

QC 984  
C6C49a  
no. 76-1  
ARCHIVE

**MONTHLY AND WATER YEAR PRECIPITATION CLIMATOLOGY**  
**FOR SELECTED STATIONS IN SOUTHWESTERN COLORADO**

**BY**

**JOHN F. BENCI**

**THOMAS B. MCKEE**



**CLIMATOLOGY REPORT NO. 76 - 1**

**DEPARTMENT OF ATMOSPHERIC SCIENCE**  
**COLORADO STATE UNIVERSITY**  
**FORT COLLINS, COLORADO**

MONTHLY AND WATER YEAR PRECIPITATION CLIMATOLOGY  
FOR SELECTED STATIONS IN SOUTHWESTERN COLORADO

By

John F. Benci  
Thomas B. McKee

Prepared for

Bureau of Land Management  
U.S. Dept. of the Interior

COLORADO CLIMATOLOGY OFFICE  
Dept. of Atmospheric Science  
Colorado State University  
Fort Collins, Colorado 80521

September, 1976

## ACKNOWLEDGEMENTS

The authors would like to express their appreciation to Mr. Steve Knox for his programming assistance and to Mrs. Dorothy Chapman for typing this report.

## TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	xi
LIST OF SYMBOLS	xiv
I. INTRODUCTION	1
II. STATISTICAL ANALYSIS	7
III. REFERENCES	9
IV. PRECIPITATION CLIMATOLOGY	10

## LIST OF TABLES

Table	Page
1a. Alamosa time series and statistical summary of monthly and water year precipitation.	11
1b. Alamosa time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	12
1c. Alamosa absolute and percent relative frequencies of monthly precipitation.	13
1d. Alamosa absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	14
1e. Alamosa probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	16
2a. Del Norte time series and statistical summary of monthly and water year precipitation.	20
2b. Del Norte time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	22
2c. Del Norte absolute and percent relative frequencies of monthly precipitation.	24
2d. Del Norte absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	25
2e. Del Norte probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	28
3a. Great Sand Dunes N. M. time series and statistical summary of monthly and water year precipitation.	32
3b. Great Sand Dunes N. M. time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	33

LIST OF TABLES CONTINUED

Table	Page
3c. Great Sand Dunes N. M. absolute and percent relative frequencies of monthly precipitation.	34
3d. Great Sand Dunes N. M. absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	35
3e. Great Sand Dunes N. M. probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	38
4a. Saguache time series and statistical summary of monthly and water year precipitation.	42
4b. Saguache time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	45
4c. Saguache absolute and percent relative frequencies of monthly precipitation.	48
4d. Saguache absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	49
4e. Saguache probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	52
5a. Cedaredge time series and statistical summary of monthly and water year precipitation.	56
5b. Cedaredge time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	58
5c. Cedaredge absolute and percent relative frequencies of monthly precipitation.	60
5d. Cedaredge absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	61

LIST OF TABLES CONTINUED

Table	Page
5e. Cedaredge probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	64
6a. Cimmaron time series and statistical summary of monthly and water year precipitation.	68
6b. Cimmaron time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	69
6c. Cimmaron absolute and percent relative frequencies of monthly precipitation.	70
6d. Cimmaron absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	72
6e. Cimmaron probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	77
7a. Delta time series and statistical summary of monthly and water year precipitation.	81
7b. Delta time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	83
7c. Delta absolute and percent relative frequencies of monthly precipitation.	85
7d. Delta absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	86
7e. Delta probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	88
8a. Montrose No. 1 time series and statistical summary of monthly and water year precipitation.	92
8b. Montrose No. 1 time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	93

LIST OF TABLES CONTINUED

Table	Page
8c. Montrose No. 1 absolute and percent relative frequencies of monthly precipitation.	94
8d. Montrose No. 1 absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	95
8e. Montrose No. 1 probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	98
9a. Montrose No. 2 time series and statistical summary of monthly and water year precipitation.	102
9b. Montrose No. 2 time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	105
9c. Montrose No. 2 absolute and percent relative frequencies of monthly precipitation.	108
9d. Montrose No. 2 absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	110
9e. Montrose No. 2 probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	114
10a. Norwood time series and statistical summary of monthly and water year precipitation.	118
10b. Norwood time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	120
10c. Norwood absolute and percent relative frequencies of monthly precipitation.	122
10d. Norwood absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	123



LIST OF TABLES CONTINUED

Table	Page
10e. Norwood probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	126
11a. Ouray time series and statistical summary of monthly and water year precipitation.	130
11b. Ouray time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	131
11c. Ouray absolute and percent relative frequencies of monthly precipitation.	132
11d. Ouray absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	133
11e. Ouray probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	137
12a. Paonia time series and statistical summary of monthly and water year precipitation.	141
12b. Paonia time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	142
12c. Paonia absolute and percent relative frequencies of monthly precipitation.	143
12d. Paonia absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	144
12e. Paonia probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	148
13a. Placerville time series and statistical summary of monthly and water year precipitation.	152
13b. Placerville time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	153

LIST OF TABLES CONTINUED

Table	Page
13c. Placerville absolute and percent relative frequencies of monthly precipitation.	154
13d. Placerville absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	156
13e. Placerville probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	161
14a. Powderhorn time series and statistical summary of monthly and water year precipitation.	165
14b. Powderhorn time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.	166
14c. Powderhorn absolute and percent relative frequencies of monthly precipitation.	167
14d. Powderhorn absolute and percent relative frequencies of period 1, period 2, and water year precipitation.	168
14e. Powderhorn probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)	171

## LIST OF FIGURES

Figure	Page
1a. Alamosa mean monthly precipitation for period of record.	17
1b. Alamosa water year and 5 year moving mean precipitation.	18
1c. Alamosa water year and 15 year moving mean precipitation.	19
2a. Del Norte mean monthly precipitation for period of record.	29
2b. Del Norte water year and 5 year moving mean precipitation.	30
2c. Del Norte water year and 15 year moving mean precipitation.	31
3a. Great Sand Dunes N. M. mean monthly precipitation for period of record.	39
3b. Great Sand Dunes N. M. water year and 5 year moving mean precipitation.	40
3c. Great Sand Dunes N. M. water year and 15 year moving mean precipitation.	41
4a. Saguache mean monthly precipitation for period of record.	53
4b. Saguache water year and 5 year moving mean precipitation.	54
4c. Saguache water year and 15 year moving mean precipitation.	55
5a. Cedaredge mean monthly precipitation for period of record.	65
5b. Cedaredge water year and 5 year moving mean precipitation.	66
5c. Cedaredge water year and 15 year moving mean precipitation.	67

LIST OF FIGURES CONTINUED

Figure	Page
6a. Cimmaron mean monthly precipitation for period of record.	78
6b. Cimmaron water year and 5 year moving mean precipitation.	79
6c. Cimmaron water year and 15 year moving mean precipitation.	80
7a. Delta mean monthly precipitation for period of record.	89
7b. Delta water year and 5 year moving mean precipitation.	90
7c. Delta water year and 15 year moving mean precipitation.	91
8a. Montrose No. 1 mean monthly precipitation for period of record.	99
8b. Montrose No. 1 water year and 5 year moving mean precipitation.	100
8c. Montrose No. 1 water year and 15 year moving mean precipitation.	101
9a. Montrose No. 2 mean monthly precipitation for period of record.	115
9b. Montrose No. 2 water year and 5 year moving mean precipitation.	116
9c. Montrose No. 2 water year and 15 year moving mean precipitation.	117
10a. Norwood mean monthly precipitation for period of record.	127
10b. Norwood water year and 5 year moving mean precipitation.	128
10c. Norwood water year and 15 year moving mean precipitation.	129

## LIST OF FIGURES CONTINUED

Figure	Page
11a. Ouray mean monthly precipitation for period of record.	138
11b. Ouray water year and 5 year moving mean precipitation.	139
11c. Ouray water year and 15 year moving mean precipitation.	140
12a. Paonia mean monthly precipitation for period of record.	149
12b. Paonia water year and 5 year moving mean precipitation.	150
12c. Paonia water year and 15 year moving mean precipitation.	151
13a. Placerville mean monthly precipitation for period of record.	162
13b. Placerville water year and 5 year moving mean precipitation.	163
13c. Placerville water year and 15 year moving mean precipitation.	164
14a. Powderhorn mean monthly precipitation for period of record.	172
14b. Powderhorn water year and 5 year moving mean precipitation.	173
14c. Powderhorn water year and 15 year moving mean precipitation.	174.

## LIST OF SYMBOLS

N.....	Sample Size
STD DEV.....	Standard Deviation
CV.....	Coefficient of Variation
STD ERR.....	Standard Error of the Mean
MAX.....	Maximum Value in Data Array
MIN.....	Minimum Value in Data Array
pdf.....	Probability Density Function
G(X).....	Mixed Incomplete Gamma pdf
F(X).....	Incomplete Gamma pdf
YR.....	Year
WSO.....	Weather Service Office
AP.....	Airport
PROB.....	Probability
MM.....	Millimeters
PRECIP.....	Precipitation

## I. INTRODUCTION

This report contains a precipitation climatology for selected weather stations in southwestern Colorado. Two primary areas were selected for the precipitation analysis; one is in the San Luis Valley and the other area encompasses stations within approximately a 50 mile radius of Montrose. Table 1 lists the weather stations used in the analysis and also gives a brief history of each station. Included in the report is a statistical summary of monthly, seasonal, and water year precipitation. Precipitation data used in the summary were obtained from the monthly data base at the Colorado Climatology Office.

In all instances traces were set equal to zero and 900.00 added to estimated or interpolated values for coding purposes. However, these values were included in the statistical analysis. If one month of data was missing in any water year, precipitation for that water year was coded as missing (999.90).

The climatological summary for each station is similar and consists of:

Table 1a. data array indicating monthly and water year precipitation for period of record, and mean, standard deviation, coefficient of variation, standard error of the mean, highest and lowest value and range for monthly and water year precipitation,

Table 1b. data arrays for two periods (Period 1, Oct-Mar and Period 2, Apr-Sept) and mean, standard deviation, coefficient of variation, standard error of the mean, highest and lowest value and range for the two periods,

- Table 1c. absolute and relative frequencies computed for monthly data array,
- Table 1d. absolute and relative frequencies computed for the two periods and water year data arrays,
- Table 1e. probability table for monthly and water year precipitation,
- Figure 1a. plot of mean monthly precipitation,
- Figure 1b. time series plot of water year precipitation and the 5 year moving average, and
- Figure 1c. time series plot of water year precipitation and the 15 year moving average.



Table 1. Station history for weather stations used in precipitation analysis.

STATION HISTORY

LOCATION	DATE OPENED	DATE CLOSED OR MOVED	LATITUDE NORTH	LONGITUDE WEST	ELEVATION FT.
<u>Alamosa WSO AP</u> #130	1-14-45	10-20-54	37°26'	105°51'	7534
	10-20-54	Present	37°27'	105°52'	7536
<u>Del Norte</u> #2184	8-01-89	1-31-93	37°40'	106°21'	7880
	10-01-19	6-24-22	37°40'	106°22'	7880
	9-01-23	4-30-37	37°49'	106°21'	7880
	5-01-37	9-17-46	37°40'	106°21'	7880
	9-17-46	9-01-52	37°40'	106°21'	7880
	9-01-52	9-11-55	37°40'	106°21'	7890
	9-11-55	Present	37°40'	106°21'	7884
<u>Great Sand Dunes N. M.</u> #3541	6-11-40	1-15-41	37°44'	105°33'	8120
	9-01-50		37°43'	105°31'	8120
	4-21-59	4-21-69	37°43'	105°31'	8120
	4-21-69	Present	37°43'	105°32'	8120
<u>Saguache</u> #7337	9-01-86	4-30-21	38°05'	106°08'	7800
	11-01-21	4-30-46	38°05'	106°08'	7800
	5-21-46	6-17-52	38°05'	106°08'	7697
	6-18-52	11-24-59	38°05'	106°09'	7697
	11-24-59	Present	38°05'	106°09'	7697

Table 1. (continued)

## STATION HISTORY

LOCATION	DATE OPENED	DATE CLOSED OR MOVED	LATITUDE NORTH	LONGITUDE WEST	ELEVATION FT.	
<u>Cedaredge</u> #1440	1- 1-91	12-31-02	38°54'	107°55'	6150	
	1- 1-03	3-31-05	38°54'	107°55'	6150	
	10- 3-10	7-31-15	38°54'	107°55'	6150	
	9- 1-15	5-31-18	38°54'	107°55'	6150	
	4- 1-19	9-30-20	38°54'	107°55'	6150	
	12- 1-20	12-31-22	38°54'	107°55'	6180	
	6- 7-23	8-31-24	38°55'	107°57'	6175	
	10- 1-24	8-31-29	38°54'	107°56'	6183	
	9- 1-29	8-31-36	38°54'	107°56'	6175	
	9- 1-36	1-31-39	38°54'	107°56'	6160	
	2- 1-39	1-31-42	38°54'	107°56'	6175	
	2- 1-42	11-30-45	38°54'	107°56'	6175	
	12- 1-45	9-14-46	38°54'	107°56'	6175	
	9-26-46	8-12-47	38°54'	107°56'	6175	
	8-13-47	10-26-54	38°54'	107°56'	6175	
	10-26-54	7- 7-67	38°54'	107°56'	6155	
	7- 7-67	7-23-68	38°54'	107°56'	6185	
	7-23-68	Present	38°54'	107°56'	6180	
	<u>Cimmaron</u> #1609	9-13-51	5- 1-55	38°24'	107°31'	7096
		5- 1-55	8-20-64	38°24'	107°31'	7096
8-20-64		10-23-64	38°24'	107°31'	7240	
10-23-64		Present	38°27'	107°33'	6896	

Table 1. (continued)

## STATION HISTORY

LOCATION	DATE OPENED	DATE CLOSED OR MOVED	LATITUDE NORTH	LONGITUDE WEST	ELEVATION FT.
<u>Delta #2192</u>	9- 6-88	7-31-91	38°45'	108°04'	4980
	10- 1-91	9-30-96	38°44'	108°04'	5120
	12- 1-96	12-31-02	38°44'	108°04'	5120
	1- 1-03	11-30-04	38°45'	108°04'	5115
	5- 1-05	9-30-06	38°45'	108°04'	5115
	2- 1-07	9-25-68	38°45'	108°03'	5115
	9-25-68	Present	38°46'	108°07'	5055
	<u>Montrose No. 1 #5717</u>	3-30-39	Present	38°29'	107°53'
<u>Montrose No. 2 #5722</u>	2- 1-85	12-31-91	--	--	--
	1- 1-92	10-31-97	38°29'	107°52'	5820
	8- 1-99	5-31-02	38°30'	107°52'	5820
	6-11-02	5-30-03	38°28'	107°56'	5811
	7- 1-03	12-21-10	38°28'	107°57'	5811
	1- 1-11	Present	38°29'	107°53'	5830
	<u>Norwood #6012</u>	4- 1-24	1-31-25	38°08'	108°17'
10- 1-25		2-18-27	38°08'	108°17'	7017
7- 1-27		1-31-28	38°08'	108°17'	7017
2- 1-28		8-27-28	38°07'	108°14'	7017
10- 1-28		9-30-30	38°08'	108°17'	7017
6- 1-31		12-31-41	38°08'	108°17'	7017
1- 1-42		5-31-43	38°08'	108°17'	7017
6- 1-43		Present	38°08'	108°17'	7017

Table 1. (continued)

## STATION HISTORY

LOCATION	DATE OPENED	DATE CLOSED OR MOVED	LATITUDE NORTH	LONGITUDE WEST	ELEVATION FT.
<u>Ouray</u> #6203	6- 1-88	5-31-89	--	--	--
	6- 4-93	7-31-93	38°02'	107°41'	7730
	11- 1-94	10-31-95	38°02'	107°41'	7721
	11- 1-95	6-30-96	38°02'	107°41'	7726
	10- 1-13	8-31-15	38°01'	107°41'	7720
	2- 1-36	Present	38°01'	107°41'	7720
<u>Paonia</u> #6306	5- 9-57	9-24-69	38°52'	107°35'	5685
	9-24-69	10- 3-73	38°52'	107°36'	5693
	10- 3-73	Present	38°52'	107°36'	5580
<u>Placerville</u> #6524	7- 1-47	6-17-55	38°02'	108°04'	7282
	6-18-55	Present	38°02'	108°03'	7322
<u>Powderhorn</u> #6651	8-21-64	2- 1-71	38°16'	107°06'	8087

## II. STATISTICAL ANALYSIS

Monthly precipitation data was obtained from our magnetic tape data bank for the period of record on tape through 1975. Water year precipitation was computed by summing the 12 months October through September. Traces were treated as zero precipitation and are presented in that manner in the tables and figures. Estimated or interpolated values were used in the analysis and are biased by 900 in the tables. Standard procedures were used to obtain the summarized statistics. However, the Table c and e series may need further clarification. The Table c series contains the absolute and relative frequencies summarized by months and for the water year. The absolute frequency is the number of months or water years which fall into the class interval in the period of record. Indicated in parenthesis below the absolute frequency is the percent relative frequency which is the number of observations in the class interval divided by the total number of observations possible expressed in percent.

Table e series presents for various probability levels the magnitude of precipitation which is at least equalled for a given month or water year. The return period of the precipitation amount is defined as one divided by the probability level. The precipitation amounts for the corresponding probability levels were obtained by fitting a mixed Gamma distribution to the precipitation data. The mixed Gamma distribution has been proven as an acceptable model describing monthly precipitation (Thom, 1951, 1968). Two parameters describe the cumulative probability density function of the Gamma distribution which can be written as follows:

$$F(x) = \int_0^x \frac{e^{-t/\beta} t^{\alpha-1}}{\beta^\alpha \Gamma(\alpha)} dt \quad \text{for } x > 0 \quad (1)$$

where  $x$  = precipitation amount (inches)

$\alpha$  = shape parameter, Alpha

$\beta$  = scale parameter, Beta

$\Gamma(\alpha)$  = Gamma function

$F(x)$  = cumulative probability that the precipitation amount  $t$  is  $\leq x$

The method of maximum likelihood was used to estimate the shape and scale parameters. The mixed Gamma distribution which includes zero and non zero precipitation events is given by

$$G(x) = Q + (1 - Q) F(x_1) \quad (2)$$

where

$G(x)$  is the cumulative density function including zero precipitation events

$Q$  = number of zero precipitation events ÷ total number of events

$F(x_1)$  is the incomplete Gamma function for precipitation greater than zero (Eq. 1).

The inverse of the mixed distribution i.e. solving for  $x_1$  in Eq. 2 at various probability levels ( $G(x)$ ) produces the results shown in the Table e series.

### III. REFERENCES

Thom, H. C. S., "A Frequency Distribution for Precipitation," abstract in Bulletin American Meteorological Society, Vol. 32, No. 10, December, 1951.

\_\_\_\_\_, "Direct and Inverse Tables of the Gamma Distribution," Tech. Report No. 2, Environmental Data Service, ESSA, April, 1968, pp. 1-30.

#### IV. PRECIPITATION CLIMATOLOGY

<u>Station</u>	<u>Index No.</u>	<u>Beginning Page</u>
Alamosa	0130	11
Del Norte	2184	20
Great Sand Dunes N. M.	3541	32
Saguache	7337	42
Cedaredge	1440	56
Cimmaron	1690	68
Delta	2192	81
Montrose No. 1	5717	92
Montrose No. 2	5722	102
Norwood	6012	118
Ouray	6203	130
Paonia	6306	141
Placerville	6524	152
Powderhorn	6651	165



Table 1a. Time series and statistical summary of monthly and water year precipitation.

STATION 130 ALAMOSA WSO

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1948	.60	.24	.17	.33	.31	.12	.34	1.02	.49	1.08	1.35	.98	7.03
1949	.31	0.00	0.00	.03	.19	.20	.08	.04	1.13	.60	1.00	.55	4.13
1950	.19	0.00	.11	.03	.15	.37	.45	.03	.03	.74	1.29	.85	3.44
1951	.35	.22	.38	.67	.12	.07	1.01	1.03	1.13	1.19	.94	1.24	7.91
1952	.02	.64	.15	.08	.20	.26	1.35	1.20	.43	1.24	.62	0.00	5.18
1953	1.21	.51	.39	.28	0.00	.06	.78	.78	.03	1.77	1.03	.88	7.26
1954	.19	.09	.13	.06	.15	0.00	.22	1.24	.11	.67	1.44	.15	4.25
1955	.03	.05	.04	.58	.06	.19	.58	.19	.16	.19	1.18	0.00	3.25
1956	.18	.09	0.00	.52	.08	.26	1.38	1.64	.21	2.45	.53	.01	7.45
1957	.26	1.21	.01	.30	.15	.32	.81	.38	.20	.72	.72	.48	5.56
1958	.55	.25	.02	.24	.31	.42	.54	1.15	.18	1.09	1.53	1.04	5.37
1959	1.78	.07	.26	.33	.56	.10	.39	.15	.65	.55	.71	1.26	5.21
1960	1.28	.29	.58	.09	.23	.62	1.02	.70	.51	.49	2.03	1.48	9.62
1961	1.55	.60	.57	.08	.21	.16	.11	.15	.52	.49	.22	.81	6.47
1962	.32	.52	.15	.42	1.42	.25	.13	.13	.69	1.10	1.57	.15	7.15
1963	.27	.08	.04	.26	.27	.41	.22	.50	.39	.91	.73	1.66	5.14
1964	0.00	.80	1.52	.28	.37	.52	.36	.59	1.77	1.52	.95	1.59	10.27
1965	1.08	.65	.76	.28	.23	.11	.15	.30	.72	.78	1.42	.63	7.41
1966	.40	.10	.35	.07	.78	.15	.58	1.22	.84	1.78	3.24	.53	10.17
1967	.42	.01	1.20	.04	.42	.21	.27	.20	.06	3.50	2.22	.41	8.96
1968	.11	.28	.38	.16	.12	.47	.32	.49	2.58	1.92	1.31	1.29	7.43
1969	2.37	.11	.41	.06	.03	.85	.54	.86	.38	1.35	1.30	1.53	9.79
1970	1.09	.06	.03	.15	.25	.03	.33	1.07	.08	2.50	1.21	1.45	8.35
1971	.71	.44	.45	.24	.09	.12	0.00	.07	.60	.80	1.16	1.00	5.64
1972	2.16	1.00	.46	.16	.12	1.42	.41	1.85	.69	1.09	.65	1.62	11.07
1973	.64	.11	.19	.70	.08	.24	.18	.09	900.72	1.78	.72	0.00	906.07
1974	.74	.15	.74	.38	.22	.50	.33	.01	.65	.51	.90	1.47	5.60
1975	.78	.43	.04	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
MEAN	28	28	28	27	27	27	27	27	27	27	27	27	27
STD DEV	.71	.30	.34	.25	.26	.35	.44	.53	.55	1.23	1.20	.78	7.06
CV	.64	.31	.37	.19	.29	.34	.37	.53	.56	.75	.62	.59	2.17
STD ERP	.91	1.05	1.08	.77	1.08	.97	.83	.84	1.01	.60	.51	.76	.31
MAX	.12	.06	.07	.04	.05	.06	.07	.10	.11	.14	.12	.11	.42
MIN	2.37	1.21	1.52	.70	1.42	1.42	1.55	1.85	2.58	3.50	3.28	1.94	11.07
RANGE	0.00	0.00	0.00	.03	0.00	0.00	0.00	.01	.03	.19	.22	0.00	3.25
	2.37	1.21	1.52	.67	1.42	1.42	1.55	1.84	2.55	3.31	3.06	1.94	7.82

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 1b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 130 ALAMOSA WSO

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1948	1.77	5.26
1949	.73	3.40
1950	.85	2.59
1951	1.81	6.10
1952	1.34	3.84
1953	2.45	4.81
1954	.62	3.83
1955	.95	2.30
1956	1.13	6.32
1957	2.25	3.31
1958	1.90	6.47
1959	3.10	2.71
1960	3.09	6.53
1961	4.17	2.30
1962	3.08	4.07
1963	1.33	3.81
1964	3.49	6.78
1965	2.51	3.40
1966	1.04	3.23
1967	2.30	6.66
1968	1.52	7.91
1969	3.83	5.46
1970	1.62	6.73
1971	2.05	3.63
1972	5.32	5.75
1973	1.96	4.11
1974	2.73	3.87
1975	999.90	999.90
N	27	27
MEAN	2.22	4.84
STD DEV	1.12	1.74
CV	.51	.36
STD ERR	.22	.33
MAX	5.32	8.23
MIN	.62	2.30
RANGE	4.70	5.93

Table 1c. Absolute and percent relative frequencies of monthly precipitation.

STATION 130 ALAMOSA WSO

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	14 ( 50.0)	21 ( 75.0)	22 ( 78.6)	23 ( 85.2)	24 ( 88.9)	21 ( 77.8)	19 ( 70.4)	13 ( 48.1)	14 ( 51.9)	2 ( 7.4)	1 ( 3.7)	10 ( 37.0)
.50- .99	6 ( 21.4)	5 ( 17.9)	4 ( 14.3)	4 ( 14.8)	2 ( 7.4)	4 ( 14.8)	5 ( 18.5)	5 ( 18.5)	10 ( 37.0)	10 ( 37.0)	10 ( 37.0)	6 ( 22.2)
1.00- 1.49	4 ( 14.3)	2 ( 7.1)	1 ( 3.6)	0 ( 0.0)	1 ( 3.7)	2 ( 7.4)	2 ( 7.4)	7 ( 25.9)	1 ( 3.7)	7 ( 25.9)	11 ( 40.7)	5 ( 18.6)
1.50- 1.99	2 ( 7.1)	0 ( 0.0)	1 ( 3.6)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	2 ( 7.4)	1 ( 3.7)	5 ( 18.5)	2 ( 7.4)	3 ( 11.1)
2.00- 2.49	2 ( 7.1)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	2 ( 7.4)	0 ( 0.0)
2.50- 2.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)
TOTALS	28.	28.	28.	27.	27.	27.	27.	27.	27.	27.	27.	27.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 1d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 130 ALAMOSA WSO			
INTERVAL	ABSOLUTE AND PERCENT RELATIVE FREQUENCIES		
	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	4 ( 14.8)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	3 ( 11.1)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	7 ( 25.9)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	4 ( 14.8)	2 ( 7.4)	0 ( 0.0)
2.50- 2.99	2 ( 7.4)	2 ( 7.4)	0 ( 0.0)
3.00- 3.49	4 ( 14.8)	3 ( 11.1)	2 ( 7.4)
3.50- 3.99	1 ( 3.7)	5 ( 18.5)	0 ( 0.0)
4.00- 4.49	1 ( 3.7)	2 ( 7.4)	2 ( 7.4)
4.50- 4.99	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)
5.00- 5.49	1 ( 3.7)	1 ( 3.7)	2 ( 7.4)
5.50- 5.99	0 ( 0.0)	2 ( 7.4)	4 ( 14.8)
6.00- 6.49	0 ( 0.0)	3 ( 11.1)	2 ( 7.4)
6.50- 6.99	0 ( 0.0)	4 ( 14.8)	1 ( 3.7)
7.00- 7.49	0 ( 0.0)	0 ( 0.0)	4 ( 14.8)

Table 1d. (continued)

STATION 130 ALAMOSA WSO

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	1 ( 3.7)	1 ( 3.7)
8.00- 8.49	0 ( 0.0)	1 ( 3.7)	2 ( 7.4)
8.50- 8.99	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	2 ( 7.4)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	2 ( 7.4)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)
TOTALS	27.0	27.0	27.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 1e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

130 ALAMOSA WSO AP

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.03	.02	.02	.05	.03	.04	.30	.42	0.00	.02	0.00	0.00	3.91
.10	.05	.05	.05	.11	.07	.08	.41	.53	.03	.07	.01	.01	4.47
.20	.09	.09	.11	.18	.14	.15	.59	.69	.14	.17	.06	.05	5.23
.30	.13	.13	.16	.24	.23	.23	.74	.82	.25	.27	.10	.10	5.82
.40	.17	.17	.21	.31	.33	.32	.89	.95	.38	.38	.15	.15	6.37
.50	.21	.22	.27	.38	.44	.42	1.06	1.09	.53	.51	.21	.22	6.91
.60	.26	.27	.34	.45	.58	.55	1.24	1.23	.70	.67	.28	.30	7.48
.70	.32	.34	.43	.55	.77	.70	1.45	1.40	.93	.87	.37	.41	8.12
.80	.41	.42	.54	.67	1.02	.92	1.73	1.62	1.24	1.14	.49	.56	8.92
.90	.55	.57	.73	.86	1.46	1.29	2.17	1.95	1.76	1.59	.70	.83	10.11
.95	.69	.70	.92	1.04	1.90	1.66	2.58	2.26	2.28	2.04	.91	1.09	11.16
ALPHA	1.53	1.65	1.52	2.19	1.01	1.14	2.74	4.19	1.12	1.19	1.10	.95	10.25
BETA	.17	.17	.24	.21	.63	.51	.44	.28	.73	.62	.29	.39	.70
Q	0.00	.04	.04	.04	0.00	0.00	0.00	0.00	.07	.04	.07	.07	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 1a. Mean monthly precipitation for period of record.

ALAMOSA WSO

MEAN MONTHLY PRECIPITATION (JAN-DEC)

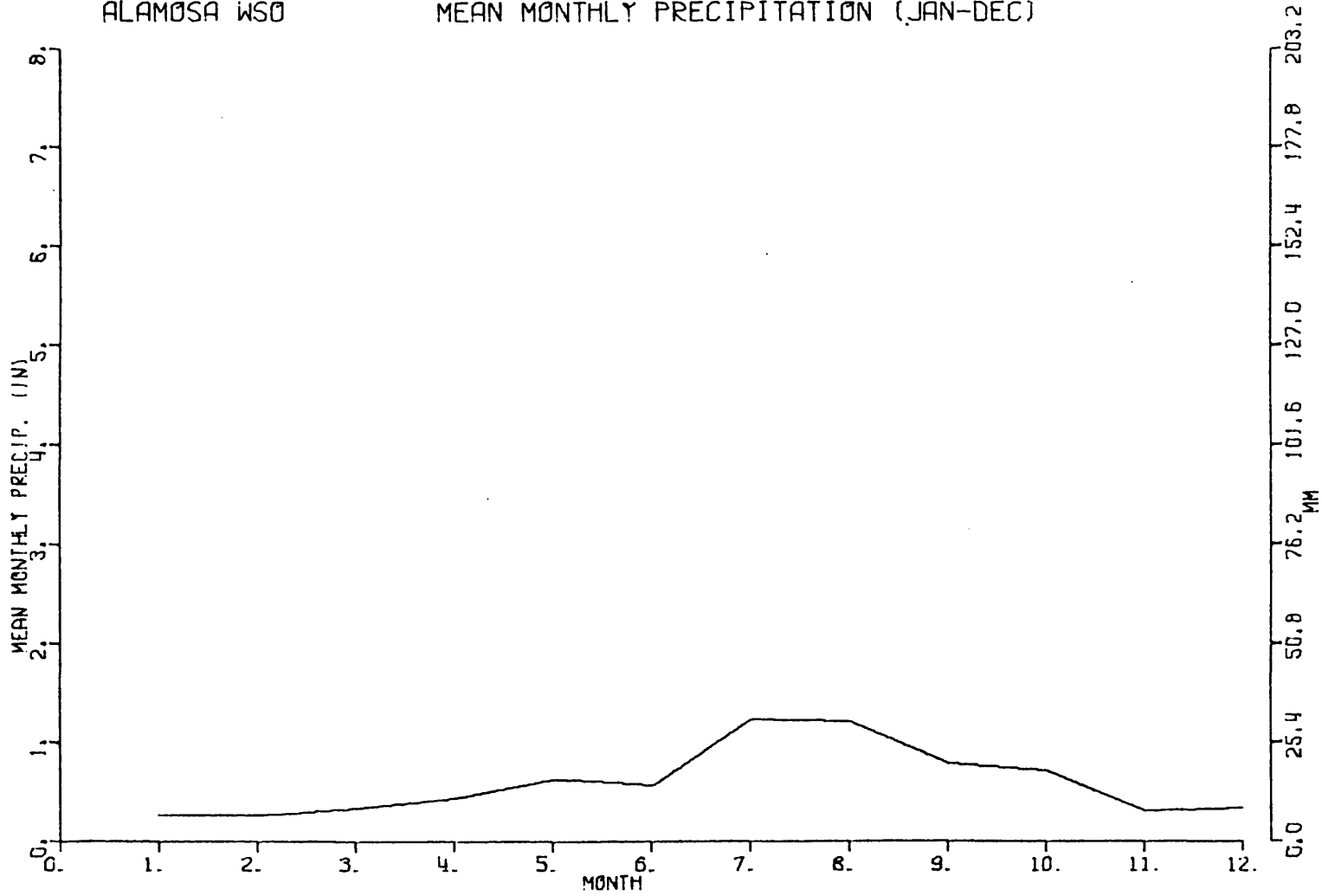


Figure 1b. Water year and 5 year moving mean precipitation.

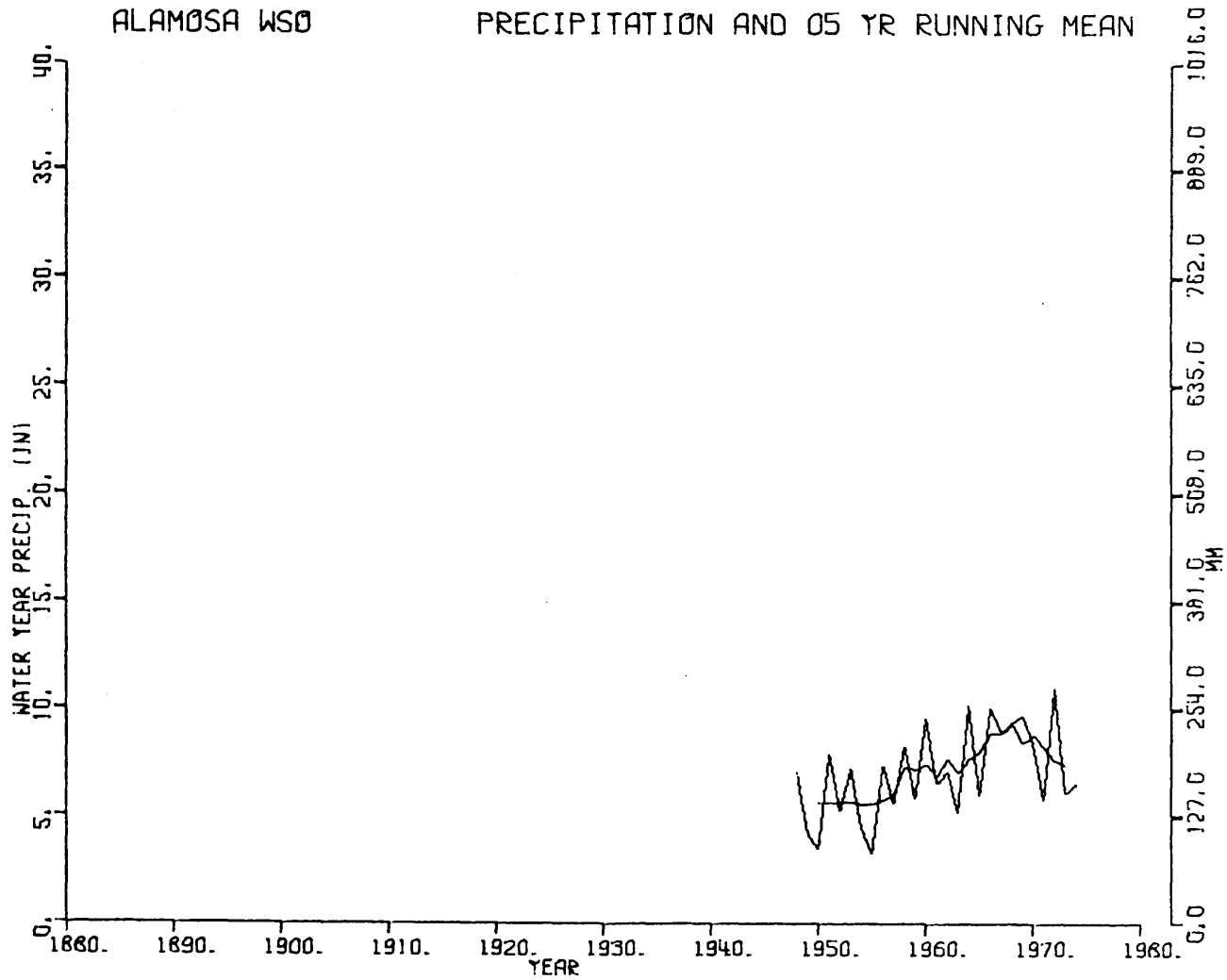




Figure 1c. Water year and 15 year moving mean precipitation.

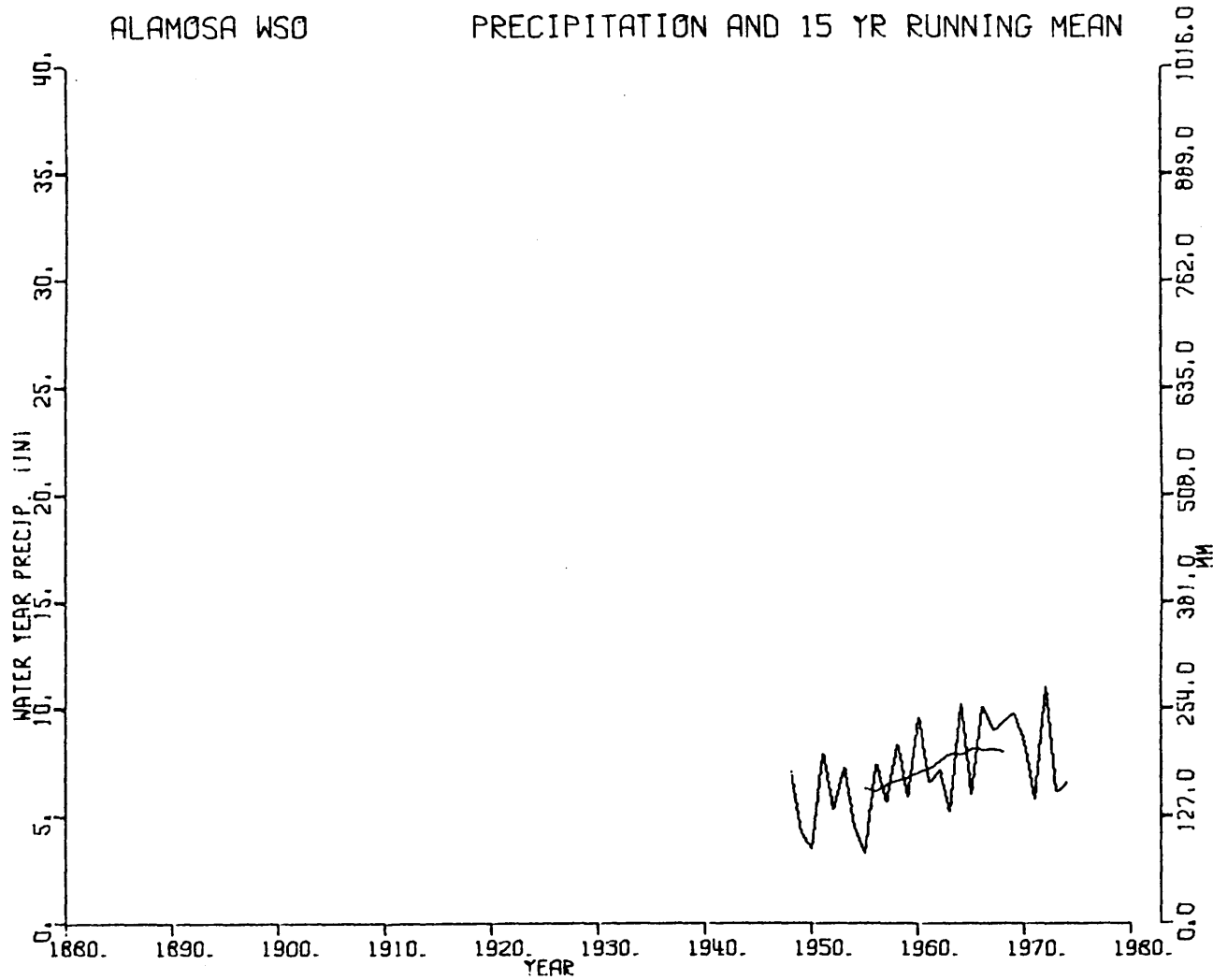


Table 2a. Time series and statistical summary of monthly and water year precipitation.

STATION 2184 DEL NORTE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1919	.44	1.14	.58	0.00	.41	.40	.51	.76	.25	.51	2.30	.67	7.97
1920	1.32	.29	.16	.14	.29	.19	.20	.39	2.00	1.21	3.05	.08	9.33
1921	0.00	.02	.10	.90	.46	.35	.78	.43	.22	999.90	999.90	999.90	999.90
1922	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1923	1.24	.50	.11	.23	.19	.40	.81	.13	.11	.64	.23	.16	905.75
1924	.72	1.22	.82	.11	.35	.75	.50	.70	.40	1.18	1.15	.24	8.14
1925	.70	1.35	.10	999.90	999.90	999.90	999.90	.26	.03	1.10	.89	.26	439.70
1926	.66	.30	.05	.25	.50	1.16	.25	.25	1.39	1.97	1.55	1.47	9.40
1927	.02	0.00	.25	.03	.11	1.44	.25	1.21	.33	1.52	2.50	1.05	6.71
1928	.15	1.00	0.00	.03	.30	.50	1.15	2.18	0.00	3.20	2.10	1.55	12.16
1929	.73	.65	0.00	.08	0.00	.10	900.25	.27	0.00	3.45	.71	.45	905.87
1930	0.00	.78	0.00	0.00	.75	.35	1.10	.50	.30	.70	1.03	1.03	6.58
1931	.93	2.03	.04	.21	.01	.28	0.00	.07	.70	2.31	1.05	1.18	7.21
1932	.60	0.00	.90	.60	0.00	.35	.53	.90	.40	.76	2.46	2.15	9.53
1933	.70	1.18	1.10	.04	.36	0.00	.10	.38	.22	.80	1.23	1.00	7.11
1934	0.00	.48	.15	.70	.20	1.05	900.50	3.45	1.10	1.14	1.20	.73	909.70
1935	1.05	0.00	0.00	0.00	.33	.51	.35	.15	1.05	1.15	3.78	1.15	9.53
1936	.35	.20	.17	.15	.40	.75	.30	.54	.82	1.93	2.34	.96	8.51
1937	.48	.11	.02	.96	.38	1.35	.51	.90	.28	1.13	.88	3.46	10.45
1938	.95	.15	.19	.87	.22	.26	.26	.04	.22	1.12	1.87	.61	5.76
1939	.16	0.00	.17	.41	.63	.08	.52	1.55	.35	.49	2.03	1.03	7.82
1940	.18	1.10	.45	.28	.27	1.25	.76	1.50	2.00	.60	1.01	1.71	12.07
1941	2.55	.07	.25	0.00	.67	.77	.84	0.00	.59	.70	1.01	.82	11.41
1942	.26	0.00	.54	.61	.01	.01	.47	.70	1.55	.59	2.41	.17	8.62
1943	.55	.20	.70	.43	.09	1.16	.28	.22	.14	.54	.86	.24	5.51
1944	1.79	.17	.35	.22	0.00	.20	.90	.37	.20	.77	2.66	.91	8.54
1945	1.01	0.00	.02	.98	.33	.68	.55	.56	0.00	2.38	2.04	.49	9.25
1946	.70	.30	.03	.08	0.00	0.00	.74	.56	.84	.52	3.51	1.33	7.20
1947	.78	0.00	.03	.47	1.08	.60	.50	1.02	.76	.89	.32	.25	9.28
1948	.98	0.00	.25	.51	.37	.60	1.16	.95	1.34	2.47	.45	0.00	7.08
1949	0.00	0.00	.15	.25	.12	0.00	0.00	0.00	1.54	1.88	.62	1.11	5.27
1950	.11	.06	.05	.25	.62	.11	.46	.17	0.00	.35	1.39	1.18	3.75
1951	.44	.37	1.53	1.62	.07	.52	.59	.17	0.00	.59	2.75	1.26	14.24
1952	0.00	1.23	.18	.02	.03	.66	1.14	.81	.59	2.59	2.75	1.26	14.24
1953	.71	.78	.54	.23	.08	.66	0.00	.14	.29	2.41	.62	.65	9.14
1954	.39	.03	.25	.10	.14	.00	0.00	1.08	.36	1.47	.84	1.79	7.82
1955	0.00	.30	.25	.10	.14	.00	1.33	1.08	.21	1.23	1.54	.57	6.87
1956	.41	.30	.19	.41	.46	.46	.21	.78	.42	1.19	.82	.04	4.28
1957	.58	.71	.03	1.18	.37	.75	2.00	2.67	.62	3.47	2.88	.01	15.27
1958	.44	.35	.60	.61	.15	.23	1.27	.74	.47	1.25	.88	1.16	10.23
1959	.44	.35	.60	.24	.45	.85	.97	1.03	.86	.53	2.33	1.05	9.00

Table 2a. (continued)

STATION 2184 DEL NORTE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	WATER YEAR
1959	3.58	.18	.35	.64	.15	.10	.14	.37	.50	1.10	.25	.27	7.63
1960	2.83	.16	.95	.08	.24	1.00	.64	.04	.27	.80	3.04	1.17	12.12
1961	2.46	.88	.42	.12	.45	.77	.25	0.00	.42	1.87	.66	1.18	9.48
1962	.90	.76	.14	.43	.65	.54	.18	.10	.52	.70	2.00	.40	7.32
1963	.41	.46	.08	.17	1.44	.86	.53	.30	.48	.98	2.55	1.71	9.97
1964	.02	1.06	1.21	.34	.86	1.04	1.89	.53	.58	3.42	1.11	1.63	13.63
1965	.67	.39	1.52	.05	.35	0.00	.10	.46	.51	.67	1.62	.19	6.53
1966	.51	.79	.14	.01	.28	.64	0.00	1.37	1.79	2.02	3.73	.90	12.18
1967	.23	0.00	2.54	.12	.28	.84	.69	1.00	0.00	4.45	2.16	.46	12.77
1968	.18	.44	.37	.14	.36	.42	.27	1.13	3.53	2.97	2.43	2.28	14.52
1969	2.70	.11	.51	.43	0.00	1.11	.26	.23	.85	.61	1.35	1.90	10.65
1970	1.84	.23	.13	.19	.28	.14	.24	.92	.49	2.04	1.24	1.13	8.87
1971	.86	.31	.12	.33	.01	.22	0.00	.13	.38	1.65	2.04	.62	6.67
1972	3.15	.98	1.34	0.00	.11	1.13	.82	.41	.55	1.60	1.05	.41	11.59
1973	.64	.12	900.14	.83	.15	.74	0.00	0.00	.28	1.92	1.10	1.12	497.36
1974	.81	.59	.79	.85	.89	.89	1.29	.08	.41	2.02	.64	1.13	10.39
1975	1.05	.87	.10	999.90	999.90	990.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	56	56	56	54	54	54	54	55	55	54	54	55	53
MEAN	.84	.47	.39	.37	.33	.57	.65	.72	.61	1.45	1.66	.89	2.99
STD DEV	.84	.46	.50	.37	.29	.41	.66	.71	.64	.97	.95	.60	2.58
CV	1.01	.94	1.26	1.02	.90	.72	1.01	.99	1.05	.67	.58	.77	2.29
STD ERR	.11	.06	.07	.05	.04	.06	.09	.10	.09	.13	.13	.09	.35
MAX	3.58	2.03	2.54	1.62	1.44	1.40	3.84	3.45	3.53	4.45	3.94	3.46	15.27
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.12	.23	0.00	3.75
RANGE	3.58	2.03	2.54	1.62	1.44	1.40	3.84	3.45	3.53	4.33	3.71	3.46	11.52

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 2b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 2184 DEL NORTE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1919	2.97	5.00
1920	2.39	6.93
1921	1.83	999.90
1922	999.90	999.90
1923	3.67	2.08
1924	3.97	4.17
1925	999.90	999.90
1926	2.92	6.88
1927	.85	5.86
1928	1.94	10.18
1929	1.56	5.33
1930	1.88	4.66
1931	3.50	4.31
1932	2.45	7.20
1933	3.38	3.73
1934	2.53	7.12
1935	1.90	7.63
1936	2.02	6.49
1937	3.30	7.16
1938	2.64	3.12
1939	1.45	5.97
1940	4.49	7.58
1941	4.35	9.96
1942	1.43	6.59
1943	3.13	2.38
1944	2.73	5.81
1945	2.32	6.04
1946	1.11	8.14
1947	3.46	3.74
1948	2.71	6.37
1949	.52	4.95
1950	1.20	2.55
1951	4.55	9.69
1952	2.17	3.47
1953	2.28	5.54
1954	.91	5.96
1955	1.82	2.46
1956	3.62	11.65
1957	4.46	5.77
1958	2.93	6.87

Table 2b. (continued)

STATION 2104 DEL NORTE

23

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1959	5.00	2.63
1960	5.26	6.86
1961	5.10	4.38
1962	3.42	3.90
1963	3.42	6.55
1964	4.53	9.16
1965	2.98	3.55
1966	2.37	9.81
1967	4.01	8.76
1968	1.91	12.61
1969	4.86	5.20
1970	2.81	6.06
1971	1.85	4.82
1972	6.75	4.84
1973	2.62	4.42
1974	4.82	5.57
1975	999.90	999.90
N	54	53
MEAN	2.95	6.02
STD DEV	1.31	2.28
CV	.44	.38
STD ERR	.18	.31
MAX	6.75	12.61
MIN	.52	2.08
RANGE	6.23	10.53

Table 2c. Absolute and percent relative frequencies of monthly precipitation.

STATION 2184 DEL NORTE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	22 ( 39.3)	35 ( 62.5)	40 ( 71.4)	39 ( 72.2)	44 ( 81.5)	24 ( 44.4)	24 ( 44.4)	26 ( 47.3)	32 ( 58.2)	4 ( 7.4)	4 ( 7.4)	20 ( 36.4)
.50- .99	20 ( 35.7)	11 ( 19.6)	10 ( 17.9)	12 ( 22.2)	8 ( 14.8)	19 ( 35.2)	19 ( 35.2)	14 ( 25.5)	14 ( 25.5)	14 ( 33.3)	11 ( 20.4)	10 ( 14.2)
1.00- 1.49	6 ( 10.7)	9 ( 16.1)	3 ( 5.4)	2 ( 3.7)	2 ( 3.7)	17 ( 20.4)	7 ( 13.0)	9 ( 16.4)	3 ( 5.5)	11 ( 20.4)	13 ( 24.1)	16 ( 29.1)
1.50- 1.99	2 ( 3.6)	0 ( 0.0)	2 ( 3.6)	1 ( 1.9)	0 ( 0.0)	0 ( 0.0)	2 ( 3.7)	2 ( 3.6)	3 ( 5.5)	7 ( 13.0)	4 ( 7.4)	6 ( 10.9)
2.00- 2.49	1 ( 1.8)	1 ( 1.8)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)	2 ( 3.6)	2 ( 3.6)	7 ( 13.0)	12 ( 22.2)	2 ( 3.6)
2.50- 2.99	3 ( 5.4)	0 ( 0.0)	1 ( 1.8)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)	0 ( 0.0)	2 ( 3.7)	5 ( 9.3)	0 ( 0.0)
3.00- 3.49	1 ( 1.8)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)	0 ( 0.0)	4 ( 7.4)	1 ( 1.9)	1 ( 1.8)
3.50- 3.99	1 ( 1.8)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)	0 ( 0.0)	1 ( 1.8)	0 ( 0.0)	4 ( 7.4)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)	0 ( 0.0)	0 ( 0.0)
TOTALS	56.	56.	56.	54.	54.	54.	54.	55.	55.	54.	54.	55.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 2d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 2184 DEL NORTE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	3 ( 5.6)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	4 ( 7.4)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	8 ( 14.8)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	7 ( 13.0)	3 ( 5.7)	0 ( 0.0)
2.50- 2.99	10 ( 18.5)	2 ( 3.8)	0 ( 0.0)
3.00- 3.49	7 ( 13.0)	1 ( 1.9)	0 ( 0.0)
3.50- 3.99	3 ( 5.6)	4 ( 7.5)	1 ( 1.9)
4.00- 4.49	4 ( 7.4)	4 ( 7.5)	1 ( 1.9)
4.50- 4.99	5 ( 9.3)	5 ( 9.4)	0 ( 0.0)
5.00- 5.49	2 ( 3.7)	2 ( 3.8)	1 ( 1.9)
5.50- 5.99	0 ( 0.0)	7 ( 13.2)	3 ( 5.7)
6.00- 6.49	0 ( 0.0)	4 ( 7.5)	0 ( 0.0)
6.50- 6.99	1 ( 1.9)	8 ( 15.1)	6 ( 11.3)
7.00- 7.49	0 ( 0.0)	3 ( 5.7)	5 ( 9.4)

Table 2d. (continued)

STATION 2184 DEL NORTE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	2 ( 3.8)	4 ( 7.5)
8.00- 8.49	0 ( 0.0)	1 ( 1.9)	3 ( 5.7)
8.50- 8.99	0 ( 0.0)	1 ( 1.9)	3 ( 5.7)
9.00- 9.49	0 ( 0.0)	1 ( 1.9)	5 ( 9.4)
9.50- 9.99	0 ( 0.0)	2 ( 3.8)	6 (11.3)
10.00-10.49	0 ( 0.0)	1 ( 1.9)	4 ( 7.5)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)
11.50-11.99	0 ( 0.0)	1 ( 1.9)	1 ( 1.9)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	4 ( 7.5)
12.50-12.99	0 ( 0.0)	1 ( 1.9)	1 ( 1.9)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)



Table 2d. (continued)

STATION 2184 DEL NORTE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.9)
TOTALS	53.0	53.0	53.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 2e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

2184 DEL NORTE

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	0.00	0.00	0.00	0.00	0.00	0.00	.30	.42	.06	0.00	0.00	0.00	5.21
.10	.01	0.00	.03	0.00	.05	.03	.44	.58	.13	0.00	0.00	.01	5.88
.20	.06	.07	.15	.17	.16	.16	.65	.82	.25	.16	.04	.05	6.77
.30	.12	.13	.25	.29	.28	.26	.84	1.03	.38	.30	.14	.10	7.47
.40	.18	.18	.35	.40	.40	.37	1.03	1.24	.51	.45	.23	.17	8.10
.50	.25	.25	.45	.52	.53	.48	1.24	1.46	.67	.62	.34	.24	8.73
.60	.34	.32	.57	.66	.69	.61	1.48	1.71	.85	.81	.46	.34	9.38
.70	.45	.41	.72	.82	.89	.77	1.76	2.00	1.09	1.05	.60	.47	10.11
.80	.61	.54	.91	1.04	1.17	.98	2.13	2.38	1.40	1.38	.80	.65	11.02
.90	.87	.74	1.23	1.40	1.62	1.33	2.72	2.99	1.93	1.93	1.13	.97	12.36
.95	1.12	.93	1.53	1.74	2.07	1.67	3.28	3.55	2.45	2.47	1.45	1.29	13.55
ALPHA	1.12	1.45	1.66	1.76	1.29	1.58	2.30	2.78	1.30	1.33	1.38	.87	12.28
BETA	.36	.25	.38	.41	.60	.42	.63	.60	.69	.71	.42	.48	.73
Q	.09	.11	.09	.11	.07	.09	0.00	0.00	.02	.11	.18	.07	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 2a. Mean monthly precipitation for period of record.

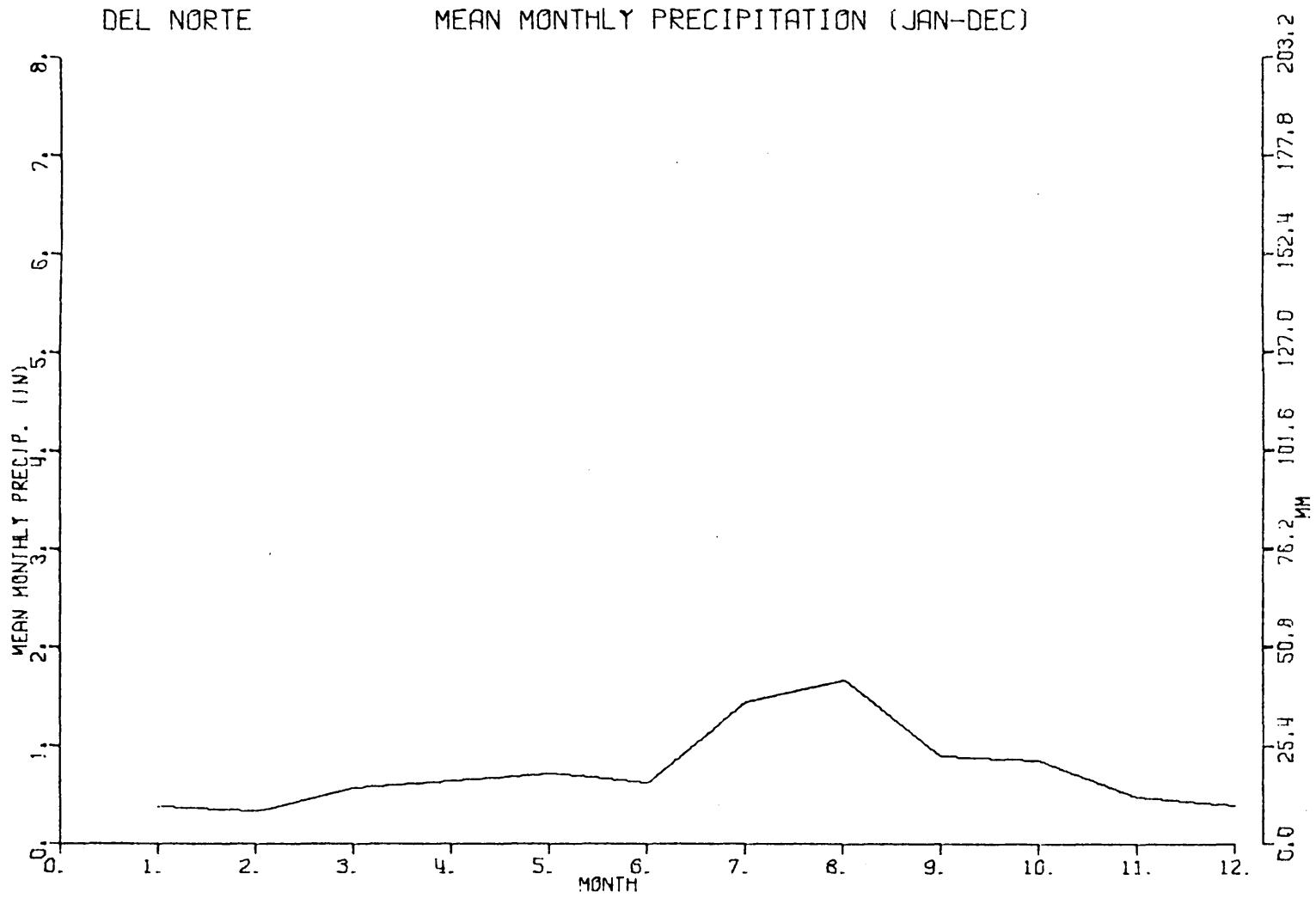


Figure 2b. Water year and 5 year moving mean precipitation.

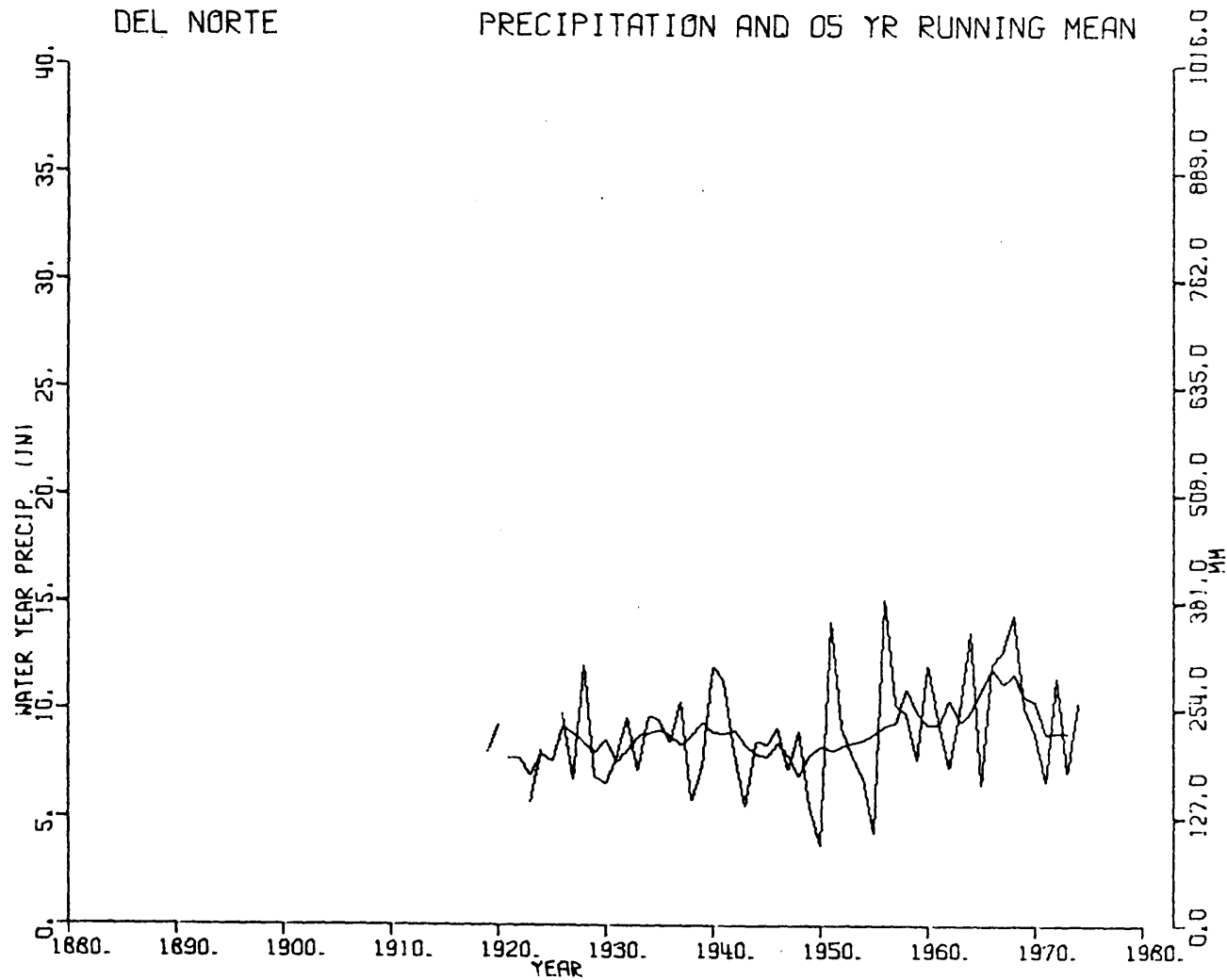


Figure 2c. Water year and 15 year moving mean precipitation.

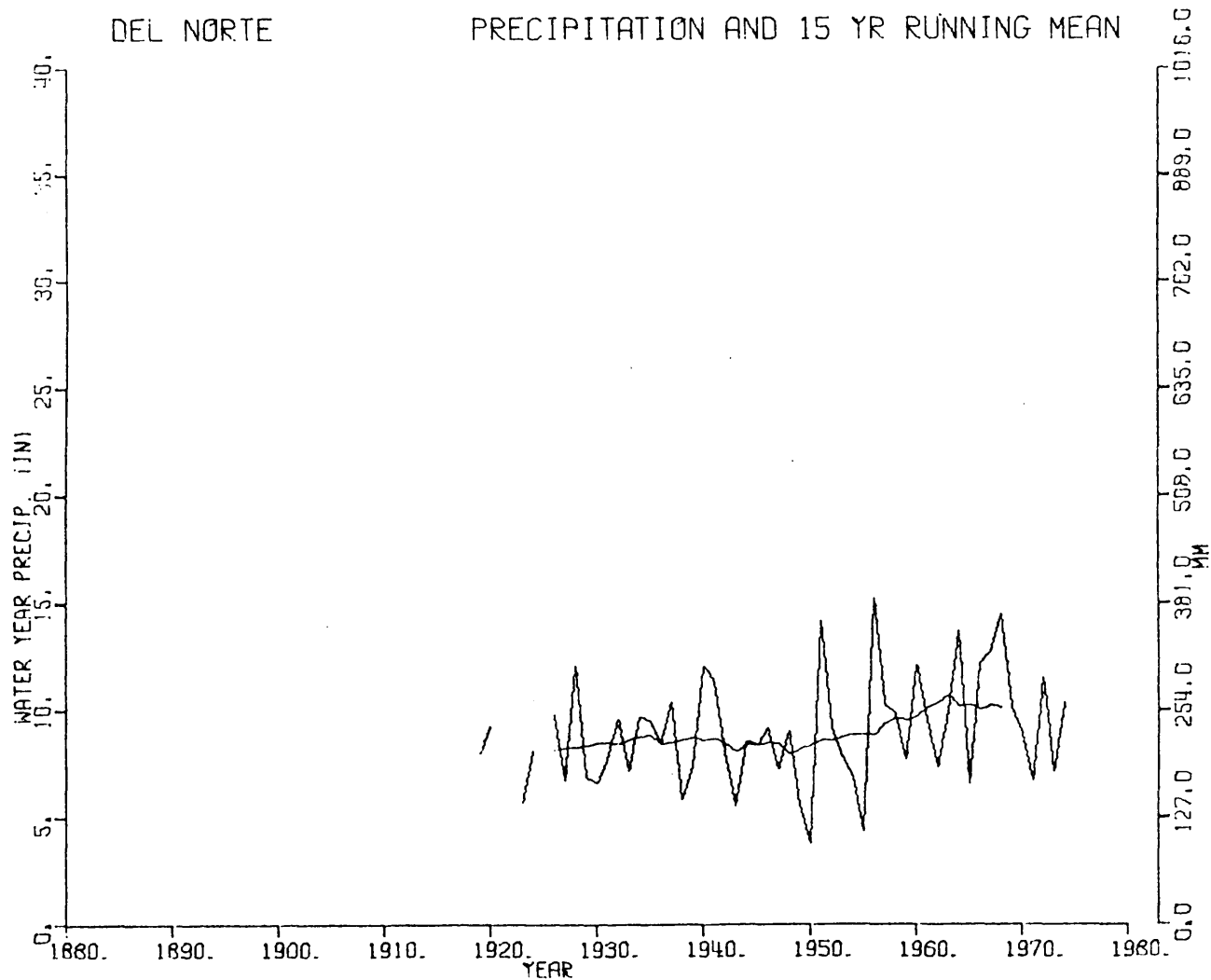


Table 3a. Time series and statistical summary of monthly and water year precipitation.

STATION 3541 GREAT SAND DUNES

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1950	.24	0.00	.47	.32	.06	.12	1.04	.35	.05	.04	2.03	.34	5.14
1951	.89	.15	.38	.99	.05	.29	1.64	1.07	.22	.82	3.98	2.33	12.81
1952	0.00	.40	.10	.03	.14	.87	1.80	1.39	1.25	2.72	1.30	0.90	9.00
1953	1.43	.72	.24	.25	.05	.24	.80	1.28	.05	1.34	2.84	1.18	9.50
1954	.72	.32	.11	.45	.03	.06	.47	2.65	.04	1.23	2.51	.18	8.33
1955	.03	.20	.22	.66	.13	.20	1.08	1.14	.15	1.51	1.09	.04	5.50
1956	.17	.53	.19	.37	.20	.53	2.08	3.83	.88	4.62	2.61	0.60	16.01
1957	.97	.84	.03	.76	.30	1.00	1.12	.61	.71	.47	.94	.44	8.19
1958	.72	.47	.21	.44	.19	.79	1.25	1.63	.66	1.98	2.08	1.25	11.94
1959	2.15	.12	.27	.42	1.04	.22	.70	.42	1.47	2.13	.26	.44	9.68
1960	1.43	.10	.45	.21	.47	.52	.46	.46	.29	1.51	2.41	1.47	9.33
1961	.82	.39	.53	.08	.30	.57	.36	.15	.50	1.38	.30	1.46	6.93
1962	.59	.62	.15	900.77	.27	.24	0.00	.35	.81	1.66	2.35	1.58	404.39
1963	.41	.07	.14	.05	.55	900.70	.51	.90	.99	2.43	2.25	1.81	410.81
1964	.16	.82	.47	.19	.12	1.04	.19	.90	2.54	2.68	1.47	3.87	15.11
1965	.97	.11	900.38	.43	.12	.05	.32	.32	.94	2.32	2.26	.11	408.24
1966	.07	.06	.17	.13	.61	.24	.96	2.08	1.29	2.80	4.22	1.10	13.73
1967	.50	0.00	.91	.08	.57	.51	900.26	1.39	.05	5.01	3.52	1.11	414.01
1968	.46	.45	.07	.04	.09	.64	900.20	2.20	4.32	2.18	2.49	1.15	14.29
1969	2.14	.11	.73	.02	.01	1.01	.56	.18	1.24	1.83	3.25	2.51	13.24
1970	.85	900.11	0.00	.01	.22	.12	.30	.48	1.19	3.74	1.87	1.37	489.25
1971	1.02	.48	.45	.10	.05	.23	900.05	.38	1.23	.49	1.29	1.17	987.24
1972	1.55	.74	901.12	.03	.17	.57	1.12	.62	.26	1.37	.96	.77	909.28
1973	.27	900.05	.63	.86	.19	.46	0.00	.10	.83	901.42	1.35	.40	906.56
1974	1.74	.05	.87	.58	.19	.78	0.00	.63	.80	2.23	1.01	3.42	12.32
1975	.37	.60	.18	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
MEAN	26	26	26	25	25	25	25	25	25	25	25	25	25
STD DEV	.79	.33	.35	.33	.26	.48	.65	1.00	.88	1.98	2.03	1.14	10.24
CV	.63	.27	.29	.30	.25	.31	.53	.92	.94	1.14	1.05	1.02	3.06
STD ERR	.81	.84	.80	.90	.93	.65	.81	.92	1.06	.60	.52	.90	.30
MAX	.12	.05	.06	.06	.05	.06	.11	.18	.19	.24	.21	.20	.51
MIN	2.15	.84	1.12	.99	1.08	1.04	2.08	3.83	4.32	5.01	4.22	3.87	16.01
RANGE	0.00	0.00	0.00	.01	.01	.05	0.00	.02	.04	.08	.26	0.00	5.14
	2.15	.84	1.12	.98	1.07	.99	2.08	3.81	4.28	4.93	3.96	3.87	10.87

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 3b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 3541 GREAT SAND DUNES

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1950	1.21	3.93
1951	2.75	10.06
1952	1.54	7.46
1953	2.33	6.87
1954	1.25	7.08
1955	1.44	4.06
1956	1.39	14.02
1957	3.30	4.29
1958	2.82	8.86
1959	4.26	5.42
1960	3.23	6.60
1961	2.63	4.24
1962	2.64	5.75
1963	1.32	4.89
1964	3.10	11.92
1965	2.06	5.18
1966	1.28	12.45
1967	2.67	11.34
1968	1.75	12.54
1969	4.02	9.62
1970	1.31	7.95
1971	2.33	5.11
1972	4.12	5.10
1973	2.46	4.10
1974	4.21	8.11
1975	999.90	999.90
N	25	25
MEAN	2.56	7.68
STD DEV	1.00	3.03
CV	.39	.39
STD ERR	.20	.61
MAX	4.26	14.02
MIN	1.21	3.93
RANGE	3.05	10.09

Table 3c. Absolute and percent relative frequencies of monthly precipitation.

STATION 3541 GREAT SAND DUNES

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	11 ( 42.3)	19 ( 73.1)	20 ( 76.9)	19 ( 76.0)	20 ( 80.0)	12 ( 48.0)	12 ( 48.0)	11 ( 44.0)	9 ( 36.0)	2 ( 8.0)	2 ( 8.0)	4 ( 36.0)
.50- .99	8 ( 30.8)	7 ( 26.9)	5 ( 19.2)	6 ( 24.0)	4 ( 16.0)	10 ( 40.0)	6 ( 24.0)	4 ( 16.0)	4 ( 36.0)	3 ( 12.0)	2 ( 8.0)	2 ( 8.0)
1.00- 1.49	3 ( 11.5)	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)	1 ( 4.0)	2 ( 12.0)	5 ( 20.0)	5 ( 20.0)	5 ( 20.0)	5 ( 20.0)	5 ( 24.0)	4 ( 36.0)
1.50- 1.99	2 ( 7.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)	0 ( 0.0)	4 ( 16.0)	1 ( 4.0)	1 ( 4.0)
2.00- 2.49	2 ( 7.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	2 ( 8.0)	0 ( 0.0)	5 ( 20.0)	7 ( 28.0)	1 ( 4.0)
2.50- 2.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)	3 ( 12.0)	3 ( 12.0)	1 ( 4.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)	1 ( 4.0)	2 ( 8.0)	1 ( 4.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	26.	26.	26.	25.	25.	25.	25.	25.	25.	25.	25.	25.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL.  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH.



Table 3d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 3541 GREAT SAND DUNES

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

35

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	5 ( 20.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	4 ( 16.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	3 ( 12.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	6 ( 24.0)	0 ( 0.0)	0 ( 0.0)
3.00- 3.49	2 ( 8.0)	0 ( 0.0)	0 ( 0.0)
3.50- 3.99	1 ( 4.0)	1 ( 4.0)	0 ( 0.0)
4.00- 4.49	4 ( 16.0)	4 ( 16.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	3 ( 12.0)	2 ( 8.0)
5.50- 5.99	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
6.50- 6.99	0 ( 0.0)	2 ( 8.0)	2 ( 8.0)
7.00- 7.49	0 ( 0.0)	2 ( 8.0)	1 ( 4.0)

Table 3d. (continued)

STATION 3541 GREAT SAND DUNES

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
8.00- 8.49	0 ( 0.0)	1 ( 4.0)	4 ( 16.0)
8.50- 8.99	0 ( 0.0)	2 ( 8.0)	1 ( 4.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	2 ( 8.0)
9.50- 9.99	0 ( 0.0)	1 ( 4.0)	3 ( 12.0)
10.00-10.49	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)
11.00-11.49	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)
11.50-11.99	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)
12.00-12.49	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)
12.50-12.99	0 ( 0.0)	1 ( 4.0)	1 ( 4.0)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	2 ( 8.0)
14.00-14.49	0 ( 0.0)	1 ( 4.0)	2 ( 8.0)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 3d. (continued)

STATION 3541 GREAT SAND DUNES

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.00-16.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)
TOTALS	25.0	25.0	25.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 3e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

3541 GREAT SAND DUNES N.M.

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.02	.02	.08	0.00	.07	.04	.40	.54	0.00	.03	0.00	.02	5.71
.10	.03	.04	.12	.07	.14	.09	.58		.07	.10	.02	.07	6.49
.20	.07	.08	.19	.21	.27	.19	.87		.27	.22	.08	.13	7.53
.30	.11	.12	.26	.32	.40	.30	1.14		.45	.33	.14	.18	8.34
.40	.16	.16	.33	.42	.56	.44	1.41		.64	.46	.19	.24	9.09
.50	.22	.20	.40	.54	.73	.60	1.69	1.00	.85	.60	.25	.30	9.82
.60	.30	.25	.48	.67	.94	.80	2.02	2.10	1.10	.76	.32	.37	10.59
.70	.40	.32	.59	.82	1.21	1.06	2.41	2.44	1.41	.96	.41	.45	11.46
.80	.53	.42	.72	1.03	1.58	1.42	2.92	2.90	1.83	1.24	.53	.57	12.54
.90	.77	.57	.94	1.37	2.21	2.05	3.75	3.61	2.52	1.70	.72	.75	14.14
.95	1.01	.72	1.15	1.69	2.83	2.67	4.53	4.27	3.20	2.15	.91	.93	15.56
ALPHA	.95	1.31	1.92	1.85	1.17	.96	2.24	2.95	1.38	1.38	1.47	1.75	11.20
BETA	.35	.20	.25	.39	.85	.91	.88	.69	.88	.59	.24	.22	.90
Q	0.00	0.00	0.00	.08	0.00	0.00	0.00	0.00	.08	.04	.08	.04	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 3a. Mean monthly precipitation for period of record.

GREAT SAND DUNES MEAN MONTHLY PRECIPITATION (JAN-DEC)

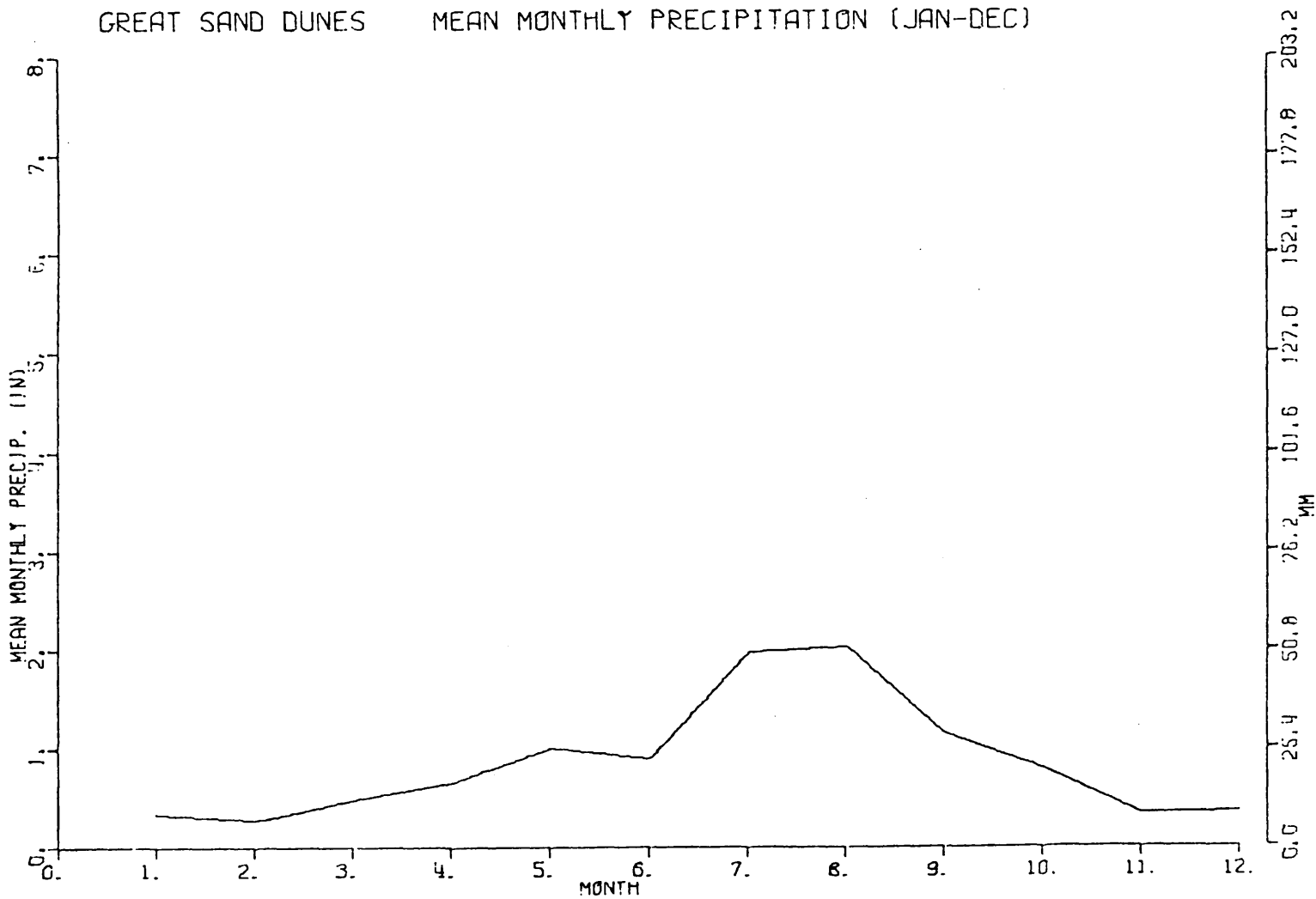


Figure 3b. Water year and 5 year moving mean precipitation.

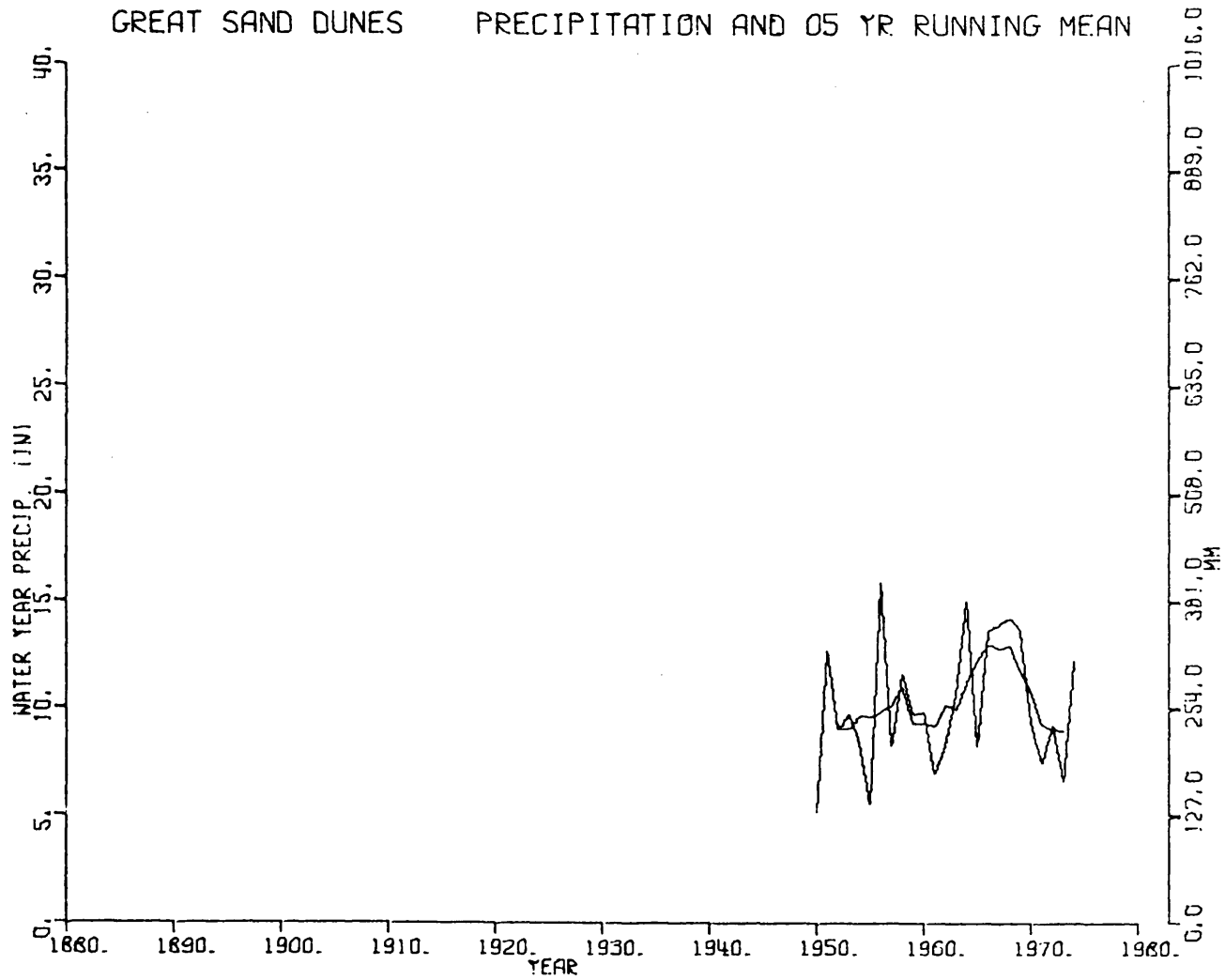


Figure 3c. Water year and 15 year moving mean precipitation.

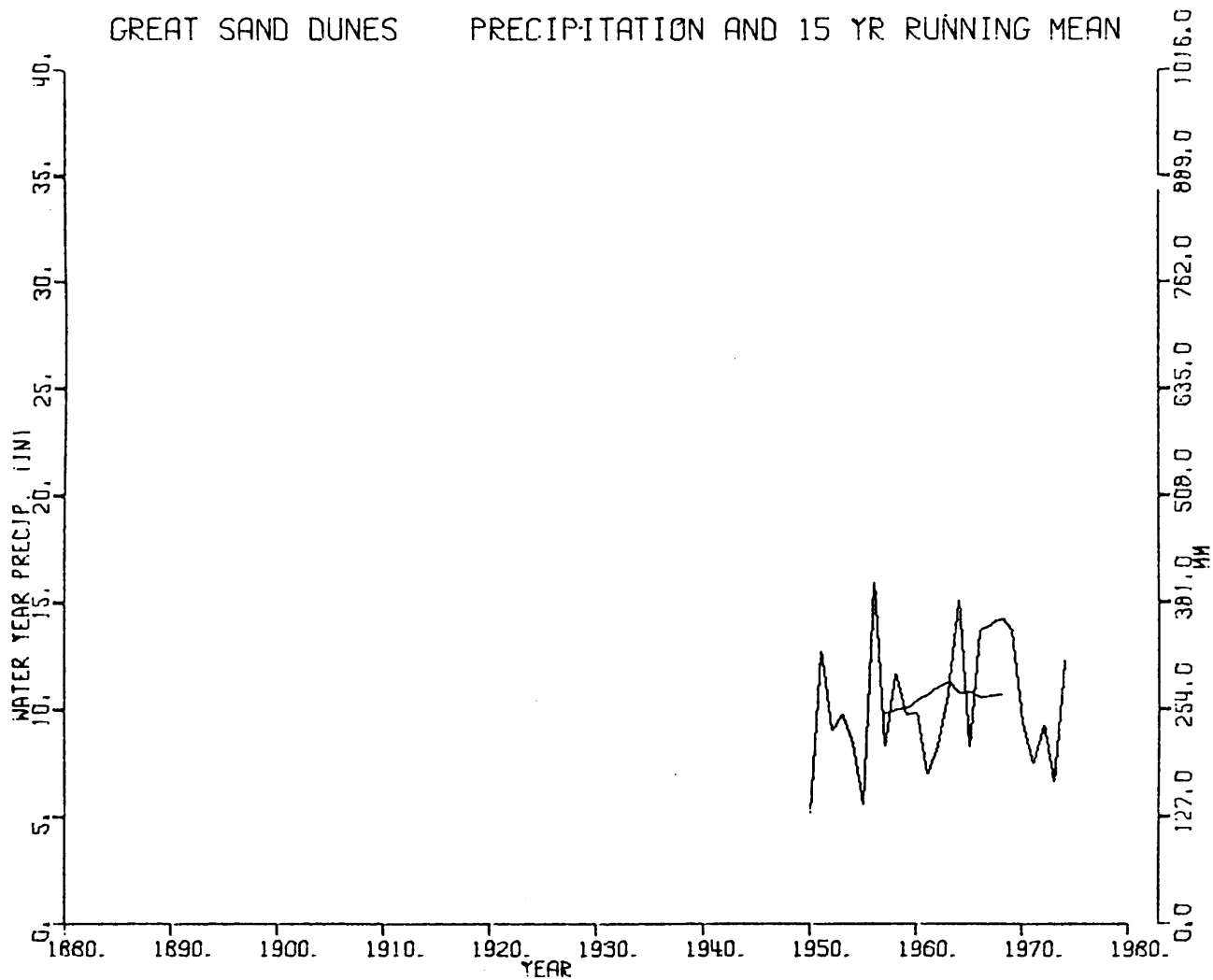


Table 4a. Time series and statistical summary of monthly and water year precipitation.

STATION 7337 SAGUACHE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	WATER YEAR
1894	0.00	0.00	.15	.30	.80	0.00	0.00	1.28	2.50	3.15	3.13	.32	11.53
1895	1.93	.60	0.00	.25	0.00	0.00	0.05	0.00	0.00	901.32	.27	.69	905.11
1896	0.00	0.00	.30	.30	.35	.60	0.00	1.53	1.70	.45	.80	1.20	7.23
1897	1.41	.10	.40	.24	.10	.10	.73	.90	.82	2.74	1.05	0.00	8.62
1898	.13	.82	.40	.22	.69	0.00	0.00	0.00	2.50	2.01	.86	1.19	8.02
1899	.38	.05	.06	.02	.06	0.00	2.19	1.65	.84	.52	.54	1.31	6.62
1900	.05	.07	0.00	.07	0.00	.27	.26	.90	.90	.99	1.82	1.07	6.60
1901	.46	0.00	.12	.22	.13	.10	0.00	1.86	.31	.25	2.66	.64	6.75
1902	.18	.32	.42	.15	.33	.24	.52	.10	2.68	.54	1.15	.70	7.83
1903	.10	0.00	0.00	.02	.03	.50	0.00	.15	.68	1.18	1.93	1.47	6.06
1904	.96	0.00	.34	.13	.42	.30	.40	.10	.50	1.00	.16	.88	6.06
1905	0.00	.18	0.00	.13	0.00	.67	.39	1.20	0.00	2.42	.95	.88	7.12
1906	3.58	900.35	900.63	.10	.02	0.00	.78	1.97	1.90	1.50	3.60	.55	11.47
1907	1.05	.10	.43	.05	.87	900.90	900.90	999.90	999.90	999.90	999.90	999.90	999.90
1908	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1909	999.90	.81	1.25	0.00	.29	.42	.63	0.00	1.00	1.30	.84	.80	909.40
1910	.55	1.20	.67	0.00	1.13	.63	.25	.11	.80	3.50	901.55	1.00	911.39
1911	2.20	.20	0.00	.13	.05	.53	1.11	0.00	1.75	1.27	1.55	1.00	10.23
1912	.50	0.00	.27	.30	.20	.85	1.20	0.00	2.40	2.03	1.40	1.00	10.25
1913	.70	.30	.65	.43	.10	.31	2.30	2.25	2.10	3.05	2.37	.50	15.25
1914	.73	0.00	.83	.20	1.35	.50	2.65	.60	.85	2.14	.44	1.63	11.25
1915	.15	.40	.66	.88	.10	0.00	1.17	.20	0.00	1.55	2.31	.69	8.42
1916	.85	0.00	.05	.38	.25	.52	.40	2.64	.48	2.85	1.40	.60	10.82
1917	0.00	0.00	0.00	.90	2.50	.05	.10	0.00	2.30	1.83	1.92	1.63	11.23
1918	1.20	.32	.68	0.00	.28	1.25	.00	1.75	0.00	3.35	.65	.44	10.82
1919	.15	1.35	0.00	.05	.10	.02	1.15	1.95	.70	1.65	3.12	.88	11.12
1920	.66	.43	.62	.07	0.00	.26	.70	999.90	999.90	999.90	999.90	999.90	999.90
1921	999.90	0.00	.31	.80	1.38	.55	0.00	0.00	1.60	999.90	999.90	999.90	999.90
1922	999.90	999.90	999.90	0.00	.02	.00	.35	.29	1.45	1.73	5.67	901.65	909.90
1923	3.64	.47	.39	.22	.14	900.87	1.49	.94	900.57	901.27	0.00	900.82	910.10
1924	.01	.36	.51	.01	0.30	.33	.90	999.90	999.90	900.90	999.90	999.90	999.90
1925	1.25	.25	999.90	.43	.30	999.90	999.90	999.90	999.90	999.90	999.90	1.01	999.90
1926	.28	0.00	.32	.03	.41	1.08	0.00	999.90	999.90	999.90	999.90	999.90	999.90
1927	999.90	999.90	.19	0.00	.50	.90	.17	1.49	.41	.64	1.58	.70	999.90
1928	.40	.87	0.00	.09	.04	.21	.31	.62	0.00	1.52	2.27	1.31	7.64
1929	.45	.41	.08	.32	0.00	.27	.20	.63	.17	4.16	1.49	.53	8.71
1930	.14	.28	0.00	0.00	.91	1.08	.34	.25	.32	1.94	2.56	1.15	8.97
1931	.55	1.30	.12	.28	.02	.16	900.51	.20	.55	2.49	.99	.35	907.52
1932	.39	0.00	.14	.30	.07	0.00	.61	.08	.79	1.48	2.00	.41	6.27
1933	.56	.46	.71	0.00	.18	.05	.42	.53	.23	.66	1.51	1.17	6.48



Table 4a. (continued)

STATION 7337 SAGUACHE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1934	0.00	.34	.06	.25	.44	.33	.16	3.09	0.00	1.66	3.04	2.15	11.52
1935	.52	.02	.04	.22	.16	.33	.33	.50	.68	2.14	2.58	.76	8.24
1936	.07	0.00	.04	.05	.20	.76	.50	.56	.80	.50	1.64	.70	905.32
1937	.35	0.00	.15	.23	.23	1.59	.78	.44	1.04	.73	1.15	1.71	7.42
1938	2.12	.05	.20	.50	.14	.75	.04	.06	.45	.31	1.41	.17	5.20
1939	.10	0.00	.27	.68	.57	.02	.21	.97	.16	.33	1.65	.74	5.70
1940	.08	.90	901.72	.42	.14	.89	1.30	.67	1.02	.66	.98	1.65	910.83
1941	3.02	.10	.37	.27	.14	.14	1.36	.15	1.37	.35	.26	900.63	907.16
1942	900.60	900.18	900.74	0.00	.15	.23	.20	.46	1.17	.29	2.03	.61	906.71
1943	.17	.02	.34	900.87	.13	.76	.85	.43	0.00	1.87	.66	.15	905.24
1944	.89	900.39	900.62	900.43	900.54	900.33	901.78	1.02	.81	.85	1.60	.74	910.00
1945	.13	0.00	.07	.21	.09	.22	900.58	1.11	1.10	2.55	1.30	1.07	907.53
1946	.59	.43	.05	.18	.06	.25	.58	.93	1.04	1.00	2.35	1.41	8.47
1947	1.28	.32	.44	.99	1.02	.75	.42	1.09	1.58	.71	1.11	.21	9.42
1948	.40	.03	.52	.73	.38	.58	.96	.93	1.47	902.07	.60	.92	904.54
1949	.24	0.00	.14	.08	.18	.14	.08	.14	.46	1.11	.51	.77	4.29
1950	.27	.04	.25	.48	.35	.21	1.42	.20	.15	.75	2.86	0.00	7.02
1951	.42	.51	.05	.75	.05	.48	1.57	.47	.20	1.76	.84	1.22	8.32
1952	.04	.74	.17	0.00	.42	.82	1.75	.02	1.27	2.45	1.74	0.00	9.85
1953	1.08	.40	.23	.04	.03	.08	.02	.02	1.07	2.90	1.55	1.12	9.25
1954	.21	.15	.23	.08	.12	.05	.67	.67	1.33	0.00	3.76	.59	7.78
1955	.00	.12	.20	.42	.11	.35	.81	.46	.27	1.23	.70	.10	5.22
1956	.47	.59	.26	.59	0.00	.43	1.31	2.78	1.21	3.45	2.96	.03	14.08
1957	2.02	1.36	.08	.41	.19	.48	.59	.37	.38	.79	1.37	.75	6.74
1958	.64	.24	.20	.02	.49	.18	1.14	.95	.83	1.24	1.01	.77	7.71
1959	2.71	.07	0.00	.40	.46	.25	1.02	.47	.42	1.65	.48	.16	7.04
1960	1.71	.16	.07	.07	.14	.93	.48	.85	.52	1.07	2.06	1.28	10.14
1961	2.30	.35	.24	.17	.26	.31	.24	0.00	.53	.84	.32	.62	9.54
1962	.45	.59	.54	.13	.54	.31	.02	0.00	.64	.77	1.16	1.01	8.16
1963	.34	.43	.11	0.00	.44	.25	1.11	.31	.82	1.95	1.43	1.46	8.65
1964	0.00	.70	.31	.21	.46	.74	.51	.79	.72	3.17	1.71	1.65	10.97
1965	1.60	0.00	1.12	.08	.43	0.00	.55	.78	.47	.51	2.20	.77	8.51
1966	.24	.19	.39	0.00	.00	.18	.41	1.33	1.30	2.43	3.30	.81	10.44
1967	0.00	0.00	1.95	.07	.19	.24	.18	.73	0.00	3.17	1.14	.74	9.41
1968	.13	.25	.35	.20	.28	.39	.17	.90	2.35	3.19	2.46	1.65	12.43
1969	2.80	.02	.36	.03	0.00	.71	.10	.33	.55	.30	1.39	2.13	8.72
1970	.22	.03	0.00	.30	.38	0.00	.53	.65	.19	2.18	1.36	1.03	6.47
1971	.57	.88	.24	.54	0.00	.38	0.00	.27	.63	.69	1.04	.33	5.57
1972	1.41	1.62	.65	.04	0.00	.44	.40	.75	.40	3.64	1.57	.51	11.98
1973	.47	0.00	.35	.64	.11	.52	.25	0.00	.17	.45	1.34	.63	4.93

Table 4a. (continued)

STATION 7337 SAGUACHE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1974	.93	.79	.49	.60	.52	.86	1.11	.01	.67	1.39	.76	.51	8.04
1975	.30	1.05	.06	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	77	79	79	80	80	7A	7A	75	75	74	74	75	71
MEAN	.76	.34	.35	.27	.31	.40	.61	.75	.79	1.60	1.59	.84	8.57
STD DEV	.87	.39	.34	.27	.39	.34	.57	.71	.69	.99	1.00	.52	2.34
CV	1.15	1.14	1.06	1.01	1.27	.84	.93	.95	.87	.62	.62	.62	.27
STD ERR	.10	.04	.04	.03	.04	.04	.06	.08	.08	.12	.12	.06	.24
MAX	3.64	1.62	1.95	.99	2.50	1.59	2.65	3.09	2.68	4.16	5.67	2.18	15.66
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.25	0.00	0.00	4.29
RANGE	3.64	1.62	1.95	.99	2.50	1.59	2.65	3.09	2.68	3.91	5.67	2.18	10.77

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 4b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 7337 SAGUACHE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1894	1.25	10.38
1895	2.78	2.33
1896	1.55	5.68
1897	2.39	6.23
1898	2.26	6.56
1899	.57	6.05
1900	.46	5.94
1901	1.03	5.72
1902	1.64	5.69
1903	.65	5.41
1904	2.15	2.73
1905	.98	7.14
1906	4.68	9.29
1907	999.90	999.90
1908	999.90	999.90
1909	999.90	4.63
1910	4.18	7.21
1911	3.25	6.78
1912	2.12	8.43
1913	2.44	12.57
1914	3.61	8.15
1915	2.54	5.83
1916	2.05	8.77
1917	3.45	7.78
1918	3.73	7.09
1919	1.67	2.45
1920	2.34	999.90
1921	999.90	999.90
1922	999.90	11.12
1923	5.77	4.33
1924	1.22	999.90
1925	999.90	999.90
1926	2.12	999.90
1927	999.90	4.44
1928	1.61	6.03
1929	1.53	7.18
1930	2.41	6.56
1931	2.43	5.09
1932	.90	5.37
1933	1.96	4.52

Table 4b. (continued)

STATION 7337 SAGUACHE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1934	1.42	10.10
1935	1.29	6.99
1936	1.12	4.70
1937	2.55	4.86
1938	3.76	2.44
1939	1.56	4.06
1940	4.55	6.23
1941	4.04	3.12
1942	1.95	4.76
1943	2.33	3.96
1944	3.70	7.80
1945	1.72	6.81
1946	1.56	7.31
1947	4.30	5.12
1948	2.64	6.95
1949	2.82	3.47
1950	1.54	5.38
1951	2.26	6.06
1952	2.19	7.66
1953	2.26	6.99
1954	2.84	6.94
1955	1.60	3.62
1956	2.34	11.74
1957	4.54	4.25
1958	1.77	5.94
1959	3.89	3.20
1960	3.88	6.26
1961	3.33	2.91
1962	2.56	3.60
1963	1.57	7.08
1964	2.42	8.55
1965	3.23	5.28
1966	1.00	9.58
1967	2.45	5.96
1968	1.60	10.73
1969	3.92	4.80
1970	2.93	5.94
1971	2.61	2.96
1972	2.71	2.27
1973	2.09	2.84

Table 4b. (continued)

STATION 7337 SAGUACHE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1974	4.19	4.45
1975	999.90	999.90
N	74	74
MEAN	2.38	6.20
STD DEV	1.20	2.25
CV	.51	.36
STD ERR	.14	.26
MAX	5.77	12.57
MIN	.46	2.33
RANGE	5.31	10.24

Table 4c. Absolute and percent relative frequencies of monthly precipitation.

STATION 7337 SAGUACHE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	42 ( 54.5)	59 ( 74.7)	60 ( 75.9)	65 ( 81.3)	66 ( 82.5)	51 ( 65.4)	39 ( 50.0)	34 ( 45.3)	29 ( 38.7)	11 ( 10.8)	8 ( 10.8)	17 ( 22.7)
.50- .99	16 ( 20.8)	14 ( 17.7)	15 ( 19.0)	15 ( 18.7)	9 ( 11.2)	23 ( 29.5)	22 ( 28.2)	21 ( 28.0)	24 ( 32.0)	17 ( 23.0)	14 ( 18.9)	29 ( 38.7)
1.00- 1.49	6 ( 7.8)	5 ( 6.3)	2 ( 2.5)	0 ( 0.0)	4 ( 5.0)	3 ( 3.8)	12 ( 15.4)	10 ( 13.3)	11 ( 14.7)	13 ( 17.6)	15 ( 20.3)	20 ( 26.7)
1.50- 1.99	4 ( 5.2)	1 ( 1.3)	2 ( 2.5)	0 ( 0.0)	0 ( 0.0)	1 ( 1.3)	2 ( 2.6)	6 ( 8.0)	4 ( 5.3)	12 ( 16.2)	10 ( 13.5)	6 ( 8.0)
2.00- 2.49	4 ( 5.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 2.6)	1 ( 1.3)	4 ( 5.3)	10 ( 13.5)	4 ( 5.4)	3 ( 4.0)
2.50- 2.99	2 ( 2.6)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)	0 ( 0.0)	1 ( 1.3)	2 ( 2.7)	3 ( 4.0)	4 ( 5.4)	5 ( 6.8)	0 ( 0.0)
3.00- 3.49	1 ( 1.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.3)	0 ( 0.0)	7 ( 9.5)	4 ( 5.4)	0 ( 0.0)
3.50- 3.99	2 ( 2.6)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 2.7)	2 ( 2.7)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)	0 ( 0.0)
TOTALS	77.	79.	79.	80.	80.	78.	78.	75.	75.	74.	74.	75.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL.  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 4d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 7337 SAGUACHE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	1 ( 1.4)	0 ( 0.0)	0 ( 0.0)
.50- .99	6 ( 10.8)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	7 ( 9.5)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	14 ( 18.9)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	18 ( 24.3)	2 ( 2.7)	0 ( 0.0)
2.50- 2.99	6 ( 8.1)	4 ( 5.4)	0 ( 0.0)
3.00- 3.49	4 ( 5.4)	3 ( 4.1)	0 ( 0.0)
3.50- 3.99	7 ( 9.5)	3 ( 4.1)	0 ( 0.0)
4.00- 4.49	3 ( 4.1)	4 ( 5.4)	1 ( 1.4)
4.50- 4.99	5 ( 6.8)	7 ( 9.5)	2 ( 2.8)
5.00- 5.49	0 ( 0.0)	6 ( 8.1)	2 ( 2.8)
5.50- 5.99	1 ( 1.4)	8 ( 10.8)	3 ( 4.2)
6.00- 6.49	0 ( 0.0)	6 ( 8.1)	7 ( 9.9)
6.50- 6.99	0 ( 0.0)	9 ( 12.2)	5 ( 7.0)
7.00- 7.49	0 ( 0.0)	7 ( 9.5)	6 ( 8.5)

Table 4d. (continued)

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	2 ( 2.7)	5 ( 7.0)
8.00- 8.49	0 ( 0.0)	2 ( 2.7)	5 ( 7.0)
8.50- 8.99	0 ( 0.0)	2 ( 2.7)	10 (14.1)
9.00- 9.49	0 ( 0.0)	2 ( 2.7)	1 ( 1.4)
9.50- 9.99	0 ( 0.0)	1 ( 1.4)	4 ( 5.6)
10.00-10.49	0 ( 0.0)	2 ( 2.7)	3 ( 4.2)
10.50-10.99	0 ( 0.0)	1 ( 1.4)	6 ( 8.5)
11.00-11.49	0 ( 0.0)	1 ( 1.4)	3 ( 4.2)
11.50-11.99	0 ( 0.0)	1 ( 1.4)	4 ( 5.6)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)
12.50-12.99	0 ( 0.0)	1 ( 1.4)	0 ( 0.0)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

50



Table 4d. (continued)

STATION 7337 SAGUACHE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.4)
TOTALS	74.0	74.0	71.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL.  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 4e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

7337 SAGUACHE

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	0.00	0.00	0.00	0.00	0.00	0.00	.35	.33	.08	0.00	0.00	0.00	5.15
.10	0.00	0.00	0.00	0.00	0.00	0.00	.49	.49	.20	0.00	0.00	0.00	5.77
.20	.03	.04	.09	.12	.13	.21	.73	.74	.34	.10	0.00	.06	6.59
.30	.08	.09	.17	.22	.27	.36	.94	.95	.47	.21	.04	.13	7.22
.40	.13	.15	.24	.33	.41	.50	1.15	1.16	.59	.35	.12	.19	7.80
.50	.18	.21	.32	.45	.56	.65	1.38	1.39	.72	.50	.21	.26	8.37
.60	.25	.29	.40	.59	.74	.81	1.63	1.64	.87	.69	.31	.34	8.96
.70	.33	.39	.51	.76	.95	1.01	1.94	1.93	1.04	.93	.44	.44	9.62
.80	.44	.53	.65	1.00	1.25	1.27	2.34	2.32	1.27	1.27	.61	.57	10.44
.90	.63	.77	.88	1.40	1.74	1.69	2.98	2.94	1.64	1.84	.90	.79	11.64
.95	.82	1.01	1.10	1.78	2.21	2.09	3.58	3.52	1.99	2.42	1.18	1.01	12.71
ALPHA	1.20	1.12	1.69	1.32	1.40	1.88	2.38	2.56	2.23	1.03	1.20	1.47	13.70
BETA	.25	.33	.27	.51	.62	.47	.67	.63	.39	.82	.38	.27	.63
U	.14	.14	.13	.10	.13	.12	0.00	.01	.04	.10	.25	.14	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA  
 ALPHA= SHAPE PARAMETER    BETA= SCALE PARAMETER  
 U= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS  
 MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 4a. Mean monthly precipitation for period of record.

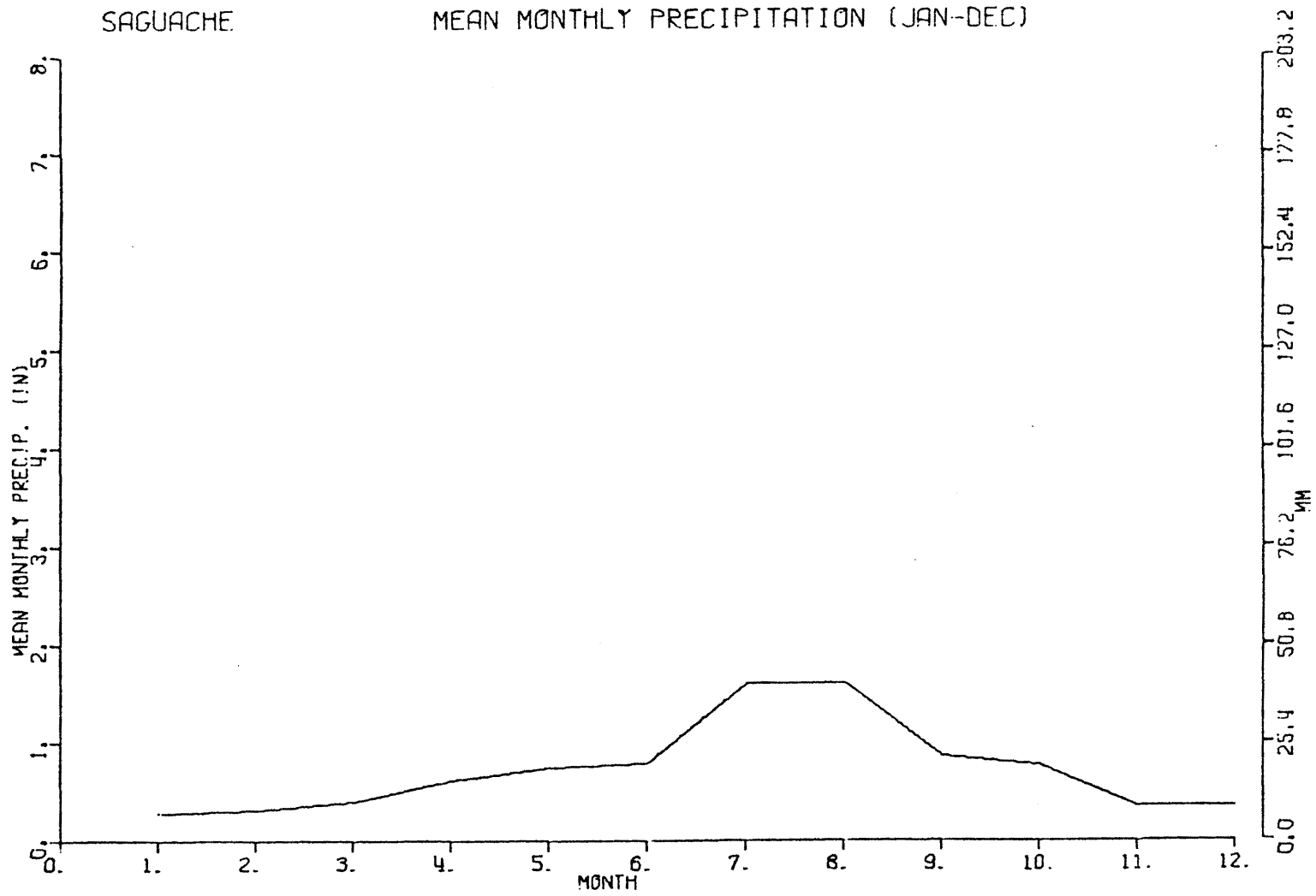


Figure 4b. Water year and 5 year moving mean precipitation.

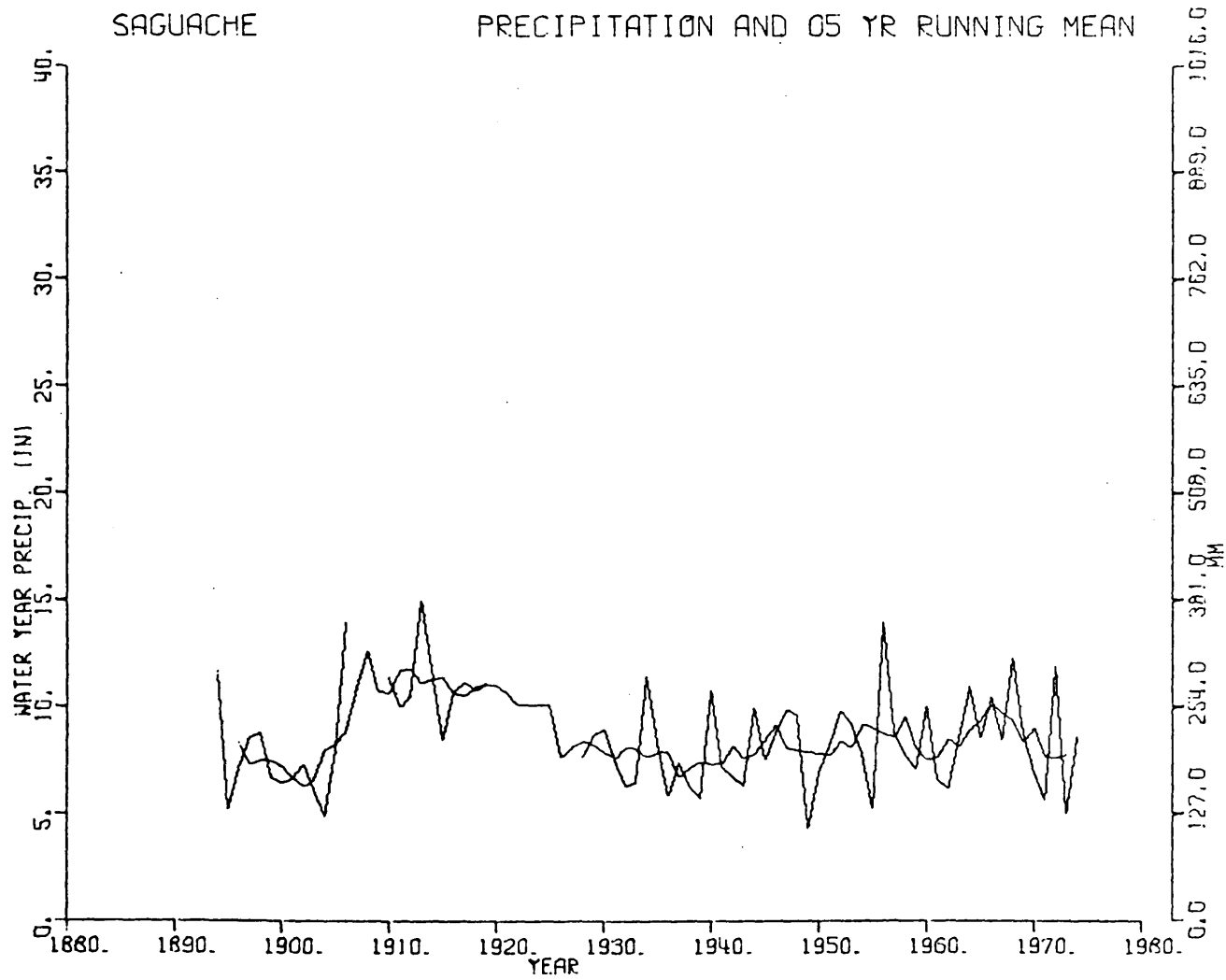


Figure 4c. Water year and 15 year moving mean precipitation.

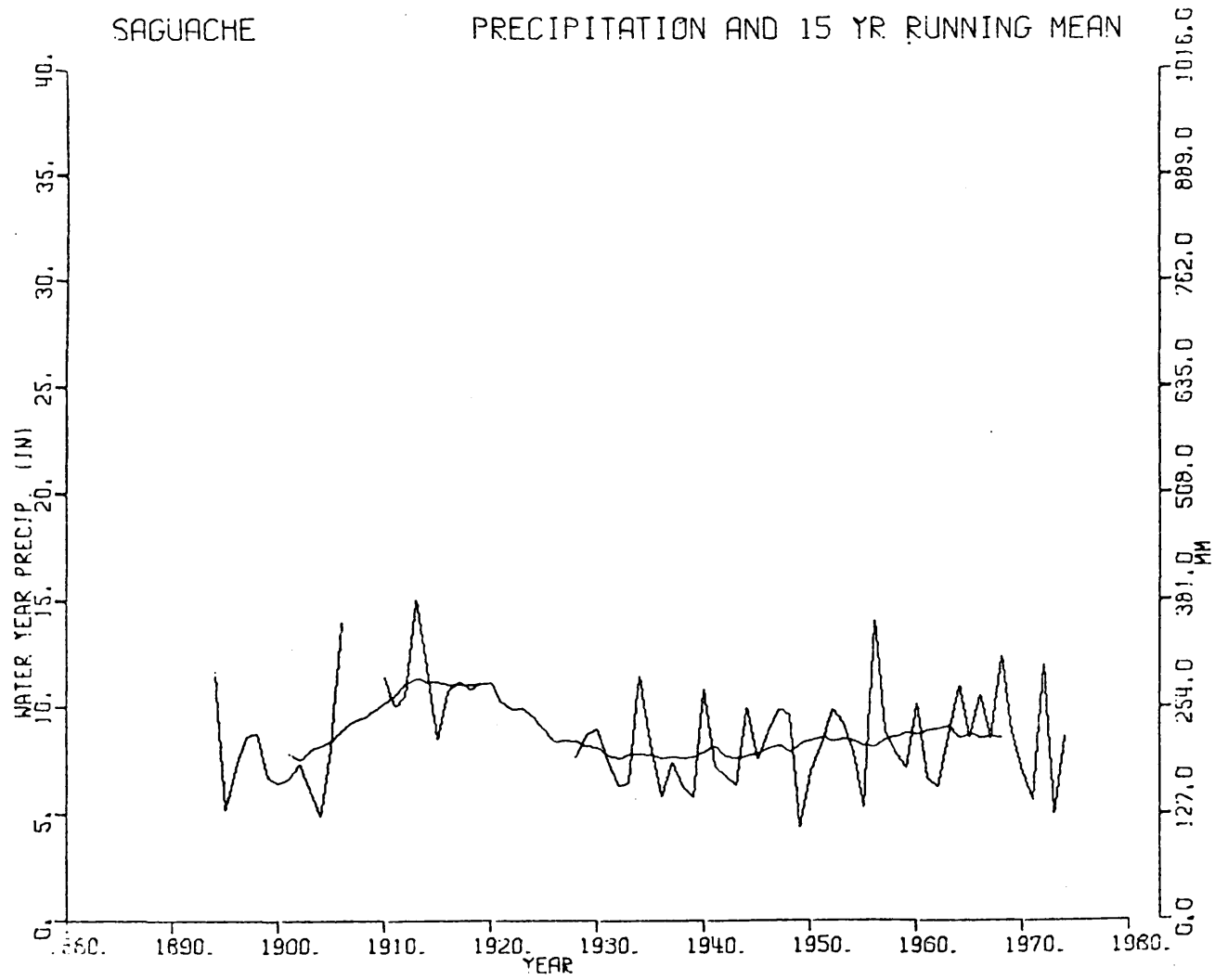


Table 5a. Time series and statistical summary of monthly and water year precipitation.

STATION 1440 CEDAREGGE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1898	.20	.43	.24	.46	.63	1.67	.41	.10	1.49	.57	1.36	.28	7.84
1899	2.63	.24	1.06	.36	.27	.17	2.16	.76	.40	0.00	1.42	2.72	11.19
1900	1.40	1.01	0.00	.79	.59	1.18	.60	1.26	.43	.20	1.42	.48	9.35
1901	.74	.35	.17	.48	.94	1.42	.63	1.30	.19	.98	1.05	1.00	8.30
1902	.40	1.01	1.15	.30	1.08	1.67	1.03	.54	.16	.05	.05	1.55	2.93
1903	.17	0.00	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1904	999.90	999.90	999.90	1.52	999.90	1.54	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1905	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1906	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1907	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1908	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1909	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1910	999.90	1.08	.70	.44	1.57	1.66	.36	0.00	.70	1.06	1.06	2.70	999.90
1911	2.97	.28	.15	.39	.27	4.85	.85	.68	.46	1.42	499.90	.37	999.90
1912	1.85	.53	.39	.81	1.38	.05	.52	.14	.78	.95	499.90	.47	477.90
1913	.38	2.08	1.81	2.00	.85	0.00	1.64	2.80	1.71	1.99	499.90	.49	999.90
1914	2.71	.18	.97	.76	1.16	.25	2.58	2.19	1.13	.47	999.90	1.34	999.90
1915	0.00	1.13	1.45	1.43	.86	.45	.64	1.00	0.00	.62	1.89	1.02	10.49
1916	3.87	.42	.57	.73	.24	.24	3.78	2.88	.01	.26	1.55	1.13	14.18
1917	.09	.25	.22	1.92	.98	1.67	999.90	0.00	999.90	999.90	999.90	999.90	999.90
1918	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1919	1.10	999.90	.27	.21	1.21	.96	.96	2.16	.45	0.00	499.90	.75	999.90
1920	999.90	999.90	.50	.38	1.78	.50	1.87	1.62	2.57	999.90	499.90	999.90	999.90
1921	.78	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1922	0.00	.45	.44	.18	999.90	999.90	999.90	999.90	999.90	999.90	999.90	1.13	999.90
1923	.99	.51	.37	.85	.30	2.60	.64	.11	.60	.63	999.90	999.90	999.90
1924	1.73	.11	1.38	.18	.29	.85	.37	.92	.58	.78	3.15	2.13	12.47
1925	1.84	.45	.27	.21	.99	1.03	2.43	2.39	1.66	.80	3.40	2.50	12.47
1926	1.90	.80	.94	.86	2.11	1.72	.69	2.58	3.21	1.37	2.46	2.56	19.00
1927	1.53	.84	.44	.11	.10	1.17	.65	1.88	.61	1.76	1.10	.32	10.49
1928	2.62	1.34	.33	.86	.84	.62	1.31	1.84	.23	1.51	.81	3.89	16.20
1929	.66	.28	.03	2.97	.67	.20	1.09	2.26	.27	1.28	1.61	1.28	12.60
1930	.35	.71	.15	.15	.75	.53	1.65	.44	.83	1.00	1.44	1.90	8.90
1931	1.66	1.87	.85	.48	.64	.24	1.70	.30	.28	1.83	1.44	.54	11.88
1932	1.09	.12	.83	.59	.33	.57	1.13	.46	.34	.90	1.88	2.10	10.34
1933	0.00	.90	.40	.48	2.04	0.00	1.11	1.96	.79	.27	.75	1.35	9.65
1934	0.00	.76	.72	1.11	.75	.21	1.66	1.45	0.00	.52	1.13	1.34	9.65
1935	.45	.96	.57	.52	1.84	.59	.34	.10	.79	1.52	1.48	.64	8.90
1936	1.45	.23	1.17	.55	.90	1.59	.58	.65	.24	1.37	.64	1.07	10.74
1937	.94	.40	2.51	.67	1.07	2.67	1.23	1.10	1.84	.35	.50	2.03	15.31

Table 5a. (continued)

STATION 1440 CEDAREDDGE

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1938	1.05	.27	1.14	1.45	.51	1.01	.32	.22	.19	.56	1.52	2.15	10.39
1939	.66	.18	1.20	1.37	2.26	.75	2.08	.05	.13	.63	1.29	3.24	12.46
1940	1.74	.78	1.56	1.55	.94	1.65	1.97	1.11	1.18	.88	.77	2.88	17.01
1941	3.69	.59	1.84	1.85	2.20	1.71	1.89	0.00	0.00	.20	1.15	2.63	13.75
1942	.88	.23	.07	1.23	.70	1.49	1.28	2.72	2.26	.50	1.57	.29	12.32
1943	.84	.43	.76	1.89	.87	1.23	3.16	.47	1.26	.84	1.26	.07	12.24
1944	.46	1.26	.85	1.58	1.03	.65	1.09	1.18	.44	.92	1.27	.07	9.59
1945	.83	.25	1.28	.32	.21	999.90	.93	1.64	.43	2.17	1.78	.54	999.90
1946	1.08	1.25	.60	.52	.48	.72	.54	.95	3.20	.77	2.47	.75	13.33
1947	2.13	.35	.95	.95	1.67	1.23	.78	.13	1.99	1.00	1.55	.67	13.40
1948	.85	.63	1.21	1.27	1.16	1.07	.84	.14	1.22	.74	1.63	.45	10.52
1949	.90	.60	.60	.89	1.08	.79	.50	.14	1.08	1.35	.99	1.22	8.55
1950	0.00	.35	.83	.86	.88	.13	.95	.52	.55	.55	1.73	.44	7.31
1951	1.09	.73	1.29	1.99	.41	1.43	1.37	.54	.25	1.07	2.28	.74	12.47
1952	0.00	.84	.55	.89	.31	1.24	1.96	1.27	.19	.76	1.81	.05	9.51
1953	2.22	1.29	.44	.28	.36	.68	.74	.72	.26	.37	.97	1.85	10.58
1954	1.24	1.72	.37	.55	1.71	.19	.58	1.54	.44	1.73	.95	1.49	11.51
1955	.35	.79	1.15	1.66	.51	.80	.63	.07	.74	1.07	.60	1.10	8.47
1956	.92	.60	.88	2.39	.92	.50	2.07	3.15	1.22	1.80	2.41	.09	16.45
1957	3.65	1.23	1.02	.60	1.47	1.68	.59	.38	1.95	.69	.94	1.28	15.48
1958	.65	.80	.28	.49	1.27	.60	.79	.51	.53	.22	1.86	1.44	9.44
1959	1.87	.34	1.47	.63	1.13	1.35	.82	.48	.44	.02	1.48	1.49	10.52
1960	1.41	.52	.55	.07	.31	1.80	1.04	1.06	.09	.19	1.09	3.40	11.53
1961	1.59	.65	.95	.68	1.95	.73	1.37	.69	.58	1.31	1.17	1.59	12.26
1962	1.12	.79	.88	1.28	.70	1.16	.50	.48	.35	1.01	1.23	.93	10.43
1963	1.63	.86	.32	.31	.21	1.22	1.75	1.98	.70	1.31	2.91	.97	13.17
1964	0.00	1.25	1.49	1.04	.82	1.10	1.40	1.52	1.16	1.58	2.00	2.71	16.07
1965	.77	2.47	1.32	.31	.67	.14	.79	1.32	.41	.39	.53	.36	9.48
1966	.55	1.02	2.47	.55	.14	.50	.31	1.08	1.04	1.21	1.74	1.63	12.14
1967	0.00	.35	1.67	.21	1.90	.59	.54	.98	.04	2.24	1.48	.07	10.29
1968	.87	1.04	.90	1.88	.83	.64	.16	.52	2.94	.73	.98	1.18	12.72
1969	2.94	.50	.63	.45	.05	1.92	.99	.06	2.04	.47	.87	4.18	15.10
1970	1.58	.93	.87	.53	.78	.11	1.47	1.23	0.00	.52	1.69	1.23	10.89
1971	2.45	1.10	1.67	.01	0.00	.08	.24	.32	.36	.17	.46	2.09	8.95
1972	4.92	1.17	1.31	1.07	.30	1.09	.43	1.60	2.35	1.50	1.19	.28	17.21
1973	.49	.55	.88	2.07	.27	.43	1.05	0.00	.03	.72	.54	.60	7.63
1974	1.32	.86	.71	.79	.92	1.54	.53	1.12	.56	.77	.07	.29	9.48
1975	.45	.53	.32	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	69	68	69	69	67	67	67	68	66	67	63	67	67
MEAN	1.24	.71	.82	.84	.84	.98	1.07	1.02	.79	.87	1.22	1.21	11.65
STD DEV	1.05	.49	.53	.62	.57	.79	.69	.80	.81	.55	.75	.98	2.73
CV	.85	.69	.65	.73	.67	.80	.64	.78	.81	.63	.62	.81	.23
STD ERR	.13	.06	.06	.07	.07	.10	.08	.10	.10	.07	.09	.12	.35
MAX	4.92	2.47	2.51	2.97	2.26	4.85	3.28	3.15	3.21	2.28	3.57	4.18	19.65
MIN	0.00	0.00	0.00	.01	0.00	0.00	.16	0.00	0.00	0.00	.05	.05	7.63
RANGE	4.92	2.47	2.51	2.96	2.26	4.85	3.12	3.15	3.21	2.28	3.52	4.13	11.97

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 5b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 1440 CEDAREEDGE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1898	3.63	4.21
1899	4.73	6.46
1900	4.97	4.39
1901	3.10	5.20
1902	5.61	3.38
1903	999.90	999.90
1904	999.90	999.90
1905	999.90	999.90
1906	999.90	999.90
1907	999.90	999.90
1908	999.90	999.90
1909	999.90	999.90
1910	999.90	5.82
1911	8.91	999.90
1912	5.01	999.90
1913	7.12	999.90
1914	6.03	999.90
1915	5.32	5.17
1916	6.07	2.11
1917	5.13	999.90
1918	999.90	999.90
1919	999.90	5.41
1920	999.90	999.90
1921	999.90	999.90
1922	999.90	999.90
1923	5.62	999.90
1924	4.54	7.93
1925	4.79	8.14
1926	8.33	11.27
1927	4.19	6.30
1928	6.61	9.59
1929	4.81	7.79
1930	2.64	6.26
1931	3.79	6.09
1932	3.53	6.81
1933	3.42	6.23
1934	3.55	6.10
1935	4.03	4.87
1936	5.89	4.85
1937	8.26	7.05



Table 5b. (continued)

STATION 1440 CEDAREGE

59

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1938	5.43	4.96
1939	5.42	7.44
1940	8.22	8.79
1941	9.88	3.87
1942	4.60	7.72
1943	6.02	6.06
1944	4.83	4.77
1945	999.90	7.49
1946	4.65	8.68
1947	7.28	6.12
1948	5.14	5.43
1949	4.86	3.39
1950	3.05	4.76
1951	6.04	5.93
1952	3.87	5.64
1953	5.27	5.41
1954	5.78	5.73
1955	5.26	3.21
1956	6.21	10.74
1957	9.65	5.83
1958	4.04	5.35
1959	6.74	3.73
1960	4.66	6.87
1961	6.55	5.71
1962	5.93	4.50
1963	4.55	8.62
1964	5.70	10.37
1965	5.68	3.80
1966	5.23	6.91
1967	4.81	5.39
1968	6.16	6.56
1969	6.49	8.61
1970	4.80	6.09
1971	5.31	3.64
1972	9.86	7.35
1973	4.69	2.94
1974	6.14	3.34
1975	999.90	999.90
N	63	60
MEAN	5.58	6.15
STD DEV	1.60	1.91
CV	.29	.31
STD ERP	.20	.25
MAX	9.88	11.27
MIN	2.64	2.94
RANGE	7.24	8.33

Table 5c. Absolute and percent relative frequencies of monthly precipitation.

STATION 1440 CEDAREIDGE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	19 ( 27.5)	25 ( 36.8)	21 ( 30.4)	24 ( 34.8)	20 ( 29.9)	17 ( 25.4)	10 ( 14.9)	21 ( 30.9)	34 ( 51.5)	16 ( 23.9)	9 ( 14.3)	19 ( 28.4)
.50- .99	16 ( 23.2)	25 ( 36.8)	27 ( 39.1)	25 ( 36.2)	27 ( 40.3)	19 ( 28.4)	28 ( 41.8)	14 ( 20.6)	13 ( 19.7)	27 ( 40.3)	19 ( 30.2)	13 ( 19.4)
1.00- 1.49	11 ( 15.9)	14 ( 20.6)	15 ( 21.7)	9 ( 13.0)	10 ( 14.9)	15 ( 22.4)	13 ( 19.4)	15 ( 22.1)	8 ( 12.1)	13 ( 19.4)	16 ( 25.4)	16 ( 23.9)
1.50- 1.99	11 ( 15.9)	2 ( 2.9)	4 ( 5.8)	7 ( 10.1)	6 ( 9.0)	13 ( 19.4)	9 ( 13.4)	10 ( 14.7)	5 ( 7.6)	9 ( 13.4)	11 ( 17.5)	5 ( 7.5)
2.00- 2.49	3 ( 4.3)	2 ( 2.9)	1 ( 1.4)	3 ( 4.3)	4 ( 6.0)	0 ( 0.0)	4 ( 6.0)	4 ( 5.9)	2 ( 3.0)	2 ( 3.0)	7 ( 7.9)	5 ( 7.5)
2.50- 2.99	5 ( 7.2)	0 ( 0.0)	1 ( 1.4)	1 ( 1.4)	0 ( 0.0)	2 ( 3.0)	1 ( 1.5)	3 ( 4.4)	2 ( 3.0)	0 ( 0.0)	1 ( 1.6)	5 ( 7.5)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 3.0)	1 ( 1.5)	2 ( 3.0)	0 ( 0.0)	1 ( 1.6)	2 ( 3.0)
3.50- 3.99	3 ( 4.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.6)	1 ( 1.5)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.5)
4.50- 4.99	1 ( 1.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.5)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	69.	68.	69.	69.	67.	67.	67.	68.	66.	67.	63.	67.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 5d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 1440 CEDAREGE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

19

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	1 ( 1.6)	1 ( 1.7)	0 ( 0.0)
3.00- 3.49	3 ( 4.8)	4 ( 6.7)	0 ( 0.0)
3.50- 3.99	4 ( 6.3)	4 ( 6.7)	0 ( 0.0)
4.00- 4.49	3 ( 4.8)	3 ( 5.0)	0 ( 0.0)
4.50- 4.99	14 ( 22.2)	5 ( 8.3)	0 ( 0.0)
5.00- 5.49	10 ( 15.9)	7 ( 11.7)	0 ( 0.0)
5.50- 5.99	8 ( 12.7)	6 ( 10.0)	0 ( 0.0)
6.00- 6.49	7 ( 11.1)	9 ( 15.0)	0 ( 0.0)
6.50- 6.99	4 ( 6.3)	4 ( 6.7)	0 ( 0.0)
7.00- 7.49	2 ( 3.2)	4 ( 6.7)	0 ( 0.0)

Table 5d. (continued)

STATION 1440 CEDAREGE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATFR YEAR
7.50- 7.99	0 ( 0.0)	3 ( 5.0)	3 ( 5.3)
8.00- 8.49	3 ( 4.8)	2 ( 3.3)	3 ( 5.3)
8.50- 8.99	1 ( 1.6)	4 ( 6.7)	4 ( 7.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	4 ( 7.0)
9.50- 9.99	3 ( 4.8)	1 ( 1.7)	4 ( 7.0)
10.00-10.49	0 ( 0.0)	1 ( 1.7)	6 ( 10.5)
10.50-10.99	0 ( 0.0)	1 ( 1.7)	5 ( 8.8)
11.00-11.49	0 ( 0.0)	1 ( 1.7)	1 ( 1.8)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	3 ( 5.3)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	5 ( 8.8)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	5 ( 8.8)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	3 ( 5.3)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

29

Table 5d. (continued)

STATION 1440 CEDAREGE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	3 ( 5.3)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.00-16.49	0 ( 0.0)	0 ( 0.0)	2 ( 3.5)
16.50-16.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)
63 17.00-17.49	0 ( 0.0)	0 ( 0.0)	2 ( 3.5)
17.50-17.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.00-18.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.50-18.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.00-19.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.50-19.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.8)
TOTALS	63.0	60.0	57.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 5e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

1440 CEDAREUGE

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.13	.14	.08	.27	0.00	0.00	.11	.23	.12	0.00	.13	.14	7.30
.10	.20	.22	.18	.37	.12	.05	.22	.34	.20	0.00	.20	.22	8.08
.20	.32	.36	.34	.52	.30	.16	.36	.52	.36	.37	.32	.34	9.10
.30	.43	.47	.49	.66	.46	.27	.49	.68	.53	.60	.41	.46	9.89
.40	.56	.60	.63	.80	.63	.40	.61	.85	.71	.82	.51	.58	10.60
.50	.69	.72	.80	.94	.82	.55	.75	1.03	.92	1.04	.62	.70	11.30
.60	.84	.87	.99	1.11	1.03	.73	.90	1.23	1.16	1.29	.73	.84	12.02
.70	1.03	1.05	1.22	1.30	1.30	.96	1.08	1.48	1.46	1.59	.87	1.01	12.83
.80	1.28	1.28	1.52	1.55	1.66	1.27	1.32	1.80	1.88	1.98	1.06	1.23	13.82
.90	1.68	1.65	2.03	1.94	2.26	1.81	1.70	2.32	2.57	2.61	1.35	1.59	15.28
.95	2.07	2.01	2.51	2.32	2.84	2.33	2.06	2.81	3.25	3.21	1.63	1.94	16.56
ALPHA	1.77	2.12	1.70	2.73	1.51	1.13	2.18	2.14	1.34	2.03	2.33	2.13	16.55
BETA	.48	.41	.59	.39	.74	.73	.41	.57	.90	.69	.31	.39	.70
Q	0.00	.01	.03	0.00	.06	.06	.03	0.00	0.00	.12	.01	.01	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 5a. Mean monthly precipitation for period of record.

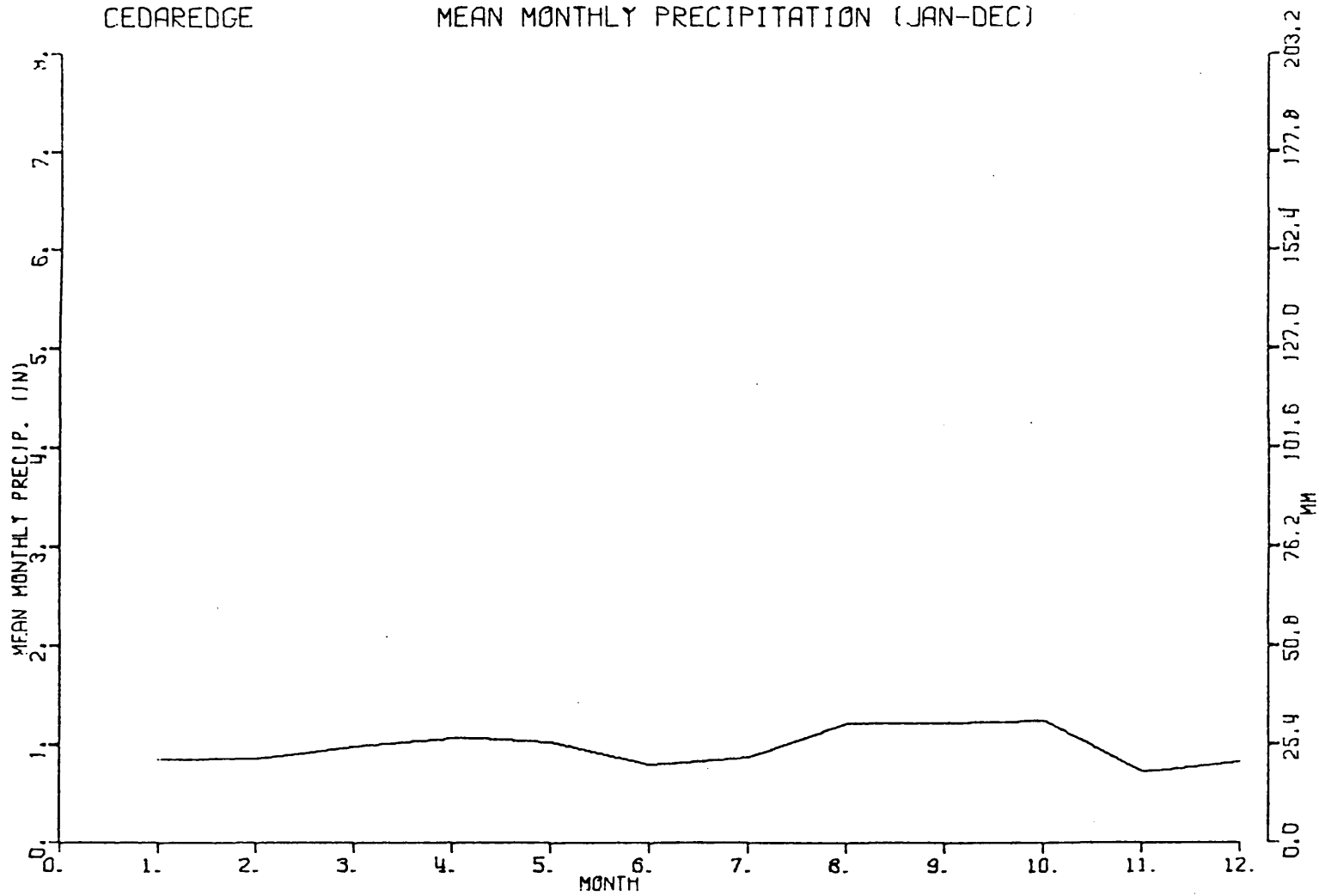


Figure 5b. Water year and 5 year moving mean precipitation.

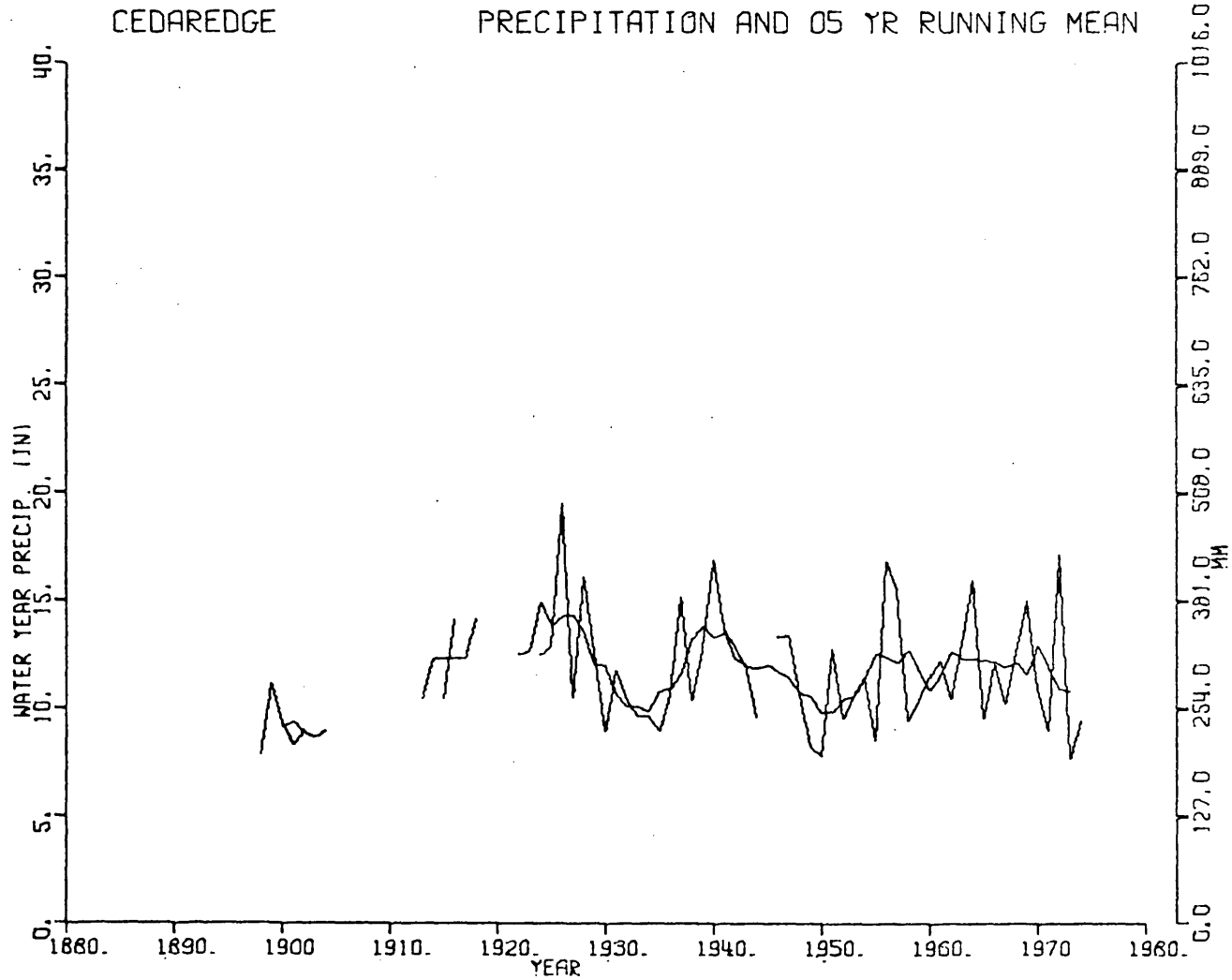




Figure 5c. Water year and 15 year moving mean precipitation.

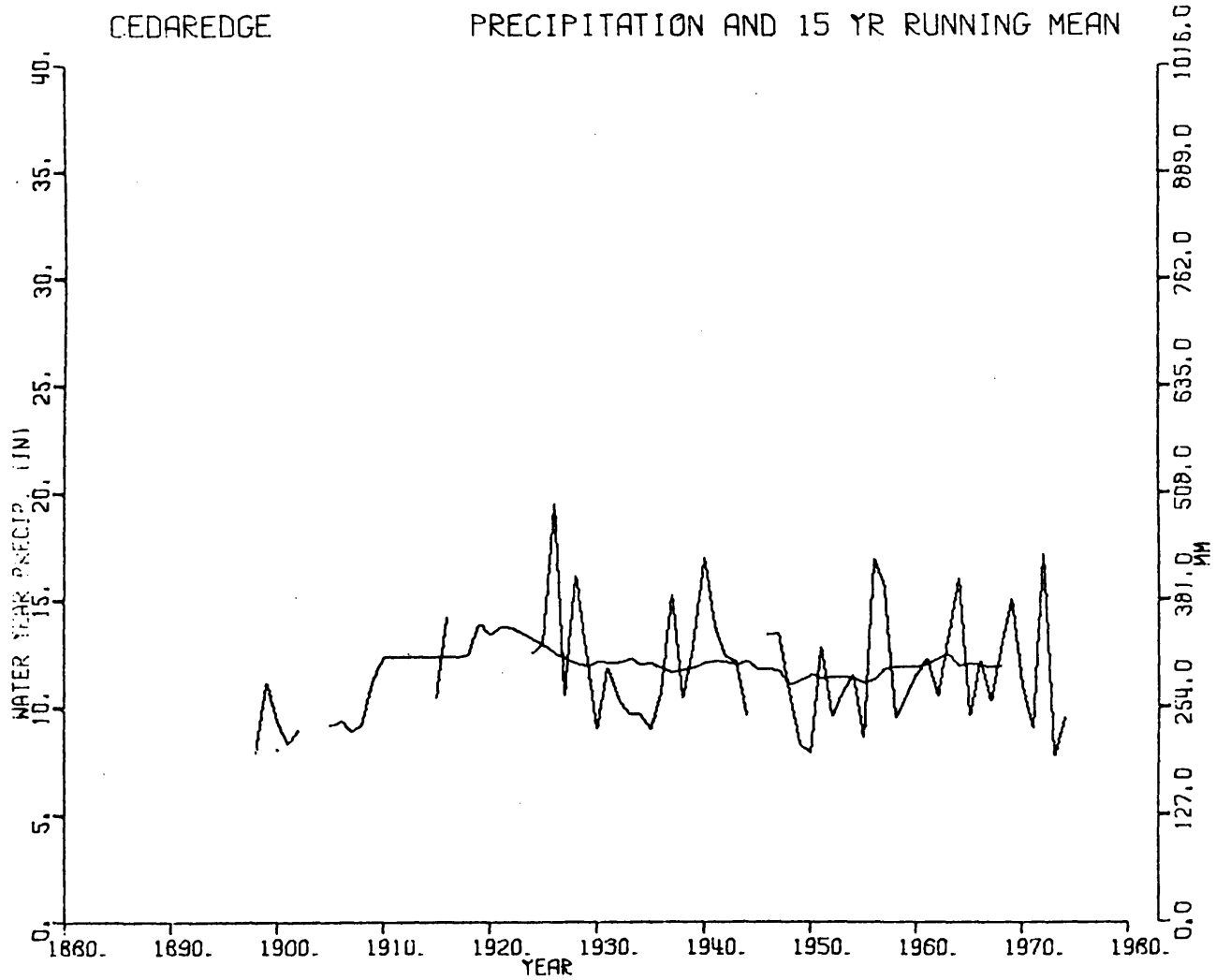


Table 6a. Time series and statistical summary of monthly and water year precipitation.

STATION 1609 CIMARRON

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1951	.91	1.18	3.87	2.31	2.70	3.42	.80	.90	5.25	1.30	7.69	4.70	35.03
1952	0.00	.34	.66	1.19	.29	1.96	1.77	3.05	.75	3.21	.55	1.40	15.17
1953	.10	.50	1.30	900.46	900.66	.60	.30	1.03	.20	1.47	.30	2.85	909.77
1954	.83	1.65	.46	900.60	1.65	901.04	901.11	1.43	.37	.16	1.50	0.00	910.80
1955	0.00	901.38	900.56	2.10	1.15	0.00	.50	.44	.60	.47	1.34	0.00	908.54
1956	.85	.45	901.13	2.71	1.00	.87	.87	3.35	.95	2.14	2.69	.75	917.26
1957	1.85	.60	1.50	1.75	1.86	.34	.35	0.00	0.00	0.00	.20	.60	9.05
1958	.50	.20	900.68	1.10	.98	.60	1.47	.26	1.41	.54	2.32	1.79	911.85
1959	1.80	.16	.75	.92	2.41	2.67	.25	.70	.15	.36	.53	.62	11.32
1960	.73	.40	.90	.03	.98	.85	901.24	.15	0.00	.17	1.89	2.32	403.66
1961	1.26	.34	1.15	10.00	.80	900.60	0.00	.50	.50	.60	.75	1.00	917.50
1962	.90	900.93	.25	.20	.35	1.75	0.00	.25	0.00	.83	2.25	900.73	908.44
1963	.70	.20	900.81	901.18	.60	1.72	.88	.29	999.90	999.90	999.90	999.90	999.90
1964	999.90	.35	.91	1.98	.68	1.70	1.19	2.04	1.02	3.14	1.81	2.87	999.90
1965	1.25	2.02	.37	.54	.97	.20	1.07	1.01	.71	.95	.61	.59	10.29
1966	1.87	.95	2.60	1.21	.55	.48	.47	1.67	1.70	1.43	1.40	1.99	16.32
1967	.10	1.35	.94	.93	1.53	.03	1.57	1.40	.15	999.90	999.90	.05	999.90
1968	1.05	.80	1.00	902.00	1.55	1.29	1.02	.17	2.56	2.29	.32	.17	914.22
1969	4.24	.66	.78	.12	.13	2.42	1.72	.20	.95	1.78	2.82	2.96	17.78
1970	2.18	1.18	.16	.10	.26	.36	.55	.85	0.00	.56	2.21	1.05	9.46
1971	2.00	.87	1.13	.80	.10	.10	1.05	.25	2.67	.78	.74	2.65	13.14
1972	2.19	1.62	.54	900.51	.01	.21	1.58	1.20	1.53	.59	.90	.15	911.03
1973	900.48	.96	1.43	2.90	1.30	.63	1.58	0.00	.15	.74	.82	1.27	912.26
1974	1.85	1.03	.34	.68	.20	1.30	.80	.59	.58	.92	.23	0.00	8.52
1975	1.10	1.55	.35	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	24	25	25	24	24	24	24	24	23	22	22	23	21
MEAN	1.20	.87	.98	1.51	.95	1.05	.88	.92	.97	1.11	1.54	1.30	13.21
STD DEV	.95	.52	.79	1.99	.72	.91	.51	.89	1.21	.91	1.61	1.26	5.89
CV	.79	.60	.80	1.31	.76	.87	.58	.96	1.25	.82	1.04	.97	4.5
STD ERR	.19	.10	.16	.41	.15	.19	.10	.18	.25	.19	.34	.26	1.29
MAX	4.24	2.02	3.87	10.00	2.70	2.42	1.77	3.35	5.25	3.21	7.69	4.70	35.03
MIN	0.00	.16	.16	.03	.01	0.00	0.00	0.00	0.00	0.00	.20	0.00	8.44
RANGE	4.24	1.86	3.71	9.97	2.69	2.42	1.77	3.35	5.25	3.21	7.49	4.70	26.59

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 6b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 1609 CIMARRON

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1951	14.39	20.64
1952	4.44	10.73
1953	3.62	6.15
1954	6.23	4.57
1955	5.19	3.35
1956	7.01	10.25
1957	7.90	1.15
1958	4.06	7.79
1959	8.71	2.61
1960	3.89	5.77
1961	14.15	3.35
1962	4.38	4.05
1963	5.21	999.90
1964	999.90	12.07
1965	5.35	4.94
1966	7.66	8.66
1967	4.88	999.90
1968	7.69	6.53
1969	8.35	9.43
1970	4.24	5.22
1971	5.00	8.14
1972	5.08	5.95
1973	7.70	4.56
1974	5.40	3.12
1975	999.90	999.90
N	23	22
MEAN	6.54	6.77
STD DEV	2.89	4.21
CV	.44	.62
STD ERR	.60	.90
MAX	14.39	20.64
MIN	3.62	1.15
RANGE	10.77	19.49

Table 6c. Absolute and percent relative frequencies of monthly precipitation.

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	5 ( 20.8)	8 ( 32.0)	6 ( 24.0)	5 ( 20.8)	7 ( 29.2)	8 ( 31.3)	6 ( 25.0)	9 ( 37.5)	9 ( 39.1)	5 ( 22.7)	4 ( 18.2)	7 ( 30.4)
.50- .99	7 ( 29.2)	8 ( 32.0)	10 ( 40.0)	7 ( 29.2)	8 ( 33.3)	6 ( 25.0)	7 ( 29.2)	6 ( 25.0)	7 ( 30.4)	9 ( 40.9)	7 ( 31.8)	4 ( 17.4)
1.00- 1.49	4 ( 16.7)	5 ( 20.0)	6 ( 24.0)	4 ( 16.7)	3 ( 12.5)	3 ( 12.5)	7 ( 29.2)	5 ( 20.8)	2 ( 8.7)	3 ( 13.6)	2 ( 9.1)	4 ( 17.4)
1.50- 1.99	4 ( 16.7)	3 ( 12.0)	1 ( 4.0)	2 ( 8.3)	4 ( 16.7)	4 ( 16.7)	4 ( 16.7)	1 ( 4.2)	2 ( 8.7)	1 ( 4.5)	3 ( 13.6)	2 ( 8.7)
2.00- 2.49	3 ( 12.5)	1 ( 4.0)	0 ( 0.0)	3 ( 12.5)	1 ( 4.2)	1 ( 4.2)	0 ( 0.0)	1 ( 4.2)	0 ( 0.0)	2 ( 9.1)	3 ( 13.6)	1 ( 4.3)
2.50- 2.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	2 ( 8.3)	1 ( 4.2)	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)	2 ( 8.7)	0 ( 0.0)	2 ( 9.1)	4 ( 17.4)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.2)	0 ( 0.0)	2 ( 8.3)	0 ( 0.0)	2 ( 9.1)	0 ( 0.0)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.50- 6.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 6c. (continued)

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
7.50- 7.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.5)	0 ( 0.0)
8.00- 8.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.50- 8.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	24.	25.	25.	24.	24.	24.	24.	24.	23.	22.	22.	23.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

71

Table 6d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	1 ( 4.5)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	0 ( 0.0)	1 ( 4.5)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	3 ( 13.6)	0 ( 0.0)
3.50- 3.99	2 ( 8.7)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	4 ( 17.4)	1 ( 4.5)	0 ( 0.0)
4.50- 4.99	2 ( 8.7)	3 ( 13.6)	0 ( 0.0)
5.00- 5.49	5 ( 21.7)	1 ( 4.5)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	2 ( 9.1)	0 ( 0.0)
6.00- 6.49	1 ( 4.3)	1 ( 4.5)	0 ( 0.0)
6.50- 6.99	0 ( 0.0)	1 ( 4.5)	0 ( 0.0)
7.00- 7.49	1 ( 4.3)	0 ( 0.0)	0 ( 0.0)

Table 6d. (continued)

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	4 ( 17.4)	1 ( 4.5)	0 ( 0.0)
8.00- 8.49	1 ( 4.3)	1 ( 4.5)	1 ( 4.8)
8.50- 8.99	1 ( 4.3)	1 ( 4.5)	2 ( 9.5)
9.00- 9.49	0 ( 0.0)	1 ( 4.5)	2 ( 9.5)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	2 ( 9.5)
10.00-10.49	0 ( 0.0)	1 ( 4.5)	1 ( 4.8)
10.50-10.99	0 ( 0.0)	1 ( 4.5)	1 ( 4.8)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	2 ( 9.5)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.8)
12.00-12.49	0 ( 0.0)	1 ( 4.5)	1 ( 4.8)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.8)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
14.00-14.49	2 ( 8.7)	0 ( 0.0)	1 ( 4.8)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

73

Table 6d. (continued)

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.8)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.00-16.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.8)
16.50-16.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
17.00-17.49	0 ( 0.0)	0 ( 0.0)	2 ( 9.5)
17.50-17.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.8)
18.00-18.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.50-18.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.00-19.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.50-19.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
20.00-20.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
20.50-20.99	0 ( 0.0)	1 ( 4.5)	0 ( 0.0)
21.00-21.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
21.50-21.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
22.00-22.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)



Table 6d. (continued)

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
22.50-22.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
23.00-23.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
23.50-23.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
24.00-24.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
24.50-24.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
25.00-25.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
25.50-25.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
26.00-26.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
26.50-26.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
27.00-27.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
27.50-27.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
28.00-28.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
28.50-28.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
29.00-29.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
29.50-29.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 6d. (continued)

STATION 1609 CIMARRON

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
30.00-30.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
30.50-30.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
31.00-31.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
31.50-31.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
32.00-32.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
32.50-32.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
33.00-33.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
33.50-33.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
34.00-34.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
34.50-34.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
35.00-35.49	( 0 0.0)	( 0 0.0)	( 1 4.8)
TOTALS	23.0	22.0	21.0

76

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 6e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

1609 CIMMARON

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.07	.08	.02	0.00	0.00	0.00	.05	.16	0.00	0.00	.19	.20	6.49
.10	.15	.14	.11	.23	.06	0.00	.20	.27	0.00	.12	.27	.29	7.62
.20	.33	.27	.20	.46	.24	.06	.39	.49	.17	.38	.40	.43	9.15
.30	.53	.40	.42	.59	.39	.25	.56	.70	.40	.58	.52	.57	10.38
.40	.76	.54	.59	.71	.54	.44	.73	.93	.63	.78	.63	.70	11.51
.50	1.04	.71	.78	.83	.72	.65	.92	1.19	.90	.99	.75	.84	12.65
.60	1.38	.91	1.01	.96	.91	.90	1.13	1.50	1.23	1.23	.89	1.00	13.86
.70	1.82	1.15	1.29	1.10	1.16	1.22	1.38	1.88	1.63	1.51	1.05	1.20	15.23
.80	2.44	1.49	1.68	1.29	1.49	1.65	1.72	2.40	2.19	1.89	1.27	1.45	16.95
.90	3.51	2.06	2.33	1.58	2.03	2.37	2.27	3.26	3.13	2.51	1.61	1.86	19.53
.95	4.58	2.62	2.98	1.84	2.55	3.08	2.80	4.11	4.05	3.09	1.93	2.25	21.85
ALPHA	.97	1.25	1.27	3.95	1.50	1.21	1.85	1.40	1.19	1.87	2.45	2.25	7.77
BETA	1.56	.76	.86	.24	.67	.96	.63	1.10	1.27	.70	.35	.44	1.70
Q	0.00	0.00	.04	.08	.08	.17	.05	0.00	.13	.08	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA = SHAPE PARAMETER      BETA = SCALE PARAMETER

Q = NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 6a. Mean monthly precipitation for period of record.

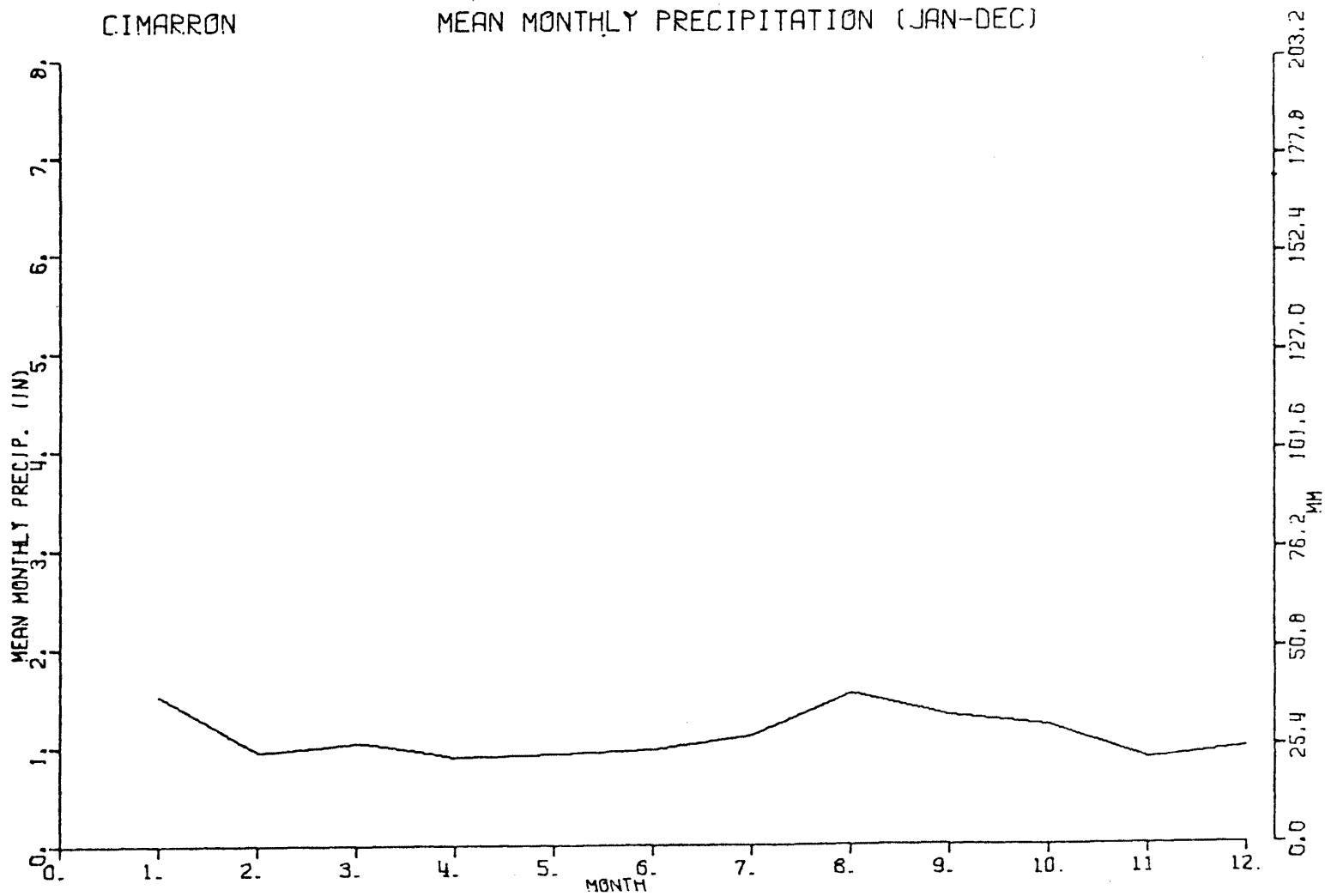


Figure 6b. Water year and 5 year moving mean precipitation.

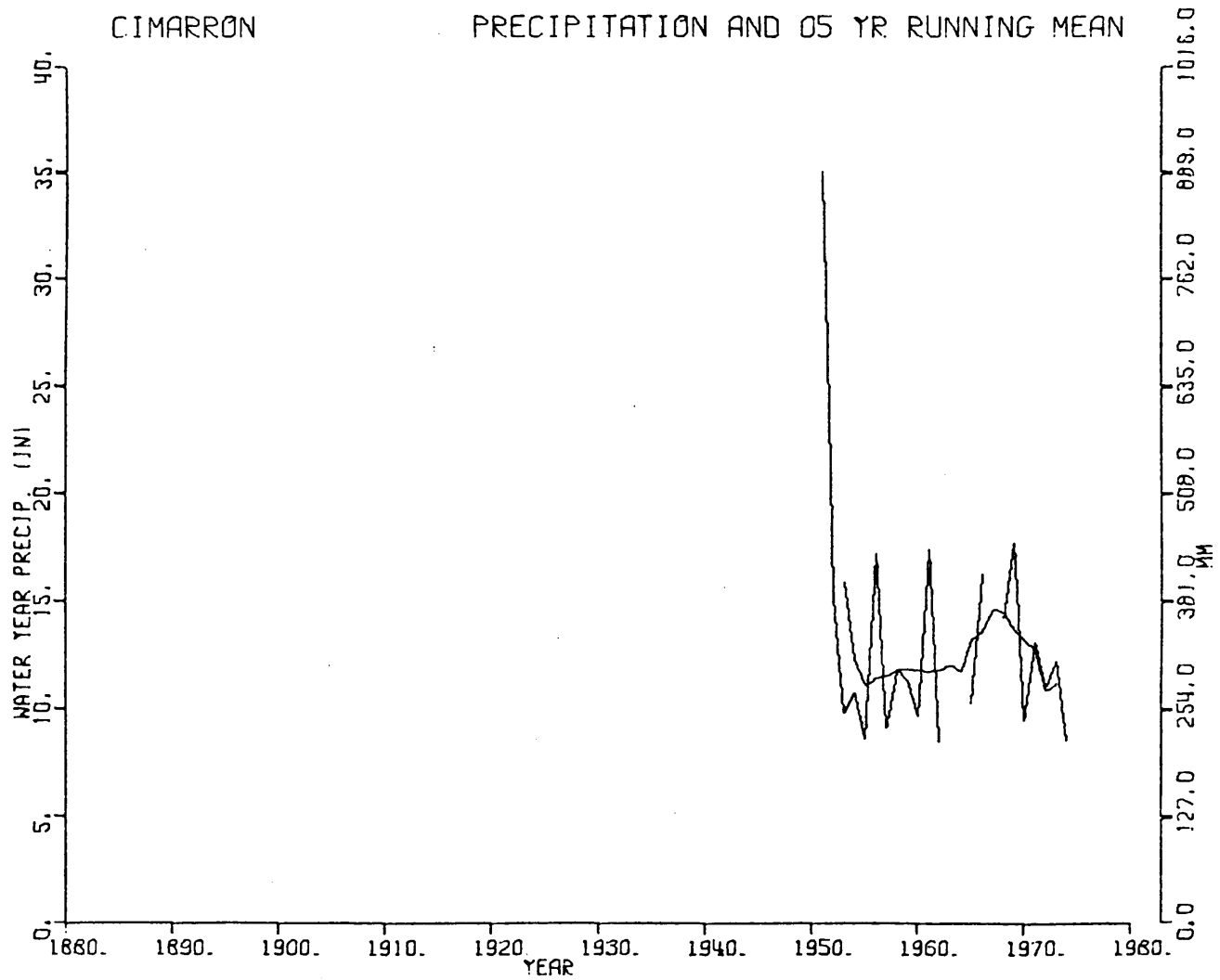


Figure 6c. Water year and 15 year moving mean precipitation.

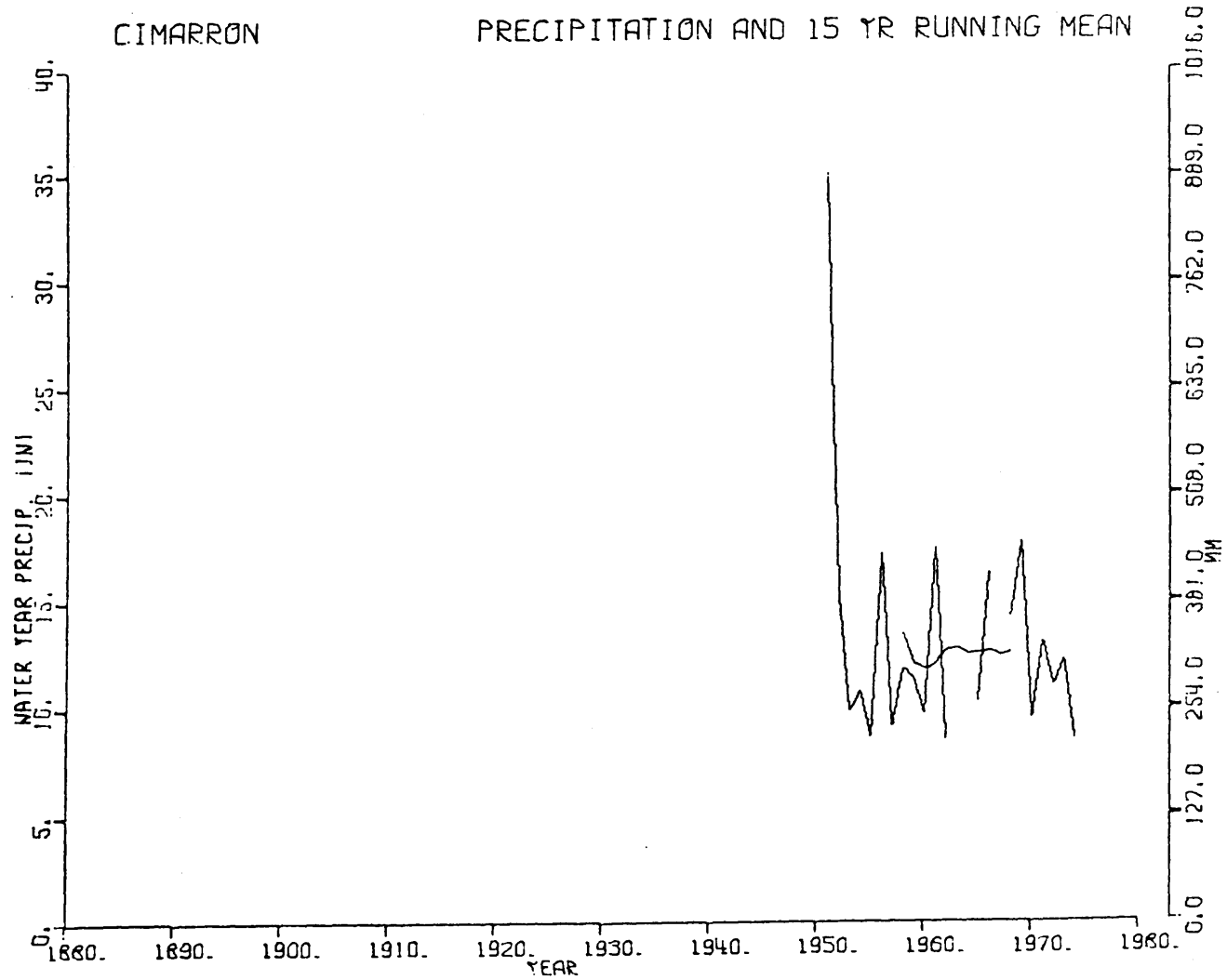


Table 7a. Time series and statistical summary of monthly and water year precipitation.

STATION 2192 DELTA 3 NW

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1931	1.42	1.18	.32	.53	.38	.33	1.17	.20	.12	1.11	.82	.29	7.87
1932	1.05	.03	.43	.33	.33	.46	1.46	.42	.13	1.55	1.31	1.56	7.86
1933	.82	.47	.03	.62	1.16	0.00	.44	1.04	.41	.66	.41	1.53	7.59
1934	0.00	.61	.39	.56	.35	.11	.69	.53	0.00	.50	.77	1.27	5.78
1935	.45	.05	.45	.39	.77	.20	.17	.19	.28	.67	1.32	.92	5.86
1936	1.25	.10	.71	.57	.40	.71	.28	.40	.28	1.00	1.03	.93	7.66
1937	.73	.17	1.42	.75	.71	1.47	.82	1.28	.56	.06	.84	1.16	9.97
1938	.60	.16	.88	.60	.23	.58	.74	.02	.18	.42	.89	1.25	5.45
1939	.26	.33	.11	1.05	.84	.10	.10	.38	.24	.30	.87	2.38	7.56
1940	1.19	.64	.80	.88	.40	.85	1.18	1.57	.56	.26	1.12	2.05	11.50
1941	3.06	.22	.64	.44	1.24	.85	1.08	.15	.02	.61	.51	.79	9.61
1942	.68	.09	.49	.28	.35	.90	1.10	1.56	1.19	.24	.33	.12	10.83
1943	.90	.31	.37	.43	.42	.79	2.60	1.20	1.43	1.30	.19	.06	9.00
1944	.24	1.02	.40	.78	.46	.09	.81	1.09	1.10	1.16	.82	.43	7.40
1945	1.08	.13	.79	.28	.02	.55	1.62	1.89	1.18	.69	.69	.95	10.87
1946	.86	.52	.24	.33	.24	.45	.57	.44	1.88	.65	2.30	.62	9.10
1947	1.79	.03	.80	.75	1.46	.77	.90	.31	1.59	.54	2.19	.30	11.43
1948	.53	.58	.56	1.07	.07	.91	.52	.75	1.32	.64	.73	.55	8.23
1949	.69	.17	.07	.68	.58	.31	.12	.10	0.00	1.14	.15	1.17	5.18
1950	0.00	.24	.39	.55	.38	.04	.36	.45	.06	.40	.66	.19	3.72
1951	.76	.24	.40	.63	.21	.56	.88	.50	.14	.76	2.06	.83	7.47
1952	0.00	.46	.16	.20	.09	.59	1.04	.44	.44	1.22	.87	0.00	5.51
1953	1.73	.62	.21	.08	.02	.34	.33	.12	.26	.47	.38	1.36	5.42
1954	1.25	1.31	.25	.18	.69	.01	.42	1.30	.34	.53	.56	.21	7.05
1955	.12	.31	.31	.47	.19	.26	.29	1.05	.30	.41	.41	.03	3.15
1956	.61	.47	.36	1.04	.28	.27	1.64	2.01	.60	1.26	3.02	.01	11.57
1957	2.86	.79	.28	.50	.66	.08	.12	.29	1.00	.27	.58	.75	4.18
1958	.71	.43	.03	.13	.65	.33	.44	.29	.39	.29	1.42	.87	5.98
1959	1.76	.14	.61	.58	.72	.69	1.06	.38	.30	.10	1.04	.17	7.55
1960	.84	.32	.47	.02	.33	.83	.43	.36	.03	.12	.72	2.90	7.37
1961	1.40	.59	.45	.20	.61	.19	.96	.23	.31	.28	.34	1.49	7.05
1962	1.10	.66	.72	.34	.28	.60	.05	.36	.18	.39	1.01	.50	6.19
1963	1.11	.35	.19	.15	0.00	.34	.71	.75	.19	.59	3.11	.72	8.21
1964	0.00	1.02	.39	.54	.27	.60	.64	.87	1.02	.93	.92	2.47	9.67
1965	.60	.80	.69	.09	.19	.05	.41	.84	.33	.23	.46	.59	5.28
1966	.19	.63	.64	.20	.31	.04	.02	.81	.93	1.69	1.90	.81	8.17
1967	0.00	.27	.74	.11	1.07	.32	.52	.82	.07	1.24	.97	.16	6.29
1968	.34	.61	.30	.92	.81	.31	.20	.40	2.29	.51	.70	1.46	8.45
1969	2.23	.32	.55	.04	0.00	1.03	.77	.01	1.33	.72	1.02	2.44	10.46
1970	1.04	.38	.40	.26	.21	.03	.52	.71	0.00	.86	.53	.74	5.68

Table 7a. (continued)

STATION 2192 DELTA 3 NW

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1971	2.08	1.05	999.90	0.00	0.00	0.00	999.25	999.30	999.60	999.10	999.16	1.24	999.
1972	999.90	.59	.60	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.
N	41	42	41	41	41	41	41	41	41	41	41	41	40
MEAN	.93	.46	.46	.45	.45	.46	.64	.61	.55	.63	1.10	.93	7.
STD DEV	.74	.32	.27	.30	.35	.35	.51	.51	.57	.39	.87	.74	2.
CV	.79	.70	.58	.66	.79	.77	.79	.84	1.03	.62	.79	.79	.
STD ERR	.12	.05	.04	.05	.06	.06	.08	.08	.09	.06	.14	.12	.
MAX	3.06	1.31	1.42	1.07	1.46	1.47	2.60	2.01	2.29	1.69	4.33	2.90	11.
MIN	0.00	.03	.03	0.00	0.00	0.00	.02	.01	0.00	.06	.15	0.00	3.
RANGE	3.06	1.28	1.39	1.07	1.46	1.47	2.58	2.00	2.29	1.63	4.18	2.90	8.

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA



Table 7b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 2192 DELTA 3 NW

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1931	4.16	3.71
1932	2.63	4.43
1933	3.10	4.49
1934	2.02	3.76
1935	2.31	3.55
1936	3.74	3.92
1937	5.25	4.72
1938	3.05	2.90
1939	2.69	4.87
1940	4.76	6.74
1941	6.45	3.16
1942	2.79	7.54
1943	3.22	5.78
1944	2.99	4.41
1945	2.85	8.02
1946	2.64	6.46
1947	5.60	5.83
1948	3.77	4.51
1949	2.50	2.68
1950	1.60	2.12
1951	2.80	5.17
1952	1.50	4.01
1953	3.00	2.92
1954	3.69	3.36
1955	1.66	1.49
1956	3.03	8.54
1957	6.17	3.01
1958	2.78	3.70
1959	4.50	3.05
1960	2.81	4.56
1961	3.44	3.61
1962	3.70	2.49
1963	2.14	6.07
1964	2.82	6.85
1965	2.42	6.86
1966	2.01	6.16
1967	2.51	3.78
1968	3.29	5.56
1969	4.17	6.29
1970	2.32	3.36

Table 7b. (continued)

STATION 2192 DELTA 3 NW		
YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1971	999.90	2.65
1972	999.90	999.90
N	40	41
MEAN	3.21	4.47
STD DEV	1.18	1.68
CV	.37	.38
STD ERR	.19	.26
MAX	6.45	8.54
MIN	1.50	1.49
RANGE	4.95	7.05

Table 7c. Absolute and percent relative frequencies of monthly precipitation.

STATION 2192 DELTA 3 NW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	11 ( 26.8)	25 ( 59.5)	26 ( 63.4)	22 ( 53.7)	27 ( 65.9)	27 ( 66.1)	19 ( 46.3)	24 ( 58.5)	26 ( 63.4)	16 ( 39.0)	8 ( 19.5)	12 ( 29.3)
.50- .99	13 ( 31.7)	12 ( 28.6)	14 ( 34.1)	16 ( 39.0)	10 ( 24.4)	15 ( 36.6)	14 ( 34.1)	9 ( 22.0)	5 ( 12.2)	16 ( 39.0)	17 ( 41.5)	14 ( 34.1)
1.00- 1.49	10 ( 24.4)	5 ( 11.9)	1 ( 2.4)	3 ( 7.3)	4 ( 9.8)	7 ( 17.3)	5 ( 12.2)	4 ( 9.8)	7 ( 17.1)	8 ( 19.5)	8 ( 19.5)	8 ( 19.5)
1.50- 1.99	3 ( 7.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 4.9)	3 ( 7.3)	2 ( 4.9)	1 ( 2.4)	2 ( 4.9)	2 ( 4.9)
2.00- 2.49	2 ( 4.9)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.4)	1 ( 2.4)	0 ( 0.0)	3 ( 7.3)	4 ( 9.8)
2.50- 2.99	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.4)
3.00- 3.49	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 4.9)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.4)	0 ( 0.0)
TOTALS	41.	42.	41.	41.	41.	41.	41.	41.	41.	41.	41.	41.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

85

Table 7d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 2192 DELTA 3 NW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	1 ( 2.4)	0 ( 0.0)
1.50- 1.99	3 ( 7.5)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	8 ( 20.0)	2 ( 4.9)	0 ( 0.0)
2.50- 2.99	11 ( 27.5)	5 ( 12.2)	0 ( 0.0)
3.00- 3.49	6 ( 15.0)	5 ( 12.2)	1 ( 2.5)
3.50- 3.99	4 ( 10.0)	7 ( 17.1)	1 ( 2.5)
4.00- 4.49	3 ( 7.5)	4 ( 9.8)	0 ( 0.0)
4.50- 4.99	1 ( 2.5)	4 ( 9.8)	0 ( 0.0)
5.00- 5.49	1 ( 2.5)	1 ( 2.4)	2 ( 5.0)
5.50- 5.99	1 ( 2.5)	3 ( 7.3)	7 ( 17.5)
6.00- 6.49	2 ( 5.0)	4 ( 9.8)	2 ( 5.0)
6.50- 6.99	0 ( 0.0)	2 ( 4.9)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	0 ( 0.0)	5 ( 12.5)

Table 7d. (continued)

STATION 2192 DELTA 3 NW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	1 ( 2.4)	6 ( 15.0)
8.00- 8.49	0 ( 0.0)	1 ( 2.4)	3 ( 7.5)
8.50- 8.99	0 ( 0.0)	1 ( 2.4)	2 ( 5.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.0)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	3 ( 7.5)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.0)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.5)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.0)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.5)
TOTALS	40.0	41.0	40.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 7e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

2192 DELTA 3 NW

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.05	0.00	.00	.08	.06	0.00	.13	.20	.05	0.00	.07	.10	4.57
.10	.10	.05	.05	.14	.10	.03	.19	.30	.12	0.00	.11	.14	5.14
.20	.17	.14	.12	.23	.18	.10	.28	.46	.25	.31	.17	.21	5.89
.30	.24	.21	.19	.32	.26	.19	.37	.61	.39	.49	.24	.27	6.47
.40	.30	.29	.27	.41	.35	.28	.45	.76	.54	.65	.30	.33	7.00
.50	.37	.37	.35	.52	.46	.38	.54	.92	.72	.81	.38	.40	7.52
.60	.45	.45	.45	.64	.58	.51	.64	1.11	.92	.99	.46	.47	8.07
.70	.55	.56	.57	.79	.73	.67	.76	1.33	1.18	1.20	.56	.56	8.68
.80	.68	.71	.73	.99	.94	.89	.92	1.63	1.54	1.48	.70	.68	9.44
.90	.90	.95	1.01	1.33	1.29	1.27	1.18	2.10	2.14	1.91	.93	.87	10.55
.95	1.10	1.17	1.28	1.65	1.63	1.64	1.42	2.56	2.73	2.32	1.15	1.05	11.54
ALPHA	1.91	1.75	1.36	1.60	1.32	1.13	2.33	2.08	1.24	2.38	1.74	2.32	13.04
BETA	.24	.28	.35	.40	.45	.52	.27	.52	.80	.45	.27	.20	.59
Q	.02	.07	.05	0.00	0.00	.07	0.00	0.00	.02	.12	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA = SHAPE PARAMETER      BETA = SCALE PARAMETER

Q = NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 7a. Mean monthly precipitation for period of record.

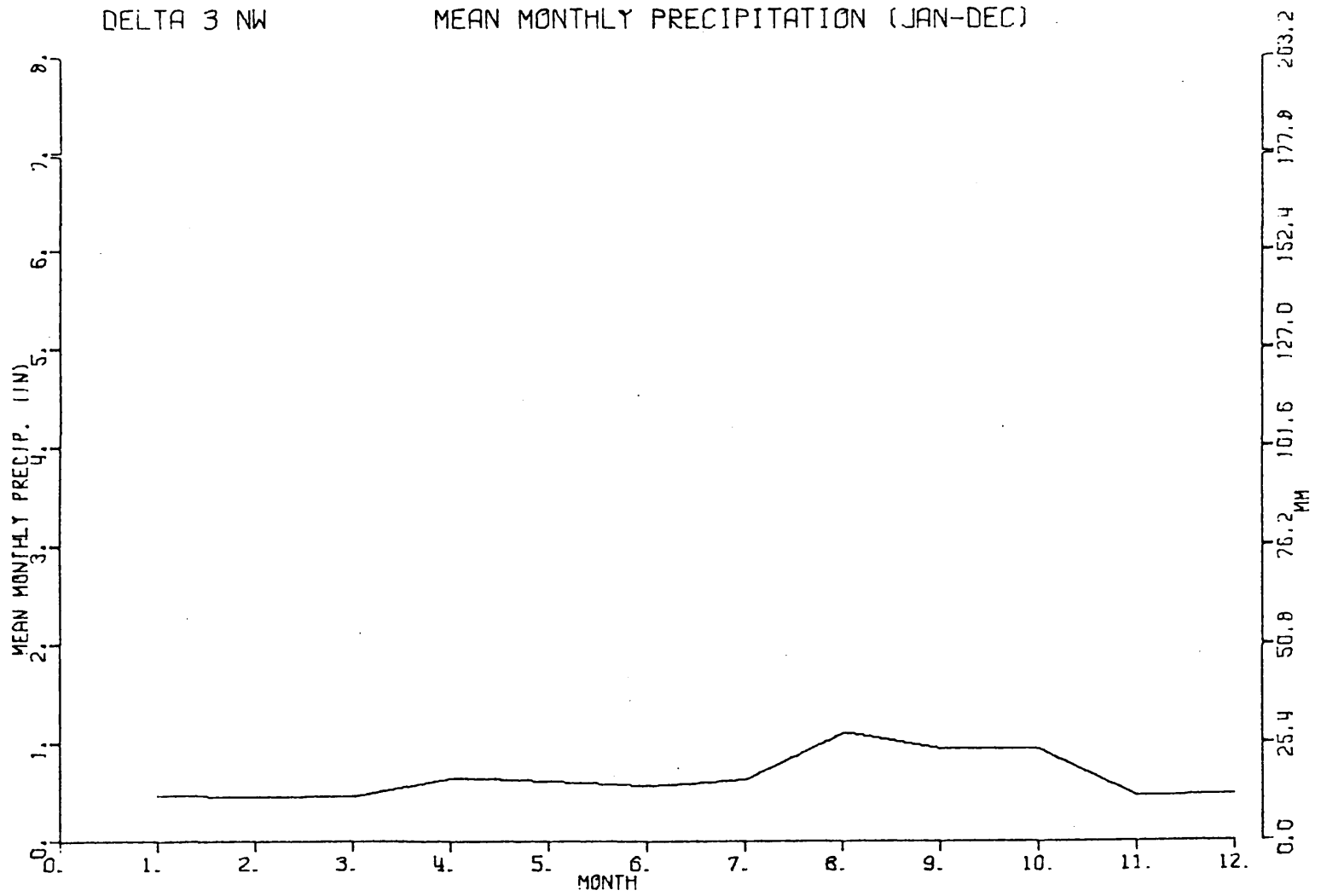


Figure 7b. Water year and 5 year moving mean precipitation.

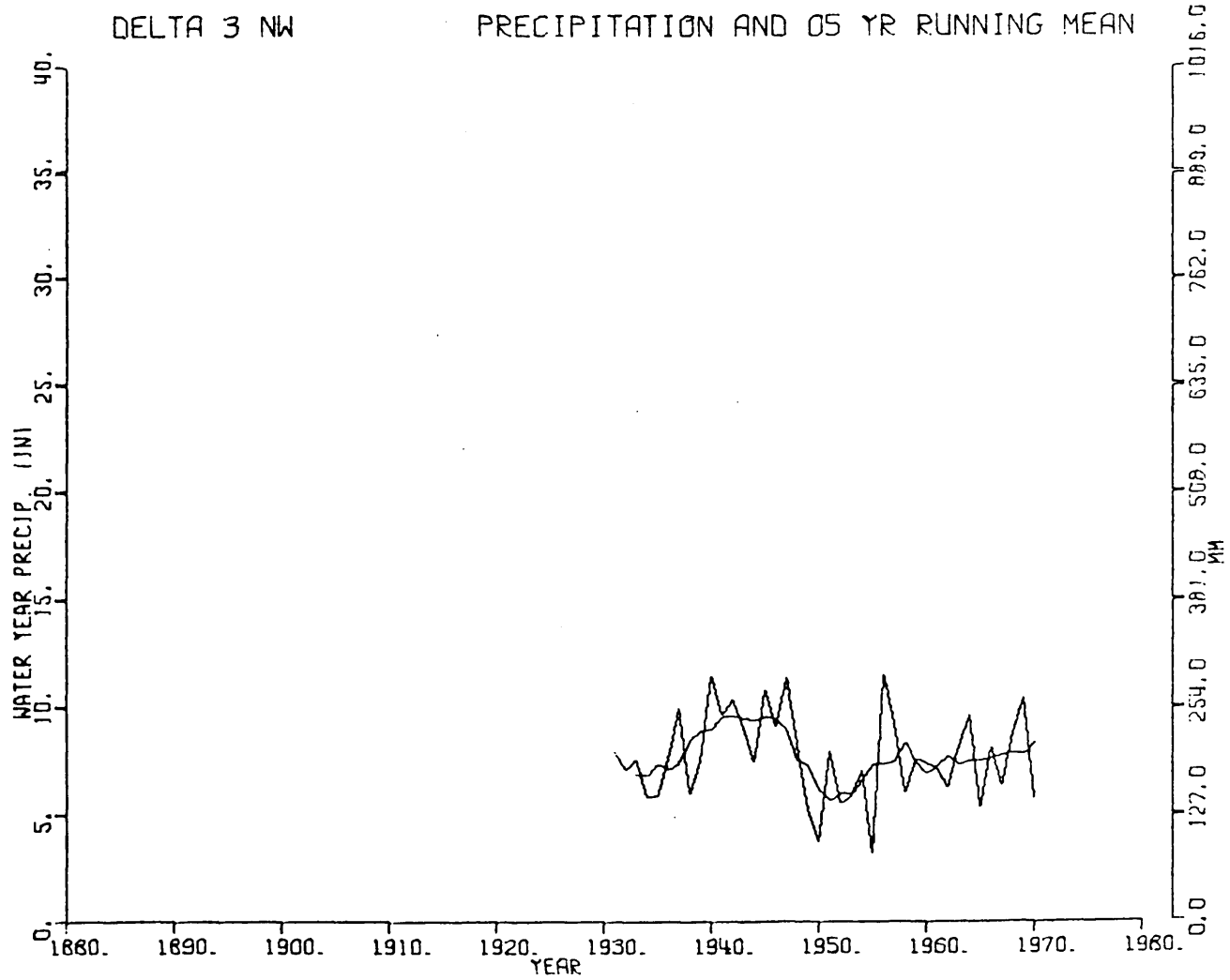




Figure 7c. Water year and 15 year moving mean precipitation.

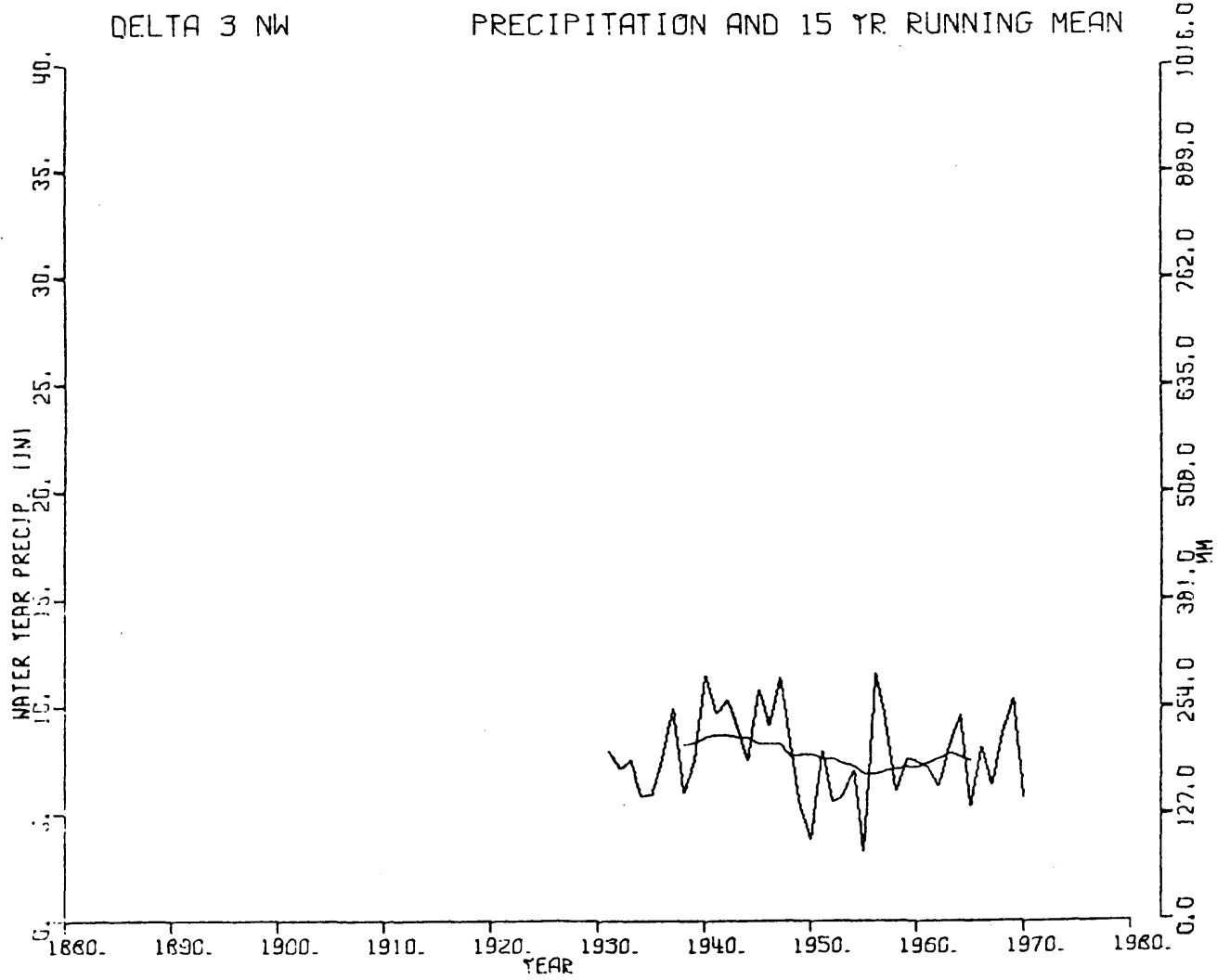


Table 8a. Time series and statistical summary of monthly and water year precipitation.

STATION 5717 MONTROSE NO. 1

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1939	.19	.46	.44	999.90	.62	.99	.51	.61	.09	.21	.92	2.22	999.90
1940	1.21	.71	1.35	1.72	.52	1.42	1.54	1.49	1.24	.39	1.81	2.32	15.72
1941	3.00	.28	.67	.63	.72	.86	2.07	.29	1.05	.72	1.48	.56	10.32
1942	.71	.20	999.90	999.90	.63	.51	.05	2.11	1.22	.19	3.34	.11	999.90
1943	.66	.23	.27	.55	.34	1.20	2.87	.75	.97	.81	.63	.07	9.42
1944	.93	.89	.78	.47	.36	.48	2.08	.75	.11	.36	1.34	.25	8.42
1945	1.04	.31	.46	.30	.36	.63	.91	1.48	.11	1.44	1.13	.70	8.82
1946	.95	.96	.23	.06	.49	.43	.97	.61	2.43	1.31	2.01	.61	11.92
1947	2.14	.18	.80	.97	1.69	.96	2.20	.05	1.54	.86	1.80	.38	12.59
1948	.26	.63	.55	2.14	.26	.63	.91	.53	1.17	.31	.83	.56	8.72
1949	1.05	.11	.12	1.55	1.01	.84	.46	.09	.19	.84	.21	1.01	7.72
1950	.13	.43	.12	1.14	.29	.09	.39	.47	.15	.17	.50	.02	4.12
1951	.71	.55	.78	.53	.75	.93	1.49	.83	.23	1.11	1.48	.64	10.92
1952	0.00	.88	.51	.28	.47	.79	1.58	1.30	.67	.73	1.52	.23	8.72
1953	1.43	1.32	.73	.17	.09	.27	.26	1.42	.37	.66	1.31	2.55	9.52
1954	.53	1.11	.38	.44	1.07	.05	.60	1.20	.21	1.19	1.88	.11	8.72
1955	.11	.66	.27	.79	.64	.60	.66	.17	.16	.18	1.48	.07	5.72
1956	.50	.52	1.01	1.70	.20	.56	1.43	1.96	.77	2.27	2.72	.12	13.72
1957	2.05	1.17	.30	.73	.89	.68	.38	.16	.65	0.00	.05	1.10	8.12
1958	.78	.52	.16	.17	.58	.48	.81	.15	.27	.27	1.73	1.60	7.72
1959	1.95	.08	.78	2.01	1.57	1.17	.80	.42	.42	.34	.66	.29	9.42
1960	.70	.22	1.44	.18	.94	1.71	.97	.80	.07	.21	1.26	2.59	11.92
1961	1.32	.39	.75	.05	.55	.15	1.62	.49	.35	.27	1.63	1.39	7.92
1962	.85	.81	1.05	.48	.22	.89	0.00	.12	.19	1.15	1.83	.37	7.92
1963	2.34	.49	.24	.34	.61	.38	1.21	.68	.49	.72	3.16	1.22	11.92
1964	0.00	1.32	.69	1.07	.54	.53	.93	.87	.65	2.25	.94	3.03	12.59
1965	1.53	.71	.49	.12	.23	.02	.91	.56	.38	.49	.73	.48	6.72
1966	1.07	.64	.60	.19	.59	.10	.49	1.23	1.77	.89	1.57	1.32	10.92
1967	.16	.43	1.09	.09	.96	.15	.86	.54	.01	1.47	1.21	.32	7.72
1968	.54	.43	.46	.45	.60	.49	.32	.19	2.12	1.15	.94	.86	8.72
1969	2.54	.40	.74	.22	0.00	1.17	1.14	.14	.58	.51	.60	2.58	10.92
1970	1.70	.52	.78	.44	.40	.09	.48	.91	0.00	.23	.76	7.82	7.82
1971	1.46	1.11	1.29	.17	0.00	.25	.26	.13	.71	.81	.12	1.13	7.82
1972	2.67	1.12	1.16	.51	.05	.43	.55	1.55	1.54	.43	1.45	.31	11.72
1973	.50	.72	.60	1.94	.24	.69	1.14	0.00	.17	.87	.41	.65	7.92
1974	.69	.83	.36	.59	.22	.75	.25	.80	.65	.78	.42	.35	6.52
1975	1.04	1.28	.17	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	37	37	36	34	36	36	36	36	36	36	36	36	34
MEAN	1.07	.64	.63	.68	.53	.62	.95	.69	.60	.74	1.22	.92	9.22
STD DEV	.79	.35	.36	.62	.35	.41	.66	.55	.60	.54	.78	.45	2.32
CV	.74	.56	.57	.90	.67	.65	.69	.79	1.00	.73	.64	.93	2.32
STD ERR	.13	.06	.06	.11	.06	.07	.11	.09	.10	.09	.13	.14	.42
MAX	3.00	1.32	1.44	2.14	1.69	1.71	2.87	2.11	2.43	2.27	3.34	3.03	15.72
MIN	0.00	.09	.12	.05	0.00	.02	0.00	0.00	0.00	0.00	.05	.02	4.12
RANGE	3.00	1.24	1.32	2.09	1.69	1.69	2.87	2.11	2.43	2.27	3.29	3.01	11.62

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 8b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 5717 MONTROSE NO. 1

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1939	999.90	4.56
1940	6.93	8.79
1941	6.16	4.17
1942	999.90	7.02
1943	3.25	6.10
1944	3.91	4.89
1945	3.10	5.77
1946	3.12	7.94
1947	6.76	5.83
1948	4.47	4.31
1949	4.68	2.84
1950	2.20	1.91
1951	4.25	5.83
1952	2.93	5.22
1953	4.01	5.57
1954	3.53	5.19
1955	3.07	4.22
1956	4.49	9.27
1957	5.82	2.34
1958	2.69	4.83
1959	7.06	2.93
1960	5.19	5.90
1961	3.21	4.75
1962	4.30	6.66
1963	4.40	7.48
1964	4.15	3.67
1965	3.15	3.55
1966	3.19	7.27
1967	2.88	4.61
1968	2.97	5.58
1969	5.07	5.55
1970	3.93	3.16
1971	4.28	3.16
1972	5.94	5.83
1973	4.69	6.24
1974	3.44	2.25
1975	999.90	999.90
N	34	36
MEAN	4.21	5.11
STD DEV	1.28	1.89
CV	.30	.37
STD ERR	.22	.32
MAX	7.06	9.27
MIN	2.20	1.91
RANGE	4.86	7.36

Table 8c. Absolute and percent relative frequencies of monthly precipitation.

STATION 5717 MONTROSE NO. 1

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	7 ( 18.9)	15 ( 40.5)	15 ( 41.7)	18 ( 52.9)	17 ( 47.2)	15 ( 41.7)	11 ( 30.6)	15 ( 41.7)	20 ( 55.6)	15 ( 41.7)	6 ( 16.7)	15 ( 41.7)
.50- .99	13 ( 35.1)	15 ( 40.5)	14 ( 38.9)	8 ( 23.5)	15 ( 41.7)	16 ( 44.4)	13 ( 36.1)	13 ( 36.1)	9 ( 25.0)	12 ( 33.3)	11 ( 30.6)	8 ( 22.2)
1.00- 1.49	8 ( 21.6)	7 ( 18.9)	7 ( 19.4)	2 ( 5.9)	3 ( 8.3)	4 ( 11.1)	5 ( 13.9)	5 ( 13.9)	3 ( 8.3)	7 ( 19.4)	8 ( 22.2)	6 ( 16.7)
1.50- 1.99	3 ( 8.1)	0 ( 0.0)	0 ( 0.0)	4 ( 11.8)	1 ( 2.8)	1 ( 2.8)	3 ( 8.3)	2 ( 5.6)	2 ( 5.6)	0 ( 0.0)	7 ( 19.4)	1 ( 2.8)
2.00- 2.49	3 ( 8.1)	0 ( 0.0)	0 ( 0.0)	2 ( 5.9)	0 ( 0.0)	0 ( 0.0)	3 ( 8.3)	1 ( 2.8)	2 ( 5.6)	2 ( 5.6)	1 ( 2.8)	2 ( 5.6)
2.50- 2.99	2 ( 5.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.8)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.8)	3 ( 8.3)
3.00- 3.49	1 ( 2.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 5.6)	1 ( 2.8)
TOTALS	37.	37.	36.	34.	36.	36.	36.	36.	36.	36.	36.	36.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 8d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 5717 MONTROSE NO. 1

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	1 ( 2.8)	0 ( 0.0)
2.00- 2.49	1 ( 2.9)	1 ( 2.8)	0 ( 0.0)
2.50- 2.99	4 ( 11.8)	3 ( 8.3)	0 ( 0.0)
3.00- 3.49	8 ( 23.5)	4 ( 11.1)	0 ( 0.0)
3.50- 3.99	3 ( 8.8)	2 ( 5.6)	0 ( 0.0)
4.00- 4.49	8 ( 23.5)	3 ( 8.3)	1 ( 2.9)
4.50- 4.99	2 ( 5.9)	4 ( 11.1)	0 ( 0.0)
5.00- 5.49	2 ( 5.9)	1 ( 2.8)	0 ( 0.0)
5.50- 5.99	2 ( 5.9)	9 ( 25.0)	1 ( 2.9)
6.00- 6.49	1 ( 2.9)	1 ( 2.8)	0 ( 0.0)
6.50- 6.99	2 ( 5.9)	0 ( 0.0)	2 ( 5.9)
7.00- 7.49	1 ( 2.9)	3 ( 8.3)	3 ( 8.8)

Table 8d. (continued)

STATION 5717 MONTROSE NO. 1

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	1 ( 2.8)	5 ( 14.7)
8.00- 8.49	0 ( 0.0)	0 ( 0.0)	1 ( 2.9)
8.50- 8.99	0 ( 0.0)	2 ( 5.6)	6 ( 17.6)
9.00- 9.49	0 ( 0.0)	1 ( 2.8)	1 ( 2.9)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	2 ( 5.9)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	3 ( 8.8)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.9)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.9)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	2 ( 5.9)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	2 ( 5.9)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.9)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 8d. (continued)

STATION 5717 MONTROSE NO. 1

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.9)
TOTALS	34.0	36.0	34.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 8e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

5717 MONTROSE NO. 1

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.06	0.00	.08	.11	.05	.01	.11	.22	.06	0.00	.16	.16	5.75
.10	.11	.13	.14	.22	.11	.05	.19	.33	.12	.19	.22	.22	6.39
.20	.20	.23	.22	.37	.22	.12	.31	.51	.23	.38	.32	.31	7.23
.30	.30	.31	.31	.50	.31	.20	.42	.68	.36	.54	.40	.39	7.88
.40	.40	.39	.40	.63	.42	.29	.52	.84	.50	.71	.48	.47	8.47
.50	.52	.47	.50	.78	.53	.40	.63	1.03	.67	.89	.56	.55	9.04
.60	.66	.56	.62	.94	.67	.54	.76	1.23	.87	1.09	.66	.65	9.64
.70	.83	.66	.76	1.14	.84	.71	.91	1.48	1.13	1.33	.77	.76	10.31
.80	1.07	.80	.95	1.41	1.06	.95	1.11	1.81	1.48	1.65	.92	.90	11.13
.90	1.47	1.02	1.27	1.83	1.43	1.37	1.43	2.34	2.08	2.18	1.15	1.13	12.34
.95	1.87	1.22	1.57	2.24	1.79	1.79	1.73	2.85	2.68	2.67	1.37	1.35	13.40
ALPHA	1.30	2.60	1.65	2.02	1.53	1.00	2.24	2.07	1.11	1.92	2.78	2.77	15.56
BETA	.52	.22	.38	.47	.45	.60	.34	.59	.83	.59	.23	.23	.59
Q	0.00	.06	0.00	.03	.03	.03	.03	0.00	0.00	.05	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA  
 ALPHA= SHAPE PARAMETER    BETA= SCALE PARAMETER  
 Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS  
 MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL



Figure 8a. Mean monthly precipitation for period of record.

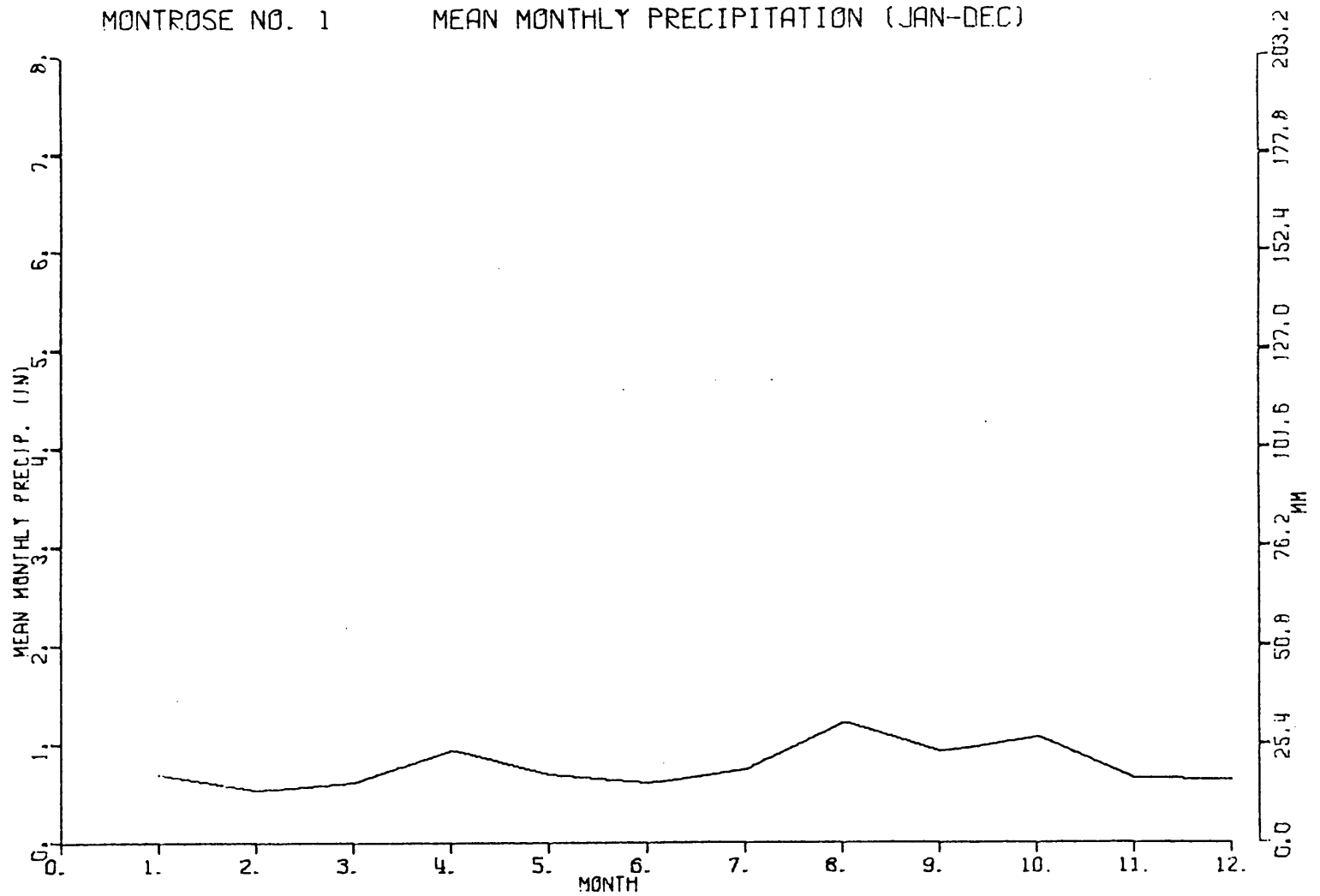


Figure 8b. Water year and 5 year moving mean precipitation.

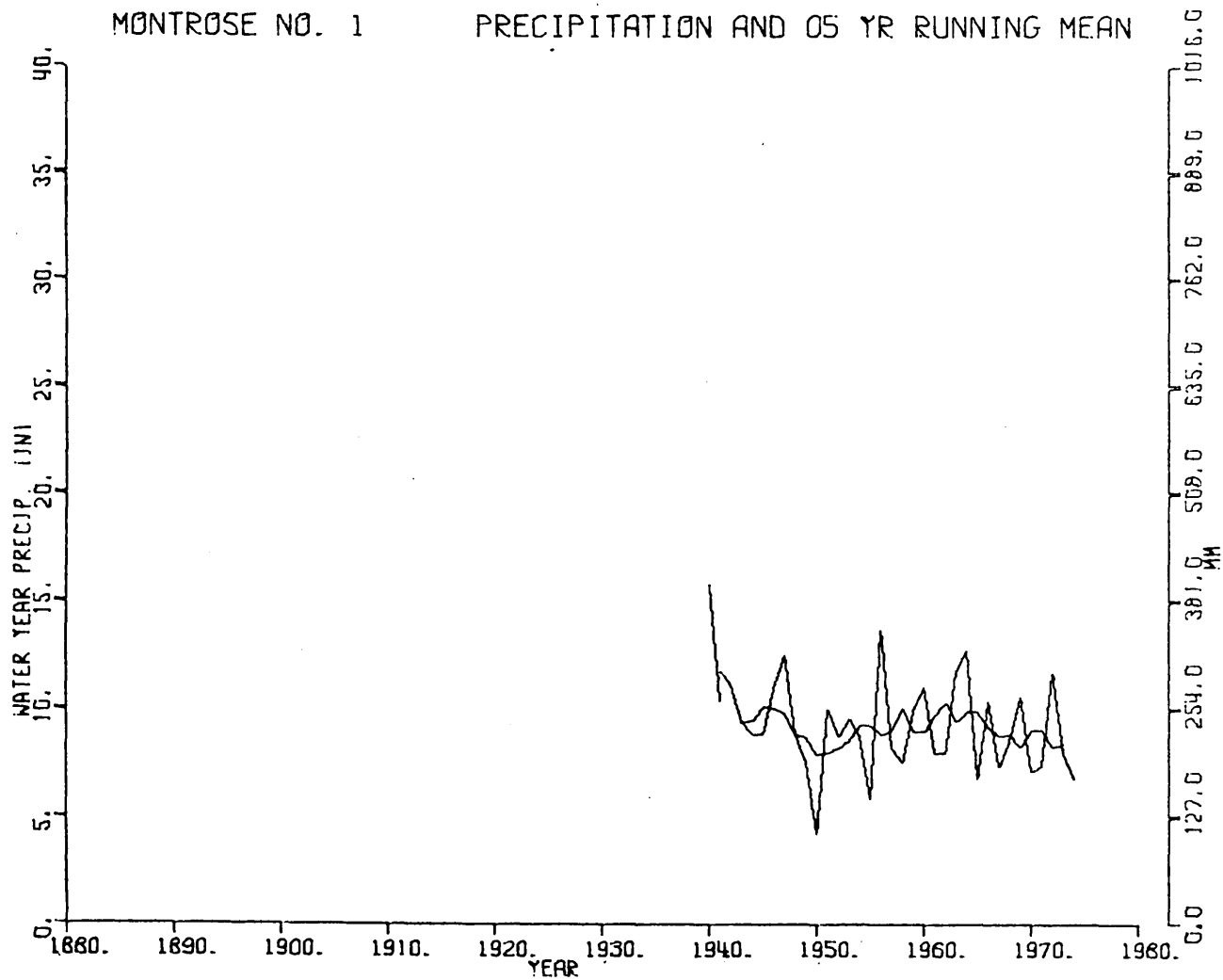


Figure 8c. Water year and 15 year moving mean precipitation.

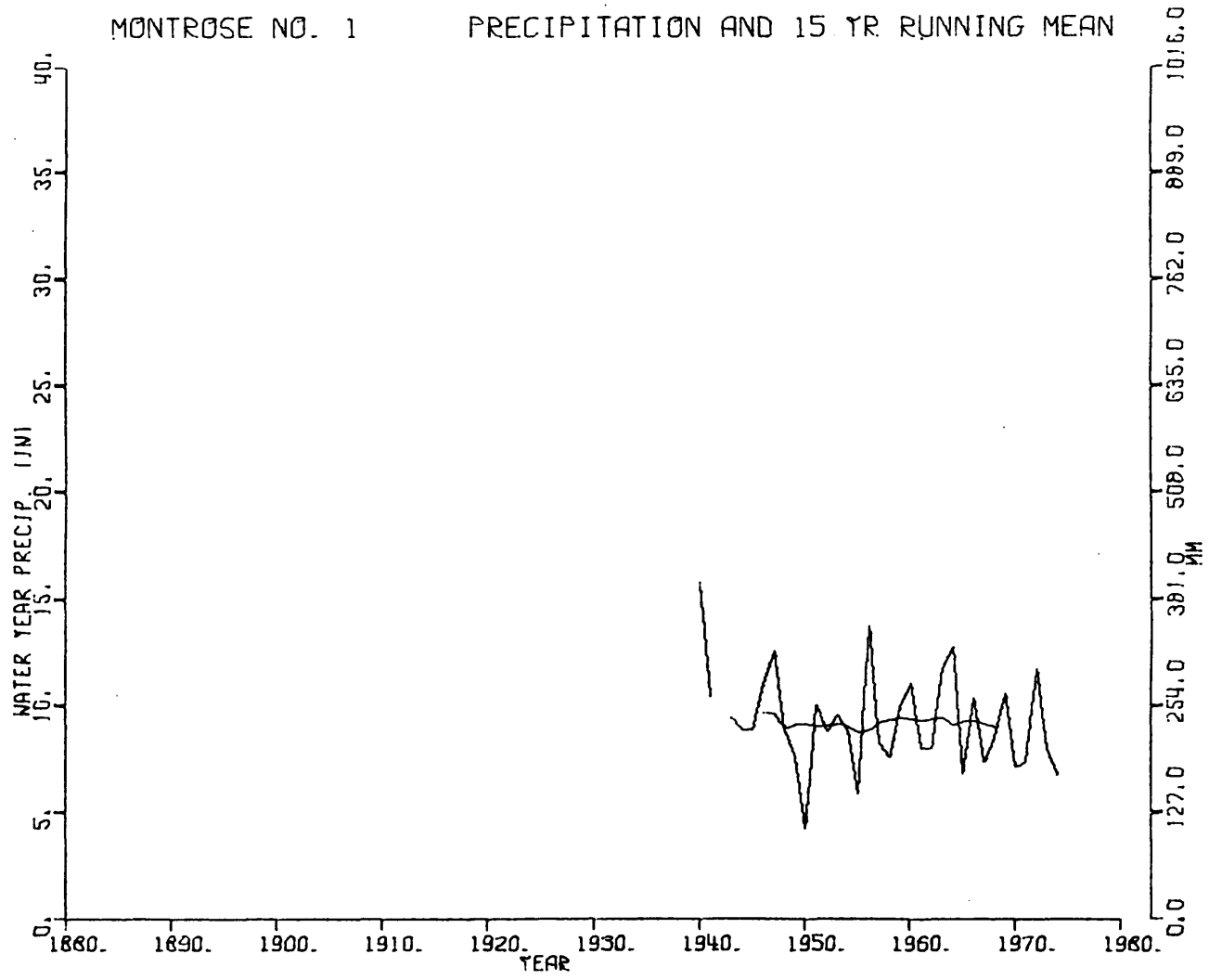


Table 9a. Time series and statistical summary of monthly and water year precipitation.

STATION 5722 MONTROSE NO. 2

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1885	.56	.50	.71	.79	.13	.49	3.14	.57	1.01	.33	1.38	1.06	10.67
1886	.95	.54	.50	.16	.24	.28	1.21	.07	.04	1.34	2.12	1.56	9.01
1887	1.19	1.08	.35	.45	.38	.60	.42	.84	.05	.51	1.48	.16	7.51
1888	1.66	1.74	1.21	.59	.44	.05	.86	.60	.28	.84	.35	.80	8.42
1889	.47	.58	1.34	.80	.78	.56	1.36	.16	.03	.71	1.38	.68	8.75
1890	1.41	.58	.65	.04	.93	1.14	.64	1.25	.08	1.65	1.08	1.73	11.18
1891	.12	.01	1.81	.98	.94	1.61	1.06	1.40	.02	1.21	.37	0.00	9.53
1892	.52	.26	.66	1.06	2.36	.72	.57	.18	.06	.48	2.17	.48	10.02
1893	.18	.40	.35	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1894	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1895	1.23	2.50	1.30	.84	.60	.34	.36	.13	.18	.48	.37	1.66	9.99
1896	.68	.38	.45	.62	2.14	3.41	.97	1.50	.43	1.89	.35	2.45	15.27
1897	1.11	900.45	900.30	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1898	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1899	1.83	.04	1.54	.05	.44	.26	.95	.20	.43	0.00	.50	1.28	7.52
1900	901.25	.47	.05	.54	.39	.54	.14	.50	.55	.17	2.31	0.00	906.91
1901	.73	.07	.25	.41	.58	.10	.26	1.27	.25	.90	1.09	.40	6.31
1902	.10	.32	.84	0.00	.95	1.20	.90	.13	.90	.91	.37	1.94	908.16
1903	.02	0.00	1.18	.85	.38	.86	.03	.67	.85	.66	1.06	900.80	907.35
1904	1.14	0.00	.23	1.39	1.43	901.60	900.90	1.18	.70	.56	.87	.99	910.40
1905	.47	.89	.22	911.12	.42	1.86	.04	1.69	0.00	1.01	1.68	1.44	922.70
1906	1.13	.63	.32	901.26	901.25	900.76	.76	3.95	.84	.56	2.61	.51	914.66
1907	1.02	0.00	.55	900.15	.38	.10	.54	1.19	.40	.55	2.59	.41	907.88
1908	1.19	.59	1.78	1.07	.32	.02	1.43	.37	.25	1.07	2.30	1.87	12.28
1909	.14	.73	1.62	.26	.12	0.00	.60	.55	.21	1.10	1.42	1.30	6.95
1910	901.92	.19	.96	.41	.93	.73	.57	.04	.34	2.10	1.78	1.84	910.91
1911	2.91	.46	.59	.48	0.00	2.46	.53	.62	1.31	1.59	1.18	.91	13.03
1912	1.50	.06	.27	.60	.81	.19	.09	.57	.69	.68	.38	1.27	7.11
1913	.33	.76	1.69	1.11	.78	.27	1.28	2.18	1.26	1.23	2.23	.48	13.80
1914	1.52	.15	.74	.94	.48	0.00	1.31	1.53	.91	1.22	.64	1.03	9.87
1915	0.00	.80	1.12	1.02	.37	.61	2.21	1.64	0.00	1.18	2.04	1.34	11.33
1916	2.28	.82	1.62	.62	.07	.69	1.09	2.18	.16	.49	1.53	.70	11.25
1917	.13	.10	0.00	1.92	.49	.16	1.30	0.00	.31	.87	1.24	1.34	7.86
1918	1.53	.01	.83	.44	.78	.01	.81	1.00	.13	.75	.65	.90	9.84
1919	1.23	1.98	.26	.06	.26	.53	2.09	1.66	.42	.17	1.25	.86	10.77
1920	1.70	.17	.91	.23	.19	1.11	.77	1.03	1.50	1.94	1.85	.09	11.69
1921	.66	.78	.47	.34	.19	1.38	.05	1.23	.21	.87	.98	.14	7.20
1922	.05	1.00	1.30	.03	.16	.30	.43	1.25	.12	1.19	1.69	.69	8.41
1923	1.19	.18	1.62	.32	.41	.55	.81	1.82	.04	1.42	.78	.69	9.83
1924	.71	.35	1.23	.47	.48	.62	.35	.34	1.00	.42	2.83	1.82	10.62

Table 9a. (continued)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1925	.98	.29	.41	.42	.16	2.05	1.06	1.87	.37	.77	.25	1.13	9.76
1926	2.03	.08	.64	.67	.73	2.24	.31	.92	1.59	.98	1.96	2.08	14.23
1927	.32	.43	.47	.15	.27	.79	.68	2.73	.27	1.33	1.33	1.12	8.89
1928	1.73	1.49	.13	.64	.42	.93	.64	1.38	0.00	1.30	1.07	3.07	13.06
1929	.49	.25	.20	.99	.13	.22	.60	.97	.54	1.20	1.73	.77	8.49
1930	.38	1.05	.10	.14	.41	.37	.68	.21	.35	.85	1.68	1.45	6.64
1931	.85	1.03	.17	.39	.68	.62	1.43	.28	.20	1.25	1.42	.32	9.06
1932	1.03	.03	1.23	.13	.21	.32	.81	.62	.01	.43	1.21	1.34	7.37
1933	1.28	.86	.25	.42	.94	0.00	.86	1.73	.47	.23	.91	1.39	9.34
1934	.04	.62	.32	.60	.33	.16	.63	.59	0.00	.83	1.24	1.45	7.31
1935	.22	.29	.32	.37	1.06	.35	.22	.56	.20	1.08	1.21	.72	6.64
1936	.55	.15	.83	.14	.66	.78	.47	.53	.20	.66	.71	.44	6.43
1937	.55	.25	1.62	.30	.98	1.66	1.35	.90	.91	.08	.51	4.26	13.47
1938	.76	.75	.80	.40	.42	.91	.13	.19	.02	.68	1.07	1.55	7.71
1939	.15	.46	.44	.90	.55	1.02	.30	.55	.13	.21	.97	1.31	6.99
1940	2.20	.60	1.40	1.70	.45	.27	1.60	1.65	1.43	.40	1.91	2.42	17.03
1941	3.13	.24	.68	.51	.50	.84	2.07	.29	.08	.80	1.50	.76	10.40
1942	.74	.23	.44	.33	.57	.53	.04	2.18	1.22	.25	3.42	.09	10.04
1943	.62	.23	.24	.53	.24	.21	2.80	.73	.99	.77	1.59	.05	9.00
1944	.89	.97	.67	.40	.55	.35	2.01	.91	.09	.32	1.52	.26	8.44
1945	1.14	.33	.37	.26	.25	.64	2.94	1.61	.10	1.41	1.11	.68	8.84
1946	.97	.91	.19	.08	.49	.44	1.03	.63	2.51	1.29	1.14	.65	11.33
1947	2.23	.24	.77	.86	1.49	.05	2.08	.07	.54	1.02	2.93	.44	12.72
1948	.27	.59	.48	1.84	.27	.61	.95	.47	1.21	.31	.88	.60	8.48
1949	1.06	.12	.08	1.17	1.11	.77	.44	.08	.21	1.00	.22	1.07	7.43
1950	.13	.48	.14	1.15	.25	.09	.46	.46	.21	.25	.55	.25	4.42
1951	.75	.55	.85	.61	.73	.75	1.64	.85	.25	1.13	1.57	.72	10.40
1952	0.00	.46	.45	.29	.45	.80	1.59	1.36	.65	.74	1.47	.03	8.50
1953	1.42	1.31	.71	.20	.10	.22	.24	.56	.29	.96	1.35	2.57	9.43
1954	.49	1.24	.39	.30	1.02	.12	.58	1.21	.21	1.12	1.80	.12	8.60
1955	.10	.78	.30	.73	.64	.59	.60	.19	.05	.21	1.63	.08	5.90
1956	.49	.49	1.03	1.76	.23	.55	1.38	2.11	.83	2.24	2.66	.20	13.97
1957	2.00	1.07	.37	1.75	.93	.59	.36	.20	.65	.02	2.96	1.13	8.13
1958	.76	.57	.17	.16	.58	.46	.81	.16	.29	.25	1.73	1.55	7.50
1959	1.97	.11	.66	1.94	.93	2.29	.80	.41	.36	.34	1.57	.31	9.79
1960	.73	.23	1.42	.15	.89	.66	.94	.78	.07	.22	1.26	2.84	11.19
1961	1.40	.35	1.73	.05	.55	.15	1.52	.56	.10	.60	1.66	1.45	8.12
1962	.89	.90	1.12	.49	.24	.91	0.00	.12	.18	1.20	1.79	.52	8.36
1963	2.39	.53	.23	.35	.63	.41	2.20	.70	.44	.55	3.22	1.40	12.35
1964	0.00	1.26	.73	1.06	.50	.63	.96	.95	.68	2.27	.93	3.22	13.19

Table 9a. (continued)

STATION 5722 MONTROSE NO. 2

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1965	1.43	.83	.51	.16	.33	.02	.91	.49	.52	.52	.80	.60	7.12
1966	1.18	.66	.58	.22	.60	.10	.52	1.38	2.08	.99	1.39	1.72	11.42
1967	.22	.48	1.19	.09	.99	.16	.94	.60	.01	1.40	1.55	.35	7.92
1968	.51	.59	.55	.46	.59	.51	.34	.23	2.26	1.18	.98	.96	9.12
1969	2.53	.35	.77	.28	0.00	.11	1.05	.14	.65	.55	.62	2.77	10.82
1970	1.56	.47	.90	.30	.41	.09	.48	.96	0.00	.37	.83	1.10	7.42
1971	1.55	1.15	.98	.18	0.00	.23	.28	.12	.83	.77	.17	1.13	7.32
1972	2.60	1.09	1.14	.50	.04	.42	.53	1.61	1.63	.45	1.51	.35	11.82
1973	.52	.68	.61	1.96	.25	.66	1.15	.01	.17	.87	.42	.68	7.92
1974	.80	.80	.36	.59	.21	.76	.22	.76	.78	.84	.45	.37	6.92
1975	.93	1.29	.16	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	89	89	89	86	86	86	86	86	86	86	87	87	86
MEAN	1.00	.61	.68	.71	.56	.71	.90	.85	.50	.82	1.25	1.05	9.62
STD DEV	.73	.47	.46	1.23	.42	.60	.61	.71	.54	.51	.72	.83	2.72
CV	.73	.78	.68	1.72	.75	.85	.68	.83	1.07	.62	.57	.80	.29
STD ERR	.08	.05	.05	.13	.05	.05	.07	.08	.06	.05	.08	.09	.30
MAX	3.13	2.50	1.81	11.12	2.36	3.41	3.14	3.95	2.51	2.27	3.42	4.26	22.42
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.06	0.00	4.42
RANGE	3.13	2.50	1.81	11.12	2.36	3.41	3.14	3.95	2.51	2.27	3.36	4.26	18.42

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 9b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 5722 MONTROSE NO. 2

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1885	3.18	7.49
1886	2.67	6.34
1887	4.05	3.46
1888	4.69	3.73
1889	4.53	4.32
1890	4.75	6.43
1891	5.47	4.06
1892	5.58	4.44
1893	999.90	999.90
1894	999.90	999.90
1895	6.81	3.18
1896	7.68	7.59
1897	999.90	999.90
1898	999.90	999.90
1899	4.16	3.36
1900	3.24	3.67
1901	2.14	4.17
1902	3.41	4.75
1903	3.29	4.07
1904	5.79	5.20
1905	14.98	7.91
1906	5.35	9.11
1907	2.70	5.68
1908	4.97	7.24
1909	2.87	3.18
1910	5.14	5.77
1911	6.89	6.14
1912	3.43	3.68
1913	4.94	8.66
1914	3.83	5.64
1915	3.92	7.41
1916	5.10	6.15
1917	2.80	5.06
1918	5.60	4.24
1919	4.32	6.45
1920	4.31	7.18
1921	3.72	3.48
1922	3.04	5.37
1923	4.27	5.56
1924	3.86	6.76

Table 9b. (continued)

STATION 5722 MONTROSE NO. 2

YEAR PERIOD 1 (OCT-MAR) PERIOD 2 (APR-SEPT)

1925	4.31	5.45
1926	6.39	7.84
1927	6.43	6.46
1928	5.60	7.46
1929	5.68	5.81
1930	4.45	4.23
1931	4.16	4.90
1932	4.95	4.42
1933	5.75	5.59
1934	5.07	5.24
1935	5.35	3.99
1936	5.38	3.05
1937	5.36	8.01
1938	4.07	3.64
1939	5.52	3.47
1940	5.82	3.41
1941	5.90	4.50
1942	5.84	7.20
1943	5.07	5.93
1944	5.83	5.11
1945	5.99	5.85
1946	5.08	8.25
1947	6.64	6.08
1948	4.06	4.42
1949	4.31	3.02
1950	5.24	2.18
1951	4.24	6.16
1952	5.06	5.84
1953	5.66	5.97
1954	5.56	5.04
1955	5.14	2.76
1956	4.55	9.42
1957	5.71	2.42
1958	5.70	4.80
1959	5.90	2.84
1960	5.08	6.11
1961	5.23	4.89
1962	4.55	3.81
1963	4.54	7.81
1964	4.18	9.01



Table 9b. (continued)

STATION 5722 MONTROSE NO. 2

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1965	3.28	3.84
1966	3.34	8.08
1967	3.13	4.85
1968	3.21	5.95
1969	5.04	5.78
1970	3.73	3.74
1971	4.09	3.30
1972	5.79	6.08
1973	4.68	3.30
1974	3.52	3.42
1975	999.90	999.90
N	86	86
MEAN	4.28	5.39
STD DEV	1.74	1.77
CV	.41	.33
STD ERR	.19	.19
MAX	14.98	9.42
MIN	2.07	2.18
RANGE	12.91	7.24

Table 9c. Absolute and percent relative frequencies of monthly precipitation.

STATION 5722 MONTROSE NO. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	25 ( 28.1)	43 ( 48.3)	39 ( 43.8)	46 ( 53.5)	47 ( 54.7)	32 ( 37.2)	23 ( 26.7)	29 ( 33.7)	54 ( 62.8)	26 ( 30.2)	12 ( 13.8)	26 ( 29.9)
.50- .99	24 ( 27.0)	30 ( 33.7)	30 ( 33.7)	24 ( 27.9)	31 ( 36.0)	34 ( 39.5)	34 ( 39.5)	29 ( 33.7)	19 ( 22.1)	31 ( 36.0)	24 ( 27.6)	23 ( 26.4)
1.00- 1.49	19 ( 21.3)	12 ( 13.5)	13 ( 14.6)	9 ( 10.5)	6 ( 7.0)	11 ( 12.8)	17 ( 19.8)	12 ( 14.0)	7 ( 8.1)	22 ( 25.6)	22 ( 25.3)	18 ( 20.7)
1.50- 1.99	11 ( 12.4)	3 ( 3.4)	7 ( 7.9)	6 ( 7.0)	0 ( 0.0)	5 ( 5.8)	4 ( 4.7)	10 ( 11.6)	3 ( 3.5)	4 ( 4.7)	16 ( 18.4)	11 ( 12.6)
2.00- 2.49	6 ( 6.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 2.3)	3 ( 3.5)	6 ( 7.0)	4 ( 4.7)	2 ( 2.3)	3 ( 3.5)	7 ( 8.0)	3 ( 3.4)
2.50- 2.99	3 ( 3.4)	1 ( 1.1)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)	1 ( 1.2)	1 ( 1.2)	0 ( 0.0)	4 ( 4.6)	3 ( 3.4)
3.00- 3.49	1 ( 1.1)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)	1 ( 1.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 2.3)	2 ( 2.3)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.1)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.50- 6.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 9c. (continued)

STATION 5722 MONTROSE No. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
7.50- 7.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.00- 8.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.50- 8.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	89.	89.	89.	86.	86.	86.	86.	86.	86.	86.	87.	87.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 9d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 5722 MONTROSE NO. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	6 ( 7.0)	2 ( 2.3)	0 ( 0.0)
2.50- 2.99	10 ( 11.6)	2 ( 2.3)	0 ( 0.0)
3.00- 3.49	15 ( 17.4)	11 ( 12.8)	0 ( 0.0)
3.50- 3.99	11 ( 12.8)	8 ( 9.3)	0 ( 0.0)
4.00- 4.49	13 ( 15.1)	10 ( 11.6)	1 ( 1.2)
4.50- 4.99	9 ( 10.5)	5 ( 5.8)	0 ( 0.0)
5.00- 5.49	7 ( 8.1)	7 ( 8.1)	0 ( 0.0)
5.50- 5.99	7 ( 8.1)	12 ( 14.0)	1 ( 1.2)
6.00- 6.49	1 ( 1.2)	10 ( 11.6)	3 ( 3.5)
6.50- 6.99	4 ( 4.7)	1 ( 1.2)	5 ( 5.8)
7.00- 7.49	0 ( 0.0)	6 ( 7.0)	10 ( 11.6)

Table 9d. (continued)

STATION 5722 MONTROSE NO. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	2 ( 2.3)	4 ( 4.7)	7 ( 8.1)
8.00- 8.49	0 ( 0.0)	3 ( 3.5)	8 ( 9.3)
8.50- 8.99	0 ( 0.0)	1 ( 1.2)	7 ( 8.1)
9.00- 9.49	0 ( 0.0)	4 ( 4.7)	5 ( 5.8)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	7 ( 8.1)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	4 ( 4.7)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	6 ( 7.0)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	7 ( 8.1)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	2 ( 2.3)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	4 ( 4.7)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	2 ( 2.3)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	2 ( 2.3)
14.50-14.99	1 ( 1.2)	0 ( 0.0)	0 ( 0.0)

Table 9d. (continued)

STATION 5722 MONTROSE NO. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	( 0 0.0)	( 0 0.0)	( 1 1.2)
15.50-15.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
16.00-16.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
16.50-16.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
17.00-17.49	( 0 0.0)	( 0 0.0)	( 1 1.2)
17.50-17.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
18.00-18.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
18.50-18.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
19.00-19.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
19.50-19.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
20.00-20.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
20.50-20.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
21.00-21.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
21.50-21.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
22.00-22.49	( 0 0.0)	( 0 0.0)	( 0 0.0)

Table 9d. (continued)

STATION 5722 MONTROSE NO. 2

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
22.50-22.99	0 ( 0.0)	0 ( 0.0)	1 ( 1.2)
TOTALS	86.0	86.0	86.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 9e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

5722 MONTROSE NO. 2

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.04	.07	.04	.15	.07	0.00	.15	.31	.08	.06	.04	.12	5.84
.10	.09	.14	.11	.23	.14	.03	.23	.42	.17	.16	.10	.18	6.54
.20	.18	.23	.22	.37	.25	.09	.36	.61	.33	.32	.20	.28	7.46
.30	.28	.31	.33	.50	.37	.16	.48	.77	.48	.47	.29	.38	8.17
.40	.39	.39	.44	.63	.50	.24	.59	.94	.64	.62	.38	.47	8.81
.50	.52	.47	.56	.77	.65	.34	.71	1.11	.82	.79	.49	.57	9.45
.60	.67	.57	.70	.92	.82	.46	.85	1.30	1.02	.99	.60	.69	10.11
.70	.87	.68	.88	1.12	1.04	.62	1.01	1.53	1.28	1.24	.75	.83	10.85
.80	1.14	.84	1.11	1.37	1.34	.84	1.23	1.83	1.63	1.57	.95	1.01	11.76
.90	1.60	1.08	1.51	1.78	1.83	1.22	1.58	2.31	2.20	2.11	1.27	1.31	13.11
.95	2.06	1.31	1.88	2.17	2.31	1.59	1.90	2.76	2.75	2.63	1.58	1.59	14.30
ALPHA	1.14	2.22	1.52	2.04	1.36	1.00	2.27	2.63	1.51	1.57	1.62	2.13	13.95
BETA	.63	.26	.48	.45	.63	.54	.37	.48	.71	.66	.39	.32	.69
Q	.01	.03	.03	.01	.01	.06	.01	0.00	.02	.03	.03	.01	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL



Figure 9a. Mean monthly precipitation for period or record.

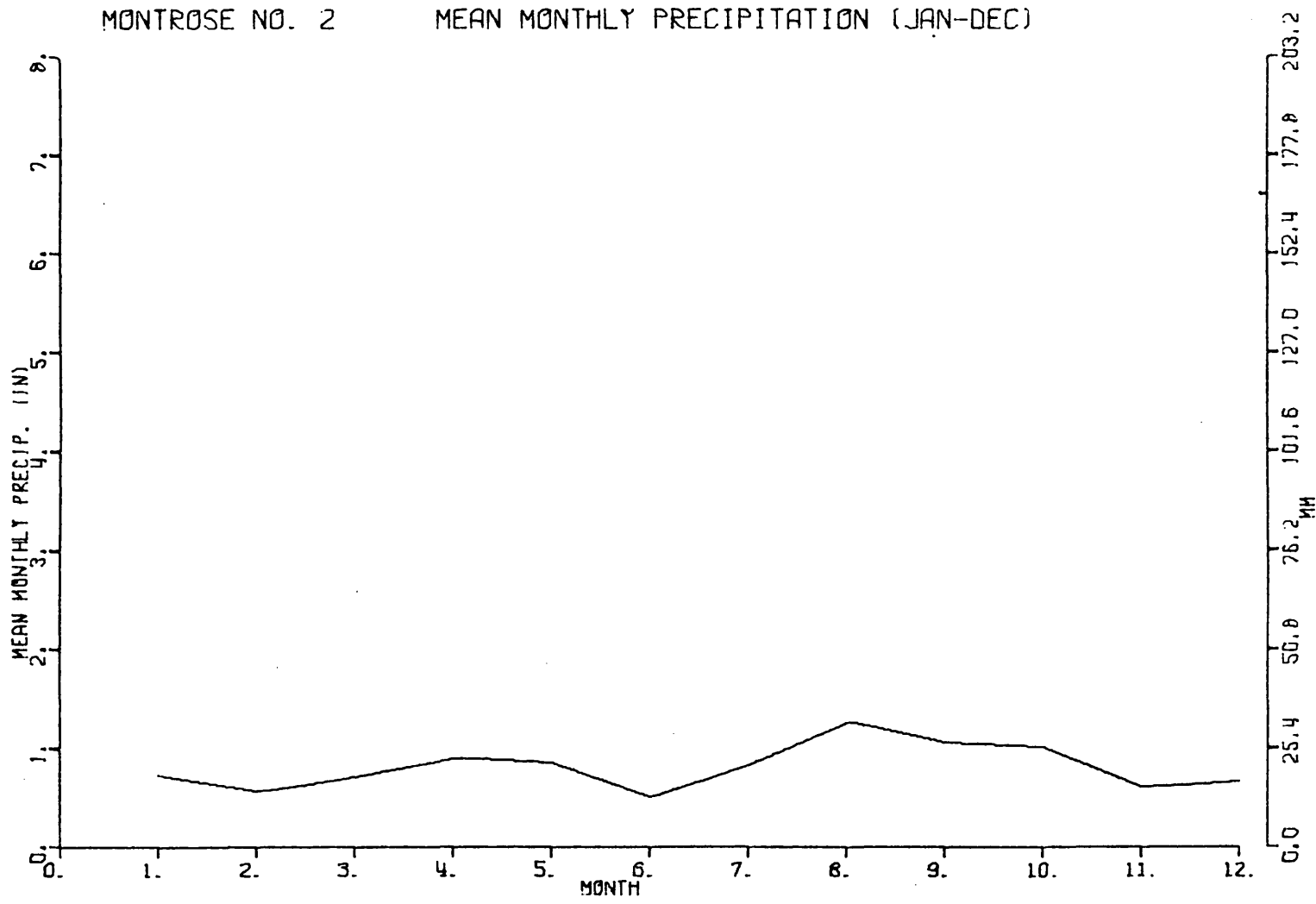


Figure 9b. Water year and 5 year moving mean precipitation.

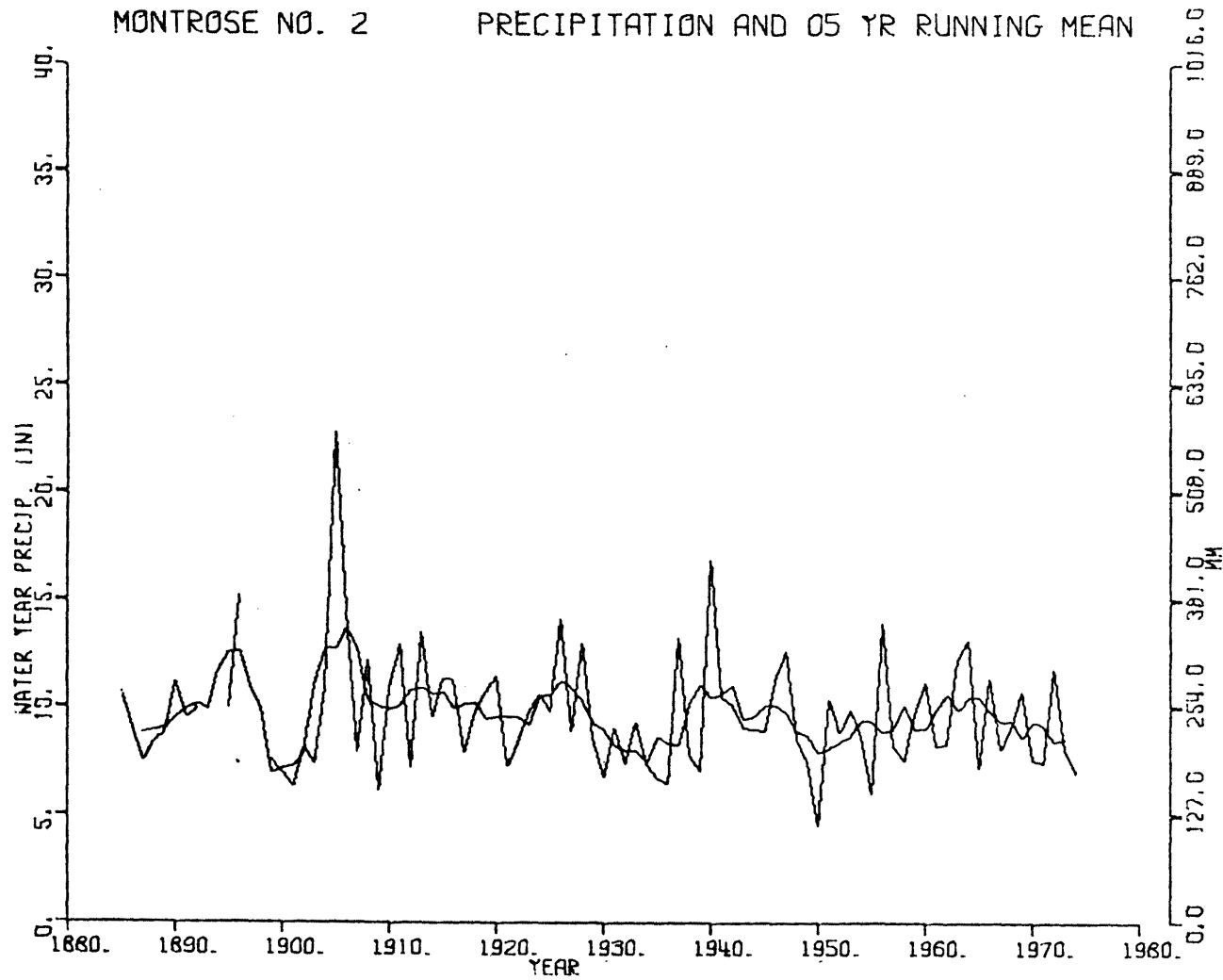


Figure 9c. Water year and 15 year moving mean precipitation.

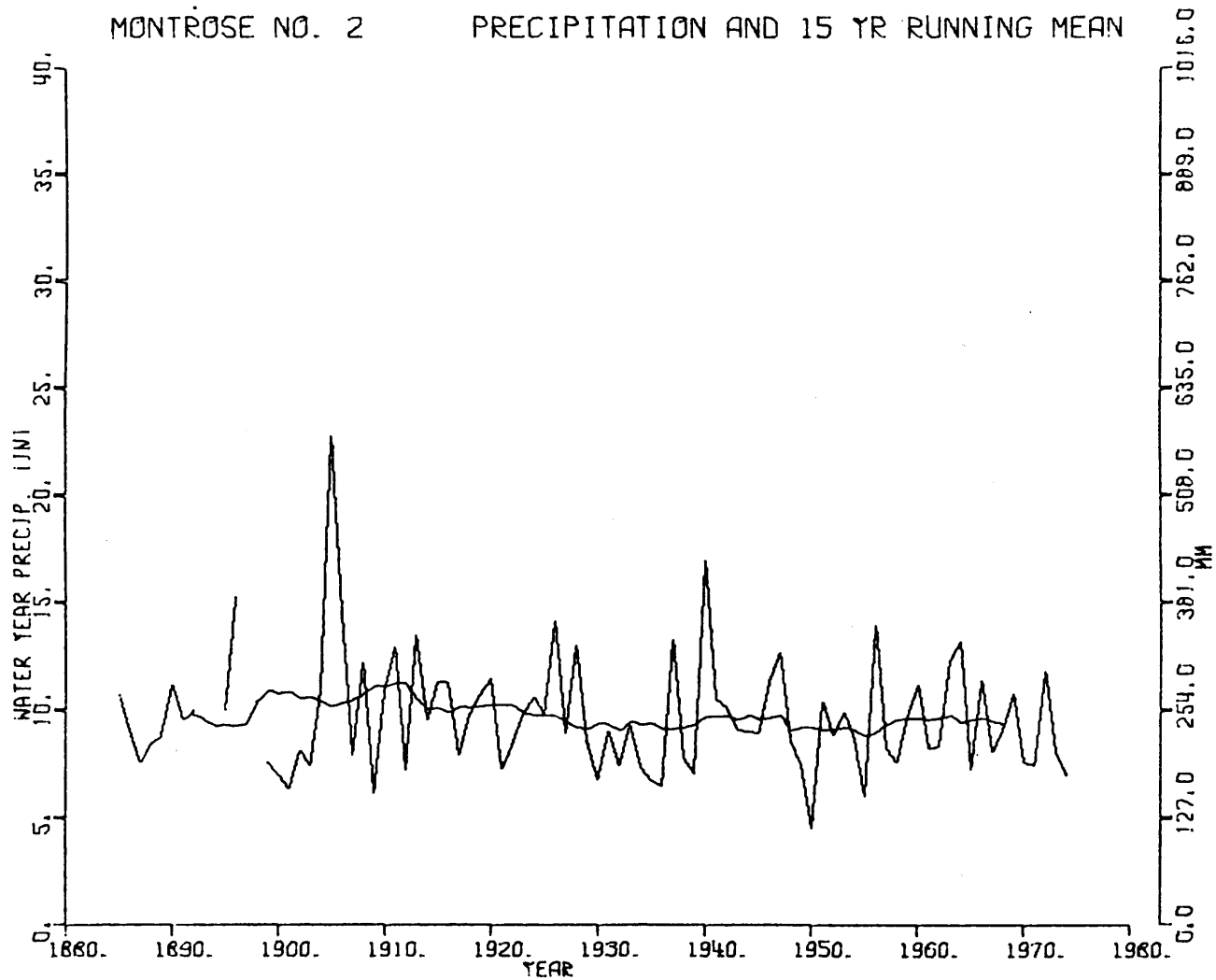


Table 10a. Time series and statistical summary of monthly and water year precipitation.

STATION 6012 NORWOOD

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1931	1.97	2.28	.32	1.65	2.53	1.45	3.85	.47	.97	2.71	1.24	.68	20.12
1932	1.63	0.00	2.44	1.96	1.50	1.53	1.54	1.54	.14	2.45	.96	2.48	18.27
1933	1.97	1.70	1.38	1.41	2.39	0.00	1.83	.84	.37	1.33	1.10	1.48	14.40
1934	.52	1.90	1.83	1.53	.36	1.07	1.66	2.89	0.00	1.90	3.91	1.90	19.56
1935	1.05	.19	1.69	.35	3.22	1.41	.91	1.41	1.29	2.49	4.09	.73	18.43
1936	.96	1.35	2.23	.55	1.27	1.80	.96	.32	1.18	2.99	3.68	1.53	18.82
1937	1.65	.62	1.04	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1938	999.90	.72	.92	1.75	1.09	1.64	0.00	.29	0.00	.42	2.59	2.38	999.90
1939	1.30	0.00	.56	2.29	1.93	.26	1.07	.80	.39	1.22	1.14	4.40	15.36
1940	1.63	.38	1.42	1.58	1.40	2.39	5.14	1.80	2.17	1.49	4.10	999.90	999.90
1941	999.90	999.90	999.90	.66	.51	4.90	.42	.20	0.00	0.00	.78	1.40	999.90
1942	.88	.48	1.56	2.07	0.00	1.48	.44	1.81	1.25	1.61	5.16	.14	16.52
1943	.96	.48	1.75	.71	1.12	1.27	2.60	.29	1.77	1.52	.84	.12	11.53
1944	.74	1.71	1.28	.45	.55	1.59	1.94	.31	.46	2.00	3.68	.83	14.54
1945	2.23	.44	1.17	.52	.36	1.85	2.43	2.18	.06	1.37	3.07	.93	16.65
1946	1.73	1.36	.28	.29	.70	.82	.86	.86	2.63	2.70	4.21	1.43	17.87
1947	2.74	.87	1.47	.81	2.56	1.80	1.54	.24	2.04	.56	1.58	1.52	17.73
1948	.64	.71	1.31	2.17	.71	.94	.98	1.37	2.88	1.67	.82	1.32	16.56
1949	999.90	.35	.78	1.39	1.48	1.06	.50	.46	.34	1.83	.37	1.26	999.90
1950	.11	.24	.71	.91	1.56	1.03	1.29	.84	.25	1.60	2.41	.31	8.56
1951	1.07	1.33	1.39	1.64	1.26	1.50	1.83	1.11	.12	1.14	1.45	1.40	16.24
1952	0.00	1.21	.73	.60	.82	.67	1.44	999.90	.50	2.13	2.34	0.00	11.32
1953	2.63	1.79	.42	.28	.11	1.09	1.62	1.02	.73	2.16	2.88	4.24	10.47
1954	1.43	1.23	.38	.60	1.54	.30	1.15	1.16	.54	.95	1.03	.09	10.40
1955	.13	.96	.52	1.31	.52	.53	.82	.56	.31	1.03	1.37	.11	8.23
1956	.71	.69	.86	1.95	.57	1.17	1.32	3.59	.56	4.15	3.59	0.00	19.16
1957	5.12	2.11	.51	1.10	1.10	1.04	.55	.34	.32	.51	1.88	1.79	16.37
1958	1.28	1.05	.40	.22	1.18	.31	1.01	.25	.33	1.44	2.14	1.50	11.11
1959	2.48	.20	1.15	.57	1.73	1.45	.90	.55	.80	.90	.72	1.49	17.48
1960	1.66	.72	1.07	.68	1.96	2.36	.85	1.02	.41	.95	2.43	3.68	16.79
1961	1.70	.86	1.06	.53	1.94	.52	.48	.86	.54	.82	.51	2.08	11.90
1962	1.51	1.15	.88	900.98	.87	1.14	.27	.10	.67	3.72	3.84	2.34	9.57
1963	2.79	.91	.49	900.43	.49	1.08	1.23	.59	.48	2.04	2.14	1.46	9.13
1964	0.00	1.37	901.47	1.77	.82	1.82	1.58	1.30	.84	2.65	2.52	3.16	9.93
1965	1.39	1.23	901.78	900.43	900.78	.08	1.70	.64	1.81	1.81	1.55	1.13	9.38
1966	.87	1.31	1.31	900.43	900.78	.37	.59	2.27	1.62	1.81	1.55	1.04	15.02
1967	.26	.37	1.30	900.44	.44	.97	.20	1.93	.40	3.59	2.54	1.13	9.15
1968	.50	.71	1.06	1.01	901.20	.20	.18	1.11	1.41	1.74	2.50	2.00	9.05
1969	2.41	.72	1.02	.59	901.20	.23	.63	.24	1.37	1.02	2.28	5.05	18.61
1970	1.65	.42	1.00	.36	999.90	.52	.96	.71	.03	.41	2.98	.43	999.90

Table 10a. (continued)

STATION 6012 NORWOOD

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1971	2.89	999.90	999.90	.31	900.25	-.18	.10	.15	1.92	1.58	.45	1.86	999.90
1972	4.36	1.41	1.66	.65	.22	1.47	1.14	1.99	2.16	1.11	1.50	.87	18.54
1973	.71	.92	.97	903.20	.43	.94	1.32	0.00	.20	1.85	.58	.87	911.09
1974	1.82	.82	.92	1.33	901.14	902.53	1.16	1.09	.26	1.44	.67	1.33	914.51
1975	.53	.96	900.78	999.90	909.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	909.90
N	42	43	43	43	42	43	43	43	43	43	43	42	37
MEAN	1.49	.94	1.08	1.01	1.04	1.18	1.27	.96	.85	1.67	2.07	1.49	15.23
STD DEV	1.08	.55	.50	.70	.73	.91	.94	.78	.77	.93	1.26	1.22	3.24
CV	.73	.59	.47	.69	.70	.77	.74	.81	.91	.56	.61	.82	.21
STD ERR	.17	.08	.08	.11	.11	.14	.14	.12	.12	.14	.19	.19	.53
MAX	5.12	2.28	2.44	3.20	3.22	4.90	5.14	3.59	2.88	4.15	5.16	5.05	20.12
MIN	0.00	0.00	.28	.22	0.00	0.00	0.00	0.00	0.00	0.00	.37	0.00	8.23
RANGE	5.12	2.28	2.16	2.98	3.22	4.90	5.14	3.59	2.88	4.15	4.79	5.05	11.89

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 10b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 6012 NORWOOD

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1931	10.20	9.92
1932	9.06	9.21
1933	7.85	6.95
1934	7.21	12.35
1935	7.91	10.92
1936	8.16	10.66
1937	999.90	999.90
1938	999.90	5.68
1939	6.34	4.02
1940	9.10	999.90
1941	999.90	2.80
1942	6.37	10.45
1943	5.29	6.24
1944	5.32	9.22
1945	6.61	10.04
1946	5.18	12.69
1947	10.25	7.48
1948	6.52	8.04
1949	999.90	4.85
1950	2.56	5.70
1951	8.19	7.85
1952	4.03	7.49
1953	6.32	10.65
1954	5.48	4.92
1955	4.03	4.20
1956	5.45	13.21
1957	10.98	5.39
1958	4.44	6.67
1959	7.56	5.36
1960	7.45	9.34
1961	6.61	5.29
1962	6.53	11.04
1963	6.19	7.94
1964	7.25	12.05
1965	5.69	7.69
1966	4.56	10.46
1967	3.74	7.62
1968	5.11	8.44
1969	7.60	11.01
1970	999.90	5.52

Table 10b. (continued)

STATION 6012 NORWOOD

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1971	999.90	6.06
1972	9.77	8.77
1973	7.17	4.82
1974	8.56	5.95
1975	999.90	999.90
N	38	42
MEAN	6.77	8.11
STD DEV	1.94	2.59
CV	.29	.32
STD ERR	.32	.40
MAX	10.98	13.21
MIN	2.46	2.80
RANGE	8.42	10.41

Table 10c. Absolute and percent relative frequencies of monthly precipitation.

STATION 6012 NORWOOD

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	5 ( 11.9)	11 ( 25.6)	6 ( 14.0)	11 ( 25.6)	10 ( 23.8)	9 ( 20.9)	7 ( 16.3)	14 ( 32.6)	20 ( 46.5)	3 ( 7.0)	2 ( 4.7)	10 ( 23.8)
.50- .99	11 ( 26.2)	15 ( 34.9)	13 ( 30.2)	15 ( 34.9)	13 ( 31.0)	9 ( 20.9)	12 ( 27.9)	12 ( 27.9)	9 ( 20.9)	8 ( 18.6)	9 ( 20.9)	6 ( 14.3)
1.00- 1.49	6 ( 14.3)	11 ( 25.6)	17 ( 39.5)	5 ( 11.6)	10 ( 23.8)	12 ( 30.2)	11 ( 25.6)	9 ( 20.9)	5 ( 11.6)	9 ( 20.9)	6 ( 14.0)	9 ( 21.4)
1.50- 1.99	11 ( 26.2)	4 ( 9.3)	5 ( 11.6)	8 ( 18.6)	5 ( 11.9)	7 ( 16.3)	9 ( 20.9)	4 ( 9.3)	4 ( 9.3)	9 ( 20.9)	5 ( 11.6)	7 ( 16.7)
2.00- 2.49	3 ( 7.1)	2 ( 4.7)	2 ( 4.7)	3 ( 7.0)	1 ( 2.4)	2 ( 4.7)	1 ( 2.3)	2 ( 4.7)	3 ( 7.0)	7 ( 16.3)	7 ( 16.3)	5 ( 11.9)
2.50- 2.99	4 ( 9.5)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 4.8)	2 ( 4.7)	1 ( 2.3)	1 ( 2.3)	2 ( 4.7)	4 ( 9.3)	4 ( 9.3)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	1 ( 2.4)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	1 ( 2.3)	0 ( 0.0)	2 ( 4.7)	5 ( 11.6)	1 ( 2.4)
4.00- 4.49	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	3 ( 7.0)	2 ( 4.8)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	1 ( 2.4)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 2.3)	1 ( 2.4)
TOTALS	42.	43.	43.	43.	42.	43.	43.	43.	43.	43.	43.	42.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH



Table 10d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 6012 NORWOOD

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	1 ( 2.6)	1 ( 2.4)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
3.50- 3.99	1 ( 2.6)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	3 ( 7.9)	1 ( 2.4)	0 ( 0.0)
4.50- 4.99	1 ( 2.6)	3 ( 7.1)	0 ( 0.0)
5.00- 5.49	5 ( 13.2)	3 ( 7.1)	0 ( 0.0)
5.50- 5.99	2 ( 5.3)	4 ( 9.5)	0 ( 0.0)
6.00- 6.49	4 ( 10.5)	2 ( 4.8)	0 ( 0.0)
6.50- 6.99	4 ( 10.5)	2 ( 4.8)	0 ( 0.0)
7.00- 7.49	4 ( 10.5)	2 ( 4.8)	0 ( 0.0)

123

Table 10d. (continued)

STATION 6012 NORWOOD

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	4 ( 10.5)	4 ( 9.5)	0 ( 0.0)
8.00- 8.49	2 ( 5.3)	1 ( 2.4)	2 ( 5.4)
8.50- 8.99	1 ( 2.6)	2 ( 4.8)	0 ( 0.0)
9.00- 9.49	2 ( 5.3)	4 ( 9.5)	0 ( 0.0)
9.50- 9.99	1 ( 2.6)	1 ( 2.4)	0 ( 0.0)
10.00-10.49	2 ( 5.3)	3 ( 7.1)	1 ( 2.7)
10.50-10.99	1 ( 2.6)	3 ( 7.1)	0 ( 0.0)
11.00-11.49	0 ( 0.0)	2 ( 4.8)	2 ( 5.4)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	4 ( 10.8)
12.00-12.49	0 ( 0.0)	2 ( 4.8)	0 ( 0.0)
12.50-12.99	0 ( 0.0)	1 ( 2.4)	1 ( 2.7)
13.00-13.49	0 ( 0.0)	1 ( 2.4)	1 ( 2.7)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.4)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	4 ( 10.8)

Table 10d. (continued)

STATION 6012 NORWOOD

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.4)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.00-16.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.4)
16.50-16.99	0 ( 0.0)	0 ( 0.0)	4 ( 10.8)
17.00-17.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
17.50-17.99	0 ( 0.0)	0 ( 0.0)	2 ( 5.4)
18.00-18.49	0 ( 0.0)	0 ( 0.0)	1 ( 2.7)
18.50-18.99	0 ( 0.0)	0 ( 0.0)	4 ( 10.8)
19.00-19.49	0 ( 0.0)	0 ( 0.0)	2 ( 5.4)
19.50-19.99	0 ( 0.0)	0 ( 0.0)	1 ( 2.7)
20.00-20.49	0 ( 0.0)	0 ( 0.0)	1 ( 2.7)
TOTALS	38.0	42.0	37.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 10e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

6012 NORWOOD

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.21	.16	.11	.20	.09	0.00	.42	.46	.03	.06	.11	.39	9.23
.10	.31	.28	.22	.35	.18	.06	.62	.65	.19	.31	.30	.49	10.28
.20	.46	.45	.40	.55	.33	.20	.88	.95	.44	.58	.47	.64	11.66
.30	.59	.59	.58	.73	.47	.34	1.10	1.21	.67	.80	.60	.76	12.73
.40	.73	.74	.75	.90	.61	.48	1.30	1.48	.91	1.03	.73	.87	13.70
.50	.87	.90	.95	1.09	.77	.64	1.51	1.77	1.17	1.26	.86	.99	14.65
.60	1.03	1.07	1.18	1.30	.96	.82	1.75	2.09	1.48	1.53	1.00	1.12	15.64
.70	1.23	1.28	1.46	1.56	1.19	1.06	2.02	2.47	1.87	1.85	1.16	1.28	16.74
.80	1.49	1.56	1.83	1.89	1.49	1.37	2.36	2.98	2.39	2.28	1.37	1.47	18.10
.90	1.90	2.01	2.45	2.42	2.00	1.90	2.91	3.78	3.26	2.96	1.70	1.77	20.11
.95	2.29	2.43	3.04	2.92	2.48	2.42	3.41	4.54	4.09	3.61	2.01	2.04	21.87
ALPHA	2.32	2.27	1.64	2.32	1.63	1.35	3.46	2.46	1.47	2.10	3.23	4.34	14.98
BETA	.44	.47	.74	.56	.60	.68	.49	.83	1.08	.75	.31	.25	1.00
Q	0.00	.02	.02	.02	.02	.07	.02	0.00	.05	.05	.05	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA = SHAPE PARAMETER      BETA = SCALE PARAMETER

Q = NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 10a. Mean monthly precipitation for period of record.

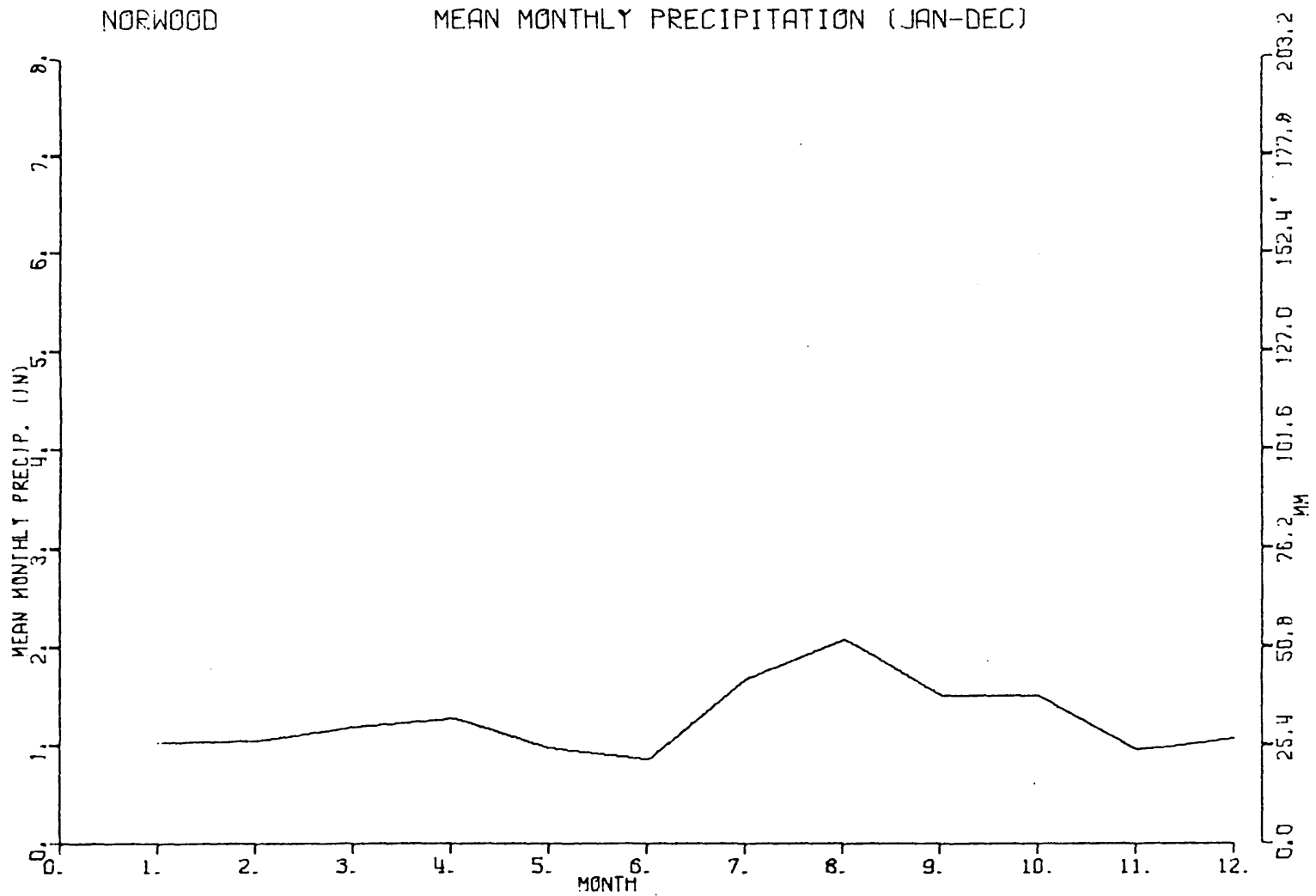


Figure 10b. Water year and 5 year moving mean precipitation.

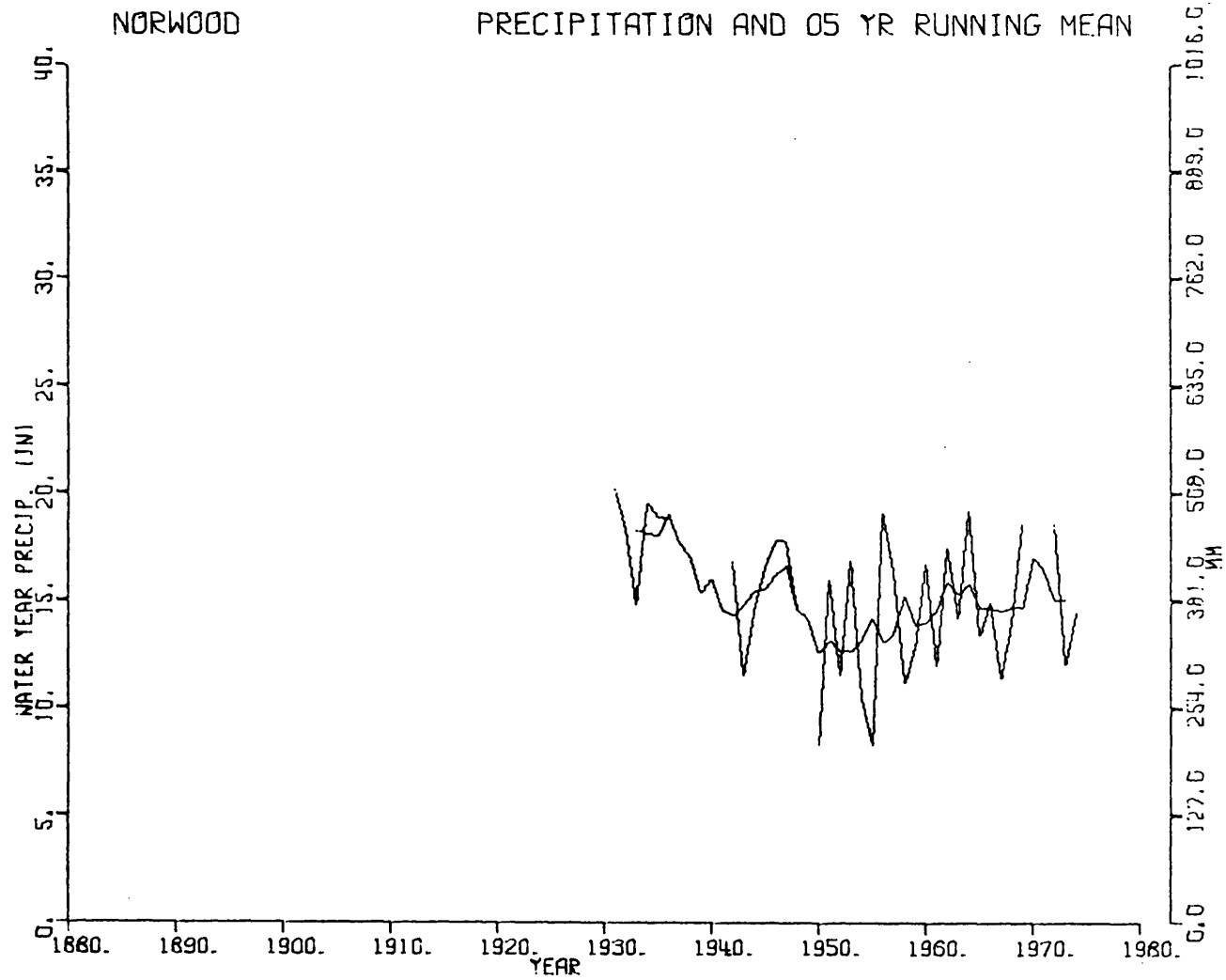


Figure 10c. Water year and 15 year moving mean precipitation.

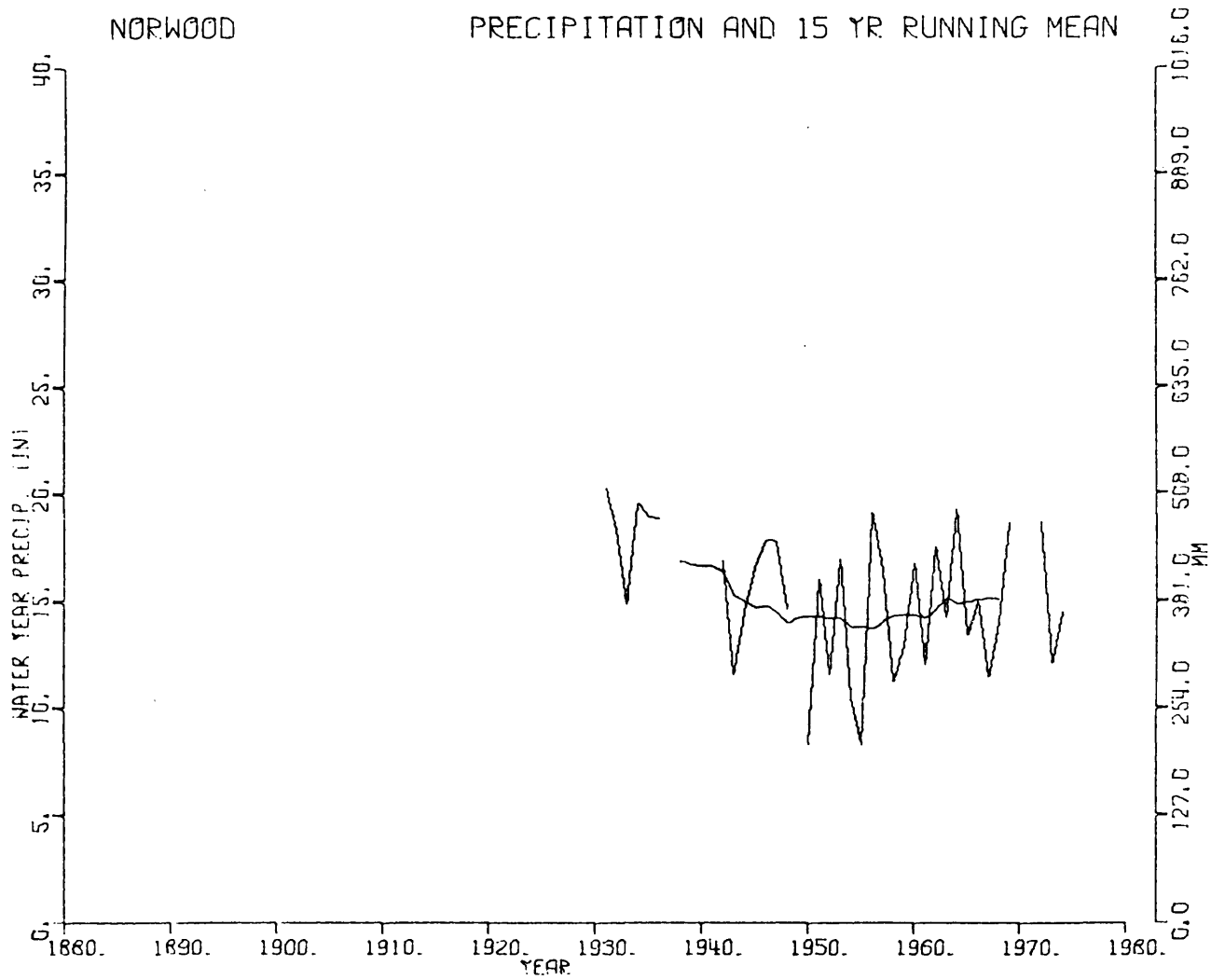


Table 11a. Time series and statistical summary of monthly and water year precipitation.

STATION 6203 OURAY

130

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1943	2.67	1.03	1.22	1.08	1.01	4.45	4.79	.90	1.86	2.13	.79	.64	22.57
1944	1.54	2.64	1.79	.44	1.92	1.69	4.01	1.77	1.51	2.05	3.02	.73	22.11
1945	2.30	.87	1.77	.95	1.46	2.80	2.44	2.59	.21	2.67	3.46	.85	21.37
1946	2.48	1.48	.85	.58	1.57	1.54	2.54	.78	3.11	2.18	3.83	1.96	22.90
1947	3.10	1.78	1.08	.91	2.29	3.29	2.73	.88	1.84	1.98	1.74	1.70	21.32
1948	1.61	1.76	1.31	2.73	1.04	2.60	1.94	1.85	3.22	1.66	1.63	1.12	21.52
1949	1.44	1.33	1.11	1.62	2.27	990.90	990.90	990.90	.94	2.75	1.20	1.39	933.90
1950	1.25	1.32	1.23	1.48	1.35	.91	1.60	1.01	.44	1.75	1.62	1.17	24.33
1951	1.63	1.34	2.52	1.56	1.51	2.05	2.39	1.92	.09	2.95	1.42	1.63	23.01
1952	.04	1.19	1.76	1.79	.58	1.40	2.31	2.57	.87	4.25	1.90	1.11	18.27
1953	2.52	2.32	1.48	.35	.75	.94	.41	2.27	.71	3.32	.54	2.84	18.75
1954	1.42	1.45	1.66	1.50	1.15	1.65	1.88	2.83	.98	1.81	3.06	.54	19.42
1955	1.50	1.78	1.26	2.39	1.25	1.02	1.32	1.06	.68	1.86	1.46	.55	14.73
1956	1.33	1.19	.50	3.13	1.67	2.53	2.86	.47	1.77	3.16	3.45	.19	25.56
1957	2.77	4.12	3.90	1.68	3.44	1.65	1.85	.75	1.18	.65	2.05	2.67	22.31
1958	1.54	1.78	2.66	1.37	1.44	2.50	1.70	.95	.37	.89	3.38	2.10	18.68
1959	2.29	1.79	1.07	1.40	2.57	2.92	1.33	1.14	.63	.84	2.28	1.71	16.47
1960	2.03	1.26	1.44	1.49	1.68	2.92	1.94	1.16	.52	1.37	2.61	3.52	20.44
1961	3.60	2.17	1.29	1.54	2.11	1.27	2.30	1.80	.40	2.16	1.10	2.33	22.12
1962	2.79	1.31	.60	1.65	2.36	1.45	.64	1.53	1.27	2.30	2.74	1.31	18.75
1963	3.27	1.21	1.41	2.08	1.82	2.32	1.53	1.87	.91	1.72	4.25	2.20	24.39
1964	.28	3.52	1.46	1.76	1.74	2.10	1.50	3.20	1.24	3.61	3.09	3.79	27.29
1965	2.14	1.29	1.91	1.02	1.06	.52	1.53	1.08	1.40	2.29	2.35	1.00	17.54
1966	.86	.89	3.05	1.01	1.50	.68	1.04	1.73	1.33	3.67	2.31	1.72	19.79
1967	1.45	.52	3.63	.85	2.87	.67	2.57	1.18	2.23	3.70	2.70	2.49	20.46
1968	1.77	1.15	1.85	2.32	2.26	1.78	1.14	.77	4.23	2.58	1.50	2.49	23.95
1969	6.01	1.10	1.18	.98	.44	2.23	2.32	.42	1.66	2.52	3.16	4.22	26.44
1970	4.40	3.49	.88	.57	1.95	1.22	.86	2.21	.38	1.13	2.91	1.34	21.84
1971	3.56	2.08	2.84	.83	.33	1.35	1.41	.50	1.17	1.66	.08	2.34	18.74
1972	4.33	2.72	2.50	1.11	.55	2.69	2.49	2.66	2.23	2.97	3.22	1.64	29.11
1973	.45	1.38	3.80	2.68	1.34	1.61	1.87	.04	1.08	1.74	.48	.94	17.41
1974	1.33	1.88	1.87	2.28	1.84	4.36	2.25	2.06	1.27	2.97	1.49	1.13	24.73
1975	1.24	2.38	.75	994.90	999.90	990.90	990.90	990.90	999.90	994.90	999.90	999.90	999.90
N	33	33	33	32	32	31	31	31	32	32	32	32	31
MEAN	2.06	1.65	1.55	1.44	1.57	1.97	1.98	1.55	1.18	2.26	2.31	1.64	21.25
STD DEV	1.35	.83	.82	.72	.74	.98	.99	.88	.96	.90	1.13	1.08	3.49
CV	.65	.53	.53	.50	.47	.50	.45	.57	.81	.40	.49	.66	.16
STD ERR	.23	.15	.14	.13	.13	.18	.16	.16	.17	.16	.20	.19	.63
MAX	6.01	4.12	3.80	3.13	3.44	4.45	4.79	3.47	4.23	4.25	4.25	4.42	29.11
MIN	.04	.33	.50	.35	.33	.52	.41	.04	.09	.65	.28	.11	14.03
RANGE	5.97	3.79	3.30	2.78	3.11	3.93	4.38	3.43	4.14	3.60	3.97	4.31	15.08

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA



Table 11b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 6203 OURAY

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1943	11.46	11.11
1944	10.02	12.09
1945	9.15	12.22
1946	4.50	14.40
1947	11.45	9.87
1948	10.05	11.47
1949	999.90	999.90
1950	6.54	7.49
1951	10.61	12.40
1952	6.26	12.01
1953	8.36	10.39
1954	7.83	12.09
1955	8.20	6.53
1956	10.76	14.80
1957	14.16	8.15
1958	9.29	9.39
1959	11.04	5.93
1960	9.82	11.12
1961	11.98	10.14
1962	10.16	8.79
1963	12.11	12.88
1964	10.86	16.43
1965	7.94	9.65
1966	7.99	11.80
1967	9.99	10.87
1968	11.13	12.82
1969	11.94	14.50
1970	12.51	9.37
1971	10.69	6.10
1972	12.90	15.21
1973	11.26	6.15
1974	13.56	11.17
1975	999.90	999.90
N	31	31
MEAN	10.31	10.95
STD DEV	2.00	2.66
CV	.19	.24
STD ERR	.36	.48
MAX	14.16	16.43
MIN	6.26	5.93
RANGE	7.90	10.50

Table 11c. Absolute and percent relative frequencies of monthly precipitation.

STATION 6203 OUPAY

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	4 ( 12.1)	1 ( 3.0)	0 ( 0.0)	3 ( 9.4)	3 ( 9.4)	0 ( 0.0)	1 ( 3.2)	2 ( 6.5)	8 ( 25.0)	0 ( 0.0)	2 ( 6.3)	4 ( 12.5)
.50- .99	3 ( 9.1)	5 ( 15.2)	8 ( 24.2)	7 ( 21.9)	3 ( 9.4)	5 ( 16.1)	2 ( 6.5)	8 ( 25.8)	9 ( 28.1)	3 ( 9.4)	3 ( 9.4)	6 ( 18.7)
1.00- 1.49	6 ( 18.2)	14 ( 42.4)	14 ( 42.4)	7 ( 21.9)	8 ( 25.0)	6 ( 19.4)	5 ( 16.1)	6 ( 19.4)	7 ( 21.9)	2 ( 6.3)	4 ( 12.5)	0 ( 0.0)
1.50- 1.99	4 ( 12.1)	4 ( 12.1)	5 ( 15.2)	8 ( 25.0)	10 ( 31.3)	6 ( 19.4)	10 ( 32.3)	6 ( 19.4)	4 ( 12.5)	9 ( 28.1)	5 ( 15.6)	6 ( 18.7)
2.00- 2.49	5 ( 15.2)	4 ( 12.1)	0 ( 0.0)	4 ( 12.5)	5 ( 15.6)	4 ( 12.9)	7 ( 22.6)	3 ( 9.7)	1 ( 3.1)	6 ( 18.7)	3 ( 9.4)	3 ( 9.4)
2.50- 2.99	4 ( 12.1)	2 ( 6.1)	3 ( 9.1)	2 ( 6.3)	2 ( 6.3)	7 ( 22.6)	4 ( 12.9)	4 ( 12.9)	0 ( 0.0)	6 ( 18.7)	4 ( 12.5)	4 ( 12.5)
3.00- 3.49	2 ( 6.1)	1 ( 3.0)	1 ( 3.0)	1 ( 3.1)	1 ( 3.1)	1 ( 3.2)	0 ( 0.0)	2 ( 6.5)	2 ( 6.3)	2 ( 6.3)	7 ( 21.9)	0 ( 0.0)
3.50- 3.99	2 ( 6.1)	1 ( 3.0)	2 ( 6.1)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	3 ( 9.4)	2 ( 6.3)	2 ( 6.3)
4.00- 4.49	2 ( 6.1)	1 ( 3.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 6.5)	1 ( 3.2)	0 ( 0.0)	1 ( 3.1)	1 ( 3.1)	2 ( 6.3)	1 ( 3.1)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.2)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	1 ( 3.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	33.	33.	33.	32.	32.	31.	31.	31.	32.	32.	32.	32.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL.  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 11d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 6203 OURAY

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	1 ( 3.2)	0 ( 0.0)
6.00- 6.49	1 ( 3.2)	1 ( 3.2)	0 ( 0.0)
6.50- 6.99	1 ( 3.2)	1 ( 3.2)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	1 ( 3.2)	0 ( 0.0)

Table 11d. (continued)

STATION 6203 OURAY

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATFR YEAR
7.50- 7.99	( 3 9.7)	( 0 0.0)	( 0 0.0)
8.00- 8.49	( 3 9.7)	( 2 6.5)	( 0 0.0)
8.50- 8.99	( 0 0.0)	( 1 3.2)	( 0 0.0)
9.00- 9.49	( 2 6.5)	( 2 6.5)	( 0 0.0)
9.50- 9.99	( 2 6.5)	( 2 6.5)	( 0 0.0)
10.00-10.49	( 3 9.7)	( 2 6.5)	( 0 0.0)
10.50-10.99	( 4 12.4)	( 1 3.2)	( 0 0.0)
11.00-11.49	( 5 16.1)	( 4 12.9)	( 0 0.0)
11.50-11.99	( 2 6.5)	( 1 3.2)	( 0 0.0)
12.00-12.49	( 1 3.2)	( 5 16.1)	( 0 0.0)
12.50-12.99	( 1 3.2)	( 2 6.5)	( 0 0.0)
13.00-13.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
13.50-13.99	( 2 6.5)	( 0 0.0)	( 0 0.0)
14.00-14.49	( 1 3.2)	( 2 6.5)	( 1 3.2)
14.50-14.99	( 0 0.0)	( 1 3.2)	( 1 3.2)

Table 11d. (continued)

STATION 6203 OURAY

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	( 0 ) ( 0.0)	( 1 ) ( 3.2)	( 0 ) ( 0.0)
15.50-15.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 0 ) ( 0.0)
16.00-16.49	( 0 ) ( 0.0)	( 1 ) ( 3.2)	( 0 ) ( 0.0)
16.50-16.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 1 ) ( 3.2)
17.00-17.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 1 ) ( 3.2)
17.50-17.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 1 ) ( 3.2)
18.00-18.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 1 ) ( 3.2)
18.50-18.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 4 ) ( 12.9)
19.00-19.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 0 ) ( 0.0)
19.50-19.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 2 ) ( 6.5)
20.00-20.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 0 ) ( 0.0)
20.50-20.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 2 ) ( 6.5)
21.00-21.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 2 ) ( 6.5)
21.50-21.99	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 2 ) ( 6.5)
22.00-22.49	( 0 ) ( 0.0)	( 0 ) ( 0.0)	( 3 ) ( 9.7)

Table 11d. (continued)

STATION 6203 OURAY

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
22.50-22.99	( 0 0.0)	( 0 0.0)	( 2 6.5)
23.00-23.49	( 0 0.0)	( 0 0.0)	( 1 3.2)
23.50-23.99	( 0 0.0)	( 0 0.0)	( 1 3.2)
24.00-24.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
24.50-24.99	( 0 0.0)	( 0 0.0)	( 2 6.5)
25.00-25.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
25.50-25.99	( 0 0.0)	( 0 0.0)	( 1 3.2)
26.00-26.49	( 0 0.0)	( 0 0.0)	( 1 3.2)
26.50-26.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
27.00-27.49	( 0 0.0)	( 0 0.0)	( 1 3.2)
27.50-27.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
28.00-28.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
28.50-28.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
29.00-29.49	( 0 0.0)	( 0 0.0)	( 1 3.2)
TOTALS	31.0	31.0	31.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 11e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

6203 OURAY

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.48	.52	.68	.77	.33	.16	.97	.67	.27	.30	.56	.55	15.45
.10	.62	.67	.87	.95	.47	.25	1.18	.89	.42	.47	.71	.69	16.55
.20	.82	.88	1.14	1.21	.70	.42	1.46	1.22	.65	.77	.94	.91	17.45
.30	.99	1.07	1.37	1.43	.90	.59	1.69	1.50	.88	1.05	1.14	1.08	19.01
.40	1.15	1.25	1.59	1.64	1.11	.76	1.91	1.78	1.10	1.35	1.32	1.25	19.94
.50	1.32	1.43	1.81	1.85	1.33	.95	2.13	2.07	1.35	1.68	1.51	1.43	20.84
.60	1.50	1.63	2.00	2.08	1.58	1.17	2.37	2.40	1.63	2.05	1.72	1.62	21.77
.70	1.72	1.87	2.34	2.34	1.88	1.44	2.64	2.77	1.98	2.52	1.97	1.84	22.79
.80	2.00	2.17	2.71	2.68	2.28	1.80	2.98	3.26	2.44	3.14	2.28	2.13	24.02
.90	2.43	2.64	3.28	3.19	2.91	2.40	3.51	4.03	3.18	4.15	2.77	2.57	25.81
.95	2.82	3.08	3.80	3.66	3.51	2.98	3.98	4.75	3.89	5.12	3.22	2.97	27.35
ALPHA	3.86	3.81	4.10	4.85	2.31	1.64	5.87	3.22	1.93	1.73	3.91	4.20	33.63
BETA	.37	.41	.48	.41	.67	.72	.38	.72	.84	1.19	.42	.37	.63
Q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 11a. Mean monthly precipitation for period of record.

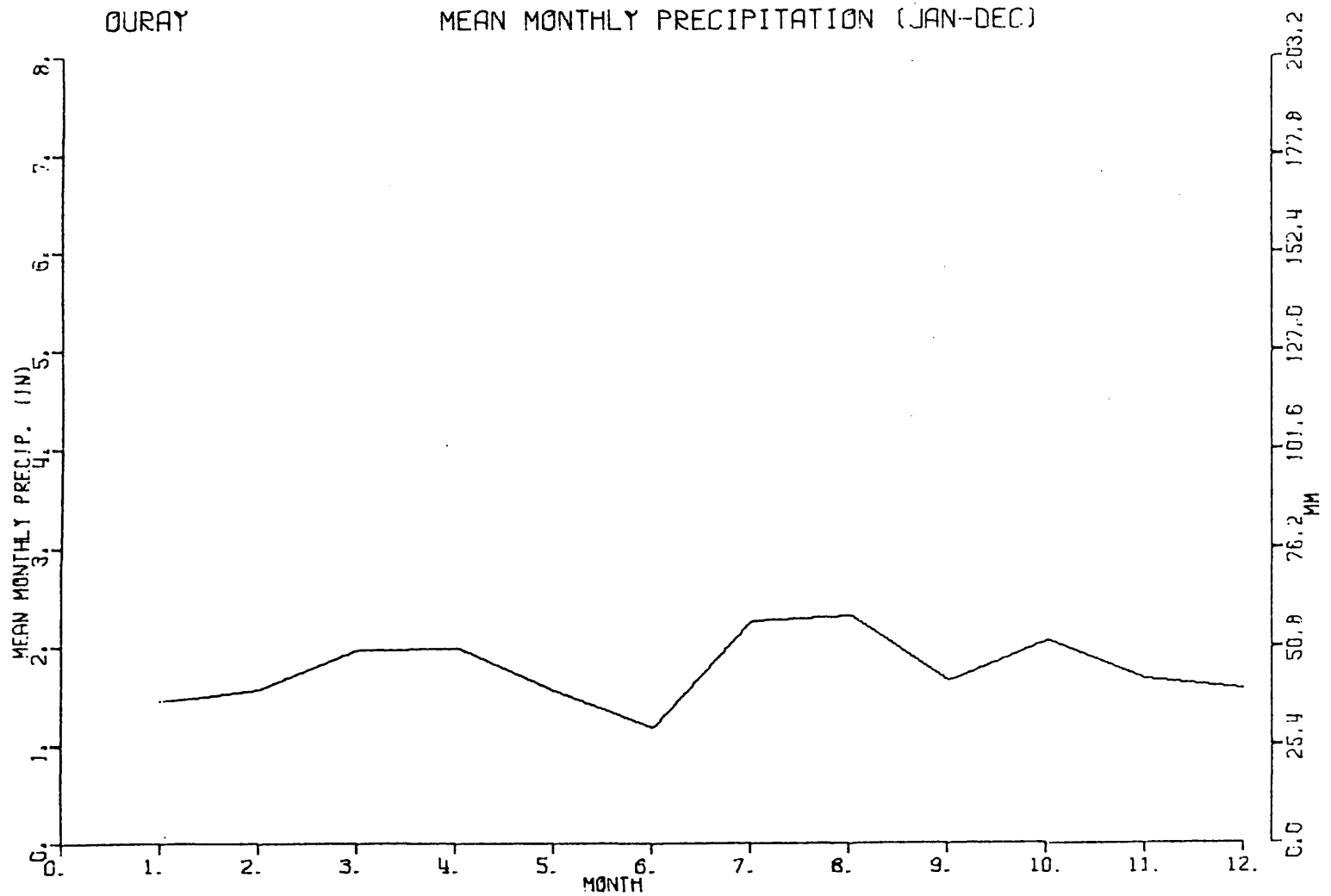




Figure 11b. Water year and 5 year moving mean precipitation.

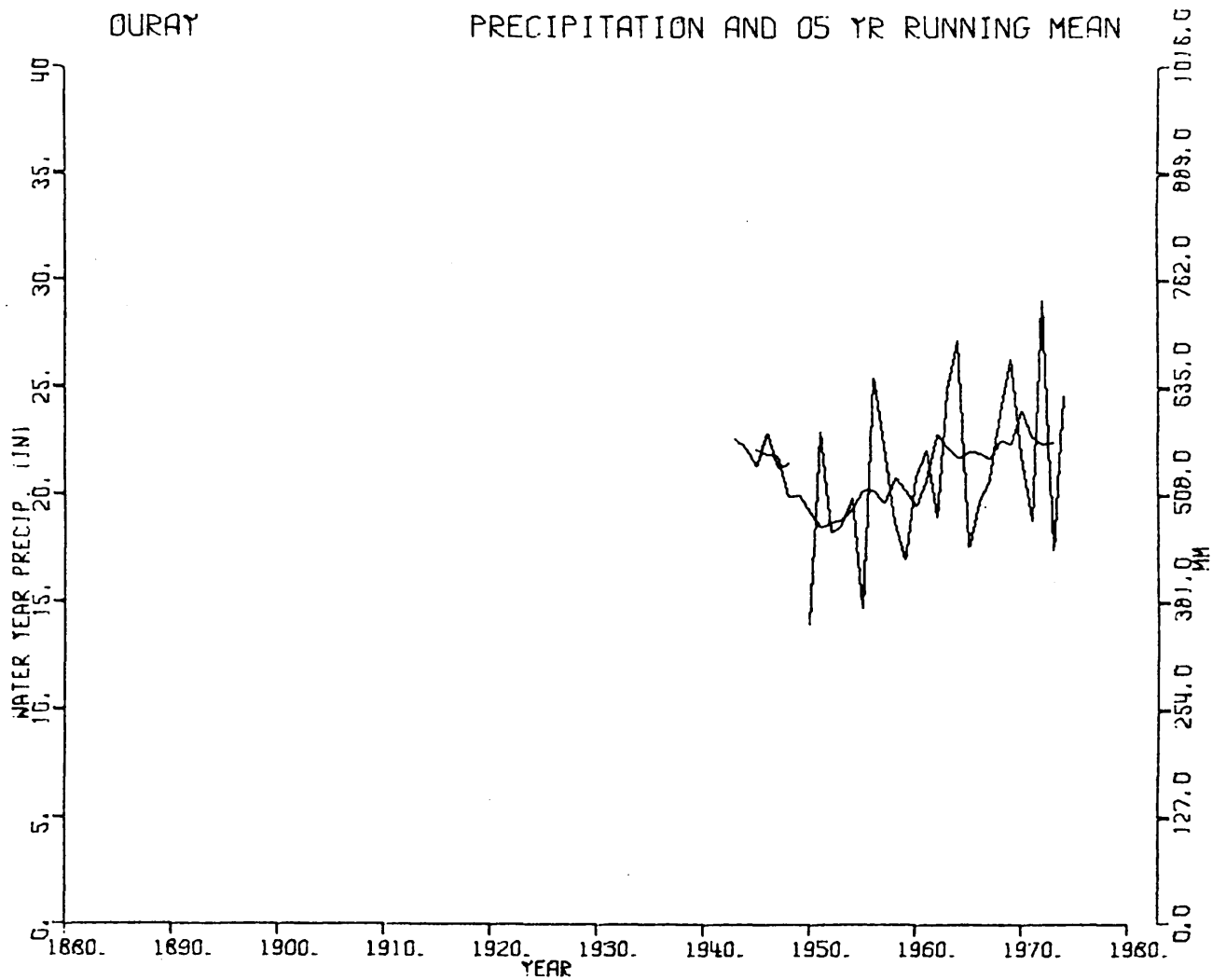


Figure 11c. Water year and 15 year moving mean precipitation.

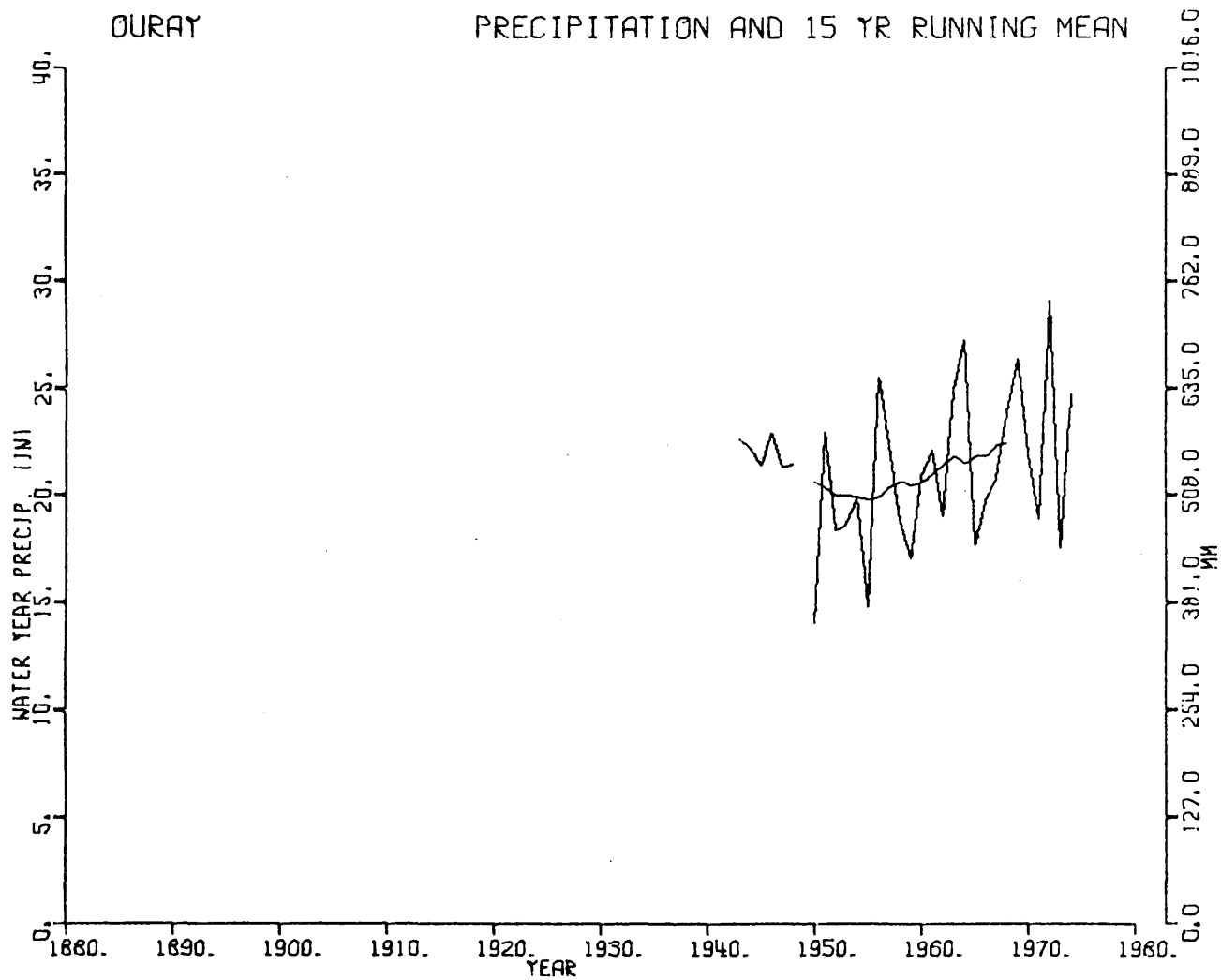


Table 12a. Time series and statistical summary of monthly and water year precipitation.

STATION 6306 PAONIA 1 SW

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1957	2.60	2.59	.80	.51	1.61	2.38	.84	.28	1.13	.31	1.80	1.55	16.40
1958	.72	1.03	1.77	.52	1.35	.91	1.79	1.33	.45	.05	1.37	1.74	12.83
1959	1.95	.34	1.02	1.20	1.83	2.47	.99	1.59	.36	.23	1.05	1.26	12.29
1960	1.24	.93	1.49	.13	.65	2.49	1.43	1.70	.27	.71	1.25	3.37	15.56
1961	1.04	1.52	1.43	.63	3.26	.45	3.11	1.22	.19	1.27	1.21	1.52	15.85
1962	1.10	1.19	1.00	2.81	1.01	1.41	.90	1.54	.67	.51	2.58	1.23	14.95
1963	1.91	1.07	.41	.55	.69	1.90	2.46	1.47	.84	1.24	2.53	1.79	16.95
1964	0.00	.82	2.55	1.33	1.23	2.13	1.42	1.55	1.32	1.72	1.63	2.74	18.44
1965	1.11	2.60	1.30	.27	.81	.21	1.17	1.42	.65	.33	1.22	.41	11.90
1966	1.05	1.94	3.24	.91	.23	.54	1.07	.95	.76	1.46	2.48	2.24	16.87
1967	.05	.69	1.95	.44	2.17	.77	1.73	1.07	.06	2.19	2.13	.50	13.75
1968	1.39	.81	1.41	2.68	.81	.94	.33	.48	3.30	.71	.70	.90	14.45
1969	3.16	.65	1.65	.45	.08	2.24	2.39	.92	1.71	1.51	1.41	2.96	19.13
1970	2.24	1.73	1.46	.53	1.07	.37	1.52	1.75	.09	2.34	.79	1.97	15.90
1971	2.64	1.32	3.12	.52	.12	.31	.58	.46	.49	.42	.14	2.13	12.25
1972	3.43	1.28	2.42	1.16	.57	1.29	1.32	3.69	2.44	1.97	1.76	901.17	922.50
1973	.72	.57	1.48	2.88	.72	1.14	1.14	.06	.46	.97	.57	.52	11.23
1974	1.26	.94	900.60	1.09	.80	1.88	.72	.67	.37	.43	.46	.20	909.52
1975	.84	1.22	.27	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	499.90
N	19	19	19	18	18	18	18	18	18	18	18	18	18
MEAN	1.50	1.22	1.49	1.03	1.06	1.32	1.38	1.12	.86	1.02	1.34	1.53	15.00
STD DEV	.97	.62	.85	.87	.78	.81	.71	.82	.86	.72	.79	.93	3.23
CV	.65	.51	.57	.84	.74	.61	.51	.73	.94	.70	.59	.61	.22
STD ERR	.22	.14	.19	.21	.18	.19	.17	.19	.20	.17	.19	.22	.75
MAX	3.43	2.60	3.24	2.88	3.26	2.49	3.11	3.69	3.30	2.34	2.63	3.37	22.50
MIN	0.00	.34	.27	.13	.08	.21	.33	.06	.06	.05	.14	.20	9.42
RANGE	3.43	2.26	2.97	2.75	3.18	2.28	2.78	3.63	3.24	2.29	2.49	3.17	13.08

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

141

Table 12b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 6306 PAONIA ) SW

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1957	10.49	5.91
1958	5.30	6.73
1959	8.81	3.48
1960	6.93	8.73
1961	8.23	7.52
1962	5.52	6.43
1963	6.53	10.43
1964	8.06	10.38
1965	6.30	5.60
1966	7.91	8.96
1967	6.07	7.68
1968	8.04	6.42
1969	8.23	10.40
1970	7.44	8.46
1971	8.03	4.22
1972	10.15	12.35
1973	7.51	3.72
1974	6.57	2.85
1975	999.90	999.90
N	18	18
MEAN	7.73	7.26
STD DEV	1.14	2.74
CV	.17	.38
STD ERR	.32	.65
MAX	10.49	12.35
MIN	5.30	2.85
RANGE	5.19	9.50

Table 12c. Absolute and percent relative frequencies of monthly precipitation.

STATION 6306 PAONIA 1 SW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	2 ( 10.5)	1 ( 5.3)	2 ( 10.5)	4 ( 22.2)	3 ( 16.7)	4 ( 22.2)	1 ( 5.6)	4 ( 22.2)	9 ( 50.0)	6 ( 33.3)	3 ( 16.7)	2 ( 11.1)
.50- .99	3 ( 15.8)	7 ( 36.8)	3 ( 15.8)	7 ( 38.9)	7 ( 38.9)	4 ( 22.2)	5 ( 27.8)	5 ( 27.8)	4 ( 22.2)	4 ( 22.2)	3 ( 16.7)	4 ( 22.2)
1.00- 1.49	7 ( 36.8)	6 ( 31.6)	8 ( 42.1)	4 ( 22.2)	4 ( 22.2)	3 ( 16.7)	6 ( 33.3)	5 ( 27.8)	2 ( 11.1)	3 ( 16.7)	5 ( 27.8)	2 ( 11.1)
1.50- 1.99	2 ( 10.5)	3 ( 15.8)	2 ( 10.5)	0 ( 0.0)	2 ( 11.1)	2 ( 11.1)	3 ( 16.7)	3 ( 16.7)	1 ( 5.6)	3 ( 16.7)	3 ( 16.7)	5 ( 27.8)
2.00- 2.49	1 ( 5.3)	0 ( 0.0)	1 ( 5.3)	0 ( 0.0)	1 ( 5.6)	5 ( 27.8)	2 ( 11.1)	0 ( 0.0)	1 ( 5.6)	2 ( 11.1)	2 ( 11.1)	2 ( 11.1)
2.50- 2.99	2 ( 10.5)	2 ( 10.5)	1 ( 5.3)	3 ( 16.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 11.1)	2 ( 11.1)
3.00- 3.49	2 ( 10.5)	0 ( 0.0)	2 ( 10.5)	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	19.	19.	19.	18.	18.	18.	18.	18.	18.	18.	18.	18.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 12d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 6306 PAONIA 1 SW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	1 ( 5.6)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	2 ( 11.1)	0 ( 0.0)
6.00- 6.49	2 ( 11.1)	2 ( 11.1)	0 ( 0.0)
6.50- 6.99	3 ( 16.7)	1 ( 5.6)	0 ( 0.0)
7.00- 7.49	1 ( 5.6)	0 ( 0.0)	0 ( 0.0)

Table 12d. (continued)

STATION 6306 PAONIA 1 SW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	2 ( 11.1)	2 ( 11.1)	0 ( 0.0)
8.00- 8.49	5 ( 27.8)	1 ( 5.6)	0 ( 0.0)
8.50- 8.99	2 ( 11.1)	2 ( 11.1)	0 ( 0.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.00-10.49	2 ( 11.1)	2 ( 11.1)	0 ( 0.0)
10.50-10.99	0 ( 0.0)	1 ( 5.6)	0 ( 0.0)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
12.00-12.49	0 ( 0.0)	1 ( 5.6)	3 ( 16.7)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	1 ( 5.6)

Table 12d. (continued)

STATION 6306 PAONIA 1 SW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
15.50-15.99	( 0 0.0)	( 0 0.0)	( 3 16.7)
16.00-16.49	( 0 0.0)	( 0 0.0)	( 1 5.6)
16.50-16.99	( 0 0.0)	( 0 0.0)	( 2 11.1)
17.00-17.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
17.50-17.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
18.00-18.49	( 0 0.0)	( 0 0.0)	( 1 5.6)
18.50-18.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
19.00-19.49	( 0 0.0)	( 0 0.0)	( 1 5.6)
19.50-19.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
20.00-20.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
20.50-20.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
21.00-21.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
21.50-21.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
22.00-22.49	( 0 0.0)	( 0 0.0)	( 1 5.6)



Table 12d. (continued)

STATION 6306 PAONIA 1 SW

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
TOTALS	18.0	18.0	18.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 12e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

6306 PAONIA 1 SW

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.16	.15	.27	.48	.18	.08	.15	.28	.21	0.00	.44	.40	10.39
.10	.24	.24	.39	.61	.28	.14	.23	.41	.33	.30	.56	.55	11.28
.20	.39	.39	.58	.80	.44	.26	.38	.61	.55	.58	.72	.76	12.43
.30	.54	.54	.76	.96	.60	.38	.52	.80	.75	.81	.86	.95	13.30
.40	.68	.69	.94	1.11	.76	.51	.67	1.00	.96	1.03	.99	1.14	14.08
.50	.85	.86	1.13	1.27	.93	.66	.84	1.20	1.19	1.27	1.13	1.33	14.84
.60	1.03	1.05	1.35	1.44	1.13	.83	1.03	1.44	1.46	1.54	1.28	1.55	15.62
.70	1.26	1.29	1.61	1.65	1.37	1.05	1.26	1.72	1.78	1.87	1.45	1.80	16.49
.80	1.57	1.61	1.96	1.91	1.69	1.35	1.57	2.09	2.22	2.30	1.67	2.13	17.54
.90	2.07	2.14	2.51	2.31	2.21	1.86	2.09	2.69	2.94	2.99	2.01	2.65	19.07
.95	2.55	2.64	3.04	2.68	2.71	2.35	2.58	3.26	3.63	3.64	2.32	3.14	20.41
ALPHA	1.77	1.70	2.22	4.03	1.89	1.31	1.70	2.18	1.73	2.12	4.32	2.98	24.14
BETA	.59	.62	.60	.34	.59	.66	.61	.65	.84	.75	.28	.50	.62
Q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.05	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 12a. Mean monthly precipitation for period of record.

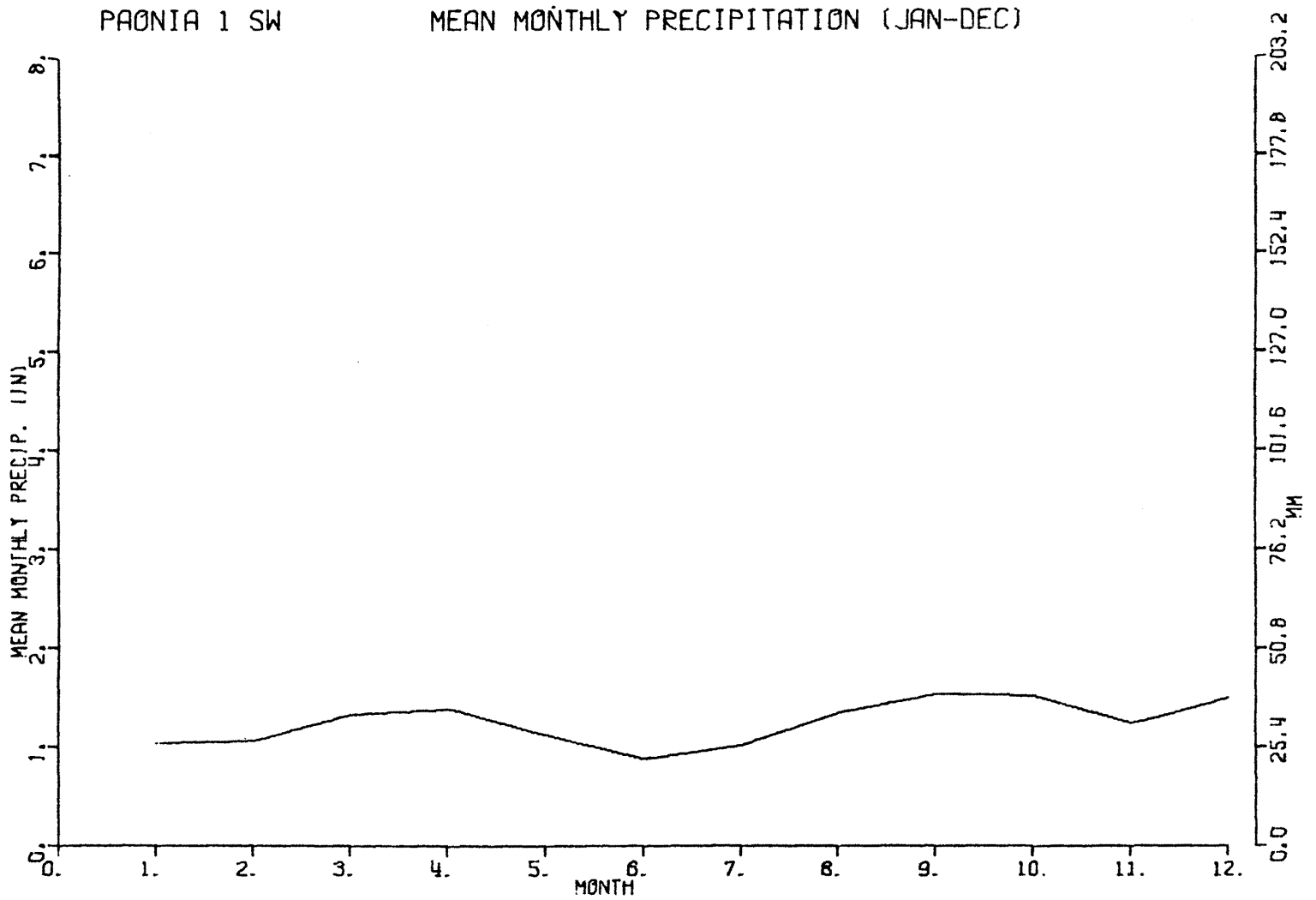


Figure 12b. Water year and 5 year moving mean precipitation.

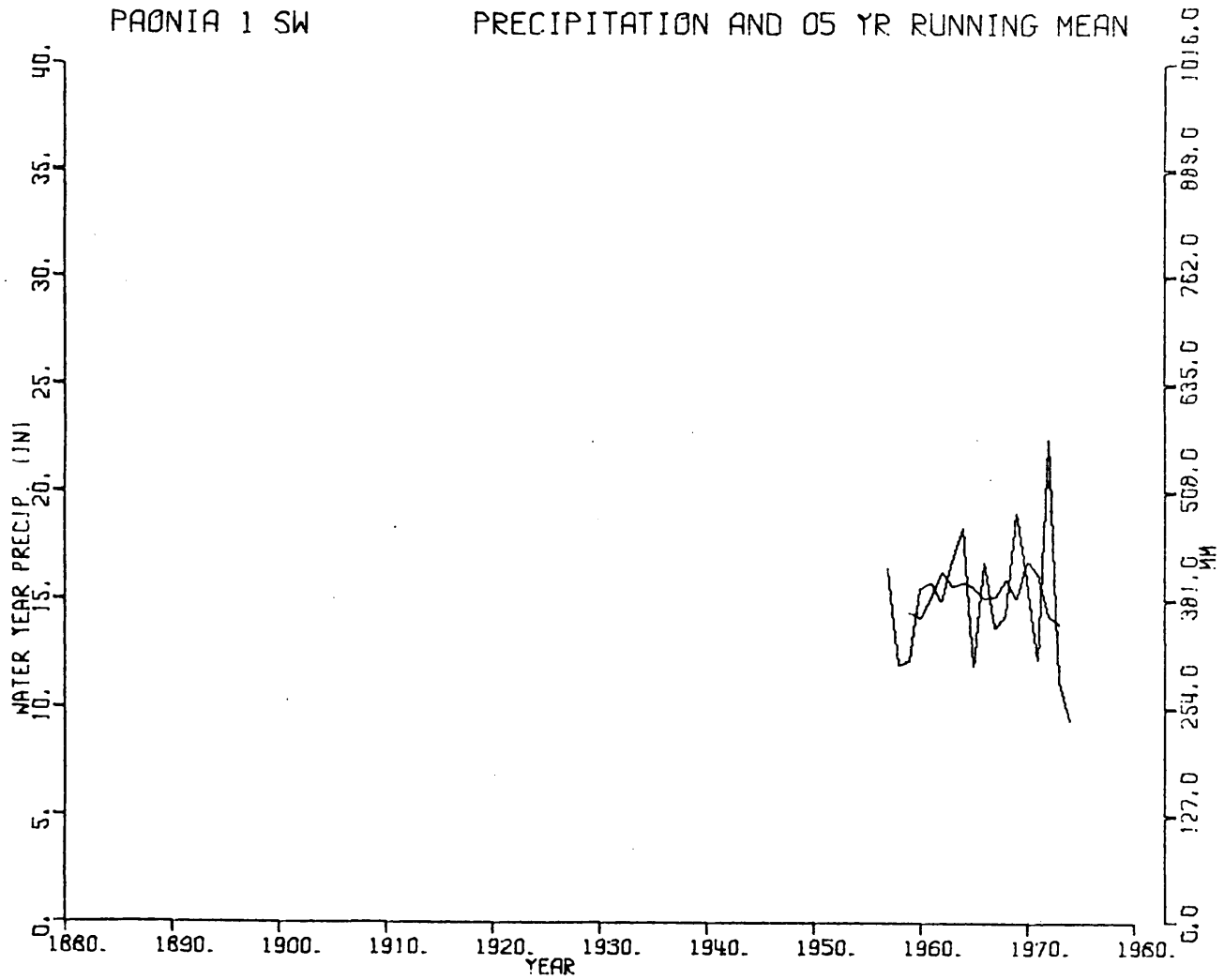


Figure 12c. Water year and 15 year moving mean precipitation.

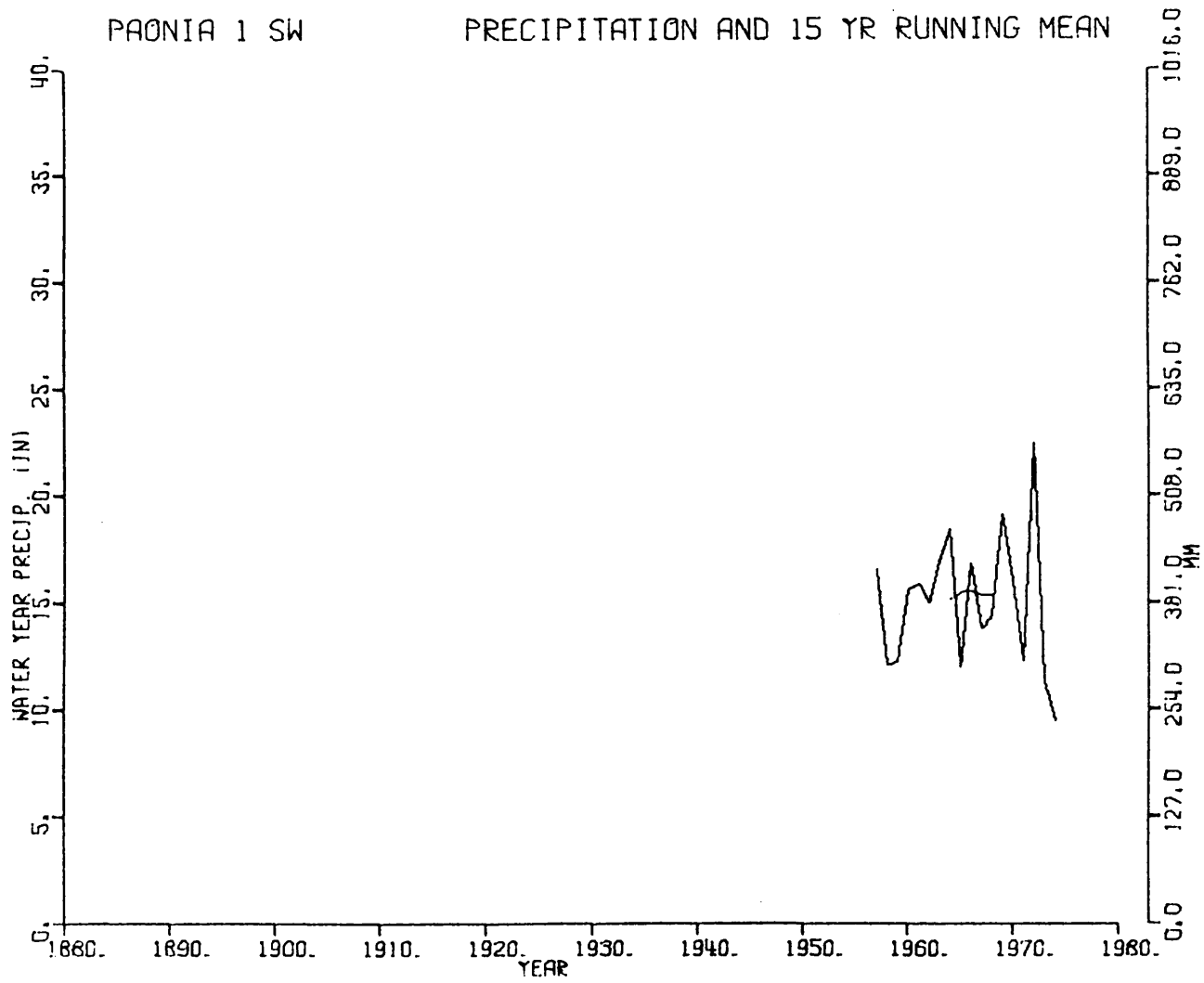


Table 13a. Time series and statistical summary of monthly and water year precipitation.

STATION 6524 PLACERVILLE

152

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1947	2.15	1.04	1.65	1.05	4.02	2.20	3.16	.40	1.25	2.22	1.04	.29	20.47
1948	.01	.24	.72	.65	.76	.78	.59	.72	1.31	.67	.97	2.42	19.24
1949	1.05	.15	.46	1.03	.87	1.30	.43	.29	.10	.23	.24	.33	6.48
1950	0.00	.05	.48	.31	.29	.22	.21	.55	.13	.30	.56	.37	3.47
1951	.26	.39	999.90	.44	1.14	.73	.62	.33	0.00	.70	.66	.28	999.90
1952	0.00	.51	.66	.49	.33	.93	.81	.54	.19	.37	.38	.13	5.34
1953	.29	.25	.28	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1954	999.90	.72	999.90	900.90	901.45	901.00	901.38	901.81	900.62	.24	2.91	0.60	999.90
1955	.19	.90	.93	2.40	.07	.04	.24	.76	.89	.79	3.35	.30	7.86
1956	1.10	900.30	1.15	902.05	.65	1.53	1.83	3.60	.04	4.43	3.63	0.00	920.35
1957	2.88	2.40	.73	1.67	1.79	.96	1.78	0.00	0.00	2.28	2.52	1.75	15.76
1958	1.40	1.04	.59	1.42	1.90	1.40	1.00	.19	.55	.59	3.36	2.04	13.78
1959	2.45	1.30	.49	901.32	1.90	2.44	1.37	.82	.72	.80	3.36	1.05	914.11
1960	1.11	1.40	.90	.45	1.18	2.63	1.26	.66	0.00	.45	2.15	1.45	15.54
1961	2.25	.89	.45	.16	1.61	1.23	.83	1.62	.72	.63	.05	1.50	11.84
1962	.41	3.75	.43	.42	1.98	1.27	.07	.34	.57	.68	1.78	0.00	10.70
1963	2.32	.64	901.22	1.33	1.46	4.52	3.66	1.50	.07	3.01	2.28	6.16	928.71
1964	0.00	1.94	2.07	2.03	2.15	1.34	3.99	3.29	1.54	904.37	2.32	1.40	931.72
1965	.55	1.53	1.79	.15	900.76	0.00	.83	.55	.57	.86	2.71	1.75	911.06
1966	.23	.57	1.92	.76	.13	.94	.45	1.77	1.46	3.03	2.32	.55	14.13
1967	.81	.10	1.51	900.65	1.12	.22	1.76	.75	0.00	3.05	2.88	0.00	912.85
1968	.45	.75	1.83	1.62	1.70	.70	0.00	1.03	2.51	2.47	3.68	3.24	20.02
1969	3.23	1.18	1.53	1.37	1.56	2.33	1.42	0.00	1.24	4.18	2.66	5.17	24.87
1970	2.99	1.47	1.57	.76	1.91	1.24	2.30	3.29	0.00	.98	2.05	.52	26.03
1971	1.41	2.18	3.31	.48	.08	1.51	1.23	1.05	2.60	999.90	.99	2.28	999.90
1972	5.63	999.90	3.65	900.85	.22	2.08	2.40	2.41	2.48	1.18	1.58	1.98	999.90
1973	1.44	.46	5.01	5.97	1.59	1.38	.72	0.00	.33	4.67	1.65	2.17	25.90
1974	2.05	1.23	903.41	3.07	2.19	5.13	.46	901.62	.83	2.59	1.51	2.57	928.66
1975	.75	1.57	1.89	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	28	28	27	27	27	27	27	27	27	26	27	27	23
MEAN	1.34	1.01	1.50	1.23	1.18	1.45	1.25	1.11	.80	1.91	1.84	1.47	16.15
STD DEV	1.31	.83	1.16	1.19	.87	1.21	1.06	1.03	.79	2.06	1.08	1.56	7.76
CV	.98	.82	.77	.96	.73	.84	.84	.93	1.00	1.08	.59	1.06	4.48
STD ERR	.25	.16	.22	.23	.17	.23	.20	.20	.15	.40	.21	.30	1.62
MAX	5.63	3.75	5.01	5.97	4.02	5.13	3.99	3.60	2.50	9.37	3.68	6.19	31.72
MIN	0.00	.05	.28	.15	.07	0.00	0.00	0.00	0.00	.23	0.00	0.00	3.47
RANGE	5.63	3.70	4.73	5.82	3.95	5.13	3.99	3.60	2.60	9.14	3.68	6.10	28.25

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 13b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 6524 PLACERVILLE

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1947	12.11	8.36
1948	3.16	7.08
1949	4.86	1.62
1950	1.35	2.12
1951	999.90	2.59
1952	2.92	2.42
1953	999.90	999.90
1954	999.90	7.00
1955	4.53	3.33
1956	6.78	13.57
1957	10.43	5.33
1958	5.75	8.03
1959	8.99	5.12
1960	8.17	6.87
1961	5.59	6.25
1962	7.26	3.44
1963	11.49	17.22
1964	9.57	22.15
1965	4.78	6.28
1966	4.55	9.58
1967	4.41	8.44
1968	7.05	12.97
1969	10.20	14.67
1970	9.99	10.04
1971	8.97	999.90
1972	999.90	12.03
1973	16.25	9.74
1974	17.08	9.58
1975	999.90	999.90
N	24	26
MEAN	7.76	9.30
STD DEV	3.97	4.96
CV	.51	.60
STD ERR	.41	.97
MAX	17.08	22.15
MIN	1.35	1.62
RANGE	15.73	20.53

Table 13 c. Absolute and percent relative frequencies of monthly precipitation.

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	10 ( 35.7)	8 ( 28.6)	6 ( 22.2)	8 ( 29.6)	6 ( 22.2)	5 ( 18.5)	7 ( 25.9)	8 ( 29.6)	10 ( 37.0)	5 ( 19.2)	4 ( 14.8)	10 ( 37.0)
.50- .99	3 ( 10.7)	8 ( 28.6)	6 ( 22.2)	7 ( 25.9)	7 ( 25.9)	6 ( 22.2)	7 ( 25.9)	8 ( 29.6)	9 ( 33.3)	10 ( 37.0)	5 ( 18.5)	3 ( 11.1)
1.00- 1.49	6 ( 21.4)	6 ( 21.4)	2 ( 7.4)	5 ( 18.5)	5 ( 18.5)	7 ( 25.9)	6 ( 22.2)	2 ( 7.4)	4 ( 14.8)	1 ( 3.7)	1 ( 3.7)	2 ( 7.4)
1.50- 1.99	0 ( 0.0)	3 ( 10.7)	8 ( 29.6)	2 ( 7.4)	6 ( 22.2)	2 ( 7.4)	2 ( 7.4)	5 ( 18.5)	1 ( 3.7)	0 ( 0.0)	4 ( 14.8)	4 ( 14.8)
2.00- 2.49	5 ( 17.9)	2 ( 7.1)	1 ( 3.7)	3 ( 11.1)	2 ( 7.4)	4 ( 14.8)	2 ( 7.4)	1 ( 3.7)	1 ( 3.7)	2 ( 7.7)	4 ( 14.8)	3 ( 11.1)
2.50- 2.99	2 ( 7.1)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	2 ( 7.4)	1 ( 3.8)	2 ( 7.7)	2 ( 7.4)
3.00- 3.49	1 ( 3.6)	0 ( 0.0)	2 ( 7.4)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	2 ( 7.4)	0 ( 0.0)	3 ( 11.5)	1 ( 3.7)	1 ( 3.7)
3.50- 3.99	0 ( 0.0)	1 ( 3.6)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 7.4)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	2 ( 7.4)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	2 ( 7.7)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)
5.50- 5.99	1 ( 3.6)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.7)
6.50- 6.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)



Table 13c. (continued)

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
7.50- 7.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.00- 8.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.50- 8.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)	0 ( 0.0)
TOTALS	28.	28.	27.	27.	27.	27.	27.	27.	27.	26.	27.	27.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 13d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	2 ( 7.7)	0 ( 0.0)
2.50- 2.99	1 ( 4.2)	1 ( 3.8)	0 ( 0.0)
3.00- 3.49	1 ( 4.2)	2 ( 7.7)	1 ( 4.3)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	4 ( 16.7)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	2 ( 7.7)	1 ( 4.3)
5.50- 5.99	2 ( 8.3)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	2 ( 7.7)	1 ( 4.3)
6.50- 6.99	1 ( 4.2)	1 ( 3.8)	0 ( 0.0)
7.00- 7.49	2 ( 8.3)	2 ( 7.7)	0 ( 0.0)

156

Table 13d. (continued)

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAH)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
8.00- 8.49	1 ( 4.2)	3 ( 11.5)	0 ( 0.0)
8.50- 8.99	2 ( 8.3)	0 ( 0.0)	0 ( 0.0)
9.00- 9.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
9.50- 9.99	2 ( 8.3)	3 ( 11.5)	0 ( 0.0)
10.00-10.49	2 ( 8.3)	1 ( 3.8)	1 ( 4.3)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
11.00-11.49	1 ( 4.2)	0 ( 0.0)	1 ( 4.3)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
12.00-12.49	1 ( 4.2)	1 ( 3.8)	0 ( 0.0)
12.50-12.99	0 ( 0.0)	1 ( 3.8)	1 ( 4.3)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	1 ( 3.8)	1 ( 4.3)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	2 ( 8.7)
14.50-14.99	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)

157

Table 13d. (continued)

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATFR YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
16.00-16.49	1 ( 4.2)	0 ( 0.0)	0 ( 0.0)
16.50-16.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
17.00-17.49	1 ( 4.2)	1 ( 3.8)	0 ( 0.0)
17.50-17.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.00-18.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.50-18.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.00-19.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
19.50-19.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
20.00-20.49	0 ( 0.0)	0 ( 0.0)	4 ( 17.4)
20.50-20.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
21.00-21.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
21.50-21.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
22.00-22.49	0 ( 0.0)	1 ( 3.8)	0 ( 0.0)

Table 13d. (continued)

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
22.50-22.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
23.00-23.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
23.50-23.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
24.00-24.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
24.50-24.99	( 0 0.0)	( 0 0.0)	( 1 4.3)
25.00-25.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
25.50-25.99	( 0 0.0)	( 0 0.0)	( 1 4.3)
26.00-26.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
26.50-26.99	( 0 0.0)	( 0 0.0)	( 1 4.3)
27.00-27.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
27.50-27.99	( 0 0.0)	( 0 0.0)	( 0 0.0)
28.00-28.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
28.50-28.99	( 0 0.0)	( 0 0.0)	( 1 4.3)
29.00-29.49	( 0 0.0)	( 0 0.0)	( 0 0.0)
29.50-29.99	( 0 0.0)	( 0 0.0)	( 0 0.0)

Table 13d. (continued)

STATION 6524 PLACERVILLE

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
30.00-30.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
30.50-30.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
31.00-31.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
31.50-31.99	0 ( 0.0)	0 ( 0.0)	1 ( 4.3)
TOTALS	24.0	26.0	23.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 13e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

6524 PLACERVILLE

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	.16	.14	.07	.07	0.00	0.00	.15	.37	0.00	0.00	.11	.27	5.55
.10	.26	.23	.22	.20	0.00	0.00	.28	.54	0.00	0.00	.19	.40	7.06
.20	.44	.40	.44	.40	.29	.05	.53	.82	.20	.20	.33	.62	9.26
.30	.61	.56	.66	.59	.49	.24	.79	1.08	.48	.41	.47	.83	11.12
.40	.79	.74	.89	.79	.69	.41	1.08	1.33	.76	.64	.62	1.04	12.90
.50	.99	.93	1.14	1.00	.89	.58	1.42	1.61	1.07	.91	.79	1.26	14.73
.60	1.22	1.16	1.43	1.25	1.13	.78	1.82	1.92	1.44	1.24	.99	1.52	16.72
.70	1.51	1.44	1.79	1.55	1.41	1.03	2.32	2.30	1.89	1.65	1.24	1.84	19.04
.80	1.89	1.83	2.28	1.96	1.79	1.35	3.02	2.79	2.51	2.23	1.57	2.25	22.02
.90	2.52	2.46	3.09	2.63	2.40	1.89	4.19	3.59	3.54	3.20	2.13	2.93	26.63
.95	3.13	3.07	3.87	3.28	2.98	2.41	5.35	4.35	4.54	4.16	2.67	3.57	30.87
ALPHA	1.62	1.51	1.51	1.60	1.76	1.47	1.21	2.19	1.31	1.11	1.45	2.01	4.09
BETA	.76	.78	1.00	.81	.71	.67	1.57	.86	1.33	1.34	.70	.75	3.92
U	0.00	0.00	.04	.04	.11	.19	0.00	0.00	.14	.11	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

U= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 13a. Mean monthly precipitation for period of record.

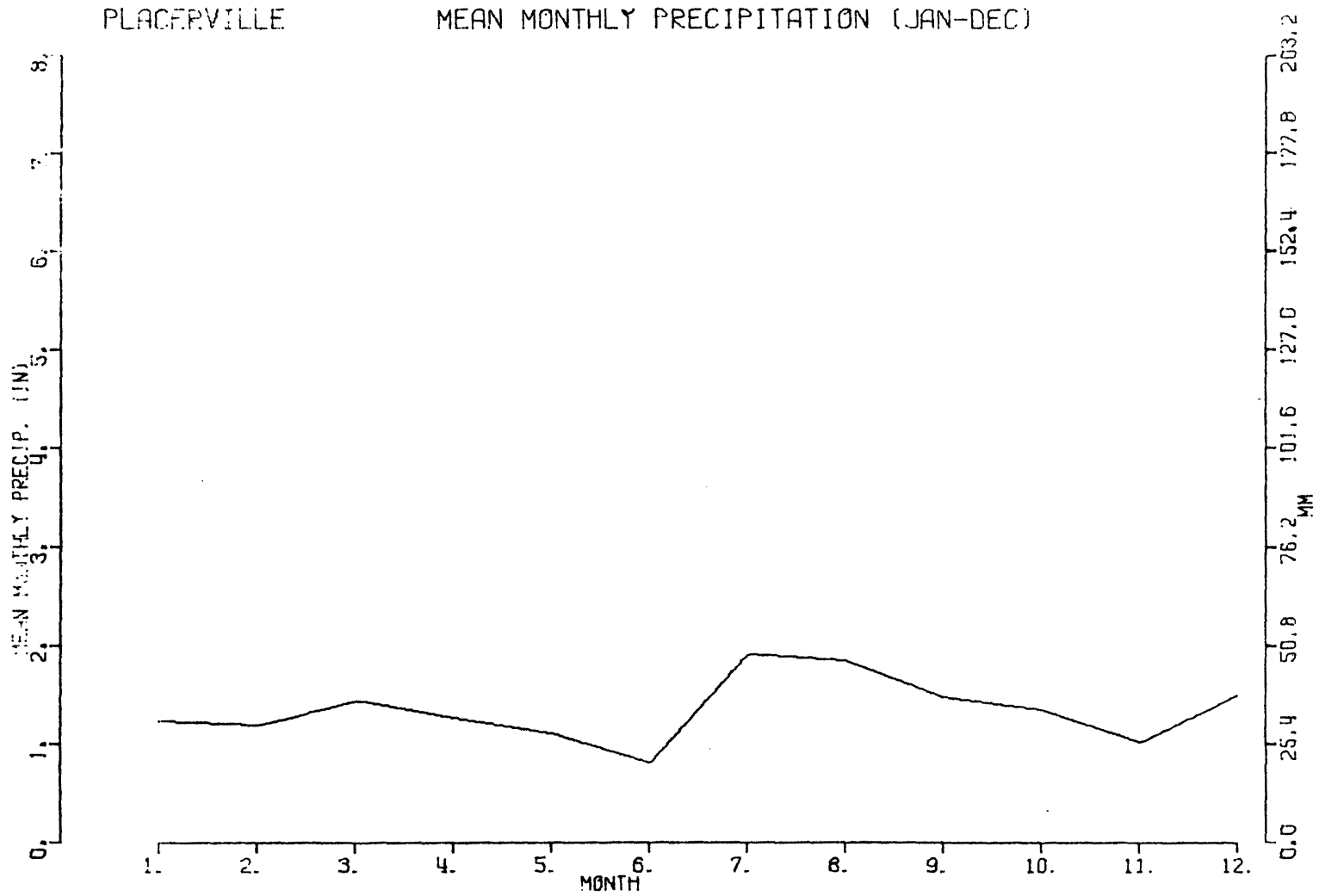




Figure 13b. Water year and 5 year moving mean precipitation.

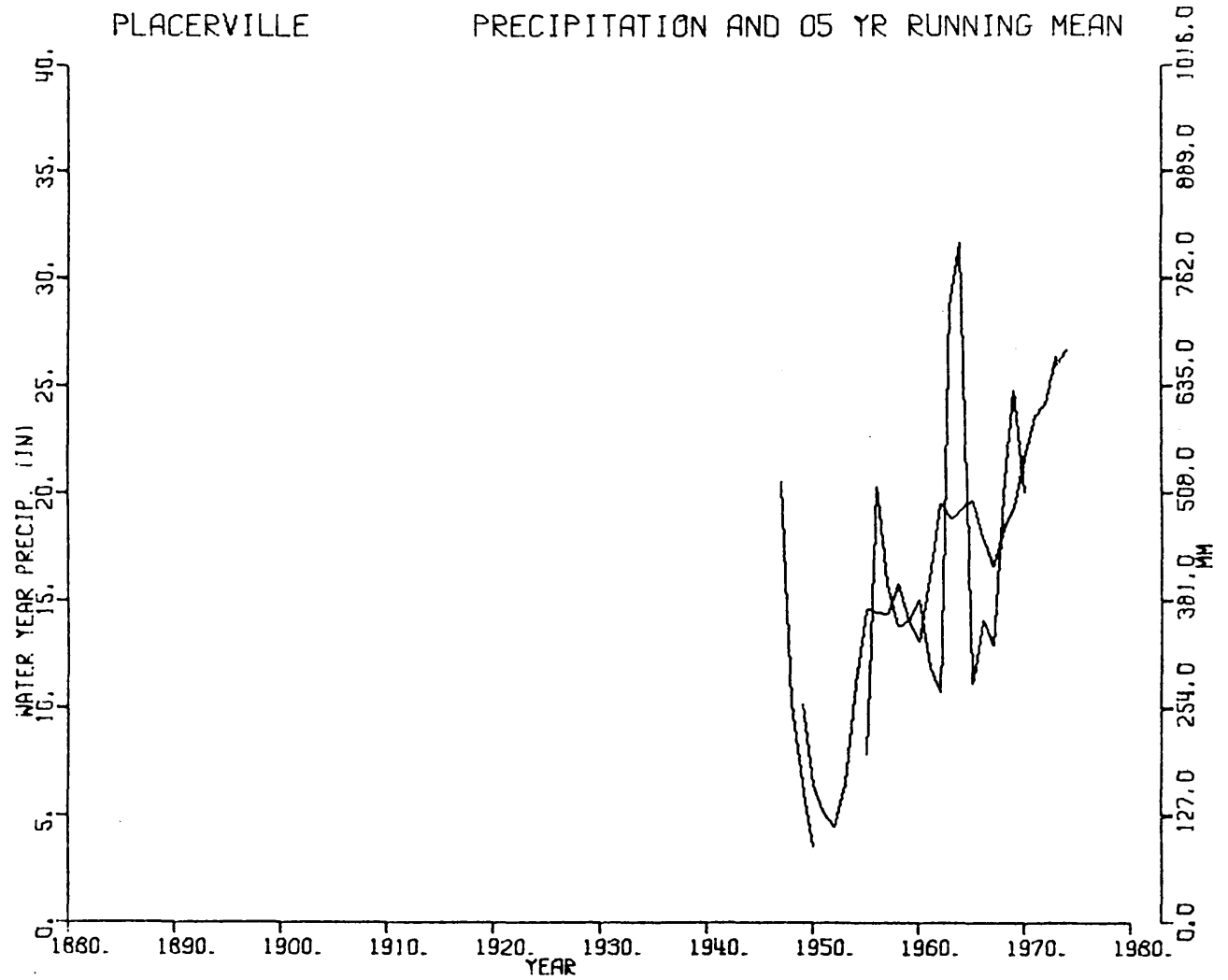


Figure 13c. Water year and 15 year moving mean precipitation.

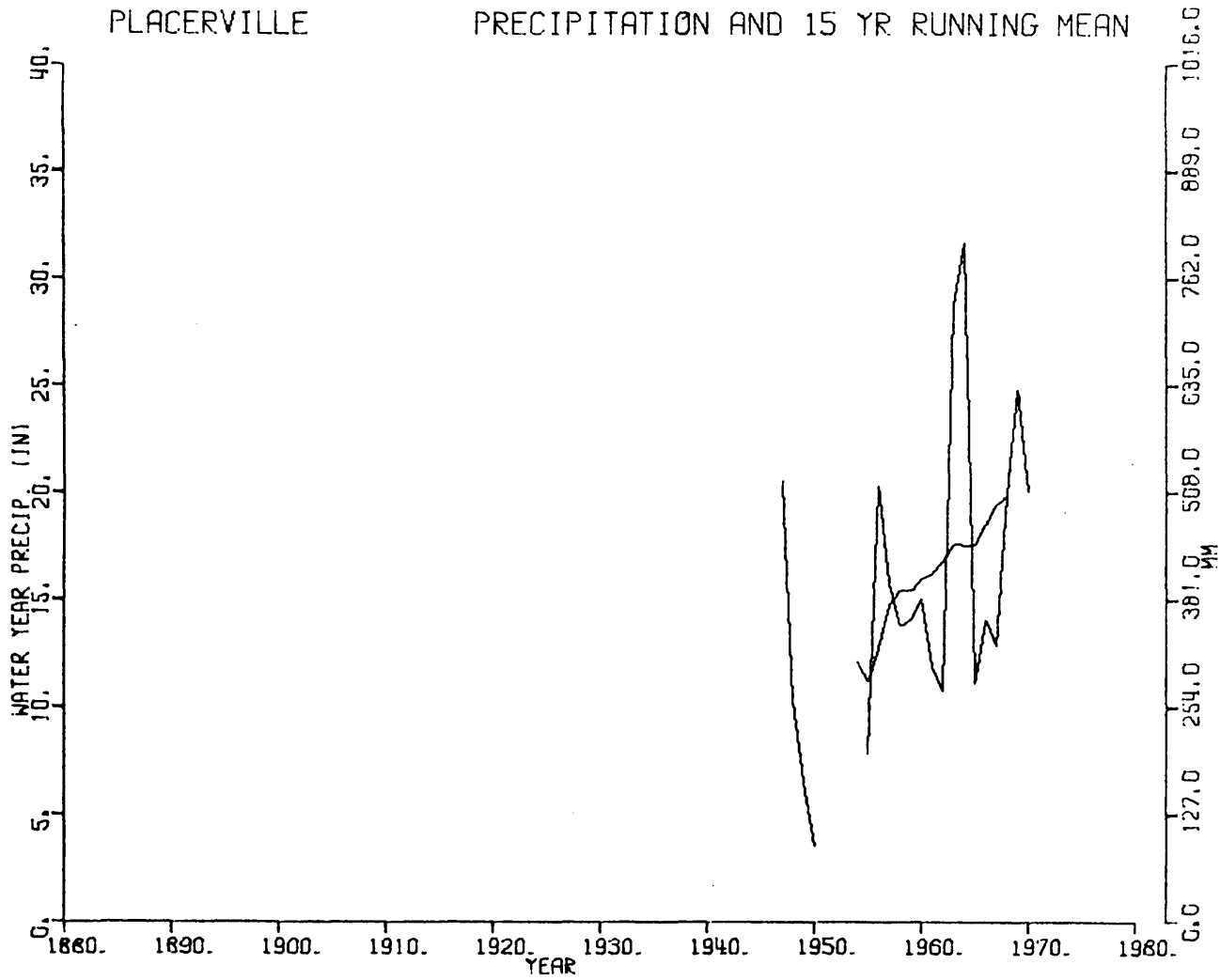


Table 14a. Time series and statistical summary of monthly and water year precipitation.

STATION 6651 POWDERHORN

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR
1964	0.00	.59	.77	.55	.50	1.12	.38	.10	.57	2.13	2.51	1.45	10.67
1965	.64	1.10	.41	0.00	.34	.22	1.00	1.05	.14	1.42	1.02	.30	7.64
1966	900.25	.35	.74	.35	.37	.18	.14	.89	1.30	1.00	2.19	1.23	908.90
1967	.82	.40	1.44	.79	.96	.50	.50	1.59	0.00	1.72	1.95	.46	11.13
1968	.61	.94	1.23	1.51	.49	.45	.27	.24	2.94	1.35	1.39	1.48	12.90
1969	5.67	.63	.73	1.04	.78	.28	.59	.16	.79	2.74	3.07	2.10	18.58
1970	1.72	.62	.56	.29	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
1971	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90	999.90
N	7	7	7	7	6	6	6	6	6	6	6	6	6
MEAN	1.39	.66	.84	.65	.57	.46	.48	.67	.96	1.73	2.02	1.17	11.65
STD DEV	1.94	.27	.37	.51	.25	.35	.30	.60	1.08	.63	.74	.68	3.85
CV	1.42	.41	.44	.79	.43	.76	.63	.90	1.13	.36	.37	.58	.33
STD ERR	.74	.10	.14	.19	.10	.14	.12	.25	.44	.26	.30	.28	1.57
MAX	5.67	1.10	1.44	1.51	.96	1.12	1.00	1.59	2.94	2.74	3.07	2.10	18.58
MIN	0.00	.35	.41	0.00	.34	.18	.14	.10	0.00	1.00	1.02	.30	7.64
RANGE	5.67	.75	1.03	1.51	.62	.94	.86	1.49	2.94	1.74	2.05	1.80	10.94

NOTE-- 999.9 = MISSING DATA, 900 ADDED TO ESTIMATED OR INTERPOLATED DATA

Table 14b. Time series and statistical summary of period 1 (Oct-Mar) and period 2 (April-Sept) precipitation.

STATION 6651 POWDERHORN

YEAR	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)
1964	3.53	7.14
1965	2.71	4.93
1966	2.24	6.75
1967	4.91	6.22
1968	5.23	7.67
1969	9.13	9.45
1970	999.90	999.90
1971	999.90	999.90
N	6	6
MEAN	4.62	7.03
STD DEV	2.50	1.51
CV	.54	.22
STD ERR	1.02	.62
MAX	9.13	9.45
MIN	2.24	4.93
RANGE	6.89	4.52

Table 14c. Absolute and percent relative frequencies of monthly precipitation.

STATION 6651 POWDERHORN

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0.00- .49	2 ( 28.6)	2 ( 28.6)	1 ( 14.3)	3 ( 42.9)	3 ( 50.0)	4 ( 66.7)	3 ( 50.0)	3 ( 50.0)	2 ( 33.3)	0 ( 0.0)	0 ( 0.0)	2 ( 33.3)
.50- .99	3 ( 42.9)	4 ( 57.1)	4 ( 57.1)	2 ( 28.6)	3 ( 50.0)	1 ( 16.7)	2 ( 33.3)	1 ( 16.7)	2 ( 33.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	1 ( 14.3)	2 ( 28.6)	1 ( 14.3)	0 ( 0.0)	1 ( 16.7)	1 ( 16.7)	1 ( 16.7)	1 ( 16.7)	3 ( 50.0)	2 ( 33.3)	3 ( 50.0)
1.50- 1.99	1 ( 14.3)	0 ( 0.0)	0 ( 0.0)	1 ( 14.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)	0 ( 0.0)	1 ( 16.7)	1 ( 16.7)	0 ( 0.0)
2.00- 2.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)	1 ( 16.7)	1 ( 16.7)
2.50- 2.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)	1 ( 16.7)	1 ( 16.7)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)	0 ( 0.0)
3.50- 3.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.00- 5.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	1 ( 14.3)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
TOTALS	7.	7.	7.	7.	6.	6.	6.	6.	6.	6.	6.	6.

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL.  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

Table 14d. Absolute and percent relative frequencies of period 1, period 2, and water year precipitation.

STATION 6651 POWDERHORN

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
0.00- .49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
.50- .99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.00- 1.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
1.50- 1.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
2.00- 2.49	1 ( 16.7)	0 ( 0.0)	0 ( 0.0)
2.50- 2.99	1 ( 16.7)	0 ( 0.0)	0 ( 0.0)
3.00- 3.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
3.50- 3.99	1 ( 16.7)	0 ( 0.0)	0 ( 0.0)
4.00- 4.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
4.50- 4.99	1 ( 16.7)	1 ( 16.7)	0 ( 0.0)
5.00- 5.49	1 ( 16.7)	0 ( 0.0)	0 ( 0.0)
5.50- 5.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
6.00- 6.49	0 ( 0.0)	1 ( 16.7)	0 ( 0.0)
6.50- 6.99	0 ( 0.0)	1 ( 16.7)	0 ( 0.0)
7.00- 7.49	0 ( 0.0)	1 ( 16.7)	0 ( 0.0)

Table 14d. (continued)

STATION 6651 POWDERHORN

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
7.50- 7.99	0 ( 0.0)	1 ( 16.7)	1 ( 16.7)
8.00- 8.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
8.50- 8.99	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)
9.00- 9.49	1 ( 16.7)	1 ( 16.7)	0 ( 0.0)
9.50- 9.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.00-10.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
10.50-10.99	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)
11.00-11.49	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)
11.50-11.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
12.00-12.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
12.50-12.99	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)
13.00-13.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
13.50-13.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
14.00-14.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
14.50-14.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)

Table 14d. (continued)

STATION 6651 POWDERHORN

ABSOLUTE AND PERCENT RELATIVE FREQUENCIES

INTERVAL	PERIOD 1 (OCT-MAR)	PERIOD 2 (APR-SEPT)	WATER YEAR
15.00-15.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
15.50-15.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.00-16.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
16.50-16.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
17.00-17.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
17.50-17.99	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.00-18.49	0 ( 0.0)	0 ( 0.0)	0 ( 0.0)
18.50-18.99	0 ( 0.0)	0 ( 0.0)	1 ( 16.7)
TOTALS	6.0	6.0	6.0

NOTE-- ABSOLUTE FREQ (UPPER VALUE) IS THE TOTAL NO. OF OBSERVATIONS IN THE GIVEN CLASS INTERVAL  
 RELATIVE FREQUENCY (LOWER VALUE) IS THE RATIO (EXPRESSED AS A PERCENT) OF THE ABSOLUTE FREQUENCY  
 TO THE TOTAL NO. OF OBSERVATIONS OVER ALL CLASS INTERVALS FOR THE GIVEN MONTH

170



Table 14e. Probability of receiving at least the indicated amounts of precipitation. (Mixed incomplete Gamma pdf.)

6651 POWDERHORN

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

PROB. LEVEL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	WATER YR
.05	0.00	.27	.11	.13	.05	0.00	.92	1.01	.28	0.00	.31	.38	6.78
.10	0.00	.32	.15	.18	.10	0.00	1.06	1.18	.39	0.00	.37	.45	7.65
.20	.24	.39	.22	.25	.19	.09	1.25	1.41	.55	.13	.45	.56	8.81
.30	.38	.44	.28	.31	.28	.28	1.40	1.60	.69	.37	.51	.64	9.71
.40	.49	.50	.34	.37	.38	.47	1.53	1.77	.83	.62	.57	.72	10.53
.50	.60	.55	.40	.43	.50	.68	1.67	1.94	.98	.92	.63	.80	11.34
.60	.71	.60	.47	.50	.64	.92	1.81	2.12	1.14	1.27	.69	.88	12.19
.70	.84	.66	.55	.58	.82	1.22	1.97	2.33	1.33	1.72	.77	.98	13.14
.80	1.01	.74	.66	.69	1.06	1.62	2.17	2.58	1.58	2.35	.86	1.10	14.32
.90	1.27	.86	.84	.85	1.47	2.29	2.47	2.97	1.98	3.41	.99	1.28	16.06
.95	1.50	.97	1.00	1.01	1.88	2.95	2.74	3.32	2.36	4.47	1.12	1.45	17.60
ALPHA	3.21	7.12	2.66	2.99	1.22	1.32	9.53	8.04	2.83	1.09	7.06	6.45	12.31
BETA	.24	.08	.17	.16	.55	.87	.18	.25	.39	1.48	.09	.13	.95
Q	.14	0.00	0.00	0.00	0.00	.17	0.00	0.00	0.00	.14	0.00	0.00	0.00

MIXED GAMMA DISTRIBUTION FITTED TO DATA

ALPHA= SHAPE PARAMETER      BETA= SCALE PARAMETER

Q= NO. OF MONTHS HAVING ZERO PRECIPITATION/TOTAL NO. OF MONTHS

MEDIAN PRECIPITATION AMOUNTS ARE INDICATED AT THE .50 PROBABILITY LEVEL

Figure 14a. Mean monthly precipitation for period of record.

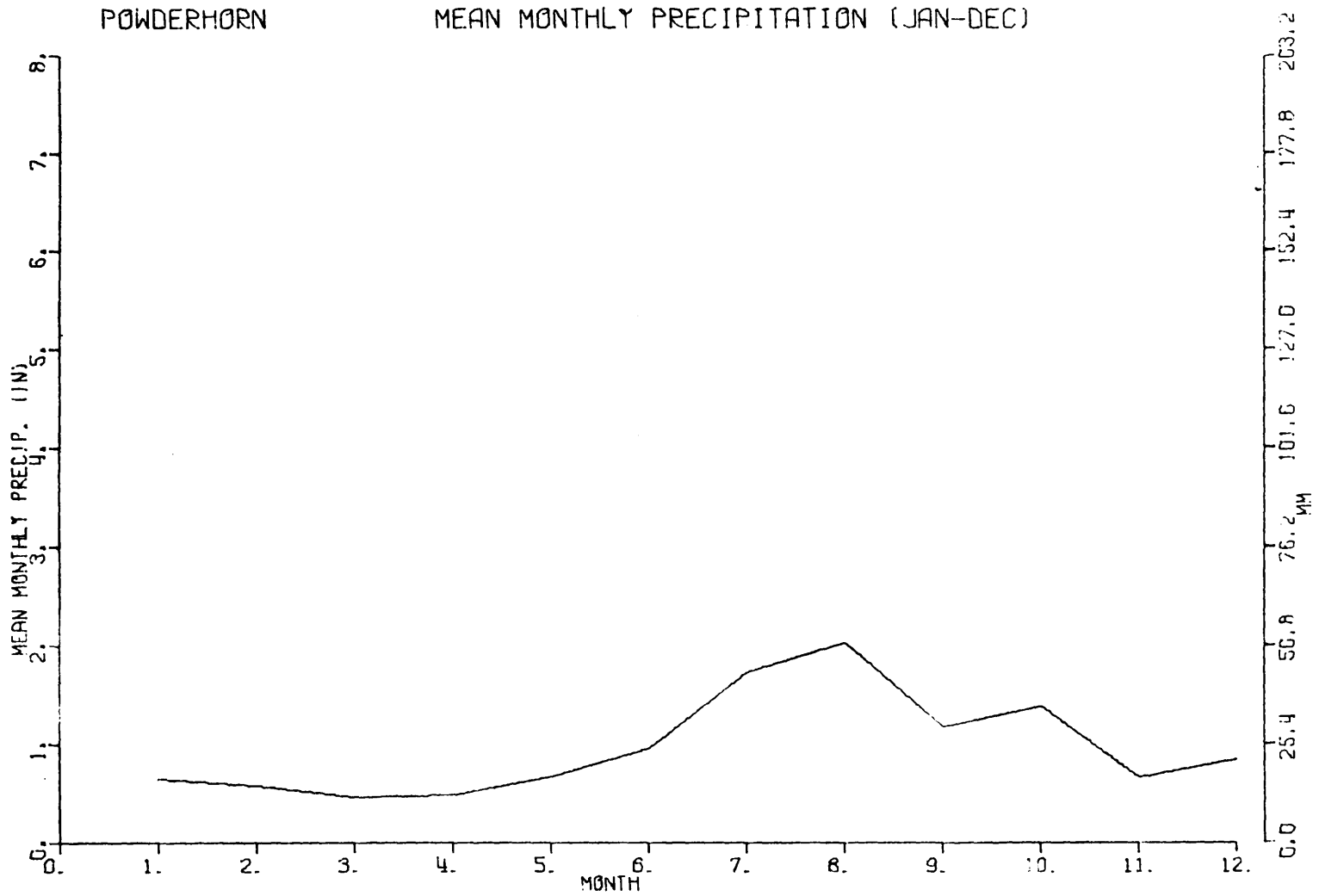


Figure 14b. Water year and 5 year moving mean precipitation.

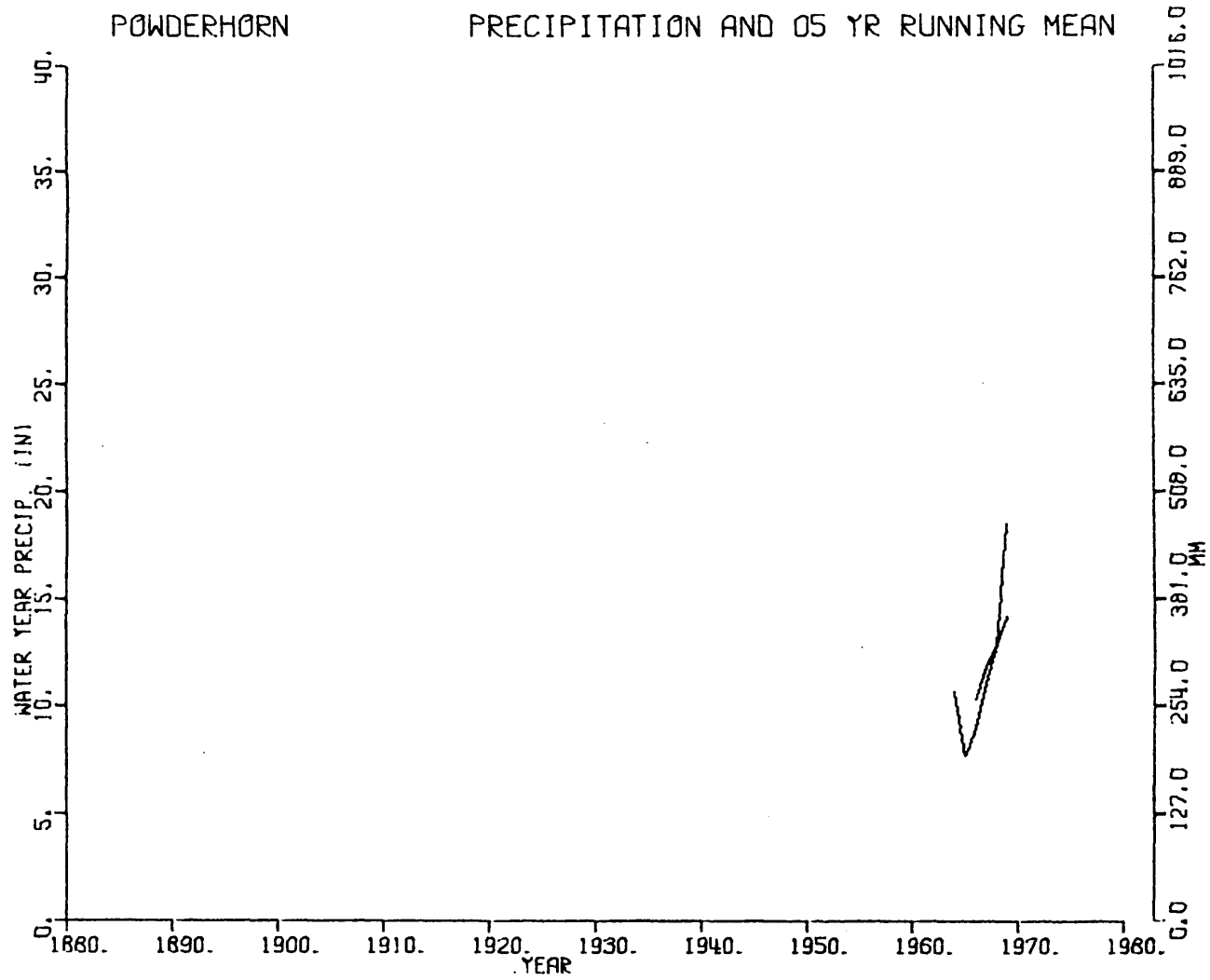


Figure 14c. Water year and 15 year moving mean precipitation.

