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Operations and Services
Public Weather Services, NWSPD 10-5
WFO Winter Weather Products Specification, NWSI 10-513

WINTER WEATHER WATCH/WARNING/ADVISORY PROCEDURES AND
THRESHOLDS

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SUMMARY OF REVISIONS: This Supplement replaces ERS 02-2003, "Winter Weather Watch/Warning/Advisory Policy, Procedures, and Thresholds," dated November 13, 2007, issued with NWSI 10-513, and contains the following revisions:

1. Section 4.3 simplifies the suite of authorized winter storm watch/warning/advisory product headlines to reflect national policy.
2. A guideline is provided to help WFOs verify warnings when mixed precipitation events occur.
3. Section 4.2 has been updated to allow Winter Weather Advisories for black ice.
4. Section 4.7 has been updated to include mention of the Internet.

<signed>

October 14, 2008

Dean P. Gulezian
Director, NWS Eastern Region

Date

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- 1) Purpose. The purpose of this Supplement is to document Eastern Region (ER) procedures for winter weather products in addition to the guidelines set forth in NWS Instruction 10-513 *WFO Winter Weather Product Specification*.
- 2) Background. Winter weather product inconsistencies between offices cause confusion and diminished customer confidence. In addition, the widespread use of computer graphics makes such inconsistencies more noticeable.
- 3) Policy. To maximize product utility, ER field offices must strive to issue externally consistent watch, warning and advisory (WWA) products. To accomplish this goal, forecasters must understand issuance thresholds, use the same interpretation of these thresholds, and collaborate with adjacent offices on hazard type, timing, and magnitude. Collaboration of forecasts delivers more consistent products and yields more accurate forecasts.
- 4) Issuance Procedures.
 - 4.1 Software. All ER offices will use the latest nationally approved software, as the primary issuance tool for all winter weather watch/warning/advisory products.
 - 4.2 Triggering Procedures. When forecast conditions provided in the forecast database are expected to [meet or exceed local winter weather criteria](#) within 12 to 48 hours, the appropriate WWA will be issued (see section 4.3).

Winter precipitation forecasts (including hazards grids) must be included in the first 48 hours of the forecast database and ideally go out further in time to ensure national requirements are met. Snowfall forecasts contained in the legacy text products such as the Zone Forecast Product, Area Forecast Matrices (AFM) and Point Forecast Matrices (PFM) will be consistent with amounts provided in the local database. Snowfall forecast data are not to be included in the Coded Cities Forecast (CCF) or State Forecast Tabular (SFT).

Text formatters will use “mid-point values” (rounded up to the nearest inch) of the forecast snowfall range and serve as the primary criterion for WWA issuances.

Event duration, timing and rates of snow accumulation/ice accretion should also be considered when determining the need for a WWA (e.g., high precipitation rate during a rush hour, first event of season, or long-duration event with high impact).

WWAs may be issued based on public impact alone. For example, if a storm is not expected to reach warning criteria, but heavy, wet snow, or a mixture of snow, freezing rain and ice pellets will significantly affect rush hour or holiday transportation, commerce, or electrical power service, a warning headline can be used. This rule applies especially during early and late season storms, and in

locations where winter weather is rare. Winter Weather Advisories may also be issued for black ice conditions, when significant public impact is expected.

Winter storm outlook information will be mentioned in the Hazardous Weather Outlook (HWO) when there is a 30% chance or greater of meeting/exceeding warning criteria. Watches are recommended when there is a 50% or greater chance of meeting/exceeding warning criteria; warnings are recommended when there is an 80% or greater chance of meeting/exceeding warning criteria.

For wind chill WWAs, the colder boundary of the forecast wind chill interval will serve as the criterion for issuance.

Release of winter storm products and their updates should be coordinated with surrounding WFOs to ensure consistency of information.

- 4.3 Authorized Headlines. Table 1 shows the winter weather headlines ER offices in WSW segments while Table 2 shows the changes to winter weather advisories and warnings from FY2008 to FY2009.

Table 1. FY2009 ER winter weather headlines for WSW segments.

HEADLINE TYPE	WATCH	WARNING	ADVISORY
<i>Blizzard</i>	X	X	
<i>Winter Storm</i>	X	X	
<i>Lake Effect</i>	X	X	X
<i>Ice Storm</i>		X	
<i>Freezing Rain</i>			X
<i>Winter Weather</i>			X
<i>Wind Chill</i>	X	X	X

Table 2. Winter weather advisory and warning changes for FY2009.

FY2008 Winter Advisories/Warnings	FY2009 Winter Advisories/Warning Change
<i>Snow Advisory</i>	Winter Weather Advisory
<i>Snow and Blowing Snow Advisory</i>	Winter Weather Advisory
<i>Sleet Advisory</i>	Winter Weather Advisory
<i>Blowing Snow Advisory</i>	Winter Weather Advisory
<i>Heavy Snow Warning</i>	Winter Storm Warning

- 4.4 Content of Segments. The four basic segment types (cancellation, warning, advisory or watch) may be subdivided into as many zone groupings as needed to address differing precipitation types or amounts across the forecast area. For cancellation segments, a UGC expiration time of one hour will be used. Forecasters must keep each segment's text **brief and to the point**. The basis of the warning (quantitative values and phenomena) should be included in the first sentence (e.g., "A quarter to one-half inch of ice accumulation expected. Travel will be hazardous, with downed tree limbs and power outages possible.") **Localized extreme snowfall values**

should not be mentioned, as most people will not observe the extremes. References and/or comparison to historical events will be reserved for warning situations and should only be mentioned if confidence is high that a comparable event is unfolding.

- 4.5 Reporting Storm Events. Public Information Statements (PNS) will be the primary public product to summarize the latest winter precipitation, high wind observation or wind chill occurrences to the public, and will be done using the format shown in resource links (see Section 5). A disclaimer must be appended to the PNS noting that the information within the PNS is UNOFFICIAL.

At a minimum, PNSs should be issued every three to six hours during an event. WFOs should also produce a summary PNS at the end of an event. Observations and related reports are permitted in other products to support warning or advisory content.

- 4.6 Local Issuance Delays. Offices will not develop local policies which routinely mandate delays in issuing WWAs, e.g., never issuing a “Winter Storm Watch” for the third period or a “Winter Storm Warning” for the second period. Issuances should be based on science and forecaster consensus. In addition, updates should be issued prior to the expiration time of the earlier warning to avoid gaps in warning coverage.

- 4.7 NWS Attribution. To identify the NWS as the information source, all **initial** advisory, watch, and warning segments should begin with “The National Weather Service...” Additionally, the segment should end with “Stay tuned to NOAA Weather Radio or your favorite source of weather information for the latest updates. Additional details can also be found at [www.weather.gov/\(your WFO's name\)](http://www.weather.gov/(your WFO's name)).”

- 4.8 Relationship to Outlooks. Winter Storm Outlooks: information on impending winter storms in days 1-7 will be included in the HWO. WFOs should emphasize the HWO on local web pages and NWR when particularly dangerous winter storms are possible in the outlook period.

- 4.9 Best Practices. ER has instituted a Best Practices Program to promote WFO operational excellence through the sharing of both operational and training procedures, methods, and strategies common to superior performing programs. This document can be viewed by accessing the [Eastern Region Watch/Warning Advisory Resource Page](http://www.werh.noaa.gov/MSD/Resources/Winter/resource.htm) at <http://www.werh.noaa.gov/MSD/Resources/Winter/resource.htm>

All ER WFOs are expected to review and incorporate the documented winter weather best practices into their pre-season preparation activities (drills, training, etc.) and operations.

- 5) Criteria. Warning and Advisory criteria can be viewed by accessing the [Eastern Region Watch/Warning Advisory Resource Page](http://www.werh.noaa.gov/MSD/Resources/Winter/resource.htm).

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An optional method of identifying winter storm events when mixed precipitation occurs is now available on the [Eastern Region Watch/Warning Advisory Resource Page](#). Eastern Region offices may find this technique useful in quantifying the magnitude of mixed precipitation events when no individual winter weather element reaches warning criteria and simple subjective classification using storm impacts both fail to define whether a winter storm event has occurred or not.