

**NATIONAL WEATHER SERVICE SOUTHERN REGION SUPPLEMENT SRS-02-2008**  
**APPLICABLE TO NWSI 10-503**  
**NOVEMBER 12, 2008**

*Operations and Services*  
*Public Weather Services, NWSPD 10-5*  
*WFO Public Weather Forecast Products Specification, NWSI 10-503*

**GUIDELINES FOR INCLUSION OF AVIATION SECTIONS WITHIN THE AREA**  
**FORECAST DISCUSSION PRODUCT**

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**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>.

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**SUMMARY OF SUPPLEMENT:** This Supplement establishes Southern Region policy and guidelines for the inclusion and content of .AVIATION... section in the Area Forecast Discussion Product.

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<signed by> October 29, 2008  
Bill Proenza Date  
Director, Southern Region

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1. **Purpose.** This Supplement provides additional guidance to that contained in Section 2 and associated Appendix of NWSI 10-503. All instructions contained in NWSI 10-503 remain valid. This supplement establishes the requirement of an .AVIATION... section in the Area Forecast Discussion (AFD) product. The aviation section of the AFD can be used to describe, in plain language, the reasoning and the degree of confidence behind the TAF. This insight and additional information complements the TAF, making it more effective and useful to the aviation community. The .AVIATION... section of the AFD is an NWS supplementary product that complements the mandatory TAF.
2. **Southern Region Policy.** Beginning on November 12, 2008, each Southern Region Weather Forecast Office (WFO) will include an .AVIATION... section that will provide a brief meteorological explanation of the reasoning behind the aviation forecasts issued by that office. Brief descriptions of weather outside the terminal forecast area(s) may be included, but must be kept brief. The .AVIATION... section of the AFD should be issued at least 4 four times per day in conjunction with routine Terminal Aerodrome Forecast (TAF) issuance times. The .AVIATION... section should be issued as an updated product, so the short and long term AFDs remain appended to the AFD product. More frequent updates to the .AVIATION... section are encouraged and should be considered when significant unexpected changes occur to the TAF.
3. **Philosophy, Content and Guidelines.** The content, terminology, and valid forecast periods of the Aviation section in the AFD should meet the needs of the majority of the users in the Forecast Area (FA) who receive the AFD. It is the responsibility of each WFO to determine the primary users of its AFD product.

For the .AVIATION... section, users include, but may not be limited to, Flight Service Stations (FSS), dispatchers and others at commercial airlines, Center Weather Service Units (CWSU), the Aviation Weather Center (AWC), General Aviation (GA) pilots, adjacent Weather Forecast Offices (WFO), and military units. There will always be a discussion or summary of expected weather conditions impacting aviation in the .Aviation... section of each AFD. If benign weather is forecast, a short explanation will be given (i.e., VFR conditions will prevail for the next 24 hours at all TAF sites). Do not write "see TAF" in the AFD. Collaboration between the WFO and the CWSU serving a major aviation hub is encouraged (e.g. DFW, MEM, MCO, ATL, IAH, MIA, FLL, PHX)

The explanation and terms used in the aviation section should be geared toward the users. For example, WFOs with large airports and heavy commercial traffic may emphasize the short-term aviation forecasts (two to nine hours), while WFOs with mainly recreational (GA) users may emphasize the aviation forecast/explanation out to 24 hours.

The meteorological explanation for each section should be succinct and complex narratives are discouraged. The length of the .AVIATION... product should not exceed 8 lines of text, even in complex and/or changing weather conditions. Since a general narrative discussion is already provided in the traditional AFD, any explanation in the .AVIATION... section should consist of information that adds to, or enhances, the narrative discussion with respect to the needs of the aviation users. In most cases, this section should be limited to a discussion of the most critical impact affecting the TAF(s).

In formatting the .AVIATION... section, keep the .AVIATION... header as a stand-alone line. See examples in Appendix B. This is important because some users have automated scripts that strip the aviation section of AFDs for use in internally created products or briefings.

Be familiar with NWSI 10-503 and the 10-8 series, especially NWSI 10-813.

Do add your professional insight instead of simply repeating the TAF.

Do not use technical jargon or lengthy descriptions of meteorological phenomena. Use plain language and restrict acronyms to those commonly used by the aviation community.

Know airport-specific criteria that impact aviation operations (i.e. ATL cigs at or below 045 cause restriction in the arrival rate). These airport-specific criteria are as important as the standard flight criteria – IFR, VFR.

Focus on the biggest aviation concerns over the time period covered by the TAF. For example:

-**Precipitation**: Type, start and stop times, special attention to ice, snow, etc.

-**Winds**: Threat of strong winds, wind shifts, cross wind activity.

-**Thunderstorms**: Coverage, likelihood, duration.

-**Frontal passages**: Timing and cause.

-**Low ceiling and fog potential**: Timing and cause.

-**Visibility obstructions**: Smoke, blowing dust, volcanic ash, other.

-**Low level wind shear potential**

-**Changes in flight condition**: Timing window of changes

-**TAF confidence**: Reasoning why conditions or elements were left out.

Include timing (UTC) and degree of confidence (such as high/low, or slight chance/chance/likely) in the forecast for a specific forecast element (i.e. - may include items that were considered but left out of the TAFs due to uncertainty).

Keep the discussion concise, eight lines of text or less.

Do not include long range issues greater than 24 hours, unless it is a “heads-up” for a significant weather event that could impact aviation or airport operations (i.e. – major winter storm, hurricane, etc).

Discuss the impacts of the synoptic and mesoscale weather patterns on the aviation community, as opposed to simply describing those patterns.

Do not use the term “likely” about a parameter NOT mentioned in the TAF. *Note: In cases where a “heads up” to an upcoming significant weather event outside the TAF period, the term “likely” may be used if applicable.*

Do not use probability terms for more than two parameters, which can be very confusing (i.e. “chance of this..., chance of that, and a chance of something else...”)

Do not simply repeat what has already been mentioned in the .Synopsis part of the AFD. Rather, tie the weather systems or processes mentioned in the synopsis with key “decision points” in the TAFs. Decision points are expected events which would significantly impact actions of the user .

Do provide qualitative, subjective information, to go with the terse objective information (TAF)

Do address more of the "why" behind forecast conditions and the degree of confidence behind the TAF.

*Note: Do not append times or other wording to the .Aviation... header line. Add clarifying remarks, such as time, TAF cycle, update information and or begin the discussion on the next line.*

.AVIATION...

VFR CONDITIONS TO CONTINUE ACROSS WEST CENTRAL TEXAS TAF SITES. LIGHT WINDS OVERNIGHT WILL GIVE WAY TO STRONGER NORTH WINDS BEHIND A COLD FRONT. THE FRONTAL PASSAGE WILL BE AROUND MID MORNING FOR KABI AND AROUND NOON FOR KSJT.

.AVIATION...

PATCHY FOG IS EXPECTED TONIGHT AS DEWPOINTS CONTINUE TO INCREASE. LOW LEVEL JET WILL ONCE AGAIN INCREASE OVERNIGHT...HOWEVER NOT AS STRONG AS THIS MORNING. LLJ SPEED IS EXPECTED TO BE AROUND 25 KTS...THUS EXPECTING A COMBINATION OF LOW STRATUS BETWEEN 1000 AND 2000 FT PLUS PATCHY FOG WITH VSBYS GENERALLY ABOVE 1/2SM. THE EXCEPTION WILL BE BETWEEN 10Z AND 13Z WHERE VSBYS MAY LOWER BRIEFLY. VFR CONDITIONS ARE EXPECTED BY 14Z WITH CIGS RISING TO AROUND 3500 FT. A COLD FRONT WITH SCATTERED THUNDERSTORMS IS EXPECTED LATE MONDAY NIGHT.

&&

.AVIATION...

12Z TAF CYCLE

VFR CONDITIONS EXPECTED AT ALL TERMINALS THROUGH 00Z TONIGHT. SURFACE WINDS WILL GENERALLY BE FROM THE SOUTHWEST AROUND 15-20 KTS SUSTAINED WITH GUSTS APPROACHING 30 KTS BY 15Z. LLWS OF 22045-60KT WILL ALSO BE NOTED AROUND FL015 TO 020 PARTICULARLY AT THE HOT SPRINGS AND HARRISON TERMINALS. SURFACE WINDS WILL DIMINISH AFTER 00Z.

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.AVIATION...

1210 AM. VFR CONDITIONS WILL PREVAIL THIS EVENING OVER SOUTH CENTRAL TEXAS. AFT 10Z AREAS OF FOG WILL DEVELOP IMPACTING KAUS AND KSAT WITH MVFR AND IFR CIGS/VSBYS. THE FOG WILL DISSIPATE AFT 16Z WITH VFR CONDITIONS FOR THE AFTERNOON HOURS. ISOLATED SHOWERS AND THUNDERSTORMS ARE POSSIBLE ACROSS THE SOUTHEASTERN AREAS MONDAY NIGHT.

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.AVIATION...

ISOLATED TSRA POSSIBLE LATE THIS AFTERNOON AND EVENING ACROSS XNA/FYV/FSM AS AN OUTFLOW BOUNDARY AND A WEAK COLD FRONT APPROACH FROM THE NORTH. BEHIND THE BOUNDARY AREAS OF LIGHT FOG MAY REDUCE VISIBILITIES TO AROUND 4 MILES BETWEEN 0900 AND 1200 UTC FOR NORTHWEST ARKANSAS TAF SITES. A WIND SHIFT OUT OF THE EAST-SOUTHEAST LOOKS TO ACCOMPANY THE FRONTAL BOUNDARY AT ALL TAF SITES AFTER 0200 UTC...THEN BECOMING MORE SOUTHERLY BY LATE TOMORROW MORNING.

**Issue as an AFD update:**

FXUS64 KFWD 071704 AAC  
AFDFWD

AREA FORECAST DISCUSSION...UPDATED  
NATIONAL WEATHER SERVICE FORT WORTH TX  
1204 PM CDT MON JUL 7 2008

.AVIATION...

/18Z TAFS/

NO MAJOR CONCERNS FOR THE NEXT TAF PERIOD. WINDS THIS AFTERNOON WILL BE A BIT BREEZY...AVERAGING 17 KTS. AFTERNOON CU WILL BE SCATTERED AROUND 6 KFT...DISSIPATE AFTER DARK AND RETURN ONCE AGAIN TOMORROW. ALL PRECIPITATION IN SOUTH TEXAS WILL CONTINUE TO STAY WELL SOUTH OF ALL TAF SITES AND DO NOT EXPECT ANY PROBLEMS. VFR CONDITIONS WILL PREVAIL.

85/NH

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.PREV DISCUSSION... /ISSUED 1044 AM CDT MON JUL 7 2008/

UPDATE...

12Z FWD SOUNDING IS A BIT MORE MOIST TODAY WITH COOLER TEMPERATURES ALOFT. OVERALL STILL EXPECT THE BULK OF THE PRECIPITATION TO STAY...