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PNSWSH

Service Change Notice 17-112 Updated  
National Weather Service Headquarters Silver Spring MD  
727 AM EST Tue Dec 19 2017

To:           Subscribers:  
              -NOAA Weather Wire Service  
              -Emergency Managers Weather Information Network  
              -NOAAPORT  
              Other NWS Partners and NWS Employees

From:        Michelle Hawkins, Chief  
              Severe, Fire, Public, and Winter Weather  
              Services Branch

Subject:     Updated: Polygon-based Snow Squall Warnings, and  
              Polygon-based Dust Storm Warnings and Dust Advisory  
              Product Operational Demonstration to begin on or  
              About January 16, 2018, at select Weather Forecast  
              Offices (WFOs)

Updated to amend beginning date of Operational Demonstration to  
on or about January 16, 2018, for the Snow Squall Warning  
locations and during spring 2018 for the Dust Storm Warning and  
Advisory locations.

To provide feedback on Dust Storm Warning and Dust Advisory:  
[www.nws.noaa.gov/survey/nws-survey.php?code=DSWDSY](http://www.nws.noaa.gov/survey/nws-survey.php?code=DSWDSY)

To provide feedback on Snow Squall Warnings:  
[www.nws.noaa.gov/survey/nws-survey.php?code=SQW1718](http://www.nws.noaa.gov/survey/nws-survey.php?code=SQW1718)

Effective on or about January 16, 2018, the NWS will begin an  
operational demonstration to issue the highly localized,  
polygon-based Snow Squall Warnings at the following WFOs:

State College, PA  
Buffalo, NY  
Binghamton, NY  
Burlington, VT  
Pittsburgh, PA  
Cheyenne, WY  
Detroit, MI

and the polygon-based Dust Storm Warning and Dust Advisory  
products at WFOs:

Phoenix, AZ  
Tucson, AZ

The software that provides the capability to issue these  
products will be implemented in a phased manner to all NWS

offices by May 2018. Provision of the new products will commence according to local office procedures. A Service Change Notice will be issued before the operational implementation of the new services.

The products will be issued for a portion of a county or counties within the warned area, as defined and depicted by the polygon LAT/LON point pairs. Portions of counties would be described by ordinal directions (e.g., North, Northeast, East, Southwest, Central, etc.). After an initial issuance, WFOs would update the product for an extension of area or time by issuing a new product. The WFO issuing the initial message would cancel or allow it to expire when conditions no longer meet criteria.

Snow Squall Warning Product:

The Snow Squall Warning will provide three discrete information sections segments per the example below when the following conditions are expected:

HAZARD...White-out conditions in heavy snow and blowing snow  
SOURCE...Radar indicated and webcams  
IMPACT...Dangerous life-threatening travel

The Snow Squall Warning will use the new SQ.W Valid Time Event Code (VTEC) with an operational (O) fixed identifier in the P-VTEC line, and Warning (W) significance code.

The new product will use existing World Meteorological Organization (WMO) headers and Advanced Weather Interactive Processing System (AWIPS) identifiers as shown below:

WFO	WMO Header	AWIPS Id
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State College, PA	WWUS51 KCTP	SQWCTP
Buffalo, NY	WWUS51 KBUF	SQWBUF
Binghamton, NY	WWUS51 KBGM	SQWBGM
Burlington, VT	WWUS51 KBTV	SQWBTV
Pittsburgh, PA	WWUS51 KPBZ	SQWPBZ
Detroit, MI	WWUS53 KDTX	SQWDTX
Cheyenne, WY	WWUS55 KCYS	SQWCYS

The Snow Squall Warning product will be available via NOAA Weather Wire Services, NOAAPort satellite broadcast and other sources under the WMO Header WWaa5i cccc:

-aa corresponds to US, AK, CA, GM, HW, or ZS  
-i is equal to 0 (zero) to 9  
-cccc is equal to the WFO 4-character site ID

The Snow Squall Warning product will use the county Universal Geographic Code (UGC).

The Snow Squall Warning will appear on the weather.gov web page

as well as the local WFO web pages with a priority of number 23 and display color of medium violet red.

Snow Squall Warnings will broadcast over NOAA Weather Radio All Hazards (NWR) using the NWR Specific Area Message Encoding (SAME) SVS Event Code according to local policy. The 1050 Hz Warning Alarm Tone will also be invoked. NWS Offices will be working with state broadcasters associations and State Emergency Communications Committees for possible future activations of the Emergency Alert System (EAS) for the Snow Squall Warning.

#### Dust Storm Warning Products:

The existing zone-based Dust Storm Warning will be replaced by two distinct warning products: a polygon-based Dust Storm Warning and a zone-based Blowing Dust Warning. The polygon-based Dust Storm Warning will be issued when widespread or localized blowing dust is forecast to suddenly reduce visibility to less than one quarter mile with sustained winds greater than 25 mph, resulting in dangerous and life-threatening travel conditions. The polygon-based Dust Storm Warning will provide three discrete information sections segments per the example below when the following conditions are expected:

HAZARD...Visibility less than one-quarter mile in blowing dust  
SOURCE...Radar indicated and webcams  
IMPACT...Dangerous and life-threatening travel

The zone-based Blowing Dust Warning will be issued if similar conditions are forecast over a long duration, generally greater than 90 minutes.

#### Dust Advisory Products:

The new polygon-based Dust Advisory will be issued when widespread or localized blowing dust suddenly reduces visibility to between one quarter of a mile and 1 mile, resulting in hazardous travel conditions. The polygon-based Dust Advisory will provide three discrete information sections, per the example below, when the following conditions are expected:

HAZARD...Visibility between one-quarter and 1 mile in blowing dust  
SOURCE...Radar indicated and webcams  
IMPACT...Hazardous travel

The existing Blowing Dust Advisory will remain a zone-based product and will be issued if similar conditions persist over a long duration, generally greater than 3 hours.

All Dust Warning and Advisory products will be available via NOAA Weather Wire Service (NWWS), NOAAPort satellite broadcast and other sources under the WMO Header WWaa7i cccc

-aa corresponds to US, AK, CA, GM, HW, or ZS  
-i is equal to 0 (zero) to 9  
-cccc is equal to the WFO 4-character site ID

The polygon-based (with county UGC) Dust Storm Warning and Dust Advisory will have an AWIPS Identifier of DSWxxx where xxx is equal to WFO site ID.

The zone-based (with zone UGC) Blowing Dust Warning and Blowing Dust Advisory will have an AWIPS Identifier of NPWxxx, where xxx is equal to 3-character WFO site ID.

The Dust Storm Warning will use the existing VTEC code DS.W and the Dust Advisory will use the new DS.Y VTEC code. Both of the warning products will use existing WMO headings (WWUS55 KPSR for WFO Phoenix and WWUS55 KTWC for WFO Tucson) and AWIPS Identifiers (DSWPSR for WFO Phoenix and DSWTWC for WFO Tucson) for dissemination over NOAAPort and NOAA Weather Wire Services. NWS will broadcast the polygon-based Dust Storm Warning over NWR and disseminate with both SAME (using the DSW Event Code) and 1050 Hz warning alarm tones. NWS will display the warning polygon on NWS radar depictions.

The Dust Storm Warning and the Blowing Dust Warning will appear on the weather.gov web page as well as the local WFO web pages with a priority of number (40) and display color of bisque. The Dust Advisory and the Blowing Dust Advisory will appear on the weather.gov web page as well as the local WFO web pages with a priority of number (87) and display color of dark khaki.

#### Common Alerting Protocol:

The Snow Squall Warning and Dust Storm Warning products will be disseminated in Common Alerting Protocol (CAP) format through several methods. CAP is pre-parsed and is intended for use by the weather enterprise and other partners. For more information on CAP and how to obtain it via NOAAPORT, NWS web file services, in raw XML format or via a web service API, please see the following Service Change Notice issued on September 1, 2017:  
[http://www.nws.noaa.gov/os/notification/scn17-98cap1\\_2.htm](http://www.nws.noaa.gov/os/notification/scn17-98cap1_2.htm)

Examples of these products including more information about activation of the Emergency Alert System and Wireless Emergency Alerts can be found in the Product Description Documents linked below:

Dust Storm Warning/Dust Advisory:  
<https://nws.weather.gov/products/docs/PDD-DustStormWarningandAdvisoryProducts.pdf>

Snow Squall Warning:  
<https://nws.weather.gov/products/docs/PDD-NewSnowSqualWarning.pdf>

Additional information on UGC and VTEC can be found in NWS Instructions (NWSI) 10-1701 and NWSI 10-1703, respectively at:  
<http://www.nws.noaa.gov/directives/sym/pd01017001curr.pdf>  
<http://www.nws.noaa.gov/directives/sym/pd01017003curr.pdf>

To provide feedback on Dust Storm Warning and Dust Advisory:  
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To provide feedback on Snow Squall Warnings:  
[www.nws.noaa.gov/survey/nws-survey.php?code=SQW1718](http://www.nws.noaa.gov/survey/nws-survey.php?code=SQW1718)

For questions or comments on these new products, please contact:

For Snow Squall Warning  
David Soroka, Winter Weather Services Program Lead  
NWS Severe, Fire, Public, and Winter Weather Services Branch  
Silver Spring, MD  
Telephone: 301-427-9346  
Email: [david.soroka@noaa.gov](mailto:david.soroka@noaa.gov)

For Dust Storm Warning and Dust Advisory  
Andy Horvitz, Public Weather Services Program Lead  
NWS Severe, Fire, Public, and Winter Weather Services Branch  
Silver Spring, MD  
Telephone: 301-427-9357  
Email: [andy.horvitz@noaa.gov](mailto:andy.horvitz@noaa.gov)

National Service Change Notice are online at:

<http://www.weather.gov/os/notif.htm>

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