



# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 1997

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

#### District Of Columbia

Northwest Portion	18	1740EST 1750EST			0	0	10K		<b>Thunderstorm Wind</b>
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Peripheral winds south of a damaging microburst in southern Montgomery Co, Maryland, blew down several large limbs in upper Northwest Washington.

#### DCZ001

#### District Of Columbia

25	1100EST			0	0			<b>Excessive Heat</b>	
26	1500EST								

The first bona-fide summer heat wave in nearly two years arrived in the city after a three month period of below normal temperatures. The maximum temperature on the 25th at Washington/National Airport (DCA) hit the century mark, and rose to 97 on the 26th before a line of strong to severe thunderstorms cooled the atmosphere. Heat indices at the airport surpassed 105 for a brief period on the 25th; however, the values remained at or above 90 degrees for much of the overnight hours. Heat indices were likely higher in the more densely populated sections of the city east of Rock Creek, including the downtown sector.

The heat wave was potentially more dangerous than most since it occurred early in the season and was preceded by a three month period of below normal temperatures and several cloudy periods.

Advance advisories and warnings may have saved lives and precluded injury.

#### District Of Columbia

Upper Northwest	26	1520EST 1530EST			0	0	5K		<b>Gusty Wind</b>
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A line of thunderstorms produced scattered tree damage across portions of Washington. The line was associated with an air mass front which lifted very unstable air ahead of it. Damage included at least two downed trees; one blocking Reservoir Road and another at the intersection of 49th and Ellicott Street.

### MARYLAND, Central

#### Prince George'S County

Clinton	13	1230EST			0	0	20K		<b>Lightning</b>
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A house fire was ignited by a lightning strike in Clinton, causing moderate property damage.

#### Allegany County

2 E Cumberland	18	1510EST			0	0	1K		<b>Hail (1.75)</b>
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Golfball-sized hail fell in a pulse-severe thunderstorm near Cumberland.

#### Washington County

4 E Hancock to 5 NE Hancock	18	1629EST 1634EST	2	15	0	0	10K		<b>Tornado (F0)</b>
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A small tornado touched down near the Chesapeake and Ohio (C&O) Canal 4 miles east of Hancock, knocking down several trees and limbs before crossing interstate 70. After crossing the highway, the twister snapped tree tops and lifted several cages and parts of a fence at a local farm. Witnesses noted the trees swirling "like a blender" as the twister moved through.

#### Montgomery County

Potomac to Bethesda	18	1717EST 1732EST			1	0	300K		<b>Thunderstorm Wind (G55)</b>
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M57VE

#### Montgomery County

Bethesda to Silver Spg	18	1733EST 1745EST			0	0	500K		<b>Thunderstorm Wind (G55)</b>
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A wet microburst, associated with a heavy-precipitation supercell moving out of northern Virginia, produced a 13-mile swath of scattered tree and power line damage across extreme southern Montgomery Co. The microburst, which had a width of about 1/3 mile, snapped hundreds of mainly soft wood trees and large limbs. However, some of the trees fell onto homes and vehicles, causing substantial damage. In Potomac, a vehicle was crushed by a falling oak tree. The driver, waiting out the storm along the side of a road, was killed instantly. Numerous large limbs and dozens of small trees were snapped and/or uprooted in Potomac.

Farther east, at least 50 trees and limbs were snapped, most of them evergreens, at the Bethesda Country Club. Scattered light damage continued through North Chevy Chase, then damage increased again in the Woodside section of Silver Spring.

Unfortunately, at least four homes sustained substantial damage from fallen trees in Silver Spring. The heaviest damage occurred at the intersection of Highland and Second Avenue, where three oak trees and limbs combined to cause major damage to one home whose second story was smashed to the ground. The next-door neighbor's home had a snapped oak crash into its garage. Damage to the other two homes was not quite as severe. At the intersection of Spring Street and Second Ave., an uprooted locust tree smashed into the side wall, chimney, and roof. Another home, located at the intersection of Georgia Ave. and Noyes Drive,



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### MARYLAND, Central

suffered minor roof damage from a fallen tree. An adjacent shed was crushed by a snapped large silver maple tree.

The damage lightened up as the storm moved into the Takoma Park neighborhoods just east of Silver Spring. In all, the combination of wind and lightning cut power to 37,500 customers in the Potomac Electric Power Co service area.

#### Montgomery County

##### White Oak

18	1745EST 1750EST				0	0			<b>Hail (1.00)</b>
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An off-duty NWS employee reported nickel to quarter-sized hail at his residence in the White Oak section of Silver Spring.

#### Calvert County

##### Lusby

18	1935EST				0	0	<b>20K</b>		<b>Thunderstorm Wind</b>
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Thunderstorm winds knocked a large limb onto a house in Lusby. Several broken branches were also reported in the vicinity as well.

#### Anne Arundel County

##### Riviera Beach

22	1500EST				0	0	<b>3K</b>		<b>Lightning</b>
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#### Anne Arundel County

##### Riviera Beach

22	1500EST				0	0	<b>8K</b>		<b>Thunderstorm Wind</b>
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An isolated severe thunderstorm knocked down several trees in Riviera Beach, causing minor peripheral damage to property. Lightning strikes apparently split two trees, with one limb falling onto a car. Wind gusts snapped several large limbs, including one which caused minor damage to a shed and a deck, and another which fell onto a car. No injuries were reported with the storm.

#### MDZ011

##### Southern Baltimore

25	1100EST				0	0			<b>Excessive Heat</b>
26	1500EST								

The first bona-fide summer heat wave in nearly two years arrived in the city after a three month period of below normal temperatures. The maximum temperature on the 25th at Baltimore/Washington International Airport (BWI) reached 99 degrees, shattering the previous record by 1 degree. At Baltimore's Custom House, the reading soared to 104. Readings rose to 96 at BWI on the 26th before a line of strong thunderstorms cooled the atmosphere. Heat indices in town surpassed 105 for a brief period on the 25th; however, the values likely remained at or above 90 degrees for much of the overnight hours in the more densely populated sections of the city, including the downtown sector.

The heat wave was potentially more dangerous than most since it occurred early in the season and was preceded by a three month period of below normal temperatures and several cloudy periods.

No serious injuries or fatalities occurred due to the heat. However, several persons were admitted to area hospitals for brief stays due to minor heat exhaustion.

#### Anne Arundel County

##### Crownsville to Annapolis

26	1410EST 1415EST				0	0	<b>80K</b>		<b>Thunderstorm Wind (G54)</b>
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An apparent microburst snapped or uprooted over 30 trees, including large poplars that were between 50 and 100 feet tall and two feet wide. Wind measuring equipment recorded a gust of 63 mph. The trees were blown from east to west, indicated that the core of the microburst moved through the location. The back-side microburst (easterly wind gusts) blew down the trees. One tree crashed into a home near Mathiers Point, knocking out the chimney and tearing a hole in the roof. This storm was an individual cell well ahead of the main squall line which produced additional rainfall later that afternoon.

Other damage was noted near the Chesapeake Bay Bridge. Along Whitehall Road and federal highway 50, two fast food establishments had sign damage. At Revell Downs, a subdivision near Sandy Point State Park, at least a dozen trees and large limbs were downed. Baltimore Gas and Electric reported 3400 customers were without power after the main line of storms passed through at around 6:30 PM.

#### Montgomery County

##### Countywide

26	1440EST 1455EST				0	0	<b>30K</b>		<b>Lightning</b>
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#### Montgomery County

##### Countywide

26	1440EST 1455EST				0	0	<b>100K</b>		<b>Thunderstorm Wind</b>
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#### Prince George'S County

##### Central Portion

26	1450EST 1515EST				0	0	<b>325K</b>		<b>Lightning</b>
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### MARYLAND, Central

Prince George's County Central Portion	26	1510EST 1515EST			0	0	20K		Thunderstorm Wind
Prince George's County Croom to Upper Marlboro	26	1530EST 1615EST			0	0	10K		Flash Flood
Charles County Waldorf	26	1547EST 1602EST			0	0	5K		Thunderstorm Wind
St. Mary's County Leonardtown	26	1557EST			0	0	5K		Thunderstorm Wind
Calvert County Chesapeake Beach	26	1600EST			0	0	10K		Thunderstorm Wind

A pre-frontal squall line, progressing into a very unstable atmosphere, generated widespread but scattered tree and wire damage across central and lower southern Maryland during the mid to late afternoon of the 26th. Tree damage was most pronounced in Montgomery Co, where over 3 dozen large limbs and trees were knocked down between Poolesville and Rockville. In Gaithersburg, the 200-year-old famed Forest Oak's demise was aided by the winds, although it had been gradually rotting. In Bethesda, winds along the gust front (estimated between 50 and 60 mph at their peak) blew a large oak onto a home, causing substantial roof damage. In one Germantown neighborhood, seven trees were reported down, including one onto a vehicle. In the northeast portion of the county, a man was trapped in his automobile by downed power wires. Several roads were blocked during the height of the storm; the combination of lightning, wind, and excessive load on the power grid from air conditioning left approximately 41,000 customers without electricity at the height of the storm.

The lightning may have contributed to 4 knocked out substations in the county; lightning also struck and felled a tree in Gaithersburg.

Similar damage occurred in lower southern Maryland, from Prince George's Co through Calvert and St. Mary's Cos. Lightning-related fires caused substantial damage to at least four homes in central Prince George's, including one with an estimated \$250,000 in damage. Four fire fighters were injured battling the blaze. Other homes were struck by lightning in Clinton, Ardmore, and Forestville. Large limbs and wires were blown down in Beltsville, with one limb onto an automobile. Other tree damage was noted in Upper Marlboro. Farther south, scattered tree and wire damage was seen in Chesapeake Beach, and estimated winds of 60 to 70 mph knocked down large limbs/trees in Waldorf. the storms passed across the Chesapeake Bay shortly after 5 PM.

Downpours associated with one of the more intense cells may have dumped as much as 2 inches of rain in an hour in central Prince George's Co. Two creeks spilled over their banks in Croom and Upper Marlboro. In both cases, low-lying bridges were flooded by rapidly rising water. Along Croom Road, an automobile unsuccessfully attempted to navigate through the flooding Charles Branch. The vehicle stalled, and the motorist was rescued by volunteer fire and state highway personnel when the water level reached the hood of his car. The flood waters receded on all creeks within an hour after the storm's passage.

### VIRGINIA, North

Fairfax County Newington	13	1215EST			0	1	40K		Lightning
Lightning struck and injured a man in the Newington area, causing minor burns on his chest. Two nearby homes had fires which were ignited by lightning strikes.									
Shenandoah County 3 SW Wheatfield to 2.5 SW Wheatfield	18	1520EST	0.4	30	0	0	1K		Tornado (F1)
Shenandoah County North Portion	18	1525EST 1540EST			0	0	2K	1K	Thunderstorm Wind
Frederick County South Portion	18	1530EST 1540EST			0	0	8K	4K	Thunderstorm Wind
Frederick County Stephens City	18	1530EST 1540EST			0	0	60K		Lightning



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					Killed	Injured	Property	Crops	

### VIRGINIA, North

<b>Frederick County</b>									
4 WSW Dbl Tollgate to 1 WSW Dbl Tollgate	18	1542EST 1549EST	3	30	0	0	4K	2K	Tornado (F0)
<b>Warren County</b>									
North Portion	18	1545EST			0	0	4K	2K	Thunderstorm Wind
<b>Clarke County</b>									
South Portion	18	1555EST 1607EST			0	0	5K	4K	Thunderstorm Wind
<b>Clarke County</b>									
3 S Berryville to 2.7 S Berryville	18	1602EST	0.3	25	0	0	2K	1K	Tornado (F0)
<b>Fauquier County</b>									
North Portion	18	1610EST 1620EST			0	0	1K	2K	Thunderstorm Wind
<b>Loudoun County</b>									
Unison	18	1610EST			0	0	5K		Lightning
<b>Loudoun County</b>									
Mountville to Oatlands	18	1618EST 1625EST	4	30	0	0	2K	1K	Tornado (F0)
<b>Loudoun County</b>									
South Portion	18	1620EST 1630EST			0	0	1K	2K	Thunderstorm Wind
<b>Loudoun County</b>									
Sterling	18	1630EST			0	0	30K		Gusty Wind

A rapidly developing heavy-precipitation supercell produced several instances of severe weather over portions of the northern Shenandoah Valley and Piedmont regions of Virginia during the late afternoon and evening of the 18th. Four small tornadoes were confirmed: one in northern Shenandoah Co near the town of Wheatfield, one in extreme southeast Frederick Co in the community of Double Tollgate, a third in Clarke Co near the town of Berryville, and a fourth in Loudoun Co between Mountville and Oatlands.

Damage in Wheatfield was confined to a heavily wooded rural area, where 20 trees were snapped or uprooted along a narrow but distinctive path. Winds were estimated to be around 80 mph. It was the first tornado ever reported in the county; perhaps partially due to a NWS survey team locating the damage. The twister lifted along the county line, later seen as a funnel near Stephens City (Frederick Co) before dissipating. The second small tornado touched down east of Klines Corner in southeast Frederick Co. Five trees were downed on one farm, and damage was spotty along a 3-mile path to Double Church Road just southwest of Double Tollgate. A spotter had previously reported a touchdown near this area. Most of the damage was to trees, though some minor roof and fence damage was observed along and near Double Church Road.

In Clarke Co, a third tornado touched down just south of Berryville. Minor damage was noted to a roof and shingles at a house; an electric garage door was damaged as well. A circular pattern was noted in the tall grass and in branches that had broken off nearby trees. Some tomato stakes and cages were pulled up and tossed. A fourth (small) tornado path was found from Mountville to Oatlands in western Loudoun Co. Large branches were snapped and some trees were uprooted on a narrow path along Lime Kiln Road.

Scattered tree damage was noted elsewhere across the six-county area, including the towns of Reliance (Warren Co), Middletown and Stephens City (Frederick Co), Upperville (Fauquier Co), White Post and Berrys (Clarke Co), and from Middleburg to Arcola (Loudoun).

Farther east, a steel-framed fire hall, still under construction, collapsed when a near-severe thunderstorm wind gust passed through Sterling (Loudoun Co). Approximately 150 wooden trusses supporting the frame initially fell. A home in the nearby Cascades subdivision had a deck collapse. However, the deck was found to have been improperly anchored to the ground (e.g., not according to specifications). Based on the above evidence, and the fact that only two small trees were reported down near the fire center, wind speeds were estimated to be just under severe criteria.

Lightning struck and killed two horses at a farm just north of Unison. Earlier, lightning struck a home in Stephens City, causing \$60,000 in structural damage, mainly to the roof.

<b>Frederick County</b>									
S Portion	18	1645EST 2000EST			0	0			Flash Flood



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### VIRGINIA, North

#### Shenandoah County N Portion

18	1700EST 2000EST				0	0			Flash Flood
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#### Warren County N Portion

18	1700EST 2000EST				0	0			Flash Flood
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#### Clarke County S Portion

18	1715EST 2000EST				0	0			Flash Flood
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Three torrential-rain producing training thunderstorms caused flash flooding of creeks and streams in a portion of the northern Shenandoah Valley. At the Shenandoah/Frederick Co line local route 622 was closed along the Cedar Creek. Additional flooding was reported in Frederick Co at the Lakeside Estates near Stephens City, and Mine Bank Road was under water west of Middletown. Other evidence of flash flooding such as mud, stones, and debris that had washed over roads was noted during the damage surveys in southern Clarke Co and northern Warren Co.

#### Fairfax County Great Falls

18	1705EST 1716EST				0	0			Hail (0.88)
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#### Fairfax County Great Falls

18	1705EST 1716EST				0	0	30K		Thunderstorm Wind
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A heavy-precipitation supercell, tracking east from the Shenandoah Valley, produced wind gusts estimated at 60 mph and hail the size of nickels in Great Falls. Numerous large limbs were knocked down, some onto wires. A few small trees were uprooted. Virginia Power reported at least 7000 customers were without power at the peak of the storm. The microburst continued across the Potomac River into southern Montgomery Co Maryland.

#### King George County Dahlgren

18	1845EST				0	0	10K		Thunderstorm Wind
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A developing squall line near the tidal Potomac River produced a downburst which knocked several tree limbs into power lines in Dahlgren.

#### Frederick County 2 S Welltown to Stephenson

26	1315EST 1322EST				0	0	250K	10K	Thunderstorm Wind (G75)
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#### Clarke County Boyce

26	1340EST				0	0	1K		Thunderstorm Wind
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#### Madison County Roswell

26	1410EST				0	0	5K		Thunderstorm Wind
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#### Loudoun County Leesburg

26	1415EST 1430EST				0	0	20K		Thunderstorm Wind
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#### Fauquier County N Portion

26	1430EST 1500EST				0	0	20K		Lightning
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#### Arlington County Countywide

26	1445EST 1450EST				0	0	3K		Thunderstorm Wind (G53)
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#### Fairfax County Dranesville

26	1510EST 1515EST				0	0	5K		Thunderstorm Wind
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A pre-frontal squall line moving into very unstable air produced several instances of straight-line wind damage, including some from in-storm downbursts and others along the gust front. The most intense damage occurred early in the event, in northeast Frederick Co. A strong downburst, containing estimated winds of 80 to 100 mph, produced a swath of damage approximately 1 mile wide and 4 miles long between Welltown and Stephenson.

The heaviest structural damage occurred with the onset of the downburst at an industrial park located just north of the intersection of interstate 81, federal highway 11 and state route 37. Damage at the park included one steel-frame building (under construction) which collapsed, and minor damage to several other buildings. The downburst raced into nearby forested areas, where heavy damage was sustained (numerous trees were uprooted or snapped) and some utility poles were felled. Thereafter, four residential homes sustained roof damage, with two declared uninhabitable. One large barn collapsed, as did three large sheds. Two mobile homes shifted off their moorings. A total of 50 structures sustained minor to major damage, including siding, gutters, windows,



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### VIRGINIA, North

and roofs. Additional tree damage, including one onto a car, occurred in nearby Stephenson before the downburst dissipated.

Other tree damage was reported in Madison and Clarke Cos. In Madison Co, trees were down across state route 231 near Roswell. Several trees fell in northern Clarke Co along local route 611. In northern Fauquier Co, power outages were fairly widespread - a result of lightning striking several transformers. In Arlington Co, a fallen tree blocked the intersection of Glebe and Chain Bridge roads. A local wind sensor recorded a gust of 62 mph at Thomas Jefferson High School.

The line weakened as it travelled east, but still produced widespread (though scattered) tree and wire damage. Dozens of large limbs were knocked down in central Loudoun Co, with Leesburg particularly hard hit. Two large (30 lb.) planters were blown off a residence's deck in Leesburg, and a work scaffold was blown down at an under construction building in Sterling. In northwest Fairfax Co, several trees and large limbs were downed at the intersection of Holly Knoll Road and state route 7 near Dranesville. At least two of the trees had to be cleared from the roadway. Virginia Power reported 6700 customers were without power during the height of the storm in the Leesburg area. For their entire northern Virginia district, an estimated 17,300 customers were powerless.

### WEST VIRGINIA, East

#### **Grant County Petersburg**

<b>02</b>	<b>0100EST 0400EST</b>								
		<b>0</b>	<b>0</b>						<b>Flash Flood</b>

Persistent rainfall from upslope flow caused areas of flash flooding in eastern Grant Co.

#### **Grant County 2 E Petersburg**

<b>18</b>	<b>1415EST</b>	<b>0.3</b>	<b>20</b>						
				<b>0</b>	<b>0</b>		<b>15K</b>		<b>Tornado (F0)</b>

#### **Hardy County Wardensville**

<b>18</b>	<b>1445EST</b>								
				<b>0</b>	<b>0</b>	<b>2K</b>			<b>Thunderstorm Wind</b>

A severe thunderstorm developed in eastern Grant Co during the mid-afternoon of the 18th, moved into Hardy Co, and would eventually produce widespread minor to moderate damage in northern Virginia.

The storm dropped a brief tornado in a wooded area east of Petersburg. Numerous small to medium trees and limbs were snapped off along a broken 500 yard long path. A resident near where the twister touched down noted a sharp pressure drop on his barometer as the storm passed by. Farther east, in Wardensville, two healthy trees were knocked down and a 2500 lb. hay wagon was moved by thunderstorm winds. Minor damage was caused when the wagon struck a parked pickup truck.

#### **Jefferson County South Portion**

<b>26</b>	<b>1400EST</b>								
				<b>0</b>	<b>0</b>	<b>25K</b>			<b>Thunderstorm Wind</b>

A severe thunderstorm produced wind gusts strong enough to collapse a mobile home in southern Jefferson Co. Nearby wires were also blown down.