

Product/Service Description Document

Polygon-based Snow Squall Warning

Part I - Mission Connection

- a. Product/Service Description - Snow squalls are unique, extremely localized extreme weather events that can result in high impact to the public and commerce. Annual highway fatalities from these events can exceed fatalities due to tornadoes in many years. Currently, hazard messages for these events are issued via generic Special Weather Statements (SPS) that are not enabled by Valid Time Event Code (VTEC). The Polygon-based Snow Squall Warning is short-fused and polygon-based, enabling improved dissemination techniques for maximum user distribution and effective Decision Support Services.
- b. Product Type - Operational
- c. Purpose - There has been a long-standing need for the National Weather Service (NWS) to effectively disseminate this information to our partners who depend upon VTEC to recognize and parse our warning products for their customers. In addition, the capability to define localized areas of threat (e.g., as is available for severe thunderstorms, tornadoes and flash floods through the use of NWS WarnGen software) would improve communication to the public via the Emergency Alert System and possibly Wireless Emergency Alerts (WEA). The Polygon-based Snow Squall Warning will provide critical, life-saving information for these short-term, highly localized, extremely hazardous events to our partners in a manner that will allow them to recognize and parse the products to make them available to their customers.
- d. Audience - The target audiences for this product are customers and partners such as emergency managers, state and local officials including school superintendents, Department of Transportation, media, and the general public.
- e. Presentation Format - The format for the snow squall warning is a segmented, polygon-based product issued via WarnGen software, similar to a flood warning. Please see examples in Part II.
- f. Feedback Method - Feedback on the Snow Squall Warning, as presented in the Part II examples, was gathered from representatives from federal, state, county, and local government agencies and broadcast media during scheduled customer review meetings and via a public web-based survey in the Public Notification Statement issued on August 22, 2017:

http://www.nws.noaa.gov/os/notification/pns17-dsw_sqwaaa.htm

www.nws.noaa.gov/survey/nws-survey.php?code=SOW1718

Customer comments or questions on the product may be addressed to:

Dave Soroka
National Weather Service (NWS) Headquarters
E-mail: david.soroka@noaa.gov
Phone: 301-427-9346

Part II - Technical Description

- a. Format and Science Basis - The format is described in Part I under "Presentation Format." Forecasters use available tools (including instability and moisture parameters) to determine the risk of snow squalls in their local area.
- b. Availability - In some areas, and depending on individual state Emergency Alert System (EAS) plans, broadcasters will have the choice to activate EAS using the Severe Weather Statement (SVS) Specific Area Message Encoding (SAME) Event Code for the Snow Squall Warning. NWS will broadcast the operational warnings over NOAA Weather Radio All Hazards (NWR) and disseminate these products using both the SAME (with the SVS Event Code) and 1050 Hz warning alarm tones. NWS will display the warning polygon on NWS radar depictions.

NWS will request WEA broadcast of the polygon-based Snow Squall Warning to WEA-capable cell phones in the warning area. However, WEA broadcast of Snow Squall Warning is not currently enabled by wireless carriers. Wireless carriers may implement WEA broadcast for Snow Squall Warning at any time, but no official timeline has been announced.

Snow Squall Warning Product examples:

The first issuance of Snow Squall Warning (VTEC Action - NEW):

WWUS51 KBGM 271735
SQWBGM

BULLETIN - EAS ACTIVATION REQUESTED
Snow Squall Warning
National Weather Service Binghamton NY
135 PM EDT Wed Sep 27 2017

NYC007-017-023-107-PAC015-115-271830-
/O.NEW.KBGM.SQ.W.0007.170927T1735Z-170927T1830Z/
Broome NY-Cortland NY-Tioga NY-Chenango NY-Susquehanna PA-
Bradford PA-
135 PM EDT Wed Sep 27 2017

The National Weather Service in Binghamton has issued a

- * Snow Squall Warning for...
 - Broome County in central New York...
 - Cortland County in central New York...
 - Eastern Tioga County in central New York...
 - Chenango County in central New York...
 - Susquehanna County in northeastern Pennsylvania...

Northeastern Bradford County in northeastern Pennsylvania...

* Until 230 PM EDT.

* At 135 PM EDT, a dangerous snow squall was located along a line extending from Tully to near Rome, moving east at 40 mph.

HAZARD...Heavy snow and blowing snow. Wind gusts up to 30 mph.

SOURCE...Radar indicated.

IMPACT...Dangerous life-threatening travel.

* This snow squall will be near...

East Homer around 140 PM EDT.

Truxton around 145 PM EDT.

Taylor, Rushville and Brushville around 155 PM EDT.

Montrose, Plymouth and Earlville around 215 PM EDT.

* This includes the following highways...

Interstate 81 in New York between mile markers 0 and 65.

Interstate 81 in Pennsylvania between mile markers 233 and 206.

Interstate 86 in New York between mile markers 220 and 270.

Interstate 88 in New York between mile markers 0 and 32.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Consider avoiding or delaying travel until the snow squall passes your location. If you must travel, use extra caution and allow extra time. Rapid changes in visibility and slick road conditions may lead to accidents.

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LAT...LON 4267 7533 4264 7532 4256 7535 4251 7540

4245 7538 4164 7563 4183 7642 4230 7627

4230 7625 4237 7625 4278 7612 4279 7601

4278 7590 4272 7589 4274 7558 4271 7530

TIME...MOT...LOC 1735Z 285DEG 37KT 4278 7611 4185 7641

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DJN

The cancellation of a Snow Squall Warning (VTEC Action - CAN) and continuation (VTEC Action - CON):

WWUS51 KBGM 271755
SQWBGM

Snow Squall Warning
National Weather Service Binghamton NY
155 PM EDT Wed Sep 27 2017

NYC053-107-PAC015-271805-
/O.CAN.KBGM.SQ.W.0006.000000T0000Z-170927T1830Z/
Madison NY-Tioga NY-Bradford PA-
155 PM EDT Wed Sep 27 2017

...THE SNOW SQUALL WARNING FOR SOUTH CENTRAL MADISON...EASTERN TIOGA
AND NORTHEASTERN BRADFORD COUNTIES IS CANCELLED...

The snow squall which prompted the warning has moved out of the
warned area. Therefore, the snow squall warning has been cancelled.

LAT...LON 4164 7563 4179 7613 4182 7613 4223 7601
4232 7600 4268 7587 4271 7530
TIME...MOT...LOC 1755Z 287DEG 23KT 4272 7584 4179 7615

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NYC007-017-023-077-PAC115-271830-
/O.CON.KBGM.SQ.W.0006.000000T0000Z-170927T1830Z/
Otsego NY-Broome NY-Cortland NY-Chenango NY-Susquehanna PA-
155 PM EDT Wed Sep 27 2017

...A SNOW SQUALL WARNING REMAINS IN EFFECT UNTIL 230 PM EDT FOR WEST
CENTRAL OTSEGO...BROOME...SOUTHEASTERN CORTLAND...CHENANGO AND
SUSQUEHANNA COUNTIES...

At 155 PM EDT, a dangerous snow squall was located along a line extending from near De Ruyter
to Rushville, moving east at 25 mph.

HAZARD...Heavy snow and blowing snow. Wind gusts up to 30 mph.

SOURCE...Radar indicated.

IMPACT...Dangerous life-threatening travel.

This snow squall will be near...

Rush around 205 PM EDT.

Montrose, Plymouth and Smyrna around 225 PM EDT.

Norwich, North Norwich and Sherburne around 230 PM EDT.

This includes the following highways...

Interstate 81 in New York between mile markers 0 and 31.

Interstate 81 in Pennsylvania between mile markers 233 and 206.

Interstate 86 in New York between mile markers 235 and 270.

Interstate 88 in New York between mile markers 0 and 32.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Consider avoiding or delaying travel until the snow squall passes your location. If you must travel, use extra caution and allow extra time. Rapid changes in visibility and slick road conditions may lead to accidents.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS MESSAGE.

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LAT...LON 4164 7563 4179 7613 4182 7613 4223 7601

4232 7600 4268 7587 4271 7530

TIME...MOT...LOC 1755Z 287DEG 23KT 4272 7584 4179 7615

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DJN