



National Weather Service

Storm Data and Unusual Weather Phenomena



February 2003

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	26 0600EST			0	0			Winter Weather/Mix
		28 1200EST							

A series of low pressure systems that tracked from the Gulf Coast to Cape Hatteras dropped light snow off and on between the morning of the 26th and midday on the 28th. A total of 4.8 inches of snow accumulated at the National Arboretum and 5.3 inches was recorded at Reagan Washington National Airport. Minor traffic accidents occurred across the metropolitan area after the fallen snow made roads slippery.

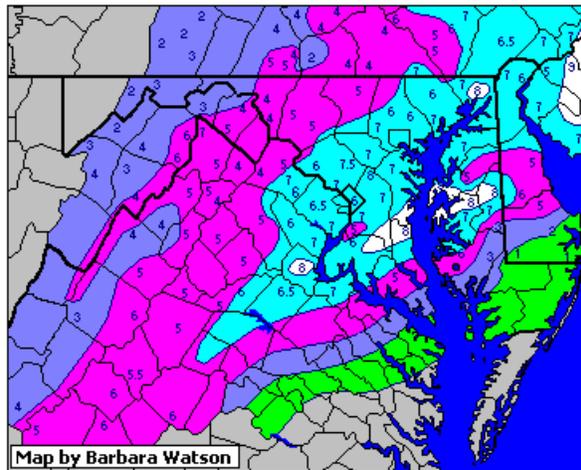
MARYLAND, Central

MDZ002>003	Allegheny - Washington	06 1900EST			0	0			Winter Weather/Mix
		07 1100EST							

MDZ004>007-009>011-013>014-016>018	Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert	06 1900EST			0	0			Winter Storm
		07 1100EST							



Snowfall Map for Feb. 7, 2003



Low pressure tracked from the Gulf Coast to the Carolinas on the 6th then off the Atlantic coast on the 7th. This storm dropped light to moderate snow between the evening of the 6th and Noon on the 7th. Accumulations ranged from 2 to 4 inches across Western Maryland and 5 to 8 inches in Central and Southern Maryland. Several weather related traffic accidents were reported. In College Park (Prince George's County), a passenger in a minivan was killed and a tractor-trailer driver was critically injured when their vehicles collided on southbound Interstate 95.

MDZ002>007-009>011-013>014-016>018	Allegheny - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert	14 0800EST			1	10	5.2M		Winter Storm
		18 1200EST							



National Weather Service

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February 2003

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

MARYLAND, Central



A complex storm system produced copious amounts of wintery precipitation across Maryland west of the Chesapeake Bay between the evening of the 14th and midday on the 18th. The first batch of precipitation fell between the evening of the 14th and the evening of the 15th in the form of light to moderate snow or rain. The second batch of precipitation fell between midnight on the 16th through midday on the 17th in the form of heavy snow or sleet. The third batch of precipitation on the back side of the storm fell between the evening of the 17th and midday on the 18th in the form of scattered snow showers.

After the precipitation came to an end, record breaking snow and sleet accumulations were reported. Across western and north central Maryland, and the Baltimore metropolitan area, accumulations of mainly snow ranged from 20 to 32 inches. The highest amounts occurred across the north and west suburbs of Baltimore where a period of thunder snow produced snowfall rates up to 4 inches per hour on the 16th. Across the east and southeast Maryland suburbs of Washington D.C., accumulations of snow and sleet ranged from 12 to 20 inches. Across extreme Southern Maryland, accumulations of mainly sleet ranged from 7 to 12 inches. As a general rule, 1 inch of sleet accumulation is equivalent to 3 inches of snow. Therefore, areas that received mainly sleet during this massive winter storm received accumulations around two thirds less than areas that had all snow, even though they were impacted by the same storm system. As an example, Hollywood (St. Mary's County) recorded 7.5 inches of accumulation (almost all sleet) whereas downtown Baltimore recorded 24 inches of accumulation (all snow).

Nicknamed the President's Weekend Snowstorm of 2003, this storm will go down in history as the heaviest snowstorm in the Baltimore region since records began in 1870. A total of 28.2 inches of snow was recorded at Baltimore-Washington International Airport. This massive storm took a heavy toll on residents, structures, transportation systems, emergency responders, businesses, livestock, and travelers. A state of emergency was declared by the governor of Maryland and people across the state were ordered to stay off the roads during the height of the storm between the morning of the 16th and the morning of the 17th. Roads were covered by deep snow and sleet and were nearly impassible. Almost every airport in the region was shut down on the 16th, stranding hundreds of travelers. Emergency personnel and those needing emergency transport had to be taken to their destinations in 4 wheel drives or military vehicles during the storm. Main highways were partially cleared by the 18th but it took up to 5 days to reach some secondary and residential roads. Area schools were closed up to a week after the storm ended. Heavy accumulations weighed down on buildings in the region and several structural collapses occurred. In addition, several injuries and a handful of deaths were attributed to the storm.

The following is a list of damage and casualty reports by county that occurred as a result of this winter storm. In Allegany County, 15 structures fully or partially collapsed including several sheds, a church, and a business building. In Frederick County, 5 sheds or barns caved-in. Portable classrooms at 4 county schools collapsed. A meeting hall and a tennis court bubble were crushed. A 42-year-old man died from a heart attack after shoveling snow in New Market. A 12-year-old boy died from carbon monoxide poisoning in a snowbound car in Mt. Airy. In Carroll County, a barn collapse injured 50 cattle. A gas station canopy in Westminster fell onto 3 vehicles. A shed, greenhouse, and the roof of a car dealership also suffered structural collapses. In Montgomery County, multiple buildings collapsed including a bakery, grocery store, and a barn. A 4-year-old girl in Aspen Hill died from carbon monoxide poisoning in a snowbound car. A 51-year-old woman with a mental disability was found dead from exposure in the snow in Bethesda. In Baltimore County, a dozen structures including carports, a factory, and an office building collapsed. A man in his



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MARYLAND, Central

20s died from carbon monoxide poisoning in a snowbound car.

In Baltimore City, bus and commuter train operations were suspended during the storm. The historic B&O Railroad Museum roof collapsed, damaging priceless exhibits. Twenty four homes were condemned and two homes were demolished after suffering structural collapses. A 5-story building downtown had to be evacuated after support beams buckled. Five people (males ages 11, 12, 16, 20, and 55) died in the city from carbon monoxide poisoning in snowbound cars. Another 11-year-old boy was overcome by carbon monoxide but was resuscitated. A 64-year-old man died from a heart attack after shoveling snow. A 65-year-old woman was injured when an awning on her home collapsed. In Harford County, the roof of two homes, a sunroom, and a deck collapsed. A man in the community of Hunter's Chase suffered a heart attack after shoveling snow. A Bel Air man amputated a finger in a snow blower accident. In Howard County, a stable, warehouse, store awning, tennis bubble dome, greenhouse, and a shed collapsed. In Prince George's County, the roof of a toy store in Lanham collapsed and 9 people inside were injured. Three carports collapsed in Bowie, crushing 12 cars. A partial roof collapse was reported at a school in Cheverly. A man in his early 50s died of a heart attack after shoveling snow in Laurel.

In Anne Arundel County, 4 people (including 2 men ages 60 and 64) died of heart attacks after shoveling snow. At county hospitals, eight people were treated for chest pains, 7 people were treated for shoveling injuries, 40 people were treated for slip and fall injuries, 4 people were treated for snow blower amputations, and 3 people were treated for exposure to the cold. A 66-year-old man in Glen Burnie died from carbon monoxide poisoning in his snowbound car. A 7-year-old boy was critically injured after sledding into the path of a car in Glen Burnie. A 60-year-old man in Pasadena was seriously injured when he fell off his roof while shoveling off snow. Two middle schools suffered partial roof collapses. Other buildings that suffered structural damage included a church, warehouse, athletic club, shopping center, mall, grain silo, awning on a house and a restaurant, garage, boat storage structure, and a grocery store. Eleven people were evacuated from weakened structures. In Calvert County, an auto shop roof collapsed in Owings. In Charles County, the roof of an educational building in Doncaster caved in. Other buildings across the county that sustained structural damage include an auto shop, warehouse, garage, and two stores. F51OU

Allegany County

Countywide	22	0800EST		0	0		Heavy Rain
	23	0600EST					

Calvert County

Countywide	22	0800EST		0	0		Heavy Rain
	23	0600EST					

MDZ004>007-009>011-013>014-016 Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles

	22	0800EST		0	0		Flood
	23	0600EST					

St. Mary'S County

Countywide	22	0800EST		0	0		Heavy Rain
	23	0600EST					

Washington County

Countywide	22	0800EST		0	0		Heavy Rain
	23	0600EST					

A combination of 1.5 to 3 inches of rain that fell between the evening of the 21st and the morning of the 23rd and snow melt from the massive snowstorm of 14-18 February led to widespread flooding. In Frederick County, Gas House Pike, Glissans Mill Road, and Bretheren Church Road were closed by flood waters. Two people had to be rescued when their pickup became stranded in high water on Gas House Pike. A 35-year-old man was killed after his car hydroplaned and crashed into another car near Green Valley. Langanore Creek and Catoctin Creek overflowed their banks. In Carroll County, small streams and creeks overflowed their banks. Keysville Road and Bucher John Road in addition to 10 other roads were closed by flooding. In Baltimore County, about 500 basements were flooded. The Baltimore-Washington Parkway was closed by high water on the afternoon of the 23rd north of the Baltimore Beltway. In Baltimore City, 90 roads and 290 basements were flooded. In Harford County, Route 7 was closed by flooding in several locations. One car became stalled in flood waters on the highway. Flooded basements and backed up sewer drains were reported in Aberdeen, Havre de Grace, and Perryville. Broad Street in Perryville was closed by flooding.

In Howard County, Route 108 was under water east of Route 29. Several county roads were closed by high water, including Race Road, Furnace Avenue, and Triadelphia Mill Road. Officials rescued people trapped in flood waters in an unknown location in the county. A minor mudslide closed Toll House Road in Ellicott City. Thirty county basements were flooded. In Montgomery County, Rock Creek overflowed its banks in Chevy Chase and flooded 9 vehicles at a recreational facility. Officials reported 200 calls for flooded basements or people stranded in high water. Small stream flooding was reported in Silver Spring. Magruder Branch in Damascus flooded over Log House Road. In Anne Arundel County, 142 basements and 2 yards were pumped out by county firefighters. Roads closed by flooding included Old Mill Road, Furnace Avenue, Furnace Branch Road, and Cedar Road. A woman had to be rescued when her car became trapped in flood waters near Woodwardville. Nine of the county's 240 wastewater pumping stations overflowed, sending wastewater into Selby Bay, the South River, Rhode River tributaries, and Church Creek.



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MARYLAND, Central

In Prince George's County, Route 50 was closed by flooding in Cheverly. Three hundred reports of basement flooding were received by county officials. The Anacostia River rose 8 feet above low tide, flooding some docks. A wastewater treatment plant overwhelmed by water overflowed sewage into Broad Creek, the Anacostia River, Piscataway Creek, and the western branch of the Patuxent River. In addition, sewage backed up into 200 basements. A total of 29 county schools reported water damage. In Charles County, urban and small stream flooding was reported in La Plata and Bryans Road. Newton Road, Hancock Road, and Bumpy Oak Road were closed by high water.

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

23	0600EST 2200EST	0	0	1.4K	Strong Wind
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A strong cold front moved through the region around dawn on the 23rd. This front ushered in winds that gusted between 40 and 55 MPH. Due to the soft saturated soil from heavy rains and snow melt, the gusty winds downed scattered trees and power lines. In Washington County, a wind gust of 43 MPH was reported at the Hagerstown airport. Wind gusts in Frederick County included 49 MPH at the Frederick airport and 48 MPH in Mt. Airy. In Baltimore County, a 48 MPH gust was recorded in Catonsville. In Howard County, a 49 MPH gust was measured in Columbia. In Montgomery County, 5200 customers lost power after winds gusted to 50 MPH in Damascus and 47 MPH in Rockville. In Prince Georges County, a wind gust of 49 MPH was recorded at Andrews Air Force Base. A total of 1400 county customers reported power outages. In Anne Arundel County, 2300 customers lost power as winds gusted to 49 MPH at Baltimore-Washington International Airport. In St. Mary's County, a wind gust of 43 MPH was recorded at Patuxent River Naval Air Station.

MDZ004-009

Frederick - Montgomery

24	1100EST 2200EST	0	0		Flood
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A combination of melting snow from the record snowstorm of February 14-18th and 2 inches of rain that fell on the 21st and 22nd led to high water on regional rivers. The Potomac River and Seneca Creek rose out of their banks. At Point of Rocks (Frederick County), the Potomac River rose above flood stage at 11:00 AM on the 24th. It crested at 16.50 feet at 3:00 PM and dropped below flood stage at 10:15 PM. Low water roads upstream of Brunswick were inundated by water. At Dawsonville (Montgomery County), Seneca Creek rose above its bankful stage of 7.5 feet at 3:15 PM on the 22nd. It crested at 8.10 feet at 11:30 PM on the 22nd and dropped below bankful stage at 5:15 AM on the 23rd.

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

26	0600EST	0	0		Winter Weather/Mix
28	1200EST				

A series of low pressure systems that tracked from the Gulf Coast to Cape Hatteras dropped light snow off and on between the morning of the 26th and midday on the 28th. A total of 5 to 8 inches of snow accumulated across Central and Southern Maryland and 2 to 4 inches was reported in Western Maryland. Minor traffic accidents were reported after the fallen snow made roads slippery.

VIRGINIA, North

VAZ021-031

Highland - Clarke

06	1900EST	0	0		Winter Weather/Mix
07	1100EST				

VAZ025>030-036>042-050>057

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

06	1900EST	0	0		Winter Storm
07	1100EST				



National Weather Service

Storm Data and Unusual Weather Phenomena

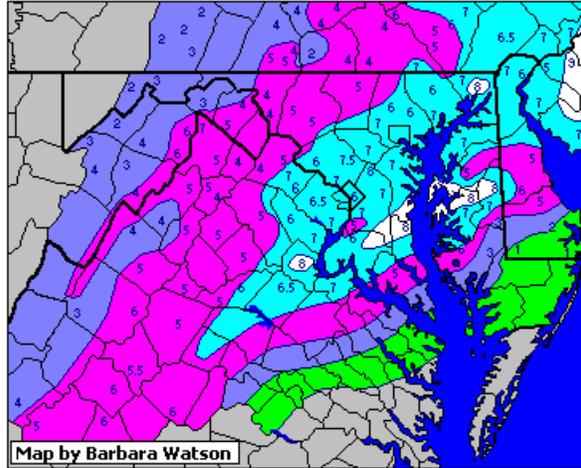


February 2003

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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VIRGINIA, North

Snowfall Map for Feb. 7, 2003



Low pressure tracked from the Gulf Coast to the Carolinas on the 6th then off the Atlantic coast on the 7th. This storm dropped light to moderate snow between the evening of the 6th and Noon on the 7th. Accumulations ranged from 3 to 7 inches, with the highest amounts occurring in the Washington D.C. suburbs and along the Interstate 95 corridor. Several weather related traffic accidents were reported. A 2 mile stretch of Route 50 just east of Fairfax City was closed because of slippery conditions.

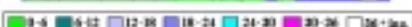
VAZ021-025>031-036>042-050>057

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

14 0800EST 1 0 8.9M Winter Storm
18 1200EST



Storm Total Snowfall Feb. 14-18, 2003





National Weather Service

Storm Data and Unusual Weather Phenomena



February 2003

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

A complex storm system produced copious amounts of wintery precipitation across the northern third of Virginia between the evening of the 14th and midday on the 18th. The first batch of precipitation fell between the evening of the 14th and the evening of the 15th in the form of light to moderate snow or rain. The second batch of precipitation fell between midnight on the 16th through midday on the 17th in the form of heavy snow or sleet. The third batch of precipitation on the back side of the storm fell between the evening of the 17th and midday on the 18th in the form of scattered snow showers.

After the precipitation came to an end, record breaking snow and sleet accumulations were reported. Across the Northern Shenandoah Valley and the northwest Virginia suburbs of Washington D.C., accumulations of mainly snow ranged from 20 to 36 inches. Across the North Central Shenandoah Valley, the North Central Foothills, and the west and southwest Virginia suburbs of Washington D.C., accumulations of snow and sleet ranged from 12 to 20 inches. Across the South Central Shenandoah Valley, the South Central Foothills, and the Northern Piedmont, accumulations of mainly sleet ranged from 7 to 12 inches. As a general rule, 1 inch of sleet accumulation is equivalent to 3 inches of snow. Therefore, areas that received mainly sleet during this massive winter storm received accumulations around two thirds less than areas that had all snow, even though they were impacted by the same storm system. As an example, Charlottesville recorded 9 inches of accumulation (almost all sleet) whereas Leesburg in Loudoun County recorded 25 inches of accumulation (all snow).

Nicknamed the President's Weekend Snowstorm of 2003, this storm will go down in history as the 5th heaviest snowstorm in the Washington D.C. region since records began in 1870. A total of 16.7 inches of snow and sleet was recorded at Ronald Reagan Washington National Airport. This massive storm took a heavy toll on residents, structures, transportation systems, emergency responders, businesses, livestock, and travelers. Local officials urged people to stay off the roads during the height of the storm between the morning of the 16th and the morning of the 17th. Roads were covered by deep snow and sleet and were nearly impassible. Almost every airport in the region was shut down on the 16th, stranding hundreds of travelers. Emergency personnel and those needing emergency transport had to be taken to their destinations in 4 wheel drives or military vehicles during the storm. Main highways were partially cleared by the 18th but it took up to 5 days to reach some secondary and residential roads. Area schools were closed up to a week after the storm ended. Heavy accumulations weighed down on buildings in the region and several structural collapses occurred. In addition, several injuries and a handful of deaths were attributed to the storm.

The following is a list of damage and casualty reports by county that occurred as a result of this winter storm. In Highland County, a turkey house collapsed near McDowell and 500 turkeys were killed. In Augusta County, officials reported \$1.5 million in structural damage. Several agricultural buildings including a barn and a turkey shed collapsed, killing or injuring livestock. Two people died at a Charlottesville hospital from heart attacks brought on by shoveling snow. Several other people were treated across the county for chest pains or snow blower related injuries. A 39-year-old man died after sledding into the path of a car in Craigsville. In Rockingham County, 7 chicken houses and 5 turkey houses collapsed. At least 37,000 chickens and turkeys were lost. A cow was killed and 17 cows were injured when a dairy barn collapsed in Grottoes. In Orange County, a gas station canopy collapsed on Route 3. A nursery near Rhoadesville lost 22 of 24 plastic greenhouses. In Madison County, a wood flooring factory storage building collapsed in Madison. In Culpeper County, 3 livestock barns collapsed. Three cows were killed, several other animals were injured. Two hay barns, several sheds, and other farm buildings collapsed on three farms near Batna. A gas station canopy on Route 3 near Germanna Bridge collapsed. In addition, a 2.5 acre glass greenhouse in the county valued at \$2 million dollars collapsed.

In Page County, a chicken house collapsed in Dovel Hollow. In Shenandoah County, two homes, one carport, 7 business buildings, 3 public buildings, and 7 agricultural buildings (including 5 animal shelters where a total of 61,000 turkeys and chickens were lost) suffered structural collapses. Twenty people who lost their homes were sheltered by the Red Cross. Near Edinburg, a 38-year-old man who was sitting in a snowbound car died of carbon monoxide poisoning. An 82-year-old man near Conicville died from a heart attack after trying to cross through deep snow to feed livestock. In Frederick County, officials reported \$1.4 million in structural losses. Four mobile homes, a park maintenance building, a commercial storage building, a barn, an industrial building, a church, and two stores suffered collapsed roofs. A nursery north of Winchester suffered the loss of 9 of 21 large greenhouses. A 76-year-old woman from Stephens City suffering from dementia was found dead from exposure a week after the storm ended buried under one foot of snow. In Clarke County, 2 hay barns and a machine shed collapsed. In Warren County, the roof of the North Warren Fire Station collapsed. Many other smaller structures including porches, garages, and carports collapsed across the county. Two men, ages 82 and 57, died of heart attacks while shoveling snow.

In Fauquier County, a gas station canopy in Bealton and a dairy barn in Calverton collapsed. Twelve boy scouts and 6 adults were trapped at Camp Moss Hollow near Markam during the snowstorm. In Loudoun County, a nursing home in Leesburg had to be evacuated after the roof partially collapsed. A county office building and two middle school auditoriums also suffered structural damage. In addition, a 37-year-old man was found dead from carbon monoxide in his snowbound car. In Spotsylvania County, the roof of a home, a gas station canopy, and the roof of a business collapsed. In Fredericksburg, the roof of a shopping center collapsed. A 55-year-old man in the county died from a heart attack while shoveling snow. In Fairfax County, an elementary school and two church buildings in Herndon suffered structural collapses. Three county sports bubble structures also collapsed. Local hospitals treated several people for injuries from sledding and snow blower accidents and for chest pains brought on by shoveling. In Arlington, an athletic bubble structure valued at \$400,000 collapsed. F76OU

Clarke County



National Weather Service

Storm Data and Unusual Weather Phenomena



February 2003

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>VIRGINIA, North</u>									
Countywide	22 23	0800EST 0600EST			0	0			Heavy Rain
King George County									
Countywide	22 23	0800EST 0600EST			0	0			Heavy Rain
Rappahannock County									
Countywide	22 23	0800EST 0600EST			0	0			Heavy Rain
VAZ021-025>030- 036>039-041>042-050>056			Highland - Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Nelson - Albemarle - Greene - Madison - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Arlington - Stafford - Spotsylvania						
	22 23	0800EST 0600EST			0	0	100K		Flood

A combination of 1.5 to 3 inches of rain that fell between the evening of the 21st and the morning of the 23rd and snow melt from the massive snowstorm of 14-18 February led to widespread flooding. In Highland County, small streams and creeks overflowed onto Route 220 and washed out shoulders near Monterey. Routes 640 and 637 near New Hampden, Route 604 near Valley Center, and Route 84 in the southwest corner of the county were also flooded. In Augusta County, 37 roads were flooded and some small bridges were washed out. Officials reported some water rescues. About 25 residents of the Deerfield Valley Camps community west of Churchville were trapped after the Stony Brook Road bridge that connected to their community was washed out by Calf Pasture River. In Waynesboro, some small streams overflowed their banks. Eight basements and some streets were flooded. In Staunton, low lying areas were flooded. In Rockingham County, flooding of basements and urban areas was reported. Ten secondary roads were also flooded.

In Nelson County, urban and small stream flooding occurred. A secondary road was also closed by flood waters. In Albemarle County, 22 secondary roads were flooded. Urban and small stream flooding and water rescues were also reported. In Greene County, urban flooding closed 7 secondary roads. In Orange County, 17 secondary roads flooded. In Madison County, 8 secondary roads were flooded by urban runoff. In Spotsylvania County, 1 primary and 7 secondary roads were flooded. One private road was washed out. Officials rescued 4 people, 2 horses, and 6 dogs from flood waters. Two of the people were rescued from Old Mill Park after falling asleep on dry land near the riverbank and waking up in North Anna River flood waters. The Davenport Bridge across the North Anna River was also flooded. Flooding was also reported in the College Terrace neighborhood in Fredericksburg. In Stafford County, Red Fern Lane which is the entrance to the Stafford Oaks development was flooded. Four other secondary roads were closed by flooding. In Culpeper County, 18 secondary roads were flooded. In Page County, streams reached bankful in the southern part of the county. Urban flooding was also reported. In Shenandoah County, 25 county roads were closed by high water. Stony Creek, Narrow Passage Creek, Passage Creek, and Painter Run overflowed their banks. Numerous basements were also flooded.

In Frederick County, several basements and 7 secondary roads were flooded. Urban and small stream flooding was also reported. In Warren County, urban flooding was reported. High water closed Fish Hatchery Road, the Eighth Street bridge, Morgan's Ford low water bridge, and Bentonville low water bridge. In Fauquier County, basement flooding was reported in Opal. One county road was also flooded. In Loudoun county, 4 secondary roads were flooded. In Prince William County, roads were underwater in Manassas. Three secondary county roads were also flooded. In Fairfax County, Hunter Mill Road and Lawyers Road were flooded. Across the county, 1 primary and 25 secondary roads were underwater. In Alexandria, flooding occurred when the water treatment plant was overwhelmed by runoff and snow melt. Water backed up on streets via manhole covers and basements via plumbing. The hardest hit areas were in the Del Ray and Arlandria neighborhoods. Some residents had to be evacuated and 19 people were sheltered for up to 6 nights by the Red Cross. Lake Cook in the Eisenhower Valley overflowed onto Eisenhower Avenue. Tidal flooding was also reported on King Street.



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February 2003

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VIRGINIA, North

VAZ030-040-051

Warren - Rappahannock - Culpeper

22	2300EST	0	0	
24	1100EST			Flood

A combination of melting snow from the record snowstorm of February 14-18th and 2 inches of rain that fell on the 21st and 22nd led to high water on regional rivers. The Rapidan, Rappahannock, and South Fork Shenandoah rivers rose just above flood stage. At Culpeper (Culpeper County), the Rapidan River rose above its flood stage of 14 feet at 11:30 PM on the 23rd. It crested at 14.27 feet at 3:30 AM on the 23rd and dropped below flood stage at 6:45 AM. Flooding occurred upstream of the town of Rapidan and pastureland was inundated by water around Culpeper. At Remington (Rappahannock County), the Rappahannock River rose above its flood stage of 15 feet at 1:30 AM on the 23rd. It crested at 15.52 feet at 6:00 AM and dropped below flood stage at 10:00 AM. A few structures on the south end of Remington were flooded. In Fredericksburg, the Rappahannock River inundated the picnic area and parking lot at the Fredericksburg City Dock. At Front Royal (Warren County), the South Fork Shenandoah River rose above its flood stage of 12 feet at 9:15 PM on the 23rd. It crested at 12.76 feet at 4:15 AM on the 24th and dropped below flood stage at 11:00 AM. Low lying areas along the river near Front Royal were subject to minor flooding. Near Strasburg, the river washed out bridges and closed roads.

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

23	0900EST 2200EST	0	0	2.3K	Strong Wind
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A strong cold front moved through the region around dawn on the 23rd. This front ushered in winds that gusted between 40 and 55 MPH. Due to the soft saturated soil from heavy rains and snow melt, the gusty winds downed scattered trees and power lines. In Frederick County, a wind gust of 48 MPH was recorded at the Winchester airport. In Loudoun County, wind gusts included 51 MPH in Sterling and 46 MPH in Leesburg. In Fairfax County, a wind gust of 49 MPH was reported in Vienna. Ronald Reagan National Airport in Arlington recorded a wind gust of 49 MPH. In Arlington, a tree fell onto a pickup truck on Lorcum Lane. A wind gust of 54 MPH was recorded in Falls Church. In Alexandria, winds gusted to 47 MPH. Across the Virginia suburbs of Washington D.C. 15,000 power outages were reported.

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

26	0600EST	0	0		Winter Weather/Mix
28	1200EST				

A series of low pressure systems that tracked from the Gulf Coast to Cape Hatteras dropped light snow off and on between the morning of the 26th and midday on the 28th. A total of 5 to 8 inches of snow accumulated across the northern third of Virginia during the storm. Minor traffic accidents were reported after the fallen snow made roads slippery.

WEST VIRGINIA, East

WVZ048>049-051-
053>055

Grant - Mineral - Morgan - Jefferson - Pendleton - Hardy

06	1900EST	0	0		Winter Weather/Mix
07	1100EST				



National Weather Service

Storm Data and Unusual Weather Phenomena

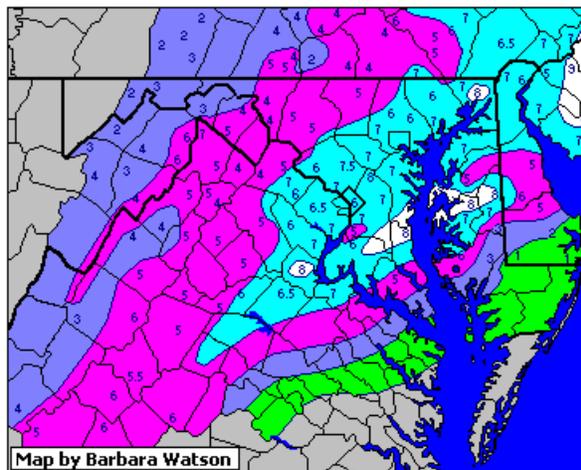


February 2003

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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WEST VIRGINIA, East

Snowfall Map for Feb. 7, 2003



WVZ050-052

Hampshire - Berkeley

06 1900EST
07 1100EST

0 0

Winter Storm

Low pressure tracked from the Gulf Coast to the Carolinas on the 6th then off the Atlantic coast on the 7th. This storm dropped light to moderate snow between the evening of the 6th and Noon on the 7th. Accumulations ranged from 2 to 5 inches across the Eastern Panhandle. A handful of weather related traffic accidents were reported. In Berkeley County, a tractor trailer southbound on Interstate 81 jackknifed and spilled 100 gallons of diesel fuel, shutting down the highway for 3 hours.

WVZ048>055

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

14 0800EST
18 1200EST

0 1 7.6M

Winter Storm



National Weather Service

Storm Data and Unusual Weather Phenomena



February 2003

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



A complex storm system produced copious amounts of wintery precipitation across the Eastern Panhandle of West Virginia between the evening of the 14th and midday on the 18th. The first batch of precipitation fell between the evening of the 14th and the evening of the 15th in the form of light to moderate snow or rain. The second batch of precipitation fell between midnight on the 16th through midday on the 17th in the form of heavy snow or sleet. The third batch of precipitation on the back side of the storm fell between the evening of the 17th and midday on the 18th in the form of scattered snow showers. After the precipitation came to an end, record breaking snow and sleet accumulations of 20 to 37 inches were reported, with the highest amounts falling above 2500 feet. Nicknamed the President's Weekend Snowstorm of 2003, this storm will go down in history as one of the top five regional snowstorms since records began in the late 1800s.

This massive storm took a heavy toll on residents, structures, transportation systems, emergency responders, businesses, livestock, and travelers. Officials asked people to stay off the roads during the height of the storm between the morning of the 16th and the morning of the 17th because they were covered by deep snow and sleet and were nearly impassible. Airports in the region was shut down on the 16th, stranding travelers. Emergency personnel and those needing emergency transport had to be taken to their destinations in 4 wheel drives or military vehicles during the storm. Main highways were partially cleared by the 18th but it took up to 5 days to reach some secondary and residential roads. Area schools were closed up to a week after the storm ended. Heavy accumulations weighed down on buildings in the region and several structural collapses occurred. The agricultural community was hardest hit.

The following is a list of damage and casualty reports by county that occurred as a result of this winter storm. In Pendleton County, 9 poultry houses collapsed and 175,000 chickens were killed. Five other barns and sheds also caved in. In Grant County, one person was injured when a carport collapsed on them. Several buildings across the county also collapsed including 8 barns, 5 sheds, 2 house roofs, 5 carports, 4 business buildings, 2 porches, 1 trailer roof, and 1 gas canopy. In Hardy County, four poultry houses (2 containing chickens) collapsed. A snow slide at Durgon and near the Petersburg Gap bridge partially blocked roads. In Mineral County, a church and a storage building in Keyser collapsed. A barn built in the 1780s collapsed near Bedington. In Morgan County, a greenhouse in Berkeley Springs suffered structural damage. In Jefferson County, the roofs of 4 trailers and one house collapsed. A barn in Shenandoah Junction also caved in.



National Weather Service

Storm Data and Unusual Weather Phenomena



February 2003

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

Mineral County

Countywide	22	0800EST			0	0	
	23	0600EST					Heavy Rain

Pendleton County

Countywide	22	0800EST			0	0	
	23	0600EST					Heavy Rain

WVZ048-050>053-055

Grant - Hampshire - Morgan - Berkeley - Jefferson - Hardy	22	0800EST			0	0	
	23	0600EST					Flood

A combination of 1.5 to 3 inches of rain that fell between the evening of the 21st and the morning of the 23rd and snow melt from the massive snowstorm of 14-18 February led to widespread flooding. In Berkeley County, Tuscarora Creek was swollen in Martinsburg. In Hampshire County, flooding was reported on roads near Springfield. In Grant County, 2 basements were flooded in Petersburg. A mobile home in Hinkle Hollow was damaged by flood waters. Minor flood damage was reported on a road in Sites Hollow. Along Route 220 North, a chain link fence was moved 20 feet by a mud slide. In Hardy County, urban road flooding occurred. Small creek flooding was reported due to ice jams in the eastern side of the county. In Morgan County, the Cacapon River deposited large ice chunks at Kilgore Road in Largent which caused the road to be flooded by 3 feet of water. The Rock Ford Road bridge over the Cacapon River was flooded out, trapping 15 families. Ice piled up on the bridge and it took road crews over a day to clear the jam to make the bridge passable. In Jefferson County, drivers had to be rescued when their vehicles stalled in high water on Bloomery Road. Avon Bend Road was flooded by the Shenandoah River and a motorist had to be rescued when his car became stalled in flood waters.

WVZ050-052

Hampshire - Berkeley	23	0300EST			0	0	
	24	0400EST					Flood

A combination of melting snow from the record snowstorm of February 14-18th and 2 inches of rain that fell on the 21st and 22nd led to high water on regional rivers. The South Branch Potomac River and Opequon Creek rose out of their banks. At Springfield (Hampshire County), the South Branch Potomac River rose above its flood stage of 15 feet at 1:45 AM on the 24th. It crested at 15.07 feet at 3:30 AM and dropped below flood stage at 4:00 AM. Water inundated Milleston Mills and Maple Landing roads. At Martinsburg (Berkeley County), Opequon Creek rose above its bankful stage of 10 feet at 3:00 AM on the 23rd. It crested at 10.50 feet at 9:30 AM and dropped below bankful stage at 1:45 PM. Water overflowed onto portions of Sulpry Spring Road, Douglas Grove Road, and fields along the creek. In Jefferson County, River Road was flooded by the Potomac River.

WVZ048>055

Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy	23	0600EST			0	0	0.80K	
		2200EST						Strong Wind

A strong cold front moved through the region around dawn on the 23rd. This front ushered in winds that gusted between 40 and 55 MPH. Due to the soft saturated soil from heavy rains and snow melt, the gusty winds downed scattered trees and power lines. In Berkeley County, a wind gust of 41 MPH was recorded at the Martinsburg airport.

WVZ048>055

Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy	26	0600EST			0	0	
	28	1200EST					Winter Weather/Mix

A series of low pressure systems that tracked from the Gulf Coast to Cape Hatteras dropped light snow off and on between the morning of the 26th and midday on the 28th. A total of 3 to 7 inches of snow accumulated across the Eastern Panhandle. Minor traffic accidents were reported after the fallen snow made roads slippery.