

# 1999 Annual Summaries

National Oceanic and Atmospheric Administration  
National Environmental Satellite Data Information Service  
National Climatic Data Center

## FLOOD/FLASH FLOOD



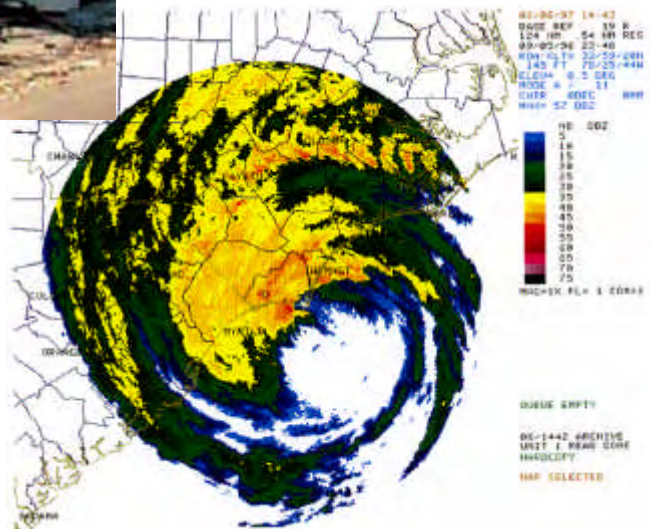
## Lightning



## Tornado



## Hurricane



# 1999 Annual Summaries

## Flood/Flash Flood

## Lightning

## Tornado

## Hurricane

All summaries are compiled from information contained in the Storm Data Publication.

Sources include the Storm Data Publication, the National Weather Service's Office of Meteorology and Office of Hydrology, Suitland, MD. and the National Hurricane Center, Miami, FL.

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## Summary of Natural Hazard Statistics for 1999 in the United States



This National Weather Service (NWS) report summarizes fatalities, injuries and damages caused by severe weather in 1999. The NWS Office of Climate, Water and Weather Services and the National Climatic Data Center compiled this *Summary of U.S. Natural Hazard Statistics* from Storm Data, a report comprising statistics from NWS forecast offices in the 50 states, Puerto Rico, Guam, and the Virgin Islands.

### Summary of 1999 Weather Events, Fatalities, Injuries, and Damage Costs

LAST UPDATED : 10/19/2000

<u>Weather Event</u>	<u>Fatalities</u>	<u>Injuries</u>	<u>Amount of Property Damage (M)</u>	<u>Amount of Crop Damage (M)</u>	<u>Total Prop/Crop Damage (M)</u>
<b><u>Convection</u></b>					
Lightning	46	243	\$ 32.5	\$ 0.0	\$ 32.5
Tornado	94	1842	1,989.9	8.3	1,998.2
Tstm Wind	29	325	313.5	75.2	388.7
Hail	0	46	443.0	157.8	600.8
<b><u>Extreme Temperatures</u></b>					
Cold	7	32	1.7	155.5	157.2
Heat	502	1477	3.3	0.0	3.3
<b><u>Flood</u></b>					
Flash Flood	60	290	1,201.8	357.2	1,559.0
River Flood	5	0	214.7	14.5	229.2
Small Stream/Urban Flood	3	11	4.2	0.0	4.2
<b><u>Marine</u></b>					
Coastal Storm	28	42	0.7	0.0	0.7
Tsunami	0	0	0.0	0.0	0.0
<b><u>Tropical Cyclones</u></b>					
Tropical Storm/Hurricane	19	10	4,190.1	1,418.7	5,608.8
<b><u>Winter</u></b>					
Winter Storm	39	316	61.9	0.0	61.9
Ice	2	86	0.3	0.0	0.3
Avalanche	26	10	0.1	0.0	0.1
<b><u>Other</u></b>					
Drought	0	0	0.1	1,332.9	1,333.0
Dust Storm	1	49	0.6	0.1	0.7
Dust Devil	0	0	0.0	0.0	0.0
Rain	8	7	30.3	0.0	30.3
Fog	3	84	0.9	0.0	0.9
High Wind	33	148	86.7	5.3	92.0
Waterspout	0	0	0.3	0.0	0.3
Fire Weather	2	127	141.0	1.6	142.6
Mud Slide	0	0	0.0	0.0	0.0
Volcanic Ash	0	0	0.0	0.0	0.0
Miscellaneous	1	3	3.7	5.0	8.7
<b>TOTAL</b>	<b>908</b>	<b>5148</b>	<b>\$8,721.3M</b>	<b>\$3,532.1M</b>	<b>12,253.4M</b>

## Summary of 1999 Natural Hazard Statistics

In 1999, there were 908 weather-related fatalities—221 more than in 1998. The 10-year average for weather-related fatalities (1990-1999) is 602. Extreme heat ranked as the #1 weather-related killer with 502 deaths—nearly three times higher than 1998's death toll of 173. Tornadoes resulted in 94 fatalities, followed by flooding with 68 and lightning with 46.

Weather-related injuries significantly dropped from 11,171 in 1998 to 5,148 in 1999. Tornadoes and heat caused the greatest number of injuries with 1,842 and 1,477, respectively. In 1998, flooding alone caused 6,440 injuries with tornadoes causing 1,868 injuries.

In 1999, severe weather accounted for more than \$12 billion in damages. Hurricanes/tropical storms were the most destructive weather with \$5.6 billion in property and crop losses. Tornadoes were the second most destructive, costing nearly \$2 billion. Hurricanes generated almost \$4.2 billion in property losses. Hurricanes and drought caused devastating losses to crops: \$1.4 and \$1.3 billion, respectively. States suffering more than a billion dollars in damage include Florida, North Carolina and Oklahoma. A tornado outbreak struck Oklahoma in May generating more than \$1 billion in damage. Hurricane Floyd in September and October caused inland flooding amounting to more than \$4 billion in damage.

Of the 908 people who died because of severe weather, 555 were male, 334 were female and 19 unknown. The 40- to 89-age group accounted for the largest number of fatalities—632.

July was the deadliest month with 477 fatalities, most caused by extreme heat. May ranked second with 75 fatalities, primarily from the tornado outbreak in Oklahoma.

In 1999, Illinois suffered the highest number of deaths with 147; Pennsylvania had 101 fatalities. Topping the injuries list were Oklahoma with 706 and Missouri with 424.

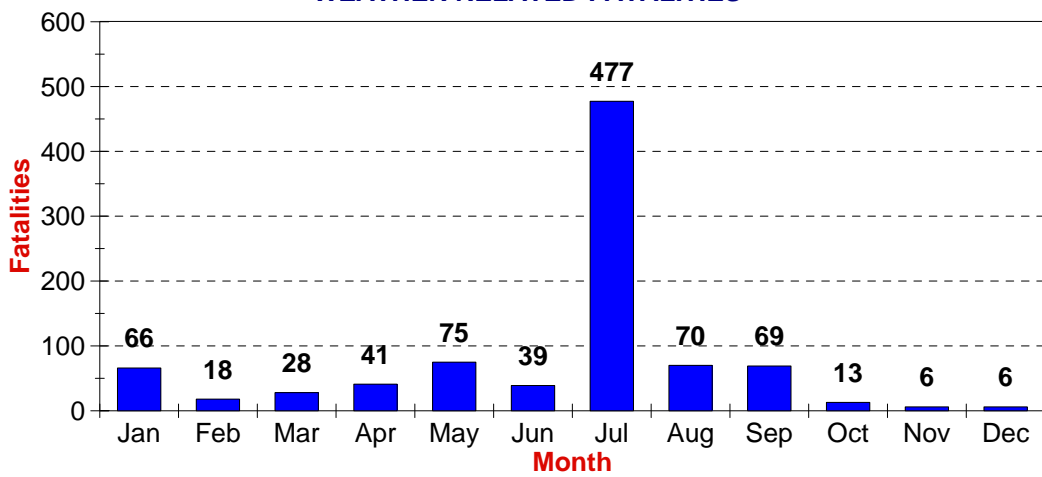
In 1998-99, extreme heat ranked as the #1 weather killer in the United States, outranking floods. The 30-year average (1970-1999) for floods is 130; for lightning, 76; for tornadoes, 70; for hurricanes, 16. The 10-year average for cold related deaths is 26; for heat, 194.

## 1999 Summary of all Natural Hazards

### 1999 SUMMARY OF FATALITIES FOR ALL HAZARDS BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	14	18	0	32	4
10 TO 19	18	21	0	39	4
20 TO 29	18	52	0	70	8
30 TO 39	18	62	0	80	9
40 TO 49	39	90	0	129	14
50 TO 59	22	92	0	114	13
60 TO 69	33	79	0	112	12
70 TO 79	82	72	0	154	17
80 TO 89	70	53	0	123	14
90 TO --	18	7	0	25	3
UNKNOWN	2	9	19	30	3
<b>TOTAL</b>	<b>334</b>	<b>555</b>	<b>19</b>	<b>908</b>	<b>100</b>
<b>PERCENT</b>	<b>37</b>	<b>61</b>	<b>2</b>	<b>100</b>	

### 1999 MONTHLY WEATHER RELATED FATALITIES



## 1999 Summary of Hazardous Weather Fatalities, Injuries, and Damage Costs Listed by State

<u>State</u>	<u>Fatalities</u>	<u>Injuries</u>	<u>Property Damage (M)</u>	<u>Crop Damage (M)</u>	<u>Total Damage (M)</u>
AK	18	14	2.2	0.0	2.2
AL	11	19	11.7	0.0	11.7
AR	24	187	27.6	0.0	27.6
AS	0	0	0.1	0.0	0.1
AZ	4	61	71.4	0.1	71.5
CA	32	274	138.9	166.5	305.4
CO	9	44	129.2	12.4	141.6
CT	1	1	2.8	0.0	2.8
DC	3	140	0.3	0.0	0.3
DE	6	33	8.6	29.1	37.7
FL	15	90	653.2	628.8	1,282.0
GA	7	52	27.9	0.3	28.2
GU	2	6	0.6	0.0	0.6
HI	2	7	0.0	0.0	0.0
IA	7	54	91.7	137.4	229.1
ID	0	14	5.6	0.0	5.6
IL	147	186	32.0	56.2	88.2
IN	7	14	55.1	0.0	55.1
KS	12	182	218.2	15.7	233.9
KY	3	35	6.8	154.0	160.8
LA	14	171	33.3	0.0	33.3
MA	3	4	0.5	0.0	0.5
MD	15	304	30.7	30.6	61.3
ME	1	8	1.3	0.0	1.3
MI	6	102	11.6	1.1	12.7
MN	2	9	10.4	0.6	11.0
MO	81	424	35.2	5.3	40.5
MS	4	49	15.5	0.0	15.5
MT	5	5	18.8	0.2	19.0
NC	48	90	3,621.7	1,075.8	4,697.5
ND	3	1	219.2	13.2	232.4
NE	9	52	109.6	53.3	162.9
NH	3	17	1.3	0.0	1.3
NJ	38	390	550.9	80.0	630.9
NM	8	13	6.3	0.4	6.7
NV	1	3	25.5	0.0	25.5
NY	39	43	60.7	50.7	111.4
OH	26	177	110.2	200.2	310.4
OK	55	706	1,146.2	1.1	1,147.3
OR	11	46	6.3	22.6	28.9
PA	101	358	115.7	520.5	636.2
PR	8	3	92.6	14.0	106.6
RI	0	0	0.0	0.0	0.0
SC	21	54	52.1	2.0	54.1
SD	1	59	7.1	2.1	9.2
TN	15	174	141.0	0.5	141.5
TX	34	99	372.8	71.5	444.3
UT	5	143	182.5	0.7	183.2
VA	7	121	167.3	175.7	343.0
VI	0	0	26.0	0.0	26.0
VT	2	6	3.4	0.0	3.4
WA	6	15	39.7	0.3	40.0
WI	17	60	15.8	1.6	17.4
WV	3	12	3.7	7.0	10.7
WY	6	17	2.7	0.8	3.5
<b>TOTAL</b>	<b>908</b>	<b>5148</b>	<b>\$8,721.5M</b>	<b>\$3,532.3M</b>	<b>\$12,253.8M</b>

*NOTE: Damage amounts may be slightly different than those indicated on front page due to rounding*

## 1999 Lightning Fatalities

Lightning caused 46 fatalities in 1999, up two from 1998. Over the last 10 years, lightning has averaged 57 fatalities. In 1999, Florida again ranked #1 with 5 deaths; North Carolina followed with 4. Of those who died, 24 were outside, 9 under a tree, and 6 in a boat. More than five times as many males (39) were killed than females (7). The 30- to 49-year-old age group accounted for 59% of the fatalities.

### 1999 LIGHTNING FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>BF</u>	<u>BO</u>	<u>CA</u>	<u>EQ</u>	<u>GF</u>	<u>IW</u>	<u>OT</u>	<u>OU</u>	<u>TE</u>	<u>UT</u>	<u>TOTAL</u>
AL	0	0	0	0	0	0	0	2	0	0	2
AR	0	0	0	0	0	0	0	1	0	1	2
AZ	0	0	0	0	0	0	0	1	0	0	1
CA	0	0	0	0	0	0	0	1	0	0	1
CO	0	0	0	0	0	0	0	2	0	0	2
FL	0	1	0	1	0	0	0	2	0	1	5
GA	1	0	0	0	0	0	0	1	0	0	2
IL	0	0	0	0	0	0	0	0	0	2	2
IN	0	0	0	0	0	0	0	0	0	1	1
KS	0	0	0	0	0	0	0	2	0	0	2
LA	0	2	0	0	0	0	0	1	0	0	3
MI	0	0	0	0	0	0	0	1	0	0	1
MS	0	0	0	0	0	0	0	0	0	1	1
MT	0	0	0	1	0	1	0	0	0	1	3
NC	0	1	0	0	0	0	0	3	0	0	4
NJ	0	0	1	0	0	0	0	0	0	0	1
NY	0	0	0	0	0	0	1	0	0	0	1
OH	0	0	0	0	0	0	0	1	0	1	2
OK	0	1	0	0	0	0	0	0	0	0	1
TN	0	0	0	0	0	0	0	1	0	0	1
TX	0	1	0	0	0	1	0	1	0	0	3
UT	0	0	0	0	0	0	0	1	0	0	1
VA	0	0	0	0	0	0	0	0	0	1	1
WI	0	0	0	0	0	0	0	1	0	0	1
WY	0	0	0	0	0	0	0	2	0	0	2
<b>TOTAL</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>24</b>	<b>0</b>	<b>9</b>	<b>46</b>
<b>PERCENT</b>	<b>2</b>	<b>13</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>52</b>	<b>0</b>	<b>20</b>	<b>99*</b>

(\* Due to rounding total does not equal 100%)

### 1999 LIGHTNING FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	0	0	0	0	0
10 TO 19	3	4	0	7	15
20 TO 29	0	4	0	4	9
30 TO 39	2	15	0	17	37
40 TO 49	2	8	0	10	22
50 TO 59	0	4	0	4	9
60 TO 69	0	2	0	2	4
70 TO 79	0	0	0	0	0
80 TO 89	0	0	0	0	0
90 TO --	0	0	0	0	0
UNKNOWN	0	2	0	2	4
<b>TOTAL</b>	<b>7</b>	<b>39</b>	<b>0</b>	<b>46</b>	<b>100</b>
<b>PERCENT</b>	<b>15</b>	<b>85</b>	<b>0</b>	<b>100</b>	

#### LEGEND

**BF** - Ball Field  
**BO** - Boat  
**CA** - Camping  
**EQ** - Nr Hvy Equipment  
**GF** - Golf  
**IW** - In Water  
**OT** - Other/Unknown  
**OU** - Outside Open  
**TE** - At Telephone  
**UT** - Under Tree

## 1999 Tornado Fatalities

In 1999, NWS recorded 1,343 tornadoes, a drop from 1,425 in 1998. Tornadoes resulted in 94 deaths—down nearly 30% from 1998's total of 130. Both years are significantly higher than the 10-year average for tornado deaths—58. Of the 94 fatalities, 39 were in permanent homes and 34 were in mobile homes. In a departure from the norm, female fatalities (50) outnumbered male fatalities (44) in 1999. The 30- to 69-age groups were most affected with 63% of the fatalities. Tornado injuries (1,842) in 1999 decreased slightly from 1998's total (1,868). On May 3, 1999, one of the largest tornado outbreaks in history struck west-central Oklahoma and southern Kansas, killing 48 and injuring 945.

### 1999 TORNADO FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>BU</u>	<u>LS</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>SC</u>	<u>VE</u>	<u>TOTAL</u>
AR	1	0	3	0	0	2	0	2	8
IA	0	0	0	0	2	0	0	0	2
IL	0	0	2	0	0	0	0	1	3
KS	0	0	4	0	2	0	0	0	6
LA	0	0	6	0	1	0	0	0	7
MS	0	0	1	0	0	0	0	0	1
NC	0	0	1	0	0	0	0	0	1
OH	0	0	0	0	0	2	0	2	4
OK	2	0	12	0	2	25	0	1	42
SD	0	0	1	0	0	0	0	0	1
TN	0	0	3	1	1	7	0	0	12
TX	0	0	3	0	0	3	0	0	6
UT	0	0	0	0	1	0	0	0	1
<b>TOTAL</b>	<b>3</b>	<b>0</b>	<b>36</b>	<b>1</b>	<b>9</b>	<b>39</b>	<b>0</b>	<b>6</b>	<b>94</b>
<b>PERCENT</b>	<b>3</b>	<b>0</b>	<b>38</b>	<b>1</b>	<b>10</b>	<b>41</b>	<b>0</b>	<b>6</b>	<b>99*</b>

(\* Due to rounding total does not equal 100%)

### 1999 TORNADO FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	3	3	0	6	6
10 TO 19	3	0	0	3	3
20 TO 29	4	4	0	8	9
30 TO 39	4	8	0	12	13
40 TO 49	12	8	0	20	21
50 TO 59	8	6	0	14	15
60 TO 69	6	7	0	13	14
70 TO 79	4	4	0	8	9
80 TO 89	4	3	0	7	7
90 TO --	1	0	0	1	1
UNKNOWN	1	1	0	2	2
<b>TOTAL</b>	<b>50</b>	<b>44</b>	<b>0</b>	<b>94</b>	<b>100</b>
<b>PERCENT</b>	<b>53</b>	<b>47</b>	<b>0</b>	<b>100</b>	

#### LEGEND

**BU** - Business  
**LS** - Long-Span Roof  
**MH** - Mobile Home  
**OT** - Other/Unknown  
**OU** - Outside Open  
**PH** - Permanent Home  
**SC** - School  
**VE** - Vehicle



## 1999 Flash Flood / River Flood Related Fatalities

In 1999, flooding (flash floods, river floods and urban/small stream floods) contributed to 68 fatalities—half of 1998's death toll of 136. The 10-year average for flood deaths is 99. Of the 68 victims, 29 died in flood waters and 26 perished in vehicles. Flood-related fatalities are probably the most preventable. Most vehicular deaths occur when people attempt to drive across flooded roadways. Of the deaths classified as “in water,” many of the victims left a stalled vehicle and were swept away by swift current. North Carolina recorded the highest flood casualties with 24; Pennsylvania and New Jersey each tallied 6.

Flash floods caused 60 fatalities and river floods caused 8. In 1999, 59% of flood fatalities were males and 41% were females. The 20- to 59-age groups comprised 62% of the fatalities.

<b>1999 FLASH FLOOD / RIVER FLOOD FATALITIES BY STATE AND LOCATION</b>									
<u>STATE</u>	<u>BO</u>	<u>BU</u>	<u>CA</u>	<u>IW</u>	<u>MH</u>	<u>OT</u>	<u>PH</u>	<u>VE</u>	<u>TOTAL</u>
AL	0	0	0	0	0	0	0	1	1
CA	0	0	0	0	0	0	1	2	3
CT	1	0	0	0	0	0	0	0	1
DE	0	0	0	2	0	0	0	0	2
IA	0	0	0	0	0	0	0	1	1
IL	0	0	0	1	0	0	0	0	1
IN	0	0	0	0	0	0	0	4	4
KY	0	0	0	0	0	0	0	1	1
MO	0	1	0	2	0	1	0	0	4
MS	0	0	0	0	0	0	0	2	2
NC	0	0	0	22	0	1	0	1	24
NE	0	0	0	0	0	0	1	0	1
NJ	0	0	0	1	0	0	3	2	6
NV	0	0	0	0	0	1	0	0	1
NY	0	0	0	0	0	1	1	0	2
OH	0	0	0	0	0	0	0	2	2
OK	0	0	0	0	0	0	0	2	2
PA	0	0	0	0	0	0	1	5	6
TX	0	0	0	1	0	0	0	1	2
VA	0	0	0	0	0	0	0	1	1
WV	0	0	0	0	0	0	0	1	1
<b>TOTAL</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>4</b>	<b>7</b>	<b>26</b>	<b>68</b>
<b>PERCENT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>38</b>	<b>99*</b>

(\* Due to rounding total does not equal 100%)

<b>1999 FLASH FLOOD / RIVER FLOOD FATALITIES BY AGE AND GENDER</b>					
	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	8	2	0	10	15
10 TO 19	2	1	0	3	4
20 TO 29	7	5	0	12	18
30 TO 39	2	5	0	7	10
40 TO 49	5	7	0	12	18
50 TO 59	1	10	0	11	16
60 TO 69	0	3	0	3	4
70 TO 79	1	4	0	5	7
80 TO 89	2	3	0	5	7
90 TO --	0	0	0	0	0
UNKNOWN	0	0	0	0	0
<b>TOTAL</b>	<b>28</b>	<b>40</b>	<b>0</b>	<b>68</b>	<b>99*</b>
<b>PERCENT</b>	<b>41</b>	<b>59</b>	<b>0</b>	<b>100</b>	

(\* Due to rounding total does not equal 100%)

<b>LEGEND</b>	
<b>BO</b>	- Boat
<b>BU</b>	- Business
<b>CA</b>	- Camping
<b>IW</b>	- In Water
<b>MH</b>	- Mobile Home
<b>OT</b>	- Other/Unknown
<b>PH</b>	- Permanent Home
<b>VE</b>	- Vehicle

## 1999 Flash Flood / River Flood Related Fatalities (Continued)

### 1999 FLASH FLOOD / RIVER FLOOD FATALITIES BY STATE

<u>STATE</u>	<u>FLASH FLOOD</u>	<u>RIVER FLOOD</u>	<u>TOTAL</u>
AL	1	0	1
CA	2	1	3
CT	1	0	1
DE	2	0	2
IA	1	0	1
IL	0	1	1
IN	0	4	4
KY	0	1	1
MO	3	1	4
MS	2	0	2
NC	24	0	24
NE	1	0	1
NJ	6	0	6
NV	1	0	1
NY	2	0	2
OH	2	0	2
OK	2	0	2
PA	6	0	6
TX	2	0	2
VA	1	0	1
WV	1	0	1
<b>TOTAL</b>	<b>60</b>	<b>8</b>	<b>68</b>
<b>PERCENT</b>	<b>88</b>	<b>12</b>	<b>100</b>

### 1999 FLASH FLOOD / RIVER FLOOD FATALITIES BY GENDER

	<u>FLASH FLOOD</u>	<u>RIVER FLOOD</u>	<u>TOTAL</u>	<u>PERCENT</u>
FEMALE	24	4	28	41
MALE	36	4	40	59
UNKNOWN	0	0	0	0
<b>TOTAL</b>	<b>60</b>	<b>8</b>	<b>68</b>	<b>100</b>
<b>PERCENT</b>	<b>88</b>	<b>12</b>	<b>100</b>	

## 1999 Winter Weather Related Fatalities

Winter weather resulted in 41 casualties; 39 from winter storms and 2 from ice. Not included in this total are 26 fatalities from avalanches. The 1999 winter weather deaths are down significantly from 1998's total of 77. Of the 41 fatalities from winter storms and ice, 15 were located outside in the open and 13 were in vehicles. California suffered 9 deaths and Alaska Nebraska both had 5. In April 2000, 8 men died when 18 inches of snow fell in a 12-hour period in the Pine Creek Wilderness area of the Laguna Mountains, California. Nearly three times as many males as females died from winter storms and ice. Age demographics were spread evenly with the 40- to 49-age group suffering the highest number of deaths with 11.

### 1999 WINTER STORM FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>LS</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>VE</u>	<u>TOTAL</u>
AK	0	0	5	0	0	0	5
AR	0	0	0	0	1	0	1
CA	0	0	1	8	0	0	9
IA	0	0	1	2	1	0	4
IL	0	0	0	1	1	0	2
KS	0	0	0	0	0	1	1
MT	0	0	0	0	0	1	1
ND	0	0	0	1	1	0	2
NE	0	0	0	1	0	4	5
OR	0	0	0	0	0	1	1
PA	0	0	0	1	1	2	4
WA	0	0	0	1	0	0	1
WI	0	0	0	0	0	1	1
WV	0	0	0	0	0	1	1
WY	0	0	1	0	0	2	3
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>41</b>
<b>PERCENT</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>37</b>	<b>12</b>	<b>32</b>	<b>101*</b>

(\* Due to rounding total does not equal 100%)

### 1999 WINTER STORM FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	1	1	0	2	5
10 TO 19	1	4	0	5	12
20 TO 29	0	6	0	6	15
30 TO 39	1	5	0	6	15
40 TO 49	5	6	0	11	27
50 TO 59	0	4	0	4	10
60 TO 69	2	0	0	2	5
70 TO 79	1	0	0	1	2
80 TO 89	0	2	0	2	5
90 TO --	0	1	0	1	2
UNKNOWN	0	1	0	1	2
<b>TOTAL</b>	<b>11</b>	<b>30</b>	<b>0</b>	<b>41</b>	<b>100</b>
<b>PERCENT</b>	<b>27</b>	<b>73</b>	<b>0</b>	<b>100</b>	

#### LEGEND

**LS** - Long-Span Roof  
**MH** - Mobile Home  
**OT** - Other/Unknown  
**OU** - Outside Open  
**PH** - Permanent Home  
**VE** - Vehicle

## 1999 Tropical Cyclone Fatalities

There were more than the typical number of tropical storms and hurricanes in 1999; 12 named storms—8 hurricanes and 4 tropical storms. On average, there are 10 named storms, 6 of which become hurricanes. In 1999, hurricanes and tropical storms caused 19 deaths, more than twice the number (9) who died in 1998. North Carolina suffered the highest number of deaths with 14. Of the 19 deaths, 8 of the victims died in vehicles and 8 were water related. Fatalities from hurricanes/tropical storms were spread throughout most of the age groups; however, only 2 of the 19 victims were female.

Hurricane Floyd produced 56 deaths in the United States and damage estimates ranged from \$4.5 billion to over \$6 billion, according to *The Hurricane Floyd Floods of September 1999 Service Assessment*. Of the 56 deaths, 48 were due to drowning in freshwater flooding inland, mostly in North Carolina. Floyd was the deadliest hurricane in the United States since Agnes in 1972.

### 1999 TROPICAL CYCLONE FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>BO</u>	<u>BU</u>	<u>IW</u>	<u>LS</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>SC</u>	<u>VE</u>	<u>TOTAL</u>
CA	0	0	2	0	0	0	0	0	0	0	2
FL	0	0	1	0	0	0	0	0	0	0	1
NC	1	0	5	0	0	0	0	1	0	7	14
VA	0	0	0	0	0	1	0	0	0	1	2
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>19</b>
<b>PERCENT</b>	<b>5</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>42</b>	<b>99*</b>

(\* Due to rounding total does not equal 100%)

### 1999 TROPICAL CYCLONE FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	0	1	0	1	5
10 TO 19	0	2	0	2	11
20 TO 29	1	2	0	3	16
30 TO 39	0	0	0	0	0
40 TO 49	0	3	0	3	16
50 TO 59	0	2	0	2	11
60 TO 69	1	3	0	4	21
70 TO 79	0	2	0	2	11
80 TO 89	0	1	0	1	5
90 TO --	0	0	0	0	0
UNKNOWN	0	1	0	1	5
<b>TOTAL</b>	<b>2</b>	<b>17</b>	<b>0</b>	<b>19</b>	<b>101*</b>
<b>PERCENT</b>	<b>11</b>	<b>89</b>	<b>0</b>	<b>100</b>	

(\* Due to rounding total does not equal 100%)

#### LEGEND

<b>BO</b>	- Boat
<b>BU</b>	- Business
<b>IW</b>	- In Water
<b>LS</b>	- Long-Span Roof
<b>MH</b>	- Mobile Home
<b>OT</b>	- Other/Unknown
<b>OU</b>	- Outside Open
<b>PH</b>	- Permanent Home
<b>SC</b>	- School
<b>VE</b>	- Vehicle

## 1999 Wind Related Fatalities

Wind related fatalities in 1999 totaled 62. High winds caused the greatest number of fatalities with 33; thunderstorm winds resulted in 29 deaths. Oregon and New Mexico had the highest number of deaths with 8 and 7, respectively. Males accounted for 63% of the wind related fatalities. Almost all age groups were vulnerable to both thunderstorm and high winds.

### 1999 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>BO</u>	<u>CA</u>	<u>LS</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>SC</u>	<u>VE</u>	<u>TOTAL</u>
AL	0	0	0	1	0	0	0	0	0	1
AR	0	0	0	1	0	0	0	0	0	1
AZ	0	0	0	0	0	1	0	0	1	2
CA	0	0	0	0	1	0	0	0	0	1
CO	0	0	0	0	1	0	0	0	1	2
FL	0	0	0	0	1	0	0	0	0	1
IN	0	0	0	0	1	0	0	0	0	1
KS	0	0	0	0	0	0	0	0	1	1
LA	2	0	0	0	0	0	0	0	0	2
MA	0	0	0	0	0	0	0	0	1	1
ME	0	0	0	0	1	0	0	0	0	1
MI	0	0	0	0	1	0	0	0	0	1
NC	0	0	0	0	0	0	0	0	1	1
ND	0	0	0	0	0	1	0	0	0	1
NH	0	0	0	0	0	0	1	0	2	3
NJ	0	0	0	0	1	1	0	0	1	3
NM	0	0	0	0	0	0	0	0	7	7
NY	0	1	0	0	1	0	0	0	1	3
OH	0	0	0	1	3	1	0	0	0	5
OR	0	0	0	0	0	0	0	0	8	8
PA	0	2	0	0	0	0	0	0	1	3
TN	0	0	0	1	0	0	1	0	0	2
TX	0	0	1	0	0	0	0	0	0	1
VA	0	0	0	1	1	0	0	0	0	2
VT	0	2	0	0	0	0	0	0	0	2
WA	0	0	0	0	1	0	0	0	1	2
WI	0	1	0	0	2	0	0	0	0	3
WY	0	0	0	0	0	0	0	0	1	1
<b>TOTAL</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>5</b>	<b>15</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>27</b>	<b>62</b>
<b>PERCENT</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>8</b>	<b>24</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>44</b>	<b>100</b>

### 1999 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	1	4	0	5	8
10 TO 19	7	1	0	8	13
20 TO 29	2	5	0	7	11
30 TO 39	2	9	0	11	18
40 TO 49	3	6	0	9	15
50 TO 59	2	6	0	8	13
60 TO 69	2	7	0	9	15
70 TO 79	2	1	0	3	5
80 TO 89	1	0	0	1	2
90 TO --	0	0	0	0	0
UNKNOWN	0	0	1	1	2
<b>TOTAL</b>	<b>22</b>	<b>39</b>	<b>1</b>	<b>62</b>	<b>102*</b>
<b>PERCENT</b>	<b>35</b>	<b>63</b>	<b>2</b>	<b>100</b>	

(\* Due to rounding total does not equal 100%)

#### LEGEND

**BO** - Boat  
**CA** - Camping  
**LS** - Long-Span Roof  
**MH** - Mobile Home  
**OT** - Other/Unknown  
**OU** - Outside Open  
**PH** - Permanent Home  
**SC** - School  
**VE** - Vehicle

## 1999 Wind Related Fatalities (Continued)

### 1999 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY STATE

<u>STATE</u>	<u>TSTM WIND</u>	<u>HIGH WIND</u>	<u>TOTAL</u>
AL	1	0	1
AR	1	0	1
AZ	0	2	2
CA	0	1	1
CO	1	1	2
FL	1	0	1
IN	1	0	1
KS	0	1	1
LA	2	0	2
MA	1	0	1
ME	0	1	1
MI	1	0	1
NC	0	1	1
ND	1	0	1
NH	2	1	3
NJ	0	3	3
NM	0	7	7
NY	2	1	3
OH	5	0	5
OR	0	8	8
PA	3	0	3
TN	1	1	2
TX	1	0	1
VA	1	1	2
VT	1	1	2
WA	0	2	2
WI	3	0	3
WY	0	1	1
<b>TOTAL</b>	<b>29</b>	<b>33</b>	<b>62</b>
<b>PERCENT</b>	<b>47</b>	<b>53</b>	<b>100</b>

### 1999 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY GENDER

	<u>TSTM WIND</u>	<u>HIGH WIND</u>	<u>TOTAL</u>	<u>PERCENT</u>
FEMALE	8	14	22	35
MALE	21	18	39	63
UNKNOWN	0	1	1	2
<b>TOTAL</b>	<b>29</b>	<b>33</b>	<b>62</b>	<b>100</b>
<b>PERCENT</b>	<b>47</b>	<b>53</b>	<b>100</b>	

## 1999 Heat Related Fatalities

In 1999, heat was the #1 killer with 502 fatalities, nearly three times the number (173) reported in 1998. A large portion of these deaths occurred in Illinois (138), Pennsylvania (88), and Missouri (77). Heat related injuries totaled 1,477, up nearly 57% from 1998. Seniors are most at risk from heat. In 1999, those between 70 and 89 years old accounted for 47% of the year's fatalities. Males accounted for 55% of the fatalities and females 41%; another 4% were unknown. As in the past, most deaths occurred in homes without air conditioning or adequate ventilation. Those most at risk had a contributing health ailment aggravated by the heat.

### 1999 HEAT RELATED FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>BF</u>	<u>CA</u>	<u>GF</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>VE</u>	<u>TOTAL</u>
AL	0	0	0	0	0	0	3	0	3
AR	0	0	0	2	2	1	7	0	12
DC	0	0	0	0	0	0	3	0	3
DE	0	0	0	0	0	0	4	0	4
GA	0	0	0	0	0	0	5	0	5
IL	0	0	0	1	1	5	125	6	138
KS	0	0	0	0	0	1	1	0	2
KY	0	0	0	0	0	0	2	0	2
LA	0	0	0	0	0	2	0	0	2
MA	0	0	0	0	0	0	2	0	2
MD	0	0	0	0	0	0	15	0	15
MN	0	0	0	1	0	0	0	1	2
MO	0	0	0	1	8	7	61	0	77
NC	0	0	0	0	0	2	1	1	4
NE	0	0	0	1	0	1	1	0	3
NJ	0	0	0	0	14	1	13	0	28
NY	0	0	0	0	31	0	2	0	33
OH	0	0	0	0	0	0	13	0	13
OK	0	0	0	0	0	1	9	0	10
PA	0	0	0	1	0	3	82	2	88
SC	0	0	0	2	0	6	13	0	21
TX	0	0	0	0	3	5	13	1	22
VA	0	0	0	0	0	1	0	0	1
WI	0	0	0	0	2	0	10	0	12
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>61</b>	<b>36</b>	<b>385</b>	<b>11</b>	<b>502</b>
<b>PERCENT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>7</b>	<b>77</b>	<b>2</b>	<b>100</b>

### 1999 HEAT RELATED FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	0	5	0	5	1
10 TO 19	0	1	0	1	0
20 TO 29	1	4	0	5	1
30 TO 39	7	10	0	17	3
40 TO 49	12	40	0	52	10
50 TO 59	11	54	0	65	13
60 TO 69	22	53	0	75	15
70 TO 79	73	60	0	133	26
80 TO 89	62	44	0	106	21
90 TO --	17	6	0	23	5
UNKNOWN	1	1	18	20	4
<b>TOTAL</b>	<b>206</b>	<b>278</b>	<b>18</b>	<b>502</b>	<b>99*</b>
<b>PERCENT</b>	<b>41</b>	<b>55</b>	<b>4</b>	<b>100</b>	

(\* Due to rounding total does not equal 100%)

#### LEGEND

**BF** - Ball Field  
**CA** - Camping  
**GF** - Golf  
**MH** - Mobile Home  
**OT** - Other/Unknown  
**OU** - Outside Open  
**PH** - Permanent Home  
**VE** - Vehicle

## 1999 Cold Related Fatalities

Extreme cold claimed 7 lives in 1999, down from 11 deaths recorded in 1998. Four states suffered cold related deaths: Alaska (1), Alabama (1), Illinois (1), and Michigan (4). Four fatalities occurred outside in the open. Six of the seven fatalities were male. Age demographics were spread throughout the age groups.

### 1999 COLD RELATED FATALITIES BY STATE AND LOCATION

<u>STATE</u>	<u>IW</u>	<u>MH</u>	<u>OT</u>	<u>OU</u>	<u>PH</u>	<u>VE</u>	<u>TOTAL</u>
AK	0	0	1	0	0	0	1
AL	0	0	0	0	1	0	1
IL	0	0	0	0	1	0	1
MI	0	0	0	4	0	0	4
<b>TOTAL</b>	0	0	1	4	2	0	7
<b>PERCENT</b>	0	0	14	57	29	0	100

### 1999 COLD RELATED FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	0	1	0	1	14
10 TO 19	0	0	0	0	0
20 TO 29	0	1	0	1	14
30 TO 39	0	0	0	0	0
40 TO 49	0	2	0	2	29
50 TO 59	0	1	0	1	14
60 TO 69	0	1	0	1	14
70 TO 79	0	0	0	0	0
80 TO 89	1	0	0	1	14
90 TO --	0	0	0	0	0
UNKNOWN	0	0	0	0	0
<b>TOTAL</b>	1	6	0	7	99*
<b>PERCENT</b>	14	86	0	100	

(\* Due to rounding total does not equal 100%)

#### LEGEND

**IW** - In Water  
**MH** - Mobile Home  
**OT** - Other/Unknown  
**OU** - Outside Open  
**PH** - Permanent Home  
**VE** - Vehicle





# TOTAL LIGHTNING DEATHS BY STATE AND NATION FOR YEAR 1999



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	0	0	2	0	0	0	0	0	0	0	2
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	0	0	1	0	0	0	0	0	1
ARKANSAS	0	0	0	0	0	1	0	1	0	0	0	0	2
CALIFORNIA	0	0	0	0	1	0	0	0	0	0	0	0	1
COLORADO	0	0	0	0	0	0	1	1	0	0	0	0	2
CONNECTICUT	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	0	0	0	0	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	0	0	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	0	0	1	0	0	1	0	3	0	0	0	0	5
GEORGIA	0	0	0	0	1	0	0	1	0	0	0	0	2
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	0	0	0	0	0	0	0	0
ILLINOIS	0	0	0	0	0	2	0	0	0	0	0	0	2
INDIANA	0	0	0	1	0	0	0	0	0	0	0	0	1
IOWA	0	0	0	0	0	0	0	0	0	0	0	0	0
KANSAS	0	0	0	0	0	0	0	1	0	0	1	0	2
KENTUCKY	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISIANA	0	0	0	0	0	0	3	0	0	0	0	0	3
MAINE	0	0	0	0	0	0	0	0	0	0	0	0	0
MARYLAND	0	0	0	0	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	0	0	0	0	0	0	0	0	0	0	0	0	0
MICHIGAN	0	0	0	0	0	0	1	0	0	0	0	0	1
MINNESOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
MISSISSIPPI	0	0	0	0	0	0	0	1	0	0	0	0	1
MISSOURI	0	0	0	0	0	0	0	0	0	0	0	0	0
MONTANA	0	0	0	0	0	2	1	0	0	0	0	0	3
NEBRASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	0	0	0	0	0	0	0	1	0	0	0	0	1
NEW MEXICO	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW YORK	0	0	0	0	0	0	0	0	1	0	0	0	1
NORTH CAROLINA	0	0	0	0	0	0	3	1	0	0	0	0	4
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	0	0	1	1	0	0	0	0	0	2
OKLAHOMA	0	0	0	1	0	0	0	0	0	0	0	0	1
OREGON	0	0	0	0	0	0	0	0	0	0	0	0	0
PENNSYLVANIA	0	0	0	0	0	0	0	0	0	0	0	0	0
PUERTO RICO	0	0	0	0	0	0	0	0	0	0	0	0	0
RHODE ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH CAROLINA	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
TENNESSEE	0	0	0	0	0	1	0	0	0	0	0	0	1
TEXAS	0	0	0	0	2	0	1	0	0	0	0	0	3
UTAH	0	0	0	0	1	0	0	0	0	0	0	0	1
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	0	0	0	1	0	0	0	0	0	0	0	0	1
WASHINGTON	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST VIRGINIA	0	0	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	0	0	0	0	0	0	1	0	0	0	0	0	1
WYOMING	0	0	0	0	0	0	2	0	0	0	0	0	2
TOTAL: UNITED STATES	0	0	1	3	7	8	15	10	1	0	1	0	46



# TOTAL LIGHTNING INJURIES BY STATE AND NATION FOR YEAR 1999



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	0	0	1	0	3	0	0	0	0	0	4
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	0	0	7	3	1	0	0	0	11
ARKANSAS	0	0	0	1	1	0	0	0	0	0	0	0	2
CALIFORNIA	0	0	0	0	0	0	1	0	0	0	0	0	1
COLORADO	0	0	0	0	4	2	6	10	0	0	0	0	22
CONNECTICUT	1	0	0	0	0	0	0	0	0	0	0	0	1
DELAWARE	0	0	0	0	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	0	0	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	0	0	1	0	13	12	11	8	2	0	0	0	47
GEORGIA	0	0	0	0	1	2	0	2	0	0	0	0	5
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	0	0	0	0	0	0	0	0
ILLINOIS	0	0	0	0	5	2	0	0	0	0	0	0	7
INDIANA	0	0	0	0	1	0	0	0	0	0	0	0	1
IOWA	0	0	0	0	0	1	0	0	0	0	0	0	1
KANSAS	0	0	0	0	0	1	0	0	0	0	1	0	2
KENTUCKY	0	0	0	0	0	1	0	0	0	0	0	0	1
LOUISIANA	1	0	0	0	0	0	1	2	0	0	0	0	4
MAINE	0	0	0	0	0	1	0	1	0	0	0	0	2
MARYLAND	0	0	0	0	1	1	0	1	0	0	0	0	3
MASSACHUSETTS	0	0	0	0	0	0	0	0	0	0	0	0	0
MICHIGAN	0	0	0	0	0	1	2	0	0	2	0	0	5
MINNESOTA	0	0	0	0	0	2	0	0	0	0	0	0	2
MISSISSIPPI	0	0	0	0	1	0	0	0	0	0	0	0	1
MISSOURI	0	0	0	0	1	0	0	0	0	0	0	0	1
MONTANA	0	0	0	0	1	0	0	0	0	0	0	0	1
NEBRASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	0	1	0	0	0	0	1
NEW HAMPSHIRE	0	0	1	0	0	0	4	4	0	0	0	0	9
NEW JERSEY	1	0	0	1	0	0	1	6	0	0	0	0	9
NEW MEXICO	0	0	0	1	0	0	0	1	1	0	0	0	2
NEW YORK	0	0	0	0	0	0	1	0	0	0	0	0	1
NORTH CAROLINA	0	0	0	0	0	0	11	9	0	0	0	0	20
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	0	0	3	7	0	1	0	0	0	11
OKLAHOMA	0	0	0	1	0	0	0	1	4	0	0	0	6
OREGON	0	0	0	0	0	0	0	1	0	0	0	0	1
PENNSYLVANIA	0	0	0	0	0	2	1	1	0	0	0	0	4
PUERTO RICO	0	0	0	0	0	0	0	2	0	0	0	0	2
RHODE ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH CAROLINA	0	0	0	3	0	0	2	2	0	0	0	0	7
SOUTH DAKOTA	0	0	0	0	0	0	0	1	0	0	0	0	1
TENNESSEE	0	0	0	0	0	1	1	0	0	0	0	0	2
TEXAS	0	0	1	0	1	1	1	0	6	1	0	0	11
UTAH	0	0	0	0	1	0	0	0	0	0	0	0	1
VERMONT	0	0	0	0	0	1	1	0	0	0	0	0	2
VIRGINIA	0	0	0	0	0	0	0	2	0	0	0	0	2
WASHINGTON	0	0	0	0	0	0	1	8	0	0	0	0	9
WEST VIRGINIA	0	0	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	0	0	0	1	2	8	4	0	0	0	0	0	15
WYOMING	0	0	0	0	0	0	1	2	0	0	0	0	3
TOTAL: UNITED STATES	3	0	3	8	34	42	67	67	15	3	1	0	243



# TOTAL LIGHTNING DEATHS BY STATE AND NATION FOR PERIOD 1959-1999



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	1	3	4	10	10	7	1	1	0	0	37
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	4	0	8	7	9	1	0	1	30
ARKANSAS	0	0	8	0	2	15	18	15	4	0	0	0	62
CALIFORNIA	0	0	0	0	1	2	3	1	5	0	0	0	12
COLORADO	0	0	0	2	1	12	26	15	7	1	0	0	64
CONNECTICUT	0	0	0	0	0	2	3	2	0	0	0	0	7
DELAWARE	0	0	0	0	3	1	2	3	0	0	0	0	9
DISTRICT OF COLUMBIA	0	0	0	0	0	2	1	1	0	0	0	0	4
FLORIDA	0	0	2	5	8	47	65	57	31	2	0	0	217
GEORGIA	0	0	1	2	5	10	16	10	2	1	0	0	47
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	4	2	1	1	0	0	0	8
ILLINOIS	0	0	0	2	3	17	8	12	4	1	0	0	47
INDIANA	0	0	1	2	3	10	9	10	4	2	0	0	41
IOWA	0	0	0	1	5	10	2	11	1	2	0	0	32
KANSAS	0	0	0	3	3	6	7	2	1	1	3	0	26
KENTUCKY	0	0	0	2	3	9	9	6	12	0	0	0	41
LOUISIANA	1	1	1	4	5	14	24	3	11	0	2	2	68
MAINE	0	0	0	0	0	1	3	4	0	3	0	0	11
MARYLAND	0	0	0	0	2	4	6	6	2	1	0	81	102
MASSACHUSETTS	0	0	0	0	1	3	1	5	1	0	0	0	11
MICHIGAN	0	0	0	1	2	14	21	14	5	0	0	0	57
MINNESOTA	0	0	0	1	2	9	6	11	2	1	0	0	32
MISSISSIPPI	0	0	3	1	5	7	18	9	5	0	0	0	48
MISSOURI	0	0	4	0	7	16	8	7	1	1	0	0	44
MONTANA	0	0	0	0	0	5	8	0	1	0	0	0	14
NEBRASKA	0	0	0	0	1	8	6	6	3	0	0	0	24
NEVADA	0	0	0	0	1	1	0	1	1	0	0	0	4
NEW HAMPSHIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	0	0	0	1	3	2	6	7	5	0	0	0	24
NEW MEXICO	0	0	0	0	3	6	13	26	2	0	0	0	50
NEW YORK	0	0	0	0	4	11	35	18	5	2	0	0	75
NORTH CAROLINA	0	1	2	0	6	11	28	21	4	0	0	0	73
NORTH DAKOTA	0	0	0	0	0	3	3	1	0	0	0	0	7
OHIO	0	0	0	2	5	14	21	13	8	2	2	0	67
OKLAHOMA	1	0	0	3	6	8	7	16	10	2	0	0	53
OREGON	0	0	0	0	1	0	0	0	2	0	0	0	3
PENNSYLVANIA	0	0	0	1	2	10	21	13	7	1	0	0	55
PUERTO RICO	0	0	0	0	0	0	2	6	0	0	0	0	8
RHODE ISLAND	0	0	0	0	0	0	1	0	2	0	0	0	3
SOUTH CAROLINA	0	0	1	0	3	4	13	10	8	0	0	0	39
SOUTH DAKOTA	0	0	0	0	4	1	2	1	2	2	0	0	12
TENNESSEE	0	1	0	5	7	23	15	12	12	2	1	0	78
TEXAS	0	1	1	10	16	11	25	14	10	2	0	0	90
UTAH	0	0	0	1	1	4	5	5	4	0	0	0	20
VERMONT	0	0	0	0	0	1	1	2	0	0	0	0	4
VIRGINIA	0	0	0	1	1	4	7	4	3	0	0	0	20
WASHINGTON	0	0	0	1	0	1	1	0	1	0	0	0	4
WEST VIRGINIA	0	0	0	0	3	4	5	4	1	0	0	0	17
WISCONSIN	0	0	1	1	0	7	7	11	2	0	0	1	30
WYOMING	0	0	0	0	0	4	6	5	2	0	0	0	17
TOTAL: UNITED STATES	2	4	26	55	136	368	514	415	204	31	8	85	1848



# TOTAL LIGHTNING INJURIES BY STATE AND NATION FOR PERIOD 1959-1999



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	1	2	11	2	9	14	63	25	4	4	0	0	135
ALASKA	0	0	0	0	0	0	1	1	0	0	0	0	2
ARIZONA	0	1	0	0	4	4	14	34	22	3	1	3	86
ARKANSAS	1	1	3	7	8	25	19	38	7	0	0	1	110
CALIFORNIA	0	0	4	1	1	0	10	8	13	1	1	0	39
COLORADO	0	0	0	3	23	67	71	78	18	3	0	0	263
CONNECTICUT	1	1	2	1	2	2	16	6	6	3	0	0	40
DELAWARE	0	0	0	0	7	6	2	0	1	0	0	0	16
DISTRICT OF COLUMBIA	0	0	0	0	0	13	0	1	0	0	1	0	15
FLORIDA	0	1	13	20	45	148	247	177	138	38	1	1	829
GEORGIA	2	0	3	3	20	47	74	33	4	5	0	1	192
HAWAII	0	1	0	0	0	0	0	4	0	0	3	0	8
IDAHO	0	0	0	0	0	18	10	10	6	1	0	0	45
ILLINOIS	0	1	0	1	14	33	26	49	27	6	0	0	157
INDIANA	0	0	2	1	16	18	36	22	8	0	0	0	103
IOWA	0	0	0	3	11	28	13	11	6	1	0	0	73
KANSAS	0	0	5	4	6	15	30	17	25	2	2	0	106
KENTUCKY	0	0	1	2	11	17	41	13	8	0	0	0	93
LOUISIANA	4	1	5	25	15	18	35	24	9	7	2	2	147
MAINE	0	10	0	0	2	14	24	18	0	0	1	0	69
MARYLAND	1	0	1	1	5	19	22	23	4	3	0	0	79
MASSACHUSETTS	0	0	0	0	11	40	72	54	26	0	0	1	204
MICHIGAN	0	0	2	7	13	77	108	64	26	8	0	0	305
MINNESOTA	0	0	1	0	9	14	23	17	2	3	0	0	69
MISSISSIPPI	1	0	4	2	10	5	45	16	8	3	7	1	102
MISSOURI	0	1	1	9	5	14	8	17	8	1	4	0	68
MONTANA	0	0	0	0	1	8	5	2	1	1	0	0	18
NEBRASKA	0	0	0	2	13	7	8	11	3	0	0	0	44
NEVADA	0	0	0	0	3	2	8	3	1	0	0	0	17
NEW HAMPSHIRE	0	0	1	0	0	3	35	14	0	0	0	0	53
NEW JERSEY	1	0	0	1	9	6	20	14	19	0	0	0	70
NEW MEXICO	0	0	0	1	3	12	51	55	6	1	0	0	129
NEW YORK	0	0	0	1	16	51	85	107	24	5	1	0	290
NORTH CAROLINA	0	2	19	4	18	61	101	97	22	2	1	0	327
NORTH DAKOTA	0	0	0	0	1	1	6	3	2	0	0	0	13
OHIO	0	0	2	5	30	48	63	94	52	4	12	0	310
OKLAHOMA	1	0	1	7	13	22	26	34	27	18	8	2	159
OREGON	0	0	0	0	1	0	0	9	1	0	0	0	11
PENNSYLVANIA	1	1	0	0	22	96	95	35	45	3	0	0	298
PUERTO RICO	0	0	0	0	0	0	0	2	0	0	0	0	2
RHODE ISLAND	0	0	0	0	0	3	1	9	3	0	1	0	17
SOUTH CAROLINA	0	0	0	5	11	17	47	28	16	0	1	0	125
SOUTH DAKOTA	0	0	0	1	3	9	12	7	1	2	0	0	35
TENNESSEE	1	3	6	25	29	15	64	32	9	5	1	0	190
TEXAS	2	3	5	6	22	39	53	34	44	7	3	0	218
UTAH	0	0	0	1	8	16	10	13	7	1	0	0	56
VERMONT	0	0	0	0	0	5	4	2	0	0	0	0	11
VIRGINIA	0	0	2	4	7	22	62	23	9	0	0	0	129
WASHINGTON	0	0	0	1	0	12	4	14	0	0	1	1	33
WEST VIRGINIA	0	0	0	10	1	4	40	27	0	1	0	0	83
WISCONSIN	0	1	1	3	3	49	44	36	7	3	0	0	147
WYOMING	0	0	0	1	2	14	10	11	8	0	0	0	46
TOTAL: UNITED STATES	17	30	95	170	463	1178	1864	1476	683	145	52	13	6186



## NATIONAL TOTAL LIGHTNING DEATHS BY YEAR FOR PERIOD 1959-1999



YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1959	0	0	0	1	8	13	27	11	10	5	0	0	75
1960	0	0	0	2	0	19	12	8	7	0	0	0	48
1961	0	0	0	1	1	18	25	8	8	0	0	0	61
1962	0	0	0	1	4	7	14	16	5	1	0	0	48
1963	0	0	4	1	2	26	16	12	7	1	0	81*	150
1964	0	0	9	2	2	8	10	10	7	1	0	0	49
1965	0	0	2	3	6	19	16	9	2	0	0	0	57
1966	0	0	1	0	0	7	12	10	7	2	0	0	39
1967	0	0	1	1	1	6	10	6	1	0	0	1	27
1968	0	0	0	0	4	10	14	12	7	3	0	1	51
1969	0	0	0	3	2	6	15	6	11	3	0	0	46
1970	0	0	0	0	7	14	12	5	11	1	0	0	50
1971	0	0	1	0	4	16	15	9	17	0	0	0	62
1972	0	0	1	1	2	14	14	19	0	0	0	0	51
1973	0	1	0	1	4	10	17	7	7	2	1	0	50
1974	0	1	0	5	4	16	18	10	3	0	1	0	58
1975	0	0	1	0	2	8	16	5	5	1	0	0	38
1976	0	0	0	1	4	5	9	10	3	2	0	0	34
1977	0	0	0	1	4	8	7	31	8	0	0	0	59
1978	0	0	0	0	0	9	16	15	3	1	0	0	44
1979	0	0	0	0	4	0	7	7	4	2	0	0	24
1980	0	0	0	0	3	9	14	11	2	0	0	0	39
1981	0	0	0	4	2	9	4	15	5	0	1	0	40
1982	1	0	0	1	1	4	11	12	2	1	0	0	33
1983	0	0	1	2	2	6	15	16	5	1	1	0	49
1984	0	0	0	1	3	5	12	6	5	0	1	0	33
1985	0	0	0	2	5	7	13	3	4	0	0	0	34
1986	0	0	0	2	4	4	9	11	2	0	0	0	32
1987	0	0	0	0	6	6	15	7	0	1	0	0	35
1988	0	0	0	0	3	2	9	12	1	1	2	0	30
1989	0	0	0	1	5	3	4	7	2	1	0	0	23
1990	0	0	2	0	2	9	10	7	9	0	0	0	39
1991	0	0	0	1	2	6	13	11	3	0	0	0	36
1992	0	0	0	2	1	3	6	8	5	0	0	0	25
1993	0	0	0	0	5	2	4	5	4	0	0	0	20
1994	0	0	0	1	4	3	13	6	4	1	0	0	32
1995	0	0	0	4	4	3	16	9	7	0	0	0	43
1996	1	0	0	4	3	18	8	13	4	0	0	1	52
1997	0	1	0	1	6	10	12	8	4	0	0	0	42
1998	0	1	2	2	3	12	9	12	2	0	0	1	44
1999	0	0	1	3	7	8	15	10	1	0	1	0	46
TOTAL	2	4	26	55	136	368	514	415	204	31	8	85	1848
MEAN	0	0	1	1	3	9	13	10	5	1	0	2	45

\* ON DECEMBER 8, 1963 THE CRASH OF A JETLINER KILLING 81 PEOPLE NEAR ELKIN, MARYLAND, WAS ATTRIBUTED TO LIGHTNING BY THE CIVIL AERONAUTICS BOARD INVESTIGATORS.



## NATIONAL TOTAL LIGHTNING INJURIES BY YEAR FOR PERIOD 1959-1999

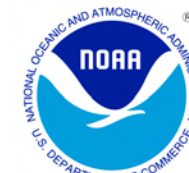


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1959	0	0	0	1	14	31	40	26	18	3	1	0	134
1960	0	0	0	2	0	29	11	27	13	6	3	0	91
1961	0	0	5	1	8	40	48	35	26	1	1	1	166
1962	0	0	0	1	8	13	48	20	5	5	0	0	100
1963	0	0	0	1	6	54	22	27	18	1	0	0	129
1964	0	0	7	3	2	11	31	33	7	0	1	0	95
1965	1	2	0	0	8	28	29	31	14	0	0	0	113
1966	0	1	0	0	2	22	25	28	12	1	0	0	91
1967	0	0	0	1	5	20	22	8	3	1	0	1	61
1968	0	0	1	0	8	26	48	28	11	9	1	0	132
1969	0	0	0	4	6	29	19	14	6	0	0	1	79
1970	0	0	1	0	13	30	35	23	33	4	1	0	140
1971	0	1	0	0	6	34	30	28	17	1	1	0	118
1972	0	0	4	4	6	16	20	34	3	2	1	0	90
1973	0	0	9	1	7	11	24	38	23	9	1	0	123
1974	1	2	0	2	1	15	28	25	9	1	0	0	84
1975	0	0	0	0	9	10	49	24	22	1	0	0	115
1976	0	1	0	4	6	19	27	29	3	1	0	1	91
1977	0	0	0	0	5	19	26	46	41	0	1	0	138
1978	0	0	0	1	2	19	28	20	39	5	0	0	114
1979	0	0	2	4	9	9	27	22	4	2	0	0	79
1980	0	1	1	8	4	25	29	102	16	0	0	0	186
1981	0	0	1	4	19	23	80	39	5	1	12	0	184
1982	1	0	2	3	4	8	12	16	8	4	4	1	63
1983	0	0	23	3	11	8	43	73	12	30	0	0	203
1984	0	0	1	4	5	26	57	22	40	0	1	0	156
1985	0	0	0	2	33	38	29	24	23	0	0	0	149
1986	0	2	4	1	9	24	43	25	11	1	0	0	120
1987	0	0	0	4	11	31	49	60	31	2	1	1	190
1988	0	0	0	1	16	7	69	47	2	4	0	0	146
1989	0	0	4	5	10	26	83	35	6	4	2	0	175
1990	0	0	2	2	8	20	64	31	24	1	0	0	152
1991	0	0	0	9	12	52	61	48	24	1	0	0	207
1992	0	0	2	4	30	8	50	37	24	6	0	0	161
1993	1	0	0	1	9	45	55	23	11	1	0	1	147
1994	0	1	0	21	27	33	96	69	23	13	4	1	288
1995	4	1	3	16	18	25	96	50	17	0	3	0	233
1996	2	3	4	12	36	102	66	49	21	6	6	2	309
1997	3	12	7	8	8	69	109	48	27	11	4	0	306
1998	1	3	9	24	28	81	69	45	16	4	2	3	285
1999	3	0	3	8	34	42	67	67	15	3	1	0	243
TOTAL	17	30	95	170	463	1178	1864	1476	683	145	52	13	6186
MEAN	0	1	2	4	11	29	45	36	17	4	1	0	151



# LIGHTNING DEATHS BY STATE, RANK, AND LOCATION OF OCCURRENCE

## 1959-1999 1999



STATE	RANK	OPEN FIELDS, BALL PARKS AND OPEN SPACES		UNDER TREES		BOATING, FISHING AND WATER RELATED		NEAR TRACTORS HEAVY ROAD EQUIPMENT		GOLF COURSES		AT TELEPHONES		VARIOUS OTHER AND UNKNOWN LOCATIONS		OPEN FIELDS, BALL PARKS AND OPEN SPACES		UNDER TREES		BOATING, FISHING AND WATER RELATED		NEAR TRACTORS HEAVY ROAD EQUIPMENT		GOLF COURSES		AT TELEPHONES		VARIOUS OTHER AND UNKNOWN LOCATIONS	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ALABAMA	22	9	24	11	30	8	22	0	0	0	0	0	0	9	24	2	100	0	0	0	0	0	0	0	0	0	0	0	0
ALASKA	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	26	15	50	2	7	1	3	1	3	3	10	2	7	6	20	1	100	0	0	0	0	0	0	0	0	0	0	0	0
ARKANSAS	10	20	32	11	18	2	3	5	8	2	3	0	0	22	35	0	0	1	50	0	0	1	50	0	0	0	0	0	0
CALIFORNIA	36	1	8	3	25	1	8	2	17	0	0	0	0	5	42	0	0	0	0	0	0	0	0	0	0	0	1	100	
COLORADO	9	29	45	13	20	2	3	2	3	5	8	0	0	13	20	2	100	0	0	0	0	0	0	0	0	0	0	0	0
CONNECTICUT	43	2	29	0	0	0	0	0	0	1	14	0	0	4	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	39	4	44	0	0	3	33	0	0	0	0	0	0	2	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DIST OF COLUMBIA	47	1	25	2	50	0	0	0	0	1	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	1	59	27	32	15	51	24	16	7	8	4	0	0	51	24	0	0	1	20	2	40	0	0	0	0	0	2	40	
GEORGIA	17	18	38	8	17	7	15	1	2	2	4	1	2	10	21	1	50	0	0	0	0	0	0	0	0	0	1	50	
HAWAII	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	41	1	13	1	13	1	13	4	50	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ILLINOIS	16	12	26	13	28	2	4	3	6	3	6	1	2	13	28	0	0	2	100	0	0	0	0	0	0	0	0	0	0
INDIANA	20	9	22	16	39	2	5	3	7	0	0	0	0	11	27	0	0	1	100	0	0	0	0	0	0	0	0	0	0
IOWA	24	6	19	1	3	1	3	5	16	1	3	0	0	18	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KANSAS	27	11	42	0	0	4	15	3	12	0	0	0	0	8	31	2	100	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	19	9	22	4	10	2	5	2	5	2	5	1	2	21	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISIANA	7	6	9	22	32	17	25	6	9	0	0	0	0	17	25	1	33	0	0	2	67	0	0	0	0	0	0	0	0
MAINE	38	0	0	0	0	5	45	0	0	0	0	0	0	6	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MARYLAND	2	6	6	3	3	10	10	1	1	0	0	0	0	82	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	37	2	18	1	9	0	0	0	0	1	9	1	9	6	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MICHIGAN	11	14	25	15	26	8	14	2	4	6	11	2	4	10	18	0	0	0	0	1	100	0	0	0	0	0	0	0	0
MINNESOTA	23	13	41	7	22	3	9	3	9	2	6	1	3	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISSISSIPPI	15	16	33	12	25	5	10	4	8	0	0	0	0	11	23	0	0	1	100	0	0	0	0	0	0	0	0	0	0
MISSOURI	18	9	20	9	20	8	18	2	5	2	5	1	2	13	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONTANA	34	5	36	2	14	1	7	4	29	0	0	0	0	2	14	0	0	0	0	1	33	1	33	0	0	0	1	33	33
NEBRASKA	29	10	42	2	8	2	8	6	25	0	0	0	0	4	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA	46	0	0	0	0	0	0	0	0	1	25	0	0	3	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	28	8	33	6	25	3	13	0	0	2	8	0	0	5	21	0	0	1	100	0	0	0	0	0	0	0	0	0	0
NEW MEXICO	14	25	50	6	12	3	6	0	0	0	0	2	4	14	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW YORK	5	11	15	16	21	9	12	3	4	4	5	0	0	32	43	0	0	0	0	0	0	0	0	0	0	0	1	100	
NORTH CAROLINA	6	15	21	10	14	8	11	4	5	2	3	0	0	34	47	3	75	0	0	1	25	0	0	0	0	0	0	0	0
NORTH DAKOTA	42	2	29	0	0	0	0	3	43	0	0	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0

\* ON DECEMBER 8, 1963 THE CRASH OF A JETLINER KILLING 81 PEOPLE NEAR ELKIN, MARYLAND, WAS ATTRIBUTED TO LIGHTNING BY THE CIVIL AERONAUTICS BOARD INVESTIGATORS.



# LIGHTNING DEATHS BY STATE, RANK, AND LOCATION OF OCCURRENCE

## 1959-1999



1999

STATE	RANK	OPEN FIELDS, BALL PARKS AND OPEN SPACES		UNDER TREES		BOATING, FISHING AND WATER RELATED		NEAR TRACTORS HEAVY ROAD EQUIPMENT		GOLF COURSES		AT TELEPHONES		VARIOUS OTHER AND UNKNOWN LOCATIONS		OPEN FIELDS, BALL PARKS AND OPEN SPACES		UNDER TREES		BOATING, FISHING AND WATER RELATED		NEAR TRACTORS HEAVY ROAD EQUIPMENT		GOLF COURSES		AT TELEPHONES		VARIOUS OTHER AND UNKNOWN LOCATIONS		
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	
OHIO	8	18	27	8	12	8	12	7	10	6	9	1	1	19	28	0	0	1	50	0	0	1	50	0	0	0	0	0	0	0
OKLAHOMA	13	20	38	3	6	15	28	4	8	0	0	2	4	9	17	0	0	0	0	1	100	0	0	0	0	0	0	0	0	
OREGON	49	1	33	1	33	0	0	0	0	0	0	0	0	1	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PENNSYLVANIA	12	21	38	4	7	1	2	1	2	4	7	0	0	24	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PUERTO RICO	40	3	38	2	25	1	13	0	0	0	0	0	0	2	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RHODE ISLAND	48	0	0	0	0	0	0	0	0	0	0	0	0	3	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH CAROLINA	21	6	15	11	28	6	15	6	15	2	5	1	3	7	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH DAKOTA	35	2	17	1	8	2	17	5	42	1	8	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TENNESSEE	4	18	23	21	27	4	5	6	8	5	6	1	1	23	29	0	0	0	0	0	0	1	100	0	0	0	0	0	0	
TEXAS	3	31	34	15	17	14	16	10	11	3	3	0	0	17	19	1	33	0	0	1	33	0	0	0	0	0	0	1	33	
UTAH	31	9	45	6	30	0	0	2	10	0	0	0	0	3	15	1	100	0	0	0	0	0	0	0	0	0	0	0	0	
VERMONT	45	1	25	1	25	0	0	0	0	0	0	0	0	2	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VIRGINIA	30	7	35	4	20	0	0	1	5	1	5	0	0	7	35	0	0	1	100	0	0	0	0	0	0	0	0	0	0	
WASHINGTON	44	2	50	1	25	0	0	1	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WEST VIRGINIA	33	4	24	6	35	1	6	1	6	0	0	0	0	5	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WISCONSIN	25	11	37	2	7	6	20	2	7	2	7	0	0	7	23	1	100	0	0	0	0	0	0	0	0	0	0	0	0	
WYOMING	32	12	71	0	0	2	12	0	0	0	0	0	0	3	18	2	100	0	0	0	0	0	0	0	0	0	0	0	0	
UNITED STATES	0	514	28	314	17	229	12	131	7	73	4	17	1	570	31	17	37	9	20	9	20	4	9	0	0	0	0	7	15	





# TORNADO SUMMARY BY STATE AND NATION, 1999

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
<b>ALABAMA</b>													
NUMBER	5	5	2	3	5	0	1	0	0	2	0	0	23
DAYS	1	2	2	2	3	0	1	0	0	1	0	0	12
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>ARIZONA</b>													
NUMBER	0	0	0	0	0	0	1	0	4	0	0	0	5
DAYS	0	0	0	0	0	0	1	0	3	0	0	0	4
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ARKANSAS</b>													
NUMBER	67	2	12	8	9	2	1	0	0	0	0	5	106
DAYS	3	1	1	4	3	2	1	0	0	0	0	2	17
DEATHS	6	0	0	0	0	0	0	0	0	0	0	0	6
INJURIES	114	0	0	7	0	0	26	0	0	0	0	0	147
<b>CALIFORNIA</b>													
NUMBER	0	0	0	2	0	0	1	0	0	0	0	0	3
DAYS	0	0	0	2	0	0	1	0	0	0	0	0	3
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>COLORADO</b>													
NUMBER	0	0	0	1	9	12	4	11	4	0	0	0	41
DAYS	0	0	0	1	4	6	4	4	2	0	0	0	21
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	1	0	0	0	0	0	0	1
<b>FLORIDA</b>													
NUMBER	12	3	6	0	11	4	9	4	5	5	1	0	60
DAYS	3	2	4	0	8	4	7	4	3	2	1	0	38
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	8	0	0	0	0	0	0	0	0	4	0	0	12
<b>GEORGIA</b>													
NUMBER	1	0	0	5	3	2	0	0	0	0	1	0	12
DAYS	1	0	0	1	3	2	0	0	0	0	1	0	8
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	30	3	0	0	0	0	0	0	0	33
<b>IDAHO</b>													
NUMBER	0	0	0	0	0	0	1	0	0	0	0	0	1
DAYS	0	0	0	0	0	0	1	0	0	0	0	0	1
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ILLINOIS</b>													
NUMBER	3	3	0	12	5	37	0	2	0	0	0	0	62
DAYS	2	2	0	3	3	4	0	1	0	0	0	0	15
DEATHS	0	0	0	2	0	1	0	0	0	0	0	0	3
INJURIES	0	0	0	11	4	10	0	0	0	0	0	0	25
<b>INDIANA</b>													
NUMBER	0	0	0	3	6	0	0	0	1	0	0	0	10
DAYS	0	0	0	1	2	0	0	0	1	0	0	0	4
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	2	0	0	0	0	1	0	0	0	3
<b>IOWA</b>													
NUMBER	0	0	0	19	14	18	4	2	1	0	0	0	58
DAYS	0	0	0	2	2	5	3	1	1	0	0	0	14
DEATHS	0	0	0	0	2	0	0	0	0	0	0	0	2
INJURIES	0	0	0	12	16	0	0	0	0	0	0	0	28
<b>KANSAS</b>													
NUMBER	0	0	0	11	32	13	6	0	2	0	0	0	64
DAYS	0	0	0	3	9	5	3	0	2	0	0	0	22
DEATHS	0	0	0	0	6	0	0	0	0	0	0	0	6
INJURIES	0	0	0	1	154	0	0	0	0	0	0	0	155
<b>KENTUCKY</b>													
NUMBER	2	1	0	0	1	0	1	1	0	0	0	0	6
DAYS	1	1	0	0	1	0	1	1	0	0	0	0	5
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	8	2	0	0	0	0	0	0	0	0	0	0	10
<b>LOUISIANA</b>													
NUMBER	44	1	8	4	3	0	1	0	1	0	0	1	63
DAYS	7	1	3	1	3	0	1	0	1	0	0	1	18
DEATHS	0	0	0	7	0	0	0	0	0	0	0	0	7
INJURIES	5	0	5	103	0	0	0	0	0	0	0	0	113

\* CORRECTED FOR BOUNDARY-CROSSING TORNADOES  
& TORNADO DAYS FOR COUNTRY AS A WHOLE



# TORNADO SUMMARY BY STATE AND NATION, 1999

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
<b>MAINE</b>													
NUMBER	0	0	0	0	0	0	0	1	0	0	0	0	1
DAYS	0	0	0	0	0	0	0	1	0	0	0	0	1
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>MARYLAND</b>													
NUMBER	0	0	0	0	0	0	1	2	0	0	0	0	3
DAYS	0	0	0	0	0	0	1	2	0	0	0	0	3
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>MICHIGAN</b>													
NUMBER	0	0	0	0	4	0	5	1	0	0	0	0	10
DAYS	0	0	0	0	3	0	4	1	0	0	0	0	8
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	2	0	0	0	0	0	2
<b>MINNESOTA</b>													
NUMBER	0	0	0	0	0	9	15	13	0	0	0	0	37
DAYS	0	0	0	0	0	4	7	2	0	0	0	0	13
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	2	0	0	0	0	0	2
<b>MISSISSIPPI</b>													
NUMBER	29	2	3	4	5	0	0	0	0	0	0	1	44
DAYS	4	1	2	1	2	0	0	0	0	0	0	1	11
DEATHS	0	0	0	1	0	0	0	0	0	0	0	0	1
INJURIES	2	0	0	33	0	0	0	0	0	0	0	1	36
<b>MISSOURI</b>													
NUMBER	12	2	0	15	2	10	0	0	0	0	0	0	41
DAYS	1	1	0	3	1	4	0	0	0	0	0	0	10
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	11	1	0	0	0	0	0	0	0	12
<b>MONTANA</b>													
NUMBER	0	0	0	0	1	9	5	7	0	0	0	0	22
DAYS	0	0	0	0	1	6	3	2	0	0	0	0	12
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	3	0	0	0	0	3
<b>NEBRASKA</b>													
NUMBER	0	0	0	16	24	49	4	4	5	0	0	0	102
DAYS	0	0	0	3	6	10	2	1	4	0	0	0	26
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	1	0	0	0	0	0	1
<b>NEVADA</b>													
NUMBER	0	0	0	0	0	0	1	0	0	0	0	0	1
DAYS	0	0	0	0	0	0	1	0	0	0	0	0	1
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NEW HAMPSHIRE</b>													
NUMBER	0	0	0	0	0	0	1	1	0	0	0	0	2
DAYS	0	0	0	0	0	0	1	1	0	0	0	0	2
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NEW JERSEY</b>													
NUMBER	0	1	0	0	0	0	0	1	0	0	0	0	2
DAYS	0	1	0	0	0	0	0	1	0	0	0	0	2
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>NEW MEXICO</b>													
NUMBER	0	0	0	1	4	3	0	0	0	0	0	0	8
DAYS	0	0	0	1	2	2	0	0	0	0	0	0	5
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NEW YORK</b>													
NUMBER	0	0	0	0	0	0	0	1	0	0	0	0	1
DAYS	0	0	0	0	0	0	0	1	0	0	0	0	1
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>NORTH CAROLINA</b>													
NUMBER	0	0	0	12	1	0	0	1	21	2	0	0	37
DAYS	0	0	0	2	1	0	0	1	2	1	0	0	7
DEATHS	0	0	0	1	0	0	0	0	0	0	0	0	1
INJURIES	0	0	0	37	0	0	0	0	0	1	0	0	38

\* CORRECTED FOR BOUNDARY-CROSSING TORNADOES  
& TORNADO DAYS FOR COUNTRY AS A WHOLE



# TORNADO SUMMARY BY STATE AND NATION, 1999

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
<b>NORTH DAKOTA</b>													
NUMBER	0	0	0	0	0	38	9	11	0	0	0	0	58
DAYS	0	0	0	0	0	7	3	3	0	0	0	0	13
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>OHIO</b>													
NUMBER	0	0	0	5	0	0	10	1	0	2	0	0	18
DAYS	0	0	0	1	0	0	3	1	0	1	0	0	6
DEATHS	0	0	0	4	0	0	0	0	0	0	0	0	4
INJURIES	0	0	0	65	0	0	4	0	0	6	0	0	75
<b>OKLAHOMA</b>													
NUMBER	0	1	5	19	90	14	0	1	2	4	5	3	144
DAYS	0	1	1	4	6	4	0	1	1	1	1	1	21
DEATHS	0	0	0	0	40	2	0	0	0	0	0	0	42
INJURIES	0	0	4	1	675	5	0	0	0	0	0	1	686
<b>OREGON</b>													
NUMBER	0	0	0	0	0	0	0	1	0	2	0	1	4
DAYS	0	0	0	0	0	0	0	1	0	2	0	1	4
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>PENNSYLVANIA</b>													
NUMBER	2	0	1	0	0	0	4	1	0	0	1	0	9
DAYS	1	0	1	0	0	0	2	1	0	0	1	0	6
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	18	0	0	0	0	0	0	0	0	0	12	0	30
<b>SOUTH CAROLINA</b>													
NUMBER	0	1	0	10	3	1	0	0	1	1	0	0	17
DAYS	0	1	0	5	1	1	0	0	1	1	0	0	10
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	6	0	0	0	6
<b>SOUTH DAKOTA</b>													
NUMBER	0	0	0	0	11	26	5	0	0	0	0	0	42
DAYS	0	0	0	0	3	8	3	0	0	0	0	0	14
DEATHS	0	0	0	0	0	1	0	0	0	0	0	0	1
INJURIES	0	0	0	0	0	54	0	0	0	0	0	0	54
<b>TENNESSEE</b>													
NUMBER	16	0	0	0	6	0	0	1	0	0	0	0	23
DAYS	3	0	0	0	1	0	0	1	0	0	0	0	5
DEATHS	9	0	0	0	3	0	0	0	0	0	0	0	12
INJURIES	139	0	0	0	17	0	0	0	0	0	0	0	156
<b>TEXAS</b>													
NUMBER	20	0	18	23	62	27	3	8	0	0	0	4	165
DAYS	4	0	6	7	14	10	3	5	0	0	0	2	51
DEATHS	1	0	1	0	2	0	0	0	0	0	0	2	6
INJURIES	23	0	6	1	41	0	0	0	0	0	0	3	74
<b>UTAH</b>													
NUMBER	0	0	0	0	1	0	0	1	1	0	0	0	3
DAYS	0	0	0	0	1	0	0	1	1	0	0	0	3
DEATHS	0	0	0	0	0	0	0	1	0	0	0	0	1
INJURIES	0	0	0	0	0	0	0	80	1	0	0	0	81
<b>VIRGINIA</b>													
NUMBER	1	0	1	2	0	0	2	0	3	0	0	0	9
DAYS	1	0	1	2	0	0	2	0	2	0	0	0	8
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	17	0	0	0	0	0	6	0	0	0	23
<b>WASHINGTON</b>													
NUMBER	0	0	0	1	1	0	0	0	0	0	0	0	2
DAYS	0	0	0	1	1	0	0	0	0	0	0	0	2
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>WEST VIRGINIA</b>													
NUMBER	0	0	0	0	0	0	0	0	0	1	0	0	1
DAYS	0	0	0	0	0	0	0	0	0	1	0	0	1
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>WISCONSIN</b>													
NUMBER	0	0	0	0	1	6	3	1	0	0	0	0	11
DAYS	0	0	0	0	1	3	2	1	0	0	0	0	7
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	3	0	0	0	0	0	3

\* CORRECTED FOR BOUNDARY-CROSSING TORNADOES  
& TORNADO DAYS FOR COUNTRY AS A WHOLE



# TORNADO SUMMARY BY STATE AND NATION, 1999

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
<b>WYOMING</b>													
NUMBER	0	0	0	2	2	9	1	3	3	0	0	0	20
DAYS	0	0	0	1	2	5	1	2	2	0	0	0	13
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>UNITED STATES</b>													
NUMBER	214*	22*	56	178*	316*	289	99	81	54	19	8*	15	1340*
DAYS	12	7	12	19	29	27	28	22	16	7	3	4	186
DEATHS	16	0	1	15	53	4	0	1	0	0	0	2	92
INJURIES	317	3	32	314	911	70	38	85	14	11	12	6	1813

\* CORRECTED FOR BOUNDARY-CROSSING TORNADOES  
& TORNADO DAYS FOR COUNTRY AS A WHOLE



# NATIONS SUMMARY OF TORNADOS, TORNADO DAYS AND DEATHS BY MONTH AND ANNUAL, 1953-1999



YEAR	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL		
	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS			
1953	14	6	0	16	3	3	40	10	24	47	16	34	94	21	161	111	24	244	31	19	0	24	15	0	5	4	0	6	4	0	12	6	0	21	8	49	421	136	515
1954	2	1	0	17	9	2	63	13	10	112	22	3	101	22	9	107	26	5	45	23	0	49	21	1	21	10	3	14	8	2	2	2	0	17	3	1	550	160	36
1955	3	2	0	4	3	0	43	15	5	99	18	7	147	26	103	154	28	2	49	21	5	33	18	0	15	8	2	23	7	1	20	4	1	3	2	0	593	152	126
1956	2	2	0	47	12	8	31	7	1	85	15	67	79	24	4	65	21	0	91	26	1	43	20	2	16	10	0	29	8	0	7	6	0	9	4	0	504	155	83
1957	17	3	13	5	3	0	38	7	1	216	21	29	227	26	87	147	25	14	55	19	0	20	14	0	17	10	2	18	11	2	58	11	25	38	4	19	856	154	192
1958	12	7	0	20	5	13	15	10	0	76	19	4	68	21	0	127	27	42	121	30	1	46	20	1	24	14	1	9	6	4	45	6	0	1	1	0	564	166	66
1959	16	2	3	20	5	21	43	11	9	30	12	1	226	28	8	73	25	2	63	24	0	38	18	0	58	15	14	24	10	0	11	4	0	2	2	0	604	156	58
1960	9	4	0	28	10	0	28	10	0	70	20	7	201	26	34	124	27	3	43	22	0	47	23	1	22	13	0	18	10	1	25	6	0	1	1	0	616	172	46
1961	1	1	0	31	8	0	124	17	7	74	19	3	137	25	23	107	23	2	77	27	0	27	16	0	53	16	15	14	5	0	36	7	1	16	5	0	697	169	51
1962	12	3	1	25	7	0	37	9	17	41	8	1	200	22	3	171	29	0	78	26	0	51	21	6	24	11	0	11	10	0	5	4	0	2	2	0	657	152	28
1963	15	5	1	6	3	0	48	12	8	84	14	16	71	21	1	91	23	0	62	26	0	26	13	2	33	13	3	13	5	0	15	6	0	0	0	0	464	141	31
1964	14	3	10	2	2	0	36	11	6	157	23	15	135	20	16	136	24	0	63	23	0	79	23	2	25	10	0	22	4	22	17	8	0	18	5	2	704	156	73
1965	21	11	0	32	4	0	34	9	2	129	20	267	275	25	17	147	28	6	86	26	0	61	23	1	64	21	0	16	4	1	34	6	5	7	4	0	906	181	299
1966	1	1	0	28	5	0	12	6	58	80	20	12	98	17	0	126	28	19	100	27	3	58	21	0	22	13	0	29	6	6	20	3	0	11	3	0	585	150	98
1967	39	4	7	8	5	0	42	14	3	149	18	73	116	25	3	210	27	6	90	25	1	28	16	2	139	16	5	36	7	4	8	5	0	61	10	10	926	173	114
1968	5	3	0	7	3	0	28	8	0	102	15	40	145	26	72	136	27	11	56	22	2	66	23	2	25	14	0	14	9	0	44	12	3	32	9	1	660	171	131
1969	3	1	32	5	5	0	8	2	1	68	15	2	145	25	4	137	28	7	99	27	0	69	21	19	20	11	0	26	10	0	5	3	0	23	7	1	608	155	66
1970	9	5	0	16	3	0	25	12	2	117	16	29	88	19	26	134	24	6	81	26	3	55	21	0	54	20	0	50	13	6	10	4	0	14	8	0	653	171	72
1971	18	7	1	83	12	131	40	13	2	75	14	11	166	24	7	199	28	1	100	30	1	50	21	0	47	15	0	38	12	0	16	7	0	56	9	2	888	192	156
1972	33	10	5	7	4	0	69	17	0	96	20	16	140	27	0	114	25	2	115	29	0	59	23	2	49	19	0	34	10	0	17	4	2	8	6	0	741	194	27
1973	33	7	1	10	4	0	80	16	17	150	22	10	250	26	35	224	26	2	80	26	0	51	23	4	69	22	3	25	11	0	81	11	12	49	12	3	1102	206	87
1974	24	8	2	23	9	0	36	12	1	269	22	313	144	28	10	194	26	31	59	19	0	107	26	0	25	11	0	45	10	4	13	8	0	8	5	0	947	184	361
1975	52	7	12	45	12	7	84	16	12	108	20	13	188	30	5	196	28	6	79	26	2	60	25	2	34	17	0	12	7	0	40	8	0	22	8	1	920	204	60
1976	12	5	0	37	6	5	180	18	21	113	23	1	155	24	8	169	26	3	84	28	2	38	18	1	35	15	3	11	5	0	0	0	1	1	0	835	169	44	
1977	5	4	0	17	3	2	64	15	0	88	15	26	228	29	4	132	27	0	99	27	1	82	26	6	65	21	1	25	5	1	24	10	0	23	7	2	852	189	43
1978	23	7	2	6	3	0	17	8	0	107	17	4	213	27	7	148	28	17	143	30	11	65	24	1	20	10	6	7	5	0	9	5	0	30	9	5	788	173	53
1979	16	9	0	4	3	0	53	13	1	120	17	58	112	23	2	150	24	8	132	30	1	127	27	5	68	19	2	47	12	7	21	8	0	2	1	0	852	186	84
1980	5	4	0	11	9	0	41	15	2	137	16	4	203	25	8	217	30	7	95	26	5	73	27	0	37	14	1	43	7	1	3	2	0	1	1	0	866	176	28
1981	3	3	0	25	5	2	33	13	1	84	18	13	187	24	0	223	29	8	98	27	0	64	22	0	26	16	0	32	12	0	7	5	0	1	1	0	783	175	24
1982	18	8	1	3	2	0	60	15	6	150	20	30	327	28	14	198	30	4	95	29	0	34	15	0	38	12	2	9	4	0	19	6	0	95	13	7	1046	182	64
1983	13	2	2	41	7	1	71	21	0	65	15	6	249	26	14	178	27	2	99	27	4	76	21	0	20	15	0	12	5	0	49	11	0	58	13	5	931	190	34
1984	1	1	0	27	4	0	73	15	64	176	22	33	169	27	6	242	25	14	72	21	0	47	20	0	17	12	0	49	12	4	30	5	1	4	2	0	907	166	122
1985	2	2	0	7	4	0	38	12	2	134	19	5	182	28	78	82	24	3	51	19	0	108	26	3	40	16	0	18	8	0	19	8	3	3	2	0	684	168	94
1986	0	0	0	30	11	2	75	9	6	84	17	2	173	25	1	134	25	0	88	24	3	67	23	1	65	17	0	26	7	0	17	8	0	5	2	0	764	168	15
1987	6	3	0	19	4	6	38	11	1	20	8	1	126	25	31	132	29	2	163	28	0	63	24	1	19	10	0	1	1	0	55	5	11	14	3	6	656	151	59
1988	17	3	5	4	3	0	28	10	1	58	16	4	132	24	3	63	21	0	103	23	0	61	13	3	76	16	1	19	8	0	121	13	14	20	6	1	702	156	32
1989	15	6	0	18	3	0	44	14	1	82	13	0	234	28	9	253	27	5	59	19	0	36	20	0	31	12	0	30	7	4	58	10	31	3	1	0	856	160	50
1990	11	7	0	57	10	1	88	8	3	108	17	0	243	27	5	335	28	11	106	26	0	60	22	29	45	15	0	35	9	2	18	5	0	35	7	2	1133	181	53
1991	29	6	1	11	5	0	159	16	13	206	20	21	335	30	0	216	30	1	65	22	1	46	17	0	26	16	0	22	9	0	20	5	2	3	3	0	1132	179	39
1992	15	6	0	29	9	0	55	17	5	53	11	0	137	21	0	400	29	1	214	30	0	115	22	3	82	17	0	34	10	4	149	14	26	20	9	0	1298	195	39



# NATIONS SUMMARY OF TORNADOS, TORNADO DAYS AND DEATHS BY MONTH AND ANNUAL, 1953-1999



YEAR	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL					
	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS						
1993	17	8	0	34	7	3	49	11	5	85	15	10	179	26	2	316	27	1	242	31	0	112	26	6	65	17	2	55	9	4	19	6	0	6	3	0	6	3	0	1176	186	33
1994	13	5	0	9	7	0	61	12	40	206	23	12	161	27	0	236	29	3	155	27	3	120	24	4	30	17	0	51	15	0	42	10	7	4	3	0	1082	199	69			
1995	36	9	3	7	4	6	49	11	0	130	17	1	394	28	16	219	25	0	163	28	0	53	22	0	19	11	0	74	11	1	79	5	2	19	7	1	1235	178	30			
1996	35	10	1	14	5	1	71	10	6	178	16	12	236	29	1	128	27	0	204	28	1	72	24	0	101	20	0	68	10	0	55	8	3	15	7	1	1173	194	26			
1997	50	10	2	23	6	1	102	13	28	114	16	1	225	27	29	194	29	0	189	30	4	84	26	1	32	12	1	101	12	0	25	8	0	12	7	0	1148	196	67			
1998	47	12	0	73	18	42	74	12	16	190	19	55	314	29	10	389	29	3	82	22	0	62	20	0	104	19	2	86	13	2	27	6	0	6	3	0	1449	202	130			
1999	214	12	16	22	7	0	56	12	1	178	19	15	316	29	53	289	27	4	99	28	0	81	22	1	54	16	0	19	7	0	8	3	0	15	4	2	1340	186	92			
POR	958	245	121	1013	281	257	2583	568	409	5300	818	1287	00	18	287	8273	1250	508	4623	1199	55	2893	996	112	1976	678	69	1400	390	83	1415	307	149	814	233	121	39854	8155	4100			
MEAN	20	5	3	22	6	5	55	12	9	113	17	27	184	25	20	176	27	11	98	26	1	62	21	2	42	14	1	30	8	2	30	7	3	17	5	3	848	174	87			



# TORNADOES, TORNADO DAYS AND DEATHS BY STATE AND NATION 1953-1999



STATE	TORNADOES							DAYS		DEATHS		
	TOTAL	AVERAGE	GREATEST	YEAR	LEAST	YEAR	PER # 10,000 Sq.Mi.	TOTAL	AVERAGE	TOTAL	AVERAGE	PER # 10,000 Sq.Mi.
ALABAMA	1074	23	50	1998	5	1956	4.46	552	12	322	7	62
ALASKA	1	0	1	1959	0	1989+	.00	1	0	0	0	0
ARIZONA	188	4	17	1972	0	1965	.36	147	3	3	0	0
ARKANSAS	1087	23	106	1999	2	1987+	4.33	475	10	223	5	42
CALIFORNIA	307	7	25	1998	0	1968+	.44	218	5	0	0	0
COLORADO	1470	31	98	1996+	1	1959	2.97	735	16	2	0	0
CONNECTICUT	66	1	8	1973	0	1988+	2.00	58	1	4	0	8
DELAWARE	55	1	6	1992	0	1987+	4.86	44	1	2	0	10
DISTRICT OF COLUMBIA	1	0	1	1995	0		0	.0	1	0	0	0
FLORIDA	2496	53	115	1997	10	1956	9.05	1535	33	131	3	22
GEORGIA	1000	21	52	1994	2	1987	3.57	538	11	129	3	22
HAWAII	27	1	4	1971	0	1987+	1.55	23	0	0	0	0
IDAHO	145	3	11	1991+	0	1977+	.36	119	3	0	0	0
ILLINOIS	1512	32	107	1974	4	1953	5.67	633	13	182	4	32
INDIANA	1012	22	49	1990	4	1984	6.06	463	10	221	5	61
IOWA	1600	34	73	1998	7	1956	6.04	696	15	62	1	11
KANSAS	2390	51	116	1991	14	1976	6.20	989	21	196	4	24
KENTUCKY	507	11	39	1997	0	1953	2.72	271	6	110	2	27
LOUISIANA	1243	26	79	1992	3	1955	5.36	686	15	113	2	23
MAINE	89	2	11	1971	0	1987+	.60	79	2	1	0	0
MARYLAND	225	5	24	1995	0	1988+	4.73	134	3	2	0	2
MASSACHUSETTS	139	3	12	1958	0	1988+	3.63	98	2	102	2	124
MICHIGAN	789	17	39	1974	2	1959	2.92	453	10	238	5	41
MINNESOTA	1064	23	61	1998	5	1988+	2.74	535	11	85	2	10
MISSISSIPPI	1196	25	62	1988	1	1979	5.24	568	12	371	8	78
MISSOURI	1313	28	79	1973	6	1977+	4.02	576	12	137	3	20
MONTANA	307	7	30	1991	0	1974+	.48	212	5	1	0	0
NEBRASKA	1993	42	102	1999	10	1966	5.44	860	18	51	1	7
NEVADA	62	1	8	1987+	0	1985+	.09	57	1	0	0	0
NEW HAMPSHIRE	77	2	9	1963	0	1987+	2.15	68	1	0	0	0
NEW JERSEY	125	3	17	1989	0	1984+	3.83	95	2	0	0	0
NEW MEXICO	453	10	31	1991	0	1953	.82	325	7	3	0	0
NEW YORK	299	6	25	1992	0	1953	1.21	204	4	21	0	4
NORTH CAROLINA	819	17	66	1998	2	1970	3.23	432	9	85	2	16
NORTH DAKOTA	965	21	58	1999	2	1961	2.97	497	11	22	0	3
OHIO	725	15	61	1992	0	1988	3.64	375	8	176	4	43
OKLAHOMA	2673	57	144	1999	17	1988	8.15	1009	21	255	5	36
OREGON	76	2	14	1997	0	1988+	.21	67	1	0	0	0
PENNSYLVANIA	575	12	60	1998	0	1959	2.65	330	7	81	2	18
PUERTO RICO	11	0	2	1979	0	1989+	.00	10	0	0	0	0
RHODE ISLAND	8	0	3	1986	0	1988+	.00	7	0	0	0	0
SOUTH CAROLINA	597	13	54	1995	1	1986+	4.19	348	7	49	1	16
SOUTH DAKOTA	1333	28	85	1993	1	1958	3.63	587	12	15	0	2
TENNESSEE	642	14	44	1974	1	1987+	3.31	326	7	116	2	27
TEXAS	6426	137	232	1967+	32	1953	5.12	2365	50	495	11	19
UTAH	94	2	7	1998	0	1989+	.24	81	2	1	0	0
VERMONT	33	1	5	1962	0	1985+	1.04	30	1	0	0	0
VIRGINIA	364	8	28	1993	1	1982+	1.96	224	5	25	1	6
VIRGIN ISLANDS	2	0	1	1979+	0	1989+	.00	2	0	0	0	0
WASHINGTON	73	2	14	1997	0	1988+	.29	61	1	6	0	1
WEST VIRGINIA	105	2	16	1998	0	1988+	.83	82	2	2	0	1
WISCONSIN	929	20	43	1980	3	1953	3.63	472	10	83	2	15
WYOMING	513	11	42	1977	0	1970	1.12	343	7	2	0	0
PACIFIC ISLANDS	2	0	1	1981+	0	1989+	.00	2	0	0	0	0
UNITED STATES	41024*	873	1449	1998	421	1953	2.42	8351&	178	4125	88	11

+ ALSO IN EARLIER YEAR(S).  
\* CORRECTED FOR BOUNDARY-CROSSING TORNADOES.  
& TORNADOES DAYS FOR COUNTRY AS A WHOLE.

# MEAN ANNUAL TORNADOES PER  
10,000 SQUARE MILES.  
' NUMBER OF DEATHS PER  
10,000 SQUARE MILES.



# NATIONAL TORNADOES, TORNADO DAYS, DEATHS AND RESULTING LOSSES BY YEARS, 1916 - 1999



YEAR	NUMBER TORNADOES	TORNADO DAYS	TOTAL DEATHS	MOST DEATHS IN SINGLE TORNADO	TOTAL PROPERTY LOSSES \$	PROPERTY LOSS FREQUENCY *		
						CATEGORY 5	CATEGORY 6	CATEGORY 7 AND OVER
1916	90	36	150	30	6	7	1	0
1917	121	38	551	101	7	21	9	0
1918	81	45	136	36	7	20	5	0
1919	64	35	206	59	7	10	2	0
1920	87	50	499	87	7	14	10	0
1921	105	55	202	61	7	22	3	0
1922	108	64	135	16	7	27	5	0
1923	102	59	110	23	6	21	1	0
1924	130	57	376	85	7	26	11	1
1925	119	65	794	689	7	34	2	1
1926	111	57	144	23	6	28	0	0
1927	163	62	540	92	7	42	9	1
1928	203	79	95	14	7	40	7	0
1929	197	74	274	40	7	48	4	0
1930	192	72	179	41	7	38	6	0
1931	94	57	36	6	6	14	1	0
1932	151	67	394	37	7	23	1	1
1933	258	96	362	34	7	46	9	0
1934	147	77	47	6	6	10	3	0
1935	180	77	71	11	6	29	0	0
1936	151	71	552	216	7	17	5	1
1937	147	75	29	5	6	24	0	0
1938	213	76	183	32	7	29	6	0
1939	152	75	91	27	7	21	3	0
1940	124	62	65	18	7	13	2	0
1941	118	57	53	25	6	24	1	0
1942	167	66	384	65	7	42	10	0
1943	152	61	58	5	7	28	8	0
1944	169	68	275	100	7	50	9	0
1945	121	66	210	69	7	21	10	1
1946	106	65	78	15	7	29	7	0
1947	165	78	313	169	7	46	7	1
1948	183	68	139	33	7	62	11	2
1949	249	80	211	58	7	54	13	0
1950	200	88	70	18	7	47	9	0
1951	262	113	34	6	7	35	11	2
1952	240	98	229	57	7	53	19	0
1953	421	136	515	116	8	63	18	7
1954	550	160	36	6	7	63	8	1
1955	593	152	126	80	7	74	13	1
1956	504	155	83	25	7	83	24	1
1957	856	154	192	44	8	129	26	3
1958	564	166	66	19	7	70	8	1
1959	604	156	58	21	7	70	4	1
1960	616	172	46	16	7	65	11	1
1961	697	169	51	16	7	103	21	1
1962	657	152	28	17	7	51	10	0
1963	464	141	31	5	7	77	15	1
1964	704	156	73	22	7	113	17	5
1965	906	181	299	44	8	126	30	11
1966	585	150	98	58	8	79	13	4
1967	926	173	114	33	8	125	33	8
1968	660	171	131	34	8	82	26	6
1969	608	155	66	32	8	98	16	3
1970	653	171	72	26	8	97	24	6
1971	888	192	156	58	8	71	30	5
1972	741	194	27	6	8	100	28	1
1973	1102	206	87	7	9	219	67	9
1974	947	184	361	34	9	166	82	25
1975	920	204	60	9	9	189	31	11

NOTE:-THE ABOVE ESTIMATED LOSSES ARE BASED ON VALUES AT TIME OF OCCURRENCE.  
MEAN WAS DERIVED FROM DATA FOR PERIOD 1953-1992.

\$ STORM DAMAGES IN CATEGORIES:

- |                                |                                  |
|--------------------------------|----------------------------------|
| 5. \$50,000 TO \$500,000       | 8. \$50 MILLION TO \$500 MILLION |
| 6. \$500,000 TO \$5 MILLION    | 9. \$500 MILLION AND OVER        |
| 7. \$5 MILLION TO \$50 MILLION |                                  |

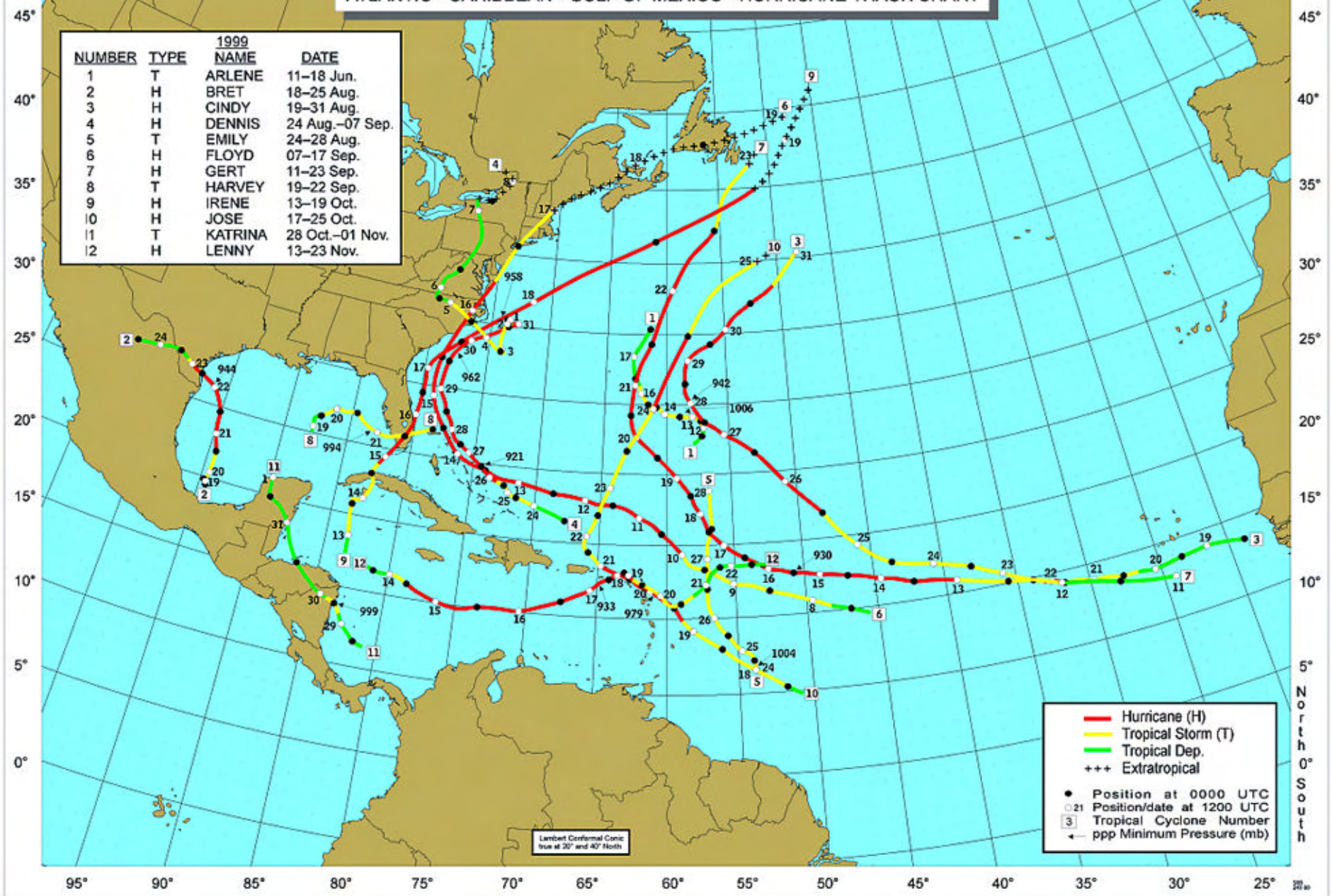
\* NUMBER OF TIMES PROPERTY LOSSES REPORTED IN STORM DATA IN CATEGORIESS 5, 6, 7 AND OVER.



120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

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NUMBER	TYPE	1999 NAME	DATE
1	T	ARLENE	11-18 Jun.
2	H	BRET	18-25 Aug.
3	H	CINDY	19-31 Aug.
4	H	DENNIS	24 Aug.-07 Sep.
5	T	EMILY	24-28 Aug.
6	H	FLOYD	07-17 Sep.
7	H	GERT	11-23 Sep.
8	T	HARVEY	19-22 Sep.
9	H	IRENE	13-19 Oct.
10	H	JOSE	17-25 Oct.
11	T	KATRINA	28 Oct.-01 Nov.
12	H	LENNY	13-23 Nov.



— Hurricane (H)  
— Tropical Storm (T)  
— Tropical Dep.  
 +++ Extratropical  
 ● Position at 0000 UTC  
 ○21 Position/date at 1200 UTC  
 ③ Tropical Cyclone Number  
 ← ppp Minimum Pressure (mb)

Lambert Conformal Conic  
true at 30° and 40° North

45°  
40°  
35°  
30°  
25°  
20°  
15°  
10°  
5°  
0°  
North  
South

95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25°

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