



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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
30 2359EST

0 0

Drought

This was the fifth month in a row that drought conditions were seen across the Washington D.C. area. Persistent high pressure over the Southeast U.S. forced most rain producing low pressure systems to steer north of the region. Only 0.91 inches of rain fell at the Washington Reagan National Airport during the month of November, 2.19 inches below normal. Only one other year on record (1930) had come close to the lack of rainfall National Airport saw from July 1st to November 30th. The 5 month total at the airport was only 5.78 inches, 11.38 inches below normal.

MARYLAND, Central

MDZ002>004-006-
009>011-013>014-
016>018

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

01 0000EST
30 2359EST

0 0

20.0M Drought

This was the fifth month in a row that drought conditions were seen across Central and Northern Maryland. Persistent high pressure over the Southeast U.S. forced most rain producing low pressure systems to steer north of the region. Only 1.13 inches of rain fell at the Baltimore/Washington International Airport (BWI) in Anne Arundel County during the month of November, 2.07 inches below normal. Only one other year on record (1930) had come close to the lack of rainfall the Baltimore area saw from July 1st to November 30th. The 5 month rainfall total at BWI Airport was only 5.79 inches, compared to the normal of over 17 inches. The Maryland Science Center in Baltimore reported a monthly total of 1.11 inches. Other monthly rainfall totals from affected counties included 0.6 inches in Washington, 0.7 in Howard, 0.9 in Frederick, 1.0 in Charles, 1.1 in Carroll and Anne Arundel, and 1.2 in Montgomery and Prince Georges.

Water levels and reserves were greatly affected by the persistent drought. In Washington County, the Pretty Boy Reservoir level dropped 12% during the month. The level of two reservoirs along the Patuxent River were 10 to 12 feet below normal during the month. The U.S. Geological Survey reported the flow of the Potomac River through Little Falls, MD (near Washington D.C.) was 39% of median flow, and several upstream tributaries were at record low levels. The river stage at Williamsport, MD was at 1.4 feet for much of the month, low enough to see a Native American v-shaped fish wier from the I-81 bridge. In Allegany County, the Georges Creek which feeds into the Potomac River dried up, causing 2000 households and businesses to run out of water.

County officials were forced to construct an emergency plastic pipeline from Frostburg to the towns of Lonaconing, Midland, and Barton, and asked the governor declare a local water emergency. The communities of Carlos and Shaft had to be connected to the Frostburg water supply by a 1.4 mile emergency chain of fire hoses. The U.S. Geological Survey also reported flow of freshwater into the Chesapeake Bay was only 24% of the median for November.

The agricultural community continued to be hard hit by the persistent drought. By November 20th, 80% of topsoil moisture across the state was rated short or very short. The persistent drought contributed \$40 million in damage to the fall harvest. The lack of precipitation continued to have a negative impact on winter crops such as wheat, barley, and rye. Winter grain crops were only half as tall as they should have been at the end of November. Some farmers opted to not plant winter crops this year due to the lack of moisture.

The drought also contributed to a six fold increase in the amount of brush fires seen across Maryland this November. Officials reported 173 fires, burning a total of 490 acres during the month. From the beginning of August to the end of November, the Forest Service recorded 303 fires statewide. The three largest fires, each between 20 and 30 acres in size, were reported near Taneytown in Carroll County, the second west of Hancock in Washington County, and the third in Harwood in Anne Arundel County. The fire risk in Maryland during the month averaged 700 on a scale of 0 to 800, compared to the normal of 450. The governor declared a statewide ban on outdoor burning on November 26th, hoping to significantly reduce the number of fires being accidentally set by campers and by field and leaf burning.

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

01 0000EST
30 2359EST

0 0

Drought

This was the fifth month in a row that drought conditions were seen across Northern Virginia. Persistent high pressure over the Southeast U.S. forced rain producing low pressure systems to steer north of the region. Only 0.91 inches of rain fell at Reagan National Airport in Arlington County during the month of November, 2.19 inches below normal. Only one other year on record (1930) had come close to the lack of rainfall National Airport saw from July 1st to November 30th. The 5 month total at the airport was only 5.78 inches, 11.38 inches below normal. Similarly, 1.21 inches of rain fell at Dulles Airport in Loudoun County, 2.09



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VIRGINIA, North

inches below normal. Other monthly rainfall totals from affected counties included 1.5 inches in Page, 1.0 in Orange and Rappahannock, 0.9 in Fauquier and Loudoun, 0.8 in Rockingham, 0.7 in Warren, and 0.4 in Shenandoah. Charlottesville in Albemarle County reported 1.2 inches, compared to the normal of 3.66 inches and only had a total of 11.15 inches of rain from July through November. Fairfax County had only 57% of its normal rainfall from July 1st to November 30th and Loudoun County had only 6.22 inches of rain during the same period. The independent cities of Fredericksburg, Waynesboro and Staunton received only 1.0 inches, Gore reported 0.5 inches, and Winchester reported only 0.3 inches during November.

By the end of the month, the Ni Reservoir, main water supply in Spotsylvania County, had only backup reserve water left and was at a record low level. The county was forced to continue mandatory water restrictions and buy additional water from Stafford County. Many other communities across Northern Virginia instituted voluntary water restrictions during the month. Water from the Beaverdam Creek in Loudoun County was drained into the Goose Creek Reservoir to keep this major water supply for Loudoun and Fairfax Counties high enough to serve both areas. This drainage project caused an old bridge normally 15-20 feet below the water level of Beaverdam Creek to re-emerge.

The agricultural community continued to suffer through the second worst drought in the past 100 years. By November 30th, 89% of topsoil moisture across the state was rated short or very short and 76% of pasture land was rated poor or very poor. This was the first year the Farm Service Agency had to make direct payments for grazing losses. The extended drought damaged root systems of grass and is expected to have an affect on next year's hay crop. Loudoun County reported one third of the winter hay reserve had already been fed to livestock by the end of November. Farmers were forced to dip into feed reserves early due to poor pasture land conditions. Warren County asked to be declared an agricultural disaster area during November, citing 107 farmers with 60-69% fall production losses and 100 farmers with losses between 40-60%. The hardest hit fall crops were barley, corn, hay, soybeans, tobacco, and wheat. The winter wheat crop across Northern Virginia also showed drought stress. Many plants were only 1/3 of their average size at the end of November.

The drought has also contributed to a nearly unprecedented amount of forest and brush fires. Sixty-five fires were reported across Virginia between November 1st and 20th. A 300 acre fire burned in Nelson County, and over 2000 acres burned in the George Washington and Thomas Jefferson National Forests in Augusta County. Stafford County reported several significant brush fires during the month, and dozens of smaller fires burned in several other locations.

Augusta County **3 W Deerfield**

21	0000EST	0	0	80K	Wild/Forest Fire
29	2359EST				

A wildfire, started by human activity, began on the 21st of November in U.S. Forest Service land, 3 miles west of Deerfield in Southwest Augusta County. Timber and brush were extremely dry from the lack of rainfall, and caused the fire to spread rapidly. The terrain of the Jerkentight Roadless area along the east side of Shenandoah Mountain where the fire raged was extremely steep and rocky. This made the fire fighting efforts of the Department of Forestry, U.S. Forest Service, and the National Park Service difficult at best. Seven hundred fire fighters and 2 helicopters were needed to bring the fire under control. The fire burned over 2000 acres of the George Washington and Thomas Jefferson National Forests before being controlled on the 29th of November.

Nelson County **4 NW Lovingson**

24	0000EST	0	0	15K	Wild/Forest Fire
27	2359EST				

The Virginia Department of Forestry reported a significant flareup of a fire that burned 250 acres at the end of October on White Mountain in Central Nelson County. This fire which had been under control since November 3rd, started to spread rapidly again on the 24th of November. The flareup burned an additional 300 acres near Davis Creek on White Mountain near Lovingson before being controlled on the 27th. Only private forest land was affected and 50 fire fighters were used to bring the blaze under control. Also of note, a separate fire burned 20 acres on Afton Mountain in extreme Northern Nelson County on the 23rd of November. Fortunately it was contained within the day.

WEST VIRGINIA, East

WVZ048>055

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

01	0000EST	0	0		Drought
30	2359EST				

This was the fifth month in a row that drought conditions were seen across the Eastern Panhandle of West Virginia. Persistent high pressure over the Southeast U.S. forced most rain producing low pressure systems to steer north of the region. Monthly rainfall totals from counties in the region included a meager 0.3 inches in Mineral, 0.4 in Morgan, 0.5 in Hardy and Hampshire, 0.6 in Jefferson, and 0.9 in Grant. The extremely dry conditions forced the governor to declare a ban on open burning in Berkeley, Grant, Hampshire, Jefferson, Mineral, Morgan, and Pendleton Counties on November 19th.

The agricultural community across Hampshire, Pendleton, and Hardy Counties continued to be affected by the persistent drought. By November 30th, 86% of topsoil moisture across the state was rated short or very short. Some farmers opted to not plant winter crops this year due to the lack of moisture. Damage to pasture land and lack of winter livestock feed reserves were all attributed to the lack of rainfall.