

***NATIONAL WEATHER SERVICE WESTERN REGION SUPPLEMENT 9-2003
APPLICABLE TO NWSI 10-801, 10-803 and 10-813
NOVEMBER 14, 2007***

***Operations and Services
Aviation Weather Services, NWSPD 10-8
Aviation Weather Services, NWSI 10-801, 10-803 and 10-813***

WESTERN REGION AVIATION SERVICES

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SUMMARY OF REVISIONS: This directive supersedes Regional Supplement 9-2003, dated July 7, 2006, filed with Instructions 10-805, and 10-813. It no longer pertains to NWSI 10-805 because it was rescinded on September 29, 2007.

The following changes were made in this issuance:

1. Section 2e.b. Clarify that the critical TAF period is the first six hours, not 2-6 hours.
2. Section 2e.5. NIL TAFs should not be used, except in rare situations. If a NIL TAF is issued, the WFO forecast team will provide written documentation on the circumstances leading to the decision to issue a NIL TAF.
3. Section 3. TWEBs are no longer issued.
4. Section 3. Airport Weather Warnings are clarified including using UGC codes for dissemination.
5. Section 4. "See TAFs" or "refer to TAFs" will not be allowed in Aviation Section of the AFD.
6. Appendices A and B were updated with the latest aviation training.

Signed _____

10/26/07

Robert Tibi

Date

Acting Director, Western Region

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1. Description: The aviation program at WR WFOs is a vital part of NWS forecast operations. All WFO forecasters must be fully qualified to produce aviation products, regardless of grade. Workload often requires aviation forecasts be issued by any forecaster on shift, not just a designated “aviation forecaster”. Meteorologist Interns may write TAFs after receiving the proper local aviation training, provided the TAFs are reviewed by a forecaster before issuance.

2. Terminal Aerodrome Forecasts (TAF). TAFs are prepared by WR WFOs for airports as listed in NWSI 10-813, Appendix E.

- a. Changes to TAF Hours: Requests to change the hours of TAF coverage should come from a local or regional FAA office. A MIC may also request expanded TAF hours for sites where observations have changed from part-time to full-time, and they believe the increase will benefit aviation customers. The MIC will forward such requests to MSD, who will discuss the expansion with the WFO in regards to workload. If the request is approved by MSD, MSD will forward the request to Office of Climate Weather and Water Services (OCWWS) NWSH for consideration. Once the change is approved at all levels, MSD will draft a change notice and send it to NWSH for dissemination.
- b. Addition of TAFs: Requests for new TAF service must come from a local aviation customer or regional FAA office to MSD. MSD will discuss a formal request with the responsible WFO, and upon agreement that the TAF is justified and observation requirements are satisfied (NWSI 10-813), MSD will forward the request to OCWWS for approval. MSD will draft a change notice and send it to NWSH for dissemination.
- c. Deletion of TAFs: Requests to terminate an existing TAF may be made by the MIC. Justification for the deletion of a TAF will be sent to the Director of

OCWWS, NWSH through MSD. The letter should state, “due to unavailability of observations, ABC WFO would like to drop XYZ TAF”. Once the letter is sent to OCWWS, Aviation Services Branch (ASB) for action, they will forward it to the FAA. Only in very rare circumstances will the FAA allow termination of a TAF. WFOs should not discontinue a TAF until the FAA has notified OCWWS of approval, and the customer notification process is complete.

- d. Verification: The national aviation verification statistics can be found under the “Stats on Demand” web site. Other supplemental verification programs may be used by the WFO, but statistics from “Stats on Demand” will be used for any regional or national purposes. Verification results must be evaluated by the WFO management team/focal point on a routine basis to determine strengths and weaknesses of the WFOs TAF program. WFOs are requested to produce summaries for the staff and WR MSD on a quarterly basis. These reports will be submitted January 30, April 30, July 30, and October 30.
- e. Content: In addition to the guidelines presented in NWSI 10-813, WR forecasters should take the following information into account when preparing TAFs:
1. Write the forecast based on the conditions a pilot can expect when landing or departing from the airport, keeping in mind that an automated observation system may only “see” over a point, while the TAF is to cover a five-mile radius from the center of airport.
 2. Although the critical TAF period for most airports is within the first six hours (0-6) of the TAF valid time, international airports with flights crossing the Atlantic and/or Pacific rely on the second half of the 24 hour TAF to plan their flight operations. Airlines and airports with flights originating in Australia, Europe, Asia, etc use information 12 - 24 hours from the current valid time because that is when their flights will be arriving at Western Region International Airports.
 3. Use of TEMPO group: WR forecasters should use TEMPO sparingly in the first 12 hours of a TAF, and should eliminate them if possible after 12 hours. TEMPO is defined to indicate fluctuating conditions that have a high probability of occurring, and should not be used as a “just in case” group.
 4. Consistency with other products should be strived for. However, due to the different natures of the TAF and public zone forecasts, there is no requirement for an exact match between the two in terms of precipitation and obstructions to vision. Scattered precipitation in the public forecast zone containing the airport, may be less likely to occur at the airport itself, and the TAF should reflect that difference.

5. NIL TAFs should not be used, except in rare situations. Refer to NWSI 10-813 for examples of when NIL TAF may be used. If NIL TAF is issued, the WFO forecast team will provide written documentation on the circumstances leading to the decision to issue a NIL TAF.

NIL TAF's disrupt airline operations, cause inconvenience to the traveling public, and force users to seek weather information from other sources. If surface observations are missing in AWIPS, unreliable, or not complete, forecasters may append AMD NOT SKED to the end of a TAF. The use of AMD NOT SKED provides a valid forecast, but alerts the user that no amendments will be issued.

3. Airport Weather Warnings (AWW): AWWs are prepared for airports through users' agreement between local airport management and the supporting WFO. An example of the required Letter of Agreement (LOA), between the issuing office and the user, is detailed in NWSI 10-801 (Section 5 and Appendix A). The AWW complements and will be consistent with, existing NWS warnings and forecasts.

The AWW addresses weather phenomena which can adversely impact airport ground operations. Information contained in this product is useful to airport managers, fixed-based operators, airline ground personnel and others responsible for the safety of ground operations. AWWs are not intended for use by in-flight operations.

- a. The AWW will be disseminated via the NOAA port Advanced Weather Interactive Processing System (AWIPS) Satellite Broadcast Network (SBN). The AWW should use county codes (UGC) for dissemination via NWS web pages. If preferred, zone codes may be used instead of county codes. In addition, a locally established communication system can be used if no access to the NOAA data stream is available. Refer to NWSI 10-801 for additional AWW procedures and issuance criteria.

4. Aviation Section in the Area Forecast Discussion (AFD): An aviation section is mandatory in the AFD. This section of the AFD should be written to the NWS aviation customers. These customers include (and are not limited to) pilots, the Aviation Weather Center, CWSUs, and airline dispatchers. During benign weather, do not enter "see TAFs" or "refer to TAFs". Aviation customers have responded negatively to forecasters adding "see TAFs" to the AFD, so the forecaster and/or observed conditions should be discussed even during benign weather situations. For specific instructions regarding the aviation section of the AFD, refer to WR Supplement 23-2003: Western Region Public Weather Products.

5. Training and Professional Development: WR meteorologist producing any of the core suite of aviation products or services must be trained. Forecasters will complete the following requirements before issuing aviation products*:

- a. Local Training. Complete local training led by the Science Operation Officer (SOO) and aviation focal point. For CWSUs the training will be led by the

Meteorologists in Charge (MIC). Use of the Weather Event Simulator (WES) is encouraged, and the training should focus on (1) the effects of local complex terrain on aviation parameters with an emphasis on cloud cover and visibility; (2) local aviation studies and climatology; and (3) Automated Surface Observing Systems (ASOS) and WSR-88D observations.

- b. Aviation Baseline Knowledge. Complete the NWS web based aviation training (Distance Learning Aviation Course (DLACI and II), and other NWS web based aviation training. See task lists - Appendix A and B for specific lessons.
- c. Products and Services. Become familiar with all NWS aviation products and services and become proficient in the preparation and dissemination procedures for those products issued by your office. Read NWS Policy Directive 10-8, associated instructions and WR supplements.
- d. Briefing Training (CWSU only). Training on the fundamentals of providing quality stand up weather briefings will be provided by the CWSU MIC or designee.
- e. New WFO forecasters complete WFO Aviation forecaster task list (Appendix A).
- f. New CWSU forecasters complete CWSU Aviation forecaster task list (Appendix B).

* Note: The requirements assume the forecaster has completed the NWS meteorologist intern training (NWSI 20-103). If the forecaster is new to the agency, without a NWS intern assignment, the intern requirement will be completed before the aviation forecaster training. NWS forecasters (general or lead as of 8/1/04) are grand fathered into the training (Section 5 and associated aviation forecaster task list).

5.1 Aviation Proficiency: It is important for NWS forecasters to remain current and proficient with the latest advances in the science. Experienced forecasters must complete the following requirements to remain proficient in aviation:

- a. Operations. WFO forecasters will work a minimum of two weeks of aviation shifts (minimum 10 shifts) annually. Shifts are defined as issuing the routine aviation products and providing a continuous weather watch. CWSU forecasters will work a minimum of four weeks of operational shifts (minimum 20 shifts) annually. In addition, it is highly recommended for CWSU forecasters to shadow the WFO forecaster for a minimum of one day annually.
- b. Meteorology. Read or submit a weather study annually. Attending a local forecasting seminar, AMS meeting, weather workshop, COMET training or NWSTC Course will meet this requirement.
- c. Outreach. Perform outreach with an aviation customer every five years.

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The MIC will be responsible for ensuring aviation forecasters are proficient. MICs or SOOs will oversee proficiency records in the meteorologists individual training plans, and determine refresher training if necessary.

APPENDIX A - WFO Aviation Forecaster Task List

The MIC will be responsible for ensuring aviation forecasters are properly trained. The MIC or SOO will initial the appropriate task when complete. After all the tasks have been completed, a copy of the task list will be kept in the individual meteorologists training plan.

- Complete local training. Use of the WES is encouraged. Focus on (1) the effects of local complex terrain on aviation parameters with an emphasis on cloud cover and visibility; (2) local aviation studies and climatology; and (3) Automated Surface Observing Systems (ASOS) and WSR-88D observations.

Date of completion: _____

- Distance Learning Aviation Course (DLAC I and II) - Commerce Learning Center

Date of completion: _____

- The Impact of Weather on Air Traffic - Commerce Learning Center

Date of completion: _____

- NWS Terminal Aerodrome Forecast (TAF) - Commerce Learning Center

Date of completion: _____

- Read National Directives System (10-8) Aviation Weather Services, Instructions 10-801, 10-802, and 10-813.

Date of completion: _____

APPENDIX B - CWSU Aviation Forecaster Task List

The MIC will be responsible for ensuring CWSU forecasters are properly trained. The MIC will initial the appropriate task when complete. After all the tasks have been completed, a copy of the task list will be kept in the individual meteorologists training plan.

- Complete local weather training. Training should focus on (1) the large areas which encompass the CWSUs area of responsibility, and the effects of complex terrain on aviation parameters which affect aviation traffic flow; (2) local aviation studies and climatology; (3) and major jet routes used by the Center.

Date of completion: _____

- ARTCC training. This includes (but not limited to) FAA orientation and clearance, local equipment training, knowledge of Aviation Weather Center products and local CWSU products.

Date of completion: _____

- Distance Learning Aviation Course - (DLAC I and II) - Commerce Learning Center

Date of completion: _____

- Forecasting Aviation Icing: Icing Type and Severity - Commerce Learning Center

Date of completion: _____

- Icing Assessment Using Observations and Pilot Reports - Commerce Learning Center

Date of completion: _____

- The Impact of Weather on Air Traffic including the Weather Impact Playbook - Commerce Learning Center

Date of completion: _____

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- Read National Directives System (10-8) Aviation Weather Services, Instructions 10-802 through 10-804, 10-811 through 10-813.

Date of completion: _____

- Training on the fundamentals of providing quality stand up weather briefings.

Date of completion: _____