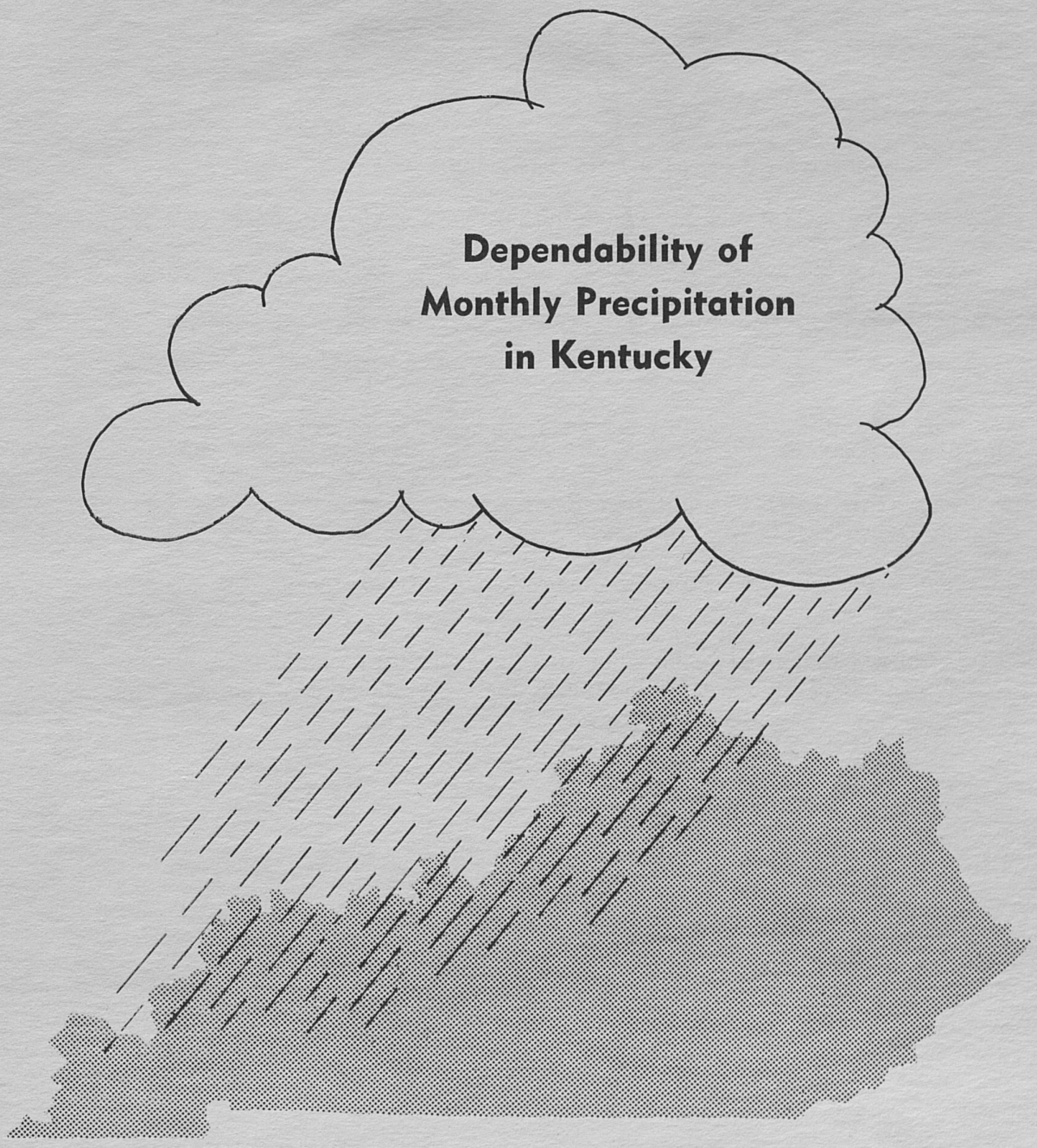
Dependability of Monthly Precipitation in Kentucky



Progress Report 182

UNIVERSITY OF KENTUCKY :: AGRICULTURAL EXPERIMENT STATION
Lexington

CONTENTS

DEPENDABILITY OF MONTHLY PRECIPITATION IN KENTUCKY

By Doyle (NMI) Cook[1], Clyde B. Lee[2], Allen B. Elam, Jr.[3]

A knowledge of the distribution of precipitation over Kentucky is of the highest importance to agriculture, hydrology, architecture, and other interests. It is difficult to find an activity that is not affected—directly or indirectly—by the amounts of precipitation that occur. Since the amount that falls on any one location during any particular month can vary greatly from year to year, a knowledge of the probability or dependability of occurrence should be useful. It would seem that anyone in need of data for applications to specific problems would need to know the variability of precipitation much as the structural engineer needs to know the strength of his materials.

This publication is intended as a reference for farmers, engineers, hydrologists and others interested in the probability of precipitation in any month in Kentucky. Owing to the variability of applications, application to any one use is treated only briefly on the premise that each user will be able to make his own application after the data are made available.

Data are discussed in the text without mathematical or statistical references (except briefly in the last paragraph) on the assumption that most users are not likely to be interested in mathematical derivations. For those interested, the references provided contain sufficient material for documentation of the mathematical background and the soundness of the data presented.

Precipitation Having a Set Chance of Occurring

If one could only depend upon average monthly rainfall, it would be a simple matter to make plans or schedule operations. However, in practice he has to take into account the extreme variability of precipitation, and a statistical study of many years of precipitation data allows one to estimate the amount of precipitation having a set chance of occurrence during a particular month. Figures 1-36 show the statewide pattern of precipitation dependability for each month. Owing chiefly to space limitations, figures included are for the recurrence intervals corresponding to the 10%, 50%, and 90% probability levels only. See Fig. 37 (locator map) and listing for specific locations for which these and other (5%, 20%, 80%, 95%) probability levels have been computed. See Appendix for tables for 35 locations (in alphabetical order) of Probabilities (%) That Monthly Precipitation (Inches) Will be Less Than the Amounts Listed.

The figures show in a general way the precipitation patterns and probabilities of occurrence. Upon inspection of the figures one will observe several seasonal

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patterns. There is over much of the state a prominent late winter and early spring maximum, greatest in the south, and a mid-fall minimum. A mid-summer peak in the east-central portion occurs in the area where rougher and higher terrain begins. As examples of precipitation probabilities for specific areas, in Fig. 3 it will be noted that in January in the southern portions of Christian and Todd counties, precipitation will be greater than 11 inches (>11) 10 out of 100 years; that in Boone, Campbell, and Kenton counties January precipitation will be less than 7 inches (<7) 90 out of 100 years.

The tables list probabilities for specific locations that precipitation will be less than the tabulated values. For probabilities greater than these values, subtract the tabulated percentage values from 100%. Linear interpolation between tabulated values will supply acceptable estimates of other probability levels.

Some Applications of Monthly Precipitation Probabilities

A number of applications come to mind: determining the need for and indication of type and capacity of supplementary irrigation equipment; estimating the yield of water from a particular watershed for use in power generation, for design of reservoirs for irrigation or for use as municipal or industrial water supply; designing private and public drainage systems and water retaining structures. Other uses will occur to those engineers and others having particular problems. The foregoing are a few of the possible applications. To use the probabilities it is first necessary to establish the precipitation criteria of importance to the problem at hand, then to determine the likelihood of occurrence from the appropriate table(s) or figure(s). This study provides a means of approximating data needed for various planning and design purposes.

Limitations of Computed Data - Tables and Derived Figures

Past precipitation data for specific locations treated statistically as noted in the last paragraph provide estimates (tables in Appendix) of precipitation probabilities. Probability estimates for 35 Kentucky locations are presented in the tables. In using the tabular data it should be remembered that computed probabilities based on a long period of record are better estimates than those based on fewer data, i.e., 30 years of precipitation data would be preferred over 20 years of data. See the bottom line of each table in the Appendix, labeled YEARS RECORD.

The figures (1-36) in addition to showing precipitation patterns also are useful in making interpolations ("by eye" estimates) for locations not included in the Appendix. However it should be noted that these may be approximations or rough estimates because: data available and/or used for the period 1932-61 provided a network density of less than one rain gage to 1,000 square miles of area; use of data from a network of this density will tend to smooth the isopleths (lines connecting points of equal value in the figures); precipitation can vary considerably over a relatively short distance, especially in hilly or mountainous country.

The analysis in each figure consists of isopleths of a set chance of occurrence, and is based primarily on data in the tables from locations having 30 years of record. Isopleths are drawn for 1/2-inch intervals for the "10 years in 100" and "50 years in 100" figures (top and middle figures on each page); drawn for 1-inch intervals for the "90 years in 100" figures (bottom figure on each page).

Computation of Probabilities

The 30-year arithmetic average, sometimes called the "normal," is a useful statistic but more often than not does not indicate the most likely amount of precipitation to be expected. This is because an average computed from monthly precipitation totals often is weighted too heavily by a few excessively rainy months. A statistical procedure discussed by Barger et al. (1-3) has been used for computing the probabilities of precipitation. In brief, the procedure consists of fitting a mathematical function (commonly known as the "incomplete gamma" function) to the tabulated frequencies of the observed precipitation data, and then computing the probabilities from this function.

REFERENCES

1. Barger, Gerald L. and Thom, H. C. S. Evaluation of drought hazard. Agron. Jour. 41:519-526. 1949.

2. Friedman, Don G. and Janes, Byron E. Estimation of rainfall probabilities. Storrs, (Conn.) Agr. Exp. Sta. Bul. 332, 1957.

3. Shaw, Robert H., Barger, Gerald L., and Dale, Robert F. Precipitation probabilities in the north central states. North Central Regional Publication 115 (Agr. Exp. Sta., Univ. of Mo. Bul. 753), June 1960.

MONTHLY PRECIPITATION TOTALS LESS THAN AMOUNTS SHOWN:

10 Years in 100; 50 years in 100; 90 Years in 100

(pages 6-17)

Fig. 1.-January. — Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

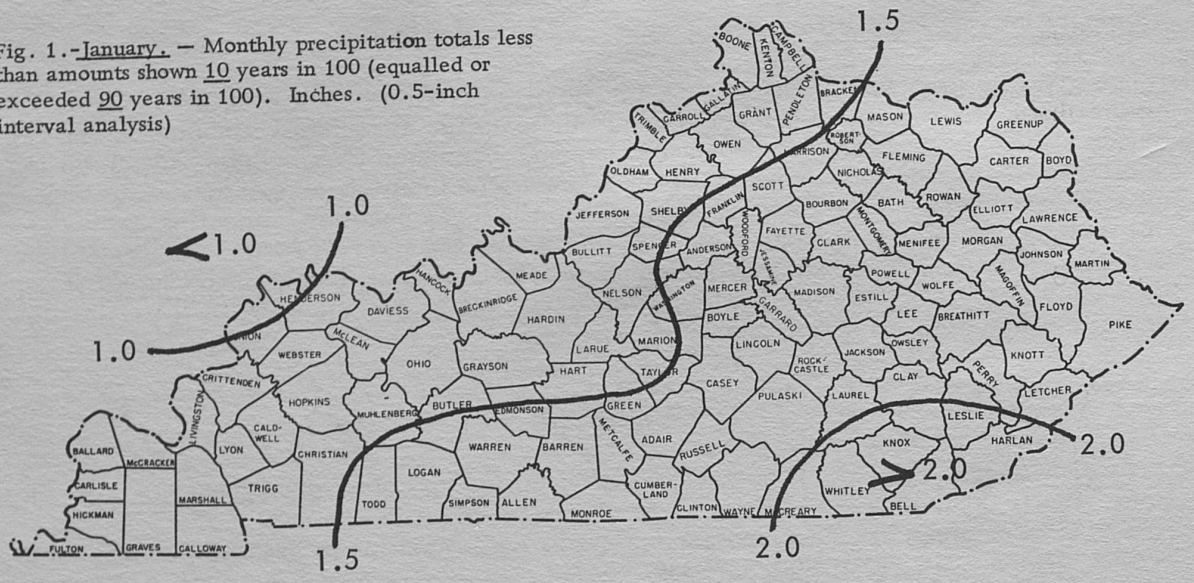


Fig. 2.-January.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

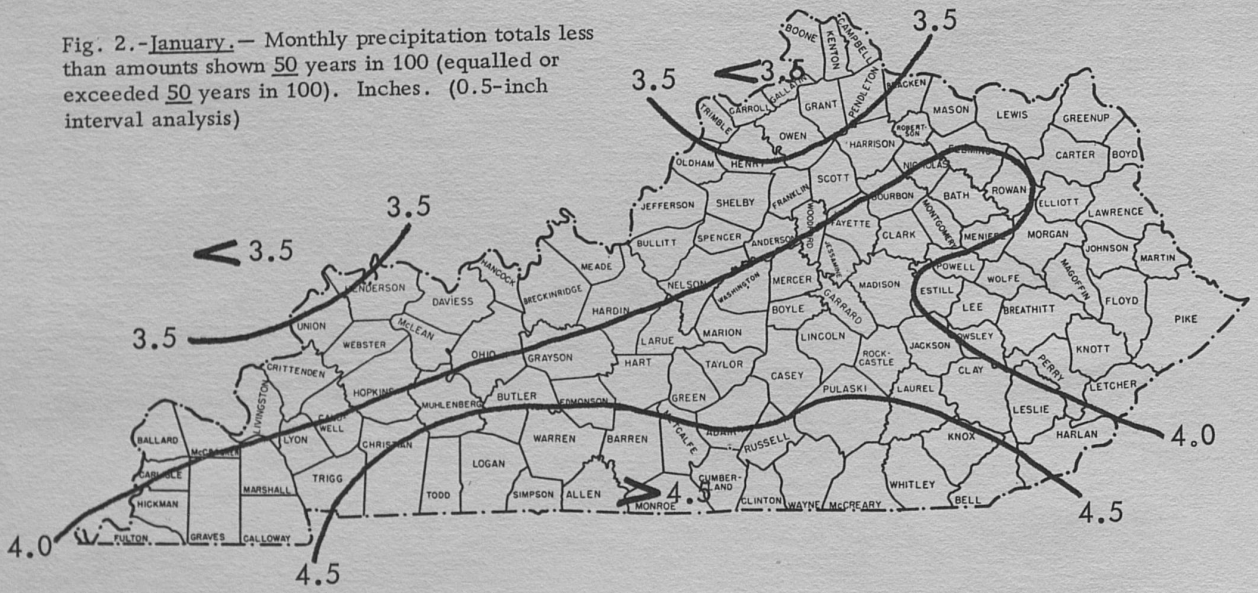


Fig. 3.-January.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

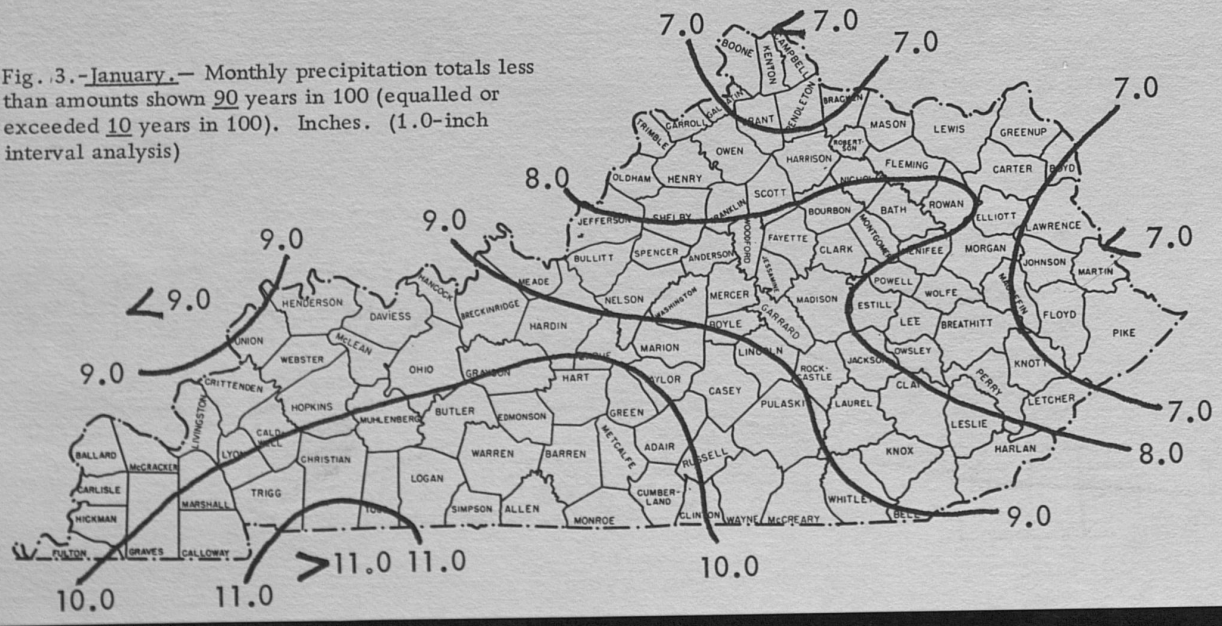


Fig. 4.-February.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

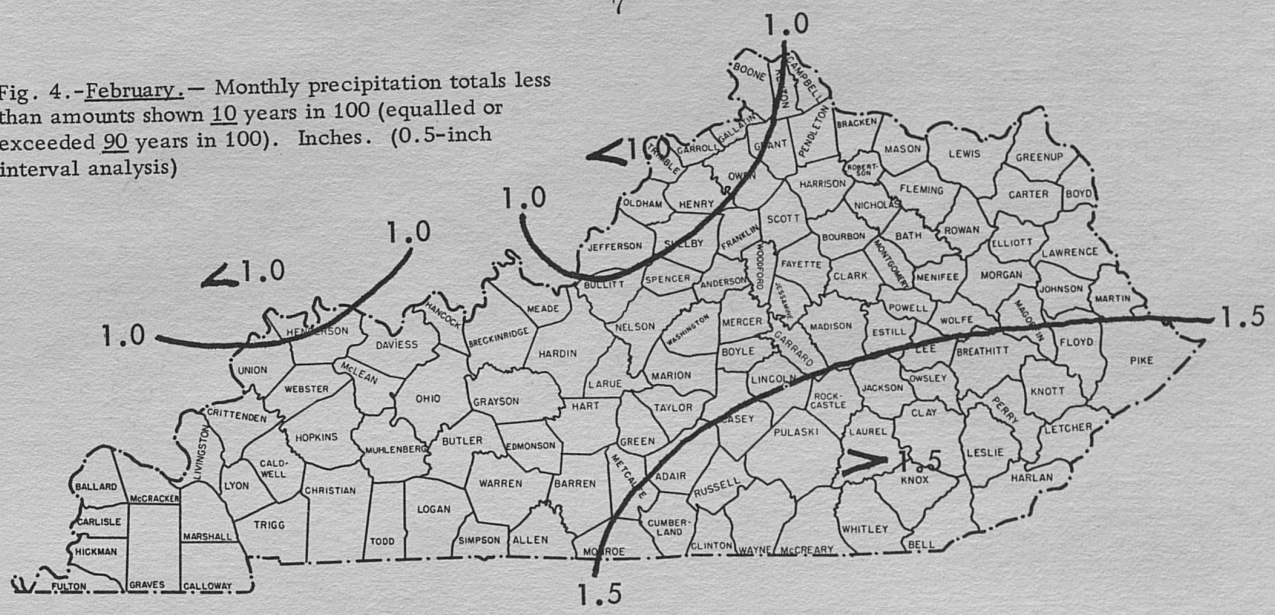


Fig. 5.-February.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

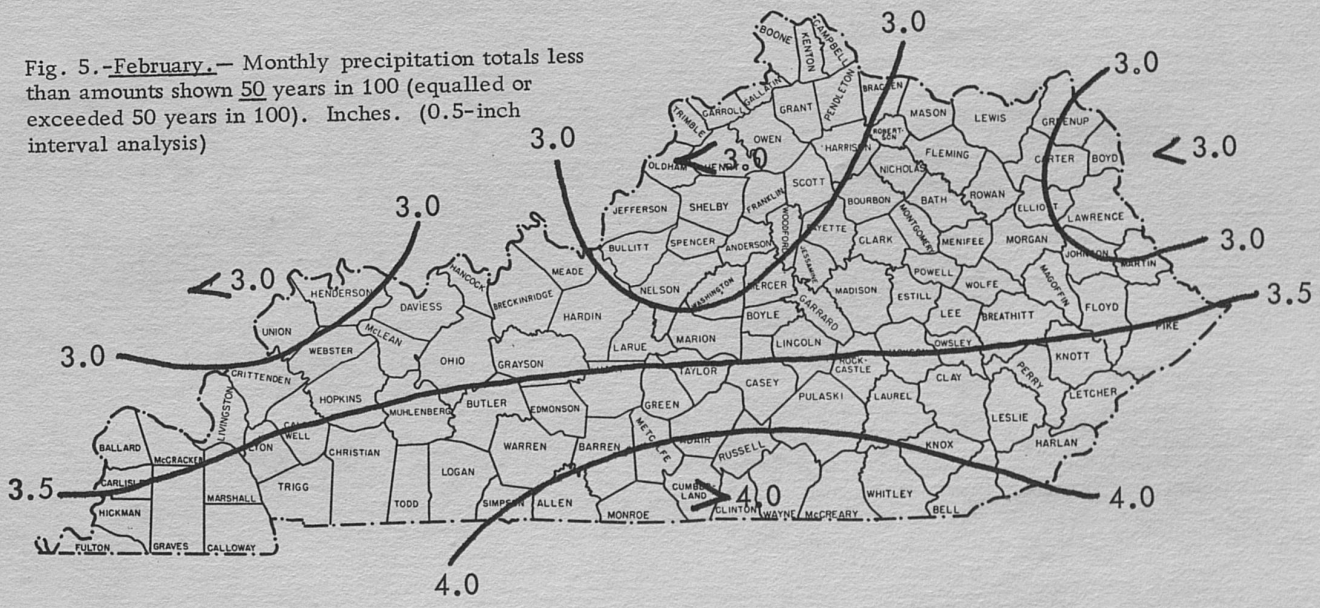
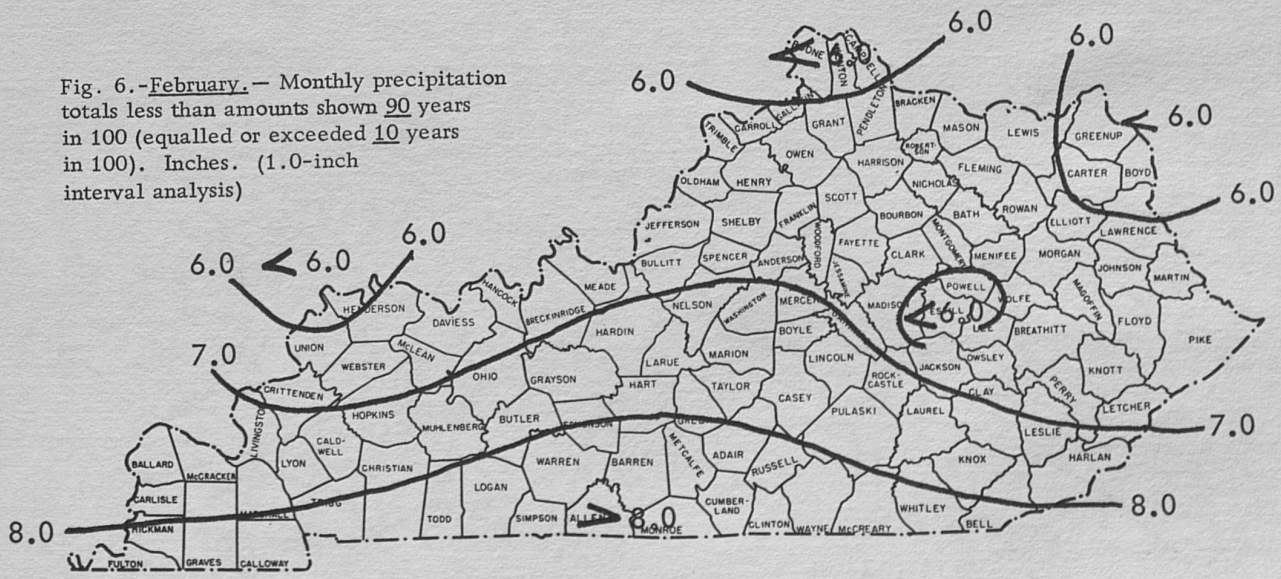


Fig. 6.-February.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)



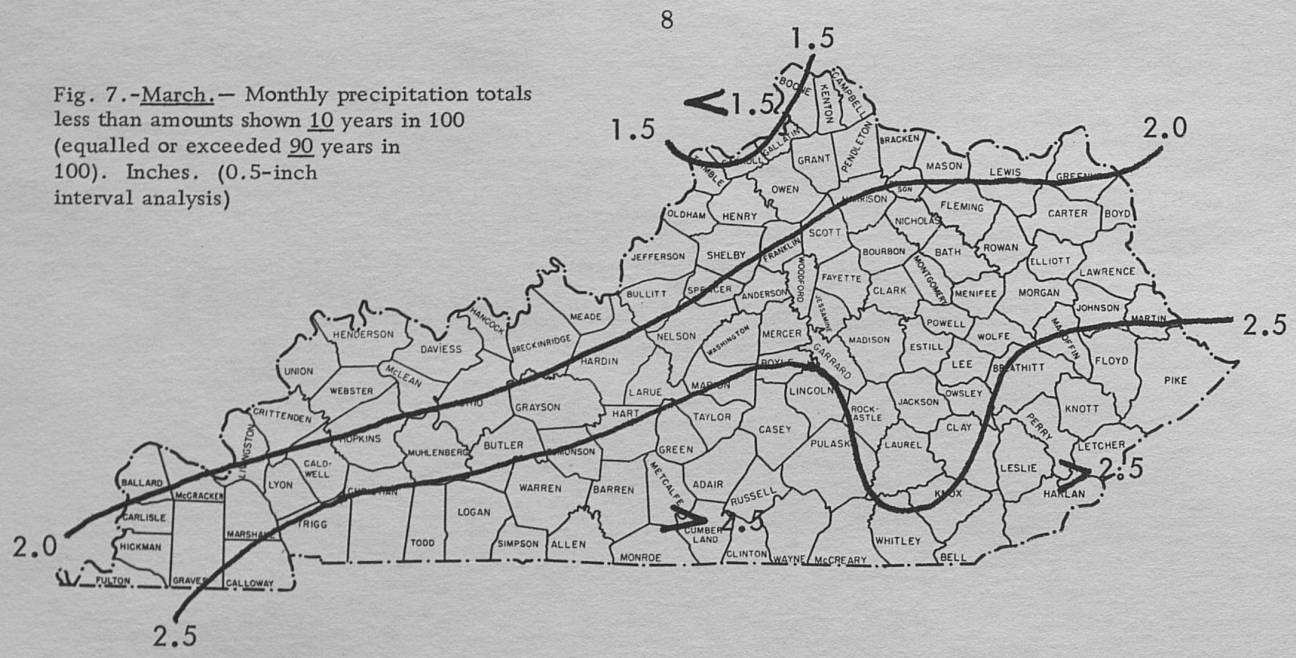


Fig. 7.-March.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

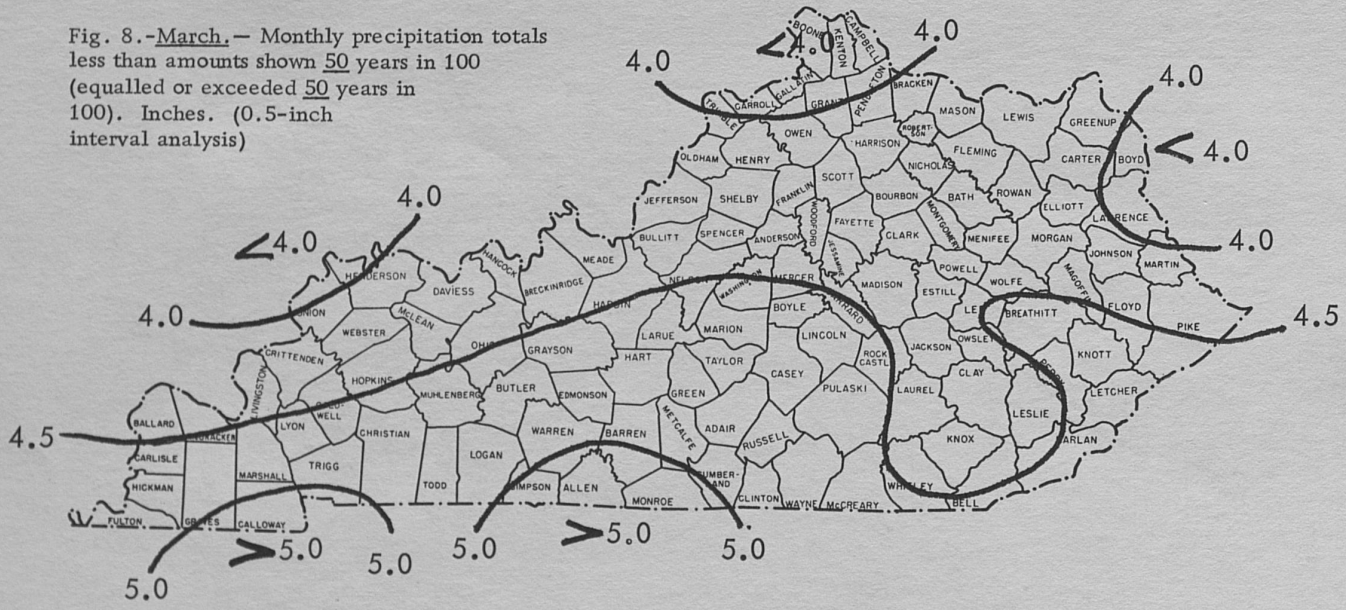


Fig. 8.-March.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

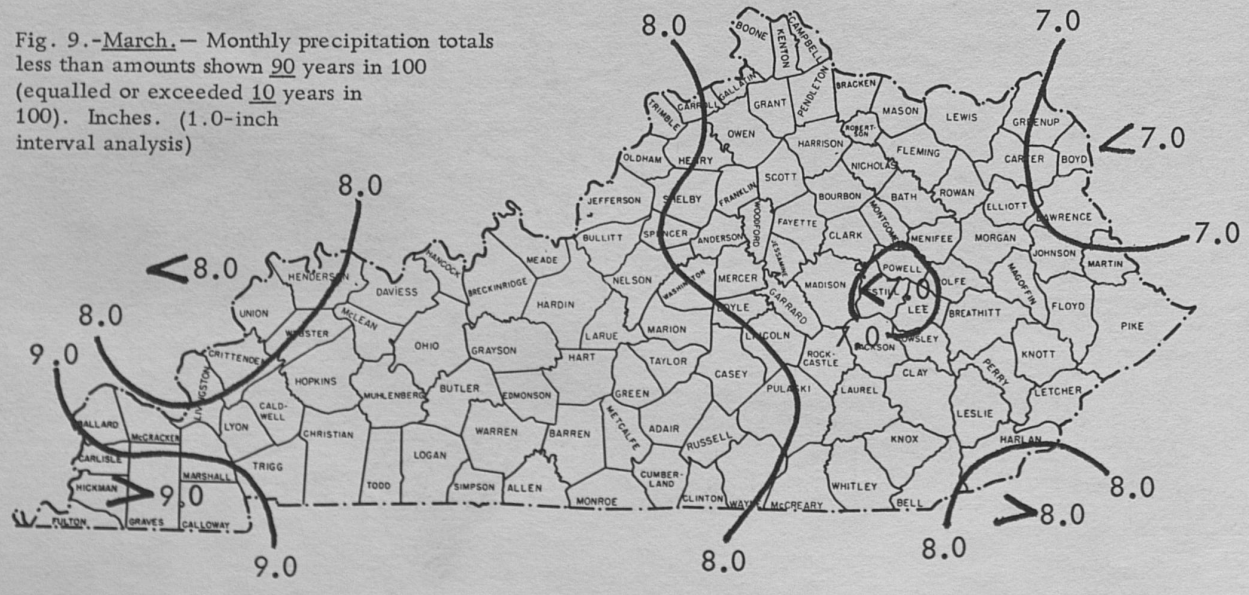


Fig. 9.-March.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

Fig. 10.-April.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

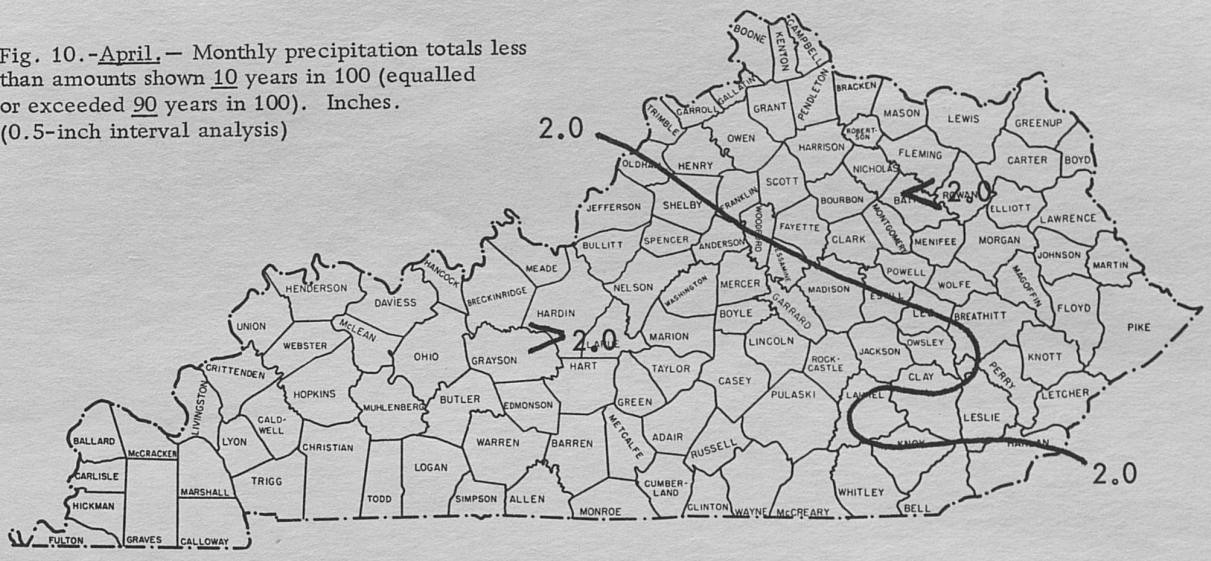


Fig. 11.-April.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

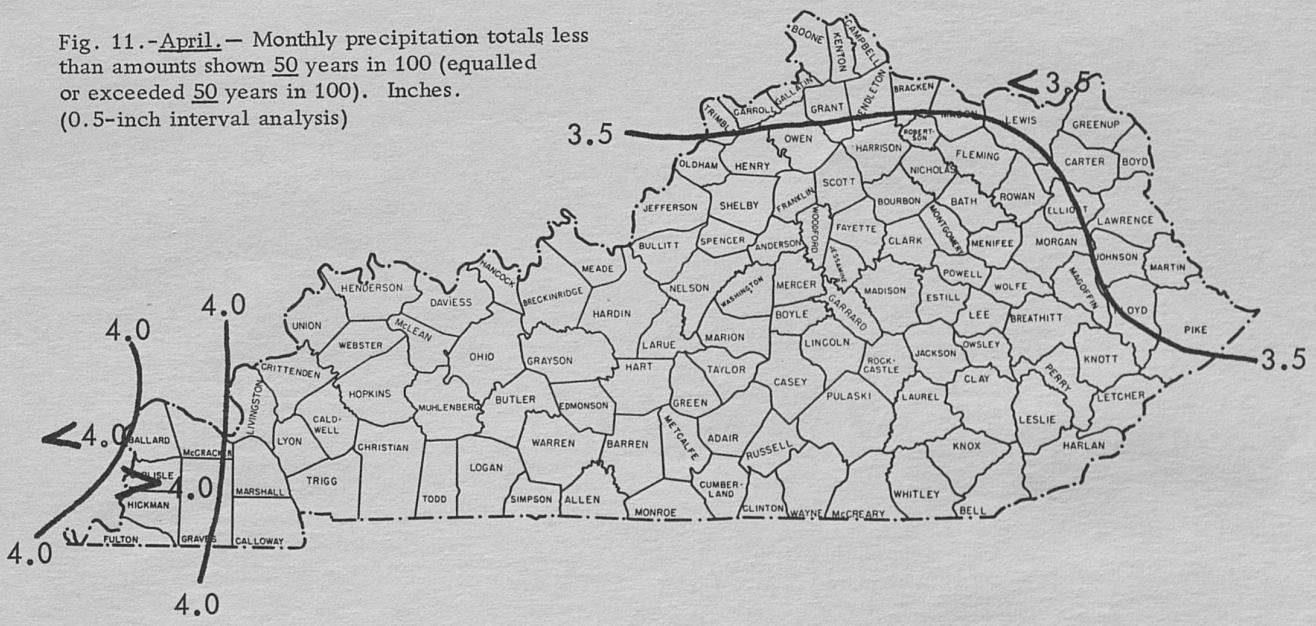


Fig. 12.-April.— Monthly Precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

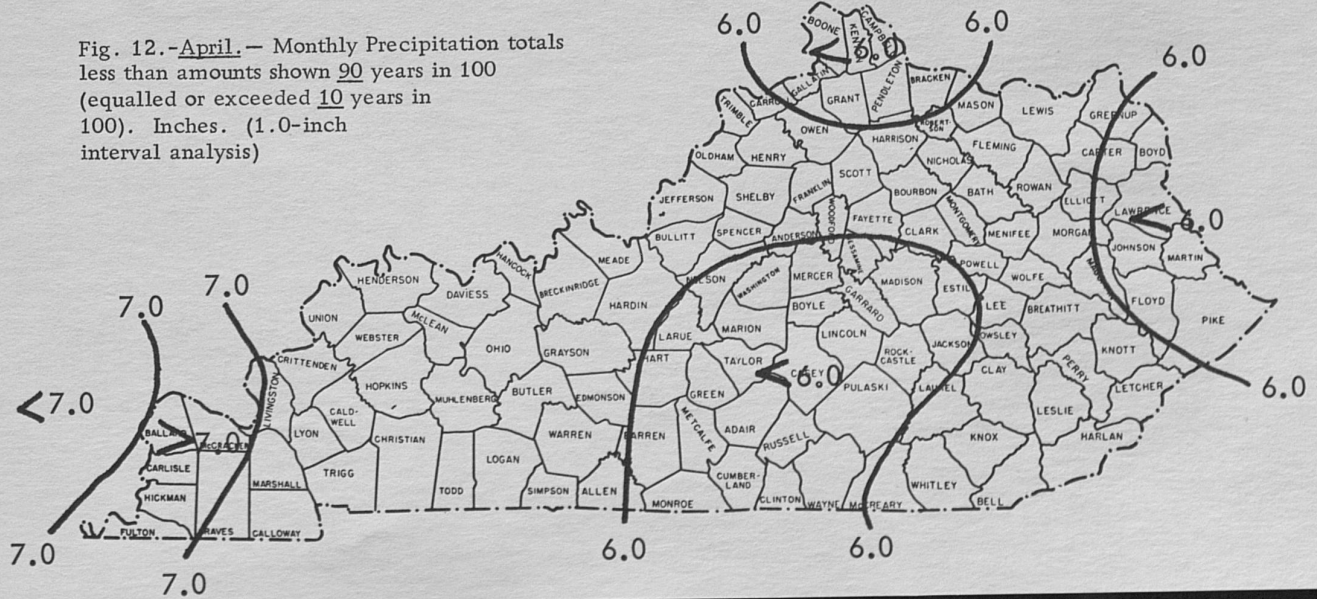


Fig. 13.-May.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

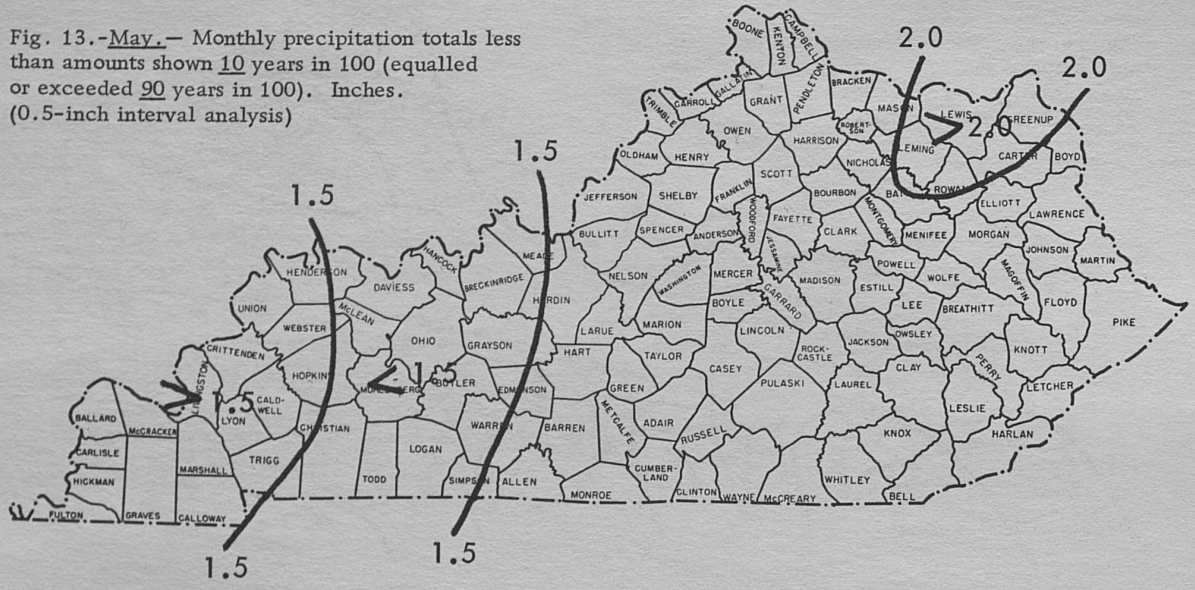


Fig. 14.-May.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

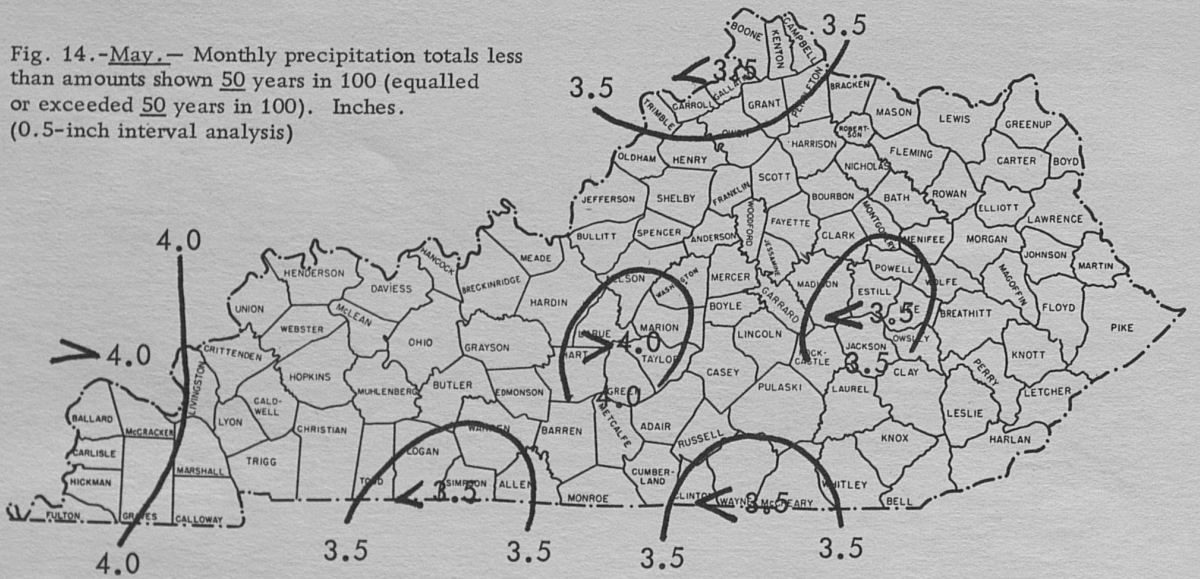


Fig. 15.-May.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

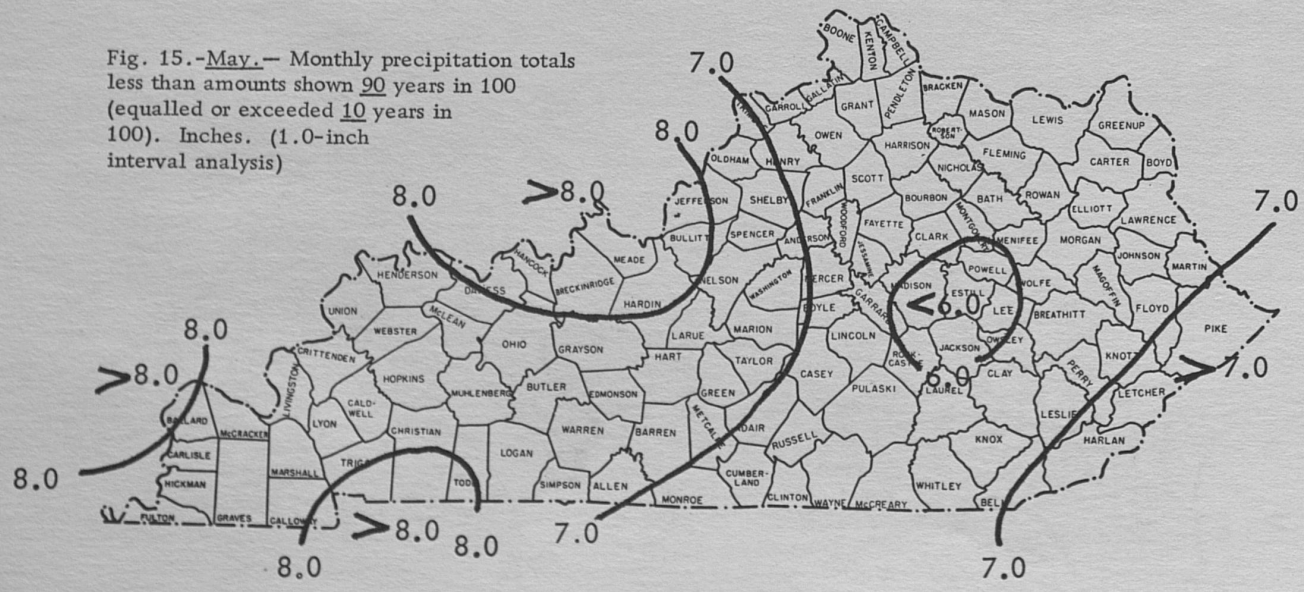


Fig. 16.-June.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

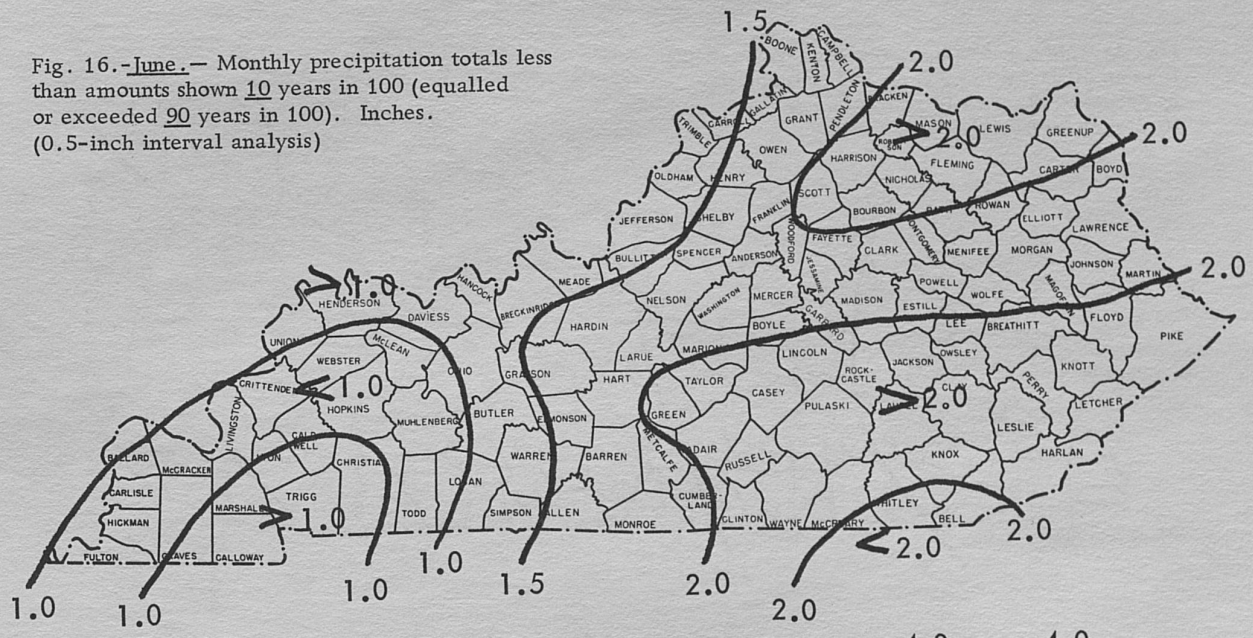


Fig. 17.-June.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

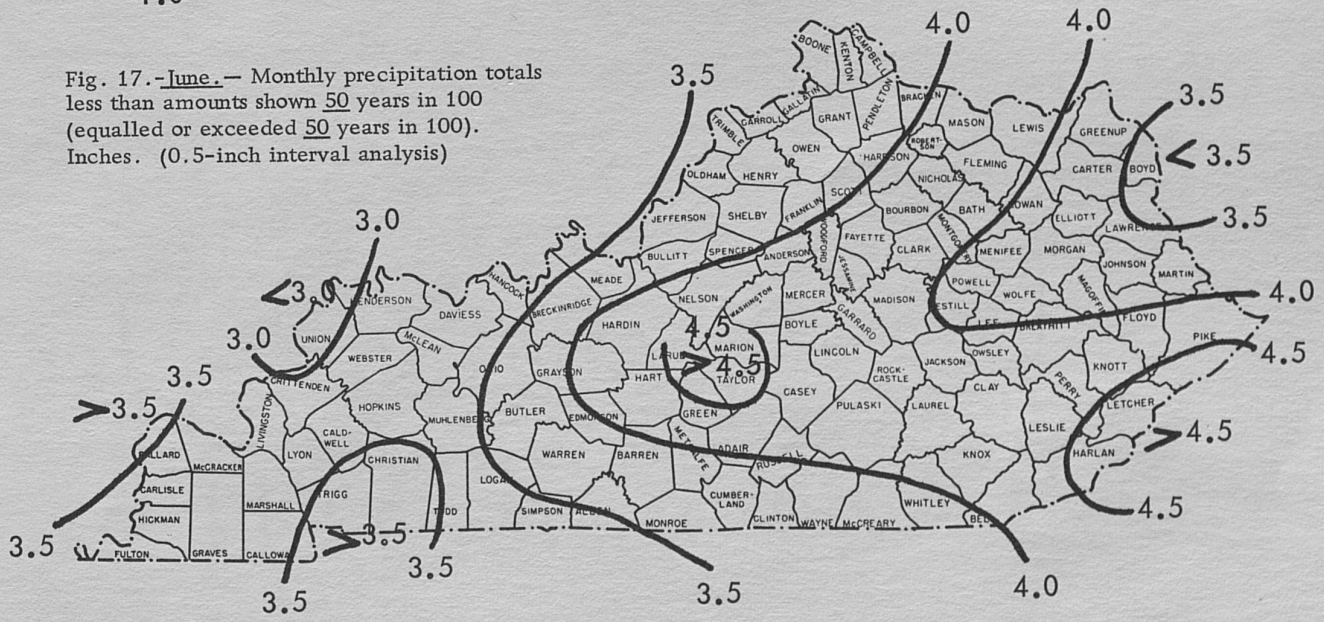


Fig. 18.-June.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

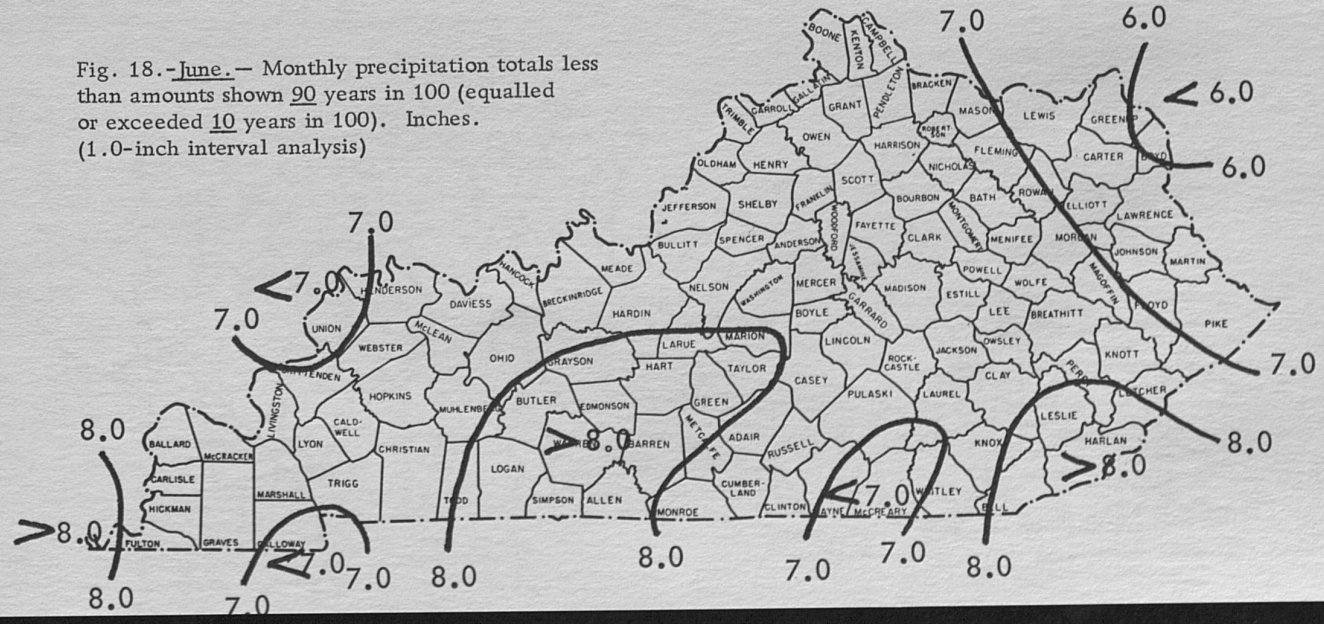


Fig. 19.-July.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

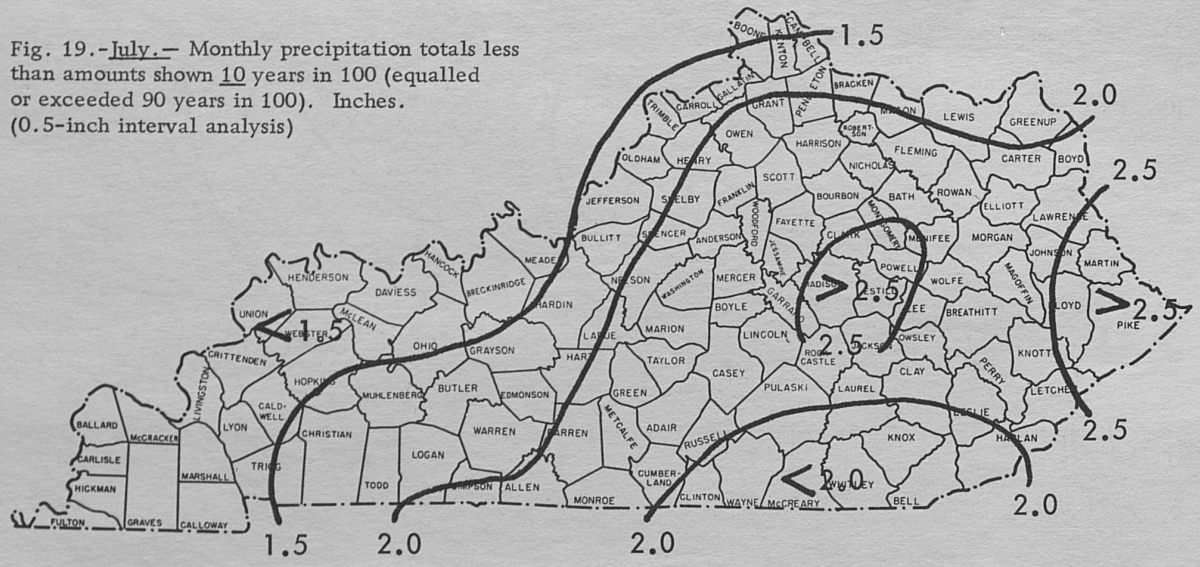


Fig. 20.-July.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

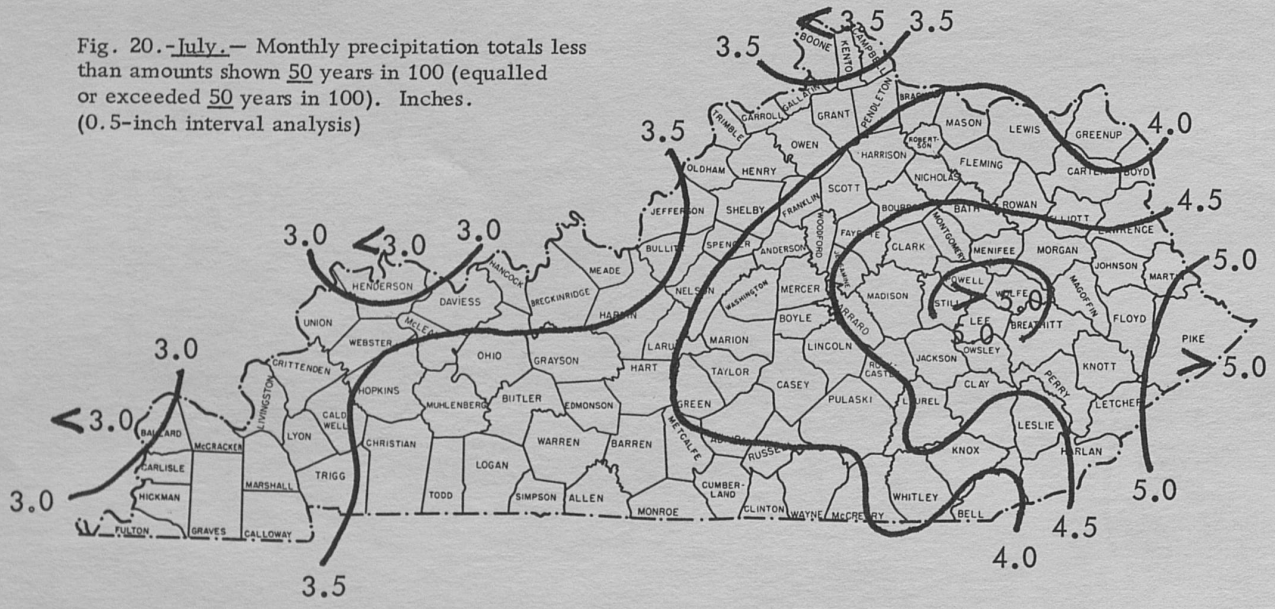


Fig. 21.-July.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

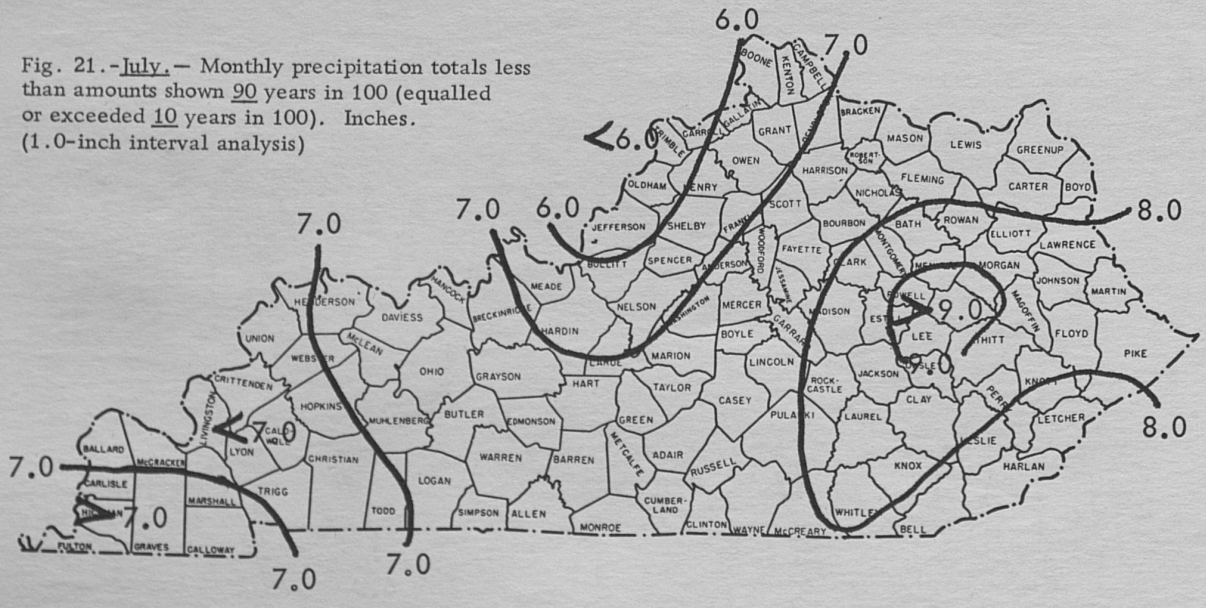


Fig. 22.-August.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

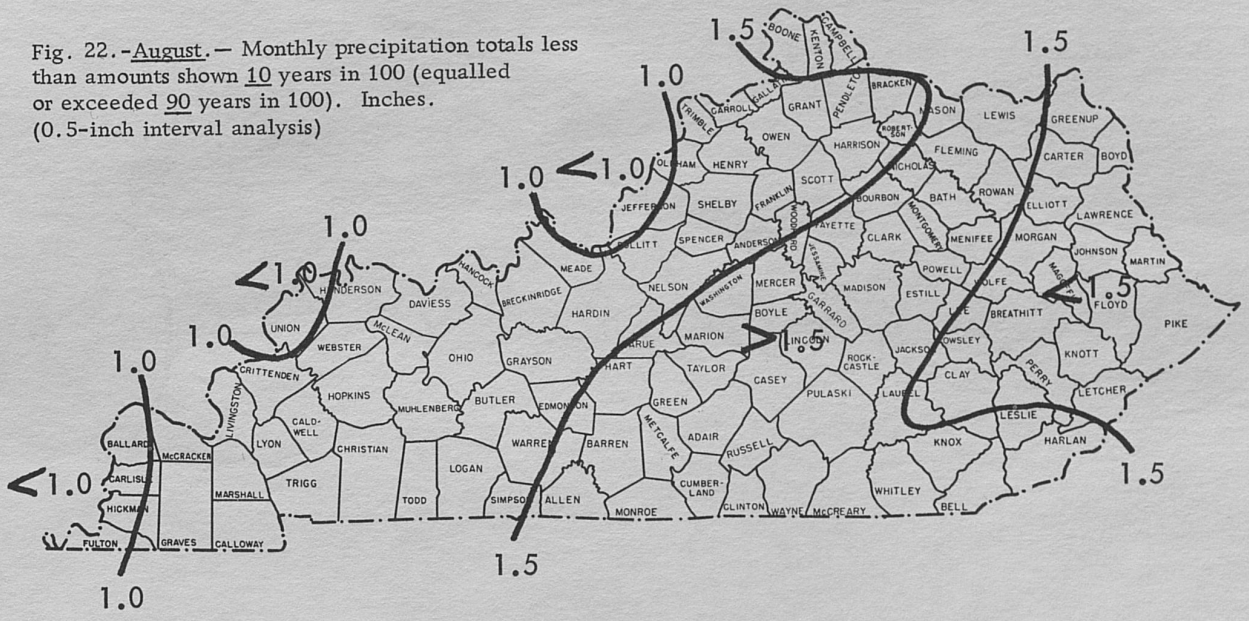


Fig. 23.-August.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

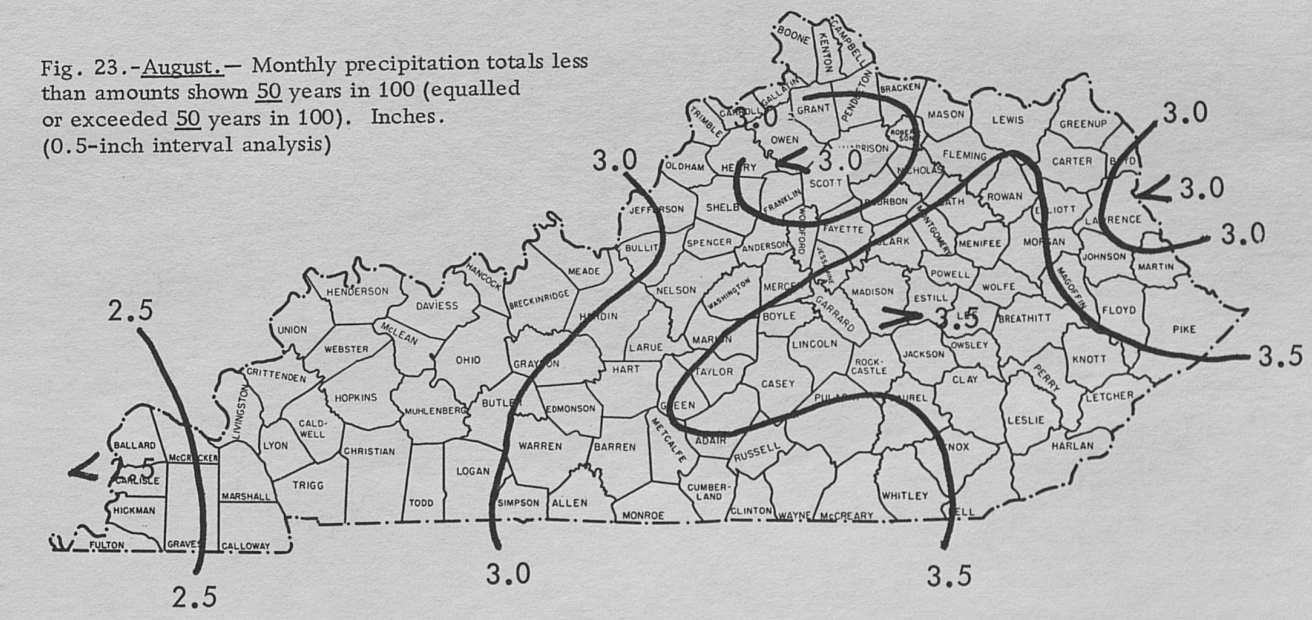


Fig. 24.-August.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

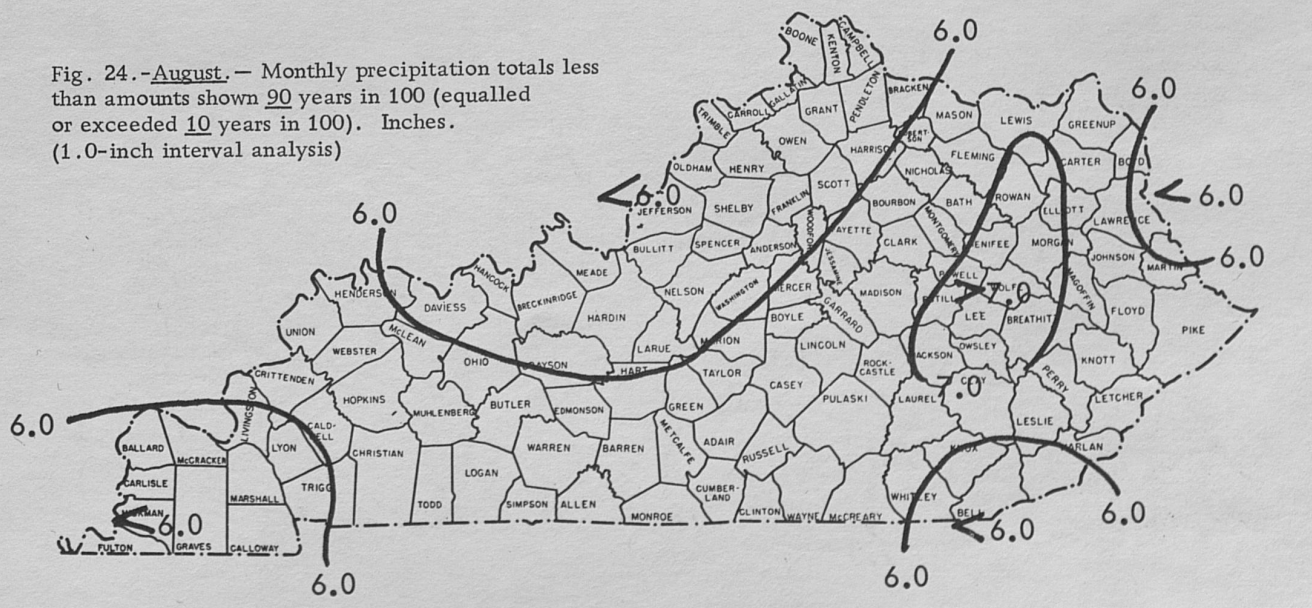


Fig. 25.-September.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches.
(0.5-inch interval analysis)

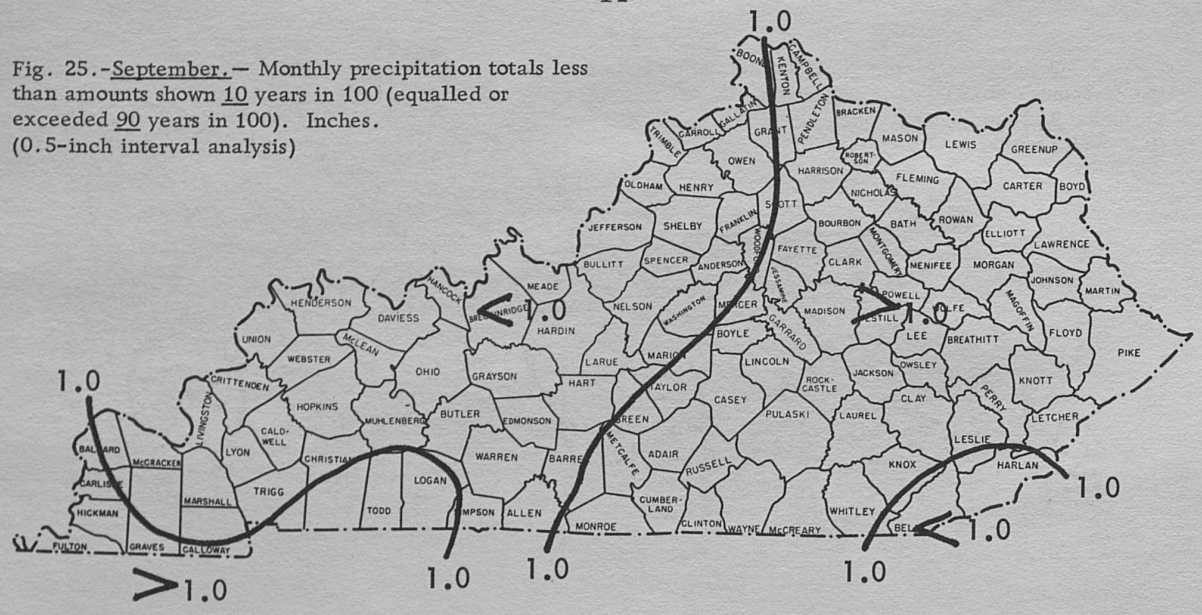


Fig. 26.-September.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches.
(0.5-inch interval analysis)

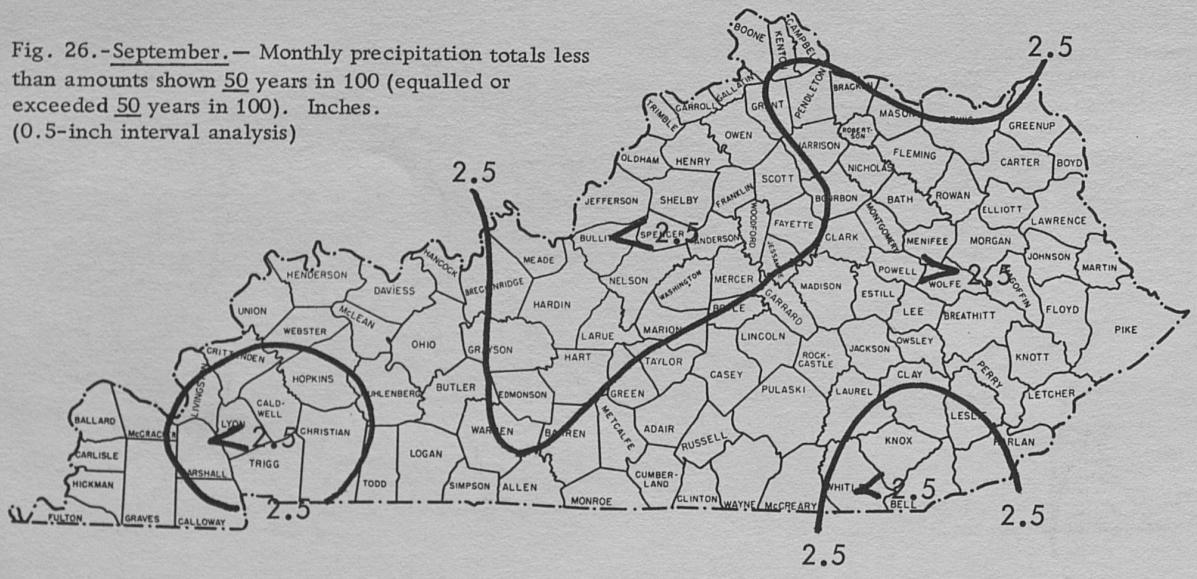


Fig. 27.-September.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches.
(1.0-inch interval analysis)

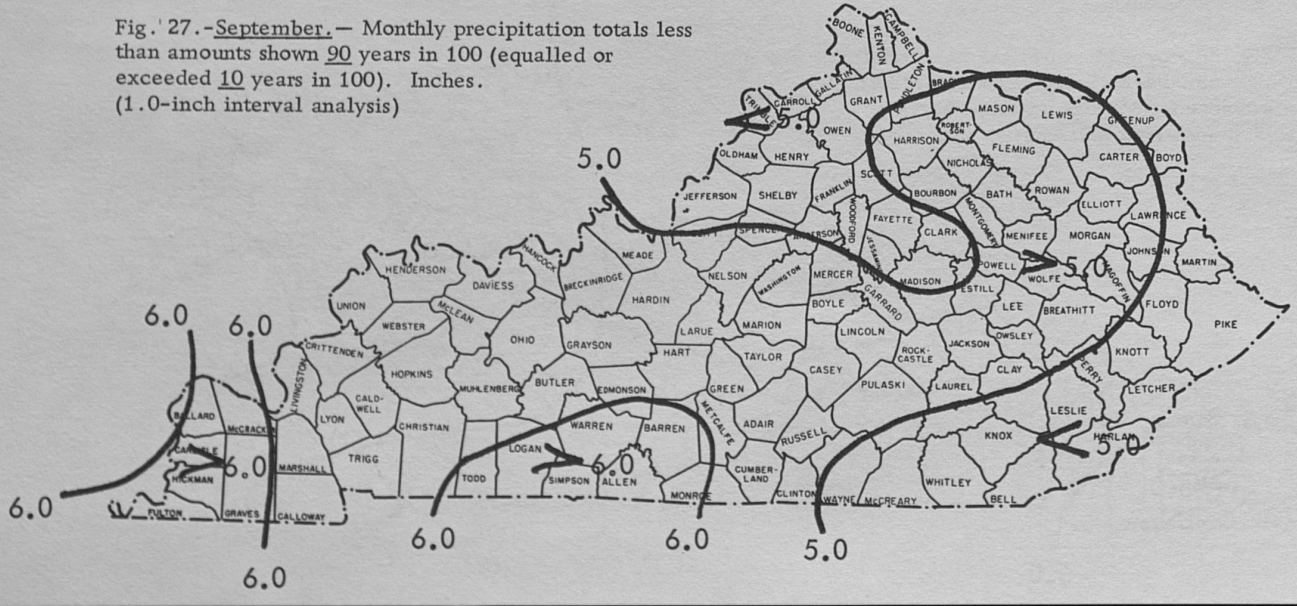


Fig. 28.-October.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches.
(0.5-inch interval analysis)

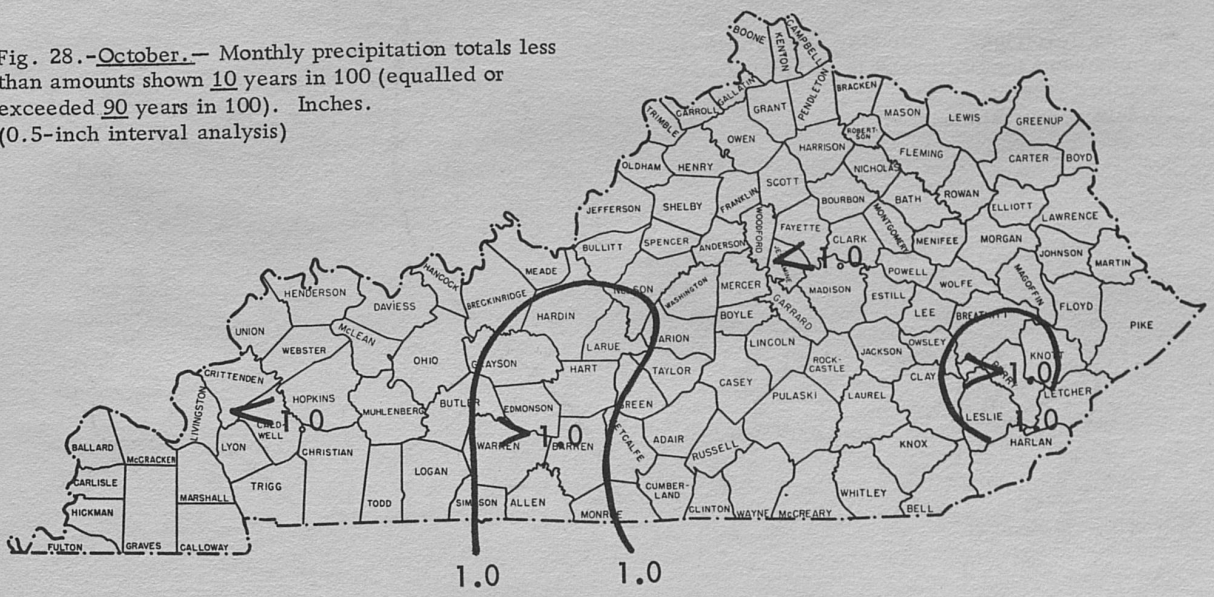


Fig. 29.-October.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches.
(0.5-inch interval analysis)

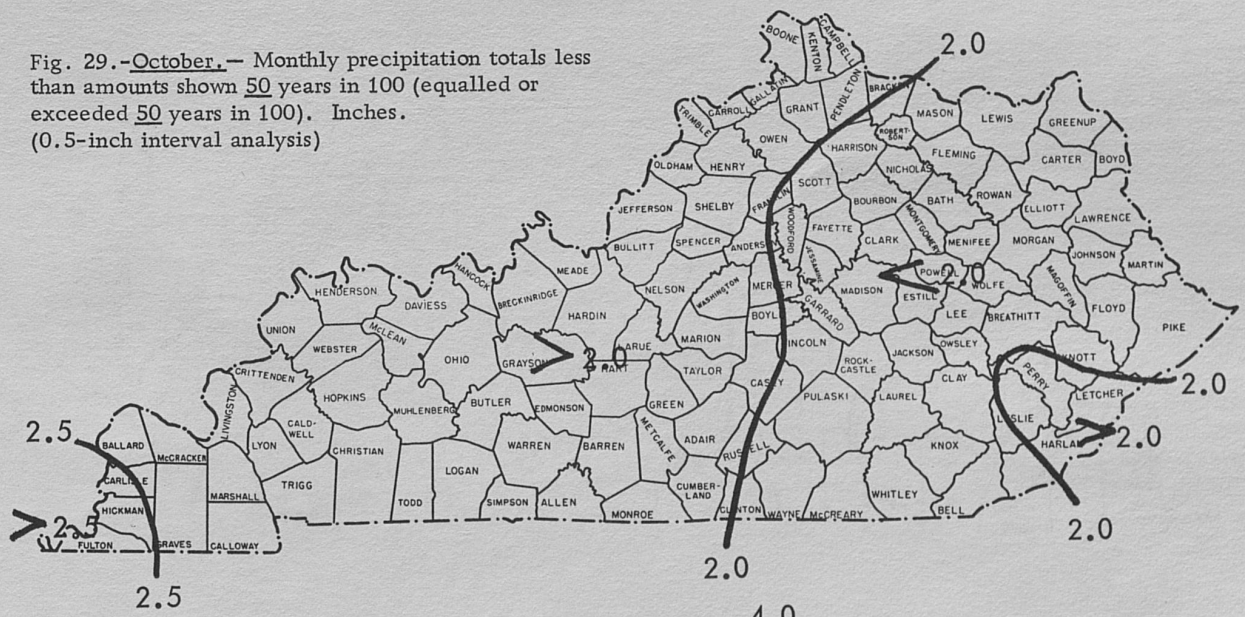


Fig. 30.-October.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches.
(1.0-inch interval analysis)

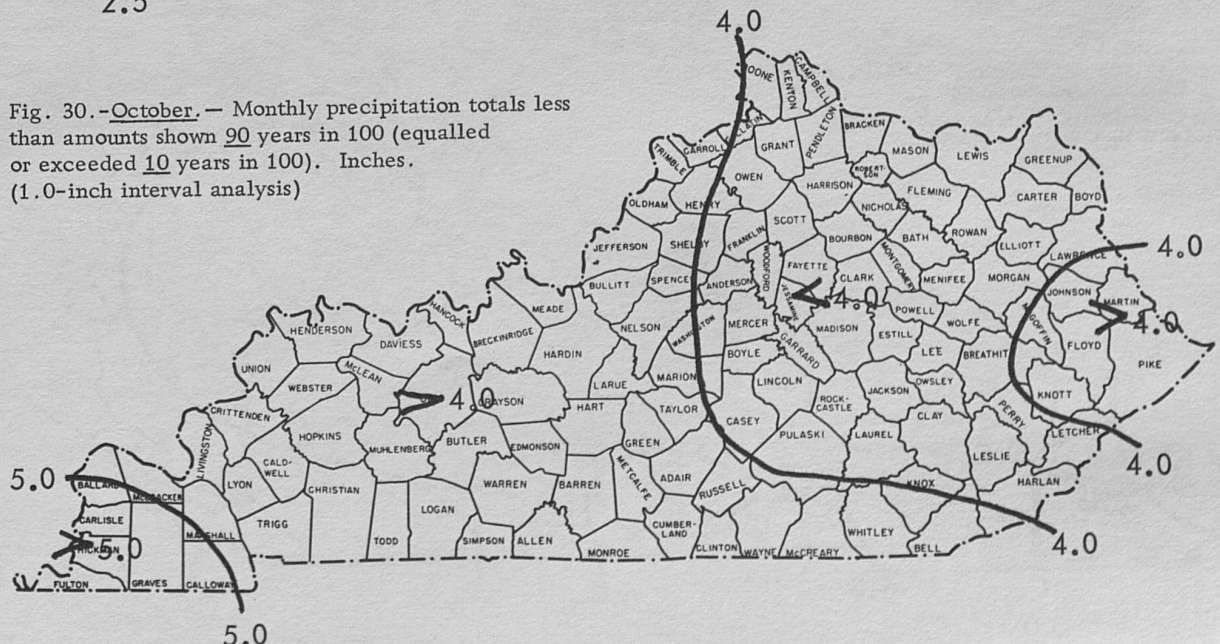


Fig. 31.-November.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

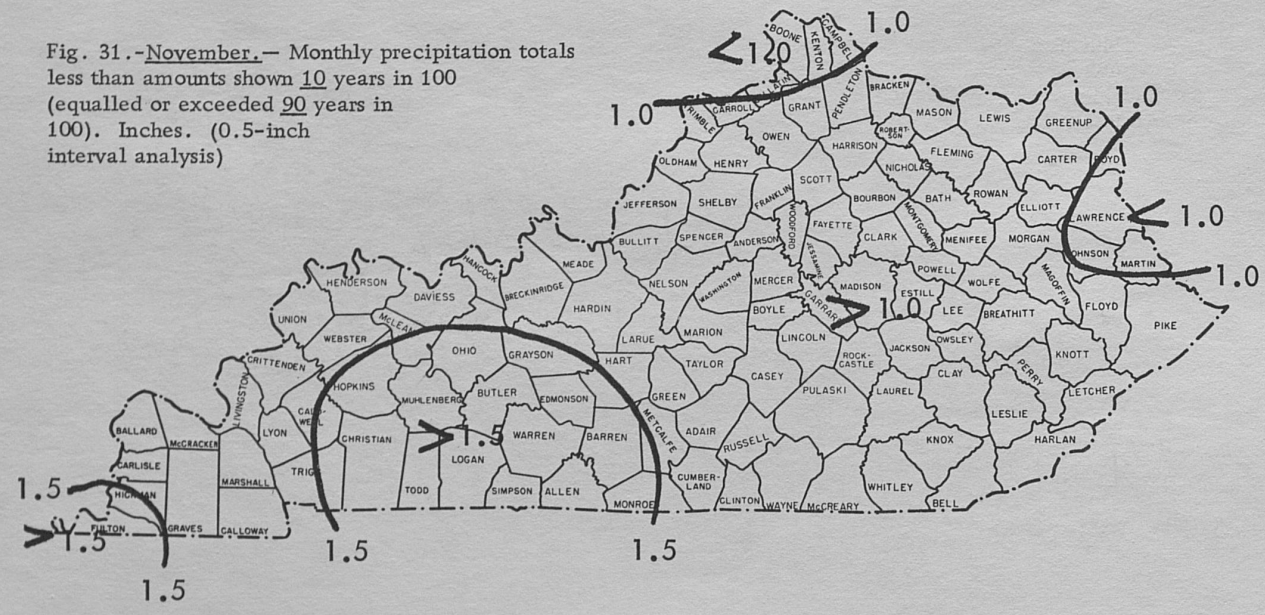


Fig. 32.-November.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

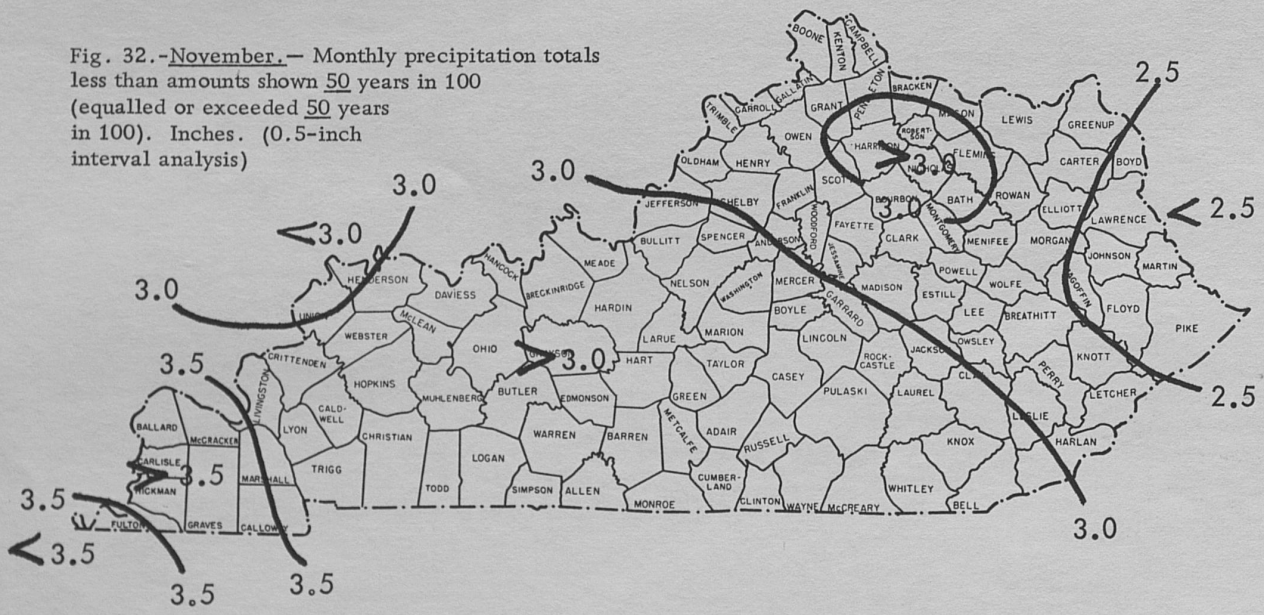


Fig. 33.-November.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)

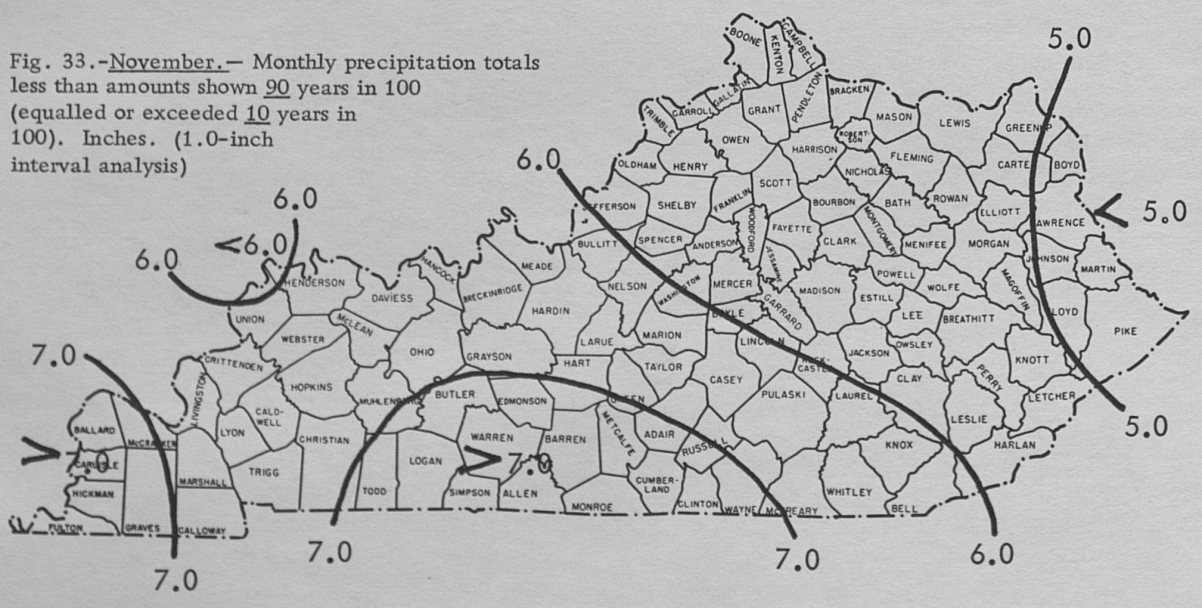


Fig. 34.-December.— Monthly precipitation totals less than amounts shown 10 years in 100 (equalled or exceeded 90 years in 100). Inches. (0.5-inch interval analysis)

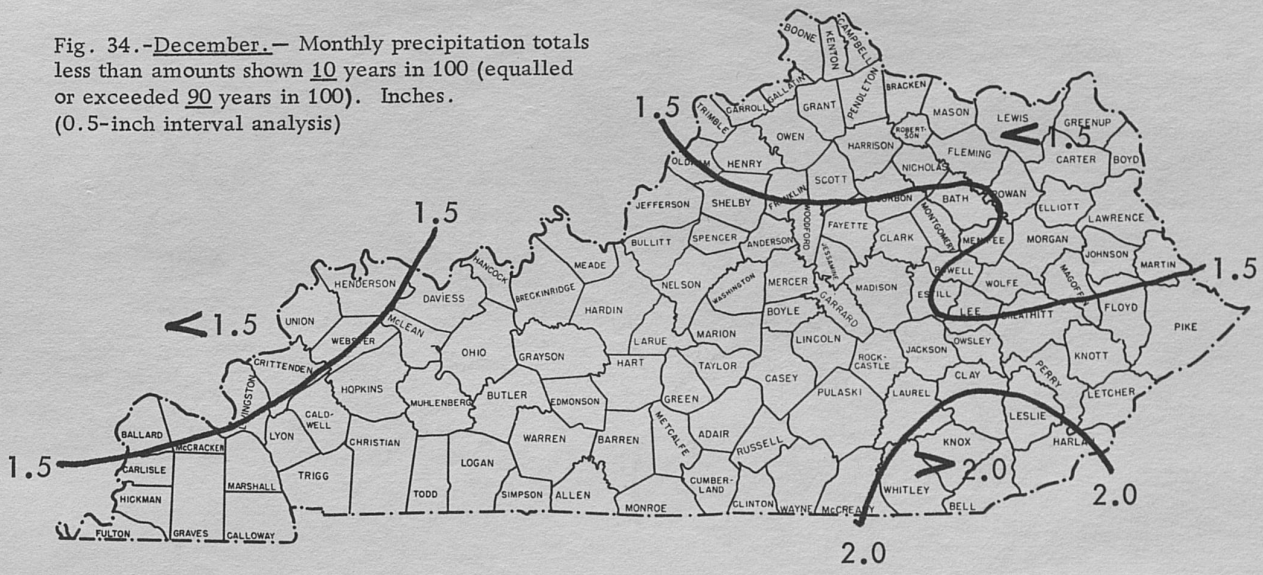


Fig. 35.-December.— Monthly precipitation totals less than amounts shown 50 years in 100 (equalled or exceeded 50 years in 100). Inches. (0.5-inch interval analysis)

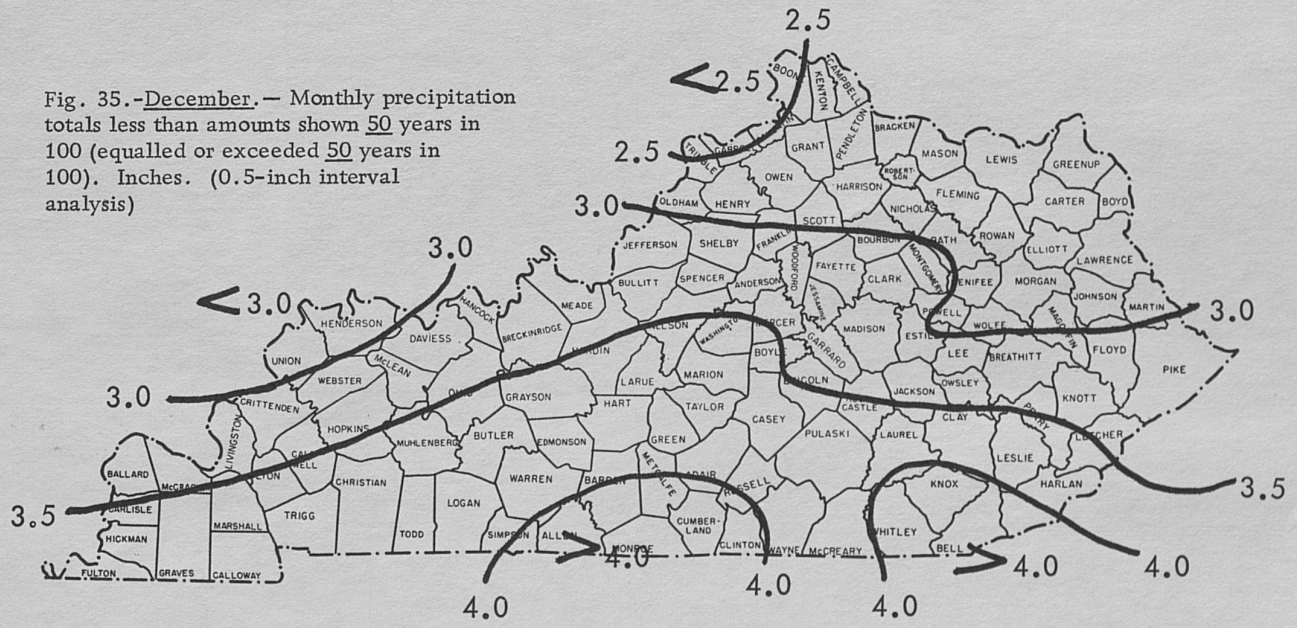
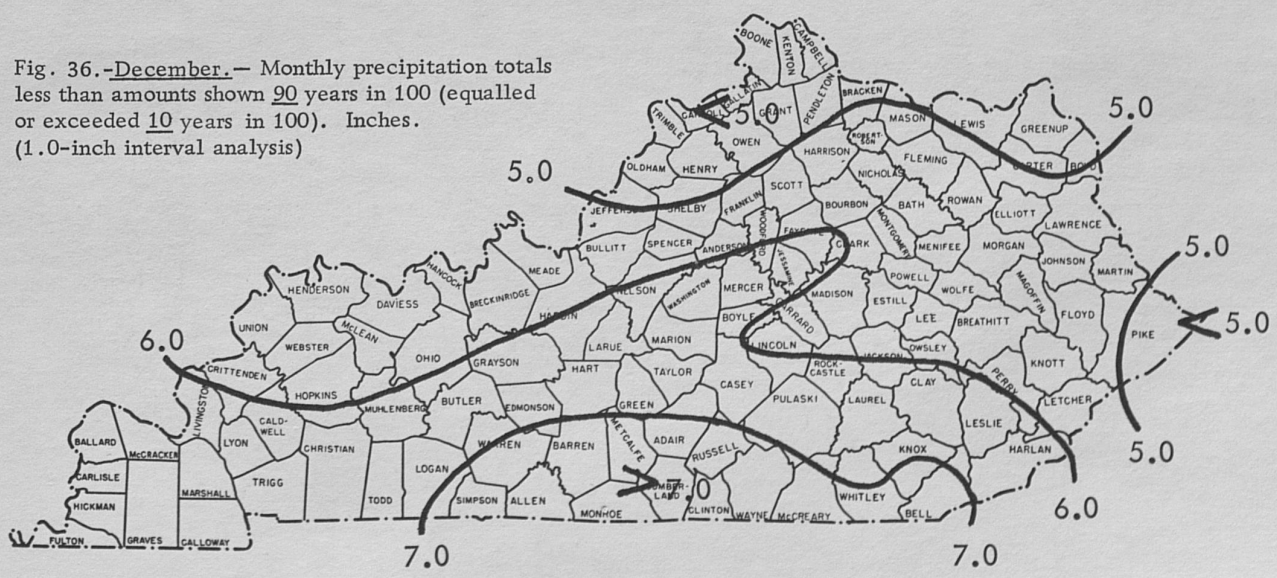


Fig. 36.-December.— Monthly precipitation totals less than amounts shown 90 years in 100 (equalled or exceeded 10 years in 100). Inches. (1.0-inch interval analysis)



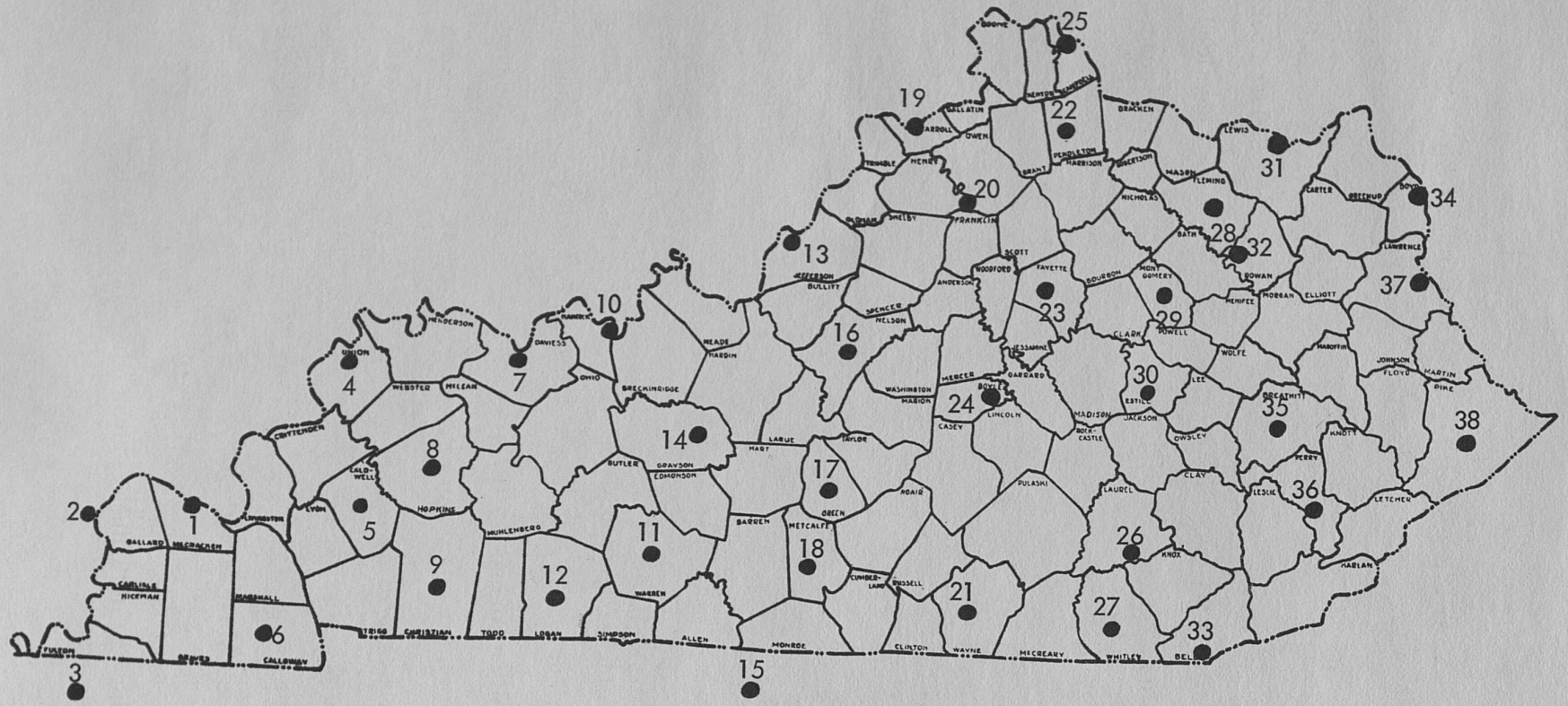


Fig. 37.— Stations from which precipitation records were used (locator chart). (Numbers are identified on opposite page.)

STATIONS FROM WHICH PRECIPITATION RECORDS WERE USED* (LISTING)

(Locations shown on opposite page)

No.	Station	No.	Station
1.	Paducah	20	Gest Lock 3
2	Cairo, Ill. WBO	21	Monticello
3	Union City, Tennessee	22	Falmouth
4	Uniontown Dam 49	23	Lexington WBO
5	Princeton	24	Danville
6	Murray	25	Brent Dam 36
7	Owensboro Dam 46	26	London FAA AP
8	Madisonville	27	Williamsburg
9	Hopkinsville	28	Flemingsburg
10	Addison Dam 45	29	Mount Sterling
11	Bowling Green FAA AP	30	Ravenna Lock 12
12	Russellville	31	Vanceburg Dam 32
13	Louisville WBO	32	Farmers
14	Leitchfield	33	Middlesboro
15	Red Boiling Springs 3NNE, Tenn.	34	Ashland
16	Bardstown S J PREP School	35	Jackson
17	Greensburg	36	Hazard
18	Edmonton	37	Louisa
19	Carrollton Lock 1	38	Pikeville

*All stations located in Kentucky unless otherwise indicated

APPENDIX

TABLES: Probabilities that Monthly Precipitation (Inches) Will Be Less Than Amounts Listed.

Note: Tables are in alphabetical order by place name.

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

ADDISON DAM 45, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	0.8	1.4	1.7	1.0	0.8	0.8	0.9	0.6	0.6	0.9	1.2
10 %	1.2	1.2	1.9	2.1	1.5	1.2	1.2	1.2	0.9	0.8	1.3	1.5
20 %	1.9	1.7	2.6	2.6	2.1	1.7	1.7	1.7	1.4	1.2	1.7	2.0
50 %	3.9	3.3	4.4	3.8	3.8	3.3	3.3	2.9	2.6	2.1	3.0	3.1
80 %	7.0	5.5	6.9	5.2	6.5	5.7	5.7	4.5	4.5	3.4	4.8	4.6
90 %	9.1	7.0	8.6	6.0	8.4	7.3	7.3	5.6	5.8	4.3	6.0	5.6
95 %	11.0	8.4	10.2	6.9	10.1	9.0	8.9	6.9	7.0	5.1	7.2	6.3
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

ASHLAND, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.2	0.7	1.8	1.5	1.4	1.7	1.5	1.1	0.9	0.6	0.8	1.0
10 %	1.5	1.1	2.2	1.8	1.8	2.1	2.0	1.4	1.1	0.7	1.1	1.3
20 %	2.1	1.5	2.7	2.2	2.3	2.5	2.5	1.8	1.5	1.0	1.4	1.7
50 %	3.5	2.6	3.9	3.2	3.7	3.7	4.0	3.0	2.5	1.7	2.4	2.7
80 %	5.3	4.4	5.6	4.4	5.4	5.1	5.9	4.6	3.9	2.7	3.7	3.9
90 %	6.6	5.6	6.6	5.1	6.6	6.0	7.0	5.6	4.7	3.4	4.6	4.7
95 %	7.7	6.8	7.4	5.7	7.5	6.7	8.1	6.4	5.4	4.0	5.4	5.4
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

BARDSTOWN S.J. PREP SCHOOL, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	0.7	1.9	1.7	1.3	1.4	1.8	1.0	0.5	0.8	1.1	1.2
10 %	1.7	1.1	2.2	2.1	1.8	1.8	2.1	1.4	0.8	1.0	1.5	1.6
20 %	2.3	1.5	2.9	2.5	2.4	2.6	2.7	1.9	1.1	1.3	1.9	2.1
50 %	4.0	3.0	4.3	3.7	4.2	4.0	3.9	3.2	2.4	2.2	3.2	3.6
80 %	6.5	5.2	6.6	5.1	6.6	6.2	5.5	4.8	4.4	3.3	4.9	5.5
90 %	8.3	6.7	7.2	5.9	8.2	7.6	6.5	5.9	5.8	4.1	6.0	6.8
95 %	9.8	8.1	8.1	6.7	9.7	8.8	8.1	6.9	7.1	4.7	7.0	7.9
YEARS OF RECORD	24	25	25	24	25	25	25	25	25	25	25	25

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

BOWLING GREEN FAA A.P., KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.1	0.8	2.2	2.0	0.9	1.0	1.4	1.2	0.4	0.9	1.3	1.4
10 %	1.6	1.2	2.7	2.1	1.3	1.4	1.8	1.6	0.7	1.1	1.6	1.9
20 %	2.5	1.8	3.2	2.5	1.8	2.1	2.4	2.1	1.1	1.4	2.1	2.5
50 %	4.8	3.5	5.0	3.9	3.3	3.7	3.9	3.3	2.5	2.3	3.3	3.9
80 %	8.4	6.2	7.0	5.3	5.6	6.2	5.9	5.0	4.6	3.5	5.0	6.0
90 %	10.9	8.1	8.3	6.4	7.1	8.0	7.2	6.2	6.2	4.1	6.0	7.2
95 %	13.3	9.8	9.5	7.1	8.5	9.6	8.4	7.1	7.7	4.8	7.0	8.3
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

BRENT DAM 36, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	0.8	1.0	1.3	1.2	1.3	1.1	1.2	0.8	0.6	0.6	1.0
10 %	1.2	1.0	1.5	1.6	1.6	1.7	1.4	1.6	1.1	0.8	0.9	1.3
20 %	1.7	1.4	2.1	2.1	2.1	2.3	1.9	2.0	1.4	1.1	1.3	1.7
50 %	3.0	2.6	3.6	3.2	3.4	3.8	3.3	3.2	2.4	2.0	2.5	2.5
80 %	5.2	4.3	5.8	4.7	5.2	5.9	5.2	4.8	3.9	3.2	4.3	3.6
90 %	6.8	5.3	7.3	5.7	6.4	7.3	6.4	5.8	5.0	4.0	5.5	4.3
95 %	8.2	6.5	8.6	6.5	7.4	8.5	7.5	6.7	5.8	4.7	6.7	4.9
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

CARROLLTON LOCK 1, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.7	0.6	0.9	1.2	1.3	0.9	1.7	1.0	0.5	0.6	0.7	0.9
10 %	1.1	0.8	1.3	1.6	1.7	1.2	2.0	1.3	0.8	0.8	0.9	1.1
20 %	1.6	1.2	2.0	2.0	2.3	1.8	2.4	1.8	1.2	1.2	1.4	1.5
50 %	3.3	2.6	3.7	3.3	3.2	3.6	3.6	3.0	2.2	2.1	2.6	2.4
80 %	5.8	4.8	6.2	4.9	5.1	6.2	4.9	4.9	3.8	3.3	4.5	3.6
90 %	7.4	6.2	7.9	6.0	6.9	7.9	5.2	6.0	4.8	4.1	5.7	4.4
95 %	9.0	7.6	9.6	7.1	8.1	9.6	6.8	7.0	5.8	4.9	6.9	5.0
YEARS OF RECORD	30	29	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

DANVILLE, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.4	0.9	2.0	1.9	1.4	1.5	1.5	1.2	1.0	0.6	1.0	1.2
10 %	1.9	1.3	2.5	2.2	1.8	1.9	2.0	1.5	1.2	0.7	1.3	1.5
20 %	2.5	1.9	3.1	2.6	2.4	2.4	2.6	2.1	1.6	1.0	1.8	2.1
50 %	4.5	3.4	4.6	3.8	3.8	4.2	4.3	3.5	2.8	1.7	3.0	3.2
80 %	7.0	5.7	6.6	4.9	5.6	6.4	6.4	5.4	4.2	2.7	4.7	4.8
90 %	8.9	7.4	7.8	5.8	6.8	7.9	7.8	6.7	5.2	3.3	5.7	5.8
95 %	10.8	9.1	8.9	6.4	7.8	9.4	9.1	7.9	6.1	3.9	6.8	6.8
YEARS OF RECORD	28	28	29	29	29	29	29	29	29	29	29	29

EDMONTON, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.6	0.9	1.9	1.8	2.0	1.3	1.8	0.7	0.8	0.6	1.0	1.4
10 %	1.9	1.4	2.4	2.1	2.4	1.7	2.2	1.1	1.1	0.8	1.4	1.8
20 %	2.6	1.9	3.0	2.6	2.8	2.3	2.6	1.5	1.5	1.1	1.9	2.4
50 %	4.8	3.9	4.8	3.9	3.8	3.9	3.9	2.6	2.7	1.9	3.3	4.0
80 %	7.8	6.9	7.0	5.1	5.1	6.2	5.2	4.3	4.5	3.0	5.5	6.1
90 %	9.5	8.8	8.3	5.9	5.9	7.6	6.0	5.5	5.8	3.7	7.0	7.3
95 %	11.2	10.3	9.5	6.7	6.5	9.0	6.8	6.7	7.0	4.4	8.4	8.5
YEARS OF RECORD	20	19	21	21	22	22	22	22	21	21	21	21

FALMOUTH, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.1	0.7	1.5	1.6	1.3	1.2	1.8	0.9	0.8	0.6	1.0	1.1
10 %	1.5	1.0	1.9	1.9	1.7	1.6	2.2	1.2	1.1	0.8	1.3	1.4
20 %	2.0	1.4	2.5	2.4	2.3	2.2	2.8	1.6	1.4	1.1	1.8	1.8
50 %	3.4	2.7	4.2	3.5	3.7	3.8	4.2	2.7	2.5	1.9	3.1	2.8
80 %	5.5	4.7	6.4	5.0	5.6	6.2	6.0	4.1	4.1	3.1	4.8	4.2
90 %	7.0	6.0	7.6	5.8	6.9	7.9	7.1	5.0	5.1	3.8	6.0	5.0
95 %	8.2	7.3	9.0	6.6	8.0	9.4	8.2	5.8	6.1	4.5	7.0	5.8
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

FARMERS, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	1.0	1.8	1.6	1.8	1.4	2.0	1.1	1.0	0.6	1.1	1.1
10 %	1.7	1.3	2.3	1.9	2.2	1.8	2.5	1.5	1.3	0.8	1.3	1.5
20 %	2.3	1.7	2.9	2.3	2.6	2.4	3.1	1.9	1.7	1.1	1.8	1.9
50 %	4.0	3.1	4.4	3.7	3.9	4.1	4.6	3.5	2.8	1.9	2.9	2.9
80 %	6.1	5.0	6.2	5.1	5.5	6.5	6.5	5.6	4.3	3.0	4.4	4.3
90 %	8.1	6.3	7.4	6.2	6.4	7.7	7.7	7.1	5.2	3.8	5.3	5.2
95 %	9.0	7.5	8.6	7.0	7.9	9.2	8.7	8.3	6.1	4.6	6.2	6.0
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

FLEMINGSBURG, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	0.9	1.8	1.3	1.2	1.8	1.9	1.7	0.9	0.7	1.0	1.2
10 %	1.7	1.2	2.2	1.9	1.6	2.2	2.4	2.1	1.2	0.8	1.4	1.5
20 %	2.3	1.6	2.8	2.3	2.1	2.8	3.0	2.5	1.6	1.1	1.8	1.9
50 %	4.0	3.0	4.3	3.6	3.5	4.3	4.5	3.7	2.8	1.8	3.0	3.0
80 %	6.3	4.7	6.4	5.4	5.5	6.4	6.4	5.3	4.5	3.0	4.7	4.5
90 %	7.9	5.9	7.6	6.6	7.0	7.5	7.5	6.3	5.6	3.6	5.7	5.4
95 %	9.2	7.1	8.8	7.6	8.0	8.8	8.6	7.1	6.5	4.2	6.8	6.2
YEARS OF RECORD	30	30	30	30	29	29	30	30	30	30	30	30

GEST LOCK 3, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	0.7	1.4	1.6	1.2	0.8	1.9	0.9	0.7	0.5	1.0	1.1
10 %	1.2	1.0	1.8	2.0	1.5	1.2	2.3	1.2	1.0	0.7	1.3	1.4
20 %	1.8	1.5	2.4	2.4	2.1	1.9	2.9	1.6	1.3	0.9	1.8	1.7
50 %	3.5	2.7	4.0	3.6	3.5	3.6	4.3	2.8	2.3	1.8	2.9	2.7
80 %	6.0	4.6	6.3	5.2	5.5	6.2	6.1	4.7	4.0	3.0	4.5	4.0
90 %	7.9	5.9	7.8	6.2	6.8	8.0	7.2	5.9	5.0	3.9	5.4	4.7
95 %	9.5	7.1	9.1	7.0	7.9	9.9	8.1	7.1	6.1	4.8	6.3	5.4
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

GREENSBURG, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	1.0	2.0	1.7	1.3	1.6	1.7	0.9	0.8	0.7	0.9	1.2
10 %	1.3	1.3	2.5	2.1	1.8	2.1	2.2	1.4	1.1	0.9	1.4	1.7
20 %	2.2	1.9	3.2	2.6	2.4	2.8	2.8	1.8	1.4	1.2	1.8	2.2
50 %	4.3	3.6	4.9	3.6	4.0	4.6	4.3	3.5	2.8	2.1	3.3	3.6
80 %	8.2	5.8	7.2	5.1	6.3	6.8	6.3	5.0	4.6	3.3	5.5	5.4
90 %	10.8	7.3	8.6	5.9	7.8	8.4	7.7	5.9	5.7	4.1	7.0	6.6
95 %	13.5	8.7	9.6	6.7	9.1	9.3	8.8	6.8	6.8	4.8	8.3	7.7
YEARS OF RECORD	30	30	29	30	29	30	28	30	30	30	30	30

HAZARD, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.6	1.3	2.1	1.7	1.2	1.9	2.4	1.5	1.0	0.9	1.1	1.6
10 %	2.1	1.6	2.5	2.0	1.5	2.4	2.9	1.9	1.3	1.2	1.4	1.9
20 %	2.5	2.2	2.8	2.4	2.1	3.1	3.6	2.4	1.7	1.5	1.8	2.3
50 %	4.0	3.6	4.3	3.6	3.5	4.7	4.9	3.7	2.7	2.2	2.9	3.4
80 %	5.8	5.5	5.9	5.2	5.4	6.8	6.6	5.5	4.1	3.0	4.3	4.6
90 %	6.9	6.8	7.5	6.1	6.6	8.1	7.7	6.6	5.0	3.6	5.1	5.4
95 %	8.0	8.1	7.7	6.8	7.7	9.4	8.5	7.7	5.7	4.0	5.9	6.1
YEARS OF RECORD	30	29	30	30	30	29	30	30	30	30	30	30

HOPKINSVILLE, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.9	1.0	2.0	1.8	0.8	1.0	1.3	0.7	0.7	0.7	1.0	1.5
10 %	1.5	1.4	2.5	2.1	1.2	1.4	1.7	1.0	1.0	0.9	1.5	1.9
20 %	2.3	2.0	3.2	2.6	1.7	2.0	2.3	1.5	1.4	1.2	2.0	2.4
50 %	4.5	3.5	4.8	3.8	3.6	3.6	3.6	2.9	2.4	2.1	3.3	3.7
80 %	8.0	5.9	6.9	5.4	6.2	6.1	5.5	4.8	4.2	3.3	5.4	5.4
90 %	10.4	7.5	8.3	6.3	8.2	7.8	6.7	6.2	5.4	4.2	6.8	6.4
95 %	12.8	9.1	9.5	7.1	10.0	9.5	8.3	7.5	6.6	4.9	8.0	7.3
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	29

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

JACKSON, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.5	1.2	2.2	1.7	1.3	1.6	1.2	1.1	0.8	0.5	0.7	1.5
10 %	1.9	1.6	2.6	2.0	1.6	2.0	1.7	1.4	1.1	0.7	1.0	1.8
20 %	2.5	2.1	3.2	2.5	2.1	2.6	2.3	2.0	1.5	1.0	1.4	2.2
50 %	4.1	3.6	4.7	3.7	3.5	4.0	4.2	3.5	2.6	1.8	2.7	3.3
80 %	6.2	5.6	6.6	5.3	5.3	6.0	7.0	5.8	4.1	2.9	4.1	4.7
90 %	7.6	7.0	7.7	6.2	6.4	7.1	8.9	7.3	5.2	4.0	5.6	5.5
95 %	8.8	8.2	8.5	7.0	7.5	8.3	10.1	8.8	6.2	4.9	6.9	6.1
YEARS OF RECORD	25	25	25	27	27	26	26	27	25	26	26	26

LEITCHFIELD, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.9	0.8	1.8	1.6	1.0	1.3	1.4	0.9	0.6	1.0	1.0	1.4
10 %	1.3	1.1	2.3	2.1	1.4	1.7	1.8	1.2	0.9	1.3	1.4	1.8
20 %	2.1	1.5	3.0	2.6	2.1	2.4	2.4	1.7	1.4	1.6	2.0	2.3
50 %	4.3	3.4	4.8	3.9	3.7	4.1	3.9	3.0	2.5	2.5	3.5	3.5
80 %	7.7	5.9	7.1	5.6	6.2	6.5	5.8	4.9	4.2	3.5	5.5	5.2
90 %	9.9	7.7	8.5	6.6	7.8	8.0	7.1	6.1	5.4	4.3	6.9	6.2
95 %	12.3	9.3	9.8	7.3	9.4	9.6	8.4	7.2	6.4	5.0	8.3	7.5
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

LEXINGTON, WBO, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	1.1	1.8	1.5	1.2	1.9	1.8	1.1	0.8	0.7	1.0	1.3
10 %	1.8	1.4	2.2	1.9	1.5	2.3	2.2	1.5	1.0	0.9	1.3	1.6
20 %	2.5	1.9	2.8	2.4	2.1	2.9	2.8	1.9	1.4	1.2	1.7	2.1
50 %	4.2	3.2	4.3	3.6	3.6	4.3	4.4	3.2	2.4	1.9	2.9	3.3
80 %	7.0	5.0	6.4	5.2	5.5	6.3	6.5	4.8	3.7	3.0	4.4	4.8
90 %	8.8	6.2	7.5	6.0	6.8	7.6	7.7	5.9	4.8	3.7	5.4	5.8
95 %	10.6	7.3	8.6	7.1	8.0	8.7	9.1	6.9	5.6	4.3	6.3	6.6
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

LONDON FAA AP, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.5	1.3	1.9	1.4	1.6	2.2	0.7	0.9	0.7	0.4	0.9	1.6
10 %	2.0	1.7	2.3	1.6	2.0	2.6	1.3	1.2	1.0	0.6	1.3	2.1
20 %	2.7	2.3	2.9	2.1	2.6	3.2	1.8	1.7	1.4	0.9	1.8	2.7
50 %	4.5	4.0	4.3	3.4	4.0	4.4	3.7	2.9	2.5	1.7	3.2	4.1
80 %	7.2	6.3	6.1	5.0	5.7	5.7	6.4	4.5	4.1	2.9	5.3	6.1
90 %	8.9	7.9	7.2	6.1	6.9	6.7	8.4	5.6	5.2	3.7	6.8	7.2
95 %	10.5	9.4	8.1	7.0	7.9	7.5	10.0	6.6	6.3	4.5	8.3	8.3
YEARS OF RECORD	20	21	21	22	21	21	21	21	21	20	20	22

LOUISA, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.4	0.8	1.7	1.4	1.3	1.1	1.6	1.0	1.0	0.4	0.7	1.0
10 %	1.7	1.1	2.1	1.7	1.6	1.5	2.1	1.3	1.3	0.6	1.0	1.3
20 %	2.2	1.5	2.5	2.1	2.2	2.1	2.7	1.7	1.6	0.9	1.3	1.7
50 %	3.6	2.6	3.9	3.1	3.6	3.6	4.3	2.9	2.6	1.7	2.3	2.8
80 %	5.4	4.3	5.6	4.4	5.6	5.5	6.3	4.6	3.9	2.8	3.9	4.1
90 %	6.6	5.5	6.7	5.1	6.9	6.8	7.5	5.6	4.8	3.6	4.9	5.0
95 %	7.6	6.6	7.7	5.8	8.1	7.9	8.6	6.6	5.5	4.4	6.0	5.8
YEARS OF RECORD	28	27	30	30	29	29	30	29	30	30	30	29

LOUISVILLE, WBO, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.7	0.6	1.3	1.6	1.2	0.7	1.2	0.6	0.6	0.6	0.9	1.4
10 %	1.2	0.8	1.8	2.0	1.5	1.1	1.6	0.9	0.9	0.8	1.2	1.7
20 %	1.8	1.4	2.5	2.5	2.2	1.6	2.1	1.3	1.2	1.1	1.6	2.1
50 %	3.5	2.8	4.3	3.7	3.7	3.4	3.2	2.5	2.3	2.0	2.9	3.0
80 %	6.1	5.0	6.7	5.2	5.8	6.0	4.8	4.3	3.7	3.2	4.6	4.2
90 %	7.9	6.5	8.4	6.2	7.2	7.9	5.8	5.5	4.7	4.1	5.8	5.0
95 %	9.6	8.0	9.6	7.1	8.5	9.6	6.7	6.7	5.8	4.8	6.9	5.7
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

MADISONVILLE 1 SE, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	1.0	1.4	1.6	1.3	0.6	1.2	0.7	0.4	0.5	1.2	1.3
10 %	1.3	1.4	1.9	2.0	1.7	0.9	1.6	1.0	0.7	0.8	1.5	1.7
20 %	2.0	1.8	2.6	2.5	2.3	1.5	2.3	1.5	1.2	1.2	2.1	2.2
50 %	4.2	3.3	4.3	3.9	3.8	3.3	3.8	3.0	2.4	2.1	3.4	3.3
80 %	7.4	5.3	6.8	5.6	5.8	5.8	6.0	5.2	4.2	3.6	5.6	4.7
90 %	9.6	6.5	8.6	6.8	7.2	7.6	7.5	6.8	5.5	4.5	6.9	5.6
95 %	11.9	7.8	10.0	7.8	8.3	9.3	8.9	8.3	6.8	5.5	7.9	6.4
YEARS OF RECORD	30	29	30	30	29	30	30	30	30	30	30	30

MIDDLESBORO, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.6	1.4	2.2	2.1	1.0	1.1	1.3	1.6	0.7	0.4	1.1	2.1
10 %	2.1	1.9	2.6	2.4	1.5	1.6	1.6	1.9	0.9	0.7	1.4	2.4
20 %	2.7	2.5	3.3	2.9	2.1	2.3	2.1	2.4	1.3	1.0	1.8	2.9
50 %	4.7	4.1	4.9	4.0	3.6	4.0	3.7	3.5	2.1	2.0	3.2	4.4
80 %	7.4	6.4	7.0	5.3	5.6	6.5	5.7	5.0	3.7	3.2	4.9	6.1
90 %	9.1	7.8	8.2	6.2	7.1	8.3	7.0	5.9	4.5	4.1	6.1	7.1
95 %	10.6	9.1	9.3	6.8	8.5	10.0	8.2	6.6	5.4	5.0	7.2	8.1
YEARS OF RECORD	30	26	27	28	27	28	28	28	26	27	27	24

MONTICELLO, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	1.3	2.2	1.7	1.2	1.7	1.4	1.1	1.0	0.4	1.3	1.4
10 %	1.8	1.8	2.7	2.1	1.6	2.1	1.8	1.5	1.3	0.6	1.7	1.8
20 %	2.6	2.4	3.2	2.5	2.0	2.7	2.4	2/0	1.7	0.9	2.2	2.3
50 %	4.4	4.2	4.7	3.5	3.3	4.1	3.8	3.3	2.7	1.8	3.6	3.9
80 %	7.4	6.5	6.3	5.0	5.0	5.8	6.0	5.0	4.1	3.2	5.4	5.9
90 %	9.4	8.3	7.9	5.8	6.0	6.9	7.5	6.2	4.9	4.1	6.6	7.3
95 %	11.3	9.7	8.2	6.6	7.0	7.8	9.0	7.3	5.7	4.9	7.6	8.4
YEARS OF RECORD	23	23	23	23	25	24	25	24	24	24	24	23

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

MOUNT STERLING, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.0	0.9	2.2	1.4	1.5	1.3	2.1	1.0	0.9	0.6	1.1	1.3
10 %	1.5	1.2	2.6	1.8	1.9	1.7	2.6	1.3	1.2	0.8	1.4	1.6
20 %	2.0	1.6	3.2	2.4	2.5	2.3	3.3	1.7	1.6	1.1	1.8	2.3
50 %	3.5	2.8	4.7	4.0	3.9	3.9	4.9	3.0	2.5	2.0	2.8	3.8
80 %	5.9	3.2	6.5	6.1	5.8	6.2	6.2	4.7	3.9	3.2	4.1	5.9
90 %	7.5	4.7	7.0	7.4	6.9	7.7	8.1	5.8	4.8	4.1	5.0	7.2
95 %	9.1	7.0	8.6	8.6	7.9	8.8	9.1	6.8	5.6	4.8	5.7	8.5
YEARS OF RECORD	24	22	23	23	23	24	23	24	23	21	22	22

MURRAY, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.7	0.9	2.1	1.7	1.3	0.7	0.9	0.8	0.7	0.7	1.0	1.5
10 %	1.0	1.3	2.7	2.1	1.7	1.1	1.3	1.1	0.9	0.9	1.3	1.9
20 %	1.7	2.2	3.4	2.6	2.6	1.5	1.9	1.6	1.4	1.3	1.8	2.4
50 %	4.1	3.6	5.4	3.8	4.0	3.1	3.4	2.8	2.6	2.4	3.3	3.9
80 %	7.9	6.2	7.7	5.4	6.1	5.3	5.7	4.6	4.4	4.1	5.3	5.7
90 %	11.0	8.2	9.3	6.4	7.5	6.9	7.3	5.8	5.7	5.2	6.7	6.9
95 %	13.4	9.9	10.8	7.2	8.8	8.4	8.9	6.9	6.9	6.3	8.0	8.0
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

OWENSBORO DAM 46, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	0.6	1.4	1.7	1.0	0.6	0.8	0.8	0.7	0.5	0.9	1.1
10 %	1.1	1.0	1.9	2.1	1.4	1.0	1.4	1.1	1.0	0.8	1.2	1.5
20 %	1.8	1.5	2.6	2.5	2.2	1.6	1.8	1.5	1.4	1.1	1.8	1.9
50 %	3.8	2.9	4.4	3.7	3.9	3.3	3.4	2.8	2.6	2.1	3.1	2.9
80 %	7.0	5.0	7.0	5.3	6.5	6.0	5.7	4.6	4.3	3.4	5.0	4.4
90 %	9.3	6.5	8.5	6.3	8.3	7.8	7.3	5.9	5.4	4.3	6.2	5.4
95 %	11.3	7.4	10.2	7.2	9.8	9.4	8.8	7.0	6.4	5.2	7.4	6.1
YEARS OF RECORD	30	29	29	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

PADUCAH, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.7	1.0	1.2	1.7	1.5	0.8	0.8	1.0	0.4	0.7	1.0	1.0
10 %	1.2	1.3	1.7	2.1	1.9	1.1	1.1	1.3	0.8	1.0	1.3	1.4
20 %	1.9	1.9	2.4	2.6	2.6	1.7	1.7	1.7	1.1	1.4	1.9	1.9
50 %	4.0	3.4	4.4	4.1	4.3	3.3	3.1	2.8	2.5	2.4	3.5	3.2
80 %	7.2	5.7	7.1	5.8	6.4	5.7	5.1	4.3	4.7	4.0	5.8	5.1
90 %	9.4	7.1	8.0	7.0	7.9	7.3	6.5	5.4	6.2	5.0	7.4	6.2
95 %	11.5	8.4	10.7	8.2	9.2	8.9	7.8	6.3	7.7	6.0	8.8	7.3
YEARS OF RECORD	30	30	30	28	29	30	29	29	30	30	30	30

PIKEVILLE, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.2	1.3	2.3	1.5	1.1	1.9	2.1	0.9	1.1	0.5	0.9	1.4
10 %	1.5	1.7	2.9	1.8	1.5	2.3	2.6	1.3	1.4	0.6	1.2	1.7
20 %	2.0	2.3	3.9	2.3	2.1	2.9	3.3	1.8	1.8	1.0	1.5	2.1
50 %	3.5	3.6	4.5	3.4	3.6	4.2	5.0	3.3	2.7	1.9	2.5	3.0
80 %	5.5	5.5	6.3	5.0	5.7	5.9	7.1	5.4	3.9	3.2	3.7	4.2
90 %	6.7	6.6	7.7	5.9	7.1	7.0	8.4	6.8	4.9	4.1	4.5	4.9
95 %	7.9	7.7	8.2	6.8	8.3	8.0	9.6	8.1	5.5	5.0	5.1	5.5
YEARS OF RECORD	30	29	28	29	29	29	29	30	30	30	30	30

PRINCETON, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.8	1.0	1.5	1.7	1.4	0.6	1.0	0.8	0.4	0.5	1.1	1.6
10 %	1.5	1.4	2.0	2.1	1.7	0.9	1.5	1.1	0.7	0.9	1.4	1.9
20 %	2.0	2.0	2.7	2.7	2.4	1.4	1.8	1.5	1.1	1.2	2.0	2.4
50 %	4.4	3.5	4.5	3.8	3.9	3.3	3.2	2.8	2.3	2.1	3.3	3.7
80 %	7.7	5.8	7.0	5.5	5.9	5.7	5.0	4.7	4.4	3.6	5.1	4.9
90 %	10.0	7.2	8.4	6.7	7.1	7.7	6.4	5.6	5.8	4.7	6.3	5.8
95 %	12.1	8.7	9.8	7.7	8.2	9.4	7.5	6.8	7.0	5.6	7.4	6.6
YEARS OF RECORD	30	30	30	28	29	30	30	29	27	30	30	29

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

RAVENNA LOCK 12, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.4	1.1	1.7	1.6	1.4	1.3	2.1	1.1	0.9	0.4	0.9	1.0
10 %	1.8	1.4	2.2	2.0	1.7	1.7	2.7	1.6	1.1	0.6	1.2	1.2
20 %	2.3	1.8	2.7	2.4	2.2	2.3	3.4	2.1	1.5	0.9	1.6	1.7
50 %	3.8	3.0	4.2	3.6	3.3	3.9	5.2	3.6	2.6	1.6	2.8	2.7
80 %	5.9	4.9	5.7	5.0	4.9	5.8	7.6	6.0	4.1	2.7	4.5	4.2
90 %	7.3	5.8	6.6	5.8	5.8	7.1	9.1	7.6	5.0	3.4	5.5	5.1
95 %	8.5	6.8	7.6	6.5	6.6	8.3	10.3	9.0	5.9	4.1	6.5	6.0
YEARS OF RECORD	29	29	28	29	30	30	28	30	29	29	29	29

RUSSELLVILLE, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.1	0.8	2.0	1.9	1.0	0.5	1.6	0.5	0.7	0.6	0.9	1.3
10 %	1.7	1.3	2.5	2.2	1.4	0.8	2.0	0.9	1.0	0.8	1.4	1.7
20 %	2.4	1.8	3.1	2.7	1.8	1.3	2.5	1.5	1.5	1.1	1.8	2.3
50 %	4.6	3.5	4.7	3.9	3.4	3.2	4.0	2.9	3.0	2.0	3.2	3.6
80 %	8.1	6.2	6.7	5.3	5.6	6.2	5.9	5.1	5.0	3.2	5.7	5.4
90 %	10.4	8.0	8.0	6.3	7.1	8.4	7.1	6.8	6.6	4.0	7.3	6.6
95 %	13.2	9.7	9.2	7.0	8.3	10.5	8.2	8.2	8.0	4.8	8.7	7.7
YEARS OF RECORD	29	29	30	30	30	30	30	30	29	30	28	28

UNIONTOWN, DAM 49, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	0.5	0.7	1.2	1.9	1.1	0.7	1.1	0.4	0.6	0.3	0.9	0.9
10 %	0.8	1.0	1.6	2.2	1.5	1.1	1.4	0.8	0.9	0.8	1.2	1.2
20 %	1.4	1.4	2.1	2.8	2.1	1.5	1.9	1.2	1.3	1.0	1.6	1.6
50 %	3.3	2.6	3.8	3.9	3.7	3.0	3.2	2.8	2.5	2.2	2.8	2.6
80 %	6.4	4.4	6.4	5.3	6.0	5.0	5.1	4.9	4.3	3.6	4.8	4.1
90 %	8.7	5.7	8.3	6.2	8.0	6.6	6.3	6.5	5.7	4.4	6.1	5.2
95 %	10.7	6.9	9.7	6.9	9.4	8.0	7.5	8.1	6.9	5.3	7.2	6.1
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

PROBABILITIES THAT MONTHLY PRECIPITATION (INCHES) WILL BE LESS THAN AMOUNTS LISTED

VANCEBURG DAM 32, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.3	0.8	1.4	1.4	1.6	2.0	1.4	1.1	0.9	0.5	1.0	1.1
10 %	1.7	1.2	1.8	1.8	2.0	2.4	1.8	1.5	1.1	0.8	1.3	1.4
20 %	2.2	1.7	2.4	2.2	2.5	2.8	2.8	2.0	1.5	1.1	1.7	1.7
50 %	3.7	3.0	4.1	3.5	3.8	4.2	3.9	3.4	2.4	1.9	2.8	2.7
80 %	5.8	4.8	6.5	5.3	5.6	5.7	6.1	5.6	3.7	3.1	4.2	4.0
90 %	7.2	6.0	8.0	6.3	6.6	6.5	7.6	7.0	4.5	3.9	5.1	4.8
95 %	8.5	7.2	9.3	7.2	7.6	7.4	8.9	8.3	5.2	4.8	5.9	5.6
YEARS OF RECORD	30	30	30	30	30	30	30	30	30	30	30	30

WILLIAMSBURG, KENTUCKY

% PROBABILITY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5 %	1.5	1.1	1.8	1.5	1.2	1.1	1.9	1.4	0.8	0.5	1.0	1.5
10 %	2.0	1.5	2.3	2.2	1.6	1.6	2.5	1.8	1.1	0.8	1.4	1.9
20 %	2.6	2.1	2.9	2.7	2.0	2.1	3.1	2.2	1.4	1.1	1.8	2.4
50 %	4.3	4.0	4.3	3.8	3.5	3.7	4.8	3.4	2.4	2.0	2.9	3.5
80 %	6.4	6.8	6.2	5.6	5.4	5.7	6.8	5.1	3.8	3.5	4.4	5.0
90 %	7.8	8.7	7.4	6.6	6.6	7.2	8.1	6.0	4.7	4.5	5.4	5.9
95 %	9.1	10.7	8.2	7.6	7.9	8.5	9.4	6.9	5.6	5.6	6.3	8.4
YEARS OF RECORD	23	23	25	23	24	24	23	24	25	25	24	25

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