U. S DEPARTMENT OF COMMERCE
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TECHNICAL PAPER NO. 19

# Mean Number of Thunderstorm Days in the United States

Prepared by

CLIMATOLOGICAL SERVICES DIVISION

WASHINGTON, D. C.

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# MEAN NUMBER OF DAYS WITH THUNDERSTORMS IN THE UNITED STATES

Definition.--In the recording of thunderstorm occurrences by Weather Bureau Observers, the instructions, beginning with the year 1894, have defined a day with thunderstorms as the local calendar day on which thunder is heard. Prior to 1894 these instructions called for the additional requirement that rain must accompany the thunder, thus reducing somewhat the frequency of the recorded occurrences during those earlier years. A day with thunderstorms is so recorded regardless of the number occurring on that day. Also, when a storm begins before midnight and ends after midnight, local time, a day with thunderstorms is recorded for both dates involved. These records, therefore, do not indicate the frequency of occurrence of individual storms. The duration of an individual thunderstorm is defined by Weather Bureau instructions as the time interval between the first and last thunder. The occurrence of lightning without thunder is not recorded as a thunderstorm in Weather Bureau climatological records.

Source of Data.--The data presented in the accompanying charts and tables were taken directly from the 1951 "Local Climatological Summary" issued for 266 Weather Bureau Offices in Continental United States, 16 in Alaska, 5 in certain islands of the Pacific and 2 in the West Indies. The charts cover only Continental United States but data for all these locations are shown in the table. The computed mean values shown are based on the official records at each location.

Reliability of Data.--These data are based on official Weather Bureau records at those locations where trained observing staffs are maintained. For the specific locations involved, therefore, they can be accepted as accurate. It should be understood, however, that the requirement that thunder be heard limits the area covered by each observing point to one having a radius of not more than 10 or 12 miles. Consequently a network of only 266 locations for the entire country may be inadequate for accurate interpolations for areas between the points of observation. The considerable distances between stations, however, probably eliminate all or nearly all duplication of records, i.e., of the same thunderstorm being recorded by more than one observing station. These facts, together with the fact that there is considerable variation in the years-of-record on which the mean values are based at different stations, should be given due consideration in using the isoline charts.

Discussion of Data.--It will be noted from the charts and tables shown herein that the area having the greatest number of days with thunderstorms per year is central Florida, with relatively high values for the entire southeastern portion of the country and an area of secondary maxima centered roughly over northeastern New Mexico and south-central Colorado; also that the Pacific coastal regions have the least number of days with thunderstorms. As is to be expected, since the chief source of energy in the formation of thunderstorms is solar heating, there is a direct variation of the frequency of thunderstorm days with the seasons; the months of highest frequency being July and August and those of lowest frequency, December and January. In fact, thunderstorms rarely occur in most of the northern States during the winter season.

Thunderstorm days are relatively infrequent in most of Alaska but average 10 and 11 per year, respectively, in the Fairbanks and Northway areas. They are also rather infrequent in the Hawaiian Islands and the islands of Canton and Wake. Except for Honolulu, however, records for these locations are too short to indicate normal values. The two locations in the West Indies for which Weather Bureau records of these data are available, namely San Juan, Puerto Rico and St. Croix, Virgin Islands, indicate frequencies of 50 and 45 thunderstorm days per year, respectively. The latter figure, however, is based on only 4 years of record.

# THUNDERSTORMS

(Mean number of days)

| State and Station | Years of record | Jan. | Feb. | March | April | May | June | July | August | Sept. | Oct. | Nov. | Dec. | Spring March–May | Summer June–August | Autumn Sept.–Nov. | Winter Dec.–Feb. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ALABAMA** | | | | | | | | | | | | | | | | | | |
| Anniston | 45 | 1 | 2 | 4 | 5 | 7 | 11 | 12 | 10 | 5 | 1 | 1 | 1 | 16 | 33 | 7 | 4 | 60 |
| Birmingham | 48 | 1 | 2 | 4 | 5 | 7 | 12 | 14 | 12 | 6 | 2 | 1 | 1 | 16 | 38 | 9 | 4 | 67 |
| Mobile | 71 | 1 | 2 | 3 | 4 | 6 | 10 | 14 | 13 | 6 | 2 | 1 | 2 | 13 | 37 | 9 | 5 | 64 |
| Montgomery | 79 | 1 | 2 | 4 | 4 | 6 | 10 | 11 | 9 | 4 | 1 | 1 | 1 | 14 | 30 | 6 | 4 | 54 |
| **ARIZONA** | | | | | | | | | | | | | | | | | | |
| Flagstaff | 19 | • | • | • | 1 | 1 | 2 | 6 | 11 | 12 | 2 | • | • | 2 | 19 | 14 | • | 35 |
| Payson | 4 | 0 | 0 | 1 | 3 | 3 | 5 | 15 | 13 | 9 | 4 | • | • | 7 | 33 | 13 | 1 | 54 |
| Phoenix | 56 | • | 1 | 1 | 1 | 1 | 1 | 7 | 8 | 4 | 1 | 1 | • | 3 | 16 | 6 | 1 | 26 |
| Prescott | 9 | • | • | 1 | 1 | 1 | 1 | 15 | 15 | 7 | 2 | • | • | 3 | 31 | 9 | • | 43 |
| Tucson | 11 | • | • | 1 | • | • | 1 | 11 | 12 | 6 | 3 | 1 | • | 1 | 24 | 10 | • | 35 |
| Winslow | 3 | 0 | 0 | • | 2 | 2 | 3 | 12 | 7 | 7 | 1 | 0 | 0 | 4 | 22 | 8 | 0 | 34 |
| Yuma | 28 | • | • | • | • | • | • | 3 | 4 | 2 | 1 | • | • | • | 7 | 3 | • | 10 |
| **ARKANSAS** | | | | | | | | | | | | | | | | | | |
| Fort Smith | 70 | 1 | 2 | 4 | 6 | 8 | 8 | 7 | 7 | 4 | 3 | 2 | 1 | 18 | 22 | 9 | 4 | 53 |
| Little Rock | 59 | 2 | 2 | 5 | 7 | 7 | 9 | 9 | 8 | 4 | 2 | 1 | 2 | 19 | 26 | 7 | 6 | 58 |
| Texarkana | 9 | 2 | 4 | 7 | 7 | 11 | 9 | 10 | 7 | 6 | 3 | 3 | 2 | 25 | 26 | 12 | 8 | 71 |
| **CALIFORNIA** | | | | | | | | | | | | | | | | | | |
| Bakersfield | 18 | • | • | 1 | 1 | • | • | 0 | • | 1 | • | • | • | 2 | • | 1 | • | 3 |
| Beaumont | 13 | • | • | • | 1 | • | 0 | 2 | 2 | 1 | 1 | • | • | 2 | 4 | 2 | 1 | 9 |
| Blue Canyon | 11 | • | 1 | • | 1 | 2 | 2 | 1 | 1 | 1 | 1 | • | 0 | 4 | 4 | 2 | 1 | 11 |
| Eureka | 65 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 3 |
| Fresno | 64 | • | • | 1 | 1 | • | • | • | • | • | 1 | • | • | 3 | • | 1 | • | 4 |
| Los Angeles | 68 | • | 1 | 1 | 1 | • | • | • | • | • | • | • | • | 2 | • | • | 1 | 3 |
| Mt. Shasta | 9 | 0 | • | • | 2 | 3 | 3 | 3 | 2 | 1 | 0 | • | 0 | 5 | 8 | 1 | • | 14 |
| Oakland | 21 | • | • | • | • | • | • | • | • | • | • | • | • | 1 | • | • | 1 | 2 |
| Red Bluff | 7 | • | 1 | 1 | 1 | 3 | 2 | • | 1 | • | • | • | • | 5 | 3 | • | • | 9 |
| Sacramento | 4 | • | • | 1 | 1 | • | • | • | • | • | • | • | • | 2 | • | • | • | 4 |
| Sandberg | 20 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 0 | 6 |
| San Diego | 80 | 1 | • | • | • | • | • | 1 | 1 | • | • | • | • | • | 2 | • | 1 | 3 |
| San Francisco (City) | 61 | • | • | • | • | • | • | • | • | • | • | • | • | 1 | • | • | 1 | 2 |
| San Francisco (Airport) | 24 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Santa Catalina | 7 | 0 | 0 | • | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | 0 | 0 |
| Santa Maria | 9 | • | • | • | • | 0 | 0 | • | • | • | 0 | 0 | • | • | • | • | • | • |
| **COLORADO** | | | | | | | | | | | | | | | | | | |
| Alamosa | 7 | 0 | • | 0 | 2 | 7 | 6 | 14 | 14 | 6 | 2 | • | 0 | 9 | 34 | 8 | • | 51 |
| Colorado Springs | 4 | 0 | 0 | 1 | 3 | 10 | 12 | 18 | 15 | 7 | 2 | 0 | 0 | 14 | 45 | 9 | 0 | 68 |
| Denver | 68 | • | • | • | 2 | 6 | 9 | 12 | 10 | 4 | 1 | • | • | 8 | 31 | 5 | • | 44 |
| Grand Junction | 53 | • | • | 1 | 2 | 4 | 5 | 11 | 10 | 5 | 2 | • | • | 7 | 26 | 7 | 1 | 41 |
| Pueblo | 63 | • | • | • | 2 | 6 | 8 | 12 | 10 | 3 | 1 | • | • | 8 | 30 | 4 | • | 42 |
| **CONNECTICUT** | | | | | | | | | | | | | | | | | | |
| Hartford | 47 | • | • | 1 | 2 | 4 | 5 | 7 | 5 | 2 | 1 | • | • | 7 | 17 | 3 | • | 27 |
| New Haven | 79 | • | • | 1 | 1 | 3 | 5 | 6 | 5 | 2 | 1 | • | • | 5 | 16 | 3 | • | 24 |
| **DELAWARE** | | | | | | | | | | | | | | | | | | |
| Wilmington | 4 | 0 | 0 | 1 | 2 | 6 | 7 | 6 | 7 | 2 | 1 | 1 | 0 | 9 | 20 | 4 | 0 | 33 |
| **DIST. OF COLUMBIA** | | | | | | | | | | | | | | | | | | |
| Washington | 63 | • | 1 | 1 | 2 | 5 | 7 | 9 | 6 | 3 | 1 | • | • | 8 | 22 | 4 | 1 | 35 |
| **FLORIDA** | | | | | | | | | | | | | | | | | | |
| Apalachicola | 29 | 1 | 2 | 4 | 4 | 5 | 11 | 17 | 16 | 10 | 2 | 1 | 1 | 13 | 44 | 13 | 4 | 74 |
| Daytona Beach | 7 | 2 | 1 | 4 | 6 | 8 | 15 | 22 | 18 | 9 | 4 | 2 | 2 | 18 | 55 | 15 | 5 | 93 |
| Fort Myers | 7 | 1 | 1 | 1 | 4 | 8 | 15 | 24 | 20 | 12 | 3 | 1 | 1 | 13 | 59 | 16 | 3 | 91 |
| Jacksonville | 61 | 1 | 2 | 3 | 4 | 7 | 13 | 18 | 16 | 8 | 2 | 1 | 1 | 14 | 47 | 11 | 4 | 76 |
| Key West | 68 | 1 | 1 | 2 | 2 | 4 | 8 | 11 | 12 | 10 | 4 | 1 | 1 | 8 | 31 | 15 | 3 | 57 |
| Melbourne | 7 | 1 | 1 | 4 | 6 | 10 | 13 | 19 | 18 | 10 | 3 | 2 | 1 | 20 | 50 | 15 | 3 | 88 |
| Miami | 41 | 1 | 1 | 2 | 5 | 8 | 11 | 14 | 13 | 9 | 4 | 1 | 1 | 15 | 38 | 14 | 3 | 70 |
| Orlando | 7 | 1 | 1 | 3 | 6 | 8 | 16 | 23 | 18 | 11 | 3 | 1 | 1 | 17 | 57 | 15 | 2 | 91 |
| Pensacola | 58 | 2 | 2 | 4 | 4 | 6 | 11 | 15 | 14 | 7 | 2 | 1 | 2 | 14 | 40 | 10 | 6 | 70 |
| Tallahassee | 12 | 1 | 2 | 5 | 4 | 7 | 14 | 18 | 15 | 7 | 2 | 2 | 1 | 16 | 47 | 11 | 4 | 78 |
| Tampa | 61 | 1 | 1 | 3 | 3 | 7 | 15 | 20 | 19 | 11 | 3 | 1 | 1 | 13 | 54 | 15 | 3 | 85 |
| West Palm Beach | 9 | 1 | • | 2 | 4 | 9 | 12 | 17 | 17 | 10 | 5 | 1 | 1 | 15 | 46 | 16 | 2 | 79 |
| **GEORGIA** | | | | | | | | | | | | | | | | | | |
| Albany | 32 | 1 | 2 | 4 | 6 | 7 | 9 | 17 | 11 | 5 | 2 | 1 | 1 | 17 | 37 | 8 | 4 | 66 |
| Athens | 8 | 1 | 1 | 3 | 3 | 6 | 10 | 11 | 8 | 4 | 1 | 1 | 0 | 12 | 29 | 6 | 2 | 49 |
| Atlanta | 73 | 1 | 1 | 3 | 4 | 6 | 9 | 11 | 9 | 3 | 1 | 1 | 1 | 13 | 29 | 5 | 3 | 50 |
| Augusta | 79 | • | 1 | 2 | 3 | 5 | 7 | 10 | 8 | 3 | 1 | 1 | • | 10 | 25 | 5 | 1 | 41 |
| Columbus | 6 | 1 | 2 | 4 | 6 | 8 | 9 | 16 | 10 | 4 | 1 | 2 | 1 | 18 | 35 | 7 | 4 | 64 |
| Macon | 53 | 1 | 2 | 3 | 5 | 6 | 11 | 13 | 11 | 4 | 1 | 1 | 1 | 14 | 35 | 6 | 4 | 59 |
| Rome | 6 | 3 | 2 | 4 | 4 | 9 | 10 | 12 | 11 | 5 | 2 | 2 | 1 | 17 | 33 | 9 | 6 | 65 |
| Savannah | 76 | 1 | 1 | 2 | 3 | 6 | 10 | 13 | 11 | 5 | 1 | • | • | 11 | 34 | 6 | 2 | 53 |
| Valdosta | 4 | 0 | 2 | 1 | 4 | 8 | 14 | 18 | 12 | 5 | 2 | 2 | 1 | 13 | 44 | 9 | 3 | 69 |
| **IDAHO** | | | | | | | | | | | | | | | | | | |
| Boise | 40 | 12 | 0 | • | 1 | 1 | 4 | 4 | 3 | 2 | 2 | 1 | • | 0 | 6 | 9 | 3 | • |
| Lewiston | 40 | 5 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 3 | 1 | 1 | • | 0 | 4 | 11 | 2 | • |
| Pocatello | 51 | 13 | • | • | • | 1 | 4 | 4 | 6 | 7 | 4 | 1 | • | • | 5 | 17 | 5 | • |
| **ILLINOIS** | | | | | | | | | | | | | | | | | | |
| Cairo | 52 | 68 | 1 | 2 | 4 | 6 | 8 | 10 | 9 | 8 | 5 | 2 | 2 | 1 | 18 | 27 | 9 | 4 |
| Chicago | 20 | 72 | • | • | 2 | 3 | 5 | 7 | 7 | 6 | 4 | 2 | 1 | • | 10 | 20 | 7 | • |
| Joliet | | 10 | 1 | 1 | 2 | 3 | 6 | 8 | 6 | 7 | 4 | 1 | 1 | 1 | 11 | 21 | 6 | 3 |
| Moline | | 17 | • | 1 | 3 | 4 | 7 | 9 | 8 | 7 | 4 | 2 | 2 | • | 14 | 24 | 8 | 1 |
| Peoria | 32 | 47 | • | 1 | 3 | 4 | 7 | 9 | 8 | 7 | 5 | 2 | 1 | • | 14 | 24 | 8 | 1 |
| Springfield | | 73 | • | 1 | 3 | 5 | 8 | 9 | 8 | 7 | 5 | 2 | 1 | • | 16 | 24 | 8 | 1 |
| **INDIANA** | | | | | | | | | | | | | | | | | | |
| Evansville | 39 | 55 | 1 | 1 | 4 | 5 | 7 | 9 | 8 | 7 | 4 | 2 | 1 | 1 | 16 | 24 | 7 | 3 |
| Fort Wayne | 22 | 40 | • | 1 | 2 | 3 | 6 | 8 | 8 | 6 | 4 | 2 | 1 | • | 11 | 22 | 7 | 1 |
| Indianapolis | 26 | 77 | 0 | 1 | 3 | 4 | 6 | 8 | 7 | 6 | 4 | 2 | 1 | 0 | 13 | 21 | 7 | 1 |
| South Bend | | 12 | 1 | 1 | 3 | 4 | 7 | 9 | 7 | 7 | 5 | 2 | 1 | 1 | 14 | 23 | 8 | 3 |
| Terre Haute | 38 | 39 | 1 | 1 | 3 | 4 | 7 | 9 | 8 | 7 | 5 | 2 | 2 | • | 14 | 24 | 9 | 2 |
| **IOWA** | | | | | | | | | | | | | | | | | | |
| Burlington | | 10 | • | 1 | 3 | 5 | 7 | 12 | 10 | 7 | 5 | 3 | 2 | 1 | 15 | 29 | 10 | 2 |
| Davenport | 26 | 72 | • | • | 2 | 3 | 7 | 8 | 8 | 6 | 5 | 2 | 1 | • | 12 | 22 | 8 | • |
| Des Moines | 29 | 73 | • | • | 2 | 4 | 7 | 9 | 8 | 7 | 5 | 3 | 1 | • | 13 | 24 | 9 | • |
| Dubuque | 26 | 77 | • | • | 2 | 3 | 6 | 8 | 7 | 6 | 4 | 2 | 1 | • | 11 | 21 | 7 | • |
| Sioux City | 20 | 62 | 0 | 0 | 1 | 3 | 6 | 9 | 8 | 8 | 5 | 2 | 0 | 0 | 10 | 25 | 7 | 0 |
| **KANSAS** | | | | | | | | | | | | | | | | | | |
| Concordia | | 66 | • | • | 1 | 4 | 7 | 9 | 8 | 8 | 5 | 2 | 1 | • | 12 | 25 | 8 | • |
| Dodge City | 10 | 76 | 0 | 0 | 1 | 3 | 6 | 9 | 8 | 7 | 3 | 2 | 0 | 0 | 10 | 24 | 5 | • |
| Goodland | | 12 | 0 | 0 | 0 | 2 | 6 | 10 | 12 | 8 | 5 | 1 | 0 | 0 | 8 | 30 | 6 | 0 |
| Topeka | 52 | 65 | • | 1 | 2 | 5 | 8 | 9 | 8 | 8 | 6 | 3 | 1 | • | 15 | 25 | 10 | 1 |
| Wichita | | 63 | • | 1 | 3 | 5 | 9 | 10 | 8 | 8 | 6 | 3 | 1 | • | 17 | 26 | 10 | 1 |
| **KENTUCKY** | | | | | | | | | | | | | | | | | | |
| Lexington | | 64 | 1 | 1 | 2 | 3 | 6 | 8 | 9 | 7 | 4 | 1 | 1 | 1 | 11 | 24 | 6 | 3 |
| Louisville | 35 | 59 | 1 | 1 | 3 | 4 | 6 | 9 | 8 | 7 | 4 | 2 | 1 | 0 | 13 | 24 | 7 | 2 |
| **LOUISIANA** | | | | | | | | | | | | | | | | | | |
| Baton Rouge | | 7 | 4 | 3 | 6 | 5 | 7 | 10 | 15 | 13 | 7 | 2 | 3 | 3 | 18 | 38 | 12 | 10 |
| Lake Charles | | 13 | 3 | 3 | 5 | 6 | 8 | 10 | 15 | 12 | 8 | 2 | 3 | 3 | 19 | 37 | 13 | 9 |
| New Orleans | 25 | 52 | 2 | 2 | 4 | 5 | 6 | 11 | 16 | 15 | 8 | 2 | 2 | 2 | 15 | 42 | 12 | 6 |
| Shreveport | 70 | 76 | 2 | 2 | 4 | 6 | 6 | 7 | 8 | 6 | 3 | 2 | 2 | 2 | 16 | 21 | 7 | 6 |

See footnotes at end of table.

# THUNDERSTORMS

(Mean number of days)

| State and Station | Years of record | Jan. | Feb. | March | April | May | June | July | August | Sept. | Oct. | Nov. | Dec. | Spring March–May | Summer June–August | Autumn Sept.–Nov. | Winter Dec.–Feb. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAINE | | | | | | | | | | | | | | | | | | |
| Caribou | 12 | 0 | 0 | • | 1 | 2 | 5 | 7 | 4 | 1 | 1 | • | 0 | 3 | 16 | 2 | 0 | 21 |
| Eastport | 66 | • | • | • | • | 1 | 3 | 4 | 3 | 1 | 1 | • | • | 1 | 10 | 2 | • | 13 |
| Portland | 21 | • | • | 1 | 1 | 3 | 6 | 7 | 5 | 3 | 1 | • | • | 5 | 18 | 4 | • | 27 |
| MARYLAND | | | | | | | | | | | | | | | | | | |
| Baltimore | 68 | • | • | 1 | 2 | 5 | 6 | 8 | 6 | 3 | 1 | • | • | 8 | 20 | 4 | • | 32 |
| Frederick | 10 | • | • | 1 | 1 | 5 | 5 | 5 | 4 | 2 | 1 | • | 0 | 7 | 14 | 3 | • | 24 |
| MASSACHUSETTS | | | | | | | | | | | | | | | | | | |
| Boston | 59 | • | • | 1 | 1 | 3 | 4 | 5 | 4 | 2 | • | • | • | 5 | 13 | 2 | • | 20 |
| Nantucket | 65 | • | • | 1 | 1 | 2 | 3 | 3 | 3 | 1 | 1 | • | • | 4 | 9 | 2 | • | 15 |
| Pittsfield | 13 | 0 | • | 1 | 1 | 4 | 6 | 8 | 5 | 3 | 1 | • | 0 | 6 | 19 | 4 | • | 29 |
| MICHIGAN | | | | | | | | | | | | | | | | | | |
| Alpena | 78 | • | • | 1 | 1 | 3 | 5 | 6 | 4 | 3 | 1 | • | 0 | 5 | 15 | 4 | • | 24 |
| Detroit | 81 | • | 1 | 1 | 3 | 5 | 6 | 6 | 5 | 3 | 1 | 1 | • | 9 | 17 | 5 | 1 | 32 |
| Escanaba | 53 | • | • | 1 | 1 | 4 | 6 | 8 | 6 | 4 | 2 | 1 | • | 6 | 20 | 7 | • | 33 |
| Grand Rapids | 48 | • | 1 | 2 | 3 | 5 | 7 | 7 | 6 | 5 | 2 | 1 | • | 10 | 20 | 8 | 1 | 39 |
| Lansing | 42 | • | 1 | 2 | 3 | 5 | 7 | 7 | 7 | 5 | 2 | 1 | • | 10 | 21 | 8 | 1 | 40 |
| Marquette | 71 | 0 | • | 1 | 1 | 3 | 5 | 6 | 5 | 3 | 1 | • | 0 | 5 | 16 | 4 | • | 25 |
| Muskegon | 10 | 0 | 0 | 1 | 3 | 5 | 6 | 5 | 6 | 4 | 2 | 1 | 0 | 9 | 17 | 7 | 0 | 33 |
| Sault Ste. Marie | 63 | 0 | 0 | 1 | 1 | 3 | 4 | 5 | 4 | 4 | 2 | 0 | 0 | 5 | 13 | 6 | 0 | 24 |
| MINNESOTA | | | | | | | | | | | | | | | | | | |
| Duluth | 59 | • | • | • | 1 | 4 | 6 | 7 | 6 | 4 | 1 | • | • | 5 | 19 | 5 | • | 29 |
| International Falls | 12 | 0 | 0 | 0 | 1 | 2 | 6 | 8 | 7 | 3 | 1 | 0 | 0 | 3 | 21 | 4 | 0 | 28 |
| Minneapolis | 59 | • | • | 1 | 2 | 6 | 8 | 7 | 7 | 5 | 2 | 1 | 0 | 9 | 22 | 8 | • | 39 |
| Rochester | 10 | • | • | 1 | 3 | 7 | 8 | 8 | 7 | 4 | 2 | • | • | 11 | 23 | 6 | • | 40 |
| St. Cloud | 12 | 0 | • | 1 | 2 | 5 | 7 | 8 | 7 | 4 | 2 | • | 0 | 8 | 22 | 6 | • | 36 |
| St. Paul | 63 | 0 | • | 1 | 2 | 5 | 7 | 7 | 6 | 4 | 2 | • | • | 8 | 20 | 6 | • | 34 |
| MISSISSIPPI | | | | | | | | | | | | | | | | | | |
| Jackson | 13 | 3 | 3 | 5 | 6 | 7 | 10 | 12 | 8 | 4 | 2 | 2 | 2 | 18 | 30 | 8 | 8 | 64 |
| Meridian | 60 | 2 | 3 | 4 | 5 | 7 | 10 | 13 | 10 | 5 | 1 | 2 | 2 | 16 | 33 | 8 | 7 | 64 |
| Vicksburg | 67 | 2 | 3 | 5 | 6 | 6 | 9 | 11 | 9 | 5 | 2 | 2 | 2 | 17 | 29 | 9 | 7 | 62 |
| MISSOURI | | | | | | | | | | | | | | | | | | |
| Columbia | 62 | 1 | 1 | 3 | 5 | 9 | 11 | 8 | 9 | 6 | 3 | 2 | • | 17 | 28 | 11 | 2 | 58 |
| Kansas City | 63 | • | 1 | 3 | 5 | 8 | 10 | 8 | 9 | 6 | 3 | 1 | 1 | 16 | 27 | 10 | 2 | 55 |
| St. Joseph | 42 | 0 | 1 | 2 | 5 | 8 | 10 | 8 | 9 | 7 | 3 | 1 | 0 | 15 | 27 | 11 | 1 | 54 |
| St. Louis | 59 | 1 | 1 | 3 | 5 | 7 | 9 | 7 | 7 | 5 | 3 | 1 | • | 15 | 23 | 9 | 2 | 49 |
| Springfield | 64 | 1 | 1 | 4 | 6 | 9 | 10 | 9 | 8 | 5 | 3 | 2 | 1 | 19 | 27 | 10 | 3 | 59 |
| MONTANA | | | | | | | | | | | | | | | | | | |
| Billings | 12 | 0 | 0 | • | 1 | 5 | 8 | 10 | 7 | 2 | • | 0 | 0 | 6 | 25 | 2 | 0 | 33 |
| Butte | 13 | 0 | 0 | • | 1 | 6 | 9 | 13 | 10 | 4 | • | 0 | 0 | 7 | 32 | 4 | 0 | 43 |
| Glasgow | 8 | 0 | 0 | • | 1 | 3 | 7 | 6 | 8 | 2 | • | 0 | 0 | 4 | 21 | 2 | 0 | 27 |
| Great Falls | 14 | 0 | • | • | 1 | 4 | 7 | 9 | 6 | 2 | • | 0 | 0 | 5 | 22 | 2 | • | 29 |
| Havre | 70 | 0 | 0 | • | 1 | 3 | 6 | 6 | 5 | 2 | • | 0 | 0 | 4 | 17 | 2 | 0 | 23 |
| Helena | 72 | • | • | • | 1 | 5 | 7 | 9 | 7 | 2 | • | • | • | 6 | 23 | 2 | • | 31 |
| Kalispell | 50 | • | 0 | • | • | 3 | 5 | 6 | 6 | 2 | • | • | 0 | 3 | 17 | 2 | • | 22 |
| Missoula | 16 | 0 | 0 | • | 1 | 4 | 5 | 8 | 6 | 3 | • | 0 | 0 | 5 | 19 | 3 | 0 | 27 |
| NEBRASKA | | | | | | | | | | | | | | | | | | |
| Grand Island | 13 | 0 | • | 2 | 3 | 8 | 11 | 10 | 8 | 5 | 3 | • | • | 13 | 29 | 8 | • | 50 |
| Lincoln | 55 | • | • | 1 | 4 | 7 | 10 | 8 | 8 | 5 | 3 | 1 | • | 12 | 26 | 9 | • | 47 |
| Norfolk | 6 | 0 | 0 | 2 | 5 | 9 | 10 | 8 | 9 | 5 | 4 | 1 | 0 | 16 | 27 | 10 | • | 53 |
| North Platte | 77 | 0 | • | • | 2 | 6 | 9 | 9 | 8 | 3 | 1 | • | • | 8 | 26 | 4 | • | 38 |
| Omaha | 81 | • | • | 1 | 3 | 6 | 8 | 7 | 7 | 5 | 2 | • | • | 10 | 22 | 7 | • | 39 |
| Scottsbluff | 8 | 0 | 0 | 1 | 2 | 7 | 12 | 11 | 9 | 4 | 2 | 0 | 0 | 10 | 32 | 6 | 0 | 48 |
| Valentine | 60 | 0 | 0 | • | 2 | 5 | 9 | 10 | 8 | 4 | 1 | • | • | 7 | 27 | 5 | • | 39 |
| NEVADA | | | | | | | | | | | | | | | | | | |
| Ely | 13 | • | • | • | 2 | 5 | 4 | 8 | 7 | 3 | 2 | • | • | 7 | 19 | 5 | • | 31 |
| Las Vegas | 15 | • | • | • | 1 | 1 | 1 | 4 | 3 | 2 | 1 | • | • | 2 | 8 | 3 | • | 13 |
| Reno | 45 | 0 | 0 | • | • | 2 | 3 | 4 | 3 | 2 | • | 0 | 0 | 2 | 10 | 2 | 0 | 14 |
| Winnemucca | 73 | 0 | • | • | 1 | 2 | 2 | 3 | 2 | 1 | • | • | • | 3 | 7 | 1 | • | 11 |
| NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | |
| Concord | 49 | 0 | 0 | 1 | 1 | 3 | 5 | 6 | 5 | 2 | 1 | 0 | 0 | 5 | 16 | 3 | 0 | 24 |
| Mt. Washington | 19 | 0 | 0 | • | 1 | 2 | 4 | 5 | 3 | 1 | • | • | • | 3 | 12 | 1 | • | 16 |
| NEW JERSEY | | | | | | | | | | | | | | | | | | |
| Atlantic City | 78 | • | • | 1 | 2 | 3 | 5 | 5 | 4 | 2 | 1 | • | • | 6 | 14 | 3 | • | 23 |
| Newark | 21 | • | 0 | 1 | 1 | 4 | 6 | 7 | 5 | 2 | 1 | • | 0 | 6 | 18 | 3 | • | 27 |
| Trenton | 39 | • | • | 1 | 2 | 5 | 7 | 9 | 7 | 3 | 1 | • | • | 8 | 23 | 4 | • | 35 |
| NEW MEXICO | | | | | | | | | | | | | | | | | | |
| Albuquerque | 21 | • | • | 1 | 2 | 4 | 6 | 13 | 13 | 5 | 3 | • | • | 7 | 32 | 8 | • | 47 |
| Clayton | 5 | • | • | • | 2 | 10 | 13 | 16 | 13 | 5 | 2 | 0 | • | 12 | 42 | 7 | • | 63 |
| Raton | 10 | 0 | 0 | 1 | 4 | 11 | 11 | 20 | 18 | 7 | 3 | 0 | 0 | 16 | 49 | 10 | 0 | 75 |
| Roswell | 47 | • | • | 1 | 3 | 6 | 8 | 10 | 9 | 5 | 3 | • | • | 10 | 27 | 8 | • | 45 |
| NEW YORK | | | | | | | | | | | | | | | | | | |
| Albany | 78 | • | • | • | 1 | 3 | 5 | 6 | 5 | 2 | 1 | • | • | 4 | 16 | 3 | • | 23 |
| Bear Mountain | 11 | 0 | 0 | 0 | 1 | 4 | 6 | 9 | 5 | 3 | 0 | 0 | 0 | 5 | 20 | 3 | 0 | 28 |
| Binghamton | 55 | • | • | 1 | 1 | 5 | 6 | 8 | 6 | 3 | 1 | • | • | 7 | 20 | 4 | • | 31 |
| Buffalo | 61 | • | • | 1 | 2 | 4 | 5 | 7 | 5 | 3 | 1 | 1 | • | 7 | 17 | 5 | • | 29 |
| New York | 68 | • | • | 1 | 2 | 4 | 6 | 7 | 6 | 3 | 1 | 1 | • | 7 | 19 | 5 | 3 | 31 |
| Oswego | 68 | • | • | 1 | 1 | 3 | 5 | 6 | 5 | 3 | 1 | • | • | 5 | 16 | 4 | • | 25 |
| Rochester | 68 | • | • | 1 | 2 | 3 | 5 | 7 | 5 | 3 | 1 | • | • | 6 | 17 | 4 | • | 27 |
| Syracuse | 49 | • | • | 1 | 2 | 4 | 6 | 7 | 6 | 3 | 1 | • | • | 7 | 19 | 4 | • | 30 |
| NORTH CAROLINA | | | | | | | | | | | | | | | | | | |
| Asheville | 49 | • | 1 | 2 | 3 | 7 | 11 | 13 | 10 | 5 | 1 | • | • | 12 | 34 | 6 | 1 | 53 |
| Charlotte | 73 | • | 1 | 2 | 3 | 6 | 9 | 11 | 9 | 3 | 1 | 1 | • | 11 | 29 | 5 | 1 | 46 |
| Greensboro | 23 | • | 1 | 2 | 3 | 7 | 10 | 12 | 9 | 4 | 1 | 1 | • | 12 | 31 | 6 | 1 | 50 |
| Hatteras | 54 | 1 | 1 | 2 | 3 | 5 | 6 | 8 | 7 | 4 | 1 | 1 | 1 | 10 | 21 | 6 | 3 | 40 |
| Raleigh | 65 | • | 1 | 2 | 3 | 6 | 8 | 10 | 7 | 3 | 1 | • | • | 11 | 25 | 4 | 1 | 41 |
| Wilmington | 81 | 1 | 1 | 2 | 3 | 5 | 8 | 11 | 9 | 4 | 1 | 1 | • | 10 | 28 | 6 | 2 | 46 |
| Winston-Salem | 6 | • | • | 2 | 2 | 9 | 9 | 10 | 9 | 3 | 1 | 0 | 0 | 13 | 28 | 4 | 1 | 46 |
| NORTH DAKOTA | | | | | | | | | | | | | | | | | | |
| Bismarck | 61 | 0 | 0 | • | 1 | 4 | 7 | 8 | 7 | 3 | 1 | • | 0 | 5 | 22 | 4 | 0 | 31 |
| Devils Lake | 47 | 0 | 0 | • | 1 | 3 | 7 | 8 | 7 | 3 | 1 | • | 0 | 4 | 22 | 4 | 0 | 30 |
| Fargo | 68 | 0 | • | • | 1 | 4 | 7 | 7 | 6 | 3 | 1 | • | 0 | 5 | 20 | 4 | • | 29 |
| Williston | 70 | 0 | 0 | 0 | 1 | 3 | 7 | 7 | 5 | 2 | • | 0 | 0 | 4 | 19 | 2 | 0 | 25 |
| OHIO | | | | | | | | | | | | | | | | | | |
| Akron | 21 | • | • | 2 | 3 | 6 | 7 | 8 | 6 | 4 | 1 | 1 | • | 11 | 21 | 6 | • | 38 |
| Cleveland | 64 | • | • | 2 | 2 | 5 | 7 | 7 | 5 | 4 | 2 | 1 | • | 9 | 19 | 7 | 1 | 35 |
| Cincinnati | 36 | 1 | 1 | 4 | 4 | 7 | 9 | 10 | 8 | 5 | 2 | 1 | 1 | 15 | 27 | 8 | 3 | 53 |
| Columbus | 73 | • | 1 | 2 | 3 | 6 | 8 | 8 | 6 | 3 | 1 | 1 | 1 | 11 | 22 | 5 | 2 | 40 |
| Dayton | 37 | 1 | 1 | 3 | 4 | 7 | 9 | 9 | 7 | 4 | 2 | 1 | • | 14 | 25 | 7 | 2 | 48 |
| Sandusky | 68 | 0 | 0 | 1 | 2 | 5 | 7 | 7 | 5 | 3 | 1 | 0 | 0 | 8 | 19 | 4 | 0 | 31 |
| Toledo | 81 | • | • | 2 | 3 | 5 | 7 | 7 | 5 | 3 | 2 | 1 | • | 10 | 19 | 6 | • | 35 |
| Youngstown | 8 | 0 | 0 | 2 | 3 | 6 | 7 | 7 | 6 | 3 | 1 | 1 | 0 | 11 | 20 | 5 | 0 | 36 |
| OKLAHOMA | | | | | | | | | | | | | | | | | | |
| Oklahoma City | 61 | 1 | 1 | 3 | 5 | 7 | 8 | 5 | 6 | 4 | 3 | 1 | 1 | 15 | 19 | 8 | 3 | 45 |
| Tulsa | 16 | 1 | 2 | 3 | 6 | 10 | 11 | 7 | 7 | 5 | 4 | 1 | 1 | 19 | 25 | 10 | 4 | 58 |

See footnotes at end of table.

# THUNDERSTORMS

(Mean number of days)

| State and Station | Years of record | Jan. | Feb. | March | April | May | June | July | August | Sept. | Oct. | Nov. | Dec. | Spring March–May | Summer June–August | Autumn Sept.–Nov. | Winter Dec.–Feb. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OREGON** | | | | | | | | | | | | | | | | | | |
| Baker | 60 | • | 0 | • | 1 | 2 | 4 | 4 | 3 | 2 | • | • | • | 3 | 11 | 2 | • | 16 |
| Burns | 13 | 0 | • | 0 | 1 | 2 | 3 | 3 | 3 | 1 | • | 0 | • | 3 | 9 | 1 | • | 14 |
| Eugene | 9 | 0 | • | • | • | 2 | 1 | • | 1 | • | • | • | 0 | 2 | 2 | 1 | • | 5 |
| Meacham | 7 | 0 | 0 | • | 1 | 5 | 4 | 4 | 5 | 2 | • | • | 0 | 6 | 13 | 2 | 0 | 21 |
| Medford | 24 | • | • | 0 | 1 | 2 | 2 | 2 | 1 | 1 | • | • | 0 | 3 | 5 | 1 | • | 9 |
| Pendleton | 15 | 0 | 0 | • | 1 | 2 | 2 | 2 | 2 | 2 | 1 | • | 0 | 3 | 6 | 3 | 0 | 12 |
| Portland | 11 | • | • | • | • | 2 | 1 | 1 | 1 | 1 | • | • | 0 | 2 | 3 | 1 | • | 6 |
| Roseburg | 70 | • | 0 | • | • | 1 | 1 | 1 | 1 | 1 | • | • | 0 | 1 | 3 | 1 | • | 5 |
| Salem | 18 | • | 0 | • | • | 1 | 1 | 1 | 1 | 1 | • | • | • | 1 | 3 | 1 | • | 5 |
| Sexton Summit | 7 | • | 0 | • | • | 2 | 2 | 1 | 1 | 1 | • | 0 | 0 | 3 | 4 | 1 | • | 8 |
| Troutdale | 6 | • | • | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 1 | 0 | 3 | 5 | 4 | • | 12 |
| **PENNSYLVANIA** | | | | | | | | | | | | | | | | | | |
| Allentown | 8 | 0 | • | 1 | 2 | 6 | 6 | 9 | 7 | 4 | 1 | • | 0 | 9 | 22 | 5 | • | 36 |
| Curwensville | 9 | • | 1 | 2 | 4 | 7 | 9 | 12 | 7 | 4 | 1 | • | • | 13 | 28 | 5 | 1 | 47 |
| Erie | 70 | • | • | 1 | 2 | 5 | 6 | 7 | 5 | 4 | 2 | 1 | • | 8 | 18 | 7 | • | 33 |
| Harrisburg | 63 | • | • | 1 | 2 | 5 | 7 | 8 | 6 | 3 | 1 | • | • | 8 | 21 | 4 | • | 33 |
| Park Place | 9 | 0 | 0 | 1 | 2 | 5 | 6 | 7 | 6 | 2 | 1 | • | 0 | 8 | 19 | 3 | 0 | 30 |
| Philadelphia | 81 | • | • | 1 | 2 | 4 | 5 | 7 | 5 | 2 | 1 | • | • | 7 | 17 | 3 | • | 27 |
| Pittsburgh | 66 | 0 | 0 | 2 | 3 | 6 | 8 | 9 | 7 | 4 | 1 | • | • | 11 | 24 | 5 | • | 40 |
| Reading | 39 | • | • | 1 | 2 | 5 | 7 | 9 | 6 | 3 | • | • | • | 8 | 22 | 3 | • | 33 |
| Scranton | 51 | • | • | 1 | 2 | 4 | 7 | 8 | 6 | 3 | 1 | • | • | 7 | 21 | 4 | • | 32 |
| Williamsport | 56 | • | • | 1 | 1 | 3 | 4 | 5 | 3 | 2 | 1 | • | • | 5 | 12 | 3 | • | 20 |
| **RHODE ISLAND** | | | | | | | | | | | | | | | | | | |
| Block Island | 71 | • | • | 1 | 1 | 2 | 3 | 4 | 3 | 2 | 1 | • | • | 4 | 10 | 3 | • | 17 |
| Providence | 47 | • | • | 1 | 1 | 3 | 4 | 5 | 4 | 2 | 1 | • | • | 5 | 13 | 3 | • | 21 |
| **SOUTH CAROLINA** | | | | | | | | | | | | | | | | | | |
| Charleston | 61 | 1 | 1 | 2 | 3 | 6 | 10 | 13 | 13 | 5 | 1 | 1 | • | 11 | 36 | 7 | 2 | 56 |
| Columbia | 65 | • | 1 | 2 | 4 | 6 | 9 | 11 | 9 | 4 | 1 | • | • | 12 | 29 | 5 | 2 | 47 |
| Florence | 6 | 0 | 0 | 3 | 5 | 7 | 10 | 13 | 10 | 5 | 1 | 2 | 0 | 15 | 33 | 8 | 0 | 56 |
| Greenville | 34 | • | 1 | 3 | 3 | 7 | 10 | 13 | 9 | 4 | 1 | 1 | • | 13 | 32 | 6 | 1 | 52 |
| Spartanburg | 21 | 1 | 1 | 2 | 3 | 6 | 9 | 12 | 9 | 4 | 1 | 1 | • | 11 | 30 | 6 | 2 | 49 |
| **SOUTH DAKOTA** | | | | | | | | | | | | | | | | | | |
| Huron | 70 | 0 | • | • | 2 | 5 | 9 | 9 | 8 | 4 | 1 | • | 0 | 7 | 26 | 5 | • | 38 |
| Rapid City | 52 | 0 | 0 | • | 1 | 6 | 11 | 11 | 9 | 3 | • | • | 0 | 7 | 31 | 3 | 0 | 41 |
| Sioux Falls | 6 | 0 | • | 1 | 3 | 7 | 9 | 9 | 8 | 6 | 3 | • | 0 | 11 | 26 | 9 | 0 | 46 |
| **TENNESSEE** | | | | | | | | | | | | | | | | | | |
| Bristol | 8 | 1 | 1 | 2 | 3 | 8 | 11 | 11 | 8 | 6 | 1 | 1 | 0 | 13 | 30 | 8 | 2 | 53 |
| Chattanooga | 73 | 1 | 2 | 4 | 5 | 7 | 11 | 12 | 10 | 4 | 1 | 1 | • | 16 | 33 | 6 | 3 | 58 |
| Knoxville | 71 | • | 1 | 3 | 4 | 7 | 9 | 10 | 8 | 4 | 1 | 1 | • | 14 | 27 | 6 | 1 | 48 |
| Memphis | 70 | 2 | 2 | 4 | 5 | 6 | 8 | 8 | 7 | 4 | 2 | 2 | 1 | 15 | 23 | 8 | 5 | 51 |
| Nashville | 79 | 1 | 2 | 4 | 5 | 7 | 9 | 10 | 7 | 4 | 1 | 1 | 1 | 16 | 26 | 6 | 4 | 52 |
| **TEXAS** | | | | | | | | | | | | | | | | | | |
| Abilene | 66 | • | 1 | 2 | 5 | 8 | 6 | 5 | 5 | 3 | 2 | 1 | • | 15 | 16 | 6 | 1 | 38 |
| Amarillo | 60 | 0 | 0 | 1 | 3 | 6 | 7 | 7 | 8 | 4 | 2 | 0 | 0 | 10 | 22 | 8 | 0 | 38 |
| Austin | 25 | 1 | 2 | 4 | 5 | 7 | 5 | 5 | 4 | 4 | 2 | 2 | 1 | 16 | 14 | 8 | 4 | 42 |
| Brownsville | 29 | • | 1 | 1 | 2 | 4 | 3 | 4 | 4 | 5 | 2 | 1 | 1 | 7 | 11 | 8 | 2 | 28 |
| Corpus Christi | 65 | 1 | 1 | 2 | 3 | 5 | 4 | 4 | 4 | 5 | 2 | 1 | 1 | 10 | 12 | 8 | 3 | 33 |
| Dallas | 38 | 2 | 3 | 4 | 6 | 8 | 7 | 5 | 5 | 4 | 3 | 2 | 2 | 18 | 17 | 9 | 7 | 51 |
| Del Rio | 46 | • | 1 | 2 | 4 | 5 | 4 | 3 | 3 | 2 | 2 | 1 | • | 11 | 10 | 5 | 1 | 27 |
| El Paso | 73 | • | • | • | 1 | 2 | 4 | 8 | 8 | 3 | 2 | • | • | 3 | 20 | 5 | • | 28 |
| Fort Worth | 53 | 1 | 2 | 3 | 6 | 8 | 6 | 6 | 5 | 4 | 3 | 1 | 1 | 17 | 17 | 8 | 4 | 46 |
| Galveston | 60 | 2 | 2 | 3 | 4 | 5 | 5 | 8 | 8 | 6 | 2 | 2 | 2 | 12 | 21 | 10 | 6 | 49 |
| Houston | 42 | 2 | 2 | 3 | 4 | 6 | 7 | 10 | 10 | 6 | 3 | 2 | 2 | 13 | 27 | 11 | 6 | 57 |
| Laredo | 9 | 1 | 2 | 2 | 4 | 8 | 5 | 4 | 3 | 4 | 1 | 1 | 1 | 14 | 12 | 6 | 4 | 36 |
| Lubbock | 5 | 0 | 1 | 1 | 3 | 11 | 12 | 10 | 8 | 5 | 1 | 0 | 0 | 15 | 30 | 6 | 1 | 52 |
| Palestine | 70 | 1 | 2 | 4 | 5 | 6 | 6 | 6 | 6 | 4 | 2 | 2 | 2 | 15 | 18 | 8 | 5 | 46 |
| Port Arthur | 35 | 3 | 3 | 4 | 5 | 6 | 9 | 14 | 13 | 7 | 3 | 2 | 3 | 15 | 36 | 12 | 9 | 72 |
| San Angelo | 4 | • | 3 | 1 | 5 | 8 | 7 | 7 | 6 | 4 | 3 | 1 | 0 | 14 | 20 | 8 | 3 | 45 |
| San Antonio | 67 | 1 | 1 | 2 | 5 | 6 | 4 | 5 | 4 | 4 | 2 | 2 | 1 | 13 | 13 | 8 | 3 | 37 |
| Victoria | 5 | 1 | 2 | 2 | 6 | 7 | 5 | 8 | 7 | 7 | 1 | 1 | 2 | 15 | 20 | 9 | 5 | 49 |
| Waco | 21 | 1 | 2 | 3 | 4 | 6 | 4 | 4 | 4 | 3 | 2 | 1 | 1 | 13 | 12 | 6 | 4 | 35 |
| Wichita Falls | 8 | 1 | 3 | 3 | 5 | 10 | 9 | 7 | 5 | 4 | 3 | 1 | 1 | 18 | 21 | 8 | 5 | 52 |
| **UTAH** | | | | | | | | | | | | | | | | | | |
| Milford | 3 | 0 | 0 | 0 | 3 | 3 | 3 | 9 | 7 | 3 | • | • | • | 6 | 19 | 3 | • | 28 |
| Salt Lake City | 24 | • | 1 | 1 | 3 | 4 | 5 | 7 | 8 | 4 | 2 | • | • | 8 | 20 | 6 | 1 | 35 |
| **VERMONT** | | | | | | | | | | | | | | | | | | |
| Burlington | 46 | 0 | 0 | 0 | 1 | 3 | 6 | 8 | 6 | 3 | 1 | 0 | 0 | 4 | 20 | 4 | 0 | 28 |
| **VIRGINIA** | | | | | | | | | | | | | | | | | | |
| Cape Henry | 60 | • | 1 | 2 | 3 | 5 | 7 | 9 | 7 | 3 | 1 | 1 | • | 10 | 23 | 5 | 1 | 39 |
| Lynchburg | 68 | • | • | 1 | 2 | 5 | 8 | 9 | 7 | 3 | • | • | • | 8 | 24 | 3 | • | 35 |
| Norfolk | 67 | • | 1 | 2 | 3 | 5 | 7 | 9 | 7 | 3 | 1 | • | • | 10 | 23 | 4 | 1 | 38 |
| Richmond | 54 | • | • | 2 | 3 | 6 | 8 | 10 | 7 | 3 | 1 | • | • | 11 | 25 | 4 | • | 40 |
| Roanoke | 5 | 0 | 0 | 1 | 3 | 8 | 9 | 9 | 8 | 4 | 0 | 0 | 0 | 12 | 26 | 4 | 0 | 42 |
| **WASHINGTON** | | | | | | | | | | | | | | | | | | |
| Ellensburg | 7 | 0 | 0 | • | • | 3 | 2 | 2 | 3 | 1 | • | • | 0 | 3 | 7 | 1 | 0 | 11 |
| North Head | 64 | • | • | • | • | • | • | • | • | 1 | 1 | 1 | • | • | • | 3 | • | 3 |
| Olympia | 10 | 0 | • | 0 | • | 1 | 1 | • | 1 | • | 0 | • | • | 1 | 2 | • | • | 3 |
| Port Angeles | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | • | 0 | 0 | 0 | 1 | 3 | • | 0 | 4 |
| Seattle | 58 | • | • | • | • | 1 | 1 | 1 | 1 | 1 | • | • | • | 1 | 3 | 1 | • | 5 |
| Spokane | 71 | • | 0 | • | 1 | 2 | 3 | 2 | 2 | 1 | • | • | 0 | 3 | 7 | 1 | • | 11 |
| Stampede Pass | 8 | 0 | 0 | • | • | 2 | 2 | 1 | 2 | 1 | • | • | 0 | 2 | 5 | 1 | 0 | 8 |
| Stevenson | 5 | • | • | 1 | • | 1 | 1 | 1 | 1 | 2 | 1 | 1 | • | 3 | 3 | 4 | • | 10 |
| Tacoma | 55 | • | • | • | 1 | 1 | 1 | 1 | 1 | 1 | • | • | • | 2 | 3 | 1 | • | 6 |
| Tatoosh Island | 66 | • | • | • | • | • | • | • | • | • | 1 | 1 | 1 | • | • | 2 | 1 | 3 |
| Walla Walla | 66 | • | • | • | 1 | 1 | 2 | 2 | 2 | 1 | • | 0 | 0 | 2 | 6 | 1 | • | 9 |
| Yakima | 43 | 0 | • | • | • | 1 | 1 | 1 | 1 | 1 | • | 0 | 0 | 1 | 3 | 1 | • | 5 |
| **WEST VIRGINIA** | | | | | | | | | | | | | | | | | | |
| Charleston | 4 | 1 | 2 | 2 | 4 | 9 | 9 | 9 | 5 | 4 | 1 | 1 | • | 15 | 23 | 6 | 3 | 47 |
| Elkins | 53 | • | 1 | 2 | 3 | 7 | 10 | 11 | 7 | 4 | 1 | • | • | 12 | 28 | 5 | 1 | 46 |
| Parkersburg | 63 | • | 1 | 2 | 3 | 7 | 9 | 9 | 7 | 4 | 1 | • | • | 12 | 25 | 5 | 1 | 43 |
| Petersburg | 7 | 1 | 0 | 1 | 3 | 7 | 9 | 8 | 7 | 4 | • | 1 | 0 | 11 | 24 | 5 | 1 | 41 |
| **WISCONSIN** | | | | | | | | | | | | | | | | | | |
| Green Bay | 65 | • | • | 1 | 2 | 4 | 6 | 7 | 5 | 4 | 2 | 1 | • | 7 | 18 | 7 | • | 32 |
| La Crosse | 78 | • | • | 1 | 3 | 5 | 7 | 7 | 6 | 4 | 2 | 1 | • | 9 | 20 | 7 | • | 36 |
| Madison | 47 | • | • | 1 | 3 | 6 | 8 | 8 | 7 | 5 | 2 | 1 | • | 10 | 23 | 8 | • | 41 |
| Milwaukee | 77 | • | • | 1 | 3 | 5 | 6 | 6 | 5 | 4 | 2 | 1 | • | 9 | 17 | 7 | • | 33 |
| **WYOMING** | | | | | | | | | | | | | | | | | | |
| Casper | 12 | 0 | 0 | • | 2 | 6 | 8 | 11 | 7 | 4 | 1 | 0 | 0 | 8 | 26 | 5 | 0 | 39 |
| Cheyenne | 70 | 0 | 0 | • | 2 | 6 | 10 | 13 | 10 | 4 | 1 | • | 0 | 8 | 33 | 5 | • | 46 |
| Lander | 60 | 0 | 0 | 0 | 1 | 3 | 5 | 6 | 5 | 2 | • | • | 0 | 4 | 16 | 2 | 0 | 22 |
| Rock Springs | 19 | • | • | • | 3 | 5 | 7 | 11 | 8 | 4 | 2 | • | 0 | 8 | 26 | 6 | • | 40 |
| Sheridan | 44 | 0 | 0 | 0 | 1 | 5 | 10 | 10 | 7 | 2 | • | 0 | 0 | 6 | 27 | 2 | 0 | 35 |

See footnotes at end of table.

# THUNDERSTORMS

(Mean number of days)

| State and Station | Years of record | Jan. | Feb. | March | April | May | June | July | August | Sept. | Oct. | Nov. | Dec. | Spring March–May | Summer June–August | Autumn Sept.–Nov. | Winter Dec.–Feb. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALASKA | | | | | | | | | | | | | | | | | | |
| Annette | 4 | • | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | • | 1 |
| Anchorage | 9 | 0 | 0 | 0 | 0 | 0 | 1 | • | • | • | 0 | 0 | 0 | 0 | 1 | • | 0 | 1 |
| Barrow | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bethel | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Cordova | 6 | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | • |
| Fairbanks | 22 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 10 |
| Galena | 4 | 0 | 0 | 0 | 0 | • | 2 | 2 | 0 | 0 | 0 | 0 | 0 | • | 4 | 0 | 0 | 4 |
| Gambell | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Juneau | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kotzebue | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| McGrath | 9 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | • | 0 | 0 | 0 | 0 | 6 | • | 0 | 6 |
| Nome | 45 | 0 | 0 | 0 | 0 | 0 | • | • | • | • | • | 0 | 0 | 0 | • | • | 0 | • |
| Northway | 9 | 0 | 0 | 0 | 0 | 1 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 11 |
| St. Paul Island | 17 | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | 0 | 0 | 0 | 0 | 0 | • | 0 | 0 | • |
| Umiat | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Yakutat | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | • | 0 | • | 0 | 0 | • | • | 1 |
| PACIFIC AREA | | | | | | | | | | | | | | | | | | |
| Canton Island | 5 | 0 | 0 | 0 | 1 | 1 | 1 | • | • | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| Hilo, T. H. | 6 | • | 1 | 1 | 1 | • | 0 | • | 0 | 0 | 1 | 1 | • | 2 | • | 2 | 2 | 6 |
| Honolulu, T. H. | 47 | 1 | 1 | 1 | • | • | • | • | • | • | 1 | 1 | 1 | 1 | • | 2 | 3 | 6 |
| Lihue | 2 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 4 | 0 | 3 | 2 | 9 |
| Wake Island | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 2 | 1 | 0 | 3 | 5 | 1 | 9 |
| PUERTO RICO | | | | | | | | | | | | | | | | | | |
| San Juan | 53 | • | • | • | 2 | 5 | 6 | 7 | 7 | 10 | 8 | 3 | 1 | 7 | 20 | 21 | 2 | 50 |
| St. Croix, Virgin Is. | 4 | 0 | 1 | 1 | 1 | 4 | 6 | 4 | 5 | 9 | 8 | 4 | 2 | 6 | 15 | 21 | 3 | 45 |

Note: Years of record through 1951.
• Less than one-half day.

U.S. Department of Commerce

Weather Bureau

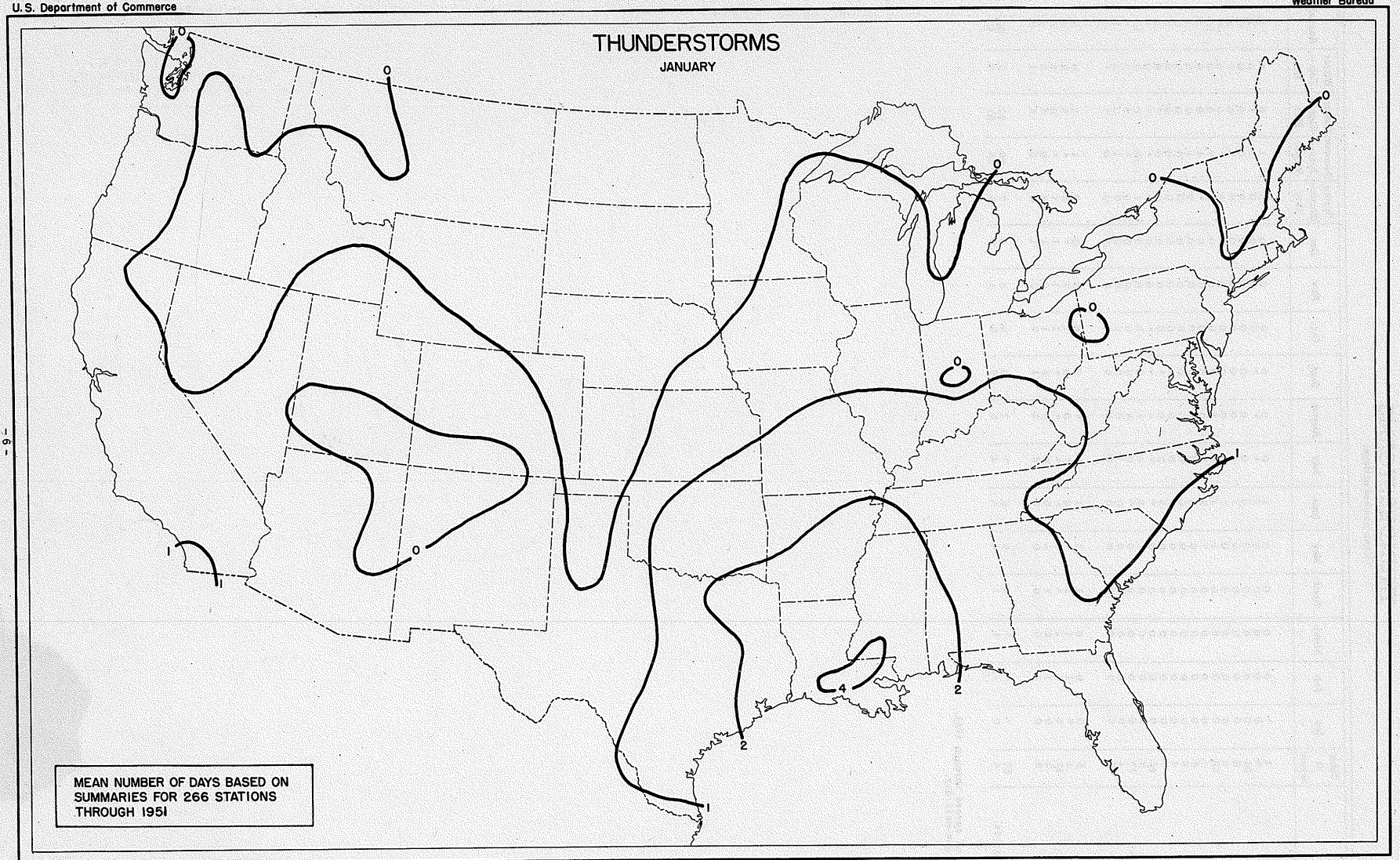


FIGURE 1

U.S. Department of Commerce

Weather Bureau

253239 O - 52 - 2

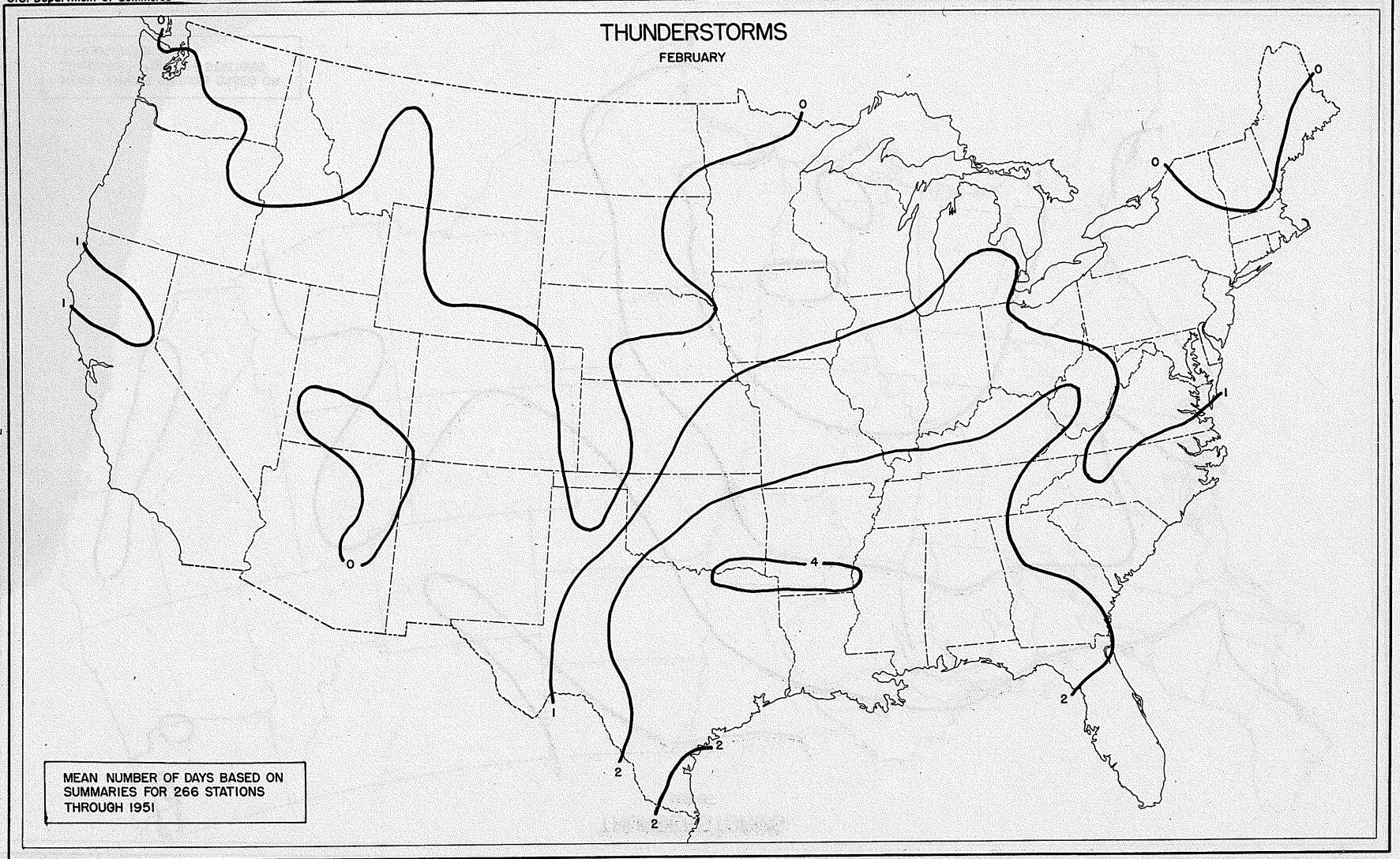


FIGURE 2

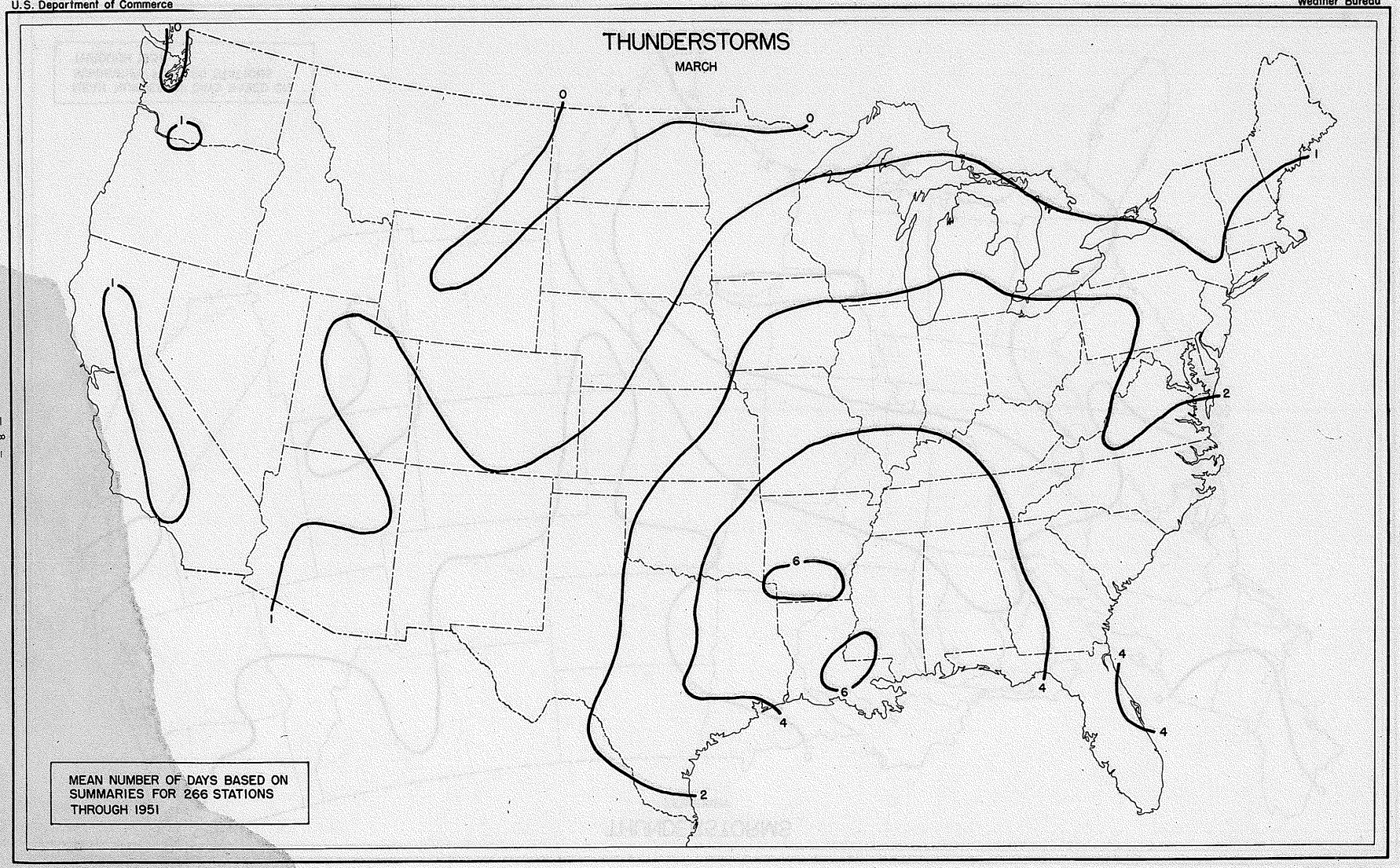
THUNDERSTORMS
MARCH
0
0
0
1
1
1
2
2
4
4
4
4
6
6
MEAN NUMBER OF DAYS BASED ON
SUMMARIES FOR 266 STATIONS
THROUGH 1951

FIGURE 3

U.S. Department of Commerce

Weather Bureau

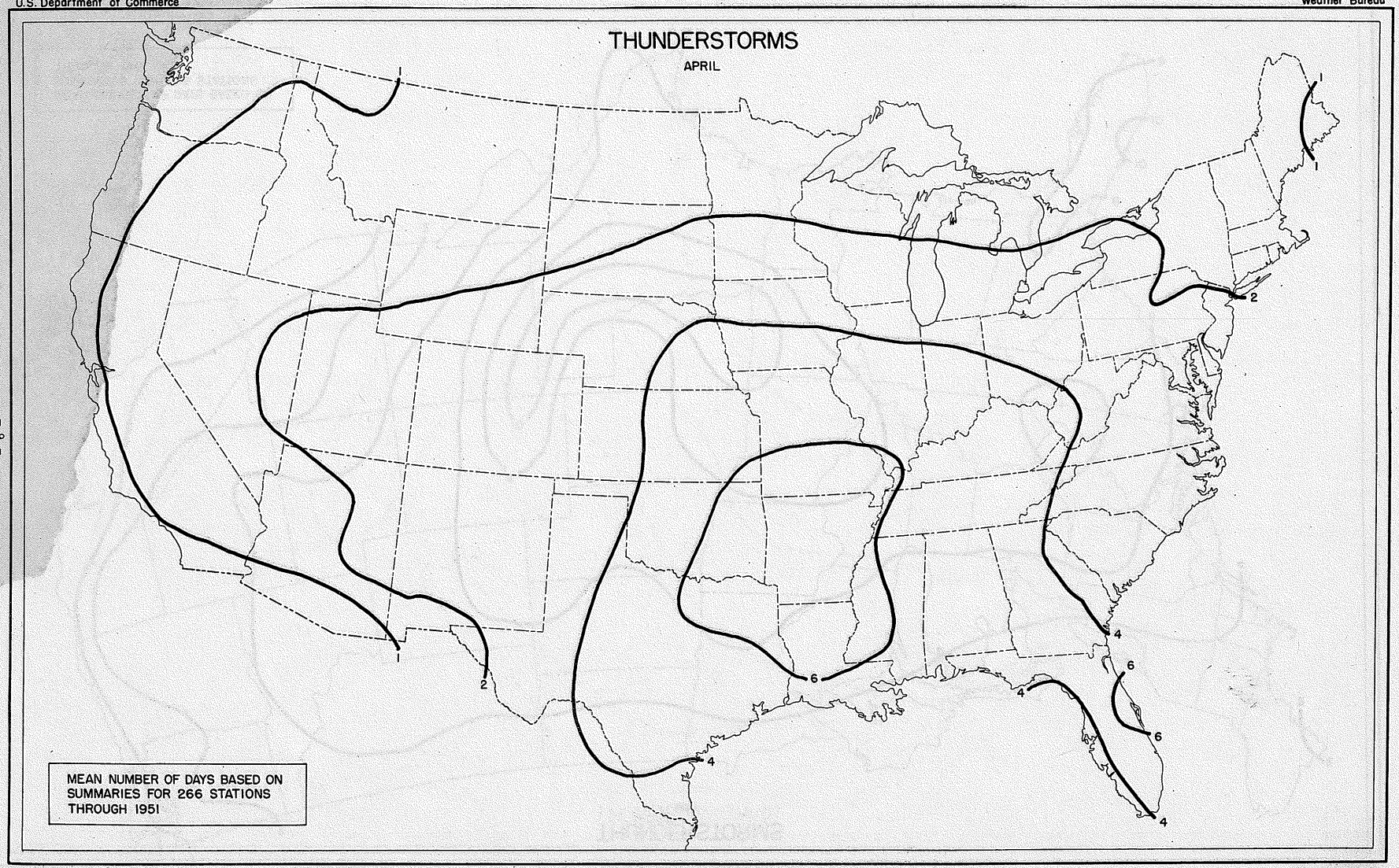


FIGURE 4

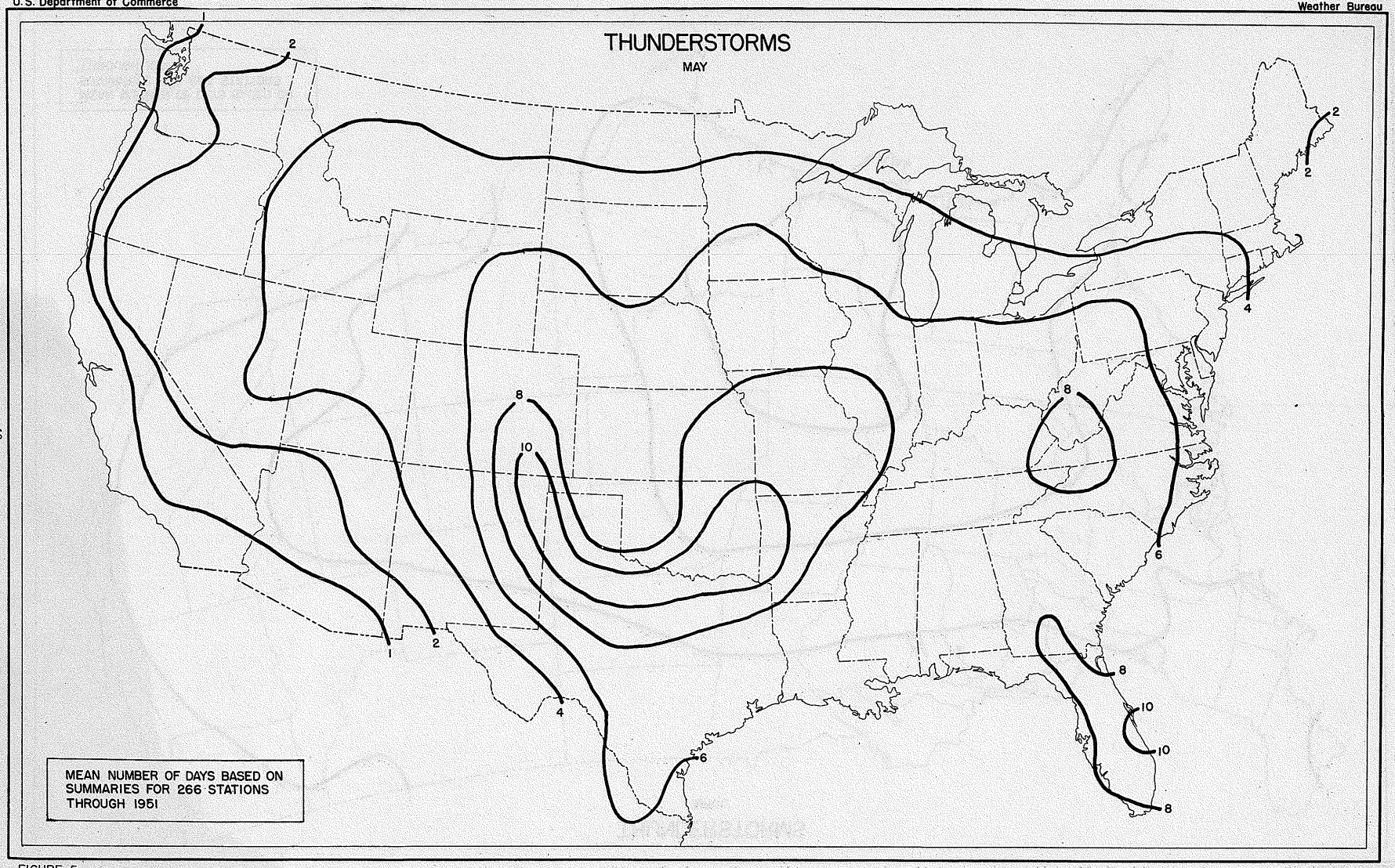
THUNDERSTORMS
MAY
2
2
2
4
8
8
10
6
8
10
10
8
1
2
4
6
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 5

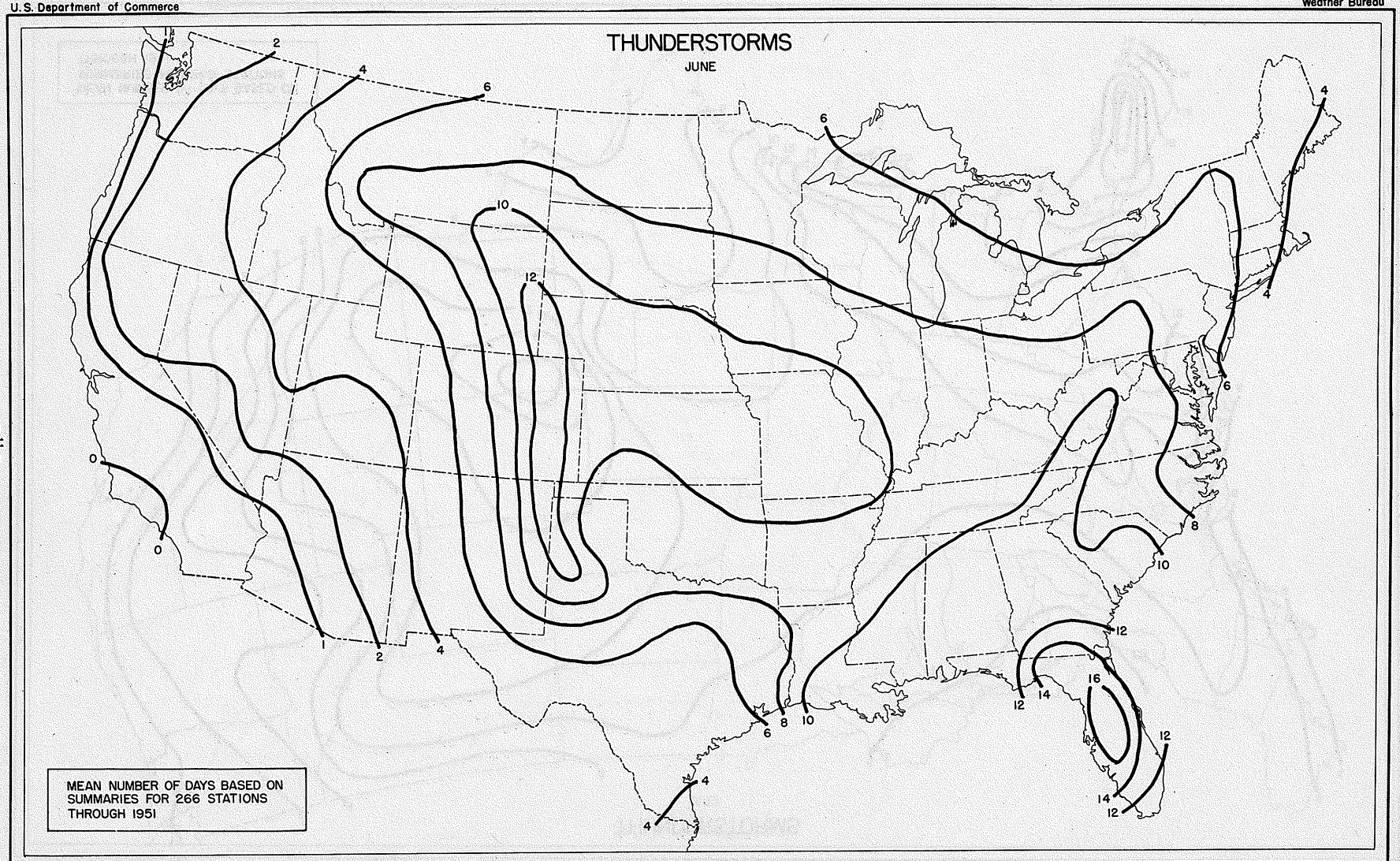
THUNDERSTORMS
JUNE
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 6

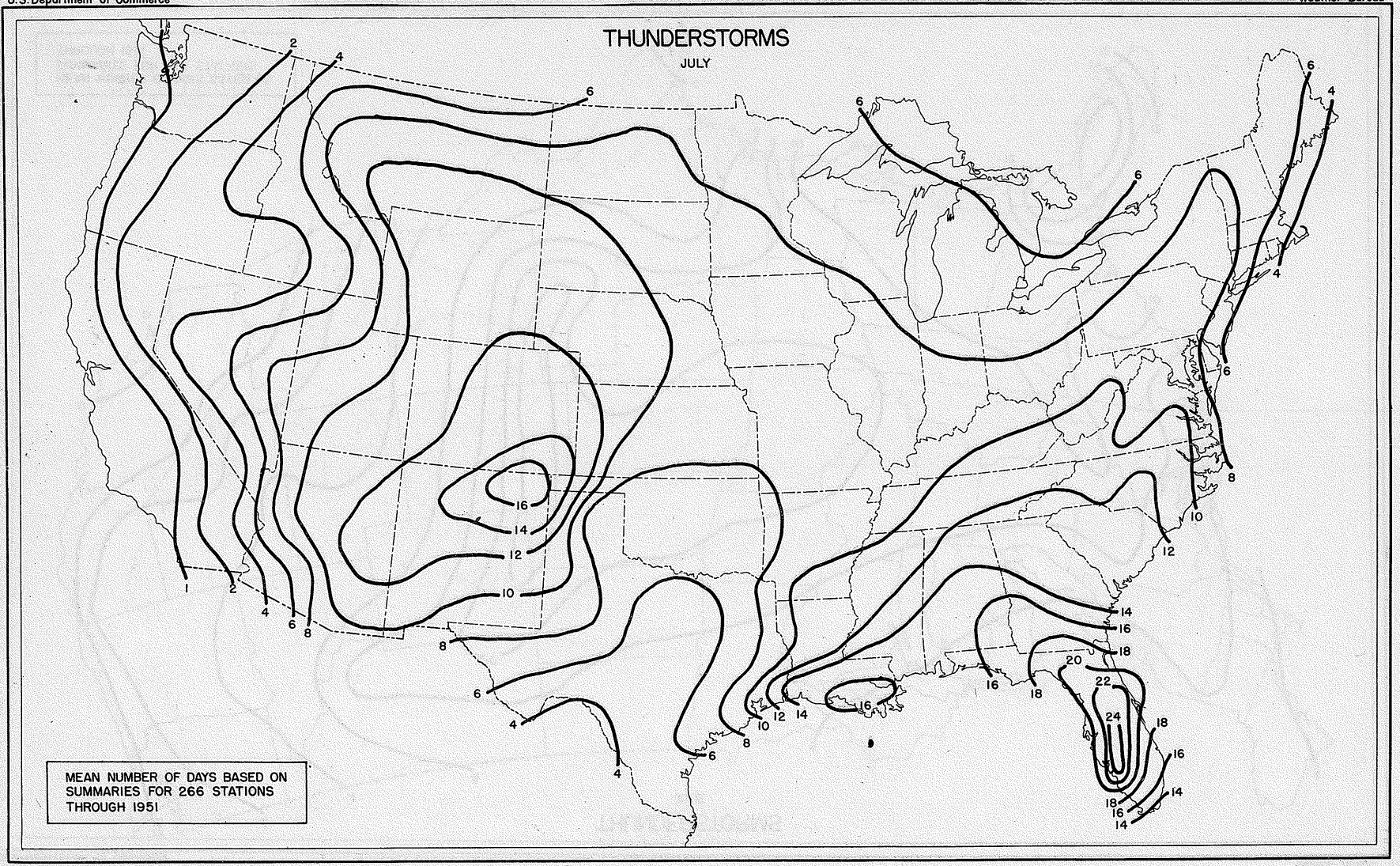
THUNDERSTORMS
JULY
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 7

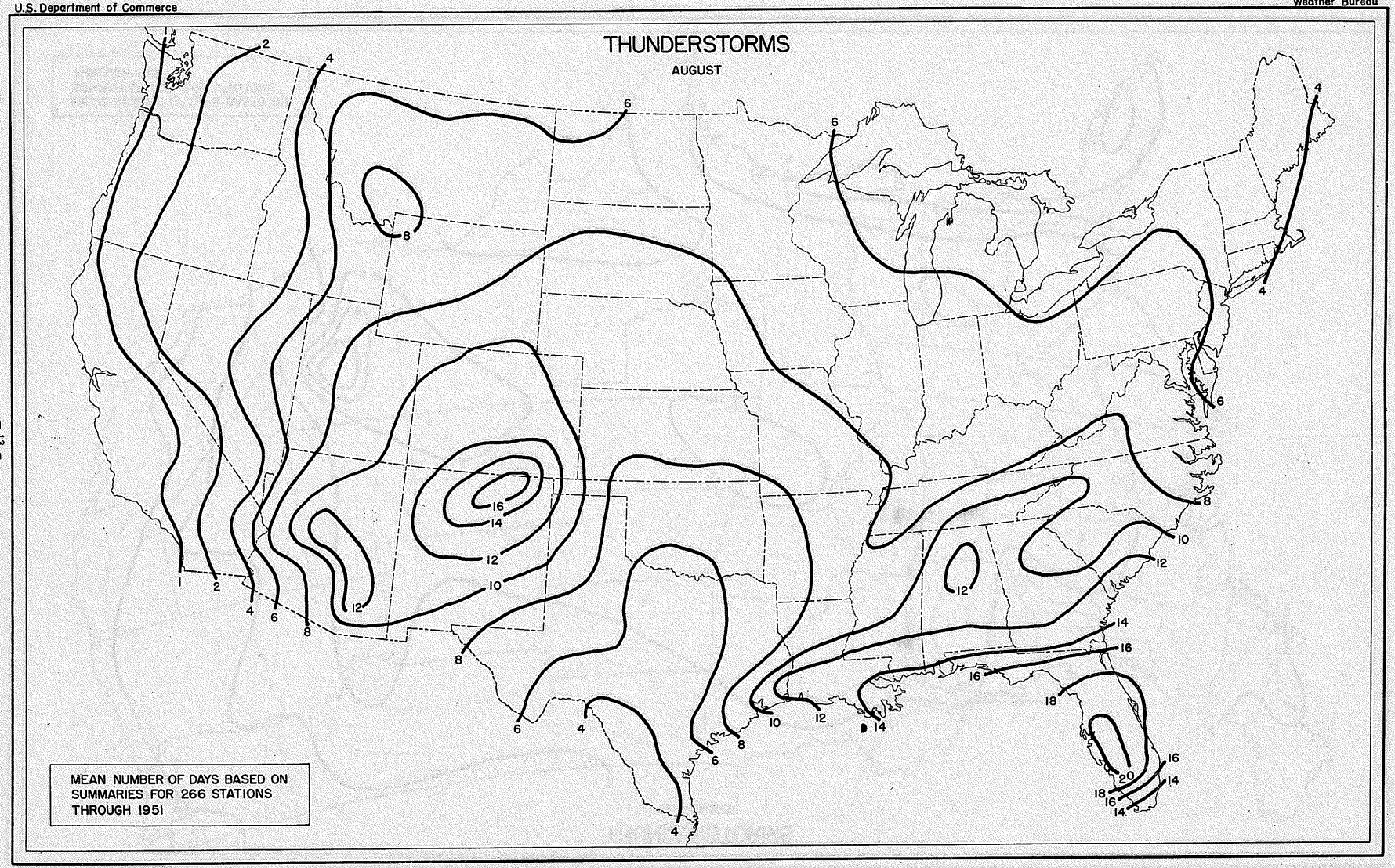
THUNDERSTORMS
AUGUST
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 8

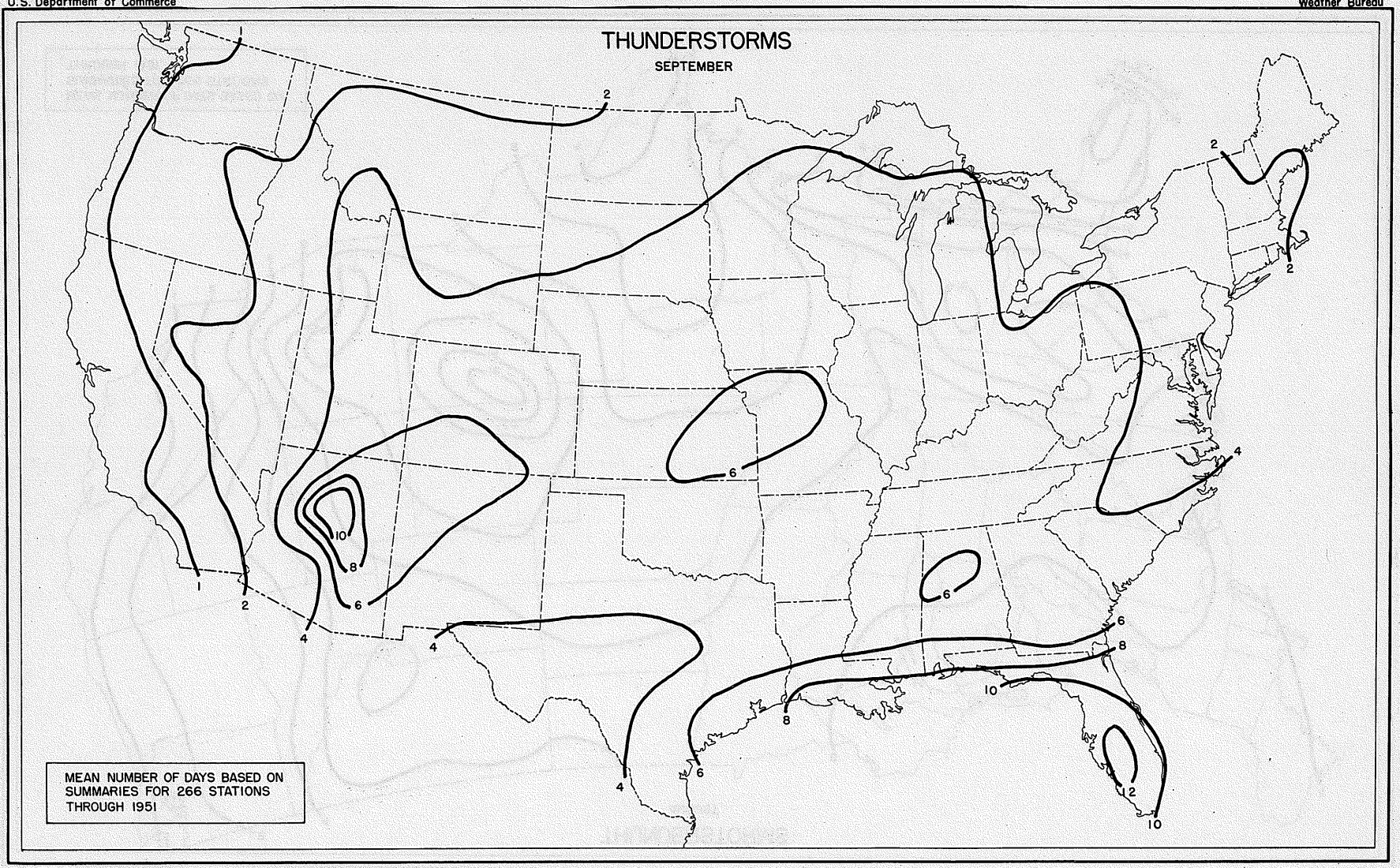
THUNDERSTORMS
SEPTEMBER
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 9

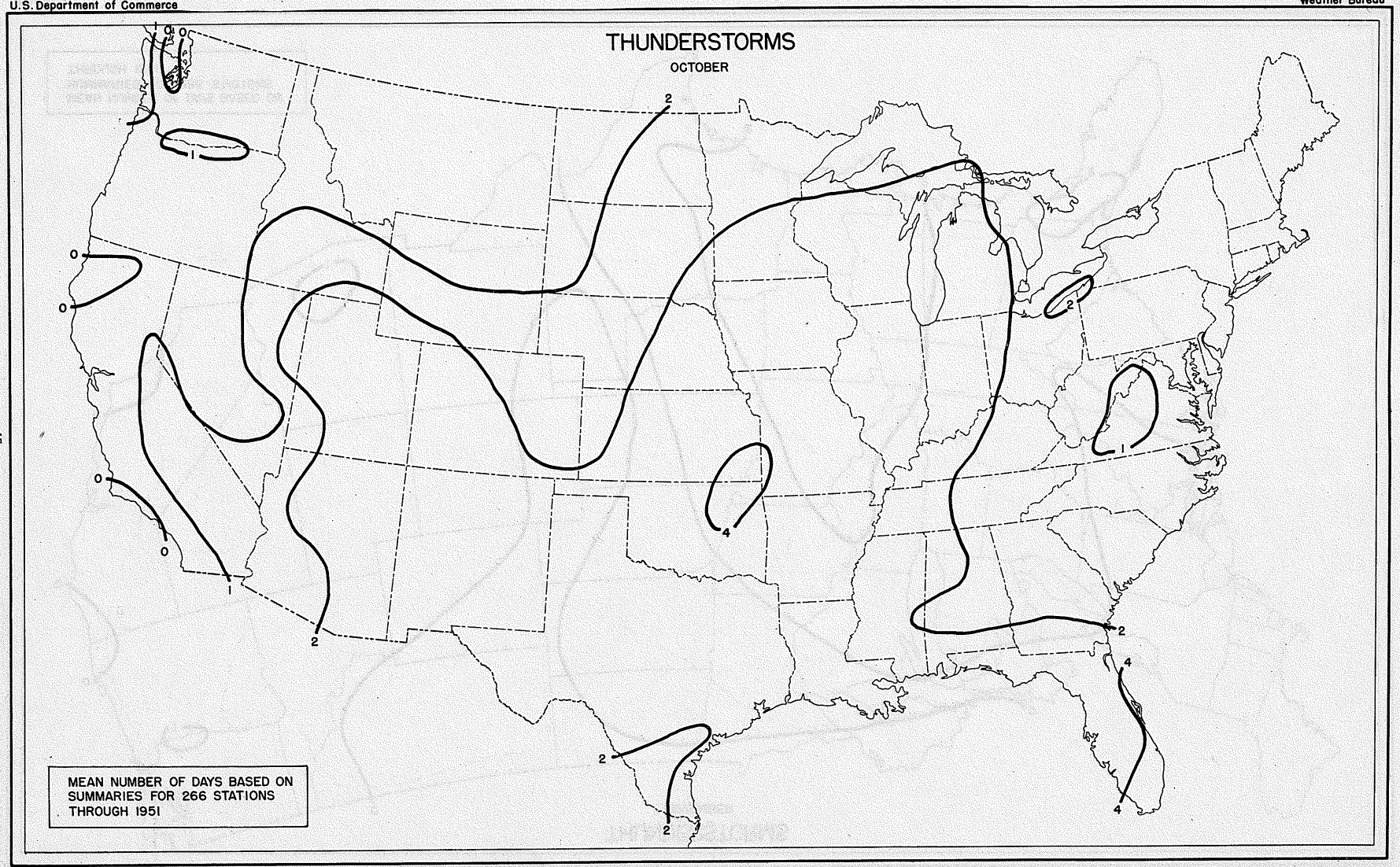
THUNDERSTORMS
OCTOBER
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 10

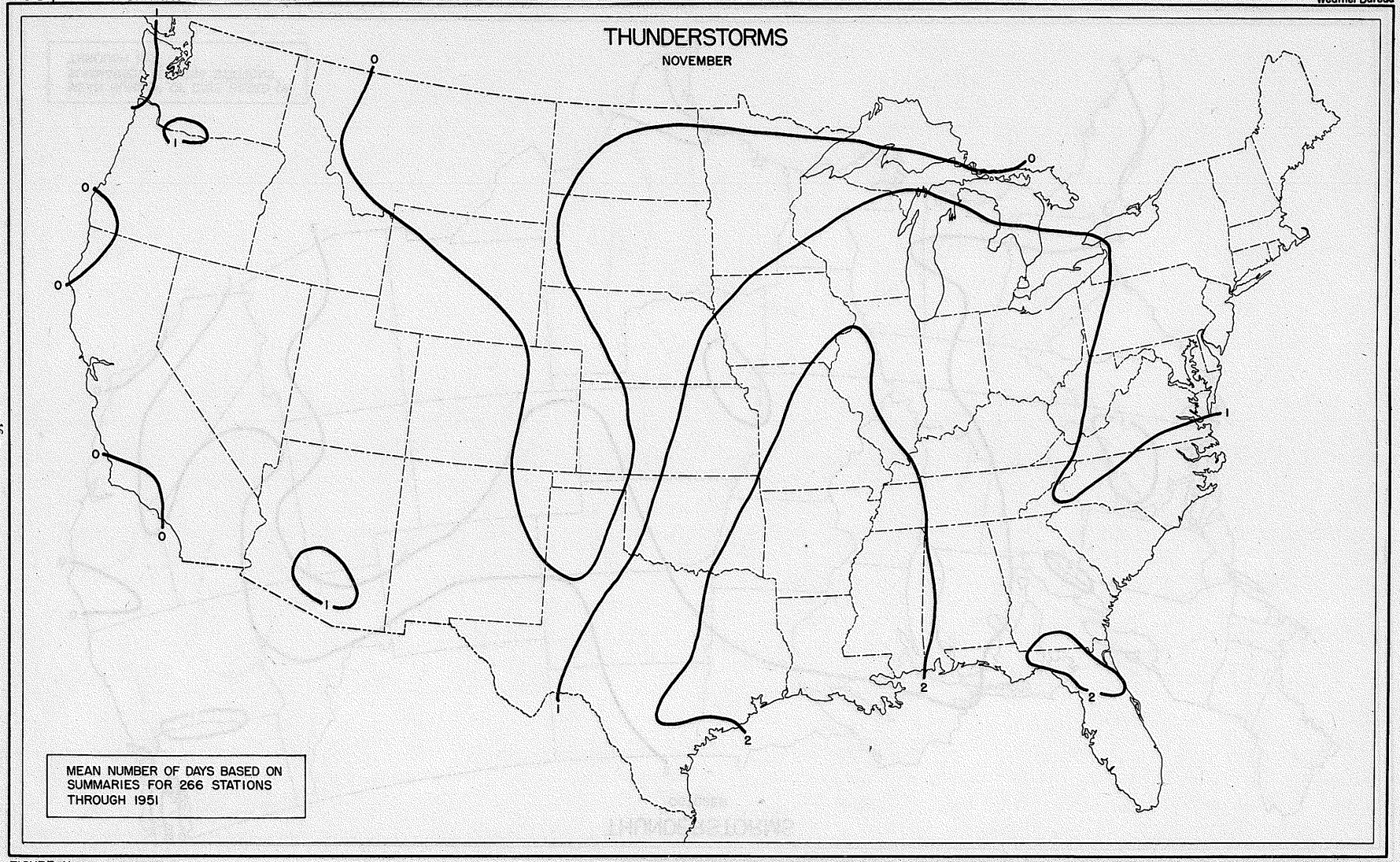
THUNDERSTORMS
NOVEMBER
0
0
0
0
0
1
1
0
1
2
2
2
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 11

U.S. Department of Commerce

Weather Bureau

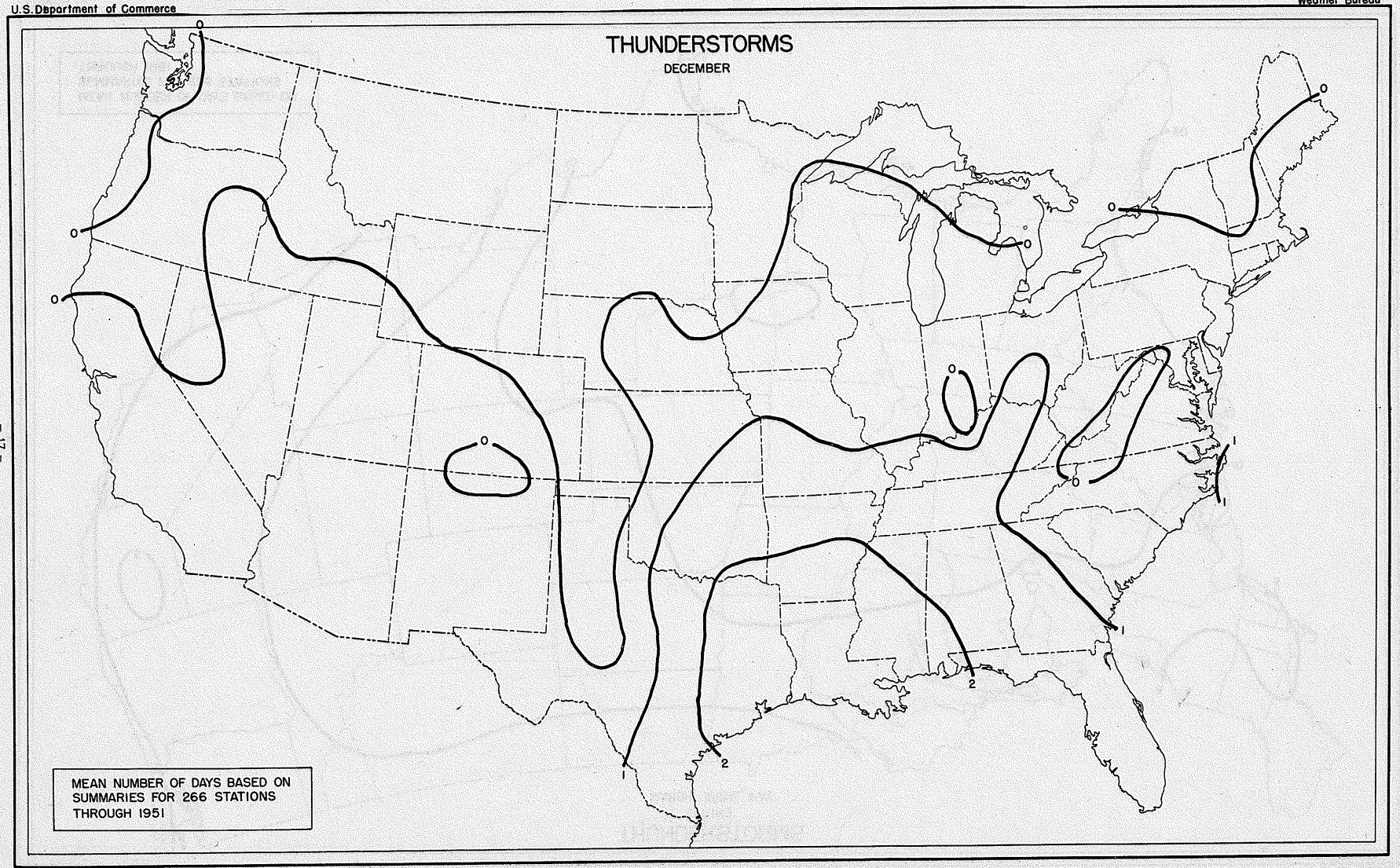


FIGURE 12

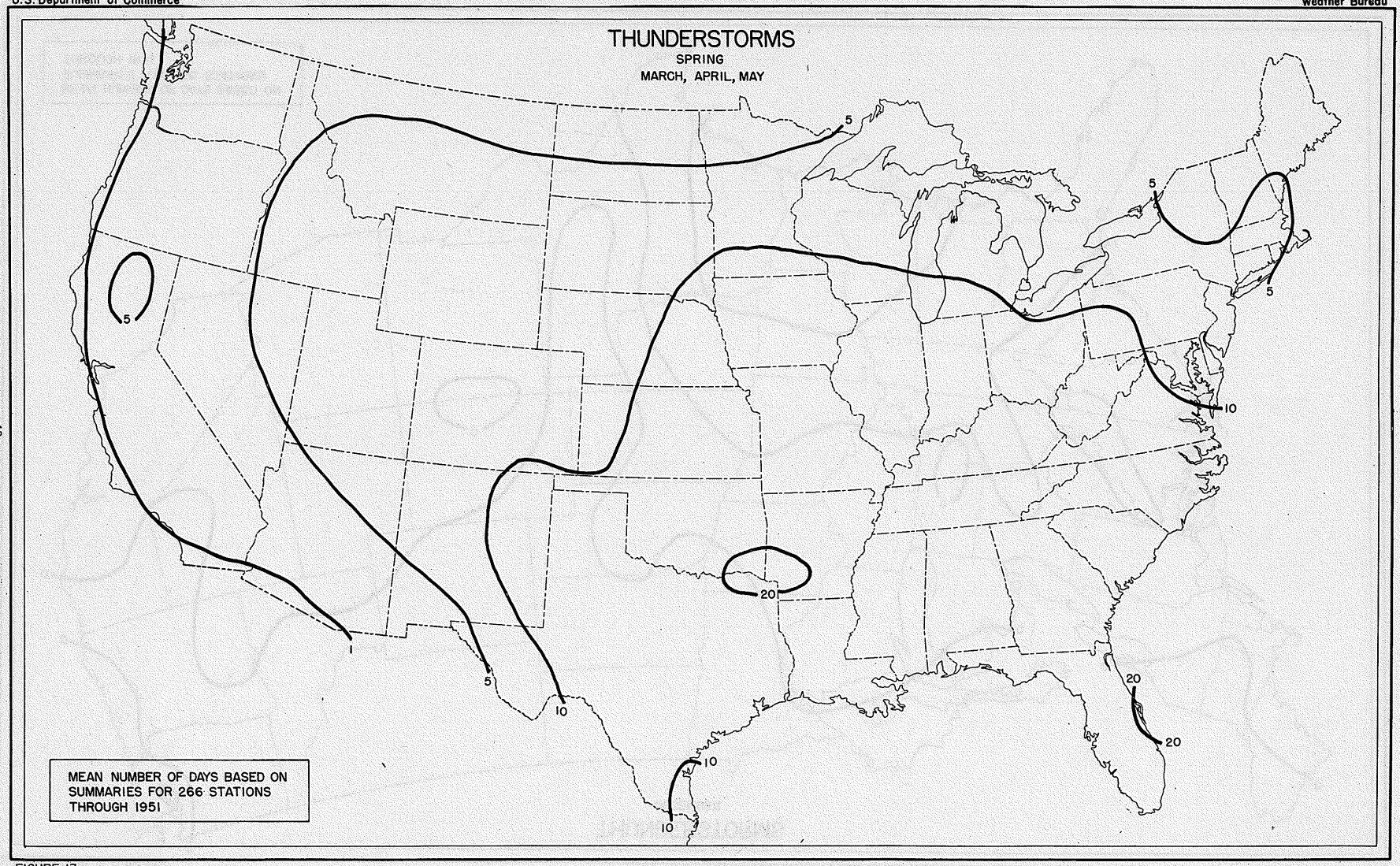
THUNDERSTORMS
SPRING
MARCH, APRIL, MAY
5
5
5
5
10
20
5
10
10
20
20
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 13

U.S. Department of Commerce

Weather Bureau

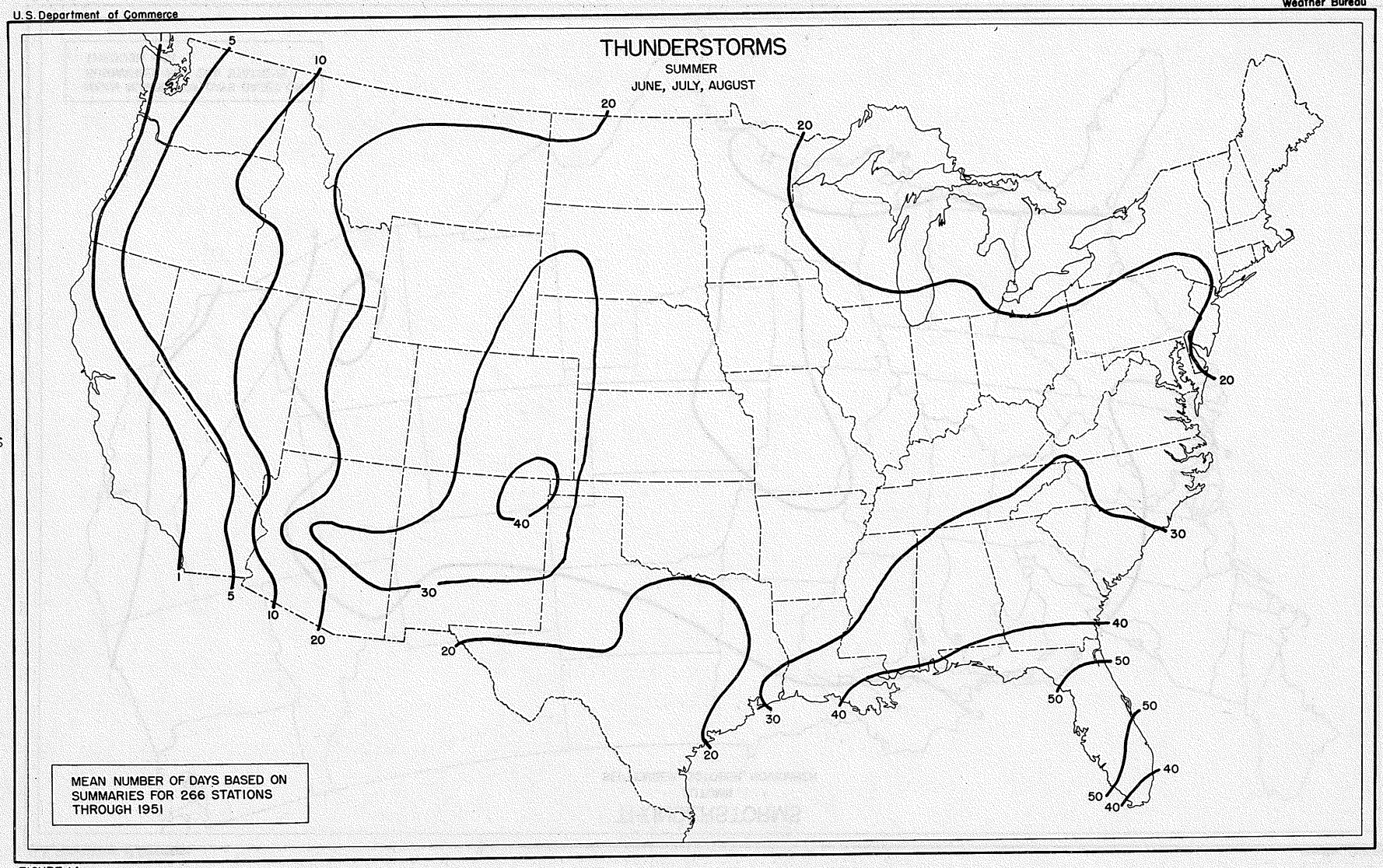


FIGURE 14

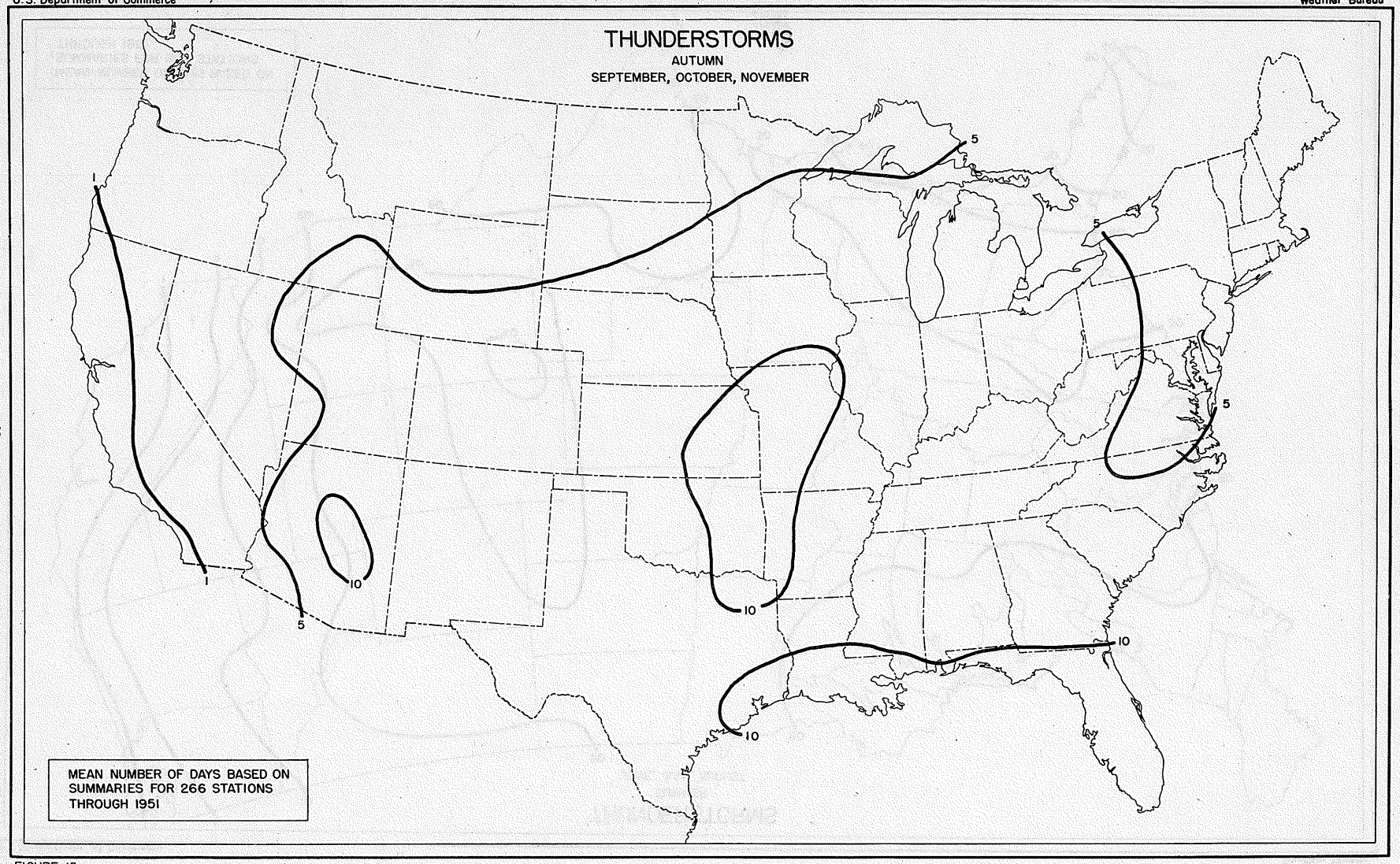
THUNDERSTORMS
AUTUMN
SEPTEMBER, OCTOBER, NOVEMBER
1
1
5
10
5
10
5
5
10
10
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 15

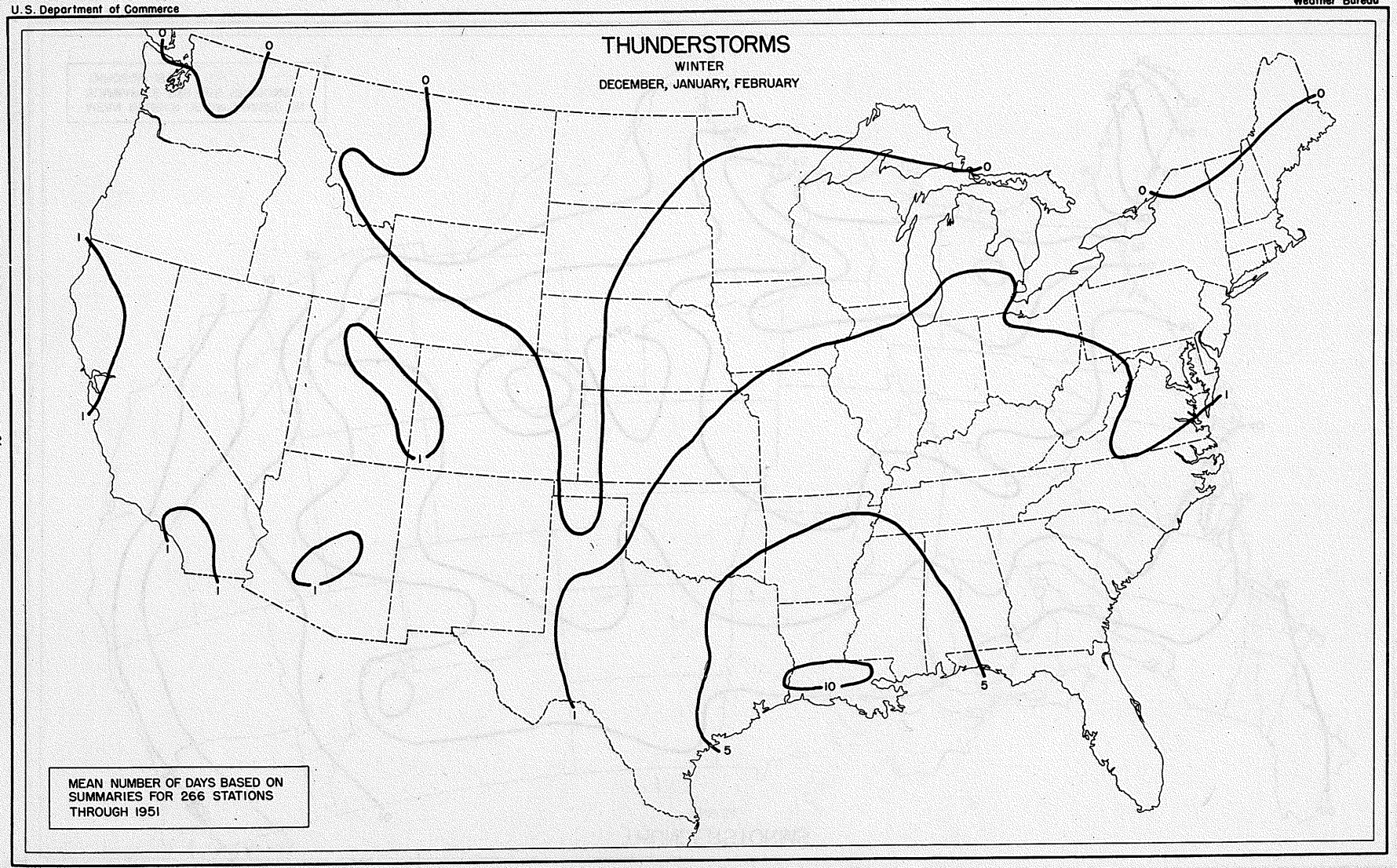
THUNDERSTORMS
WINTER
DECEMBER, JANUARY, FEBRUARY
0
0
0
0
0
0
1
1
1
1
1
1
10
5
5
MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 16

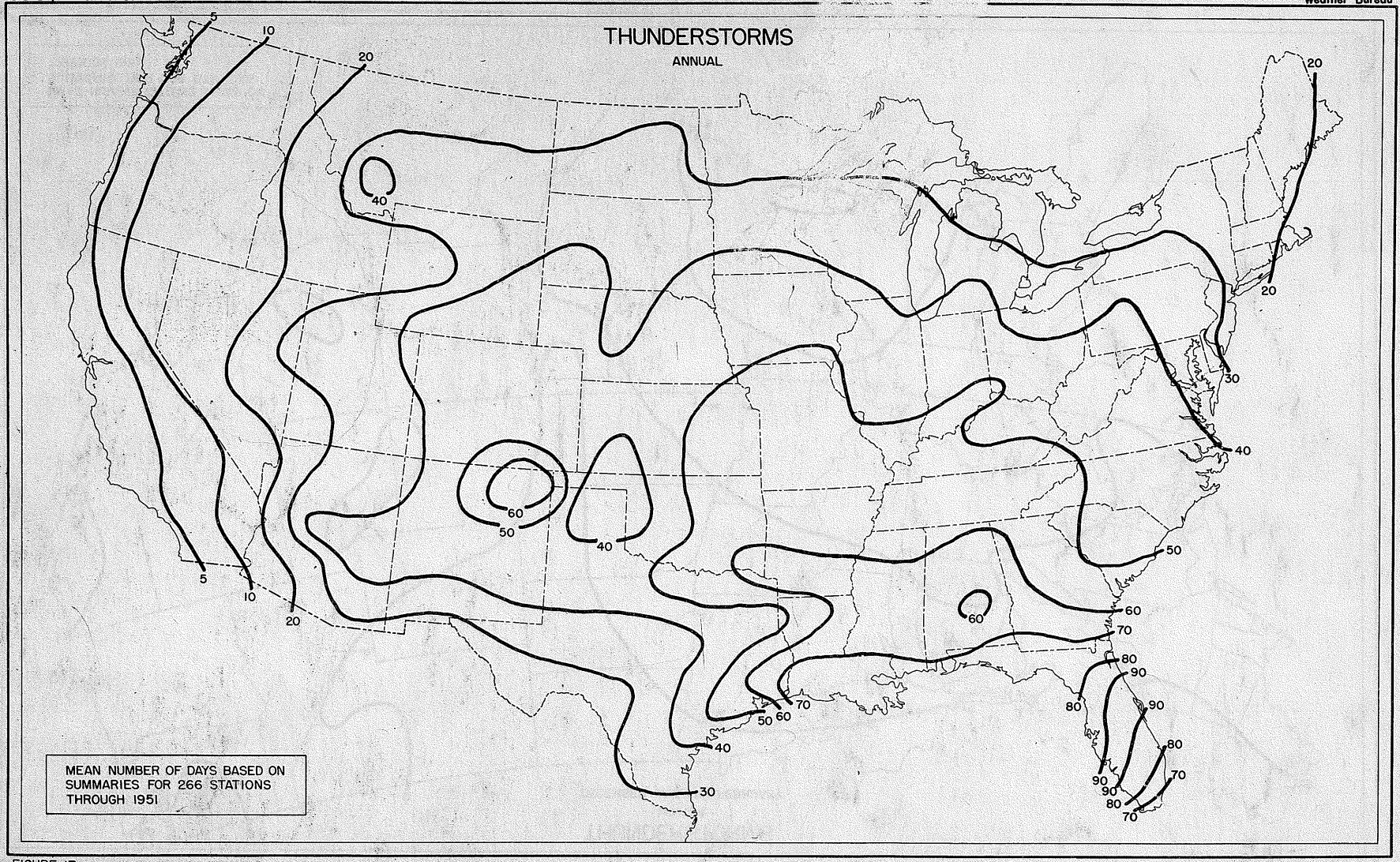


FIGURE 17



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