



2020

GEORGIA LIGHTNING REPORT



ABOUT THIS REPORT

The 2020 Lightning Report was prepared by Earth Networks using the Earth Networks Total Lightning Network (ENTLN). The following report includes in-cloud, cloud-to-ground, and total lightning data for this state and the surrounding water bodies (if any) throughout 2020. Counts, densities, rankings, Dangerous Thunderstorm Alerts (DTAs), and Thunder Days in this report are from January 1, 2020 to December 31, 2020.

THE EARTH NETWORKS TOTAL LIGHTNING NETWORK (ENTLN)

The lightning data in this report is derived from the Earth Networks Total Lightning Network (ENTLN), which monitors the combination of in-cloud and cloud-to-ground lightning strikes over 100 countries. With over 1,800 sensors, the ENTLN is the most extensive and technologically advanced total lightning network in the world. ENTLN has been specifically deployed to detect real-time lightning and provide advanced warning for severe weather events that could threaten public safety and operational efficiency.

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REPORT TERMINOLOGY

To help you better understand the insights from this lightning report, we've included definitions of our frequently used report terminology below.

Lightning Pulse: This report measures lightning pulses. A pulse is a surge of electric current in lightning usually accompanied by a burst of light. Pulses are classified as In-cloud (IC) or Cloud-to-Ground (CG).

Lightning Flash: A lightning flash is a collection of pulses close in space and time that approximates the continuous ionized channels of a complete bolt of lightning.

Cloud-to-Ground Lightning (CG): Lightning that happens between opposite charges in a cloud and on the ground.

In-Cloud Lightning (IC): Lightning that occurs between opposite charges within a thunderstorm cloud.

Total Lightning Detection: The combination of all in-cloud and cloud-to-ground lightning activity.

Pulse Density: The number of lightning pulses per square mile per year.

Dangerous Thunderstorm Alerts (DTAs): Earth Networks patented advanced severe weather warnings that notify users of incoming storms up to 45 minutes before storm arrival.

Thunder Days: Any given day where lightning was detected in a certain area.

TOTAL LIGHTNING

is the combination of cloud-to-ground (CG) and in-cloud (IC) lightning strikes



Cloud-to-Ground lightning:

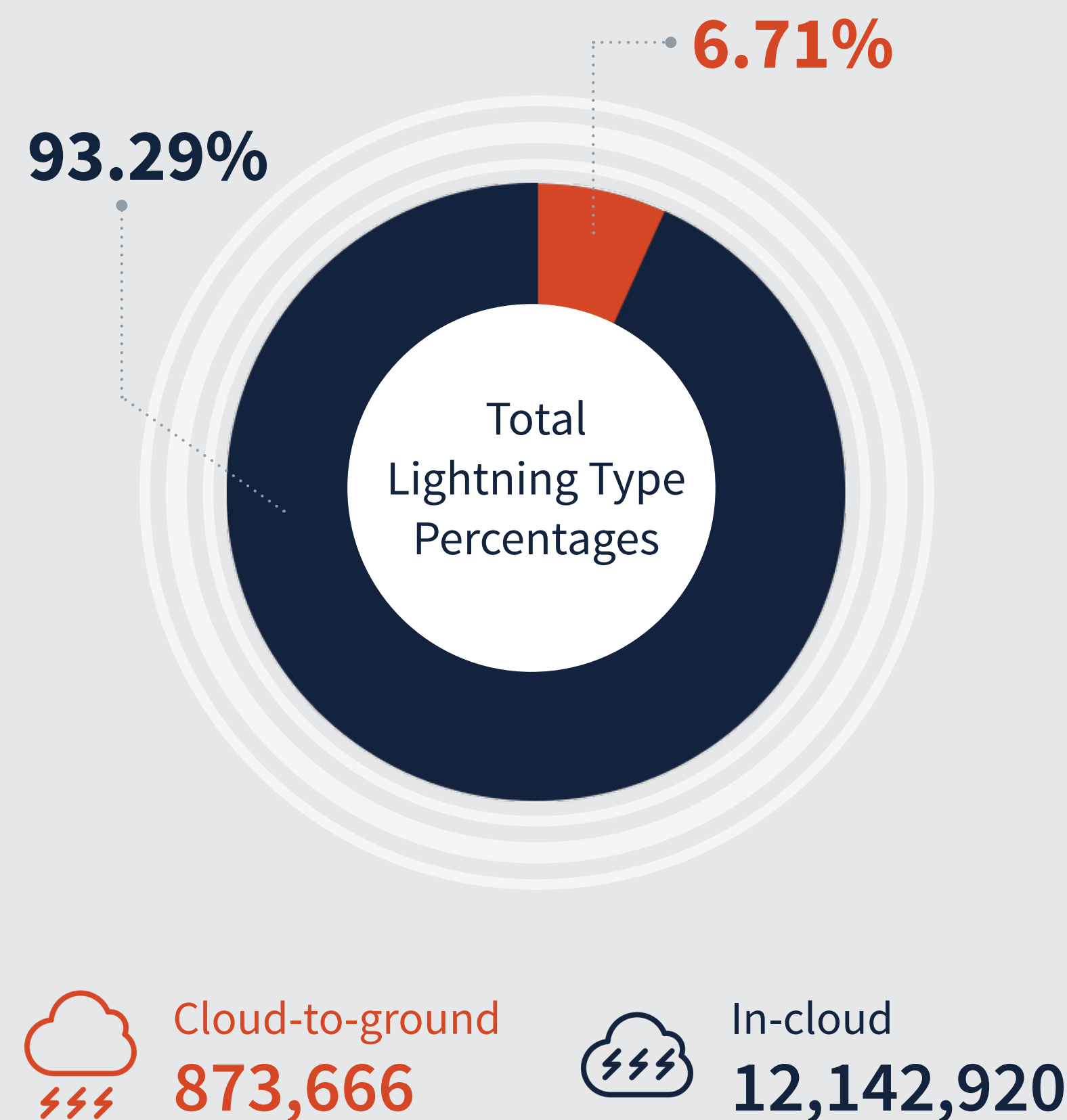
Lightning that happens between opposite charges in a cloud and on the ground

In-Cloud lightning:

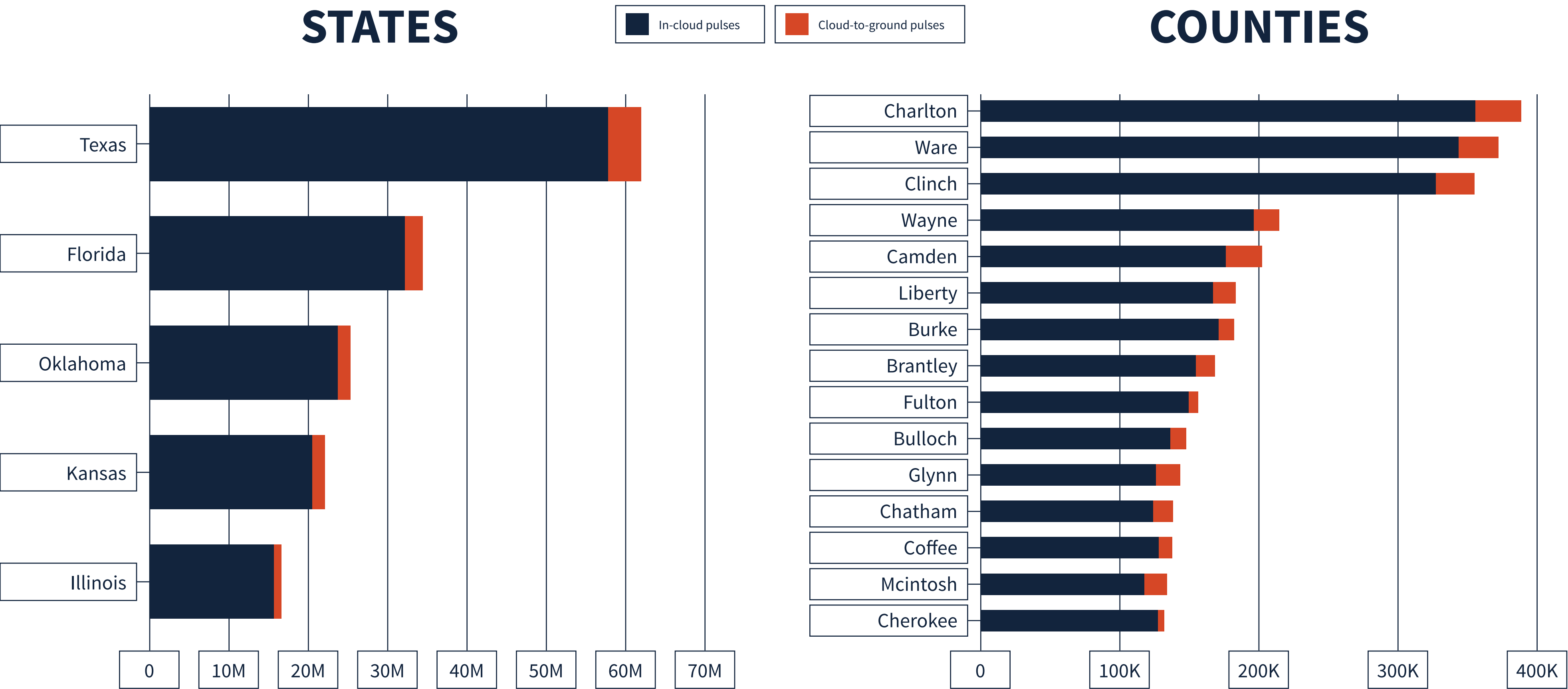
Lightning that occurs between opposite charges within a thunderstorm cloud

GEORGIA TOTAL LIGHTNING PULSES

13,016,803

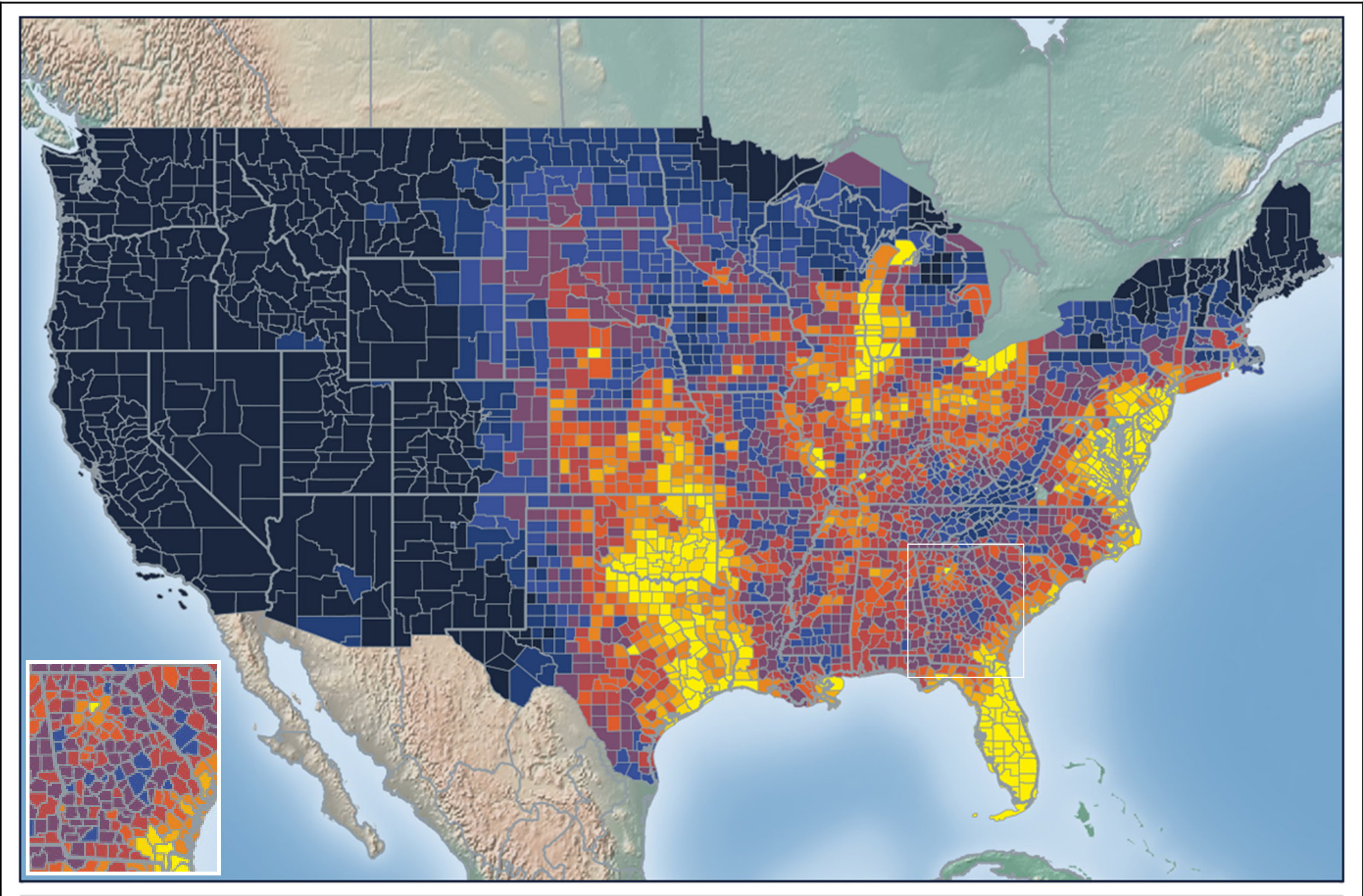


LIGHTNING COUNT RANKINGS

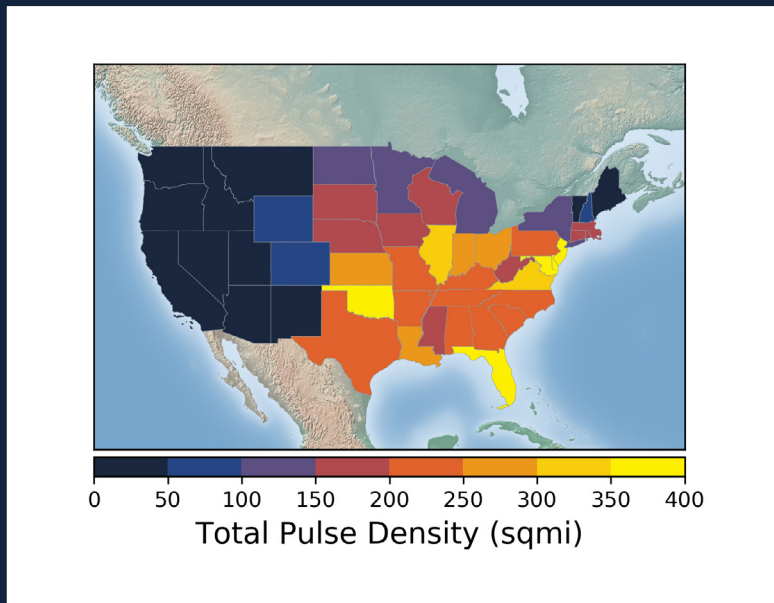


Georgia ranked 9 in total lightning pulses for 2020.

TOTAL (CG+IC) PULSE DENSITY MAP



Total Pulse Density (lightning pulses per square mile per year)

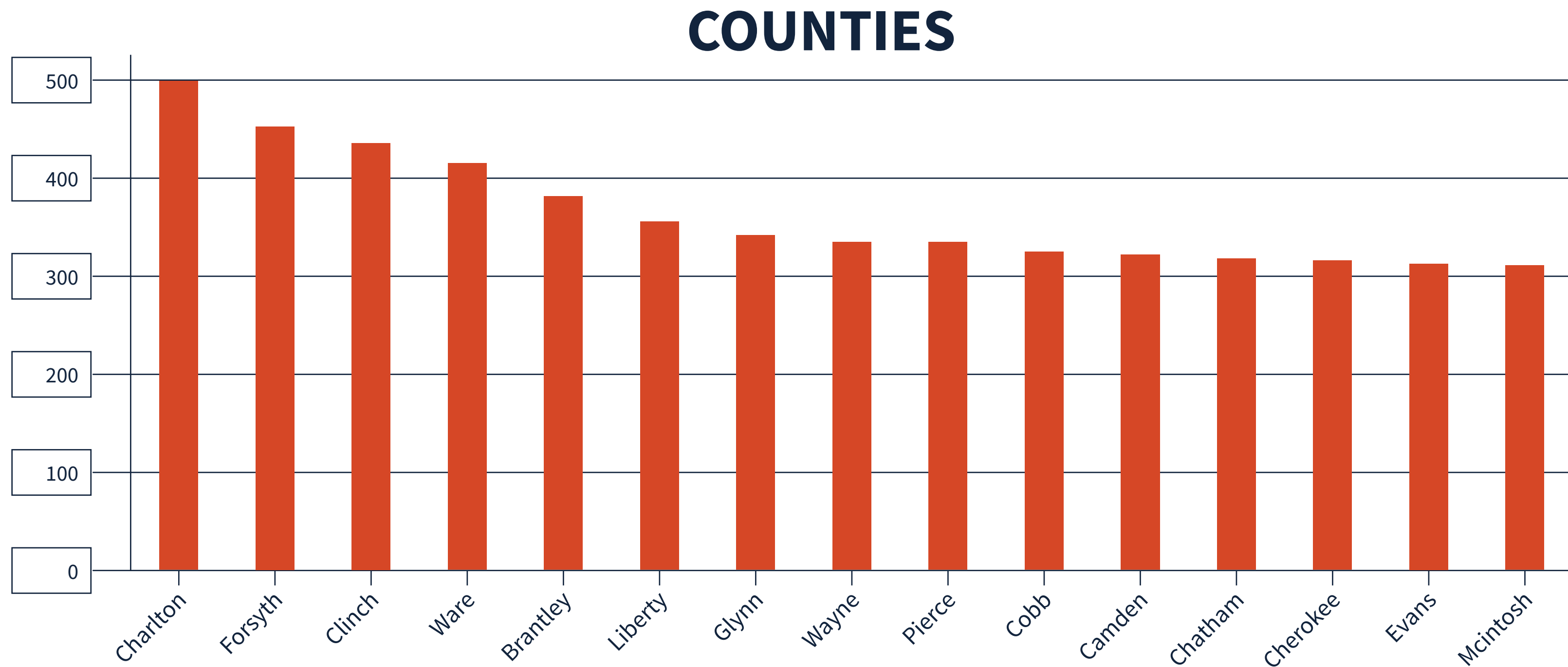


Pulse density is a better indicator of lightning activity than total lightning counts because it enables us to compare different sized areas (like states and counties) fairly.

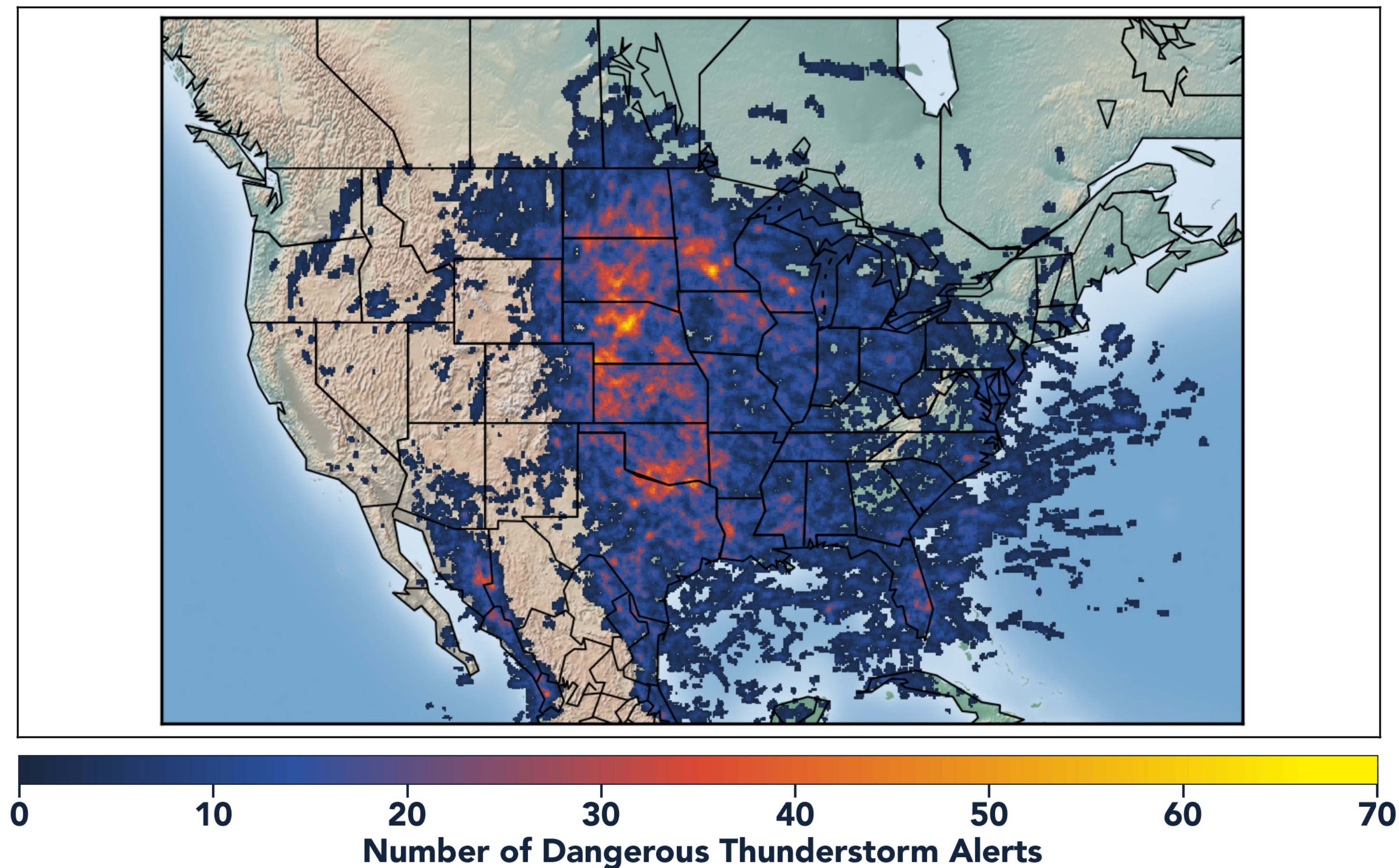
We cluster pulses together into a flash. With every pulse we detect, we receive a more precise measure of lightning activity. At left, areas in bright yellow experienced the highest lightning pulse density per square mile in 2020.

TOTAL PULSE DENSITY RANKINGS

This chart shows the top 15 counties in the state ranked by total pulse density, which is the total lightning divided by the area of the county (in square miles).



DANGEROUS THUNDERSTORM ALERTS IN THE U.S.



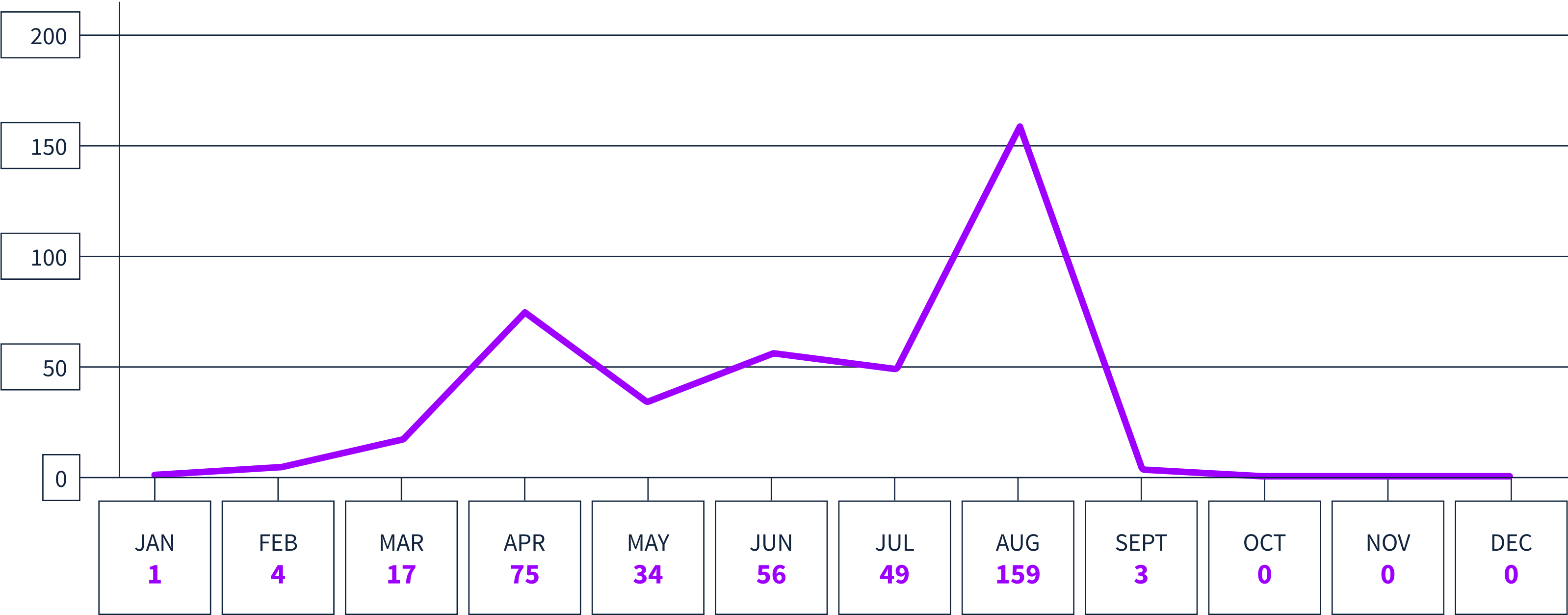
Earth Networks issued 29,401 Dangerous Thunderstorm Alerts (DTAs) in 2020. This year's map clearly shows the persistent drought conditions that have plagued the South and Southwest.

Dangerous Thunderstorm Alerts (DTAs), available exclusively to Earth Networks, provide **50% more lead time** to severe storms compared to publicly available alerts.

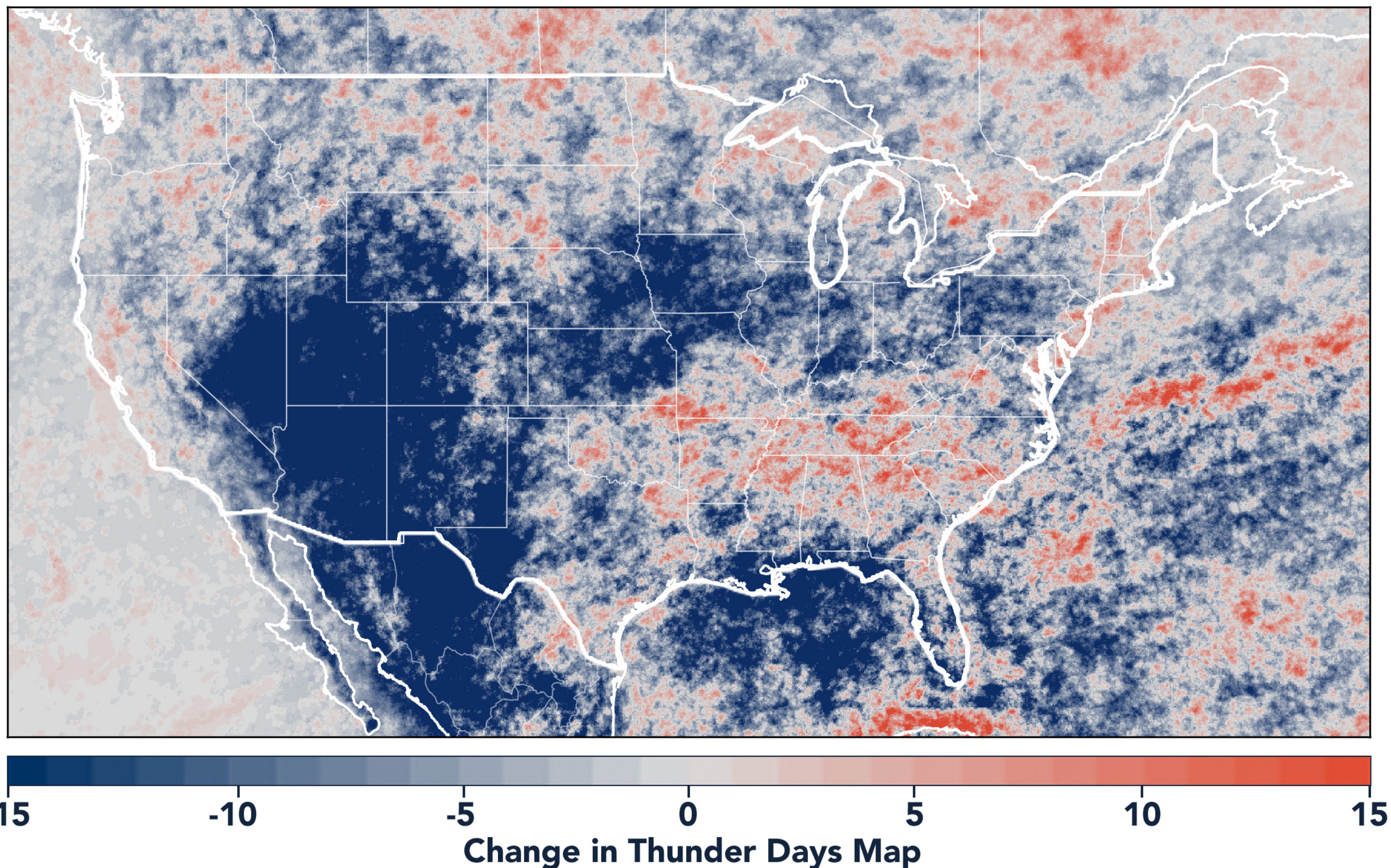
DANGEROUS THUNDERSTORM ALERTS BY MONTH

Earth Networks issued 398 Dangerous Thunderstorm Alerts for the state in 2020.

GEORGIA



TOTAL STATE THUNDER DAYS: 217



Thunder Days are the days we detected lightning over a certain area. The map shows a deviation from our 7-year average and illustrates our overall finding that lightning decreased about 15% from 2019.

This year, the Southwest and Midwest experienced significantly less lightning than in previous years due to a persistent drought and weak monsoon. States in the Southeast experienced a substantial uptick in lightning activity this year, including Tennessee, North Carolina, South Carolina, Virginia, West Virginia, Georgia, Alabama, Mississippi, Florida, Louisiana, Arkansas, and Kentucky.



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THANK YOU

For additional insights or permission to use data or graphics from this report, please contact us at: info@earthnetworks.com or call 1 301.250.4000



APPENDIX

This table ranks all U.S. states by total lightning pulses, including in-cloud and cloud-to-ground from highest to lowest. Total number of thunder days in each state (the total number of days in the year when lightning was detected by ENTLN) are also included. The period covered is January 1, 2020 to December 31, 2020.

STATE	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
TX	63,683,799	278
FL	35,430,198	246
OK	26,159,420	205
KS	23,125,675	179
IL	16,785,149	166
NE	14,433,875	178
MO	14,081,658	184
VA	13,234,163	176
GA	13,016,803	217
OH	12,009,955	143
SD	11,940,870	156
LA	11,787,379	230
AL	11,448,621	202
AR	11,417,155	211
NC	10,666,834	203
PA	10,024,978	151
MS	9,236,279	210
IN	9,175,986	149
IA	9,121,097	140
WI	8,812,327	145
TN	8,458,373	186
MN	8,009,792	148
KY	7,974,926	166
MI	7,769,382	159
ND	7,634,287	131
SC	7,454,219	197
CO	7,360,769	185
MD	6,666,766	124
NM	5,819,550	196
MT	5,107,593	154
WY	4,951,397	166
NY	4,943,122	152
WV	4,684,226	150
AZ	3,532,759	151
NJ	3,465,297	96
UT	1,951,574	162
ID	1,518,171	172
MA	1,267,046	80
NV	1,237,862	146
DE	1,168,918	89
CA	956,187	151
OR	915,855	132
CT	802,252	70
NH	618,242	70
WA	402,333	117
ME	358,334	81
VT	354,695	75
RI	190,992	42
DC	44,204	47

APPENDIX

This table ranks all U.S. states by total lightning pulses, including in-cloud and cloud-to-ground from highest to lowest. Total number of thunder days in each state (the total number of days in the year when lightning was detected by ENTLN) are also included. The period covered is January 1, 2020 to December 31, 2020.

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Charlton County	389,557	113
Ware County	372,395	117
Clinch County	355,412	110
Wayne County	215,066	101
Camden County	202,613	101
Liberty County	183,815	96
Burke County	182,630	93
Brantley County	169,043	91
Fulton County	156,227	96
Bulloch County	147,587	88
Glynn County	143,585	92
Chatham County	138,034	91
Coffee County	137,445	93
McIntosh County	133,967	84
Cherokee County	132,308	91
Bryan County	131,259	98
Screven County	130,321	78
Tattnall County	129,655	92
Thomas County	129,112	100
Gwinnett County	129,087	89
Hall County	118,606	89
Berrien County	116,842	95
Appling County	116,412	93
Brooks County	116,122	98
Emanuel County	115,382	87
Floyd County	114,923	91
Long County	114,002	95
Pierce County	113,901	83
Effingham County	113,168	90
Meriwether County	111,773	82
Cobb County	110,635	83
Jefferson County	108,980	81
Lowndes County	106,664	95
Grady County	106,128	79
Decatur County	103,806	94
Worth County	102,810	90
Echols County	102,299	99
Forsyth County	101,268	82
Morgan County	99,569	81
Atkinson County	99,523	90
Monroe County	96,670	76
Colquitt County	96,277	93
Toombs County	96,261	83
Walker County	95,635	88
Laurens County	95,462	94
Washington County	95,385	97
Gilmer County	94,267	84

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Sumter County	92,161	91
Bartow County	91,291	87
Chattooga County	91,188	77
Walton County	91,065	80
Early County	89,459	87
Stewart County	88,555	90
Dodge County	85,423	79
Greene County	85,030	75
Coweta County	84,624	80
Lee County	84,338	91
Gordon County	83,536	73
Telfair County	80,753	69
Jackson County	79,234	76
Wilkinson County	78,930	74
Randolph County	78,254	90
Lumpkin County	77,672	79
Hancock County	77,238	84
Harris County	76,679	89
Marion County	76,605	83
Elbert County	76,103	69
Newton County	75,328	74
Wilkes County	74,709	73
Carroll County	74,212	84
Mitchell County	73,987	85
Turner County	73,978	78
Murray County	73,129	80
Paulding County	72,339	81
Bacon County	72,107	83
Wilcox County	71,485	78
Fannin County	71,206	91
Richmond County	69,907	71
Dooly County	69,342	86
Union County	68,783	82
Jasper County	68,525	72
Jones County	68,425	80
Upson County	68,212	75
Baker County	67,778	80
Macon County	67,534	80
DeKalb County	67,389	86
Oglethorpe County	66,910	79
Henry County	66,693	75
Troup County	65,902	77
Columbia County	65,775	76
Talbot County	64,473	87
Seminole County	63,534	73
Irwin County	62,302	74
Lanier County	60,976	81

APPENDIX

This table ranks all Texas counties by total lightning pulses including in-cloud and cloud-to-ground from highest to lowest. Total number of thunder days in each county (the total number of days in the year when lightning was detected by ENTLN) are also included. The period covered is January 1, 2020 to December 31, 2020.

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Rabun County	60,889	80
Dougherty County	60,356	83
Haralson County	59,774	77
McDuffie County	59,720	67
Jeff Davis County	58,945	86
Houston County	58,177	79
Pike County	57,559	68
Putnam County	57,513	74
Evans County	57,152	72
Terrell County	56,995	86
Taylor County	55,855	83
Whitfield County	55,726	73
Oconee County	55,220	65
Dawson County	55,086	76
Tift County	54,770	74
Jenkins County	54,207	78
Pulaski County	53,735	79
Crawford County	53,511	75
Pickens County	52,647	71
Twiggs County	51,257	75
Calhoun County	51,244	82
Baldwin County	50,229	67
Franklin County	49,982	65
Polk County	49,393	78
Crisp County	49,380	74
Webster County	49,370	78
Spalding County	48,996	67
Habersham County	48,854	83
Warren County	48,655	76
Barrow County	47,939	60
Miller County	47,919	76
Quitman County	46,050	75
Ben Hill County	43,485	65
Stephens County	43,242	62
Hart County	43,213	70
Cook County	42,524	87
Lamar County	42,382	71
Douglas County	41,986	69
Madison County	40,597	72
Heard County	40,129	70
Muscogee County	39,808	81
Fayette County	39,369	75
Clay County	39,340	83
Taliaferro County	39,296	72
Wheeler County	38,968	75
Banks County	38,654	76
Bibb County	38,270	74

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Montgomery County	37,720	73
Johnson County	37,304	76
Bleckley County	36,557	72
Rockdale County	36,405	66
Treutlen County	36,274	63
Catoosa County	35,768	65
Candler County	35,350	79
Chattahoochee County	34,934	82
White County	33,862	72
Dade County	32,059	72
Schley County	31,041	74
Towns County	28,878	64
Butts County	28,259	65
Clayton County	27,090	71
Glascocock County	24,992	59
Clarke County	24,027	60
Lincoln County	23,290	65
Peach County	17,966	66