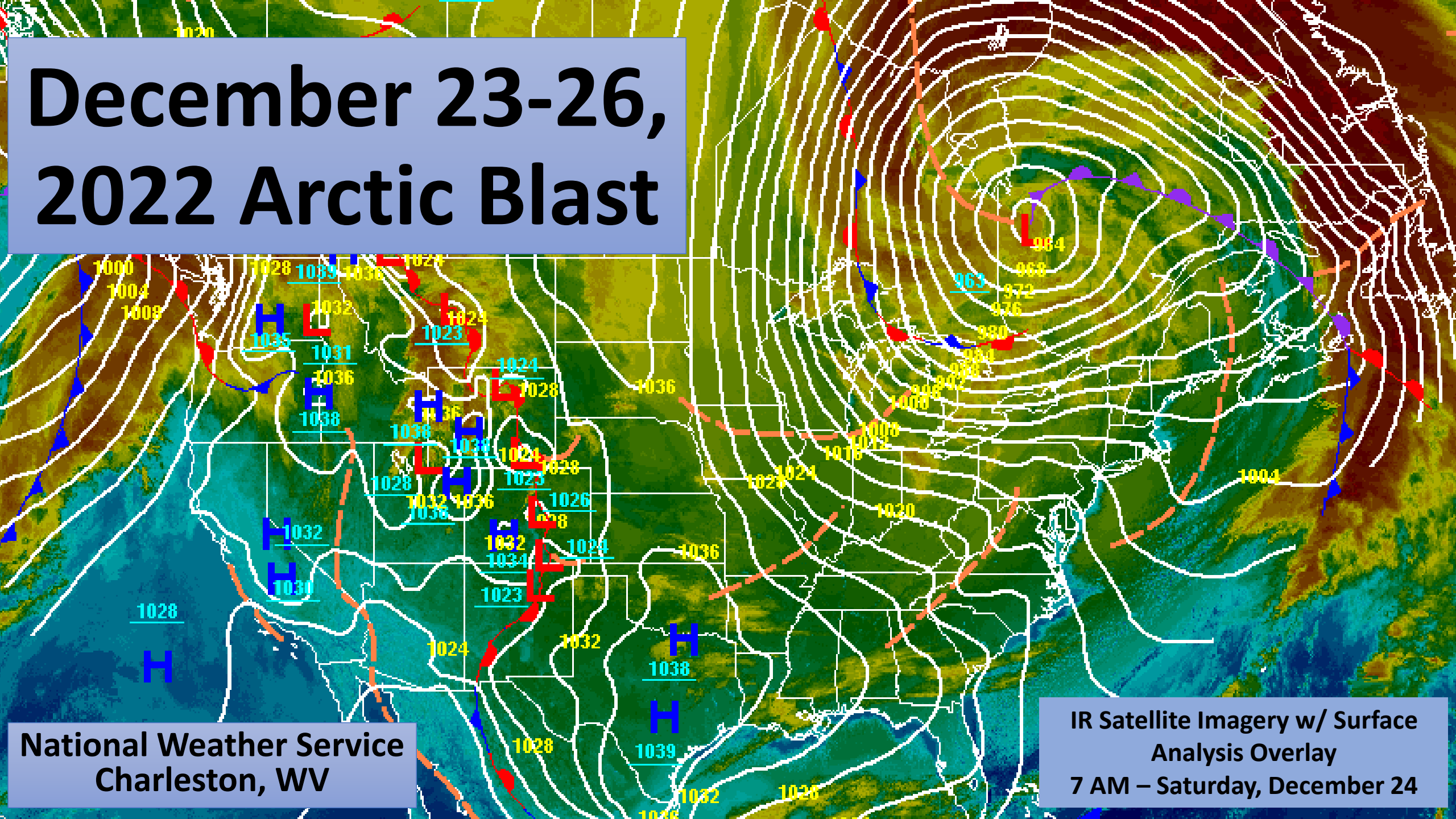


# December 23-26, 2022 Arctic Blast



National Weather Service  
Charleston, WV

IR Satellite Imagery w/ Surface  
Analysis Overlay  
7 AM – Saturday, December 24



# Event Synopsis

An arctic front located across the central Midwest on the morning of Thursday, December 22nd would quickly shift eastward towards the region throughout the day. By late evening, the front was rapidly approaching northeast Kentucky and southeast Ohio. Temperatures in advance of the front were warm enough for rain showers, but precipitation would quickly switch to snow as the arctic front rapidly pushed through the region, crossing the entire NWS Charleston forecast area from approximately 12 AM to 5 AM on Friday, December 23rd.

While post-frontal snowfall was on the light side with generally less than two inches across most locations, the impacts would be much more significant, as sustained winds and gusts quickly increased following the front's passage courtesy of cold air advection and an extremely tight pressure gradient. Wind gusts of 40-50+ mph were recorded during the morning of December 23rd as temperatures rapidly plummeted across the region, resulting in some blowing and drifting snow. Temperature drops in excess of 40 degrees over the course of six hours were recorded across portions of the region, leading to a flash freeze of roadways in some cases. Huntington, WV went from 45 °F at 1:20 AM to (+) 1 °F at 7:20 AM, or a temperature drop of 44 degrees in 6 hours!

These bitter temperatures and gusty winds resulted in dangerous wind chills across the entire region on December 23rd into the morning of December 24th. Wind chills of 10 to 30 below occurred in the lowlands, with values as low as 50 below across the higher mountain elevations! Accumulating snowfall would quickly end for most lowland locations by late morning of December 23rd, with just some very light additional accumulations for the higher terrain through Christmas morning.

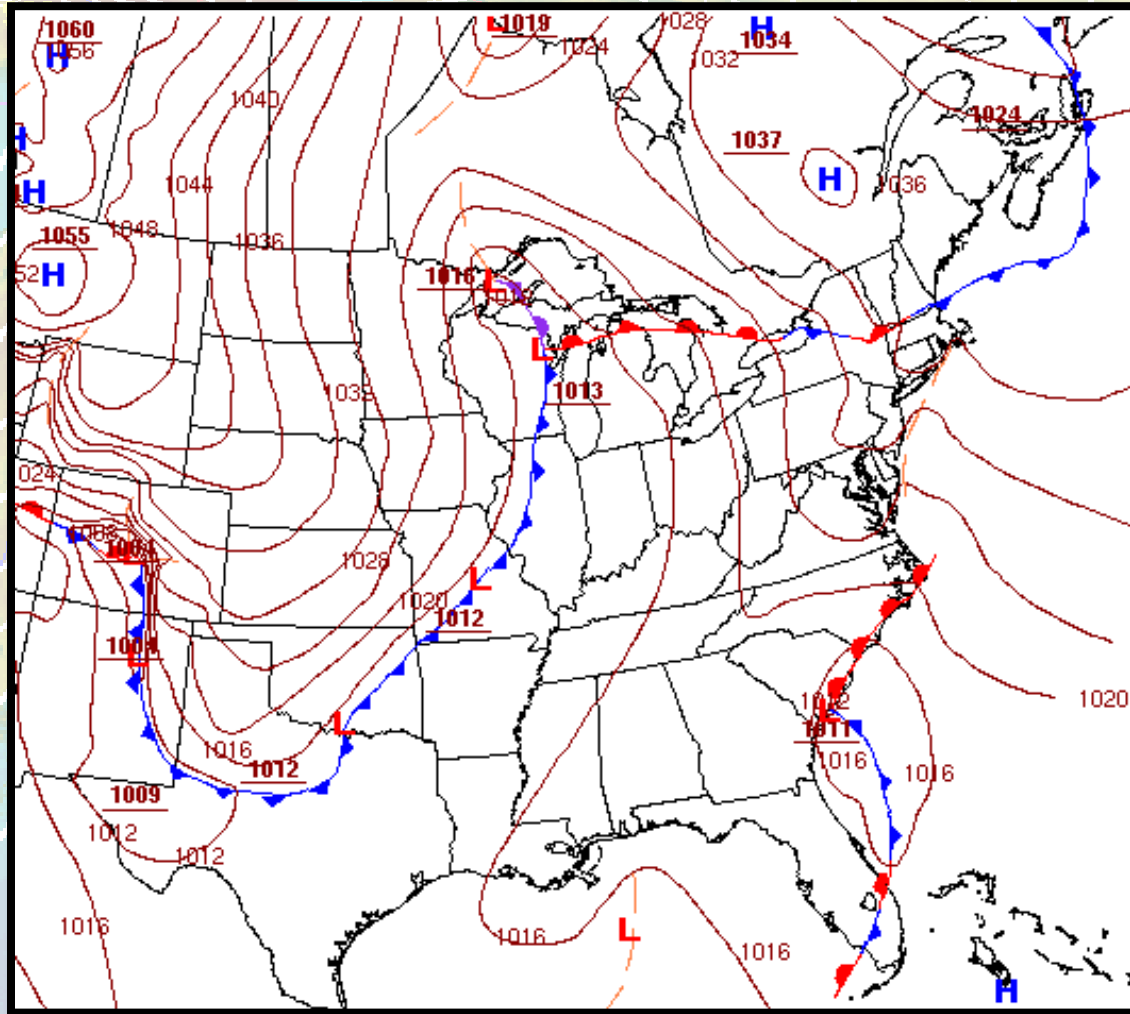
A weather map background showing pressure contours and fronts. The map features a low-pressure system (marked with a blue 'L') moving from the northwest towards the east. High-pressure systems (marked with blue 'H') are visible to the north and east. Contour lines are labeled with values such as 1020, 1016, 1012, 1008, 1004, 1000, 996, 992, 988, 984, 980, 976, 972, 968, 964, 960, 956, 952, 948, 944, 940, 936, 932, 928, 924, 920, 916, 912, 908, 904, 900, 896, 892, 888, 884, 880, 876, 872, 868, 864, 860, 856, 852, 848, 844, 840, 836, 832, 828, 824, 820, 816, 812, 808, 804, 800, 796, 792, 788, 784, 780, 776, 772, 768, 764, 760, 756, 752, 748, 744, 740, 736, 732, 728, 724, 720, 716, 712, 708, 704, 700, 696, 692, 688, 684, 680, 676, 672, 668, 664, 660, 656, 652, 648, 644, 640, 636, 632, 628, 624, 620, 616, 612, 608, 604, 600, 596, 592, 588, 584, 580, 576, 572, 568, 564, 560, 556, 552, 548, 544, 540, 536, 532, 528, 524, 520, 516, 512, 508, 504, 500, 496, 492, 488, 484, 480, 476, 472, 468, 464, 460, 456, 452, 448, 444, 440, 436, 432, 428, 424, 420, 416, 412, 408, 404, 400, 396, 392, 388, 384, 380, 376, 372, 368, 364, 360, 356, 352, 348, 344, 340, 336, 332, 328, 324, 320, 316, 312, 308, 304, 300, 296, 292, 288, 284, 280, 276, 272, 268, 264, 260, 256, 252, 248, 244, 240, 236, 232, 228, 224, 220, 216, 212, 208, 204, 200, 196, 192, 188, 184, 180, 176, 172, 168, 164, 160, 156, 152, 148, 144, 140, 136, 132, 128, 124, 120, 116, 112, 108, 104, 100, 96, 92, 88, 84, 80, 76, 72, 68, 64, 60, 56, 52, 48, 44, 40, 36, 32, 28, 24, 20, 16, 12, 8, 4, 0. The map also shows various weather fronts: a cold front (red line with triangles) and a warm front (blue line with semicircles). Wind vectors are shown as arrows, and a low-pressure system is marked with a blue 'L' and a high-pressure system with a blue 'H'. The map is overlaid on a satellite-style image of the region, showing cloud cover and precipitation patterns. The text is overlaid on a yellow background.

# Event Synopsis (Continued)

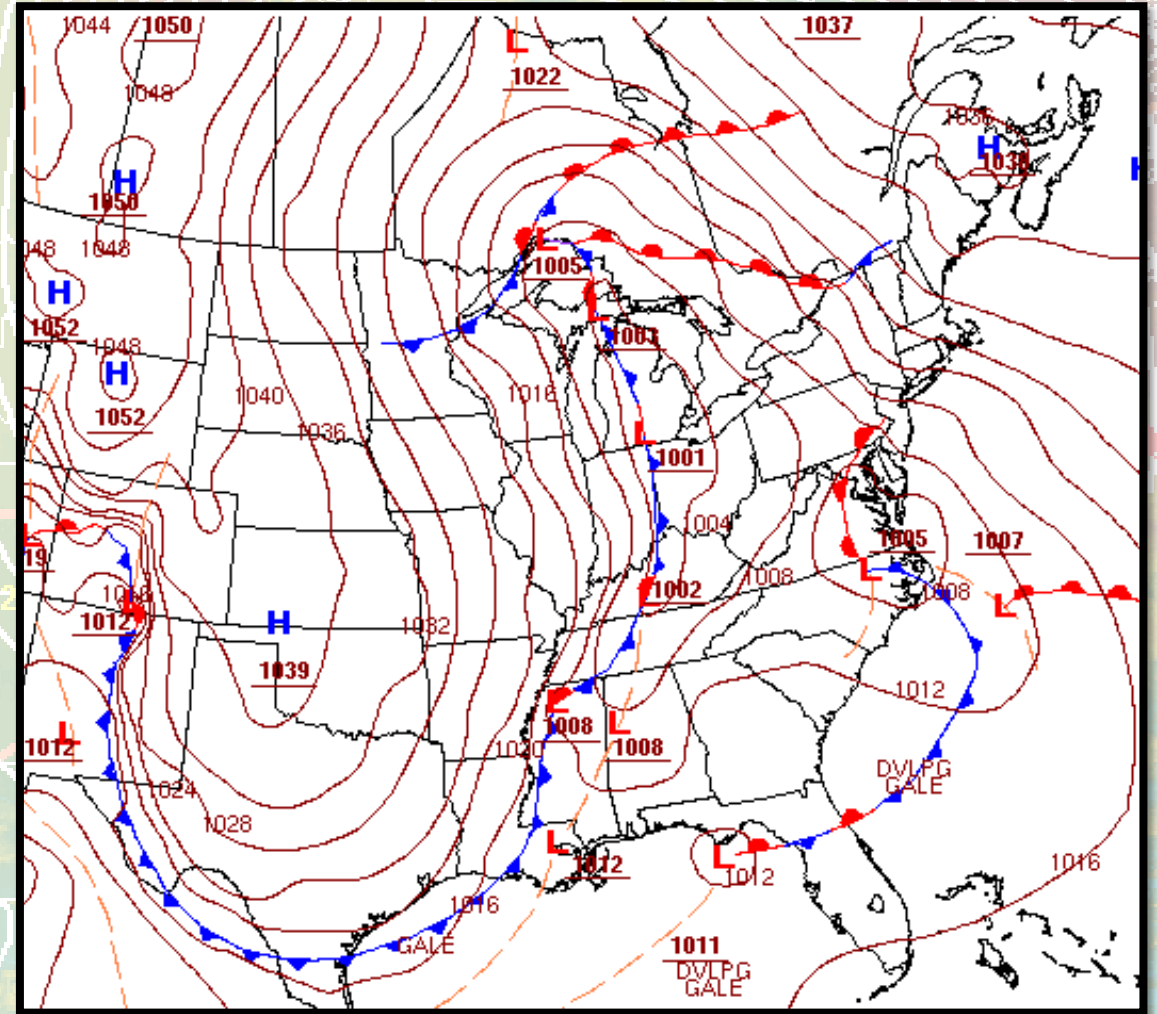
The bitterly cold temperatures would however persist into the holiday weekend. Low pressure associated with the (aforementioned) arctic front would phase with a disturbance moving up the eastern seaboard during the morning of December 23rd. This helped to facilitate a rapid intensification of the system, with a central pressure of approximately 996 mb just north of Detroit, Michigan at 11 PM December 22nd lowering to 968 mb at 11 PM December 23rd over the southwest portion of Quebec. Given such, the system officially met the criteria of a "**Bomb Cyclone**", in which barometric pressure readings dropped in excess of 24 mb (0.71 in Hg) over a 24-hour period.

The immense size, slow movement, and extremely tight pressure gradient of the system would allow for continued gusty conditions and bitter cold temperatures (and wind chills) through Christmas Eve, albeit not as harsh as what was observed on December 23rd. The system would continue to gradually weaken and exit northeast away from the area on Christmas Day, allowing for winds to continue to gradually lessen. Well below normal temperatures would persist through December 25-26th, but to a much lesser extent than what was observed the prior two days. Strengthening return flow as high pressure shifted east across the region on December 27th would allow the area to finally exit the deep freeze.

# Surface Analysis Maps

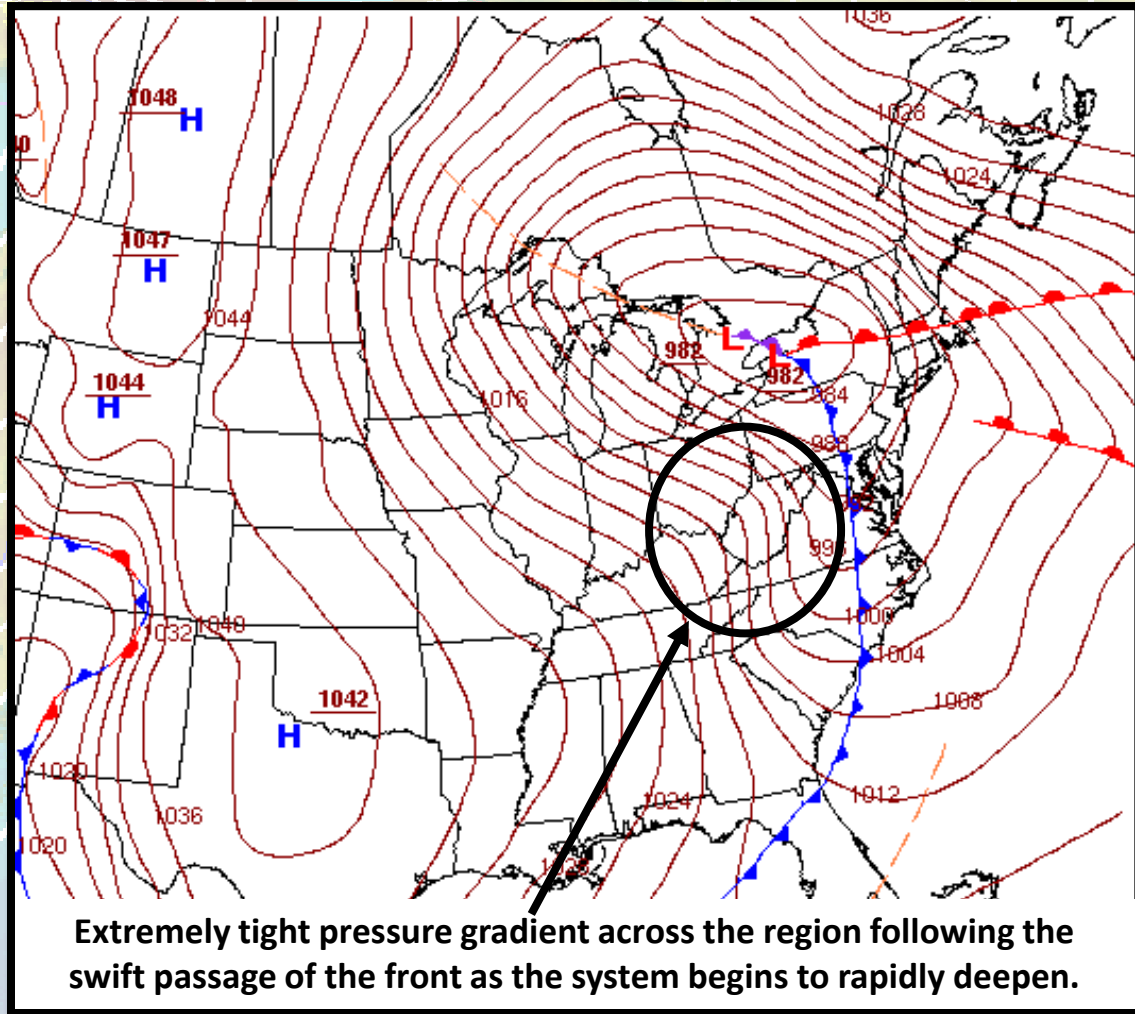


7 AM – Thursday, December 22nd



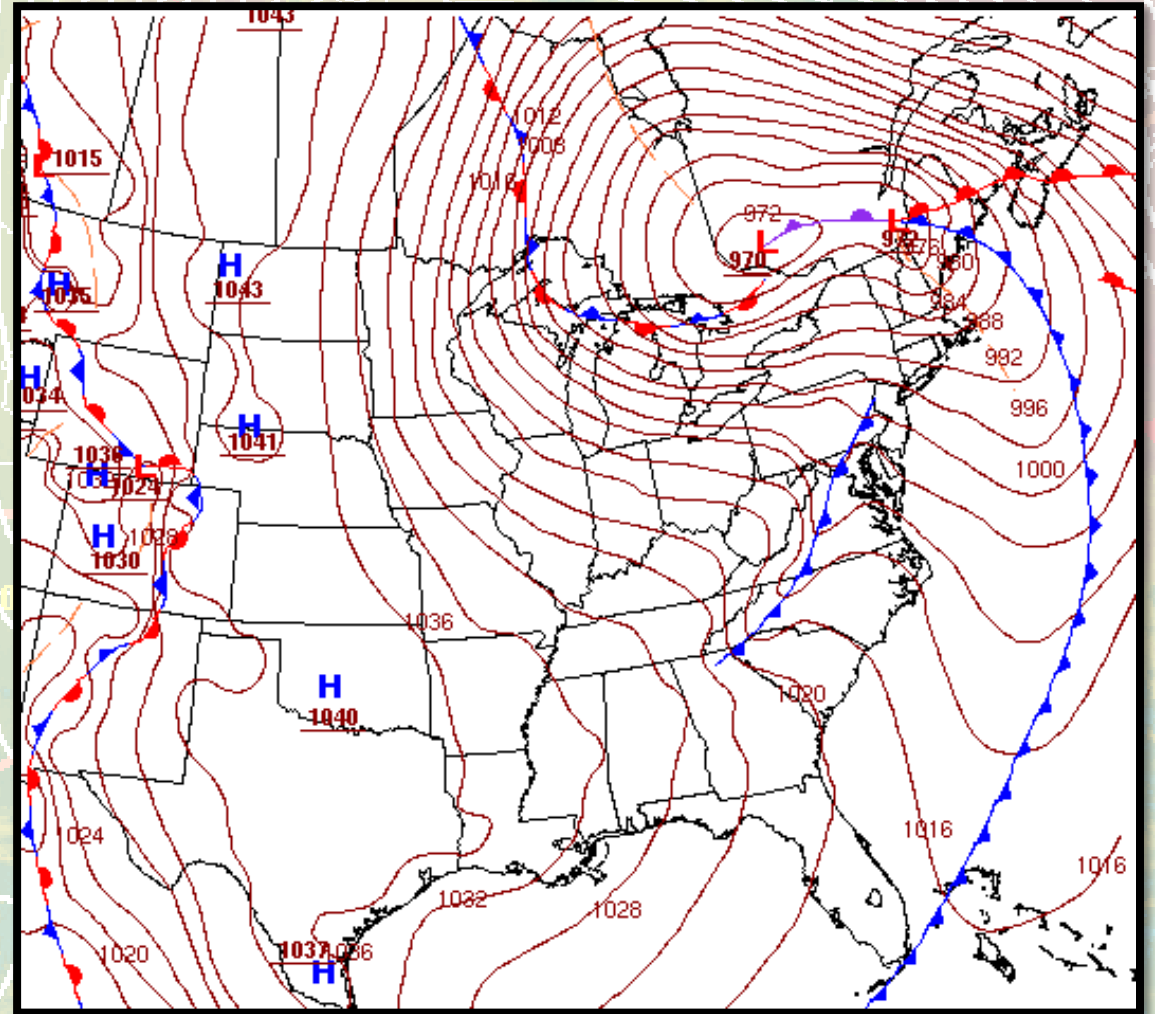
7 PM – Thursday, December 22nd

# Surface Analysis Maps



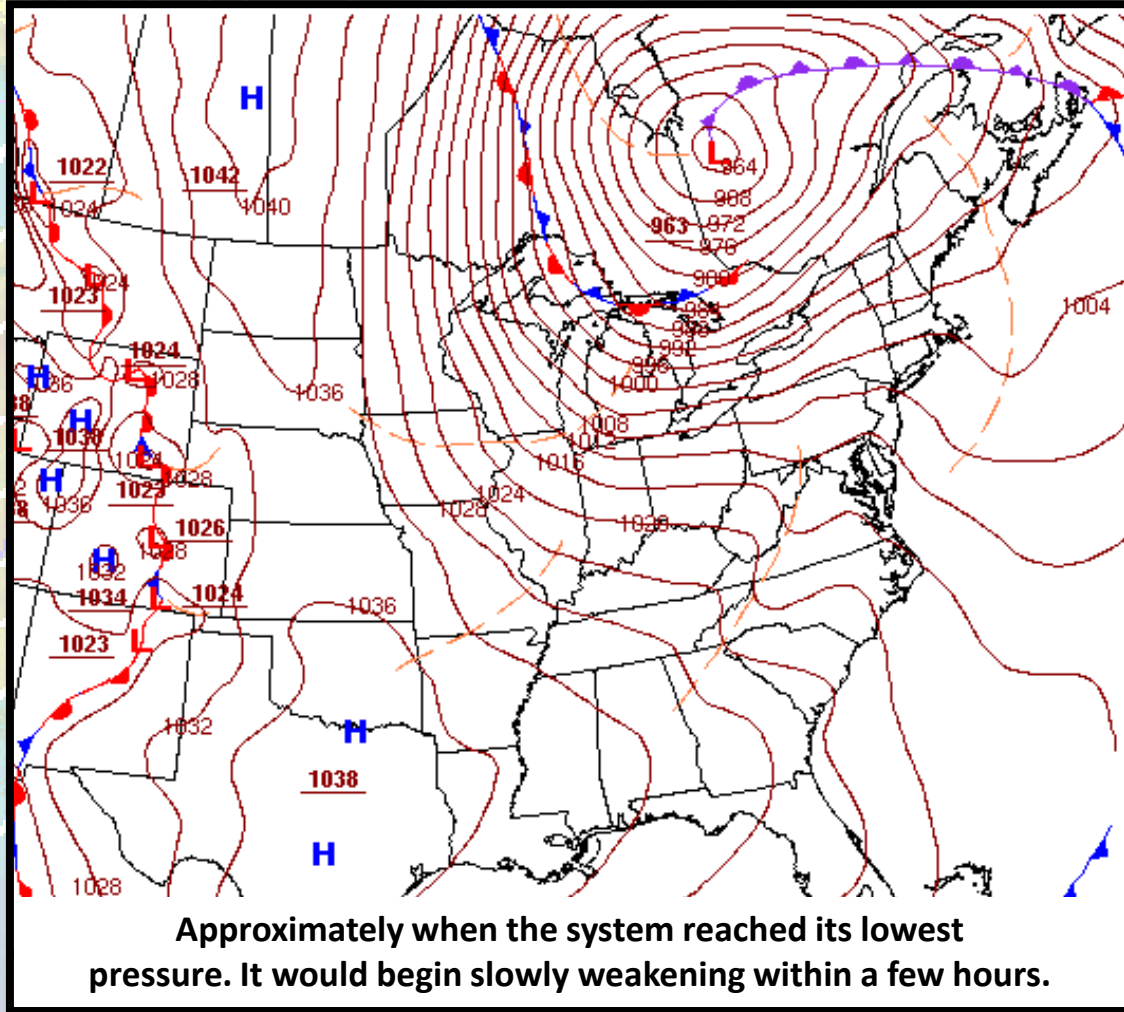
Extremely tight pressure gradient across the region following the swift passage of the front as the system begins to rapidly deepen.

7 AM – Friday, December 23rd

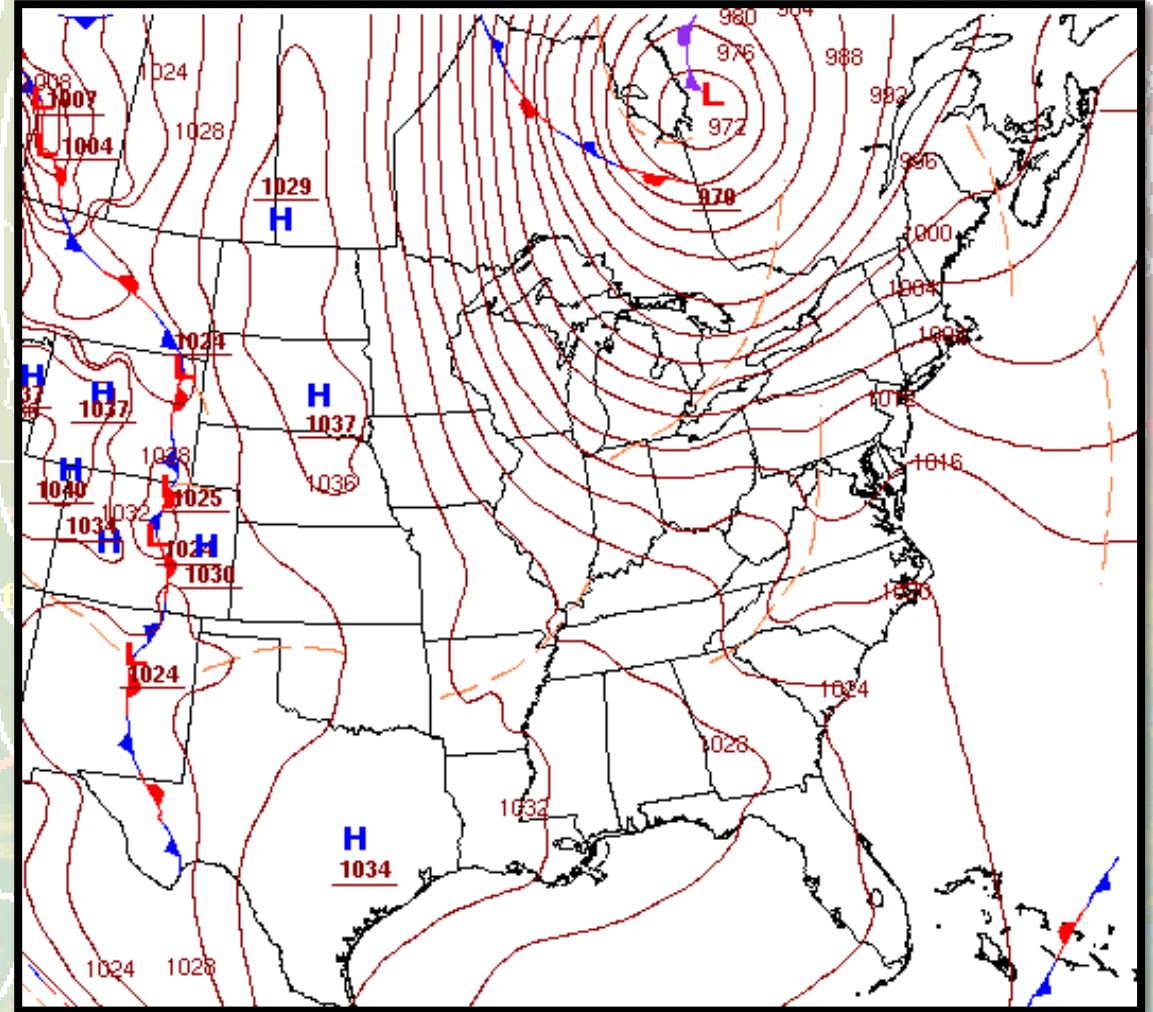


7 PM – Friday, December 23rd

# Surface Analysis Maps



7 AM – Saturday, December 24th



# Lowest Observed Temperatures

To the right is a summary of lowest observed temperatures from Friday, December 23rd, through Saturday morning, December 24th. This time period covers the peak of the cold outbreak.

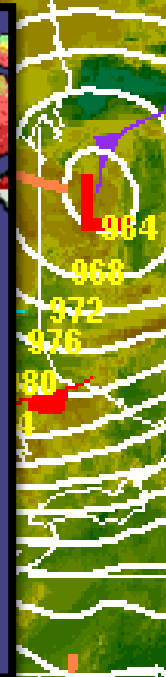
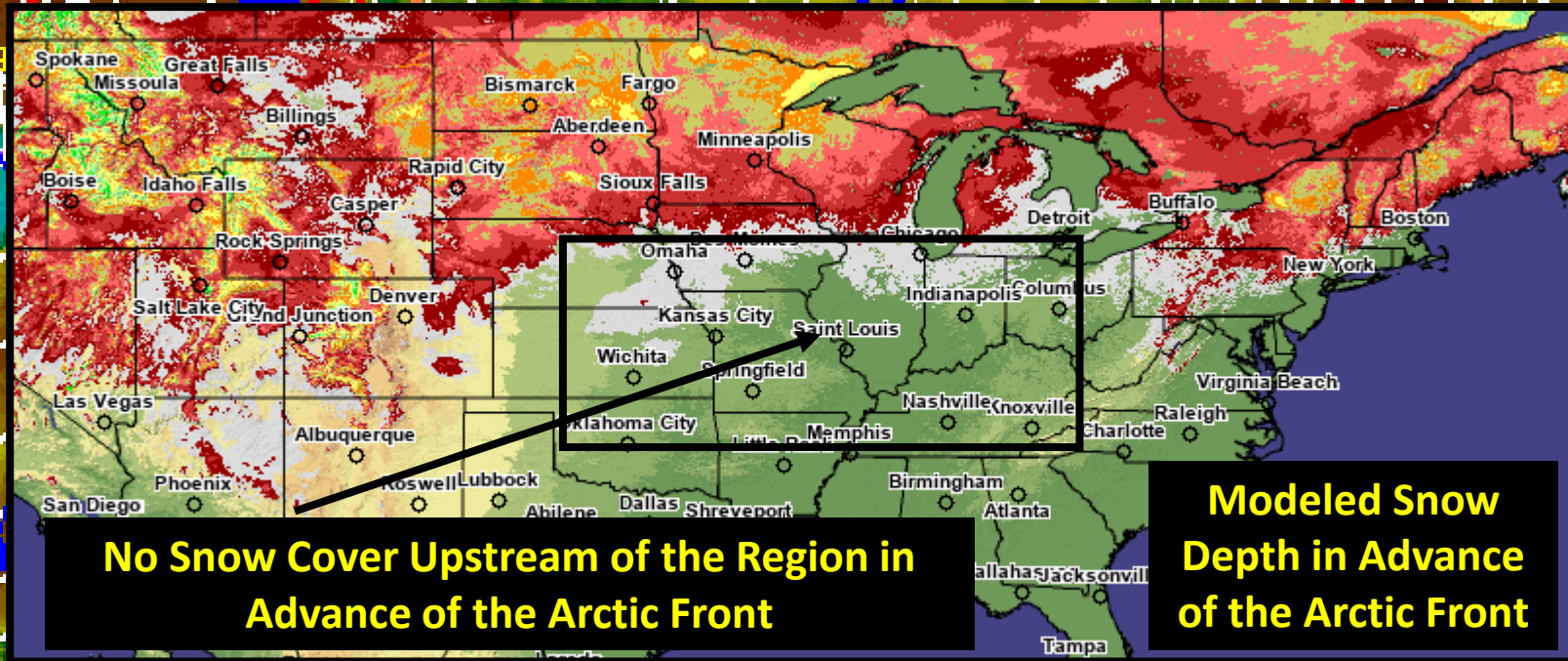
\*Please note that the table furthest right is a continuation of observations from West Virginia counties.

Location	Temp	Time/Date	Provider
...Kentucky...			
...Boyd County...			
Ashland	0 F	1125 PM 12/23	CWOP
...Carter County...			
Olive Hill 5 NE	-4 F	0742 AM 12/24	COOP
GRAYSON	-1 F	0826 PM 12/23	CWOP
...Greenup County...			
Warnock	-3 F	0630 AM 12/24	COOP
Ashland Airport	-1 F	1256 AM 12/24	AWOS
Flatwoods	0 F	0125 PM 12/23	AWS
...Lawrence County...			
Louisa 1 S	0 F	1010 PM 12/23	KYMN2
...Ohio...			
...Athens County...			
Albany	-6 F	0305 PM 12/23	AWS
Glouster	-3 F	0700 PM 12/23	AWS
Athens	-2 F	0726 PM 12/23	CWOP
Athens Airport	-1 F	0135 AM 12/24	AWOS
...Gallia County...			
Gallipolis	-2 F	0854 AM 12/24	COOP
BIDWELL	-1 F	0127 AM 12/24	CWOP
...Jackson County...			
Jackson 3 NW	-5 F	0658 AM 12/24	COOP
...Lawrence County...			
AID	-3 F	0149 PM 12/23	CWOP
Dean	-3 F	0712 PM 12/23	RAWS
...Meigs County...			
REEDSVILLE	-3 F	0623 PM 12/23	CWOP
...Morgan County...			
Burr Oak	-4 F	0635 PM 12/23	RAWS
MCCONNELSVILLE	-3 F	0108 AM 12/24	CWOP
...Perry County...			
Hemlock	-6 F	0145 PM 12/23	AWS
New Lexington 2 NW	-6 F	0700 AM 12/24	COOP
...Vinton County...			
Vinton Furnace	-3 F	1107 PM 12/23	RAWS
Zaleski	-2 F	1251 AM 12/24	RAWS
...Washington County...			
Waterford	-3 F	0728 PM 12/23	CWOP
MARIETTA	-2 F	0107 PM 12/23	CWOP
Newport	-2 F	0820 AM 12/24	COOP
1.2 SE Marietta	0 F	1200 AM 12/24	HADS

...Virginia...			
...Buchanan County...			
HONAKER	-4 F	0112 AM 12/24	CWOP
GRUNDY	-1 F	0248 AM 12/24	CWOP
Grundy	1 F	0700 AM 12/24	COOP
...Dickenson County...			
Nora 4 SSE	-6 F	0723 AM 12/24	COOP
Clintwood	-3 F	1255 AM 12/24	CWOP
2 SE Haysi	-2 F	0109 AM 12/24	AWS
Dante	-2 F	1210 AM 12/24	DAVIS
CLINTWOOD	-2 F	0105 AM 12/24	CWOP
McClure	-1 F	1135 PM 12/23	DAVIS
...West Virginia...			
...Barbour County...			
Belington	-8 F	0446 AM 12/24	CWOP
Bridgeport	-1 F	0230 AM 12/24	CWOP
...Boone County...			
Madison 3 NNW	4 F	0805 AM 12/24	COOP
...Braxton County...			
Sutton Lake	-2 F	0700 AM 12/24	COOP
Gassaway	-1 F	0700 AM 12/24	COOP
Sutton	-1 F	0446 AM 12/24	CWOP
...Cabell County...			
1 ESE Huntington	-2 F	1010 PM 12/23	AWS
Ona	0 F	1055 PM 12/23	CWOP
Barboursville	0 F	1145 PM 12/23	CWOP
Huntington	0 F	0145 AM 12/24	CWOP
Barboursville	1 F	1030 PM 12/23	DAVIS
Salt Rock	2 F	0416 AM 12/24	CWOP
...Calhoun County...			
MOUNT ZION	-2 F	0233 AM 12/24	CWOP
...Clay County...			
WALBACK	0 F	1238 AM 12/24	CWOP
...Doddridge County...			
CENTER POINT	-1 F	0339 AM 12/24	CWOP
...Gilmer County...			
Rosedale 3 NNW	-3 F	0825 AM 12/24	COOP
Glennville	0 F	0335 AM 12/24	CWOP
...Harrison County...			
Shinnston	-2 F	0247 AM 12/24	CWOP
Clarksburg Airport	1 F	0653 AM 12/24	ASOS
...Jackson County...			
Ravenswood	0 F	0216 AM 12/24	CWOP
RIPLEY	0 F	0151 AM 12/24	CWOP

...Kanawha County...			
Bee Mountain	-2 F	0417 AM 12/24	RAWS
South Charleston	-2 F	1029 PM 12/23	CWOP
South Charleston NWS	-1 F	0700 AM 12/24	COOP
Sissonville 1 SW	-1 F	0700 AM 12/24	COOP
Saint Albans	-1 F	0845 AM 12/24	COOP
Elkview	0 F	1100 PM 12/23	CWOP
Charleston	0 F	0545 AM 12/24	CWOP
Charleston Airport	0 F	0654 AM 12/24	ASOS
Spring Hill	1 F	0300 AM 12/24	CWOP
Chelyan (Turnpike)	1 F	1100 PM 12/23	DAVIS
Standard (Turnpike)	1 F	0130 AM 12/24	DAVIS
London Locks	2 F	0600 AM 12/24	COOP
...Lewis County...			
WESTON	-2 F	0437 AM 12/24	CWOP
...Lincoln County...			
HARTS	1 F	0105 AM 12/24	CWOP
SOD	1 F	1152 PM 12/23	CWOP
...Logan County...			
Logan Cnty Airport	-4 F	1155 PM 12/23	AWOS
Logan	-4 F	1114 PM 12/23	RAWS
CHAPMANVILLE	0 F	0108 AM 12/24	CWOP
MAN	2 F	1152 PM 12/23	CWOP
...Mason County...			
Pt Pleasant Airport	0 F	0555 PM 12/23	AWOS
Lakin	0 F	0116 AM 12/24	RAWS
...McDowell County...			
Elkhorn	-5 F	1217 AM 12/24	RAWS
...Mingo County...			
WILLIAMSON	1 F	0108 AM 12/24	CWOP
WHARNCLIFFE	2 F	1223 AM 12/24	CWOP
...Nicholas County...			
CRAIGSVILLE	-6 F	0515 AM 12/24	CWOP
Mount Nebo	-6 F	0700 AM 12/24	COOP
...Pleasants County...			
1.8 NE Saint Marys	0 F	0200 AM 12/24	MESOWEST
...Pocahontas County...			
Snowshoe	-19 F	0600 AM 12/24	COOP
Bartow 1 S	-11 F	0730 AM 12/24	COOP
Marlinton	-10 F	0437 AM 12/24	RAWS
ARBORVALE	-9 F	0406 AM 12/24	CWOP
Frost 3 NE	-7 F	0625 AM 12/24	COOP
Huntersville	-6 F	0510 AM 12/24	DAVIS
...Putnam County...			
Culloden	0 F	1216 AM 12/24	CWOP
Hurricane	0 F	0445 AM 12/24	CWOP
BUFFALO	0 F	0915 PM 12/23	CWOP
LEON	0 F	1054 PM 12/23	CWOP
Winfield	2 F	1125 PM 12/23	CWOP
Poca	2 F	0907 PM 12/23	CWOP

# Lowest Observed Temperatures (Cont.)



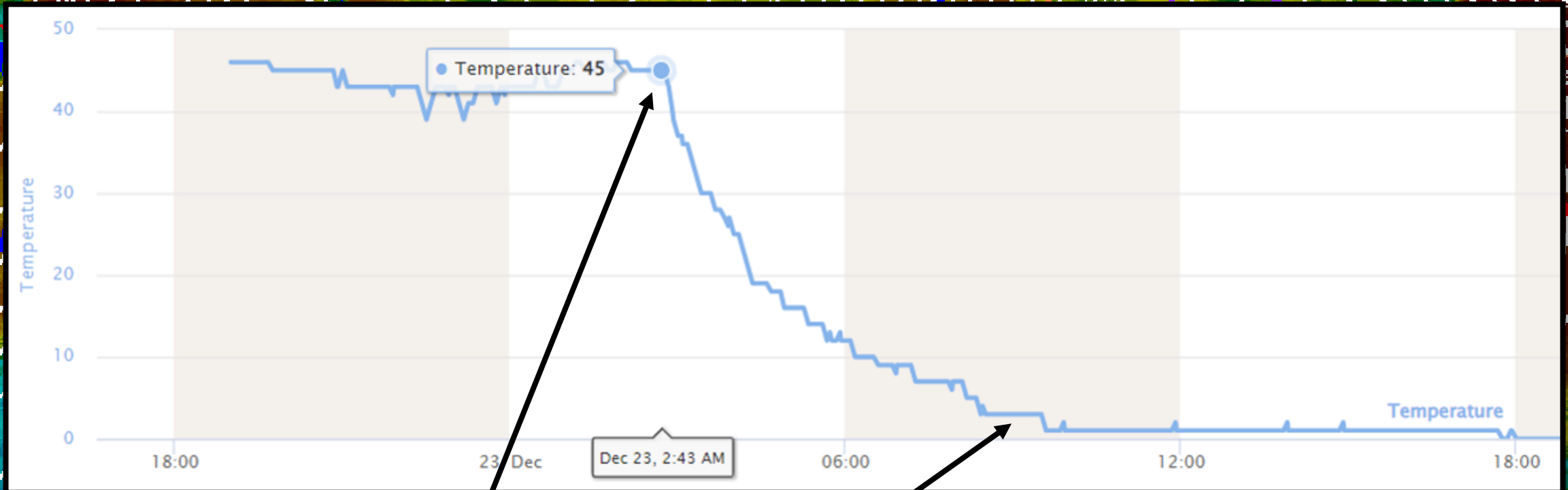
...Raleigh County...			
Cool Ridge	-10 F	1148 PM 12/23	CWOP
Ghent (Turnpike)	-9 F	0131 AM 12/24	DAVIS
Beckley (Turnpike)	-7 F	0310 AM 12/24	DAVIS
Grandview	-6 F	0405 AM 12/24	RAWS
Beckley Airport	-6 F	0651 AM 12/24	ASOS
WHITEVILLE	1 F	0136 AM 12/24	CWOP
WHITE OAK	3 F	1102 AM 12/24	CWOP
...Randolph County...			
BOWDEN	-10 F	0403 AM 12/24	CWOP
ELKINS	-9 F	0428 AM 12/24	CWOP
BEVERLY	-6 F	0514 AM 12/24	CWOP
Elkins Airport	-6 F	0329 AM 12/24	ASOS
...Ritchie County...			
PENNSBORO	-3 F	0403 AM 12/24	CWOP
FREEPORT	-1 F	0127 AM 12/24	CWOP
Harrisville	0 F	0400 AM 12/24	CWOP
...Roane County...			
Spencer	-3 F	0700 AM 12/24	COOP
...Taylor County...			
Grafton	-5 F	0430 AM 12/24	CWOP
...Tyler County...			
Conaway Lake	-3 F	0316 AM 12/24	RAWS
Middlebourne 3 ESE	-2 F	0700 AM 12/24	COOP
...Upshur County...			
Rock Cave 2 NE	-6 F	0822 AM 12/24	COOP
Buckhannon Airport	-4 F	0535 AM 12/24	AWOS
Adrian	-3 F	0445 AM 12/24	CWOP
BUCKHANNON	-3 F	0505 AM 12/24	CWOP
...Wayne County...			
FORT GAY	-2 F	0945 PM 12/23	CWOP
Huntington Airport	-1 F	1251 AM 12/24	ASOS
Beech Fork	0 F	1114 PM 12/23	RAWS
Wayne	0 F	0401 AM 12/24	CWOP
...Webster County...			
WEBSTER SPRINGS	-8 F	0108 AM 12/24	CWOP
Hacker Valley	-6 F	0755 AM 12/24	COOP
...Wirt County...			
WINDY	-2 F	0136 AM 12/24	CWOP
...Wood County...			
DAVISVILLE	-2 F	0814 PM 12/23	CWOP
Parkersburg Airport	-2 F	0653 PM 12/23	ASOS
Parkersburg	0 F	0330 AM 12/24	CWOP
...Wyoming County...			
R.D. Bailey Lake	-2 F	0710 AM 12/24	COOP
MULLENS	-2 F	1143 PM 12/23	CWOP
DAVY	0 F	0136 AM 12/24	CWOP
Pineville Airport	0 F	0122 AM 12/24	AWOS

- The coldest observed temperature during the arctic blast was -19 °F! It occurred at 6 AM on Christmas Eve at Snowshoe, WV.
- What makes this cold spell even more impressive is the **significant** lack of snow cover upstream from the region preceding the arrival of the arctic front and bitterly cold air. Generally, such a scenario would help to modify a cold air mass as it moved eastward. This however wasn't really the case with this system, as the immense size/strength of it was able to rapidly advect the bitterly cold temperatures eastward as it continued to deepen, despite the lack of snow cover. Imagine what temperatures could have been if there was a broad and significant antecedent snowpack upstream of the area..

Additional lowest observed temperatures from WV counties.



# Temperature Drop at Charleston Yeager Airport on Friday, December 23rd



**45 °F at 2:43 AM, 3 °F at 8:43 AM.  
A 42-degree temperature drop in 6 hours!!**

# Highest Wind Gust Reports

Wind gusts of 40-50+ mph were reported on Friday, December 23rd following the passage of the arctic front. While the graphic to the right highlights the highest wind gust reports, it is also important to note the temporal length of breezy/gusty conditions with this system. While not as strong as on December 23rd, breezy to gusty conditions did linger across the region all the way into Christmas morning. All told, the winds associated with this system lead to blowing and drifting snowfall, dangerous to life threatening wind chills, and some downed trees and power outages.

.....HIGHEST WIND GUST REPORTS.....

Location	Speed	Time/Date	Provider
Clarksburg Airport	54 MPH	0654 AM 12/23	ASOS
Conaway Lake	48 MPH	0516 AM 12/23	RAWS
REEDSVILLE	47 MPH	0517 AM 12/23	CWOP
Charleston Airport	47 MPH	0250 AM 12/23	ASOS
Buckhannon Airport	47 MPH	0455 AM 12/23	AWOS
Snowshoe	46 MPH	1040 AM 12/23	CWOP
Parkersburg Airport	45 MPH	0345 AM 12/23	ASOS
Bee Mountain	44 MPH	0517 AM 12/23	RAWS
Huntington Airport	44 MPH	0852 AM 12/23	ASOS
Burr Oak	44 MPH	0535 AM 12/23	RAWS
Logan	43 MPH	0414 AM 12/23	RAWS
Louisa 1 S	42 MPH	0135 AM 12/23	KYMN2
Waterford	41 MPH	0408 AM 12/23	CWOP
Beckley Airport	41 MPH	0453 AM 12/23	ASOS
Elkins Airport	41 MPH	0529 AM 12/23	ASOS
Athens Airport	41 MPH	0135 AM 12/23	AWOS
Lakin	41 MPH	0416 AM 12/23	RAWS
Logan Cnty Airport	40 MPH	0415 AM 12/23	AWOS
Ashland Airport	40 MPH	0557 AM 12/23	AWOS

# Lowest Observed Wind Chills

To the right is a summary of lowest observed wind chills from Friday, December 23rd, through Saturday morning, December 24th. This time period covers the peak of the cold outbreak.

Wind chills on December 23-24 were cold enough that a Wind Chill Warning was issued for the entire NWS Charleston, WV forecast area during the peak of the cold outbreak. The lowest observed reading was a bitterly cold -51 °F at Snowshoe, WV on the morning of December 24th (1:15 AM).

Location	WC Temp.	Time/Date	Provider
...Kentucky...			
...Boyd County...			
Ashland	-17 F	1025 PM 12/23	CWOP
...Carter County...			
GRAYSON	-19 F	1255 PM 12/23	CWOP
...Greenup County...			
Ashland Airport	-25 F	1256 PM 12/23	AWOS
...Lawrence County...			
Louisa 1 S	-18 F	0125 PM 12/23	KYMN2
...Ohio...			
...Athens County...			
Albany	-30 F	0300 PM 12/23	AWS
Athens Airport	-26 F	1255 PM 12/23	AWOS
Glouster	-20 F	1225 PM 12/23	AWS
...Gallia County...			
BIDWELL	-26 F	0103 PM 12/23	CWOP
...Lawrence County...			
AID	-25 F	0149 PM 12/23	CWOP
Dean	-18 F	0412 PM 12/23	RAWS
...Meigs County...			
REEDSVILLE	-30 F	0248 PM 12/23	CWOP
...Morgan County...			
Burr Oak	-23 F	0635 PM 12/23	RAWS
MCCONNELSVILLE	-22 F	0440 PM 12/23	CWOP
...Perry County...			
Hemlock	-26 F	0100 PM 12/23	AWS
...Vinton County...			
Vinton Furnace	-21 F	1107 AM 12/23	RAWS
Zaleski	-18 F	1251 PM 12/23	RAWS
...Washington County...			
Waterford	-23 F	0538 PM 12/23	CWOP
MARIETTA	-23 F	1247 PM 12/23	CWOP

...Virginia...				
...Buchanan County...				
GRUNDY	-19 F	1033 PM 12/23	CWOP	
HONAKER	-17 F	1024 PM 12/23	CWOP	
...Dickenson County...				
McClure	-15 F	0255 AM 12/24	DAVIS	
CLINTWOOD	-14 F	1119 PM 12/23	CWOP	
2 SE Haysi	-13 F	1139 PM 12/23	AWS	
...West Virginia...				
...Barbour County...				
Belington	-28 F	0316 AM 12/24	CWOP	
...Braxton County...				
Sutton	-14 F	0601 AM 12/24	CWOP	
...Cabell County...				
Huntington	-21 F	0215 PM 12/23	CWOP	
1 ESE Huntington	-21 F	1205 PM 12/23	AWS	
Barboursville	-18 F	0145 PM 12/23	DAVIS	
Ona	-17 F	0259 PM 12/23	CWOP	
Salt Rock	-15 F	0613 PM 12/23	CWOP	
...Calhoun County...				
MOUNT ZION	-21 F	0127 AM 12/24	CWOP	
...Clay County...				
WALBACK	-11 F	1024 PM 12/23	CWOP	
...Doddridge County...				
CENTER POINT	-18 F	1015 PM 12/23	CWOP	
...Gilmer County...				
Glenville	-15 F	0150 PM 12/23	CWOP	
...Harrison County...				
Clarksburg Airport	-22 F	1253 AM 12/24	ASOS	
Shinnston	-14 F	0437 AM 12/24	CWOP	
...Jackson County...				
RIPLEY	-21 F	0109 PM 12/23	CWOP	
Ravenswood	-17 F	1216 PM 12/23	CWOP	

# Lowest Observed Wind Chills (Cont.)

To the right are additional lowest observed wind chills from Friday, December 23rd, through Saturday morning, December 24th. Please note that both tables are a continuation of observations from West Virginia counties.

...Kanawha County...			
Bee Mountain	-21 F	0117 AM 12/24	RAWS
Charleston Airport	-21 F	1254 AM 12/24	ASOS
NWS Charleston (unofficial)	-21 F	1245 PM 12/23	CWOP
Spring Hill	-18 F	1120 AM 12/23	CWOP
South Charleston	-16 F	1230 AM 12/24	CWOP
Charleston	-16 F	0701 PM 12/23	CWOP
Standard (Turnpike)	-11 F	0833 PM 12/23	DAVIS
Chelyan (Turnpike)	-9 F	0845 PM 12/23	DAVIS
...Lewis County...			
WESTON	-14 F	0422 PM 12/23	CWOP
...Lincoln County...			
HARTS	-13 F	1134 PM 12/23	CWOP
SOD	-9 F	0458 PM 12/23	CWOP
...Logan County...			
Logan Cnty Airport	-26 F	0915 PM 12/23	AWOS
Logan	-24 F	1114 PM 12/23	RAWS
CHAPMANVILLE	-14 F	0403 AM 12/24	CWOP
MAN	-12 F	0109 PM 12/23	CWOP
...Mason County...			
Lakin	-23 F	1216 PM 12/23	RAWS
Pt Pleasant Airport	-22 F	0155 PM 12/23	AWOS
...McDowell County...			
Elkhorn	-21 F	0417 AM 12/24	RAWS
...Mingo County...			
WILLIAMSON	-15 F	1033 PM 12/23	CWOP
WHARNCLIFFE	-14 F	1024 PM 12/23	CWOP
...Nicholas County...			
CRAIGSVILLE	-25 F	0300 AM 12/24	CWOP
Mount Nebo	-24 F	1005 PM 12/23	CWOP
...Pleasants County...			
1.8 NE Saint Marys	-20 F	0100 PM 12/23	MESOWEST
...Pocahontas County...			
Snowshoe	-51 F	0115 AM 12/24	DAVIS
MARLINTON	-35 F	1259 AM 12/24	CWOP
Marlinton	-28 F	0137 AM 12/24	RAWS
Huntersville	-18 F	1000 PM 12/23	DAVIS
ARBORVALE	-18 F	1152 PM 12/23	CWOP
...Putnam County...			
Culloden	-21 F	1118 AM 12/23	CWOP
BUFFALO	-19 F	0915 PM 12/23	CWOP
LEON	-19 F	0202 PM 12/23	CWOP
Hurricane	-16 F	0515 AM 12/24	CWOP
Poca	-15 F	0907 PM 12/23	CWOP
Winfield	-12 F	1245 PM 12/23	CWOP

...Raleigh County...			
Ghent (Turnpike)	-33 F	0100 AM 12/24	DAVIS
Beckley Airport	-30 F	0547 AM 12/24	ASOS
Cool Ridge	-29 F	1043 PM 12/23	CWOP
Beckley (Turnpike)	-24 F	0600 AM 12/24	DAVIS
Grandview	-18 F	0205 AM 12/24	RAWS
WHITEVILLE	-8 F	0115 AM 12/24	CWOP
...Randolph County...			
BOWDEN	-32 F	1134 PM 12/23	CWOP
Elkins Airport	-28 F	0329 AM 12/24	ASOS
ELKINS	-26 F	0854 PM 12/23	CWOP
BEVERLY	-25 F	1119 PM 12/23	CWOP
...Ritchie County...			
PENNSBORO	-27 F	0108 AM 12/24	CWOP
FREEPORT	-26 F	0817 PM 12/23	CWOP
Harrisville	-21 F	1149 AM 12/23	CWOP
...Taylor County...			
Grafton	-26 F	0915 PM 12/23	CWOP
GRAFTON	-22 F	0227 PM 12/23	CWOP
...Tyler County...			
Conaway Lake	-24 F	1216 AM 12/24	RAWS
...Upshur County...			
Buckhannon Airport	-30 F	0955 PM 12/23	AWOS
Adrian	-20 F	1030 PM 12/23	CWOP
BUCKHANNON	-19 F	1125 PM 12/23	CWOP
...Wayne County...			
FORT GAY	-26 F	0820 PM 12/23	CWOP
Huntington Airport	-25 F	1151 AM 12/23	ASOS
Beech Fork	-16 F	0514 PM 12/23	RAWS
...Webster County...			
WEBSTER SPRINGS	-16 F	1143 PM 12/23	CWOP
...Wirt County...			
WINDY	-26 F	0136 AM 12/24	CWOP
...Wood County...			
Parkersburg Airport	-23 F	0553 PM 12/23	ASOS
DAVISVILLE	-22 F	1132 AM 12/23	CWOP
Parkersburg	-12 F	0130 PM 12/23	CWOP
...Wyoming County...			
DAVY	-13 F	0945 PM 12/23	CWOP
MULLENS	-9 F	1143 PM 12/23	CWOP

# Minimum Observed Wind Chills Compared to Records

## Charleston

Recent Low Wind Chill: **-21**

Record: **-38** on 1/20/1985

## Huntington

Recent Low Wind Chill: **-25**

Record: **-40** on 1/20/1985

## Parkersburg

Recent Low Wind Chill: **-23**

Record: **-44** on 1/21/1985

## Clarksburg

Recent Low Wind Chill: **-22**

Record: **-34** on 1/17/1977

## Elkins

Recent Low Wind Chill: **-28**

Record: **-39** on 1/20/1985

## Beckley

Recent Low Wind Chill: **-30**

Record: **-49** on 1/21/1985

# Snowfall Totals

Event total snowfall was on the light side across the region. Amounts were generally 2" or less for the lowlands, with up to a few inches more across the higher terrain. Despite the low amounts, flash freezing conditions and/or blowing/drifting snowfall made the impacts more significant. Additionally, the very cold temperatures made salt ineffective on roadways. Attached (right) are two tables highlighting event snowfall totals across the region of at least 1".

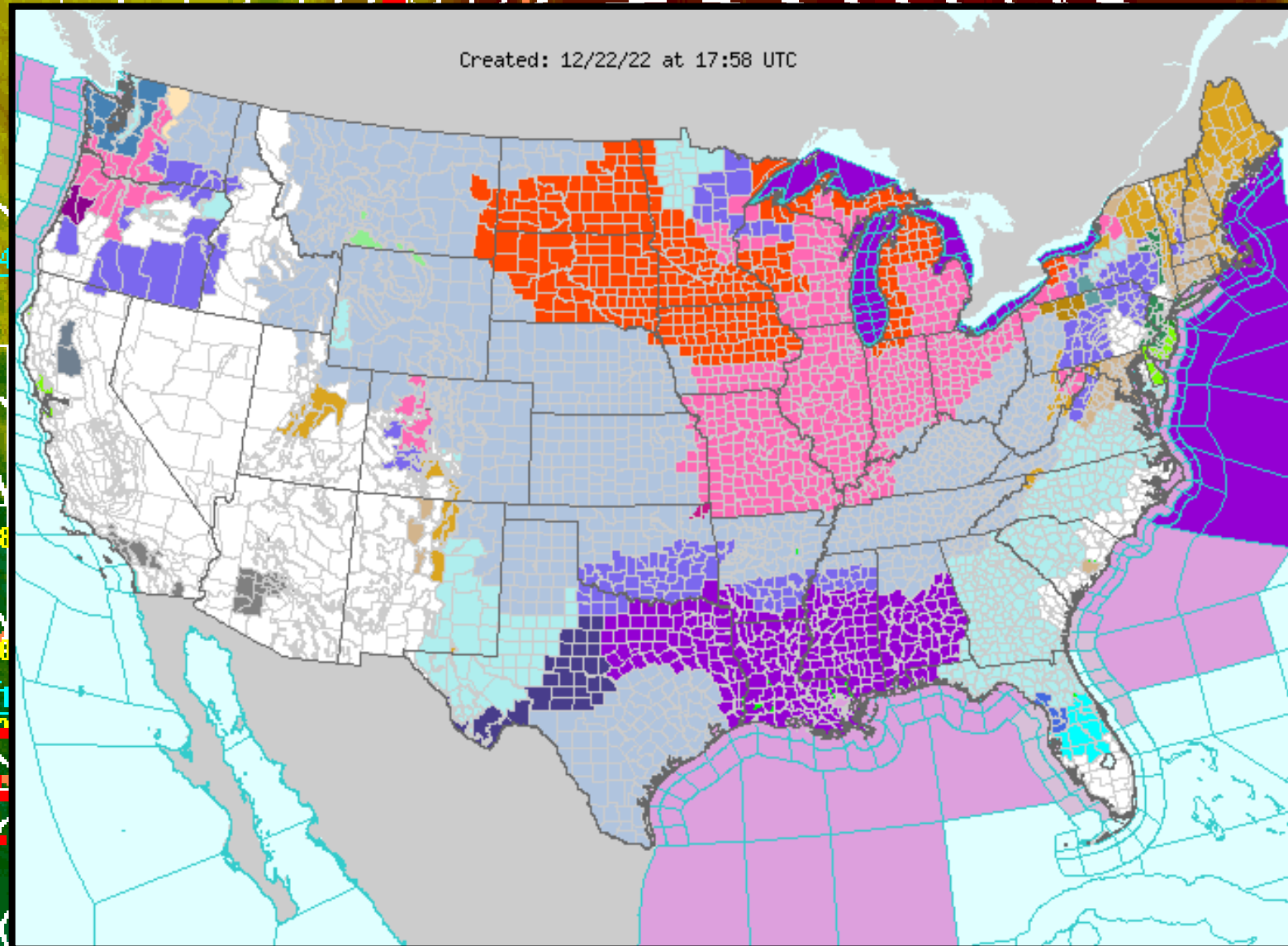
\*Please note that the table furthest right is a continuation of observations from West Virginia counties.

Location	Amount	Time/Date
...Kentucky...		
...Carter County... Olive Hill 5 NE	1.5 in	0759 AM 12/25
...Greenup County... Warnock	2.0 in	0630 AM 12/25
...Ohio...		
...Athens County... Albany 4.1 NW Athens 2.3 SSE Athens 6.0 NW	2.0 in 1.5 in 1.0 in	0700 AM 12/24 0700 AM 12/25 0700 AM 12/25
...Perry County... New Lexington 2 NW	1.4 in	0700 AM 12/25
...Vinton County... 2 W McArthur	1.7 in	1048 AM 12/23
...Washington County... Newport	1.8 in	0800 AM 12/25
...West Virginia...		
...Boone County... Bandytown 0.1 NW	1.0 in	0700 AM 12/23
...Braxton County... Gassaway	2.0 in	0700 AM 12/25
...Cabell County... Huntington 2.9 E	1.5 in	0650 AM 12/25
...Clay County... Clay 0.2 WSW	1.0 in	0700 AM 12/23
...Doddridge County... Center Point 2.2 NNW	1.8 in	0700 AM 12/25
...Gilmer County... Rosedale 3 NNW	1.5 in	0830 AM 12/25
...Jackson County... 7 SE Kenna Ripley 5.8 S	1.8 in 1.5 in	1016 AM 12/23 0700 AM 12/25

...Kanawha County... South Charleston NWS Sissonville 1 SW	1.7 in 1.1 in	0700 AM 12/25 0700 AM 12/25
...Mason County... Point Pleasant 5.8 E	1.0 in	0800 AM 12/25
...Nicholas County... Craigsville 0.6 NE Mount Nebo	3.2 in 2.6 in	0700 AM 12/25 0700 AM 12/25
...Pocahontas County... Snowshoe Durbin Bartow 1 S 1 N Marlinton	5.0 in 2.0 in 1.8 in 1.0 in	0600 AM 12/25 1224 PM 12/22 0730 AM 12/25 0720 AM 12/22
...Putnam County... Hurricane 1.6 SSW	1.2 in	0700 AM 12/25
...Raleigh County... Cool Ridge 0.4 NE 11 E Shady Spring	2.0 in 1.0 in	0630 AM 12/25 1200 PM 12/23
...Ritchie County... Harrisville Pennsboro 1.2 ESE	1.0 in 1.0 in	1200 PM 12/23 0700 AM 12/25
...Roane County... Spencer	2.0 in	0700 AM 12/25
...Tyler County... Middlebourne 3 ESE	1.2 in	0700 AM 12/25
...Upshur County... Rock Cave 2 NE	1.1 in	0820 AM 12/23
...Wayne County... East Lynn Lake	1.0 in	0630 AM 12/23
...Webster County... Hacker Valley	1.9 in	0755 AM 12/24
...Wood County... Williamstown 0.4 WNW Walker 2.1 SW	1.4 in 1.2 in	0700 AM 12/24 0621 AM 12/25

# Final Thoughts

The December 23-26, 2022 Arctic Blast brought multiple hazards to the region. Gusty winds combined with very cold temperatures to produce dangerous to life threatening wind chills. Additionally, rapidly dropping temperatures lead to some roadways flash freezing. There were even some power outages that occurred during the bitter cold due to the gusty conditions. And while conditions were bad locally, much of the rest of the country felt the effects of this system as well, as can be seen right. This truly was a widespread, high impact cold wave, that won't soon be forgotten.



National Weather Service Watch, Warning, Advisory Display at 1 PM December 23rd. This image illustrates how extensive the cold/impacts were from this system, with much of the country being affected.