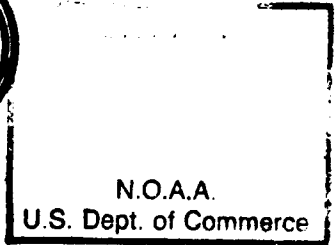
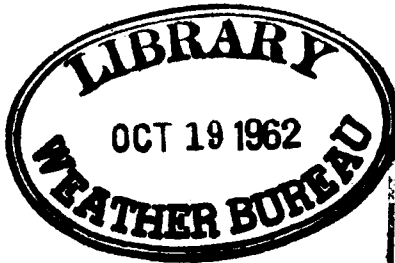


REPUBLIC OF IRAQ  
DEVELOPMENT BOARD  
Baghdad, Iraq

SUMMARY OF MONTHLY PRECIPITATION  
AT STATIONS IN IRAQ

1887 - 1958

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HYDROLOGICAL SURVEY OF IRAQ

Harza Engineering Co.  
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London

In Association

May, 1959

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# **National Oceanic and Atmospheric Administration**

## **Environmental Data Rescue Program**

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# HYDROLOGICAL SURVEY OF IRAQ.

8/1/28, Hewaidy Street  
Kerrada el Sharqiyah  
Baghdad

The Harza Engineering Co. } in  
Binnie, Deacon & Gourley } association

Cables : CHICLON BAGHDAD

Phone : 99428

Ref. 421 ..... Date 1 May 1959 .....

Minister of Development,  
Development Board and Ministry of Development,  
Baghdad, Iraq.

Subject: Hydrological Survey of Iraq -  
Summary of Monthly Precipitation  
at Stations in Iraq.

Your Excellency :

We refer to your letter of 14 January 1958 regarding a Hydrological Survey of Iraq by our firms. The scope of the work, as outlined in that letter and in earlier correspondence and further defined by consultation with the First Technical Section of the Ministry consists of five general categories, as follows:

Phase I - Collection of existing hydrologic data and evaluation of its adequacy for estimating extreme floods, for operation studies and for runoff forecasting.

Phase II - Expansion of hydrologic networks to supplement the above data.

**Phase III - Determination of probable maximum floods in Iraq and of probability of floods of lesser magnitude.**

**Phase IV - Operation studies of the existing (including under construction) river control systems in Iraq and of alternative projected systems (a) to evaluate degree of flood control and water available at varying stages of irrigation development, and (b) to evaluate water available for interim non-irrigation use at different stages of development.**

**Phase V - Development of operating guides and rules for reservoir systems and recommendations for river control procedures.**

We are pleased to submit in this report the results of that part of Phase I of our investigations pertaining to precipitation data. Streamflow data were submitted in a report entitled "Discharges for Selected Gaging Stations in Iraq, 1930-1956" dated May 1958. A supplement containing later discharge data is being prepared. Our "Interim Report - Hydrological Survey of Tigris and Euphrates Basins", dated August 1958, gave preliminary conclusions on other phases of the work. A final report on all phases is now in preparation and will be submitted later this year.

This publication gives in a single document the total monthly precipitation which has been measured by various agencies at stations in

Iraq through December 1958. The majority of the data presented represents the work of others but, since collection of the data was required for other phases of Hydrological Survey work, it was deemed desirable to publish the entire record. Data have been reviewed and revised where possible, but in general are presented as received.

We wish to acknowledge the cooperation we have received from the Director of Meteorology and his staff who made the records available and assisted in many ways.

Respectfully submitted



C. V. Davis.  
Harza Engineering Company.



G. M. Binnie.  
Binnie, Deacon & Gourley.

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## INTRODUCTION

### History and description of precipitation data collection

All the data in this report was obtained from the Directorate of Meteorology of the Iraq Government, except that from stations installed by the Hydrological Survey of Iraq since 1956. Exhibit 1 shows the location of the precipitation stations covered by this report, together with their categories. The key numbers shown on the Exhibit are the same as the page numbers of the station summaries.

Some of the data from the Directorate of Meteorology was recorded at its meteorological stations by trained observers. The rest was recorded at 'co-operative' stations by observers of other agencies which include the Iraq Railways, the Iraq Petroleum Company, the Directorate-General of Irrigation, headmasters of schools under the Ministry of Education and personnel at army and police posts. The co-operative stations are mostly operated on a voluntary basis and have not been subject to detailed and frequent inspections by the Directorate of Meteorology.

The bulk of the data is for the period starting 1935, since there are only a few records available for earlier periods. Many gaps appear in the records of the co-operative stations and many stations ceased operating after a few years.

### Types of rain gages in use

Rain gages installed by or for the Directorate of Meteorology are British Meteorological Office standard non-automatic type with either eight- or five-inch diameter rims. These gages consist of a funnel which drains into a collector bottle inside a cylindrical overflow can. Rainfall is measured by emptying the contents of the bottle into a graduated beaker, calibrated in millimetres, and observing the water level. Observations are made once daily at co-operative stations, generally at 9 a.m., and at three- or six-hour intervals at meteorological stations.

The Hydrological Survey of Iraq installed non-automatic rain gages and/or automatic rain gages at a total of 34 stations in the period starting in late 1956. Some automatic rain gages were installed at existing Directorate of Meteorology and co-operative stations; all the other gages were installed at new stations set up by the Hydrological Survey. Meteorological instruments such as evaporation pans, temperature recorders, radiation recorders and anemometers were included at some of these new stations.

The Hydrological Survey standard non-automatic rain gage is patterned after the U.S. Weather Bureau type. The gage consists of an eight-inch diameter overflow can which supports an eight-inch diameter collector funnel draining into a tube whose cross sectional area is one-tenth of that of the collector. The observer measures rainfall by dipping a calibrated wooden stick into the central tube and noting the level to which the wood is wetted. Observations are made once daily, generally at 9 a.m.

The automatic rain gages are Bendix Model 775 C weighing gages which record rainfall automatically on a chart from which hourly precipitation amounts can be read.

#### Scope of data presented

This reports contains monthly total precipitation values only. Although daily data exists for most Directorate of Meteorology stations, publication of the data was considered beyond the scope of this report. Daily precipitation data for the Directorate of Meteorology stations is stored at the Climatology Office at Baghdad Airport and has been copied into the files of the Hydrological Survey of Iraq.

#### Reliability of Data

Review and evaluation of the precipitation data recorded before the establishment of the Hydrological Survey are limited by the lack of historical information and detailed descriptions of many of the stations. In general, the distance between stations makes it impossible to apply any of the comparative methods of hydrologic analysis. Double mass curves were prepared for some of the stations as part of other phases



of H.S.I. work but no reliable conclusions could be drawn. In this Summary the records from non-Hydrological Survey stations are in general presented as received from the Climatology Office, with only arithmetic checking, since it was considered impossible to evaluate the bulk of the data. The exceptions are the records from those stations at which H.S.I. automatic gages were installed in 1957 or 1958, or near which H.S.I. stations were set up. Hence it was possible to evaluate the records of the meteorological stations at Diwaniyah, Kirkuk, Mosul and Rutba, and of the co-operative stations at Halabja, Khanaqin, Ruwanduz, Shaqlawa and Sulaimaniya, during those months of 1957 and 1958 for which H.S.I. records were available. The evaluation leads to an estimate of the reliability of these stations' records prior to 1957.

Discrepancies were found between some of the H.S.I. and non-H.S.I. records of monthly precipitation for the stations referred to above. An inspection of the daily precipitation data for these months indicated that the differences were due mainly to errors made by the observer at the non-H.S.I. station in reading and recording the daily precipitation from the non-automatic gage. On average, the records of one month in nine were found to be incorrect at non-H.S.I. stations, the meteorological stations being more reliable on the whole than the co-operative stations. The records of such stations are presented as received from the Directorate of Meteorology, with the corrected value shown in brackets under the original value. Further discrepancies between concurrent records for H.S.I. and non-H.S.I. stations in the same locality, though not at the same site, were suspected but could not be proved.

It is the general rule among those who work with climatological data that in cases of doubt the record made by the gage observer should be assumed correct unless conclusively proved to be in error, and this approach has been adopted in the compilation of this summary.

Records taken from H.S.I. stations have been reviewed on the basis of frequent inspection reports and comparisons between companion automatic and non-automatic rain gages.

### Presentation of Data

All precipitation data in this report is presented as monthly totals in millimetres. A missing record is indicated by a dash (-) as compared to no rainfall which is indicated by a zero (0.0). A 'trace' is indicated by (T) and is defined as rainfall of less than measurable quantity. If the record for any month is incomplete, it is indicated as a missing record. Data is totalled in calendar years and water years, the latter extending from October of the previous calendar year through September of the calendar year concerned.

In general, rainfall observations have not been made at most stations during the summer months, when normally there is no rainfall. Rainfall during the months of May and October is usually such a very small percentage of annual rainfall that years even with these months missing are totalled on the data sheets. It is safe to assume that a record is a suitable representation of the annual rainfall if it is complete from October through May. In this case the bar chart presentation of the station record is shown as a continuous line even if any or all of the months of June, July, August and September are missing. Bar charts showing the extent of each record are presented in Exhibit 2 in alphabetical order.

Some of the data is presented to tenths of a millimetre and some to even millimetres. The presentation is based on the form of the field observer's report and does not imply an evaluation of the accuracy of the measurements.

Stations are described by their latitude, longitude and elevation in metres above mean sea level. H.S.I. station summaries also include the type of gage in current use.

### General Evaluation of Data

Data recorded at Directorate of Meteorology stations and Hydrological Survey of Iraq stations is considered to be reliable. Data from co-operative stations varies in reliability from station to station and from time to time. It is not possible to make an accurate evaluation of precipitation measurements in these circumstances, but in general, the more complete records would be expected to be the more reliable.

**STATION POSITIONS AND  
TABULATIONS OF MONTHLY  
PRECIPITATION**

## ADHAM, IRAQ

Latitude  $34^{\circ}33'$  Longitude  $44^{\circ}30'$  Elevation 90

HSI 8 inch diameter non-automatic gage

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	--	4.0	12.4	0.0	5.0	0.0	--	0.0	0.0	0.0	18.0	29.8	--	--

## AIN SIFWI, IRAQ

Latitude  $36^{\circ}41'$  Longitude  $45^{\circ}21'$  Elevation 520

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	95.5	100.3	77.2	38.0	--	--	--	--	--	--	--	--	--
1958	--	--	--	15.0	0.5	T	--	T	0.0	T	40.0	102.5	--	--

## ALI GHARKI

Co-operative Station

Latitude  $32^{\circ}28'$  Longitude  $46^{\circ}41'$  Elevation 13

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939	--	--	--	--	--	--	--	--	--	--	--	17.5	--	--
1940	142.5	42.5	20.0	17.8	0.0	--	--	--	--	0.0	29.0	10.0	261.8	--
1941	12.0	35.0	18.0	--	--	--	--	--	--	0.0	0.0	56.5	--	--
1942	--	33.0	--	--	--	--	--	--	--	4.5	68.5	29.5	--	--
1943	99.0	24.0	66.0	--	--	--	--	--	--	6.0	4.0	20.5	--	--
1944	35.5	0.0	8.0	--	--	--	--	--	--	--	89.4	42.5	--	--
1945	92.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	0.0	28.5	22.2	--	--
1947	47.4	34.2	36.7	0.0	8.8	--	--	--	--	--	--	--	--	177.8
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1957	--	--	--	--	--	--	--	--	--	--	62.5	37.3	--	--
1958	37.9	0.0	4.3	--	--	--	--	--	--	--	28.3	76.5	--	--





ASTA SHARIF, IRAQ

Co-operative Station

Latitude  $33^{\circ}33'$  Longitude  $45^{\circ}27'$  Elevation 853

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1954	—	—	—	—	—	—	—	—	—	—	—	152.7	—	—
1955	59.8	45.0	71.6	—	53.8	—	—	—	0.0	0.0	116.9	161.6	508.7	382.9
1956	60.4	67.4	115.6	126.7	3.0	—	—	—	1.3	0.0	28.6	83.6	486.6	652.9
1957	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—

BADAA, IRAQ

Co-operative Station

Latitude  $31^{\circ}26'$  Longitude  $46^{\circ}10'$  Elevation 9

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940	5.5	3.6	—	—	—	—	—	—	—	—	0.0	5.8	—	—
1941	—	4.9	0.0	5.1	—	0.0	—	—	—	0.0	0.0	—	—	—
1942	—	14.3	3.1	0.9	0.0	0.0	—	—	—	0.0	6.5	4.6	—	—
1943	1.8	0.0	13.3	1.3	—	—	—	—	0.0	0.9	0.0	3.0	20.3	27.5
1944	0.5	0.0	1.5	0.5	0.8	—	—	—	—	0.0	5.0	0.4	8.7	7.2
1945	35.2	10.5	29.5	4.0	7.9	0.0	—	—	—	0.0	32.0	13.5	132.6	92.5
1946	51.0	3.0	18.0	41.0	—	—	—	—	—	0.0	3.0	21.8	137.8	158.5
1947	61.0	2.0	20.5	0.0	—	—	—	—	—	—	—	6.0	—	108.3
1948	13.0	5.0	20.0	8.0	—	—	—	—	—	0.0	—	—	—	—
1949	—	8.0	—	—	—	—	—	—	—	—	—	—	—	—
1950	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1951	17.0	0.0	23.0	0.0	0.0	—	—	—	0.0	0.0	6.0	40.0	86.0	—
1952	21.0	11.0	0.0	6.2	0.0	0.0	—	—	—	0.0	49.0	38.5	125.7	84.2
1953	21.5	9.0	7.5	12.0	0.0	—	—	—	—	2.5	37.0	13.5	103.0	137.5
1954	2.0	17.0	23.0	3.0	0.0	—	—	—	0.0	4.0	89.5	76.0	214.5	96.0
1955	2.5	0.0	20.0	1.3	10.0	0.0	—	—	0.0	0.0	0.0	11.0	44.8	203.3
1956	37.0	26.0	5.5	6.0	—	0.0	0.0	0.0	—	0.0	—	19.0	—	85.5
1957	13.5	44.0	26.0	102.0	8.0	—	—	—	—	—	—	38.8	—	—
1958	—	—	—	0.0	—	—	—	—	—	0.0	26.0	31.0	—	—





## BAGHDAD, continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1941	0.6	41.1	12.7	32.0	—	T	—	—	—	4.6	T	38.6	129.6	107.7
1942	4.2	11.8	16.4	T	T	T	—	—	—	8.0	22.5	19.6	82.5	75.6
1943	15.1	23.0	31.3	7.5	T	—	—	—	—	3.2	0.3	4.7	85.1	127.0
1944	13.6	2.0	23.5	11.3	3.3	—	—	—	—	T	47.2	19.5	120.4	61.9
1945	54.5	14.1	1.1	2.7	0.9	—	—	—	—	0.9	23.2	40.3	137.7	140.0
1946	30.2	22.1	50.9	8.2	2.4	—	—	—	—	0.1	9.2	24.0	147.1	178.2
1947	16.2	11.2	52.4	0.7	8.4	—	—	—	T	0.1	33.4	23.8	146.2	122.2
1948	5.6	20.8	20.6	12.4	0.1	—	—	—	—	T	1.4	24.8	85.7	116.8
1949	12.7	31.9	54.9	8.2	0.2	—	—	—	—	—	0.1	63.8	171.8	134.1
1950	8.9	18.8	13.1	0.3	29.2	—	T	—	—	1.9	38.4	10.2	120.8	134.2
1951	37.2	85.5	45.5	1.1	0.2	—	—	—	1.3	T	33.8	20.9	225.5	221.3
1952	7.9	10.6	5.0	26.3	0.8	—	—	—	—	—	0.8	20.9	72.3	105.3
1953	5.4	34.5	14.8	2.6	T	—	—	—	—	1.9	29.0	8.9	97.1	79.0
1954	13.8	44.4	69.5	21.6	T	—	—	—	—	T	10.8	27.0	187.1	189.1
1955	90.1	54.1	11.3	15.1	31.7	13.0	2.5	—	—	—	12.5	27.5	257.8	255.6
1956	7.5	8.5	26.1	44.8	0.0	0.0	0.0	0.0	T	0.0	T	4.6	91.5	126.9
1957	12.1	51.5	58.9	72.9	28.5	T	0.0	0.0	0.0	2.8	77.8	31.5	336.0	228.5
1958	74.2	6.8	3.2	T	2.0	0.0	0.0	0.0	0.0	T	20.3	19.2	125.7	198.3

## BALI, IRAQ

Co-operative Station

Latitude  $34^{\circ}56'$ Longitude  $43^{\circ}29'$ 

Elevation 115

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1936	7.0	37.5	9.2	28.2	19.0	—	—	—	—	0.0	13.0	80.9	194.8	—
1937	41.3	30.5	—	26.5	0.0	—	—	—	—	16.3	79.3	—	—	—
1938	59.1	41.3	71.9	—	—	—	—	—	—	0.0	12.0	67.4	—	—
1939	13.5	44.1	43.6	37.8	0.0	—	—	—	—	—	46.2	58.5	243.7	218.4
1940	87.8	33.2	46.0	—	—	—	—	—	—	—	—	—	—	—
1941	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1942	—	—	—	—	—	—	—	—	—	—	39.4	—	—	—
1943	10.4	35.9	79.6	17.7	—	—	—	—	—	—	—	13.5	—	—
1944	43.6	—	7.1	14.6	—	—	—	—	—	—	—	—	—	—
1945	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1946	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1947	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1948	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1949	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1950	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1951	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1952	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1953	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1954	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1955	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1956	—	—	—	—	—	—	—	—	—	—	—	38.8	—	—
1957	34.4	27.2	101.6	41.2	51.8	—	—	—	—	—	53.6	14.5	324.3	—
1958	24.4	2.5	10.8	0.9	—	—	—	—	—	—	11.5	17.6	67.7	106.7







## BUSAYYA, IRAQ

## Co-operative Station

Latitude 30°06' Longitude 46°07' Elevation 144

## Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										0.0	15.7	91.3	--	--
1936	31.4	18.0	14.7	14.9	3.3	--	--	--	--	0.0	0.0	30.0	112.3	189.3
1937	0.9	27.6	10.8	11.6	4.1	--	--	--	--	1.8	46.2	0.0	103.0	85.0
1938	58.5	20.1	35.7	7.7	0.0	--	--	--	--	--	0.0	33.9	155.9	170.0
1939	29.7	10.8	0.0	11.2	--	--	--	--	--	0.0	0.0	--	--	115.6
1940	24.7	20.1	1.9	16.1	0.0	--	--	--	--	0.0	7.0	0.0	69.8	--
1941	0.0	22.6	0.0	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	11.5	17.7	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## CHAMCHAMAL, IRAQ

## Co-operative Station

Latitude 35°32' Longitude 44°51' Elevation 701

## Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939	--	113.3	144.8	68.2	34.0	--	--	--	--	29.9	52.0	142.2	584.4	--
1940	355.4	124.5	40.5	63.4	15.4	--	--	--	--	--	7.6	--	--	823.3
1941	78.7	57.2	45.2	43.3	--	--	--	--	--	--	--	127.8	--	--
1942	137.9	72.2	100.9	6.5	10.3	--	--	--	--	11.6	11.5	20.6	371.5	--
1943	33.7	40.0	33.5	31.0	5.2	--	--	--	--	--	--	55.1	--	187.1
1944	202.3	2.2	78.1	--	25.5	--	--	--	--	2.0	137.5	71.2	--	--
1945	203.5	4.2	65.5	30.2	46.2	--	--	--	--	0.0	150.5	142.7	642.8	560.3
1946	188.0	235.3	213.8	120.2	60.0	--	--	--	--	--	97.1	126.8	1041.2	1110.5
1947	80.9	129.0	112.2	35.0	30.0	--	--	--	--	0.0	--	--	--	611.0
1948	--	--	--	--	--	--	--	--	--	0.0	0.9	80.9	--	--
1949	77.3	135.6	145.3	86.5	0.0	--	--	--	--	0.0	0.0	123.9	568.6	526.5
1950	123.9	102.6	25.5	16.7	118.4	--	--	--	--	0.0	0.0	27.7	414.8	511.0
1951	202.2	113.1	53.7	29.9	11.7	--	--	--	0.0	13.3	28.3	103.4	555.6	438.3
1952	22.9	105.3	--	--	--	--	--	--	--	0.0	7.5	55.1	--	--
1953	70.8	144.0	107.0	65.7	0.0	--	--	--	--	0.0	80.7	77.6	545.8	450.1
1954	108.9	80.6	106.8	146.4	14.8	--	--	--	0.0	--	--	--	--	615.8
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	--	--	38.2	--	--
1957	84.8	108.0	124.7	142.5	--	--	--	--	--	21.7	85.4	61.0	633.1	--
1958	109.0	--	--	--	--	--	--	--	--	0.0	16.0	44.0	--	--

## CHWARTA, IRAQ

Co-operative Station

Latitude 35°44' Longitude 45°33' Elevation 1356

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1942	--	53.7	152.8	10.6	--	--	--	--	--	65.0	125.4	54.5	--	--
1943	101.7	281.2	341.5	150.9	13.2	--	--	--	--	37.3	9.1	149.4	1084.3	1133.4
1944	255.8	65.0	155.2	87.5	63.7	1.5	--	--	--	3.6	--	--	--	824.5
1945	--	--	--	1.6	35.1	--	--	--	--	6.8	235.9	183.9	--	--
1946	135.8	171.5	290.4	146.9	109.6	--	--	--	--	--	--	--	--	1200.8
1947	--	--	--	--	--	--	--	--	--	--	51.0	120.7	--	--
1948	41.6	92.3	75.4	206.4	27.8	--	--	--	--	--	--	181.0	--	615.2
1949	110.0	158.9	272.4	96.7	55.0	--	--	--	--	0.0	--	183.7	--	--
1950	232.9	442.0	102.5	45.4	123.0	--	--	--	--	--	11.3	55.4	1012.5	1129.5
1951	132.4	164.7	79.5	13.0	10.0	--	--	--	--	13.7	56.7	154.0	624.0	466.3
1952	52.3	153.6	126.4	68.1	19.0	--	--	--	--	--	26.2	174.2	619.8	643.8
1953	170.8	120.5	238.9	86.2	11.8	--	--	--	--	--	221.5	74.2	923.9	828.6
1954	116.4	338.7	288.7	217.1	--	--	--	--	--	--	--	--	--	1256.6
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	0.0	0.0	0.0	--	0.0	33.4	86.2	--	--
1957	137.5	124.6	338.4	132.4	155.5	--	--	--	--	--	--	--	--	1008.0
1958	207.9	22.7	36.4	2.5	8.7	--	--	--	--	--	35.4	131.6	445.2	--

## DERBENDI KHAN, IRAQ

Co-operative Station

Latitude 35°08' Longitude 45°45' Elevation 400

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	173.6	226.3	130.9	210.4	3.0	0.0	--	--	--	93.5	110.4	--	--
1958	219.8	14.4	38.8	3.0	5.0	3.1	0.0	0.0	0.0	T	27.0	151.8	462.9	488.0



## DIWANIYA, IRAQ

Directorate of Meteorology Station

Latitude 31°59' Longitude 44°59' Elevation 20.4

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1929	T	3.4	T	2.8	T	0.0	0.0	0.0	0.0	2.5	13.4	37.8	59.9	—
1930	30.4	3.2	3.9	15.2	T	0.0	0.0	0.0	0.0	0.1	0.6	9.4	62.8	106.4
1931	1.4	10.2	7.0	33.8	20.5	5.3	0.0	0.0	0.0	0.0	14.4	5.2	97.8	88.3
1932	8.7	3.2	3.1	0.0	8.3	0.0	0.0	0.0	0.0	0.0	10.0	5.9	39.2	42.9
1933	32.2	21.4	5.6	T	5.5	0.0	0.0	0.0	T	T	T	1.9	86.6	108.6
1934	93.0	31.4	T	59.2	36.9	0.0	0.0	0.0	0.0	0.6	4.4	47.4	238.9	188.4
1935	1.8	6.4	1.3	1.6	113.6	0.0	0.0	0.0	0.0	1.1	19.6	24.7	170.1	177.1
1936	13.8	23.4	10.8	0.6	13.5	0.0	0.0	0.0	0.0	0.0	T	56.0	118.1	107.5
1937	7.7	69.5	8.7	11.9	0.7	0.0	0.0	0.0	0.0	1.7	29.8	0.1	130.1	154.5
1938	60.0	20.0	5.0	6.3	T	0.0	0.0	9.7	T	0.0	54.7	60.6	216.3	132.6
1939	29.5	35.4	10.0	5.1	T	0.0	0.0	0.0	T	0.0	37.7	7.3	125.0	135.3
1940	55.0	24.2	7.2	38.1	T	0.0	0.0	0.5	0.0	1.7	1.1	6.2	134.0	170.0
1941	T	44.0	20.5	47.0	0.0	0.0	0.0	0.0	0.0	3.8	1.3	47.2	163.7	120.5
1942	5.1	15.1	0.3	8.6	T	0.0	0.0	0.0	T	2.2	12.1	21.4	64.8	81.3
1943	7.4	8.1	85.6	T	T	0.0	0.0	0.0	0.09	3.1	T	15.2	119.4	136.8
1944	5.5	1.3	29.6	0.2	2.7	T	0.0	0.0	0.0	0.0	39.0	15.4	93.7	57.6
1945	56.9	5.6	9.8	T	24.5	0.0	3.7	0.0	0.0	T	15.0	20.8	136.3	154.9
1946	7.9	7.0	36.4	20.2	0.3	0.0	0.0	0.0	T	T	2.4	23.3	97.5	107.6
1947	18.4	34.4	6.5	T	43.6	0.0	0.0	0.0	0.0	T	10.6	4.3	117.8	128.6
1948	5.5	32.9	14.3	9.0	3.7	0.0	0.0	0.0	0.0	0.0	T	33.1	98.5	80.3
1949	30.1	7.8	29.8	31.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	41.7	140.6	132.0
1950	10.0	9.4	1.0	4.4	9.5	0.0	0.0	0.0	0.0	T	11.0	7.6	52.9	76.0
1951	7.2	19.6	23.5	1.8	0.0	0.0	0.0	0.0	T	0.7	0.8	42.1	95.7	70.7
1952	18.6	4.6	T	T	T	0.0	0.0	0.0	T	0.0	31.0	13.7	69.9	64.8
1953	10.6	44.1	13.1	9.2	1.8	0.0	0.0	0.0	T	3.0	14.2	13.5	109.5	125.5
1954	14.5	18.1	18.9	17.0	T	0.0	0.0	0.0	0.0	2.3	32.4	—	—	99.2
1955	14.0	1.4	101.5	4.7	11.8	0.0	0.0	0.0	0.0	0.0	2.9	35.0	171.3	—
1956	2.5	31.0	7.3	64.4	0.0	0.0	0.0	0.0	0.0	0.0	3.1	11.0	119.3	143.1
1957	9.8	12.5	18.8	64.1	60.2	0.0	0.0	0.0	0.0	2.7	64.2	38.0	270.3	179.5
1958	33.1	0.0	0.8	2.6	4.0	0.0	0.0	0.0	0.0	T	28.3	42.4	111.8	146.0
											(50.4)		(119.8)	

## DIWANIYA, IRAQ

Latitude 31°59' Longitude 44°59' Elevation 20

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	—	T	1.0	4.0	—	—	—	—	—	—	29.0	51.0	—	—



## DOHIK, IRAQ

Co-operative Station

Latitude 36°52' Longitude 43°02' Elevation 860

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1943										47.4	--	73.8	--	--
1944	180.2	20.5	123.0	82.8	90.0	--	--	--	0.8	16.6	199.1	109.2	822.2	--
1945	242.0	57.9	33.3	27.4	23.9	--	--	--	--	5.8	82.2	110.5	583.0	709.4
1946	82.8	196.6	186.1	135.1	120.9	--	--	--	--	--	--	--	--	920.0
1947	--	--	--	2.9	40.6	--	--	--	--	--	113.2	72.6	--	--
1948	42.4	92.6	99.9	150.0	24.8	--	--	--	--	2.7	22.9	126.0	561.3	595.5
1949	57.7	102.6	205.9	70.0	11.1	--	--	--	--	--	--	205.3	--	598.9
1950	128.7	112.6	123.5	11.4	118.0	--	--	--	--	10.6	10.6	60.2	575.6	--
1951	95.9	80.2	25.9	31.3	25.6	--	--	--	--	20.3	36.9	134.5	450.6	340.3
1952	32.8	226.2	56.1	44.1	19.7	--	--	--	--	--	18.8	74.7	472.4	570.6
1953	131.3	214.3	148.4	84.1	3.5	--	--	--	--	9.6	105.2	85.5	781.9	675.1
1954	84.6	186.4	155.8	110.8	1.7	--	--	--	0.8	0.0	49.6	100.4	690.1	740.4
1955	26.9	63.0	48.1	113.2	--	--	--	--	9.4	0.0	74.3	158.1	493.0	410.6
1956	107.8	70.8	128.9	44.3	13.4	0.0	0.0	0.0	--	0.0	27.4	--	--	597.6
1957	153.4	127.1	162.9	--	110.1	--	--	--	--	--	94.5	--	--	--
1958	48.0	--	--	--	--	--	--	--	--	0.0	13.2	113.0	--	--

## DOKAN, IRAQ

Latitude 35°57' Longitude 44°58' Elevation 535

HSI 8 inch diameter non-automatic gage

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	378.0	165.5	122.5	15.0	--	T	--	11.5	79.0	46.1	--	--
1958	231.0	40.5	50.5	22.5	12.5	--	--	--	--	T	36.5	168.0	561.5	493.6



## PATA, IRAQ

Latitude 35°03' Longitude 45°34' Elevation 120

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	—	51.9	110.3	109.9	60.0	2.6	0.0	—	—	2.0	—	19.0	—	—
1958	44.0	3.5	8.3	T	3.8	0.0	0.0	0.0	0.0	0.0	16.2	23.0	96.8	—

## GALALA, IRAQ

Longitude 36°37' Longitude 44°49' Elevation 1100

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	39.0	144.0	319.2	93.0	—	—	—	—	—	—	—	127.0	—	—
1958	161.0	69.0	70.5	89.5	—	—	—	—	—	—	—	147.0	—	—

## GHURAISHIYA, IRAQ

Co-operative Station

Latitude 36°44' Longitude 47°05' Elevation 4

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1946	—	—	—	—	—	—	—	—	—	0.0	1.3	12.7	—	—
1947	6.4	—	—	—	—	—	—	—	—	—	—	—	—	—
1948	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1949	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1950	—	—	—	—	—	—	—	—	—	0.0	18.1	14.0	—	—
1951	34.1	7.1	1.0	0.0	0.0	—	—	—	—	—	—	—	—	74.3
1952	3.8	—	—	—	—	—	—	—	—	0.0	4.3	26.7	—	—
1953	—	5.1	16.5	—	—	—	—	—	—	—	—	3.8	—	—
1954	3.8	5.0	15.5	9.4	0.0	0.0	—	—	0.0	8.4	228.8	63.0	333.9	—
1955	24.9	0.0	9.7	—	—	—	—	—	0.0	0.0	0.8	20.3	—	—
1956	14.0	10.2	—	—	—	0.0	0.0	0.0	—	0.0	—	15.9	—	—
1957	37.3	13.2	7.6	64.2	0.0	—	—	—	—	—	0.0	13.7	136.0	—
1958	14.7	0.0	0.0	0.0	0.0	—	—	—	—	—	0.0	45.8	60.5	26.4



## HABANIYAH, IRAQ

Directorate of Meteorology Station

Latitude 33°22' Longitude 43°34' Elevation 436

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935	T	20.7	0.1	2.2	82.4	0.0	0.0	0.0	0.0	1.3	39.8	49.8	196.3	--
1936	13.2	31.2	19.1	15.8	3.8	0.0	0.0	T	0.0	T	0.7	22.0	105.8	174.0
1937	29.4	5.8	1.1	20.2	5.1	0.0	0.0	0.0	0.0	5.1	30.8	T	97.5	84.3
1938	60.2	1.7	43.3	7.6	1.6	0.0	T	0.0	0.3	T	39.2	77.5	237.4	156.6
1939	21.9	16.8	15.0	16.7	0.2	0.0	0.0	0.0	0.5	0.6	21.6	6.8	110.1	197.8
1940	48.9	11.6	8.0	12.0	0.8	0.0	0.0	T	0.0	3.0	1.3	9.0	95.6	111.3
1941	0.3	1.3	17.0	17.0	T	T	0.0	0.0	0.0	T	T	14.0	80.6	79.9
1942	5.0	1.1	19.3	T	T	0.0	0.0	0.0	0.0	20.8	31.4	10.6	95.2	46.4
1943	9.9	15.4	63.1	13.5	T	0.0	T	0.0	0.0	5.7	1.2	5.4	114.4	164.9
1944	13.2	0.6	31.2	2.5	1.1	T	0.0	0.0	0.0	0.0	15.6	18.9	83.1	60.9
1945	56.9	0.5	12.5	0.6	1.1	0.0	0.0	0.0	0.0	0.7	37.0	37.8	153.1	112.1
1946	44.9	16.2	32.7	4.8	14.5	0.0	0.0	0.0	0.0	T	18.6	25.5	167.2	198.6
1947	17.9	17.9	13.5	0.6	3.1	0.0	0.0	0.0	T	T	23.6	8.5	77.1	89.1
1948	1.9	21.2	2.2	6.1	1.4	0.0	0.0	0.0	0.0	0.0	2.6	22.3	57.7	64.9
1949	1.2	3.4	83.1	7.3	3.2	0.0	0.0	0.0	0.0	0.0	T	32.2	132.0	124.7
1950	14.9	17.9	10.0	3.3	18.5	0.0	0.0	0.0	0.0	T	20.8	3.6	86.2	94.0
1951	25.1	11.7	66.4	0.0	0.9	0.0	0.0	0.0	6.4	0.8	3.1	26.9	183.5	177.1
1952	8.5	18.2	7.2	3.1	0.2	0.0	0.0	0.0	0.0	T	0.1	23.4	54.7	62.0
1953	2.1	40.8	19.2	15.2	T	T	0.0	0.0	T	0.9	14.1	7.7	100.2	101.0
1954	9.1	40.8	46.6	43.3	T	0.0	T	0.0	0.0	T	--	--	--	162.5
1955	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	13.3	34.5	--	--
1956	2.6	1.9	5.0	56.2	0.0	0.0	0.0	T	0.0	T	T	5.2	70.9	113.5
1957	10.6	10.8	53.4	105.9	25.7	T	0.0	0.0	T	4.8	20.4	23.0	254.6	211.6
1958	61.3	6.4	2.3	3.3	2.0	0.0	--	--	--	--	--	--	--	123.5

## HADITHA, IRAQ

Co-operative Station

Latitude 34°04' Longitude 42°22' Elevation 140

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939	--	--	--	--	--	--	--	--	0.0	7.1	42.3	37.1	--	--
1940	20.6	25.6	10.3	34.4	5.0	0.0	0.0	0.0	0.0	29.0	9.0	8.0	141.9	182.4
1941	12.0	29.9	--	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1957	--	--	--	--	--	--	--	--	--	--	33.7	32.7	--	--
1958	15.0	0.0	0.0	0.0	0.0	--	--	--	--	0.0	2.0	0.0	17.0	81.4

## HAI, IRAQ

Directorate of Meteorology Station

Latitude 32°10' Longitude 46°03' Elevation 14.9

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940						0.0	0.0	0.0	0.0	1.2	1.2	10.3	--	--
1941	1.2	53.9	9.1	11.5	0.0	0.0	0.0	0.0	0.0	T	0.6	24.3	100.6	88.4
1942	4.2	13.2	16.9	3.2	0.1	0.0	0.0	0.0	T	1.5	12.5	32.4	84.0	62.5
1943	28.6	15.5	70.9	3.5	T	0.0	0.0	0.0	0.0	10.6	1.1	22.2	152.4	164.9
1944	16.1	1.0	13.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	44.7	10.5	86.4	65.1
1945	77.2	4.3	20.0	4.9	8.2	0.0	0.0	0.0	0.0	T	16.0	26.9	157.5	169.8
1946	28.4	7.5	78.7	48.0	T	0.0	0.0	0.0	0.0	0.0	30.5	29.8	222.9	205.5
1947	74.9	29.3	14.2	T	16.7	0.0	0.0	0.0	0.0	T	36.3	4.9	176.3	195.4
1948	9.9	48.1	18.1	7.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	107.3	125.5
1949	19.4	30.6	47.6	16.7	29.1	0.0	0.0	0.0	0.0	0.0	0.0	73.8	217.2	166.4
1950	11.4	23.5	11.9	0.6	9.8	0.0	0.0	0.0	0.0	T	20.7	24.4	102.3	131.0
1951	10.0	30.5	20.7	2.4	0.0	0.0	0.0	0.0	T	T	3.7	31.8	99.1	108.7
1952	27.3	9.5	T	0.5	0.0	0.0	0.0	0.0	T	0.0	19.0	26.2	82.5	72.8
1953	14.7	51.6	16.8	5.3	0.4	T	0.0	0.0	0.0	7.2	14.9	20.9	131.8	134.0
1954	15.4	32.4	26.8	22.5	0.0	0.0	0.0	0.0	0.0	2.0	38.4	70.3	207.8	140.1
1955	15.0	1.2	56.2	8.5	29.4	0.0	0.0	0.0	0.0	0.0	9.0	30.8	150.1	221.0
1956	11.6	21.5	4.2	18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.9	87.5	95.4
1957	16.4	22.3	37.1	60.9	27.3	0.3	0.0	0.0	T	2.6	70.6	24.0	261.5	196.2
1958	14.2	T	3.2	2.9	T	0.0	0.0	0.0	0.0	0.4	48.4	44.4	113.5	117.5

## HALABJA, IRAQ

Co-operative Station

Latitude 35°11'

Longitude 45°59'

Elevation 724

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1936	53.0	589.5	196.0	158.0	35.0	0.0	0.0	0.0	0.0	0.0	236.0	321.0	1588.5	--
1937	502.6	148.0	45.0	27.0	50.0	--	--	--	--	423.0	235.0	40.0	1470.6	1329.6
1938	550.0	470.0	270.0	313.0	0.0	0.0	--	--	--	55.0	193.0	405.0	2256.0	2301.0
1939	230.0	70.0	112.0	29.0	5.0	--	--	--	--	9.4	60.7	91.5	607.6	1099.0
1940	197.1	211.3	151.5	71.5	18.4	--	--	--	--	29.9	48.5	133.3	861.5	811.4
1941	99.0	83.8	169.7	117.0	--	--	--	--	--	0.0	17.2	220.8	707.5	681.2
1942	129.4	87.9	141.2	11.7	23.9	--	--	--	--	62.3	105.4	22.4	584.2	632.1
1943	114.7	126.8	192.4	63.6	--	--	--	--	--	7.0	0.6	107.8	612.9	687.6
1944	205.8	57.0	139.3	91.3	47.4	--	--	--	--	0.0	--	--	--	656.2
1945	--	97.6	35.6	71.8	73.7	0.0	12.0	8.0	--	2.8	14.3	14.9	--	--
1946	144.4	156.2	284.5	109.4	105.7	--	--	--	--	--	17.1	69.9	887.2	1094.2
1947	131.8	105.8	139.2	13.0	33.3	--	--	--	--	--	41.6	64.8	529.5	510.1
1948	63.9	84.4	95.7	100.8	17.5	--	--	--	--	--	28.9	148.9	540.1	468.7
1949	88.3	108.6	211.9	55.6	18.9	--	--	--	--	0.0	0.0	--	--	661.1
1950	109.3	87.4	72.9	32.1	120.6	--	--	--	--	--	17.7	65.8	505.8	--
1951	108.2	72.6	39.6	43.0	7.0	--	--	--	--	10.1	83.5	131.2	495.2	353.9
1952	1.9	92.9	90.9	47.1	17.6	--	--	--	--	--	33.3	108.4	392.1	475.2
1953	119.4	228.1	129.1	88.1	10.0	0.8	0.0	--	--	14.1	175.5	64.7	829.8	717.2
1954	83.9	208.4	189.5	148.4	--	--	--	--	6.0	4.9	53.8	119.3	806.2	884.5
1955	67.7	33.8	67.2	99.3	65.9	0.0	--	--	--	0.0	69.0	133.6	536.5	511.9
1956	40.5	94.8	87.8	113.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	108.5	464.9	538.2
1957	97.4	78.3	239.0	114.5	83.2	--	--	--	--	6.2	71.8	66.5	756.9	741.7
1958	173.0	18.0	57.5	7.0	5.0	--	--	--	--	--	4.5	119.0	423.0	405.0

## HALABJA, IRAQ

Latitude 35°10'

Longitude 46°00'

Elevation 730

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	79.0	304.5	163.0	--	--	--	--	--	--	70.0	103.2	--	--
1958	208.6	--	78.5	5.6	--	--	--	--	--	--	--	123.2	--	--





## HINDIYA, IRAQ

Co-operative Station

Latitude 32°42'

Longitude 44°17'

Elevation 3

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1936	5.7	30.5	4.3	15.0	2.1	--	--	--	--	0.0	0.5	35.1	93.2	--
1937	12.0	8.0	--	20.5	0.0	--	--	--	--	13.6	16.7	0.0	--	--
1938	80.3	16.0	38.3	0.5	0.0	--	--	--	--	0.0	16.8	59.1	211.0	165.4
1939	51.9	53.5	32.4	13.5	0.0	--	--	--	--	0.0	29.3	5.3	185.9	227.2
1940	85.5	26.7	4.6	17.8	0.0	--	--	--	--	0.2	0.0	6.3	141.1	169.2
1941	0.0	49.0	5.0	--	0.0	--	--	--	--	--	--	--	--	--
1942	--	13.0	--	--	0.0	--	0.0	--	--	3.8	17.8	27.2	--	--
1943	10.5	13.4	58.3	7.8	0.0	--	--	--	0.0	0.0	0.0	--	--	138.8
1944	10.9	--	19.2	2.5	0.0	--	--	--	--	0.0	34.7	11.9	--	--
1945	61.5	5.4	5.8	0.0	22.6	--	--	--	--	0.0	0.0	33.3	128.6	141.9
1946	19.0	14.7	47.5	7.2	--	--	--	--	--	0.0	4.3	--	--	121.7
1947	16.0	19.1	12.3	0.0	11.5	--	--	--	--	0.0	32.3	13.3	104.5	--
1948	5.5	18.8	2.2	25.0	0.5	--	--	--	--	0.0	0.0	23.3	75.3	97.6
1949	34.7	22.3	45.7	7.3	2.7	--	--	--	--	0.0	0.0	37.5	150.2	136.0
1950	9.2	10.6	12.0	0.0	44.2	--	--	--	--	0.0	1.0	25.8	102.8	113.5
1951	16.8	109.8	44.1	0.0	0.0	--	--	--	0.0	0.0	13.3	15.8	199.8	197.5
1952	1.5	8.2	--	--	--	--	--	--	--	0.0	7.9	12.6	--	--
1953	15.7	26.2	26.3	3.0	--	--	--	--	--	0.5	3.1	4.7	79.5	91.7
1954	32.4	1.8	52.4	22.0	--	--	--	--	--	0.0	17.4	91.9	217.9	116.9
1955	47.9	2.8	177.8	7.8	1.3	--	--	--	--	--	12.2	33.6	283.4	346.9
1956	6.7	7.2	15.6	29.8	--	0.0	0.0	0.0	--	0.0	--	1.1	--	105.3
1957	24.5	19.9	24.5	72.5	52.6	0.0	--	--	--	--	40.5	16.9	251.4	--
1958	52.0	--	0.0	--	--	--	--	--	--	--	16.0	21.0	--	--

## HIT, IRAQ

Co-operative Station

Latitude 33°38'

Longitude 42°50'

Elevation 58

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1952	--	--	--	--	--	--	--	--	--	--	--	24.7	--	--
1953	17.3	25.3	4.4	30.6	0.0	--	--	--	--	5.1	17.3	9.5	109.5	182.3
1954	3.9	34.9	49.9	23.4	0.0	0.0	--	--	--	0.0	30.4	22.5	165.0	144.0
1955	20.8	4.9	0.6	24.2	0.0	--	--	--	--	0.0	2.8	7.6	60.9	103.4
1956	8.1	1.2	33.0	71.5	0.0	0.0	0.0	0.0	--	0.0	--	15.8	--	124.2
1957	16.5	16.9	11.4	69.2	39.4	--	--	--	--	T	13.6	38.0	205.0	--
1958	18.5	2.6	1.5	T	T	--	--	--	--	0.0	2.8	21.8	47.2	74.2

## IFRAZ, IRAQ

Latitude 36°23'

Longitude 43°48'

Elevation 285

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	65.9	192.6	91.2	54.9	21.2	0.0	3.2	0.0	12.7	64.3	66.6	--	--
1958	105.5	14.1	22.3	6.1	1.3	0.0	0.0	--	0.0	0.0	52.5	99.1	300.9	292.9

## IFRIKHAR, IRAQ

Co-operative Station

Latitude 35°03' Longitude 44°27' Elevation 264

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935											46.0	52.0	--	--
1936	17.0	130.0	15.0	45.0	16.0	--	--	--	--	--	46.0	84.0	353.0	321.0
1937	24.0	35.0	--	--	--	--	--	--	--	--	39.0	--	--	--
1938	120.0	42.0	90.0	7.0	23.0	--	--	--	--	--	53.0	58.0	393.0	--
1939	55.0	47.0	--	73.0	--	--	--	--	--	--	28.0	85.0	--	--
1940	144.0	60.0	44.0	--	0.0	--	--	--	--	--	45.0	--	--	--
1941	35.0	105.0	51.0	44.0	0.0	--	--	--	--	0.0	--	62.0	--	--
1942	31.0	58.0	65.0	--	0.0	0.0	0.0	--	--	--	41.1	24.4	--	--
1943	34.4	74.4	73.4	--	0.0	--	--	--	--	--	0.0	19.0	--	--
1944	37.1	4.3	5.6	--	--	--	--	--	--	--	48.5	--	--	--
1945	103.9	11.7	18.0	--	0.0	--	--	--	--	--	27.3	67.1	--	--
1946	64.7	44.4	156.1	37.9	0.0	--	--	--	--	--	16.3	39.4	358.8	397.5
1947	36.3	5.1	51.1	--	--	--	--	--	--	--	--	--	--	--
1948	7.6	8.9	--	22.8	0.0	--	--	--	--	0.0	5.1	71.2	--	--
1949	17.7	45.6	94.0	--	--	--	--	--	--	0.0	--	135.1	--	--
1950	41.4	41.3	11.4	5.1	24.2	--	--	--	--	0.0	0.0	10.2	133.6	--
1951	39.3	76.2	44.4	6.4	--	--	--	--	--	--	21.6	40.6	228.5	176.5
1952	2.5	15.2	28.4	29.7	0.0	--	--	--	--	0.0	6.4	83.8	166.0	138.0
1953	43.0	70.6	29.1	46.4	0.0	--	--	--	--	--	42.9	30.0	262.0	279.3
1954	7.6	89.6	70.5	107.2	--	0.0	--	--	--	4.6	34.7	69.4	383.6	347.8
1955	44.1	7.1	14.7	48.0	4.1	--	--	--	0.0	0.0	12.7	74.8	205.5	226.7
1956	16.2	12.6	2.5	50.8	--	0.0	0.0	0.0	--	0.0	3.8	44.5	130.4	169.6
1957	59.7	75.2	227.8	81.7	64.9	--	--	--	--	--	65.6	19.0	593.9	557.6
1958	59.3	0.0	11.2	0.0	--	--	--	--	--	--	17.8	30.0	118.3	155.1

## JALAWIA, IRAQ

Co-operative Station

Latitude 34°16' Longitude 45°09' Elevation 119

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935											35.0	66.0	--	--
1936	19.0	72.0	8.0	22.0	17.0	--	--	--	--	--	23.0	66.0	227.0	239.0
1937	27.0	45.0	0.0	39.0	--	--	--	--	--	18.0	28.0	1.0	158.0	200.0
1938	153.0	28.0	13.0	--	--	--	--	--	--	--	79.0	101.0	--	--
1939	54.0	40.0	34.0	57.0	--	--	--	--	--	--	42.0	13.0	240.0	365.0
1940	83.0	105.0	17.0	--	0.0	--	--	--	--	--	--	15.0	--	--
1941	10.0	60.0	25.0	8.0	--	--	--	--	--	0.0	0.0	36.0	139.0	--
1942	11.0	25.0	37.0	0.0	--	--	--	--	--	--	--	11.7	--	109.0
1943	19.8	92.0	77.2	35.6	--	--	--	--	--	3.8	0.0	23.9	252.3	--
1944	36.0	4.5	26.1	10.9	--	--	--	--	--	--	--	--	--	105.2
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	23.6	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	14.4	26.9	1.8	6.8	--	--	--	--	--	0.0	0.0	38.5	88.4	--
1949	47.7	58.4	107.9	--	--	--	--	--	--	0.0	0.0	126.2	--	--
1950	41.5	31.0	--	--	--	--	--	--	--	0.0	40.1	11.5	--	--
1951	29.2	101.5	71.1	--	--	--	--	--	--	6.4	38.1	96.6	--	--
1952	--	--	--	--	--	--	--	--	--	0.0	--	109.3	--	--
1953	29.0	51.8	--	--	--	--	--	--	--	--	31.2	19.1	--	--
1954	25.7	48.7	101.9	75.2	--	--	--	--	--	0.0	36.6	64.3	352.4	301.8
1955	34.6	12.7	23.7	21.6	15.2	--	--	--	0.0	0.0	5.1	69.6	182.5	208.7
1956	8.4	29.1	15.3	55.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.8	159.5	183.4
1957	--	57.9	145.1	85.2	--	--	--	--	--	4.3	104.0	76.2	--	--
1958	130.8	8.9	29.2	0.0	0.0	--	--	--	--	--	15.2	53.5	237.6	353.4

## K - 2, IRAQ

Latitude 34°58' Longitude 43°20' Elevation 150

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	—	—	—	—	—	—	—	—	—	—	—	23.0	—	—
1958	38.0	0.0	16.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	15.5	25.1	98.6	—

## KANI SPIKA, IRAQ

Latitude 35°51' Longitude 45°53' Elevation 1080

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	—	—	290.0	242.0	166.0	—	—	—	—	—	138.7	152.0	—	—
1958	270.0	30.0	62.0	10.0	T	12.4	0.0	T	0.0	0.0	70.8	57.9	513.1	675.1

## KARBALA, IRAQ

Latitude 32°57' Longitude 44°01' Elevation 29

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935	—	—	—	—	—	—	—	—	—	—	13.0	52.0	—	—
1936	5.0	23.0	—	5.0	17.0	—	—	—	—	—	—	13.0	—	—
1937	—	—	—	—	—	—	—	—	—	—	8.0	—	—	—
1938	44.0	9.0	21.0	2.0	—	—	—	—	—	—	16.0	50.0	142.0	—
1939	28.0	41.0	16.0	3.0	—	—	—	—	—	—	—	5.0	—	154.0
1940	33.0	13.0	—	—	0.0	—	—	—	—	—	—	—	—	—
1941	—	31.0	—	40.0	—	—	—	—	—	0.0	1.0	8.0	—	—
1942	0.0	9.0	10.0	0.0	0.0	0.0	—	—	—	4.5	—	—	—	28.0
1943	5.1	10.7	—	—	—	—	—	—	—	—	—	6.1	—	—
1944	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1945	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1946	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1947	—	—	—	—	—	—	—	—	—	0.0	—	11.4	—	—
1948	8.9	6.4	—	28.9	—	—	—	—	—	—	—	13.9	—	—
1949	14.0	11.4	—	—	—	—	—	—	—	0.0	0.0	30.5	—	—
1950	7.6	9.1	5.1	—	—	—	—	—	—	0.0	12.7	5.1	—	—
1951	15.2	12.7	—	—	—	—	—	—	0.0	0.0	2.5	19.1	—	—
1952	—	—	—	—	—	—	—	—	—	0.0	5.1	8.9	—	—
1953	5.1	25.4	7.6	—	12.7	—	—	—	—	—	—	8.9	—	—
1954	18.3	7.6	15.3	20.3	—	—	—	—	0.0	0.0	20.3	55.8	137.6	—
1955	38.1	—	—	—	—	—	—	—	—	—	—	13.5	—	—
1956	—	5.1	30.5	33.0	—	—	—	—	—	—	—	—	—	—
1957	6.4	2.5	19.6	58.2	14.0	—	—	—	—	—	37.3	14.2	152.2	—
1958	26.7	0.0	0.0	0.0	—	—	—	—	—	—	—	12.4	—	78.2

## KHANAQIN, IRAQ

Co-operative Station

Latitude  $34^{\circ}18'$  Longitude  $45^{\circ}26'$  Elevation 201.2

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1937										82.3	31.1	3.0	—	—
1938	145.5	42.8	23.7	7.4	12.7	0.0	9.1	1.9	T	T	93.6	138.7	475.4	359.5
1939	76.6	84.3	43.3	81.0	0.7	0.0	0.0	0.0	T	T	63.4	73.5	422.8	518.2
1940	137.0	155.5	25.2	14.9	T	0.0	0.0	0.0	0.0	14.3	97.2	63.9	508.0	469.5
1941	25.6	64.9	63.0	70.1	—	0.0	0.0	—	0.0	T	1.9	38.5	264.0	399.0
1942	24.5	32.6	51.6	0.5	0.2	T	0.0	0.0	T	26.2	22.8	48.5	206.9	149.8
1943	32.9	124.5	233.6	35.7	T	0.0	0.0	0.0	0.0	1.2	0.5	47.9	476.3	524.2
1944	81.6	3.7	44.4	13.8	36.1	T	0.0	0.0	0.0	T	72.7	12.9	265.2	229.2
1945	83.0	20.7	6.4	8.7	20.2	0.0	—	0.0	—	3.9	61.7	37.4	242.0	224.6
1946	164.3	45.6	142.5	12.5	22.7	—	—	—	—	0.6	14.3	23.7	426.2	490.6
1947	72.6	32.0	81.1	2.0	29.1	—	T	—	T	0.2	38.8	20.8	276.6	255.4
1948	16.7	34.6	17.5	50.8	2.3	0.0	0.0	0.0	0.0	0.0	1.3	48.2	171.4	181.7
1949	69.9	71.0	138.5	16.0	5.9	0.0	0.0	0.0	0.0	0.0	0.6	194.2	496.1	350.8
1950	46.0	57.9	36.0	51.6	80.8	0.0	0.0	0.0	0.0	0.0	7.6	45.4	325.3	467.1
1951	50.6	122.8	52.2	10.0	11.8	0.0	0.0	0.0	1.0	3.0	49.6	72.6	373.6	301.4
1952	5.6	25.9	26.4	36.6	—	0.0	0.0	0.0	0.0	0.0	3.4	82.8	180.7	219.7
1953	43.6	84.8	71.6	72.6	1.0	0.0	0.0	0.0	T	5.1	57.6	24.0	360.3	359.8
1954	37.3	51.2	122.4	50.7	0.7	0.0	0.0	1.0	0.0	T	27.8	72.0	363.1	350.0
1955	63.9	10.4	55.6	32.3	29.5	0.0	0.0	0.0	0.0	0.0	18.9	93.6	304.2	291.5
1956	34.5	23.6	48.3	93.2	0.0	0.0	0.0	0.0	0.0	0.0	1.4	84.1	285.1	312.1
1957	69.1	68.1	198.1	83.6	81.7	8.0	0.0	0.0	0.0	7.0	100.5	32.1	648.2	594.1
1958	35.6	0.2	49.5	0.3	3.6	0.3	0.0	0.0	0.0	0.0	40.8	56.2	186.5	229.1
	(—)	(—)	(—)										(—)	(—)

## KHANAQIN, IRAQ

Latitude  $34^{\circ}18'$  Longitude  $45^{\circ}26'$  Elevation 201

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	185.0	5.0	27.4	—	—	—	—	—	—	—	37.0	54.0	—	—

## KIPPEI, IRAQ

Latitude  $34^{\circ}42'$  Longitude  $44^{\circ}58'$  Elevation 210

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	—	89.8	155.8	109.9	58.8	0.0	—	—	—	—	—	55.0	—	—
1958	151.0	14.0	2.7	0.0	4.0	3.0	0.0	—	0.0	0.0	4.3	50.3	229.3	—

## KIRKUK, IRAQ

Directorate of Meteorology Station

Latitude 35°28' Longitude 44°28' Elevation 531

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935	25.5	49.2	17.7	37.5	8.2	T	0.0	0.0	T	1.5	59.8	41.4	236.8	—
1936	52.0	158.2	75.4	61.4	37.0	0.0	T	0.0	0.0	0.0	94.9	37.0	495.9	462.7
1937	69.4	22.5	0.2	57.3	7.3	0.0	0.0	0.0	0.0	37.8	47.7	1.8	244.0	288.6
1938	172.9	89.1	113.5	43.3	38.4	0.0	T	0.0	1.5	0.1	97.8	79.7	846.3	556.0
1939	69.5	92.1	87.4	71.2	5.0	T	0.0	0.0	T	18.9	51.0	116.8	503.9	502.8
1940	171.9	161.9	58.3	33.5	0.9	0.0	0.0	0.0	0.0	19.1	18.5	52.0	416.1	505.2
1941	39.2	94.3	88.4	40.2	0.0	0.0	0.0	0.0	0.0	0.3	7.6	68.1	338.1	351.7
1942	46.8	54.5	47.0	9.1	0.1	0.0	0.0	0.0	3.2	18.0	43.4	27.0	245.9	236.7
1943	28.7	81.3	136.4	69.6	3.6	0.0	0.0	0.0	0.0	6.0	0.2	32.9	358.7	404.8
1944	92.5	8.7	49.1	21.3	6.1	T	0.0	0.0	T	0.4	79.8	37.0	294.9	216.8
1945	85.4	4.8	32.8	8.2	0.2	0.0	0.0	0.0	0.0	T	154.1	90.0	375.5	248.6
1946	137.1	115.1	248.7	141.2	60.5	0.0	0.0	0.0	0.0	T	22.5	44.8	769.9	946.7
1947	50.9	43.2	96.6	T	4.4	0.0	0.3	0.0	0.0	2.1	35.6	56.1	289.2	262.7
1948	21.9	25.0	29.9	81.4	1.1	0.0	0.0	0.0	0.0	0.0	2.8	100.9	263.0	253.1
1949	35.2	119.8	167.4	51.2	1.2	0.0	0.0	0.0	0.0	0.0	T	162.4	537.2	478.5
1950	106.0	78.7	48.2	16.9	45.3	T	0.0	0.0	0.0	1.2	2.4	41.5	340.2	457.5
1951	40.8	86.8	36.5	9.7	6.6	T	0.0	T	T	11.7	28.6	59.4	280.1	225.5
1952	6.5	92.6	62.2	45.1	12.5	0.0	0.0	0.0	0.0	0.0	11.2	92.5	322.6	318.6
1953	66.2	123.0	138.7	37.0	1.9	T	0.0	0.0	0.0	5.1	68.2	35.8	475.9	470.5
1954	16.2	99.9	160.1	112.9	2.7	0.0	0.0	T	0.0	1.0	50.3	65.5	508.6	500.9
1955	62.6	39.2	18.8	79.0	16.5	T	0.0	0.0	T	0.0	28.7	93.9	339.9	333.7
1956	33.1	26.5	40.9	49.6	T	0.0	0.0	0.2	T	T	8.4	47.6	206.3	272.9
1957	51.8	93.6	165.6	90.2	111.4	3.0	0.0	0.0	0.0	1.4	52.4	24.4	593.8	571.6
1958	37.6	12.3	19.2	0.9	4.5	1.5	0.0	0.0	0.0	T	51.4	58.2	185.6	154.2
	(90.0)												(238.0)	(206.6)

## KIRKUK - HSI, IRAQ

Latitude 35°28' Longitude 44°24' Elevation 320

HSI 8 inch diameter non-automatic gage

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	52.6	—	—	—	91.2	1.5	—	—	—	—	—	—	—	—
1958	101.4	11.8	18.6	T	3.1	0.6	0.0	0.0	0.0	0.0	50.3	65.1	250.9	—

## KOI SANJAK, IRAQ

Latitude 36°05' Longitude 44°38' Elevation 610

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	—	185.4	414.3	147.0	138.0	14.0	—	—	—	—	140.0	88.0	—	—
1958	249.0	58.8	54.0	39.0	40.0	—	—	—	—	12.0	80.0	119.0	651.8	668.8

KUT, IRAQ  
Co-operative Station  
Latitude 32°30'      Longitude 45°45'      Elevation 19  
Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										6.8	14.7	41.0	--	--
1936	20.6	39.7	10.7	9.6	12.6	--	--	--	--	0.0	--	55.3	--	155.7
1937	10.6	62.0	23.3	10.5	9.9	--	--	--	--	0.0	17.8	0.0	294.8	--
1938	87.5	--	--	11.0	0.0	0.0	0.0	0.0	0.0	0.0	69.4	21.0	--	--
1939	24.5	33.6	25.0	16.0	0.0	--	--	--	--	0.0	20.4	8.3	127.8	189.5
1940	91.2	77.3	14.1	7.1	0.0	--	--	--	--	0.0	0.0	5.1	194.8	218.4
1941	3.5	23.2	11.8	--	0.0	--	--	--	--	--	--	21.4	--	--
1942	0.4	7.4	1.0	0.0	--	--	--	--	0.0	0.3	19.0	20.0	48.1	--
1943	2.2	2.2	49.3	--	--	--	--	--	--	--	--	--	--	--
1944	7.0	1.0	--	--	--	--	--	--	--	--	3.8	3.7	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	0.0	39.0	40.0	--	--
1948	45.0	33.2	9.2	--	--	--	--	--	--	0.0	0.0	60.0	--	--
1949	18.3	53.8	47.4	--	--	--	--	--	--	0.0	0.0	62.5	--	--
1950	17.5	20.7	1.7	--	--	--	--	--	--	0.0	10.0	21.0	--	--
1951	15.7	39.0	33.7	--	--	--	--	--	--	0.0	0.0	25.8	--	--
1952	13.2	11.4	--	--	--	--	--	--	--	0.0	19.2	25.0	--	--
1953	23.3	40.3	13.7	11.5	--	--	--	--	--	0.0	10.0	11.3	110.1	133.0
1954	15.4	21.9	14.6	--	--	--	--	--	--	--	19.5	41.1	--	--
1955	38.0	--	--	--	--	--	--	--	--	0.0	28.0	23.3	--	--
1956	5.8	46.4	22.9	10.6	0.0	0.0	0.0	0.0	0.0	0.0	--	12.3	--	137.0
1957	7.5	7.0	32.4	36.8	--	--	--	--	--	T	72.4	29.5	185.6	--
1958	11.1	T	T	--	--	--	--	--	--	--	--	--	--	--

MAKHMUR, IRAQ  
Latitude 35°46'      Longitude 43°35'      Elevation 270

HSI 8 inch diameter non-automatic gage  
Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	31.3	231.5	110.0	86.0	--	--	--	--	--	53.0	14.0	--	--
1958	119.0	5.0	22.0	--	0.0	0.0	0.0	--	--	--	0.0	13.3	--	--

## MANUKLI, IRAQ

Co-operative Station

Latitude 33°45'

Longitude 45°33'

Elevation 137

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										0.0	131.0	52.2	--	--
1936	15.5	94.9	37.8	39.5	12.5	--	--	--	--	0.0	14.0	54.3	268.5	333.4
1937	10.6	46.0	--	30.9	0.0	--	--	--	--	--	184.0	0.0	--	--
1938	229.0	88.0	75.0	30.0	--	0.0	--	--	--	0.0	74.8	168.0	664.5	526.0
1939	112.5	140.5	25.5	28.0	0.0	--	--	--	--	0.0	40.0	29.0	375.5	549.0
1940	64.0	155.0	22.0	0.0	0.0	--	--	--	--	0.0	--	18.7	--	310.0
1941	8.8	48.0	65.2	128.2	0.0	0.0	0.0	--	--	0.0	0.0	119.3	369.5	--
1942	16.5	39.5	41.2	0.0	15.8	0.0	0.0	0.0	0.0	14.7	63.7	46.4	237.8	232.3
1943	13.7	110.7	115.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	372.5
1944	60.9	18.0	7.7	--	--	0.0	--	--	--	--	--	--	--	--
1945	--	--	--	10.3	16.3	--	--	--	--	0.0	42.7	46.2	--	--
1946	113.5	28.9	130.4	26.9	6.6	--	--	--	--	--	19.6	42.5	368.4	395.2
1947	72.5	46.5	81.2	0.0	--	--	--	--	--	0.0	59.0	13.5	272.7	262.3
1948	--	45.2	63.0	27.3	--	--	--	--	--	0.0	0.0	31.9	--	--
1949	19.5	79.1	80.0	11.4	--	--	--	--	--	0.0	0.0	75.4	265.4	221.9
1950	32.3	62.1	--	35.8	--	--	--	--	--	--	53.1	401.7	--	--
1951	36.1	111.7	79.6	--	--	--	--	--	--	3.6	--	80.7	--	--
1952	--	--	--	76.8	--	--	--	--	--	--	--	42.0	--	--
1953	--	33.4	64.8	--	--	--	--	--	--	--	36.1	25.5	--	--
1954	14.5	64.2	84.5	61.5	--	--	--	--	--	23.3	48.0	--	296.0	286.3
1955	52.0	20.0	22.0	22.5	4.1	--	--	--	--	--	60.0	54.3	234.9	191.9
1956	27.8	18.0	37.0	62.5	--	0.0	0.0	0.0	--	--	--	97.5	--	259.6
1957	43.0	44.0	143.0	161.0	--	--	--	--	--	--	74.7	16.0	481.7	--
1958	110.3	--	--	55.0	--	--	--	--	--	--	--	75.5	--	--

## MANSURIYAT EL JEKEL, IRAQ

(TABLE MOUNTAIN)

Co-operative Station

Latitude 34°03'

Longitude 45°00'

Elevation 65

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940	104.5	94.0	17.5	17.0	0.0	--	--	--	--	--	121.8	122.1	476.9	--
1941	2.0	53.5	46.0	--	--	--	--	--	--	--	--	53.3	--	--
1942	14.7	19.0	32.0	--	--	--	--	--	--	34.0	14.0	37.0	--	--
1943	18.0	53.0	59.0	20.0	--	--	--	--	--	--	--	17.0	--	235.0
1944	29.0	--	27.0	13.0	14.0	--	--	--	--	--	58.0	3.0	--	--
1945	82.0	14.0	--	--	--	--	--	--	--	--	16.0	33.0	--	--
1946	83.0	14.0	--	--	--	--	--	--	--	--	--	20.0	--	--
1947	25.0	--	62.0	--	--	--	--	--	--	--	45.0	--	--	--
1948	20.0	--	--	--	--	--	--	--	--	--	--	29.0	--	--
1949	25.0	38.0	89.0	32.0	--	--	--	--	--	--	--	138.0	--	--
1950	29.0	58.0	18.0	30.0	42.0	--	--	--	--	--	29.0	10.0	216.0	--
1951	27.0	67.0	67.0	10.0	--	--	--	--	10.0	--	17.0	26.0	224.0	220.0
1952	--	8.0	6.0	--	--	--	--	--	--	0.0	3.0	60.0	--	--
1953	10.0	36.0	23.0	41.0	0.0	--	--	--	--	--	29.0	11.0	150.0	173.0
1954	25.0	50.0	99.0	45.0	0.0	--	--	--	--	19.0	33.0	40.0	311.0	259.0
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	24.4	0.0	67.1	--	--	0.0	0.0	0.0	0.0	0.0	0.0	27.0	--	--
1957	--	--	229.1	--	--	--	--	--	--	--	2.5	--	--	--
1958	--	--	--	--	--	--	--	--	--	0.0	6.0	39.0	--	--

## MARGIL, IRAQ

Co-operative Station

Latitude 30°34' Longitude 47°47' Elevation 2

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940	69.0	43.0	--	0.0	0.0	--	--	--	--	--	18.0	0.0	--	--
1941	0.0	27.0	35.0	13.2	--	--	--	--	--	1.0	0.0	30.0	106.2	93.2
1942	--	--	12.0	6.0	--	--	--	--	--	--	--	--	--	--
1943	15.5	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	29.5	3.4	--	--
1951	42.9	9.7	2.3	0.0	--	--	--	--	--	0.8	11.5	--	67.2	87.8
1952	12.5	24.3	--	--	--	--	--	--	--	27.4	--	--	--	--
1953	3.3	11.4	22.9	31.8	--	--	--	--	--	1.5	15.5	17.6	104.0	--
1954	2.6	19.1	32.0	10.3	0.0	0.0	--	--	0.0	0.0	173.4	130.6	368.0	98.6
1955	9.1	4.8	19.3	3.0	1.8	--	--	--	0.0	0.0	2.1	48.8	88.9	342.0
1956	6.8	6.4	6.4	16.7	--	0.0	0.0	0.0	0.0	0.0	0.0	80.8	117.1	87.2
1957	25.9	11.4	24.9	32.1	25.1	--	--	--	--	--	--	18.3	--	200.1
1958	14.3	0.0	0.0	0.0	0.0	--	--	--	--	0.0	5.8	52.7	72.8	--

## MERGA SOOR, IRAQ

Latitude 36°50' Longitude 44°19' Elevation 1170

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	--	--	--	--	--	--	--	--	148.0	--	--
1958	102.6	40.0	147.5	45.0	T	--	--	--	--	--	50.0	198.5	583.6	--

## MIRZA HUSTAM, IRAQ

Co-operative Station

Latitude 36°03' Longitude 44°56' Elevation 459

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1945	--	--	--	16.0	5.8	--	--	--	--	--	117.4	152.8	--	--
1946	149.7	195.1	--	--	--	--	--	--	--	--	--	95.9	--	--
1947	413.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	142.0	164.0	--	--
1949	120.9	313.2	323.2	104.4	23.9	--	--	--	--	0.0	171.7	173.7	1231.0	1191.6
1950	422.3	208.6	101.4	50.8	117.3	--	--	--	--	0.0	0.0	94.4	994.8	1245.8
1951	115.2	212.8	15.0	20.7	1.8	--	--	--	--	2.6	5.2	134.0	507.3	459.9
1952	51.3	383.4	91.4	60.7	70.7	--	--	--	--	--	--	--	657.5	799.3
1953	--	225.0	151.4	15.8	--	--	--	--	--	0.9	145.3	112.0	--	--
1954	84.8	306.0	255.3	183.5	--	--	--	--	0.0	0.0	73.1	43.0	945.7	1067.8
1955	--	42.1	111.1	152.7	30.5	--	--	--	0.0	0.0	20.4	16.8	--	--
1956	13.3	10.9	13.9	14.6	--	0.0	0.0	0.0	--	0.0	7.2	16.5	76.4	89.9
1957	15.6	25.4	30.2	19.5	13.3	--	--	--	--	1.2	7.8	8.8	121.8	127.7
1958	83.5	4.9	4.3	1.5	--	--	--	--	--	0.0	2.6	17.4	114.2	112.0



## MOSUL, IRAQ

Directorate of Meteorology Station

Latitude 36°19' Longitude 43°09' Elevation 222

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1923	66.6	85.8	30.4	41.9	7.4	T	T	--	T	13.8	7.8	31.4	285.1	--
1924	93.4	65.6	47.4	19.2	14.6	2.6	--	--	T	29.9	29.3	63.5	365.5	455.8
1925	19.7	21.1	69.5	15.6	11.3	1.1	--	--	T	23.1	19.7	69.3	250.4	261.0
1926	79.2	163.6	96.5	25.5	15.6	T	0.3	--	--	1.6	87.1	109.8	579.2	492.8
1927	8.0	85.6	9.7	71.3	53.2	T	--	--	T	3.7	46.3	52.7	330.5	426.3
1928	43.5	95.4	28.3	2.1	0.1	0.3	1.1	--	1.3	0.3	109.4	13.4	295.2	274.8
1929	34.3	73.3	27.1	42.9	4.8	T	--	--	--	T	141.0	15.9	339.3	305.5
1930	61.7	61.0	2.6	102.1	1.6	2.0	T	T	--	T	20.2	76.3	327.5	387.9
1931	39.6	92.7	22.0	114.1	5.1	1.4	--	T	--	4.5	27.0	13.6	320.0	371.4
1932	46.4	66.5	45.4	12.0	9.2	--	--	--	0.1	--	13.7	16.4	224.7	224.7
1933	132.3	66.9	76.5	52.3	1.0	0.3	--	--	T	T	4.7	40.8	374.8	359.4
1934	40.9	59.6	48.3	49.2	50.8	--	--	--	--	2.2	6.9	63.5	321.4	294.3
1935	22.9	37.9	11.6	41.5	1.9	--	--	--	T	6.5	84.0	33.7	240.0	188.4
1936	52.0	84.6	19.9	43.2	61.6	T	T	--	--	T	79.4	60.1	400.8	385.5
1937	84.4	13.1	10.7	44.2	7.5	0.0	T	T	0.0	54.6	127.0	13.0	334.5	299.4
1938	155.9	70.3	42.4	41.0	27.0	T	T	0.0	1.5	T	110.4	72.2	520.7	532.7
1939	73.3	59.5	138.1	108.4	5.8	0.0	0.0	--	--	T	11.3	53.1	135.3	584.8
1940	122.8	59.5	36.2	66.2	5.3	T	--	T	T	30.7	33.8	52.2	406.7	489.7
1941	38.3	93.2	80.7	28.7	T	--	--	--	0.5	--	20.4	165.5	427.3	358.1
1942	62.4	76.4	51.2	7.6	0.2	T	--	T	0.6	8.3	89.2	9.9	305.8	364.3
1943	51.5	134.8	103.6	42.3	8.5	T	2.3	--	--	14.1	1.7	48.7	407.5	450.4
1944	141.9	5.7	42.6	40.7	21.2	T	T	0.0	0.0	3.9	126.1	60.4	442.5	316.6
1945	105.0	15.7	18.5	12.3	3.3	T	T	0.0	T	5.2	80.4	115.8	356.2	345.2
1946	84.0	102.6	63.5	74.5	79.2	3.3	T	--	T	13.3	10.6	71.2	502.2	608.5
1947	88.0	29.8	36.8	8.3	9.6	1.1	T	0.0	--	0.1	42.9	36.7	253.3	268.7
1948	30.1	26.9	28.6	142.9	22.0	T	0.0	T	--	T	9.3	113.3	373.1	330.2
1949	42.6	129.8	167.4	74.6	10.9	--	--	0.0	0.0	T	T	116.6	541.9	547.9
1950	117.0	86.9	105.0	11.6	69.8	0.3	T	0.0	T	8.1	14.2	29.4	442.3	507.2
1951	48.1	76.9	47.2	45.2	22.5	T	--	T	T	22.9	24.6	72.5	369.9	301.6
1952	57.3	182.3	75.9	42.6	6.2	T	T	--	T	T	5.8	55.7	405.8	464.3
1953	76.4	84.1	131.1	75.7	9.5	3.8	T	--	0.0	9.3	45.1	102.6	537.6	442.1
1954	48.9	137.1	165.0	128.6	6.4	T	T	0.2	T	3.8	19.1	76.1	585.2	643.2
1955	41.5	59.7	39.7	73.7	6.1	0.2	0.0	0.0	1.8	0.0	41.7	100.7	365.1	321.7
1956	92.6	31.9	50.3	52.0	1.5	T	0.0	T	0.9	1.5	15.1	50.9	296.7	371.6
1957	55.3	45.2	111.6	85.8	67.7	4.5	0.0	T	7.1	3.5	44.1	35.1	459.9	444.7
1958	83.9	5.0	39.9	7.1	2.6	0.1	0.0	0.0	0.0	0.4	11.5	57.7	208.2	221.3

## MOSUL, IRAQ

Latitude 36°19' Longitude 43°00' Elevation 223

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	--	--	--	--	--	--	--	--	25.0	--	--
1958	72.4	5.0	38.0	6.0	--	--	--	--	--	--	11.0	47.0	179.4	--

## NAFT-KHANAH, IRAQ

Co-operative Station

Latitude 34°03' Longitude 45°27' Elevation 154.5

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1931	38.6	25.4	7.5	44.2	2.2	0.0	0.0	0.0	0.0	0.0	20.4	40.7	179.0	—
1932	77.6	5.9	6.9	0.0	2.7	0.1	0.0	0.0	0.0	0.0	3.5	3.5	100.2	154.3
1933	58.6	65.2	69.0	28.6	8.5	0.0	0.0	0.0	0.0	0.0	1.6	—	—	236.9
1934	84.5	32.0	—	37.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	—	—
1935	4.9	27.4	1.7	22.3	—	0.0	0.0	0.0	0.0	0.0	52.3	71.6	180.2	86.8
1936	10.2	135.0	37.8	66.0	17.8	0.0	0.0	0.0	0.0	0.0	24.0	67.3	358.1	390.7
1937	25.4	34.6	T	62.5	15.7	0.0	0.0	0.0	0.0	12.7	94.0	5.1	250.0	229.5
1938	146.0	76.5	37.8	46.7	6.6	0.0	T	0.0	0.0	0.0	64.5	193.0	571.1	425.4
1939	90.2	99.6	31.5	36.8	—	0.0	0.0	0.0	0.0	0.2	44.5	39.4	342.2	515.6
1940	150.0	115.6	24.4	14.5	0.1	0.0	0.0	0.0	0.0	0.0	41.9	36.0	382.5	388.7
1941	13.7	25.4	46.5	—	—	0.0	0.0	0.0	0.0	0.0	—	—	—	—

## NASIRIYA, IRAQ

Directorate of Meteorology Station

Latitude 31°01' Longitude 46°14' Elevation 3

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940		27.2	2.9	7.7	0.2	0.0	0.0	0.0	0.0	0.9	3.1	1.2	—	—
1941	T	31.4	1.0	19.6	0.0	0.0	0.0	0.0	0.0	T	0.8	9.5	62.3	57.2
1942	1.0	16.0	19.2	12.2	0.0	0.0	0.0	0.0	0.0	2.0	3.9	33.5	87.8	58.7
1943	3.4	2.1	53.3	5.6	T	0.0	0.0	0.0	0.0	0.7	0.3	12.5	77.9	103.8
1944	7.7	T	5.9	1.0	5.4	0.0	0.0	0.0	0.0	0.0	60.7	13.6	94.3	33.5
1945	37.0	16.6	19.6	3.9	46.8	0.0	T	0.0	0.0	T	31.3	26.6	161.8	196.2
1946	33.3	3.1	85.7	66.0	3.3	0.0	0.0	0.0	0.0	0.0	5.9	24.8	222.1	249.3
1947	30.5	5.2	7.2	T	7.8	0.0	0.0	0.0	0.0	3.0	34.4	5.9	94.0	81.4
1948	21.8	8.9	25.9	17.5	2.3	0.0	0.0	0.0	0.0	0.0	1.4	68.9	146.7	119.7
1949	25.8	2.1	25.0	0.2	7.3	0.0	0.0	0.0	0.0	0.0	0.0	35.5	95.9	130.7
1950	10.3	4.2	11.1	5.1	6.0	0.0	0.0	0.0	0.0	T	53.9	32.6	123.2	72.2
1951	32.9	13.5	17.3	2.3	0.0	T	0.0	0.0	0.2	T	5.1	25.1	96.4	152.7
1952	11.4	12.2	3.7	17.2	T	0.0	0.0	0.0	0.0	0.0	69.8	49.4	163.7	74.7
1953	12.6	19.4	30.6	51.7	—	0.0	0.0	0.0	0.0	10.8	32.4	21.2	178.7	233.5
1954	2.4	23.6	27.3	5.0	0.7	0.0	T	0.0	0.0	8.5	54.7	55.5	177.7	123.4
1955	14.6	0.4	12.7	7.9	7.5	0.0	0.0	0.0	0.0	T	12.3	23.0	78.4	161.8
1956	2.4	28.1	10.1	4.4	0.0	0.0	0.0	0.0	T	T	T	35.7	80.7	45.0
1957	19.1	48.5	23.7	59.0	13.8	T	0.0	0.0	0.0	0.9	35.1	5.3	205.4	199.8
1958	59.0	T	T	0.2	0.7	0.0	0.0	0.0	0.0	T	6.4	28.2	74.5	81.2

**NUKHAIB, IRAQ**

Co-operative Station

Latitude  $37^{\circ}02'$       Longitude  $44^{\circ}13'$       Elevation 305

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										0.0	6.4	77.5	--	--
1936	5.6	8.8	5.9	2.7	13.0	--	--	--	--	0.0	9.5	13.3	58.8	119.9
1937	17.2	23.2	2.0	5.0	2.2	--	--	--	--	14.4	40.7	0.0	108.7	76.4
1938	19.7	4.6	31.4	0.0	0.0	--	--	--	--	0.0	35.4	50.8	141.9	110.8
1939	44.2	23.0	--	13.0	0.0	--	--	--	--	0.0	9.6	7.0	--	--
1940	23.1	13.8	4.2	16.3	2.5	--	--	--	--	9.2	10.5	--	--	76.5
1941	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	0.0	5.0	24.0	22.0	--	--
1955	10.0	0.0	2.0	10.0	0.0	--	--	--	0.0	0.0	2.0	8.0	32.0	73.0
1956	2.0	5.0	5.0	8.6	--	0.0	0.0	0.0	0.0	--	--	--	--	30.6
1957	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1958	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**PENJWIN, IRAQ**

Co-operative Station

Latitude  $35^{\circ}37'$       Longitude  $45^{\circ}58'$       Elevation 1311

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939										14.5	200.3	180.0	--	--
1940	523.7	340.1	225.0	108.5	21.1	--	--	--	--	98.9	109.3	303.7	1730.3	1613.2
1941	326.3	190.5	261.5	128.7	--	--	--	--	--	10.5	43.3	321.5	1282.3	1448.9
1942	349.3	164.1	298.3	36.5	6.8	--	--	--	--	99.0	167.1	53.2	1174.3	1230.3
1943	175.9	201.7	276.7	173.9	32.2	0.0	0.0	0.0	--	46.4	2.6	137.7	1047.1	1179.7
1944	344.3	76.2	250.5	136.1	54.1	--	--	--	--	--	309.4	72.1	1242.7	1047.9
1945	393.9	152.1	79.2	70.3	52.4	--	--	--	--	31.3	291.1	157.8	1228.1	1129.4
1946	209.0	327.9	300.2	173.3	146.1	--	--	--	--	--	--	--	--	1636.7
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	0.0	0.0	348.7	--	--
1950	421.5	315.1	178.1	48.1	152.1	--	--	--	--	0.0	0.8	145.7	1261.4	1463.6
1951	186.4	218.3	84.2	60.4	19.2	--	--	--	--	55.9	109.6	261.6	995.6	715.0
1952	81.4	479.5	291.6	123.9	37.0	--	--	--	--	18.5	52.5	261.7	1346.1	1440.5
1953	254.0	362.5	304.1	94.5	38.0	--	--	--	--	--	498.6	80.6	1632.3	1385.8
1954	241.4	334.7	429.5	249.5	9.0	--	--	--	0.0	4.0	84.2	214.9	1567.2	1843.3
1955	68.8	93.6	139.5	171.4	35.5	--	--	--	--	--	26.1	27.1	562.0	811.9
1956	67.0	21.2	22.0	31.4	--	0.0	0.0	0.0	--	0.1	10.7	25.6	178.0	200.6
1957	--	195.0	441.0	218.0	223.0	--	--	--	--	4.0	124.0	179.0	--	--
1958	295.0	119.0	107.0	43.0	--	--	--	--	--	--	58.0	233.0	855.0	871.0

## QADIR KARAN, IRAQ

Latitude 35°11' Longitude 44°53' Elevation 380

BSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	123.5	237.7	104.9	91.4	T	--	--	--	--	63.0	34.2	--	--
1958	127.2	0.0	29.5	0.0	4.5	--	--	0.0	0.0	0.0	320.0	95.3	576.5	258.4

## QAIYARA, IRAQ

Co-operative Station

Latitude 35°48' Longitude 43°17' Elevation 180

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1938	103.9	43.4	42.2	25.5	9.4	0.0	0.0	0.0	0.0	0.0	31.5	48.9	304.8	--
1939	40.0	53.1	64.1	50.7	0.5	0.0	0.0	0.0	0.0	4.6	41.4	57.0	321.4	288.8
1940	90.9	57.4	37.2	35.3	--	--	--	--	0.0	16.1	50.3	41.0	328.2	333.8
1941	31.2	70.9	--	--	--	--	--	--	0.0	2.3	10.4	48.8	--	--
1942	22.6	54.8	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	0.0	--	--	--	--
1957	29.5	14.5	104.0	30.2	34.0	--	--	--	--	--	10.1	10.8	233.1	--
1958	33.0	0.7	7.4	3.5	--	--	--	--	--	--	--	21.0	--	65.5

## QALAT DIZA, IRAQ

Co-operative Station

Latitude 36°11' Longitude 45°07' Elevation 610

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1956	--	--	--	--	--	--	--	--	--	0.1	6.2	153.0	--	--
1957	42.1	176.5	337.4	120.5	148.5	--	--	--	--	--	--	97.0	--	983.4
1958	241.5	29.0	50.5	--	--	--	--	--	--	--	--	37.2	--	--

QALAT SHAKAR, IRAQ

Co-operative Station

Latitude 31°52'

Longitude 46°05'

Elevation 13

Precipitation in millimetres

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										1.6	28.2	65.8	--	--
1936	26.8	51.2	18.8	2.4	14.0	--	--	--	--	--	--	67.5	--	208.8
1937	4.5	20.6	9.6	21.9	13.2	--	--	--	--	--	26.3	0.0	86.1	--
1938	67.6	28.2	--	--	--	--	--	--	--	0.0	6.0	82.0	--	--
1939	50.0	13.5	15.0	18.0	--	--	--	--	--	--	--	5.6	--	184.5
1940	71.8	1.6	0.6	--	0.0	--	--	--	--	--	--	--	--	--
1941	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	--	--	4.4	--	--
1943	--	7.8	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	20.6	--	--
1946	20.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	0.0	6.5	--	--	--
1948	4.5	2.7	2.7	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	0.0	4.4	2.6	--	--
1951	--	--	--	--	--	--	--	--	--	--	22.0	35.0	--	--
1952	25.0	--	--	--	--	--	--	--	--	--	27.5	--	--	--
1953	16.5	71.5	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--

QARA DAGH, IRAQ

Latitude 35°18'

Longitude 45°23'

Elevation 830

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	--	35.5	--	2.5	76.0	--	--	--	--	--	--	193.5	--	--

RAML, IRAQ

Latitude 34°57'

Longitude 44°01'

Elevation 200

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	59.0	204.0	72.0	69.0	T	0.0	0.0	0.0	0.0	4.2	16.0	--	--
1958	52.0	6.0	17.0	8.0	5.0	1.0	0.0	0.0	0.0	0.0	33.0	31.0	153.0	109.2

## RAYAF, IRAQ

Co-operative Station

Latitude 36°41'

Longitude 44°37'

Elevation 2610

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1942										26.6	196.5	16.8	—	—
1943	90.3	89.9	110.2	93.8	25.5	2.1	0.0	—	—	69.2	13.1	58.0	592.1	651.7
1944	—	—	126.5	148.0	—	—	—	—	—	—	—	—	—	—
1945	—	—	—	—	68.6	—	—	—	—	78.1	57.3	30.8	—	—
1946	21.6	162.7	197.1	111.9	142.4	—	—	—	—	—	—	—	—	801.9
1947	—	—	—	—	—	—	—	—	—	10.4	46.8	6.6	—	—
1948	4.2	115.3	58.2	267.5	77.4	—	—	—	—	0.6	6.1	16.0	445.3	486.4
1949	27.3	24.9	25.6	104.7	6.5	—	—	—	—	50.7	52.9	78.7	371.3	211.7
1950	170.8	108.8	149.1	74.1	154.8	—	—	—	—	16.6	159.3	134.1	967.6	839.9
1951	101.3	100.8	52.1	130.0	37.4	—	—	—	—	92.0	—	112.7	—	731.6
1952	—	142.0	31.8	—	—	—	—	—	—	—	124.4	—	—	—
1953	104.5	87.1	103.5	20.5	39.6	—	—	—	—	26.4	85.6	93.6	560.8	—
1954	62.9	117.6	160.4	175.7	16.3	—	—	—	—	7.2	34.9	126.1	701.1	738.5
1955	—	88.2	83.3	—	69.8	—	—	—	—	—	73.4	—	—	—
1956	58.5	128.0	96.0	92.1	10.4	0.0	0.0	0.0	0.0	0.0	73.9	114.5	573.4	—
1957	67.2	167.9	197.2	106.6	122.9	31.5	—	—	—	9.7	100.3	74.0	877.3	881.7
1958	157.1	46.4	95.1	58.6	38.8	—	—	—	—	—	20.4	167.4	583.8	580.0

## HUSTAMIA, IRAQ

Co-operative Station

Latitude 33°11'

Longitude 44°29'

Elevation 32

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1936	8.7	44.1	5.3	23.2	3.8	0.0	0.0	0.0	0.0	0.0	7.0	40.8	132.9	—
1937	21.4	25.6	0.0	24.1	4.5	0.0	0.0	0.0	0.0	42.0	26.0	0.0	143.6	123.4
1938	72.9	32.6	81.6	21.0	0.0	0.0	0.0	0.0	10.5	0.0	42.3	106.2	367.1	266.6
1939	35.9	79.6	20.9	45.1	0.0	0.0	0.0	0.0	0.0	0.0	18.7	—	—	330.0

## HUTBA, IRAQ

Directorate of Meteorology Station

Latitude 33°02' Longitude 40°17' Elevation 615.5

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1928	—	—	—	—	—	0.8	0.0	0.0	T	T	43.1	5.1	—	—
1929	3.4	17.4	0.9	4.3	1.2	0.0	0.0	0.0	0.0	0.0	26.3	24.7	78.2	75.4
1930	35.7	57.5	3.2	7.8	T	0.0	0.0	0.0	4.1	0.0	0.9	5.0	114.2	159.3
1931	3.3	6.1	0.0	32.0	25.2	0.0	0.0	0.0	0.0	T	T	11.1	77.7	72.5
1932	28.8	3.0	3.2	0.2	T	0.0	0.0	0.0	0.5	0.0	0.7	10.5	46.9	46.8
1933	45.7	36.3	7.4	10.1	T	0.0	0.0	0.0	0.0	0.0	T	T	99.5	110.7
1934	31.2	6.4	2.2	0.4	17.2	0.3	0.0	0.0	0.0	1.3	T	36.6	95.6	57.7
1935	5.1	4.2	0.0	9.9	2.8	0.0	0.0	0.0	0.0	10.8	64.3	53.4	150.5	59.9
1936	2.3	14.7	12.1	11.5	8.7	0.0	0.0	T	0.0	T	T	51.8	101.1	177.8
1937	19.4	6.6	4.3	36.3	11.0	0.0	0.0	0.0	0.0	65.3	57.7	T	200.6	129.4
1938	69.4	20.6	22.7	7.7	5.0	0.0	T	0.0	0.0	0.1	12.0	45.2	182.7	248.4
1939	22.0	24.2	41.0	46.5	T	T	0.0	0.0	T	T	17.7	15.4	166.8	191.0
1940	23.0	4.0	10.8	12.6	3.0	T	0.0	0.0	0.0	17.8	19.3	10.0	100.5	86.5
1941	1.7	26.8	23.5	—	—	—	—	0.0	0.0	0.1	1.0	3.6	—	—
1942	17.0	8.7	19.4	5.3	0.3	0.0	0.0	0.0	0.0	10.5	28.1	27.4	116.7	55.4
1943	8.0	16.5	46.0	44.0	3.8	0.0	0.0	0.0	0.0	10.0	T	6.9	135.2	184.3
1944	9.1	4.0	42.2	12.0	24.3	T	0.0	0.0	0.0	0.0	17.8	32.4	141.8	108.5
1945	21.5	17.1	4.9	0.4	3.0	0.0	T	0.0	0.0	7.1	10.5	23.3	87.8	97.1
1946	13.8	40.7	3.8	85.0	26.5	T	0.0	0.0	0.0	T	5.8	—	—	210.7
1947	—	—	—	—	—	—	—	—	—	—	—	30.4	—	—
1948	0.7	22.7	7.6	8.5	10.5	0.0	0.0	0.0	0.0	0.0	0.5	17.9	68.4	80.4
1949	2.5	8.9	40.5	1.7	9.9	0.0	0.0	0.0	0.0	T	0.0	62.4	125.9	81.9
1950	5.4	8.4	8.0	26.4	16.7	T	T	0.0	0.0	0.5	15.1	8.2	88.7	127.3
1951	1.3	4.1	19.9	T	4.8	0.0	0.0	0.0	0.0	T	T	41.3	71.4	53.9
1952	5.7	10.4	9.4	3.2	4.4	0.0	0.0	T	T	1.5	5.0	28.5	68.1	74.4
1953	19.1	23.0	24.7	74.4	2.3	T	0.0	0.0	T	8.2	24.4	10.6	186.7	178.5
1954	7.2	29.7	130.0	20.0	1.7	1.7	0.0	T	0.0	4.5	50.1	25.0	269.9	233.5
1955	9.8	1.4	11.6	0.7	9.3	0.0	0.0	0.0	0.0	0.0	21.4	2.7	56.9	112.4
1951	1.3	4.1	19.9	T	4.8	0.0	0.0	0.0	0.0	T	T	41.3	71.4	53.9
1952	5.7	10.4	9.4	3.2	4.4	0.0	0.0	T	T	1.5	5.0	28.5	68.1	74.4
1953	19.1	23.0	24.7	74.4	2.3	T	0.0	0.0	T	8.2	24.4	10.6	186.7	178.5
1954	7.2	29.7	130.0	20.0	1.7	1.7	0.0	T	0.0	4.5	50.1	25.0	269.9	233.5
1955	9.8	1.4	11.6	0.7	9.3	0.0	0.0	0.0	0.0	0.0	21.4	2.7	56.9	112.4
1956	25.0	3.2	6.5	60.9	T	0.0	0.0	T	T	T	T	9.5	105.1	119.7
1957	25.8	2.4	38.6	17.2	67.9	T	0.0	T	16.6	2.3	13.3	4.3	188.4	178.0
1958	33.9 (24.9)	2.0	T	2.6	2.0	T	0.0	0.0	0.0	0.0	18.7	1.1	60.3 (51.3)	60.4 (51.4)

## HUTBA, IRAQ

Latitude 33°02' Longitude 40°17' Elevation 615.5

Berdix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	24.0	5.0	2.0	4.0	4.0	—	—	—	—	—	11.0	—	—	—

## HUWANDUZ, IRAQ

Co-operative Station

Latitude  $36^{\circ}37'$  Longitude  $44^{\circ}32'$  Elevation 690

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939	78.7	172.4	223.6	610.5	10.0	--	--	--	--	8.5	135.6	256.4	1495.7	--
1940	317.4	200.0	120.0	104.3	20.4	--	--	--	--	67.2	72.2	211.3	1112.4	1162.6
1941	198.0	194.3	154.7	87.0	--	--	--	--	--	24.2	31.0	341.3	1030.5	984.7
1942	191.9	56.7	161.2	11.8	--	--	--	--	--	61.0	231.3	81.2	795.1	818.1
1943	204.5	152.5	294.8	225.0	53.0	--	--	--	--	29.1	5.9	145.9	1110.7	1303.3
1944	232.8	40.8	135.8	142.7	30.2	--	--	--	--	11.9	196.7	53.9	844.8	763.2
1945	242.6	67.6	77.2	52.8	16.8	--	--	--	--	--	161.8	126.2	745.0	719.5
1946	78.2	198.7	290.6	136.8	111.2	--	--	--	--	--	--	--	--	1103.5
1947	--	--	--	--	--	--	--	--	--	--	51.9	--	--	--
1948	27.2	139.5	102.7	252.6	61.4	--	--	--	--	--	26.4	103.6	713.4	--
1949	109.1	282.6	218.3	148.9	29.8	--	--	--	--	0.0	0.0	123.2	911.9	918.7
1950	260.7	212.0	231.4	24.8	152.5	--	--	--	--	22.6	0.0	97.8	1001.8	1004.6
1951	136.7	163.3	70.3	70.9	34.7	--	--	--	--	63.5	68.5	151.7	759.6	596.3
1952	46.1	491.0	111.5	106.0	33.1	--	--	--	--	0.0	12.5	121.0	921.2	1071.4
1953	159.0	239.0	202.5	81.0	0.0	--	--	--	--	--	226.5	135.0	1043.0	815.0
1954	141.0	273.0	339.0	196.0	30.0	--	--	--	0.0	5.0	45.0	92.0	1121.0	1340.5
1955	15.0	118.0	160.0	150.0	69.0	--	--	--	10.0	--	213.0	131.5	866.5	664.0
1956	140.0	223.0	150.0	148.0	60.0	0.0	0.0	0.0	0.0	0.0	80.0	175.0	976.0	1065.5
1957	95.0	155.0	351.0	17.3	303.1	--	--	--	--	--	--	--	--	1176.4
1958	--	--	102.3	46.5	--	--	--	--	--	--	33.5	158.0	--	--

## HUWANDUZ, IRAQ

Latitude  $36^{\circ}37'$  Longitude  $44^{\circ}32'$  Elevation 690

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	67.0	142.0	--	--	--	--	--	--	--	--	--
1958	--	--	--	--	--	--	--	--	--	--	36.5	180.0	--	--

## SALAHUDIN, IRAQ

Co-operative Station

Latitude  $36^{\circ}27'$  Longitude  $44^{\circ}13'$  Elevation 1088

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1941	--	188.6	121.2	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	5.2	24.4	10.1	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	7.0	99.1	107.0	--	--
1954	105.8	210.9	256.7	185.0	13.7	--	--	--	--	0.0	55.0	60.3	887.4	905.2
1955	29.5	86.0	41.4	104.9	63.2	1.4	--	--	17.0	--	127.0	116.0	580.4	450.7
1956	114.0	134.0	111.0	81.0	23.0	0.0	0.0	0.0	--	0.0	11.9	53.1	528.0	700.0
1957	75.7	95.9	202.5	92.4	244.3	1.3	--	--	--	2.5	72.6	111.7	898.9	777.1
1958	199.6	8.9	52.1	2.5	--	--	--	--	--	--	18.0	80.1	361.2	449.9



## SALMAN, IRAQ

Co-operative Station

Latitude 30°30'

Longitude 44°32'

Elevation 202

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										0.4	15.5	36.5	--	--
1936	29.3	27.3	5.0	5.4	5.9	--	--	--	--	0.0	1.0	57.2	131.1	125.3
1937	2.7	23.5	9.5	8.0	0.0	--	--	--	--	0.0	--	9.0	--	101.9
1938	38.7	4.8	3.5	0.0	0.0	--	--	--	--	0.0	8.6	87.2	142.8	--
1939	26.0	25.1	0.0	4.5	0.0	--	--	--	--	0.0	0.6	7.8	64.0	151.4
1940	9.2	12.0	2.3	49.1	0.5	--	--	--	--	0.6	7.9	0.0	81.6	81.5
1941	0.0	32.2	3.3	16.9	--	--	--	--	--	--	--	--	--	60.9
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	7.0	15.0	7.0	--	--
1954	5.0	5.0	13.0	--	--	--	--	--	0.0	6.0	55.0	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1957	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1958	--	--	--	--	--	--	--	--	--	0.0	8.2	34.1	--	--

## SAMARRA, IRAQ

Co-operative Station

Latitude 34°11'

Longitude 43°50'

Elevation 65

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935											13.0	31.0	--	--
1936	9.0	22.0	33.0	27.0	--	--	--	--	--	--	--	37.0	--	115.0
1937	23.0	--	--	17.0	--	--	--	--	--	11.0	26.0	--	--	--
1938	61.0	9.0	54.0	--	--	--	--	--	--	--	38.0	69.0	--	--
1939	11.0	36.0	25.0	21.0	--	--	--	--	--	--	27.0	42.0	162.0	200.0
1940	86.0	44.0	5.0	11.0	0.0	--	--	--	--	0.0	0.0	17.0	163.0	215.0
1941	7.0	42.0	12.0	4.0	--	--	--	--	--	0.0	0.0	16.0	81.0	82.0
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	23.6	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	11.5	26.2	--	--
1947	16.5	12.7	--	33.8	49.3	--	--	--	--	43.5	34.0	53.1	--	--
1948	12.5	33.8	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	13.1	81.6	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	0.0	2.5	7.6	--	--
1951	17.8	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	0.0	--	5.4	--	--
1953	--	--	--	--	--	--	--	--	--	--	35.3	10.4	--	--
1954	2.5	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1956	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1957	--	--	--	--	--	--	--	--	--	--	14.6	22.5	--	--
1958	17.7	5.2	2.5	0.0	4.5	--	--	--	--	0.0	15.0	39.0	83.9	67.0

## SAMAWA, IRAQ

Co-operative Station

Latitude 31°18'

Longitude 45°16'

Elevation 6

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935											15.0	46.0	--	--
1936	42.0	40.0	31.0	--	5.0	--	--	--	--	--	--	38.0	--	--
1937	3.0	40.0	35.0	9.0	--	--	--	--	--	--	18.0	5.0	110.0	--
1938	75.0	29.0	--	--	--	--	--	--	--	--	--	--	--	--
1939	13.0	8.0	2.0	--	--	--	--	--	--	--	5.0	--	--	--
1940	42.0	--	--	0.0	0.0	--	--	--	--	0.0	0.0	3.0	--	--
1941	0.0	30.0	0.0	4.0	--	--	--	--	--	0.0	0.0	7.0	41.0	37.0
1942	3.0	8.0	4.0	10.0	0.0	--	--	--	--	0.0	9.9	15.2	50.1	32.0
1943	--	--	--	--	0.0	0.0	0.0	--	0.0	10.2	--	--	8.6	--
1944	1.3	0.0	1.3	--	--	--	--	0.0	--	--	24.1	7.6	34.3	--
1945	41.2	14.0	--	--	--	--	--	--	--	--	39.9	30.5	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	27.9	--	--	0.0	0.0	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	0.0	101.3	30.5	--	--
1951	41.9	30.5	67.9	0.0	0.0	--	--	--	0.0	3.0	3.8	98.3	245.4	272.1
1952	33.5	12.9	0.0	--	0.0	--	--	--	--	0.0	121.9	75.5	--	--
1953	62.5	113.5	6.1	6.9	2.3	--	--	--	--	0.0	3.8	5.1	200.2	388.7
1954	1.0	25.4	14.0	21.3	3.8	--	--	--	0.0	10.2	76.1	61.7	213.5	74.4
1955	19.6	0.0	19.1	5.1	--	--	--	--	--	0.0	13.5	38.2	95.5	191.8
1956	0.0	24.1	6.6	19.5	--	--	--	--	--	0.0	--	15.3	--	101.9
1957	--	--	--	--	--	--	--	--	--	1.5	38.6	41.5	--	--
1958	11.5	--	--	--	--	--	--	--	--	0.0	28.0	--	--	--

## SAMAT, IRAQ

Co-operative Station

Latitude 36°46'

Longitude 42°48'

Elevation 300

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1944	--	--	124.1	204.3	105.9	--	--	--	--	20.0	276.4	126.1	--	--
1945	231.5	113.9	128.2	46.0	--	--	--	--	--	--	203.1	265.0	987.7	942.1
1946	97.8	259.0	304.4	220.7	--	--	--	--	--	52.9	44.4	108.0	1047.2	1350.0
1947	304.8	68.2	82.8	55.8	26.5	--	--	--	--	10.5	145.1	127.1	820.8	703.4
1948	82.8	256.7	182.7	344.3	45.2	--	--	--	--	--	103.7	141.2	1156.6	1194.4
1949	166.0	198.5	270.3	175.0	43.3	--	--	--	--	0.0	0.0	66.0	918.9	1097.8
1950	238.0	85.0	285.0	109.0	281.0	--	--	--	--	42.0	100.0	105.0	1245.0	1064.0
1951	151.0	138.2	68.6	134.0	26.0	--	--	--	--	97.0	42.0	195.0	851.8	744.8
1952	77.5	44.0	137.0	128.0	36.0	--	--	--	--	0.0	25.2	99.8	943.7	112.7
1953	135.5	394.5	402.4	158.4	32.0	--	--	--	--	31.5	291.1	126.8	1572.2	1217.8
1954	243.5	349.3	310.5	235.1	41.0	0.0	--	--	--	14.0	75.5	191.4	1460.5	1620.8
1955	11.4	146.9	147.7	170.5	66.3	--	--	--	4.9	--	51.6	137.4	736.7	828.6
1956	158.5	63.9	257.6	170.3	62.9	0.0	0.0	0.0	--	0.0	--	--	--	902.0
1957	408.5	242.1	321.0	208.8	368.0	37.9	--	--	--	70.9	119.1	154.8	1931.1	--
1958	397.0	154.1	147.5	120.6	33.2	--	--	--	--	--	--	131.6	--	1197.2

## SKESANK, IRAQ

Co-operative Station

Latitude 36°58' Longitude 43°32' Elevation 1046

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1945	--	--	--	--	21.6	--	--	--	--	--	159.4	177.5	--	--
1946	64.4	242.1	267.0	132.1	158.2	--	--	--	--	33.9	1.1	94.8	993.6	1200.7
1947	315.7	35.6	112.3	34.0	27.8	--	--	--	--	4.9	127.5	109.2	767.0	655.2
1948	61.3	181.7	106.2	316.7	48.6	--	--	--	--	11.6	83.6	132.1	941.8	956.1
1949	149.3	246.1	235.6	151.0	58.7	--	--	--	--	2.8	2.1	283.3	1128.9	1068.0
1950	276.2	333.2	309.2	52.4	232.7	--	--	--	--	56.8	58.3	150.4	1469.2	1491.9
1951	200.8	181.0	56.1	123.4	26.0	--	--	--	16.3	74.2	66.0	336.2	1080.0	869.1
1952	145.4	395.5	115.8	170.9	94.7	--	--	--	--	8.8	16.3	105.7	993.1	1338.7
1953	170.6	383.8	318.9	252.4	16.6	--	--	--	--	18.6	324.0	150.2	1635.1	1273.1
1954	163.2	339.7	351.7	244.6	26.6	--	--	--	--	4.9	102.5	235.1	1468.3	1618.6
1955	15.6	129.3	139.4	60.1	19.9	--	--	--	--	--	55.3	118.7	538.3	706.8
1956	63.0	47.8	88.9	43.2	7.9	0.0	0.0	0.0	--	0.0	29.0	82.6	362.4	424.8
1957	101.2	111.7	92.0	61.7	101.3	9.1	--	--	--	--	--	21.9	--	588.6
1958	106.1	19.3	43.3	22.0	12.7	--	--	--	--	--	10.9	63.9	278.2	--

## SHABIKA, IRAQ

Co-operative Station

Latitude 30°48' Longitude 43°40' Elevation 300

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935	--	--	--	--	--	--	--	--	--	0.4	8.7	28.4	--	--
1936	29.8	13.4	5.9	0.0	6.9	--	--	--	--	0.0	1.0	70.2	127.2	93.5
1937	3.1	7.5	5.5	13.5	0.0	--	--	--	--	7.0	36.5	1.0	74.1	100.8
1938	44.5	20.5	2.5	0.0	0.0	--	--	--	--	0.0	4.3	51.1	122.9	112.0
1939	40.2	16.7	0.0	0.3	--	--	--	--	--	0.0	4.6	45.0	106.8	112.6
1940	23.0	12.7	0.0	63.0	--	--	--	--	--	--	--	--	--	148.3
1941	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1942	--	--	--	--	--	--	--	--	--	--	--	19.0	--	--
1943	--	--	44.5	--	4.9	--	--	--	--	--	--	--	--	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	0.0	2.2	2.1	--	--
1951	1.7	--	--	--	--	--	--	--	--	--	--	14.0	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	87.0	--	--
1955	20.0	0.0	10.0	14.0	--	--	--	--	--	0.0	0.0	37.0	68.0	--
1956	0.0	17.0	4.0	5.5	--	0.0	0.0	0.0	--	0.0	0.0	18.8	45.3	63.5
1957	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1958	--	--	--	--	--	--	--	--	--	--	0.0	15.0	--	--

## SHAIRA, IRAQ

Co-operative Station

Latitude 30°25'

Longitude 47°39'

Elevation 18.3

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1923	59.0	25.8	23.7	0.1	2.1	0.0	0.0	0.0	0.0	0.7	0.5	21.9	133.8	—
1924	84.1	37.4	2.1	T	T	0.0	0.0	0.0	0.0	0.5	1.0	29.0	154.1	146.7
1925	16.0	7.6	8.1	13.2	T	0.0	0.0	0.0	0.0	20.8	14.5	3.1	83.3	75.4
1926	28.3	49.9	8.4	13.8	0.1	0.0	0.0	0.0	0.0	T	194.0	13.0	307.5	138.9
1927	15.1	20.2	5.8	18.6	T	0.0	0.0	0.0	0.0	0.0	29.6	7.3	96.6	266.7
1928	46.8	14.3	3.9	9.0	0.0	0.0	0.0	0.0	0.0	T	61.8	0.3	136.1	110.9
1929	21.2	48.6	0.9	T	0.4	0.0	0.0	0.0	0.0	1.5	4.1	58.4	135.1	133.2
1930	45.6	11.3	3.0	6.1	0.0	0.0	0.0	0.0	0.0	T	1.7	21.1	88.8	130.0
1931	5.5	72.6	T	21.1	1.0	0.0	0.0	0.0	0.0	0.0	5.3	2.6	108.1	123.0
1932	21.3	1.5	6.5	T	T	0.0	0.0	0.0	0.0	0.0	1.9	19.2	50.4	37.2
1933	37.2	41.4	24.9	28.6	T	0.0	0.0	T	0.0	0.1	0.3	3.7	136.2	153.2
1934	41.4	28.1	0.6	24.6	10.7	0.0	0.0	0.0	0.0	T	13.7	88.8	207.9	109.5
1935	13.9	37.0	9.9	11.3	2.4	0.0	0.0	0.0	0.0	0.0	27.8	73.0	175.3	177.0
1936	31.6	24.3	16.5	13.4	11.1	0.0	0.0	1.6	0.0	T	41.3	43.3	183.1	199.3
1937	19.2	40.3	15.4	13.2	5.2	0.0	0.0	0.0	0.0	T	23.7	0.2	117.2	177.9
1938	88.7	52.6	27.9	1.5	T	0.0	0.0	0.0	T	0.0	0.9	32.8	204.4	194.6
1939	36.9	39.6	1.3	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	104.5	136.8
1940	36.9	40.8	3.7	1.6	0.0	0.0	0.0	T	0.0	3.9	74.6	0.0	161.5	84.4
1941	0.1	25.7	20.1	19.0	T	0.0	0.0	0.0	0.0	T	1.3	48.1	114.3	143.4
1942	1.0	9.0	12.5	8.3	T	0.0	0.0	0.0	T	2.3	6.8	29.6	69.5	80.2
1943	19.1	16.5	65.6	11.7	T	0.0	T	0.0	0.0	0.0	T	7.0	119.9	151.6
1944	39.9	T	5.9	11.8	4.6	0.0	0.0	0.0	0.0	0.0	74.3	77.9	214.4	69.2
1945	35.4	23.3	3.6	6.3	57.3	0.0	4.7	0.0	0.0	16.2	47.3	4.3	198.4	282.8
1946	22.2	8.5	63.1	29.1	T	0.0	0.0	0.0	T	0.0	36.0	15.9	174.8	190.7
1947	7.2	67.2	6.5	T	T	0.0	0.0	0.0	0.0	0.0	—	—	—	132.8
1948	3.3	6.8	4.4	11.6	T	0.0	0.0	0.0	0.0	0.0	2.9	60.2	89.2	—
1949	29.1	0.3	36.0	T	0.3	0.0	0.0	0.0	0.0	0.0	12.9	33.2	111.8	128.8
1950	6.3	12.9	35.2	7.9	76.9	0.0	0.0	0.0	0.0	0.0	25.9	0.8	165.9	185.3
1951	28.0	9.2	3.1	T	11.3	T	0.0	0.0	0.0	T	0.4	10.7	62.7	78.3
1952	14.8	24.9	2.9	53.2	0.3	0.0	0.0	0.0	T	T	23.1	34.3	153.5	107.2
1953	11.1	8.2	44.7	23.2	1.5	0.1	0.0	0.0	0.0	3.3	10.7	19.3	122.1	146.2
1954	3.8	14.9	35.0	12.8	T	0.0	0.0	0.0	0.0	7.8	—	—	—	99.8
1955	10.1	0.4	11.8	6.3	15.0	0.0	0.0	0.0	0.0	0.0	0.6	50.4	94.6	—

## SHAQLAWA, IRAQ

Co-operative Station

Latitude 36°24' Longitude 44°20' Elevation 970

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1945	--	--	--	0.1	34.3	--	--	--	--	--	169.4	176.0	--	--
1946	137.2	345.8	378.1	130.1	121.7	--	--	--	--	20.9	44.5	112.7	1251.0	1458.3
1947	485.1	73.6	120.7	43.7	47.0	3.4	--	--	--	0.5	120.8	137.1	1031.9	911.6
1948	45.2	178.4	149.9	237.7	45.7	--	--	--	--	10.0	38.0	118.0	823.9	916.3
1949	128.5	313.0	252.8	135.5	21.0	--	--	--	--	0.0	0.0	250.3	1101.1	1016.8
1950	417.4	268.1	229.8	52.1	--	--	--	--	--	16.9	8.3	127.6	1120.2	1217.7
1951	93.9	236.5	77.1	75.1	--	--	--	--	--	21.4	52.4	227.6	790.0	635.4
1952	56.6	377.4	146.4	198.4	--	--	--	--	--	--	21.6	125.7	926.1	1086.2
1953	150.0	309.5	182.1	85.7	--	--	--	--	--	1.5	217.8	95.8	1042.4	874.6
1954	154.3	321.4	250.0	234.2	--	--	--	--	--	--	48.3	73.6	1081.8	1275.0
1955	18.7	71.4	67.7	111.5	41.0	--	--	--	11.0	--	165.1	149.3	635.7	443.2
1956	148.2	156.0	117.0	82.8	--	0.0	0.0	0.0	--	0.0	79.5	149.0	732.5	818.4
1957	93.6	106.6	210.6	104.3	150.7	--	--	--	--	16.4	44.6	115.0	839.8	892.2
1958	136.5	--	66.0	--	--	--	--	--	--	--	7.5	129.5	--	--
	(--)										(--)	(--)		

## SHAQLAWA, IRAQ

Latitude 36°24' Longitude 44°20' Elevation 970

HSI 8 inch diameter non-automatic gage

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	--	--	--	--	--	--	--	--	127.6	--	--
1958	321.8	33.0	64.0	24.0	15.0	13.0	0.0	--	--	0.0	32.0	146.0	648.8	--

## SIDDIKAN, IRAQ

Latitude 36°47' Longitude 44°40' Elevation 1000

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	--	--	--	--	--	--	--	5.4	111.5	--	--
1958	104.2	33.0	89.0	51.0	--	--	--	--	--	--	36.0	140.2	434.4	394.1

## SINJAR, IRAQ

Co-operative Station

Latitude 36°19' Longitude 41°50' Elevation 476

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										36.9	109.5	53.0	--	--
1936	45.5	22.3	15.6	50.0	28.0	--	31.5	--	--	0.0	73.0	107.0	372.9	392.3
1937	106.0	38.0	2.5	52.0	28.5	--	--	--	--	114.0	77.5	18.0	436.5	407.0
1938	208.0	64.0	54.0	73.0	23.0	--	--	--	--	0.0	72.0	62.0	556.0	631.5
1939	38.0	59.0	198.0	84.0	3.8	--	--	--	--	2.0	55.3	106.2	566.3	536.8
1940	127.3	73.7	45.9	78.0	29.0	--	--	--	--	38.0	10.0	78.5	480.4	517.4
1941	63.5	101.5	78.0	35.0	--	--	--	--	--	0.0	19.5	21.0	510.5	404.5
1942	24.2	90.0	60.0	--	--	--	--	--	--	10.2	72.5	18.0	--	--
1943	69.0	128.0	57.0	--	4.5	0.0	--	--	--	16.4	1.9	26.1	--	--
1944	335.8	5.0	73.4	51.7	29.2	--	--	--	--	13.0	132.3	86.9	527.3	339.5
1945	198.2	31.6	8.3	12.4	12.6	--	--	--	--	0.0	44.6	103.1	410.8	495.3
1946	25.1	51.6	56.3	49.5	118.4	--	--	--	--	--	--	--	--	448.6
1947	--	--	--	1.2	3.8	0.8	0.0	0.0	--	0.2	43.3	43.2	--	--
1948	35.0	33.0	32.3	103.3	19.9	--	--	--	--	3.2	17.5	112.6	356.8	310.2
1949	44.6	110.4	165.3	60.4	32.8	--	--	--	--	0.0	3.0	179.5	596.0	546.1
1950	108.2	69.0	109.5	33.5	125.5	--	--	--	--	4.0	11.5	31.5	492.7	628.2
1951	55.0	36.7	71.2	50.5	--	--	--	--	0.0	38.3	12.9	58.8	303.4	240.4
1952	25.4	208.8	--	--	--	--	--	--	--	0.0	16.1	52.8	--	--
1953	54.9	143.4	121.9	95.3	--	--	--	--	--	13.0	66.2	82.2	576.9	484.4
1954	108.9	94.7	167.0	159.0	14.4	--	--	--	0.0	0.0	53.5	72.0	669.5	705.4
1955	22.3	76.4	24.0	30.2	12.7	--	--	--	0.0	0.0	28.0	104.3	297.9	291.1
1956	119.1	37.9	57.1	27.7	0.0	0.0	0.0	0.0	0.0	0.0	14.4	67.2	323.4	374.1
1957	71.1	61.6	127.6	75.1	97.4	6.1	--	--	--	2.7	20.7	59.5	521.8	520.5
1958	134.3	4.9	10.1	7.4	6.3	--	--	--	--	--	25.3	39.9	228.2	245.9

## SULAIMANIYA, IRAQ

Co-operative Station

Latitude 35°33' Longitude 45°27' Elevation 853

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										1.5	88.5	78.1	--	--
1936	48.5	151.7	50.1	126.3	166.1	--	--	--	--	0.0	--	93.6	--	710.8
1937	84.8	81.4	100.9	440.3	0.0	--	--	--	--	51.5	87.7	32.0	878.6	--
1938	207.7	139.4	89.5	191.8	0.0	--	--	--	--	0.0	154.0	230.5	1012.9	799.6
1939	95.5	162.5	141.0	124.0	--	--	--	--	--	7.5	24.2	121.0	675.7	907.5
1940	266.0	138.5	71.5	30.7	0.0	--	--	--	--	13.3	44.2	197.7	761.9	659.4
1941	143.0	163.1	213.0	50.9	--	--	--	--	--	0.0	7.2	207.7	784.9	825.2
1942	95.8	72.5	138.3	5.5	--	--	--	--	--	26.5	88.8	38.0	465.4	527.0
1943	88.9	130.5	227.2	105.0	10.0	--	--	--	--	24.0	3.4	110.0	699.0	714.9
1944	222.3	13.5	105.9	38.0	63.7	--	--	--	--	2.0	141.5	55.8	642.7	580.8
1945	195.0	83.9	53.2	67.4	86.9	--	--	--	--	4.3	199.6	100.4	790.7	685.7
1946	105.7	151.2	242.8	155.2	86.3	--	--	--	--	--	--	88.3	--	1045.5
1947	140.1	125.0	90.2	--	--	--	--	--	--	--	58.9	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	182.5	--	--
1950	--	--	--	--	--	--	--	--	--	0.0	2.6	42.8	--	--
1951	105.9	83.3	46.6	21.2	9.9	--	--	--	--	20.5	57.5	84.4	429.3	312.3
1952	42.8	158.0	110.8	112.6	10.8	--	--	--	--	0.0	13.5	181.8	630.3	597.4
1953	118.8	158.0	152.0	94.6	10.5	--	--	--	--	5.5	192.7	54.1	786.2	729.2
1954	47.9	204.0	203.7	189.7	10.5	--	--	--	0.8	0.9	64.5	162.5	884.5	908.9
1955	53.3	44.3	61.1	104.3	83.6	--	--	--	--	--	69.7	142.8	559.1	574.5
1956	62.0	71.1	106.4	130.9	--	0.0	0.0	0.0	--	0.0	--	--	--	582.9
1957	133.1	--	252.6	150.8	141.6	--	--	--	--	--	--	94.6	--	--
1958	204.4	18.7	--	--	--	--	--	--	--	--	--	--	--	--

## SULAIMANIYA, IRAQ

Latitude 35°33' Longitude 45°27' Elevation 890

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	--	--	--	--	--	--	--	--	--	--	75.0	--	--
1958	203.0	15.0	26.0	2.0	5.0	0.0	0.0	--	--	--	--	--	--	--

## T - 1, IRAQ

Co-operative Station

Latitude 34°13' Longitude 41°20' Elevation 310

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939	--	--	--	--	--	--	--	--	0.0	4.3	45.2	36.6	--	--
1940	9.4	26.5	25.5	17.5	1.0	--	--	--	--	21.5	2.9	6.4	112.7	168.0
1941	12.6	26.5	46.8	--	--	--	--	--	--	--	--	--	--	--

## T - 1, IRAQ

Latitude 34°13' Longitude 41°20' Elevation 310

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	16.0	0.0	7.0	0.0	7.0	0.0	0.0	--	--	0.0	4.0	--	--	--

## TAQ TAQ, IRAQ

Latitude 35°53' Longitude 44°35' Elevation 370

HSI 8 inch diameter non-automatic gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1957	--	158.0	249.0	137.0	97.0	4.5	0.0	T	T	3.0	--	41.0	--	--
1958	205.0	9.0	46.0	12.0	16.0	6.0	0.0	0.0	0.0	0.0	24.0	151.8	469.8	--

## TKL APAR, IRAQ

Co-operative Station

Latitude 36°22' Longitude 42°28' Elevation 373

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1939										0.0	60.0	67.9	--	--
1940	111.7	41.9	67.0	72.8	1.5	--	--	--	--	34.3	3.4	65.2	397.8	422.8
1941	45.2	86.3	60.7	71.5	--	--	--	--	--	0.0	28.9	118.5	411.1	366.6
1942	60.9	53.6	44.8	13.0	--	--	--	--	0.0	3.4	84.9	8.9	269.5	319.7
1943	55.8	108.0	76.4	54.7	--	--	--	--	--	22.5	0.0	17.8	335.2	392.1
1944	101.3	5.0	67.4	28.9	--	--	--	--	--	7.3	--	84.7	--	242.9
1945	130.7	9.8	--	--	--	--	--	--	--	--	71.7	91.7	--	--
1946	56.8	59.9	44.8	48.2	105.7	--	--	--	--	--	--	45.0	--	478.8
1947	73.7	34.7	63.0	2.8	1.5	--	--	--	--	0.0	50.8	22.8	249.3	--
1948	43.0	45.0	32.4	80.2	37.0	--	--	--	--	0.0	2.6	80.4	320.6	311.2
1949	48.1	57.3	168.9	25.1	68.8	--	--	--	--	0.0	0.0	98.0	466.2	451.2
1950	38.3	46.0	95.6	7.7	48.0	--	--	--	--	0.0	6.1	13.1	254.8	333.6
1951	37.9	32.1	32.9	32.0	39.8	--	--	--	--	0.0	18.9	30.0	223.6	193.9
1952	9.9	129.5	35.1	16.6	24.9	--	--	--	--	9.7	3.5	25.3	254.5	264.9
1953	43.6	75.2	82.4	71.5	3.0	--	--	--	--	2.0	27.5	64.5	369.7	314.2
1954	21.6	77.2	146.0	75.3	0.0	--	--	--	0.0	0.0	33.0	54.5	407.6	414.1
1955	24.6	73.0	9.3	47.8	12.3	--	--	--	6.0	0.0	22.8	48.1	243.9	260.5
1956	86.8	23.0	46.6	29.6	1.0	0.0	0.0	0.0	0.0	0.0	11.0	47.6	245.6	257.9
1957	62.1	19.5	178.8	57.9	37.5	--	--	--	--	--	54.0	47.6	457.4	414.4
1958	73.7	4.0	14.3	1.8	0.0	--	--	--	--	0.0	31.8	40.0	165.6	195.4

## TKL UWAINAT, IRAQ

Co-operative Station

Latitude 36°41' Longitude 42°24' Elevation 346

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1940	--	12.0	5.0	0.0	--	--	--	--	--	--	0.0	57.0	--	--
1941	40.0	55.0	43.0	28.0	--	--	--	--	--	0.0	21.8	98.2	286.0	223.0
1942	78.1	57.6	30.0	31.2	--	--	--	--	--	--	--	29.2	--	316.9
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1944	101.9	8.1	76.8	47.5	18.9	0.0	0.0	--	--	--	--	--	--	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1950	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1952	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1953	--	--	--	--	17.9	--	--	--	--	--	37.6	45.7	--	--
1954	73.5	109.2	158.0	132.7	--	--	--	--	0.0	0.0	20.3	46.8	540.5	556.7
1955	15.2	47.2	19.2	42.8	--	--	--	--	7.4	0.0	12.2	81.6	225.6	194.9
1956	87.9	17.0	63.8	62.0	--	0.0	0.0	0.0	--	0.0	--	62.2	--	326.5
1957	50.0	51.3	146.9	45.2	67.0	--	--	--	--	23.3	84.9	56.7	501.1	--
1958	115.1	20.6	22.4	4.6	--	--	--	--	--	--	14.7	29.4	201.3	327.6



## TUSAN, IRAQ

Latitude 37°00' Longitude 42°28' Elevation 380

BSI 8 inch diameter non-automatic gage

Bendix 8 inch diameter automatic weighing gage

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1958	195.3	14.0	32.0	25.1	4.4	2.6	0.0	0.0	0.0	1.5	23.2	108.8	406.9	—

## TUZ KHURMATU, IRAQ

Co-operative Station

Latitude 34°53' Longitude 44°39' Elevation 220

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935	—	—	—	—	—	—	—	—	—	0.0	59.0	56.0	—	—
1936	12.0	137.0	11.0	33.0	30.0	—	—	—	—	0.0	49.0	81.0	353.0	338.0
1937	36.0	39.0	—	21.0	—	—	—	—	—	0.0	45.0	—	—	—
1938	129.0	68.0	66.0	—	8.0	—	—	—	—	0.0	54.0	80.0	—	—
1939	61.0	43.0	—	70.0	—	—	—	—	—	—	—	—	—	—
1940	—	18.0	12.0	0.0	0.0	—	—	—	—	0.0	96.0	32.0	—	—
1941	32.0	63.0	23.0	27.0	0.0	—	—	—	—	0.0	0.0	39.0	184.0	273.0
1942	44.0	52.0	43.0	0.0	0.0	—	—	—	—	—	—	—	—	178.0
1943	—	68.6	77.9	30.7	0.0	—	—	—	—	—	—	—	—	—
1944	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1945	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1946	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1947	—	—	—	—	—	—	—	—	—	0.0	17.2	35.6	—	—
1948	17.0	18.8	17.7	82.9	0.0	—	—	—	—	—	—	—	—	189.2
1949	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1950	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1951	—	—	—	—	—	—	—	—	—	—	—	44.4	—	—
1952	8.9	39.5	32.3	20.3	0.0	—	—	—	—	0.0	2.5	140.5	244.0	—
1953	52.1	102.0	31.7	75.6	0.0	—	—	—	—	—	55.8	24.9	342.1	404.4
1954	10.5	69.0	121.3	92.3	0.0	0.0	—	—	0.0	0.0	32.5	107.7	433.3	373.8
1955	39.0	17.0	25.7	0.0	0.0	—	—	—	0.0	0.0	17.3	81.0	180.0	221.9
1956	18.5	13.7	10.2	65.3	—	0.0	0.0	0.0	0.0	0.0	—	—	—	206.0
1957	37.3	117.1	240.2	100.1	—	0.0	—	—	—	—	—	—	—	—
1958	—	—	9.9	0.0	—	—	—	—	—	0.0	2.8	31.0	—	—

## ZAFARANIA, IRAQ

Co-operative Station

Latitude 33°15' Longitude 44°29' Elevation 32

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1937	—	—	—	—	—	—	—	—	—	21.0	26.0	0.0	—	—
1938	75.0	31.0	41.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	91.3	265.0	204.0
1939	31.1	50.5	21.8	32.5	0.0	0.0	0.0	0.0	0.0	0.0	28.2	8.5	172.6	243.9

## ZAKHO, IRAQ

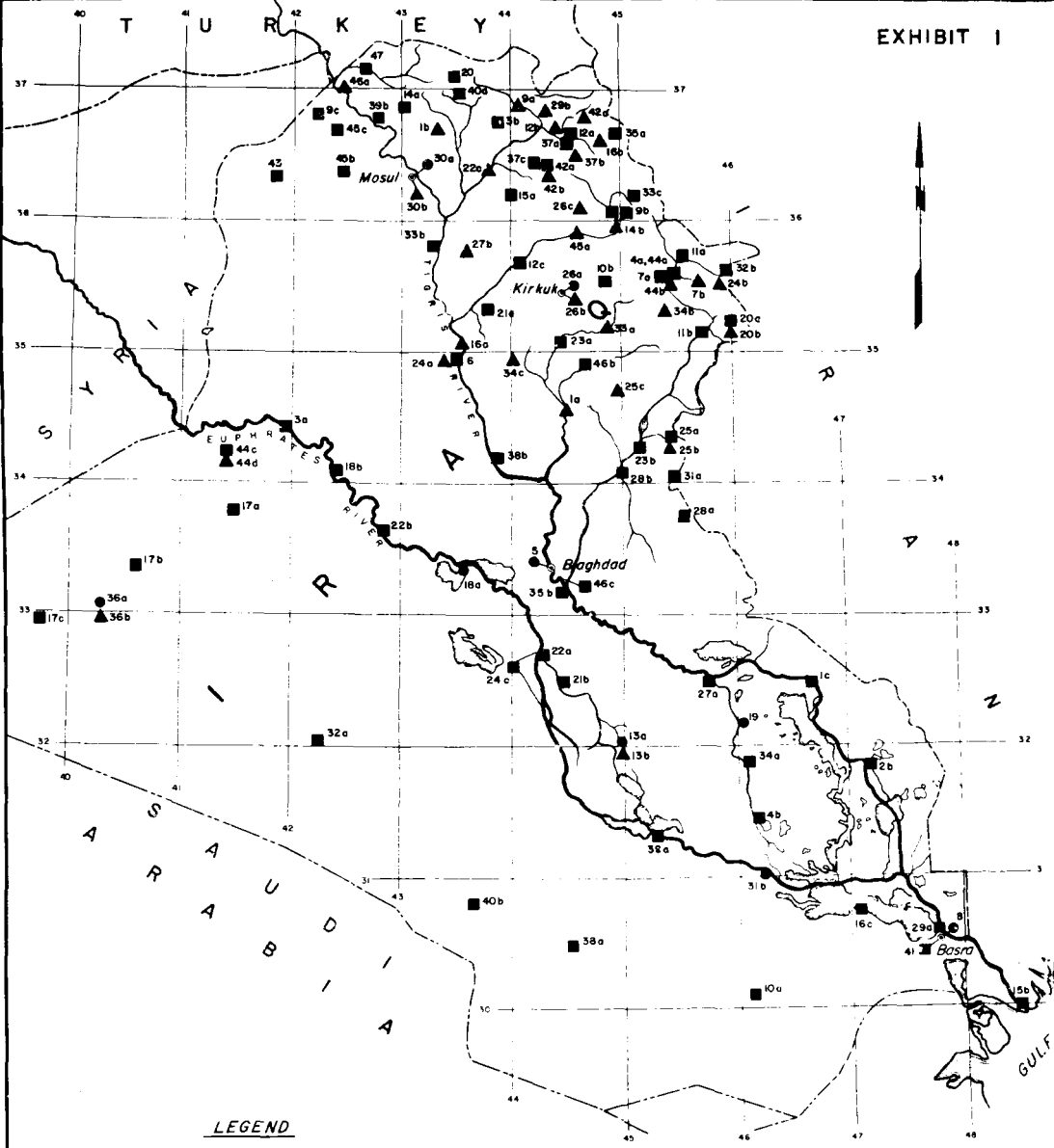
Co-operative Station

Latitude 37°08' Longitude 42°41' Elevation 442

Precipitation in millimeters

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar Year	Water Year
1935										14.1	80.4	88.2	—	—
1936	68.8	150.4	30.7	107.0	73.8	—	—	—	—	9.0	102.0	89.6	651.3	613.4
1937	147.0	103.0	17.0	228.0	16.0	—	—	—	—	141.4	169.0	45.0	866.4	711.6
1938	217.0	205.0	126.0	106.0	15.5	—	—	—	—	1.7	168.0	240.0	1079.2	1024.9
1939	192.0	177.0	264.0	26.8	23.0	—	—	—	0.0	0.0	151.7	324.7	1159.2	1092.5
1940	305.3	227.0	106.9	175.3	20.3	0.0	0.0	0.0	0.0	112.4	46.9	204.1	1198.2	1311.2
1941	185.8	170.9	203.6	128.7	0.0	0.0	0.0	—	—	0.0	66.8	239.6	995.4	1052.4
1942	285.5	72.6	112.0	31.9	6.3	0.0	0.0	0.0	0.0	50.0	274.1	74.7	907.1	814.7
1943	247.4	131.7	257.8	—	—	—	—	—	—	36.7	—	82.5	—	—
1944	181.5	30.9	102.0	88.6	50.0	—	—	—	—	15.6	143.6	91.7	703.9	—
1945	248.6	94.0	50.6	20.6	—	—	—	—	—	12.3	187.7	137.9	751.7	664.7
1946	91.2	162.0	169.4	135.3	116.4	—	—	—	—	29.9	1.8	71.9	777.9	1012.2
1947	250.5	25.7	62.1	18.4	14.3	—	—	—	—	—	78.8	67.0	516.8	474.8
1948	42.7	123.3	86.9	168.6	41.5	—	—	—	—	9.1	57.9	152.4	682.4	608.8
1949	125.0	146.3	237.8	97.0	19.6	—	—	—	—	0.0	0.0	192.6	818.3	845.1
1950	136.0	79.1	150.8	40.0	211.5	—	—	—	—	5.8	46.2	41.0	719.4	810.0
1951	107.4	83.6	37.6	68.4	10.8	—	—	—	—	49.4	32.3	118.2	507.7	400.8
1952	35.3	247.7	84.5	71.1	36.8	—	—	—	—	10.5	7.3	48.6	541.8	675.3
1953	108.0	214.2	174.2	132.1	—	—	—	—	—	—	124.8	82.4	835.7	694.9
1954	80.1	186.7	191.4	149.2	—	—	—	—	0.0	—	37.6	127.7	772.7	814.6
1955	100.0	56.3	49.8	—	—	—	—	—	—	—	—	—	—	—
1956	—	—	—	—	—	—	—	—	—	0.0	30.0	144.5	—	—
1957	126.8	108.0	184.0	—	—	—	—	—	—	—	—	69.3	—	—
1958	187.5	—	—	—	—	—	—	—	—	—	—	115.8	—	—

**APPENDIX  
EXHIBITS**

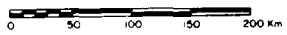


**LEGEND**

- Directorate of Meteorology station
  - Co-operative station
  - ▲ H.S.I. Station or automatic rain gage
- See Exhibit 2 for identification of stations

**NOTE:**

The key numbers shown on this exhibit are the same as the page numbers of the station summaries.



BY:	DATE:	CHK:	#15
DWN:	R.M.M.	23 May 1959	D.J.K. 23 May 1959
ENGR:	SECTION:	HEC	M. H.
	HEC:	WSH	June 1959

GOVERNMENT OF IRAQ	
DEVELOPMENT BOARD	
HYDROLOGICAL SURVEY OF IRAQ	
<b>PRECIPITATION STATIONS</b>	
HARZA ENGINEERING CO CHICAGO	BINNIE, DEACON & GOURLEY LONDON
MEMBER OF THE ENGINEERING ASSOCIATION	
BAGHDAD, IRAQ	DATE: 24 May 1959
	TOWNSHIP: 621 - 3

# RECORDS OF PRECIPITATION STATIONS

Map and Page No.	Station and Category	Calendar year	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
1a	Adhalm	H																								
1b	Aln Sifni	H																								
1c	Ali Gharbl	C																								
2a	Amadiya	C																								
2b	Amara	C																								
3a	Ang	C																								
3b	Agra	C																								
4a	Asta Sharif	C																								
4b	Badaa	C																								
5	Baghdad	M <sup>(1)</sup>																								
6	Bajil	C																								
7a	Bakraja	C																								
7b	Barzinja	H																								
8	Basra	M <sup>(2)</sup>																								
9a	Billa - Zabar	H																								
9b	Binkird	C																								
9c	Blr Uala	C																								
10a	Busayya	C																								
10b	Chamehamal	C																								
11a	Chwarta	C																								
11b	Derbendi Khan	C																								
12a	Diana	(i) C																								
12b		(ii) H																								
12c	Dibbls	C																								
13a	Diwaniya	(i) M <sup>(3)</sup>																								
13b		(ii) H																								
14a	Dohuk	C																								
14b	Dokan	H																								
15a	Erbil	C																								
15b	Fao	C																								
16a	Fatha	H																								
16b	Galala	H																								
16c	Ghubalshiya	C																								
17a	H - 1	C																								
17b	H - 2	C																								
17c	H - 3	C																								
18a	Habbaniyah	M																								
18b	Haditha	C																								
19	Hal	M																								
20a	Halabja	(i) C																								
20b		(ii) H																								
21a	Hawija	C																								
21b	Hilla	C																								
22a	Hindiya	C																								
22b	Hit	C																								
22c	Ifroz	H																								
23a	Iffikhar	C																								
23b	Jalawla	C																								
24a	K - 2	H																								
24b	Kani Spika	H																								
24c	Karbala	C																								
25a	Khanaqin	(i) C																								
25b		(ii) H																								

**NOTES:** (1) Also October 1887 - December 1930 (2) Also January 1900 - December 1930 (3) From January 1929  
Station categories, M - Directorate of Meteorology station, C - Co-operative station, H - H.S.I. station or automatic rain-gage.

# RECORDS OF PRECIPITATION STATIONS

Map and Page No.	Station and Category	Calendar year	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
25c	Kifri	H																								
26a	Kirkuk	(I) M																								
26b		(II) H																								
26c	Kol Sanjak	H																								
27a	Kut	C																								
27b	Mahmur	H																								
28a	Mandeli	C																								
28b	* Mansuriyat el Jebel	C																								
29a	Marali	C																								
29b	Maraa Soor	H																								
29c	Mirza Rustum	C																								
30a	Mosul	(I) M <sup>(1)</sup>																								
30b		(II) H																								
31a	Naft - Khanah	C <sup>(2)</sup>																								
31b	Naalriya	M																								
32a	Nukhalb	C																								
32b	Penwin	C																								
33a	Qadir Karam	H																								
33b	Qalyara	C																								
33c	Qalat Dlza	C																								
34a	Qalat Sekar	C																								
34b	Qara Daah	H																								
34c	Rami	H																								
35a	Rayat	C																								
35b	Rustamia	C																								
36a	Rutba	(I) M <sup>(3)</sup>																								
36b		(II) H																								
37a	Ruwanduz	(I) C																								
37b		(II) H																								
37c	Salahudin	C																								
38a	Salman	C																								
38b	Samarra	C																								
39a	Samawa	C																								
39b	Sanat	C																								
40a	Sarakk	C																								
40b	Shablka	C																								
41	Shalba	C <sup>(4)</sup>																								
42a	Shaalawa	(I) C																								
42b		(II) H																								
42c	Sidkan	H																								
43	Sinjar	C																								
44a	Sulaimaniya	(I) C																								
44b		(II) H																								
44c	T - I	(I) C																								
44d		(II) H																								
45a	Taa Taa	H																								
45b	Tai Afor	C																								
45c	Tai Uwalnat	C																								
46a	Tusan	H																								
46b	Tuz Khurmatu	C																								
46c	Zafarani	C																								
47	Zakho	C																								

NOTES: (1) From January 1923, October 1932 incomplete. (2) From January 1931, December 1933 and March 1934 incomplete.  
 (3) From June 1928, (4) From January 1923. \* Also known as Table Mountain.  
 Station categories: M - Directorate of Meteorology station. C - Co-operative station. H - H.S.I. station or automatic rain-gage.