



National Weather Service

Storm Data and Unusual Weather Phenomena



May 1999

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

DCZ001

District Of Columbia

01	0000EST								
31	2359EST				0	0			Drought

High pressure was the dominant weather feature across the Washington D.C. metropolitan area during the month. This weather pattern directed rain producing low pressure systems north of the area and continued the climatological drought that has gripped the area since last summer. By the last week of May the Palmer Drought Index, a measure of long term drought conditions, indicated Washington D.C. was in a moderate drought. May was the 7th month in the past 12 months that precipitation was below average, the 3rd driest 12 months on record. Washington Reagan National Airport reported a monthly total of only 1.28 inches, 2.38 inches below normal. It was the 8th driest May on record, and rain only fell on 5 days during the month. The lack of precipitation affected water reserves. The flow of water down the Potomac River at Washington D.C. was only 23% of normal during the month. Monthly flow rates on the river have been below normal for the past 9 months.

**District Of Columbia
Countywide**

	24	1245EST							
					0	0	2K		Thunderstorm Wind

Trees downed

A line of thunderstorms moved across the Washington D.C. metropolitan area just after midday, producing winds in excess of 55 MPH. City officials reported a few trees were knocked down by the storm inside the District around 1:45 PM EDT.

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**

01	0000EST								
31	2359EST				0	0			Drought

High pressure was the dominant weather feature across Maryland during the month. This weather pattern directed rain producing low pressure systems north of the region and continued the climatological drought that has gripped the area since last summer. The Maryland Department of the Environment issued a drought warning in December and it remained in effect through May. By the last week of the month the Palmer Drought Index, a measure of long term drought conditions, indicated North Central and Northeast Maryland were in a moderate drought, and South Central Maryland was in a severe drought. May was the 7th month in the past 12 months that precipitation was below normal. From June 1998 through May 1999 precipitation was a staggering 14 inches below average, the 2nd driest 12 months on record. Only 1.72 inches of rain fell at Baltimore/Washington International Airport in Anne Arundel County during the month of May, 2.00 inches below normal. The Maryland Science Center at Inner Harbour Baltimore reported a total of only 1.40 inches, and rain only fell on 6 days during the month. Andrews Air Force Base in Prince Georges County reported a monthly total of only 0.95 inches. Additional rainfall totals included Allegany County at 2.6 inches, Washington County at 1.5 inches, Frederick and Northern Prince Georges County at 1.8 inches, Carroll County at 2.2 inches, Northern Baltimore County at 1.7 inches, Howard and Southern Anne Arundel County at 1.3 inches, Montgomery County at 2.0 inches, Charles County at 0.9 inches, and St. Mary's County at 0.7 inches.

The lack of rainfall affected water levels along the Potomac River and the Chesapeake Bay. In the Potomac watershed where below normal water levels have been recorded for the past 9 months stream flow averaged around 38% of normal and several record low daily flows were recorded. The flow of water past the Washington D.C. gage was only 23% of the long term monthly average. The total water flow into the Chesapeake Bay which has been below average for the past 10 months was only 46% of average during May, an all time record low. The deficit of fresh water flowing into the Chesapeake resulted in an increase of salinity levels in the bay and had an impact on animal and plant life. Contents of the Baltimore reservoir system decreased to 85% of average by month's end. The University of Maryland Agricultural Facility in Upper Marlboro recorded a pan evaporation of 24.56 inches in May. Western Maryland ground water levels fell from above normal to below normal during the month, and remained below normal elsewhere. Carroll County banned outdoor water use by the end of the month in Eldersburg and Sykesville. A popular swimming beach at Greenbriar State Park near Hagerstown had to be closed for the summer after spring rains never came to fill up the 50 acre reservoir. Closing the beach for the summer led to \$120,000 in lost revenue.

The lack of precipitation also played havoc with spring planting and livestock maintenance. Corn stalks normally knee high were only 2 to 6 inches tall. Hay and pasture land wilted, soybean planting slowed or was halted, and watering holes and irrigation systems slowly dried up. Tobacco, normally a drought-tolerant crop suffered in the fields after being recently transplanted. 34% of pasture land, 35% of corn, and 40% of soybeans across the state were reported in poor or very poor condition. 96% of topsoil was reported as short or very short of moisture by the end of the month.

**Allegany County
Countywide**

	07	1820EST							
		2100EST			0	0	15K		Flash Flood

**Allegany County
Cumberland**

	07	1845EST							
					0	0	10K		Lightning



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MARYLAND, Central

A lightning strike started a house fire

**Allegany County
Cumberland**

07 1850EST **0** **0** **Hail (0.75)**

**Allegany County
Cumberland**

07 1850EST **0** **0** **20K** **Thunderstorm Wind**

Trees downed on the west side of Cumberland

A thunderstorm producing very heavy rainfall, winds over 55 MPH, large hail, and frequent lightning moved across Allegany County between 7:30 and 8:30 PM EDT. A lightning strike started a house fire on Frederick Street in Cumberland at 7:45 PM EDT. One person was reported injured as a result of the fire. Lightning also struck the 1st Presbyterian Church, damaging electrical equipment. Dime sized hail fell in Cumberland at 7:50 PM EDT. County officials also reported wind gusts downed several trees on the west side of Cumberland around 7:50 PM EDT. Between 1.25 and 2.00 inches of rain fell across the county in less than one hour, causing water levels to rise rapidly. A co-op observer in Cumberland reported 1.15 inches of rain fell in only 10 minutes around 8:00 PM EDT. This deluge of water flooded basements and led to high water closures on several roads in Cumberland and across the county. Several cars were stuck in water at the Virginia Avenue underpass in Cumberland. Green Street and Henderson Avenue were also impassable after the storm. Several manhole covers were blown off by rapidly rising water in both Cumberland and Frostburg. Roads in the western end of the county required maintenance after mud and debris settled on road margins after being washed onto the roadway.

**Montgomery County
Countywide**

24 1300EST **0** **0** **10K** **Thunderstorm Wind**

Several trees and power lines downed

**Baltimore City (C)
Countywide**

24 1315EST **0** **0** **20K** **Thunderstorm Wind**

Several trees and power lines downed

**Howard County
Countywide**

24 1315EST **0** **0** **10K** **Thunderstorm Wind**

Several trees and power lines downed

**Harford County
Countywide**

24 1345EST **0** **0** **20K** **Thunderstorm Wind**

Several trees and power lines downed

A line of thunderstorms moved across North Central Maryland during the early afternoon. These storms produced winds in excess of 55 MPH which felled hundreds of trees and knocked out power to 47,000 customers. The hardest hit counties were Montgomery, Howard, Harford and Southern Baltimore. One tree at the intersection of Holder and Echodale Avenue near Baltimore fell onto a minivan and totaled the vehicle. A second tree that fell onto Route 1 near Sandy Hook Road in Harford County nearly missed hitting a moving car. A third tree on Philadelphia Road in Aberdeen fell onto a truck and car. Heavy downpours that accompanied these storms led to minor flooding and lowered visibility, a contributing factor in two serious automobile accidents. One car on Interstate 495 near Greenbelt in Prince Georges County hydroplaned and overturned, killing the 19 year old driver. Another vehicle, an empty tractor trailer, lost traction on Interstate 95 near Halethorpe in Baltimore County and slid into a jersey barrier. The impact of the crash ruptured the gas tank and the vehicle caught on fire, seriously injuring the 50 year old driver.

VIRGINIA, North

VAZ021-025>031-036>042-050>057

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

01 0000EST **0** **0** **Drought**

High pressure was the dominant weather feature across Northern Virginia during the month. This weather pattern directed rain producing low pressure systems north of the region and continued the climatological drought that has gripped the area since last summer. By the last week of May the Palmer Drought Index, a measure of long term drought conditions, indicated Northern Virginia was in a moderate drought. May was the 7th month in the past 12 months that precipitation was below normal. Only 2.22 inches of rain fell at Dulles International Airport in Loudoun County during the month of May, 1.80 inches below normal. It was the 8th driest May on record, and rain only fell on 5 days during the month. Additional rainfall totals included Frederick County at 1.5 inches, Shenandoah County at 2.9 inches, Warren County at 1.4 inches, Rockingham and Orange County at 2.4



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VIRGINIA, North

inches, Augusta County at 3.0 inches, Highland County at 2.2 inches, Nelson and Albemarle County at 2.3 inches, Culpeper County at 2.8 inches, Rappahannock County at 2.1 inches, Fauquier County at 2.2 inches, Spotsylvania County 0.5 inches, and Fairfax and Loudoun County at 2.0 inches.

The lack of rainfall affected water levels along the Potomac River, the main water source for extreme northern Virginia. The flow of water past Washington D.C. hovered around the 10th percentile and record low daily flows were reported in some upstream tributaries. Monthly flow rates of the Potomac River have been below average for the last 9 months. During May, the average daily flow of the river was only 38% of the long term average. Conditions on the Shenandoah and Rappahannock River were also extremely dry. Some stations in these two watersheds reported streamflow at or below the 90th percentile exceedence, which rivaled minimum daily mean flow values of the drought of 1980-82. With such low water tables, Spotsylvania County was forced to reinstate voluntary water restrictions. The Ni River Reservoir, main water source for the county, had already dipped 4 inches below the spillway by mid month.

The lack of precipitation also played havoc with spring planting and livestock maintenance. Trees were prematurely shedding leaves in orchards, hay and pastureland were wilting, and watering holes and irrigation sources were slowly drying up. 69% of pastureland and 58% of hay across the state was reported in poor or very poor condition. 58% of topsoil was reported as short or very short of moisture by the end of the month. Some farmers had to reduce their herd sizes in order to stretch hay and water supplies. In addition to agricultural lands, forests and rural vegetation was also dangerously dry. In Page County alone, fifteen brush fires were reported in May near Stanley, including one that burned 100 acres. Another fire in Shenandoah National Park burned around 400 acres and closed a 40 mile stretch of Skyline Drive for several days during the first week of the month.

Clarke County Berryville

12	0545EST								
		0	0	5K	Thunderstorm Wind				

One tree uprooted and several trees split in a county park

A thunderstorm producing wind over 55 MPH moved across Northern Clarke County between 6:00 AM and 7:00 AM EDT. County park officials reported the storm downed a large tree by the recreation office and split several other trees lining the entrance driveway. Also, a staff member who was driving a maintenance truck around the county park during the storm reported gusty winds caused their vehicle to shake.

Culpeper County North Portion

22	1510EST								
		0	0	15K	Thunderstorm Wind				

Trees and powerlines downed

Albemarle County Countywide

22	1915EST								
		0	0	4K	Thunderstorm Wind				

Charlottesville (C) Charlottesville

22	1915EST								
		0	0	4K	Thunderstorm Wind				

Trees downed

Low pressure over the Ohio River Valley produced a line of thunderstorms that moved across Northern Virginia during the early evening. The strongest thunderstorms moved across Rappahannock, Culpeper, and Albemarle County and produced frequent lightning, heavy downpours, and wind gusts over 55 MPH. A resident of Rappahannock County reported the passing storms downed trees around 4:05 PM EDT. Law enforcement officials reported several trees and power lines downed across the northern part of Culpeper County around 4:10 PM EDT. Around 8:15 PM EDT, storms downed several trees and caused power outages across Albemarle County and the City of Charlottesville. One fallen tree blocked a lane of traffic on U.S. Highway 64 west of Charlottesville, and another blocked Mosley Drive. The storm dropped three quarters of an inch of rain in Charlottesville.

Fairfax County Vienna

24	1230EST								
		0	0	Hail (0.75)					

Falls Church (C) Falls Church

24	1235EST								
		0	0	0.50K	Thunderstorm Wind				

Tree downed at intersection of Patricia and Shreve Street

A line of thunderstorms moved across extreme Northern Virginia just after midday and produced large hail and winds in excess of 55 MPH. Dime sized hail was reported in Vienna at 1:30 PM EDT. A one foot diameter tree was blown down by high wind at the intersection of Patricia and Shreve Street, 1/2 mile northwest of central Falls Church.



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May 1999

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

WEST VIRGINIA, East

WVZ048>055

Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy

01	0000EST				0	0			Drought
31	2359EST								

High pressure was the dominant weather feature across the Eastern Panhandle of West Virginia during the month. This weather pattern directed rain producing low pressure systems north of the region and continued the climatological drought that has gripped the area since last summer. The Palmer Drought Index, a measure of long term drought conditions, indicated the Eastern Panhandle was in a severe drought through the month. May was the 7th month in the past 12 months that precipitation was below normal. The region was a staggering 13 inches below average for precipitation during the period. Monthly rainfall totals across the Eastern Panhandle included 2.6 inches in Pendleton County, 1.9 inches in Grant County, 2.8 inches in Hardy County, 2.5 inches in Mineral and Jefferson County, 1.7 inches in Hampshire County, and 2.4 inches in Morgan County. The lack of precipitation was especially troublesome to the agricultural community. Area farmers reported most pastures were in poor condition and 42% of the hay crop was in poor or very poor condition. 70% of topsoil was reported short or very short of moisture across the state by the last week of the month.

Berkeley County

4 SE Martinsburg	12	1605EST			0	0			Hail (1.00)
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Berkeley County

4 SE Martinsburg	12	1605EST			0	0			Thunderstorm Wind (G52)
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Jefferson County

Shepherdstown	12	1615EST			0	0	0.50K		Thunderstorm Wind
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Tree downed

A thunderstorm producing wind gusts over 55 MPH and large hail moved across the Eastern Panhandle between 5:00 PM and 6:00 PM EDT. One inch diameter hail and an estimated wind gust of 60 MPH were reported by a trained spotter near Route 45 about 4 miles southeast of Martinsburg at 5:05 PM EDT. Emergency management officials in Jefferson County reported a wind gust strong enough to down a large tree in Shepherdstown around 5:15 PM EDT.

Hampshire County

Springfield	22	1730EST			0	0	15K		Thunderstorm Wind
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Trees downed and siding and roof material blown off homes

Low pressure over the Ohio River Valley produced a line of thunderstorms that moved across the Eastern Panhandle between 6:00 PM and 7:00 PM EDT. The strongest thunderstorms moved across Hampshire County, producing heavy downpours and wind gusts over 55 MPH. Around 6:30 PM EDT several homes and trees were damaged in roughly a 1 1/2 mile radius from the intersection of Route 28 and Greenspring Valley Road in Springfield. Emergency management officials reported siding and roof material removed from homes. Several large trees up to 2 1/2 feet in diameter were uprooted or broken off at the base, and one tree about 2 feet in diameter fell onto a house and car. Springfield received around 2 inches of rain in 45 minutes. Minor street flooding was reported in Romney where 1 inch of rain fell in 20 minutes.