

Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

***NATIONAL WEATHER SERVICE WESTERN REGION SUPPLEMENT 2-2003  
TO INSTRUCTION 10-517  
JANUARY 31, 2003***

***Operations and Services  
Public Weather Services, NWSPD 10-5  
WFO Multi-Purpose Weather Products Specification, NWSI 10-517***

***WESTERN REGION HAZARDOUS WEATHER OUTLOOKS***

**OPR:** W/WR1x2 (C. Schmidt)

**Certified by:** W/WR1 (R. Douglas)

**Type of Issuance:** Initial.

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***SUMMARY OF REVISIONS:*** This is a new issuance.

Signed

01/14/03

Vickie Nadolski

Date

Director, Western Region

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A. Examples

1 Examples of HWO Products .....	A-1
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1. Description: The Hazardous Weather Outlook (AWIPS category HWO) provides emergency managers, media, and the general public with a single source of information regarding expected hazardous weather through the seven day forecast period. The HWO addresses valid NWS watches, warnings, and advisories, as well as hazards that may develop beyond the time frame of current warning products through day seven. The HWO is used for both convective and non-convective weather situations, and is issued on a daily basis regardless of the hazard.

Operational personnel must exercise initiative and professional judgment to balance the risk to public safety against frequency of warnings and possible constraint of travel and commerce. Protection of life and property will take precedence in these decision-making processes.

2. Definition of a Hazard: A hazard is defined as a hydrometeorological condition or event that poses a threat to life and/or property and typically requires the issuance of at least an advisory and more often a warning. There are two primary categories of hazards in the HWO:

- a. Short term. Short term hazards are those hydrometeorological events requiring advisories, watches, and warnings of less than 6 hours duration. Severe

convective weather falls into this category. Information should specify the type of hazard(s) most likely to occur (e.g., large hail, flash floods, damaging wind, etc.).

- b. Long term. Long term hazards are those hydrometeorological events for which advisories, watches, and warnings may extend from about 6 hours to over several days. Synoptic scale hazards such as winter storms, high winds, Red Flag conditions, storm warnings or higher, and river flooding fall into this category. For conciseness and consistency, when long term watches or warnings are in effect, the HWO will refer readers to those products (see example in Appendix A).

WFOs must maintain an awareness of what is considered a “hazard” to the local customers and partners in order to provide the highest level of customer service. Weather that does not necessarily meet warning or advisory criteria, but that is a significant change from previous weather, may warrant mention in the HWO.

2.1 Marine Hazards. Marine hazards that do not directly affect the coastline, such as Small Craft Advisories and Gale Warnings, may be omitted from the HWO based on local customer needs. These hazards are nearly daily occurrences in some areas, and the HWO is often not disseminated offshore. Marine-based hazards such as High Surf and Coastal Flooding that do affect the coast will be addressed in the HWO.

### 3. Relationship Between HWO and Other “Outlook” Products.

3.1 Special Weather Statements (SPS) and HWO: The HWO may replace the Special Weather Statement (SPS) as the tool to issue information about potentially hazardous weather expected within the next seven days. This will give customers “one-stop shopping” when looking for information on potentially hazardous weather. An SPS outlook may still be issued at WFO discretion for cases such as extreme conditions (record breaking snow or cold, extremely damaging winds, etc.) or critical timing (upcoming holidays, hunting seasons, etc.). In this case, the HWO will refer to the SPS whenever a SPS is in effect.

3.2 Hydrologic, Convective, Tropical, and other Outlooks and the HWO: Various NWS national centers and WFOs issue “outlook” products for special purposes. These include CPC’s U.S. Hazards Assessment, SPC’s Convective Outlooks for Days One through Three, TPC’s Tropical Outlooks, RFC’s and HPC’s daily Significant River Flood Potential Outlooks, and WFO’s Hydrologic Outlooks. Forecasters should incorporate these other sources of information when creating the HWO in order to deliver a consistent message to NWS partners and customers.

4. Product Issuance Times: Western Region WFOs will issue an HWO at least once per day.

The HWO should be issued between 5 a.m. and 7 a.m. local time. Product expiration time in the header will be 24 hours after original issuance time. (HWO updates will be valid until the next scheduled issuance time for updated HWOs.)

Consistently scheduled alternative issuance times are permitted on a seasonal basis (e.g., Southwest Monsoon season) to allow WFOs time and resources to thoroughly analyze and diagnose hazard potential, especially in the .DAY ONE time period.

5. Content Sections.

5.1 Day One Time Period: This section of the HWO will consist of a discussion summarizing the forecaster's diagnosis and a statement as to the threat of hazardous weather potential for that day. This section will begin with the words ".DAY ONE...", or ".DAY ONE...TODAY". Words will be spelled out, not abbreviated. Refer to affected areas in general terms, such as NORTHEAST NEVADA. When warnings or watches are already in effect, give a concise explanation of the situation and refer to warnings and watches in effect (e.g., HIGH WIND WARNING TONIGHT...SEE THE LATEST HIGH WIND STATEMENT FROM XXXX /WWUS75 Kxxx NPWNN/ FOR DETAILS, or RED FLAG WARNING TODAY...REFER TO WWUS86 Kxxx RFWNN FOR FURTHER INFORMATION) .

When hazardous weather (i.e., events that prompt advisories, watches, or warnings) is not anticipated, one of the following statements will be the first line at the start of the discussion: "THE PROBABILITY FOR WIDESPREAD HAZARDOUS WEATHER IS LOW", or "NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME".

5.2 Days Two Through Seven Time Period: Information pertaining to this time period will always be included in the HWO. This section will begin with the words ".DAYS TWO THROUGH SEVEN..." OR ".DAYS TWO THROUGH SEVEN...(actual days of the week)". Briefly convey the type of hazardous weather (e.g., convection/thunderstorms, winter weather, wind, Red Flag conditions, river flooding, coastal flooding, etc.) that could impact the CWA over this period. Timing of events should be to the nearest day of the week. When warnings or watches are already in effect, give a concise explanation of the situation and refer to warnings and watches in effect by using product name, product ID, or similar (e.g., HIGH WIND WATCH FOR THURSDAY NIGHT...REFER TO WWUS75 Kxxx CCCNPWNN FOR DETAILS). Information contained in this time period should be coordinated with adjacent WFOs to ensure consistency.

If hazardous weather is not anticipated, one of the following statements will be the first line at the start of the discussion: "THE PROBABILITY FOR WIDESPREAD HAZARDOUS WEATHER IS LOW", or "NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME".

5.3 Spotter Information Statement: Spotters and emergency managers in WR are trained to report "all-hazards" when they are observed. However, a notice to spotters that their assistance may be needed is a valuable feature of the HWO. Whenever any weather hazards are discussed in either the Day One or the Day Two through Seven sections of the HWO, WR WFOs will include a spotter activation statement following the Day Two through Seven section. The statement will be titled ".SPOTTER INFORMATION STATEMENT...". This statement is not required when both time sections state that no hazards are expected, though WFOs may still use the phrases "WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT

WEATHER CONDITIONS ACCORDING TO STANDARD OPERATING PROCEDURES.” or “SPOTTER ACTIVATION IS NOT EXPECTED AT THIS TIME.”.

6. Updates: The HWO is valid for 24 hours unless an updated HWO is issued in the meantime. HWOs will be updated whenever there is no correlation between the current HWO and actual ongoing or predicted hazardous weather in the .DAY ONE time period. Information in the .DAYS TWO THROUGH SEVEN time period may be updated at forecaster discretion.

Example of when to update: The routine morning HWO described heavy snow would continue to affect the CWA until late afternoon. By late morning, the snow has ended, skies cleared, and forecasts are updated to predict no more accumulating snow. The HWO should be updated to remove mention of accumulating snow.

Example of no update necessary: The routine morning HWO explained how conditions were very favorable for convection with thunderstorms likely in the afternoon. SPC issues a Severe Thunderstorm Watch and numerous severe thunderstorms develop.

7. Dissemination: The HWO will be accessible via WFO Internet pages. The text version will be placed under “Current Hazards” on the left side bar of WFO home pages. Graphically, NWS home page maps will color code a CWA to highlight when a HWO includes mention of hazardous weather potential. The color code highlight will remain on the map through the product expiration time.

HWOs will not be highlighted on these maps if either one of the following conditions are met:

- a. A watch or warning is already in effect for any part of the CWA, or issued for any part of the CWA prior to the product expiration time.
- b. One of the following phrases is stated first in the .DAY ONE *and* the .DAYS TWO THROUGH SEVEN time period:

“THE PROBABILITY FOR WIDESPREAD HAZARDOUS WEATHER IS LOW”; or

“NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.”

HWOs are available on NWS text based dissemination systems and customers can program their systems to receive them at their discretion. HWOs may be broadcast on NWR at the MIC’s discretion.

## APPENDIX

### Example 1.

FLUS46 KEKA 041304  
HWOEKA  
CAZ001>004-076-051330-

HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE EUREKA CA  
500 AM PST WED DEC 4 2002

THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHWEST CALIFORNIA

.DAY ONE...TODAY

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY

THE PROBABILITY OF WIDESPREAD HAZARDOUS WEATHER IS LOW.

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Example 2.

FLUS45 KTWC 041305  
HWOTWC  
AZZ019-029>035-051400-

HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE TUCSON AZ  
700 AM MST WED DEC 4 2002

THIS HAZARDOUS WEATHER OUTLOOK IS FOR SOUTHEAST ARIZONA

.DAY ONE...TODAY

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY

A STRONG WINTER STORM SYSTEM WILL REACH SOUTHEAST ARIZONA BY FRIDAY RESULTING IN THUNDERSTORMS...STRONG WINDS AND MOUNTAIN SNOW. BLIZZARD CONDITIONS ARE POSSIBLE BEGINNING FRIDAY THROUGH SATURDAY IN THE WHITE MOUNTAINS IN NORTHERN GRAHAM AND GREENLEE COUNTIES. A WINTER STORM WATCH IS IN EFFECT FOR THIS AREA...PLEASE SEE THE LATEST WINTER WEATHER STATEMENT FROM TUCSON /WWUS45 KTWC WSWTWC/ FOR FURTHER DETAILS.

.SPOTTER INFORMATION STATEMENT...

WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT  
WEATHER CONDITIONS ACCORDING TO STANDARD OPERATING  
PROCEDURES.

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