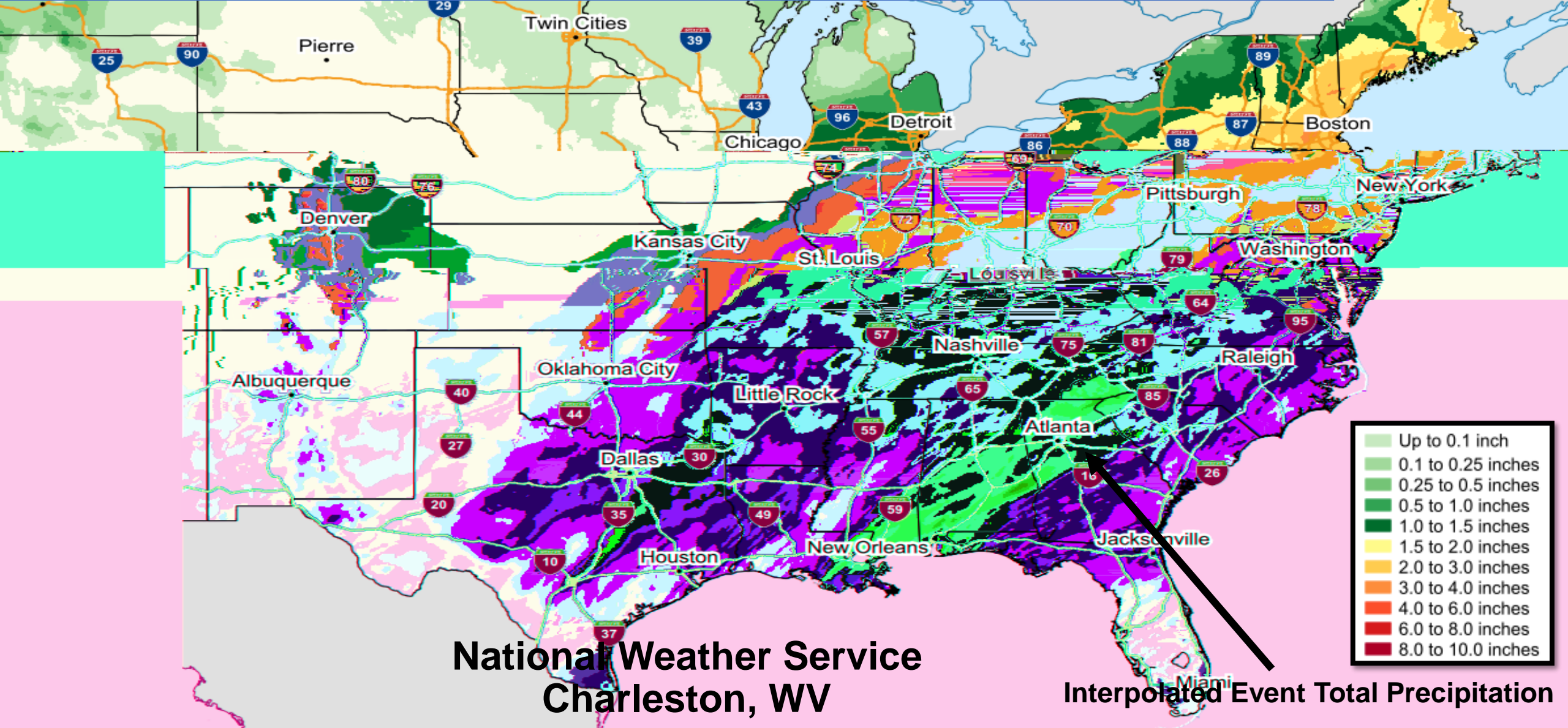


# FEBRUARY 2ND - FEBRUARY 5TH LONG DURATION MIXED BAG WINTER STORM



National Weather Service  
Charleston, WV

Interpolated Event Total Precipitation

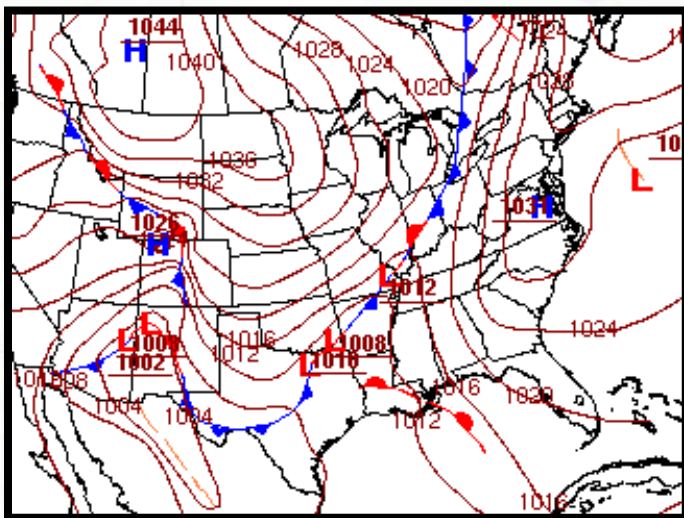
# Event Summary

A long duration event would begin across the area late on the morning of February 2nd, lasting through midday on February 5th, as an arctic cold front to the northwest slowly progressed towards and through the region. Waves of low pressure would ride along the front during this southeastward progression bringing multiple rounds of precipitation, heavy at times, into the area over the course of the three-day period.

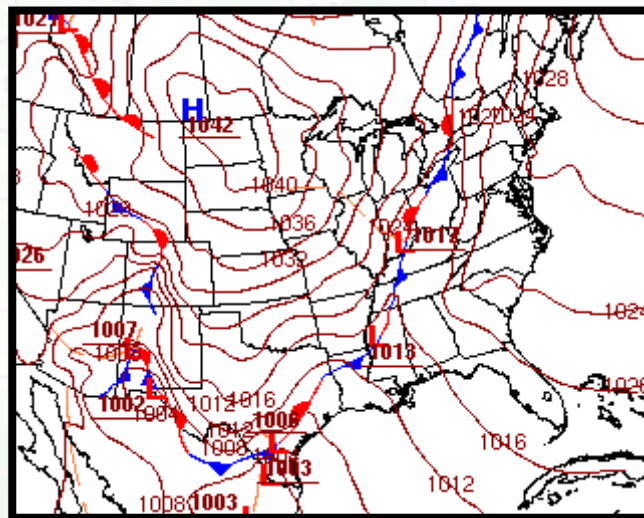
Scattered showers would begin to progress northeastward into the region during the late morning on February 2nd courtesy of a Gulf of Mexico moisture stream. Periods of light to moderate rainfall would continue through the morning of February 3rd, but would become heavier during the day (particularly across NE KY, SE OH, and NW WV) as another wave of low pressure approached from the southwest. This would quickly lead to water issues across the hardest hit areas during the evening of February 3rd. Multiple flood warnings were issued and many reports of flooded roadways were received beginning that evening. Creek, stream, and river flooding would also become an issue as several would exceed their banks, with some issues lingering all the way into the afternoon of February 6th (Symmes Creek).

As the arctic front continued to slowly push southeast, rain would begin to transition over to a wintry mix across SE OH during the afternoon and evening hours of February 3rd. Significant ice accretion occurred in some areas with up to 0.4" of radial ice reported in northern Morgan County. This resulted in significant impacts to utilities, with nearly 50% of customers reported to be without power on the morning of February 4th in Morgan County. The changeover to a wintry mix would slowly progress to the southeast throughout the early morning hours of February 4th, with ice accretion of up to 0.1-0.2" reported down into portions of NW WV. While the bulk of the precipitation would exit the region by late morning on February 4th, light accumulating snow on the evening of February 4th through midday on February 5th in advance of an upper trough would result in up to a few fluffy inches of snow across portions of the area to wrap up the event.

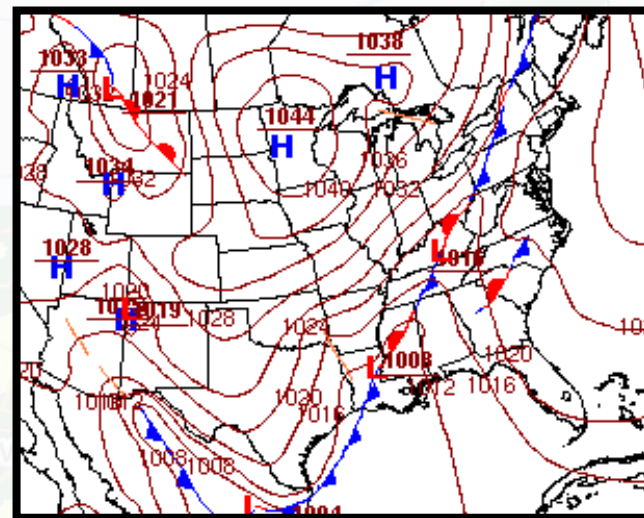
# Surface Analysis Charts



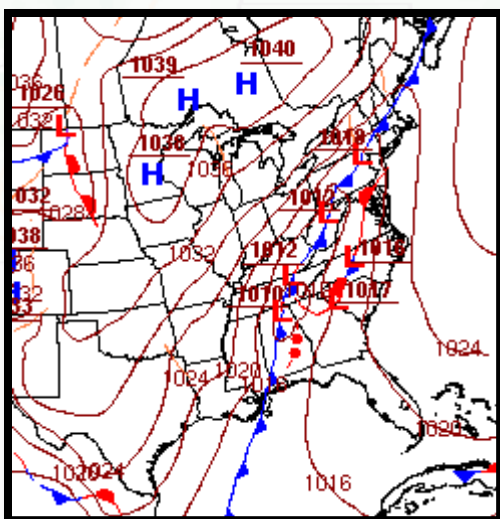
Surface Analysis: 7 AM 2/2



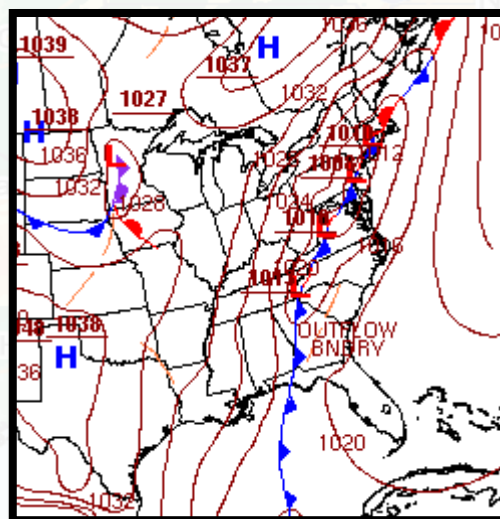
Surface Analysis: 7 PM 2/2



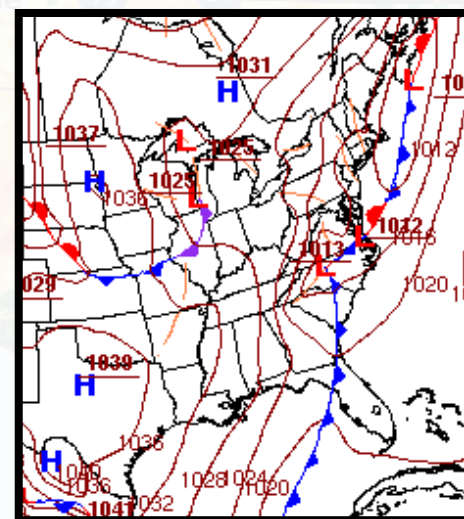
Surface Analysis: 7 AM 2/3



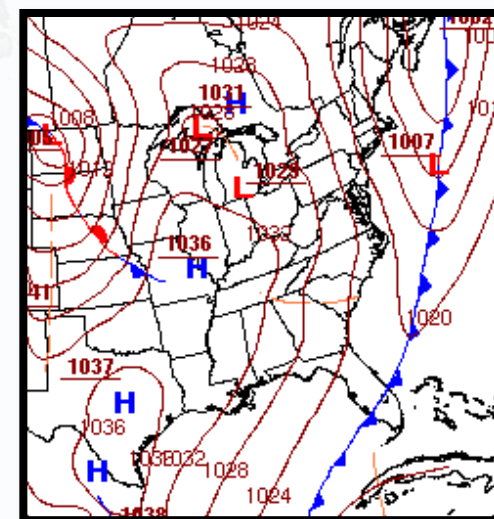
Surface Analysis: 7 PM 2/3



Surface Analysis: 7 AM 2/4



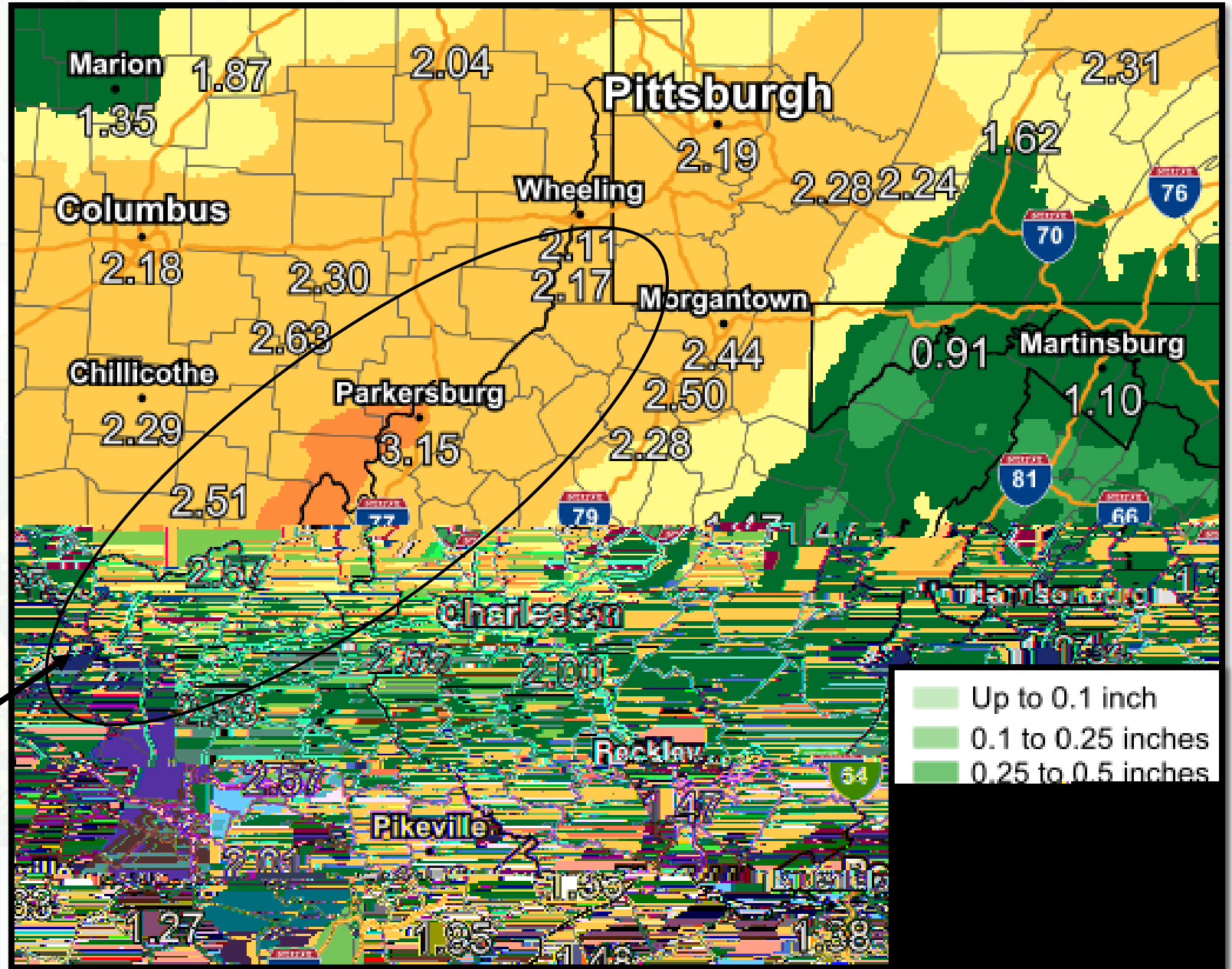
Surface Analysis: 7 PM 2/4



Surface Analysis: 7 AM 2/5

# Event Total Precipitation

By the end of the event, total precipitation (including liquid equivalent of snow, sleet, and freezing rain) was 1-3"+ for the vast majority of the NWS Charleston forecast area. Northeast Kentucky, Southeast Ohio, and Northern/Western West Virginia were hit particularly hard with widespread 2-3" amounts, and even isolated amounts of 3-3.5". This correlated with the locations that had the greatest flooding impacts. On the right is an interpolated event total precipitation map.



# Event Total Precipitation Reports

Location	Amount
...Kentucky...	
...Boyd County...	
Ashland	2.85 in
1.3 NE Ashland	2.20 in
...Carter County...	
Olive Hill 5 NE	2.85 in
3.0 NE Grayson Lake State Pa	2.79 in
Rush 1.1 W	2.56 in
4.7 E Carter Caves State Par	1.48 in
...Greenup County...	
2.6 NW Franklin Furnace	2.87 in
Warnock	2.67 in
Greenup 5.8 W	2.63 in
Ashland Airport	2.34 in
Warnock Po	2.19 in
Flatwoods	1.70 in
...Lawrence County...	
6.9 E Bruin	2.93 in
1.4 SW Yatesville Lake State	1.76 in
...Ohio...	
...Athens County...	
Athens 2.3 SSE	3.59 in
Athens 4.6 ESE	2.99 in
Athens 6.0 NW	2.92 in
Stewart 4.6 NNE	2.89 in
Amesville 2.6 SE	2.67 in
Athens 1.3 N	2.56 in
Glouster 3.6 SW	2.53 in
Albany	2.18 in
5.9 SE Amesville	2.00 in
Athens	2.00 in
3.1 NE Glouster	1.59 in
Glouster	1.53 in
...Gallia County...	
5.0 W Gallipolis	2.36 in
...Jackson County...	
Jackson 3 NW	2.77 in

Location	Amount
...Ohio...	
...Lawrence County...	
Dean	3.20 in
4.8 N Lake Vesuvius	2.52 in
1.6 E Burlington	2.38 in
...Meigs County...	
Cheshire 2.3 NNE	3.33 in
Salem Center 2 E	2.90 in
...Morgan County...	
2 E Trimble	1.70 in
...Perry County...	
1.4 S New Lexington	1.72 in
2.2 E Junction City	1.30 in
Corning	1.08 in
New Lexington 2 NW	1.08 in
...Vinton County...	
Zaleski	2.36 in
Vinton Furnace	2.29 in
...Washington County...	
Belpre 0.3 NE	3.42 in
Newport	3.00 in
1.2 SE Marietta	2.30 in
Waterford	1.87 in
...Virginia...	
...Buchanan County...	
2.4 W Vansant	1.44 in
0.7 N Davenport	1.40 in
2.2 SE Toonerville	1.32 in
4.3 NE Grundy	1.32 in
Grundy	1.30 in
7.0 SW Bradshaw	1.23 in
...Dickenson County...	
6.2 NE Coeburn	1.80 in
Nora 4 SSE	1.69 in
3.8 SE Shelby Gap	1.58 in
John Flannagan Lake	1.41 in
2 SE Haysi	1.09 in

Location	Amount
...West Virginia...	
...Barbour County...	
Belington	1.97 in
Belington	1.21 in
3 SE Philippi	1.16 in
...Boone County...	
Madison 3 NNW	1.74 in
Danville 1.8 WSW	1.68 in
...Braxton County...	
Sutton	1.75 in
7.0 E Flatwoods	1.73 in
2.1 E Burnsville	1.72 in
Flatwoods	1.62 in
Gassaway	1.51 in
1.6 E Burnsville	1.50 in
Sutton Lake	1.44 in
8.2 SW Gassaway	1.34 in
5.8 NW Birch River	1.34 in
Gassaway	1.29 in
Sutton	1.24 in
...Cabell County...	
Ona	2.91 in
Ona	2.87 in
Huntington 2.9 E	2.63 in
Huntington 1.0 S	2.46 in
Huntington 1.7 ESE	2.46 in
Salt Rock	1.96 in
1 ESE Huntington	1.74 in
Huntington	1.73 in
Barboursville	1.65 in
...Calhoun County...	
1.6 NE Grantsville	2.28 in
Grantsville	1.97 in
...Doddridge County...	
Center Point 2.2 NNW	2.83 in
West Union 8.2 NE	2.77 in
4.0 S West Union	2.64 in
West Union 2.9 SE	2.60 in
Auburn 8.3 ENE	2.25 in
4.6 W Salem	1.52 in
...Fayette County...	
0.6 S Thurmond	1.08 in
Glen Jean 0.3 W	1.03 in

Location	Amount
...West Virginia...	
...Gilmer County...	
Auburn 4.0 E	2.27 in
Glenville 5.9 W	2.18 in
Glenville	2.08 in
2.2 S Glenville	2.08 in
6.2 SW Cedar Creek State Par	1.76 in
Glenville	1.51 in
...Harrison County...	
Lost Creek 1.3 NW	2.20 in
Clarksburg Airport	2.02 in
Enterprise	1.87 in
1.1 E Salem	1.73 in
Shinnston	1.57 in
Clarksburg	1.45 in
...Jackson County...	
Ravenswood	2.64 in
Ripley 5.8 S	2.26 in
...Kanawha County...	
Sissonville 1 SW	2.47 in
St. Albans 5.1 WSW	2.13 in
Saint Albans	2.01 in
St. Albans 1.0 WNW	2.01 in
South Charleston	1.98 in
Charleston 2.6 W	1.94 in
Southridge NWS	1.93 in
St. Albans 0.5 ESE	1.92 in
Southridge NWS	1.88 in
South Charleston 2.5 W	1.82 in
South Charleston 4.7 SSW	1.81 in
South Charleston 2.0 ESE	1.77 in
Charleston Airport	1.71 in
Bee Mountain	1.67 in
3.8 E Clendenin	1.57 in
Alum Creek 3.0 E	1.56 in
3.3 W Pinch	1.52 in
...Lewis County...	
4.4 SW Stonewall Jackson	2.00 in
5.1 W Weston	1.72 in
6.0 NW Rock Cave	1.64 in
Stonewall Jackson	1.48 in
6.3 W Rock Cave	1.29 in
...Lincoln County...	
Hamlin	1.58 in

# Event Total Precipitation Reports (Continued)

Location	Amount
...West Virginia...	
...Logan County...	
0.8 SE Logan	1.37 in
5.1 SW Holden	1.12 in
...Mason County...	
8.5 E Crown City	2.96 in
9.4 S Gallipolis	2.84 in
Lakin	2.76 in
0.9 N Henderson	2.76 in
...McDowell County...	
Elkhorn	1.39 in
2.0 NW Gary	1.34 in
Welch	1.25 in
2.9 N Bradshaw	1.01 in
...Mingo County...	
0.5 W R.d. Bailey Lake	1.68 in
1.7 W Delbarton	1.48 in
Williamson	1.19 in
...Nicholas County...	
Summersville Lake	1.60 in
Mount Nebo	1.58 in
Birch River	1.51 in
Runa 0.1 W	1.43 in
Craigsville 0.6 NE	1.41 in
2.1 S Craigsville	1.34 in
5.1 N Richwood	1.34 in
Nettie 1.9 SSW	1.26 in
Mount Nebo	1.21 in
...Pleasants County...	
St. Marys 9.1 ESE	3.06 in
1.9 S Saint Marys	1.88 in
...Pocahontas County...	
9.2 W Snowshoe	2.23 in
Snowshoe	2.00 in
6.3 SE Hillsboro	1.84 in
Cass 3.7 SW	1.62 in
Bartow 1 S	1.61 in
Frost 3 NE	1.30 in

Location	Amount
...West Virginia...	
...Putnam County...	
Culloden	2.48 in
2.7 SE Buffalo	2.40 in
Eleanor 0.2 SSW	2.38 in
7.7 W Kenna	2.12 in
Winfield	2.01 in
Hurricane	1.99 in
...Raleigh County...	
8.0 W Glen Daniel	2.04 in
Cool Ridge 0.4 NE	1.72 in
Ghent Interchange on I-77, W	1.65 in
Beckley	1.62 in
Beckley Airport	1.41 in
Cool Ridge	1.31 in
4.2 W Flat Top	1.24 in
Grandview	1.07 in
...Randolph County...	
8.8 E Holly River State	2.11 in
3.0 W Womelsdorf (coalton)	1.72 in
Elkins Airport	1.36 in
1.7 W Elkins	1.12 in
4.5 E Elkins	1.09 in
...Ritchie County...	
Harrisville	2.98 in
1.3 SE Ellenboro	2.96 in
Cairo	2.84 in
Pennsboro 1.2 ESE	2.84 in
4.4 N Ellenboro	2.56 in
8.5 S Cairo	2.36 in
Harrisville	1.98 in
...Roane County...	
11.0 NE Clendenin	1.84 in
Spencer	1.67 in
...Taylor County...	
1.3 E Grafton	2.01 in
Tygart Lake	1.98 in
4.3 W Newburg	1.88 in
Grafton	1.81 in
1.0 N Tygart Lake State Park	1.58 in

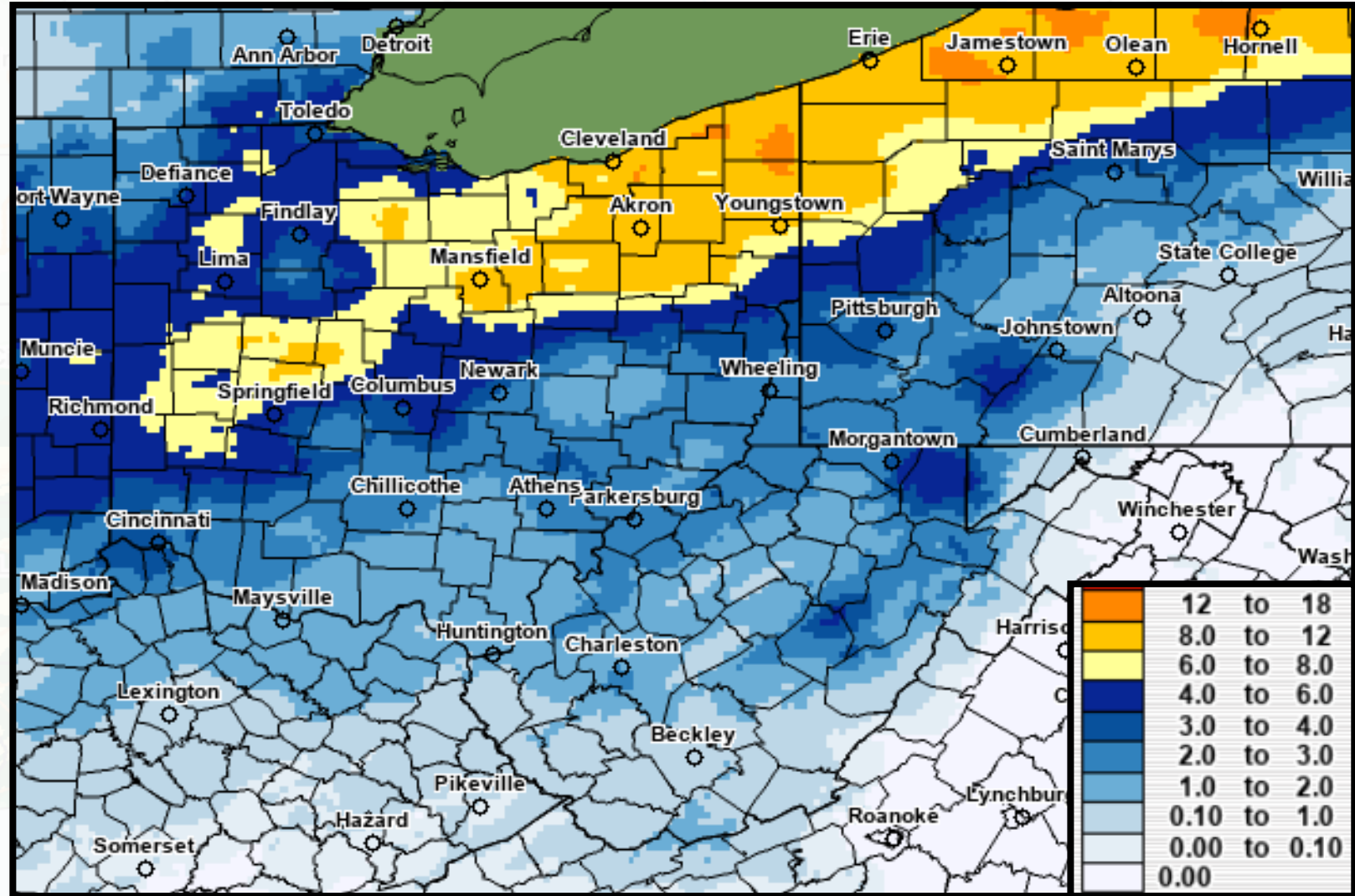
Location	Amount
...West Virginia...	
...Tyler County...	
Middlebourne 3 ESE	2.96 in
Middlebourne 3.2 ESE	2.96 in
Conaway Lake	2.85 in
5.8 SW Jacksonburg	2.60 in
...Upshur County...	
Rock Cave 2 NE	1.89 in
Adrian	1.42 in
...Wayne County...	
Huntington Airport	2.50 in
Beech Fork State Park	2.35 in
East Lynn Lake	2.16 in
East Lynn Lake	1.81 in
0.9 NW Wayne	1.72 in
...Webster County...	
7.3 W Holly River State	1.77 in
Hacker Valley	1.71 in
5.6 W Holly River State	1.70 in
9.3 NW Webster Springs	1.46 in
7.4 SE Cowen	1.42 in
...Wirt County...	
6.7 NW Reedy	3.20 in
1.8 NW Elizabeth	2.36 in
5.9 E Elizabeth	2.24 in
9.1 W Grantsville	2.08 in
...Wood County...	
9.2 S Mineralwells	3.04 in
Walker 2.1 SW	3.01 in
8.7 N Elizabeth	2.92 in
Parkersburg	2.77 in
Williamstown 0.4 WNW	2.67 in
Parkersburg Airport	2.36 in
Parkersburg	2.27 in
Ohio River	1.81 in
...Wyoming County...	
4.6 NE Oceana	1.90 in
R.D. Bailey Lake	1.68 in
Oceana	1.46 in
4.6 NE Davy	1.45 in
6.3 SW Oceana	1.22 in
0.6 S Pineville	1.22 in

Special thanks to all of those who submitted reports during this complex, long duration winter system!

# Event Total Freezing Rain and Snowfall

Issues with freezing rain were primarily confined to SE OH where several reports of 0.25-0.40" of ice accumulation was reported. Further to the southeast across far NW WV, up to 0.15" was reported by the morning of February 4th.

The heaviest snowfall with this event missed the region just to the north where widespread 6-12"+ was observed across northern Ohio. Locally, snow fell in two waves. The first being Thursday night into late Friday morning after the initial changeover from a wintry mix, with light snowfall accumulations of up to 3" across SE OH and far NW WV. Most locations received less than 2" however, with isolated higher amounts in Perry County (OH). The second wave came Friday night into Saturday morning in advance of an upper trough, producing a general 1-3"+ of fluffy snow across a good portion of the area. Event total snowfall generally ranged from 1-4", with some locations receiving slightly more or less.



Interpolated Event Total Snowfall

# Event Total Freezing Rain and Snowfall Reports

## STORM TOTAL SNOWFALL REPORTS

...STORM TOTAL FREEZING RAIN REPORTS	
Location	Amount
...Kentucky...	
...Greenup County... 5 NW Cannonsburg	T in
...Ohio...	
...Athens County... Athens	0.20 in
...Jackson County... 6 NE Oak Hill	0.25 in
...Meigs County... 5 ESE Wilkesville	0.25 in
...Perry County... 1 SSW Shawnee	0.25 in
...West Virginia...	
...Cabell County... 1 E Huntington 1 NE Pea Ridge	0.10 in T in
...Calhoun County... 5 NNE Grantsville	0.14 in
...Putnam County... 6 SW Kenna	0.10 in
...Wayne County... 5 E East Lynn Lake	0.10 in
...Wood County Wells 0.15 in 6 ESE Mineral Wells 0.15 in 6 ESE Wells 4 ESE	

Location	Amount
...Kentucky...	
...Boyd County... Ashland 0.3 E	1.2 in
...Carter County... Olive Hill 5 NE	1.3 in
...Greenup County... Warnock	2.5 in
10 NNE Carter Caves State Pa	1.0 in
...Ohio...	
...Athens County... Stewart 4.6 NNE Athens 2.3 SSE Athens 1.3 N Glouster 3.6 SW Athens 6.0 NW Athens Athens 4.6 ESE	3.6 in 3.0 in 2.7 in 1.9 in 1.7 in 0.8 in 0.5 in
...Gallia County... Gallipolis	1.2 in
...Jackson County... Jackson 3 NW 6 NE Oak Hill	2.4 in 1.5 in
...Meigs County... Salem Center 2 E	1.0 in

Location	Amount
...Ohio...	
...Perry County... Thornville New Lexington 2 NW 1 SSW Shawnee	3.0 in 3.0 in 1.3 in
...Washington County... Newport	2.5 in
...Virginia...	
...Buchanan County... Grundy	0.2 in
...Dickenson County... Nora 4 SSE	1.3 in
...West Virginia...	
...Boone County... Danville 1.8 WSW	1.1 in
...Braxton County... Gassaway	1.0 in
...Cabell County... Huntington 2.9 E Huntington 1.7 ESE	1.5 in 1.0 in
...Doddridge County... Center Point 2.2 NNW West Union 2.9 SE	2.5 in 1.6 in
...Gilmer County... Glenville	1.0 in

Location	Amount
...West Virginia...	
...Harrison County... Lost Creek 1.3 NW 1 SW Clarksburg	1.5 in 1.0 in
...Jackson County... Ripley 5.8 S 1 SSW Kenna 7 SE Kenna	2.1 in 2.0 in 1.5 in
...Kanawha County... South Charleston 4.7 SSW St. Albans 5.1 WSW Alum Creek 3.0 E Charleston 2.6 W Southridge NWS South Charleston 2.0 ESE St. Albans 0.5 ESE Saint Albans St. Albans 1.0 WNW Sissonville 1 SW	2.5 in 2.4 in 2.1 in 2.1 in 2.0 in 2.0 in 1.3 in 1.2 in 1.2 in 1.0 in
...Lewis County... Stonewall Jackson	1.0 in
...Nicholas County... Mount Nebo Craigsville 0.6 NE 5 SSW Summersville	2.0 in 1.4 in 1.0 in
...Pocahontas County... Snowshoe Frost 3 NE Bartow 1 S Cass 3.7 SW	4.0 in 0.9 in 0.3 in 0.3 in

Location	Amount
...West Virginia...	
...Putnam County... Eleanor 0.2 SSW 6 SW Kenna	2.6 in 2.4 in
...Raleigh County... Cool Ridge 0.4 NE	1.2 in
...Randolph County... 3 SW Dailey	1.3 in
...Ritchie County... Harrisville Pennsboro 1.2 ESE	3.0 in 2.3 in
...Taylor County... Tygart Lake	1.5 in
...Tyler County... 4 SW Middlebourne Middlebourne 3.2 ESE	2.8 in 1.7 in
...Upshur County... Rock Cave 2 NE 1 SSE Buckhannon	2.4 in 1.5 in
...Wayne County... 3 ESE Wayne	0.8 in
...Webster County... Hacker Valley	4.3 in
...Wood County... Walker 2.1 SW 5 ESE Mineral Wells 1 NNW Parkersburg 2 SW Mineral Wells Williamstown 0.4 WNW 4 ESE Parkersburg	2.8 in 1.2 in 1.0 in 0.9 in 0.3 in 0.3 in



# Flooding Impacts: River Gauges That Exceeded Flood Stage

Gage	Crest	Flood Stage
Duck Creek (at Macksburg)	14.97'	Minor
Duck Creek (near Whipple)	15.39'	Minor
Little Kanawha River (at Glenville)	24.03'	Minor
Little Muskingum River (at Bloomfield)	23.53'	<i>Moderate</i>
Little Sandy River (at Grayson)	22.04'	Minor
Middle Island Creek (at Little)	21.46'	<u><i>Major</i></u>
Middle Island Creek (near Middlebourne)	23.22'	<u><i>Major</i></u>
Middle Island Creek (near West Union)	17.75'	Minor
Mud River (near Griffithsville)	12.04'	Minor
Shade River (near Chester)	23.33'	<i>Moderate</i>
Sunday Creek (at Glouster)	18.63'	<i>Moderate</i>
Symmec Creek (at Aid)	21.58'	<i>Moderate</i>
West Fork River (near Clarksburg)	14.01'	Minor
West Fork River (at Enterprise)	19.66'	Minor
Tygart Valley River (at Mill Creek)	12.24'	Minor