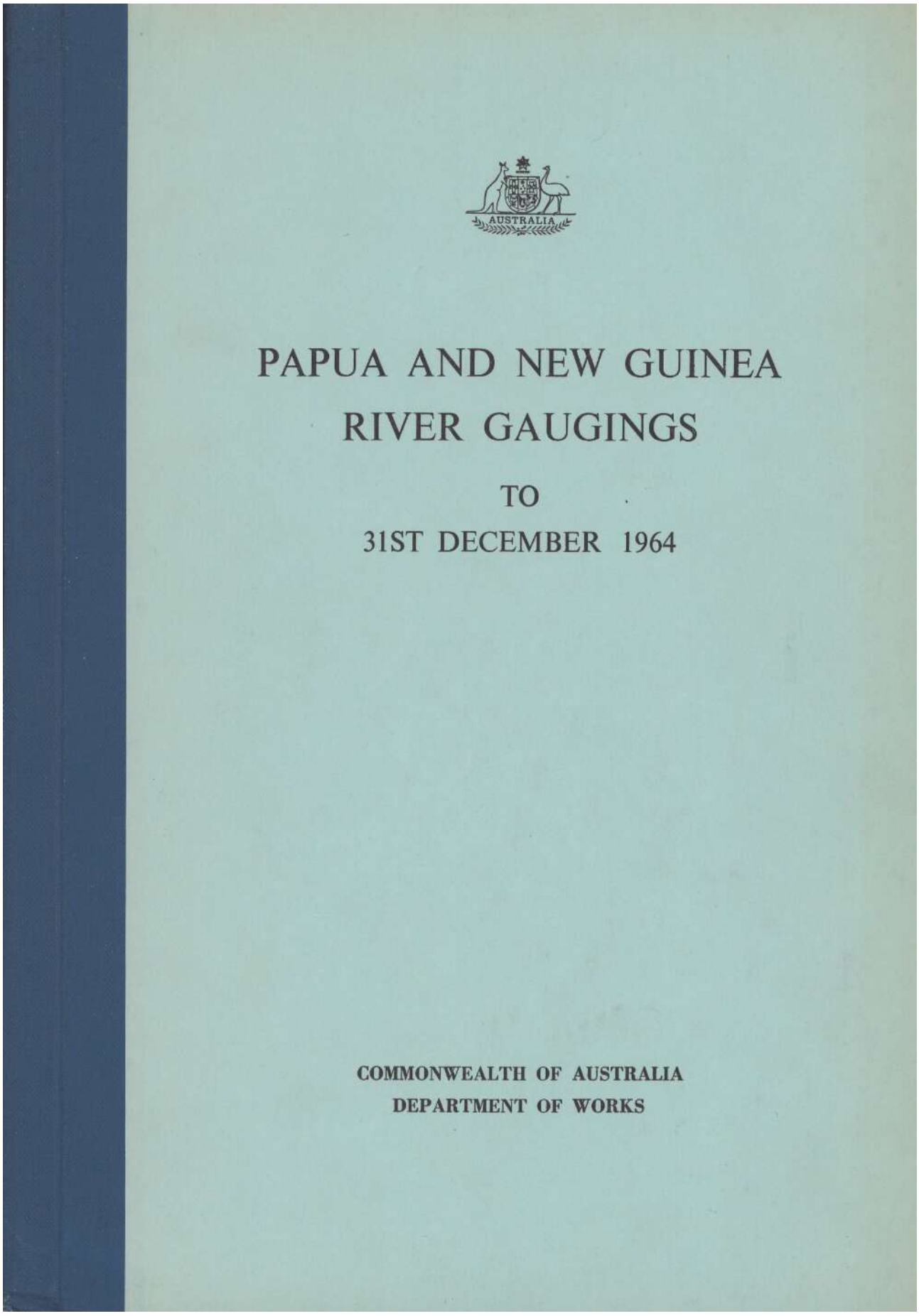
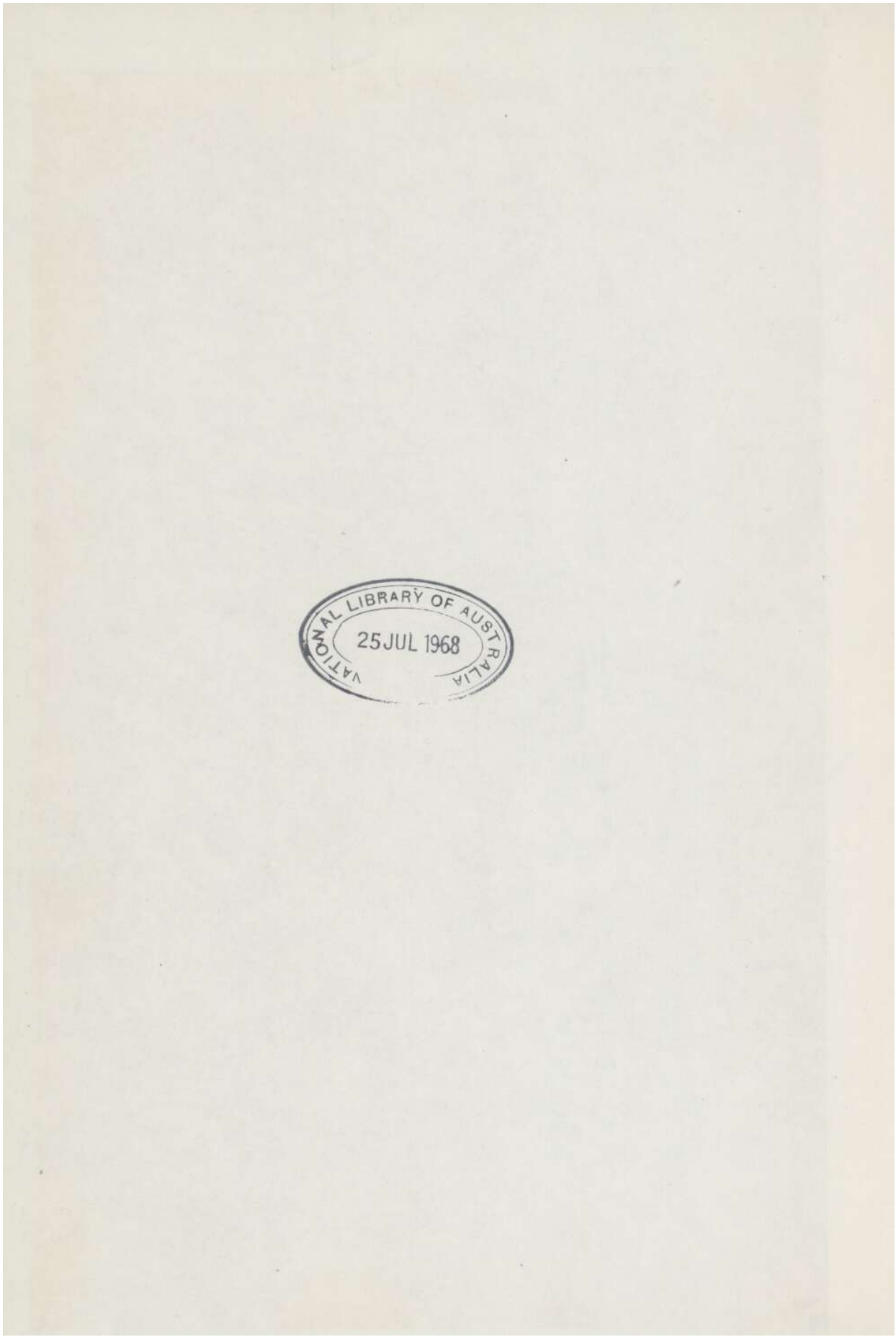
Papua and New Guinea river gaugings to 31st December, 1964 : stream gauging and compilation of information

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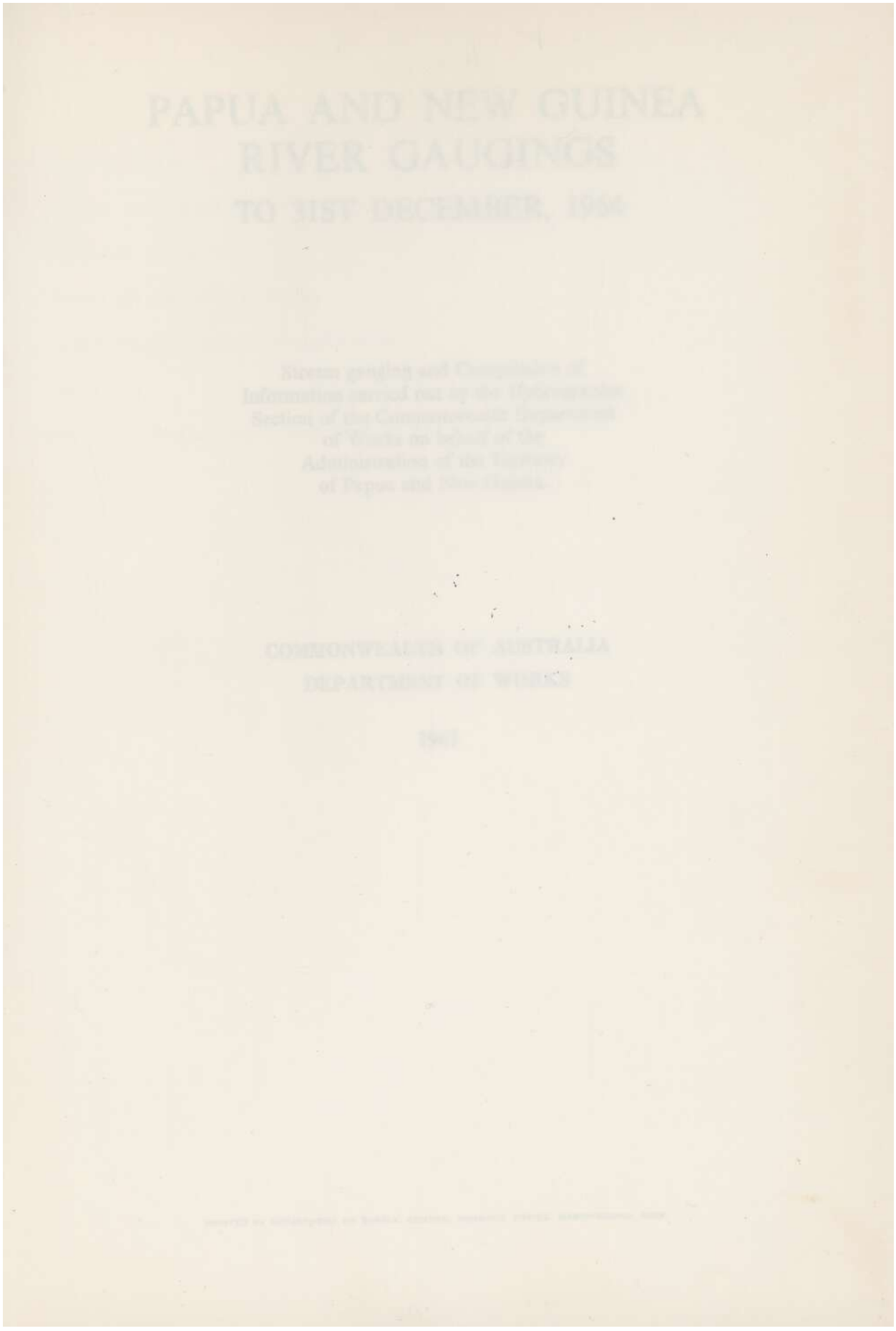


PAPUA AND NEW GUINEA RIVER GAUGINGS

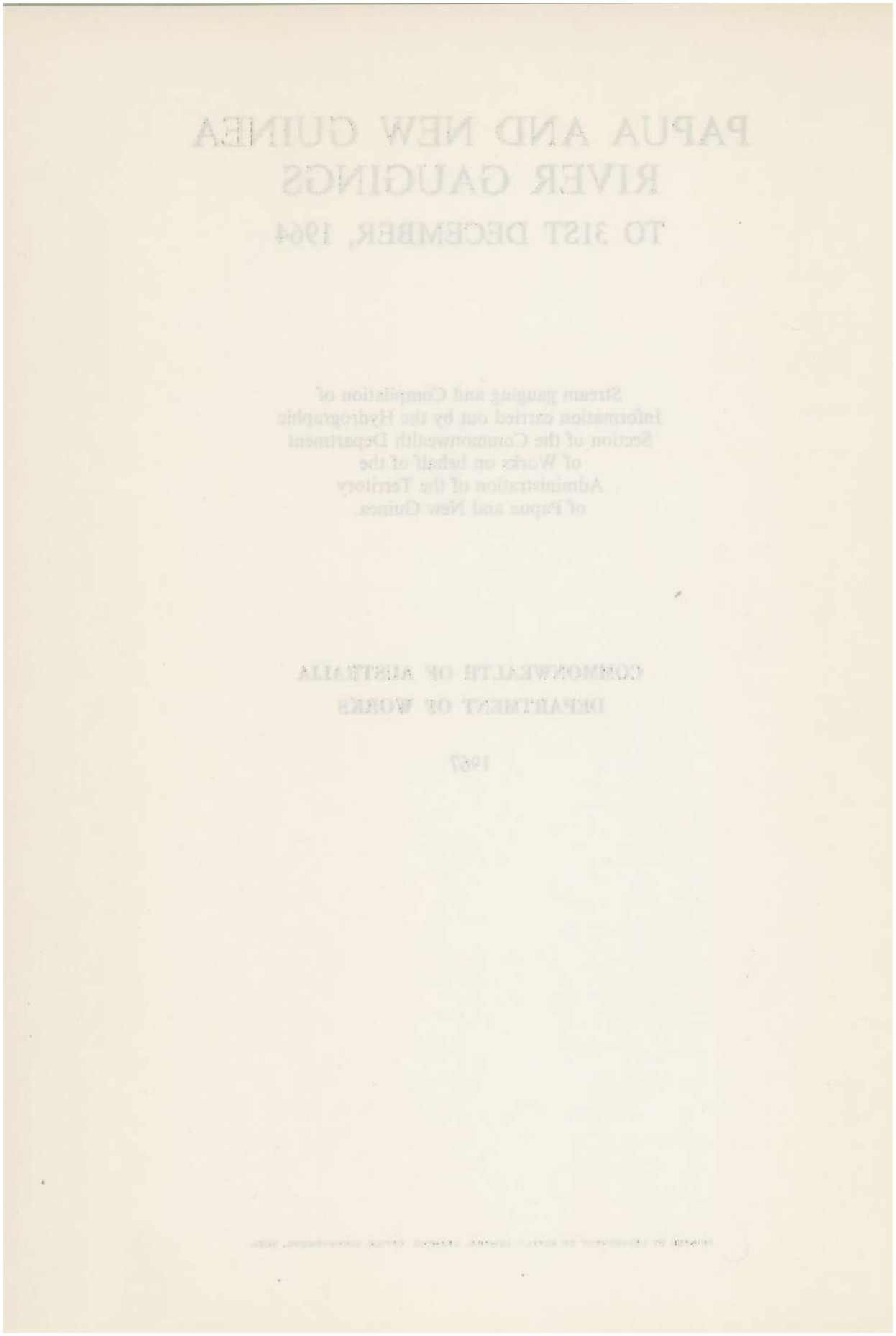
TO 31ST DECEMBER, 1964

Stream gauging and Compilation of Information carried out by the Hydrographic Section of the Commonwealth Department of Works on behalf of the Administration of the Territory of Papua and New Guinea.

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF WORKS

1967

PRINTED BY DEPARTMENT OF SUPPLY, CENTRAL DRAWING OFFICE, MARIBYRNONG, 3032.



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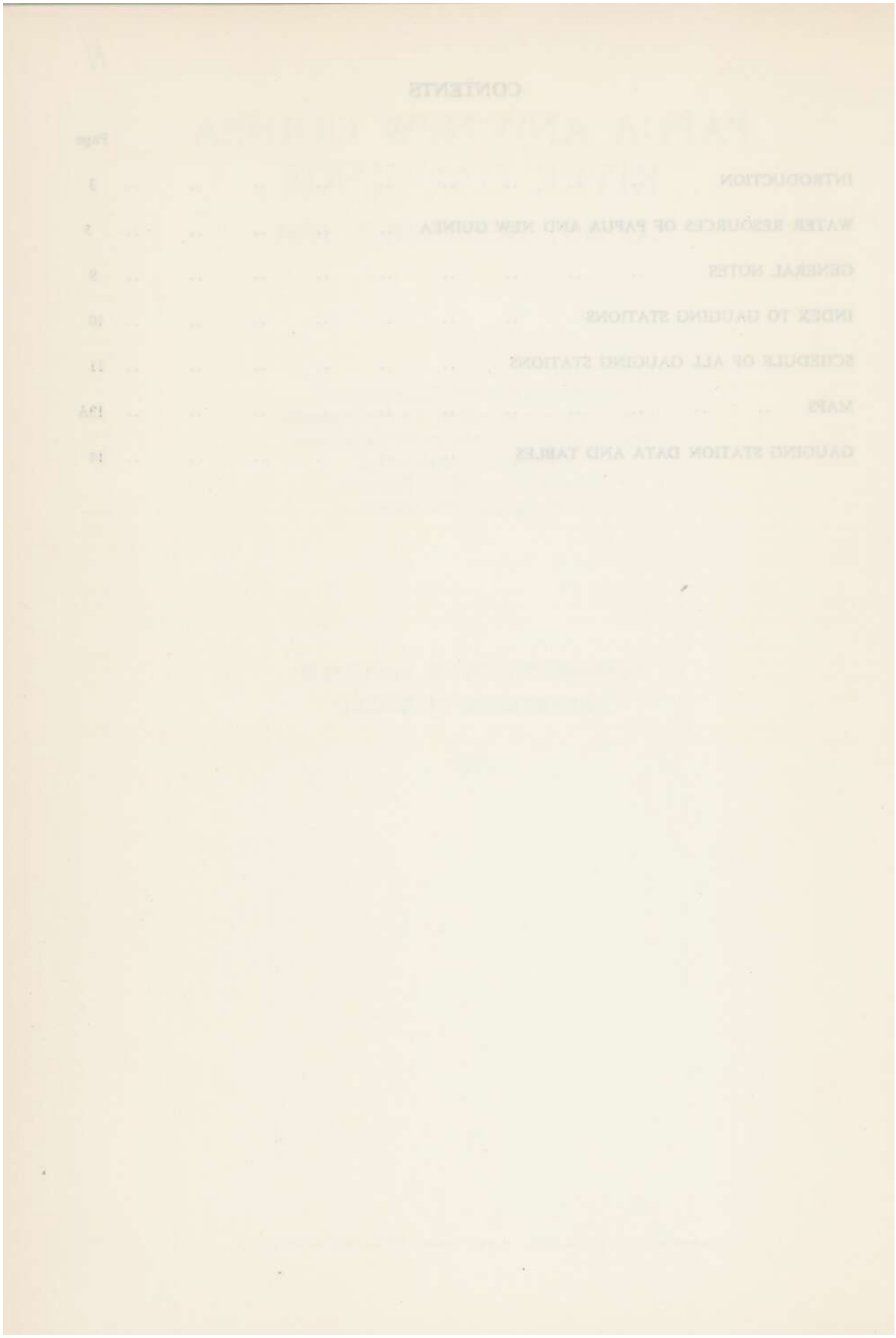


INTRODUCTION

Organised gauging of Papua-New Guinea rivers commenced in 1951 when the Commonwealth Department of Works installed a station at Sogeri on the Laloki River.

The New Guinea Resources Prospecting Company Ltd. (a joint investigating organization of the Commonwealth Government and the British Aluminium Company Ltd.) began investigations in Western Papua for a large hydro station to generate power for a proposed aluminium refinery and installed their first recorder in 1952. The Company installed a number of stream gauging stations including stations on the Vanapa, Angabunga, Tauri, Oreba and Purari Rivers. In 1956 the Commonwealth Department of Works took over the operation and maintenance of all the Company's gauging stations except the Purari which was finally taken over in 1961. Where available, all records obtained from these stations while under the control of the Prospecting Company have been included in this publication.

Since those early years a growing network of stream gauging stations has been established in the Territory with the installation of automatic water level recorders and daily read staff gauges to provide design data for specific investigation projects such as dams, bridges, hydro electric stations, town water supplies, irrigation, etc., and for the long range assessment of the water resources.

Some of the stations which were installed to investigate early proposals have served their useful purpose and have since been discontinued because they were not sufficiently accurate or important to retain in the permanent network. Where the records for these stations are sufficiently accurate and flows have been reduced, they have been included in this publication.

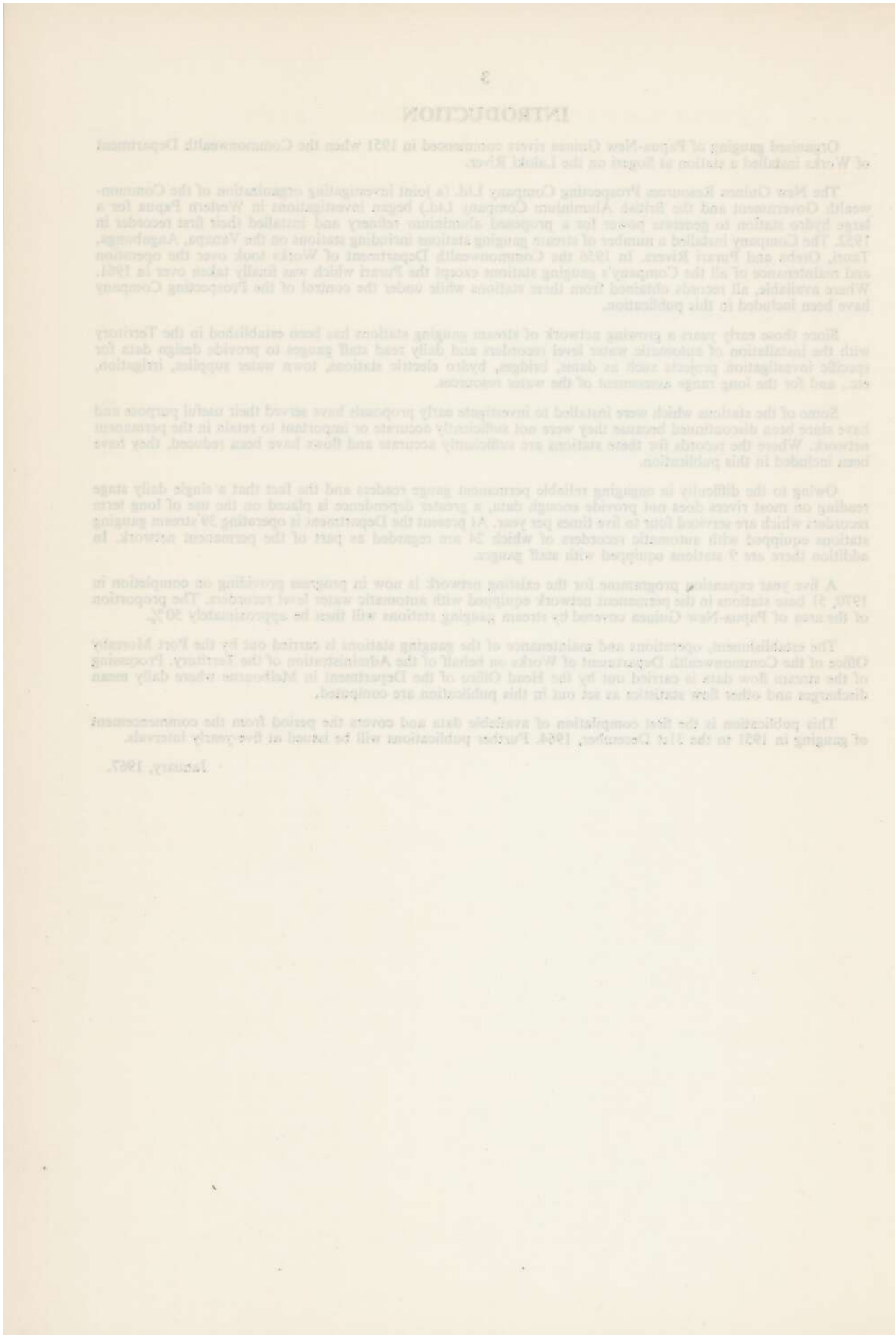
Owing to the difficulty in engaging reliable permanent gauge readers and the fact that a single daily stage reading on most rivers does not provide enough data, a greater dependence is placed on the use of long term recorders which are serviced four to five times per year. At present the Department is operating 39 stream gauging stations equipped with automatic recorders of which 24 are regarded as part of the permanent network. In addition there are 9 stations equipped with staff gauges.

A five year expansion programme for the existing network is now in progress providing on completion in 1970, 51 base stations in the permanent network equipped with automatic water level recorders. The proportion of the area of Papua-New Guinea covered by stream gauging stations will then be approximately 50%.

The establishment, operations and maintenance of the gauging stations is carried out by the Port Moresby Office of the Commonwealth Department of Works on behalf of the Administration of the Territory. Processing of the stream flow data is carried out by the Head Office of the Department in Melbourne where daily mean discharges and other flow statistics as set out in this publication are computed.

This publication is the first compilation of available data and covers the period from the commencement of gauging in 1951 to the 31st December, 1964. Further publications will be issued at five-yearly intervals.

January, 1967.



WATER RESOURCES OF PAPUA AND NEW GUINEA

The Territory of Papua and New Guinea lies wholly within the tropics. In addition to the mainland area—the eastern part of the large island of New Guinea—it comprises New Britain, New Ireland, Bougainville, and a multitude of lesser islands.

The land area of the mainland is approximately 158,000 sq. miles and the total area of the Territory 183,540 sq. miles. Practically the whole area, whether mainland or islands, is very mountainous and covered with dense jungle or tropical grassland. The mainland is one of contrasting topography consisting of very high mountain ranges, the principle peaks rising from 10,000 to 15,000 ft.; deep valleys with very high surface run-off; elevated valleys of the Upper Sepik, Upper Ramu and Wahgi, and the flat swampy plains of the Sepik and Fly Rivers and lower Ramu.

The available rainfall data indicates a wide variety of climates and rainfall regimes throughout the Territory. The whole area can generally be described as "wet tropical" with a marked seasonal variation in the rainfall with some areas receiving summer rainfall and others winter rainfall. Nowhere in New Guinea is there experienced two wet seasons and two dry seasons in the one year, although this occurs at some places elsewhere in the tropics. The general areal distribution of rain through the Territory is as follows. A belt of very high rainfall extends through the central mainland of New Guinea to the south of the southern crests of the main mountain ranges and from the Huon Peninsular to New Britain and Bougainville. Annual falls in excess of 270 inches have been recorded on the south coast of New Britain. The drier parts include the Markham Valley west of the Huon Gulf where annual falls of less than 50 inches are experienced; valleys between the central mountain ranges; dry pockets along the north coast and extending inland into the Sepik Valley south of Wewak; and the dry coastal belt either side of Port Moresby. This coastal strip is the driest part of New Guinea with an annual average rainfall of 40 inches at Port Moresby.

The rather variable topography contributes to the high degree of climatic variation over relatively short distances. An excellent example is the narrow island of New Britain where the area south of the mountain range receives a winter rainfall and to the north a summer rainfall. A similar variation may be found on the mainland where winter rainfall is experienced along the southern slopes and summits of the main mountain range and on the plains for about 100 miles south of the ranges. In contrast dry belts are formed to the north of the ranges from June to August when the south-east winds most strongly dominate the circulation. The dry coastal belt on either side of Port Moresby is mainly due to the failure of the low coastal land area to present an adequate barrier to the south-east winds. However, to the north west of Port Moresby at the head of the Gulf of Papua very high rainfall occurs owing to the presence of the mountain barrier. Differential heating of land and sea is of considerable importance throughout the whole area, convectional rainfall contributing a large share of the total precipitation.

A general characteristic of the rainfall throughout the Territory is its marked diurnal variation. The pattern is shown in the river flow where sharp rises and falls occur at similar times daily. Stations indicating this characteristic are generally located close to the headwaters where time of run-off from the catchment is fairly uniform. The lower reaches of the rivers exhibit smaller and more numerous peaks due to the larger catchment areas and lower stream velocities. This diurnal variation in flow limits the usefulness of daily read staff gauges.

The heavy rainfall gives rise to some very large rivers on the mainland notably the Sepik, the Fly, the Ramu, the Purari, the Kikori and the Markham. The Sepik, the Ramu and the Markham drain the northern side of the mainland and the Fly, Purari, Kikori and numerous small ones, the southern side. There are no comparable rivers in the big islands of New Britain and Bougainville, the drainage of their mountainous interiors being taken care of by the many small rapid rivers.

The many thousands of square miles of high, elevated land, abundant rainfall, and the many large rivers, give an indication of the potential available for the development of the Territory's water resources. For this development to take place, it is essential that accurate and continuous records of streamflow and rainfall data be available to enable the safe and economical design of works such as dams, bridges, hydro-electric projects, town water supplies, irrigation and drainage.

Because the value of hydrographic records is recognized, the Administration of Papua-New Guinea has authorised stream gauging and provided funds for this purpose. A network of stream gauging stations has been installed on their behalf by the Commonwealth Department of Works which also operates and maintains the stations.

Rainfall measurement networks are maintained in Papua-New Guinea by two departments of the Australian Commonwealth Government, the Bureau of Meteorology and the Commonwealth Department of Works. A total network of approximately 300 daily read stations and 42 pluviographs were maintained in April, 1966. Catalogues of daily read rain gauge and pluviograph stations showing location, and length of record for each station, have been published by the Bureau of Meteorology. A small evaporation measurement network is also maintained by the Bureau of Meteorology.

The streamflow measuring network comprises mainly automatic water level recorders of the float type or pressure type and some daily read staff gauges. The current meter method of measuring discharge is used exclusively. During high flows discharge measurements are taken from cableways, travellers, bridges or boats. Discharge measurements or gaugings at each station are carried out four or five times per year for the remoter stations and more frequently at closer and more accessible stations. Efforts are made to obtain a wide range of gaugings to enable a reliable stage-discharge relationship to be determined. However, with the remoter stations which are visited only four or five times a year, it is difficult to obtain gaugings of flood flows which form the higher portion of the rating table.

Many difficulties are encountered in establishing and maintaining the gauging stations, particularly in the remoter regions. Roads away from the centres of trade and agriculture are practically non-existent and access is only possible by foot, boat, plane, helicopter or a combination of these modes of travel. Materials for the construction of new stations have often to be flown to the vicinity and either air dropped, lifted in by helicopter or carried along mountain and jungle trails by manpower. Visits to the remoter mainland stations and to stations on the outlying islands often involve gauging parties in tours of over 500 miles.

The recent construction of a station on the upper Strickland River in the Western Highlands District provides an illustration of the above. The station is over 400 miles from Port Moresby and is situated 15 miles from Lake Kopiago Patrol Post which has a small airstrip and is located 120 miles from the nearest larger settlement at Mount Hagen. Access is only by charter aircraft and a two-day walk over fairly rugged terrain. Construction involved an engineer, a construction supervisor and approximately 90 local labourers engaged from Kopiago. About 6 tons of construction material and gear was required and had to be transported, first by coastal ship from Port Moresby to Madang, thence by D.C.3 charter aircraft to Tari, the nearest larger airstrip, by smaller aircraft from Tari to Kopiago, and by helicopter from Kopiago to the recorder site. The 250-lb. gauging boat was too large to fit into a small aircraft and was transported to Kopiago by a R.A.A.F. Caribou plane. From Kopiago the boat was carried on the backs of labourers in relays of 10 for three days and arrived safely at the recorder site.

The hydrographer is confronted with many problems and hazards in performing the duties of servicing the recorders and taking gaugings. These include risky river crossings, particularly at high stages; floating and submerged logs which can overturn boats resulting in loss of valuable equipment and on one occasion in loss of life; dysenteric fevers; reliability of return transport particularly in adverse weather conditions; hiring of native labour to act as carriers and to do the necessary periodical clearing of encroaching jungle and to assist with the crosswire for gauging.

The task of operating established stations is also complicated by the deleterious effect of tropical climatic conditions on recording instruments and the difficulty of maintaining stations in trouble-free condition on the steep, unstable and silt-laden streams. These conditions contribute to the gaps in many of the records.

Despite the many difficulties, efforts are being made to expand the network of stream gauging stations into remoter regions, soon after the area becomes accessible through the construction of airfields or other means of transport.

The Commonwealth Bureau of Meteorology has adopted as standard equipment for measuring precipitation, the 8-inch diameter Australian standard rain gauge and float type pluviographs. The latter consist of a standard rain gauge emptying into a container with a capacity of 60 inches of rain. A float inside the container operates a long term (3 to 6 months) recording instrument. The U.S. Class A pan has been adopted as the standard evaporimeter in the Territory.

Although the period of recorded observations of rainfall and streamflow is relatively short compared with older and more developed countries, the information obtained has enabled the design and construction of a number of small hydro-electric stations supplying small centres of population. The first major investigation concerned the development of the Laloki River to supply hydro-power to Port Moresby.

The full hydro-electric possibilities of the Laloki River and other streams adjacent to Port Moresby were investigated in detail and it was established that the Laloki River offered the best potential. The development could be conveniently built in stages and it has so far resulted in the construction of Rouna No. 1 power station, construction of Sirinumu Dam to provide a continuous regulated flow and construction of Rouna No. 2 power station and associated works. Two further power stations may be constructed in the future giving an ultimate development of the Laloki River to produce an effective output of 41.5 M.W.

The need to supply power to the larger centres of New Guinea has resulted in investigations for development of the Upper Ramu River. The proposed scheme is concerned with the development of the potential head available in the Ramu River gorge, extending from the edge of the eastern highlands down to the lower valley of the Ramu. In this section the Ramu River falls about 2500 feet in elevation over a distance of about 5 miles, giving a total power potential of about 250 M.W. at 55% annual load factor. The scheme is well placed to become a central generating source supplying electricity to Lae and Madang and large areas in the highlands.

The investigations for both of the above schemes have required the analysis of available records to obtain maximum, minimum and average flow figures to determine whether regulation of the flow is required to satisfy specific power requirements and the estimation of possible maximum flood flows for the safe location of the works and on which further detail design will be based.

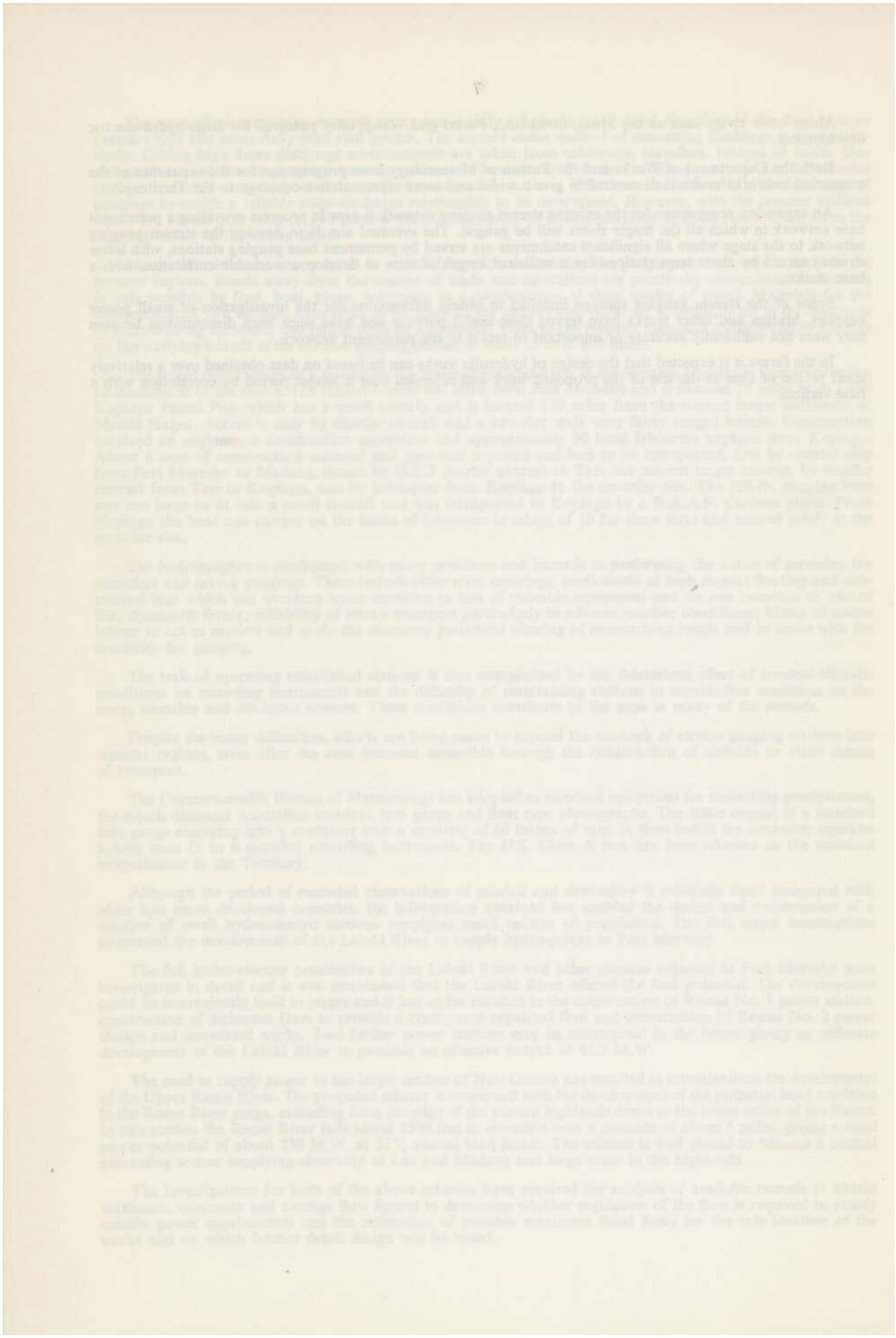
Many other rivers such as the Musa, Strickland, Purari and Wahgi offer potential for large hydro-electric development.

Both the Department of Works and the Bureau of Meteorology have programmes for the expansion of the measuring networks under their control to give a wider and more representative coverage to the Territory.

An expansion programme for the existing stream gauging network is now in progress providing a permanent base network in which all the major rivers will be gauged. The eventual aim is to develop the stream gauging network to the stage where all significant catchments are served by permanent base gauging stations, with lesser streams served by short term stations for a sufficient length of time to develop a workable correlation with a base station.

Some of the stream gauging stations installed to obtain information for the investigation of small power supplies, bridges and other works have served their useful purpose and have since been discontinued because they were not sufficiently accurate or important to retain in the permanent network.

In the future it is expected that the design of hydraulic works can be based on data obtained over a relatively short period of time at the site of the proposed work and extended over a longer period by correlation with a base station.



GENERAL NOTES

An index is given of all stations for which the records are included in this publication.

A schedule is given of all stations installed before the end of 1964, including stations which have been discontinued and stations for which records have not been published.

In the schedule the stations are grouped into the various drainage divisions shown on the map and are listed under each division with stations on the main river shown in order upstream to downstream followed by stations on tributaries in order of joining the main river upstream to downstream. Stations on small individual rivers are listed last.

The series of maps included show the various drainage divisions and the location of all the gauging stations listed in the schedule.

The records from each station are set out as follows:

Station Data showing the name, catchment area, location, map reference, geographical co-ordinates, station serial number, history and reliability of the records.

A Table of Maximum Flows for each month of the station years.
A Table of Minimum Flows for each month of the station years.
A Table of Monthly and Annual Discharges in calendar years.

For the daily read gauges the maximum recorded flows correspond to the daily reading except where the observer has given maximum flood heights or where they have been obtained from flood marks.

For continuous water level recorders the maximum flows given are those representing the instantaneous peak.

For daily read gauges the minimum flows recorded correspond to the daily reading. On streams where there is a large diurnal variation in the stream flow, the actual minimum may be less than that recorded.

INDEX TO GAUGING STATIONS

for which records are published

SCHEDULE OF ALL GAUGING STATIONS
installed before 31.12.64

Stream Name	Station No.	Location	Period of Observation From	Period of Observation To	Discharge Computed	Type of Gauge
NORTH-WESTERN DRAINAGE DIVISION						
Brandi R.	29	At Road Crossing	Mar. 1957	July 1959	No	Recorder
	29A	Below Gorge	Aug. 1963		No	Recorder
Bagiaure Creek	83	At Road Bridge	July 1961		No	Staff
NORTH-CENTRAL DRAINAGE DIVISION						
Ramu R.	69	At Kainantu	Oct. 1962		No	Recorder
Ramu R.	30	At Yonki Dome	May 1957		Yes	Recorder
Ramu R.	81	At Power House site	Oct. 1963		No	Recorder
Akwitana R.	70	At Aiyura	Oct. 1962		No	Recorder
Gum R.	18	Below Wopi	Oct. 1954	Dec. 1963	Yes	Recorder
HUON DRAINAGE DIVISION						
Markham R.	26	At Road Bridge	Jan. 1957	Sept. 1958	No	Recorder
	26A	At Road Bridge	Oct. 1958		No	Recorder
Umi R.	38	At Wata-Boong	Aug. 1957	Dec. 1957	No	Recorder
Wanton R.	44	At Karanka	Mar. 1958		Yes	Recorder
Leron R.	41	At Cliff	Dec. 1957	July 1959	No	Recorder
Snake R.	28	Above Road Bridge	Feb. 1957	Mar. 1964	Yes	Recorder
Erap R.	25	At Murrays	Nov. 1956	May 1958	No	Recorder
Gabensis Creek	3	Wau Labu Rd. Crossing	Oct. 1952	July 1955	Yes	Staff
Gabensis Creek	20	Below damsite	Aug. 1955	Nov. 1963	Yes	Recorder
Oomsis Creek	4	Below Barkers	Nov. 1952	Nov. 1956	Yes	Recorder
			Dec. 1956	Mar. 1959	No	Recorder
Sankwep R.	43	At Angau	Dec. 1957	Jan. 1960	No	Recorder
Buka Creek	76	Finschhaven	Mar. 1962		No	Staff
Getung Creek	77	Above Waterfalls	Oct. 1962		No	Staff
Butaweng Creek	75	Above Raceline	Jan. 1961		No	Staff
Pumone Creek	89	At Kabwum	Jan. 1963		No	Staff
NORTH-EAST COAST DRAINAGE DIVISION						
Waria R.	49	At Garaina	Aug. 1958	April 1961	Yes	Recorder
	49A	At Garaina	Oct. 1964		No	Recorder
Goru Creek	46	At Garaina	Mar. 1954	April 1957	Incomplete	Weir
Mambare R.	78	Below Chirima Junction	Dec. 1961		Yes	Recorder
Musa R.	45	At Nadi Gabuna	Aug. 1958		Yes	Recorder
EAST CAPE DRAINAGE DIVISION						
Esa-Ala Creek	74	At Esa-Ala	May 1961	Aug. 1964	No	Staff
SOUTH-EAST COAST DRAINAGE DIVISION						
Musgrave R.	68	At Jawarere	Oct. 1961		Yes	Recorder
Laloki R.	19	At Sirinumu	July 1955		Yes	Recorder
Laloki R.	1	At Sogeri	Sept. 1951		Yes	Recorder
Laloki R.	15	At Bomana	Oct. 1954	Aug. 1957	Yes	Staff
			Sept. 1957		No	Staff
Eilogo Creek	14	At Eilogo Plantation	Sept. 1954	Sept. 1957	Yes	Staff
			Oct. 1957	Oct. 1964	No	Staff
Eilogo Creek	42	At Aru Bada	Jan. 1958		Yes	Recorder

SCHEDULE OF ALL GAUGING STATIONS

installed before 31.12.64

Stream Name	Station No.	Location	Period of Observation From	Period of Observation To	Discharge Computed	Type of Gauge
Eworogo Creek	17	At Sogeri	Sept. 1954 Feb. 1958	Aug. 1957	Yes Yes	Staff Recorder
Goldie R.	67	At Uberi	Dec. 1961		Yes	Recorder
Ebealue Creek	108	Above Army Camp	Dec. 1963		Incomplete	Recorder
Brown R.	16 16A	At Karema At Karema At Karema	Sept. 1954 Aug. 1957 Dec. 1960	July 1957 April 1960	Yes No Yes	Staff Staff Recorder
Vanapa R.	11	At Peto Island	July 1953 Sept. 1954	Sept. 1954	Yes Yes	Staff Recorder
Angabunga R.	5	At Yaifa Bridge	July 1952		Yes	Recorder
Warama Creek	73	At Tapini	Oct. 1960	Aug. 1962	Yes	Staff
Oreba R.	8	At Golden Valley	Oct. 1953		Yes	Recorder
Tauri R.	2 2A	At Hell's Gate At Hell's Gate	Sept. 1952 Nov. 1964	Oct. 1961	Yes No	Recorder Recorder
GULF DRAINAGE DIVISION						
Purari R.	64	At Wabo Dam Site	Aug. 1958 April 1960 Oct. 1961	Mar. 1960 Oct. 1961	No No Yes	Staff Recorder Recorder
Gerumba Creek	6	At Mt. Hagen	July 1952	June 1956	Incomplete	Weir
Kum R.	40 40A	At Mt. Hagen At Mt. Hagen (at Race Line)	Feb. 1958 Mar. 1961	Nov. 1958	No No	Recorder Recorder
Minj R.	34 34A	At Road Bridge At Road Bridge	July 1957 Jan. 1961	Jan. 1960	No No	Staff Recorder
Warasena Creek	39 39A	At Minj Above Pukamil Village	Oct. 1957 Mar. 1961	Feb. 1958	No No	Recorder Recorder
Adnagel R.	33	Nondugel	July 1957	Dec. 1957	No	Staff
Kudmangel R.	32	At Kerowagi	July 1957	April 1958	No	Staff
Chimbu R.	72	At Kundiawa Road Bridge	July 1961	May 1964	No	Recorder
Taaba Creek	31 31A	At Kundiawa Dinga Village	Nov. 1957 June 1961	May 1958	No No	Recorder Recorder
Asaro R.	35 35A	At Road Bridge At Road Bridge	July 1957 Nov. 1959	July 1958	No Yes	Staff Recorder
Omahaga R.	58	At Hovei Village	Mar. 1959	Nov. 1963	Yes	Recorder
Goroka Creek	27	Above Race Line	Feb. 1957	Aug. 1964	Yes	Recorder
Bena R.	57	At Road Bridge	Mar. 1959		Yes	Recorder
Karmanuntina R.	37	At Henganofi	Aug. 1957	Dec. 1964	No	Staff
Dunantina R.	36	At Road Bridge	Nov. 1957		Yes	Recorder
Tuma R.	98	At Pepeka	May 1963		Yes	Recorder
Aibe Creek	48	At Mendi	Feb. 1956 Mar. 1963	Sept. 1957	No Yes	Staff Recorder

SCHEDULE OF ALL GAUGING STATIONS
installed before 31.12.64

Stream Name	Station No.	Location	Period of Observation		Discharge Computed	Type of Gauge
			From	To		
ISLAND DRAINAGE DIVISION						
Lorengau R.	56	Above Falls	Mar. 1964		Incomplete	Recorder
Pondo R. (North Arm)	62	At Road Crossing	Nov. 1959	Dec. 1959	Incomplete	Recorder
			Sept. 1960	Nov. 1960	Incomplete	Recorder
			Sept. 1962	April 1963	Yes	Recorder
			May 1963		No	Recorder
Pondo R.	63	Below Junction	Nov. 1959	Dec. 1959	Incomplete	Recorder
			Sept. 1960	Nov. 1960	Incomplete	Recorder
			Oct. 1962	July 1963	Incomplete	Recorder
			Aug. 1963	May 1964	No	Recorder
Towanokoko R.	61	At Towanokoko	Nov. 1959	Dec. 1959	Incomplete	Recorder
			Sept. 1960	Nov. 1960	Incomplete	Recorder
			Aug. 1961	Sept. 1962	Incomplete	Recorder
			Sept. 1962	Oct. 1963	Yes	Recorder
			Nov. 1963		No	Recorder
Batonga R. (East Arm)	23	Batonga East	July 1956		No	Recorder
Batonga R.	24	Below Junction	Sept. 1956		No	Recorder
Warangoi R.	21	At Kamarere	Oct. 1955	Jan. 1960	No	Recorder
Warangoi R.	111	Above Dam Site	June 1964		Incomplete	Recorder
Kavavas R.	22	At Hollands	Feb. 1956	Oct. 1959	No	Recorder
Bovo R.	100	Kupei Rd. Crossing	Dec. 1964		No	Recorder


141°
144°
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153°
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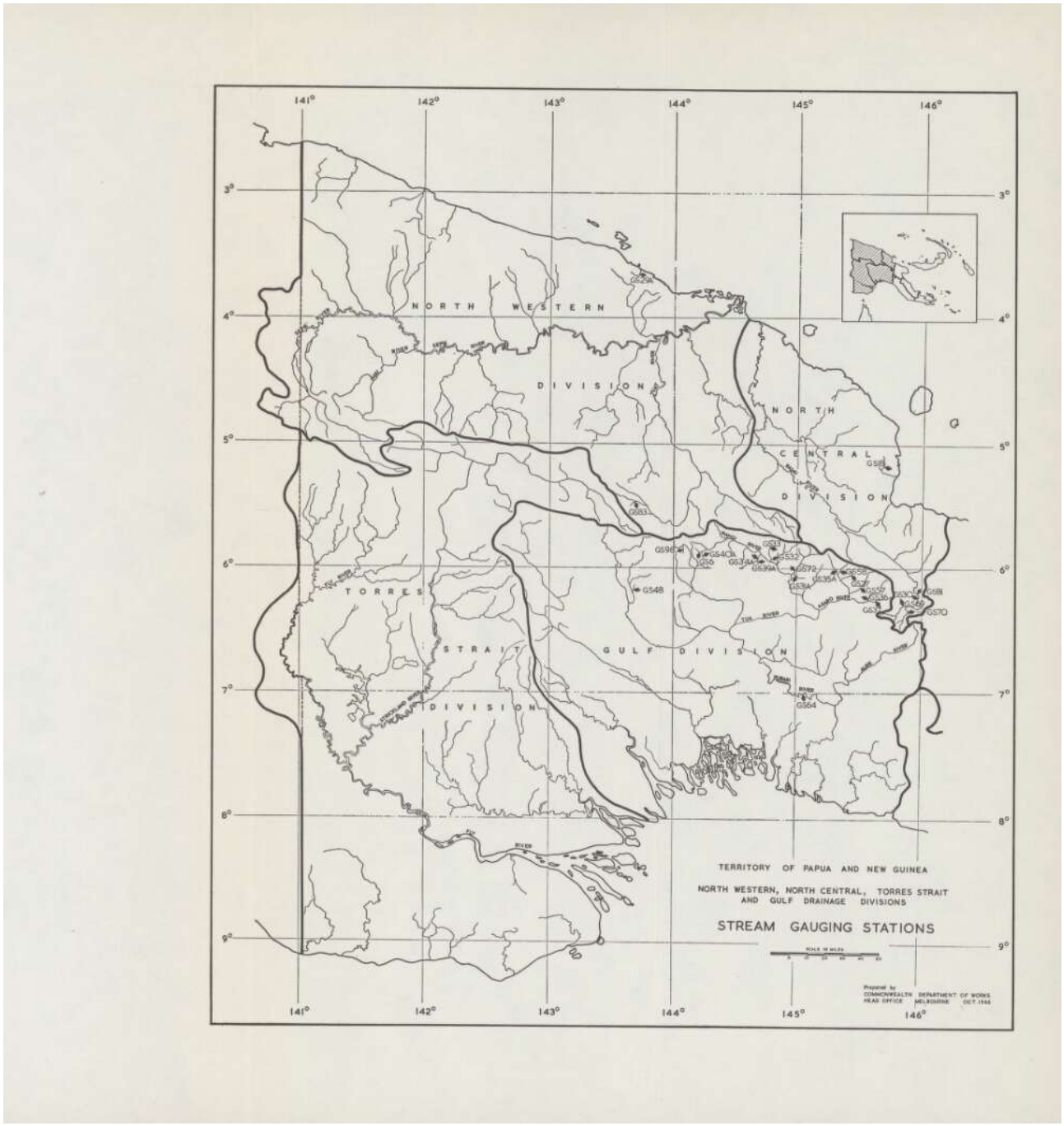
6°
9°
12°
SCALE OF MILES
MANUS IS.
NORTH WESTERN DIVISION
NORTH CENTRAL DIVISION
IRIAN
WEST
MADANG
MT HAGEN
GOROKA
HUON DIVISION
GULF DIVISION
TORRES STRAIT DIVISION
NORTH COAST DIVISION
SOUTH EAST COAST DIVISION
PORT MORESBY
EAST CAPE DIVISION
ISLAND
NEW BRITAIN
DIVISION
BOUGAINVILLE IS.
TERRITORY OF PAPUA AND NEW GUINEA.
DRAINAGE DIVISIONS.
QUEENSLAND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NORTH WESTERN
DIVISION
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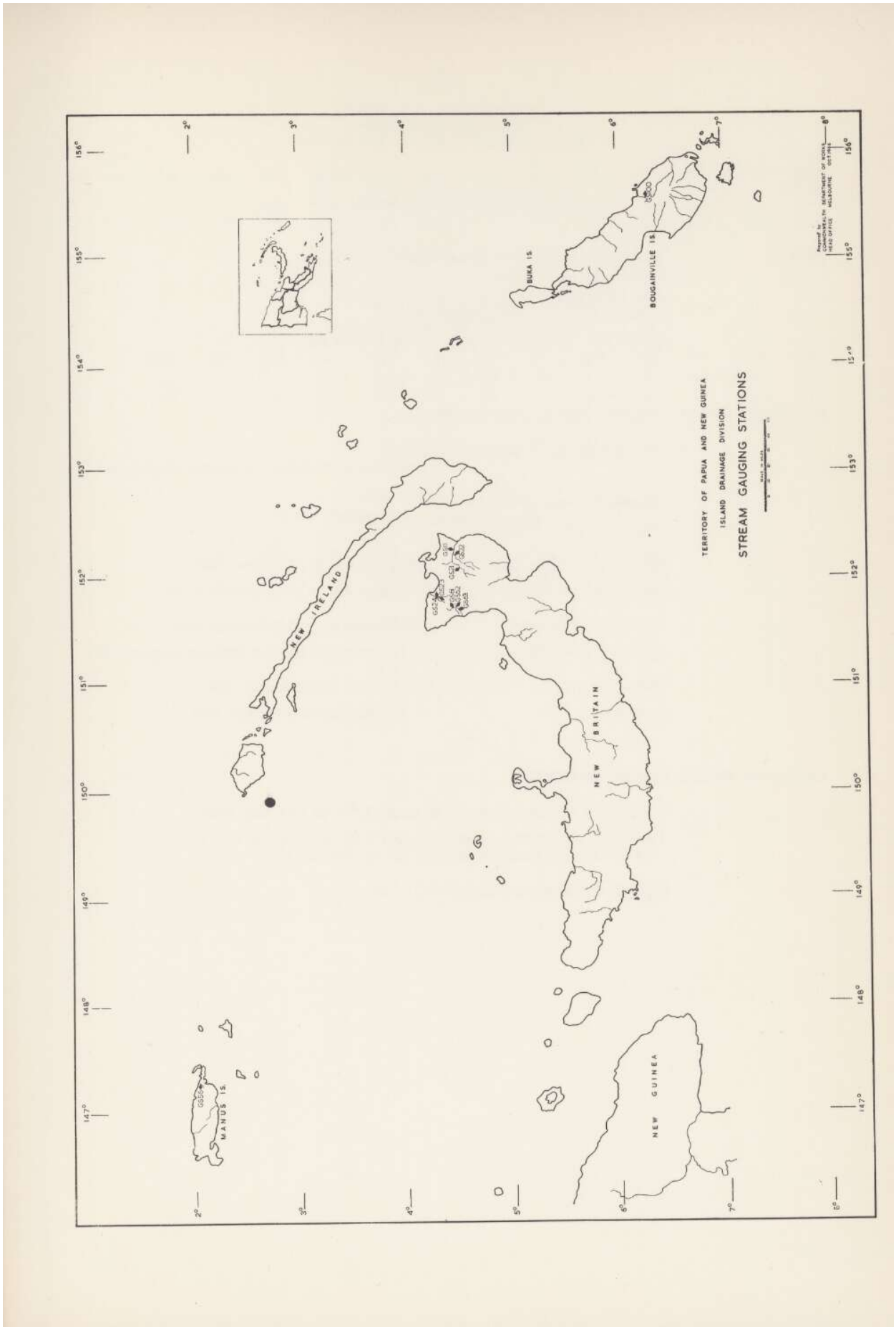
CENTRAL
DIVISION
TORRES
STRAIT
GULF DIVISION
DIVISION
G548
G564
TERRITORY OF PAPUA AND NEW GUINEA
NORTH WESTERN, NORTH CENTRAL, TORRES STRAIT AND GULF DRAINAGE DIVISIONS
STREAM GAUGING STATIONS


TERRITORY OF PAPUA AND NEW GUINEA
ISLAND DRAINAGE DIVISION
STREAM GAUGING STATIONS
BUKA IS.
BOUGAINVILLE IS.
NEW IRELAND
NEW BRITAIN
NEW GUINEA
MANUS IS.

AIBE CREEK AT MENDI
(Gulf Drainage Division)

Catchment Area = 6.5 square miles

SITE

Aibe Creek, at Intake to Mendi Hydro-Electric station race line

Map reference:
Latitude S. 6° 10′. Longitude E. 143° 41′

Station 48: L.S.2A35 recorder—March 1963 to date

GAUGING DATA MARCH 1963 to DECEMBER 1964

Mean Discharges in thousands Acre Feet—
Not listed since number of years of records insufficient

Maximum Annual Discharge Minimum Annual Discharge	Not sufficient records
Maximum Monthly Discharge	6,560 acre feet in September 1963
Minimum Monthly Discharge	880 acre feet in November 1963
Maximum Daily Flow	279 cusecs on 10th September 1963
Minimum Daily Flow	11 cusecs in December 1963 and January 1964
Peak Flow	1,165 cusecs on 1st August 1963
Lowest Flow	10 cusecs on 18th January 1964

CURRENT METER MEASUREMENTS

Highest: 79.61 cusecs at gauge 48, height 3.89′ on 13th May 1964

Lowest: 24.41 cusecs at gauge 48, height 3.06′ on 25th February 1964
(8.17 cusecs at gauge 48, height 2.45′ on 25th July 1965)

Number of Measurements (1963–64) = 23

AIBE CREEK AT MENDI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1963	—	—	—	0.36	1.06	0.18	0.57	1.17	0.58	0.60	0.04	0.14	—	—
1964	0.30	0.20	0.44	1.07	0.66	0.20	0.48	1.13	0.96	1.05	0.35	0.73	1.13	7.20

AIBE CREEK AT MENDI

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Aug.	Nov.	Dec.	Year
1963	..	—	—	—	20	17	15	18	24	27	17	12	11	—
1964	..	10	14	21	19	30	19	17	40	34	32	32	14	10

AIBE CREEK AT MENDI

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1963	..	—	—	—	2.08	2.25	2.11	4.13	3.43	6.56	2.52	0.88	1.18	—
1964	..	1.81	1.54	3.61	3.35	4.08	2.03	3.94	4.90	4.62	4.19	4.58	2.06	40.72

ANGABUNGA RIVER AT YAIFA BRIDGE
(South-East Coast Drainage Division)

Catchment Area = 613 square miles

SITE

Angabunga River, at Yaifa Bridge approximately halfway between Kubuna and Tapani

Map reference: YULE 1 inch = 4 Miles. Grid (Q) B5535
Latitude S. 8° 34′ 30″. Longitude E. 146° 51′ 40″

Station 5: Staff gauge—June 1952 to November 1952
L.S.A35 recorder—November 1952 to date

GAUGING DATA JUNE 1952 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	8	8	6	8	8	9	9	9	10	10	11	11	
Mean ..	308.1	357.1	424.9	338.2	230.8	123.5	96.6	111.7	154.0	196.9	207.0	289.5	2838.3

Maximum Annual Discharge	3,234,110 Acre ft. in 1962
Minimum Annual Discharge	2,466,360 Acre ft. in 1963
Maximum Monthly Discharge	600,990 Acre ft. in February 1958
Minimum Monthly Discharge	50,700 Acre ft. in September 1955
Maximum Daily Flow	16,140 cusecs on 23rd December 1954
Minimum Daily Flow	750 cusecs on 30th August 1956
Peak Flow	19,780 cusecs on 30th January 1964
Lowest Flow	750 cusecs on 30th August 1956

CURRENT METER MEASUREMENTS

Highest: 6071 cusecs at gauge 5, height 7.14′ on 5th November 1962
(6936 cusecs at gauge 5, height 7.55′ on 30th March 1966)

Lowest: 1079 cusecs at gauge 5, height 1.1′ on 5th August 1952
(1060 cusecs at gauge 5, height 3.14′ on 29th September 1965)

Number of Measurements (1952–64) = 57

ANGABUNGA RIVER AT YAIFA BRIDGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1952	—	—	—	—	—	—	2.86	4.86	6.39	4.56	11.12	8.21	—	—
1953	9.71	9.21	10.89	9.71	7.95	2.85	3.02	3.67	7.24	5.77	8.21	10.89	10.89	11.17
1954	10.14	8.34	8.01	9.57	8.21	4.08	2.24	2.24	5.11	5.90	4.20	19.20	19.20	15.58
1955	9.14	12.16	—	—	—	2.36	2.52	2.28	—	2.36	5.11	9.14	—	—
1956	6.92	10.50	—	8.07	4.86	1.83	1.20	—	—	—	—	—	—	—
1957	—	—	—	—	—	—	—	5.16	9.30	9.04	19.30	15.83	—	—
1958	15.44	18.90	15.50	11.30	7.10	5.28	—	—	7.54	9.71	9.23	18.00	—	—
1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	—	—	—	—	—	—	—	—	—	—	8.37	13.52	—	—
1961	—	—	14.21	9.71	11.14	8.73	6.08	9.16	10.70	14.30	14.87	10.21	—	—
1962	13.16	17.90	15.50	14.60	10.88	5.52	3.34	6.95	10.93	10.13	10.18	9.11	17.90	11.57
1963	11.96	11.48	19.03	16.13	7.72	6.64	4.11	6.86	8.54	10.34	7.81	12.43	19.03	11.92
1964	19.78	12.32	—	13.75	8.22	7.21	6.12	3.53	12.88	8.92	16.82	6.44	—	—

ANGABUNGA RIVER AT YAIFA BRIDGE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1952	..	—	—	—	—	—	—	1200	1060	1435	1680	1910	2280	—
1953	..	2200	3870	3020	3920	2090	1330	1200	1200	1200	1610	1365	2690	1200
1954	..	2940	3760	3330	2940	2645	1435	1130	960	900	1295	1435	2690	900
1955	..	4310	4080	—	—	—	1080	960	870	840	840	960	1830	—
1956	..	1760	3380	—	2560	1260	930	870	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	1066	1421	1820	2496	3590	—
1958	..	3856	4894	6464	4738	2448	1547	—	—	1646	2520	2830	2460	—
1959	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	..	—	—	—	—	—	—	—	—	—	—	2307	2307	—
1961	..	—	—	3440	2664	3665	2120	1664	1610	1655	2230	2021	2817	—
1962	..	2532	4016	5020	4048	3044	1720	1475	1430	1999	2544	1988	2010	1430
1963	..	2296	2098	2252	3254	1556	1376	1430	1385	1475	1900	1367	1770	1367
1964	..	3352	3620	—	4144	2895	1760	1421	1349	1250	2131	2568	2010	—

ANGABUNGA RIVER AT YAIFA BRIDGE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1952	..	—	—	—	—	—	—	104.4	104.3	151.8	150.4	257.4	242.5	—
1953	..	278.7	305.6	340.8	369.6	233.0	98.4	91.8	87.5	125.9	137.6	178.3	263.3	2510.4
1954	..	357.1	312.8	314.7	267.3	218.2	122.5	82.3	67.7	79.1	167.7	141.5	421.6	2552.4
1955	..	378.8	402.7	—	—	—	86.2	68.3	55.9	50.7	56.9	100.0	202.3	—
1956	..	195.3	313.6	—	283.3	132.9	64.8	60.9	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	95.7	136.6	185.0	272.0	491.4	—
1958	..	385.8	601.0	564.1	394.3	231.6	133.2	—	—	172.1	291.9	246.1	341.9	—
1959	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	..	—	—	—	—	—	—	—	—	—	—	181.7	317.9	—
1961	..	—	—	421.9	258.3	320.4	202.2	143.1	200.2	134.9	323.1	275.9	256.0	—
1962	..	264.1	382.4	510.2	382.5	304.9	148.3	105.1	128.9	312.0	259.6	217.0	219.3	3234.1
1963	..	215.7	198.0	397.7	371.8	152.0	113.8	100.6	150.1	207.7	199.9	123.6	235.4	2466.4
1964	..	389.3	340.7	—	378.6	253.4	142.3	113.1	114.9	168.9	197.0	283.4	193.0	—

ASARO RIVER AT ROAD BRIDGE
(Gulf Drainage Division)

Catchment Area = 86 square miles

SITE

Asaro River, approximately 200 yards downstream of bridge on Chimbu-Goroka Road

Map reference:
Latitude S. 6° 00′. Longitude E. 145° 19′

Station 35A: L.S.A35 recorder—November 1959 to date

GAUGING DATA DECEMBER 1959 to DECEMBER 1964

Mean Discharge in thousands of Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	5	5	5	5	5	5	5	5	5	5	5	6	
Mean ..	35.68	37.16	40.68	44.05	34.29	26.40	21.00	23.37	24.27	28.55	27.26	29.25	371.96

Maximum Annual Discharge	446,200 acre feet in 1960
Minimum Annual Discharge	294,190 acre feet in 1963
Maximum Monthly Discharge	77,090 acre feet in April 1960
Minimum Monthly Discharge	16,370 acre feet in January 1962
Maximum Daily Flow	2,230 cusecs on 9th April 1960
Minimum Daily Flow	200 cusecs on 7th September 1964
Peak Flow	7,690 cusecs on 29th April 1960
Lowest Flow	189 cusecs on 11th September 1964

CURRENT METER MEASUREMENTS

Highest: 1,737 cusecs at gauge 35A, height 7.85′ on 5th February 1961

Lowest: 199.5 cusecs at gauge 35A, height 5.80′ on 10th September 1964
(179.4 cusecs at gauge 35A, height 5.75′ on 29th November 1965)

Number of Measurements (1958–64) = 97

ASARO RIVER AT ROAD BRIDGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1959	—	—	—	—	—	—	—	—	—	—	—	1.12	—	—
1960	5.86	5.77	4.99	7.69	4.12	7.14	1.66	5.50	1.26	1.17	5.77	6.14	7.69	11.85
1961	4.62	3.20	2.81	4.31	5.11	3.62	0.92	3.10	4.31	6.98	1.74	2.84	6.98	11.51
1962	0.90	4.92	4.16	2.73	5.99	2.44	4.03	4.33	1.95	4.78	2.91	6.56	6.56	11.30
1963	4.43	2.15	4.78	1.91	1.06	0.67	1.02	1.13	3.73	5.45	2.50	4.94	5.45	10.70
1964	3.88	4.01	7.12	5.11	4.46	0.79	0.59	1.89	3.94	1.82	4.46	1.18	7.12	11.58

ASARO RIVER AT ROAD BRIDGE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1959	..	—	—	—	—	—	—	—	—	—	—	—	207	—
1960	..	232	623	540	655	440	382	329	297	239	249	303	346	232
1961	..	436	398	394	402	382	354	275	282	273	300	280	258	258
1962	..	232	232	347	326	475	322	294	326	350	319	300	315	232
1963	..	309	258	248	315	255	242	232	248	294	390	319	322	232
1964	..	362	530	530	565	460	320	245	211	189	226	257	301	189

ASARO RIVER AT ROAD BRIDGE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1959	..	—	—	—	—	—	—	—	—	—	—	—	18.70	—
1960	..	44.59	54.09	50.40	77.09	34.88	39.45	23.75	23.68	17.09	18.65	24.82	37.71	446.20
1961	..	41.88	36.74	36.22	34.10	32.14	27.36	20.13	25.09	22.68	34.06	21.41	20.43	352.24
1962	..	16.37	28.35	30.33	34.55	45.24	25.25	25.84	30.26	27.41	34.59	24.71	40.87	363.77
1963	..	26.61	16.72	24.75	25.88	18.41	16.62	17.32	20.90	34.60	37.28	25.21	29.89	294.10
1964	..	48.95	49.90	61.71	48.63	40.78	23.34	17.94	16.92	19.57	18.17	40.16	27.90	413.97

BENA RIVER AT ROAD BRIDGE
(Gulf Drainage Division)

Catchment Area = 125 square miles

SITE

Bena River, at Bridge on the road from Kainantu to Goroka

Map reference: BENA BENA. 1 inch = 1 mile. Grid 019023
Latitude S. 6° 08′ 40″. Longitude E. 145° 30′ 05″

Station 57: Bristol recorder—March 1959 to February 1960
L.S.A35 recorder—January 1960 to date

GAUGING DATA

APRIL 1959 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	5	5	5	5	6	6	6	6	6	6	6	6	
Mean ..	42.49	43.99	41.37	40.20	32.50	23.73	17.56	17.33	20.02	25.78	24.69	29.97	359.63

Maximum Annual Discharge 438,880 acre feet in 1960
Minimum Annual Discharge 224,130 acre feet in 1963

Maximum Monthly Discharge 75,350 acre feet in February 1964
Minimum Monthly Discharge 10,130 acre feet in September 1960

Maximum Daily Flow 5,280 cusecs on 26th January 1964
Minimum Daily Flow 128 cusecs on 27th and 28th October 1964

Peak Flow: 15,160 cusecs on 6th February 1964
Lowest Flow: 122 cusecs on 27th October 1964

CURRENT METER MEASUREMENTS

Highest: 2,049 cusecs at gauge 57, height 6.61′ on 5th January 1961
Lowest: 127.7 cusecs at gauge 57, height 2.68′ on 15th September 1964

Number of Measurements (1958–64) = 133

BENA RIVER AT ROAD BRIDGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1959	—	—	—	—	2.51	4.92	1.81	1.67	1.76	2.11	0.49	3.11	—	—
1960	6.76	5.46	7.63	9.55	3.08	3.65	0.37	0.49	0.55	1.02	4.43	2.78	9.55	15.35
1961	5.40	5.70	12.40	1.82	4.72	4.41	4.41	3.19	9.22	7.04	3.91	1.90	12.40	17.00
1962	1.07	6.77	4.50	3.82	2.90	1.07	1.54	3.96	2.04	4.54	5.15	7.60	7.60	12.70
1963	1.10	0.55	1.05	4.45	0.82	0.67	0.66	0.87	4.41	6.65	0.80	1.54	6.65	11.75
1964	13.78	15.16	3.46	2.73	1.61	0.44	1.98	0.72	0.99	0.90	4.95	1.92	15.16	19.30

BENA RIVER AT ROAD BRIDGE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1959	..	—	—	—	—	309	282	309	205	200	191	191	205	—
1960	..	336	850	466	497	319	366	215	178	142	154	215	380	142
1961	..	450	382	319	325	400	400	250	253	283	376	294	289	250
1962	..	201	190	370	415	493	292	227	263	257	280	257	282	190
1963	..	223	169	174	234	191	165	169	170	202	317	244	246	165
1964	..	255	515	459	460	302	178	158	134	126	122	154	226	122

BENA RIVER AT ROAD BRIDGE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1959	..	—	—	—	—	36.88	23.48	23.36	15.74	14.56	17.03	13.91	26.34	—
1960	..	58.38	73.63	51.78	70.00	27.09	32.03	16.84	12.80	10.13	14.64	32.96	38.60	438.88
1961	..	50.52	35.00	46.82	27.50	41.48	35.93	21.41	31.41	27.36	55.81	27.34	23.40	423.98
1962	..	15.76	24.43	34.57	42.04	47.90	24.25	18.30	21.25	22.39	27.92	28.17	44.30	351.28
1963	..	21.68	11.52	15.44	17.91	15.39	12.41	13.13	12.51	35.12	29.14	18.20	21.68	224.13
1964	..	66.10	75.35	58.26	43.54	26.23	14.26	12.34	10.28	10.54	10.15	27.56	25.47	380.08

BROWN RIVER AT KAREMA
(South-East Coast Drainage Division)

Catchment Area = 828 square miles

SITE

Brown River, at the Brown River Road Bridge

Map reference: VANAPA. 1 inch = 1 mile. Grid 954661
Latitude S. 9° 12′ 00″. Longitude E. 147° 13′ 37″

Station 16: Staff gauge—September 1954 to November 1960
Station 16A: L.S.2A35 recorder—December 1960 to date

GAUGING DATA SEPTEMBER 1954 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	6	7	7	6	6	6	7	6	6	7	7	7	4
Mean ..	226.0	275.6	293.4	251.9	214.9	113.3	89.6	85.5	101.1	108.3	115.5	163.4	2038.5

Maximum Annual Discharge 2,450,900 acre feet in 1962
Minimum Annual Discharge 1,559,770 acre feet in 1956

Maximum Monthly Discharge 378,240 acre feet in February 1955
Minimum Monthly Discharge 46,840 acre feet in October 1955

Maximum Daily Flow 13,380 cusecs on 30th January 1962
Minimum Daily Flow 495 cusecs in October and November 1955

Peak Flow 17,634 cusecs on 30th January 1962
Lowest Flow 495 cusecs in October and November 1955

CURRENT METER MEASUREMENTS

Highest: 13,720 cusecs at gauge 16A, height 17.47′ on 6th April 1959

Lowest: 873 cusecs at gauge 16A, height 4.64′ on 24th September 1959
(641 cusecs at gauge 16A, height 7.03′ on 13th October 1965)

Number of Measurements (1959–64) = 67

BROWN RIVER AT KAREMA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1954	—	—	—	—	—	—	—	—	—	4.56	2.33	8.20	—	—
1955	9.20	12.00	8.51	—	—	—	1.31	1.12	1.47	1.20	3.30	4.47	—	—
1956	3.66	6.30	6.00	9.40	6.40	2.50	1.20	1.20	2.50	2.07	3.39	9.50	9.50	11.50
1957	7.20	10.00	10.20	12.20	11.00	1.91	1.75	—	—	—	—	—	—	—
1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1961	—	16.24	6.98	6.86	13.16	5.67	10.27	3.20	3.19	6.61	5.93	11.82	—	—
1962	17.63	12.12	10.63	16.24	10.35	3.29	2.17	3.19	5.94	4.34	5.02	8.47	17.63	20.13
1963	11.14	10.63	12.48	10.23	5.21	6.91	3.58	4.09	6.25	3.67	4.44	8.24	12.48	18.52
1964	12.13	11.59	13.53	7.32	4.24	3.84	4.93	2.57	4.52	5.03	7.95	3.94	13.53	18.16

BROWN RIVER AT KAREMA

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1954	..	—	—	—	—	—	—	—	—	—	740	845	1680	—
1955	..	3480	3390	2360	—	—	—	910	680	680	495	495	1280	—
1956	..	1160	2580	2500	2070	1280	870	740	740	820	870	820	870	740
1957	..	1280	2740	3660	4200	1750	1080	740	—	—	—	—	—	—
1958	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1961	..	—	2652	2540	2012	2652	2082	1634	1490	1310	1592	1442	1796	—
1962	..	2264	3225	3594	3279	2860	1844	1544	1418	1700	1706	1640	1826	1418
1963	..	2428	2596	2540	2564	1768	1502	1322	1268	1328	1406	1208	1430	1208
1964	..	2258	3600	3329	2794	1964	1410	1120	1060	930	1214	1490	960	930

BROWN RIVER AT KAREMA

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1954	..	—	—	—	—	—	—	—	—	—	107.0	81.2	259.4	—
1955	..	291.8	378.2	241.9	—	—	—	65.9	50.8	50.7	46.8	78.0	115.8	—
1956	..	133.0	212.0	213.0	245.9	154.1	69.5	51.2	49.0	79.0	80.2	121.3	151.5	1559.8
1957	..	122.8	251.5	355.1	295.2	227.8	86.2	66.7	—	—	—	—	—	—
1958	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1960	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1961	..	—	291.1	247.3	178.5	312.0	170.5	150.0	110.6	90.9	161.6	138.0	197.8	—
1962	..	268.7	262.0	346.3	328.4	295.2	136.7	104.6	108.1	158.1	140.6	136.1	166.2	2450.9
1963	..	238.0	218.9	343.5	234.3	141.0	112.0	97.1	116.8	140.1	115.1	98.1	152.4	2007.2
1964	..	301.6	315.2	306.4	229.3	159.0	105.0	91.4	78.0	87.6	106.7	155.8	100.9	2036.8

DUNANTINA RIVER AT ROAD BRIDGE
(Gulf Drainage Division)

Catchment Area = 108 square miles

SITE

Dunantina River, at bridge on the road from Kainantu to Goroka

Map reference: BENA BENA. 1 inch = 1 mile. Grid 093928
Latitude S.6° 13′ 55″. Longitude E. 145° 33′ 55″

Station 36: Bristol recorder—November 1957 to date

GAUGING DATA DECEMBER 1958 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	5	6	5	5	5	6	5	6	6	6	5	5	
Mean ..	30.85	39.72	39.20	35.20	27.10	19.39	13.95	13.08	14.17	20.17	19.59	24.36	296.78

Maximum Annual Discharge	332,210 acre feet in 1964
Minimum Annual Discharge	170,700 acre feet in 1963
Maximum Monthly Discharge	66,640 acre feet in February 1964
Minimum Monthly Discharge	9,070 acre feet in August 1964
Maximum Daily Flow	4,800 cusecs on 26th January 1964
Minimum Daily Flow	118 cusecs on 12th and 13th June 1963
Peak Flow	29,000 cusecs on 24th January 1964
Lowest Flow	118 cusecs in June 1963

CURRENT METER MEASUREMENTS

Highest: 1,361 cusecs at gauge 36, height 3.90′ on 4th March 1961
Lowest: 126 cusecs at gauge 36, height 1.05′ on 26th October 1964
Number of Measurements (1957–64) = 102

DUNANTINA RIVER AT ROAD BRIDGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1959	1.96	7.23	9.77	6.02	1.92	3.60	0.82	0.22	1.07	2.00	1.48	4.40	9.77	12.05
1960	5.55	5.22	—	—	2.04	1.72	0.33	0.28	0.33	2.00	2.59	4.25	—	—
1961	—	4.76	14.22	3.03	—	8.33	—	4.76	6.08	6.15	—	—	—	—
1962	0.57	4.40	2.58	3.69	15.48	1.07	0.72	1.07	2.94	2.85	13.03	2.90	15.48	13.90
1963	0.79	0.43	1.07	1.27	0.64	0.47	0.85	0.35	3.92	3.41	1.72	2.63	3.92	6.70
1964	29.00	15.27	5.14	14.43	2.13	0.22	0.22	0.17	0.43	0.98	3.42	0.79	29.00	19.50

DUNANTINA RIVER AT ROAD BRIDGE

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1959	..	274	365	388	560	309	249	209	161	150	150	184	263	150
1960	..	325	815	—	—	309	309	209	150	139	150	184	278	—
1961	..	—	446	400	278	—	309	—	222	249	372	—	—	—
1962	..	150	129	263	196	272	272	182	134	134	182	182	157	129
1963	..	132	135	150	173	150	118	139	128	139	193	212	198	118
1964	..	255	465	465	333	255	193	151	130	125	125	151	162	125

DUNANTINA RIVER AT ROAD BRIDGE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1959	..	25.99	34.14	56.48	58.34	32.49	19.63	16.04	11.42	10.34	12.81	13.58	24.58	315.84
1960	..	41.58	64.25	—	—	23.66	21.99	15.72	11.64	9.28	13.31	17.66	36.46	—
1961	..	—	42.72	49.06	26.16	—	28.67	—	23.77	19.01	43.66	—	—	—
1962	..	11.86	20.72	24.68	36.78	45.06	21.99	15.11	13.50	17.23	19.60	30.64	25.95	283.12
1963	..	11.69	9.86	13.41	14.07	11.97	9.76	12.25	9.10	19.67	22.05	17.63	19.24	170.70
1964	..	63.14	66.64	52.38	40.64	22.32	14.29	10.65	9.07	9.49	9.59	18.43	15.57	332.21

EILOGO CREEK AT ARU BADA
(South-East Coast Drainage Division)

Catchment Area = 12 square miles

SITE

Eilogo Creek above junction with Laloki River at Road Bridge on Sirinumu Dam access road

Map reference: UBERI. 1 inch = 1 mile. Grid 183387
Latitude S. 9° 27′ 00″. Longitude E. 147° 26′ 00″

Station 42: L.S.2A35 recorder—January 1958 to date

GAUGING DATA FEBRUARY 1958 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	6	7	7	7	7	7	7	7	7	7	7	7	
Mean	3.16	3.16	3.95	4.48	4.85	2.83	2.61	2.23	3.96	3.37	3.10	2.60	40.30

Maximum Annual Discharge	52,240 acre feet in 1962
Minimum Annual Discharge	25,260 acre feet in 1959
Maximum Monthly Discharge	7,940 acre feet in September 1962
Minimum Monthly Discharge	1,140 acre feet in July 1958
Maximum Daily Flow	305 cusecs on 6th September 1958
Minimum Daily Flow	14 cusecs in October 1959
Peak Flow	1,090 cusecs on 17th May 1960
Lowest Flow	14 cusecs on 21st October 1959

CURRENT METER MEASUREMENTS

Highest: 219 cusecs at gauge 42, height 2.40′ on 13th May 1964
Lowest: 16.0 cusecs at gauge 42, height 1.15′ on 10th September 1959

Number of Measurements (1957–64) = 93

EILOGO CREEK AT ARU BADA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1958	—	0.09	0.36	0.61	0.12	0.02	0.02	0.07	0.31	0.19	0.29	0.23	—	—
1959	0.10	0.04	0.04	0.26	0.15	0.04	0.07	0.20	0.07	0.31	0.26	0.25	0.31	—
1960	0.25	0.17	0.33	0.17	1.09	0.51	0.07	0.13	0.26	0.11	0.07	0.36	1.09	5.00
1961	0.70	0.66	0.37	0.28	0.40	0.25	0.26	0.29	0.36	0.32	0.37	0.20	0.70	4.31
1962	0.57	0.65	0.47	0.78	0.30	0.15	0.07	0.25	0.77	0.45	0.46	0.10	0.78	4.48
1963	0.20	0.40	0.51	0.29	0.23	0.22	0.35	0.09	0.42	0.17	0.21	0.35	0.51	3.82
1964	0.25	0.07	0.27	0.70	0.61	0.16	0.39	0.63	0.67	0.57	0.63	0.19	0.70	4.24

EILOGO CREEK AT ARU BADA

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1958	..	—	22	21	23	21	18	18	16	34	36	27	25	—
1959	..	25	21	21	20	32	26	24	19	16	14	17	17	14
1960	..	20	27	23	42	39	55	28	23	23	17	22	19	17
1961	..	27	33	35	34	58	42	49	42	29	39	34	40	27
1962	..	53	45	52	71	53	37	26	24	33	39	30	24	24
1963	..	24	44	53	46	34	31	31	34	33	33	26	26	24
1964	..	29	36	35	33	52	37	37	38	35	44	64	43	29

EILOGO CREEK AT ARU BADA

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1958	..	—	1.55	3.12	3.00	1.93	1.18	1.14	1.21	6.74	3.35	2.17	2.13	—
1959	..	2.03	1.37	2.27	6.01	2.72	1.78	1.78	1.27	1.16	1.29	1.68	1.90	25.26
1960	..	1.70	2.47	3.10	4.23	7.44	5.35	2.57	1.73	1.88	1.69	1.72	1.84	35.72
1961	..	2.91	6.11	3.87	3.14	6.99	3.48	4.46	3.50	2.45	5.62	4.00	3.48	50.01
1962	..	7.15	4.08	5.66	6.72	4.85	2.85	2.04	2.06	7.94	4.01	2.80	2.08	52.24
1963	..	2.76	4.08	6.22	4.22	3.29	2.40	2.94	2.51	3.67	2.37	2.02	3.02	39.50
1964	..	2.40	2.45	3.42	4.05	6.72	2.79	3.34	3.32	3.89	5.28	7.32	3.72	48.70

EILOGO CREEK AT EILOGO PLANTATION
(South-East Coast Drainage Division)

Catchment Area = 6.1 square miles

SITE

Eilogo Creek, at road crossing in Eilogo plantation

Map reference: UBERI. 1 inch = 1 mile. Grid 228387
Latitude S. 9° 27′ 05″. Longitude E. 147° 28′ 30″.

Station 14: Staff gauge—September 1954 to date

GAUGING DATA SEPTEMBER 1954 to SEPTEMBER 1957

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	3	3	3	3	3	3	3	3	3	3	3	
Mean ..	1.76	4.55	1.74	5.01	4.28	1.42	1.01	0.90	0.68	2.13	2.02	2.92	28.42

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge 7,710 acre feet in May 1956
Minimum Monthly Discharge 350 acre feet in July 1957

Maximum Daily Flow 639 cusecs on 10th February 1955
Minimum Daily Flow 4 cusecs in October 1955

CURRENT METER MEASUREMENTS

Highest: 119.4 cusecs at gauge 14, height 3.03′ on 23rd February 1961
Lowest: 5.72 cusecs at gauge 14, height 1.03′ on 20th August 1959

Number of Measurements (1954–64) = 89

NOTE: 1. From October 1957 to date, gauge height records only are available
2. From February 1958 continuous records are available from gauge 42 representing approximately the same catchment

EILOGO CREEK AT EILOGO PLANTATION

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1954	—	—	—	—	—	—	—	—	—	0.36	0.58	0.32	—	—
1955	0.16	0.64	0.04	0.38	0.12	0.06	0.06	0.02	0.18	0.02	0.06	0.03	0.64	—
1956	0.04	0.06	0.09	0.59	0.88	0.27	0.09	0.22	0.10	0.40	0.10	0.06	0.88	—
1957	0.06	0.49	0.07	0.14	0.09	0.01	0.01	0.06	0.10	—	—	—	—	—

EILOGO CREEK AT EILOGO PLANTATION

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1954	..	—	—	—	—	—	—	—	—	—	11	11	21	—
1955	..	21	42	14	21	21	14	21	11	8	4	8	11	4
1956	..	8	8	11	31	30	11	6	6	6	17	21	11	6
1957	..	8	11	17	30	14	5	5	5	6	—	—	—	—

EILOGO CREEK AT EILOGO PLANTATION

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1954		—	—	—	—	—	—	—	—	—	2.26	1.76	6.49	—
1955	..	3.38	7.35	1.52	6.59	3.24	1.63	1.90	0.86	1.01	0.40	1.37	0.91	30.16
1956	..	0.59	0.89	1.47	5.10	7.71	2.20	0.78	1.15	0.62	3.72	2.94	1.37	28.54
1957	..	1.32	5.41	2.23	3.34	1.89	0.42	0.35	0.70	0.41	—	—	—	—

EWOROGO CREEK AT SOGERI
(South-East Coast Drainage Division)

Catchment Area = 30 square miles

SITE

Eworogo Creek, above the junction with the Laloki River at Sogeri Patrol Post.

Map reference: UBERI. 1 inch = 1 mile. Grid 157417
Latitude S. 9° 25′ 25″. Longitude E. 147° 24′ 40″

Station 17: Staff gauge—September 1954 to August 1957
L.S.2A35 recorder—February 1958 to date

GAUGING DATA SEPTEMBER 1954 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	9	10	10	10	10	10	10	10	9	10	10	10	
Mean ..	9.97	12.40	11.50	14.62	14.26	6.41	5.30	4.60	9.20	9.69	9.94	9.90	117.79

Maximum Annual Discharge	140,760 acre feet in 1956
Minimum Annual Discharge	61,460 acre feet in 1959
Maximum Monthly Discharge	25,990 acre feet in February 1957
Minimum Monthly Discharge	1,800 acre feet in August 1959
Maximum Daily Flow	1,319 cusecs on 12th February 1955
Minimum Daily Flow	21 cusecs on 18th to 21st October 1959
Peak Flow	3,650 cusecs on 17th May 1960
Lowest Flow	21 cusecs on 18th to 21st October 1959

CURRENT METER MEASUREMENTS

Highest: 1,199 cusecs at gauge 17, height 6.29′ on 16th December 1954

Lowest: 25.5 cusecs at gauge 17, height 1.87′ on 2nd October 1959
(19.9 cusecs at gauge 17, height 1.78′ on 15th September 1965)

Number of Measurements (1954–64) = 139

EWOROGO CREEK AT SOGERI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1954	—	—	—	—	—	—	—	—	—	0.82	0.58	1.42	—	—
1955	1.16	1.53	0.51	1.10	1.70	0.80	0.64	0.08	0.43	0.58	1.10	0.77	1.53	7.2
1956	1.30	0.17	0.74	2.70	1.45	0.47	0.47	0.43	0.54	0.90	1.87	1.77	2.70	—
1957	0.56	2.92	0.95	2.27	0.59	0.08	0.05	0.34	—	—	—	—	—	—
1958	—	0.63	0.86	0.76	1.51	0.24	0.04	0.19	2.38	0.89	1.03	0.49	—	—
1959	0.27	0.35	0.58	1.04	0.36	0.29	0.26	0.04	0.30	0.95	0.71	0.73	1.04	6.57
1960	0.98	0.60	0.87	0.43	3.65	0.87	0.13	0.13	0.66	0.48	0.82	0.70	3.65	10.72
1961	0.81	1.67	0.69	0.84	1.34	0.68	0.71	0.74	1.04	1.16	1.08	0.81	1.67	7.91
1962	1.47	3.10	0.95	1.09	0.51	0.41	0.23	0.63	1.48	0.89	1.17	0.62	3.10	10.08
1963	0.96	1.04	1.20	1.15	1.02	0.60	0.65	0.50	1.20	0.29	0.43	0.98	1.20	6.76
1964	0.61	0.42	0.96	0.97	1.24	0.81	0.92	0.78	1.27	0.77	1.12	0.45	1.27	6.92

EWOROGO CREEK AT SOGERI

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1954	..	—	—	—	—	—	—	—	—	—	81	72	90	—
1955	..	81	169	105	134	121	63	55	47	47	59	68	88	47
1956	..	59	78	88	109	158	98	78	68	68	87	98	65	59
1957	..	65	76	30	56	76	47	30	30	—	—	—	—	—
1958	..	—	62	50	52	84	42	29	23	49	72	42	42	—
1959	..	44	35	30	122	50	44	40	24	24	21	35	39	21
1960	..	35	57	46	96	85	103	50	40	37	31	66	40	31
1961	..	67	77	65	70	114	73	83	62	46	63	56	71	46
1962	..	134	80	103	122	95	51	35	27	52	84	60	81	27
1963	..	74	144	127	73	72	59	58	58	52	38	28	35	28
1964	..	49	71	80	79	118	71	66	57	59	79	121	60	49

EWOROGO CREEK AT SOGERI

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1954	..	—	—	—	—	—	—	—	—	—	15.85	8.47	24.38	—
1955	..	11.45	25.87	9.03	23.84	19.73	5.35	7.61	3.51	5.10	5.03	14.88	9.13	140.53
1956	..	6.66	6.55	11.65	18.45	18.97	8.61	7.06	6.02	8.10	17.97	16.95	13.77	140.76
1957	..	8.08	25.99	16.50	25.66	9.84	3.25	2.12	4.30	—	—	—	—	—
1958	..	—	5.42	8.04	5.13	9.91	4.66	1.97	1.82	17.18	9.92	4.97	5.72	—
1959	..	4.60	3.29	6.51	14.93	5.98	3.83	3.44	1.80	2.36	3.35	4.87	6.50	61.46
1960	..	5.58	8.29	9.45	11.89	23.47	10.84	5.02	3.02	4.11	5.22	7.57	6.38	100.84
1961	..	8.41	16.60	8.58	9.08	19.02	7.19	8.79	7.17	6.28	14.34	12.80	9.92	128.18
1962	..	25.74	9.80	15.93	15.20	10.20	5.24	3.03	4.42	18.13	9.20	7.93	8.71	133.53
1963	..	12.81	16.37	18.48	10.76	9.19	6.28	6.29	7.27	11.44	3.77	2.80	7.64	113.10
1964	..	6.40	5.80	10.82	11.22	16.24	8.82	7.66	6.62	10.07	12.26	18.14	6.85	120.90

GABENSIS CREEK BELOW DAMSITE
(Huon Drainage Division)

Catchment Area = 31 square miles

SITE

Gabensis Creek, approximately 1 mile downstream of Gabensis Bridge and upstream of Garagos Bridge on Lae–Wau Road

Map reference: NADZAB 1 inch = 1 mile. Grid 393415
Latitude S. 6° 42′ 25″. Longitude E. 146° 44′ 15″

Station 20: L.S.A35 recorder—August 1955 to December 1963
Discontinued

GAUGING DATA AUGUST 1955 to NOVEMBER 1963

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	7	6	8	8	7	7	8	7	7	7	7	7	
Mean ..	3.54	3.87	5.93	4.72	3.52	4.16	5.26	6.59	5.95	4.27	2.61	3.85	54.27

Maximum Annual Discharge	68,330 acre feet in 1959
Minimum Annual Discharge	28,150 acre feet in 1956
Maximum Monthly Discharge	13,720 acre feet in August 1958
Minimum Monthly Discharge	1,020 acre feet in November 1956
Maximum Daily Flow	640 cusecs on 24th August 1958
Minimum Daily Flow	6 cusecs 22nd–24th November 1956
Peak Flow	682 cusecs on 24th August 1958
Lowest Flow	6 cusecs on 23rd November 1956

CURRENT METER MEASUREMENTS

Highest: 451 cusecs at gauge 20, height 7.51′ on 14th August 1958
Lowest: 6.5 cusecs at gauge 20, height 1.13′ on 27th November 1956

Number of Measurements (1955–63) = 73

GABENSIS CREEK BELOW DAMSITE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1955	—	—	—	—	—	—	—	—	0.11	0.08	0.23	0.29	—	—
1956	0.14	0.09	0.15	0.11	0.04	0.06	0.05	0.19	0.07	0.06	0.05	0.12	0.19	4.04
1957	0.15	0.24	0.34	0.41	0.14	0.27	0.50	—	—	—	—	—	—	—
1958	—	—	0.33	0.45	—	—	0.34	0.68	0.17	0.14	0.06	0.28	—	—
1959	0.18	0.41	0.43	0.10	0.19	0.25	0.16	0.37	0.44	0.15	0.07	0.11	0.43	7.27
1960	0.22	—	0.39	0.24	0.10	0.28	0.27	0.36	—	—	—	0.38	—	—
1961	0.22	0.11	0.12	0.07	0.41	0.26	0.21	0.31	0.59	0.27	0.10	0.05	0.59	9.21
1962	0.13	0.12	0.20	0.10	0.09	0.08	0.13	0.19	0.26	0.11	0.12	0.22	0.26	4.78
1963	0.27	0.03	0.13	0.05	0.04	0.13	0.40	0.24	0.39	0.31	0.10	—	—	—

GABENSIS CREEK BELOW DAMSITE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1955	..	—	—	—	—	—	—	—	—	52	39	36	43	—
1956	..	40	13	11	37	25	24	21	21	25	21	6	8	6
1957	..	34	35	58	70	57	65	87	—	—	—	—	—	—
1958	..	—	—	67	58	—	—	44	63	64	51	27	27	—
1959	..	46	84	63	59	48	60	61	61	80	45	42	23	23
1960	..	40	—	59	59	53	56	50	63	—	—	—	41	—
1961	..	13	41	42	36	31	42	59	50	49	60	22	8	8
1962	..	19	34	24	23	28	22	35	53	47	39	35	38	19
1963	..	9	24	27	26	19	16	33	42	42	46	31	—	—

GABENSIS CREEK BELOW DAMSITE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1955	..	—	—	—	—	—	—	—	—	4.38	2.99	4.22	5.42	—
1956	..	3.54	1.98	3.56	3.10	1.88	1.83	1.63	3.84	1.99	1.64	1.02	2.14	28.15
1957	..	3.74	4.15	8.69	8.33	5.28	6.46	10.03	—	—	—	—	—	—
1958	..	—	—	11.65	8.92	—	—	5.10	13.72	5.91	4.14	2.17	4.52	—
1959	..	4.49	9.24	8.22	4.21	4.26	6.91	5.29	5.67	10.58	4.22	2.84	2.40	68.33
1960	..	3.97	—	5.91	6.04	3.86	5.07	5.27	6.21	—	—	—	6.43	—
1961	..	4.44	3.19	3.67	2.72	4.87	4.76	5.61	6.38	7.06	7.62	2.97	1.32	54.61
1962	..	1.81	3.14	3.28	2.47	2.94	2.29	3.52	5.19	6.08	3.25	2.62	4.73	41.32
1963	..	2.77	1.54	2.42	1.94	1.53	1.82	5.66	5.11	5.67	6.02	2.41	—	—

GABENSIS CREEK AT ROAD CROSSING
(Huon Drainage Division)

Catchment Area = 21 square miles

SITE

Gabensis Creek, at the Wau–Lae road crossing

Map reference: NADZAB. 1 inch = 1 mile. Grid 432405
Latitude S. 6° 43′ 00″. Longitude E. 146° 46′ 20″

Station 3: Staff gauge—October 1952 to July 1955
Discontinued

GAUGING DATA — OCTOBER 1952 to JULY 1955

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	2	3	3	3	3	3	3	2	2	3	3	3	
Mean ..	4.83	4.48	7.92	6.52	4.41	6.09	9.80	9.57	8.10	3.67	2.65	4.52	72.56

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge 17,470 acre feet in July 1953
Minimum Monthly Discharge 1,440 acre feet in April 1955

Maximum Daily Flow 1,350 cusecs in July and September 1953
Minimum Daily Flow 15 cusecs on 11th and 27th December 1952

Peak Flow 1,350 cusecs in July and September 1953
Lowest Flow 15 cusecs on 11th and 27th December 1952

CURRENT METER MEASUREMENTS

Highest: 124.3 cusecs at gauge 3, on 10th October 1952
Lowest: 22.0 cusecs at gauge 3, on 1st June 1956

Number of Measurements (1952–56) = 28

GABENSIS CREEK AT ROAD CROSSING

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1952	—	—	—	—	—	—	—	—	—	0.55	0.23	0.27	—	—
1953	0.11	0.13	0.15	0.27	0.63	0.27	1.35	0.33	1.35	0.09	0.06	0.27	1.35	3.00

GABENSIS CREEK AT ROAD CROSSING

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1952	..	—	—	—	—	—	—	—	—	—	35	25	15	—
1953	..	17	62	80	94	35	45	57	120	90	57	57	57	17

GABENSIS CREEK AT ROAD CROSSING

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1952	..	—	—	—	—	—	—	—	—	—	3.57	2.42	2.38	—
1953	..	2.79	5.13	6.79	10.39	5.34	6.00	17.47	11.49	10.79	4.29	3.42	4.01	87.91
1954	..	—	4.93	12.20	7.74	6.05	3.18	4.92	7.64	5.41	3.11	2.11	7.17	—
1955	..	6.86	3.37	4.78	1.44	1.85	9.09	7.02	—	—	—	—	—	—

NOTE: Daily discharges Feb. 1954 to July 1955 obtained by correlation with gauge 4.

GOLDIE RIVER AT UBERI
(South-East Coast Drainage Division)

Catchment Area = 31 square miles

SITE

Goldie River, above the Kokoda Trail crossing at Uberi

Map reference: UBERI. 1 inch = 1 mile. Grid 243485
Latitude S. 9° 21′ 45″. Longitude E. 147° 29′ 35″

Station 67: L.S.2A35 recorder—December 1961 to date

GAUGING DATA

DECEMBER 1961 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	2	2	2	3	3	3	2	2	3	3	3	3	
Mean ..	22.35	17.87	22.73	16.31	16.13	11.35	11.47	18.66	20.76	14.59	14.56	13.88	200.66

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge 25,840 acre feet in March 1963
Minimum Monthly Discharge 7,840 acre feet in November 1963

Maximum Daily Flow 1,330 cusecs on 9th March 1963
Minimum Daily Flow 71 cusecs on 12th November 1963

Peak Flow 6,290 cusecs on 2nd December 1963
Lowest Flow 71 cusecs on 12th November 1963

CURRENT METER MEASUREMENTS

Highest: 3,008 cusecs at gauge 67, height 11.27′ on 17th May 1962

Lowest: 93.5 cusecs at gauge 67, height 2.00′ on 13th September 1961
(41 cusecs at gauge 67, height 1.50′ on 9th September 1965)

Number of Measurements (1960–64) = 114

GOLDIE RIVER AT UBERI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1962	4.96	1.83	1.48	4.86	2.97	1.42	—	—	5.12	5.32	3.69	2.02	—	—
1963	6.04	5.36	4.56	2.65	3.15	1.72	1.49	5.13	4.39	1.73	1.25	6.29	6.29	19.15
1964	—	—	—	2.56	1.94	3.21	2.08	4.26	2.92	3.70	4.71	1.20	—	—

GOLDIE RIVER AT UBERI

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1962	..	114	99	160	164	148	108	—	—	200	127	88	110	—
1963	..	137	173	162	90	88	97	99	101	101	86	71	92	71
1964	..	—	—	—	118	148	105	94	104	122	129	176	91	—

GOLDIE RIVER AT UBERI

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1962	..	24.23	13.91	19.62	21.48	18.58	11.41	—	—	24.51	17.49	16.03	14.86	—
1963	..	20.46	21.83	25.84	11.67	13.07	11.49	11.94	19.54	19.00	9.83	17.84	17.55	190.06
1964	..	—	—	—	15.79	16.73	11.15	10.99	17.77	18.76	16.45	19.82	9.22	—

GOROKA CREEK ABOVE RACE LINE
(Gulf Drainage Division)

Catchment Area = 15 square miles

SITE

Goroka Creek, above the raceline offtake approximately 8 miles from the Asaro River

Map reference: BENA BENA. 1 inch = 1 mile. Grid 920127
Latitude S. 6° 03′ 00″. Longitude E. 145° 24′ 45″

Station 27: Bristol recorder—February 1957 to September 1964
Discontinued

GAUGING DATA FEBRUARY 1957 to AUGUST 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	7	6	7	7	7	8	8	8	7	7	7	7	
Mean ..	5.88	6.62	7.27	6.93	5.43	4.29	3.50	3.57	4.19	4.85	4.13	5.65	62.31

Maximum Annual Discharge	68,990 acre feet in 1960
Minimum Annual Discharge	45,100 acre feet in 1963
Maximum Monthly Discharge	10,530 acre feet in February, 1964
Minimum Monthly Discharge	1,610 acre feet in August, 1958
Maximum Daily Flow	455 cusecs on 26th January, 1964
Minimum Daily Flow	21 cusecs in August and September 1958
Peak Flow	2,140 cusecs on 12th April 1959
Lowest Flow	21 cusecs in August and September 1958

CURRENT METER MEASUREMENTS

Highest: 240 cusecs at gauge 27, height 2.26′ on 13th April 1959

Lowest: 38.9 cusecs at gauge 27, height 0.98′ on 2nd September 1960

Number of Measurements (1955–64) = 140

GOROKA CREEK ABOVE RACE LINE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1957	—	—	—	—	—	0.19	0.28	0.38	1.49	0.43	0.38	1.60	—	—
1958	0.21	—	1.00	0.24	0.10	0.09	0.09	0.18	0.15	1.29	0.43	1.29	—	—
1959	1.39	1.29	0.86	2.14	0.20	0.91	0.18	0.07	0.13	0.31	0.17	0.29	2.14	6.60
1960	0.60	1.39	1.09	0.58	0.29	0.31	0.08	0.05	0.07	0.23	0.69	1.34	1.39	5.30
1961	1.14	0.91	1.00	0.48	0.76	0.16	0.07	0.88	0.55	0.31	0.26	0.23	1.14	4.80
1962	0.20	0.92	0.49	0.34	0.88	0.20	0.22	0.35	0.55	1.34	1.44	0.95	1.44	5.40
1963	0.10	0.05	0.19	0.24	0.07	0.18	0.19	0.10	1.14	0.61	0.11	0.33	1.14	4.80
1964	2.11	1.42	0.58	0.63	0.23	0.19	0.13	0.10	—	—	—	—	—	—

GOROKA CREEK ABOVE RACE LINE

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1957	..	—	—	—	—	—	84	72	78	76	48	39	55	—
1958	..	59	—	74	59	33	29	29	21	21	22	40	84	—
1959	..	67	85	97	77	67	53	41	39	34	35	37	52	34
1960	..	56	138	88	101	58	70	47	40	33	33	48	65	33
1961	..	74	76	74	52	69	63	41	41	50	60	49	53	41
1962	..	39	39	69	65	91	63	48	51	55	59	60	65	39
1963	..	50	41	41	57	44	40	39	40	41	62	45	48	39
1964	..	60	117	117	90	78	60	50	45	—	—	—	—	—

GOROKA CREEK ABOVE RACE LINE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1957	..	—	—	—	—	—	5.35	5.28	6.13	6.29	5.25	3.38	6.29	—
1958	..	5.35	—	7.28	4.87	3.16	2.07	2.33	1.61	1.73	4.29	4.79	7.51	—
1959	..	5.43	6.67	9.22	9.24	6.95	4.45	3.42	2.86	2.76	3.23	2.73	4.35	61.31
1960	..	7.52	9.90	8.01	9.72	4.89	6.18	3.38	2.70	2.34	3.13	4.32	6.90	68.99
1961	..	7.01	6.17	6.98	4.99	6.48	4.66	3.02	4.92	4.63	6.61	5.05	4.22	64.74
1962	..	2.89	4.00	5.83	7.08	7.61	4.66	4.14	4.46	5.72	5.58	5.25	6.25	63.47
1963	..	3.85	2.47	3.47	4.35	3.22	2.94	2.93	2.77	5.84	5.85	3.41	4.00	45.10
1964	..	9.10	10.53	10.09	8.29	5.72	3.99	3.50	3.08	—	—	—	—	—

GUM RIVER BELOW WOPI
(North-Central Drainage Division)

Catchment Area = 20.3 square miles

SITE

Gum River below Wopi Village

Map reference: MADANG. 1 inch = 1 mile. Grid 605280
Latitude S. 5° 05′. Longitude E. 145° 41′

Station 18: L.S.A35 recorder—October 1954 to December 1963
Discontinued

GAUGING DATA

OCTOBER 1954 to DECEMBER 1963

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	4	6	7	7	6	7	7	7	6	6	4	
Mean ..	2.74	4.42	8.05	9.63	9.00	7.10	6.86	6.43	4.53	5.75	8.74	5.07	78.32

Maximum and Minimum Discharges and Flows not given due to poor quality of records

CURRENT METER MEASUREMENTS

Highest: 688 cusecs at gauge 18, height 4.40′ on 12th August 1961

Lowest: 10.7 cusecs at gauge 18, height 0.76′ on 16th October 1954

Number of Measurements (1954–63) = 99

GUM RIVER BELOW WOPI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1956	—	—	—	3.97	0.21	0.24	0.71	1.50	1.51	0.16	2.25	1.20	—	—
1957	2.17	1.66	8.92	8.92	2.22	2.44	—	—	2.84	2.68	—	—	—	—
1958	—	—	—	—	—	—	8.50	2.33	0.28	6.88	18.00	—	—	—
1959	—	3.01	2.33	3.19	2.09	1.80	1.13	16.09	1.49	0.60	3.39	0.81	—	—
1960	—	—	7.36	6.03	3.26	18.42	0.87	—	—	—	—	—	—	—
1961	—	—	8.30	1.53	19.04	1.99	1.52	5.62	1.80	5.32	0.70	1.38	—	—
1962	0.36	0.21	13.12	3.39	8.61	1.41	6.58	10.65	1.43	1.01	1.68	1.67	13.12	19.10
1963	0.56	0.11	8.85	8.85	1.38	3.68	10.10	5.68	6.36	5.02	22.55	—	—	—

GUM RIVER BELOW WOPI

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1956	..	—	—	—	19	14	11	11	12	9	7	7	16	—
1957	..	13	19	30	23	30	—	—	17	33	—	—	—	—
1958	..	—	—	—	—	—	—	16	19	16	16	18	—	—
1959	..	—	39	40	41	21	16	15	16	23	23	21	21	—
1960	..	—	—	31	28	25	29	24	—	—	—	—	—	—
1961	..	—	—	26	44	49	44	29	25	30	20	16	16	—
1962	..	10	11	61	24	30	32	25	28	19	15	22	31	10
1963	..	16	12	12	17	21	21	23	23	28	25	27	—	—

GUM RIVER BELOW WOPI

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1956	..	—	—	—	6.37	1.32	1.25	1.37	2.94	2.32	0.90	3.13	4.88	—
1957	..	4.30	4.76	10.52	8.20	12.96	—	—	6.39	6.73	—	—	—	—
1958	..	—	—	—	—	—	—	9.90	3.36	2.06	7.31	13.51	—	—
1959	..	—	10.33	10.18	11.08	5.85	3.41	2.96	8.75	3.76	3.86	7.60	4.09	—
1960	..	—	—	7.45	18.31	5.26	19.27	3.24	—	—	—	—	—	—
1961	..	—	—	9.35	8.10	22.08	9.73	5.49	6.84	4.08	8.54	2.92	3.64	—
1962	..	1.27	1.59	6.40	7.89	10.72	4.85	11.85	10.06	3.95	3.61	8.38	7.65	78.22
1963	..	2.64	0.99	4.37	7.43	4.79	4.11	13.19	6.66	8.84	10.27	16.90	—	—

LALOKI RIVER AT BOMANA PUMPING STATION
(South-East Coast Drainage Division)

Catchment Area = 154 square miles

SITE — Laloki River at Bomana Pumping Station

Map reference: PORT MORESBY. 1 inch = 1 mile. Grid 983450
Latitude S. 9° 23′ 35″. Longitude E. 147° 15′ 10″

Station 15: Staff gauge—October 1954 to date

GAUGING DATA — OCTOBER 1954 to AUGUST 1957

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	3	3	3	3	3	3	3	2	2	3	3	
Mean ..	34.98	81.38	49.97	87.49	54.05	17.91	15.39	12.33	14.66	26.83	38.40	63.38	496.77

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge — 112,880 acre feet in February 1955

Minimum Monthly Discharge — 8,240 acre feet in July 1957

Maximum Daily Flow — 10,300 cusecs on 17th–18th February 1957

Minimum Daily Flow — 73 cusecs in August 1957

CURRENT METER MEASUREMENTS

Highest: 2,636 cusecs at gauge 15, height 79.06′ on 29th March 1961

Lowest: 113.7 cusecs at gauge 15, height 71.75′ on 7th August 1957

Number of Measurements (1955–64) = 30

NOTE: From September 1957 to date, gauge height records only are available

LALOKI RIVER AT BOMANA PUMPING STATION

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1954	—	—	—	—	—	—	—	—	—	—	1.19	6.30	—	—
1955	1.82	6.30	2.29	3.16	3.47	0.45	1.21	0.23	0.29	0.51	1.97	3.53	6.30	87.0
1956	1.89	1.52	1.85	7.45	4.42	0.96	0.77	0.43	0.77	1.40	2.75	5.54	7.45	87.6
1957	3.27	10.30	3.58	7.76	2.60	0.67	0.24	1.58	—	—	—	—	—	—

LALOKI RIVER AT BOMANA PUMPING STATION

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1954	..	—	—	—	—	—	—	—	—	—	—	143	230	—
1955	..	485	768	200	348	445	215	165	87	87	101	129	230	87
1956	..	143	293	329	485	425	245	143	157	157	311	311	200	143
1957	..	230	311	485	840	293	143	101	73	—	—	—	—	—

LALOKI RIVER AT BOMANA PUMPING STATION

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1954	..	—	—	—	—	—	—	—	—	—	—	15.9	99.2	—
1955	..	54.6	112.9	34.5	67.0	54.4	17.8	21.1	9.5	11.1	10.7	39.2	35.7	468.5
1956	..	18.1	25.1	42.3	86.8	57.5	22.3	16.8	12.5	18.2	43.0	60.1	55.2	457.9
1957	..	32.2	106.2	73.2	108.7	50.2	13.6	8.2	15.0	—	—	—	—	—

LALOKI RIVER AT SIRINUMU
(South-East Coast Drainage Division)

Catchment Area = 62 square miles

SITE

Laloki River, approximately 200 yards upstream of confluence of Eilogo Creek

Map reference: UBERI. 1 inch = 1 mile. Grid. 181387
Latitude S. 9° 27′ 10″. Longitude E. 147° 25′ 55″

Station 19: L.S.A35 recorder—July 1955 to date

GAUGING DATA

JULY 1955 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	9	9	9	9	9	9	9	10	10	10	10	10	
Mean ..	15.32	16.38	16.32	19.18	21.03	9.82	8.67	5.78	13.10	11.81	10.45	11.81	159.67

Maximum Annual Discharge	268,590 acre feet in 1961
Minimum Annual Discharge	78,400 acre feet in 1959
Maximum Monthly Discharge	55,910 acre feet in May 1961
Minimum Monthly Discharge	1,470 acre feet in May 1963
Maximum Daily Flow	6,390 cusecs on 7th September 1958
Minimum Daily Flow	14 cusecs in May, June, July, August 1963
Peak Flow	13,350 cusecs on 26th February 1962
Lowest Flow	12 cusecs on 22nd June and 29th August 1963

CURRENT METER MEASUREMENTS

Highest: 2,930 cusecs at gauge 19, height 5.865′ on 16th May 1961

Lowest: 19.1 cusecs at gauge 19, height 0.41′ on 28th June 1963

Number of Measurements (1956–64) = 73

LALOKI RIVER AT SIRINUMU

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1955	—	—	—	—	—	—	—	0.10	0.80	0.17	1.58	3.85	—	—
1956	1.05	0.98	1.39	5.44	4.47	1.14	1.06	0.25	0.60	0.88	2.96	2.50	5.44	8.95
1957	2.87	7.02	1.60	3.35	2.28	0.10	0.32	0.89	0.63	1.60	1.18	10.13	10.13	13.80
1958	0.55	2.10	2.78	1.25	0.42	0.11	0.08	0.06	11.99	1.03	0.82	0.89	11.99	15.41
1959	0.34	0.42	0.58	3.54	0.27	0.11	0.77	0.08	0.10	—	—	0.92	—	—
1960	0.57	0.75	3.14	2.90	12.46	3.68	0.27	1.62	3.94	0.60	0.22	4.58	12.46	15.80
1961	6.47	6.57	5.50	1.07	3.94	1.06	4.90	0.89	1.01	4.16	0.65	1.28	6.57	10.21
1962	4.24	13.35	1.91	4.86	3.34	0.45	0.59	0.60	2.69	0.68	0.32	0.11	13.35	16.54
1963	1.42	1.18	1.99	2.83	0.22	1.36	0.53	0.33	1.03	0.48	1.93	1.34	2.83	5.62
1964	1.71	0.26	0.25	1.37	1.18	0.98	0.27	0.39	0.54	0.50	2.42	0.81	2.42	5.03

LALOKI RIVER AT SIRINUMU

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1955	..	—	—	—	—	—	—	—	26	26	21	21	42	—
1956	..	34	54	83	145	115	70	54	42	48	99	90	64	34
1957	..	88	96	156	232	103	56	45	34	45	52	28	29	28
1958	..	77	75	131	126	101	62	43	29	46	81	51	46	29
1959	..	59	52	44	136	75	60	66	45	27	21	23	22	21
1960	..	23	56	46	126	94	162	94	64	94	64	45	44	23
1961	..	91	134	91	120	281	162	185	112	73	112	89	81	73
1962	..	206	147	185	228	141	95	81	62	138	62	38	45	38
1963	..	37	120	20	17	14	12	15	12	16	246	133	213	12
1964	..	130	92	24	23	29	94	79	125	125	119	114	107	23

LALOKI RIVER AT SIRINUMU

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1955	..	—	—	—	—	—	—	—	2.22	2.92	1.62	9.94	11.15	—
1956	..	4.65	9.85	10.89	28.64	15.13	6.87	6.50	3.56	4.94	9.76	17.12	15.89	133.80
1957	..	12.89	39.21	22.39	32.45	17.05	4.37	3.51	5.47	4.38	8.03	3.26	22.23	175.24
1958	..	8.24	8.48	18.02	12.74	9.78	4.79	3.35	2.15	43.02	10.95	5.21	5.94	132.67
1959	..	7.53	4.42	4.85	29.25	6.59	4.60	6.59	3.46	2.48	1.96	2.73	3.94	78.40
1960	..	3.28	7.98	14.45	21.87	29.39	25.96	9.39	8.19	12.37	5.78	4.88	12.43	155.97
1961	..	27.25	29.01	15.11	14.59	55.91	16.74	32.45	13.97	9.29	32.06	8.64	13.57	268.59
1962	..	48.60	28.65	27.68	27.46	18.27	7.79	6.72	7.09	35.60	9.91	4.77	3.44	225.98
1963	..	11.20	13.29	30.79	3.33	1.47	1.63	2.44	3.13	5.67	24.69	19.27	14.59	131.50
1964	..	14.22	6.54	2.73	2.32	35.69	15.59	7.10	8.55	10.35	13.36	28.66	14.95	160.06

LALOKI RIVER AT SOGERI
(South-East Coast Drainage Division)

Catchment Area = 120 square miles

SITE

Laloki River, at low level bridge approximately 1 mile above Rouna Falls

Map reference: UBERI. 1 inch = 1 mile. Grid 142416
Latitude S. 9° 25′ 30″. Longitude E. 147° 23′ 45″

Station 1: L.S.A35 recorder—September 1951 to date

GAUGING DATA — SEPTEMBER 1951 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	13	13	13	13	13	13	13	13	13	14	14	14	
Mean ..	35.48	41.12	36.30	41.61	43.86	22.35	17.84	14.27	24.65	23.98	24.82	28.76	355.04

Maximum Annual Discharge	497,130 acre feet in 1961
Minimum Annual Discharge	200,070 acre feet in 1959
Maximum Monthly Discharge	91,950 acre feet in January 1962
Minimum Monthly Discharge	6,980 acre feet in October 1951
Maximum Daily Flow	5,290 cusecs on 26th February 1962
Minimum Daily Flow	68 cusecs on 24th August 1958
Peak Flow	15,800 cusecs on 26th February 1962
Lowest Flow	67 cusecs on 24th August 1958

CURRENT METER MEASUREMENTS

Highest: 4,474 cusecs at gauge 1, height 8.50′ on 30th January 1962

Lowest: 70.4 cusecs at gauge 1, height -0.10′ on 14th October 1959

Number of Measurements (1954–64) = 152

LALOKI RIVER AT SOGERI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1951	—	—	—	—	—	—	—	—	—	0.16	1.88	1.14	—	—
1952	1.98	2.70	1.82	1.44	3.00	1.88	2.93	2.31	1.64	1.25	3.49	1.72	3.49	6.56
1953	2.55	1.28	3.61	1.66	1.15	1.17	0.31	1.81	0.75	0.86	1.92	2.36	3.61	6.71
1954	6.02	6.35	2.50	3.01	4.80	0.76	0.21	0.34	1.52	2.00	1.21	7.12	7.12	10.62
1955	1.59	6.90	1.43	3.68	4.46	1.06	1.06	0.31	0.92	0.50	2.48	2.82	6.90	10.40
1956	2.01	—	—	—	4.29	1.49	1.48	1.06	1.04	1.39	3.02	3.12	—	—
1957	3.66	9.97	2.73	5.67	2.59	0.23	0.35	1.45	1.00	2.05	0.43	9.38	9.97	13.34
1958	0.70	1.97	2.96	1.69	2.05	0.72	0.15	0.26	11.96	1.94	3.04	1.06	11.96	15.05
1959	0.80	0.62	0.97	3.94	0.63	0.41	1.00	0.19	0.38	1.47	1.20	2.35	3.94	7.12
1960	2.04	1.00	4.14	3.00	14.07	3.75	0.51	1.31	1.99	0.81	0.90	4.42	14.07	16.62
1961	7.52	4.99	5.11	1.76	4.73	1.29	4.97	1.86	2.16	4.48	1.60	2.03	7.52	11.02
1962	6.34	15.80	2.89	5.66	2.87	0.72	0.81	1.18	4.03	1.18	1.70	0.64	15.80	17.80
1963	1.70	1.48	3.39	6.00	1.35	2.81	1.30	0.69	1.84	0.96	2.17	1.77	6.00	9.49
1964	3.22	0.59	1.48	2.59	2.69	1.55	1.36	1.81	2.38	1.51	2.83	1.51	3.22	6.23

LALOKI RIVER AT SOGERI

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1951	..	—	—	—	—	—	—	—	—	—	100	90	110	—
1952	..	110	396	451	370	300	370	240	202	263	181	165	256	110
1953	..	241	202	178	316	187	137	135	110	133	184	199	205	110
1954	..	297	430	314	307	436	175	100	93	93	157	167	205	93
1955	..	475	672	262	402	504	238	205	105	99	103	107	202	99
1956	..	125	—	—	—	412	250	155	135	123	297	232	153	—
1957	..	226	226	433	464	226	117	108	100	128	132	100	107	100
1958	..	211	187	281	275	256	129	93	67	104	271	163	154	67
1959	..	178	121	120	401	203	170	177	107	86	73	103	102	73
1960	..	98	183	140	348	333	443	206	168	194	138	170	133	98
1961	..	229	300	238	294	522	343	378	275	194	272	215	262	194
1962	..	482	364	454	465	325	199	149	108	255	236	152	173	108
1963	..	163	406	242	171	157	135	119	113	141	397	265	318	113
1964	..	338	237	155	138	358	230	212	239	227	282	341	236	138

LALOKI RIVER AT SOGERI

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1951	..	—	—	—	—	—	—	—	—	—	6.98	12.63	12.93	—
1952	..	46.17	66.23	57.92	33.00	39.78	46.30	28.01	30.64	29.16	21.87	42.13	33.81	475.02
1953	..	29.84	24.67	27.04	27.70	23.38	11.55	10.23	14.49	14.91	17.38	24.76	28.39	254.34
1954	..	58.57	41.69	32.17	38.34	61.63	19.45	8.93	7.10	12.16	32.48	16.46	64.33	393.31
1955	..	43.01	86.79	26.80	54.47	51.73	21.07	21.72	10.10	9.74	8.41	29.74	26.76	390.34
1956	..	12.57	25.02	34.38	69.82	44.48	21.51	17.48	11.79	14.05	32.18	38.76	32.44	354.48
1957	..	28.49	73.84	42.60	67.11	33.11	8.95	7.50	12.14	10.69	16.13	9.18	45.56	355.30
1958	..	19.06	17.78	31.90	23.66	26.19	11.31	7.23	5.09	68.32	31.45	16.76	17.56	276.31
1959	..	18.75	10.39	16.27	56.58	18.47	13.27	14.82	8.42	7.59	8.37	11.67	15.47	200.07
1960	..	12.44	22.30	30.60	45.41	68.70	44.22	19.94	15.40	20.40	15.17	16.81	21.15	332.54
1961	..	42.67	56.97	33.67	30.86	88.31	31.28	48.33	29.21	21.41	54.55	28.64	31.23	497.13
1962	..	91.95	52.32	56.87	51.05	35.28	17.31	12.76	14.03	61.95	25.63	17.51	15.91	452.57
1963	..	29.63	38.79	60.67	22.41	17.29	13.90	14.14	14.30	23.33	32.80	25.80	29.57	322.63
1964	..	28.03	17.80	21.05	20.55	61.81	30.40	20.78	19.91	26.71	32.27	56.60	27.46	363.37

MAMBARE RIVER BELOW CHIRIMA JUNCTION
(North-East Coast Drainage Division)

Catchment Area = 820 square miles

SITE

Mambare River, approximately ¼ mile below the junction with Chirima River

Map reference: BUNA. 1 inch = 4 miles. Grid (Q) C4131
Latitude S. 8° 37′ 20″. Longitude E. 147° 38′ 20″

Station 78: L.S.2A35 recorder—December 1961 to date

GAUGING DATA

DECEMBER 1961 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean ..	485.5	410.4	586.9	543.8	468.4	297.1	297.2	476.6	514.6	497.9	490.5	426.7	5495.6

Maximum Annual Discharge	5,974,960 acre feet in 1962
Minimum Annual Discharge	4,889,950 acre feet in 1963
Maximum Monthly Discharge	726,760 acre feet in January 1964
Minimum Monthly Discharge	255,970 acre feet in June 1964
Maximum Daily Flow	24,320 cusecs on 7th January 1964
Minimum Daily Flow	2,520 cusecs on 22nd July 1963
Peak Flow	131,560 cusecs on 30th April 1964
Lowest Flow	2,468 cusecs on 22nd July, 1963

CURRENT METER MEASUREMENTS

Highest: 23,653 cusecs at gauge 78, height 12.00′ on 30th April, 1964

Lowest: 3,201 cusecs at gauge 78, height 3.50′ on 17th June 1963
(2,384 cusecs at gauge 78, height 3.18′ on 11th July 1965)

Number of Measurements (1962–64) = 24

MAMBARE RIVER BELOW CHIRIMA JUNCTION

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1962	58.3	37.9	51.5	61.9	67.1	29.1	32.4	34.6	49.0	56.7	40.0	56.5	67.1	24.40
1963	12.2	30.4	91.9	58.7	14.8	25.0	11.2	63.9	51.9	63.5	59.1	51.6	91.9	30.20
1964	76.9	45.2	59.7	131.6	32.8	24.0	31.5	29.4	76.1	41.1	83.3	21.5	131.6	38.70

MAMBARE RIVER BELOW CHIRIMA JUNCTION

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1962	..	3870	4298	5575	5609	4474	3900	3645	4330	5099	4618	3735	4442	3645
1963	..	3406	3570	3406	3675	2720	2664	2468	3420	3705	4050	3252	3540	2468
1964	..	5252	4186	4394	4170	5065	2622	2608	4035	4650	3990	4378	3126	2608

MAMBARE RIVER BELOW CHIRIMA JUNCTION

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1962	..	411.0	461.6	614.6	665.3	593.6	343.2	360.7	479.3	555.7	535.5	477.1	477.3	5974.9
1963	..	318.7	312.0	594.0	434.9	284.8	292.0	256.5	535.3	433.9	516.2	448.2	463.5	4890.0
1964	..	726.8	457.6	551.9	531.3	526.7	256.0	274.3	415.1	554.3	441.9	546.2	339.4	5621.5

MUSA RIVER AT NADI GABUNA
(North-East Coast Drainage Division)

Catchment Area = 1,625 square miles

SITE

Musa River, one mile below junction with the Adan River

Map reference: TUFI. 1 inch = 4 miles. Grid (Q) J5726
Latitude S. 9° 33′. Longitude E. 148° 42′ 30″

Station 45: L.S.A35 recorder—August 1958 to date

GAUGING DATA

AUGUST 1958 to DECEMBER 1964

Mean Discharge in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	6	6	6	6	6	6	6	5	6	6	7	7	
Mean ..	584.3	628.4	766.6	751.3	637.3	516.2	462.7	482.2	570.1	497.9	381.2	417.0	6695.2

Maximum Annual Discharge — 7,901,830 acre feet in 1962
Minimum Annual Discharge — 5,068,480 acre feet in 1963

Maximum Monthly Discharge — 1,087,140 acre feet in April 1959
Minimum Monthly Discharge — 230,950 acre feet in July 1963

Maximum Daily Flow — 36,630 cusecs on 10th April 1959
Minimum Daily Flow — 2,130 cusecs on 20th August 1958

Peak Flow — 37,700 cusecs on 10th August 1963
Lowest Flow — 2,117 cusecs on 20th August 1958

CURRENT METER MEASUREMENTS

Highest: 33,442 cusecs at gauge 45, height 22.15′ on 14th August 1963
(34,200 cusecs at gauge 45, height 23.33′ on 21st February 1965)

Lowest: 2,169 cusecs at gauge 45, height 3.84′ on 3rd August 1958
(2,050 cusecs at gauge 45, height 2.63′ on 24th August 1965)

Number of Measurements (1958–64) = 153

MUSA RIVER AT NADI GABUNA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1958	—	—	—	—	—	—	—	—	28.05	28.85	15.07	28.49	—	—
1959	32.57	25.60	32.92	43.54	21.30	24.22	25.41	—	—	—	18.58	16.43	—	—
1960	33.36	32.68	32.49	33.68	24.15	30.07	16.07	19.76	14.37	20.34	20.53	15.19	33.68	24.24
1961	18.34	23.05	29.46	22.17	32.38	26.57	25.66	18.41	29.00	25.37	12.70	22.47	32.38	26.85
1962	26.75	34.20	27.34	37.14	25.97	22.13	22.59	21.21	34.29	12.78	16.84	26.97	37.14	29.90
1963	25.23	16.20	24.76	20.88	14.52	7.80	13.00	37.70	22.45	26.95	15.49	12.33	37.70	26.25
1964	25.31	22.90	29.36	25.56	30.83	16.15	26.64	15.55	26.60	12.91	20.85	16.34	30.83	22.75

MUSA RIVER AT NADI GABUNA

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1958	..	—	—	—	—	—	—	—	—	4286	5804	4308	3780	—
1959	..	3430	4490	7220	9260	5936	6560	5144	—	—	—	2810	3580	—
1960	..	3076	10844	7184	5780	5400	6240	3932	3221	3140	2620	3570	3540	2620
1961	..	5140	5900	4140	5740	7472	6470	6100	4770	3850	4880	4350	3570	3570
1962	..	5287	7238	10175	8613	8191	6034	5815	5463	8992	4710	3500	3070	3070
1963	..	4930	4138	4500	5386	3470	2863	2368	3223	3670	3860	2900	3040	2368
1964	..	6570	5650	5870	6080	5990	3576	3300	4490	5850	5155	5070	5490	3300

MUSA RIVER AT NADI GABUNA

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1958	..	—	—	—	—	—	—	—	—	608	676	413	458	—
1959	..	485	516	864	1087	534	678	576	—	—	—	386	352	—
1960	..	748	966	820	725	556	666	372	307	316	285	422	377	6563
1961	..	519	552	494	574	908	672	678	461	460	711	352	490	6872
1962	..	541	839	1036	966	856	495	541	552	867	429	364	415	7902
1963	..	503	349	733	610	331	246	231	598	462	430	256	318	5068
1964	..	708	547	652	546	638	340	377	493	706	456	474	508	6446

MUSGRAVE RIVER AT JAWARERE
(South-East Coast Drainage Division)

Catchment Area = 34.4 square miles

SITE

Musgrave River at Jawarere Plantation

Map reference: UBERI. 1 inch = 1 mile. Grid 373377
Latitude S. 9° 27′ 40″. Longitude E. 147° 36′ 25″

Station 68: L.S.2A35 recorder—October 1961 to date

GAUGING DATA

NOVEMBER 1961 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	3	3	3	3	3	3	3	3	3	4	3	
Mean ..	22.92	14.29	20.76	20.72	21.24	16.04	16.30	20.32	25.83	15.10	14.29	12.11	219.92

Maximum Annual Discharge	244,880 acre feet in 1962
Minimum Annual Discharge	203,180 acre feet in 1964
Maximum Monthly Discharge	36,170 acre feet in September 1962
Minimum Monthly Discharge	4,890 acre feet in November 1963
Maximum Daily Flow	2,120 cusecs on 26th September 1962
Minimum Daily Flow	58 cusecs on 22nd November 1963
Peak Flow	14,460 cusecs on 29th August 1962
Lowest Flow	53 cusecs on 2nd December 1963

CURRENT METER MEASUREMENTS

Highest: 433.5 cusecs at gauge 68, height 4.87′ on 16th May 1964
(1,100 cusecs at gauge 68, height 7.02′ on 16th March 1965)

Lowest: 58 cusecs at gauge 68, height 3.58′ on 29th October 1963
(35.1 cusecs at gauge 68, height 2.85′ on 16th November 1965)

Number of Measurements (1960–64) = 41

MUSGRAVE RIVER AT JAWARERE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1961	—	—	—	—	—	—	—	—	—	—	3.74	—	—	—
1962	6.27	1.54	2.34	7.88	3.97	5.01	1.28	14.46	10.53	8.03	7.01	4.99	14.46	18.20
1963	8.46	6.57	9.22	4.98	5.08	5.68	4.19	6.70	5.56	2.37	0.82	6.86	9.22	14.90
1964	1.21	1.84	4.53	4.40	6.99	2.43	4.16	2.77	4.66	6.75	11.23	1.59	11.22	16.26

MUSGRAVE RIVER AT JAWARERE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1961	..	—	—	—	—	—	—	—	—	—	—	104	—	—
1962	..	229	68	92	186	184	182	156	134	268	159	104	101	68
1963	..	108	222	161	127	121	125	138	117	125	86	57	53	53
1964	..	82	66	95	95	218	156	127	161	143	142	216	93	66

MUSGRAVE RIVER AT JAWARERE

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1961	..	—	—	—	—	—	—	—	—	—	—	12.31	—	—
1962	..	35.33	10.73	13.90	26.73	21.91	16.99	14.40	23.05	36.17	17.28	15.04	13.35	244.88
1963	..	22.31	25.11	30.19	16.13	16.64	14.23	18.58	20.22	21.72	10.22	4.89	13.41	213.65
1964	..	11.11	7.02	18.18	19.31	25.17	16.91	15.91	17.69	19.60	17.79	24.92	9.57	203.18

OMAHAGA RIVER AT HOVEI VILLAGE
(Gulf Drainage Division)

Catchment Area = 13.4 square miles

SITE

Omahaga River at Hovei Village approximately 3 miles upstream of Goroka–Mt. Hagen road crossing

Map reference: BENA BENA. 1 inch = 1 mile. Grid 893171
Latitude S. 6° 00′ 40″. Longitude E. 145° 23′ 20″

Station 58: Bristol recorder—March 1959 to January 1960
L.S.A35 recorder—November 1959 to November 1963
Discontinued

GAUGING DATA

MARCH 1959 to NOVEMBER 1963

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	4	4	4	5	4	5	5	5	5	5	4	4	
Mean ..	5.74	5.48	5.81	6.73	5.01	4.33	3.35	3.53	4.28	4.97	3.53	5.19	57.95

Maximum Annual Discharge	69,260 acre feet in 1960
Minimum Annual Discharge	57,540 acre feet in 1962
Maximum Monthly Discharge	10,000 acre feet in February 1960
Minimum Monthly Discharge	1,750 acre feet in June 1963
Maximum Daily Flow	410 cusecs on 27th April 1959
Minimum Daily Flow	23 cusecs on 13th and 14th August 1963
Peak Flow	2,230 cusecs on 11th April 1960
Lowest Flow	22 cusecs on 29th June and 14th August 1963

CURRENT METER MEASUREMENTS

Highest: 197 cusecs at gauge 58, height 2.72′ on 13th April 1959
Lowest: 36.0 cusecs at gauge 58, height 3.27′ on 14th February 1963

Number of Measurements (1958–63) = 131

OMAHAGA RIVER AT HOVEI VILLAGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1959	—	—	—	—	—	—	0.17	0.05	0.69	0.23	0.56	0.34	—	—
1960	0.65	1.02	0.63	2.23	0.39	0.27	0.14	0.07	0.08	0.29	0.39	0.88	2.23	7.53
1961	1.96	0.42	1.24	0.23	0.85	0.20	0.17	0.69	0.44	0.55	0.21	0.20	1.96	7.30
1962	0.07	0.48	0.31	0.41	1.09	0.30	0.17	0.18	0.33	0.41	0.15	0.19	1.09	6.36
1963	0.09	0.06	0.45	0.67	0.10	0.11	0.22	0.65	0.62	1.12	—	—	—	—

OMAHAGA RIVER AT HOVEI VILLAGE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1959	..	—	—	—	45	60	38	34	38	35	32	37	49	—
1960	..	55	119	89	95	55	62	42	37	35	35	45	62	35
1961	..	89	79	44	44	56	75	51	51	61	71	58	48	44
1962	..	37	37	60	71	90	53	53	66	61	46	33	38	33
1963	..	44	36	35	44	27	22	25	22	35	69	—	—	—

OMAHAGA RIVER AT HOVEI VILLAGE

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1959	..	—	—	—	9.01	—	4.64	3.54	2.88	2.51	2.34	2.64	4.70	—
1960	..	8.72	10.00	6.46	9.89	4.58	5.70	3.09	2.50	2.24	3.41	4.44	8.23	69.26
1961	..	7.99	6.09	7.06	4.86	5.37	5.36	3.89	5.24	5.12	7.12	4.41	3.72	66.23
1962	..	2.74	3.57	6.44	6.52	7.75	4.22	4.36	4.92	4.88	5.41	2.64	4.09	57.54
1963	..	3.52	2.27	3.28	3.38	2.32	1.75	1.88	2.13	6.64	6.56	—	—	—

OOMSIS CREEK BELOW BARKERS
(Huon Drainage Division)

Catchment Area = 13.5 square miles

SITE

Oomsis Creek approximately 10 miles above confluence with Wampit River

Map reference: NADZAB. 1 inch = 1 mile. Grid 459444
Latitude S. 6° 40′ 50″. Longitude E. 146° 47′ 55″

Station 4: L.S.A35 recorder—November 1952 to March 1959
Discontinued

GAUGING DATA

NOVEMBER 1952 to NOVEMBER 1956

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	4	4	4	4	4	4	4	4	4	4	3	4	
Mean ..	0.94	0.77	1.35	1.06	0.70	0.95	3.53	2.20	1.15	0.47	0.71	0.83	14.66

Maximum Annual Discharge	19,460 acre feet in 1953
Minimum Annual Discharge	14,760 acre feet in 1954
Maximum Monthly Discharge	8,940 acre feet in July 1953
Minimum Monthly Discharge	130 acre feet in October 1956
Maximum Daily Flow	800 cusecs on 7th July 1953
Minimum Daily Flow	0.2 cusecs in November 1956
Peak Flow	4,640 cusecs in July 1953

CURRENT METER MEASUREMENTS

Highest: 172.9 cusecs at gauge 4, height 1.15′ on 25th August 1958
Lowest: 0.2 cusecs at gauge 4, height 0.79′ on 28th November 1956

Number of Measurements (1952–59) = 38

OOMSIS CREEK BELOW BARKERS

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1952	—	—	—	—	—	—	—	—	—	—	—	0.02	—	—
1953	0.38	0.10	0.26	0.39	0.11	0.15	4.64	—	1.60	0.02	0.07	0.07	—	—
1954	0.52	0.41	1.50	0.72	0.18	0.06	0.11	0.14	0.07	0.01	0.03	1.22	1.50	3.80
1955	1.22	0.19	0.64	0.01	0.19	1.40	0.81	0.52	0.06	0.08	0.42	0.22	1.40	—
1956	0.02	0.03	0.02	—	—	0.04	0.01	3.34	0.37	—	—	—	—	—

OOMSIS CREEK BELOW BARKERS

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1952	..	—	—	—	—	—	—	—	—	—	—	—	3.9	—
1953	..	4	6	6	7	8	6.5	19	11	9.5	4.5	4	3.8	3.8
1954	..	3	6	7	10	10	8	8	4	12	8	4	5	3
1955	..	12	5	5	4	1	6	6	13	5	5	5	0	0
1956	..	1	0	0	—	—	0.5	1	1	3	1.3	—	—	—

OOMSIS CREEK BELOW BARKERS

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1952	..	—	—	—	—	—	—	—	—	—	—	—	0.35	—
1953	..	0.99	0.60	1.04	1.62	0.89	0.82	8.94	1.82	1.55	0.52	0.33	0.34	19.46
1954	..	0.41	1.10	2.71	1.72	1.34	0.71	1.10	1.70	1.21	0.69	0.47	1.60	14.76
1955	..	1.56	0.75	1.07	0.32	0.42	2.02	3.84	3.87	1.13	0.54	1.32	1.03	17.87
1956	..	0.80	0.62	0.57	0.57	0.16	0.23	0.25	1.42	0.69	0.13	—	—	—

OREBA RIVER AT GOLDEN VALLEY
(South-East Coast Drainage Division)

Catchment Area = 390 square miles

SITE — Oreba River, approximately 30 miles upstream of Kunimaipa Junction

Map reference: WAU. 1 inch = 4 miles. Grid (L) W1818
Latitude S. 7° 48′ 30″. Longitude E. 146° 33′ 20″

Station 8: L.S.A35 recorder—October 1953 to date

GAUGING DATA — OCTOBER 1953 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	7	8	6	7	7	7	7	7	6	6	7	7	
Mean ..	124.3	126.7	145.1	136.9	109.7	71.4	57.1	63.4	74.3	104.2	95.2	137.4	1245.7

Maximum Annual Discharge	1,529,900 acre feet in 1961
Minimum Annual Discharge	1,086,760 acre feet in 1959
Maximum Monthly Discharge	230,358 acre feet in December 1954
Minimum Monthly Discharge	34,100 acre feet in July 1964
Maximum Daily Flow	9,032 cusecs on 23rd December 1954
Minimum Daily Flow	294 cusecs on 24th October 1959
Peak Flow	14,180 cusecs on 16th October 1963
Lowest Flow	280 cusecs on 12th October 1959

CURRENT METER MEASUREMENTS

Highest: 2,319 cusecs at gauge 8, height 4.75′ on 12th July 1963
(3,822 cusecs at gauge 8, height 5.88′ on 15th January 1965)

Lowest: 925 cusecs at gauge 8, height 3.73′ on 15th December 1962

Number of Measurements (1958–64) = 20

OREBA RIVER AT GOLDEN VALLEY

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1953	—	—	—	—	—	—	—	—	—	—	6.46	8.52	—	—
1954	2.96	2.76	—	—	—	—	—	—	—	—	7.94	9.77	—	—
1955	—	—	—	4.55	3.56	1.83	1.02	1.52	—	—	—	—	—	—
1956	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—
1957	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	6.26	5.88	3.69	4.56	3.02	1.93	1.74	1.00	1.75	1.45	3.80	8.78	8.78	8.90
1960	5.04	8.06	8.29	5.10	2.87	5.10	1.95	6.91	3.60	5.15	4.08	7.20	8.29	8.63
1961	6.83	4.28	9.50	7.47	6.55	4.30	4.64	4.65	4.43	5.12	4.59	5.72	9.50	9.30
1962	4.12	7.37	6.30	7.97	6.28	2.59	8.46	5.56	5.56	4.01	4.97	6.33	8.46	8.72
1963	8.04	4.92	5.56	7.46	4.06	2.45	3.03	6.10	5.43	14.18	6.83	6.04	14.18	11.69
1964	5.94	5.27	6.10	7.20	6.89	2.63	3.68	2.86	4.95	5.46	—	—	—	—

OREBA RIVER AT GOLDEN VALLEY

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1953	..	—	—	—	—	—	—	—	—	—	—	1070	1360	—
1954	..	1410	1550	—	—	—	—	—	—	—	—	700	1870	—
1955	..	—	—	—	1795	1440	665	560	455	—	—	—	—	—
1956	..	—	2710	—	—	—	—	—	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	..	1180	1330	1470	1390	736	532	493	425	425	280	372	925	280
1960	..	1400	2180	1840	1630	925	925	685	588	500	644	817	925	500
1961	..	1920	1320	1660	1500	1670	1540	925	889	935	1430	1360	1160	889
1962	..	790	954	1460	1430	1320	730	610	800	1030	1050	800	840	610
1963	..	720	472	440	1190	770	547	840	800	1000	1710	1290	1430	440
1964	..	1480	1400	1290	1240	1030	574	400	408	384	574	—	—	—

OREBA RIVER AT GOLDEN VALLEY

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1953	..	—	—	—	—	—	—	—	—	—	—	127.4	139.7	—
1954	..	124.8	104.3	—	—	—	—	—	—	—	—	79.4	230.4	—
1955	..	—	—	—	157.6	115.7	61.3	41.6	38.4	—	—	—	—	—
1956	..	—	193.5	—	—	—	—	—	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	..	150.8	167.1	126.7	124.4	87.6	55.0	52.3	39.4	41.9	35.1	53.7	152.8	1086.8
1960	..	136.8	182.0	191.4	163.1	75.8	95.2	54.7	44.7	46.3	84.1	76.4	124.5	1274.9
1961	..	175.2	97.4	217.2	127.1	154.6	117.8	86.6	97.2	78.6	162.5	117.6	98.2	1529.9
1962	..	69.9	94.1	140.0	136.0	149.4	64.5	57.6	84.4	99.9	92.6	87.9	80.5	1156.7
1963	..	66.5	38.6	73.4	131.6	76.0	53.7	72.7	92.9	115.1	189.3	124.0	135.4	1169.1
1964	..	146.2	136.1	121.8	118.5	108.5	52.1	34.1	46.9	63.8	61.7	—	—	—

PONDO RIVER (NORTH) AT ROAD CROSSING
(Island Drainage Division)

Catchment Area = 9 square miles

SITE

Pondo River, North Arm above junction with main stream

Map reference: PONDO. 1 inch = 1 mile. Grid 301025
Latitude S. 4° 30′ 30″. Longitude E. 151° 43′ 05″

Station 62: Bristol recorder—November 1959 to November 1960
L.S. Manometer Servo recorder—September 1962 to date

GAUGING DATA

Maximum, Minimum and Mean Discharges not given due to poor quality of records

CURRENT METER MEASUREMENTS

Highest: 160 cusecs at gauge 62, height 3.12′ on 26th November 1959

Lowest: 12.2 cusecs at gauge 62, height 2.00′ on 14th November 1963

Number of Measurements (1959–64) = 85

PONDO RIVER (NORTH) AT ROAD CROSSING

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1962	—	—	—	—	—	—	—	—	—	0.71	0.44	0.28	—	—
1963	0.03	0.05	0.18	0.31	—	—	—	—	—	—	—	—	—	—

PONDO RIVER (NORTH) AT ROAD CROSSING

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1962	..	—	—	—	—	—	—	—	—	—	23	28	17	—
1963	..	13	14	15	26	—	—	—	—	—	—	—	—	—

PONDO RIVER (NORTH) AT ROAD CROSSING

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1962	..	—	—	—	—	—	—	—	—	—	2.55	3.07	2.24	—
1963	..	0.96	0.97	1.62	2.69	—	—	—	—	—	—	—	—	—

PURARI RIVER AT WABO DAM SITE
(Gulf Drainage Division)

Catchment Area = 11,100 square miles

SITE

Purari River, at Wabo Dam Site 29 miles above junction with the Aure River

Map reference: KIKORI. 1 inch = 4 miles. Grid (P) U5307
Latitude S. 7° 00′ 00″. Longitude E. 145° 03′ 30″

Station 64: L.S.SD175 recorder—March 1960 to May 1962
L.S. Manometer Servo recorder—June 1962 to date

GAUGING DATA DECEMBER 1961 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	1	1	1	1	1	3	2	2	3	3	3	4	
Mean ..	4737	5707	6725	6113	5028	3956	3689	5827	6988	5697	4274	4199	62940

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge 8,997,520 acre feet in September 1962
Minimum Monthly Discharge 2,362,620 acre feet in November 1963

Maximum Daily Flow 324,700 cusecs on 5th September 1962
Minimum Daily Flow 27,230 cusecs on 10th November 1963

Peak Flow 361,600 cusecs on 4th September 1962
Lowest Flow 26,600 cusecs on 11th November 1963

CURRENT METER MEASUREMENTS

Highest: 203,460 cusecs at gauge 64, height 22.30′ on 15th May 1964

Lowest: 32,126 cusecs at gauge 64, height 4.30′ on 25th July 1964
(26,253 cusecs at gauge 64, height 3.44′ on 31st July 1965)

Number of Measurements (1960–64) = 47

PURARI RIVER AT WABO DAM SITE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1961	—	—	—	—	—	—	—	—	—	—	—	149.1	—	—
1962	—	—	—	—	—	160.0	—	—	361.6	204.5	119.1	137.0	—	—
1963	121.2	—	—	—	—	208.5	176.3	222.0	228.1	227.8	96.5	130.0	—	—
1964	—	200.2	179.6	181.8	196.0	116.3	191.0	148.9	190.4	118.7	118.2	177.3	—	—

PURARI RIVER AT WABO DAM SITE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1961	..	—	—	—	—	—	—	—	—	—	—	—	37100	—
1962	..	—	—	—	—	—	48000	—	—	87990	59200	37730	41400	—
1963	..	50800	—	—	—	—	40320	33600	53200	48400	41750	26600	30520	—
1964	..	—	50560	62900	64600	50480	32900	28280	45280	41750	39620	56000	31220	—

PURARI RIVER AT WABO DAM SITE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1961	..	—	—	—	—	—	—	—	—	—	—	—	4754	—
1962	..	—	—	—	—	—	4313	—	—	8998	7068	3608	5427	—
1963	..	4737	—	—	—	—	4490	4082	6866	6617	5808	2363	3042	—
1964	..	—	5707	6725	6113	5028	3065	3296	4788	5349	4214	6852	3574	—

RAMU RIVER AT YONKI DOME
(North-Central Drainage Division)

Catchment Area = 343 square miles

SITE

Ramu River below junction with Yonki Creek

Map reference: FININTEGU. 1 inch = 1 mile. Grid 538923
Latitude S. 6° 14′ 25″. Longitude E. 145° 58′ 00″

Station 30: L.S.A35 recorder—May 1957 to date

GAUGING DATA

JUNE 1957 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	6	6	7	7	7	8	8	8	8	8	8	8	
Mean ..	86.7	96.7	106.8	96.2	63.3	39.2	32.0	38.9	46.8	67.3	59.9	93.4	827.2

Maximum Annual Discharge	958,860 acre feet in 1962
Minimum Annual Discharge	578,808 acre feet in 1963
Maximum Monthly Discharge	170,080 acre feet in January 1964
Minimum Monthly Discharge	16,790 acre feet in August 1958
Maximum Daily Flow	9,610 cusecs on 29th January 1960
Minimum Daily Flow	210 cusecs on 20th August 1958
Peak Flow	15,990 cusecs on 29th January 1960
Lowest Flow	204 cusecs on 11th October 1958

CURRENT METER MEASUREMENTS

Highest: 7,027 cusecs at gauge 30, height 11.40′ on 2nd May 1962
(10,273 cusecs at gauge 30, height 13.40′ on 2nd March 1966)

Lowest: 253.6 cusecs at gauge 30, height 0.83′ on 15th October 1964
(232 cusecs at gauge 30, height 0.91′ on 9th November 1965)

Number of Measurements (1957–64) = 106

RAMU RIVER AT YONKI DOME

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1957	—	—	—	—	—	3.79	0.45	5.07	9.58	7.19	7.28	9.17	—	—
1958	4.23	9.78	13.30	3.49	1.97	0.90	0.98	1.57	3.13	9.19	4.14	8.84	13.30	18.45
1959	3.23	6.13	11.56	10.20	3.27	2.55	2.13	1.96	2.13	6.99	6.26	5.60	11.56	16.85
1960	15.99	10.95	12.16	5.90	3.74	5.10	0.53	0.93	0.65	8.27	7.87	6.09	15.99	20.90
1961	—	—	8.34	6.76	9.98	5.16	2.55	7.55	7.45	11.80	8.18	6.26	—	—
1962	8.64	10.06	7.78	9.04	12.06	2.21	4.86	4.32	7.46	7.11	10.40	13.44	13.44	18.58
1963	3.40	1.48	4.93	3.79	0.94	5.34	5.66	4.24	6.30	12.11	6.99	5.08	12.11	17.31
1964	11.44	8.97	11.78	14.71	5.08	0.66	0.47	0.60	2.77	1.46	7.46	4.03	14.71	19.74

RAMU RIVER AT YONKI DOME

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1957	..	—	—	—	—	—	389	312	292	365	393	338	777	—
1958	..	750	755	916	688	375	270	254	208	216	204	338	492	204
1959	..	400	449	828	904	555	416	405	317	330	317	317	391	317
1960	..	511	1210	920	740	487	506	377	304	253	309	362	539	253
1961	..	—	—	570	580	655	594	422	401	452	490	546	480	—
1962	..	380	395	594	536	692	471	398	413	434	477	468	519	380
1963	..	404	312	312	423	302	260	293	236	426	620	427	412	236
1964	..	643	866	830	650	549	370	304	257	249	244	277	346	244

RAMU RIVER AT YONKI DOME

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1957	..	—	—	—	—	—	33.9	23.0	40.3	76.7	62.4	54.8	141.4	—
1958	..	74.6	117.2	135.0	64.9	36.7	21.5	21.4	16.8	30.4	68.9	44.2	120.1	751.6
1959	..	44.2	81.2	123.2	159.6	55.7	34.2	39.5	25.6	30.0	61.6	48.0	88.4	791.3
1960	..	146.7	152.4	127.9	111.5	45.0	58.4	26.6	22.7	17.3	66.1	70.7	84.5	929.8
1961	..	—	—	87.4	71.5	107.1	62.6	38.9	104.7	42.8	109.1	76.6	69.1	—
1962	..	44.1	83.9	100.3	115.7	124.1	42.8	50.5	48.1	72.5	60.2	74.1	142.6	958.9
1963	..	40.8	22.2	47.4	51.4	25.4	33.7	35.2	34.3	81.1	89.5	61.2	56.6	578.8
1964	..	170.1	123.5	126.4	99.1	48.9	26.3	21.3	18.7	23.9	20.6	49.5	44.7	773.1

SNAKE RIVER ABOVE ROAD BRIDGE
(Huon Drainage Division)

Catchment Area = 165 square miles

SITE

Snake River, approximately ¼ mile upstream of bridge on Lae–Bulolo Road

Map reference: BULOWAT EAST. 1 inch = 1 mile. Grid 244050
Latitude S. 7° 02′ 10″. Longitude E. 146° 36′ 00″

Station 28: L.S.A35 recorder—February 1957 to April 1964
Discontinued

GAUGING DATA APRIL 1957 to MARCH 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	7	7	7	6	7	7	7	7	7	7	7	7	
Mean	25.61	22.98	23.36	24.50	23.42	23.53	28.51	35.03	28.99	26.21	19.15	25.00	306.29

Maximum Annual Discharge	383,740 acre feet in 1960
Minimum Annual Discharge	237,130 acre feet in 1963
Maximum Monthly Discharge	55,620 acre feet in February 1960
Minimum Monthly Discharge	10,450 acre feet in May 1963
Maximum Daily Flow	2,340 cusecs on 26th January 1964
Minimum Daily Flow	139 cusecs on 4th June 1963
Peak Flow	4,265 cusecs on 22nd September 1959
Lowest Flow	135 cusecs on 4th June 1963

CURRENT METER MEASUREMENTS

Highest: 1,183 cusecs at gauge 28, height 3.23′ on 29th January 1960
Lowest: 183.8 cusecs at gauge 28, height 0.70′ on 11th May 1963

Number of Measurements (1957–63) = 63

SNAKE RIVER ABOVE ROAD BRIDGE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1957	—	—	—	—	1.08	1.44	2.05	1.17	0.90	0.63	0.65	3.45	—	—
1958	0.78	2.11	1.83	0.62	0.96	0.82	2.34	3.10	0.70	0.73	0.64	1.43	3.10	5.21
1959	0.79	0.96	0.91	1.87	1.60	2.22	1.69	1.31	4.27	0.65	0.64	1.57	4.27	6.01
1960	2.43	3.26	1.53	1.95	0.60	0.97	1.00	1.91	0.87	2.77	3.48	0.80	3.48	5.48
1961	1.12	0.68	1.07	0.98	1.29	1.06	1.30	1.89	1.99	2.04	1.13	0.73	2.04	4.31
1962	0.30	0.71	0.69	1.50	1.01	0.91	1.63	1.69	1.52	0.61	0.88	1.29	1.69	3.36
1963	0.55	0.53	0.66	0.88	0.24	0.83	1.99	0.62	1.78	3.41	0.73	1.44	3.41	5.07
1964	2.92	1.16	1.46	—	—	—	—	—	—	—	—	—	—	—

SNAKE RIVER ABOVE ROAD BRIDGE

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1957	..	—	—	—	—	195	266	220	372	266	179	136	190	—
1958	..	263	311	352	238	201	174	192	302	239	217	220	236	174
1959	..	175	217	250	228	350	361	378	388	455	239	199	207	175
1960	..	190	706	324	371	204	289	314	337	280	212	280	250	190
1961	..	304	258	219	224	220	250	476	425	315	397	296	262	219
1962	..	217	215	219	234	352	260	234	394	318	272	242	257	215
1963	..	198	152	157	173	139	135	211	313	290	400	274	283	135
1964	..	310	261	252	—	—	—	—	—	—	—	—	—	—

SNAKE RIVER ABOVE ROAD BRIDGE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1957	..	—	—	—	—	30.38	26.84	32.31	38.85	25.03	17.12	12.09	35.74	—
1958	..	21.50	23.32	38.32	22.35	15.09	15.47	22.71	41.16	20.12	17.75	17.17	25.75	280.71
1959	..	15.94	16.20	21.50	22.63	25.89	33.15	32.18	30.84	43.56	20.73	15.83	21.96	300.41
1960	..	46.98	55.62	31.92	37.54	16.89	28.60	29.33	31.08	26.39	28.63	25.53	25.23	383.74
1961	..	25.53	17.69	18.59	18.93	30.71	28.43	38.57	44.26	32.53	39.80	22.84	19.24	336.94
1962	..	14.91	15.03	18.52	30.04	34.50	20.42	21.84	33.81	27.70	21.13	19.82	23.09	280.81
1963	..	17.44	10.66	12.83	15.51	10.45	11.81	22.61	25.21	27.57	38.33	20.75	23.96	237.13
1964	..	36.97	22.36	21.83	—	—	—	—	—	—	—	—	—	—

TUMA RIVER AT PEPEKA
(Gulf Drainage Division)

Catchment Area = 15.1 square miles

SITE

Tuma River approximately 2 miles from junction with Nebelyer River

Map reference:
Latitude S. 5° 50′ 40″. Longitude E. 144° 05′ 00″

Station 98: L.S.2A35 recorder—May 1963 to date

GAUGING DATA

MAY 1963 to DECEMBER 1964

Maximum, Minimum and Mean Discharges not given due to insufficient records.

CURRENT METER MEASUREMENTS

Highest: 138.80 cusecs at gauge 98, height 4.63′ on 6th March 1963
(805.86 cusecs at gauge 98, height 8.60′ on 13th March 1966)

Lowest: 15.52 cusecs at gauge 98, height 3.30′ on 19th July 1963
(14.73 cusecs at gauge 98, height 3.22′ on 26th July 1965)

Number of Measurements (1962–64) = 26

TUMA RIVER AT PEPEKA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1963	—	—	—	—	—	1.11	0.21	0.19	0.88	0.45	0.66	—	—	—
1964	—	—	—	—	—	0.66	0.34	0.36	1.77	0.91	0.82	0.70	—	—

TUMA RIVER AT PEPEKA

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1963	..	—	—	—	—	—	20.0	16.0	18.0	27.0	23.0	13.2	—	—
1964	..	—	—	—	—	—	17.6	17.6	26.0	29.0	24.0	45.0	22.0	—

TUMA RIVER AT PEPEKA

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1963	..	—	—	—	—	—	4.36	2.10	2.60	6.52	4.91	2.93	—	—
1964	..	—	—	—	—	—	2.44	2.40	4.06	8.81	4.62	8.51	4.38	—

TAURI RIVER AT HELL'S GATE
(South-East Coast Drainage Division)

Catchment Area = 1,085 square miles)

SITE

Tauri River at Hell's Gate, approximately 4 miles above the junction with the Kapan River

Map reference: WAU. 1 inch = 4 miles. Grid (L) V7218
Latitude S. 7° 51′. Longitude E. 146° 09′

Station 2: L.S.A35 recorder—September 1952 to December 1961
Station 2A: L.S. Manometer Servo recorder—November 1964 to date

GAUGING DATA SEPTEMBER 1952 to OCTOBER 1961

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	7	6	6	7	5	2	4	4	4	6	6	6	
Mean ..	330.4	399.1	378.8	408.0	309.3	276.4	177.2	140.5	201.8	241.6	259.2	363.7	3486.0

Maximum Annual Discharge } Not sufficient records
Minimum Annual Discharge }

Maximum Monthly Discharge 711,650 acre feet in December 1954
Minimum Monthly Discharge 72,370 acre feet in August 1955

Maximum Daily Flow 30,240 cusecs on 16th May 1961
Minimum Daily Flow 815 cusecs on 13th August 1955

Peak Flow 40,960 cusecs on 16th May, 1961
Lowest Flow 815 cusecs on 13th August 1955

CURRENT METER MEASUREMENTS

Station 2

Highest: 10,593 cusecs at gauge 2, height 10.69′ on 10th July 1959

Lowest: 2,010 cusecs at gauge 2, height 3.83′ on 6th September 1960

Station 2A

Highest } Not sufficient gaugings
Lowest }

Number of Measurements at Station 2 (1958–61) = 15

Number of Measurements at Station 2A (1962–64) = 2

TAURI RIVER AT HELL'S GATE

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1952	—	—	—	—	—	—	—	—	—	15.20	16.13	19.53	—	—
1953	13.87	—	—	—	—	—	16.85	9.54	—	—	—	—	—	—
1954	13.80	21.13	8.15	18.90	21.05	10.42	6.22	5.68	11.27	10.30	14.43	28.00	28.00	21.63
1955	18.90	29.18	8.52	27.20	—	—	3.36	3.26	9.67	10.42	15.46	8.77	—	—
1956	12.44	12.63	16.07	14.77	7.22	—	—	—	—	—	—	—	—	—
1957	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	14.56	26.70	12.40	8.99	12.10	—	—	—	—	18.66	14.99	8.85	—	—
1959	10.47	22.05	23.07	17.95	—	—	—	8.02	13.08	8.12	14.40	16.61	—	—
1960	—	—	—	18.25	7.66	—	—	—	—	13.09	20.15	14.06	—	—
1961	15.52	33.05	23.93	20.00	40.96	21.23	23.81	—	15.20	—	—	—	—	—

TAURI RIVER AT HELL'S GATE

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1952	..	—	—	—	—	—	—	—	—	—	2130	2000	2020	—
1953	..	1900	—	—	—	—	—	1370	1440	—	—	—	—	—
1954	..	2815	3300	2330	1920	3170	1390	1130	1250	1590	1760	1170	6220	1130
1955	..	3600	3560	1845	2710	—	—	968	815	1628	1340	1480	1880	—
1956	..	1645	2180	2355	2130	1105	—	—	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	..	2851	3860	2860	1732	1345	—	—	—	—	2040	2446	1746	—
1959	..	2318	2438	5974	4610	—	—	—	1774	1400	984	992	1844	—
1960	..	—	—	—	2550	1879	—	—	—	—	1140	2078	1734	—
1961	..	2920	3107	3016	3350	3790	3530	2111	—	1518	—	—	—	—

TAURI RIVER AT HELL'S GATE

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1952	..	—	—	—	—	—	—	—	—	—	275.2	391.2	345.5	—
1953	..	248.9	—	—	—	—	—	203.3	168.5	—	—	—	—	—
1954	..	388.3	402.4	257.4	352.8	467.1	178.2	114.1	136.4	191.7	227.8	186.2	711.7	3614.0
1955	..	453.6	504.2	211.2	692.6	—	—	76.9	72.4	164.7	165.6	273.9	234.1	—
1956	..	253.8	265.7	418.8	350.9	136.3	—	—	—	—	—	—	—	—
1957	..	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	..	318.1	434.7	283.6	181.8	180.8	—	—	—	—	422.7	293.5	221.4	—
1959	..	307.1	383.8	631.8	501.3	—	—	—	184.6	224.6	117.6	146.9	332.6	—
1960	..	—	—	—	390.5	178.7	—	—	—	—	240.5	263.7	336.7	—
1961	..	342.8	403.7	469.6	386.3	583.7	374.6	314.4	—	226.1	—	—	—	—

TOWANOKOKO RIVER AT TOWANOKOKO
(Island Drainage Division)

Catchment Area = 41 square miles

SITE

Towanokoko River approximately 8 miles from the coast

Map reference: STOCKHOLM. 1 inch = 1 mile. Grid 307053
Latitude S. 4° 29′ 00″. Longitude E. 151° 43′ 40″

Station 61: Bristol recorder—November 1959 to September 1962
L.S. Manometer Servo recorder—September 1962 to date

GAUGING DATA

Maximum, Minimum and Mean Discharges not given due to poor quality of records

CURRENT METER MEASUREMENTS

Highest: 185 cusecs at gauge 61, height 3.60′ on 20th September 1963

Lowest: 42.6 cusecs at gauge 61, height 2.13′ on 10th February 1963

Number of Measurements (1959—64) = 101

TOWANOKOKO RIVER AT TOWANOKOKO

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1962	—	—	—	—	—	—	—	—	—	0.54	0.79	0.59	—	—
1963	0.13	0.09	—	—	0.62	0.21	0.91	0.95	0.90	0.19	—	—	—	—

TOWANOKOKO RIVER AT TOWANOKOKO

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1962	..	—	—	—	—	—	—	—	—	—	77	60	64	—
1963	..	51	42	—	—	55	63	59	92	92	63	—	—	—

TOWANOKOKO RIVER AT TOWANOKOKO

Discharge in thousands Acre Feet

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1962	..	—	—	—	—	—	—	—	—	—	8.75	7.80	6.89	—
1963	..	3.98	2.58	—	—	5.73	5.18	7.22	11.71	11.94	4.93	—	—	—

VANAPA RIVER AT PETO ISLAND
(South-East Coast Drainage Division)

Catchment Area = 750 square miles

SITE

Vanapa River above Peto Island, approximately 7 miles upstream of Brown River Road crossing

Map reference: MORESBY. 1 inch = 4 miles. Grid (Q) G9082
Latitude S. 9° 03′ 15″. Longitude E. 147° 11′ 08″

Station 11: Staff gauge—July 1953 to September 1954
L.S.A35 recorder—September 1954 to date

GAUGING DATA JULY 1953 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	8	10	10	8	7	6	7	6	8	9	9	9	
Mean ..	400.3	441.6	485.7	461.7	293.3	199.6	144.4	156.7	198.0	200.5	222.6	329.3	3533.7

Maximum Annual Discharge	4,143,460 acre feet in 1962
Minimum Annual Discharge	2,992,980 acre feet in 1955
Maximum Monthly Discharge	659,140 acre feet in April 1959
Minimum Monthly Discharge	96,420 acre feet in July 1958
Maximum Daily Flow	22,650 cusecs on 13th March 1964
Minimum Daily Flow	974 cusecs on 19th August 1958
Peak Flow	44,750 cusecs on 28th March 1960
Lowest Flow	974 cusecs on 19th August 1958

CURRENT METER MEASUREMENTS

Highest: 8,364 cusecs at gauge 11, height 12.42′ on 9th April 1964
(14,506 cusecs at gauge 11, height 14.85′ on 25th March 1966)

Lowest: 1,736 cusecs at gauge 11, height 8.08′ on 10th August 1960

Number of Measurements (1959–64) = 71

VANAPA RIVER AT PETO ISLAND

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1954	—	19.78	14.56	—	—	—	2.41	2.73	5.09	13.24	6.46	16.66	—	—
1955	36.80	22.20	14.24	12.58	11.26	3.71	11.06	3.98	5.85	4.68	9.09	9.63	36.80	21.79
1956	10.86	24.16	15.52	10.27	—	—	—	—	—	—	—	—	—	—
1957	—	33.90	17.51	—	—	—	—	—	—	8.13	9.39	15.32	—	—
1958	15.80	21.94	26.12	42.00	9.94	10.02	2.80	—	—	—	—	—	—	—
1959	—	—	15.54	31.20	9.52	—	—	—	11.46	9.52	6.47	36.20	—	—
1960	32.42	21.96	44.75	31.97	19.77	11.51	3.48	5.39	6.77	8.63	12.48	16.64	44.75	21.95
1961	15.04	35.35	—	—	—	—	—	—	21.35	17.27	18.43	20.80	—	—
1962	20.05	25.16	29.14	39.55	22.37	9.20	5.30	23.40	32.10	17.61	23.80	39.05	39.55	20.90
1963	37.60	21.83	27.20	34.80	9.77	21.65	11.29	19.84	26.80	12.88	14.79	15.07	37.60	20.50
1964	24.60	21.19	38.19	21.55	17.37	14.33	9.44	11.54	29.05	18.96	22.62	17.64	38.19	20.62

VANAPA RIVER AT PETO ISLAND

Minimum Flow in Cubic Feet per Second

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1954	..	—	4480	4280	—	—	—	1600	1673	1420	1760	2010	3030	—
1955	..	4630	4880	3710	3350	3440	1975	1800	1350	1350	1280	1385	2610	1280
1956	..	2250	3710	3800	3260	—	—	—	—	—	—	—	—	—
1957	..	—	4590	5690	—	—	—	—	—	—	1810	2260	3482	—
1958	..	3780	4750	6610	4920	2576	1756	1248	—	—	—	—	—	—
1959	..	—	—	4270	5240	3022	—	—	—	1567	1405	1369	1621	—
1960	..	2488	5819	4430	3705	2730	2455	1666	1540	1441	1304	2230	2650	1304
1961	..	4410	5010	—	—	—	—	—	—	1846	2300	2080	2874	—
1962	..	3780	4920	5746	4542	4050	2370	1846	1920	3496	2631	2180	2576	1846
1963	..	3645	4126	3960	5073	2240	2260	1990	1930	1950	1940	1801	2330	1801
1964	..	5368	4750	5386	4590	3286	2230	2030	2070	1783	2160	2719	2510	1783

VANAPA RIVER AT PETO ISLAND

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1954	..	—	346.4	366.1	—	—	—	117.8	102.7	121.6	233.6	187.0	441.4	—
1955	..	482.1	478.0	317.1	340.9	280.2	152.6	155.2	114.8	119.5	107.9	190.2	254.5	2993.0
1956	..	251.6	342.8	377.2	311.8	—	—	—	—	—	—	—	—	—
1957	..	—	520.7	568.2	—	—	—	—	—	—	175.2	242.6	396.0	—
1958	..	326.8	518.1	585.3	459.8	254.5	172.6	96.4	—	—	—	—	—	—
1959	..	—	—	423.9	659.1	273.8	—	—	—	145.6	119.6	132.0	285.7	—
1960	..	370.5	508.4	472.4	478.5	280.4	279.5	132.1	113.2	117.4	168.0	212.9	337.4	3470.6
1961	..	418.6	494.6	—	—	—	—	—	—	178.1	308.6	248.2	329.0	—
1962	..	392.3	413.8	553.1	554.4	422.3	199.0	146.4	194.3	423.7	267.2	235.2	341.9	4143.5
1963	..	406.8	370.0	606.5	454.2	226.0	200.3	189.9	230.3	259.9	214.3	188.7	327.7	3674.7
1964	..	553.9	423.2	587.5	434.8	315.7	193.5	173.0	185.0	217.9	210.2	366.3	250.5	3911.3

WANTON RIVER AT KARANKA
(Huon Drainage Division)

Catchment Area = 50 square miles

SITE

Wanton River, approximately 1,500 ft. north of Karanka airstrip

Map reference: ANGA. 1 inch = 1 mile. Grid 657810
Latitude S. 6° 21′. Longitude E. 146° 05′

Station 44: L.S.A35 recorder—March 1958 to date

GAUGING DATA MARCH 1958 to DECEMBER 1964

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	6	6	6	7	7	6	6	6	7	7	7	7	
Mean ..	22.49	21.48	32.09	27.79	14.52	9.57	9.49	12.72	12.67	19.43	17.40	23.29	222.94

Maximum Annual Discharge	267,800 acre feet in 1962
Minimum Annual Discharge	214,680 acre feet in 1964
Maximum Monthly Discharge	57,330 acre feet in March 1959
Minimum Monthly Discharge	4,840 acre feet in May 1963
Maximum Daily Flow	10,700 cusecs on 14th March 1959
Minimum Daily Flow	56 cusecs on 11th and 12th June 1963
Peak Flow	37,250 cusecs on 13th March 1959
Lowest Flow	56 cusecs on 12th June 1963

CURRENT METER MEASUREMENTS

Highest: 2,439 cusecs at gauge 44, height 9.50′ on 25th March 1960

Lowest: 82.5 cusecs at gauge 44, height 3.30′ on 26th June 1964

Number of Measurements (1958–64) = 96

WANTON RIVER AT KARANKA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1958	—	—	—	1.28	0.15	0.23	1.82	0.64	0.80	12.58	0.66	6.02	—	—
1959	0.48	4.04	37.25	14.66	0.61	0.63	1.13	0.74	3.25	3.00	3.38	2.87	37.25	33.50
1960	4.95	4.16	6.65	4.12	0.73	0.55	0.39	0.79	2.96	4.15	10.64	3.60	10.64	19.05
1961	3.12	1.55	1.80	6.24	7.64	1.91	1.34	2.48	2.62	8.61	1.44	2.18	8.61	17.28
1962	1.67	10.63	2.03	4.15	3.33	0.95	1.25	1.47	4.94	4.98	4.77	7.78	10.63	19.04
1963	0.80	0.51	2.70	1.73	0.43	—	—	—	2.84	4.53	4.44	1.61	—	—
1964	8.41	3.14	10.64	2.56	2.82	0.16	0.43	0.48	2.90	0.82	5.12	1.11	10.64	19.05

WANTON RIVER AT KARANKA

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1958	..	—	—	—	143	78	66	63	85	76	64	112	173	—
1959	..	114	108	233	292	134	123	111	117	126	108	86	96	86
1960	..	92	252	161	191	120	100	90	96	67	77	80	134	67
1961	..	101	119	111	120	183	143	100	97	99	110	106	92	92
1962	..	83	88	159	171	146	99	88	104	99	98	107	144	83
1963	..	109	76	70	89	59	—	—	—	93	141	80	82	—
1964	..	156	153	157	148	119	80	62	62	71	67	76	72	62

WANTON RIVER AT KARANKA

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1958	..	—	—	—	14.25	6.45	5.23	9.56	10.88	10.12	27.23	10.02	38.10	—
1959	..	10.76	21.75	57.33	54.14	13.61	10.76	12.97	11.60	18.21	16.77	14.16	17.94	260.00
1960	..	35.85	39.53	30.93	30.93	9.52	9.05	8.41	8.60	7.31	18.61	25.12	20.21	244.07
1961	..	16.59	15.94	16.23	20.45	28.32	17.53	10.78	25.39	10.05	27.34	12.88	15.59	217.09
1962	..	9.59	25.31	31.39	39.79	26.79	8.95	10.14	14.34	18.42	13.70	22.15	47.23	267.80
1963	..	11.73	5.28	12.37	13.47	4.84	—	—	—	13.67	25.05	18.28	12.54	—
1964	..	50.43	21.05	44.31	21.53	12.13	5.89	5.05	5.50	10.91	7.31	19.18	11.39	214.68

WARAMA CREEK AT TAPINI
(South-East Coast Drainage Division)

Catchment Area = 0.35 square miles

SITE

Warama Creek upstream of culvert underneath Tapini airstrip

Map reference
Latitude S. 8° 30′ 50″. Longitude E. 146° 41′ 00″

Station 73: Staff gauge—October 1960 to September 1962
Discontinued

GAUGING DATA

OCTOBER 1960 to SEPTEMBER 1962

Mean Discharges in thousands Acre Feet

Not listed since number of years of records insufficient

Maximum Annual Discharge Minimum Annual Discharge	Not sufficient records
Maximum Monthly Discharge	488 acre feet in May 1962
Minimum Monthly Discharge	292 acre feet in December 1960
Maximum Daily Flow	10.2 cusecs on 2nd May 1962
Minimum Daily Flow	4.3 cusecs on 6th December 1960

CURRENT METER MEASUREMENTS

Highest: 9.5 cusecs at gauge 73, height 1.05′ on 23rd June 1961

Lowest: 3.7 cusecs at gauge 73, height 0.72′ on 6th December 1960

Number of Measurements (1960–64) = 35

WARAMA CREEK AT TAPINI

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1960	—	—	—	—	—	—	—	—	—	—	0.006	0.005	—	—
1961	0.007	0.006	0.008	0.007	0.008	0.008	0.007	0.007	0.007	0.006	0.007	0.006	0.008	—
1962	0.008	0.007	0.007	0.008	0.010	0.008	0.008	0.008	—	—	—	—	—	—

WARAMA CREEK AT TAPINI

Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1960	..	—	—	—	—	—	—	—	—	—	—	4	4	—
1961	..	5	6	6	6	6	7	7	6	6	6	6	6	5
1962	..	6	6	6	6	7	7	7	7	—	—	—	—	—

WARAMA CREEK AT TAPINI

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1960	..	—	—	—	—	—	—	—	—	—	—	0.31	0.29	—
1961	..	0.34	0.33	0.41	0.39	0.44	0.44	0.41	0.40	0.37	0.37	0.36	0.36	4.62
1962	..	0.36	0.36	0.40	0.40	0.49	0.44	0.46	0.45	—	—	—	—	—

WARIA RIVER AT GARAINA
(North-East Coast Drainage Division)

Catchment Area = 580 square miles

SITE

Waria River, near Garaina about 2 miles east of airstrip

Map reference: SALAMOA. 1 inch = 4 miles. Grid (L) W8912
Latitude S. 7° 53′. Longitude E. 147° 10′ 30″

Station 49: L.S.A35 recorder—August 1958 to April 1961
Station 49A: L.S. Manometer Servo recorder—October 1964 to date

GAUGING DATA AUGUST 1958 to APRIL 1961

Mean Discharges in thousands Acre Feet

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
No. of Years	3	3	3	3	2	2	2	2	3	3	3	3	—
Mean ..	191.7	196.8	191.0	236.1	208.4	209.1	178.7	157.0	186.4	218.0	201.2	185.5	2359.9

Maximum Annual Discharge	2,484,460 acre feet in 1960
Minimum Annual Discharge	2,219,570 acre feet in 1959
Maximum Monthly Discharge	289,020 acre feet in February 1960
Minimum Monthly Discharge	150,740 acre feet in September 1960
Maximum Daily Flow	8,990 cusecs on 13th February 1960
Minimum Daily Flow	1,420 cusecs on 28th September 1960
Peak Flow	12,770 cusecs on 2nd September 1958
Lowest Flow	1,350 cusecs on 28th September 1960

CURRENT METER MEASUREMENTS

Station 49

Highest: 5,150 cusecs at gauge 49, height 6.46′ on 23rd September 1959
Lowest: 1,805 cusecs at gauge 49, height 2.77′ on 9th July 1960

Station 49A

Highest, Lowest } Not sufficient gaugings

Number of Measurements at Station 49 (1958–61) = 45
Number of Measurements at Station 49A (1964) = 5

WARIA RIVER AT GARAINA

Maximum Flow in thousands Cubic Feet per Second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Gauge Height (feet)
1958	—	—	—	—	—	—	—	—	12.77	10.24	10.42	10.16	—	—
1959	7.07	6.00	5.41	8.28	8.96	8.56	6.98	4.97	8.46	6.44	6.58	6.90	8.96	12.32
1960	10.62	12.25	9.42	9.70	8.10	8.88	7.78	5.89	8.46	9.79	8.50	8.54	12.25	16.35
1961	9.70	6.24	6.86	7.74	—	—	—	—	—	—	—	—	—	—

WARIA RIVER AT GARAINA

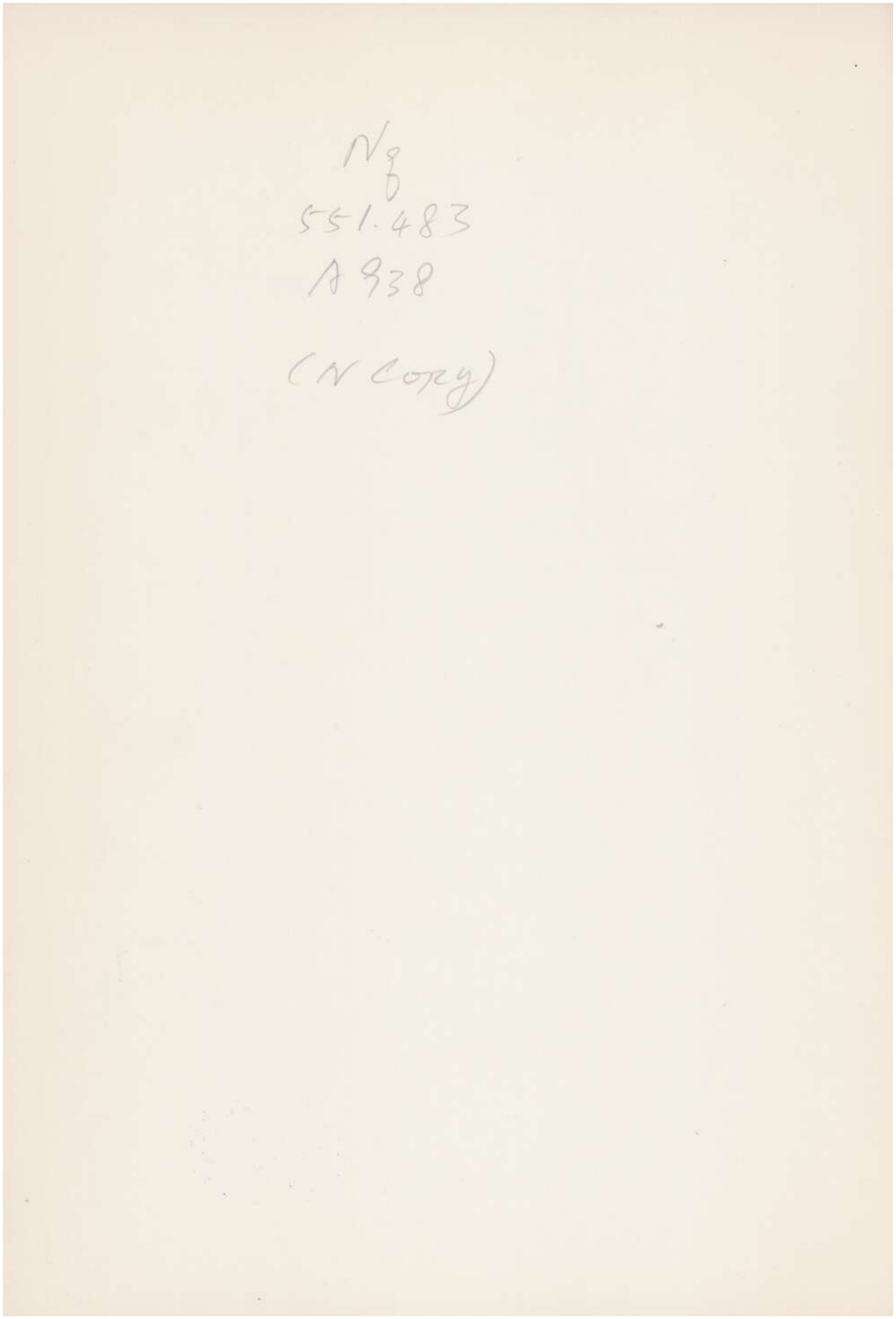
Minimum Flow in Cubic Feet per Second

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1958	..	—	—	—	—	—	—	—	—	1560	2180	2410	1850	—
1959	..	1930	1690	1760	2630	2340	2650	2220	1510	2200	1560	1490	1710	1490
1960	..	1490	2900	2190	2490	2210	2130	1590	1530	1350	1860	1980	1740	1350
1961	..	1860	1910	1778	2270	—	—	—	—	—	—	—	—	—

WARIA RIVER AT GARAINA

Discharge in thousands Acre Feet

Year	..	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1958	..	—	—	—	—	—	—	—	—	193.6	277.1	254.6	178.9	—
1959	..	195.3	149.6	154.9	227.1	226.8	218.6	201.2	149.5	214.9	161.0	154.8	166.0	2219.6
1960	..	208.8	289.0	234.7	269.2	190.0	199.6	156.3	164.5	150.7	215.9	194.2	211.5	2484.5
1961	..	171.0	151.6	183.4	212.0	—	—	—	—	—	—	—	—	—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