

1998 Annual Summaries

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

FLOOD/FLASH FLOOD



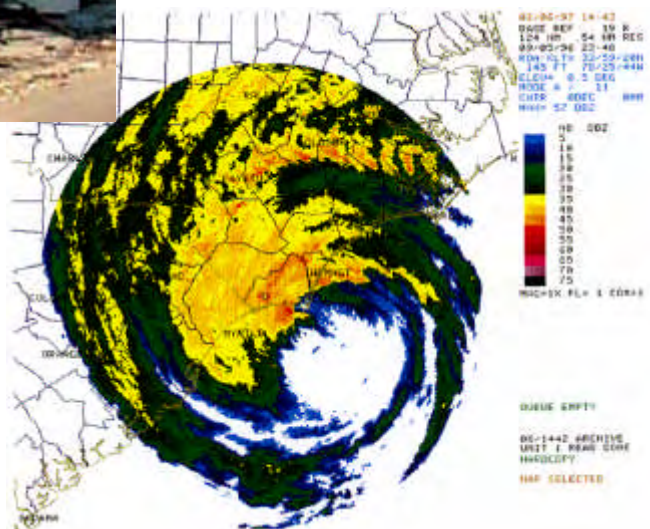
Lightning



Tornado



Hurricane



1998 Annual Summaries

Flood/Flash Flood

Lightning

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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 1998 in the United States



This National Weather Service (NWS) report offers a summary of fatalities, injuries and damages caused by severe weather in 1998. The NWS Office of Meteorology and the National Climatic Data Center compiled this *Summary of U.S. Natural Hazard Statistics* from *Storm Data*, a report comprising data from NWS forecast offices in the 50 states, Puerto Rico, Guam and the Virgin Islands.

Summary of 1998 Weather Events, Fatalities, Injuries, and Damage Costs

LAST UPDATED : 2/2/2000

<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>
<u>Convection</u>					
Lightning	44	283	\$ 38.0	\$ 3.1	\$ 41.1
Tornado	130	1868	1,714.2	22.0	1,736.2
Tstm Wind	41	860	1,435.7	161.6	1,597.3
Hail	1	45	1,348.4	166.0	1,514.4
<u>Extreme Temperatures</u>					
Cold	11	27	0.6	682.6	683.2
Heat	173	633	0.0	0.0	0.0
<u>Flood</u>					
Flash Flood	118	4578	909.1	140.9	1,050.0
River Flood	14	1856	1,400.9	169.2	1,570.1
Small Stream/Urban Flood	4	6	14.8	8.0	22.8
<u>Marine</u>					
Coastal Storm	23	32	117.3	0.0	117.3
Tsunami	0	0	0.0	0.0	0.0
<u>Tropical Cyclones</u>					
Tropical Storm/Hurricane	9	77	3,546.6	581.3	4,127.9
<u>Winter</u>					
Winter Storm	64	285	525.9	1.6	527.5
Ice	4	223	0.8	0.0	0.8
Avalanche	9	15	0.1	0.0	0.1
<u>Other</u>					
Drought	0	0	40.0	2,142.0	2,182.0
Dust Storm	0	20	0.2	0.0	0.2
Dust Devil	0	0	0.0	0.0	0.0
Rain	11	24	45.3	321.1	366.4
Fog	6	152	2.4	0.0	2.4
High Wind	24	95	63.7	20.4	84.1
Waterspout	0	0	0.0	0.0	0.0
Fire Weather	0	92	398.5	83.0	481.5
Mud Slide	0	0	0.0	0.0	0.0
Volcanic Ash	0	0	0.0	0.0	0.0
Miscellaneous	1	0	0.2	5.0	5.2
TOTALS	687	11171	\$11,602.7M	\$4,507.8M	16,110.5M

Summary of All Severe Weather for 1998

In 1998, there were 687 fatalities—87 more than in 1997. The 10-year average number of weather-related fatalities (1989-1998) is 567. In 1998, *extreme heat* ranked as the #1 weather-related killer with 173 fatalities. Floods resulted in 136 deaths, followed closely by tornadoes with 130.

Weather-related injuries more than tripled in 1998 to 11,171 compared to 3,799 in 1997. Floods caused an astounding 6,440 (57.6%) injuries. Of those injuries, 6,091 occurred during a flood in south-central Texas between October 17-21, 1998. Tornadoes again ranked second with 1,868 injuries (16.7%), up from last year's 1,033. Thunderstorm winds followed with 860 injuries (8%).

In 1998, severe weather accounted for more than \$16 billion in damages. Topping the damage list were tropical storms and hurricanes with \$4.1 billion (26%). Drought was the next most devastating with property losses nearing \$2.2 billion, followed by tornadoes at \$1.7 billion. States suffering more than a billion dollars in property damage included Puerto Rico, Florida, Minnesota and Texas. Texas and California had the worst crop damage: \$1.37 and \$1.19 billion, respectively. Texas suffered the highest property and crop damage with more than \$2.4 billion. Puerto Rico had more than \$2 billion in total damages—\$1.7 billion from Hurricane Georges alone.

Of the 687 people who died because of severe weather, 449 were male (65%) and 233 were female (34%), nearly twice as many males as females. The 30-49 age group accounted for the largest number of fatalities with 199. Children and the elderly remained the safest, except for heat, for which the elderly are most susceptible.

July was the deadliest month with 121 fatalities (17%) caused by excessive heat and flash flooding. June ranked second with 90 (13%) deaths resulting from excessive heat. February came in third with 84 fatalities from flooding in the West, tornadoes in Florida and snow in Kentucky.

In 1998, Texas recorded the highest number of fatalities with 122—nearly twice as many (67) as in 1997. Excessive heat and floods caused the fatalities. Next were Florida and Alabama with 75 and 50 fatalities, respectively, mostly from tornadoes. Texas had the highest number of injuries with 6,442, mainly from flooding.

In 1998, extreme heat ranked as the #1 weather killer in the United States, outranking floods. The 30-year average (1969-1998) for flood deaths rose slightly from 140 in 1997 to 143 in 1998. The 30-year average death rate for lightning is 79; tornadoes, 69; and hurricanes, 24. Cold and heat statistics date back to 1989. The 10-year average for cold related fatalities is 38; for heat related fatalities, 144.

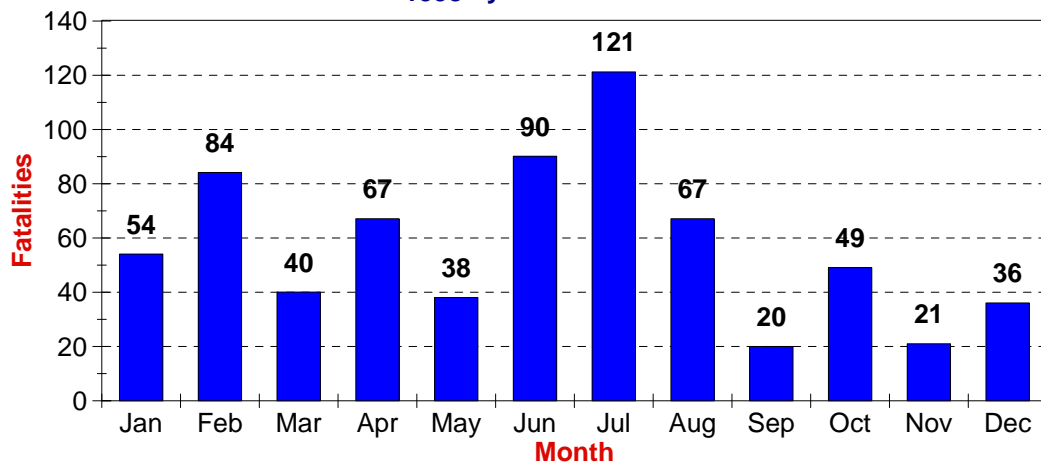
1998 Summary of all Natural Hazards

1998 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	16	25	2	43	6
10 TO 19	15	32	0	47	7
20 TO 29	15	49	0	64	9
30 TO 39	31	74	0	105	15
40 TO 49	19	75	0	94	14
50 TO 59	20	47	0	67	10
60 TO 69	35	31	0	66	10
70 TO 79	35	64	0	99	14
80 TO 89	35	28	0	63	9
90 TO --	8	4	0	12	2
UNKNOWN	4	20	3	27	4
TOTALS	233	449	5	687	100*
PERCENT	34	65	1	100	

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

Weather Related Fatalities 1998 by Month



1998 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	0	0	2.8	0.0	2.8
AL	50	298	760.1	24.7	784.8
AR	10	24	11.2	0.1	11.3
AS	0	0	0.0	0.0	0.0
AZ	7	11	1.5	0.0	1.5
CA	43	251	241.0	1,195.6	1,436.6
CO	10	45	95.5	1.1	96.6
CT	1	5	0.3	0.0	0.3
DC	0	11	0.1	0.0	0.1
DE	2	14	4.7	0.0	4.7
FL	75	520	1,691.3	36.6	1,727.9
GA	21	318	348.2	3.1	351.3
GU	3	5	0.3	0.1	0.4
HI	0	7	0.0	0.2	0.2
IA	3	216	236.3	63.4	299.7
ID	2	9	2.0	5.5	7.5
IL	21	218	33.9	4.6	38.5
IN	7	42	38.9	4.0	42.9
KS	12	32	100.9	57.9	158.8
KY	12	29	554.5	10.0	564.5
LA	27	84	136.6	230.4	367.0
MA	5	19	24.6	0.0	24.6
MD	4	26	18.1	26.7	44.8
ME	5	3	325.5	0.0	325.5
MI	12	187	208.5	45.1	253.6
MN	7	85	1,496.6	14.8	1,511.4
MO	18	333	45.6	6.3	51.9
MS	4	54	739.9	0.3	740.2
MT	6	8	18.5	5.6	24.1
NC	13	93	233.4	250.4	483.8
ND	0	6	3.8	9.1	12.9
NE	3	42	25.7	54.5	80.2
NH	1	23	32.4	0.0	32.4
NJ	3	124	42.7	0.0	42.7
NM	1	15	4.1	12.0	16.1
NV	2	21	16.6	0.0	16.6
NY	16	169	324.9	12.6	337.5
OH	13	193	162.4	81.2	243.6
OK	29	91	28.8	500.0	528.8
OR	10	13	7.2	1.0	8.2
PA	20	264	78.4	2.1	80.5
PR	10	1	1,710.1	301.0	2,011.1
RI	0	0	0.5	0.0	0.5
SC	11	59	23.6	0.1	23.7
SD	6	171	32.5	5.2	37.7
TN	21	169	175.0	3.0	178.0
TX	122	6442	1,098.9	1,367.6	2,466.5
UT	13	160	8.5	1.5	10.0
VA	4	17	129.6	72.9	202.5
VI	0	0	2.2	0.0	2.2
VT	0	5	32.9	0.7	33.6
WA	4	15	22.9	85.4	108.3
WI	9	179	184.1	8.5	192.6
WV	7	16	82.0	2.8	84.8
WY	2	29	1.9	0.3	2.2
TOTALS	687	11171	\$11,602.5M	\$4,508.0M	\$16,110.5M

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

1998 Lightning Fatalities

There were 44 lightning fatalities in 1998, 2 more than in 1997. Florida again earns the unlucky #1 ranking with 8 fatalities (18%). Colorado and Louisiana each had 3 deaths with 8 other states each counting 2 fatalities. Of those who died, 19 were in an open area, 8 under trees and 6 in a boat. Five times as many males (37) were killed than females (7) from lightning. The 20- to 40-year-old age group accounted for 59% of the fatalities.

1998 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	1	0	0	0	0	0	0	0	0	1
AR	0	0	0	0	0	0	1	0	0	0	1
AZ	0	0	0	0	0	0	1	0	0	0	1
CO	0	0	0	0	0	0	0	2	0	1	3
FL	0	2	0	0	0	0	1	2	0	3	8
GA	0	0	0	0	0	0	0	1	0	0	1
IN	0	1	0	0	0	0	0	1	0	0	2
LA	0	1	0	0	0	0	0	2	0	0	3
MD	0	0	0	0	0	0	0	1	0	1	2
MI	0	0	0	1	0	0	0	1	0	0	2
MN	0	0	0	0	0	0	0	1	0	1	2
MS	0	0	0	0	0	0	0	1	0	0	1
MT	0	0	0	0	0	0	0	0	0	2	2
NC	0	0	0	0	0	0	0	2	0	0	2
NE	0	0	0	1	0	0	0	0	0	0	1
NJ	0	0	1	0	0	0	0	0	0	0	1
NY	0	0	1	0	0	0	0	0	0	0	1
OH	0	0	1	0	0	0	0	0	0	0	1
OK	0	1	0	0	0	0	0	0	0	0	1
PA	0	0	0	0	1	0	0	0	0	0	1
SC	0	0	0	0	1	0	0	1	0	0	2
TN	0	0	0	0	0	0	0	1	0	0	1
TX	0	0	0	1	0	0	0	1	0	0	2
UT	0	0	0	0	0	0	0	1	0	0	1
WY	0	0	0	0	0	0	0	1	0	0	1
TOTAL	0	6	3	3	2	0	3	19	0	8	44
PERCENT	0	14	7	7	5	0	7	43	0	18	101*

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

1998 LIGHTNING 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	3	0	4	9
20 TO 29	1	9	0	10	23
30 TO 39	2	14	0	16	36
40 TO 49	0	6	0	6	14
50 TO 59	2	1	0	3	7
60 TO 69	0	2	0	2	5
70 TO 79	0	1	0	1	2
80 TO 89	0	0	0	0	0
90 TO --	0	0	0	0	0
UNKNOWN	0	0	0	0	0
TOTALS	7	37	0	44	101*
PERCENT	16	84	0	100	

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

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

1998 Tornado Fatalities

In 1998, 1,425 tornadoes were recorded; 277 more than in 1997. Tornadoes resulted in 130 fatalities, a 94% increase over last year's total, 67. The 30-year average is 69 tornado deaths per year. On February 22, tornadoes claimed 42 lives and caused 254 injuries in north-central and northeast Florida. On March 20, a tornado killed 12 and injured 171 people in north-central Georgia. On April 8, an F5 (wind speeds 261-318 mph) tornado in north-central Alabama claimed 34 lives and caused 270 injuries. Another 14 fatalities occurred on April 16 when tornadoes moved through Arkansas, Tennessee, Kentucky and Virginia. On May 30, an F4 (wind speeds 207-260 mph) tornado killed 6 and injured 150 people as it destroyed much of the town of Spencer, SD. Of the 130 fatalities, 64 were in mobile homes and 46 were in permanent homes. The number of men vs. women killed by tornadoes was almost even: 68 men and 62 women.

1998 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>
AL	0	0	5	0	0	29	0	0	34
AR	0	0	2	0	0	0	0	0	2
FL	0	0	29	0	0	1	0	12	42
GA	1	0	16	0	0	1	0	1	19
KY	0	0	1	0	1	1	0	0	3
LA	0	0	1	0	0	0	0	0	1
MN	0	0	0	0	1	1	0	1	3
NC	0	0	0	0	0	1	0	1	2
OH	0	0	1	0	0	0	0	0	1
PA	0	0	0	0	0	2	0	1	3
SC	0	0	3	0	0	0	0	0	3
SD	0	0	0	0	0	6	0	0	6
TN	0	0	4	0	1	2	0	0	7
TX	0	0	2	0	0	0	0	0	2
VA	0	0	0	0	0	2	0	0	2
TOTAL	1	0	64	0	3	46	0	16	130
PERCENT	1	0	49	0	2	35	0	12	99*

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

1998 TORNADO FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	2	10	0	12	9
10 TO 19	5	0	0	5	4
20 TO 29	3	7	0	10	8
30 TO 39	12	10	0	22	17
40 TO 49	8	11	0	19	15
50 TO 59	3	11	0	14	11
60 TO 69	10	5	0	15	12
70 TO 79	12	9	0	21	16
80 TO 89	5	5	0	10	8
90 TO --	2	0	0	2	2
UNKNOWN	0	0	0	0	0
TOTALS	62	68	0	130	102*
PERCENT	48	52	0	100	

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

LEGEND

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

1998 Flash Flood / River Flood Related Fatalities

In 1998, flooding (flash floods, river floods and urban/small stream floods) contributed to 136 fatalities, compared to 118 in 1997, a 13% increase. The 30-year average for flood deaths is 143. Of the 136 victims, 75 (55%) died in a vehicle and 25 (18%) were “in water.” Flood-related fatalities are probably the most preventable. Most vehicular deaths occur when people attempted 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 currents. Texas recorded the highest flood casualties, 41, followed by California with 17 and Missouri with 13. In Texas, 25 of the 41 flood deaths were related to the Great October Flood. Of the 136 flood deaths, 118 were caused by flash floods and 18 by river floods. Ninety-one (67%) fatalities were male while 44 (32%) were female. All age groups were affected by flooding/flash flooding.

1998 FLASH FLOOD / RIVER FLOOD FATALITIES BY STATE AND LOCATION

<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	1	0	1	0	5	7
AR	0	0	0	1	0	1	0	0	2
AZ	0	0	0	4	0	0	0	0	4
CA	0	0	1	3	0	3	2	8	17
GA	0	0	0	0	0	0	0	1	1
IL	0	0	0	0	0	1	0	0	1
IN	0	0	0	0	0	1	0	1	2
KS	0	0	0	0	0	0	0	3	3
KY	0	0	0	0	0	1	0	0	1
LA	0	0	0	1	0	0	0	0	1
ME	0	0	0	1	0	0	0	0	1
MN	0	0	0	0	0	0	0	2	2
MO	0	0	0	2	0	1	0	10	13
NH	0	0	0	0	0	0	1	0	1
NV	0	0	0	0	0	0	0	1	1
NY	0	2	0	0	0	1	0	0	3
OH	0	0	0	2	1	0	2	4	9
OK	0	0	0	1	0	0	0	1	2
OR	2	0	0	0	0	0	0	0	2
PR	0	0	0	2	0	0	0	1	3
SC	0	0	0	0	0	0	0	1	1
TN	0	0	0	1	0	0	0	9	10
TX	0	0	0	2	2	0	10	27	41
UT	0	0	0	3	0	0	0	0	3
VA	0	0	0	0	0	0	0	1	1
WI	0	0	0	0	0	2	0	0	2
WV	0	0	0	1	0	0	1	0	2
TOTAL	2	2	1	25	3	12	16	75	136
PERCENT	1	1	1	18	2	9	12	55	99*

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

1998 FLASH FLOOD / RIVER FLOOD FATALITIES BY AGE AND GENDER

	<u>FEMALE</u>	<u>MALE</u>	<u>UNKNOWN</u>	<u>TOTAL</u>	<u>PERCENT</u>
0 TO 9	7	7	0	14	10
10 TO 19	6	13	0	19	14
20 TO 29	5	9	0	14	10
30 TO 39	4	15	0	19	14
40 TO 49	4	11	0	15	11
50 TO 59	6	7	0	13	10
60 TO 69	7	6	0	13	10
70 TO 79	3	15	0	18	13
80 TO 89	1	3	0	4	3
90 TO --	0	1	0	1	1
UNKNOWN	1	4	1	6	4
TOTALS	44	91	1	136	100
PERCENT	32	67	1	100	

LEGEND

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

1998 Flash Flood / River Flood Related Fatalities (Continued)

1998 FLASH FLOOD / RIVER FLOOD FATALITIES BY STATE

<u>STATE</u>	<u>FLASH FLOOD</u>	<u>RIVER FLOOD</u>	<u>TOTAL</u>
AL	7	0	7
AR	2	0	2
AZ	4	0	4
CA	11	6	17
GA	0	1	1
IL	0	1	1
IN	1	1	2
KS	2	1	3
KY	1	0	1
LA	0	1	1
ME	1	0	1
MN	2	0	2
MO	12	1	13
NH	1	0	1
NV	1	0	1
NY	1	2	3
OH	9	0	9
OK	2	0	2
OR	0	2	2
PR	3	0	3
SC	1	0	1
TN	10	0	10
TX	40	1	41
UT	3	0	3
VA	0	1	1
WI	2	0	2
WV	2	0	2
TOTAL	118	18	136
PERCENT	87	13	100

1998 FLASH FLOOD / RIVER FLOOD FATALITIES BY GENDER

	<u>FLASH FLOOD</u>	<u>RIVER FLOOD</u>	<u>TOTAL</u>	<u>PERCENT</u>
FEMALE	41	3	44	32
MALE	77	14	91	67
UNKNOWN	0	1	1	1
TOTALS	118	18	136	100
PERCENT	87	13	100	

1998 Winter Weather Related Fatalities

In 1998, winter weather caused 77 fatalities; 64 from winter weather, 4 from ice, and 9 from an avalanche. This number is down 18% from the 1997 total of 94. The most severe storms include a January 11 cold front that moved across much of Utah generating heavy snowfall and strong, gusty winds (107 mph at Mt. Ogden). A February storm off the central coast of North Carolina caused a 68-foot fishing vessel to sink, killing all four crewmen aboard. Of the 68 fatalities from winter storms and ice, 36 were in vehicles and 15 others were out in the open. Nearly two and a half times as many males (47) as females (20) died of winter storms and ice. The 40- to 50-year-old age group suffered the highest number of fatalities with 16.

1998 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>
AL	0	0	0	1	0	0	1
AR	0	0	0	0	0	1	1
CA	0	0	0	1	0	2	3
CO	0	0	0	0	0	2	2
IA	0	0	0	1	0	0	1
IL	0	0	0	0	0	2	2
KS	0	0	0	0	0	7	7
KY	0	1	3	0	1	0	5
LA	0	0	0	0	0	1	1
MA	0	0	0	0	0	2	2
ME	0	0	1	1	1	0	3
MT	0	0	0	1	0	0	1
NC	0	0	4	0	0	2	6
NE	0	0	0	0	0	2	2
NV	0	0	0	0	0	1	1
NY	0	0	0	0	1	0	1
OR	0	0	0	4	0	3	7
TN	1	0	0	0	0	0	1
TX	0	0	0	4	0	2	6
UT	0	0	2	0	0	6	8
VA	0	0	0	0	1	0	1
WA	0	0	0	0	0	2	2
WV	0	0	0	2	1	0	3
WY	0	0	0	0	0	1	1
TOTAL	1	1	10	15	5	36	68
PERCENT	1	1	15	22	7	53	99*

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

1998 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	0	2	0	2	3
10 TO 19	1	5	0	6	9
20 TO 29	4	3	0	7	10
30 TO 39	2	6	0	8	12
40 TO 49	3	13	0	16	24
50 TO 59	2	6	0	8	12
60 TO 69	1	2	0	3	4
70 TO 79	4	1	0	5	7
80 TO 89	3	1	0	4	6
90 TO --	0	1	0	1	1
UNKNOWN	0	7	1	8	12
TOTALS	20	47	1	68	100
PERCENT	29	69	1	100	

LEGEND

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

1998 Tropical Cyclone Fatalities

There were more than the typical number of tropical storms and hurricanes in 1998, with 14 named storms: 10 hurricanes and 4 tropical storms. On average, there are nine named storms, six of which become hurricanes. Hurricanes/tropical storms caused 9 deaths in 1998, compared to the 30-year average, 24 fatalities. Seven of the deaths (78%) occurred in a boat or in the water. Six of the victims (67%) were males and 3 (33%) were females. Tropical Storm Frances caused the most U.S. deaths—3 fatalities in Texas—and produced damage in the amount of \$229 million. Florida suffered 4 fatalities from two tropical cyclones: Mitch and Earl. Hurricane Georges cost Puerto Rico \$1.7 billion in damages.

1998 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>
AL	0	0	0	0	0	0	1	0	0	0	1
FL	2	0	2	0	0	0	0	0	0	0	4
NC	0	0	0	0	0	0	0	1	0	0	1
TX	0	0	3	0	0	0	0	0	0	0	3
TOTAL	2	0	5	0	0	0	1	1	0	0	9
PERCENT	22	0	56	0	0	0	11	11	0	0	100

1998 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	0	0	0	0
10 TO 19	1	0	0	1	11
20 TO 29	0	0	0	0	0
30 TO 39	0	2	0	2	22
40 TO 49	1	0	0	1	11
50 TO 59	0	1	0	1	11
60 TO 69	0	1	0	1	11
70 TO 79	0	0	0	0	0
80 TO 89	0	0	0	0	0
90 TO --	0	0	0	0	0
UNKNOWN	1	2	0	3	33
TOTALS	3	6	0	9	99*
PERCENT	33	67	0	100	

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

LEGEND

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

1998 Wind Related Fatalities

Wind related fatalities in 1998 totaled 65, down 10 from 1997. Thunderstorms caused the greatest number of these fatalities (41). The remainder (24) were attributed to intense low pressure systems. Two separate "derecho" events (widespread downburst of straight line hurricane force winds) caused much of the damage and fatalities. On September 7, a derecho moved through central New York State causing two deaths and seven injuries at the New York State Fair in Geddes. A similar event in southeast Wisconsin on November 10 caused 6 deaths. Males accounted for 77% of wind related fatalities. The 30- to 50-year-old age group was the most vulnerable to thunderstorm and high winds.

1998 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	0	0	3	0	0	0	3
AZ	2	0	0	0	0	0	0	0	0	2
CA	0	0	0	0	0	1	0	0	2	3
CT	0	0	0	0	0	0	0	0	1	1
FL	1	0	0	0	5	0	0	0	0	6
IA	0	0	0	0	1	1	0	0	0	2
IN	2	0	0	0	0	0	0	0	1	3
KY	0	0	0	0	0	1	0	0	1	2
LA	0	0	0	0	0	0	1	0	0	1
MA	0	0	0	0	0	0	0	0	3	3
ME	0	0	0	0	0	1	0	0	0	1
MI	0	2	0	1	2	3	1	0	0	9
MS	0	0	0	1	0	0	0	0	2	3
MT	0	0	0	0	1	0	0	0	0	1
NJ	0	0	0	0	1	0	0	0	0	1
NY	1	2	0	0	3	2	1	0	1	10
OH	0	0	0	0	0	1	0	0	1	2
OK	0	0	0	1	0	0	0	0	1	2
PA	0	0	0	0	0	0	0	0	1	1
SC	0	0	0	0	1	0	0	0	0	1
TX	0	0	1	0	0	0	0	0	0	1
WI	0	0	0	0	2	1	2	0	2	7
TOTAL	6	4	1	3	16	14	5	0	16	65
PERCENT	9	6	2	5	25	22	8	0	25	102*

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

1998 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	0	3	0	3	5
10 TO 19	1	3	0	4	6
20 TO 29	0	6	0	6	9
30 TO 39	4	11	0	15	23
40 TO 49	2	10	0	12	18
50 TO 59	1	3	0	4	6
60 TO 69	2	5	0	7	11
70 TO 79	3	5	0	8	12
80 TO 89	0	2	0	2	3
90 TO --	0	0	0	0	0
UNKNOWN	2	2	0	4	6
TOTALS	15	50	0	65	99*
PERCENT	23	77	0	100	

(* 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

1998 Wind Related Fatalities (Continued)

1998 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY STATE

<u>STATE</u>	<u>TSTM WIND</u>	<u>HIGH WIND</u>	<u>TOTAL</u>
AL	1	2	3
AZ	0	2	2
CA	2	1	3
CT	0	1	1
FL	3	3	6
IA	1	1	2
IN	3	0	3
KY	0	2	2
LA	0	1	1
MA	2	1	3
ME	0	1	1
MI	8	1	9
MS	3	0	3
MT	1	0	1
NJ	1	0	1
NY	9	1	10
OH	1	1	2
OK	2	0	2
PA	1	0	1
SC	1	0	1
TX	1	0	1
WI	1	6	7
TOTAL	41	24	65
PERCENT	63	37	100

1998 HIGH WIND AND THUNDERSTORM WIND FATALITIES BY GENDER

	<u>TSTM WIND</u>	<u>HIGH WIND</u>	<u>TOTAL</u>	<u>PERCENT</u>
FEMALE	11	4	15	23
MALE	30	20	50	77
UNKNOWN	0	0	0	0
TOTALS	41	24	65	100
PERCENT	63	37	100	

1998 Heat Related Fatalities

In 1998, heat was the #1 killer with 173 fatalities, more than twice the number (81) reported in 1997. Most of these deaths occurred in Texas (66), Oklahoma, (24), Louisiana (20) Illinois (18) and Pennsylvania (15) in June and July. In 1998, heat related injuries totaled 633, up nearly 20% from 1997. Seniors are most at risk, with those between 60 and 90 years old accounting for 63% of the year's fatalities. Males accounted for 58% of the fatalities and females 40%. As in the past, most related deaths (118) occurred in homes without air conditioning or adequate ventilation. Those most at risk had a contributing health ailment aggravated by the heat.

1998 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	1	1	2
AR	0	0	0	0	2	0	0	0	2
CA	0	0	0	0	0	2	1	0	3
DE	0	0	0	0	1	0	0	0	1
FL	0	0	0	0	0	1	1	2	4
IL	0	0	0	0	1	0	17	0	18
KS	2	0	0	0	0	0	0	0	2
KY	0	0	0	0	0	1	0	0	1
LA	0	0	0	0	0	5	15	0	20
MD	0	0	0	0	0	1	1	0	2
MO	0	0	0	0	0	0	5	0	5
NC	0	0	0	0	0	0	2	0	2
OK	0	0	0	1	4	1	17	1	24
OR	0	0	0	0	1	0	0	0	1
PA	0	0	0	0	10	0	5	0	15
SC	0	0	0	2	0	0	1	0	3
TN	0	0	0	0	0	0	2	0	2
TX	1	0	1	2	2	8	50	2	66
TOTAL	3	0	1	5	21	19	118	6	173
PERCENT	2	0	1	3	12	11	68	3	100

1998 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	3	1	2	6	3
10 TO 19	0	4	0	4	2
20 TO 29	0	1	0	1	1
30 TO 39	4	6	0	10	6
40 TO 49	1	15	0	16	9
50 TO 59	5	11	0	16	9
60 TO 69	13	9	0	22	13
70 TO 79	12	32	0	44	25
80 TO 89	26	17	0	43	25
90 TO --	6	2	0	8	5
UNKNOWN	0	2	1	3	2
TOTALS	70	100	3	173	100
PERCENT	40	58	2	100	

LEGEND

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

1998 Cold Related Fatalities

Extreme cold claimed 11 lives in 1998, down dramatically from the 51 recorded in 1997. The most significant severe storm occurred from December 18-24 in northeastern Colorado when overnight temperatures were below zero for 6 consecutive days, causing 3 deaths. Ten (91%) of the 11 fatalities were male. Age demographics were spread evenly with the 40- to 60-year-old age group constituting the highest risk group.

1998 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>
AR	0	0	0	2	0	0	2
CA	0	0	1	3	0	0	4
CO	0	0	0	3	0	0	3
MI	0	0	0	1	0	0	1
SC	0	0	0	1	0	0	1
TOTAL	0	0	1	10	0	0	11
PERCENT	0	0	9	91	0	0	100

1998 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	0	0	0	0
10 TO 19	0	1	0	1	9
20 TO 29	0	3	0	3	27
30 TO 39	0	0	0	0	0
40 TO 49	0	4	0	4	36
50 TO 59	0	2	0	2	18
60 TO 69	0	0	0	0	0
70 TO 79	1	0	0	1	9
80 TO 89	0	0	0	0	0
90 TO --	0	0	0	0	0
UNKNOWN	0	0	0	0	0
TOTALS	1	10	0	11	99*
PERCENT	9	91	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 1998



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	1	0	0	0	0	0	0	0	0	0	1
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	0	0	0	0	0	0	0	1	1
ARKANSAS	0	0	0	0	0	0	0	1	0	0	0	0	1
CALIFORNIA	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO	0	0	0	0	0	0	0	2	1	0	0	0	3
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	0	0	0	4	2	2	0	0	0	0	8
GEORGIA	0	0	0	1	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0
INDIANA	0	0	0	0	0	0	2	0	0	0	0	0	2
IOWA	0	0	0	0	0	0	0	0	0	0	0	0	0
KANSAS	0	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISIANA	0	1	1	0	0	1	0	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	2	0	0	0	0	0	0	2
MASSACHUSETTS	0	0	0	0	0	0	0	0	0	0	0	0	0
MICHIGAN	0	0	0	0	0	2	0	0	0	0	0	0	2
MINNESOTA	0	0	0	0	0	1	0	1	0	0	0	0	2
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	0	1	0	1	0	0	0	2
NEBRASKA	0	0	0	0	0	0	1	0	0	0	0	0	1
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	1	0	0	0	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	1	0	0	0	0	0	0	1
NORTH CAROLINA	0	0	0	0	1	0	0	1	0	0	0	0	2
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	0	0	1	0	0	0	0	0	0	1
OKLAHOMA	0	0	0	0	0	0	0	1	0	0	0	0	1
OREGON	0	0	0	0	0	0	0	0	0	0	0	0	0
PENNSYLVANIA	0	0	0	0	1	0	0	0	0	0	0	0	1
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	1	1	0	0	0	0	2
SOUTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
TENNESSEE	0	0	0	0	0	0	0	1	0	0	0	0	1
TEXAS	0	0	0	1	0	0	1	0	0	0	0	0	2
UTAH	0	0	0	0	0	0	1	0	0	0	0	0	1
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0
WYOMING	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL: UNITED STATES	0	1	2	2	3	12	9	12	2	0	0	1	44



TOTAL LIGHTNING INJURIES BY STATE AND NATION FOR YEAR 1998



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	0	0	0	1	2	0	0	0	0	0	3
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	0	0	0	0	0	0	0	3	3
ARKANSAS	0	1	1	0	1	1	0	0	0	0	0	0	4
CALIFORNIA	0	0	0	0	1	0	1	0	0	0	0	0	2
COLORADO	0	0	0	1	1	0	3	9	4	0	0	0	18
CONNECTICUT	0	0	0	0	1	0	0	0	0	0	0	0	1
DELAWARE	0	0	0	0	0	0	0	0	1	0	0	0	1
DISTRICT OF COLUMBIA	0	0	0	0	0	11	0	0	0	0	0	0	11
FLORIDA	0	0	0	0	1	17	8	19	2	0	0	0	47
GEORGIA	0	0	0	0	0	2	1	0	0	0	0	0	3
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	2	2	0	3	0	0	0	7
ILLINOIS	0	0	0	0	0	1	0	0	0	0	0	0	1
INDIANA	0	0	0	0	0	1	1	0	0	0	0	0	2
IOWA	0	0	0	0	1	0	0	0	0	0	0	0	1
KANSAS	0	0	0	0	0	1	0	0	0	0	0	0	1
KENTUCKY	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISIANA	1	1	1	20	0	0	4	3	0	0	0	0	30
MAINE	0	0	0	0	0	1	2	0	0	0	0	0	3
MARYLAND	0	0	0	1	0	3	1	1	0	0	0	0	6
MASSACHUSETTS	0	0	0	0	0	1	14	0	0	0	0	0	15
MICHIGAN	0	0	0	0	1	2	1	0	0	0	0	0	4
MINNESOTA	0	0	0	0	0	1	1	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	0	0	2	0	0	0	0	0	2
MONTANA	0	0	0	0	0	0	1	0	1	1	0	0	3
NEBRASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	5	1	0	0	0	0	6
NEW HAMPSHIRE	0	0	0	0	0	1	0	1	0	0	0	0	2
NEW JERSEY	0	0	0	0	8	4	3	0	2	0	0	0	17
NEW MEXICO	0	0	0	0	0	0	1	2	0	0	0	0	3
NEW YORK	0	0	0	1	4	10	3	0	1	1	0	0	20
NORTH CAROLINA	0	0	0	0	3	2	1	1	0	0	0	0	7
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	1	0	0	0	0	0	0	0	0	1
OKLAHOMA	0	0	0	0	1	0	0	0	2	0	2	0	5
OREGON	0	0	0	0	0	0	0	0	0	0	0	0	0
PENNSYLVANIA	0	0	0	0	3	3	0	0	0	0	0	0	6
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	4	2	1	0	0	0	0	7
SOUTH DAKOTA	0	0	0	0	0	0	1	1	0	0	0	0	2
TENNESSEE	0	0	5	0	0	0	0	2	0	0	0	0	7
TEXAS	0	1	0	0	0	0	7	2	0	1	0	0	11
UTAH	0	0	0	0	0	0	2	1	0	1	0	0	4
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	0	0	1	0	1	6	0	0	0	0	0	0	8
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	1	0	0	5	0	0	0	0	0	0	6
WYOMING	0	0	0	0	0	1	0	1	0	0	0	0	2
TOTAL: UNITED STATES	1	3	9	24	28	81	69	45	16	4	2	3	285



TOTAL LIGHTNING DEATHS BY STATE AND NATION FOR PERIOD 1959-1998



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	1	3	2	10	10	7	1	1	0	0	35
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	4	0	7	7	9	1	0	1	29
ARKANSAS	0	0	8	0	2	14	18	14	4	0	0	0	60
CALIFORNIA	0	0	0	0	0	2	3	1	5	0	0	0	11
COLORADO	0	0	0	2	1	12	25	14	7	1	0	0	62
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	1	5	8	46	65	54	31	2	0	0	212
GEORGIA	0	0	1	2	4	10	16	9	2	1	0	0	45
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	15	8	12	4	1	0	0	45
INDIANA	0	0	1	1	3	10	9	10	4	2	0	0	40
IOWA	0	0	0	1	5	10	2	11	1	2	0	0	32
KANSAS	0	0	0	3	3	6	7	1	1	1	2	0	24
KENTUCKY	0	0	0	2	3	9	9	6	12	0	0	0	41
LOUISIANA	1	1	1	4	5	14	21	3	11	0	2	2	65
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	20	14	5	0	0	0	56
MINNESOTA	0	0	0	1	2	9	6	11	2	1	0	0	32
MISSISSIPPI	0	0	3	1	5	7	18	8	5	0	0	0	47
MISSOURI	0	0	4	0	7	16	8	7	1	1	0	0	44
MONTANA	0	0	0	0	0	3	7	0	1	0	0	0	11
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	6	5	0	0	0	23
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	4	2	0	0	74
NORTH CAROLINA	0	1	2	0	6	11	25	20	4	0	0	0	69
NORTH DAKOTA	0	0	0	0	0	3	3	1	0	0	0	0	7
OHIO	0	0	0	2	5	13	20	13	8	2	2	0	65
OKLAHOMA	1	0	0	2	6	8	7	16	10	2	0	0	52
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	22	15	12	12	2	1	0	77
TEXAS	0	1	1	10	14	11	24	14	10	2	0	0	87
UTAH	0	0	0	1	0	4	5	5	4	0	0	0	19
VERMONT	0	0	0	0	0	1	1	2	0	0	0	0	4
VIRGINIA	0	0	0	0	1	4	7	4	3	0	0	0	19
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	6	11	2	0	0	1	29
WYOMING	0	0	0	0	0	4	4	5	2	0	0	0	15
TOTAL: UNITED STATES	2	4	25	52	129	360	499	405	203	31	7	85	1802



TOTAL LIGHTNING INJURIES BY STATE AND NATION FOR PERIOD 1959-1998



STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	1	2	11	2	8	14	60	25	4	4	0	0	131
ALASKA	0	0	0	0	0	0	1	1	0	0	0	0	2
ARIZONA	0	1	0	0	4	4	7	31	21	3	1	3	75
ARKANSAS	1	1	3	6	7	25	19	38	7	0	0	1	108
CALIFORNIA	0	0	4	1	1	0	9	8	13	1	1	0	38
COLORADO	0	0	0	3	19	65	65	68	18	3	0	0	241
CONNECTICUT	0	1	2	1	2	2	16	6	6	3	0	0	39
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	12	20	32	136	236	169	136	38	1	1	782
GEORGIA	2	0	3	3	19	45	74	31	4	5	0	1	187
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	9	31	26	49	27	6	0	0	150
INDIANA	0	0	2	1	15	18	36	22	8	0	0	0	102
IOWA	0	0	0	3	11	27	13	11	6	1	0	0	72
KANSAS	0	0	5	4	6	14	30	17	25	2	1	0	104
KENTUCKY	0	0	1	2	11	16	41	13	8	0	0	0	92
LOUISIANA	3	1	5	25	15	18	34	22	9	7	2	2	143
MAINE	0	10	0	0	2	13	24	17	0	0	1	0	67
MARYLAND	1	0	1	1	4	18	22	22	4	3	0	0	76
MASSACHUSETTS	0	0	0	0	11	40	72	54	26	0	0	1	204
MICHIGAN	0	0	2	7	13	76	106	64	26	6	0	0	300
MINNESOTA	0	0	1	0	9	12	23	17	2	3	0	0	67
MISSISSIPPI	1	0	4	2	9	5	45	16	8	3	7	1	101
MISSOURI	0	1	1	9	4	14	8	17	8	1	4	0	67
MONTANA	0	0	0	0	0	8	5	2	1	1	0	0	17
NEBRASKA	0	0	0	2	13	7	8	11	3	0	0	0	44
NEVADA	0	0	0	0	3	2	8	2	1	0	0	0	16
NEW HAMPSHIRE	0	0	0	0	0	3	31	10	0	0	0	0	44
NEW JERSEY	0	0	0	0	9	6	19	8	19	0	0	0	61
NEW MEXICO	0	0	0	0	3	12	51	55	5	1	0	0	127
NEW YORK	0	0	0	1	16	51	84	107	24	5	1	0	289
NORTH CAROLINA	0	2	19	4	18	61	90	88	22	2	1	0	307
NORTH DAKOTA	0	0	0	0	1	1	6	3	2	0	0	0	13
OHIO	0	0	2	5	30	45	56	94	51	4	12	0	299
OKLAHOMA	1	0	1	6	13	22	26	33	23	18	8	2	153
OREGON	0	0	0	0	1	0	0	8	1	0	0	0	10
PENNSYLVANIA	1	1	0	0	22	94	94	34	45	3	0	0	294
PUERTO RICO	0	0	0	0	0	0	0	0	0	0	0	0	0
RHODE ISLAND	0	0	0	0	0	3	1	9	3	0	1	0	17
SOUTH CAROLINA	0	0	0	2	11	17	45	26	16	0	1	0	118
SOUTH DAKOTA	0	0	0	1	3	9	12	6	1	2	0	0	34
TENNESSEE	1	3	6	25	29	14	63	32	9	5	1	0	188
TEXAS	2	3	4	6	21	38	52	34	38	6	3	0	207
UTAH	0	0	0	1	7	16	10	13	7	1	0	0	55
VERMONT	0	0	0	0	0	4	3	2	0	0	0	0	9
VIRGINIA	0	0	2	4	7	22	62	21	9	0	0	0	127
WASHINGTON	0	0	0	1	0	12	3	6	0	0	1	1	24
WEST VIRGINIA	0	0	0	10	1	4	40	27	0	1	0	0	83
WISCONSIN	0	1	1	2	1	41	40	36	7	3	0	0	132
WYOMING	0	0	0	1	2	14	9	9	8	0	0	0	43
TOTAL: UNITED STATES	14	30	92	162	429	1136	1797	1409	668	142	51	13	5943



NATIONAL TOTAL LIGHTNING DEATHS BY YEAR FOR PERIOD 1959-1998



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
TOTAL	2	4	25	52	129	360	499	405	203	31	7	85	1802
MEAN	0	0	1	1	3	9	12	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 1959-1998

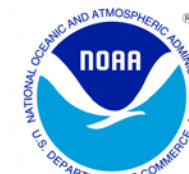


YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1959	0	0	0	1	14	31	40	26	18	3	1	0	134
1960	0	0	0	2	0	29	11	27	13	6	3	0	91
1961	0	0	5	1	8	40	48	35	26	1	1	1	166
1962	0	0	0	1	8	13	48	20	5	5	0	0	100
1963	0	0	0	1	6	54	22	27	18	1	0	0	129
1964	0	0	7	3	2	11	31	33	7	0	1	0	95
1965	1	2	0	0	8	28	29	31	14	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
TOTAL	14	30	92	162	429	1136	1797	1409	668	142	51	13	5943
MEAN	0	1	2	4	11	28	45	35	17	4	1	0	149



LIGHTNING DEATHS BY STATE, RANK, AND LOCATION OF OCCURRENCE

1959-1998



1998

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	7	20	11	31	8	23	0	0	0	0	0	0	9	26	0	0	0	0	1	100	0	0	0	0	0	0	0	0
ALASKA	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
ARIZONA	26	14	48	2	7	1	3	1	3	3	10	2	7	6	21	0	0	0	0	0	0	1	100	0	0	0	0	0	0
ARKANSAS	10	20	33	10	17	2	3	4	7	2	3	0	0	22	37	0	0	0	0	0	0	0	0	0	0	0	0	1	100
CALIFORNIA	38	1	9	3	27	1	9	2	18	0	0	0	0	4	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO	9	27	44	13	21	2	3	2	3	5	8	0	0	13	21	0	0	1	33	0	0	2	67	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	28	31	15	49	23	16	8	8	4	0	0	49	23	3	38	3	38	2	25	0	0	0	0	0	0	0	0
GEORGIA	17	17	38	8	18	7	16	1	2	2	4	1	2	9	20	0	0	0	0	0	0	1	100	0	0	0	0	0	0
HAWAII	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
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	27	11	24	2	4	3	7	3	7	1	2	13	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIANA	20	9	23	15	38	2	5	3	8	0	0	0	0	11	28	1	50	0	0	1	50	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	28	9	38	0	0	4	17	3	13	0	0	0	0	8	33	0	0	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	8	5	8	22	34	15	23	6	9	0	0	0	0	17	26	1	33	0	0	1	33	0	0	0	0	0	1	33	33
MAINE	37	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	1	50	1	50	0	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	36	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	27	7	13	2	4	6	11	2	4	10	18	1	50	0	0	0	0	1	50	0	0	0	0	0	0
MINNESOTA	23	13	41	7	22	3	9	3	9	2	6	1	3	3	9	1	50	1	50	0	0	0	0	0	0	0	0	0	0
MISSISSIPPI	15	16	34	11	23	5	11	4	9	0	0	0	0	11	23	1	100	0	0	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	35	5	45	2	18	0	0	3	27	0	0	0	0	1	9	1	50	1	50	0	0	0	0	0	0	0	0	0	0
NEBRASKA	27	10	42	2	8	2	8	6	25	0	0	0	0	4	17	0	0	0	0	0	0	0	1	100	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	50	0	0	0	0	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	29	8	35	5	22	3	13	0	0	2	9	0	0	5	22	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	22	9	12	3	4	4	5	0	0	31	42	1	100	0	0	0	0	0	0	0	0	0	0	0	0
NORTH CAROLINA	6	12	17	10	14	7	10	4	6	2	3	0	0	34	49	2	100	0	0	0	0	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.



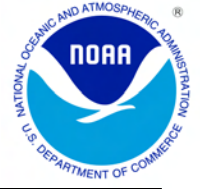
LIGHTNING DEATHS BY STATE, RANK, AND LOCATION OF OCCURRENCE

1959-1998



1998

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	7	18	28	7	11	8	12	6	9	6	9	1	2	19	29	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	13	20	38	3	6	14	27	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	1	100	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	1	50	0	0	0	0	1	50	0	0	0	0	
SOUTH DAKOTA	34	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	5	6	5	6	1	1	23	30	0	0	0	0	0	0	1	100	0	0	0	0	0	0	
TEXAS	3	30	34	15	17	13	15	10	11	3	3	0	0	16	18	2	100	0	0	0	0	0	0	0	0	0	0	0	0	
UTAH	31	8	42	6	32	0	0	2	11	0	0	0	0	3	16	0	0	0	0	0	0	1	100	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	37	3	16	0	0	1	5	1	5	0	0	7	37	0	0	0	0	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	32	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	10	34	2	7	6	21	2	7	2	7	0	0	7	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WYOMING	33	10	67	0	0	2	13	0	0	0	0	0	0	3	20	1	100	0	0	0	0	0	0	0	0	0	0	0	0	
UNITED STATES	0	497	28	305	17	220	12	127	7	73	4	17	1	563	31	17	39	9	20	6	14	8	18	2	5	0	0	2	5	



TORNADO SUMMARY BY STATE AND NATION, 1998

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA													
NUMBER	0	1	0	20	6	1	0	0	22	0	0	0	50
DAYS	0	1	0	7	4	1	0	0	6	0	0	0	19
DEATHS	0	0	0	34	0	0	0	0	0	0	0	0	34
INJURIES	0	0	0	272	0	0	0	0	3	0	0	0	275
ARIZONA													
NUMBER	0	0	0	0	1	0	0	1	0	0	0	0	2
DAYS	0	0	0	0	1	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	0	0	0	0	0	0
ARKANSAS													
NUMBER	3	1	1	9	5	9	0	0	1	3	5	0	37
DAYS	1	1	1	6	4	4	0	0	1	1	2	0	21
DEATHS	0	0	0	2	0	0	0	0	0	0	0	0	2
INJURIES	0	0	0	12	0	0	0	0	0	0	0	0	12
CALIFORNIA													
NUMBER	2	7	3	1	7	0	0	1	0	0	0	4	25
DAYS	2	6	2	1	7	0	0	1	0	0	0	1	20
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	1	0	0	0	2	0	0	0	0	0	0	0	3
COLORADO													
NUMBER	0	0	0	0	9	7	17	4	1	0	0	0	38
DAYS	0	0	0	0	8	5	15	2	1	0	0	0	31
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
CONNECTICUT													
NUMBER	0	0	0	0	1	3	0	0	0	0	0	0	4
DAYS	0	0	0	0	1	2	0	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
DELAWARE													
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
FLORIDA													
NUMBER	6	36	14	0	3	7	3	8	26	1	6	0	110
DAYS	3	11	6	0	1	6	3	5	14	1	2	0	52
DEATHS	0	42	0	0	0	0	0	0	0	0	0	0	42
INJURIES	1	263	16	0	0	0	0	0	9	0	20	0	309
GEORGIA													
NUMBER	1	4	3	9	10	0	0	0	11	0	0	0	38
DAYS	1	3	3	6	9	0	0	0	5	0	0	0	27
DEATHS	0	0	12	7	0	0	0	0	0	0	0	0	19
INJURIES	0	1	171	75	10	0	0	0	34	0	0	0	291
IDAHO													
NUMBER	0	0	0	1	2	3	1	0	0	0	0	0	7
DAYS	0	0	0	1	2	3	1	0	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	1	0	0	0	0	0	1
ILLINOIS													
NUMBER	0	0	1	47	19	30	0	1	0	0	1	1	100
DAYS	0	0	1	10	10	13	0	1	0	0	1	1	37
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	3	18	0	6	0	0	0	0	0	0	27
INDIANA													
NUMBER	0	0	2	4	9	15	3	3	0	0	0	0	36
DAYS	0	0	1	2	4	4	3	2	0	0	0	0	16
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	17	0	0	0	0	0	0	17
IOWA													
NUMBER	0	0	1	6	33	27	4	2	0	0	0	0	73
DAYS	0	0	1	3	15	18	2	2	0	0	0	0	41
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	47	86	0	0	0	0	0	0	133
KANSAS													
NUMBER	0	0	0	5	13	41	0	2	3	4	3	0	71
DAYS	0	0	0	2	11	21	0	2	2	3	2	0	43
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	2	0	0	0	0	0	1	0	0	3

* CORRECTED FOR BOUNDARY-CROSSING TORNADOES
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TORNADO SUMMARY BY STATE AND NATION, 1998

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
KENTUCKY													
NUMBER	0	0	0	9	5	2	0	0	0	0	0	0	16
DAYS	0	0	0	8	5	2	0	0	0	0	0	0	15
DEATHS	0	0	0	3	0	0	0	0	0	0	0	0	3
INJURIES	0	0	0	9	0	0	0	0	0	0	0	0	9
LOUISIANA													
NUMBER	4	1	0	1	0	0	0	1	11	3	4	1	26
DAYS	2	1	0	1	0	0	0	1	4	2	2	1	14
DEATHS	0	0	0	0	0	0	0	0	1	0	0	0	1
INJURIES	0	0	0	0	0	0	0	0	11	0	1	0	12
MAINE													
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
MARYLAND													
NUMBER	0	0	0	0	0	11	1	0	0	0	0	0	12
DAYS	0	0	0	0	0	7	1	0	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	6	0	0	0	0	0	0	6
MICHIGAN													
NUMBER	0	0	1	1	6	8	0	2	0	2	1	0	21
DAYS	0	0	1	1	2	6	0	2	0	2	1	0	15
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	0	12	0	0	12
MINNESOTA													
NUMBER	0	0	17	0	5	28	10	1	0	0	0	0	61
DAYS	0	0	2	0	3	14	3	1	0	0	0	0	23
DEATHS	0	0	2	0	1	0	0	0	0	0	0	0	3
INJURIES	0	0	21	0	30	0	0	0	0	0	0	0	51
MISSISSIPPI													
NUMBER	0	3	0	4	0	4	0	1	2	0	0	0	14
DAYS	0	2	0	4	0	3	0	1	1	0	0	0	11
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	0	1	0	0	0	1
MISSOURI													
NUMBER	0	0	0	9	2	10	1	0	0	0	1	0	23
DAYS	0	0	0	5	2	2	1	0	0	0	1	0	11
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	1	1	0	0	0	0	0	16	0	18
MONTANA													
NUMBER	0	0	0	0	0	1	4	6	0	0	0	0	11
DAYS	0	0	0	0	0	1	2	4	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	0	0	0	0	0	0	0
NEBRASKA													
NUMBER	0	0	0	0	17	28	10	0	0	10	0	0	65
DAYS	0	0	0	0	10	16	6	0	0	3	0	0	35
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	1	21	0	0	0	0	0	0	22
NEVADA													
NUMBER	0	0	0	0	0	4	2	0	2	0	0	0	8
DAYS	0	0	0	0	0	4	2	0	2	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	0	0	0	0	0	0	0
NEW HAMPSHIRE													
NUMBER	0	0	0	0	1	0	0	0	0	0	0	0	1
DAYS	0	0	0	0	1	0	0	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
NEW JERSEY													
NUMBER	0	0	0	0	0	0	0	0	3	0	0	0	3
DAYS	0	0	0	0	0	0	0	0	2	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
NEW MEXICO													
NUMBER	0	0	0	0	0	2	0	2	1	2	0	0	7
DAYS	0	0	0	0	0	1	0	2	1	2	0	0	6
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

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TORNADO SUMMARY BY STATE AND NATION, 1998

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
NEW YORK													
NUMBER	0	0	0	0	12	9	0	0	1	0	0	0	22
DAYS	0	0	0	0	5	7	0	0	1	0	0	0	13
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	85	0	0	0	6	0	0	0	91
NORTH CAROLINA													
NUMBER	1	0	14	8	23	8	1	8	3	0	0	0	66
DAYS	1	0	5	1	13	6	1	2	2	0	0	0	31
DEATHS	0	0	2	0	0	0	0	0	0	0	0	0	2
INJURIES	3	0	37	3	10	0	0	0	0	0	0	0	53
NORTH DAKOTA													
NUMBER	0	0	0	0	10	9	7	2	0	0	0	0	28
DAYS	0	0	0	0	3	9	5	2	0	0	0	0	19
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
OHIO													
NUMBER	0	0	0	4	4	10	3	3	0	0	0	0	24
DAYS	0	0	0	2	4	9	2	2	0	0	0	0	19
DEATHS	0	0	0	0	0	1	0	0	0	0	0	0	1
INJURIES	0	0	0	0	0	16	0	0	0	0	0	0	16
OKLAHOMA													
NUMBER	0	0	1	1	22	23	2	1	3	27	4	0	84
DAYS	0	0	1	1	7	6	2	1	1	4	4	0	27
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	2	22	0	0	0	11	0	0	35
OREGON													
NUMBER	1	0	0	0	0	0	0	0	0	2	0	0	3
DAYS	1	0	0	0	0	0	0	0	0	1	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
PENNSYLVANIA													
NUMBER	0	0	1	4	22	28	1	0	4	0	0	0	60
DAYS	0	0	1	2	6	15	1	0	2	0	0	0	27
DEATHS	0	0	0	0	1	2	0	0	0	0	0	0	3
INJURIES	0	0	0	1	24	66	0	0	0	0	0	0	91
SOUTH CAROLINA													
NUMBER	1	0	6	5	16	9	0	0	5	0	0	0	42
DAYS	1	0	3	3	13	5	0	0	2	0	0	0	27
DEATHS	0	0	0	0	2	0	0	0	1	0	0	0	3
INJURIES	4	0	0	0	18	0	0	0	13	0	0	0	35
SOUTH DAKOTA													
NUMBER	0	0	0	0	10	13	6	0	0	0	0	0	29
DAYS	0	0	0	0	2	9	5	0	0	0	0	0	16
DEATHS	0	0	0	0	6	0	0	0	0	0	0	0	6
INJURIES	0	0	0	0	150	1	1	0	0	0	0	0	152
TENNESSEE													
NUMBER	1	0	1	27	2	5	0	0	0	0	1	0	37
DAYS	1	0	1	13	1	5	0	0	0	0	1	0	22
DEATHS	0	0	0	7	0	0	0	0	0	0	0	0	7
INJURIES	0	0	0	113	0	3	0	0	0	0	0	0	116
TEXAS													
NUMBER	25	18	4	12	12	6	2	5	4	31	1	0	120
DAYS	5	5	3	3	5	4	2	4	3	9	1	0	44
DEATHS	0	0	0	0	0	0	0	0	0	2	0	0	2
INJURIES	1	12	0	2	2	0	0	0	5	9	0	0	31
UTAH													
NUMBER	0	0	0	0	3	1	1	1	1	0	0	0	7
DAYS	0	0	0	0	2	1	1	1	1	0	0	0	6
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	0	0	0	6	0	0	0	0	6
VERMONT													
NUMBER	0	0	0	0	1	0	0	0	0	0	0	0	1
DAYS	0	0	0	0	1	0	0	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
VIRGINIA													
NUMBER	0	2	2	3	1	5	1	0	0	0	0	0	14
DAYS	0	1	2	2	1	5	1	0	0	0	0	0	12
DEATHS	0	0	0	2	0	0	0	0	0	0	0	0	2
INJURIES	0	0	0	1	2	0	0	0	0	0	0	0	3

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TORNADO SUMMARY BY STATE AND NATION, 1998

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
WEST VIRGINIA													
NUMBER	2	0	0	0	1	11	1	1	0	0	0	0	16
DAYS	2	0	0	0	1	8	1	1	0	0	0	0	13
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	1	6	0	0	0	0	0	0	7
WISCONSIN													
NUMBER	0	0	2	0	15	4	0	3	0	0	0	0	24
DAYS	0	0	2	0	8	4	0	2	0	0	0	0	16
DEATHS	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURIES	0	0	0	0	27	1	0	2	0	0	0	0	30
WYOMING													
NUMBER	0	0	0	0	6	7	1	2	0	0	0	0	16
DAYS	0	0	0	0	5	5	1	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	0	0	0	0	0	0	0
UNITED STATES													
NUMBER	47	73	74	190	314*	389*	82	62*	104	86	27*	6	1449*
DAYS	12	18	12	19	29	29	22	20	19	13	6	3	202
DEATHS	0	42	16	55	10	3	0	0	2	2	0	0	130
INJURIES	10	276	248	509	412	251	2	8	82	33	37	0	1868

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



NATIONS SUMMARY OF TORNADOS, TORNADO DAYS AND DEATHS BY MONTH AND ANNUAL, 1953-1998



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	28	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, 1953-1998



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	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
POR	744	233	105	991	274	257	2527	556	408	5122	799	1272	22	99	272	7984	1223	504	4524	1171	55	2812	974	111	1922	662	69	1381	383	83	1407	304	149	799	229	119	38514	7969	4008
MEAN	16	5	2	22	6	6	55	12	9	111	17	28	182	25	19	174	27	11	98	25	1	61	21	2	42	14	2	30	8	2	31	7	3	17	5	3	837	173	87



TORNADOES, TORNADO DAYS AND DEATHS BY STATE AND NATION 1953-1998



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	1051	23	50	1998	5	1956	4.46	540	12	322	7	62
ALASKA	1	0	1	1959	0	1989+	.00	1	0	0	0	0
ARIZONA	183	4	17	1972	0	1965	.36	143	3	3	0	0
ARKANSAS	981	21	78	1982	2	1987+	3.95	458	10	217	5	41
CALIFORNIA	304	7	25	1998	0	1968+	.44	215	5	0	0	0
COLORADO	1429	31	98	1996+	1	1959	2.97	714	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	2436	53	115	1997	10	1956	9.05	1497	33	131	3	22
GEORGIA	988	21	52	1994	2	1987	3.57	530	12	129	3	22
HAWAII	27	1	4	1971	0	1987+	1.55	23	1	0	0	0
IDAHO	144	3	11	1991+	0	1977+	.36	118	3	0	0	0
ILLINOIS	1450	32	107	1974	4	1953	5.67	618	13	179	4	32
INDIANA	1002	22	49	1990	4	1984	6.06	459	10	221	5	61
IOWA	1542	34	73	1998	7	1956	6.04	682	15	60	1	11
KANSAS	2326	51	116	1991	14	1976	6.20	967	21	190	4	23
KENTUCKY	501	11	39	1997	0	1953	2.72	266	6	110	2	27
LOUISIANA	1180	26	79	1992	3	1955	5.36	668	15	106	2	22
MAINE	88	2	11	1971	0	1987+	.60	78	2	1	0	0
MARYLAND	222	5	24	1995	0	1988+	4.73	131	3	2	0	2
MASSACHUSETTS	139	3	12	1958	0	1988+	3.63	98	2	102	2	124
MICHIGAN	779	17	39	1974	2	1959	2.92	445	10	238	5	41
MINNESOTA	1027	22	61	1998	5	1988+	2.62	522	11	85	2	10
MISSISSIPPI	1152	25	62	1988	1	1979	5.24	557	12	370	8	78
MISSOURI	1272	28	79	1973	6	1979+	4.02	566	12	137	3	20
MONTANA	285	6	30	1991	0	1974+	.41	200	4	1	0	0
NEBRASKA	1891	41	88	1990	10	1966	5.31	834	18	51	1	7
NEVADA	61	1	8	1987+	0	1985+	.09	56	1	0	0	0
NEW HAMPSHIRE	75	2	9	1963	0	1987+	2.15	66	1	0	0	0
NEW JERSEY	123	3	17	1989	0	1984+	3.83	93	2	0	0	0
NEW MEXICO	445	10	31	1991	0	1953	.82	320	7	3	0	0
NEW YORK	298	6	25	1992	0	1953	1.21	203	4	21	0	4
NORTH CAROLINA	782	17	66	1998	2	1970	3.23	425	9	84	2	16
NORTH DAKOTA	907	20	52	1976	2	1961	2.83	484	11	22	0	3
OHIO	707	15	61	1992	0	1988	3.64	369	8	172	4	42
OKLAHOMA	2529	55	107	1957	17	1988	7.87	988	21	213	5	30
OREGON	72	2	14	1997	0	1988+	.21	63	1	0	0	0
PENNSYLVANIA	566	12	60	1998	0	1959	2.65	324	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	580	13	54	1995	1	1986+	4.19	338	7	49	1	16
SOUTH DAKOTA	1291	28	85	1993	1	1958	3.63	573	12	14	0	2
TENNESSEE	619	13	44	1974	1	1987+	3.08	321	7	104	2	25
TEXAS	6261	136	232	1967+	32	1953	5.09	2314	50	489	11	18
UTAH	91	2	7	1998	0	1989+	.24	78	2	0	0	0
VERMONT	33	1	5	1962	0	1985+	1.04	30	1	0	0	0
VIRGINIA	355	8	28	1993	1	1982+	1.96	216	5	25	1	6
VIRGIN ISLANDS	2	0	1	1979+	0	1989+	.00	2	0	0	0	0
WASHINGTON	71	2	14	1997	0	1988+	.29	59	1	6	0	1
WEST VIRGINIA	104	2	16	1998	0	1988+	.83	81	2	2	0	1
WISCONSIN	918	20	43	1980	3	1953	3.63	465	10	83	2	15
WYOMING	493	11	42	1977	0	1970	1.12	330	7	2	0	0
PACIFIC ISLANDS	2	0	1	1981+	0	1989+	.00	2	0	0	0	0
UNITED STATES	39684*	863	1449	1998	421	1953	2.39	8165&	178	4033	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 - 1998



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.



NATIONAL TORNADOES, TORNADO DAYS, DEATHS AND RESULTING LOSSES BY YEARS, 1916 - 1998



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
1976	835	169	44	5	8	145	41	5
1977	852	189	43	22	8	173	40	6
1978	788	173	53	16	9	153	53	6
1979	852	186	84	42	9	169	62	11
1980	866	176	28	5	9	201	79	13
1981	783	175	24	5	9	144	43	12
1982	1046	182	64	10	9	254	79	13
1983	931	190	34	3	9	211	85	10
1984	907	166	122	16	9	193	90	35
1985	684	168	94	18	9	114	55	14
1986	764	168	15	3	9	157	66	9
1987	656	151	59	30	8	112	32	6
1988	702	156	32	5	9	148	48	17
1989	856	160	50	21	9	133	60	18
1990	1133	181	53	29	8	215	91	18
1991	1132	179	39	17	8	194	49	15
1992	1298	195	39	12	8	212	83	25
1993	1176	186	33	7	8	186	59	13
1994	1082	199	69	22	8	194	68	15
1995	1235	178	30	6	8	203	52	11
1996	1173	194	26	7	9	225	92	20
1997	1148	196	67	27	8	201	63	10
1998	1449	202	130	32	9	317	122	39
MEAN	837	173	87	-	-	143	45	10

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:

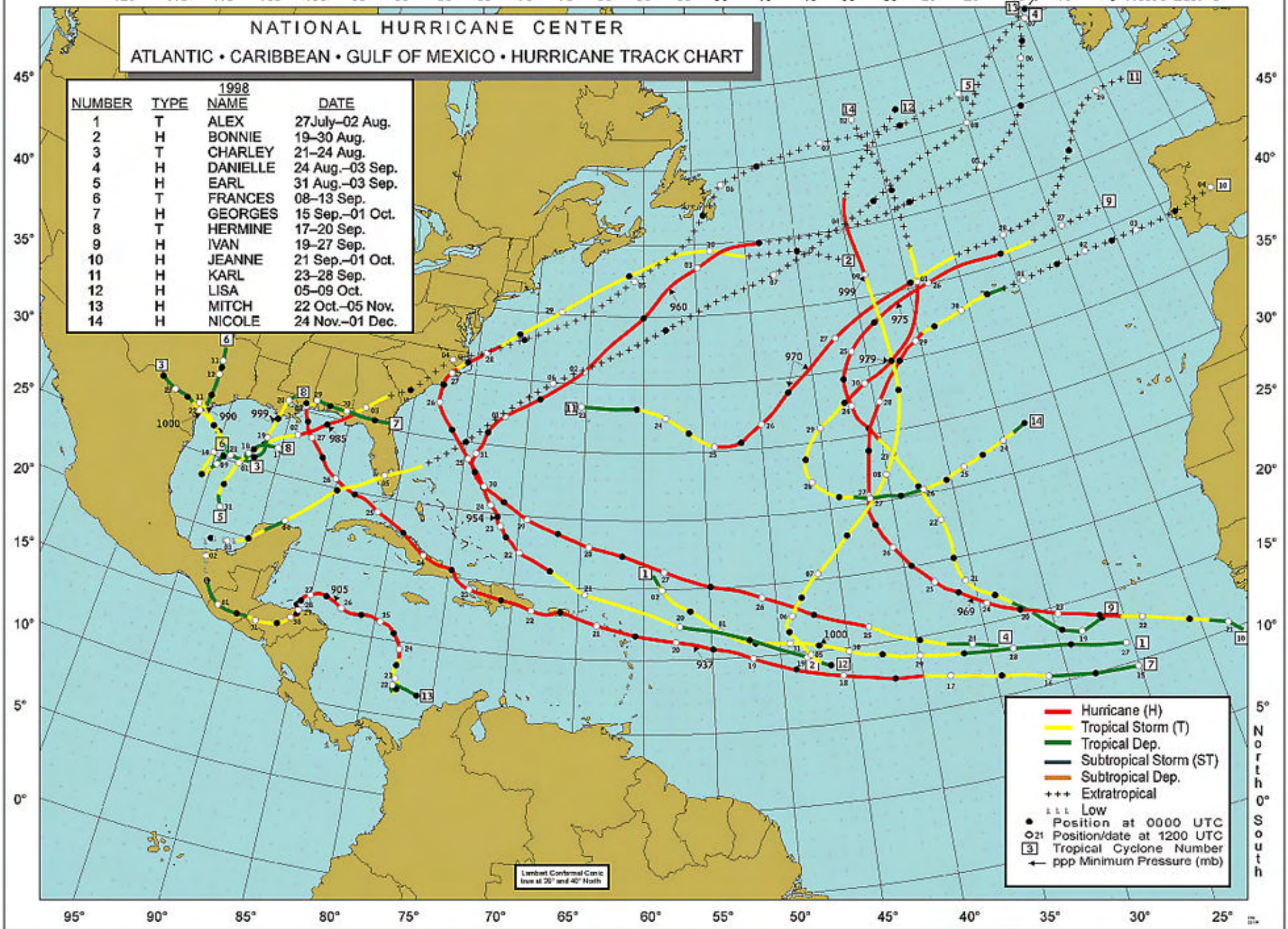
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|--------------------------------|----------------------------------|
| 5. \$50,000 TO \$500,000 | 8. \$50 MILLION TO \$500 MILLION |
| 6. \$500,000 TO \$5 MILLION | 9. \$500 MILLION AND OVER |
| 7. \$5 MILLION TO \$50 MILLION | |

* 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°

NATIONAL HURRICANE CENTER
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NUMBER	TYPE	1998 NAME	DATE
1	T	ALEX	27 July–02 Aug.
2	H	BONNIE	19–30 Aug.
3	T	CHARLEY	21–24 Aug.
4	H	DANIELLE	24 Aug.–03 Sep.
5	H	EARL	31 Aug.–03 Sep.
6	T	FRANCES	08–13 Sep.
7	H	GEORGES	15 Sep.–01 Oct.
8	T	HERMINE	17–20 Sep.
9	H	IVAN	19–27 Sep.
10	H	JEANNE	21 Sep.–01 Oct.
11	H	KARL	23–28 Sep.
12	H	LISA	05–09 Oct.
13	H	MITCH	22 Oct.–05 Nov.
14	H	NICOLE	24 Nov.–01 Dec.



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

Lambert Conformal Conic
true at 30° and 40° North

North
South

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

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