



| Location | Date | Time Local/ Standard | Path Length (Miles) | Path Width (Yards) | | ber of sons Injured | nated mage Crops | July 2 Character of Storm | 002 |
|---------------------------------|-------------|--|---------------------------|--------------------------|---|---------------------------|------------------------|----------------------------|-----|
| ATLANTIC NORTH | | | | | | | | | |
| ANZ537 Lewisetta | 09 | Potomac Cobb Is 1715EST d gust of 39 MPF | | | 0 | 0 | | Marine Tstm Wind (G35) | |
| ANZ535 Rnld Reagan Natl Arpt | 09 | Potomac Key Br 1913EST d gust of 39 MPF | O | | 0 | 0 | | Marine Tstm Wind (G35) | |
| ANZ531 7 W Riviera Beach | Chesa 09 | peake Bay Poole 1914EST | es Is To Sandy | Pt Md | 0 | 0 | | Marine Tstm Wind (G42) | |

ANZ534 Chesapeake Bay Drum Pt To Smith Pt Va

Patuxent River Nas 09 1934EST 0 0 Marine Tstm Wind (G43)

A wind gust of 49 MPH was recorded.

A wind gust of 48 MPH was recorded at BWI Airport.

ANZ530 Chesapeake Bay N Of Pooles Is Md

2 N Aberdeen Proving G 09 2000EST 0 0 Marine Tstm Wind (G35)

Winds strong enough to down trees in Bel Air moved onto the bay.

DISTRICT OF COLUMBIA

DCZ001 District Of Columbia

2 1000EST 0 0 Excessive Heat

High pressure remained stationary off the Delmarva coastline during the 1st week of July. This resulted in a prolonged period of hot and humid weather across the Mid Atlantic region. Between July 2nd and 4th, high temperatures rose into the lower to middle 90s and dew points reached into the lower 70s. This resulted in heat index values reaching 100 to 110 degrees during the afternoon. In addition, heat index value only dropped into the lower 80s overnight on the 4th and 5th, resulting in little relief for people without air conditioning. These conditions led to a number heat related illnesses, especially in people already suffering from pre-existing medical conditions. Thousands of people attended 4th of July activities on the Mall on July 4th. A handful of people on the grounds were overcome by heat during the day. On-site medical staff treated 150 people for heat exhaustion, including 83 people who were transported to area hospitals.

DCZ001 District Of Columbia

22 1000EST 0 0 Excessive Heat

Another round of hot and humid weather occurred in the Washington D.C. metropolitan area on July 22nd and 23rd. Heat indexes rose to 103 degrees on the 22nd and 105 degrees on the 23rd.

DCZ001 District Of Columbia

A large area of high pressure sat off the Mid-Atlantic coast during the last week of July. This caused a warm and moist south wind to blow into the region for several days, resulting in another heat wave. The hottest days were the 28th and 29th of July when temperatures rose into the 90s and heat index values reached 100 to 110 degrees. Local power companies reported record electricity use on the 29th. City officials reported a number of heat-related medical emergency calls during the week.





Time Path Path Number of Estimated Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

MARYLAND, Central

MDZ002>007-009>011-013>014-016>018 Allegany - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert

02 1000EST 21 0 Excessive Heat 04 2000EST

High pressure remained stationary off the Delmarva coastline during the 1st week of July. This resulted in a prolonged period of hot and humid weather across the Mid Atlantic region. Between July 2nd and 4th, high temperatures rose into the lower to middle 90s and dew points reached into the lower 70s. This resulted in heat index values reaching 100 to 110 degrees during the afternoon. In addition, heat index values only dropped into the middle 80s overnight in downtown Baltimore on the 4th and 5th, resulting in little relief for people without air conditioning. These conditions led to several heat related deaths and illnesses, especially in people already suffering from pre-existing medical conditions.

In Baltimore City, 12 people died in their non air-conditioned homes between July 3rd and 9th. On the 3rd, an 85 year-old man died from heat stroke. On the 4th, two men, age 65 and 72, and one woman who was 90 years old succumbed to the heat. On the 5th, three men, age 52, 56, and 86, and two women, age 53 and 67, died. On the 6th, an 80 year-old man and an 82 year-old woman died. On the 7th, a man of unknown age was found dead in his residence. On the 8th, an 88 year-old man was found dead in his home. On the 9th, an 83 year-old woman and a 53 year-old man died from exposure to the heat. Several other people were treated for heat illnesses in city hospitals during the period. In Baltimore County, a 78 year-old man died in his home on the 4th of July and a 48 year-old man was found dead at a construction site on the 10th. Also on the 4th, ten people were treated for heat exhaustion at a parade in Dundalk.

In Montgomery County, a 55 year-old man died on the 4th and a 74 year-old man died on the 8th. In Harford County, a 69 year-old woman was found dead in her non-air-conditioned Aberdeen home on the 5th. In Frederick County, a 23 year-old firefighter who was participating in a jogging exercise on the morning of the 3rd collapsed and went into cardiac arrest. By the time he arrived at the hospital, his body temperature had reached 107 degrees. He died of heat stroke a short time later. Twenty other people were treated at hospitals for heat illnesses countywide between July 2nd and 4th. In Washington County, a woman in her 60s was treated at a Hagerstown hospital for heat exhaustion. Her body temperature reached 105 degrees and she suffered from dementia. A 67 year-old man was overcome for a time by heat while changing a tire near Hancock. A firefighter was also treated for heat exhaustion on the 3rd after fighting a blaze in Hagerstown. M23OU, M55OT, M74PH, M78PH, M48OU, M85PH, M65PH, M72PH, F90PH, F67PH, M86PH, M56PH, F53PH, M52PH, M80PH, F82PH, M79PH, M88PH, F83PH, M53PH, F69P H

| Washington County 2 NE Smithsburg | 09 A win | 1722EST d gust of 61 MPH was recorded. | 0 | 0 | | Thunderstorm Wind $(G53)^M$ |
|--------------------------------------|--------------------|--|-------------------|------------|-------------|-----------------------------|
| Frederick County | | | | | | |
| Frederick | 09 | 1815EST | 0 | 0 | 2K | Thunderstorm Wind |
| | Trees | were downed. | | | | |
| Carroll County | | | | | | |
| Winfield | 09 | 1830EST | 0 | 10 | 5K | Tstm Wind/Hail |
| | Gusty | winds and driving rain toppled several ter | nts, resulting in | injuries t | o 10 people | |
| Anne Arundel County | | | | | | |
| North Portion | 09 | 1909EST | 0 | 0 | 50K | Thunderstorm Wind |
| | | 1940EST | | | | |

Numerous trees and wires were downed.



Bel Air

National Weather Service Storm Data and Unusual Weather Phenomena

Number of

Estimated

Path



July 2002

Time Local Path Length Width Damage Persons MARYLAND, Central **Baltimore County** Reisterstown to Dundalk 09 0 100K Thunderstorm Wind Hundreds of trees and some power lines were downed. **Baltimore County** 1930EST O Thunderstorm Wind $(G54)^M$ 1 S Dundalk Wind gusts of up to 62 MPH forced the closure of the Key Bridge (Interstate 695) for 20 minutes. Baltimore City (C) **Baltimore** 1930EST O 20K Thunderstorm Wind Fifty calls for downed trees were received by county officials **Harford County** 1955EST Joppa 2K Thunderstorm Wind Trees were downed **Harford County**

0

Thunderstorms with heavy downpours and damaging winds moved through Central Maryland between 6 PM and 9:30 PM EDT on the 9th. In Washington County, a wind gust of 61 MPH was recorded just northeast of Smithsburg. Light tree damage was noted in the vicinity. In Frederick County, trees were downed in Frederick where a wind gust of 48 MPH was recorded. One fallen tree damaged four cars on North Market Street. The communities of Mount Airy, Thurmont, Braddock Heights, and Frederick reported power outages. In Carroll County, gusty winds and driving rain toppled several tents at a community festival in Winfield. Ten people were injured. Wind gusts were estimated between 40 and 50 MPH. In Anne Arundel County, numerous trees and electrical wires were downed in the central and northern portion of the county. Communities affected by the high winds included Maryland City, Glen Burnie, Waugh Chapel, Odenton, Orchard Beach, Annapolis, Linthicum, Marley Park, Harmon's Dorsey, Arnold, Harold Harbor, Riva, Lake Shore, and Crofton. A wind gust of 49 MPH was recorded at the Naval Academy in Annapolis and a gust of 48 MPH was measured at BWI Airport. In Baltimore County, hundreds of trees and some power lines were downed between Reisterstown and Dundalk. Officials in Baltimore City received 50 calls regarding downed trees. A wind gust of 48 MPH was recorded on the University of Maryland's Baltimore Campus. A wind gust of 62 MPH forced a 20 minute closure of the Key Bridge (Interstate 695) as the storms moved through. In the Baltimore metro area, around 70,000 customers lost power as a direct result of the storm. In Harford County, trees were downed in Joppa and Bel Air.

0

2K

Thunderstorm Wind

MDZ004>007-009>011-013>014-016>018

09

2000EST

Trees were downed.

Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert

1000EST 2000EST **Excessive Heat**

Another round of hot and humid weather occurred across Central and Southern Maryland on July 22nd and 23rd. Heat indexes rose to between 98 and 105 degrees both days. Three people died from heat related illnesses during this time. In Montgomery County, a 47 year old man died on the 25th. In Baltimore County, a 50 year old man died on the 22nd. In the city of Baltimore, a 60 year old man was found dead in a junkyard on the 20th. Each victim had underlying health conditions which contributed to their death. Allegany Power, serving Central and Western Maryland, recorded record energy usage on the 22nd. M60OU, M50OT, M47OF

Montgomery County

Countywide 23 1700EST 1800EST 0 **Heavy Rain**





Time Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

MARYLAND, Central

Montgomery County Countywide

23 1745EST 0 0 45K Lightning 1800EST

Several lightning fires were reported.

Thunderstorms with very heavy downpours and frequent lightning moved through Central Maryland during the afternoon of the 23rd. In Montgomery County, the roofs of two homes were damaged by lightning fires in Rockville. An observer in Potomac recorded 2.3 inches of rain in one hour. Several trees in the city were also struck by lightning, including a handful that were downed onto power lines. In Gaithersburg, lightning started a shed on fire and the flames spread to an adjoining fence. Pea sized hail was also reported.

MDZ002>007-009>011-013>014-016>018 Allegany - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert

28 1000EST 3 0 Excessive Heat 29 2000EST

A large area of high pressure sat off the Mid-Atlantic coast during the last week of July. This caused a warm and moist south wind to blow into the region for several days, resulting in another heat wave. The hottest days were the 28th and 29th of July when temperatures rose into the 90s and heat index values reached 100 to 110 degrees. Power companies reported record electricity use on the 29th. Excessive heat was believed to have played a part in buckling train tracks that caused a passenger train derailment in the Montgomery County community of Kensington on the afternoon of the 29th. The derailment injured 97 people, including 6 who were critically injured.

At least three people died from heat stroke in Central Maryland during the heat wave. In Prince George's County, a 31 year-old man was found dead in his residence on the 30th. In Baltimore City, a 73 year-old man was found dead in his home on the 30th and an 81 year-old woman was found dead in her home on the 31st. Underlying health conditions contributed to these deaths. A 71 year-old man was also believed to have succumbed to the heat in his Baltimore home where a temperature of 96.5 degrees was measured on the 28th. Several other jurisdictions reported an increase of emergency room visits due to the heat. In Harford County, 12 elderly citizens were treated for heat illness. In Anne Arundel County, 7 people ranging from children to senior citizens were treated for exposure to the heat. In Baltimore County, at least 3 people were treated for heat cramps or heat exhaustion. M73PH, F81PH, M31PH

VIRGINIA, North

VAZ025>031-036>042-050>057 Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Nelson - Albemarle - Greene - Madison - Rappahannock - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Arlington - Stafford - Spotsylvania - King George

02 1000EST 0 0 Excessive Heat 04 2000EST

High pressure remained stationary off the Delmarva coastline during the 1st week of July. This resulted in a prolonged period of hot and humid weather across the Mid Atlantic region. Between July 2nd and 4th, high temperatures rose into the lower to middle 90s and dew points reached into the lower 70s. This resulted in heat index values reaching 100 to 110 degrees during the afternoon.

Highland County Mc Dowell

02 1700EST 0 0 Hail(1.75)

Golfball sized hail covered the ground.

A thunderstorm with large hail moved through Highland County during the evening of the 2nd. Near McDowell, a sheriff reported golfball sized hail covering the road around 6 PM EDT.





July 2002 Time Local/ Path Length Path Number of Estimated Persons Width Damage VIRGINIA, North Frederick County Gore 05 0143EST 0 1K **Thunderstorm Wind** Trees were downed onto Route 259. A thunderstorm with high winds moved through Frederick County during the pre-dawn hours of the 5th. The storm downed trees onto Route 259 near Gore. Frederick County Gore 09 1710EST 0 2KThunderstorm Wind A power line was downed onto Emma Row Lane. Frederick County Gainesboro 1715EST 0.50KThunderstorm Wind A tree was downed onto Apple Pie Ridge Road. Frederick County Clear Brook 1730EST 0 5K Thunderstorm Wind Power lines were downed onto Welltown Road **Loudoun County West Portion** 09 0 0 5K Thunderstorm Wind Trees were downed **Loudoun County** 09 1815EST 0 2K Thunderstorm Wind Leesburg 0 Power lines were downed. **Albemarle County** 6 SE Crozet 1850EST 1K Thunderstorm Wind Trees were downed at mile marker 113 on Interstate 64. **Augusta County** 1900EST 09 0 5K Thunderstorm Wind Countywide Trees were downed. Scattered thunderstorms moved through Northern and Central Virginia between 5 and 8 PM EDT on the 9th. The strongest storms produced wind gusts in excess of 55 MPH in Augusta, Albemarle, Loudoun, and Frederick counties. In Frederick County, a power line was downed onto Emma Row Lane in Gore. A tree was downed onto Apple Pie Ridge Road in Gainesboro. Power lines were downed onto Welltown Road in Clear Brook. In Loudoun County, trees were downed across the western portion of the county. Power lines and tree branches were downed in Leesburg. In Albemarle County, trees were downed at mile marker 113 on Interstate 64 about 6 miles southeast of Crozet. In Augusta County, scattered trees were downed countywide. **Fairfax County** Chantilly 2350EST 100K Lightning A lightning fire severely damaged the attic and roof of a home.

An early morning thunderstorm produced a lightning bolt which struck a home in Chantilly around 12:50 AM EDT on the 17th. A Tulip Tree Court home sustained \$100,000 damage from a fire which was caused by lightning. Electrical wiring, the second story ceiling, and the roof of the home were damaged.

VAZ036>038-040>042-050>057 Nelson - Albemarle - Greene - Rappahannock - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Arlington - Stafford - Spotsylvania - King George

22 1000EST 0 0 Excessive He 23 2000EST

Another round of hot and humid weather occurred across Northern and Central Virginia on July 22nd and 23rd. Heat indexes rose to between 98 and 105 degrees both days.





| | | Time Local/ | Path Length | Path Width | Per | ber of sons | Dar | nated nage | | ly 2002 |
|-------------------|--------------|---------------------------------|----------------|---------------|--------|----------------|----------|---------------|--------------------|---------|
| Location | Date | Standard | (Miles) | (Yards) | Killed | Injured | Property | Crops | Character of Storm | |
| VIRGINIA, North | | | | | | | | | | |
| Shenandoah County | | | | | | | | | | |
| Countywide | 23 | 1428EST 1530EST | | | 0 | 0 | | | Flash Flood | |
| | Water | covered a road ir | Orkney Sprii | ngs. | | | | | | |
| Shenandoah County | | | | | | | | | | |
| Forestville | 23 A tree | 1448EST was downed onto | o South Middl | e Road. | 0 | 0 | 0.50K | | Thunderstorm Wind | |
| Page County | | | | | | | | | | |
| Rileyville | 23 Golfb | 1515EST all sized hail fell. | | | 0 | 0 | | | Hail(1.75) | |
| Page County | | | | | | | | | | |
| Rileyville | 23 | 1515EST | | | 0 | 0 | 2K | | Thunderstorm Wind | |
| | Sever | al trees were dow | ned near Rout | e 340. | | | | | | |
| Winchester (C) | | | | | | | | | | |
| Winchester | 23 | 1645EST 1730EST | | | 0 | 0 | | | Flash Flood | |
| | Roads | were underwater | | | | | | | | |
| Albemarle County | | | | | | | | | | |
| Countywide | 23 | 2000EST 2200EST | | | 0 | 0 | | | Flash Flood | |
| | C | 1 1 1 | 11 (1 1 | | | | | | | |

Several roads were closed by flooding.

Scattered thunderstorms moved through the Shenandoah Valley and the Central Piedmont during the afternoon and evening of the 23rd. In Shenandoah County, heavy downpours flooded a road in Orkney Springs. High winds downed a tree onto South Middle Road in Forestville. In Frederick County, roads were reported underwater in Winchester. A total of 2.1 inches of rain was recorded at Cross Junction. In Page County, a severe storm dumped golfball sized hail and blew down several trees near Route 340 in Rileyville. In Albemarle County, several roads were closed by rushing water, including a few surrounding the University of Virginia campus near Charlottesville.

| Winchester (C) Winchester | 27 | 1230EST 1330EST | 0 | 0 | | Heavy Rain |
|------------------------------|---------------|----------------------------|---|---|-------|-------------------|
| Clarke County | | | | | | |
| Boyce | 27 Twenty | 1325EST trees were downed. | 0 | 0 | 5K | Thunderstorm Wind |
| Fauquier County | | | | | | |
| Broad Run | 27 Trees w | 1340EST vere downed. | 0 | 0 | 1K | Thunderstorm Wind |
| Fauquier County | | | | | | |
| Warrenton | 27 Wires v | 1347EST were downed. | 0 | 0 | 1K | Thunderstorm Wind |
| Fairfax County | | | | | | |
| Centreville | 27 Large t | 1407EST | 0 | 0 | 0.50K | Thunderstorm Wind |

Thunderstorms with damaging winds and heavy rainfall moved through Northern Virginia between 1 and 4 PM EDT on the 27th. In Frederick County, standing water covered roads in Winchester after a heavy downpour. Winds estimated between 40 and 45 MPH were also reported. In Clarke County, twenty trees were downed in Boyce. In Fauquier County, trees were downed in Broad Run and wires were downed in Warrenton. In Fairfax County, large tree branches were downed in Centreville.





July 2002 Time Local Path Length Path Number of Estimated Width Persons Damage

VIRGINIA, North

VAZ025>031-036>042-050>057

Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Nelson - Albemarle - Greene - Madison -Rappahannock - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Arlington - Stafford - Spotsylvania -King George

1000EST 2000EST **Excessive Heat** 28 29

A large area of high pressure sat off the Mid-Atlantic coast during the last week of July. This caused a warm and moist south wind to blow into the region for several days, resulting in another heat wave. The hottest days were the 28th and 29th of July when temperatures rose into the 90s and heat index values reached 100 to 110 degrees. Power companies reported record electricity use on the 29th. Several jurisdictions reported an increase of emergency room visits due to the heat

WEST VIRGINIA, East

| WVZ048>053-055 | Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Hardy |
|----------------|---|
|----------------|---|

0 0 **Excessive Heat**

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| Pendleton County Harper | 02 1736EST Quarter sized hail fell. | 0 0 | Hail(1.00) |
|----------------------------|--|-----|------------|
| Hardy County Moorefield | 02 2105EST | 0 0 | Hail(0.75) |

Thunderstorms with large hail moved through Pendleton and Hardy Counties on the evening of the 2nd. In Pendleton County, quarter sized hail was reported in Harper. In Hardy County, dime sized hail fell in Moorefield.

| Hampshire County | | | | | | |
|------------------|--------------|--|---|---|----|-------------------|
| Levels | 09 A tree | 1650EST was downed onto a power line. | 0 | 0 | 2K | Thunderstorm Wind |
| | | was downed onto a power mile. | | | | |
| Morgan County | | | | | | |
| Central Portion | 09 | 1654EST | 0 | 0 | 1K | Thunderstorm Wind |
| | Tree b | ranches were downed along Route 522. | | | | |
| Jefferson County | | | | | | |
| Shepherdstown | 09 | 1746EST | 0 | 0 | 5K | Thunderstorm Wind |
| - | Trees | were downed in town and along Route 230. | | | | |

Thunderstorms with damaging winds moved through the Eastern Panhandle between 5 and 7 PM EDT. In Hampshire County, a tree was downed onto a power line in Levels. In Morgan County, tree branches were downed along Route 522. In Jefferson County, trees were downed in Shepherdstown and along Route 230.

| Hampshire | County |
|-----------|--------|
| Levels | |

23 0 0 Flash Flood

Two feet of water covered a road and small creeks overflowed their banks.

Thunderstorms with heavy rainfall moved across Hampshire County during the evening of the 23rd. In Hampshire County, small creeks and streams overflowed their banks after heavy downpours. Two feet of water covered a road in Levels.





Time Path Path Number of Estimated Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

WEST VIRGINIA, East

Grant County

Countywide 27 0730EST 0 0 Flash Flood Flash Flood

Several roads, creeks, and basements were flooded.

Showers and thunderstorm with very heavy rainfall moved through Grant County during the morning of the 27th. Widespread flooding was reported in and around Bayard. Several basements were flooded. Al Brown Road was closed by high water. Buffalo Creek overflowed its banks in several places and rose high enough to touch the bottom of the Route 90 bridge. Rainfall totals included 3.02 inches in Bayard and 2.35 inches in Petersburg.

WVZ048>053-055 Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Hardy

28 1000EST 0 0 Excessive Heat 29 2000EST

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