



Agricultural Drouth Probabilities in Tennessee

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ust 1974

Bulletin 533

The University of Tennessee / Agricultural Experiment Station / John A. Ewing, Dean / Knoxville

ACKNOWLEDGMENTS

The daily rainfall and temperature data used in calculations of probability values in this report were recorded for many years by State, Federal, and volunteer observers. Their efforts are greatly appreciated.

This research was supported by the U. S. Department of Interior, Office of Water Resources Research (Project A-017 Tennessee), and the University of Tennessee Agricultural Experiment Station.

The cooperation of the National Weather Service and especially the National Climatic Center at Asheville, N. C. is greatly appreciated.

An expression of thanks is due John V. Vaiksnoras, and Dr. Henry Fribourg for their efforts in selecting stations and preparing the data base for each station.

The cooperation and assistance from the University of Tennessee Water Resources Research Center, its Director Floyd C. Larson, and the University of Tennessee Computing Center are greatly appreciated.

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John M. Safley, Jr. and William L. Parks*

An understanding of natural conditions which affect soil water status and the response of plants to that status is needed to guide efficient water management for crops.

Irrigation experiments provide information on adequate soil moisture levels for profitable crop response (8, 9); however, these efforts must be supported by knowledge concerning the general soil moisture condition through time in the area where irrigation data are applied. Moisture stress conditions must be described in terms of the relative frequency of occurrence and how occurrence is related to the nature of crop and soil. Human activities related to crop production are intimately related to soil moisture conditions during the preplanting period, the growing season, and the time of harvest.

In this work special attention has been given to the growing season for purposes of evaluating water use models in relation to crop yields.

Agricultural drouth is a result of soil moisture deficiencies. The occurrence of agricultural drouth is related to the pattern of precipitation, but it is generally an effect of it. The rate at which crops use soil water and the capacity of the soil for moisture entry and retention influence the pattern and intensity of agricultural drouth.

It is the purpose of this bulletin to describe a method for characterizing agricultural drouth and to apply it to conditions within the state of Tennessee.

GENERAL CLIMATE OF TENNESSEE

The climate of Tennessee is classified as Humid Mesothermal. It is characterized by a definite seasonal rhythm caused by passage of migratory 'high' and 'low' pressure systems across the state in an easterly direction. Weather systems which influence the state originate either in the interior portion of North America or over the Gulf of Mexico. The latter is the primary source of moisture and warm air.

The annual average precipitation varies widely across the state (Table 1). In West Tennessee rainfall ranges from about 48 inches in the Mississippi bottom-

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lands in the northwest to 55 inches in the low hills of the southeastern area. Middle Tennessee experiences about 45 inches in the northern region to about 55 inches in the south. Precipitation patterns in East Tennessee also follow the same trend as evidenced in the other regions. Average annual precipitation ranges from about 42 inches in the northern portion of the Ridge and Valley Province to over 50 inches in the southern region and 60 inches on the southern Cumberland Plateau. The mountainous eastern portion of East Tennessee receives more rainfall than anywhere else in the state. Over 80 inches of rain per year is usual on the higher peaks of the Appalachian and Unaka Ranges.

The general trend from north to south of increasing precipitation is more pronounced in winter and early spring due to frequent storm systems which pass over the northern portion of the state. A secondary maximum of precipitation occurs in midsummer due to thundershower activity. Hail is occasionally associated with these localized storms. Tornadoic winds are occasional during periods of severe thunderstorm activity. Seasonal snowfall averages 5 to 10 inches in West Tennessee, 4 to 6 inches in Middle Tennessee, and from 4 to 24 inches in East Tennessee depending upon elevation.

Average annual evapotranspiration for the state (Table 2) ranges from 26.21 inches at Crossville on the Cumberland Plateau to 33.75 inches in Memphis near the Mississippi River. With the exception of a few locations, evapotranspiration tends to decrease from the southern tier of counties to those along the northern border.

The average annual temperature of 60° F in West Tennessee is the warmest in the state. Average annual temperature varies from about 60° F in the Central Basin to 55° F on the Highland Rim; mean annual temperatures in the Ridge and Valley Province increase from north to south. Temperatures of the southern counties of East Tennessee are comparable to those of Middle and West Tennessee. The period between last freeze in spring and the first freeze in fall extends from early April through most of October. The average date of last freeze in spring at lower elevations in West Tennessee ranges from March 20 in the southwest to April 6 in the north. Average first date of freezing temperature in the fall in West Tennessee ranges from October 23 in the north to November 12 in the southwest. The growing season ranges from 150 days or less in the northern portion of the Cumberland Plateau and in the mountains to 200 days in the Valley of East Tennessee and the northern tier counties of Middle and West Tennessee. The growing season reaches a maximum of about 237 days at Memphis and the adjacent southern tier counties.

AGRICULTURAL DROUTH

To quantify drouth for purposes of analysis one of the more useful concepts is that of the drouth-day. Van Bavel (15) observed that agricultural drouth should be defined on the basis of available soil water conditions and subsequent plant behavior. He postulated the concept of drouth-day as a 24-hour period (beginning at the time at which the precipitation of the previous day was re-

corded) in which the soil moisture stress exceeds a limit at which crop growth processes are depressed. As a measure of drouth, a drouth-day occurred whenever available soil moisture was depleted to a point critical for normal plant processes as estimated from precipitation and evapotranspiration data by a moisture balance method. Calculation of drouth probability has been performed for several states and regions using this approach (7, 16, 17, 18, 19).

Rainfall has four fates: 1) surface runoff; 2) evaporation from soil and plant surfaces; 3) transpiration; and, 4) percolation (1). Evapotranspiration (ET), or consumptive-use (2) as it is sometimes called, is water loss from a unit area during a specified time by evaporation from the soil surface and by transpiration from plants (4). Thornthwaite (14) developed the concept of potential evapotranspiration (PE) and defines it as the water loss from a moist tract completely covered by vegetation and large enough to prevent an oasis effect. Penman (10) defines PE similarly as the amount of water transpired per unit time by a short, green crop which completely shades the ground, is of uniform height, and never experiences water shortage.

WATER USE MODELS

Thornthwaite Model

Thornthwaite derived an empirical formula for estimating PE from his research in the eastern United States. The formula can be expressed as

$$PE = 16(10T/I)^a \text{ mm per month}$$

where

$$a = (0.675I^3 - 77.1I^2 + 17,920I + 492,390) \times 10^{-6}$$

and

$$I = \sum_{1}^{12} \left(\frac{T}{5} \right)^{1.154}$$

PE is the unadjusted evapotranspiration expressed as total millimeters per month of 30 days; T is the mean monthly temperature in degrees Celsius; I is the annual heat index which is composed of 12 monthly index values. Conversion of millimeters to inches can be accomplished by multiplying by 0.0394. Thornthwaite justified exclusion of climatic factors other than temperature by stating that those factors vary significantly with temperature.

This formula is valid only when the mean air temperature is between 32° F and 80° F. For lower temperatures the PE is assumed to be zero and for higher temperatures the rate increases monotonically with increasing temperature and is independent of the heat index I (12).

Penman Model

Penman (10) combined the aerodynamic and energy budget approaches to derive an expression with which to approximate evaporative loss from an open

water surface. An aerodynamic factor accounted for turbulent transport of water vapor by eddy diffusion while the energy budget accounted for degradation of incoming solar radiation by evaporation. The use of a corrective factor (usually .75) is required to adjust calculated loss to evapotranspirative loss. Smalley¹ (personal communication) has expressed the equation in expanded form for clarity; it appears as:

$$\begin{aligned} \text{P. E.} = & \left(\frac{\Delta}{\Delta + \gamma} \right) R_a (1-r) (.18 + .55 n/N) \\ & - \left(\frac{\Delta}{\Delta + \gamma} \right) \sigma T^4 (.56 - .092\sqrt{VP}) (.10 + .90 n/N) \\ & + \left(\frac{\gamma}{\Delta + \gamma} \right) .35 (1 + W/100) (SVP-VP) \end{aligned}$$

in millimeters evaporation per day, where

- Δ = slope of the saturation vapor pressure curve at mean air temperature in millibars, per °C;
- γ = constant of the wet and dry bulb psychrometer equation;
- R_a = Angot's value (the theoretical incoming shortwave radiation at the outer limits of the atmosphere);
- r = albedo
- n = actual hours of sunshine
- N = theoretical duration of sunshine
- σT^4 = black body radiation proportional to the fourth power of the temperature in degrees Kelvin (°K).
- VP = mean vapor pressure at mean air temperature;
- SVP = saturation vapor pressure at mean air temperature;
- W = wind run at a standard height of two meters;

Penman's formula requires data for radiation, humidity, temperature, wind, and albedo; these data are available only from first order weather stations. Three difficulties are inherent in the Penman equation: 1) the conversion of calculated PE to ET over vegetation is difficult to calculate or approximate; 2) the equation describes only those areas where optimum water supply is maintained; and, 3) the data required for the equation can be obtained from only five locations in Tennessee and inferences of data from these to other sites is not always accurate.

¹Smalley, G. W. Algorithms for estimating evapotranspiration using Penman's formula. Unpublished report, University of Tennessee, July, 1973.

Moisture Balance Procedure

Calculation of drouth-days by a soil-moisture balance method requires a model of moisture status. The model used in these calculations was

$$SMS_i = SMS_{i-1} - PE + (P-RO)$$

where SMS_i is the current soil moisture status, SMS_{i-1} is the soil moisture status of the previous day, PE is the amount of calculated evapotranspiration for that day, P is precipitation input, and RO is runoff loss from the system. Precipitation in excess of available soil storage is considered lost from the system by runoff. When the soil moisture status reaches 0 inch, a drouth-day occurs. A negative moisture status is not allowed in terms of model constraints where

$$0'' \leq SMS_i \leq A.W.H.C.$$

Drouth-days were calculated for each of six available water-holding capacities (A.W.H.C.): 1, 2, 3, 4, 5, and 7 inches. These relate to most Tennessee soil-crop situations and provide a means to relate drouthiness to soil moisture conditions.

COMPUTATION METHOD

Precipitation and temperature data used in this study were obtained from daily records collected by National Weather Service Climatological Cooperative Stations and first-order stations, and at Tennessee Agricultural Experiment Station research stations. These 50 locations were selected for completeness of temperature record and have been used in many other climatic studies (5, 6, 13).

Because the data base contained such a volume of data, the information presented in the tables was obtained almost entirely through the use of digital computer programs. To select the most appropriate method of calculating evapotranspiration losses, the three water use models were employed. Drouth-days by climatic week using these values and regressions of drouth-days against crop yields from variety trials were calculated (11). Yield data for corn, cotton, and burley tobacco were extracted from Tennessee variety trials 1947-1970. All varieties of each crop were used as being representative of the range of crop response to soil moisture with the assumption that management inputs to these would be consistent with advancements in agricultural practice.

The Thornthwaite method proved to be the most responsive way of calculating water loss (11) and the probabilities derived from drouth-days calculated by this method are reported here. The Thornthwaite method has the advantage of requiring mean temperature as input where the Penman model requires data which is not available for most Tennessee locations. Low response of the Penman method can be attributed to effects of extrapolation of data from a few scattered sites to other areas.

Interpretation of the Data

Blumenstock (3) evaluated drouth occurrence by means of the theory of

probability. Drouth occurrence deviates from a random distribution due to the non-random nature of rainfall distribution, soil properties, and the seasonality of temperature and evapotranspiration. Frequency distribution, which compares the number of occurrences with exact drouth periods, more closely defines probability of drouth. These distributions are more representative in that they cover the entire range of drouth occurrence (0-7 drouth-days per week) and do not give undue emphasis to drouths of excessive length.

For each site a table (Tables 3 through 52) is presented which contains probability of occurrence for drouth from 1 to 7 days per week. Probabilities were calculated for each of seven available water holding capacities. Within each 7-day period drouth probabilities have been accumulated from right to left so that, for example, the value in any column is the total of the probabilities for both it and the column to its right. In other words, it is the probability of occurrence of "X" or more drouth days for the week in question. To arrive at the individual probability for "X" days of drouth, one must subtract the value in the $X^{\text{th}} + 1$ day column from the value in the X^{th} day column. Probabilities of no drouth **have not been added** into the accumulation and their values are as they appear in the tables.

As an example, suppose one were interested in the probability of occurrence of two or more drouth-days for the week of July 26 at Ashwood on a 3-inch A.W.H.C. soil. The accumulated probability for two-plus days is 47 percent. To derive the probability of only 2 days for that week, no more no less, the value is 6 percent, or 47 minus 41. These values can be interpreted as 47 years out of each 100 there will be at least two drouth days on this soil during this week; however, a more realistic evaluation would be 5 years out of 10. The probability of no deficit (0 days) for that week is 50 percent or 5 of every 10 years.

Available water holding capacities allow the values in these tables to be applied to a wide range of soils and soil-crop situations. Conditions affecting these soils, shallow-rooted crops, or crops with a high moisture requirement would be reflected in the 1-, 2-, or 3-inch columns. For thicker soils or for deeper-rooted crops and vegetation, values from the 4-, 5-, or 7-inch columns are probably most appropriate. Drouth probabilities for the medium to largest moisture capacities also reflect ground water depletions in relation to water supplies from wells, ponds, and ground water, itself.

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Table 1. Monthly and yearly precipitation mean (in inches) for all stations

Station	Jan.	Feb.	Mar.	Apr.	May	June	July
Allardt	5.07	4.83	5.45	4.80	4.04	4.91	5.27
Ashwood	5.50	5.53	6.09	4.75	4.15	3.87	4.60
Bolivar	6.17	5.11	5.54	4.76	3.78	3.99	4.18
Brownsville	6.06	5.04	5.69	4.89	4.16	3.79	4.39
Carthage	5.62	5.14	5.67	4.14	3.84	4.56	4.56
Chattanooga	5.61	5.37	5.64	4.29	3.52	3.70	5.11
Clarksville	5.64	4.45	5.55	4.21	3.70	3.49	3.72
Copperhill	5.57	5.74	6.41	4.82	3.60	4.48	5.66
Covington	5.77	4.84	5.72	4.82	4.42	3.62	3.84
Crossville	5.62	5.81	5.90	4.55	3.85	4.18	4.67
Dale Hollow Dam	5.30	5.05	5.40	4.44	3.86	4.67	4.93
Dickson	6.06	4.76	5.57	4.41	4.24	3.72	4.48
Dover	5.39	4.37	5.52	3.97	3.88	3.78	4.20
Fayetteville	5.47	5.53	5.36	4.23	4.05	3.31	5.05
Franklin, Ky.	4.81	4.37	4.92	4.00	4.39	3.76	4.03
Franklin	5.41	5.17	5.52	4.14	3.69	3.61	3.91
Gatlinburg	4.62	4.85	5.47	4.62	4.25	5.03	6.56
Greeneville	3.66	3.83	4.49	3.23	3.24	3.58	5.08
Huntingdon	5.41	4.39	5.33	4.31	4.54	3.54	3.97
Jackson	6.00	4.91	5.44	4.66	3.97	4.08	4.46
Jefferson City	4.41	4.75	4.68	3.34	3.70	3.37	4.75
Kingsport	3.86	4.11	4.37	3.43	3.49	3.27	4.92
Knoxville AP	4.88	4.81	4.73	3.70	3.50	3.33	4.82
Knoxville	4.41	4.28	4.85	4.22	3.93	4.22	4.70
Lewisburg	5.55	5.91	5.89	4.41	3.87	3.57	4.63
Loudon	5.28	5.26	5.39	3.95	3.65	3.39	5.05
Lynnville	5.74	6.21	6.37	4.91	4.07	3.64	4.59
Martin	5.33	4.76	5.53	4.30	4.30	4.47	4.11
Memphis AP	6.07	4.69	5.07	4.63	4.23	3.68	3.54
Memphis	5.81	4.55	4.90	4.62	4.03	3.64	3.42
Middlesboro, Ky.	4.90	4.34	5.36	4.31	4.01	4.59	4.67
Milan	5.92	4.72	5.96	4.73	4.22	4.28	4.42
Monteagle	5.97	6.30	6.76	5.69	4.39	4.38	5.45
Moscow	5.61	5.34	5.57	4.75	4.12	4.14	3.95
Murfreesboro	5.19	5.35	5.54	4.10	3.96	3.33	4.14
Nashville	5.49	4.51	5.19	3.74	3.72	3.25	3.72
Neptune	4.32	4.51	5.05	4.54	3.70	3.23	3.71
Newbern	5.02	4.41	5.59	4.21	4.12	4.13	3.92
Newport	4.01	4.34	4.82	3.57	3.61	3.87	5.07
Oak Ridge	5.94	5.80	5.59	4.20	3.73	3.24	3.95
Palmetto	5.36	5.61	5.55	4.44	3.89	3.65	4.87
Paris	5.46	4.76	5.50	4.18	3.96	3.93	3.93
Rogersville	4.39	4.46	4.82	3.74	3.38	3.22	4.68
Samburg	4.88	4.40	5.31	4.10	4.53	3.75	3.84
Savannah	6.13	5.41	5.91	4.82	4.04	4.20	4.04
Selmer	6.30	5.42	5.34	4.59	3.81	4.31	3.88
Sparta	5.39	4.59	5.39	4.34	4.01	4.87	5.38
Springfield	4.30	4.61	5.02	4.40	4.10	3.44	4.01
Tullahoma	5.78	5.88	6.19	4.59	3.76	3.89	5.02
Waynesboro	5.92	5.76	6.06	5.13	4.12	4.31	4.58

Table 1. (continued)

Station	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
Allardt	3.61	3.69	2.88	3.58	4.84	52.97
Ashwood	3.55	3.47	2.61	3.89	4.66	52.67
Bolivar	3.53	3.76	2.52	4.34	4.71	52.39
Brownsville	2.93	3.64	2.43	4.42	4.61	52.05
Carthage	3.92	3.51	2.36	3.99	4.72	52.03
Chattanooga	3.76	3.10	3.02	3.65	5.19	51.96
Clarksville	3.37	3.01	2.47	3.86	4.27	47.74
Copperhill	4.78	3.27	3.10	3.90	5.16	56.49
Covington	2.83	3.43	2.71	4.43	4.52	50.95
Crossville	4.28	3.61	2.78	4.05	5.36	54.66
Dale Hollow Dam	3.21	3.46	2.50	4.21	4.85	51.88
Dickson	3.42	2.88	2.70	4.07	4.63	50.94
Dover	3.42	3.31	2.58	4.06	4.13	48.61
Fayetteville	3.70	3.41	2.66	4.22	4.90	51.89
Franklin, Ky.	3.50	3.15	2.52	3.78	4.31	47.54
Franklin	3.82	2.85	2.41	3.55	4.24	48.23
Gatlinburg	5.40	3.00	2.99	3.67	3.99	54.45
Greeneville	3.57	2.98	2.41	2.78	3.06	42.01
Huntingdon	2.96	3.28	2.41	4.00	4.34	48.48
Jackson	3.28	3.39	2.34	4.11	4.37	51.01
Jefferson City	3.44	2.94	2.23	3.62	4.15	45.38
Kingsport	3.83	2.69	2.25	2.82	3.48	42.52
Knoxville AP	3.46	2.54	2.61	3.24	4.23	45.85
Knoxville	3.90	2.60	2.64	2.83	4.58	47.25
Lewisburg	3.19	3.23	2.62	4.15	4.59	51.61
Loudon	3.68	3.17	2.81	3.69	4.86	50.18
Lynnville	3.85	3.22	2.61	4.54	4.94	54.69
Martin	2.70	3.14	2.68	4.17	3.93	49.42
Memphis AP	2.97	2.82	2.72	4.38	4.93	49.73
Memphis	2.63	2.81	2.86	4.17	4.69	48.13
Middlesboro, Ky.	4.11	2.77	2.47	3.55	4.71	49.79
Milan	3.54	3.46	2.65	4.34	4.59	52.83
Monteagle	4.12	3.69	3.17	4.66	5.99	60.57
Moscow	3.41	3.47	2.54	4.21	5.09	52.20
Murfreesboro	3.59	3.22	2.32	3.91	4.24	48.89
Nashville	2.86	2.87	2.32	3.28	4.19	45.14
Neptune	3.29	2.62	2.11	3.60	4.45	45.13
Newbern	3.03	3.44	2.65	4.17	4.24	48.93
Newport	4.02	2.65	2.57	2.81	3.46	44.80
Oak Ridge	4.62	3.30	2.67	3.77	5.90	54.71
Palmetto	3.56	3.12	2.59	3.92	4.39	50.95
Paris	3.12	3.19	2.51	4.26	4.20	49.00
Rogersville	3.52	2.58	2.28	3.19	3.83	44.09
Samburg	2.83	3.35	2.80	4.16	4.10	48.05
Savannah	3.56	3.10	2.50	4.25	5.04	53.00
Selmer	3.22	3.37	2.88	4.29	4.80	52.21
Sparta	4.21	3.65	2.72	3.76	4.69	53.00
Springfield	3.21	2.58	2.53	3.87	4.38	46.45
Tullahoma	3.51	3.31	2.61	4.12	5.30	53.97
Waynesboro	3.73	3.10	2.64	4.62	5.09	55.06

Table 2. Average monthly potential evapotranspiration calculated by the Thornthwaite method for all stations

Station	Potential evapotranspiration in inches						
	Jan.	Feb.	Mar.	Apr.	May	June	July
Allardt	0.20	0.27	0.97	2.01	3.06	4.03	4.50
Ashwood	0.36	0.41	1.19	2.20	3.34	4.73	5.19
Bolivar	0.28	0.46	1.08	2.36	3.63	4.94	5.61
Brownsville	0.30	0.46	1.12	2.35	3.79	5.19	5.66
Carthage	0.37	0.42	1.07	2.20	3.50	4.60	5.36
Chattanooga	0.40	0.50	1.16	2.26	3.60	4.88	5.52
Clarksville	0.29	0.39	1.05	2.21	3.51	4.75	5.51
Copperhill	0.37	0.43	0.99	2.03	3.28	4.31	5.02
Covington	0.28	0.42	1.06	2.27	3.68	4.84	5.90
Crossville	0.30	0.43	0.99	1.95	2.99	3.95	4.43
Dale Hollow Dam	0.21	0.35	0.93	2.11	3.30	4.42	5.06
Dickson	0.26	0.42	1.04	2.30	3.57	4.62	5.26
Dover	0.22	0.36	1.04	2.28	3.39	4.41	5.30
Fayetteville	0.19	0.33	0.87	1.98	3.13	4.04	5.02
Franklin, Ky.	0.22	0.30	0.95	2.13	3.43	4.44	5.18
Franklin	0.32	0.40	1.10	2.12	3.40	4.63	5.50
Gatlinburg	0.31	0.39	1.18	2.23	3.12	3.87	4.33
Greeneville	0.20	0.34	1.07	2.14	3.36	4.28	4.91
Huntingdon	0.16	0.26	1.01	2.37	3.41	4.50	5.31
Jackson	0.32	0.46	1.19	2.23	3.47	4.65	5.50
Jefferson City	0.21	0.40	1.09	2.04	3.31	4.33	4.91
Kingsport	0.32	0.38	1.02	2.15	3.20	4.47	4.93
Knoxville AP	0.34	0.42	1.14	2.21	3.46	4.69	5.34
Knoxville	0.24	0.41	1.06	2.32	3.61	4.68	5.26
Lewisburg	0.32	0.40	1.02	2.11	3.30	4.42	5.29
Loudon	0.35	0.47	1.08	2.09	3.34	4.61	5.42
Lynnville	0.39	0.48	1.16	2.20	3.28	4.35	5.11
Martin	0.25	0.40	1.11	2.26	3.59	4.66	5.64
Memphis AP	0.30	0.44	1.12	2.44	3.87	5.07	5.93
Memphis	0.31	0.43	1.11	2.38	3.86	5.14	6.09
Middlesboro, Ky.	0.35	0.45	1.04	1.85	3.09	4.18	4.99
Milan	0.28	0.43	1.08	2.26	3.58	4.66	5.82
Monteagle	0.28	0.41	1.01	2.19	3.29	4.11	4.69
Moscow	0.36	0.61	1.36	2.53	3.53	3.16	4.98
Murfreesboro	0.35	0.44	1.08	2.22	3.51	4.77	5.51
Nashville	0.25	0.38	0.98	2.22	3.61	4.80	5.58
Neptune	0.16	0.27	0.91	2.17	3.43	4.49	5.35
Newbern	0.25	0.40	1.03	2.27	3.76	4.48	5.52
Newport	0.30	0.41	1.01	2.06	3.37	4.62	5.19
Oak Ridge	0.28	0.41	0.97	2.13	3.42	4.48	5.13
Palmetto	0.36	0.49	1.17	2.19	3.49	4.22	5.24
Paris	0.22	0.37	1.01	2.12	3.40	4.50	5.34
Rogersville	0.34	0.42	1.03	2.09	3.25	4.26	4.82
Samburg	0.16	0.31	0.93	2.26	3.67	4.98	5.87
Savannah	0.37	0.51	1.16	2.34	3.44	4.90	5.68
Selmer	0.22	0.40	1.08	2.40	3.59	4.57	5.28
Sparta	0.23	0.32	0.98	2.25	3.37	4.28	4.88
Springfield	0.22	0.34	0.96	2.12	3.23	4.58	5.12
Tulahoma	0.33	0.41	1.10	2.29	3.39	4.58	5.30
Waynesboro	0.19	0.26	0.96	2.27	3.33	4.36	5.02

Table 2. Average monthly potential evapotranspiration calculated by the Thornthwaite method for all stations

Station	Potential evapotranspiration in inches					
	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
Allardt	4.43	3.51	2.18	0.91	0.29	26.37
Ashwood	4.70	3.95	2.39	1.07	0.44	29.98
Bolivar	5.43	3.74	2.34	1.00	0.42	31.30
Brownsville	5.86	4.01	2.52	1.05	0.34	32.57
Carthage	5.45	4.05	2.45	1.00	0.43	30.89
Chattanooga	5.29	4.07	2.46	1.01	0.43	31.59
Clarksville	5.18	4.14	2.42	0.95	0.37	30.77
Copperhill	4.73	3.68	2.23	0.93	0.41	28.40
Covington	5.70	4.13	2.53	1.02	0.40	32.26
Crossville	4.35	3.44	2.16	0.92	0.30	26.21
Dale Hollow Dam	5.03	4.04	2.31	0.93	0.33	29.02
Dickson	5.16	4.23	2.41	0.97	0.38	30.61
Dover	5.17	3.79	2.28	0.96	0.33	29.54
Fayetteville	4.76	3.62	2.20	0.89	0.30	27.36
Franklin, Ky.	5.06	3.90	2.38	0.94	0.32	29.24
Franklin	5.45	3.82	2.29	0.99	0.37	30.40
Gatlinburg	4.35	3.22	2.19	0.93	0.32	26.46
Greeneville	4.77	3.58	2.32	1.02	0.32	28.32
Huntingdon	4.97	3.68	2.29	1.00	0.30	29.28
Jackson	5.48	4.17	2.37	1.03	0.41	31.28
Jefferson City	4.80	4.00	2.22	0.98	0.36	28.66
Kingsport	4.79	4.08	2.34	0.96	0.35	29.00
Knoxville AP	5.16	4.02	2.44	0.98	0.39	30.59
Knoxville	5.30	4.21	2.47	1.01	0.37	30.96
Lewisburg	5.25	4.06	2.32	0.93	0.39	29.81
Loudon	5.30	4.03	2.33	0.92	0.42	30.37
Lynnville	4.78	4.02	2.35	1.00	0.45	29.58
Martin	5.20	4.03	2.48	0.92	0.36	30.90
Memphis AP	5.62	4.15	2.63	1.06	0.44	33.06
Memphis	5.91	4.35	2.68	1.06	0.43	33.75
Middlesboro, Ky.	4.58	3.48	2.11	0.87	0.36	27.37
Milan	5.30	4.31	2.42	0.99	0.36	31.50
Monteagle	4.56	3.66	2.36	1.00	0.38	27.94
Moscow	4.82	4.02	2.37	1.10	0.48	29.32
Murfreesboro	5.45	4.35	2.42	0.99	0.44	31.56
Nashville	5.35	4.09	2.40	0.90	0.36	30.92
Neptune	5.18	3.83	2.23	0.94	0.32	29.25
Newbern	5.27	4.05	2.45	0.94	0.38	30.79
Newport	5.12	4.06	2.28	0.88	0.31	29.61
Oak Ridge	5.04	3.87	2.32	0.89	0.33	29.27
Palmetto	4.92	4.15	2.44	0.99	0.46	30.10
Paris	5.77	4.03	2.34	0.97	0.32	30.38
Rogersville	4.53	4.05	2.32	0.97	0.34	28.43
Samburg	5.28	3.80	2.33	0.95	0.28	30.83
Savannah	5.61	4.00	2.47	1.04	0.47	31.99
Selmer	5.26	3.90	2.36	1.01	0.38	30.44
Sparta	4.75	3.62	2.31	0.90	0.32	28.23
Springfield	5.38	3.98	2.30	0.95	0.29	29.48
Tullahoma	4.88	3.82	2.39	1.02	0.43	29.95
Waynesboro	4.97	3.73	2.21	0.94	0.34	28.58

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WEEK PERIOD BEGIN- NING:		1 INCH A.W.H.C.								2 INCH A.W.H.C.								3 INCH A.W.H.C.								4 INCH A.W.H.C.								5 INCH A.W.H.C.								7 INCH A.W.H.C.														
		DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK										
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7							
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	8	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	15	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	22	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	29	95	4	4	4	4	4	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
APR	5	95	4	4	4	4	4	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	12	86	13	13	4	4	4	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	19	86	13	13	4	4	4	0	95	4	4	4	4	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	26	86	13	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
MAY	3	65	34	34	30	30	26	17	13	8	8	8	8	8	8	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0</																		

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1-WEEK PERIOD BEGINNING:		1 INCH A-W-H-C							2 INCH A-W-H-C							3 INCH A-W-H-C							4 INCH A-W-H-C							5 INCH A-W-H-C							7 INCH A-W-H-C												
		DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK									
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7								
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	8	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	15	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	22	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	29	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
APR	5	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	12	91	8	4	4	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	19	78	21	17	13	8	4	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	26	86	13	13	8	8	4	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
MAY	3	73	26	26	21	13	13	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	10	60	39	30	17	13	8	0	91	8	8	4	4	4	4	0	1100	0	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	17	52	47	39	34	21	13	8</																																									

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Table 25. Probability of occurrence of drouth days based on 61 years of record, 1910 through 1970, for Knoxville AP

[illegible]

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1-WEEK PERIOD BEGINNING	1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.												
	DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK										
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	22	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	29	97	2	2	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
APR	5	97	2	2	2	2	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	12	93	6	6	6	4	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	19	84	15	13	6	4	4	2	2	97	2	2	2	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	26	86	13	13	9	6	6	6	97	2	2	2	2	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
MAY	3	65	34	29	22	18	9	4	95	4	2	2	2	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	10	56	43	40	27	22	15	11	6	90	9	6	6	4	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	17	40	59	54	36	27	20	18	11	84	15	15	11	9	6	6	97	2	2	2	2																											

Table 28. Probability of occurrence of drouth days based on 35 years of record, 1928 through 1962, for Loudon

[illegible]

Table 40. Probability of occurrence of drouth days based on 22 years of record, 1949 through 1970, for Newbern

1-WEEK PERIOD BEGIN- NING	1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.																				
	DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK					DROUTH		DAYS PER WEEK																		
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	22	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	29	95	4	4	4	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
APR	5	82	17	17	17	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	12	82	17	17	13	13	8	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	19	69	30	26	13	8	8	4	91	8	8	8	8	8	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	26	73	26	17	13	13	13	8	4	95	4	4	4	4	4	4	95	4	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	3	47	52	52	34	26	17	8	82	17	13	13	8	4	4	4	95	4	4	4	4	4	4	4	100	0	0	0	0	0																										

Table 41. Probability of occurrence of drouth days based on 44 years of record, 1927 through 1970, for Newport

[illegible]

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[illegible]

Table 44. Probability of occurrence of drouth days based on 33 years of record, 1938 through 1970, for Paris

1-WEEK PERIOD BEGIN- NING:	1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.																
	DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK																
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7				
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	22	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	29	97	2	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
APR	5	91	8	5	5	5	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	12	94	5	5	5	5	2	2	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	19	91	8	5	5	5	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	26	88	11	8	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	3	64	35	26	23	14	11	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	
MAY	10	61	38	29	23	10	11	8	5	1	91	8	5	2	2	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	17	67	32	29	23	14	11	8	5	1	82	17	14	11	8	5	2	97	2	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	24	61	38	25	23	11	11	11	1	79	20	17	17	11	8	5	1	91	8	5	5	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	31	29	70	52	49	41	32	23	17	70	49	23	20	14	11	8	8	82	17	11	5	5	5	5	1	94	5	2	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0		
	7	32	67	58	49	41	38	32	23	44	55	44	29	17	14	11	1	79	20	17	14	11	8	5	5	1	91	8	5	5	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
JUN	14	44	55	47	44	29	17	14	8	55	44	32	32	26	17	14	8	73	26	17	17	14	5	2	0	1	91	8	5	2	2	2	0	1	97	2	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
	21	35	64	61	55	44	35	26	14	50	49	41	41	32	29	20	17	55	44	32	29	23	20	17	11	8	14	11	11	8	5	1	94	5	2	2	2	100	0	0	0	0	0	0	0	0	0	0	0			
	28	23	76	64	55	52	49	32	14	38	61	52	47	35	35	20	14	52	47	41	35	35	32	17	11	6	34	29	23	23	11	8	5	1	85	14	11	8	5	2	2	1	97	2	2	2	2	2				
	5	26	73	61	44	38	26	20	14	44	55	44	35	32	23	17	11	52	47	38	26	20	11	8	8	6	6	35	29	20	17	11	5	1	76	23	17	11	11	8	5	5	1	97	2	2	2	2	2			
	12	32	67	64	52	44	41	23	8	47	52	47	44	38	35	23	8	52	47	44	38	32	26	17	2	6	35	32	23	23	14	2	1	73	26	20	20	20	11	0	1	91	8	5	5	2	2	2				
JUL	19	17	82	73	64	52	41	23	8	32	67	61	55	49	41	32	17	44	55	52	49	47	41	32	14	55	44	44	41	38	32	26	14	61	38	32	26	23	20	14	85	14	11	11	11	8	6	8	2	2		
	26	17	82	73	64	55	47	38	20	26	73	70	64	55	49	32	20	35	64	61	55	44	41	26	14	44	55	52	49	41	38	32	26	14	58	41	38	35	29	26	17	14	76	25	20	17	11	8	2	2		
	2	11	88	76	64	55	47	44	38	32	67	61	55	49	41	32	1	35	64	58	55	49	41	35	26	38	61	52	49	44	35	32	20	50	49	44	38	29	26	14	76	25	20	17	11	8	5	5				
	9	23	76	73	70	64	52	44	32	26	73	67	61	55	44	41	26	32	67	64	55	49	41	38	26	38	61	58	52	47	35	35	26	44	55	49	41	35	35	26	67	32	29	29	25	20	17	17				
	16	26	73	64	61	49	32	29	20	38	61	55	49	41	29	29	20	38	61	52	49	41	29	29	20	38	61	52	49	38	26	26	20	47	55	47	44	39	26	26	14	55	44	35	32	20	17	11	8			
SEP	23	14	85	79	70	58	47	32	17	38	61	52	52	44	35	26	17	41	58	49	49	41	35	26	17	41	58	49	44	41	35	26	17	47	58	49	44	35	26	17	47	58	49	44	35	26	17	14	8			
	30	17	82	76	61	58	58	47	29	32	67	64	52	52	41	20	1	38	61	58	44	44	38	26	17	41	58	55	44	44	44	35	20	47	58	49	44	35	26	17	47	58	49	44	35	26	17	14	8			
	6	26	73	58	49	41	32	26	26	44	55	44	38	26	20	17	17	44	55	44	38	29	20	17	17	50	49	38	35	29	20	17	17	50	49	38	35	29	20	17	14	55	44	35	29	26	17	14	14			
	13	29	70	61	55	49	44	29	20	47	52	47	44	38	26	20	17	47	52	47	44	38	23	14	52	47	47	41	38	32	20	14	52	47	41	38	32	20	14	58	41	41	35	32	26	20	11					
	20	32	67	64	58	52	44	32	20	41	58	55	41	32	26	20	8	50	49	47	38	32	26	20	8	50	49	47	35	29	23	17	8	52	47	44	35	29	23	17	8	55	44	41	29	23	17	14	5			
OCT	27	35	64	52	47	44	36	32	17	44	55	44	41	35	29	14	55	44	41	38	32	26	11	55	44	41	38	32	26	11	55	44	38	32	26	11	58	41	38	35	35	32	26	11	5	5	5	5	5			
	4	50	49	47	41	38	29	23	17	61	38	35	29	29	17	14	14	64	35	32	26	26	14	11	11	67	32	29	23	23	14	8	8	67	32	29	23	23	14	8	70	29	26	20	17	11	8					
	11	55	44	44	32	29	26	23	17	64	35	32	29	26	23	20	14	67	32	29	26	23	20	17	14	70	29	26	23	20	17	17	14	73	26	26	23															
	18	52	47	47	44	38	32	14	67	32	35	29	28	25	20	8	5	76	23	26	23	23	20	17	8	76	23	26	23	20	14	8	5	76	23	26	23	23	20	14	8	76	23	23	23	17	14	11				
	25	61	59	52	46	38	32	14	76	23	26	23	23	20	14	8	5</																																			

Table 45. Probability of occurrence of drouth days based on 44 years of record, 1927 through 1970, for Rogersville

WEEK PERIOD BEGINNING:	1 INCH A.W.H.C.								2 INCH A.W.H.C.								3 INCH A.W.H.C.								4 INCH A.W.H.C.								5 INCH A.W.H.C.								7 INCH A.W.H.C.							
	DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK			
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7								
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	22	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	29	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
APR	5	97	2	2	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	12	91	8	4	2	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	19	85	15	13	11	6	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	26	77	22	15	13	11	6	6	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	31	66	33	24	15	13	11	6	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
MAY	10	55	44	35	33	22	15	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	17	59	39	37	33	28	22	15	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	24	55	44	28	22	17	13	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	31	37	62	53	46	37	19	15	11	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
JUN	7	31	68	55	46	39	31	24	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	14	37	62	57	44	31	22	11	11	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	21	42	57	46	44	33	22	15	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	28	28	71	57	44	39	35	26	11	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
JUL	5	35	64	46	39	28	26	19	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	12	42	57	44	28	22	13	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	19	37	62	53	42	31	17	8	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	26	31	68	57	44	39	31	17	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
AUG	2	26	73	62	46	37	33	19	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	9	22	77	66	55	51	37	31	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	16	35	64	56	48	33	22	13	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	23	28	71	57	48	42	28	22	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	30	17	82	75	66	55	39	22	19	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
SEP	6	26	73	66	59	47	37	26	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	13	17	82	71	62	57	48	33	26	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	20	31	68	59	55	42	28	19	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	27	31	68	64	53	42	35	26	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
OCT	4	46	53	48	39	33	26	17	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	11	51	48	46	39	37	28	17	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	18	46	53	44	37	31	19	15	11	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	25	59	39	35	33	28	19	17	13	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
NOV	1	77	22	17	13	8	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	8	93	6	6	6	6	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	15	91	8	6	6	6	4	4	2	2	100	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	22	93	6	2	2	2	2	2	2	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	29	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
DEC	6	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	13	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	20	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	27	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
JAN	3	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
	10	100	0	0	0	0	0	0	0	100	0																																					

Table 46. Probability of occurrence of drouth days based on 43 years of record, 1928 through 1970, for Samburg

1-WEEK PERIOD BEGIN- NING		1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK				DROUTH			DAYS PER WEEK																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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 47. Probability of occurrence of drouth days based on 44 years of record, 1927 through 1970, for Savannah

1-WEEK PERIOD BEGINNING	1 INCH A.W.H.C.								2 INCH A.W.H.C.								3 INCH A.W.H.C.								4 INCH A.W.H.C.								5 INCH A.W.H.C.								7 INCH A.W.H.C.									
	DROUTH		DAYS PER WEEK						DROUTH		DAYS PER WEEK						DROUTH		DAYS PER WEEK						DROUTH		DAYS PER WEEK						DROUTH		DAYS PER WEEK						DROUTH		DAYS PER WEEK							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7		
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	8	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	15	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	22	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	29	1	95	4	4	4	4	2	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	
APR	5	95	4	4	4	4	4	2	0	97	2	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	12	86	13	8	4	4	4	2	0	95	4	4	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	19	75	24	15	11	8	2	2	0	95	4	4	2	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	26	81	25	11	8	2	2	2	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	
	3	64	35	31	24	22	17	11	4	93	6	6	6	2	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
MAY	10	59	39	35	33	31	17	15	8	88	11	8	4	4	4	2	1	95	4	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	17	53	46	37	28	24	13	4	7	72	22	19	15	11	6	2	1	95	4	2	2	2	2	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0		
	24	57	42	37	31	24	19	17	8	75	24	19	17	15	13	13	6	91	8	8	6	6	6	4	1	97	2	2	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	
	31	44	55	53	46	35	24	13	4	71	28	26	24	22	15	11	8	15	15	13	13	8	4	8	4	2	97	2	2	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0
	7	37	62	55	48	42	37	31	17	62	53	31	26	22	15	11	7	19	19	17	11	11	11	8	4	91	8	8	6	4	4	4	2	97	2	2	0	0	0	0	0	1100	0	0	0	0	0	0	0	
JUN	14	46	53	48	39	28	22	17	6	64	55	35	31	26	15	11	4	77	22	22	19	15	11	8	4	88	11	8	8	6	6	6	4	93	6	4	2	2	2	2	0	1100	0	0	0	0	0	0	0	
	21	28	71	64	59	51	37	31	22	55	44	42	37	35	35	26	22	62	37	35	31	26	26	19	15	71	28	28	24	17	15	8	4	86	13	13	8	8	4	97	2	2	2	2	0	0	0			
	28	28	71	66	62	51	31	17	6	48	51	39	35	22	13	6	2	68	31	28	26	19	13	6	2	75	24	22	22	15	11	6	4	82	17	15	13	8	8	2	0	95	4	2	2	2	2	0	0	
	5	28	71	62	57	52	39	24	19	44	55	48	42	37	33	22	17	59	39	31	24	17	13	8	8	77	22	19	19	13	11	8	8	77	22	17	15	11	8	6	6	95	4	4	2	2	0	0		
	12	22	77	66	66	64	53	44	31	51	68	64	59	57	46	37	22	48	51	46	46	39	35	32	25	59	39	37	28	28	26	24	13	75	24	24	24	22	22	13	84	15	13	13	8	4	2	2		
JUL	19	24	75	68	68	59	55	37	22	39	59	51	51	46	44	31	24	44	55	46	46	42	37	26	19	53	46	37	35	35	33	22	19	66	33	31	26	24	24	13	71	79	19	17	15	13	13	11		
	26	24	75	66	67	44	42	33	13	33	66	55	48	47	37	31	19	43	44	55	46	47	37	26	19	48	51	42	37	24	24	17	11	59	39	33	31	19	17	17	11	77	22	19	17	11	11	8	6	
	2	13	86	75	71	64	48	44	22	28	71	66	62	51	37	35	17	35	64	62	57	48	37	33	15	44	55	53	46	37	28	28	31	55	44	42	35	28	24	22	8	73	26	24	24	19	15	13	6	
	9	19	79	75	66	62	44	42	28	31	68	66	55	53	39	33	24	13	35	64	59	48	46	33	31	24	42	57	55	44	39	31	28	22	53	46	44	35	33	24	19	13	68	31	26	19	17	6	4	
	16	15	84	66	55	44	42	37	17	28	71	59	48	47	37	33	15	15	28	71	59	42	33	31	28	11	33	66	53	55	38	26	24	6	42	57	44	28	24	19	15	6	68	31	24	17	11	11	4	
AUG	23	28	71	66	53	48	42	33	31	42	57	51	44	42	39	31	28	46	53	51	44	42	39	31	28	46	53	51	44	39	37	28	26	53	46	39	37	35	28	26	68	31	26	24	22	22	19	17		
	30	22	77	66	62	55	33	26	13	35	64	55	48	44	35	26	19	37	62	55	46	42	35	26	19	39	59	55	46	42	35	26	19	42	57	51	44	37	28	22	17	55	44	42	37	35	22	15	13	
	6	35	64	59	51	44	39	24	17	42	57	55	46	39	33	17	15	46	53	51	42	35	33	17	15	46	53	51	39	33	31	15	13	51	48	46	39	33	31	15	13	68	33	33	26	19	17	11	8	
	13	26	73	64	64	57	42	37	28	44	55	48	46	39	31	26	19	15	51	48	46	44	37	28	24	17	53	46	44	42	35	26	24	17	55	46	42	39	33	24	22	15	66	33	31	31	22	15	15	8
	20	28	75	66	64	59	52	44	33	44	55	46	55	46	39	31	26	15	51	46	46	44	39	33	26	15	53	46	44	42	39	33	28	24	42	53	46	39	33	28	24	66	33	35	31	28	24	15	15	
SEP	27	17	82	68	57	51	37	26	17	42	57	46	42	37	24	19	15	51	48	42	39	35	22	15	11	55	44	37	37	39	19	15	11	55	44	37	37	39	15	11	59	39	33	31	18	11	13	8		
	4	46	53	42	39	28	28	24	17	64	35	31	31	19	19	17	15	71	28	26	24	17	17	15	73	26	24	24	17	17	17	15	73	26	24	24	17	17	15	77	22	19	19	15	15	13	8			
	11	53	46	44	42	33	26	20	17	64	35	35	31	26	22	19	15	68	31	28	26	19	17	11	71	28	28	28	24	19	17	11	71	28	28	24	19	17	11	73	26	26	24	19	15	13	11			
	18	51	48	42	39	31	24	17	17	59	39	33	26	19	15	13	13	68	33	28	24	17	13	13	13	68	31	26	22	17	13	13	13	68	31	26	22	17	13	13	71	28	22	17	13	13	11			
	25	42	57	48	37	26	22	17	13	62	37	31	24	13	13	11	8	68	31	26	26	19	8	6	6	71	28	24	17	8	8	6	6	71	28	24	17	8	8	6	71	28	24	17	8	8	6			
OCT	1	71	28	22	17	15	13	8	77	22	15	11	11	6	4	4	86	13	8	6	4	4	4	2	2	88	11	8	6	4	4	2	2	88	11	8	6	4	4	2	2	88	11	8	6	4	4	2		

Table 48. Probability of occurrence of drouth days based on 22 years of record, 1949 through 1970, for Selmer

1-WEEK PERIOD BEGIN- NING:		1 INCH A-W-H-C-							2 INCH A-W-H-C-							3 INCH A-W-H-C-							4 INCH A-W-H-C-							5 INCH A-W-H-C-							7 INCH A-W-H-C-														
		DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK														
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7		
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	8	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	15	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	22	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	29	1	95	4	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
APR	5	82	17	13	13	13	8	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	12	73	26	26	21	17	17	13	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	19	65	34	34	21	8	8	4	91	8	4	4	4	4	4	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	26	78	21	13	8	4	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
MAY	3	56	43	34	30	26	26	21	13	91	8	4	4	4	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	10	52	47	30	30	26	17	17	17	73	26	13	13	13	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0			
	17	47	52	47	34	34	30	26	17	73	26	21	17	17	13	13	91	8	4	4	4	4	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	1100	0	0	0	0	0	0	0			
	24	52	47	47	39	34	26	21	17	78	21	21	21	21	17	8	86	13	13	13	13	13	8	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4	1100	0	0	0	0	0	0	0				
	31	34	65	47	39	34	21	17	13	73	26	26	21	17	4	4	82	17	13	13	13	13	0	91	8	8	8	4	4	4	4	95	4	4	4	4	4	4	4	95	4	4	4	4	4	4	4				
JUN	7	43	56	52	47	30	30	26	8	65	34	34	21	17	17	8	78	21	17	8	4	4	4	4	91	8	8	4	4	4	4	4	95	4	4	4	4	4	4	4	0	1100	0	0	0	0	0	0	0		
	14	30	67	60	39	30	17	17	17	65	34	30	17	17	17	17	8	73	26	21	17	17	17	4	82	17	8	4	4	4	4	4	91	8	8	4	4	4	4	4	4	95	4	4	4	4	4	4	4		
	21	17	82	73	52	43	39	26	17	60	39	34	30	26	17	17	4	60	39	26	21	17	17	13	0	73	26	21	17	17	13	0	91	8	8	4	4	4	4	4	4	95	4	4	4	4	4	4	4		
	28	13	86	69	60	43	34	30	8	39	60	47	43	30	26	17	4	56	43	30	21	8	8	8	8	78	21	21	13	8	8	8	8	82	17	17	17	17	8	8	8	8	91	8	8	8	8	4	4	4	
JUL	5	17	82	69	52	43	30	21	13	39	60	47	30	21	17	17	8	56	43	30	21	8	8	8	8	78	21	21	13	8	8	8	8	82	17	17	17	17	8	8	8	8	91	8	8	8	8	4	4	4	
	12	21	78	78	65	52	43	34	26	26	73	65	52	39	34	26	21	56	43	39	30	30	30	21	21	73	26	26	21	21	8	8	8	78	21	21	17	17	17	17	8	8	91	8	8	8	8	4	4	4	
	19	21	78	73	65	56	39	21	6	39	60	60	56	52	34	21	8	47	52	47	39	30	21	13	4	78	21	21	17	13	8	8	8	73	26	26	21	17	13	8	8	8	91	8	8	8	8	4	4	4	
	26	26	73	65	56	52	21	13	13	47	52	47	39	39	13	8	8	52	47	39	34	34	13	8	8	73	26	26	21	17	8	8	8	78	21	21	17	17	4	4	4	91	8	8	8	8	4	4	4		
AUG	2	4	95	91	82	60	56	21	17	34	65	65	60	47	39	17	13	39	60	60	56	43	34	13	13	47	52	47	43	30	26	17	43	56	56	43	30	17	13	13	8	91	8	8	8	8	4	4	4		
	9	8	91	81	78	65	56	39	26	17	82	82	73	56	43	30	21	34	65	56	47	47	34	26	17	30	69	56	47	34	17	13	13	47	52	47	34	21	13	13	13	73	26	21	13	4	0	0	0		
	16	8	91	82	73	60	39	21	21	17	82	73	69	56	34	21	21	34	65	56	43	21	17	17	17	30	69	56	47	34	17	13	13	47	52	47	43	30	17	73	26	26	17	8	4	0	0				
	23	13	86	82	73	65	47	43	30	1	30	69	65	60	47	39	30	1	30	69	65	60	47	39	30	1	34	65	65	65	56	47	34	26	1	34	65	65	60	52	43	30	17	60	39	39	30	26	21	13	
	30	8	91	86	80	73	60	43	30	21	78	73	65	52	39	21	1	30	69	65	60	47	34	21	1	34	65	65	65	56	47	34	17	1	34	65	65	60	52	43	39	34	30	21	17	8	4	4			
SEP	6	26	73	69	56	52	47	39	26	26	73	69	56	52	47	39	26	30	69	65	56	52	43	34	21	1	34	65	60	47	43	39	30	21	1	34	65	62	43	39	34	30	21	47	52	43	34	30	21	17	8
	13	26	73	65	60	52	52	39	13	43	56	52	52	39	26	13	1	52	47	43	43	39	26	13	1	56	43	39	39	34	34	21	13	1	56	43	39	34	34	21	13	1	56	43	39	34	30	21	17	13	
	20	17	82	82	69	60	52	47	26	21	78	73	56	47	39	30	17	30	69	60	43	39	26	21	13	1	30	69	60	43	39	26	21	13	1	39	60	56	39	34	21	17	13	47	52	47	34	30	21	17	13
	27	4	95	65	60	34	30	21	17	26	73	52	47	30	26	17	17	34	65	52	47	30	26	17	17	1	34	65	52	47	30	26	17	17	1	34	65	52	47	30	26	17	17	1	52	47	39	34	21	13	13
OCT	4	56	43	34	34	21	17	13	13	60	39	30	17	17	17	13	1	65	34	21	21	17	17	13	1	69	30	21	21	17	17	13	13	1	69	30	21	21	17	17	13	1	69	30	26	21	17	17	17	8	
	11	65	34	34	30	30	26	21	1	73	26	26	26	26	21	17	1	78	21	21	21	21	17	13	1	82	17	17	17	17	17	13	13	1	82	17	17	17	17	13											
	18	39	60	39	34	26	21	8	65	34	34	26	17	17	17	17	1	73	26	26	17	17	17	17	1	82	17	17	17																						

Table 49. Probability of occurrence of drouth days based on 22 years of record, 1949 through 1970, for Sparta

1-WEEK PERIOD BEGIN- NING:	1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.																
	DROUTH							DROUTH							DROUTH							DROUTH							DROUTH							DROUTH																
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7				
MAR	1	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	8	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	15	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	22	95	4	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	29	95	4	4	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
APR	5	91	8	4	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	12	91	8	8	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	19	91	8	8	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	26	91	8	8	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
MAY	3	78	21	17	13	13	8	4	0	95	4	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	10	60	39	30	26	8	4	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	17	60	39	39	39	26	8	4	4	91	8	4	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	24	47	52	39	17	8	4	4	0	95	4	4	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	31	34	65	43	39	34	30	17	8	86	13	8	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
JUN	7	39	60	56	47	43	30	21	13	60	39	34	26	21	8	4	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	14	52	47	43	34	17	17	13	13	73	26	26	21	13	13	13	13	86	13	13	13	8	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0			
	21	47	52	34	30	26	13	4	0	65	34	26	17	8	4	0	82	17	13	13	4	4	4	4	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	28	30	69	65	56	52	39	26	13	69	30	30	26	26	17	8	8	78	21	17	13	13	8	4	4	91	8	8	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0					
JUL	5	34	65	60	52	34	21	8	13	60	39	39	30	17	13	4	0	86	13	13	13	13	8	4	0	95	4	4	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0					
	12	39	60	47	39	30	21	21	8	60	39	39	30	26	21	21	8	69	30	30	26	17	13	8	0	86	13	13	8	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	19	47	52	34	26	21	17	13	8	69	30	30	26	17	8	4	4	73	26	26	21	8	4	0	0	78	21	21	8	4	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	26	39	60	39	34	26	26	4	0	82	17	17	13	13	13	4	0	82	17	17	13	13	8	4	0	86	13	13	8	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
AUG	2	13	86	78	69	52	43	30	21	43	56	43	30	17	13	8	4	65	34	21	8	4	4	0	69	30	30	26	13	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0				
	9	26	73	56	47	39	34	26	21	47	52	47	43	34	21	13	8	65	34	30	26	13	4	4	0	82	17	8	4	4	4	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0			
	16	26	73	69	60	60	43	30	13	43	56	52	52	43	34	26	8	56	43	43	39	34	30	21	17	60	39	34	34	30	26	21	13	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	
	23	26	73	69	60	52	43	39	30	39	60	56	52	43	34	26	21	47	52	47	43	39	34	30	21	17	60	39	34	34	30	26	21	13	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
	30	21	78	73	69	60	56	34	17	30	69	65	60	52	43	34	13	34	65	60	56	47	43	30	13	13	52	47	47	43	34	26	21	13	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
SEP	6	43	56	56	43	34	30	17	8	52	47	43	34	26	21	8	4	56	43	34	26	21	8	4	0	60	39	39	34	26	21	8	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0		
	13	26	73	60	56	52	52	21	17	52	47	39	34	34	34	17	13	65	34	34	30	30	30	17	13	69	30	30	26	26	17	13	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0		
	20	39	60	52	43	34	26	21	13	52	47	39	30	30	21	13	8	65	34	30	21	17	13	8	0	78	21	17	17	13	13	8	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0		
	27	26	73	52	43	39	34	17	17	43	56	34	30	30	30	8	8	60	39	21	17	17	17	4	4	73	26	17	17	17	17	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0			
OCT	4	56	43	39	34	26	17	8	4	78	21	17	17	13	13	13	13	69	30	26	26	21	17	13	8	82	17	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13		
	11	56	43	34	30	17	17	17	17	60	39	34	30	21	17	8	4	69	30	26	21	17	13	8	4	73	26	17	17	17	17	4	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0			
	18	56	43	43	43	39	39	34	30	69	30	30	26	26	21	17	13	78	21	17	17	13	13	13	13	82	17	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13			
	25	47	52	47	43	39	26	26	13	60	39	30	26	21	17	13	13	73	26</																																	

Table 50. Probability of occurrence of drouth days based on 28 years of record, 1942 through 1969, for Springfield

1-WEEK PERIOD BEGIN- NING:		1 INCH A.W.H.C.							2 INCH A.W.H.C.							3 INCH A.W.H.C.							4 INCH A.W.H.C.							5 INCH A.W.H.C.							7 INCH A.W.H.C.													
		DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK							DROUTH DAYS PER WEEK													
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	8	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	15	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	22	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	29	96	3	3	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
APR	5	93	6	3	3	3	3	3	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	12	89	10	6	6	6	6	3	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	19	82	17	13	3	3	3	3	96	3	3	3	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	26	86	13	10	6	6	6	3	96	3	3	3	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
MAY	3	58	41	34	17	17	6	0	96	3	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	10	62	37	31	20	13	10	10	6	96	3	3	3	3	3	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	17	79	20	17	13	13	10	10	6	86	13	13	10	6	3	3	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	24	65	34	27	20	10	3	3	0	82	17	13	10	6	3	0	96	3	3	0	0	0	0	0	1100	0	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	1100	0	0	0	0	0	0
	31	41	58	58	44	34	27	13	10	75	24	20	13	13	13	6	86	13	10	10	10	10	6	89	10	10	10	6	3	3	89	10	6	6	3	3	96	3	3	3	3	3	3	3	3	3	3	3	3	
JUN	7	27	72	65	58	55	31	37	24	55	44	34	34	24	20	17	10	79	20	17	17	17	10	6	93	6	6	6	6	6	3	93	6	6	6	6	3	96	3	3	3	3	3	3	3	3	3	3	3	
	14	31	68	55	44	41	37	27	24	51	48	37	31	24	13	10	72	27	24	20	17	13	6	89	10	10	10	6	3	3	89	10	6	6	3	3	96	3	3	3	3	3	3	3	3	3	3	3		
	21	34	65	58	34	34	31	24	20	51	48	44	27	27	24	17	10	68	31	24	13	10	10	6	82	17	13	10	6	3	0	82	17	13	10	6	3	96	3	3	3	3	3	3	3	3	3	3	3	
	28	27	72	65	58	48	41	27	10	44	55	51	44	37	31	24	10	55	44	37	34	27	17	6	72	27	24	20	13	13	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
JUL	5	20	79	62	51	48	31	24	24	41	58	44	37	34	24	20	55	44	37	34	31	27	10	51	48	41	34	31	27	17	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	12	20	79	72	62	58	48	34	10	41	58	58	55	51	37	31	10	55	44	44	34	31	27	10	51	48	41	34	27	17	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	19	20	79	75	62	48	44	27	10	31	68	62	51	48	37	31	17	41	58	55	48	37	24	20	10	51	48	41	37	17	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	26	31	68	65	58	51	37	20	17	31	68	62	51	48	37	31	17	41	58	55	48	48	27	10	51	48	44	41	37	17	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
AUG	2	24	75	72	62	62	51	27	10	44	55	55	48	48	37	13	44	55	44	44	41	37	13	44	55	44	34	31	27	27	13	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3				
	9	17	82	62	62	62	48	44	37	37	62	55	51	51	44	41	31	44	55	48	48	48	41	37	27	48	51	48	48	41	34	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3		
	16	24	75	72	65	62	48	44	37	37	62	55	51	51	44	41	31	44	55	48	48	48	41	37	27	48	51	48	48	41	34	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3		
	23	17	82	72	58	55	51	37	37	31	68	65	48	44	37	27	24	41	58	58	41	41	37	27	48	51	48	41	34	24	20	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	30	17	82	79	68	62	58	51	31	27	72	65	56	51	44	41	24	37	62	58	51	48	41	37	24	41	58	55	44	41	37	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3		
SEP	6	13	86	79	65	62	48	31	27	27	72	68	55	55	44	31	27	31	62	58	51	48	41	37	24	41	58	55	44	41	37	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3		
	13	34	65	62	51	51	37	34	24	41	58	58	48	48	34	31	20	48	51	51	41	41	37	27	20	51	48	48	37	27	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	20	31	68	62	51	51	37	31	17	44	55	48	37	37	31	24	13	51	48	41	34	37	27	24	10	58	41	34	27	27	24	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
	27	34	65	58	48	44	34	27	17	55	44	34	27	27	24	20	13	62	37	31	24	24	20	17	10	65	34	27	24	24	20	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3			
OCT	4	58	41	37	31	27	24	13	10	75	24	24	24	24	20	17	10	79	20	17	17	17	10	6	82	17	17	13	13	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3				
	11	58	41	34	34	27	20	20	10	72	27	24	24	24	20	17	10	79	20	17	17	17	10	6	82	17	17	13	13	10	10	6	82	17	13	13	10	10	10	6	6	6	3	3	3	3				
	18	58	41	34	31	24	20	17	13	65	34	27	24	24	20	17	10	75	24	20	20	17	13	13	10	6	82	17	17	13	13	10	10	6	82	17	13													

Table 51. Probability of occurrence of drouth days based on 43 years of record, 1928 through 1970, for Tullahoma

1-WEEK PERIOD BEGINNING:	1 INCH A _s M _a H _e C _c								2 INCH A _s M _a H _e C _c								3 INCH A _s M _a H _e C _c								4 INCH A _s M _a H _e C _c								5 INCH A _s M _a H _e C _c								7 INCH A _s M _a H _e L _c							
	DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK				DROUTH				DAYS PER WEEK			
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7								
MAR	1	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
8	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
15	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
22	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
29	197	2	2	2	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
APR	5	97	2	2	2	2	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0								
12	88	11	9	4	2	2	0	0	97	2	2	0	0	0	0	0	103	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
19	81	18	15	13	9	4	2	97	2	2	2	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
26	86	13	13	11	9	9	6	97	2	2	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
MAY	3	70	29	20	18	11	9	4	95	4	2	2	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
10	63	36	36	31	20	15	11	9	86	13	9	9	6	2	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0								
17	50	49	40	29	27	24	22	13	81	18	13	13	11	11	9	95	4	2	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0									
24	50	49	40	29	24	20	15	13	77	22	13	13	11	11	9	88	11	9	9	9	6	2	100	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0									
JUN	31	38	61	52	43	29	27	24	20	77	22	22	18	15	15	13	9	88	11	9	6	6	6	4	95	4	4	2	2	2	0	0	100	0	0	0	0	0	0	0								
13	36	63	56	47	45	36	24	20	61	38	31	27	20	15	11	9	84	15	9	6	6	6	6	95	4	4	4	2	2	2	1	97	2	2	2	2	0	0	0									
20	45	56	47	40	36	26	11	11	56	43	36	24	0	15	9	9	81	18	13	13	11	11	6	4	90	9	6	6	6	4	4	4	95	4	4	4	2	2	0	0								
27	29	70	63	52	43	29	29	20	52	47	43	31	22	22	15	11	72	27	22	20	18	13	13	84	15	11	11	11	9	9	9	91	90	9	9	6	4	4	0									
4	29	70	63	56	47	31	22	15	40	59	45	36	34	24	18	11	61	38	29	24	20	18	9	2	75	24	22	20	11	9	0	0	88	11	11	6	4	2	0	0								
JUL	5	31	68	63	52	40	31	18	6	47	52	47	43	36	24	13	4	61	38	29	24	20	18	9	2	75	24	22	20	11	9	0	0	88	11	11	6	4	2	0	0							
12	36	63	56	47	45	38	18	11	47	52	43	31	29	29	18	9	54	45	36	31	27	20	11	6	59	40	36	22	15	9	9	6	2	88	11	11	9	6	4	0	0							
19	29	70	56	52	40	31	18	4	50	49	40	27	20	13	9	4	50	49	36	29	22	18	11	4	59	40	27	22	18	13	9	2	79	20	20	18	11	4	0	0								
26	31	68	61	52	31	18	9	50	49	43	36	22	18	9	2	61	38	31	27	13	13	9	2	70	29	24	20	11	11	9	2	79	20	18	13	9	6	4	2	0	0							
AUG	2	20	79	79	54	47	31	22	20	50	49	49	40	38	29	18	18	56	43	40	31	29	18	13	13	68	31	31	24	22	15	11	9	77	22	20	18	18	9	2	2	0	0					
9	25	74	63	56	45	38	24	15	50	61	49	45	31	27	18	11	54	45	36	31	24	24	18	11	68	31	31	24	20	18	11	4	77	22	20	15	15	11	2	0	0							
16	22	77	63	47	34	27	18	13	40	59	47	38	27	24	15	9	47	52	43	34	24	22	13	4	54	45	38	29	18	13	4	68	31	27	22	15	15	11	2	0	0							
23	22	77	68	56	47	36	25	15	45	54	49	49	45	40	34	25	52	47	43	40	34	31	29	25	54	40	34	34	31	24	22	18	68	31	31	29	27	22	20	0	0							
30	22	77	70	65	59	43	31	18	40	59	56	52	38	34	22	15	47	52	49	45	36	34	22	15	50	49	40	36	34	22	20	18	63	36	29	22	20	15	9	0	0							
SEP	6	31	68	68	56	47	34	31	25	47	52	47	45	40	29	27	52	47	45	40	34	32	20	18	59	40	40	36	34	22	20	18	61	38	38	31	29	25	15	13	0	0						
13	38	63	56	47	45	38	34	20	50	49	43	36	34	29	27	15	56	43	38	34	31	27	20	15	70	29	24	20	18	11	11	9	77	22	20	15	15	13	11	2	0	0						
20	36	63	49	36	29	22	18	15	40	40	36	27	22	15	11	68	31	27	22	18	15	11	6	72	27	22	20	15	13	11	4	2	77	22	20	15	13	9	4	2	0	0						
27	36	63	54	45	36	29	22	18	50	40	36	27	22	15	11	68	31	27	22	18	15	11	6	72	27	22	20	15	13	11	9	6	86	13	13	11	9	9	4	2	0	0						
OCT	4	47	52	43	36	31	20	15	13	68	31	27	22	20	11	11	72	27	22	20	18	15	9	9	79	20	20	18	15	9	9	6	84	15	15	11	9	9	4	2	0	0						
11	54	45	38	31	29	20	18	12	72	27	24	22	18	11	11	9	79	20	20	18	15	9	9	6	84	15	15	11	9	9	6	81	18	15	11	11	9	9	4	2	0	0						
18	52	47	45	38	27	20	18	15	63	36	34	24	22	18	13	11	72	27	22	18	15	13	11	9	79	20	18	13	11	9	9	6	81	18	15	11	11	9	9	4	2	0	0					
25	56	43	40	31	27	20	13	65	34	34	27	24	18	13	11	70	29	29	22	20	15	15	9	75	24	24	20	18	15	13	9	6	81	18	15	11	11	9	9	4	2	0	0					
NOV	1	79	20	15	6	4	4	4	84	15	11	4	2	2	2	2	86	13	11	4	2	2	2	2	88	11	11	4	2	2	2	2	95	4	4	2	2	2	2	2	0	0						
8	90	9	6	4	4	4	2	95	4	4	2	2	2	2	2	95	4	4	2	2	2	2	2	95	4	4	2	2	2	2	2	95	4	4	2	2	2	2	2	0	0							
15	93	6	6	4	4	4	2	97	2	2	2	2	2	2	2	97	2	2	2	2	2	2	2	97	2	2	2	2	2	2	2	97	2	2	2	2	2	2	2	0	0							
22	100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	0						
29	100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	0						
DEC	6	1100	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	0						
13	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	1100	0	0	0	0	0	0	0	0	0						
20	1100	0	0	0	0	0	0	0	1																																							

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