	.08	.03	.30	.01	.23	.76	.03	.23	6.5	.88	.07
29	.30	.45	.02	.19	---	.03	.13	.02	.10	3.1	9.8	1.4
30	.16	.13	.02	.08	---	.00	4.5	.04	.08	1.3	9.1	16
31	.10	---	.37	.05	---	.00	---	.20	---	1.3	1.8	---
TOTAL	75.61	51.97	11.84	89.29	8.69	1.40	6.80	8.06	125.20	31.30	94.42	53.99
MEAN	2.44	1.73	.38	2.88	.31	.045	.23	.26	4.17	1.01	3.05	1.80
MAX	12	21	6.3	17	6.5	.23	4.5	2.8	35	6.5	23	16
MIN	.01	.04	.02	.05	.01	.00	.00	.00	.05	.01	.03	.06
AC-FT	150	103	23	177	17	2.8	13	16	248	62	187	107

CAL YR 1984	TOTAL	373.63	MEAN	1.02	MAX	21	MIN	.00	AC-FT	741
WTR YR 1985	TOTAL	558.57	MEAN	1.53	MAX	35	MIN	.00	AC-FT	1110

16892400 QARINGEEL STREAM, YAP

LOCATION.--Lat 09°31'02" N., long 138°05'31" E., Hydrologic Unit 20100006, on right bank at Qaringeel and 0.3 mi southwest of Dalipeebinaew School.

DRAINAGE AREA.--0.24 mi^2.

PERIOD OF RECORD.--April 1968 to current year. Prior to October 1980, published as Aringel Stream.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 15 ft, from topographic map.

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

AVERAGE DISCHARGE.--17 years, 1.10 ft^3/s (797 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 674 ft^3/s July 13, 1981, gage height, 7.82 ft, from rating curve extended above 20 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 22	1230	204	4.95	Aug. 29	0630	322	5.78
Jan. 13	0230	325	5.80	Sept. 5	0530	208	4.98
June 17	2300	*408	*6.35	Sept. 16	0230	212	5.02
June 24	0800	240	5.23	Sept. 30	1400	230	5.16
Aug. 4	1500	391	6.24				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.16	.27	2.3	.02	.01	.00	.33	.16	.03	5.6	.81
2	.88	4.1	.14	7.1	.02	.01	.00	.13	.20	.02	2.0	4.2
3	.30	4.9	.08	12	.01	.01	.00	.05	3.0	.04	1.5	1.8
4	.25	.80	.13	.92	.01	.01	.00	.02	1.8	.02	10	1.6
5	.14	.27	4.9	.51	.01	.00	.02	.02	.33	3.2	7.8	10
6	.10	.30	1.4	.27	.01	.00	.04	.01	.27	.45	1.5	1.1
7	1.3	.18	.42	1.6	.01	.00	.04	.01	2.3	1.8	.54	.54
8	4.2	.11	.18	5.1	.01	.25	.04	.01	.27	.54	.25	.27
9	3.0	.07	.13	1.4	.01	.64	.08	.00	.13	.23	.23	.64
10	1.7	.06	.08	4.4	2.5	.18	.07	.00	.05	.16	.14	1.3
11	.51	.06	.05	3.4	1.1	.05	.03	.01	.03	.23	.11	2.5
12	.58	.08	.02	1.1	.20	.02	.01	.01	.08	.30	.10	2.3
13	.51	.04	.02	9.0	.25	.01	.01	.74	.14	.20	8.7	3.6
14	1.1	.02	.02	.65	.10	.01	.01	.27	.39	9.4	3.4	2.4
15	.69	.02	.01	.69	.05	.01	.00	.10	4.3	1.4	.58	2.1
16	8.6	.02	.04	.73	.02	.01	.00	.10	2.0	16	13	19
17	1.9	22	.04	.30	.01	.01	.00	2.6	30	7.3	5.8	.46
18	1.7	5.0	.02	4.0	.01	.01	.30	1.1	12	1.4	.39	.16
19	1.4	.58	.01	1.4	.01	.00	.39	.67	3.5	.58	.08	.11
20	2.6	.27	.01	.36	.01	.00	.14	.25	.97	.23	.25	.05
21	8.7	.25	.01	.16	.01	.00	2.3	.13	4.8	.10	.13	.03
22	14	.25	.01	.18	.01	.00	1.1	.06	1.6	.07	.10	.02
23	2.1	.39	.01	.14	.01	.00	.27	.03	7.1	.05	.07	5.0
24	1.2	3.2	.01	16	.01	.00	.72	.02	25	.04	.05	.77
25	8.1	3.1	.01	5.6	.01	.00	.54	.03	6.5	.16	.04	.18
26	1.3	.36	.01	1.7	.01	.00	.23	.01	.18	4.2	1.1	.07
27	8.1	.16	.00	.92	.01	.00	.13	.01	.46	5.4	1.4	.05
28	1.5	.16	.00	.39	.01	.00	.07	.01	.26	10	.97	.08
29	.54	.36	.00	.18	---	.00	.05	.01	.08	4.9	19	1.1
30	.27	.39	.00	.08	---	.00	1.9	.01	.04	2.4	5.1	15
31	.13	---	.12	.04	---	.00	---	.01	---	3.8	5.6	---
TOTAL	77.84	47.66	8.15	82.60	4.45	1.22	8.49	6.76	107.94	74.65	95.53	77.24
MEAN	2.51	1.59	.26	2.66	.16	.039	.28	.22	3.60	2.41	3.08	2.57
MAX	14	22	4.9	16	2.5	.64	2.3	2.6	30	16	19	19
MIN	.10	.02	.00	.04	.01	.00	.00	.00	.03	.02	.04	.02
AC-FT	154	95	16	164	8.8	2.4	17	13	214	148	189	153

CAL YR 1984	TOTAL	319.39	MEAN	.87	MAX	22	MIN	.00	AC-FT	634
WTR YR 1985	TOTAL	592.53	MEAN	1.62	MAX	30	MIN	.00	AC-FT	1180

16892480 AIRPORT POND, YAP

LOCATION.--Lat 09°29'14" N., long 138°05'08" E., Hydrologic Unit 20100006, on northwest shore of pond, behind Pacific Missionary Aviation facilities, and north of former landing strip.

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Records good except for estimated daily water levels, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.38 ft, June 18, 1985; lowest, 28.19 ft, June 1, 1984.

EXTREMES FOR CURRENT YEAR.--Highest water level, 34.38 ft, June 18; lowest, 31.22 ft, Apr. 17.

GAGE HEIGHT (FEET AT DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.81	33.08	e32.9	32.67	32.90	32.14	31.48	32.15	31.85	32.91	e33.2	33.13
2	32.98	33.15	e32.9	32.79	32.88	32.09	31.44	32.12	31.85	32.88	e33.2	33.19
3	32.97	33.45	32.88	33.17	32.85	32.05	31.38	32.08	32.09	32.87	e33.0	33.20
4	32.92	33.29	32.87	33.13	32.83	32.01	31.35	32.07	32.19	32.84	e32.9	33.11
5	32.88	33.19	32.95	33.05	e32.8	31.96	31.42	32.04	32.20	33.05	e33.2	33.27
6	32.84	33.14	33.03	32.95	e32.8	31.90	31.41	32.04	32.20	33.08	e33.3	33.20
7	32.83	33.12	32.98	32.96	32.70	31.86	31.37	32.01	32.33	33.04	e33.1	33.11
8	32.97	33.05	32.93	33.10	32.68	31.93	31.33	31.96	32.36	33.00	e32.9	33.03
9	33.12	32.99	32.88	33.19	32.66	32.13	31.53	31.91	32.35	32.93	e32.8	32.97
10	33.13	32.95	32.85	33.20	32.73	32.11	31.53	31.86	32.33	32.88	e32.7	32.96
11	33.15	32.92	32.81	33.44	32.81	32.09	31.50	31.81	32.30	32.87	e32.7	32.99
12	33.08	32.88	32.78	33.43	32.78	32.07	31.45	31.77	32.29	32.91	e32.5	33.04
13	33.03	32.85	32.74	33.37	32.75	32.03	31.40	31.76	32.28	32.87	e32.6	33.05
14	33.16	32.80	32.71	33.26	32.71	31.97	31.34	31.73	32.25	32.86	e33.3	33.09
15	33.22	32.78	32.68	33.16	32.67	31.83	31.29	31.70	32.30	32.83	e33.2	33.06
16	33.33	e32.8	32.67	33.10	32.64	31.91	31.24	31.69	32.36	32.79	e33.5	33.63
17	33.25	e33.0	32.66	33.03	32.58	31.90	31.23	31.77	32.40	32.78	e33.3	33.30
18	33.20	e33.5	32.65	33.02	32.54	31.85	31.38	31.77	34.05	32.75	e33.2	33.16
19	33.21	e33.3	32.63	33.05	32.51	31.79	31.55	31.78	33.49	32.74	e33.1	33.07
20	33.26	e33.1	32.64	33.00	32.48	31.75	31.57	31.75	33.28	32.73	33.04	33.01
21	33.37	e33.0	32.54	32.94	32.45	31.72	31.55	31.69	33.29	32.71	32.97	32.96
22	33.56	e32.9	32.49	32.92	32.40	31.69	31.59	31.78	33.32	32.68	32.91	32.91
23	33.45	e32.8	32.44	32.89	32.47	31.64	31.56	31.69	33.23	32.40	32.88	32.94
24	33.30	e32.8	32.40	33.08	32.35	31.59	31.55	31.66	33.61	32.13	32.85	33.04
25	33.39	e33.0	32.36	33.47	32.32	31.58	31.57	31.65	33.75	32.19	32.82	32.98
26	33.37	e33.0	32.32	33.27	32.27	31.60	31.48	31.62	33.38	e32.8	32.80	32.93
27	33.40	e33.0	32.27	33.20	32.23	31.63	31.43	31.57	33.20	e33.0	32.79	33.11
28	33.45	e32.9	32.23	33.12	32.18	31.63	31.39	31.52	33.08	e33.2	32.85	33.28
29	33.32	e32.9	32.19	33.06	---	31.60	31.34	31.46	33.00	e33.1	33.33	33.26
30	33.21	e32.9	32.16	33.00	---	31.55	32.01	31.47	32.95	e33.0	33.44	33.63
31	33.13	---	32.17	32.95	---	31.50	---	31.55	---	e32.9	33.24	---
MEAN	33.17	33.02	32.64	33.10	32.61	31.85	31.46	31.79	32.72	32.83	33.02	32.02
MAX	33.56	33.50	33.03	33.47	32.90	32.14	32.01	32.15	34.05	33.20	33.50	33.63
MIN	32.81	32.78	32.16	32.67	32.18	31.50	31.23	31.46	31.85	32.13	32.50	.00

WTR YR 1985 MEAN 32.52 MAX 34.05 MIN .00

e Estimated

16893100 BURONG STREAM, YAP

LOCATION.--Lat 09°32'05" N., long 138°07'19" E., Hydrologic Unit 20100006, on left bank at Dugor, 0.25 mi upstream from mouth, and 0.5 mi northeast of Mount Gamuw.

DRAINAGE AREA.--0.23 mi^2.

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. Elevation of gage is 15 ft, from topographic map.

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

AVERAGE DISCHARGE.--17 years, 0.933 ft^3/s (676 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 550 ft^3/s June 21, 1982, gage height, 5.45 ft, from rating curve extended above 15 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/a)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 18	0100	*360	*4.80	Sept. 16	0200	133	3.66
June 24	1130	152	3.79	Sept. 23	1800	184	3.98
Aug. 4	1600	146	3.75				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.09	.05	1.6	.07	.00	.05	.60	.88	.07	1.1	.50
2	.02	2.4	.03	5.1	.07	.00	.04	.13	.13	.06	.53	3.1
3	.01	5.4	.03	7.5	.06	.00	.01	.07	2.7	.05	.40	1.0
4	.02	.75	.05	1.0	.04	.00	.01	.04	2.3	.05	8.7	.53
5	.01	.27	3.6	.34	.02	.00	.07	.02	.37	.65	8.8	5.7
6	.00	.18	2.0	.20	.01	.00	.06	.01	1.4	.22	1.6	.80
7	.00	.13	.37	.70	.00	.00	.02	.00	3.7	2.4	.53	.30
8	.01	.08	.14	4.3	.00	.00	.01	.00	.40	.60	.22	.20
9	.05	.06	.10	1.8	.00	.07	.05	.00	.14	.20	.16	.16
10	.47	.05	.07	2.7	4.0	.05	.04	.00	.10	.18	.11	.13
11	1.1	.05	.05	4.6	1.1	.02	.02	.00	.07	.22	.09	.85
12	.47	.05	.03	1.1	.20	.01	.01	.00	.42	1.2	.10	1.3
13	.18	.03	.02	2.7	.09	.00	.00	.21	.34	.27	9.7	4.0
14	.30	.01	.02	.57	.06	.00	.00	.11	.24	1.3	2.0	2.3
15	.34	.01	.02	.37	.03	.00	.00	.05	.80	.44	.65	1.5
16	9.4	.01	.43	.24	.02	.04	.00	.13	.53	.18	8.9	14
17	3.2	16	.30	.16	.01	.03	.00	1.6	4.2	.20	2.2	.60
18	1.0	5.3	.11	1.0	.01	.01	.02	.34	32	.13	.60	.27
19	.85	.65	.07	1.1	.00	.00	.07	.37	3.5	.09	.27	.18
20	3.2	.22	.04	.27	.00	.00	.02	.24	1.4	.09	.20	.10
21	6.8	.13	.02	.14	.00	.00	.01	.24	3.9	.06	.14	.09
22	11	.09	.01	.11	.00	.00	.01	.08	2.4	.05	.10	.07
23	2.9	.08	.01	.10	.00	.00	.00	.04	.60	.03	.09	9.8
24	.65	2.2	.00	12	.00	.00	.24	.04	19	.02	.09	2.0
25	4.9	1.9	.00	5.8	.00	.00	.09	.34	7.6	.06	.07	.57
26	1.4	.34	.00	2.1	.00	.00	.03	.09	.70	2.8	.18	.22
27	7.0	.14	.00	.75	.00	.00	.01	.04	.40	1.1	.57	.14
28	1.3	.10	.00	.40	.00	.09	.43	.02	.20	6.2	.44	.13
29	.40	.09	.00	.27	---	.07	.20	.02	.11	4.5	6.9	.10
30	.20	.08	.00	.14	---	.02	4.7	.02	.08	2.8	7.2	11
31	.13	---	.01	.10	---	.01	---	.01	---	.65	1.0	---
TOTAL	57.33	36.89	7.58	59.26	5.79	.42	6.22	4.86	90.61	26.87	63.64	61.64
MEAN	1.85	1.23	.24	1.91	.21	.014	.21	.16	3.02	.87	2.05	2.05
MAX	11	16	3.6	12	4.0	.09	4.7	1.6	32	6.2	9.7	14
MIN	.00	.01	.00	.10	.00	.00	.00	.00	.07	.02	.07	.07
AC-FT	114	73	15	116	11	.8	12	9.6	180	53	126	122

CAL YR 1984	TOTAL	253.94	MEAN	.69	MAX	16	MIN	.00	AC-FT	504
WTR YR 1985	TOTAL	421.11	MEAN	1.15	MAX	32	MIN	.00	AC-FT	835

16893200 MUKONG STREAM, GAGIL-TAMIL

LOCATION.--Lat 09°32'05" N., long 138°10'18" E., Hydrologic Unit 20100006, on right bank 0.2 mi upstream from mouth and 0.9 mi south of U.S. Coast Guard LORAN station.

DRAINAGE AREA.--0.50 mi^2.

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. Elevation of gage is 5 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. At times some water is pumped from upstream for village use.

AVERAGE DISCHARGE.--9 years (water years 1978-77, 1979-85), 1.98 ft^3/s (1,430 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153 ft^3/s June 21, 1982, gage height, 4.10 ft, from rating curve extended above 18 ft^3/s; minimum, 0.02 ft^3/s May 17-23, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum(*):

Date	Tima	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 17	1630	50	3.05	June 18	0100	*63	*3.29

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.5	1.3	4.7	1.2	.69	.63	2.0	2.5	1.6	5.1	e2.4
2	1.5	5.0	1.2	2.9	1.6	.69	.57	1.1	1.4	1.7	2.7	e5.4
3	1.4	10	1.1	6.6	1.4	.96	.52	.89	4.2	1.8	2.3	e3.2
4	1.6	4.2	1.2	3.1	1.2	.69	.52	.69	2.7	1.5	2.6	e2.4
5	1.2	2.7	8.5	2.1	1.0	.63	.75	.57	1.6	3.3	6.3	e7.8
6	1.1	2.3	7.1	1.5	.96	.57	2.6	.52	2.6	2.1	3.2	e3.5
7	3.0	2.1	2.6	e2.0	.89	.52	1.1	.47	6.7	5.3	2.4	e2.6
8	3.5	2.0	1.9	e7.0	.89	1.1	.75	.52	2.1	2.5	2.1	e3.3
9	2.1	1.8	1.6	e4.0	.89	1.7	.75	.52	1.5	1.6	2.1	e2.8
10	3.2	2.1	1.4	e4.5	5.3	1.2	.69	.47	1.2	1.4	1.7	e2.6
11	3.2	3.3	1.4	e4.9	3.5	.69	.57	.52	1.1	1.5	1.9	e2.3
12	2.1	2.8	1.2	3.5	1.5	.57	.52	.52	2.9	1.6	3.2	2.1
13	2.0	1.9	1.2	3.6	1.2	.52	.47	1.8	3.0	1.2	12	1.9
14	2.5	2.0	1.2	2.7	1.0	.47	.42	1.4	2.5	2.8	4.2	2.6
15	2.4	1.4	1.3	3.0	.96	.75	.42	1.4	3.2	1.7	3.0	2.2
16	6.1	2.1	1.8	2.4	.89	1.2	.42	1.8	2.1	1.3	9.4	9.5
17	5.4	17	1.6	1.9	.82	.89	.47	4.2	6.7	1.4	5.1	2.7
18	2.8	11	1.3	2.8	.75	.89	.89	3.3	19	1.2	3.4	2.1
19	2.4	3.8	1.2	2.5	.89	.63	.96	2.8	4.9	1.2	2.5	2.0
20	3.8	2.5	.96	1.8	.96	.63	.69	1.5	3.2	1.2	2.6	1.7
21	7.1	2.0	.89	1.5	.96	.83	.57	1.4	2.8	1.1	2.0	1.6
22	12	1.8	.82	1.8	.75	.57	.57	1.0	2.7	.96	1.8	1.9
23	5.4	1.8	.75	1.8	.69	.52	.52	.89	e2.6	.89	1.6	3.7
24	3.5	2.6	.69	8.8	.82	.47	4.2	2.0	e19	.82	1.5	3.9
25	8.3	3.0	.69	10	.82	.52	3.3	2.2	e8.8	.96	1.4	1.9
26	4.3	1.8	.69	4.1	.69	.63	1.1	1.4	e4.4	6.2	3.6	1.6
27	7.1	1.5	.69	1.5	.69	.63	.82	.98	e3.3	3.1	2.3	1.4
28	3.8	1.4	.69	2.5	.69	.82	.89	.82	e2.4	9.6	1.8	1.4
29	2.7	1.4	.63	2.1	---	.69	1.4	.82	2.0	3.5	e8.4	2.8
30	2.3	1.4	.63	1.6	---	.63	6.0	1.2	1.6	2.5	e7.0	10
31	2.0	---	.93	1.4	---	.57	---	1.4	---	4.0	e3.2	---
TOTAL	111.2	101.2	49.16	104.6	33.91	22.47	34.08	41.08	124.7	71.53	112.4	95.3
MEAN	3.59	3.37	1.59	3.37	1.21	.72	1.14	1.33	4.16	2.31	3.63	3.18
MAX	12	17	8.5	10	5.3	1.7	6.0	4.2	19	9.6	12	10
MIN	1.1	1.4	.63	1.4	.69	.47	.42	.47	1.1	.82	1.4	1.4
AC-FT	221	201	98	207	67	45	68	81	247	142	223	189

CAL YR 1984	TOTAL	674.81	MEAN	1.84	MAX	17	MIN	.06	AC-FT	1340
WTR YR 1985	TOTAL	901.63	MEAN	2.47	MAX	19	MIN	.42	AC-FT	1790

e Estimated

CAROLINE ISLANDS, YAP ISLANDS

16893200 MUKONG STREAM, GAGIL-TAMIL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
15...	1145	2.4	27.5	26.5
19...	1305	2.2	--	26.5
NOV				
08...	1010	2.0	28.0	26.5
29...	1035	1.4	28.5	27.0
JAN , 1985				
15...	1035	3.1	27.5	26.5
FEB				
06...	1205	.92	27.5	26.5
26...	1135	.70	27.5	27.0
MAR				
14...	1335	.48	28.0	27.5
28...	1135	.93	--	27.5
28...	1145	.93	28.0	27.0
APR , 1985				
16...	1400	.44	27.5	27.0
MAY				
08...	1105	.58	28.0	27.0
29...	0930	.77	28.0	27.0
JUN				
28...	1140	2.4	26.5	26.5
JUL				
22...	1230	.95	27.5	26.5
AUG				
15...	1120	2.7	27.5	26.0
SEP				
12...	1105	2.2	28.5	27.5

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
MAR												
28...	1135	.93	84	6.6	27.5	25	3	4.1	3.5	5.6	33	.5

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
MAR											
28...	.20	22	3.3	8.5	<.10	9.1	48	.06	<.10	610	200

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

16893400 EYEB STREAM, GAGIL-TAMIL

LOCATION.--Lat 09°33'02" N., long 138°09'03" E., Hydrologic Unit 20100006, on left bank 0.6 mi southeast of the Tagireeng Canal bridge and 1.2 mi northwest of the Coast Guard LORAN Station.

DRAINAGE AREA.--0.32 mi^2, revised.

PERIOD OF RECORD.--January 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 15 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 490 ft^3/s June 21, 1982, gage height, 8.22 ft, from rating curve extended above 14 ft^3/s; minimum, 0.01 ft^3/s for many days in May 1983.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	2400	*244	*4.93	Aug. 13	1000	177	4.39

Minimum discharge, 0.24 ft^3/s, Apr. 14-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.1	1.2	4.3	1.3	.54	.54	1.7	2.8	1.6	5.5	2.2
2	1.2	8.4	1.0	3.5	1.6	.64	.49	1.1	1.3	1.5	3.5	5.6
3	1.1	5.0	1.0	4.8	1.3	.90	.44	.90	4.5	1.6	3.2	2.9
4	1.1	4.2	1.2	2.2	.97	.54	.44	.76	2.1	1.4	5.6	2.2
5	.97	2.9	12	1.5	.90	.49	.69	.69	1.3	3.4	12	8.6
6	.90	2.4	5.1	1.3	.83	.44	1.9	.64	2.2	1.6	4.2	3.2
7	8.7	1.9	2.1	1.7	.69	.39	.64	.59	5.8	4.9	2.9	2.3
8	4.0	1.7	1.6	7.8	.64	.54	.44	.64	2.0	2.0	2.4	3.2
9	2.2	1.5	1.3	3.7	.69	1.1	.59	.59	1.4	1.4	2.2	2.7
10	3.5	1.4	1.3	4.2	4.9	.64	.49	.90	1.3	1.3	1.6	2.6
11	3.9	2.7	1.1	4.8	1.7	.44	.44	.83	1.2	1.6	1.4	2.2
12	2.3	1.9	.97	3.0	1.0	.39	.34	.64	1.1	1.3	3.5	e2.2
13	2.1	1.3	.97	3.5	.83	.34	.34	2.6	3.7	1.0	21	e1.8
14	2.1	1.2	.97	2.3	.69	.29	.29	1.3	2.1	2.0	4.2	e2.0
15	2.0	1.1	.97	2.6	.64	.58	.24	1.3	2.4	1.2	3.0	e1.8
16	5.7	1.1	1.3	2.0	.59	1.0	.24	1.7	1.7	.90	11	e12
17	4.6	25	1.2	1.6	.59	.69	.29	3.6	13	2.1	6.4	e2.8
18	3.2	14	.90	2.0	.59	.54	.64	5.8	e27	1.0	3.5	e1.9
19	2.6	4.2	.76	2.0	.64	.49	.69	2.4	e4.0	.90	2.6	e1.7
20	4.0	2.7	.69	1.3	.69	.49	.44	2.4	e2.6	.90	2.6	e1.6
21	9.0	2.2	.64	1.2	.64	.54	.39	1.9	e2.3	.97	2.1	e1.5
22	16	2.0	.59	1.3	.59	.54	.34	1.3	e2.1	.76	1.9	e1.8
23	8.0	2.0	.49	1.3	.64	.44	.34	1.1	2.1	.76	1.9	e3.5
24	4.2	3.0	.44	13	.64	.39	5.5	1.3	27	.83	1.6	e3.6
25	9.4	2.7	.44	10	.69	.49	2.1	1.5	14	1.1	1.5	e1.8
26	5.2	1.5	.44	4.4	.51	.69	1.1	1.2	4.2	4.9	4.2	e1.5
27	8.1	1.3	.44	2.7	.59	.64	.76	.90	3.0	2.9	2.9	e1.3
28	3.9	1.3	.44	2.6	.59	.97	1.3	.76	2.2	11	2.2	e1.3
29	2.7	1.5	.39	2.0	---	.64	1.1	.76	1.9	5.7	6.1	e2.4
30	2.3	1.3	.39	1.5	---	.49	7.8	.90	1.6	3.5	7.8	e13
31	2.0	---	1.1	1.4	---	.44	---	1.2	---	6.6	3.7	---
TOTAL	127.97	105.5	43.43	101.5	26.67	17.74	31.34	43.90	143.9	72.62	138.2	97.2
MEAN	4.13	3.52	1.40	3.27	.95	.57	1.04	1.42	4.80	2.34	4.46	3.24
MAX	16	25	12	13	4.9	1.1	7.8	5.8	27	11	21	13
MIN	.90	1.1	.39	1.2	.51	.29	.24	.59	1.1	.76	1.4	1.3
AC-FT	254	209	86	201	53	35	62	87	285	144	274	193

CAL YR 1984	TOTAL	625.87	MEAN	1.71	MAX	25	MIN	.05	AC-FT	1240
WTR YR 1985	TOTAL	949.97	MEAN	2.60	MAX	27	MIN	.24	AC-FT	1880

e Estimated

16893400 EYEB STREAM, GAGIL-TAMIL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
20...	0920	5.8	26.0	25.5
NOV				
08...	1340	1.8	28.0	27.0
29...	1225	1.4	27.0	26.5
DEC				
13...	1350	.92	28.5	27.0
JAN , 1985				
15...	1300	2.7	28.0	27.0
FEB				
06...	1035	.91	27.0	26.0
26...	1000	.52	26.5	26.0
MAR				
14...	1000	.28	27.0	26.5
28...	1035	1.3	--	27.5
28...	1045	1.3	28.0	26.5
APR , 1985				
17...	1215	.31	28.0	27.0
MAY				
08...	0945	.71	27.5	26.5
JUN				
04...	1015	2.6	27.0	26.5
28...	1030	2.5	28.0	27.5
JUL				
22...	1350	.73	27.5	26.5
AUG				
20...	1110	3.2	27.5	26.5
SEP				
12...	0950	2.2	27.5	26.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
MAR											
28...	1035	1.3	6.6	27.5	29	2	6.1	3.3	4.2	24	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
MAR											
28...	.40	27	4.1	4.7	<.10	20	59	.08	<.10	180	14

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

16893800 WICHEN RIVER AT ALTITUDE 18 M, MOEN

LOCATION.--Lat 07°27'01" N., long 151°51'56" E., Hydrologic Unit 20100006, on left bank at Peniesence, 0.3 mi upstream from mouth, and 1.4 mi west of Saint Xaviers Academy.

DRAINAGE AREA.--0.57 mi^2.

PERIOD OF RECORD.--April 1955 to March 1956 (published as "at Peniesence"), June 1968 to January 1980, May 1980 to May 1983, February 1984 to current year. All figures of discharge above 3 ft^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: Drainsge area.

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

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

AVERAGE DISCHARGE.--14 years, 3.12 ft^3/s (2,260 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 910 ft^3/s June 4, 1972, gage height, 6.80 ft, from rating curve extended above 28 ft^3/s; minimum, 0.01 ft^3/s Apr. 16-19, 1977, Apr. 8, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 17	0300	327	4.08	Jan. 7	1330	*417	*4.68
Oct. 23	2400	224	3.39				

Minimum discharge, 0.05 ft^3/s Mar. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	3.2	3.1	1.5	2.7	.65	.19	13	.70	11	1.8	.27
2	.65	2.6	19	3.3	2.3	.55	.15	8.0	1.0	9.0	9.1	.27
3	.45	7.0	14	19	1.8	.45	1.0	5.0	.70	8.6	3.1	.27
4	3.2	4.3	8.0	14	1.3	.37	.37	2.5	.50	12	2.3	1.0
5	3.1	3.3	6.2	6.5	1.5	.30	.65	1.5	.35	9.0	2.3	.41
6	1.8	3.1	5.0	5.0	1.0	.30	3.4	1.0	.30	5.0	2.8	2.3
7	1.0	2.6	5.0	70	.80	.30	1.2	2.5	.30	4.0	2.0	31
8	1.6	2.3	4.5	22	.60	.24	.55	2.0	.30	3.0	2.8	12
9	1.3	2.0	3.8	8.8	.45	.24	.30	14	.60	12	4.5	3.1
10	2.6	2.0	3.6	7.8	.40	.24	.24	7.0	.60	11	3.8	.94
11	4.3	2.0	3.6	5.0	.37	.19	.15	4.0	18	5.0	2.6	1.0
12	6.5	1.8	3.6	3.8	.37	.19	.15	2.5	10	3.0	6.7	5.2
13	3.3	1.6	3.3	2.8	.45	.15	.11	1.8	5.0	2.0	6.8	4.5
14	2.3	3.2	2.8	3.3	.30	.30	.11	1.4	9.0	1.0	4.0	9.6
15	1.8	28	2.6	2.6	.24	.24	3.2	1.4	6.0	.80	2.8	6.2
16	19	23	2.4	2.1	.19	.19	20	15	5.0	.60	2.1	2.3
17	50	14	2.3	2.0	.30	.11	6.2	13	4.0	.50	6.6	3.4
18	22	7.7	2.3	1.8	.19	.15	2.9	6.0	12	1.0	4.3	2.7
19	10	7.1	2.3	1.6	.37	.15	12	2.0	8.0	.90	2.3	4.0
20	7.4	6.8	2.6	1.6	21	.11	11	2.0	4.0	1.6	.60	1.6
21	5.0	8.5	2.1	1.5	15	.11	16	3.0	3.0	1.0	.25	1.5
22	3.6	10	1.8	1.5	4.5	.15	6.5	1.3	1.8	.80	.15	.95
23	37	6.5	1.8	2.4	2.8	.11	5.0	1.3	1.3	.60	.15	.60
24	19	6.8	1.6	2.3	2.0	.11	3.6	.90	1.0	1.3	.40	.52
25	8.8	6.8	1.8	2.0	1.4	.11	4.8	.50	.80	1.0	.27	.33
26	6.2	8.0	1.5	8.0	1.0	.08	5.0	.40	.80	.88	.25	.51
27	10	5.8	1.3	7.0	.76	.08	15	.40	.70	.76	.60	.45
28	6.5	4.5	1.2	5.0	.76	.37	7.4	.38	1.0	.65	.39	.30
29	4.8	3.8	1.0	3.5	---	.65	5.3	.40	.90	8.6	.25	.49
30	3.8	3.3	1.5	3.2	---	.30	7.4	.50	.90	4.0	.55	.35
31	3.1	---	1.5	2.8	---	.24	---	.50	---	2.3	.34	---
TOTAL	250.47	191.4	117.1	223.7	64.85	7.73	139.87	115.18	98.55	122.89	76.90	98.06
MEAN	8.08	6.38	3.78	7.22	2.32	.25	4.66	3.72	3.28	3.96	2.48	3.27
MAX	50	28	19	70	21	.65	20	15	18	12	9.1	31
MIN	.37	1.6	1.0	1.5	.19	.08	.11	.38	.30	.50	.15	.27
AC-FT	497	380	232	444	129	15	277	228	195	244	153	195

WTR YR 1985 TOTAL 1506.70 MEAN 4.13 MAX 70 MIN .08 AC-FT 2990

16897600 NANPIL RIVER

LOCATION.--Lat 06°55'09" N., long 158°11'59" E., Hydrologic Unit 20100006, on left bank 0.1 mi upstream from diversion dam and 1.3 mi upstream from Kiepw River.

DRAINAGE AREA.--3.00 mi^2.

PERIOD OF RECORD.--March 1970 to current year. Prior to October 1980, published as Nanepil River.

REVISED RECORDS.--WDR HI-76-1: 1970(M), 1971-72(P), 1973(M), 1974(P), 1975(M). WDR HI-81-2: Drainege area.

GAGE.--Water-stage recorder. Elevation of gage is 370 ft, from topographic map.

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

AVERAGE DISCHARGE.--15 years, 44.3 ft^3/s (32,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,820 ft^3/s Aug. 4, 1976, gage height, 9.68 ft, from rating curve extended above 168 ft^3/s on basis of slope-area measurement at gage height 9.68 ft; minimum, 0.54 ft^3/s Apr. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft^3/s Oct. 16, gage height 6.57 ft, no peak greater than base discharge of 3,200 ft^3/s; minimum, 4.1 ft^3/s Mar. 11, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	16	46	22	14	58	79	12	e41	76	18	76
2	33	74	43	54	7.8	22	93	11	e50	38	72	51
3	41	119	94	112	47	13	64	10	e25	26	25	24
4	23	34	41	92	18	9.8	54	8.0	13	19	16	19
5	20	20	22	109	13	23	96	6.4	9.3	13	21	19
6	99	14	22	242	9.0	10	139	13	7.8	11	68	29
7	155	11	16	86	7.6	7.8	33	13	9.9	8.7	33	49
8	120	20	11	54	6.2	9.0	126	e40	11	8.0	21	25
9	44	66	9.0	34	5.3	6.9	60	e65	137	15	64	27
10	113	25	15	29	5.1	5.1	29	e30	30	57	50	30
11	198	13	140	101	10	4.7	114	e17	14	23	30	41
12	51	11	55	33	65	4.5	33	e20	14	14	89	21
13	33	106	40	26	20	4.7	21	e25	55	52	55	15
14	49	109	23	19	12	17	27	e20	87	130	25	15
15	30	123	15	12	9.5	19	32	e15	86	45	165	12
16	204	41	11	20	91	7.6	43	e60	60	41	62	9.8
17	91	44	9.3	36	202	5.6	88	e60	50	23	54	9.3
18	50	69	8.5	14	106	6.9	45	e25	118	15	27	53
19	39	31	7.8	57	108	12	87	e20	265	14	17	21
20	23	58	8.4	39	63	15	190	e15	40	31	17	15
21	38	57	5.8	62	67	8.0	123	e10	85	26	27	51
22	101	34	6.2	33	114	55	40	e10	41	15	124	29
23	42	20	5.8	38	35	116	26	e9.0	39	18	74	16
24	23	25	15	42	37	43	29	e10	44	15	20	13
25	16	80	15	27	79	17	25	e8.0	27	17	15	32
26	13	118	21	21	68	11	17	e6.5	22	13	11	24
27	10	51	13	15	33	9.8	27	e20	42	10	13	28
28	9.8	27	24	11	131	8.0	20	e40	51	60	24	23
29	7.8	31	104	9.8	---	6.4	17	e70	24	28	14	15
30	34	122	49	7.8	---	6.2	11	e45	19	18	16	18
31	23	---	48	9.3	---	11	---	e150	---	17	28	---
TOTAL	1789.6	1569	941.8	1466.9	1383.5	553.0	1768	863.9	1517.0	896.7	1295	810.1
MEAN	57.7	52.3	30.4	47.3	49.4	17.8	59.6	27.9	50.6	28.9	41.8	27.0
MAX	204	123	140	242	202	116	190	150	265	130	165	76
MIN	7.8	11	5.8	7.8	5.1	4.5	11	6.4	7.8	8.0	11	9.3
AC-FT	3550	3110	1870	2910	2740	1100	3550	1710	3010	1780	2570	1610

CAL YR 1984	TOTAL	13210.9	MEAN	36.1	MAX	219	MIN	2.1	AC-FT	26200
WTR YR 1985	TOTAL	14874.5	MEAN	40.8	MAX	265	MIN	4.5	AC-FT	29500

e Estimated

16897900 LEWI RIVER

LOCATION.--Lat 06°55'32" N., long 158°12'18" E., Hydrologic Unit 20100006, on right bank at road and pipeline crossing, 300 ft upstream from right-bank tributary, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--0.46 mi^2.

PERIOD OF RECORD.--March 1970 to currsnt year. Prior to October 1980, published as Lui River.

REVISED RECORDS.--WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 290 ft, from topographic map.

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

AVERAGE DISCHARGE.--15 years, 5.29 ft^3/s (3,830 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft^3/s Aug. 4, 1976, gage height, 5.92 ft, from rating curve extended above 37 ft^3/s, on basis of slope-area messurement at gage height 5.92 ft; minimum, 0.02 ft^3/s Apr. 18, 19, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 441 ft^3/s Aug. 31, gage height, 4.27 ft, no peak greater than base discharge of 500 ft^3/s; minimum, 0.43 ft^3/s Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.5	7.4	e3.0	1.4	5.3	7.0	1.4	5.0	18	1.4	11
2	2.2	5.0	5.0	e8.0	.90	2.4	10	1.1	6.6	4.8	2.7	6.0
3	2.7	19	10	e17	2.0	1.6	6.0	1.0	3.1	5.3	1.7	2.7
4	1.7	3.4	5.0	e15	1.1	1.4	3.9	.95	1.8	3.5	1.4	2.1
5	3.0	2.1	3.5	e17	.90	1.4	12	.85	1.4	2.1	1.8	3.1
6	7.9	1.6	e3.5	e35	.75	1.0	17	2.1	1.0	1.6	3.3	2.9
7	19	1.3	e2.5	e13	.70	.90	3.8	1.9	1.5	1.4	2.3	6.6
8	9.5	3.3	e1.7	e7.5	.55	.95	13	5.8	1.5	1.4	3.0	2.8
9	4.2	14	e1.5	e5.0	.49	.75	9.4	8.4	14	1.9	5.8	3.2
10	22	4.0	e2.0	e4.5	.55	.65	5.2	3.9	4.5	7.0	5.5	2.8
11	19	2.1	e20	e15	.70	.55	19	2.3	2.3	2.6	5.1	4.5
12	4.4	1.8	e8.0	e5.0	3.7	.55	4.2	2.8	1.6	1.7	10	2.4
13	2.8	15	e6.0	e3.5	1.3	.52	2.5	3.2	2.9	6.0	29	1.9
14	2.6	12	e3.5	e2.0	.85	1.1	2.2	2.9	3.2	13	6.1	1.7
15	1.6	14	e2.3	1.4	.65	1.0	2.9	2.1	17	5.2	e25	1.4
16	37	5.2	e1.7	1.7	3.2	.60	4.8	7.3	8.3	7.0	e10	1.1
17	15	5.2	e1.5	2.0	23	.52	11	7.2	8.2	3.6	e8.0	1.0
18	5.5	8.3	e1.3	1.3	7.4	.49	5.5	3.4	19	2.1	e4.0	5.4
19	2.6	3.8	e1.1	4.0	12	1.0	6.6	2.8	34	2.1	e2.5	2.1
20	1.6	6.1	e1.0	3.9	5.3	2.0	24	1.9	6.2	2.8	e2.5	1.5
21	1.9	5.6	e.90	6.1	6.8	.90	13	1.4	12	2.9	e4.0	8.5
22	13	4.5	e.95	3.8	18	2.6	5.3	1.4	5.8	2.3	e20	3.6
23	4.6	2.6	e.90	3.8	3.4	11	3.5	1.2	6.8	3.8	e4.0	1.9
24	2.6	4.0	e2.3	4.8	4.6	2.9	3.6	1.4	7.0	2.7	e2.5	1.4
25	2.3	13	e2.3	3.8	9.0	1.4	2.9	1.0	4.1	2.8	e1.7	2.1
26	2.7	12	e3.0	2.5	4.2	.90	1.9	.85	3.2	2.3	e1.3	2.1
27	2.5	5.9	e2.0	1.6	2.5	.85	1.8	3.0	3.6	1.5	2.2	2.4
28	2.1	3.4	e3.5	1.4	10	.70	1.6	5.8	3.1	13	2.6	1.9
29	1.5	3.4	e15	1.2	---	.52	1.5	9.0	1.9	4.4	1.8	1.3
30	7.5	24	e7.0	1.0	---	.55	1.1	5.8	2.1	2.3	1.4	6.2
31	3.6	---	e7.0	1.2	---	.95	---	18	---	1.7	1.7	---
TOTAL	211.7	208.1	133.35	196.0	125.94	47.95	206.4	112.15	192.7	132.8	174.3	97.6
MEAN	6.83	6.94	4.30	6.32	4.50	1.55	8.88	3.62	6.42	4.28	5.62	3.25
MAX	37	24	20	35	23	11	24	18	34	18	29	11
MIN	1.5	1.3	.90	1.0	.49	.49	1.1	.85	1.0	1.4	1.3	1.0
AC-FT	420	413	264	389	250	95	409	222	382	263	346	194

CAL YR 1984	TOTAL	1547.72	MEAN	4.23	MAX	37	MIN	.18	AC-FT	3070
WTR YR 1985	TOTAL	1838.99	MEAN	5.04	MAX	37	MIN	.49	AC-FT	3650

e Estimated

16898600 LUHPWOR RIVER

LOCATION.--Lat 06°54'09" N., long 158°09'07" E., Hydrologic Unit 20100006, on left bank about 300 ft upstream from 50-ft waterfall, 0.2 mi downstream from highway bridge, and 0.2 mi west of Pwakorokot Hill.

DRAINAGE AREA.--0.72 mi^2.

PERIOD OF RECORD.--September 1972 to current year. Prior to October 1980, published as Lupwor River.

REVISED RECORDS.--WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 145 ft, from topographic map.

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

AVERAGE DISCHARGE.--13 years, 8.76 ft^3/s (6,350 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft^3/s Aug. 4, 1976, gage height, 8.26 ft, from rating curve extended above 47 ft^3/s, on basis of estimate of peak flow; minimum, 0.13 ft^3/s May 4, 5, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 835 ft^3/s Aug. 15, gage height, 5.79 ft, no other peak greater than base discharge of 750 ft^3/s; minimum, 1.4 ft^3/s Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	3.8	10	5.3	2.6	13	10	4.2	7.3	12	4.7	15
2	11	8.3	9.3	9.1	2.0	7.8	13	4.0	11	8.6	9.0	16
3	11	34	18	17	4.6	6.0	18	3.7	8.9	8.6	5.9	9.6
4	7.6	13	11	14	2.7	5.0	11	3.0	5.2	6.9	4.5	7.8
5	5.9	8.0	7.6	16	2.5	6.4	19	2.6	4.5	5.3	6.9	8.8
6	11	5.9	6.4	44	2.0	4.2	24	4.5	3.8	5.1	27	13
7	29	4.6	5.1	20	1.8	3.4	10	4.0	4.3	4.5	9.8	25
8	45	3.9	4.2	13	1.6	3.4	14	6.9	4.3	3.6	6.8	11
9	21	13	3.6	11	1.6	2.6	12	11	27	7.8	15	9.8
10	37	6.6	3.9	9.3	1.4	2.3	7.1	7.3	8.3	16	15	8.0
11	47	4.6	20	22	1.8	2.1	14	5.0	5.2	8.3	12	10
12	16	3.9	9.6	9.3	11	2.0	7.6	4.7	6.2	5.9	25	6.4
13	9.8	24	7.8	7.3	4.1	1.8	5.9	6.6	4.6	17	14	5.5
14	13	21	5.7	5.7	2.9	4.1	5.5	5.1	11	33	20	5.9
15	8.8	30	4.7	4.6	2.6	3.8	5.9	3.9	16	19	91	4.7
16	20	10	4.2	5.2	7.3	2.3	7.1	8.6	13	12	20	4.1
17	17	11	3.6	5.9	32	1.8	13	16	9.3	8.3	17	3.7
18	12	14	3.2	4.0	17	1.6	9.8	9.8	24	6.4	11	12
19	8.3	8.6	2.9	11	20	2.0	16	17	56	6.2	9.0	5.9
20	6.2	15	2.6	7.3	13	2.0	38	10	12	5.9	13	4.8
21	8.5	14	2.4	8.6	12	1.6	28	7.1	21	6.9	11	11
22	16	9.3	2.2	6.8	21	4.7	15	5.7	11	5.2	27	8.6
23	29	6.8	2.0	8.6	8.6	17	9.8	4.7	11	5.3	21	5.9
24	6.6	6.6	2.4	6.6	7.3	7.3	7.3	4.0	11	4.8	19	4.6
25	5.3	26	2.5	5.1	13	4.3	7.6	3.4	7.3	4.6	14	7.9
26	4.6	31	2.8	4.8	10	3.4	6.0	3.0	6.2	4.2	9.8	6.6
27	3.8	14	2.4	3.4	6.8	2.9	7.1	3.8	34	3.8	8.3	19
28	3.4	9.0	3.4	3.0	22	2.6	5.9	6.7	12	20	9.0	9.3
29	2.9	8.3	15	2.7	---	2.3	5.1	10	7.3	9.0	6.9	6.4
30	7.3	26	8.3	2.5	---	2.1	4.2	5.5	7.1	6.4	11	9.3
31	5.1	---	8.0	2.8	---	2.3	---	12	---	5.2	11	---
TOTAL	449.1	394.2	194.6	293.5	235.2	128.1	356.9	203.8	368.0	276.0	484.6	275.4
MEAN	14.5	13.1	6.28	9.47	8.40	4.13	11.9	6.57	12.3	8.90	15.6	9.18
MAX	47	34	20	44	32	17	38	17	56	33	91	25
MIN	2.9	3.8	2.0	2.5	1.4	1.6	4.2	2.6	3.8	3.8	4.5	3.7
AC-FT	891	782	386	582	467	254	708	404	730	547	961	546

CAL YR 1984	TOTAL	2852.05	MEAN	7.79	MAX	47	MIN	.68	AC-FT	5660
WTR YR 1985	TOTAL	3659.4	MEAN	10.0	MAX	91	MIN	1.4	AC-FT	7260

16898690 LEHN MESI RIVER

LOCATION.--Lat 06°50'41" N., long 158°11'02" E., Hydrologic Unit 20100006, on left bank 3.2 mi upstream from mouth, 1.7 mi southwest of Mount Tolenpwoaipwoai, and 4.5 mi south of Mount Temwetemwensekir.

DRAINAGE AREA.--2.31 mi^2, revised.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 260 ft, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Periodic determinations of water temperature for the current year are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,740 ft^3/s, May 8, 1982, gage height, 10.14 ft, from rating curve extended above 126 ft^3/s; minimum, 4.5 ft^3/s for several days in April and May, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2400	*3060	*6.86	June 19	0130	3030	6.83

Minimum discharge, 16.0 ft^3/s Mar. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	39	73	48	37	109	107	52	72	124	135	58
2	80	78	88	105	24	55	143	43	87	84	132	76
3	97	145	192	243	96	42	134	34	82	89	62	43
4	55	54	90	148	38	36	83	29	49	72	48	32
5	42	41	56	218	31	42	132	28	38	58	59	40
6	63	32	66	283	26	29	187	57	32	43	57	60
7	46	29	50	156	24	26	75	55	40	35	44	72
8	79	25	39	112	21	31	213	129	52	32	40	43
9	47	78	32	100	19	27	e100	73	129	85	231	50
10	82	39	46	70	18	22	e60	53	58	132	109	86
11	272	39	289	182	31	20	e160	36	38	74	81	92
12	96	47	99	73	140	19	e70	42	74	50	151	76
13	57	178	74	62	41	21	e50	93	93	57	106	43
14	100	183	54	47	28	55	e60	74	76	196	58	36
15	57	253	42	37	25	48	e70	49	144	102	128	29
16	e290	96	34	46	263	24	e100	189	100	76	81	30
17	e150	124	31	64	e390	19	e150	148	114	51	127	35
18	108	158	31	36	e200	19	73	62	165	40	163	77
19	83	69	29	130	e150	21	171	50	402	51	79	50
20	55	210	28	84	e100	34	401	39	108	106	87	41
21	104	185	25	123	102	22	208	32	196	91	210	65
22	252	129	24	68	126	107	96	32	97	62	234	53
23	98	73	22	74	54	198	65	28	75	53	80	38
24	61	66	33	84	70	102	60	40	68	44	61	32
25	47	119	31	55	138	42	46	28	49	51	44	43
26	40	179	36	45	118	29	36	22	47	42	41	42
27	36	91	26	36	60	24	109	48	60	35	39	58
28	36	56	107	36	276	22	90	126	139	110	64	43
29	26	72	251	32	---	19	70	164	65	57	50	55
30	69	174	97	27	---	16	69	87	59	44	41	35
31	58	---	78	28	---	33	---	154	---	55	51	---
TOTAL	2817	3041	2173	2852	2646	1313	3386	2096	2806	2201	2871	1533
MEAN	90.9	101	70.1	92.0	94.5	42.4	113	67.6	93.5	71.0	92.6	51.1
MAX	290	253	269	283	390	198	401	189	402	196	234	92
MIN	26	25	22	27	18	18	36	22	32	32	39	29
AC-FT	5590	8030	4310	5660	5250	2600	6720	4160	5570	4370	5690	3040

CAL YR 1984	TOTAL	26064.5	MEAN	71.2	MAX	364	MIN	8.1	AC-FT	51700
WTR YR 1985	TOTAL	29737	MEAN	81.5	MAX	402	MIN	16	AC-FT	58980

e Estimated

16899620 MELO RIVER

LOCATION.--Lat 05°20'30" N., long 162°58'33" E., Hydrologic Unit 20100006, on left bank 0.5 mi upstream from mouth and 1.3 mi southwest of Mount Mutunte.

DRAINAGE AREA.--0.68 mi^2.

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

REVISED RECORDS.--WRD HI-81-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 20 ft, from topographic map.

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

AVERAGE DISCHARGE.--10 years (water years 1975-79, 1981-85), 6.77 ft^3/s (4,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 784 ft^3/s Mar. 22, 1976, gage height, 5.78 ft, from rating curve extended above 17 ft^3/s; minimum, 0.11 ft^3/s for several days in April 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 330 ft^3/s Feb. 20, gage height, 3.70 ft, no other peak greater than base discharge of 300 ft^3/s; minimum, 1.15 ft^3/s Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.3	6.2	e5.2	e4.0	15	e14	e3.5	e28	5.9	4.7	8.2
2	3.0	3.7	6.7	e5.0	e3.8	4.7	e5.0	e7.0	e13	5.6	3.0	2.8
3	2.8	2.1	17	4.7	e3.5	3.6	e4.0	e3.5	e10	4.1	3.5	2.4
4	3.2	1.7	e8.0	4.1	e3.2	8.9	e6.0	e2.7	e7.0	4.7	2.8	4.1
5	2.8	1.5	e8.0	4.9	e3.0	4.7	e8.0	e2.2	e18	4.0	3.0	2.2
6	3.7	1.3	e5.0	8.4	3.2	3.4	e5.0	e2.0	e8.0	2.6	2.4	2.0
7	3.0	1.8	e4.5	5.7	3.2	2.8	e3.5	e1.7	e6.0	2.5	2.1	e1.8
8	2.8	3.8	e5.5	22	3.9	23	e3.5	e3.0	e7.0	2.1	2.1	e5.0
9	2.6	2.0	e22	e8.0	2.4	7.8	e3.0	e10	e10	12	8.1	e4.0
10	5.4	1.6	e9.0	e18	2.4	4.7	e8.0	e4.0	e12	3.6	3.6	e2.3
11	9.6	1.7	e7.5	e50	3.4	3.6	7.0	e2.5	e35	2.4	3.4	e3.0
12	4.5	1.6	e35	e20	17	3.0	7.3	e20	e15	2.1	5.6	e1.8
13	3.0	7.4	e16	e15	26	4.0	3.8	e7.0	e10	2.5	3.6	e2.8
14	2.8	6.3	e11	e10	10	3.2	9.2	e4.0	e10	5.3	8.5	e2.0
15	4.9	e3.0	e8.5	e9.8	6.2	2.6	34	e3.8	e8.0	2.8	4.0	e1.7
16	9.1	e15	e7.0	e7.0	14	2.1	19	e3.5	e7.5	2.0	6.8	e1.5
17	12	e7.5	e6.0	e6.0	11	2.0	28	e3.0	e7.0	1.7	3.4	e1.5
18	4.5	e4.5	e5.0	e5.2	35	1.6	13	e2.5	e7.0	2.6	e3.0	e2.0
19	3.4	e3.2	e4.0	e5.0	54	1.3	8.1	e3.0	e10	1.7	e2.7	e1.5
20	6.6	e10	e3.8	e4.5	53	2.1	e22	e2.2	e10	1.3	e3.5	e5.0
21	16	e6.0	e3.5	e3.8	13	1.8	e36	e1.8	e30	1.5	e3.0	e10
22	6.9	e3.5	e3.0	e5.0	7.5	2.1	e17	e4.5	e20	1.7	e5.0	e15
23	5.7	e2.7	e2.8	e3.5	5.0	2.4	e11	e2.5	e13	1.9	e4.0	e3.5
24	4.7	e2.2	e6.0	e3.0	5.0	4.1	e8.5	e1.8	e17	5.9	e3.5	e2.5
25	3.8	e17	e4.5	e2.7	6.9	3.0	e7.0	e3.0	e12	2.1	e4.0	e9.5
26	4.0	e9.0	e10	e2.5	4.1	2.0	e6.0	e25	e9.0	1.5	e3.5	2.8
27	2.5	e12	e14	e2.2	3.4	e1.7	e8.5	e17	6.2	2.1	e3.0	2.4
28	2.1	e8.0	e8.0	e2.0	3.6	e2.0	e8.0	e16	10	1.6	e2.8	3.1
29	2.0	e7.2	e7.0	e20	---	e1.7	e5.0	e10	5.5	1.2	2.6	7.0
30	1.7	6.9	e6.0	e9.0	---	e8.0	e4.0	e15	9.2	1.2	2.2	5.9
31	1.5	---	e5.4	e5.0	---	e4.0	---	e20	---	5.6	2.4	---
TOTAL	144.0	155.3	263.9	277.2	310.7	136.9	320.4	207.7	370.4	97.8	116.0	119.3
MEAN	4.65	5.18	8.51	8.94	11.1	4.42	10.7	6.70	12.3	3.15	3.74	3.98
MAX	16	17	35	50	54	23	36	25	35	12	8.5	15
MIN	1.5	1.3	2.8	2.0	2.4	1.3	3.0	1.7	5.5	1.2	2.1	1.5
AC-FT	286	308	523	550	616	272	636	412	735	194	230	237

CAL YR 1984	TOTAL	2367.65	MEAN	6.47	MAX	52	MIN	.26	AC-FT	4700
WTR YR 1985	TOTAL	2519.6	MEAN	6.90	MAX	54	MIN	1.2	AC-FT	5000

e Estimated

16899750 MALEM RIVER

LOCATION.--Lat 05°17'35" N., long 163°00'54" E., Hydrologic Unit 20100006, on left bank 0.9 mi upstream from mouth and 2.0 mi southeast of Mount Finkol.

DRAINAGE AREA.--0.76 mi^2.

PERIOD OF RECORD.--July 1971 to March 1981, March 1982 to current year.

REVISED RECORDS.--WDR HI-81-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 95 ft, from stadia survey.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--12 years (1972-80, 1983-85), 6.70 ft^3/s (4,850 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft^3/s Mar. 22, 1976, gage height, 6.20 ft, from rating curve extended above 110 ft^3/s; minimum, 0.07 ft^3/s Apr. 30, May 1, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 209 ft^3/s May 27, gage height, 4.18 ft, no peak greater than base discharge of 350 ft^3/s; minimum, 0.24 ft^3/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.3	5.7	3.2	e3.5	23	10	3.2	24	8.8	3.0	5.8
2	.97	2.0	4.7	3.0	e3.3	8.0	4.7	6.7	27	5.7	2.4	2.6
3	.76	1.5	19	2.6	e2.5	5.7	3.9	5.4	9.9	4.7	1.9	1.6
4	.90	1.3	8.8	2.9	e2.2	5.5	6.8	3.8	7.5	4.7	1.8	2.2
5	.53	1.2	5.5	2.6	2.0	4.5	9.4	3.0	5.9	4.5	1.9	1.5
6	3.2	.90	4.7	8.5	2.4	3.6	6.1	3.0	20	3.5	2.1	1.7
7	1.9	.83	3.9	e7.0	2.6	3.3	4.1	2.6	7.7	3.0	1.7	1.5
8	.97	1.4	8.7	e24	2.4	17	4.1	2.2	5.7	3.2	1.6	1.7
9	.76	1.1	32	e8.0	1.9	8.2	3.5	2.9	9.2	7.7	3.6	1.6
10	2.1	1.0	10	e20	2.1	4.5	11	6.9	8.2	4.5	2.0	1.5
11	9.1	.83	8.2	e50	2.4	3.8	13	3.8	17	3.2	1.8	1.8
12	3.3	.76	28	e15	19	3.2	14	3.2	43	3.7	3.8	1.2
13	1.3	3.6	13	e10	25	6.0	6.4	26	16	2.6	2.9	1.8
14	.97	4.4	9.6	e8.0	8.2	11	14	8.0	8.6	6.9	5.9	1.3
15	3.5	1.8	6.8	10	4.7	6.6	18	4.6	6.6	3.8	3.5	1.2
16	16	15	5.5	6.6	8.8	3.6	12	4.0	4.7	2.9	4.2	1.0
17	15	5.7	4.5	5.5	7.7	2.7	28	3.5	4.5	2.4	2.6	1.3
18	3.9	3.8	3.8	4.5	10	2.4	12	3.0	6.1	3.9	2.1	2.0
19	2.7	3.5	3.3	4.3	12	2.1	8.2	2.7	7.2	2.6	1.8	1.3
20	6.2	14	3.0	4.5	24	2.0	28	2.7	12	2.2	2.4	3.2
21	24	8.8	2.6	3.8	23	2.0	40	2.3	38	2.2	2.0	7.9
22	6.8	3.6	2.3	6.6	10	2.3	14	2.2	28	2.3	3.6	13
23	4.5	2.9	2.2	3.5	7.3	4.4	8.8	4.2	13	2.5	2.7	3.0
24	3.5	2.2	6.4	2.9	14	6.6	7.3	3.2	23	11	2.2	2.7
25	2.7	18	4.7	2.4	19	3.9	9.7	2.2	12	3.9	2.3	6.9
26	2.7	7.8	9.6	2.3	7.6	3.0	5.9	4.0	8.8	3.2	2.0	3.9
27	2.2	15	14	2.0	5.7	2.4	4.9	34	9.9	2.4	1.4	2.3
28	1.7	6.1	6.7	1.9	4.9	2.2	4.1	16	9.2	2.5	1.3	1.8
29	1.7	5.8	4.5	e20	---	1.9	4.5	21	7.3	1.9	1.1	2.7
30	1.6	6.7	3.5	e8.0	---	7.3	3.9	9.3	9.5	1.7	.97	2.3
31	1.3	---	2.9	e5.0	---	4.4	---	12	---	3.1	1.2	---
TOTAL	128.46	142.82	248.1	258.6	238.2	167.1	320.3	211.6	409.7	121.2	73.77	84.1
MEAN	4.14	4.76	8.00	8.34	8.51	5.39	10.7	6.83	13.7	3.91	2.38	2.80
MAX	24	18	32	50	25	23	40	34	43	11	5.9	13
MIN	.53	.76	2.2	1.9	1.9	1.9	3.5	2.2	4.5	1.7	.97	1.0
AC-FT	255	283	492	513	472	331	635	420	813	240	146	167

CAL YR 1984	TOTAL	2169.40	MEAN	5.93	MAX	69	MIN	.43	AC-FT	4300
WTR YR 1985	TOTAL	2403.95	MEAN	6.59	MAX	50	MIN	.53	AC-FT	4770

e Estimated

16899800 TOFOL RIVER

LOCATION.--Lat 05°19'10" N., long 163°00'24" E., Hydrologic Unit 20100006, on left bank 25 ft downstream from right-bank tributary, 0.9 mi upstream from mouth, and 1.3 mi northeast of Mount Finkol.

DRAINAGE AREA.--0.53 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 98 ft, from stadia survey.

REMARKS.--Records fair. Water is diverted through 8-in pipe from dam upstream for domestic use. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years (1971-79, 1981-85), 5.67 ft^3/s (4,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft^3/s Nov. 10, 1981, gage height, 5.97 ft, from rating curve extended above 79 ft^3/s; minimum, 0.01 ft^3/s Apr. 1, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 197 ft^3/s Oct. 16, gage height, 3.28 ft, no peak greater then base discharge of 450 ft^3/s; minimum, 0.30 ft^3/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	4.2	2.9	3.1	19	12	3.6	18	7.6	1.7	3.8
2	.70	.88	4.2	2.8	3.1	7.3	4.3	3.6	24	5.7	1.3	1.4
3	.58	1.1	14	2.8	2.7	5.9	4.0	5.9	12	4.7	1.2	.94
4	.70	1.0	8.4	2.5	2.2	6.0	4.9	3.3	8.9	5.0	1.1	1.4
5	.50	.94	4.5	2.3	1.9	4.7	8.5	2.6	7.1	4.3	.82	1.1
6	.94	.88	3.6	5.1	2.0	3.6	4.3	2.1	16	3.3	.88	.98
7	.62	1.0	3.2	4.2	2.1	3.1	3.3	1.9	7.3	2.8	.82	.62
8	.46	1.0	4.5	19	1.9	14	3.5	1.6	5.9	2.6	.76	3.0
9	.42	.88	18	6.2	1.9	6.6	2.9	2.6	6.1	6.0	2.8	2.0
10	1.4	.82	7.3	15	1.5	4.3	13	8.9	8.8	2.7	1.1	1.1
11	5.1	.70	5.9	42	1.8	3.3	11	3.5	12	1.8	1.1	1.4
12	1.9	.82	20	14	14	2.9	12	2.3	31	1.5	2.3	.70
13	1.1	4.1	13	11	18	4.0	6.6	18	14	1.5	.88	1.3
14	.82	6.4	9.2	8.1	6.8	4.5	14	6.2	9.7	3.9	4.5	.76
15	1.9	2.3	8.8	7.8	4.3	3.1	20	3.8	9.9	1.9	2.2	.62
16	11	14	5.7	5.7	7.6	1.9	15	3.6	7.6	1.4	3.7	.50
17	11	7.1	5.0	5.2	8.9	1.8	23	3.5	6.4	1.1	1.9	.50
18	2.7	4.1	4.3	4.3	9.8	1.2	12	2.6	6.3	1.4	1.5	.76
19	1.9	2.5	3.6	4.2	9.5	1.2	7.8	2.2	6.2	1.1	1.2	.54
20	3.7	9.1	3.2	3.8	18	1.1	19	2.7	11	.94	1.7	4.0
21	16	5.5	2.9	3.1	19	1.1	32	2.0	28	.82	1.1	6.0
22	5.2	3.1	2.6	4.1	10	1.3	14	1.7	18	.92	2.2	5.8
23	4.2	2.7	2.3	2.8	7.6	1.4	9.5	4.1	12	1.2	1.4	1.2
24	3.1	2.1	4.9	2.5	13	3.7	7.6	2.5	15	4.9	1.1	.94
25	2.5	15	3.9	2.2	14	1.9	5.7	1.7	13	1.5	1.4	4.5
26	2.3	7.0	5.9	1.9	7.1	1.3	4.5	2.9	9.6	.94	1.1	2.3
27	1.9	10	7.8	1.8	6.4	1.3	7.6	23	7.8	1.4	.95	1.6
28	1.6	5.0	4.7	1.5	5.9	1.6	6.7	16	10	1.1	.76	1.7
29	1.5	4.9	3.8	16	---	1.3	5.4	16	7.8	.82	.62	1.9
30	1.3	4.5	3.2	7.8	---	6.6	5.0	9.2	10	.74	.66	1.9
31	1.2	---	3.1	4.0	---	3.2	---	14	---	1.7	.66	---
TOTAL	89.34	120.52	191.7	216.4	203.9	124.0	297.1	177.8	359.0	77.28	45.21	55.26
MEAN	2.88	4.02	6.18	6.98	7.28	4.00	9.90	5.73	12.0	2.49	1.46	1.84
MAX	16	15	20	42	19	19	32	23	31	7.6	4.5	6.0
MIN	.42	.70	2.3	1.5	1.5	1.1	2.9	1.6	5.9	.74	.82	.50
AC-FT	177	239	380	429	404	246	589	352	712	153	90	110

CAL YR 1984	TOTAL	1805.39	MEAN	4.93	MAX	65	MIN	.14	AC-FT	3580
WTR YR 1985	TOTAL	1957.31	MEAN	5.36	MAX	42	MIN	.42	AC-FT	3880

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 south of Afono and 0.3 mi upstream from mouth.

DRAINAGE AREA.--0.60 mi^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. Elevation of gage is 30 ft, from topographic map.

REMARKS.--Records good. About 0.06 ft^3/s is diverted upstream for domestic use in Afono. Periodic determinations of water temperature for the current year are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 3.45 ft^3/s (2,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s July 5, 1969, gage height, 5.49 ft, from rating curve extended above 52 ft^3/s; minimum, 0.11 ft^3/s Sept. 15, 16, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 210 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 27	0300	414	3.91	Apr. 15	1200	*845	*4.87
Jan. 12	0500	402	3.88	Sept. 24	0730	514	4.16
Feb. 21	2000	288	3.56				

Minimum discharge, 0.20 ft^3/s Sept. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	21	.87	5.2	2.5	1.8	.43	2.6	1.4	1.3	2.6	.70
2	.22	18	1.8	3.8	2.4	1.8	.37	3.4	7.9	1.1	3.0	.62
3	.82	5.7	18	3.0	2.2	2.5	.62	23	10	.96	1.8	.55
4	.70	4.0	12	2.5	2.1	1.8	.60	12	4.3	.87	1.2	.49
5	15	3.2	4.0	2.4	1.8	1.4	2.3	11	4.9	.87	1.0	.37
6	2.7	2.5	2.5	2.1	2.7	1.7	1.0	23	2.4	1.5	.98	.32
7	1.2	2.1	18	5.1	3.4	1.3	4.7	9.9	1.9	1.6	.87	.32
8	.87	1.7	5.7	5.2	4.2	1.2	3.0	6.0	1.6	1.0	.78	.37
9	.87	1.6	3.8	15	2.5	1.3	2.9	4.2	1.4	.87	.70	.32
10	5.8	1.3	5.9	15	1.9	1.1	1.9	3.5	1.6	.78	.70	.71
11	2.8	1.8	4.2	8.1	1.9	1.0	2.2	6.1	1.2	.62	.78	9.8
12	1.7	4.0	2.5	106	2.2	.96	1.7	7.7	1.1	.62	.70	3.6
13	8.4	1.8	2.8	17	4.9	.96	9.8	3.6	1.3	.55	.70	1.7
14	19	1.4	2.5	11	3.6	.96	5.8	3.2	3.0	.55	.55	1.0
15	5.3	1.1	1.9	6.7	2.5	.87	71	4.9	20	.62	.78	.87
16	21	1.0	1.8	10	1.9	.78	8.5	3.6	3.6	2.5	.70	.62
17	5.9	.87	1.8	5.4	1.6	.70	4.2	2.4	2.9	2.1	.89	.55
18	3.2	.96	2.0	4.6	1.4	.70	3.2	1.9	3.0	.96	1.1	.55
19	2.1	.78	2.8	5.2	1.3	.78	7.0	1.7	2.1	.70	.78	.55
20	1.6	.78	2.4	3.7	1.2	.62	4.9	1.6	5.4	.55	.55	.55
21	15	.70	4.7	3.8	15	.55	3.0	1.6	3.6	.49	1.4	1.9
22	4.0	.70	3.6	2.8	42	.62	2.2	1.3	11	.49	1.2	3.6
23	2.9	.62	2.6	2.4	7.5	.49	1.9	1.2	3.2	.49	1.2	1.8
24	34	.55	33	2.1	4.4	.49	2.2	1.4	2.4	3.5	1.1	59
25	5.7	1.0	8.3	1.9	4.0	.49	3.2	1.1	1.9	5.8	3.1	6.2
26	3.8	1.0	14	1.8	2.8	.49	6.8	1.0	1.8	3.1	2.8	3.4
27	2.7	.62	82	1.7	2.2	.70	5.4	1.0	1.6	5.2	2.5	2.7
28	1.9	.49	15	15	1.9	.49	3.7	1.1	1.4	2.9	1.8	1.9
29	1.7	.49	48	7.0	---	.49	7.1	1.1	1.3	4.9	1.1	1.6
30	1.6	1.0	20	3.2	---	.55	3.8	4.3	1.3	3.6	.87	1.3
31	2.8	---	7.5	2.5	---	.49	---	2.1	---	3.0	.78	---
TOTAL	175.51	82.76	335.97	281.2	128.0	30.08	175.42	152.5	110.5	54.09	38.79	107.96
MEAN	5.66	2.76	10.8	9.07	4.57	.97	5.85	4.92	3.68	1.74	1.25	3.60
MAX	34	21	82	106	42	2.5	71	23	20	5.8	3.1	59
MIN	.22	.49	.87	1.7	1.2	.49	.37	1.0	1.1	.49	.55	.32
AC-FT	348	164	666	558	254	60	348	302	219	107	77	214

CAL YR 1984	TOTAL	1153.39	MEAN	3.15	MAX	82	MIN	.14	AC-FT	2290
WTR YR 1985	TOTAL	1672.78	MEAN	4.58	MAX	106	MIN	.22	AC-FT	3320

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 upstream from mouth.

DRAINAGE AREA.--1.03 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area. WSP 2137: 1959-60(P), 1981(M), 1962-65(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5 ft, by hand levels from high-tide mark.

REMARKS.--Records good except for estimated daily discharges, which are fair. Small diversion upstream 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.--26 years (water years 1960-85), 6.12 ft^3/s (4,430 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 498 ft^3/s Sept. 7, 1972, gage height, 5.18 ft, from rating curve extended above 20 ft^3/s on basis of slope-area measurement at gage height 4.57 ft; minimum, 0.12 ft^3/s Oct. 21, 23, 24, 27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 202 ft^3/s Apr. 14, gage height, 3.65 ft, no other peak greater than base discharge of 180 ft^3/s; minimum, 1.3 ft^3/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	26	2.5	17	4.9	4.0	2.8	8.4	9.9	5.4	4.7	4.3
2	1.4	20	2.8	13	4.3	4.8	2.5	9.5	13	4.6	5.4	4.0
3	2.2	14	30	11	3.8	7.4	4.8	20	11	3.4	4.8	3.8
4	2.8	12	14	9.8	3.6	4.3	4.3	e10	8.4	3.0	4.0	3.4
5	9.9	10	12	8.8	3.6	3.6	8.7	e11	8.1	3.0	3.4	3.2
6	5.2	9.2	11	8.1	9.7	3.8	5.2	e17	6.7	5.2	3.2	3.0
7	3.0	9.5	12	8.0	11	3.4	7.0	e10	6.4	11	3.0	2.8
8	2.7	7.4	9.5	8.1	11	6.3	6.1	e9.4	6.1	5.2	2.8	2.8
9	7.0	6.4	7.8	11	7.4	13	13	9.2	5.6	4.0	2.7	2.7
10	13	5.5	6.7	21	6.1	6.4	8.8	8.1	5.9	3.6	3.4	4.0
11	13	6.4	6.1	14	6.1	5.4	6.7	11	4.6	3.4	4.0	12
12	8.4	9.2	5.5	56	6.8	5.2	7.5	11	4.0	3.0	2.8	8.4
13	11	6.1	5.2	30	12	4.6	16	8.8	3.8	3.0	2.7	6.1
14	17	5.2	9.7	25	15	4.0	23	8.0	8.0	2.8	2.6	5.2
15	15	4.3	8.3	19	9.8	3.8	35	8.4	15	3.0	2.8	4.0
16	20	3.8	6.2	16	8.8	3.6	26	7.0	7.8	5.5	3.4	3.6
17	15	3.6	7.8	13	7.8	3.4	20	6.1	6.4	4.6	4.2	3.4
18	12	3.6	6.7	11	7.0	8.6	17	5.2	5.8	3.0	5.5	3.4
19	11	3.2	8.9	10	6.1	5.8	16	4.6	5.5	2.7	3.6	3.2
20	9.2	3.0	11	9.2	6.1	e5.2	12	4.8	8.5	2.5	4.0	3.0
21	8.4	2.8	12	8.4	5.2	e4.6	11	5.5	5.9	2.4	9.7	3.2
22	7.0	5.0	9.2	7.0	11	e4.0	8.8	4.0	11	2.2	5.5	3.6
23	6.1	3.6	7.8	6.1	6.7	e3.8	7.6	3.6	7.8	2.2	4.3	6.3
24	14	3.0	18	5.5	5.2	e3.8	7.4	3.4	5.6	5.2	3.8	22
25	9.2	6.1	19	4.9	4.3	e3.6	8.0	3.2	5.5	3.8	7.7	15
26	7.0	5.2	22	4.3	4.0	e3.4	8.0	3.0	5.2	5.2	8.1	13
27	5.8	3.4	34	4.4	4.5	e3.2	8.7	3.0	4.6	6.8	6.7	12
28	5.2	2.7	24	14	4.0	5.0	13	2.8	4.3	5.3	5.5	9.8
29	5.5	2.7	47	6.8	---	3.2	14	2.8	4.6	5.2	6.2	8.8
30	4.9	3.0	32	6.1	---	3.7	9.5	4.2	3.8	3.8	5.2	7.4
31	6.4	---	22	4.9	---	3.2	---	3.9	---	4.2	4.6	---
TOTAL	259.8	205.9	430.7	393.4	195.8	148.1	338.8	226.7	207.2	128.0	140.3	187.4
MEAN	8.38	6.86	13.9	12.7	6.99	4.78	11.3	7.31	6.91	4.13	4.53	6.25
MAX	20	26	47	56	15	13	35	20	15	11	9.7	22
MIN	1.4	2.7	2.5	4.3	3.6	3.2	2.5	2.8	3.8	2.2	2.8	2.7
AC-FT	515	408	854	780	388	294	672	450	411	254	278	372

CAL YR 1984	TOTAL	2167.21	MEAN	5.92	MAX	47	MIN	.47	AC-FT	4300
WTR YR 1985	TOTAL	2861.9	MEAN	7.84	MAX	56	MIN	1.4	AC-FT	5680

e Estimated

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 upstream from highwsy bridge, and 300 ft upstream from mouth.

DRAINAGE AREA.--0.24 mi^2.

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

REVISED RECORDS.--WSP 1937: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft, by hand levels from high-tide mark.

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

AVERAGE DISCHARGE.--26 years (water years 1960-85), 1.48 ft^3/s (1,070 acre-ft/yr).

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0300	*520	*3.80	Apr. 15	1100	488	3.65
Dec. 24	0330	225	2.84	Apr. 28	2300	285	3.08
Dec. 27	0100	245	2.92	June 16	0600	324	3.23
Mar. 13	1330	415	3.50	Sept. 24	0830	201	2.73
Apr. 5	0600	193	2.69				

Minimum discharge, 0.50 ft^3/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	8.2	.36	4.4	1.1	1.3	.49	1.8	9.5	.98	1.5	.36
2	.33	3.8	.43	2.3	1.2	1.3	.44	1.4	9.7	.74	.72	.36
3	.33	1.3	30	1.8	1.2	2.2	3.6	4.1	3.8	.67	.59	.61
4	1.2	.87	3.5	1.4	.87	1.4	3.8	2.4	2.0	.80	.40	.36
5	6.0	.69	1.9	1.4	.80	1.8	8.7	2.5	1.8	1.0	.36	.33
6	3.2	.69	2.1	2.4	6.7	1.0	1.4	2.4	.94	4.2	.36	.30
7	15	.87	1.4	2.4	3.9	.87	1.6	2.7	.94	2.3	.36	.30
8	.80	.69	1.2	3.3	2.6	3.1	2.4	1.8	2.2	.69	.33	.36
9	1.5	.64	1.1	2.0	1.4	3.8	2.0	1.3	.87	.54	.33	.38
10	2.0	.59	.87	9.6	1.2	1.3	1.1	1.2	.87	.49	.57	.66
11	1.9	.95	.81	4.0	1.2	1.0	.94	7.0	.69	.44	.97	1.8
12	.94	.92	.80	44	1.4	1.5	2.7	1.6	.85	.40	.40	.87
13	5.4	.74	.74	7.6	4.3	7.3	6.9	1.1	.81	.36	.33	.59
14	7.5	.59	5.7	6.0	7.4	1.8	9.4	1.7	1.2	.36	.35	.59
15	3.0	.54	2.7	3.5	1.6	1.3	37	1.5	9.4	.36	.40	.44
16	6.4	1.1	1.3	2.8	1.0	1.0	3.9	1.0	8.6	.49	.76	.36
17	3.0	.69	1.2	1.9	.94	1.2	2.2	.80	1.8	.44	1.3	.33
18	2.0	.64	1.3	1.6	.94	4.6	5.5	.74	1.2	.36	1.1	.30
19	1.4	.54	1.2	1.5	1.0	3.0	3.0	.69	.87	.33	.59	.30
20	1.1	.49	1.3	1.3	.94	1.3	1.8	.79	1.8	.30	.80	.33
21	.74	.49	1.5	1.2	1.7	1.0	1.2	1.2	2.3	.30	.74	.36
22	.69	.54	1.3	1.2	5.4	.87	.94	.64	10	.30	.64	.51
23	.69	.44	1.2	1.2	2.0	.94	.94	.59	1.4	.33	.54	.91
24	1.8	.40	23	1.1	4.2	.93	.87	.59	1.0	1.6	.49	31
25	.69	.47	6.4	1.1	3.0	.80	1.5	.54	.87	.54	1.3	1.6
26	.64	.51	8.8	1.0	2.0	.74	1.6	.54	.74	1.5	.99	.87
27	.64	.44	25	3.2	1.3	.69	4.5	.54	.74	2.0	1.0	.69
28	.54	.51	13	4.8	1.2	1.3	6.7	.49	.69	1.3	.69	.85
29	.59	.46	30	2.8	---	.74	4.2	2.7	.91	.93	.64	.69
30	.44	.44	10	1.8	---	.54	2.1	4.4	.64	.64	.51	.59
31	1.1	---	3.5	1.4	---	.49	---	2.3	---	.69	.40	---
TOTAL	71.89	30.24	183.61	126.0	62.49	50.91	123.22	53.05	79.13	26.38	20.46	47.98
MEAN	2.32	1.01	5.92	4.06	2.23	1.64	4.11	1.71	2.64	.85	.66	1.60
MAX	15	8.2	30	44	7.4	7.3	37	7.0	10	4.2	1.5	31
MIN	.33	.40	.36	1.0	.80	.49	.44	.49	.64	.30	.33	.30
AC-FT	143	60	364	250	124	101	244	105	157	52	41	95

CAL YR 1984	TOTAL	630.46	MEAN	1.72	MAX	30	MIN	.17	AC-FT	1250
WTR YR 1985	TOTAL	875.36	MEAN	2.40	MAX	44	MIN	.30	AC-FT	1740

16931500 ASILI STREAM AT ALTITUDE 330 FT NEAR ASILI

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

DRAINAGE AREA.--0.32 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 330 ft, from topographic map.

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

AVERAGE DISCHARGE.--8 years, 2.54 ft^3/s (1,840 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 635 ft^3/s, Oct. 28, 1980, gage height, 4.73 ft, from rating curve extended above 14 ft^3/s; minimum, 0.20 ft^3/s Aug. 16, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 205 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0330	*464	*4.36	Apr. 28	2030	329	3.98
Apr. 15	1300	346	4.03	June 15	0130	225	3.58

Minimum discharge, 0.55 ft^3/s, Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	12	.58	5.4	1.3	1.5	1.1	2.7	6.0	2.0	1.9	1.5
2	.58	9.1	.80	3.8	1.4	1.8	1.0	2.4	5.3	1.3	1.4	1.4
3	.67	5.4	26	2.9	1.5	2.0	2.9	4.4	4.3	1.2	1.8	1.9
4	1.5	3.9	5.4	2.3	1.2	1.3	1.8	3.4	2.8	1.0	1.3	1.3
5	7.0	2.9	3.3	2.0	1.1	1.7	5.6	3.5	3.1	.99	1.2	1.2
6	4.9	2.3	3.9	2.0	4.2	1.3	2.3	7.3	2.3	4.3	1.2	1.1
7	2.5	2.2	3.3	3.5	4.3	1.2	2.4	3.9	2.0	5.6	1.1	1.0
8	2.0	1.7	2.3	3.0	3.5	3.3	2.0	3.1	2.9	1.8	1.1	1.0
9	4.8	1.4	2.0	2.6	2.3	4.2	3.8	2.6	1.8	1.5	1.0	.99
10	7.3	1.2	1.9	7.8	2.0	2.1	2.6	2.2	1.9	1.4	1.6	1.7
11	7.6	3.1	1.5	6.1	1.9	1.8	2.1	3.6	1.5	1.3	1.9	5.1
12	4.9	4.4	1.3	25	2.3	1.7	4.7	2.5	1.4	1.2	1.1	2.9
13	8.4	1.4	1.3	12	5.0	3.5	7.0	1.8	1.3	1.2	.99	2.2
14	11	1.1	3.3	9.2	8.2	1.9	8.6	2.2	5.1	1.1	.95	2.0
15	8.6	1.0	3.0	6.7	4.3	1.5	31	2.5	12	1.1	1.0	1.7
16	13	1.1	2.0	5.4	3.3	1.4	8.8	1.7	6.3	1.5	2.1	1.4
17	7.6	.95	2.7	3.8	2.7	1.8	5.8	1.4	3.8	1.2	2.6	1.3
18	4.9	1.1	2.2	3.2	2.3	4.7	5.6	1.3	2.9	.99	2.3	1.2
19	3.5	.91	2.8	2.6	2.0	3.4	4.7	1.3	2.7	.91	1.7	1.2
20	2.7	.87	2.7	2.2	1.7	2.8	3.3	1.4	2.3	.87	2.0	1.2
21	2.4	.83	3.1	1.9	1.7	2.4	3.0	1.7	2.6	.79	2.4	1.4
22	1.8	1.1	2.6	1.7	3.2	1.9	2.3	1.1	8.0	.79	1.9	1.5
23	1.9	.79	2.4	1.4	1.7	1.7	2.0	1.1	2.7	.86	1.8	2.9
24	6.1	.75	12	1.3	1.8	1.6	1.8	1.0	2.2	2.3	1.7	25
25	2.5	.72	9.1	1.2	1.4	1.4	2.2	.99	1.9	1.2	4.0	6.2
26	2.0	.71	12	1.2	1.4	1.3	2.2	.95	1.7	2.2	3.4	4.2
27	1.7	.64	22	1.7	1.3	1.2	4.1	.99	1.5	2.4	3.1	3.1
28	1.4	.61	15	3.8	1.2	2.6	6.9	.95	1.4	1.8	2.5	2.7
29	1.7	.73	26	2.2	---	1.4	5.1	1.7	1.6	1.3	2.6	2.1
30	1.3	.67	13	1.6	---	1.3	3.3	3.5	1.3	1.2	2.0	1.8
31	3.2	---	8.0	1.4	---	1.2	---	2.0	---	1.2	1.7	---
TOTAL	130.06	65.58	197.48	130.9	70.2	62.9	140.0	71.18	96.6	48.50	57.34	84.19
MEAN	4.20	2.19	6.37	4.22	2.51	2.03	4.67	2.30	3.22	1.56	1.85	2.81
MAX	13	12	26	25	8.2	4.7	31	7.3	12	5.6	4.0	25
MIN	.58	.61	.58	1.2	1.1	1.2	1.0	.95	1.3	.79	.95	.99
AC-FT	258	130	392	260	139	125	278	141	192	96	114	167

CAL YR 1984	TOTAL	907.49	MEAN	2.48	MAX	26	MIN	.22	AC-FT	1800
WTR YR 1985	TOTAL	1154.93	MEAN	3.16	MAX	31	MIN	.58	AC-FT	2290

16933500 LEAFU STREAM AT ALTITUDE 370 FT, NEAR LEONE

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

DRAINAGE AREA.--0.31 mi^2.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 370 ft, from topographic map.

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

AVERAGE DISCHARGE.--8 years, 4.60 ft^3/s (3,330 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400 ft^3/s Dec. 3, 1984, gage height, 6.70 ft, from rating curve extended above 48 ft^3/s; minimum, 32 ft^3/s Aug. 9, 1983, Aug. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gege height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0300	*400	*6.70	May 6	0100	175	4.45
27	0100	189	4.59	30	2130	171	4.41
Jan. 7	2100	180	4.50	June 14	2030	187	4.57
Apr. 15	0900	224	4.94	Sept. 24	0100	201	4.71
28	2400	226	4.96				

Minimum discharge, 0.86 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	30	1.2	11	2.2	2.2	1.6	4.9	11	2.8	3.0	2.2
2	.90	22	2.1	7.9	2.3	3.0	1.6	4.4	8.6	2.0	2.3	2.0
3	1.0	13	46	6.2	2.2	5.1	4.7	7.4	5.6	1.8	2.9	2.5
4	1.7	8.3	13	5.4	2.0	2.1	3.1	5.7	4.9	1.6	2.0	1.8
5	10	5.8	8.1	4.7	2.0	1.9	6.0	5.9	5.1	1.4	1.8	1.6
6	5.2	4.5	7.9	4.6	6.8	1.8	2.9	14	3.7	4.4	1.7	1.5
7	2.9	4.5	7.2	7.1	7.1	3.5	3.8	6.2	3.3	6.9	1.7	1.4
8	2.4	3.2	4.8	4.8	4.7	2.8	4.3	5.4	3.3	2.3	1.6	1.4
9	6.0	2.8	4.4	6.6	3.4	5.8	6.4	5.5	2.6	2.0	1.5	1.4
10	10	2.4	4.1	14	2.9	3.0	4.0	4.0	2.6	2.0	3.3	2.1
11	8.3	3.1	3.5	9.6	3.0	2.6	3.5	5.5	2.1	1.8	2.4	6.7
12	6.4	4.2	3.3	53	3.5	2.6	9.4	3.6	2.2	1.8	1.5	3.5
13	13	2.6	3.3	28	7.0	2.9	16	3.2	2.2	1.7	1.4	2.8
14	20	2.2	8.5	19	9.8	2.2	22	4.4	11	1.6	1.4	2.7
15	15	2.0	5.1	12	4.7	2.0	57	4.3	16	1.7	1.4	2.4
16	21	2.0	4.4	8.5	4.1	1.8	24	3.0	5.9	2.3	2.2	2.2
17	14	1.8	5.1	6.1	3.5	2.8	13	2.5	5.6	1.6	3.2	2.0
18	9.0	1.8	4.9	4.5	3.1	5.7	10	2.3	4.3	1.4	2.6	1.9
19	6.4	1.6	8.0	3.6	2.9	4.8	8.1	2.1	3.5	1.3	1.9	1.8
20	4.8	1.5	5.9	3.1	2.2	3.7	5.3	2.0	3.2	1.2	3.3	2.0
21	4.3	1.4	5.6	3.2	2.2	2.9	4.4	2.8	3.2	1.1	3.7	2.4
22	3.2	3.1	5.1	2.8	4.6	2.4	3.4	1.9	12	1.1	2.5	2.2
23	2.7	2.1	4.8	2.5	2.2	2.2	3.1	1.8	3.9	1.1	2.4	6.2
24	7.5	1.6	20	2.4	1.9	2.1	3.0	1.7	3.5	3.9	2.3	49
25	3.8	1.4	19	2.2	1.8	1.9	3.2	1.6	3.2	1.7	5.0	15
26	3.1	1.5	20	2.0	1.7	1.8	3.4	1.4	2.8	4.4	3.9	8.3
27	2.7	1.3	39	2.1	1.7	1.7	6.4	1.4	2.4	4.1	3.6	6.5
28	2.4	1.2	30	6.9	1.6	5.1	8.0	1.4	2.2	2.8	3.1	4.7
29	2.7	1.5	59	3.1	---	2.1	9.2	2.6	2.4	2.3	3.2	3.3
30	2.2	1.4	31	2.5	---	2.1	5.6	6.0	2.0	2.1	2.7	2.9
31	5.2	---	18	2.3	---	1.8	---	3.4	---	2.1	2.4	---
TOTAL	198.74	135.8	402.3	251.7	97.1	88.4	256.4	122.3	144.3	70.3	77.9	146.4
MEAN	6.41	4.53	13.0	8.12	3.47	2.85	8.55	3.95	4.81	2.27	2.51	4.88
MAX	21	30	59	53	9.8	5.8	57	14	16	6.9	5.0	49
MIN	.90	1.2	1.2	2.0	1.6	1.7	1.6	1.4	2.0	1.1	1.4	1.4
AC-FT	394	269	798	499	193	175	509	243	286	139	155	290

CAL YR 1984	TOTAL	1662.65	MEAN	4.54	MAX	59	MIN	.36	AC-FT	3300
WTR YR 1985	TOTAL	1991.64	MEAN	5.46	MAX	59	MIN	.90	AC-FT	3950

16948000 AFUELO STREAM AT MATUU

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

DRAINAGE AREA.--0.25 mi^2.

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. Elevation of gage is 80 ft, from topographic map.

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

AVERAGE DISCHARGE.--27 years, 1.47 ft^3/s (1,070 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 535 ft^3/s May 3, 1985, gage height, 4.70 ft, from rating curve extended above 26 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.01 ft^3/s Sept. 16, 17, 20-26, 28, 29, 1975, Apr. 5-7, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 5	0830	180	3.03	Apr. 15	1000	225	3.30
24	0600	216	3.25	May 3	0400	*535	*4.70
Dec. 27	0300	191	3.10	June 14	1900	220	3.27
Jan. 12	0530	183	3.05	Sept. 24	0900	262	3.50

Minimum discharge, 0.02 ft^3/s, Oct. 1, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	19	.33	.85	.53	.47	.06	.60	5.7	.22	.66	.11
2	.05	9.8	.95	.55	.56	.44	.06	1.6	14	.16	1.3	.08
3	.18	2.4	8.9	.46	.50	.53	.18	40	4.8	.14	.36	.09
4	.05	1.3	2.1	.36	.30	.25	.18	11	1.7	.11	.23	.10
5	19	1.2	1.2	.33	.55	.19	.42	3.0	2.1	.10	.16	.07
6	.93	.65	2.1	.42	3.0	1.6	.13	7.3	.85	.16	.13	.06
7	.46	.50	11	.84	3.4	.38	3.0	3.8	.60	.19	.09	.08
8	.30	.70	2.0	2.0	2.2	.83	.60	1.5	.55	.13	.10	.09
9	.55	.55	.91	4.6	.75	.78	1.8	.91	.39	.11	.07	.10
10	2.4	.33	1.0	7.0	.60	.30	2.3	.75	.36	.10	.08	.20
11	1.1	2.4	.70	2.7	.50	.37	2.2	1.4	.23	.10	.33	4.2
12	.50	2.8	.36	41	.53	.21	1.6	1.2	.33	.08	.09	1.7
13	6.5	.91	.36	4.5	.80	.21	3.4	.91	.45	.08	.09	.46
14	8.6	.61	.28	3.6	1.5	.19	9.0	.70	9.7	.07	.08	.21
15	3.5	.42	.17	2.2	.65	.18	29	4.1	8.3	.10	.35	.14
16	18	1.3	.19	3.9	.42	.14	2.1	1.2	1.3	.28	.78	.11
17	2.7	.70	.21	1.2	.28	.13	.91	.65	1.5	.19	.28	.09
18	1.1	.55	.33	.91	.21	4.8	8.8	.42	1.5	.09	.42	.07
19	.65	.36	.40	.70	.19	.40	9.2	.36	.60	.08	.21	.07
20	.42	.19	1.1	.60	.17	.21	1.8	.36	1.6	.07	1.4	.09
21	7.2	.14	1.8	.60	.16	.25	.80	.46	1.5	.07	.65	.21
22	1.3	3.8	.70	.39	1.3	.22	.55	.19	6.0	.08	.62	.14
23	3.9	2.2	.46	.33	.39	.14	.46	.25	.85	.09	.55	.26
24	28	.55	10	.33	1.1	.11	.79	.28	.46	2.1	.39	40
25	2.6	1.1	4.7	.25	1.0	.11	.88	.25	.30	1.6	1.7	1.8
26	1.2	1.4	9.5	.23	.39	.08	1.5	.23	.23	1.3	.98	.70
27	.80	.42	15	.23	.42	.14	1.6	.23	.17	1.8	.91	.70
28	.55	.28	7.1	7.4	.32	.10	4.9	.42	.17	1.2	.33	.46
29	.65	.69	22	2.2	---	.08	2.8	.69	.24	1.6	.23	.39
30	.39	1.0	5.8	.65	---	.09	.83	1.2	.17	1.0	.14	.33
31	4.8	---	1.5	.50	---	.08	---	.98	---	.60	.10	---
TOTAL	118.41	58.25	113.15	91.83	22.72	14.01	91.85	86.94	66.65	14.00	13.81	53.11
MEAN	3.82	1.94	3.65	2.96	.81	.45	3.06	2.80	2.22	.45	.45	1.77
MAX	28	19	22	41	3.4	4.8	29	40	14	2.1	1.7	40
MIN	.03	.14	.17	.23	.16	.08	.06	.19	.17	.07	.07	.06
AC-FT	235	116	224	182	45	28	182	172	132	28	27	105

CAL YR 1984	TOTAL	583.46	MEAN	1.59	MAX	37	MIN	.03	AC-FT	1160
WTR YR 1985	TOTAL	744.73	MEAN	2.04	MAX	41	MIN	.03	AC-FT	1480

16963900 LEAFU STREAM NEAR AUASI

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

DRAINAGE AREA.--0.11 mi^2.

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

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

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

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

AVERAGE DISCHARGE.--13 years, 0.33 ft^3/s (239 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 234 ft^3/s Dec. 5, 1980, gage height, 4.43 ft, from recorded range in stage, from rating curve extended above 19 ft^3/s; minimum, 0.02 ft^3/s several days in 1976 and many days in 1983, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 16	1200	35	2.35	Apr. 26	0300	44	2.50
24	0500	30	2.26	May 5	1900	36	2.36
Dec. 4	0800	31	2.27	12	1530	*144	*3.68
24	0630	52	2.63	June 2	2130	46	2.54
27	0430	140	-				

Minimum discharge, 0.03 ft^3/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.90	.04	e.25	.13	.09	.05	.17	.07	.05	.07	.04
2	.03	.39	.05	e.15	.15	.09	.06	.20	1.1	.05	.11	.04
3	.08	.19	.51	e.15	.13	.09	.06	.82	.49	.05	.06	.03
4	.08	.15	1.0	e.13	.09	.09	.07	.59	.15	.04	.04	.04
5	.07	.09	.17	e.12	.13	.08	.10	1.6	.13	.04	.04	.03
6	.06	.08	.58	e.11	.23	.08	.06	1.6	.08	.04	.04	.03
7	.05	e.07	1.0	e.25	.15	.08	.22	1.2	.07	.04	.04	.03
8	.05	e.07	.73	e.30	.53	.08	.22	.39	.06	.04	.04	.03
9	.05	e.06	.32	e.85	.17	.08	.19	.21	.05	.04	.04	.04
10	.21	e.06	1.1	e.90	.11	.07	.09	.17	.06	.04	.04	.06
11	.19	e.08	.29	e.40	.21	.07	.07	1.2	.05	.04	.06	.34
12	.19	e.20	.15	e10	.11	.07	.07	2.4	.05	.03	.04	.11
13	.60	e.08	.11	e3.0	.09	.15	.26	.57	.06	.04	.04	.04
14	1.6	e.07	.13	e.70	.12	.08	.48	.26	.10	.03	.04	.03
15	.26	e.06	.09	e.35	.08	.07	3.0	2.6	.36	.03	.04	.03
16	5.0	e.06	.08	.53	.08	.06	.23	.32	.09	.05	.04	.03
17	.57	e.05	.09	.26	.07	.07	.13	.19	.18	.04	.04	.03
18	.17	e.05	.07	.29	.07	.06	.11	.15	.15	.04	e.04	.03
19	.09	e.04	.09	.29	.07	.05	.19	.13	.09	.04	e.04	.03
20	.08	e.04	.07	.24	.07	.05	.11	.09	.40	.04	.04	.12
21	.56	e.04	.11	.19	.36	.05	.09	.09	.14	.04	.04	.07
22	.19	e.04	.09	.17	.40	.08	.08	.09	.13	.04	.04	.06
23	.23	e.03	.08	.15	.47	.05	.08	.08	.09	.04	.04	.04
24	4.1	e.03	6.1	.13	.28	.05	.06	.08	.07	.07	.04	2.8
25	.39	e.04	.70	.11	.26	.05	.07	.07	.06	.06	.05	.23
26	.17	e.04	.90	.11	.17	.05	1.0	.07	.06	.05	.05	.11
27	.13	e.03	e14	.11	.13	.06	.26	.07	.05	.07	.05	.08
28	.09	e.03	e1.5	.58	.11	.05	.21	.07	.05	.12	.04	.07
29	.08	e.03	e8.0	.32	---	.05	.35	.08	.05	.17	.04	.05
30	.08	.04	e2.0	.17	---	.05	.15	.08	.05	.07	.04	.05
31	.14	---	e.50	.13	---	.05	---	.07	---	.09	.04	---
TOTAL	15.62	3.14	40.65	21.44	4.95	2.15	8.12	15.71	4.54	1.63	1.41	4.72
MEAN	.50	.10	1.31	.69	.18	.069	.27	.51	.15	.053	.045	.16
MAX	5.0	.90	14	10	.53	.15	3.0	2.6	1.1	.17	.11	2.8
MIN	.03	.03	.04	.11	.07	.05	.05	.07	.05	.03	.04	.03
AC-FT	31	6.2	81	43	9.8	4.3	16	31	9.0	3.2	2.8	9.4

CAL YR 1984	TOTAL	98.64	MEAN	.27	MAX	14	MIN	.02	AC-FT	198
WTR YR 1985	TOTAL	124.08	MEAN	.34	MAX	14	MIN	.03	AC-FT	246

e Estimated

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

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

Low-flow partial-record stationa

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 simulteneous 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 1985

Station No.	Station name	Location	Drainage area mi^2	Period of record	Measurements: Date	Measurements: Discharge (ft^3/s)
		Caroline Islands, Yap Islands				
16892650	Dinaey Stream, Yap	Lat 09°30'32" N., long 138°06'15" E., at upper Gitaem Reservoir, 0.4 mi northwest of water-treatment plant.	0.04	1980-85	9-16-85	0.19
16892680	Tholomar Stream above reservoir, Yap	Lat 09°30'37" N., long 138°06'18" E., about 500 ft upstream from upper Gitasm Reservoir and 1.4 mi aouth-west of Colonia.	.10	1965≠, 1968-74†, 1980-85	9-16-85	.56
16892900	Peemgoy Stream, Yap	Lat 09°31'07" N., long 138°06'36" E., 100 ft upstream from Taalgum Stream, 0.3 southeast of Mount Peemgoy, and 1.0 mi northwest of Protestant Mission Church.	.14	1968-82≠, 1985	9-17-85	1.11
16893180	Monguch Stream, Gagil-Tamil	Lat 09°31'59" N., long 138°09'57" E., 0.7 mi northeast of Tamel Elementary School and 1.0 mi south of Coast Guard LORAN station.	.18	1980-85	9-16-85	.49
16893190	Dorfay Stream, Gagil-Tamil	Lat 09°32'08" N., long 138°10'13" E., 0.2 mi upstream from mouth and 0.9 mi northeast of Tamilang Elsmentary School.	.20	1981-85	9-16-85	.58
		Caroline Islands, Island of Ponape				
16898300	Dauen Neu River	Lat 06°56'47" N., long 158°11'55" E., 0.48 mi southwest of Ponape Island Central School and 1.7 mi upstream from bridge at mouth.	.75	1970-75≠, 1975-76, 1981-82, 1984-85	1-30-85 7-20-85 8-29-85	2.85 3.94 4.05
16898650	Pheleng River	Lat 06°52'27" N., long 158°09'26" E., at road crossing near mouth, 0.25 mi north of Doletikitik Hill.	2.01	1981-82, 1985	9-16-85	7.98
16898700	Lehn Mesi River at hanging bridge	Lat 06°49'24" N., long 158°10'11" E., at foot bridge, 0.6 mi upstream from mouth.	8.32	1971, 1973, 1976-77, 1981-83, 1985	9-18-85	76.3

≠ Operatsd as a continuous-record gaging station.
† At station 16892700, 800 ft downstream.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

Station No.	Station name	Location	Drainage area mi^2	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Caroline Islands, Island of Ponape--Continued				
16898900	Keprohi River	Lat 06°50'40" N., long 158°17'57" E., 150 ft upstream from road bridge and 0.46 mi northeast of Ponape Agriculture Trade School.	2.05	1981-85	9-10-85	11.1
16899000	Senipehn (formerly Senpen) River	Lat 06°52'28" N., long 158°16'17" E., 0.1 mi downstream from confluence of two branches, 0.5 mi southeast of Merewi Hill, and 1.5 upstream from mouth.	6.04	1971, 1973, 1976-77, 1980-81 1983, 1985	9-10-85	61.5
16899100	Lehdau (formerly Lataw) River	Lat 06°52'59" N., long 158°16'15" E., 0.1 mi upstream from left-bank tributary, 0.4 mi northeast of Merewi Hill, and 1.4 mi upstream from mouth.	2.44	1971, 1973, 1976-77, 1980-81, 1983, 1985	9-10-85	8.27
		Samoa Islands, Island of Tutuila				
16917500	Leele Stream at mouth at Fagasa	Lat 14°17'28" S., long 170°43'09" W., on left bank at Fagasa and 200 ft upstream from mouth.	.23	1966-76≠, 1977, 1981-85	8- 7-85 9- 6-85	.41 .31
16920000	Aasu Stream near Aasu	Lat 14°18'16" S., long 170°45'29" W., 300 ft downstream from 100-ft waterfall, 0.5 mi south of Aasu, and 0.5 mi upstream from mouth.	.82	1959-63, 1968, 1974-78, 1978-79, 1981, 1983, 1985	9-17-85	1.13
16932000	Asili Stream near Asili	Lat 14°19'46" S., long 170°47'42" W., 0.4 mi north of Asili and 0.5 mi upstream from mouth.	.55	1959-61, 1963-65, 1968, 1970, 1974-77, 1981-85	8-13-85	.53
16932500	Asili Stream at Asili	Lat 14°20'04" S., long 170°47'40" W., 100 ft upstream from highway bridge at Asili and 0.1 mi upstream from mouth.	.66	1958-59≠, 1960-61, 1963-65, 1967-69, 1974-77, 1981-85	8-13-85	.90
16934000	Leafu Stream near Leone	Lat 14°19'47" S., long 170°46'55" W., 30 ft upstream from reservoir, 0.9 mi upstream from mouth, and 1.0 mi north of Leone.	.69	1959-64, 1968-69, 1971-74, 1976-77, 1981-85	8- 9-85	.70
16944000	Pepa Stream near Nuuuli	Lat 14°18'31" S., long 170°42'29" W., 0.3 mi upstream from Tauese Stream and 0.9 mi northwest of Nuuuli.	.57	1959-61, 1963-64, 1967-68, 1974-78, 1981-85	7-23-85 9- 6-83	1.11 .85
16960000	Alega Stream at Alega	Lat 14°16'58" S., long 170°38'19" W., on left bank 300 ft upstream from left-bank tributary, 0.2 mi northwest of Alega, and 0.3 mi upstream from mouth.	.19	1958-76≠, 1977-78, 1981-85	8- 7-85 9- 6-85	.55 .37

≠ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

Station No.	Station name	Location	Drainage area mi^2	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Samoa Islands, Island of Tutuila--Continued				
16964000	Leafu Stream at Auasi	Lat 14°16'28" S., long 170°34'26" W., above second waterfall, 0.1 mi north of Auasi and 0.2 mi upstream from mouth.	0.12	1959-61, 1963-65, 1968-71, 1976, 1981, 1983, 1985	9- 6-85	0.01

Discharge measurements made at miscellaneous sites during water year 1985

Stream	Tributary to	Location	Drainage area mi^2	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Caroline Islands, Palau Islands				
Ngechutrong River, Babelthuap (16890620)	Pacfic Ocean	Lat 07°36'11" N., long 134°34'50" E., at trail crosaing, 300 ft upstream from Diongradid River and 0.7 mi southeast of Ngetbong village school.	0.25	1974-82	9- 5-85 9-25-85	1.81 1.92
Ngerchetang River, Babelthuap (16890650)	Pacific Ocean	Lat 07°35'48" N., long 134°34'13" E., 0.7 mi south of Ngetbong village school and 0.9 mi upstream from Diongradid River.	1.51	1974-77, 1980-82	9- 5-85	9.35
Ngermeskang River, Babelthuap (16890700)	Pacific Ocean	Lat 07°31'16" N., long 134°33'16" E., 0.6 mi upstream from unnamed left-bank trubutary, 2.0 mi east of Imaong Village, and 5.8 mi upstream from mouth.	7.14	1973-82	9- 4-85 9-26-85	33.1 145
Ngetpang River, Babelthuap (16890800)	Pacific Ocean	Lat 07°27'45" N., long 134°31'38" E., 0.2 mi upstream from unnamed right-bank tributary, 1.1 mi east of forestry station, and 2.5 mi upstream from mouth.	.34	1973-82	9- 4-85 9-23-85	5.72 2.16
		Caroline Islands, Island of Kosrae				
Mutunte River (16899500)	Pacific Ocean	Lat 05°21'45" N., long 162°59'20" E., at dam, 0.6 mi upstream from mouth, and 1.2 mi north of Mount Mutunte.	.52	1971-82≠, 1983	9-23-85	1.90
Tafuyat River (16899780)	Pacific Ocean	Lat 05°18'38" N., long 162°00'47" E., at old Japanese dam, 0.75 mi upstream from mouth, and 1.5 mi east of Mount Finkol.	.27	1974-75, 1977-83	9-23-85	1.75

≠ Operated as a continuous-record gaging station.

Samplee are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

CAROLINE ISLANDS, PALAU ISLANDS

16891190 NGERIMEL RESERVOIR, BABELTHUAP (LAT 07°22'00" N., LONG 134°32'08" E.)

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
APR 01...	1115	100	7.0	31.0	34	0	8.0	3.3	4.6	23	.4

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR 01...	.40	33	3.1	4.8	<.10	21	65	.09	<.10	260	55

16891300 EDENG RIVER, BABELTHUAP (LAT 07°23'00" N., LONG 134°33'07" E.)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT 22...	1415	35	65	6.9	26.0	25	0	4.9	3.0	3.6	24	.3
APR 01...	1035	--	--	6.9	27.5	15	2	3.0	1.9	5.4	43	.6

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 22...	.10	24	2.2	4.2	<.10	19	51	.07	<.10	68	7
APR 01...	.20	13	3.4	8.9	<.10	8.6	40	.05	<.10	960	120

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891320 KMEKUMEL RIVER AT MOUTH, BABELTHUAP (LAT 07°23'04 N., LONG 134°33'01 E.)

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
APR											
02...	1205	97	7.30	27.5	38	2	8.8	3.9	4.2	19	.3

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
02...	.30	36	3.4	7.5	<.10	23	73	.10	<.10	110	13

16891700 UNNAMED WEST COAST STREAM, NGEREKEBESANG (LAT 07°21'17" N., LONG 134°26'32" E.)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
APR												
01...	1445	.05	97	6.4	27.0	29	3	7.1	2.7	6.7	33	.6

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
01...	.40	26	2.8	9.4	<.10	25	70	.09	.12	60	9

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

CAROLINE ISLANDS, PALAU ISLANDS--Continued

16891750 UNNAMED SOUTH COAST STREAM, NGEREKEBESANG (LAT 07°20'42" N., LONG 134°26'54" E.)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
APR 01...	1410	.06	51	6.8	27.0	13	1	2.7	1.6	4.4	42	.5

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
APR 01...	.10	12	3.4	5.5	<.10	19	44	.06	<.10	170	12

16891800 ELODESACHEL SPRING, KOROR (LAT 07°20'47" N., LONG 134°29'57" E.)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
APR 01...	1145	.30	153	7.8	27.0	72	9	23	3.5	4.8	13	.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
APR 01...	.20	63	6.6	5.8	<.10	20	100	.14	.15	170	23

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MARIANA ISLANDS, ISLAND OF GUAM

16840000 - TINAGA RIVER NR INARAJAN, GUAM (LAT 13 17 10 LONG 144 45 04)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
22...	1405	6.6	27.5	26.5
NOV				
15...	1240	8.0	27.5	26.0
DEC				
12...	1245	5.1	28.5	27.0
FEB , 1985				
27...	1435	1.2	28.5	27.0
AUG				
28...	1245	5.6	29.0	27.5
SEP				
24...	1455	5.0	28.0	27.0

16847000 - IMONG RIVER NR AGAT, GUAM (LAT 13 20 17 LONG 144 41 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
DEC , 1984				
20...	1115	6.6	27.0	26.0
MAR , 1985				
12...	1045	2.9	28.0	27.0
JUN , 1985				
20...	1145	7.4	28.0	27.0

16848100 - ALMAGOSA RIVER NEAR AGAT, GUAM (LAT 13 20 43 LONG 144 41 36)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
NOV , 1984				
14...	1320	26	28.0	27.0
DEC				
20...	1250	2.6	27.0	26.0
MAR , 1985				
12...	1230	.71	28.5	27.0
JUN , 1985				
20...	1325	6.4	28.0	27.0
SEP				
10...	1435	8.7	28.5	27.0

16848500 - MAULAP RIVER NEAR AGAT, GUAM (LAT 13 21 14 LONG 144 41 44)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
NOV , 1984				
14...	1500	11	27.0	26.5
DEC				
20...	1525	3.5	27.0	26.0
MAR , 1985				
12...	1425	1.1	29.0	27.0
JUN , 1985				
20...	1440	4.7	--	28.0
SEP				
10...	1635	5.8	28.5	27.0

16854500 - UGUM RIVER AB TALOFOFO FALLS, NR TALOFOFO, GUAM (LAT 13 19 16 LONG 144 44 01)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
16...	1410	34	28.0	27.0
NOV				
15...	1420	44	27.5	26.5
JAN , 1985				
30...	1240	12	27.0	26.0
JUL , 1985				
31...	1515	24	27.5	26.5
AUG				
29...	1425	22	29.0	27.0
SEP				
26...	1320	24	28.5	27.0

16858000 - YLIG RIVER NR YONA, GUAM (LAT 13 23 28 LONG 144 45 06)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
10...	1320	23	27.5	26.5
DEC				
12...	1545	21	28.0	27.0
JUL , 1985				
31...	1325	26	27.5	26.5
AUG , 1985				
28...	1500	24	29.0	27.5
SEP				
24...	1335	22	28.5	27.0

CAROLINE ISLANDS, YAP ISLANDS

16892000 - QATLIW STREAM, YAP, YAP ISLANDS (LAT 09 32 58 LONG 138 06 41)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
20...	1410	3.2	27.0	25.5
NOV				
09...	0940	.11	27.0	26.0
DEC				
03...	1015	.04	27.0	25.5
JAN , 1985				
16...	1135	.38	27.0	26.0
JUN , 1985				
05...	0955	.45	27.0	25.5
28...	1410	.20	27.5	26.0
AUG				
21...	1110	.11	26.5	25.5
SEP				
17...	1040	.65	28.5	25.5

CAROLINE ISLANDS, YAP ISLANDS--Continued

16892400 - QARINGEEL STREAM, YAP, YAP ISLANDS (LAT 09 31 02 LONG 138 05 31)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
20...	1230	2.1	26.0	26.0
NOV				
09...	1045	.08	27.0	28.0
DEC				
03...	1135	.10	27.5	28.5
JAN , 1985				
16...	0955	.73	27.0	26.0
JUN , 1985				
03...	1515	1.4	27.5	26.5
28...	1515	.13	28.0	27.5
AUG				
21...	0935	.14	26.5	25.5
SEP				
17...	0900	.52	26.5	25.5

18893100 - BURONG STREAM, YAP, YAP ISLANDS (LAT 09 32 05 LONG 138 07 19)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
20...	1100	4.4	28.5	25.5
NOV				
08...	1440	.05	28.0	28.5
29...	1430	.06	27.0	26.5
JAN , 1985				
16...	1520	.21	27.5	28.5
MAR				
29...	1205	.06	27.0	28.0
JUN , 1985				
03...	1020	4.4	27.5	25.5
27...	1445	.37	27.5	26.5
AUG				
19...	1435	.20	26.5	26.0
SEP				
16...	1225	3.8	26.0	25.5

CAROLINE ISLANDS, TRUK ISLANDS

16893800 - WICHEN RIVER AT ALT 18M, MOEN, TRUK ISLANDS (LAT 07 27 01 LONG 151 51 56)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
FEB , 1985				
11...	1135	.37	--	26.5
FEB , 1985				
25...	1350	1.4	--	28.0

CAROLINE ISLANDS, ISLAND OF PONAPE

16897800 - NANPIL RIVER, PONAPE (LAT 06 55 09 LONG 158 11 59)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
09...	1030	37	29.0	24.0
NOV				
06...	1230	14	28.0	23.0
21...	1015	39	28.0	23.0
DEC				
04...	1005	43	28.0	23.0
JAN , 1985				
15...	0930	12	28.0	23.0
31...	0955	7.2	28.0	24.0
FEB				
08...	1145	6.2	27.0	25.0
28...	1025	27	27.0	24.0
MAR				
12...	0930	5.1	28.0	24.0
28...	0915	8.7	28.0	23.0
APR , 1985				
09...	1035	58	26.0	23.0
25...	0955	19	28.0	23.0
MAY				
07...	1030	12	28.0	24.0
JUN				
04...	0950	15	28.0	24.0
JUL				
02...	1025	38	27.0	23.0
19...	1455	15	26.0	24.0
AUG				
14...	1110	24	28.0	24.0
27...	1020	10	29.0	25.0
SEP				
12...	1105	22	28.0	24.0
26...	1050	24	28.0	24.0

16897900 - LEWI RIVER, PONAPE (LAT 06 55 32 LONG 158 12 18)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
NOV , 1984				
06...	0945	1.5	28.0	23.0
21...	1240	6.0	29.0	24.0
DEC				
04...	1150	4.7	29.0	25.0
JAN , 1985				
15...	1055	1.5	28.0	24.0
31...	1310	.82	30.0	26.0
FEB				
28...	0925	2.0	28.0	23.0
MAR				
12...	1125	.63	29.0	25.0
28...	1020	.73	29.0	25.0
APR				
09...	1155	6.2	28.0	24.0
MAY , 1985				
07...	1225	1.4	29.0	25.0
JUN				
04...	1225	1.6	29.0	25.0
18...	1300	19	28.0	24.0
JUL				
02...	1235	4.8	29.0	24.0
20...	1050	1.6	29.0	24.0
AUG				
14...	1315	5.2	29.0	25.0
27...	1155	1.9	29.0	25.0
SEP				
12...	1255	2.4	29.0	25.0
26...	1245	2.2	29.0	24.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

CAROLINE ISLANDS, ISLAND OF PONAPE--Continued

16898600 - LUHPWOR RIVER, PONAPE (LAT 06 54 09 LONG 158 09 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
10...	0945	22	28.0	24.0
NOV				
07...	1300	4.6	29.0	25.0
DEC				
05...	0940	7.7	28.0	24.0
JAN , 1985				
02...	0935	6.1	27.0	24.0
16...	0920	4.1	28.0	24.0
29...	0945	2.6	28.0	24.0
FEB				
07...	1600	1.8	28.5	27.5
26...	0910	11	28.0	24.0
MAR				
14...	0935	2.8	29.0	25.0
26...	0900	3.6	28.0	24.0
APR , 1985				
11...	1010	9.7	27.0	23.0
MAY				
08...	1000	7.9	28.0	24.0
JUN				
05...	0950	4.4	29.0	25.0
20...	1005	11	28.0	24.0
JUL				
08...	1520	6.8	28.0	24.0
20...	1400	4.7	29.0	25.0
AUG				
13...	1020	14	28.0	24.0
28...	0950	11	28.0	24.0
SEP				
24...	1020	3.0	29.0	25.0

16898690 - LEHN MESI RIVER, PONAPE (LAT 06 50 41 LONG 158 11 02)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
12...	1100	90	28.0	24.0
25...	1105	48	29.0	25.0
NOV				
19...	1635	62	29.0	25.0
JAN , 1985				
22...	1145	71	28.0	24.0
FEB				
09...	1215	20	30.0	25.0
MAR				
05...	1145	46	29.0	25.0
APR				
17...	1135	124	28.0	24.0
MAY				
02...	1110	48	28.0	25.0
MAY , 1985				
16...	1400	67	28.0	24.0
30...	1215	92	29.0	25.0
JUN				
13...	1245	42	29.0	25.0
27...	1435	37	29.0	25.0
JUL				
12...	0700	30	27.0	23.0
22...	1215	56	29.0	25.0
AUG				
08...	1310	34	29.0	25.0
20...	1110	50	28.0	24.0
SEP				
19...	1535	40	29.0	24.0

CAROLINE ISLANDS, ISLAND OF KOSRAE

16899620 - MELO RIVER, KOSRAE (LAT 05 20 30 LONG 162 58 33)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
20...	1145	3.2	27.5	26.0
FEB , 1985				
06...	1540	5.2	28.0	26.0

16899750 - MALEM RIVER, KOSRAE (LAT 05 17 35 LONG 163 00 54)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
18...	1615	3.4	27.5	26.0
30...	1040	1.6	27.5	26.0
FEB , 1985				
05...	1415	1.9	26.0	25.5
19...	0945	7.4	27.0	25.5
APR				
15...	1040	17	28.0	25.5
25...	1345	7.4	28.5	25.5
MAY , 1985				
16...	1115	5.0	29.5	26.0
30...	1450	7.6	29.0	26.5
JUN				
18...	1420	4.2	29.0	28.0
26...	1345	8.2	28.0	26.0
SEP				
12...	0925	1.1	29.0	25.5
24...	1005	2.8	--	26.0

16899800 - TOFOL RIVER, KOSRAE (LAT 05 19 10 LONG 163 00 24)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
30...	1340	1.2	28.0	26.0
FEB , 1985				
05...	1555	1.8	26.0	25.5
MAR				
13...	0845	2.1	26.0	25.0
AFR				
15...	1235	16	27.0	26.0
25...	0945	5.2	26.0	26.0
MAY				
16...	0845	3.1	27.5	26.0
MAY , 1985				
29...	0940	12	29.0	25.5
JUL				
17...	1400	.87	28.5	26.0
30...	1320	.84	27.0	26.0
AUG				
29...	1550	.53	27.0	26.5
SEP				
12...	1320	.54	28.0	26.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 (DEG C)
OCT , 1984				
15...	1110	5.4	26.0	24.0
DEC				
12...	1325	2.5	28.0	26.0
JAN , 1985				
24...	1305	2.0	24.0	22.0
FEB				
28...	1055	1.9	26.0	24.0
APR				
02...	1120	.36	24.0	22.0
MAY , 1985				
08...	1110	6.2	26.0	24.0
JUN				
18...	1020	3.2	25.0	23.0
JUL				
19...	0830	.78	26.0	24.0
AUG				
26...	0930	2.8	26.0	24.0
SEP				
12...	0915	4.0	26.0	24.0

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 (DEG C)
NOV , 1984				
06...	0920	9.4	26.0	24.0
DEC				
20...	0910	11	26.0	24.0
JAN , 1985				
25...	0920	4.8	26.0	24.0
FEB				
27...	0935	3.8	26.0	23.0
MAR				
28...	0930	2.4	26.0	24.0
MAY				
09...	0910	9.1	26.0	24.0
JUN , 1985				
07...	0840	6.1	26.0	24.0
JUL				
10...	0940	3.8	24.0	22.0
AUG				
15...	0925	3.5	24.0	22.0
SEP				
17...	0920	3.4	24.0	22.0
26...	0805	14	24.0	23.0

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 (DEG C)
OCT , 1984				
02...	0820	.35	24.0	22.0
DEC				
11...	1130	1.0	25.0	24.0
FEB , 1985				
19...	0955	.87	26.0	24.0
MAR				
21...	1120	1.0	26.0	24.0
APR				
27...	0840	1.8	24.0	24.0
MAY , 1985				
22...	1300	.65	24.0	22.0
JUN				
27...	1220	.73	26.0	24.0
JUL				
09...	1105	.55	26.0	24.0
29...	1125	.88	26.0	24.0
AUG				
14...	0840	.33	25.0	24.0
30...	1050	.52	24.0	22.0

16931500 - ASILI STR AT ALT 330 FT, NR ASILI,TUTUILA (LAT 14 19 34 LONG 170 47 38)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
25...	0925	2.6	26.0	24.0
NOV				
30...	0920	.65	24.0	22.0
DEC				
18...	0945	2.0	26.0	24.0
JAN , 1985				
08...	1125	2.8	26.0	24.0
21...	1005	1.9	24.0	22.0
FEB				
11...	0955	1.7	26.0	24.0
MAR				
13...	0820	1.4	26.0	24.0
APR , 1985				
30...	0950	3.3	26.0	24.0
MAY				
22...	1015	1.1	24.0	22.0
JUN				
11...	0930	1.5	24.0	22.0
27...	1010	1.4	26.0	24.0
JUL				
09...	0855	1.4	26.0	24.0
29...	0920	1.3	26.0	24.0
AUG				
13...	0855	.95	26.0	24.0
30...	0845	2.0	24.0	22.0

16933500 - LEAFU STR AT ALT 370 FT, NR LEONE, TUTUILA (LAT 14 19 31 LONG 170 46 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
OCT , 1984				
03...	1025	.85	24.5	24.0
30...	0930	2.2	26.0	24.0
NOV				
19...	0825	1.6	24.0	22.0
DEC				
07...	0830	5.8	24.0	24.0
JAN , 1985				
09...	1240	2.9	26.0	24.0
21...	1250	3.2	24.0	22.0
FEB				
11...	1215	3.0	26.0	24.0
MAR				
14...	0900	2.2	26.0	24.0
APR , 1985				
23...	1030	3.2	26.0	24.0
MAY				
20...	1035	2.0	26.0	24.0
JUN				
24...	1015	3.4	26.0	24.0
JUL				
08...	1110	2.2	26.0	24.0
26...	0900	1.3	24.0	22.0
AUG				
09...	1000	1.5	24.0	24.0
27...	0935	3.6	24.0	22.0
SEP				
30...	0910	3.0	24.0	22.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

SAMOA ISLANDS, ISLAND OF TUTUILA--Continued

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 (DEG C)
OCT , 1984				
11...	0920	1.2	24.0	22.0
16...	0835	4.2	26.0	24.0
NOV				
16...	0900	.22	24.0	22.0
DEC				
18...	1215	.18	26.0	24.0
JAN , 1985				
29...	1310	2.0	26.0	24.0
FEB				
15...	1025	.62	24.0	22.0
MAR				
19...	1210	.39	26.0	24.0
APR , 1985				
30...	1225	.83	26.0	24.0
MAY				
30...	1225	.81	24.0	22.0
JUN				
12...	1100	.26	24.0	22.0
JUL				
02...	1055	.11	26.0	24.0
AUG				
02...	0920	1.3	26.0	24.0
SEP				
04...	0830	.11	24.0	22.0

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 (DEG C)
NOV , 1984				
30...	1310	.04	24.0	22.0
DEC				
26...	1130	.65	28.0	24.0
JAN , 1985				
16...	1015	.54	25.0	24.0
29...	0845	.32	26.0	24.0
FEB				
19...	1255	.05	26.0	24.0
MAR				
19...	0930	.05	24.0	22.0
APR				
24...	1015	.06	26.0	24.0
MAY , 1985				
21...	0955	.09	25.5	24.0
JUN				
03...	1015	.39	26.0	24.0
12...	1310	.05	24.0	22.0
JUL				
04...	0905	.04	24.0	22.0
17...	0940	.05	24.0	22.0
AUG				
06...	0925	.04	24.0	24.0
SEP				
18...	1000	.03	24.0	22.0

MARIANA ISLANDS, ISLAND OF SAIPAN

151032145460370. Local number, 14-1045-09 Hakmang Well 78.

LOCATION.--Lat 15°10'22" N., long 145°45'51" E., Hydrologic Unit 20100006, 0.8 mi west-southwest of the Hakmang Communication station and 2.3 mi northeast of San Vicente Village. Owner: Government of the Northern Mariana Islands.

AQUIFER.--Tagpochau Limestone.

WELL CHARACTERISTICS.--Drilled artesian well, depth 369 ft, diameter 12 in.

DATUM.--Elevation of land-surface datum is 229 ft. Measuring point: Top of casing, about 230 ft above mean see level.

PERIOD OF RECORD.--Water-level recorder, March 1973 to May 1976, March 1977 to September 1978, December 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.03 ft above meen sea level, Aug. 24, 1985; lowest, 18.33 ft above mean sea level, Aug. 26, 27, 1985.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.89	---	18.85	18.88	18.93	18.85	18.86	18.83	18.78	18.85	
2	---	18.88	---	18.84	18.90	18.93	18.87	18.87	18.80	18.78	18.85	
3	18.91	18.90	---	18.85	18.90	18.91	18.85	18.86	18.79	18.76	18.88	
4	18.89	18.91	---	18.84	18.91	18.90	18.83	18.83	18.79	18.79	18.86	
5	18.90	18.89	---	18.84	18.91	18.91	18.80	18.82	18.80	18.78	18.87	
6	18.91	18.89	---	18.85	18.91	18.92	18.81	18.78	18.78	18.75	18.88	
7	18.93	18.88	---	18.83	18.90	18.93	18.83	18.75	18.79	18.76	18.90	
8	18.92	18.88	---	18.84	18.91	18.93	18.85	18.76	18.79	18.75	18.93	
9	18.90	18.86	---	18.86	18.91	18.92	18.83	18.77	18.78	18.77	18.87	
10	18.88	18.86	---	18.88	18.92	18.92	18.81	18.79	18.77	18.77	18.88	
11	18.90	18.85	---	18.88	18.90	18.91	18.78	18.77	18.81	18.77	18.95	
12	18.90	18.88	---	18.86	18.88	18.91	18.76	18.78	18.84	18.75	18.90	
13	18.90	18.85	---	18.84	18.87	18.89	18.77	18.81	18.82	18.73	18.89	
14	18.88	18.83	18.89	18.82	18.85	18.88	18.73	18.84	18.82	18.74	18.90	
15	18.88	18.84	18.89	18.81	18.85	18.88	18.74	18.82	18.84	18.76	19.04	
16	18.88	18.85	18.90	18.81	18.86	18.86	18.73	18.83	18.85	18.76	---	
17	18.88	18.83	18.91	18.82	18.86	18.87	18.73	18.83	18.83	18.77	---	
18	18.89	18.84	18.89	18.85	18.85	18.88	18.73	18.83	18.81	18.78	---	
19	19.20	18.83	18.87	18.85	18.85	18.88	18.72	18.84	18.84	18.80	---	
20	---	18.86	18.88	18.86	18.85	18.88	18.70	18.98	18.86	18.81	18.92	
21	---	18.83	18.88	18.87	18.87	18.88	18.71	18.78	18.81	18.84	19.00	
22	18.82	18.83	18.89	18.86	18.88	18.88	18.71	18.83	18.80	18.85	19.04	
23	18.97	18.81	18.88	18.87	18.89	18.88	18.72	18.89	18.79	18.86	18.98	
24	18.99	18.83	18.87	18.91	18.89	18.87	18.75	18.84	18.80	18.88	21.03	
25	18.99	18.81	18.88	18.90	18.89	18.87	18.79	18.87	18.80	18.87	18.69	
26	18.89	18.82	18.88	18.91	18.89	18.87	18.81	18.86	18.79	18.89	18.33	
27	18.93	18.81	18.88	18.89	18.90	18.87	18.82	18.86	18.75	18.90	18.33	
28	18.93	18.82	18.88	18.90	18.92	18.86	18.81	18.87	18.75	18.88	18.47	
29	18.90	18.83	18.87	18.90	---	18.87	18.86	18.84	18.76	18.86	18.66	
30	18.92	---	18.85	18.89	---	18.87	18.86	18.87	18.77	18.87	---	
31	18.91	---	18.85	18.89	---	18.85	---	18.85	---	18.80	---	
MEAN	---	---	---	18.86	18.89	18.89	18.79	18.83	18.80	18.80	---	
MAX	---	---	---	18.91	18.92	18.93	18.87	18.98	18.86	18.90	---	
MIN	---	---	---	18.81	18.85	18.85	18.70	18.75	18.75	18.73	---	

MARIANA ISLANDS, ISLAND OF SAIPAN

151130145445970. Local number, 14-1144-07 Akgak Well 31.

LOCATION.--Lat 15°11'30" N., long 145°44'59" E., Hydrologic Unit 20100006, 1.2 mi south of Capitol Hill and 2.5 mi north of San Vicente Village. Owner: Government of the Northern Mariana Islands.

AQUIFER.--Tagpochau Limestone.

WELL CHARACTERISTICS.--Drilled perched water-table well, depth 290 ft, diameter 12 in.

DATUM.--Elevation of land-surface datum is 615 ft. Measuring point: Top of casing, 615.37 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 407.97 ft above mean sea level, Dec. 24, 1982; lowest, 371.34 ft above mean sea level, July 21, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379.00	379.60	380.21	379.73	378.75	379.99	379.11	378.04	378.02	377.57	377.20	379.42
2	378.98	379.61	380.27	379.80	378.75	379.69	379.11	378.03	378.12	377.55	377.19	379.53
3	379.01	379.63	380.28	379.93	378.75	379.53	379.04	377.99	378.19	377.54	377.17	379.58
4	379.05	379.65	380.28	379.89	378.74	379.52	378.96	377.97	378.15	377.52	377.17	379.63
5	379.08	379.68	380.28	379.80	378.74	379.66	378.82	377.96	378.10	377.50	377.18	379.70
6	379.13	379.72	380.27	379.70	378.73	379.90	378.74	377.96	378.07	377.49	377.17	379.75
7	379.17	379.75	380.26	379.61	378.72	380.14	378.69	377.95	378.05	377.48	377.16	379.81
8	379.18	379.79	380.25	379.55	378.70	380.30	378.63	377.95	377.99	377.46	377.15	379.85
9	379.19	379.81	380.23	379.51	378.69	380.35	378.61	377.93	377.96	377.45	377.13	379.89
10	379.19	379.82	380.21	379.48	378.68	380.39	378.62	377.87	377.91	377.44	377.14	379.94
11	379.20	379.83	380.18	379.34	378.67	380.49	378.62	377.85	377.90	377.43	377.15	379.96
12	379.20	379.88	380.16	379.24	378.66	380.64	378.58	377.84	377.87	377.41	377.16	379.97
13	379.20	379.96	380.14	379.21	378.65	380.63	378.57	377.83	377.83	377.36	377.16	380.06
14	379.20	379.98	380.13	379.15	378.64	380.35	378.57	377.81	377.82	377.30	377.18	380.09
15	379.19	379.99	380.13	379.10	378.64	380.05	378.51	377.78	377.82	377.29	377.19	380.12
16	379.20	380.01	380.07	379.07	378.68	379.97	378.52	377.76	377.83	377.28	377.23	380.17
17	379.20	380.15	380.04	379.11	378.80	379.93	378.51	377.76	377.82	377.26	377.32	380.18
18	379.20	380.38	380.03	379.07	379.15	379.92	378.39	377.76	377.78	377.24	e377.4	380.19
19	379.20	380.35	380.02	379.01	379.11	379.94	378.34	377.75	377.73	377.21	e377.5	380.20
20	379.30	380.31	380.01	379.04	378.91	379.87	378.29	377.75	377.75	377.20	e377.7	380.26
21	379.48	380.27	379.99	379.11	378.92	380.04	378.27	377.76	377.76	377.20	e377.8	380.29
22	379.52	380.23	379.94	379.00	379.31	379.95	378.25	377.78	377.73	377.19	e377.9	380.38
23	379.53	380.23	379.89	378.92	379.85	379.63	378.21	377.83	377.71	377.18	e378.0	380.48
24	379.58	380.21	379.87	378.88	380.48	379.49	378.19	377.83	377.70	377.17	378.11	380.54
25	379.59	380.21	379.84	378.85	380.98	379.57	378.17	377.83	377.68	377.17	378.21	380.61
26	379.59	380.20	379.81	378.81	381.34	379.68	378.15	377.84	377.66	377.18	378.24	380.70
27	379.60	380.21	379.80	378.80	381.00	379.69	378.11	377.85	377.63	377.17	378.26	380.81
28	379.60	380.22	379.78	378.78	380.43	379.84	378.07	377.85	377.61	377.16	378.32	380.90
29	379.60	380.22	379.76	378.76	---	379.50	378.06	377.86	377.59	377.20	378.41	381.02
30	379.60	380.23	379.74	378.76	---	379.28	378.05	377.85	377.58	377.20	378.67	381.12
31	379.60	---	379.71	378.76	---	379.17	---	377.84	---	377.20	379.18	---
MEAN	379.30	380.00	380.05	379.22	379.20	379.91	378.49	377.86	377.85	377.32	377.60	380.17
MAX	379.60	380.38	380.28	379.93	381.34	380.64	379.11	378.04	378.19	377.57	379.18	381.12
MIN	378.98	379.60	379.71	378.76	378.64	379.17	378.05	377.75	377.58	377.16	377.13	379.42

CAL YR 1984 MEAN 374.81 MAX 380.38 MIN 371.36
WTR YR 1985 MEAN 378.91 MAX 381.34 MIN 377.13

e Estimated

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

150736145425370 - 14-0742-13 KOBLER 116A, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
AUG 30...	1225	7950	7.1	28.5	1100	910	170	170

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
AUG 30...	1200	16	212	290	2400	<.10	9.6	1.8

150730145431370 - 14-0743-11 KOBLER FIELD 111, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT 05...	1040	4770	6.9	29.0	710	500	160	75	670	67	11

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 05...	18	210	150	1300	<.10	8.9	2500	3.4	3.4	160	<10

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

150736145430070 - 14-0743-13 KOBLER FIELD 113, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
AUG										
30...	1200	2500	7.0	540	320	160	34	290	53	6

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
AUG											
30...	14	225	57	580	<.10	8.3	1300	1.7	4.0	70	<10

150740145435570 - 14-0743-25 ISLEY FIELD 107, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
03...	1620	1850	7.0	28.5	400	200	120	24	210	53	5
AUG											
29...	0910	1920	--	28.5	--	--	--	--	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
03...	6.6	196	41	410	<.10	6.9	940	1.3	5.1	54	6
AUG											
29...	--	--	--	420	--	--	--	--	--	--	--

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

151026145454970 - 14-1045-08 HAKMANG 76, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
02...	1440	936	7.2	28.5	360	160	130	9.0	50	23	1
AUG											
29...	1155	1050	--	28.5	--	--	--	--	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
02...	1.6	204	14	96	<.10	22	440	.61	1.8	5	1
AUG											
29...	--	--	--	140	--	--	--	--	--	--	--

151127145434070 - 14-1143-05 GUALO RAI 154, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
04...	1140	3960	7.1	30.5	760	630	190	69	540	60	9
AUG											
30...	1040	5050	6.8	30.5	990	780	230	100	610	57	9

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
04...	16	133	95	1200	.10	6.6	2200	3.0	1.4	160	<10
AUG											
30...	1.1	206	110	1500	.10	7.4	2700	3.6	1.3	120	<10

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

151255145443770 - 14-1244-16 SQ 9 AS RAPUGAO, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)
AUG 29...	1730	1360	6.9	27.5	360	130	130	9.2	120

DATE	SODIUM ADSORPTION RATIO	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
AUG 29...	3	233	21	250	<.10	11	3.3	81	5

151312145443970 - 14-1344-17 WELL 148 AS RAPUGAO, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT 14...	1415	865	6.9	28.0	300	98	110	5.8	50	26	1
AUG 29...	1700	805	--	28.0	--	--	--	--	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 14...	4.8	201	12	95	<.10	9.5	410	.55	3.1	7	<1
AUG 29...	--	--	--	90	--	--	--	--	--	--	--

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

151309145443870 - 14-1344-18 WELL 149 AS RAPUGAO, SAIPAN

DATE	TIME	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT 04...	1620	6.9	27.5	370	140	130	10	120	41	3

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 04...	2.3	222	12	270	<.10	9.9	690	.93	3.1	40	3

151309145443370 - 14-1344-19 WELL 150 AS RAPUGAO, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM
OCT 04...	1510	--	6.9	28.0	330	110	14	130	46
AUG 29...	1710	2300	--	28.5	--	--	--	--	--

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 04...	3	3.5	26	260	<.10	10	2.4	14	2
AUG 29...	--	--	--	550	--	--	--	--	--

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

151359145451570 - 14-1345-04 TANAPAG SPRING 2, SAIPAN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
05...	0920	517	7.3	28.0	190	0	50	16	40	30	1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
05...	6.6	223	16	23	.20	66	350	.48	<.10	71	38

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

MARIANA ISLANDS, ISLAND OF SAIPAN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
150723145431170	14-0742-06	15 07 23	145 43 11	08-30-85	1120	5550	28.0	1600
150737145431070	14-0742-07	15 07 37	145 43 10	08-30-85	1150	3910	28.5	1100
150732145431270	14-0742-09	15 07 32	145 43 12	08-30-85	1140	8740	29.0	2600
150728145431470	14-0743-10	15 07 28	145 43 14	08-30-85	1130	6370	28.5	1800
150730145435270	14-0743-17	15 07 30	145 43 52	08-29-85	0950	835	29.0	160
150737145440670	14-0743-18	15 07 37	145 44 06	08-29-85	0955	2060	29.0	470
150749145434170	14-0743-19	15 07 49	145 43 41	08-29-85	0900	2350	29.0	550
150731145440370	14-0743-22	15 07 31	145 44 03	08-29-85	0935	2700	29.0	680
150738145435870	14-0743-23	15 07 38	145 43 58	08-29-85	0920	1880	29.0	440
150743145435470	14-0743-24	15 07 43	145 43 54	08-29-85	0905	2620	29.0	640
150733145435970	14-0743-26	15 07 27	145 43 44	08-29-85	0940	1830	29.0	400
150729145435570	14-0743-29	15 07 29	145 43 55	08-29-85	1005	2060	30.0	460
150843145434770	14-0843-04	15 08 43	145 43 47	08-29-85	1035	4460	30.0	1200
151127145434270	14-1143-02	15 11 27	145 43 42	08-30-85	1030	1680	29.5	390
151248145443770	14-1244-08	15 12 46	145 44 37	08-29-85	1640	2000	27.5	460
151250145444170	14-1244-09	15 12 50	145 44 41	08-29-85	1650	7050	29.0	2100
151312145441570	14-1344-14	15 13 12	145 44 15	08-30-85	0905	5460	28.5	1600
151314145441570	14-1344-15	15 13 14	145 44 15	08-30-85	0930	11900	28.5	3600

MARIANA ISLANDS, ISLAND OF GUAM

132624144452771. Local number, 18-2645-07 Ordot Well A-20.

LOCATION.--Lat 13°26'24" N., long 144°45'27" E., Hydrologic Unit 20100003, at Ordot School, 1.4 mi west of junction of Routes 4 and 10, Ordot. Owner: Government of Guam.

AQUIFER.--Mariana Limestone and Alutom formation.

WELL CHARACTERISTICS.--Drilled parabasal water-table well, depth reported 120 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 137 ft. Measuring point: Top of casing, 141.74 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.03 ft above mean sea level, Oct. 21, 1980; lowest, 32.76 ft above mean sea level, June 21, 22, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.85	44.28	46.32	45.09	42.66	39.90	37.92	36.61	37.67	41.65	42.36	44.50
2	42.98	44.26	46.38	44.96	42.58	39.82	37.86	36.61	37.70	41.77	42.53	44.67
3	43.14	44.27	46.43	44.84	42.48	39.73	37.80	36.61	37.71	41.85	42.68	44.86
4	43.24	44.26	46.47	44.75	42.38	39.66	37.72	36.60	37.72	41.91	42.81	45.13
5	43.30	44.25	46.50	44.61	42.29	39.60	37.66	38.58	37.77	41.96	42.94	45.33
6	43.34	44.25	46.60	44.50	42.17	39.49	37.61	38.57	37.83	42.01	43.07	45.59
7	43.36	44.21	46.65	44.38	42.08	39.40	37.57	36.55	37.88	42.06	43.15	45.73
8	43.34	44.15	46.70	44.28	41.99	39.33	37.51	38.53	37.93	42.09	43.20	45.85
9	43.31	44.10	46.75	44.20	41.86	39.26	37.44	36.50	37.94	42.14	43.27	46.01
10	43.30	44.08	46.80	44.10	41.76	39.18	37.37	36.46	37.93	42.23	43.42	46.16
11	43.31	44.02	46.80	43.97	41.65	39.12	37.32	36.43	37.92	42.29	43.56	46.35
12	43.34	44.02	46.80	43.88	41.56	39.06	37.28	36.40	37.86	42.33	43.62	46.55
13	43.38	43.97	46.80	43.84	41.45	38.97	37.23	36.37	37.82	42.39	43.66	46.71
14	43.43	43.95	46.75	43.81	41.34	38.88	37.16	36.34	37.77	42.43	43.71	46.89
15	43.51	44.07	46.70	43.78	41.26	38.83	37.10	36.32	37.72	42.45	43.72	47.12
16	43.63	44.23	46.65	43.73	41.18	38.77	37.08	38.30	37.68	42.42	43.70	47.29
17	43.69	44.37	46.60	43.70	41.07	38.72	37.05	36.28	37.70	42.38	43.65	47.50
18	43.73	44.56	46.50	43.64	40.95	38.66	37.01	36.28	37.87	42.34	43.62	47.65
19	43.78	44.80	46.41	43.60	40.85	38.63	36.94	36.31	38.15	42.31	43.60	47.77
20	43.84	45.00	46.34	43.55	40.77	38.59	36.88	36.36	38.40	42.26	43.60	47.85
21	43.91	45.30	46.26	43.47	40.69	38.54	36.85	36.48	38.63	42.19	43.67	47.88
22	43.95	45.50	46.17	43.36	40.59	38.48	36.82	36.62	38.93	42.12	43.75	47.92
23	44.02	45.70	46.08	43.31	40.48	38.42	36.79	36.75	39.32	42.07	43.88	47.93
24	44.13	45.90	45.99	43.26	40.37	38.38	36.75	36.92	39.71	41.98	44.03	47.94
25	44.16	45.95	45.87	43.17	40.28	38.31	36.71	37.07	40.05	41.91	44.12	48.01
26	44.17	46.04	45.78	43.10	40.20	38.24	36.68	37.18	40.37	41.86	44.16	48.10
27	44.19	46.10	45.68	43.01	40.12	38.18	36.65	37.30	40.69	41.84	44.22	48.17
28	44.23	46.14	45.60	42.95	40.00	38.13	36.62	37.41	41.01	41.87	44.25	48.23
29	44.25	46.20	45.46	42.87	---	38.10	36.61	37.53	41.27	42.03	44.27	48.40
30	44.28	46.26	45.32	42.81	---	38.05	36.60	37.60	41.51	42.16	44.28	48.70
31	44.30	---	45.21	42.75	---	37.97	---	37.84	---	42.27	44.35	---
MEAN	43.66	44.81	46.30	43.78	41.32	38.85	37.15	36.69	38.62	42.12	43.58	46.89
MAX	44.30	46.26	46.80	45.09	42.66	39.90	37.92	37.64	41.51	42.45	44.35	48.70
MIN	42.85	43.95	45.21	42.75	40.00	37.97	36.60	36.28	37.67	41.65	42.36	44.50

WTR YR 1985 MEAN 41.99 MAX 48.70 MIN 36.28

MARIANA ISLANDS, ISLAND OF GUAM

132644144480871. Local number, 18-2648-02 BPM Well 1.

LOCATION.--Lat 13°26'44" N., long 144°48'08" E., Hydrologic Unit 20100003, on lot number 2287, 0.2 mi southeast of junction of Routes 15 and 10, Mangilao. Owner: Ana P. Diaz.

AQUIFER.--Coralline Limestone, probably Miocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth reported 235 ft, casing diameter 12 in.

DATUM.--Elevation of land-surface datum is 210 ft. Measuring point: Top of casing, 209.88, revised, ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, February 1972 to December 1973.
Water level recorder, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.45 ft above mean sea level, May 22, 1976; lowest, 1.89 ft above mean sea level, Feb. 11, 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.01	2.85	2.78	2.67	2.67	2.74	2.56	2.82	2.47	2.73	2.76	2.72
2	3.01	2.80	2.77	2.65	2.68	2.75	2.57	2.84	2.47	2.71	2.81	2.74
3	2.91	2.80	2.77	2.63	2.70	2.73	2.59	2.84	2.48	2.70	2.80	2.75
4	2.81	2.79	2.78	2.63	2.74	2.71	2.63	2.84	2.46	2.70	2.77	2.74
5	2.78	2.79	2.83	2.62	2.76	2.70	2.67	2.82	2.48	2.67	2.77	2.74
6	2.75	2.79	2.89	2.62	2.79	2.73	2.66	2.77	2.45	2.65	2.76	2.74
7	2.75	2.71	2.93	2.63	2.80	2.75	2.67	2.72	2.43	2.62	2.76	2.73
8	2.76	2.67	2.93	2.64	2.79	2.76	2.68	2.69	2.40	2.59	2.78	2.72
9	2.76	2.65	2.91	2.69	2.79	2.77	2.70	2.66	2.39	2.57	2.77	2.69
10	2.77	2.63	2.92	2.77	2.80	2.76	2.70	2.65	2.37	2.55	2.75	2.65
11	2.78	2.62	2.95	2.80	2.80	2.74	2.69	2.62	2.36	2.57	2.74	2.64
12	2.79	2.63	2.93	2.82	2.80	2.72	2.67	2.60	2.37	2.57	2.74	2.66
13	2.79	2.78	2.93	2.79	2.80	2.71	2.67	2.58	2.39	2.57	2.72	2.89
14	2.79	3.01	2.90	2.76	2.81	2.72	2.68	2.56	2.40	2.58	2.69	2.72
15	2.78	3.01	2.87	2.72	2.79	2.73	2.69	2.57	2.40	2.56	2.67	2.74
16	2.78	2.95	2.84	2.70	2.77	2.72	2.69	2.56	2.42	2.55	2.69	2.76
17	2.79	2.97	2.88	2.69	2.76	2.71	2.71	2.55	2.45	2.52	2.69	2.75
18	2.80	2.94	2.87	2.66	2.75	2.70	2.74	2.55	2.50	2.52	2.67	2.75
19	2.79	2.93	2.83	2.65	2.75	2.70	2.74	2.57	2.58	2.52	2.66	2.73
20	2.92	2.91	2.76	2.65	2.74	2.72	2.73	2.57	2.65	2.53	2.68	2.74
21	2.93	2.89	2.74	2.65	2.75	2.72	2.72	2.56	2.70	2.54	2.71	2.72
22	2.93	2.86	2.75	2.65	2.76	2.71	2.72	2.57	2.78	2.55	2.69	2.68
23	2.93	2.86	2.78	2.67	2.76	2.70	2.73	2.55	2.88	2.57	2.68	2.64
24	2.94	2.84	2.75	2.67	2.75	2.69	2.73	2.51	2.90	2.60	2.65	2.62
25	3.11	2.84	2.71	2.67	2.73	2.68	2.72	2.48	2.89	2.83	2.64	2.63
26	3.07	2.83	2.69	2.66	2.72	2.68	2.73	2.47	2.84	2.66	2.63	2.65
27	3.03	2.80	2.71	2.67	2.73	2.66	2.74	2.48	2.79	2.72	2.61	2.67
28	3.01	2.80	2.71	2.65	2.73	2.63	2.76	2.46	2.75	2.74	2.61	2.75
29	3.00	2.80	2.70	2.64	---	2.61	2.77	2.47	2.74	2.74	2.65	2.88
30	2.93	2.79	2.70	2.64	---	2.59	2.79	2.46	2.73	2.73	2.68	3.02
31	2.91	---	2.67	2.66	---	2.57	---	2.46	---	2.74	2.69	---
MEAN	2.87	2.82	2.81	2.68	2.76	2.70	2.69	2.61	2.56	2.62	2.71	2.72
MAX	3.11	3.01	2.95	2.82	2.81	2.77	2.79	2.84	2.90	2.74	2.81	3.02
MIN	2.75	2.62	2.67	2.62	2.67	2.57	2.56	2.46	2.36	2.52	2.61	2.62

WTR YR 1985 MEAN 2.71 MAX 3.11 MIN 2.36

MARIANA ISLANDS, ISLAND OF GUAM

132824144464271. Local number, 18-2846-01 ACEORP Tunnel.

LOCATION.--Lat 13°28'24" N., long 144°46'42" E., Hydrologic Unit 20100003, behind Navy Telephone Exchange, 0.35 mi southwest of junction of Routes 1 and 14, Tamuning. 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 each and tunnel 3 is 700 ft in length.

DATUM.--Elevation of land-surface datum is 180 ft. Measuring point: Top of wooden recorder shelf, 9.28 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, October 1954 to May 1965, March 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.95 ft above mean sea level, May 22, 1976; lowest, 1.70 ft above mean sea level, Feb. 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.76	2.78	2.53	2.57	2.56	2.64	2.49	2.79	2.35	2.55	2.59	2.52
2	2.88	2.71	2.59	2.56	2.62	2.82	2.52	2.78	2.35	2.52	2.59	2.51
3	2.81	2.65	2.62	2.53	2.83	2.60	2.57	2.78	2.37	2.51	2.56	2.50
4	2.59	2.60	2.62	2.52	2.62	2.57	2.80	2.77	2.37	2.50	2.54	2.50
5	2.57	2.56	2.64	2.47	2.63	2.59	2.60	2.73	2.36	2.48	2.53	2.49
6	2.57	2.53	2.70	2.46	2.62	2.62	2.58	2.65	2.36	2.45	2.53	2.48
7	2.58	2.50	2.73	2.44	2.61	2.65	2.58	2.59	2.34	2.43	2.56	2.47
8	2.59	2.49	2.75	2.48	2.60	2.65	2.61	2.55	2.32	2.41	2.56	2.45
9	2.60	2.47	2.77	2.58	2.83	2.66	2.62	2.54	2.30	2.37	2.52	2.42
10	2.62	2.48	2.79	2.71	2.63	2.85	2.61	2.53	2.28	2.36	2.48	2.39
11	2.64	2.45	2.82	2.67	2.62	2.62	2.59	2.49	2.28	2.36	2.49	2.38
12	2.69	2.45	2.77	2.63	2.60	2.59	2.57	2.45	2.31	2.38	2.50	2.44
13	2.71	2.52	2.72	2.58	2.65	2.58	2.57	2.42	2.34	2.38	2.45	2.50
14	2.68	2.60	2.67	2.51	2.87	2.81	2.57	2.43	2.34	2.36	2.42	2.55
15	2.66	2.57	2.67	2.48	2.64	2.62	2.57	2.46	2.32	2.37	2.43	2.57
16	2.67	2.57	2.73	2.47	2.70	2.60	2.58	2.48	2.36	2.35	2.47	2.57
17	2.71	2.59	2.73	2.53	2.72	2.58	2.61	2.47	2.40	2.33	2.48	2.58
18	2.72	2.61	2.69	2.52	2.67	2.59	2.64	2.51	2.45	2.31	2.47	2.55
19	2.80	2.64	2.63	2.49	2.67	2.63	2.62	2.54	2.49	2.35	2.52	2.55
20	2.88	2.68	2.60	2.49	2.68	2.83	2.58	2.55	2.53	2.35	2.65	2.54
21	2.87	2.70	2.63	2.50	2.67	2.63	2.57	2.53	2.71	2.38	2.62	2.53
22	2.87	2.72	2.67	2.54	2.68	2.81	2.59	2.51	2.74	2.40	2.59	2.47
23	2.87	2.73	2.68	2.57	2.67	2.60	2.59	2.48	2.74	2.40	2.55	2.44
24	2.91	2.72	2.66	2.58	2.65	2.60	2.60	2.43	2.70	2.48	2.52	2.43
25	2.94	2.69	2.62	2.57	2.62	2.59	2.61	2.40	2.66	2.57	2.52	2.43
26	2.93	2.66	2.59	2.54	2.61	2.60	2.65	2.39	2.59	2.65	2.45	2.43
27	2.89	2.60	2.65	2.49	2.64	2.84	2.65	2.38	2.52	2.70	2.44	2.51
28	2.89	2.54	2.63	2.49	2.65	2.59	2.70	2.41	2.50	2.65	2.45	2.67
29	2.98	2.55	2.59	2.50	---	2.53	2.72	2.41	2.51	2.58	2.48	2.83
30	3.00	2.52	2.55	2.51	---	2.51	2.75	2.38	2.54	2.57	2.57	2.87
31	2.92	---	2.52	2.51	---	2.49	---	2.36	---	2.58	2.58	---
MEAN	2.75	2.60	2.66	2.53	2.64	2.80	2.60	2.52	2.45	2.45	2.52	2.52
MAX	3.00	2.78	2.82	2.71	2.72	2.66	2.75	2.79	2.74	2.70	2.65	2.87
MIN	2.57	2.45	2.52	2.44	2.56	2.49	2.49	2.38	2.28	2.31	2.42	2.38

WTR YR 1985 MEAN 2.57 MAX 3.00 MIN 2.28

MARIANA ISLANDS, ISLAND OF GUAM

132813144472771. Local number, 18-2847-12 Barrigada Well 2 (A-16).

LOCATION.--Lat 13°28'13" N., long 144°47'27" E., Hydrologic Unit 20100003, at Carbullido School, 0.6 mi west of junction of Routes 8 and 10, Barrigada. Owner: Public Utility Agency of Guam.

AQUIFER.--Mariana Limestone, probably Pliocene age.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth reported 215 ft, diamster 12 in.

DATUM.--Elevation of land-surface datum is 207 ft. Measuring point: Top of casing, 208.00 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, June 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.71 ft above mean sea level, May 22, 1976; lowest, 2.83 ft above mean sea level, Feb. 11, 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.86	3.84	3.70	3.65	3.61	3.68	3.53	3.75	3.37	3.65	3.67	3.71
2	3.81	3.76	3.69	3.65	3.65	3.68	3.54	3.77	3.37	3.63	3.67	3.69
3	3.74	3.70	3.69	3.63	3.67	3.66	3.57	3.77	3.37	3.62	3.66	3.69
4	3.69	3.67	3.71	3.62	3.67	3.63	3.62	3.76	3.37	3.61	3.64	3.69
5	3.86	3.65	3.75	3.58	3.68	3.63	3.63	3.74	3.37	3.58	3.63	3.72
6	3.65	3.62	3.81	3.54	3.68	3.65	3.62	3.69	3.37	3.54	3.63	3.71
7	3.66	3.59	3.85	3.53	3.68	3.67	3.62	3.63	3.35	3.51	3.63	3.70
8	3.66	3.58	3.85	3.54	3.66	3.68	3.63	3.60	3.33	3.49	3.67	3.67
9	3.66	3.56	3.83	3.58	3.68	3.70	3.64	3.58	3.31	3.47	3.65	3.64
10	3.68	3.56	3.85	3.69	3.69	3.70	3.64	3.55	3.29	3.44	3.63	3.61
11	3.69	3.54	3.87	3.75	3.68	3.67	3.63	3.51	3.28	3.44	3.62	3.59
12	3.72	3.53	3.85	3.73	3.66	3.65	3.61	3.48	3.29	3.45	3.62	3.61
13	3.74	3.77	3.85	3.68	3.88	3.64	3.61	3.45	3.32	3.44	3.60	3.63
14	3.73	4.11	3.82	3.62	3.70	3.63	3.60	3.43	3.33	3.43	3.56	3.69
15	3.70	4.01	3.79	3.59	3.69	3.67	3.61	3.44	3.33	3.43	3.54	3.71
16	3.70	3.89	3.76	3.56	3.71	3.66	3.62	3.47	3.34	3.42	3.56	3.72
17	3.72	3.87	3.80	3.58	3.73	3.64	3.63	3.48	3.39	3.41	3.56	3.72
18	3.73	3.86	3.78	3.61	3.71	3.63	3.66	3.50	3.62	3.41	3.54	3.71
19	3.79	3.85	3.74	3.59	3.70	3.66	3.64	3.54	3.64	3.41	3.56	3.70
20	3.87	3.83	3.73	3.58	3.71	3.67	3.61	3.55	3.64	3.41	3.83	3.70
21	3.90	3.84	3.72	3.58	3.71	3.67	3.60	3.54	3.75	3.42	3.82	3.67
22	3.89	3.81	3.75	3.60	3.71	3.68	3.61	3.53	3.91	3.43	3.76	3.64
23	3.90	3.80	3.77	3.63	3.71	3.66	3.81	3.50	3.88	3.45	3.71	3.63
24	3.91	3.78	3.76	3.64	3.69	3.66	3.62	3.47	3.84	3.48	3.67	3.62
25	3.96	3.78	3.72	3.64	3.67	3.65	3.62	3.45	3.81	3.55	3.66	3.61
26	3.96	3.78	3.69	3.62	3.66	3.64	3.64	3.44	3.72	3.63	3.63	3.62
27	3.95	3.73	3.71	3.58	3.67	3.66	3.66	3.39	3.67	3.73	3.60	3.64
28	3.94	3.72	3.72	3.56	3.68	3.64	3.68	3.39	3.64	3.76	3.59	3.87
29	3.95	3.72	3.68	3.57	---	3.60	3.71	3.41	3.64	3.72	3.60	4.04
30	3.95	3.71	3.66	3.58	---	3.56	3.72	3.40	3.64	3.68	3.65	4.32
31	3.95	---	3.64	3.57	---	3.54	---	3.38	---	3.66	3.71	---
MEAN	3.80	3.75	3.76	3.61	3.68	3.65	3.62	3.54	3.51	3.53	3.64	3.71
MAX	3.96	4.11	3.87	3.75	3.73	3.70	3.72	3.77	3.91	3.76	3.83	4.32
MIN	3.65	3.53	3.64	3.53	3.61	3.54	3.53	3.38	3.28	3.41	3.54	3.59

WTR YR 1985 MEAN 3.65 MAX 4.32 MIN 3.28

MARIANA ISLANDS, ISLAND OF GUAM

132806144481871. Local number, 18-2848-03 Barrigada Exploratory Well Ex-9.

LOCATION.--Lat 13°28'06" N., long 144°48'18" E., Hydrologic Unit 20100003, near P.C. Lujan Elementary School Radio Barrigada. Owner: Government of Guam.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 513 ft, borehole diameter 8 in.

DATUM.--Elevation of land-surface datum is 238 ft. Measuring point: Top of surface casing, 239.41 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, September 1981 to June 1985.
WATER LEVEL: Water-level recorder, July 1985 to September 1985.
WATER QUALITY: 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.45 ft above mean sea level, Oct. 28, 1981; lowest, measured, 2.29 ft above mean sea level, Feb. 18, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---		h3.00	---	---	---	2.95	3.03	2.98
2	---	---		---		---	---	---	---	2.93	3.05	2.98
3	---	---		---		---	---	---	---	2.91	3.03	2.97
4	h2.96	---		---		---	---	---	---	2.91	3.02	2.98
5	---	---		---		---	---	---	---	2.89	3.02	2.98
6	---	---		---		---	---	---	h2.80	2.86	3.02	2.96
7	---	---		---		---	---	---	---	2.84	3.03	2.94
8	---	---		---		---	---	---	---	2.80	3.06	2.91
9	---	---		h2.77		---	---	h3.03	---	2.78	3.03	2.88
10	---	---		---		---	---	---	---	2.75	2.99	2.83
11	---	---		---		---	---	---	---	2.77	2.97	2.84
12	---	---		---		---	h3.05	---	---	2.78	2.99	2.87
13	---	---		---		---	---	---	---	2.79	2.95	2.92
14	---	---		h2.82		---	---	---	---	2.77	2.93	2.97
15	---	---		---		---	---	---	---	2.75	2.94	2.99
16	---	---		---		---	---	---	---	2.74	2.95	3.00
17	---	---		---		---	---	---	---	2.73	2.92	3.00
18	---	---		---		---	---	---	---	2.73	2.91	3.00
19	---	---		---		---	---	---	---	2.75	2.92	2.98
20	---	h3.04		---		---	---	---	---	2.76	3.04	3.00
21	---	---		---		h3.01	---	---	---	2.77	3.07	2.98
22	---	---		---		---	---	---	---	2.80	3.02	2.92
23	---	---		---		---	---	---	---	2.83	2.99	2.89
24	---	---		---		---	---	---	---	2.87	2.94	2.87
25	---	---		---		---	---	---	---	2.92	2.93	2.87
26	---	---		---		---	---	---	---	2.99	2.91	2.87
27	---	---		---		---	---	---	---	3.07	2.89	2.90
28	---	---		---		---	---	---	h2.90	3.06	2.88	2.96
29	---	---		---		---	---	---	2.94	3.03	2.91	3.02
30	---	---		---		---	---	---	2.94	3.00	2.94	3.10
31	---	---		---		---	---	---	---	3.00	2.99	---
MEAN	---	---		---		---	---	---	---	2.86	2.98	2.94
MAX	---	---		---		---	---	---	---	3.07	3.07	3.10
MIN	---	---		---		---	---	---	---	2.73	2.88	2.83

h Tape measurement.

132806144481871 - 18-2848-03 BARRIGADA EXP WELL EX-9, GUAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN					
09...	0935	260	2870	28.0	800
09...	1020	330	3510	28.0	980
09...	1055	340	3490	28.0	980
09...	1135	350	16000	28.0	5100
09...	1210	360	29900	28.0	10000
09...	1250	380	44500	27.5	16000
09...	1330	400	49500	27.5	18000
09...	1415	500	53500	27.5	20000
MAR					
21...	0910	260	4080	28.0	1200
21...	0950	330	3510	28.0	950
21...	1030	340	3680	28.0	1000
21...	1110	350	16900	28.0	5400
MAR					
21...	1155	360	33100	28.0	12000
21...	1320	400	48100	28.0	18000
21...	1405	450	50800	28.0	19000
21...	1500	500	51200	28.0	20000
JUN					
06...	1005	260	3810	28.0	1000
06...	1035	330	3370	27.5	900
06...	1110	340	3410	27.5	900
06...	1145	350	18100	27.5	5900
06...	1220	360	34800	27.5	12000
06...	1300	380	42900	27.5	16000
06...	1335	400	48200	27.5	18000

MARIANA ISLANDS, ISLAND OF GUAM

133032144491871. Local number, 18-3049-03 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. Owner: Public Utility Agency of Guam.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth reported 288 ft, casing diameter 8 in.

DATUM.--Elevation of land-surface datum is 227 ft. Measuring point: Top of casing, 228.62 ft above mean sea level.

REMARKS.--Well was abandoned in 1973 because of oil taste and high iron content.

PERIOD OF RECORD.--Water-level recorder, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.61 ft above mean sea level, May 23, 1976; lowest, 1.94 ft above mean sea level, Feb. 10-12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.83	2.95	2.54	2.55	2.55	2.71	2.65	2.92	2.50	2.67	2.67	2.60
2	2.76	2.85	2.57	2.55	2.58	2.70	2.65	2.93	2.50	2.67	2.68	2.57
3	2.72	2.76	2.61	2.52	2.61	2.69	2.66	2.94	2.51	2.66	2.67	2.57
4	2.67	2.71	2.61	2.50	2.60	2.69	2.69	2.94	2.51	2.63	2.66	2.56
5	2.64	2.66	2.65	2.47	2.63	2.68	2.70	2.93	2.52	2.61	2.66	2.56
6	2.63	2.64	2.73	2.44	2.63	2.69	2.70	2.88	2.51	2.58	2.66	2.56
7	2.65	2.59	2.77	2.43	2.63	2.70	2.70	2.82	2.51	2.55	2.67	2.57
8	2.65	2.58	2.77	2.45	2.62	2.71	2.72	2.76	2.48	2.52	2.67	2.56
9	2.64	2.55	2.76	2.52	2.64	2.72	2.72	2.72	2.48	2.50	2.67	2.54
10	2.65	2.54	2.76	2.58	2.66	2.72	2.73	2.70	2.45	2.50	2.65	2.52
11	2.68	2.51	2.79	2.60	2.66	2.70	2.73	2.68	2.44	2.50	2.64	2.50
12	2.73	2.50	2.77	2.59	2.65	2.69	2.72	2.66	2.45	2.50	2.65	2.52
13	2.76	2.57	2.74	2.56	2.68	2.69	2.72	2.65	2.48	2.51	2.64	2.55
14	2.74	2.66	2.71	2.51	2.72	2.69	2.71	2.65	2.49	2.50	2.60	2.57
15	2.72	2.66	2.68	2.49	2.71	2.70	2.71	2.65	2.48	2.51	2.57	2.60
16	2.70	2.65	2.72	2.46	2.74	2.69	2.73	2.67	2.49	2.47	2.59	2.62
17	2.70	2.67	2.71	2.45	2.74	2.66	2.75	2.67	2.51	2.43	2.59	2.64
18	2.72	2.68	2.67	2.52	2.73	2.67	2.77	2.67	2.54	2.43	2.59	2.66
19	2.77	2.68	2.61	2.50	2.72	2.69	2.79	2.69	2.55	2.44	2.59	2.65
20	2.83	2.71	2.59	2.50	2.73	2.69	2.76	2.66	2.58	2.45	2.61	2.64
21	2.87	2.77	2.60	2.49	2.71	2.70	2.77	2.64	2.61	2.46	2.65	2.63
22	2.88	2.77	2.60	2.50	2.71	2.69	2.77	2.60	2.68	2.48	2.84	2.59
23	2.92	2.79	2.64	2.51	2.72	2.69	2.77	2.59	2.69	2.51	2.64	2.56
24	2.96	2.74	2.64	2.52	2.71	2.69	2.79	2.58	2.69	2.55	2.63	2.55
25	2.97	2.71	2.60	2.53	2.70	2.69	2.79	2.57	2.69	2.59	2.64	2.52
26	2.99	2.66	2.58	2.51	2.70	2.69	2.80	2.58	2.67	2.68	2.81	2.49
27	2.98	2.62	2.62	2.49	2.70	2.71	2.81	2.57	2.66	2.74	2.54	2.51
28	3.00	2.57	2.63	2.49	2.71	2.69	2.83	2.58	2.65	2.74	2.54	2.56
29	3.08	2.56	2.59	2.50	---	2.67	2.86	2.57	2.66	2.70	2.56	2.63
30	3.09	2.55	2.56	2.51	---	2.64	2.89	2.57	2.66	2.68	2.62	2.68
31	3.07	---	2.53	2.52	---	2.65	---	2.55	---	2.66	2.63	---
MEAN	2.81	2.66	2.66	2.51	2.67	2.69	2.75	2.70	2.56	2.56	2.63	2.58
MAX	3.09	2.95	2.79	2.60	2.74	2.72	2.89	2.94	2.69	2.74	2.68	2.68
MIN	2.63	2.50	2.53	2.43	2.55	2.64	2.65	2.55	2.44	2.43	2.54	2.49

WTR YR 1985 MEAN 2.65 MAX 3.09 MIN 2.43

MARIANA ISLANDS, ISLAND OF GUAM

133047144500171. Local number, 18-3049-05 Well M-11.

LOCATION.--Let 13°30'49" N., long 144°49'58" E., Hydrologic Unit 20100003, at intersection of Harmon Loop School Road and Route 1 at Dededo. Owner: Public Utility Agency of Guam.

AQUIFER.--Berrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth reported 325 ft, casing diameter 8 in.

DATUM.--Elevation of land-surface datum is 294 ft. Measuring point: Top of casing, 295.82 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder, July 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.76 ft above mean sea level, Oct. 2, 1980; lowest, 2.46 ft above mean sea level, Feb. 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.82	3.58	3.21	3.11	3.15	3.23	3.14	3.42	3.17	3.54	3.47	3.44
2	3.70	3.48	3.22	3.11	3.19	3.23	3.18	3.43	3.16	3.47	3.44	3.42
3	3.60	3.39	3.25	3.10	3.21	3.20	3.22	3.44	3.15	3.41	3.42	3.40
4	3.52	3.33	3.25	3.08	3.22	3.17	3.25	3.43	3.13	3.37	3.41	3.50
5	3.46	3.29	3.27	3.06	3.23	3.17	3.25	3.41	3.12	3.33	3.41	3.52
6	3.42	3.26	3.32	3.05	3.24	3.21	3.23	3.35	3.10	3.29	3.68	3.44
7	3.39	3.23	3.40	3.05	3.23	3.25	3.23	3.31	3.10	3.26	3.81	3.41
8	3.37	3.21	3.44	3.06	3.22	3.26	3.26	3.30	3.08	3.23	3.42	3.38
9	3.35	3.18	3.44	3.11	3.23	3.27	3.28	3.27	3.08	3.19	3.40	3.34
10	3.34	3.15	3.46	3.15	3.24	3.27	3.26	3.23	3.06	3.15	3.38	3.31
11	3.35	3.13	3.48	3.17	3.24	3.25	3.24	3.19	3.05	3.14	3.38	3.29
12	3.38	3.13	3.47	3.23	3.23	3.22	3.22	3.17	3.06	3.15	3.38	3.31
13	3.39	3.15	3.44	3.21	3.24	3.23	3.22	3.13	3.09	3.15	3.35	3.34
14	3.38	3.24	3.39	3.20	3.28	3.21	3.22	3.12	3.07	3.13	3.32	3.35
15	3.34	3.51	3.35	3.19	3.26	3.23	3.22	3.12	3.07	3.14	3.30	3.71
16	3.32	3.63	3.36	3.17	3.28	3.22	3.23	3.13	3.07	3.12	3.40	4.06
17	3.32	3.61	3.35	3.18	3.30	3.19	3.26	3.13	3.09	3.10	3.34	4.06
18	3.32	3.73	3.32	3.19	3.33	3.20	3.29	3.13	3.31	3.09	3.30	3.91
19	3.36	3.88	3.28	3.17	3.27	3.26	3.27	3.16	3.76	3.10	3.36	3.79
20	3.42	3.82	3.25	3.15	3.28	3.26	3.23	3.33	3.69	3.10	3.56	3.68
21	3.45	3.74	3.24	3.15	3.28	3.27	3.22	3.45	3.61	3.12	3.54	3.60
22	3.47	3.67	3.26	3.14	3.27	3.26	3.25	3.45	3.62	3.14	3.49	3.51
23	3.50	3.62	3.27	3.19	3.28	3.24	3.26	3.39	3.77	3.16	3.44	3.43
24	3.53	3.55	3.26	3.20	3.26	3.24	3.26	3.34	3.76	3.20	3.39	3.37
25	3.55	3.49	3.24	3.20	3.24	3.24	3.28	3.36	3.68	3.26	3.38	3.38
26	3.57	3.44	3.21	3.17	3.22	3.25	3.27	3.34	3.58	3.31	3.34	3.41
27	3.58	3.36	3.22	3.13	3.23	3.28	3.29	3.31	3.53	3.37	3.32	3.42
28	3.58	3.30	3.22	3.12	3.24	3.24	3.31	3.29	3.54	3.45	3.31	3.44
29	3.66	3.26	3.19	3.12	---	3.19	3.34	3.28	3.55	3.52	3.50	3.54
30	3.69	3.23	3.15	3.13	---	3.16	3.39	3.23	3.55	3.51	3.70	4.10
31	3.69	---	3.11	3.13	---	3.14	---	3.20	---	3.49	3.50	---
MEAN	3.48	3.42	3.30	3.14	3.25	3.23	3.25	3.29	3.32	3.26	3.43	3.53
MAX	3.82	3.88	3.48	3.23	3.33	3.28	3.39	3.45	3.77	3.54	3.81	4.10
MIN	3.32	3.13	3.11	3.05	3.15	3.14	3.14	3.12	3.05	3.09	3.30	3.29

WTR YR 1985 MEAN 3.32 MAX 4.10 MIN 3.05

MARIANA ISLANDS, ISLAND OF GUAM

133119144491771. Local number, 18-3149-05 Wettengel Exploratory Well Ex-7.

LOCATION.--Lat 13°31'19" N., long 144°49'17" E., Hydrologic Unit 20100003, 200 ft east of junction of Routes 1 and 3, Wettengel. Owner: Government of Guam.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 698 ft, borehole diameter 8 in., casing diameter 6 in., cased to 10 ft.

DATUM.--Elevation of land-surface datum is 283 ft. Measuring point: Top of 6-inch diameter surface casing, 283.31 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, August 1981 to May 1983.
Water-level recorder, June 1983 to current year.
WATER QUALITY: 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.78 ft above mean sea level, Aug. 12, 1981, Aug. 28, 29, 1984; lowest, 2.78 ft above mean sea level, June 6, 7, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.22	3.40	3.00	3.11	3.10	3.16	3.12	3.31	2.89	3.10	3.10	3.06
2	3.16	3.24	3.03	3.11	3.14	3.15	3.13	3.33	2.88	3.07	3.10	3.05
3	3.09	3.14	3.07	3.08	3.16	3.13	3.17	3.33	2.87	3.02	3.09	3.06
4	3.08	3.10	3.08	3.05	3.15	3.11	3.21	3.33	2.88	3.02	3.07	3.04
5	3.07	3.07	3.11	3.03	3.17	3.12	3.21	3.30	2.88	2.99	3.07	3.04
6	3.07	3.03	3.18	3.00	3.17	3.15	3.20	3.23	2.88	2.96	3.07	3.04
7	3.08	3.01	3.22	2.99	3.17	3.19	3.19	3.17	2.87	2.93	3.08	3.03
8	3.10	3.01	3.24	3.02	3.16	3.20	3.21	3.14	2.86	2.91	3.10	3.01
9	3.09	2.98	3.24	3.08	3.18	3.21	3.23	3.11	2.84	2.88	3.09	3.00
10	3.09	2.98	3.28	3.13	3.19	3.21	3.23	3.08	2.82	2.87	3.07	2.97
11	3.13	2.95	3.30	3.14	3.19	3.19	3.21	3.06	2.82	2.88	3.06	2.96
12	3.18	2.96	3.28	3.13	3.17	3.16	3.20	3.02	2.84	2.89	3.07	2.99
13	3.21	3.02	3.25	3.10	3.20	3.16	3.19	3.00	2.87	2.89	3.04	3.03
14	3.18	3.07	3.22	3.05	3.23	3.17	3.17	3.00	2.87	2.87	3.01	3.08
15	3.14	3.05	3.20	3.04	3.20	3.17	3.17	3.01	2.86	2.87	3.00	3.11
16	3.11	3.05	3.25	3.01	3.23	3.16	3.19	3.03	2.87	2.86	3.04	3.13
17	3.11	3.06	3.25	3.04	3.24	3.15	3.21	3.02	2.90	2.84	3.06	3.14
18	3.13	3.08	3.21	3.05	3.21	3.15	3.23	3.02	2.93	2.83	3.06	3.13
19	3.21	3.08	3.17	3.03	3.19	3.18	3.21	3.04	2.95	2.85	3.06	3.13
20	3.30	3.13	3.14	3.04	3.20	3.19	3.18	3.05	2.97	2.85	3.10	3.12
21	3.32	3.17	3.15	3.04	3.18	3.20	3.17	3.04	3.04	2.87	3.11	3.09
22	3.35	3.18	3.17	3.06	3.18	3.19	3.17	3.03	3.08	2.90	3.09	3.06
23	3.38	3.19	3.19	3.08	3.19	3.19	3.18	3.01	3.12	2.93	3.08	3.03
24	3.40	3.16	3.18	3.09	3.17	3.20	3.18	2.97	3.11	2.98	3.06	3.01
25	3.41	3.12	3.15	3.09	3.15	3.20	3.19	2.95	3.09	3.05	3.09	3.00
26	3.43	3.09	3.13	3.07	3.13	3.20	3.20	2.93	3.06	3.10	3.06	3.00
27	3.42	3.05	3.18	3.05	3.16	3.23	3.22	2.92	3.04	3.15	3.01	3.04
28	3.44	3.00	3.18	3.05	3.16	3.20	3.24	2.94	3.05	3.13	3.01	3.08
29	3.53	3.00	3.15	3.06	---	3.15	3.26	2.95	3.07	3.10	3.03	3.13
30	3.53	2.99	3.11	3.07	---	3.13	3.28	2.92	3.10	3.07	3.09	3.17
31	3.51	---	3.09	3.07	---	3.12	---	2.90	---	3.08	3.09	---
MEAN	3.24	3.08	3.17	3.06	3.18	3.17	3.20	3.07	2.94	2.96	3.07	3.06
MAX	3.53	3.40	3.30	3.14	3.24	3.23	3.28	3.33	3.12	3.15	3.11	3.17
MIN	3.07	2.95	3.00	2.99	3.10	3.11	3.12	2.90	2.82	2.83	3.00	2.96

WTR YR 1985 MEAN 3.10 MAX 3.53 MIN 2.82

MARIANA ISLANDS, ISLAND OF GUAM

133119144491771 - 18-3149-05 WETTENGEL EXP WELL EX-7, GUAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV					
05...	1245	290	3810	28.0	1000
05...	1330	390	3570	27.0	950
05...	1415	410	3680	27.0	980
05...	1455	420	37100	27.0	13000
05...	1540	430	45200	27.0	16000
06...	0810	415	30200	27.0	10000
06...	0850	450	51400	27.0	19000
06...	0940	475	52400	27.5	19000
06...	1025	500	52400	27.5	19000
06...	1110	550	52500	27.0	19000
MAR					
26...	1000	290	3670	27.0	1000
26...	1030	390	3450	26.5	950
26...	1105	410	4950	26.5	1400
MAR					
26...	1145	415	6130	26.5	1800
26...	1225	420	40600	26.5	15000
26...	1305	430	46300	26.5	17000
26...	1340	450	51700	26.5	20000
26...	1420	475	52000	26.5	20000
JUN					
03...	1235	290	3570	--	950
03...	1305	390	3410	--	900
03...	1345	410	23400	--	7900
03...	1420	420	41000	--	15000
03...	1455	430	45600	--	17000
03...	1530	450	50900	--	19000

MARIANA ISLANDS, ISLAND OF GUAM

133224144495271. Local number, 18-3249-02 Finegayan Exploratory Well Ex-10.

LOCATION.--Lat 13°32'24" N., long 144°49'52" E., Hydrologic Unit 20100003, near NAVCAMS Housing area.
Owner: Government of Guam.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, soundad depth 704.5 ft, uncased hole diameter 8 in.

DATUM.--Elevation of land-surface datum is 348 ft. Measuring point: Top of surface casing, 348.54 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, September 1981 to May 1984.
Water-level recorder, June 1984 to current year.
WATER QUALITY: 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.49 ft above mean sea level, Aug. 27, 1984; lowest measured, 1.97 ft above mean sea level, Feb. 24, 1983.

WATER LEVL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.82	2.91	2.57	2.69	2.64	2.74	2.68	2.92	2.53	2.72	2.78	2.65
2	2.76	2.79	2.62	2.67	2.70	2.73	2.69	2.94	2.53	2.67	2.78	2.64
3	2.69	2.71	2.67	2.63	2.70	2.71	2.74	2.94	2.55	2.65	2.76	2.63
4	2.68	2.68	2.66	2.62	2.69	2.69	2.77	2.93	2.53	2.63	2.75	2.61
5	2.65	2.65	2.71	2.60	2.71	2.71	2.77	2.88	2.54	2.62	2.74	2.58
6	2.67	2.60	2.77	2.58	2.70	2.73	2.75	2.81	2.54	2.58	2.74	2.58
7	2.68	2.57	2.81	2.60	2.69	2.76	2.75	2.76	2.52	2.57	2.75	2.58
8	2.70	2.57	2.80	2.62	2.89	2.77	2.80	2.73	2.51	2.54	2.78	2.56
9	2.69	2.54	2.80	2.68	2.73	2.78	2.80	2.68	2.49	2.52	2.73	2.55
10	2.69	2.53	2.83	2.73	2.74	2.78	2.80	2.65	2.47	2.51	2.69	2.51
11	2.73	2.50	2.85	2.72	2.73	2.74	2.78	2.63	2.49	2.53	2.69	2.51
12	2.78	2.50	2.81	2.71	2.71	2.71	2.78	2.60	2.52	2.53	2.71	2.55
13	2.81	2.54	2.77	2.67	2.75	2.71	2.77	2.58	2.54	2.53	2.69	2.59
14	2.78	2.58	2.73	2.61	2.77	2.72	2.77	2.57	2.52	2.51	2.67	2.82
15	2.74	2.56	2.74	2.60	2.74	2.74	2.77	2.58	2.50	2.53	2.69	2.66
16	2.72	2.55	2.79	2.54	2.79	2.73	2.78	2.60	2.51	2.51	2.72	2.68
17	2.73	2.57	2.79	2.61	2.80	2.71	2.80	2.58	2.53	2.50	2.72	2.70
18	2.76	2.59	2.75	2.59	2.76	2.73	2.82	2.58	2.55	2.50	2.71	2.68
19	2.81	2.63	2.69	2.58	2.74	2.76	2.82	2.59	2.56	2.52	2.71	2.67
20	2.90	2.67	2.67	2.57	2.76	2.76	2.77	2.61	2.61	2.54	2.75	2.67
21	2.92	2.70	2.67	2.58	2.75	2.78	2.75	2.58	2.69	2.55	2.75	2.65
22	2.95	2.72	2.69	2.62	2.78	2.77	2.78	2.58	2.72	2.58	2.72	2.59
23	2.98	2.73	2.71	2.63	2.77	2.77	2.77	2.57	2.77	2.62	2.68	2.56
24	3.00	2.70	2.68	2.63	2.75	2.77	2.77	2.55	2.75	2.67	2.68	2.54
25	3.01	2.66	2.68	2.63	2.73	2.77	2.78	2.53	2.72	2.76	2.70	2.53
26	3.04	2.63	2.69	2.61	2.71	2.76	2.79	2.53	2.68	2.81	2.68	2.53
27	3.01	2.59	2.75	2.58	2.73	2.80	2.80	2.53	2.66	2.84	2.63	2.56
28	3.05	2.58	2.73	2.59	2.74	2.74	2.83	2.56	2.68	2.80	2.64	2.59
29	3.15	2.58	2.70	2.60	---	2.70	2.85	2.57	2.70	2.74	2.65	2.63
30	3.13	2.56	2.67	2.62	---	2.69	2.88	2.55	2.73	2.74	2.72	2.66
31	3.09	---	2.64	2.60	---	2.68	---	2.54	---	2.76	2.69	---
MEAN	2.84	2.62	2.72	2.62	2.73	2.74	2.78	2.65	2.59	2.62	2.71	2.60
MAX	3.15	2.91	2.85	2.73	2.80	2.80	2.88	2.94	2.77	2.84	2.78	2.70
MIN	2.65	2.50	2.57	2.54	2.64	2.68	2.68	2.53	2.47	2.50	2.63	2.51

WTR YR 1985 MEAN 2.69 MAX 3.15 MIN 2.47

133224144495271 - 18-3249-02 FINEGAYAN EXP WELL EX-10, GUAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV					
27...	1045	365	1220	28.0	180
27...	1120	400	1500	28.0	300
27...	1200	430	1550	27.5	330
27...	1240	450	3810	27.5	1100
27...	1325	460	17200	27.0	5500
27...	1400	470	36600	27.0	13000
27...	1440	480	52200	27.0	19000
27...	1530	500	52700	27.0	20000
MAR					
28...	1005	365	1040	27.0	150
28...	1040	400	1330	27.0	250
28...	1120	430	1400	27.0	280
28...	1200	450	4080	27.0	1100
28...	1240	460	20200	27.0	6600
28...	1325	470	38600	27.0	13000
28...	1455	485	52600	26.5	20000
JUN					
04...	1015	365	1020	26.5	140
04...	1050	430	1380	26.5	290
04...	1130	450	4330	26.5	1200
04...	1210	460	18800	26.5	6100
04...	1250	470	32900	28.5	12000
04...	1330	480	48400	26.5	18000
AUG					
13...	1210	365	886	27.0	120
13...	1250	430	1310	27.0	250
13...	1330	450	3940	26.5	1100
14...	1025	460	18000	26.5	6000
14...	1105	470	32900	26.5	12000
14...	1145	480	51200	26.5	19000

132615144470571. Local number, 18-2647-01 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. Owner: Government of Guam.

AQUIFER.--Mariana Limestone.

WELL CHARACTERISTICS.--Drilled parabasal water-table well, casing diameter 8 in.

DATUM.--Elevation of land-surface datum is 179 ft. Measuring point: Top of casing, 179.86 ft above mean sea level.

PERIOD OF RECORD.--March 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.37 ft above mean sea level, Oct. 24, 1980; lowest measured, 6.08 ft above mean sea level, Aug. 5, 1980.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	7.41	JAN 14	7.43	MAR 21	7.34	MAY 9	7.10	JUL 26	7.29	SEP 26	7.91
NOV 20	7.97	MAR 1	7.31	APR 12	7.21	JUN 28	7.68	AUG 16	7.45		

MARIANA ISLANDS, ISLAND OF GUAM

132626144471771. Local number, 18-2647-12 Exploratory Well Ex-4.

LOCATION.--Lat 13°26'26" N., long 144°47'17" E., Hydrologic Unit 20100003, in Tai Mangilao near Father Duenas Memorial High School. Owner: Government of Guam.

AQUIFER.--Argillaceous member of the Marianas Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 400 ft, borehole diameter 8 in., casing diameter 6 in., cased to 400 ft.

DATUM.--Elevation of land-surface datum is 152 ft. Measuring point: Top of casing, 153.71 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, March 1981 to April 1982, February 1983 to current year. Water-level recorder, May to November 1982.

WATER QUALITY: 1981, 1963 to current yesr.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.08 ft above mean sea level, Aug. 17, 1981; lowest, measured, 4.82 ft above mean sea level, Aug. 23, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	6.23	MAR 1	5.41	MAR 21	5.52	MAY 9	5.36	JUN 25	6.19	AUG 16	6.05
NOV 20	6.62	19	5.54	APR 12	5.39	JUN 5	5.21	JUL 26	5.63	SEP 26	6.79
JAN 14	6.21										

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR					
19...	1040	170	746	27.5	38
19...	1120	345	4950	27.0	1400
19...	1210	350	5400	27.5	1600
19...	1255	360	6620	27.5	2000
19...	1340	370	9100	27.5	2800
19...	1430	380	28800	27.5	10000
19...	1520	390	42500	27.5	16000
JUN					
05...	0805	170	746	27.0	42
05...	0830	340	6040	26.5	1800
05...	0900	350	6780	26.5	2000
05...	0930	360	8590	27.0	2600
05...	1000	370	11400	27.0	3500
JUN					
05...	1035	380	33900	27.0	12000
05...	1110	390	44400	27.0	16000
AUG					
21...	1000	170	764	27.5	55
21...	1035	300	756	27.0	56
21...	1105	340	757	27.0	55
21...	1150	350	821	27.0	80
21...	1240	360	865	27.0	92
21...	1310	370	882	27.0	92
21...	1340	380	32000	27.0	11000
21...	1415	390	43600	27.0	16000

MARIANA ISLANDS, ISLAND OF GUAM

132758144450571. Local number, 18-2745-03 Agana Well 147.

LOCATION.--Lat 13°27'58" N., long 144°45'05" E., Hydrologic Unit 20100003, on Route 4, 0.6 mi south of junction of Routes 1 and 4 in Agana. Owner: Government of Guam.

AQUIFER.--Mariana Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, depth when drilled, 186 ft, when measured in May 1973, 29 ft, casing diameter 6 in.

DATUM.--Elevation of land-surface datum is 33 ft. Measuring point: Top of casing, 33.22 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, August 1955 to May 1960, January 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.42 ft above mean sea level, Oct. 14, 1955; lowest measured, 6.83 ft above mean sea level, June 20, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	9.78	MAR 1	9.66	APR 12	9.19	JUN 28	11.95	AUG 16	11.16
NOV 20	12.12	21	9.42	MAY 9	8.91	JUL 26	11.37	SEP 26	11.60

132742144452971. Local number, 18-2745-07 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.--Elevation of land-surface datum is 10 ft. Measuring point: Edge of concrete spillway, 8.80 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Lowest water level measured, 6.04 ft above mean sea level, June 8, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	f	JAN 14	f	MAR 21	8.42	MAY 9	7.76	JUL 26	f	SEP 26	f
NOV 20	f	MAR 1	8.57	APR 12	8.10	JUN 28	f	AUG 16	f		

f Water overflowing spillway.

MARIANA ISLANDS, ISLAND OF GUAM

132736144461671. Local number, 18-2746-06 Chochogo Well Ex-1.

LOCATION.--Lat 13°27'36" N., long 144°46'16" E., Hydrologic Unit 20100003, near San Miguel School, Chochogo.

AQUIFER.--Mariana Limestone: Agana argillaceous member.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 597 ft, casing diameter 6 in, cased to 300 ft.

DATUM.--Elevation of land-surface datum is 94 ft. Measuring point: Top of PVC casing, 96.50 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occational measurements, November 1980 to current year.
WATER QUALITY: 1981, 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.52 ft above mean sea level, Sept. 28, 1982; lowest measured, 6.14 ft above mean sea level, June 22, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	9.10	MAR 1	8.27	APR 12	6.75	JUN 11	6.60	JUL 2	7.75	AUG 16	8.25
JAN 14	8.12	22	6.91	MAY 9	6.73	12	6.59	26	7.44	SEP 26	9.28

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR					
22...	0950	110	700	27.0	30
22...	1015	200	1310	26.5	240
22...	1045	270	3600	26.5	950
22...	1115	300	17100	26.5	5500
22...	1145	330	23800	26.5	7900
22...	1215	340	26700	26.5	9200
22...	1245	350	31000	26.5	11000
22...	1310	365	34800	26.5	12000
22...	1340	375	38200	26.5	14000
22...	1415	400	44300	26.0	16000
22...	1445	450	49800	26.0	18000
22...	1520	550	50000	26.0	18000
JUN					
11...	1340	110	813	26.5	46
11...	1400	200	1340	26.0	220
JUN					
11...	1425	250	3000	26.0	750
11...	1450	270	4280	26.0	1100
11...	1520	300	18500	26.0	5900
11...	1545	330	25300	26.0	8200
11...	1620	340	28800	26.0	9600
12...	1045	350	31400	26.0	11000
12...	1120	365	34900	26.0	12000
12...	1155	375	38700	26.0	14000
12...	1230	400	44300	26.0	16000
12...	1310	450	50000	26.0	18000
12...	1345	550	49800	26.0	19000

MARIANA ISLANDS, ISLAND OF GUAM

133034144500871. Local number, 18-3050-05 Macheche Rd. Well Ex-6.

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 water-table well, sounded depth 407 ft, uncased hole diameter 12 in. Well deepened to 462 ft on Aug. 7, 1981.

DATUM.--Elevation of land-surface datum is 309 ft. Measuring point: Top of surface casing, 309.41 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, February 1978 to current year.
WATER QUALITY: 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.09 ft above mean sea level, Aug. 16, 1978; lowest measured, 2.61 ft above mean sea level, Feb. 2, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	3.23	MAR 1	3.19	MAR 27	3.23	MAY 9	3.26	JUN 28	3.15	AUG 16	3.18
NOV 20	3.18	MAR 22	3.21	APR 12	3.28	JUN 10	2.93	JUL 26	3.22	SEP 26	3.04
JAN 14	3.01										

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR					
27...	1040	330	391	26.5	15
27...	1120	430	390	26.5	15
27...	1155	440	18100	26.5	6000
27...	1235	445	41500	26.0	15000
27...	1315	450	49700	26.0	18000
27...	1400	455	50300	26.0	18000
JUN					
10...	1405	330	428	26.0	40
10...	1445	425	402	26.0	14
10...	1525	430	395	26.0	14
10...	1610	435	401	26.0	15
10...	1655	440	20900	26.0	6800
JUN					
11...	1115	445	41500	26.0	15000
11...	1155	450	50000	26.0	18000
SEP					
04...	1055	330	404	26.5	13
04...	1130	425	397	26.5	14
04...	1210	430	398	26.0	13
04...	1240	435	399	26.0	14
04...	1325	440	22500	26.0	7500
04...	1400	445	41300	26.0	15000
04...	1435	450	49900	26.0	18000

MARIANA ISLANDS, ISLAND OF GUAM

133115144484971. Local number, 18-3148-02 Harmon Well 1 (107).

LOCATION.--Lat 13°31'15" N., long 144°48'49" E., Hydrologic Unit 20100003, 500 ft north of junction of Routes 1 and 16, Dededo. Owner: Government of Guam.

AQUIFER.--Mariana Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 289 ft, diameter 10 in.

DATUM.--Elevation of land-surface datum is 268 ft. Measuring point: Top of casing, 267.96 ft above mean sea level.

PERIOD OF RECORD.--Water-level recorder: March 1973 to May 1983.
Occasional measurements: June 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.34 ft above mean sea level, May 22, 1976; lowest, 1.84 ft above mean sea level, Feb. 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.55	JAN 14	2.46	MAR 22	2.75	MAY 9	2.87	JUL 26	2.70	SEP 26	2.53
NOV 20	2.66	MAR 1	2.25	APR 12	2.92	JUN 28	2.69	AUG 16	2.77		

MARIANA ISLANDS, ISLAND OF GUAM

133120144505471. Local number, 18-3150-10 Ghura-Dededo Monitoring Well.

LOCATION.--Lat 13°31'20" N., long 144°50'54" E., Hydrologic Unit 20100003, in the Dededo Well Field, PUAG, Dededo. Owner: Government of Guam.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 785 ft, uncased hole diameter 12 in.

DATUM.--Elevation of land-surface datum ia 393 ft. Measuring point: Top of surface casing, 393.90 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Water-level recorder, November 1982 to February 1983.
Occasional measurements, March 1980 to August 1982, March 1983 to current year.
WATER QUALITY: 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.58 ft above mean sea level, April 12, 1985; lowest measured, 1.40 ft above mean sea level, Dec. 17, 1982.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.00	MAR 1	1.80	MAR 25	1.98	MAY 9	2.03	JUN 28	1.96	AUG 16	2.01
NOV 20	1.97	22	1.99	APR 12	2.58	JUN 7	1.65	JUL 26	2.05	SEP 26	1.90
JAN 14	1.80										

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR					
25...	1030	400	553	27.0	40
25...	1130	500	648	27.0	63
25...	1240	520	7610	27.0	2300
25...	1400	530	24600	26.5	8200
25...	1510	540	50000	26.5	18000
25...	1620	550	52500	26.5	20000
JUN					
07...	1015	400	612	27.0	50
07...	1100	480	614	27.0	54
JUN					
07...	1150	500	641	26.5	61
07...	1245	520	7960	26.0	2400
07...	1430	530	30900	26.0	11000
10...	1030	510	622	26.5	56
10...	1220	540	49300	26.0	18000

MARIANA ISLANDS, ISLAND OF GUAM

133628144513271. Local number, 18-3651-05 Northwest Field Exploratory Well Ex-8.

LOCATION.--Lat 13°36'28" N., long 144°51'32" E., Hydrologic Unit 20100003, in old Air Force Housing area in Northwest Field.

AQUIFER.--Barrigada Limestone.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 658 ft, diameter 8 in.

DATUM.--Elevation of land-surface datum is 461 ft. Measuring point: Top of surface casing 462.49 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, September 1981 to current year.
WATER QUALITY: 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.86 ft above mean sea level, June 8, 1984; lowest, 1.88 ft above mean sea level, Feb. 28, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.42	NOV 9	2.34	NOV 20	2.39

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV					
09...	1000	480	488	27.0	27
09...	1045	550	474	27.0	22
09...	1140	570	473	27.0	21
09...	1230	590	8410	27.0	1900
09...	1315	600	19600	26.5	6200
NOV					
09...	1400	605	30000	26.5	10000
09...	1445	610	38700	26.0	14000
09...	1530	630	51800	26.0	19000

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

133414144551871 - 18-3455-31 TEST HOLE D, GUAM

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR				
06...	0030	721	26.5	140
06...	0100	842	26.5	140
06...	0130	880	26.5	140
06...	0200	883	25.0	140
06...	0300	818	25.0	140
06...	0400	891	25.0	150
06...	0500	900	25.0	150
06...	0600	854	24.5	150
06...	0700	906	25.0	150
06...	0800	907	25.0	150
MAR				
06...	0900	911	25.0	160
06...	1000	905	24.5	160
06...	1100	909	24.5	160
06...	1155	919	24.5	160
06...	1200	864	24.5	150
MAY				
29...	1030	475	26.5	18
29...	1120	484	26.5	20

DATE	TIME	SAMPLING DEPTH (FEET)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAY										
29...	1030	520	7.2	230	76	85	3.3	13	11	.4
29...	1120	550	7.3	240	82	90	3.8	12	10	.4

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
MAY										
29...	4.2	150	4.6	<.10	.6	220	.30	3.4	11	10
29...	1.6	159	4.0	<.10	.6	230	.31	2.3	<3	11

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

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

133534144521271 - 18-3552-03 TEST HOLE A, GUAM

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
DEC				
27...	1315	196	--	18
27...	1345	290	--	19
27...	1600	255	--	18
27...	1700	247	--	18
27...	1800	215	--	18
27...	1900	215	--	18
DEC				
27...	1940	350	--	20
MAY				
29...	1310	435	26.5	24
29...	1355	419	26.0	25

DATE	TIME	SAMPLING DEPTH (FEET)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAY										
29...	1310	480	7.3	200	53	78	2.0	14	13	.4
29...	1355	525	7.3	210	81	79	2.0	13	12	.4

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
MAY										
29...	.60	150	5.3	<.10	.2	210	.29	.45	5	6
29...	.70	125	4.2	<.10	.5	200	.27	.75	41	7

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

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

133522144523971 - 18-3552-04 TEST HOLE B, GUAM

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN				
19...	1400	462	--	36
19...	1500	465	--	36
19...	1600	467	--	38
19...	1700	467	--	38
19...	1800	397	--	39
MAY				
29...	1515	427	26.0	28
29...	1555	480	25.5	35

DATE	TIME	SAMPLING DEPTH (FEET)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAY										
29...	1515	480	7.4	170	55	66	2.4	16	17	.6
29...	1555	510	7.3	200	73	71	5.6	21	18	.7

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
MAY										
29...	.60	120	4.5	<.10	.3	190	.26	.26	6	2
29...	.90	128	6.2	<.10	.3	220	.29	.32	7	3

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

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

133513144523771 - 18-3552-05 TEST HOLE C, GUAM

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR				
15...	1525	720	26.0	92
15...	1600	872	26.0	150
15...	1630	954	26.0	170
15...	1700	1150	26.0	230
15...	1800	1440	26.0	310
15...	1900	1680	26.0	390
15...	2000	1960	26.0	470
MAR				
15...	2100	2140	26.0	540
15...	2200	2280	26.0	570
15...	2230	2310	26.0	580
MAY				
30...	1140	463	27.0	30
30...	1230	568	26.0	60

DATE	TIME	SAMPLING DEPTH (FEET)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAY										
30...	1140	475	7.2	200	70	75	2.7	17	16	.6
30...	1230	540	7.2	210	55	75	5.3	35	27	1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
MAY										
30...	.60	129	5.3	<.10	.3	210	.28	.33	5	9
30...	1.3	154	8.8	<.10	.4	280	.38	.56	16	5

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

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

133513144532171 - 18-3553-01 TEST HOLE E, GUAM

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB				
14...	1100	437	--	30
14...	1130	440	--	30
14...	1200	438	--	31
14...	1230	440	--	31
14...	1300	440	--	31
14...	1330	441	--	31
14...	1400	442	--	31
14...	1430	443	--	32
14...	1500	446	--	31
FEB				
14...	1530	446	--	32
14...	1600	445	--	33
14...	1630	450	--	33
14...	1700	452	--	34
MAY				
30...	0910	394	26.0	21
30...	0955	410	26.0	23

DATE	TIME	SAMPLING DEPTH (FEET)	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAY										
30...	0910	465	7.3	180	55	70	2.1	13	13	.4
30...	0955	520	7.3	180	34	67	2.4	15	15	.5

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
MAY										
30...	1.1	129	3.9	<.10	.3	190	.26	.57	5	3
30...	.80	144	3.9	<.10	.4	200	.27	.63	5	5

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

MARIANA ISLANDS, ISLAND OF GUAM

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
133031144482371	18-3048-06	13 30 31	144 48 23	02-21-85	1110	720	--	78
133047144504671	18-3050-01	13 30 47	144 50 46	02-21-85	--	594	--	49
133047144510171	18-3051-01	13 30 47	144 51 01	02-21-85	1045	561	--	42
133041144515271	18-3051-02	13 30 41	144 51 52	02-21-85	1015	539	--	45
133044144523771	18-3052-03	13 30 44	144 52 37	02-21-85	0924	534	--	50
133043144522671	18-3052-04	13 30 43	144 52 26	02-21-85	0933	593	--	65
133043144521471	18-3052-05	13 30 43	144 52 14	02-21-85	0950	491	--	31
133042144520471	18-3052-06	13 30 42	144 52 04	02-21-85	1005	528	--	42
133103144511571	18-3151-01	13 31 03	144 51 15	02-21-85	1034	540	--	30
133338144553971	18-3355-01	13 33 38	144 55 39	02-21-85	1115	514	--	24
133601144541571	18-3654-01	13 36 01	144 54 15	03-08-85	0830	1070	25.5	230
				04-11-85	1125	1110	26.0	220
				05-09-85	1145	1090	24.0	210
				05-30-85	1000	1050	24.0	200
				09-27-85	1100	1080	--	210

CAROLINE ISLANDS, YAP ISLANDS

092919138045670. Local number, 25-2904-01 Yugamanman Well 1 (Fraq-Lamaer), Yap.

LOCATION.--Lat 09°29'19" N., long 138°04'57" E., Hydrologic Unit 20100006, 800 ft southwest of the Communication Station, and 800 ft northwest of the U.S. Weather Bureau station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 92 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 42 ft. Measuring point: Top of casing, 42.68 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, July 1982 to current year.
WATER QUALITY: 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.09 ft above mean sea level, Sept. 23, 1983; lowest measured, 12.24 ft above mean sea level, May 13, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	30.34	NOV 28	29.04	FEB 7	27.69	APR 17	24.91	MAY 29	25.07	AUG 19	32.16
OCT 18	30.06	DEC 18	27.15	FEB 27	25.82	MAY 8	25.91	JUL 23	27.48	SEP 11	28.95
NOV 13	28.52	JAN 14	30.50	MAR 12	25.96						

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAR 27...	1320	39	6.6	29.0	6	0	1.6	.43	4.9	63	.9

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 27...	.40	7.0	.8	5.6	<.10	.5	18	.03	<.10	14	24

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

CAROLINE ISLANDS, YAP ISLANDS

092918138045470. Local number, 25-2904-02 Yugamanman Well 2 (Faraq-Lamaer), Yap.

LOCATION.--Lat 09°29'18" N., long 138°04'54" E., Hydrologic Unit 20100006, 1,000 ft southwest of the Communication Station, and 1,000 ft northwest of the U.S. Weather Buresu Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 84 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 37 ft. Measuring point: Top of casing, 38.83 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, July 1982 to current year.
WATER QUALITY: 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.75 ft above mean sea level, Aug. 8, 1983; lowest measured, 12.04 ft above mean sea level, May 13, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	28.44	NOV 28	27.15	FEB 7	26.18	APR 17	24.08	MAY 29	22.05	AUG 19	28.09
OCT 18	28.05	DEC 18	25.81	FEB 27	24.88	MAY 8	24.95	JUL 23	26.09	SEP 11	27.39
NOV 13	26.77	JAN 14	28.36	MAR 12	25.01						

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAR 27...	1340	51	6.8	29.0	10	0	2.6	.97	4.9	48	.7

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 27...	.70	14	.4	4.5	<.10	1.3	24	.03	<.10	100	170

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

CAROLINE ISLANDS, YAP ISLANDS

092915138050270. Local number, 25-2905-01 Timlang Well 1, Yap.

LOCATION.--Lat 09°29'15" N., long 138°05'02" E., Hydrologlic Unit 20100006, 900 ft south of the Communication Station, and 300 ft southwest of the U.S. Weather Bureau Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 70 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 41 ft. Measuring point: Top of casing, 42.65 ft above mean sea level.

PERIOD OF RECORD.--Occssional measurements, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.14 ft above mean sea level, Oct. 16, 1984; lowest messured, 11.19 ft above mean sea level, May 13, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	39.14	NOV 28	36.26	FEB 7	34.05	APR 17	29.06	MAY 29	30.22	AUG 19	38.17
OCT 18	38.64	DEC 18	33.37	FEB 27	31.33	MAY 7	31.69	JUL 23	33.60	SEP 11	35.40
NOV 13	35.53	JAN 14	38.87	MAR 12	30.68						

CAROLINE ISLANDS, YAP ISLANDS

092920138050270. Local number, 25-2905-02 Timlang Well 2, Yap.

LOCATION.--Lat 09°29'18" N., long 138°05'01" E., Hydrologic Unit 20100006, 600 ft south of the Communication Station, and 300 ft west of the U.S. Weather Bureau Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 80 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 39 ft. Measuring point: Top of casing, 40.43 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, July 1982 to current year.
WATER QUALITY: 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.83 ft above mean sea level, Oct. 16, 1984; lowest measured, 11.38 ft above mean sea level, May 13, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	36.83	NOV 28	33.47	FEB 7	31.25	APR 17	26.90	MAY 29	26.96	AUG 19	34.72
OCT 18	35.53	DEC 18	30.46	FEB 27	27.86	MAY 8	28.47	JUL 23	31.21	SEP 11	33.16
NOV 13	32.52	JAN 14	35.89	MAR 12	28.18						

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
MAR 27...	1250	40	6.4	29.5	5	1	1.2	.50	4.6	64	.9

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 27...	.40	4.0	1.3	7.1	<.10	.0	18	.02	<.10	23	160

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

CAROLINE ISLANDS, YAP ISLANDS

092616138050670. Local number 25-2905-03 Timlang Well 3, Yap

LOCATION.--Lat 09°29'16" N., long 138°05'05" E., Hydrologic Unit 20100006, 800 ft south-southeast of the Communication Station, and 100 ft southeast of the U.S. Weather Bureau Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 88 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 43 ft. Measuring point: Top of casing, 44.22 ft above mean sea level.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, September 1982 to current year.
WATER QUALITY: 1982, 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.52 ft above mean sea level, Oct. 16, 1984; lowest measured, 12.76 ft above mean sea level, May 13, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	37.52	NOV 28	32.47	FEB 7	31.61	APR 17	28.80	MAY 29	28.89	AUG 19	35.67
OCT 18	35.58	DEC 18	30.89	FEB 27	28.62	MAY 7	29.68	JUL 23	32.12	SEP 11	31.70
NOV 13	32.19	JAN 4	32.92	MAR 12	29.91						

092926138050470. Local number, 25-2905-06 Communication Well 2, Yap.

LOCATION.--Lat 09°29'25" N., long 138°05'03" E., Hydrologic Unit 20100006, 75 ft north of the Communication Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 81 ft, diameter 2 in.

DATUM.--Elevation of land-surface datum is 39 ft. Measuring point: Top of casing, 39.40 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, December 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.40 ft above mean sea level, June 8, 1982; lowest measured, 9.90 ft above mean sea level, May 27, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	29.11	NOV 28	28.18	FEB 7	26.93	APR 17	23.85	MAY 29	23.44	AUG 19	29.53
OCT 18	29.33	DEC 18	26.18	FEB 27	24.59	MAY 7	24.87	JUL 23	26.87	SEP 11	28.59
NOV 13	27.62	JAN 14	29.52	MAR 12	24.58						

CAROLINE ISLANDS, YAP ISLANDS

093159138095870. Local number 25-3109-01 Monguch Well 1, Gagil-Tamil.

LOCATION.--Lat 09°31'59" N., long 138°09'58" E., Hydrologic Unit 20100006, 0.6 mi northeast of the Tamilang Elementary School, and 1.0 mi south of the Coast Guard LORAN Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled observation well, depth reported 85 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 19.5 ft. Measuring point: Top of casing, 21.38 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, overflowing casing for many days each year; lowest measured, 18.19 ft above mean sea level, May 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	f	NOV 29	f	FEB 6	f	MAR 14	21.18	MAY 8	21.28	AUG 20	f
OCT 19	21.13	DEC 13	20.50	FEB 26	21.38	APR 17	a20.28	JUN 4	f	SEP 16	f
NOV 8	f	JAN 15	f								

093159138095870. Local number, 25-3109-02 Monguch Well 2, Gagil-Tamil.

LOCATION.--Lat 09°31'59" N., long 138°09'58" E., Hydrologic Unit 20100006, 0.6 mi north of the Tamilang Elementary School, and 1.0 mi south of the Coast Guard LORAN Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 95 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 24 ft. Measuring point: Top of casing, 26.47 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.79 ft above mean sea level, Aug. 10, 1984; lowest measured, 20.19 ft above mean sea level, May 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	24.38	NOV 29	24.55	FEB 6	24.49	APR 17	22.91	JUN 4	24.19	AUG 20	23.94
OCT 19	24.00	DEC 13	22.18	FEB 26	23.98	MAY 8	23.90	JUL 22	24.32	SEP 16	23.87
NOV 8	24.68	JAN 15	23.40	MAR 14	23.78						

f Water overflowing casing.
a Well being pumped

CAROLINE ISLANDS, YAP ISLANDS

093157138095670. Local number, 25-3109-03 Thilung Well 1 (Monguch 3), Gagil-Tamil.

LOCATION.--Lat 09°31'57" N., long 138°09'56" E., Hydrologic Unit 20100006, 0.6 mi north of the Tamilang Elementary School, and 1.1 mi south of the Coast Guard LORAN Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 115 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 26 ft. Measuring point: Top of casing, 28.18 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.03 ft above mean sea level, Aug. 20, 1985; lowest measured, 22.58 ft above mean sea level, Dec. 13, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	25.67	NOV 29	26.57	FEB 6	23.99	APR 17	24.89	JUN 4	26.09	AUG 20	27.03
OCT 19	25.98	DEC 13	22.58	FEB 26	25.87	MAY 8	25.78	JUL 22	26.30	SEP 16	25.86
NOV 8	26.76	JAN 15	22.93	MAR 14	25.62						

093154138095370. Local number, 25-3109-04 Thilung Well 2 (Monguch 4), Gagil-Tamil.

LOCATION.--Lat 09°31'54" N., long 138°09'53" E., Hydrologic Unit 20100006, 0.5 mi north of the Tamilang Elementary School, and 1.1 mi south of the Coast Guard LORAN Station.

AQUIFER.--Tamil Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 105 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 33 ft. Measuring point: Top of casing, 34.82 ft above mean sea level.

PERIOD OF RECORD.--Occasional measurements, July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.58 ft above mean sea level, Aug. 20, 1985; lowest measured, 22.95 ft above mean sea level, May 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	28.82	NOV 29	29.12	FEB 6	28.45	APR 17	27.05	JUN 4	28.43	AUG 20	30.58
OCT 19	29.33	DEC 13	28.08	FEB 26	28.19	MAY 8	28.10	JUL 22	28.73	SEP 16	28.47
NOV 8	29.40	JAN 15	29.12	MAR 14	27.89						

CAROLINE ISLANDS, YAP ISLANDS

093217138101270. Local number, 25-3210-01 Mukong Well, Gagil-Tamil.

LOCATION.--Lat 09°32'17" N., long 138°10'12" E., Hydrologic Unit 20100006, 0.6 mi south of the Coast Guard LORAN Station, and 1.1 mi north-northeast of the Tamilang Elementary School.

AQUIFER.--Coral formation in the Tamil-Volcanics.

WELL CHARACTERISTICS.--Drilled water-table well, depth reported 120 ft, diameter 6 in.

DATUM.--Elevation of land-surface datum is 24 ft. Measuring point: Top of casing, 25.83 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Occasional measurements, July 1982 to current year.
WATER QUALITY: 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.19 ft above mean sea level, Sept. 1, 1982; lowest measured, 12.68 ft above mean sea level, May 12, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	15.51	NOV 29	15.60	FEB 6	15.77	APR 17	14.80	JUN 4	15.31	AUG 20	15.30
OCT 19	15.71	DEC 13	15.44	FEB 26	15.11	MAY 8	15.10	JUL 22	14.44	SEP 16	15.99
NOV 8	15.83	JAN 15	15.80	MAR 14	14.99						

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

065013152422170 - 30-5042-03 PIS-LOSAP W9, TRUK IS.

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)
MAR 04...	1640	630	7.1	27.0	270	17	96	8.2	16

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)
MAR 04...	11	.4	15	257	12	19	.20	3.2	320	.44

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAR 04...	6.1	90	<1	200	<10	<1	10	1	6	190

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR 04...	35	<1	80	60	<1	<1	4	<1	<1	20

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

CAROLINE ISLANDS, TRUK ISLANDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

065336152440270 - 30-5344-01 LOSAP W6, TRUK IS.

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	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)
MAR 06...	1030	1090	7.1	27.0	7.1	410	12	130	20	67

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)
MAR 06...	25	2	18	396	36	83	.30	6.3	600	.81

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAR 06...	6.5	50	2	200	<10	<1	20	<1	7	110

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR 06...	70	<1	110	20	1	1	6	<1	<1	30

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

CAROLINE ISLANDS, TRUK ISLANDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

065932152344570 - 30-5934-01 NAMA W3, TRUK IS.

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (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)
MAR 03...	1005	8000	7.3	27.0	1100	810	180	160	1300

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (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)
MAR 03...	71	17	48	304	330	2300	.40	1.8	4500	6.1

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAR 03...	1.6	200	<1	200	<10	2	20	<1	2	690

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR 03...	70	<1	290	30	20	1	7	<1	<1	20

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

CAROLINE ISLANDS, TRUK ISLANDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
070000152342970	30-0034-01 NAMA W9	07 00 00	152 34 29	03-03-85	0930	750	26.5	21
072658151511970	30-2650-01 W1 MOEN	07 26 46	151 50 56	10-24-84	1320	152	28.5	12
072654151511870	30-2650-02 W2 MOEN	07 26 50	151 50 55	10-24-84	1340	151	28.0	12
				02-11-85	1445	178	24.5	14
072702151512570	30-2651-01 W7 MOEN	07 26 54	151 51 01	02-11-85	1650	354	24.5	31
072706151512470	30-2651-03 W12 MOEN	07 26 58	151 51 00	10-24-84	1500	570	29.0	110
				02-11-85	1705	391	24.5	41
072708151512170	30-2750-03 W13 MOEN	07 27 01	151 50 56	10-24-84	1420	205	28.5	20
				02-11-85	1545	239	24.5	18
072710151512570	30-2751-01 W15 MOEN	07 27 03	151 51 01	10-24-84	1515	225	29.0	19
				02-11-85	1630	230	--	16
065018152422170	30-5042-01 PIS-LOSAP W4	06 50 18	152 42 21	03-01-85	1450	1150	27.0	130
065016152420970	30-5042-02 PIS-LOSAP W7	06 50 16	152 42 09	03-04-85	1515	855	28.0	92
065015152420970	30-5042-04 PIS-LOSAP W14	06 50 15	152 42 09	03-04-85	1600	1700	27.0	270
065017152422370	30-5042-05 PIS-LOSAP W19	06 50 17	152 42 23	03-05-85	1005	660	27.0	39
065341152435870	30-5343-01 LOSAP W23	06 53 41	152 43 58	03-06-85	1015	3000	26.5	700
065334152440370	30-5344-02 LOSAP W4	06 53 34	152 44 03	03-06-85	0805	3700	27.0	880
065335152440370	30-5344-03 LOSAP W5	06 53 35	152 44 03	03-06-85	0815	1650	27.0	230
065337152440470	30-5344-04 LOSAP W9	06 53 37	152 44 04	03-06-85	0840	2200	27.5	430
065934152344170	30-5934-02 NAMA W2	06 59 34	152 34 41	03-03-85	0830	5900	27.0	1700

MARSHALL ISLANDS, MAJURO ATOLL

070849171011001. Local number, 50-0802-03 Laura DW3, Majuro.

LOCATION.--Lat 07°08'49"N., long 171°01'10"E., Hydrologic Unit 20100006, near Laura village on the Lagoon side 700 ft southwest of elementary school.

AQUIFER.--Coral sand.

WELL CHARACTERISTICS.--Dug well, oil drum casing.

DATUM.--Elevation of land-surface datum is 6 ft. Measuring point: Hole in recorder platform base, 7.59 ft above mean sea level.

PERIOD OF RECORD.--
WATER LEVEL: Water level recorder, May 1984 to current year.
WATER QUALITY: 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.27 ft above mean sea level, Jan. 4, 1985; lowest, 0.82 ft above mean se level, Sept. 10, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, MAY TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								1.00	1.13	1.26	1.14	1.02
2								1.02	1.12	1.23	1.20	.99
3								1.03	1.11	1.22	1.26	.95
4								1.04	1.10	1.21	1.30	.92
5								1.04	1.08	1.21	1.28	.90
6								1.02	1.07	1.20	1.24	.88
7								.98	1.06	1.18	1.20	.87
8								.94	1.06	1.16	1.19	.86
9								.95	1.07	1.19	1.17	.85
10								.96	1.09	1.22	1.15	.86
11								.99	1.09	1.21	1.14	.87
12								1.02	1.09	1.22	1.13	.89
13								1.04	1.09	1.22	1.11	.91
14								1.07	1.09	1.25	1.10	.94
15								1.12	1.07	1.25	1.08	.96
16								1.15	1.05	1.21	1.07	.98
17								1.17	1.03	1.17	1.05	1.00
18								1.17	1.02	1.14	1.05	1.00
19								1.15	1.03	1.12	1.04	1.01
20								1.15	1.03	1.11	1.02	1.02
21								1.14	1.05	1.15	.99	1.12
22								1.12	1.05	1.17	.98	1.20
23								1.11	1.05	1.17	.99	1.22
24								1.13	1.06	1.13	.99	1.23
25								1.16	1.07	1.12	.99	1.24
26								1.17	1.09	1.10	1.01	1.24
27								1.17	1.12	1.08	1.02	1.27
28								1.17	1.25	1.07	1.03	1.37
29								1.15	1.28	1.07	1.04	1.79
30								1.13	1.27	1.07	1.05	2.13
31								1.13	---	1.10	1.05	---
MEAN								1.08	1.09	1.17	1.10	1.08
MAX								1.17	1.28	1.26	1.30	2.13
MIN								.94	1.02	1.07	.98	.85

070849171011001. Local number, 50-0802-03 Laura DW3, Majuro--Continued.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.95	1.52	1.83	1.98	1.45	2.84	1.54	1.30	1.34	1.25	1.25	1.66
2	1.81	1.56	1.83	1.84	1.45	2.59	1.51	1.28	1.32	1.18	1.28	1.62
3	1.71	1.80	1.89	2.05	1.45	2.39	1.48	1.27	1.28	1.19	1.30	1.56
4	1.61	1.76	2.55	3.15	1.44	2.24	1.48	1.28	1.23	1.19	1.29	1.49
5	1.52	1.72	2.70	2.88	1.44	2.11	1.66	1.28	1.24	1.17	1.28	1.43
6	1.70	1.68	2.45	2.60	1.45	2.01	1.78	1.26	1.31	1.17	1.27	1.37
7	1.81	1.98	2.32	2.38	1.57	1.93	2.23	1.32	1.27	1.20	1.26	1.32
8	1.79	1.94	2.10	2.19	1.77	1.87	2.53	1.35	1.20	1.18	1.26	1.28
9	1.86	1.90	2.00	2.43	1.77	1.80	2.36	1.32	1.15	1.13	1.25	1.32
10	1.93	1.86	1.92	2.29	1.74	1.77	2.20	1.28	1.18	1.12	1.38	1.53
11	1.92	1.98	1.84	2.08	1.68	1.72	2.07	1.37	1.29	1.18	1.73	1.53
12	1.86	1.94	1.77	1.92	1.74	1.69	1.93	1.48	1.34	1.36	2.02	1.51
13	1.78	1.90	1.72	1.79	1.88	1.66	1.81	1.46	1.38	1.38	2.02	1.48
14	1.72	1.86	1.85	1.67	1.87	1.62	1.71	1.38	1.82	1.32	1.93	1.50
15	1.68	2.10	1.87	1.57	1.80	1.57	1.64	1.35	1.93	1.42	2.55	1.52
16	1.66	2.32	1.86	1.48	1.76	1.54	1.65	1.33	1.72	1.62	2.81	1.56
17	1.90	2.54	1.85	1.42	1.82	1.52	1.83	1.32	1.58	1.54	2.58	1.57
18	2.12	2.56	1.84	1.36	2.07	1.49	2.37	1.31	1.48	1.43	2.38	1.56
19	2.06	2.38	1.82	1.33	2.35	1.47	2.25	1.31	1.42	1.73	2.21	1.56
20	2.00	2.33	1.79	1.30	2.40	1.45	2.06	1.30	1.35	2.16	2.06	1.54
21	1.94	2.24	1.77	1.27	2.31	1.45	1.93	1.30	1.31	2.04	1.93	1.51
22	1.88	2.15	1.72	1.28	2.32	1.46	1.82	1.30	1.25	1.87	1.82	1.50
23	1.85	2.05	1.69	1.30	2.67	1.55	1.72	1.28	1.23	1.74	1.68	1.49
24	1.88	1.95	1.67	1.31	2.96	1.85	1.62	1.24	1.18	1.64	1.56	1.51
25	1.90	2.22	1.56	1.32	2.85	1.85	1.53	1.23	1.23	1.55	1.46	1.58
26	1.83	2.30	1.81	1.35	2.59	1.80	1.43	1.27	1.53	1.46	1.40	1.67
27	1.75	2.10	2.52	1.37	2.47	1.75	1.37	1.29	1.54	1.40	1.38	1.91
28	1.68	1.95	2.70	1.37	3.00	1.70	1.32	1.32	1.43	1.35	1.42	2.07
29	1.64	1.87	2.49	1.35	---	1.65	1.28	1.32	1.34	1.28	1.77	2.30
30	1.60	1.87	2.30	1.37	---	1.60	1.29	1.33	1.30	1.24	1.73	2.45
31	1.56	---	2.14	1.43	---	1.56	---	1.35	---	1.22	1.68	---
MEAN	1.80	2.01	2.01	1.76	2.00	1.79	1.78	1.32	1.37	1.41	1.71	1.60
MAX	2.12	2.56	2.70	3.15	3.00	2.84	2.53	1.48	1.93	2.16	2.81	2.45
MIN	1.52	1.52	1.56	1.27	1.44	1.45	1.28	1.23	1.15	1.12	1.25	1.28

WTR YR 1985 MEAN 1.71 MAX 3.15 MIN 1.12

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	DIAZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOTAL TRITHION (UG/L)
AUG										
06...	1120	551	27.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01

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

MARSHALL ISLANDS, MAJURO ATOLL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

070841171011801 - 50-0802-01 LAURA DW1, MAJURO

DATE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
AUG										
06...	1055	656	28.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01

070850171021901 - 50-0802-02 LAURA DW2, MAJURO

DATE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
AUG									
06...	1010	741	<.01	<.01	<.01	<.01	<.01	<.01	<.01

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

070854171011201 - 50-0802-04 LAURA DW4, MAJURO

DATE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
AUG										
06...	1030	765	27.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01

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

MARSHALL ISLANDS, MAJURO ATOLL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
070835171021501	50-0802-05 LAURA A-37	07 08 35	171 02 15	01-31-85	1245	--	2290	29.0	480
				04-13-85	1225	--	2000	25.0	400
				06-12-85	1225	--	2140	28.5	420
				08-10-85	1020	--	1990	28.0	390
				09-23-85	1500	--	1690	28.5	300
070856171021401	50-0802-06 LAURA D-14	07 08 56	171 02 14	12-31-84	1035	--	699	29.0	10
				01-31-85	1030	--	743	28.0	8.0
				04-13-85	1335	--	837	25.5	14
				06-12-85	1010	--	890	28.0	14
				08-10-85	1145	--	926	27.0	17
				09-23-85	1135	--	846	28.0	18
070856171021402	50-0802-07 LAURA D-31	07 08 56	171 02 14	04-13-85	1345	--	1050	25.0	160
				08-10-85	1200	--	980	27.0	110
				09-23-85	1145	--	860	28.0	88
070856171021403	50-0802-08 LAURA D-67	07 08 56	171 02 14	12-31-84	1045	--	29600	29.5	10000
				01-31-85	1040	--	23200	28.0	8400
				04-13-85	1400	--	21700	25.0	7400
				06-12-85	1020	--	18400	28.5	6000
				08-10-85	1215	--	16300	27.0	5200
				08-27-85	1035	--	15900	27.5	5400
				09-23-85	1150	--	13100	28.5	4800
070854171020801	50-0802-09 LAURA E-14	07 08 54	171 02 08	12-31-84	1100	--	420	29.0	22
				12-31-84	1135	--	407	31.5	13
				01-31-85	1050	--	431	28.5	12
				04-13-85	1415	--	444	25.5	20
				06-12-85	1040	--	404	28.0	12
				08-10-85	1240	--	398	27.0	12
				09-23-85	1210	--	384	28.5	11
070854171020802	50-0802-10 LAURA E-42	07 08 54	171 02 08	12-31-84	1105	--	414	31.0	23
				01-31-85	1100	--	439	28.5	27
				04-13-85	1425	--	410	25.5	40
				06-12-85	1045	--	384	28.0	28
				08-10-85	1250	--	468	27.0	20
				09-23-85	1215	--	409	29.5	20
070854171020803	50-0802-11 LAURA E-55	07 08 54	171 02 08	12-31-84	1115	--	7200	30.0	2200
				01-31-85	1105	--	4980	28.0	1500
				04-13-85	1445	--	4280	25.0	1200
				06-12-85	1050	--	3800	27.5	1100
				08-10-85	1330	--	3500	27.5	1000
				09-23-85	1230	--	2900	30.0	880
070854171020001	50-0802-12 LAURA F-14	07 08 54	171 02 00	01-31-85	1120	--	409	28.5	13
				04-13-85	1505	--	392	25.5	8.5
				06-12-85	1110	--	413	27.5	7.0
				08-10-85	1400	--	408	27.0	8.0
				09-23-85	1300	--	457	28.5	9.0
070854171020002	50-0802-13 LAURA F-30	07 08 54	171 02 00	01-31-85	1125	--	403	28.5	56
				04-13-85	1520	--	893	25.5	140
				06-12-85	1115	--	343	28.0	24
				08-10-85	1410	--	560	27.5	20
				09-23-85	1305	--	512	28.5	20

MARSHALL ISLANDS, MAJURO ATOLL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
070854171020003	50-0802-14 LAURA F-45	07 08 54	171 02 00	01-31-85	1130	--	6510	28.5	2000
				04-13-85	1530	--	8180	25.0	2400
				06-12-85	1125	--	6700	28.5	2000
				08-10-85	1425	--	7360	27.5	2100
				09-23-85	1320	--	9300	28.5	3200
070843171021001	50-0802-15 LAURA P-9	07 08 43	171 02 10	01-31-85	1220	--	561	29.0	22
				04-13-85	1255	--	506	25.0	12
				06-12-85	1155	--	526	28.0	10
				08-10-85	1050	--	509	26.5	8.0
				09-23-85	1425	--	459	28.0	10
070843171021003	50-0802-17 LAURA P-25	07 08 43	171 02 10	01-31-85	1225	--	346	29.5	16
				04-13-85	1300	--	420	25.0	10
				06-12-85	1200	--	418	28.5	18
				08-10-85	1100	--	436	26.5	18
				09-23-85	1430	--	414	28.0	18
070843171021004	50-0802-18 LAURA P-53	07 08 43	171 02 10	01-31-85	1230	--	2600	28.0	690
				04-13-85	1315	--	2300	25.0	580
				06-12-85	1210	--	2360	27.5	600
				08-10-85	1115	--	2110	27.0	530
				09-23-85	1440	--	1930	28.0	510
070854171020004	50-0802-19 LAURA F	07 08 54	171 02 00	06-18-85	1325	33.0	1490	30.5	310
				06-18-85	1620	38.0	1860	28.5	390
				06-19-85	1410	43.0	5920	29.5	1800
				06-20-85	1350	47.0	17100	29.5	5800
				06-20-85	1600	49.0	23500	28.0	8000
				06-21-85	1355	51.0	45600	28.5	18000
				07-17-85	0900	--	1450	28.5	240
				08-14-85	0900	--	814	29.5	88
				08-15-85	1345	--	1120	29.0	160
				08-16-85	1400	--	1180	28.0	170
				08-17-85	0900	--	1450	28.5	240
				08-20-85	1415	--	47000	28.0	18000
				08-20-85	1430	--	1660	28.5	320
070856171021404	50-0802-20 LAURA D	07 08 56	171 02 08	08-24-85	1245	47.0	930	29.0	92
				08-25-85	0945	62.0	1630	28.0	310
				09-04-85	1745	68.0	5860	28.5	1800
				09-05-85	1000	73.0	14500	28.5	5000
				09-05-85	1030	77.0	42800	28.0	18000
070854171020804	50-0802-21 LAURA E	07 08 54	171 02 08	09-25-85	0905	37.0	379	28.5	24
				09-26-85	0940	48.0	1030	28.0	220
				09-26-85	1455	56.0	3240	28.0	1000
				09-27-85	0935	58.0	3990	27.5	1200
				09-30-85	1050	59.0	3850	28.0	1200
070917171021101	50-0902-01 LAURA I-10	07 09 17	171 02 11	12-31-84	1305	--	462	28.0	21
070917171021102	50-0902-02 LAURA I-25	07 09 17	171 02 11	01-31-85	1015	--	459	28.0	14
				04-13-85	1555	--	437	25.0	19
				08-10-85	1500	--	459	27.5	18
				09-23-85	1340	--	416	28.0	16
070917171021103	50-0902-03 LAURA I-55	07 09 17	171 02 11	12-31-84	1020	--	9200	29.0	2800
				04-13-85	1605	--	2350	25.0	560
				06-12-85	0950	--	4610	28.0	1300
				08-10-85	1510	--	2420	27.5	600
				09-23-85	1350	--	2120	28.0	550

SAMOA ISLANDS, ISLAND OF TUTUILA

141945170435401. Local number, 90-1943-24 Tafunafou Observation Well 1.

LOCATION.--Lat 14°19'45" S., long 170°43'54" W., Hydrologic Unit 20100001, 120 ft northwest of Tafunafou village cross road intersection, and 0.7 mi southeast of High School in Mapusaga. Owner: Government of American Samoa.

AQUIFER.--Basalt lava flows of the Leone Volcanics.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 78 ft, casing diameter 4 inch.

DATUM.--Elevation of land-surface datum is 73 ft. Measuring point: Top of 4-inch casing, 75.18 ft above mean sea level.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--Occasional measurements, October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 20.38 ft above mean sea level, may be caused by cascading water in the well following heavy rain, May 13, 1977; lowest 7.37 ft below mean sea level, July 13, 1978.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	0.28	NOV 26	0.77	JAN 28	1.88	MAR 25	1.53	JUN 10	2.55	AUG 5	1.15
9	2.33	DEC 10	3.22	FEB 5	2.18	APR 1	1.41	17	2.53	19	1.13
29	2.87	17	1.69	25	2.13	MAY 6	6.14	JUL 1	2.52	SEP 3	1.10
NOV 13	1.44	JAN 7	4.00	MAR 18	1.66	15	2.64	22	1.22	23	.79

141948170435701. Local number, 90-1943-28 Tafunafou Observation Well 5.

LOCATION.--Lat 14°19'48" S., long 170°43'57" W., Hydrologic Unit 20100001, 1,000 ft southeast of Tafunafou village, and 1.5 mi northwest of Pago Pago International Airport. Owner: Government of American Samoa.

AQUIFER.--Basalt lava flows of the Leone Volcanics.

WELL CHARACTERISTICS.--Drilled basal water-table well, sounded depth 106 ft, casing diameter 4 in.

DATUM.--Elevation of land-surface datum is 83 ft. Measuring point: Top of 4-inch casing, 85.32 ft above mean sea level.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--Occasional measurements, October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.32 ft above mean sea level, may be caused by cascading water in the well following heavy rain, July 28, 1981; lowest 4.23 ft below mean sea level, Aug. 15, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	1.56	NOV 26	1.66	JAN 28	2.77	MAR 25	2.40	JUN 10	-0.09	AUG 05	-0.77
09	2.34	DEC 10	2.50	FEB 05	2.53	APR 01	2.26	17	-.10	19	-.71
29	2.37	17	2.20	25	2.57	MAY 06	1.37	JUL 01	-.12	SEP 03	-.90
NOV 13	2.07	JAN 07	3.02	MAR 18	2.40	15	.02	22	1.71	23	-1.07

SAMOA ISLANDS, ISLAND OF TUTUILA

142055170455901. Local number, 90-2045-03 Malaeloa Well 92.

LOCATION.--Lat 14°20'55" S., long 170°45'59" W., Hydrologic Unit 20100001, 0.4 mi southeast of Malaeloa School, adn 0.6 west of Olovalu Crater. Owner: Government of American Samoa.

AQUIFER.--Lava flows and cinders of the Leone Volcanics underlain by beach sand.

WELL CHARACTERISTICS.--Drilled basal water-tsble well, depth 191 ft, casing diameter 8 in.

DATUM.--Elevation of land surface datum is 163 ft. Measuring point: Top of 8-inch casing, 163.74 ft above mean sea level.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--Occasional measurements, September 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.77 ft above mean sea level, January 28, 1985; lowest 1.19 ft above mean sea level, September 4, 1984.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
SEP 4	1.19	SEP 10	1.30	SEP 17	1.69	SEP 24	1.31

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	1.43	NOV 26	2.71	JAN 28	6.77	MAR 25	2.41	JUN 10	4.60	AUG 5	2.91
9	2.37	DEC 10	4.42	FEB 5	3.52	APR 1	2.24	17	4.28	19	2.92
29	3.59	17	3.60	25	3.14	MAY 6	5.73	JUL 1	3.96	SEP 3	3.03
NOV 13	4.00	JAN 7	6.30	MAR 18	2.52	15	4.96	22	3.13	23	2.67

SAMOA ISLANDS, ISLAND OF TUTUILA

142102170445601. Local number, 90-2144-12 Iliili test well 115.

LOCATION.--Lat 14°21'02" S., long 170°44'56" W., Hydrologic Unit 20100001, 800 ft northwest of Iliili village church, and 0.5 mi northeast of Futiga village school.

AQUIFER.--Basalt lava flows of the Leone Volcanics underlain by calcareous coastal deposits.

WELL CHARACTERISTICS.--Drilled basal water-table well, well depth 243 ft, casing diameter 4 inch.

DATUM.--Elevation of land-surface datum is 216 ft. Measuring point: Top of 4-inch casing, 216.94 ft above mean sea level.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--Occasional measurements, February 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.89 ft above mean sea level, June 15, 1982; lowest 2.56 ft above mean sea level, May 31, 1983.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	4.03	NOV 26	4.69	JAN 28	5.48	MAR 25	4.99	JUN 10	5.37	AUG 5	4.77
9	4.60	DEC 10	5.14	FEB 5	5.19	APR 1	4.75	17	5.50	19	4.80
29	4.73	17	5.16	25	5.12	MAY 6	6.38	JUL 1	5.34	SEP 3	4.64
NOV 13	4.89	JAN 7	5.99	MAR 18	4.82	15	5.39	22	4.71	23	4.40

SAMOA ISLANDS, ISLAND OF TUTUILA

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

141623170393801 - 90-1639-08 AUA W97 TUTUILA SAMOA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE (DEG C)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT				
29...	0834	179	27.5	13
NOV				
02...	1130	--	--	12
26...	0725	180	27.0	14
DEC				
10...	1310	185	27.5	14
JAN				
28...	0730	180	27.0	14
FEB				
25...	0900	180	28.0	14
MAR				
25...	1305	200	26.0	14
MAY				
15...	0925	190	27.0	16
JUN				
17...	0755	195	27.0	18
JUL				
22...	1255	210	27.0	20
AUG				
19...	0815	215	26.0	24
SEP				
23...	0815	219	26.0	28

DATE	TIME	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	HARDNESS NONCARBONATE (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
NOV										
02...	1130	64	0	0	12	8.3	14	31	.8	1.7

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	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)
NOV									
02...	72	2.2	.10	41	130	.18	.15	<3	<1

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

SAMOA ISLANDS, ISLAND OF TUTUILA

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
141703170405301	90-1740-01 UTULEI DW3	14 17 03	170 40 53	10-29-84	0950	410	27.5	68
				01-28-85	0810	340	27.0	50
				02-25-85	0920	390	27.0	60
				05-15-85	0950	345	27.0	53
				06-17-85	0830	390	27.0	63
				07-22-85	1155	585	27.0	120
				08-19-85	0845	600	26.0	120
				09-23-85	0840	610	26.0	130
141945170435301	90-1943-06 TAFUNAFOU W33	14 19 45	170 43 53	10-29-84	1050	310	27.5	59
				11-26-84	0845	1130	26.0	290
				12-10-84	0910	422	27.0	85
				01-28-85	0840	380	26.0	81
				02-25-85	0950	560	26.0	130
				03-25-85	0830	1110	26.0	280
				05-15-85	1030	380	26.0	80
				06-17-85	0900	540	27.0	120
				07-22-85	0805	1150	26.0	300
				08-19-85	0815	950	26.0	240
				09-23-85	0915	1100	25.5	290
141928170435201	90-1943-20 TAFUNAFOU W81	14 19 28	170 43 52	10-29-84	1016	125	27.5	10
				11-26-84	0820	139	26.5	12
				03-25-85	0910	221	27.0	33
				05-15-85	1125	130	26.5	9.5
				06-17-85	0955	130	26.0	9.5
				07-22-85	1105	220	26.0	30
				09-23-85	0905	200	25.5	28
141952170440201	90-1944-11 TAFUNAFOU W61	14 19 52	170 44 02	10-29-84	1110	860	26.5	220
				11-26-84	0855	973	26.5	240
				12-10-84	0845	725	26.5	180
				01-28-85	0900	600	26.0	140
				02-25-85	1010	790	27.0	190
				03-25-85	0845	920	27.0	240
				05-15-85	1055	519	26.0	120
				06-17-85	0935	610	26.5	140
				07-22-85	0840	640	25.5	140
				08-19-85	0950	800	25.0	200
				09-23-85	0945	844	25.5	190
141951170440101	90-1944-12 TAFUNAFOU W60	14 19 51	170 44 01	01-28-85	0855	660	26.0	160
				07-22-85	--	950	26.0	240
				08-19-85	0940	1230	26.0	310
				09-23-85	0935	1300	25.5	350
141929170441401	90-1944-13 MALAEIMI W67	14 19 29	170 44 14	10-29-84	1430	160	26.5	9.5
				11-26-84	1205	170	27.0	10
				12-10-84	0945	179	26.0	11
				01-28-85	0945	179	26.0	10
				02-25-85	--	179	27.0	9.5
				03-25-85	--	180	26.0	10
				05-15-85	1140	180	26.0	10
				06-17-85	1000	175	26.0	10
				07-22-85	1110	180	25.5	9.5
				08-19-85	1200	179	26.0	10
				09-23-85	1220	180	25.5	10

SAMOA ISLANDS, ISLAND OF TUTUILA

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT-I-FIER	LAT-I-TUDE	LONG-I-TUDE	DATE OF SAMPLE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
141952170444201	90-1944-15 MASEPA W85	14 19 52	170 44 42	10-29-84	1420	180	27.0	14
142002170444201	90-2044-02 ILIILI W84	14 20 02	170 44 42	10-29-84	1225	1760	27.5	440
				11-26-84	1010	1700	27.5	430
				12-10-84	1140	1980	26.5	500
				02-25-85	1235	1720	27.0	440
				03-25-85	1125	1770	27.0	440
				05-15-85	1335	1300	26.5	320
				06-17-85	1150	1300	26.0	310
				07-22-85	1030	1600	26.0	410
				08-19-85	1015	1600	26.0	420
				09-23-85	1040	1600	26.0	410
142042170463001	90-2046-03 MALAELOA W70	14 20 42	170 46 30	10-29-84	1340	300	29.0	26
				11-26-84	1120	290	27.0	20
				12-10-84	1055	270	27.0	14
				01-28-85	1045	240	27.0	12
				02-25-85	1155	265	27.0	13
				03-25-85	1055	270	27.0	19
				05-15-85	1255	260	27.0	14
				06-19-85	1100	280	27.0	14
				07-22-85	1005	290	26.0	16
				08-19-85	1115	300	26.0	15
				09-23-85	1140	300	26.0	17
142110170444601	90-2144-05 ILIILI W62	14 21 10	170 44 46	10-29-84	1250	550	27.5	79
				12-10-84	1040	490	27.0	57
				12-10-84	1110	540	27.0	77
				01-28-85	1100	425	27.0	41
				02-25-85	1205	510	27.5	60
				03-25-85	1100	548	28.0	71
				05-15-85	1310	450	27.0	50
				06-17-85	1115	465	26.0	51
				07-22-85	1015	520	26.0	69
				08-19-85	1035	590	26.0	86
				09-23-85	1105	650	26.0	100
142102170455801	90-2145-03 PUAPUA W119	14 21 02	170 45 58	10-29-84	1305	840	27.5	180
				11-26-84	--	790	27.0	160
				12-10-84	1025	510	27.0	60
				01-28-85	1020	400	26.5	26
				03-25-85	1010	1200	27.0	300
				05-15-85	1225	450	27.0	49
				06-17-85	1040	560	26.0	80
				07-22-85	0940	725	26.0	140
				08-19-85	1045	850	26.0	180
				09-23-85	1115	1090	26.0	240

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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)
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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