EARTH NETWORKS®

2020

IDAHO 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

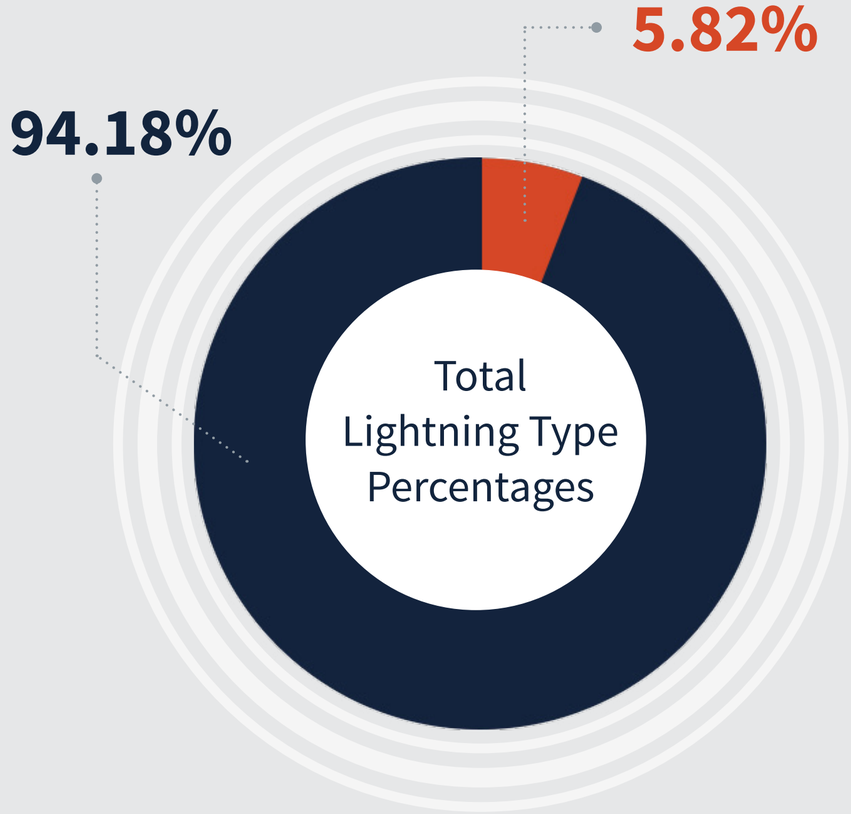
is the combination of cloud-to-ground (CG) and in-cloud (IC) lightning strikes

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

IDAHO
TOTAL LIGHTNING PULSES

1,518,171

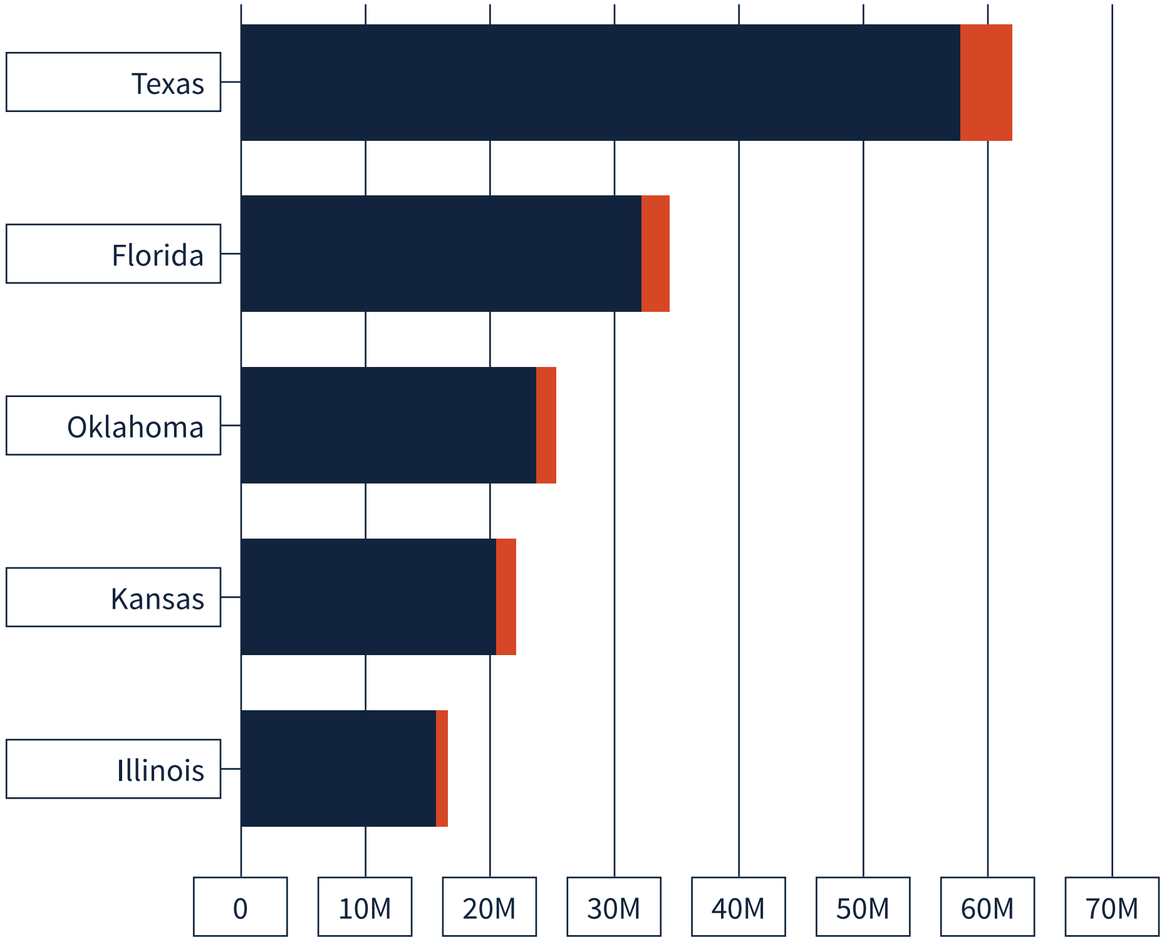


Cloud-to-ground
88,366

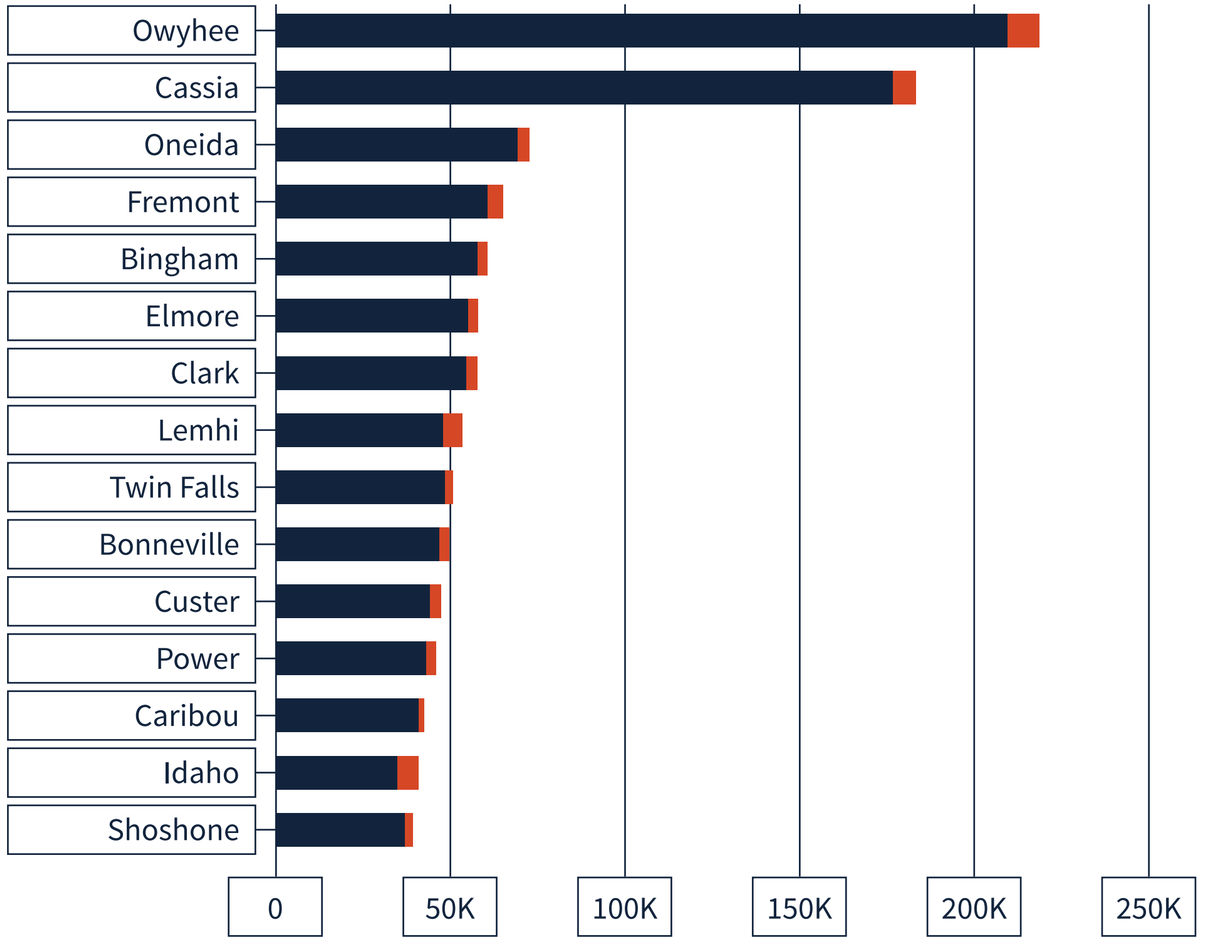
In-cloud
1,429,633

LIGHTNING COUNT RANKINGS

STATES

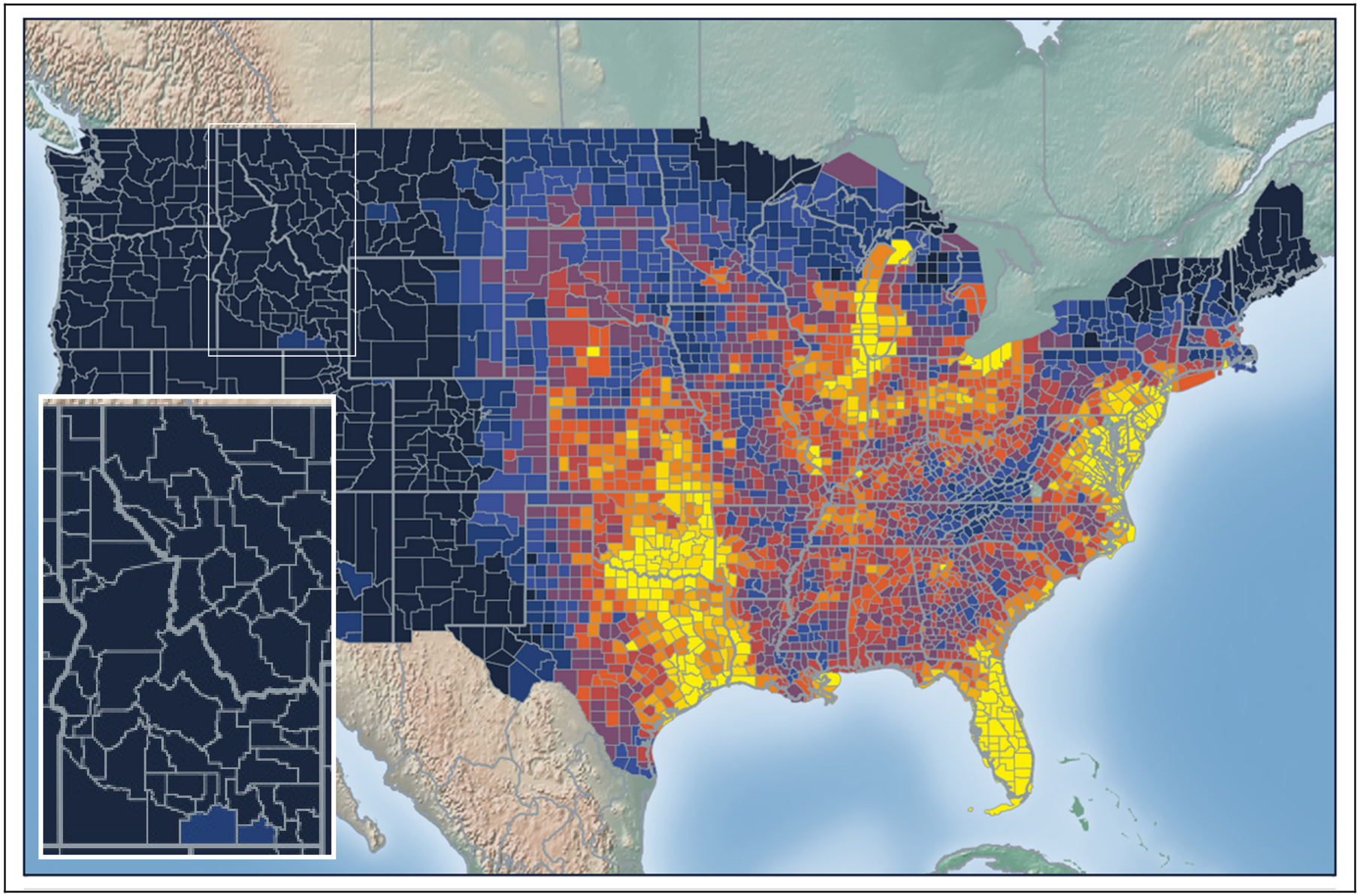


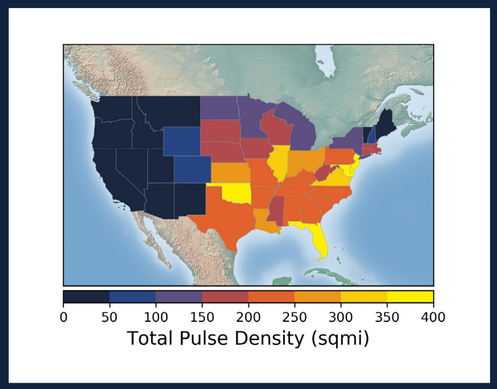
COUNTIES



Idaho ranked 37 in total lightning pulses for 2020.

TOTAL (CG+IC) PULSE DENSITY MAP





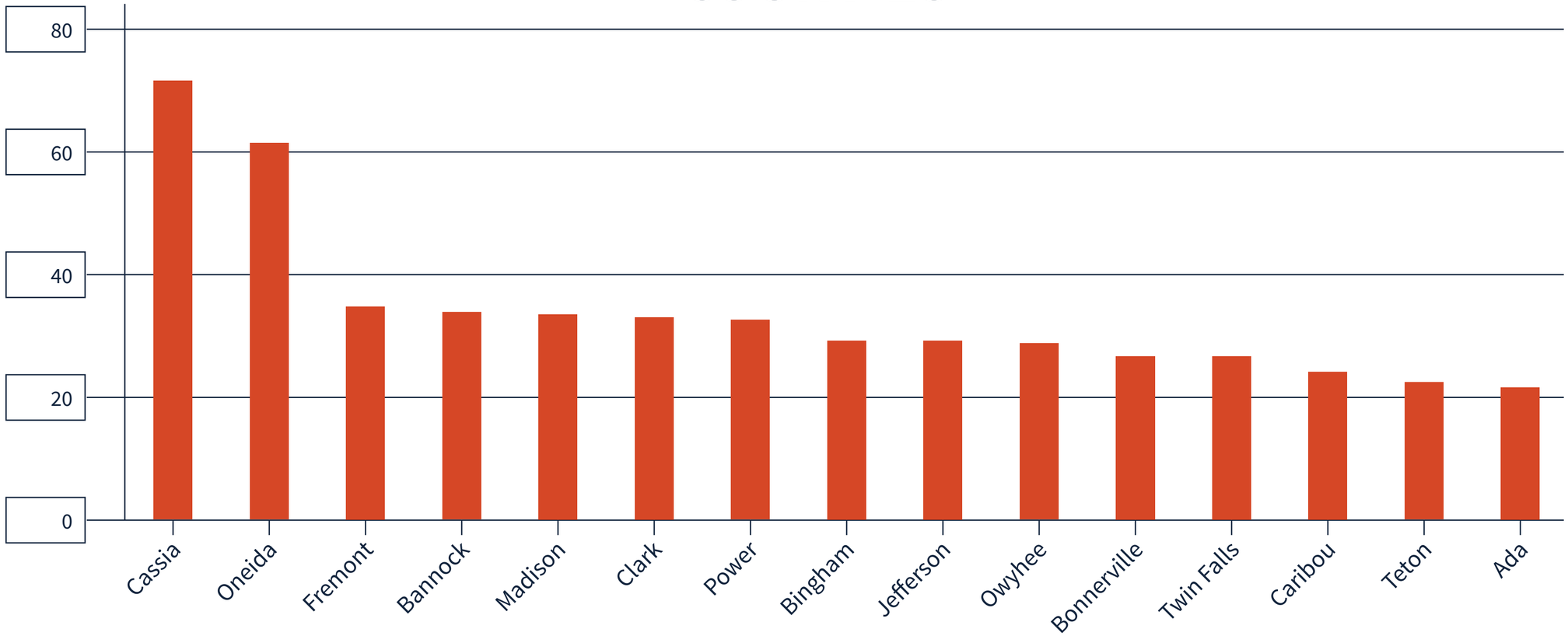
Pulse density is a better indicator of lightning activity than total lightning counts because it enables us to compare different sized areas (like states and counties) fairly.

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.

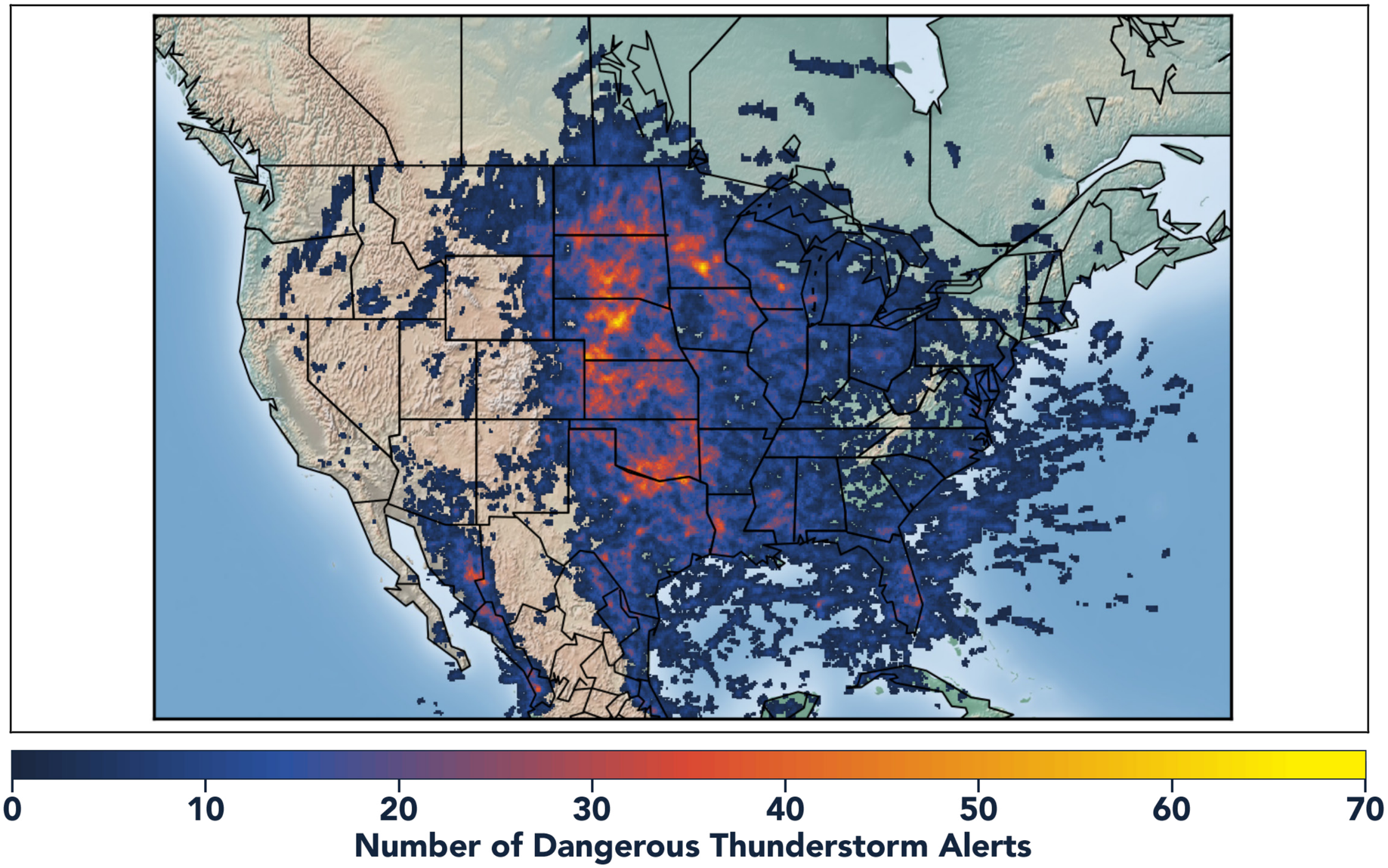
TOTAL PULSE DENSITY RANKINGS

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).

COUNTIES



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 138 Dangerous Thunderstorm Alerts for the state in 2020.

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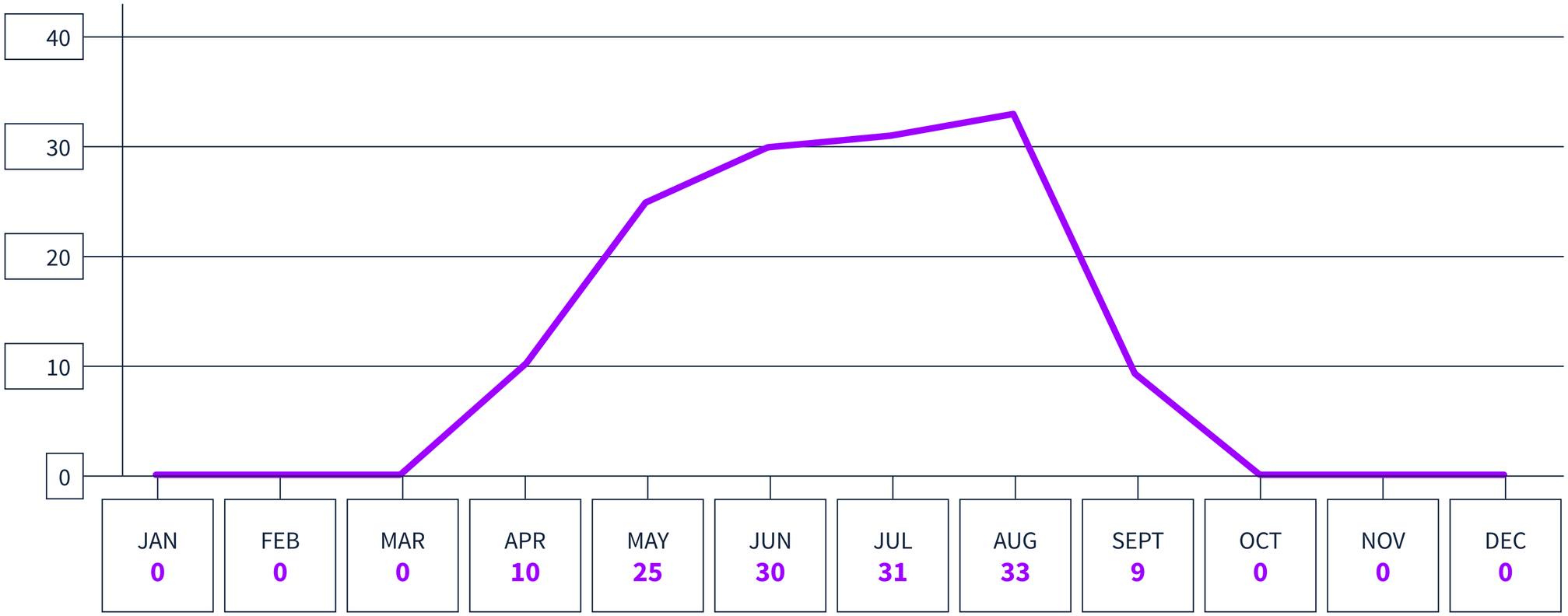
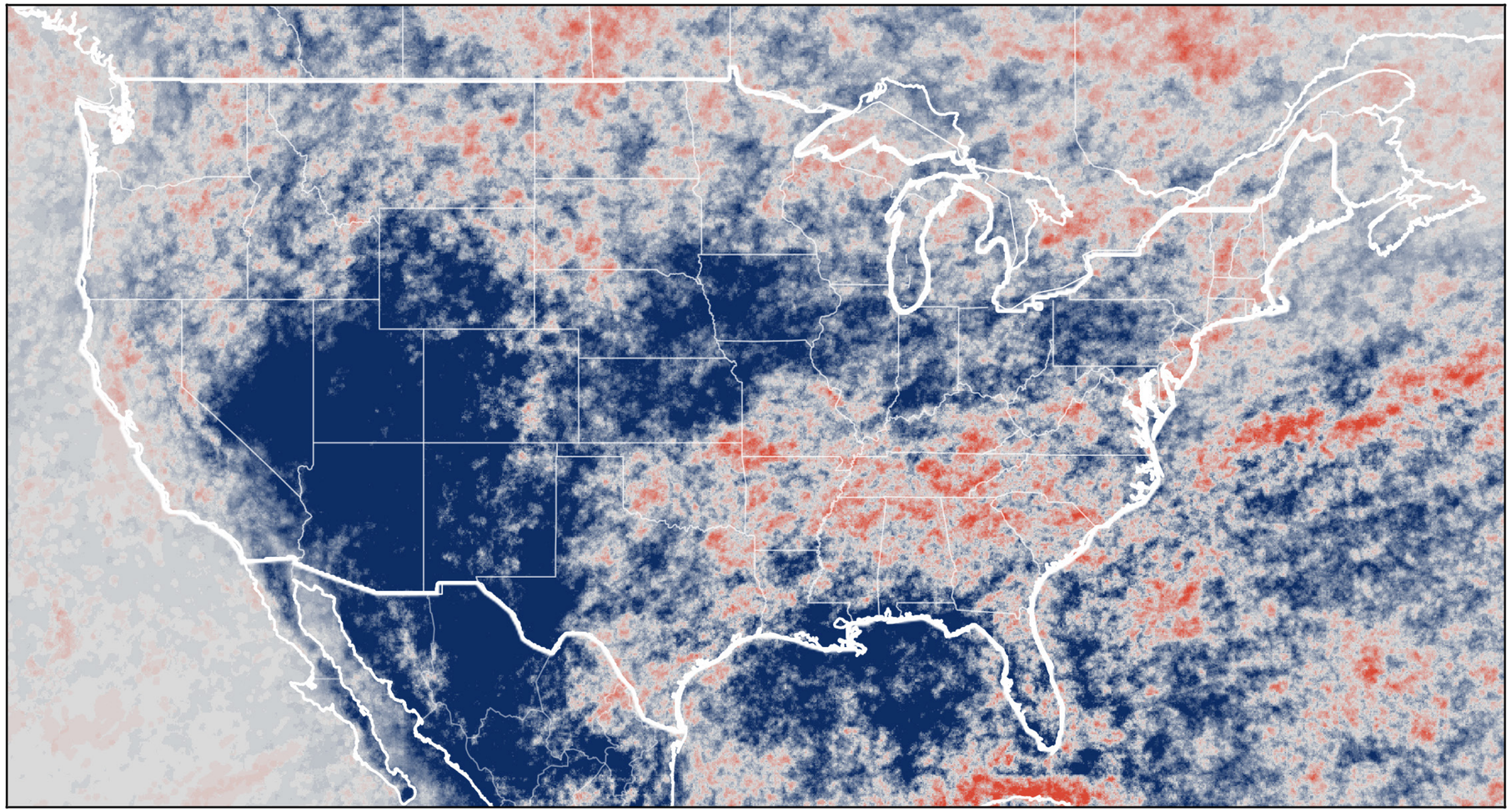


TOTAL STATE THUNDER DAYS: 172



Change in Thunder Days Map

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.

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.

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THANK YOU

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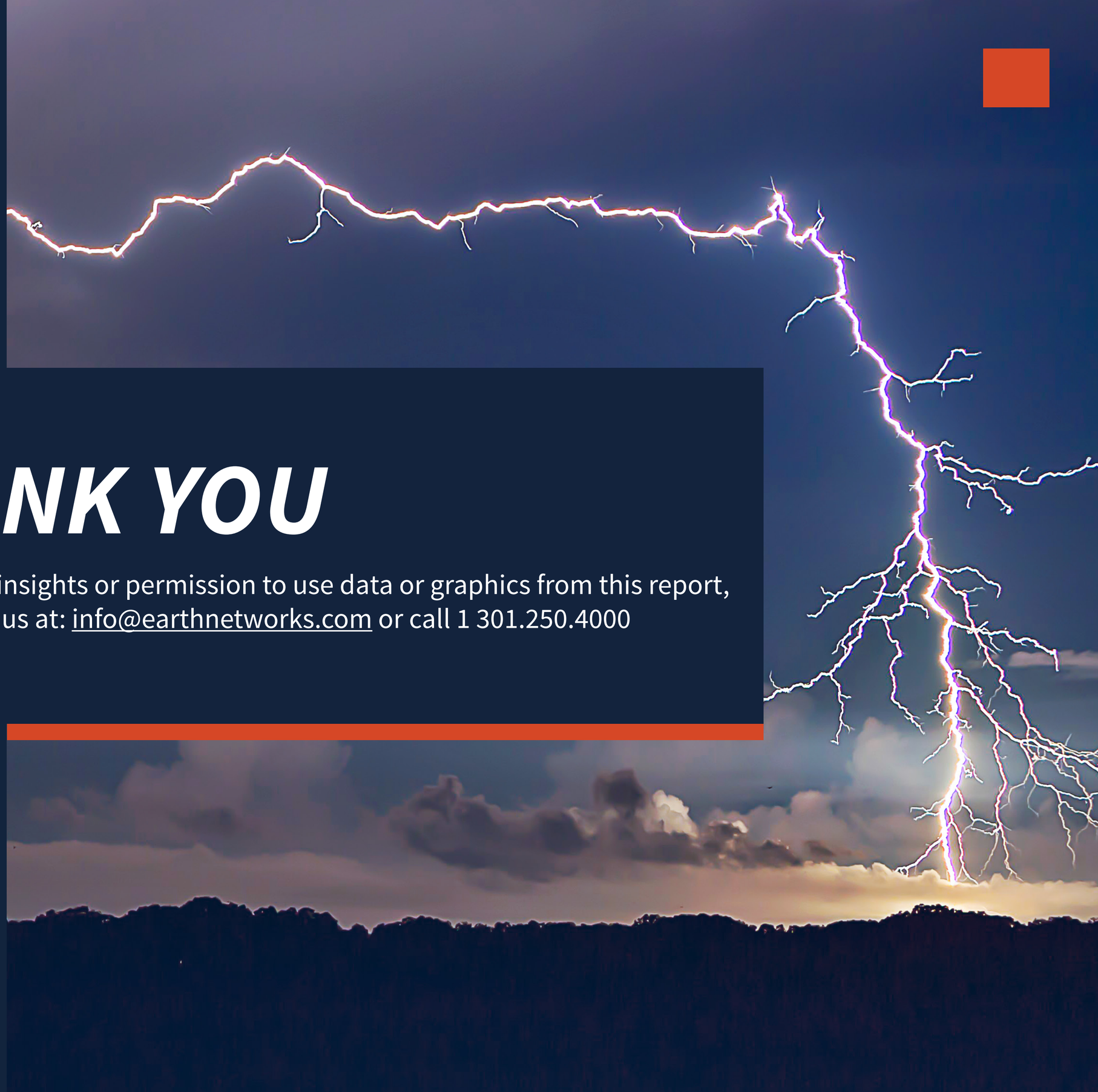

APPENDIX

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 counties in the state 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
Owyhee County	218,845	69
Cassia County	183,324	75
Oneida County	73,218	50
Fremont County	65,493	66
Bingham County	61,231	64
Elmore County	58,501	46
Clark County	58,159	70
Lemhi County	54,029	65
Twin Falls County	50,949	63
Bonneville County	50,046	78
Custer County	47,862	63
Power County	46,109	59
Caribou County	43,081	54
Idaho County	41,060	67
Shoshone County	39,783	46
Bannock County	37,744	61
Jefferson County	31,858	46
Blaine County	30,068	58
Butte County	28,973	53
Bonner County	22,898	40
Ada County	22,641	35
Lincoln County	21,003	34
Boise County	18,694	38
Clearwater County	16,557	41
Valley County	16,302	47
Bear Lake County	16,165	37
Boundary County	16,009	30
Madison County	15,630	39
Gooding County	13,343	25
Franklin County	12,859	39
Minidoka County	10,508	32
Nez Perce County	10,465	26
Adams County	10,232	34
Teton County	10,131	43
Kootenai County	9,663	36
Jerome County	8,991	32
Camas County	8,469	36
Lewis County	7,727	24
Washington County	7,568	43
Latah County	7,425	30
Benewah County	5,050	27
Gem County	4,116	23
Canyon County	2,648	30
Payette County	2,572	19