

**Fort Sill Regulation 115-9**

**Climatic, Hydrological, and Topographic Services**

# **Fort Sill Weather Support**

**Headquarters, U.S. Army Garrison  
462 Hamilton Road, Suite 120  
Fort Sill, Oklahoma 73503  
20 November 2020**

**UNCLASSIFIED**

DEPARTMENT OF THE ARMY  
HEADQUARTERS, U. ARMY GARRISON  
462 HAMILTON ROAD, SUITE 120  
FORT SILL, OK 73503  
12 April 2021

Fort Sill Regulation 115-9

Effective 20 April 2021

Climatic, Hydrological, and Topographic Services  
**Fort Sill Weather Support**

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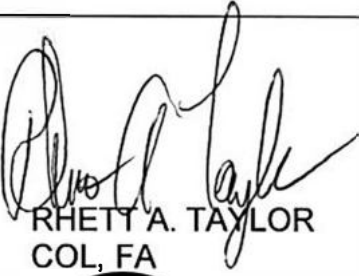
**History.** This regulation supersedes Fort Sill Regulation 115-9, Fort Sill Weather Support, 15 November 2015.

**Summary.** This regulation implements Army Regulation (AR) 115-10, Weather Support and Services for the US Army {AFI 15-157 (IP)} at Fort Sill. This regulation is distributed and published solely through the Directorate of Human Resources, Administrative Services Division Homepage at:  
<http://sill-www.army.mil/USAG/publications.html>

**Supplementation.** Supplementation of this regulation is prohibited, unless specifically approved by the Directorate of Plans, Training, Mobilization, and Security (DPTMS).

**Suggested Improvements.** The proponent of this regulation is DPTMS. Users are invited to send comments and suggest improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to DPTMS, ATTN: AMIM-SIO, Fort Sill Oklahoma 73503.

**Applicability.** This regulation applies to all activities, departments, and units described herein.

  
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Commanding



  
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## **Chapter 1**

### **Introduction**

#### **1-1. Purpose**

This regulation defines the responsibilities of Operating Location 'E' (OL-E), 3d Combat Weather Squadron (3 CWS) for providing weather support to Fort Sill organizations in accordance with (IAW) Air Force Instruction (AFI) 15-128, *Air Force Weather Roles and Responsibilities* and Air Force Manual (AFMAN) 15-129, *Air and Space Weather Operations*. It further specifies responsibilities incumbent upon United States Army Fires Center of Excellence and Fort Sill (USAFCOEFS) and various Fort Sill Army units in providing support to OL-E, 3 CWS IAW AR 115-10 (AFJ115-157), *Weather Support for the US Army*. This publication will be reviewed and revised at least biennially IAW AFMAN15-129.

#### **1-2. References**

Required and related publications; and, prescribed and referenced forms, are listed in Appendix A.

#### **1-3. Explanation of Abbreviations and Terms**

Abbreviations and terms used in this regulation are explained in the glossary.

#### **1-4. 26th Operational Weather Squadron (26 OWS) and Operating Location 'E', 3d Combat Weather Squadron Interaction**

The 26 OWS produces and disseminates forecast weather watches, and warnings for Fort Sill in addition to flight weather briefings to transient aircrews operating within their AOR. Similarly, OL-E, 3 CWS provides tailored weather products for mission planning and execution of Army training and combat operations for Fort Sill and associate units in-garrison and deployed. OL-E, 3 CWS forecasters will understand their supported units' mission and tactics, along with the 26 OWS capabilities, in order to better anticipate, exploit and integrate weather information. OL-E, 3 CWS serves as the "eyes forward" for the 26 OWS by providing real-time interpretation of local weather information.

#### **1-5. Records Management**

Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to AR 25-400-2, The Army Records Information Management System (ARIMS) and DA Pam 25-403, Guide to Recordkeeping in the Army. Record titles and descriptions are available on the ARIMS website (<http://www.arims.army.mil>). Air Force (AF) records created by OL-E, 3 CWS are identified, maintained and disposed of IAW AFMA0N 33-363, Management of Records and AFI 33-364, Records Disposition – Procedures and Responsibilities available on the Air Force e-Publishing website (<http://www.e-publishing.af.mil/>).

## **Chapter 2 Responsibilities**

### **2-1. Overview**

OL-E, 3 CWS is an AF Air Combat Command (ACC) unit, reporting directly to Headquarters (HQ), 3 CWS, Fort Hood, Texas. The OL-E, 3 CWS Superintendent of Weather Operations (SWO) serves as the staff weather officer to HQ USAFCOEFS and subordinate units.

### **2-2. OL-E, 3 CWS Superintendent of Weather Operations**

a. Provide or arrange for operational and staff weather support to HQ USAFCOEFS and subordinate units both in garrison and in the field IAW AR 115-10 and this publication.

(1) The SWO is available from 0730 to 1630, Monday through Friday (except federal holidays).

(2) Refer to appendix L for contacts/telephone numbers.

b. Act as focal and coordination point for all weather and weather support related issues.

c. Advise supported commanders on mitigating and exploiting weather impacts to combat and training operations.

d. Understand the mission, organization, operational commitments, and weather impacts to assets/equipment of supported units.

e. Advise supported commanders on AF weather support capabilities and limitations to assist in developing weather support requirements.

f. Monitor and assess effectiveness of weather products and support.

g. Assist aircraft accident investigation boards or safety investigation boards when requested or when weather or weather support is believed to be a contributing factor.

h. Provide weather expertise for airfield inspections and certifications.

### **2-3. OL-E, 3 CWS Forecasters**

a. Provide augmented or automated surface weather observations IAW AFMAN15-111, Surface Weather Observations.

b. Provide observed weather warnings and observed weather advisories for Fort Sill. Refer to appendix E and F for specific criteria.

c. Provide mission weather products (i.e., flight weather briefings, mission/staff planning briefs, etc.) for Fort Sill assigned units operating in garrison. Provide briefings to transient aircraft when workload permits, otherwise transient aircraft will be referred to the 26 OWS for a flight weather briefing IAW AFMAN 15-129.

d. Act as the liaison with the 26 OWS.

e. Provide limited weather observation training and certification to ATC personnel IAW the Cooperative Weather Watch (CWW) program (appendix C).

f. Act as the point of contact (POC) for the Joint Environmental Toolkit (JET), the primary weather dissemination system.

g. Provide weather briefings (i.e. Winter Weather Update briefings, Crisis Action Team (CAT) briefings, etc.) to the Garrison Commander on request.

h. Provide day-to-day weather and climatology information to Civilian contractors provided they are performing work for the DoD. Weather information cannot normally be provided to the general public unless imminent danger to life or property is involved. The National Weather Service is responsible for weather support to the general public and should be used when possible. IAW AFI 35-101, *Public Affairs Policies and Procedures*, all non-military requests for meteorological information will be coordinated through the installation Public Affairs Office (PAO).

i. Request ATC personnel monitor the pilot-to-metro service (PMSV) frequency (306.5 ultra-high frequency [UHF]), as their duties permit, during weather station equipment outages or evacuation.

j. Notify the Airspace Officer during extended PMSV outages and again when PMSV service is restored. Request issuance of a notice to airmen (NOTAM) for the duration of PMSV outages.

k. Provide weather input to appropriate Army agencies for the creation of heat stress and wind chill indices. OL-E, 3 CWS forecaster(s) do not calculate heat stress indices. Refer to Fort Sill Reg. 385-10, *Safety*, Appendix F & G.

l. Provide surface observations or alphanumeric forecasts representative of the location/time of a Chemical, Biological, Radiological, and Nuclear (CBRN) event to Emergency Management (EM), Fire Emergency Services (FES), and other Fort Sill force protection agencies upon request.

m. Provide "eyes-forward"/collaboration support to the 26 OWS.

(1) Relay significant, time-sensitive weather information to the 26 OWS.

(2) At a minimum, contact and collaborate with the 26 OWS for the following criteria:

(a) Severe Weather Action Procedures (SWAP) weather criteria occurring or expected to occur.

(b) Whenever an OL-E, 3 CWS forecaster issues a Weather Watch, Warning, or Advisory (WWA) for Fort Sill.

(c) An urgent Pilot Report (PIREP) is received.

(d) All weather products issued by the 26 OWS for Fort Sill during OL-E, 3 CWS duty hours (see paragraph 2-2 a (2)).

(3) Serve as back-up to the 26 OWS for Continuity of Operations (COOP) for issuance of WWAs.

(4) Coordinate and update the Fort Sill Installation Data Page with the 26 OWS when changes occur. The data page will be maintained on the 26 OWS website.

(5) Notify the 26 OWS when re-locating to the Alternate Operating Location (AOL). Provide temporary telephone numbers and any changes in WWA notification procedures to the 26 OWS.

n. Update applicable WebEOC weather boards with current weather data per paragraph 3-3, item n.

## **2-4. 26 OWS**

a. Issue forecasted weather watches and warnings for the entire Fort Sill Reservation (refer to appendix E for criteria).

(1) The 26 OWS has the primary responsibility for issuing WWAs for the Fort Sill Reservation IAW AFMAN15-129 and the Fort Sill Installation Data Page.

(2) The 26 OWS will disseminate WWAs through the Integrated Weather Warning Capability (IWWC) system and the JET.

(3) The 26 OWS will call the agencies listed below to verify receipt of WWAs when the IWWC system and the JET are not operational or does not receive successful dissemination.

(a) FSOC: (DSN) 639-3240 Alternate: 639-3241

(b) ATC ARAC: 639-2004 Alternate: 639-1866



(c) OL-E, 3 CWS:

639-4000

Alternate:

639-4887

b. Issue observed WWAs for Fort Sill (i.e. observed lightning warning and observed weather advisories) when conducting back-up operations (i.e., during IWWC and JET outage) and during OL-E, 3 CWS non-duty hours.

c. Provide flight weather briefings to transient aircrews operating from Henry Post Army Airfield (HPAAF) when OL-E, 3 CWS forecaster(s) are unable.

d. Notify OL-E, 3 CWS in the event of an interruption in weather operations at the 26 OWS (scheduled exercise or real-world events). OL-E, 3 CWS forecaster(s) will assume responsibility for Fort Sill WWAs and transient aircrew briefings until the 26 OWS resumes normal operations.

## **2-5. Commanders of Supported Units**

a. Provide OL-E, 3 CWS with weekly flight/training schedules and any changes to these schedules via e-mail to: [usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil](mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil).

b. Assist OL-E, 3 CWS with identifying and documenting weather sensitivities and thresholds applicable to supported units' operations, missions, aircraft, and weapons systems.

c. Ensure the SWO has direct interface with supported unit commanders and staff, and access to command, control and planning functions. The SWO must inject weather into the planning and execution process to allow for development of courses of action during the planning process to mitigate environmental threats.

d. Provide feedback on weather products and services through the SWO or OL-E, 3 CWS forecaster(s).

## **2-6. Directorate of Plans, Training, Mobilization, and Security (DPTMS)**

a. Provide office space necessary to operate OL-E, 3 CWS management, forecasting and maintenance functions.

b. Provide funding for OL-E, 3 CWS's expendable supplies.

c. Provide OL-E, 3 CWS with logistic support, to include, but not limited to, budget for the Lightning Tracking System (LTS) annual data contract.

d. Provide, or arrange for, administrative support to OL-E, 3 CWS. This will include staff coordination and staff representation.

e. Notify OL-E, 3 CWS of installation weather support requirements.

f. Ensure weather support from OL-E, 3 CWS is integrated into contingency plans, training and exercises relevant to the management of all emergency and/or hazard responses.

g. Ensure OL-E, 3 CWS is notified in advance of all garrison emergency management response exercises.

h. Coordinate appropriate Operation Plans (OPLANS) and Operation Orders (OPORDS) with the SWO.

i. The Fort Sill Operations Center (FSOC) will:

(1) Serve as the primary focal point for the dissemination of all WWAs received from the 26 OWS and/or OL-E, 3 CWS forecaster(s) to Fort Sill units and/or agencies.

(2) Notify OL-E, 3 CWS when damage reports due to a weather event are received from anywhere on the Fort Sill reservation.

(3) Activate the mass warning and notification system (AtHoc) when notified of a tornado warning by the 26 OWS and/or OL-E, 3 CWS forecaster(s).

(4) Notify OL-E, 3 CWS in the event of a CBRN event on the Fort Sill installation or any emergency management event that may require weather support.

(5) Include OL-E, 3 CWS on Alert Notification and Access Rosters.

(6) Notify OL-E, 3 CWS of significant events/incidents that may affect operations.

(7) Recall the "On-Call" forecaster, during weather station non-duty hours, upon receipt of a weather watch or warning from the 26 OWS that meets SWAP criteria (appendix G).

(8) Serve as alternate (backup) to DES for all Giant Voice notifications.

j. Range Operations will:

(1) Disseminate all WWAs received from the FSOC and/or OL-E, 3 CWS forecaster(s) to units on Fort Sill training ranges.

(2) Include the weather station's unit mailbox ([usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil](mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil)) and the SWO ([james.c.adams3.civ@mail.mil](mailto:james.c.adams3.civ@mail.mil)) on the distribution list for the weekly Air Activities Report and Range Bulletin.

(3) Assist OL-E, 3 CWS forecaster(s) in conducting a CWW by reporting the following conditions when observed on the Fort Sill Ranges:

(a) Tornado or funnel cloud.

(b) Any damage or injury caused by weather.

k. The Airfield Manager will:

(1) Ensure the SWO is notified and included in the combined Fort Sill Aviation Safety Council/Garrison Airfield Operations Board meeting.

(2) Allow or arrange for unrestricted access to local meteorological equipment by OL-E, 3 CWS personnel.

(3) Ensure the most current copies of the Flight Information Publication (FLIP) are provided to the weather station.

(4) Assist OL-E, 3 CWS personnel in updating weather support information (duty hours, PMSV frequency, etc.) in the FLIPs.

(5) Provide a basic orientation of the airfield, to include location of meteorological sensors to newly assigned OL-E, 3 CWS personnel.

l. The Aviation Safety Officer will:

(1) Include the SWO in an Aviation Accident Prevention Survey at least annually.

(2) Notify the SWO when hazard reports are received in any form which indicates that weather or weather service may be or has been a hazard to aviation safety.

m. The SWO will aid in determining the office of primary responsibility within the AF for investigation and determination of appropriate action to eliminate the hazard.

n. The Airfield Operations Officer will:

(1) Notify OL-E, 3 CWS when local NOTAMs and applicable directives change airfield minima.

(2) Disseminate a NOTAM and/or airfield advisory when notified by OL-E, 3 CWS personnel of extended PMSV outages.

(3) Notify OL-E, 3 CWS of any aircraft mishap involving aircraft operating from Fort Sill that occur in the local flying area as defined in Fort Sill Regulation 95-1, *Army Aviation: General Provisions and Flight Regulations*. In addition, notify the weather station of in-flight emergencies.

(4) Provide notification of WWAs to Fort Sill aviation units and activities IAW local procedures.

(5) Provide the most current copies of the FLIPs to OL-E, 3 CWS.

n. ATC Branch will:

- (1) Participate in Fort Sill's CWW program. The specifics are in appendix C.
- (2) Notify OL-E, 3 CWS when current weather data is not available via the ATC Army Automated Airfield System (AAAS).
- (3) Provide notification of all WWAs received from the 26 OWS, the FSOC or OL-E, 3 CWS to military aircraft operating in the local flying area.
- (4) Monitor the PMSV frequency (306.5 UHF), as other duties permit, during weather station equipment outages or evacuations.
- (5) Provide a basic orientation of ATC facilities to newly assigned OL-E, 3 CWS personnel.
- (6) Notify OL-E, 3 CWS when the active runway changes.

o. ATC Maintenance Branch will:

- (a) Provide and maintain Army-owned radio equipment supporting PMSV.
- (b) Provide working space and a telephone for OL-E, 3 CWS personnel during weather station evacuations.

## **2-7. Directorate of Public Works (DPW)**

- a. Prioritize the status of work orders to avoid catastrophic equipment failure to OL-E, 3 CWS's heat sensitive FMQ-19's Terminal Data Acquisition Unit.
- b. Assist in providing monetary estimates to damaged resources on Fort Sill caused by severe weather events for after-action reports to AF higher headquarters.
- c. Provide allied support requirements for meteorological and communications equipment upgrades or replacements IAW AR 115-10 for the weather sensors located on HPAAF.
- d. Notify OL-E, 3 CWS through the Airfield Operations Officer when a test of the back-up power system to Building 4907 will occur. If local weather conditions are unfavorable, DPW will delay the test. This will be coordinated through the DPW Maintenance Division and the Airfield Manager.

## **2-8. Network Enterprise Center (NEC)**

a. Provide maintenance for OL-E, 3 CWS, Building 4907, telephone (voice), and meteorological equipment data communication lines. Provide maintenance for data communication lines for all local meteorological sensors.

b. Maintain common user communications, non-secure internet protocol router network (NIPRNET) service 24 hours a day, 7 days a week with a minimum 2-hour response time to repair outages during non-duty hours. Weather information, including weather warnings and advisories, are received and disseminated via NIPRNET making it critical to Fort Sill resource protection. Additionally, daily flying/operational weather is gathered via the NIPRNET, with outages causing degradation to flight/mission safety.

c. Maintain the JET Server IAW Memorandum of Agreement between the JET Program Office, HQ Air Force Weather Agency, and US Army Network Enterprise Technology Command/9th Signal Command (Army).

d. Provide allied support requirements for meteorological and communication equipment upgrade or replacement on Fort Sill.

e. Maintain and update the OL-E, 3 CWS webpages <https://sill-www.army.mil/weather/> on the Fort Sill Public Website and <https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws/> on the Fort Sill Intranet.

## **2-9. Directorate of Emergency Services (DES)**

a. Assist OL-E, 3 CWS forecaster(s) in conducting a CWW by reporting the following conditions when observed on Fort Sill:

(1) Tornado or funnel cloud.

(2) Any damage or injury caused by weather.

## **2-10. Other Supported Units**

a. Assist the SWO by identifying and documenting weather sensitivities and thresholds applicable to their operations, missions, aircraft, and weapon systems.

b. Provide the SWO and/or the OL-E, 3 CWS weather station with weather support requirements and environmental MLTs no later than 15 days prior to exercises and contingency operations.

## **Chapter 3 Weather Services**

### **3-1. Facilities**

OL-E, 3 CWS is located on HPAAF in Building 4907, Post Road. The operations area is in rooms 105 and 106, the SWO's office is in room 115, and the maintenance technician's office is in room 114. The primary Alternate Operating Location (AOL) is in building 4915, Post Road, room 13.

### **3-2. Operating Hours**

a. The weather station is open Monday through Friday excluding federal holidays. The SWO and maintenance technician are available from 0730-1630.

b. Forecasters are routinely on duty from 0600-2200. If/when local 'live fire' training activity is scheduled to stop before 2200 the weather station will close early as a 'good stewardship' practice WRT the efficient and effective use of resources. The weather station will not close earlier than the end of the administrative duty day (1630). Refer to appendix L for contacts and phone numbers.

(1) An "On-Call" forecaster will be recalled after duty hours by the FSOC upon receipt of a weather watch or warning from the 26 OWS that meets OL-E, 3 CWS SWAP criteria (appendix G).

### **3-3. Duty Priorities**

The following is a list of prioritized duties performed by OL-E, 3 CWS forecasters. Individual(s) may alter these priorities if the situation warrants using Risk Management (RM) guidelines/tools, particularly if imminent danger to life and property is expected to occur:

- a. Emergency War Order (EWO) Tasks.
- b. Weather Station Evacuation.
- c. Aircraft /Ground Emergencies.
- d. PMSV Contacts.
- e. SWAP Operations.
- f. WWAs.
- g. Augment Surface Weather Observations.
- h. Meteorological Watch (METWATCH) – "Eyes Forward"/Collaborate with 26 OWS.
- i. Mission Execution Forecast Process (MEFP) – Produce and Disseminate Forecasts.
- j. Pilot Reports (PIREPs).

k. Mission-Scale Meteorological Watch (MISSIONWATCH) Activities.

l. Provide Weather Briefings.

m. Weather Functional Training.

n. Administrative Tasks.

### 3-4. Weather Observations

Weather observations at HPAAF are fully automated unless criteria are met requiring OL-E, 3 CWS forecasters to augment (supplement or back-up) the data. METAR (hourly) and SPECI (for significant changes or occurrences) observations are automatically and continuously disseminated into the military and national weather networks.

a. There are inherent limitations with fully automated observing systems, especially during rapidly changing weather conditions when some delay in reporting cloud ceilings and visibilities may occur.

b. To ensure flight safety OL-E, 3 CWS forecasters and ATC personnel work together to maintain situational awareness of current weather conditions and the automated observations.

c. Under certain conditions, forecasters are required to supplement automated observations. **Supplement** is the process of manually adding observed weather conditions to an automated observation that is beyond the capabilities of the automated observing system to detect and/or report.

(1) OL-E, 3 CWS forecasters will supplement the HPAAF automated observations when:

(a) A Tornado and/or Funnel Cloud is observed or disappears from sight (ends). The immediate reporting of tornados or funnel clouds takes precedent over all other phenomena.

(b) Hail  $\geq \frac{1}{4}$  inch begins or ends.

(c) Volcanic Ash is observed.

(d) Suspended or blowing dust is observed and a Dust Storm warning is in effect.

(e) Ice Pellets, Freezing Rain, or Freezing Drizzle are observed to begin, change intensity, or end.

(2) There are also times when OL-E, 3 CWS forecasters are required to back-up automated observation systems. **Back-up** is the process of manually editing/adding data or dissemination capability when the primary method is not operational, unavailable, or suspected to be providing erroneous data.

(3) There is no requirement to backup HPAAF's automated observing system when the weather station is closed unless tornadic activity is occurring or forecast to occur (i.e. a Tornado watch or warning has been issued for Fort Sill by the 26 OWS or OL-E, 3 CWS).

d. When supplementing or backing up automated observations the forecaster is responsible for the completeness and accuracy of the observations even though the automated observing system generates the report. OL-E, 3 CWS forecasters will maintain situational awareness of current weather conditions and the system-generated observations. In all cases **the highest priority** will be personnel, resource, and flight safety.

### **3-5. Cooperative Weather Watch (CWW)**

AFMAN 15-111, *Surface Weather Observations*, requires AF weather units to establish a CWW program with ATC and other local agencies.

a. HPAAF's CWW encompasses local PIREPs and any occurrence of previously unreported conditions from ATC that are critical to the safety or efficiency of local operations and resources.

b. In lieu of a formally documented letter of agreement, the specifics of the HPAAF CWW program can be found in appendix C. At a minimum the CWW documents:

(1) Procedures for ATC personnel to relay PIREPS to an OL-E, 3 CWS forecaster as soon as practical, within ATC established duty priorities.

(2) Procedures to ensure the airfield runway lights are left on if continuous runway visual range (RVR) reporting is needed. The automated observing system's RVR sensor requires the runway lights be left on to work properly. This practice supports the possibility that an aircraft may divert into HPAAF in an emergency.

### **3-6. Pilot-to-Metro Service (PMSV)**

The PMSV is monitored continuously during the weather station operating hours listed in section 3-2 of this publication on 306.5 UHF. This service allows aircrews to receive current and forecast weather conditions, as well as updates to flight weather briefings.

a. Aviators are strongly encouraged to relay PIREPs via the PMSV. Reports from airborne aircraft are one of the most important sources of current weather information and contribute greatly to improving meteorological support for Army aviation operations.



b. If unable to contact weather personnel through the PMSV, aviators should contact ATC and request personnel pass information, PIREPs, or potential problems with the PMSV radio to the weather station.

c. During PMSV outages or weather station evacuation, ATC personnel will, as their duties permit, monitor the PMSV frequency and pass contact information to the weather station (or AOL). During extended PMSV outages, a NOTAM will be disseminated by the Airfield Operations Officer to highlight the unavailability of the PMSV.

d. Dissemination of PIREPs significant to flying operations and flight safety will be via JET as per example in appendix H.

### **3-7. Dissemination of Weather Information and/or Products**

The 26 OWS and OL-E, 3 CWS forecasters will disseminate weather information through the JET. The JET system is connected to the post local area network (LAN) and is the primary system for disseminating weather information (i.e., weather observations and WWAs) to Fort Sill units and agencies.

a. The FSOC will further disseminate WWAs to subordinate units via telephone and/or other local dissemination systems. Units assigned or attached to Fort Sill will establish procedures to ensure timely dissemination of weather information to subordinate personnel and units through the FSOC. The FSOC maintains the Fort Sill prioritized severe weather notification checklist (refer to example at appendix B).

b. The JET is also connected to the ATC AAAS. Weather information from HPAAFs automated weather sensor array, other observations and forecasts, and WWAs can be viewed through the AAAS.

c. If the JET is inoperative:

(1) The 26 OWS will disseminate WWAs IAW section 2-4 of this publication.

(2) OL-E, 3 CWS will disseminate WWAs issued by Fort Sill forecasters via telephone to:

(a) FSOC.

(b) ATC ARAC.

(3) OL-E, 3 CWS will disseminate automated weather observations to ATC ARAC during weather station operating hours (see paragraph 3-2).

d. Current weather conditions to include active weather watches, warnings and advisories can always be viewed from the OL-E, 3 CWS Intranet website at

<https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws> or the 26 OWS website at <https://26ows.us.af.mil/>.

### **3-8. Evacuation of Weather Station Facilities**

In the event of actual emergencies (i.e., toxic spill, bomb threat or natural disaster) OL-E, 3 CWS personnel may be required to evacuate the HPAAF weather station. OL-E, 3 CWS personnel **will not** evacuate for drills or exercises. When evacuation is necessary, the SWO and weather forecaster(s) will relocate to the primary AOL in Building 4915, Post Road, Room 13, and the weather maintenance technician will relocate to the alternate maintenance facility in Room 12 of the same building (refer to appendix L for telephone numbers), provided it is safe to do so. If Building 4915 is in the 'corridor of evacuation' OL-E, 3 CWS personnel will relocate to another safe location.

a. OL-E, 3 CWS will contact the FSOC, ATC ARAC, Range Control, and the 26 OWS either prior to evacuation (if time permits) or immediately upon arrival at the AOL, and will provide alternate contact phone number(s).

b. All possible means will be implemented to provide uninterrupted weather support to Fort Sill agencies, but some limitations will likely occur.

(1) Aircrew briefing services may be delayed or temporarily unavailable.

(2) PMSV will not be available at the AOL.

(3) ATC ARAC will, as their duties permit, monitor the PMSV frequency and pass contact information to the OL-E, 3 CWS forecaster(s) at the AOL.

(4) OL-E, 3 CWS forecasters will have a limited view of the horizon due to obstructions of buildings and/or hangars that could limit estimations of surface visibility and sky condition. In addition, ceiling heights, wind direction and speed, and altimeter readings may have to be estimated if the automated observing system is not operational.

c. OL-E, 3 CWS forecasters will implement back-up procedures using RM principles to obtain weather situational awareness and continue providing mission-essential functions in support of Fort Sill activities.

d. Upon termination of AOL operations, OL-E, 3 CWS personnel will return to the HPAAF weather station and resume normal operations as the situation dictates.

## **Chapter 4**

### **Mission Weather Support**

#### **4-1. Flight Weather Briefing (FWB)**

a. Requests for FWBs from aircrews on temporary duty (TDY) to Fort Sill can be made in person, by phone, via fax, or e-mail to the weather station. Refer to appendix L for phone numbers/e-mail address.

b. When aircrews on TDY to Fort Sill are operating away from the Fort Sill Reservation, OL-E, 3 CWS forecaster(s) will determine the most effective means of ensuring the aircrew(s) receive mission execution weather information. This support could be provided by reach-back to the weather station or from the servicing AF regional weather center (OWS).

c. FWBs and updates to FWBs will only be provided to the "pilot of record" recorded on the aircrew's flight plan.

d. FWBs are annotated on a DD Form 175-1 or on a local weather briefing log (local flights), as requested by the aviator and IAW Fort Sill Reg. 95-1. At a minimum, FWBs will include the following:

(1) General meteorological situation for the mission area.

(2) Current and forecast weather (including flight hazards and Significant Meteorological Information (SIGMETs) / Airmen's Meteorological Information (AIRMETs)) for takeoff.

(c) Forecasted en route weather (including flight hazards and SIGMETs/AIRMETs).

(d) Forecast conditions at destinations and alternate airfields.

e. The Department of Defense (DD) Form 175-1 will normally be returned to the aircrew via fax or e-mail. The electronic DD Form 175-1 will not contain a briefing time, void time or the initials of the forecaster providing the briefing. The pilot must call back after receipt of the DD Form 175-1 to complete the briefing process. Only then will the forecaster provide the brief time, void time, and his or her initials. The DD Form 175-1 will not be considered complete without these times and initials. If the aircrew does not have access to a fax or e-mail, the DD Form 175-1 will be briefed verbally over the phone.

f. "Local" verbal briefings will be documented by the forecaster on the Aircrew Briefing Log, to include the aircraft type, last 3 numbers of the aircraft tail number or call sign, unit, take-off and/or landing times, MEF number and revision (if applicable), mission weather to include any changes to the current MEF, weather watches, warnings, and/or advisories, brief time, void time, forecaster's initials, and the pilot's initials.

g. Transient aircrews.

(1) OL-E, 3 CWS forecaster(s) may provide FWBs or updates to existing briefings IAW duty priorities for transient aircrews. If the weather station is unable to provide a

briefing, the aircrew will be directed to contact the servicing OWS. Weather station personnel will provide access to a computer and/or provide telephone numbers for the OWS or refer to the FLIP. OL-E, 3 CWS personnel will not deny assistance to an aircrew seeking a FWB.

(2) Transient aircrews should request FWBs from the servicing OWS with a minimum of 2 hours lead time to give the OWS adequate time to examine weather conditions and complete required documentation.

(3) The OWS will complete no-notice and/or short-notice FWBs as time permits depending on current workload, available manpower and duty priorities. No-notice FWBs will be prioritized behind existing requests unless special circumstances warrant a higher priority (i.e., alert, search and rescue, medical evacuation, etc.).

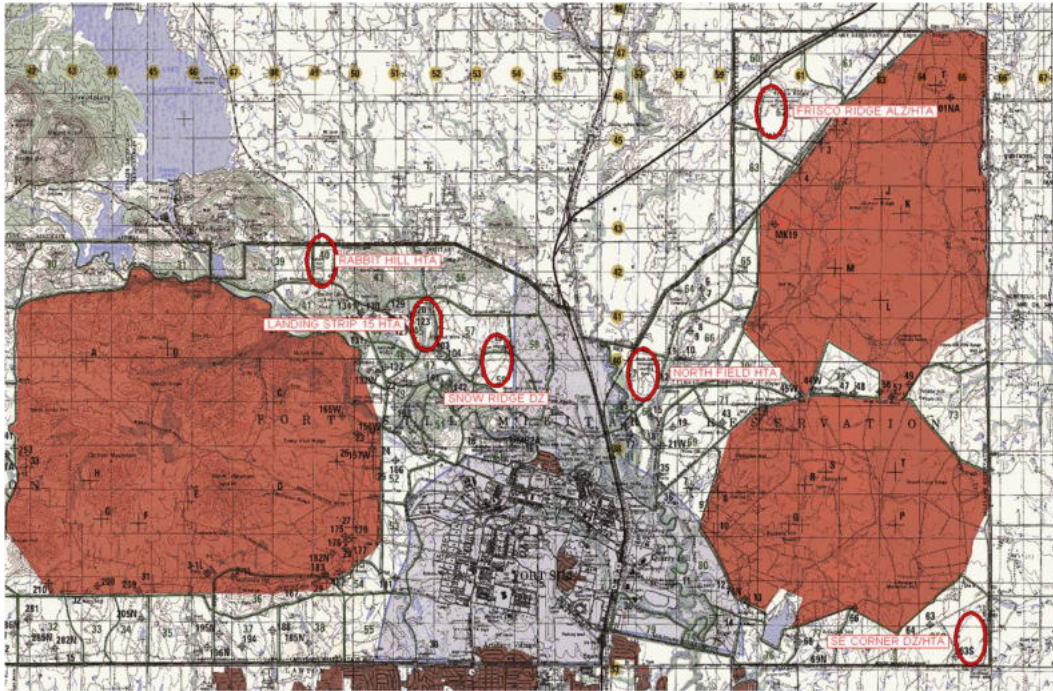
(4) The 26 OWS will provide FWB services to transient aircrews operating within their area of responsibility (AOR) upon request via phone, fax or the 26 OWS flight brief scheduling system accessible through the 26 OWS website at <https://26ows.us.af.mil/>. Refer to appendix L or the DoD FLIP for the 26 OWS contact information.

#### **4-2. Mission Execution Forecast (MEF)**

a. The MEF (refer to example at appendix I, figure I-1) is designed to incorporate the needs of most Fort Sill units into a single mission weather product for the planning and execution of the majority of Fort Sill missions; specifically VFR flight operations within the Local Flying Area (as defined in FS Reg 95-1), live-fire and non-firing Field Artillery & Air Defense Artillery training missions, and ground operations (personnel, maneuver and traffic ability) within the Fort Sill cantonment area.

b. The MEF is tailored to provide mission planning and execution information for the following operating areas/locations (refer to figure 4-1):

(1) The Fort Sill R5601 Military Operating Area (as defined in FS Reg 95-1) to include Henry Post AAF, Field Artillery and Air Defense Artillery ranges (i.e., Quannah Range, West Range and N/S Arbuckle Range), landing strips (i.e., UAS operations at Landing Strip Frisco Ridge (LSFR), drop/landing zones (i.e., Snow Ridge and SE Corner), Helicopter Training Areas (HTAs) (i.e., Rabbit Hill and North Field), etc.



**Figure 4-1. MEF Forecast Areas**

c. This MEF is normally produced twice daily during the weather station operating hours listed in section 3-2 of this publication and will be posted to the OL-E, 3 CWS website at <https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws/> and the WebEOC Board “Mission Execution Forecast”. Each MEF will be valid for 12 hours and will be numbered based on the day with an alphanumeric suffix representing the forecasting shift (Day or Night) that produced the product. For example, the MEF issued on the 25<sup>th</sup> of the month during the Day shift would be numbered “25A” (refer to table 4-1).

**Table 4-1. MEF Times**

MEF	DISSEMINATION TIME	VALID TIME
A	0900L	0900L – 2100L
B	1700L	1700L – 0500L

(1) If/when local ‘live fire’ training activity is scheduled to stop before 2200 (see 3-2 b.) there may be circumstances when the ‘B’ MEF is not issued (e.g., training activity ends before the valid time of the ‘A’ MEF expires). Whether to issue the ‘B’ MEF under these circumstances will be at the discretion of the duty forecaster. On all days that OL-E, 3 CWS is open an ‘A’ MEF will be issued.

NOTE: A ‘C’ MEF will be generated/disseminated during extended hours of operations (contingency support). The dissemination time of this MEF will be midnight local with a 0000L – 1200L valid time.

d. The MEF will be amended (updated) when specific mission types (i.e. Artillery Fires, UAS operations, etc.) are on-going and any of their mission limiting thresholds (MLTs) listed in appendix J:

(1) Occur; was not forecast to occur and is expected to continue.

(2) Is forecasted to occur; does not occur and is no longer expected to occur.

e. Amendments will be numbered with a numeric suffix for each new version (i.e., the second amendment of the 25A MEF would be numbered "25A2.").

#### **4-3. Mission-scale Meteorological Watch (MISSIONWATCH)**

a. MISSIONWATCH is a deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors. The MISSIONWATCH process identifies and alerts decision-makers to changes affecting mission success.

b. OL-E, 3 CWS forecaster(s) will MISSIONWATCH all missions supported from brief time (FWBs) or dissemination time (MEFs) through mission completion using RM concepts during the MISSIONWATCH process.

c. OL-E, 3 CWS forecasters will prioritize missions IAW the following RM category:

(1) High Risk: Highest priority—MLTs in appendix J are observed or expected.

(2) Medium Risk: Middle priority—Environmental conditions observed or expected near MLTs in appendix J.

(3) Low Risk: Lowest priority—MLTs in appendix J are not observed or expected.

d. OL-E, 3 CWS forecaster(s) will place more focus on missions identified as "High Risk" and "Medium Risk".

e. At a minimum, OL-E, 3 CWS forecaster(s) will conduct hourly MISSIONWATCH checks of real-time weather data (i.e., surface observations, PIREPs, satellite imagery, radar) to ensure conditions have not met environmental MLTs.

f. When MLTs in appendix J are expected or observed, OL-E, 3 CWS forecaster(s) will increase the frequency of MISSIONWATCH checks.

g. When MLTs in appendix J may impact mission success and were not originally forecast and/or briefed, OL-E, 3 CWS forecaster(s) will:

(1) Assess the situation and amend impacted products.

(2) Identify alternate possibilities (i.e., alternate execution area or time).

(3) Contact ARAC/flight following and request ATC pass the changes to the aircrew(s) for any airborne aircraft.

(4) Contact supported unit(s) and/or mission commander in any manner possible that will accurately and efficiently relay the mission-limiting condition to the unit(s) and/or mission commander (i.e., phone or PMSV to specific units' flight operations, Range Control, S3).

(5) Upon notifying the supported unit, resume MISSIONWATCH.

h. OL-E, 3 CWS forecaster(s) will inform the 26 OWS, when weather products issued by the 26 OWS do not accurately reflect observed conditions and impact flight safety. This includes supported unit MLTs.

#### **4-4. Space Weather**

a. OL-E, 3 CWS forecasters will use Air Force produced space weather products to determine impacts to High Frequency (HF) and Ultra-High Frequency (UHF) communications, and single-frequency Global Positioning Systems (GPS) in support of mission commanders.

b. Space weather conditions will be included on applicable products. Satellite data and communications systems are particularly sensitive to space weather phenomena, as a result, during significant space weather events, some military systems and/or operations may experience a decreased capability.

c. Mission commanders, aircrews, and other supported agencies should report suspected space weather impacts to the weather station to be forwarded to the Air Force's 557<sup>th</sup> Weather Wing (557 WW) via Air Force Weather Web Service (AFW-WEBS).

#### **4-5. Tropical Storm/Hurricane**

a. The National Hurricane Center (NHC) issues official forecasts for tropical storms and hurricanes. In addition, the 26 OWS produces a Tropical Cyclone-Threat Analysis Product (TC-TAP) derived from the NHC official forecast. OL-E, 3 CWS forecasters will fully utilize and not deviate from the tropical cyclone information (i.e., official forecast position, track, movement, maximum wind speed, or intensity trend) provided by the 26 OWS derived from the NHC.

b. The 26 OWS will serve as primary liaison between NHC and OL-E, 3 CWS.

c. OL-E, 3 CWS forecaster(s) will provide tropical storm/hurricane forecasts and updates to supported organizations as required for mission execution decisions such as evacuation and force protection (refer to example at appendix I, figure I-3).

d. OL-E, 3 CWS forecaster(s) will use local mission execution forecast processes to tailor official tropical storm/hurricane forecasts into a specific product for their supported customers. Tailoring may include local effects of vegetation/ground cover, terrain, and



position relative to the storm. Inland locations may often require the frictional TC-TAP application.

e. OL-E, 3 CWS forecaster(s) will follow Fort Sill, PAO policies and procedures regarding the release of tropical storm/hurricane forecasts to the general public.

f. Forecast outlooks of 48 hours or beyond contain a high degree of uncertainty, are for planning purposes only, and are subject to change.

#### **4-6. Volcanic Ash**

a. OL-E, 3 CWS forecaster(s) will use appropriate theater-specific volcanic ash products from civil Volcanic Ash Advisory Centers (VAAC) and supplement with 2d Weather Squadron (2 WS) products and services.

b. VAAC and 2 WS products are available via AFW-WEBS (select “Volcanic Events” under Standard Products).

[https://weather.af.mil/AFW\\_WEBS/index2.php](https://weather.af.mil/AFW_WEBS/index2.php)

c. OL-E, 3 CWS forecaster(s) will provide volcanic ash forecasts and updates to supported organizations as required for mission execution decisions.

#### **4-7. Climatology**

a. Standard climatological summary data can be viewed from the OL-E, 3 CWS webpages and WebEOC.

b. Additional climatological data for Fort Sill can be obtained by contacting the weather station (refer to appendix L for phone numbers).

c. Climatological support for any location worldwide can also be obtained through OL-E, 3 CWS forecaster(s).

d. Depending on the complexity of requests, data can be prepared in a few hours or up to a week.

#### **4-8. Chemical, Biological, Radiological, Nuclear, and High-yield Explosive (CBRNE)**

a. OL-E, 3 CWS forecaster(s) will provide surface observations or alphanumeric forecasts representative of the location/time of the CBRNE event as requested by the FSOC/Emergency Operations Center (EOC) or other agencies.

b. Weather data (if available) that may be requested by the FSOC/EOC:

(1) Wind speed in Miles Per Hour (mph)



- (2) Wind direction (from) in degrees
- (3) Temperature in Fahrenheit (°F)
- (4) Measurement height above ground in feet or meters (sensor height) if applicable
- (5) Cloud cover [complete cover (OVC), partly cloudy (FEW, SCT, BKN), clear (CLR); or use value 0-10 to represent tenths of the sky covered by clouds]
- (6) Stability class (by letter—U=Unstable, N=Neutral, S=Stable)
- (7) Inversion height if any (feet or meters)
- (8) Humidity (0-100 percent)
- c. Historical climatological data should not be used.
- d. Fort Sill does not require/use traditional Chemical Downwind Messages (CDMs) in response to CBRNE events. In the event a CDM is requested, OL-E, 3 CWS forecaster(s) will obtain/provide CDMs from the 26 OWS or AFW-WEBS IAW local procedures.
- e. Refer to Chapter 5 for additional CBRNE support information.

#### **4-9. Feedback**

- a. Mission planners, aircrews, and other users of weather information are highly encouraged to provide feedback (both positive and negative) to weather station forecaster(s) or the SWO on the quality and/or accuracy of OL-E, 3 CWS products.
- b. The link to the weather station's Survey Monkey page (<https://www.surveymonkey.com/r/7LCBV8P>) is provided with each weather product created ISO on-going or current operations (FWB, MEF, Tropical Storm/Hurricane forecast).
- c. Feedback is critical to ensure Army decision makers and aircrews have accurate and timely weather intelligence to reduce, mitigate or eliminate the risk and enable mission accomplishment. Forecasting is a circular process, much like RM, and OL-E, 3 CWS forecasters must continually evaluate their process to improve the quality of the products provided.

## **Chapter 5**

### **Staff Meteorological Functions**

- a. The SWO will provide or arrange for staff weather support Monday through Friday (except federal holidays) from 0730 to 1630 (or surge as required) to supported units IAW AR 115-10 and this publication. Refer to appendix L for phone numbers.
- b. For after-hours and emergency and/or crisis response, contact the OL-E, 3 CWS forecaster(s) or FSOC.
- c. The SWO advises supported commanders of Air Force weather support capabilities, limitations, and on mitigating and exploiting weather impacts to operations.
- d. The SWO provides weather support and assistance in preparing weather annexes to plans and orders of supported units.
- e. The SWO provides weather data/briefings for periodic flight and ground safety (or instrument refresher), seasonal training, planned exercises, operations, pre-deployment, large aircraft movements, etc. upon request. These requests should be coordinated as far in advance as possible.
- f. The SWO monitors space weather products and notifies supported units when conditions may impact military operations.
- g. The SWO provides or arranges for climatological studies and analyses in support of planned exercises, operations and commitments.
- h. The SWO develops specific weather support procedures to provide or arrange for the dissemination of weather information to supported unit(s) such as weather observations and forecast products or the integration of weather information into the supported units' command and control system(s).
- i. The SWO solicits feedback from supported customers on the quality and/or accuracy of OL-E, 3 CWS weather products.
- j. The SWO provides weather support for CBRNE operations to include:
  - (1) Serve as weather subject matter expert to CBRNE operations IAW roles and responsibilities laid out in AFI 15-128.
  - (2) Meet routinely with installation Emergency Management (EM), Fire Emergency Services (FES), and other Fort Sill force protection agencies.
  - (3) Become familiar with the CBRNE plume models (i.e., Incident Management System (IMS) and the Consequence Assessment Tool) utilized by the Fort Sill Garrison

EM/CBRNE Operations Specialist and uses garrison commander/senior commander decision cycles.

(4) Understand, recommend and provide the most appropriate weather data type for EM's use to run their model(s) to assess a real-time event which has occurred at a specific location and time (i.e., model data from DTRA, local data provided by OL-E, 3 CWS forecaster(s) or supporting SWO).

(5) Recommend historical climatological data not be used except for training or long-term planning where "canned" scenarios are being used.

(6) Ensure if surface observations or alphanumeric forecasts are requested and provided, they are representative of the location/time of the CBRNE event.

(7) Work closely with the FSOC/EOC, and EM/CBRNE operations specialist to ensure the supported commander gets a consistent picture.

(8) In the event a CDM is requested by the FSOC/EOC or other support agencies, the SWO or OL-E, 3 CWS forecaster(s) will obtain/provide CDMs from the 26 OWS or AFW-WEBS IAW local procedures.

k. The SWO participates on boards and committees where weather has a potential impact and assists, upon request, Army Aircraft Accident Investigation Boards.

## **Appendix A**

### **References**

#### **Required Publications**

##### **AR 95-1**

Flight Regulations (Cited in Appendix D)

##### **AR 115-10 (AFJI 15-157)**

Weather Support for the U.S. Army (Cited in Summary and para 1-1.)

##### **Fort Sill Reg 95-1**

General Provisions and Flight Regulations (Cited in paras 2-6 m.(3), 4-1 d., 4-2 a., 4-2 b. (1), and Appendix D)

#### **Related Publications**

##### **AFI 11-202 Volume 3**

General Flight Rules (Cited in Appendix D)

##### **AFMAN 15-111**

Surface Weather Observations (Cited in paras 2-3 a., 3-5, and Appendix D)

##### **AFI 15-128**

Air and Space Weather Operations – Roles and Responsibilities (Cited in paras 1-1 and 5 j.(1))

##### **AFMAN 15-129**

Air and Space Weather Operations (Cited in paras 1-1, 2-3 c., 2-4 a. (1), Appendix E, and Appendix G)

#### **Forms**

##### **DD Form 175-1**

Flight Weather Briefing (Cited in paras 4-1 d. and 4-1 e.)

## Appendix B Weather Notification

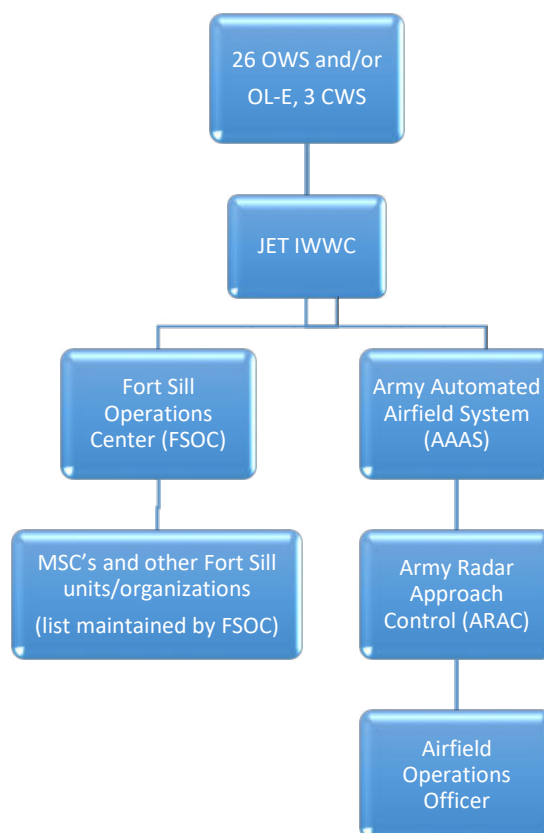
### B-1. Dissemination

a. All weather watches, warnings and advisories are disseminated to Fort Sill units and agencies IAW this publication and FSOC and OL-E, 3 CWS local procedures. The FSOC will maintain the notification list of Major Subordinate Commands (MSCs) and other Fort Sill units/organizations.

(1) Figure B-1 (below) is an example of the Fort Sill weather notification pyramid.

b. When weather watches and warnings are issued for Fort Sill, by either the 26 OWS or OL-E, 3 CWS forecaster(s), the FSOC will send an e-Mail message via weather notification distribution list (Commanders, MSCs and our partners in excellence).

(1) DES (FSOC as alternate) will activate the Mass Notification System in the event of a Tornado Warning.



**Figure B-1. Notification Pyramid**

## Appendix C

## **Cooperative Weather Watch (CWW)**

### **C-1. CWW Program**

CWW is the name given for the collaboration between weather personnel, air traffic control (ATC) personnel, and other trusted agents, in identifying significant weather changes. The primary concern is local PIREPs and any occurrence of previously unreported weather conditions that are critical to the safety or efficiency of other operations and resources.

a. Fort Sill's CWW is a method of assisting OL-E, 3 CWS forecasters performing a basic weather watch. This requires ATC, Range Operations, and DES personnel to help monitor weather conditions.

b. ATC personnel will:

(1) Solicit and relay PIREPs received to OL-E, 3 CWS forecasters as soon as practical within ATC established duty priorities.

(2) Provide OL-E, 3 CWS forecasters with radar reports (upon request) on precipitation echoes.

(3) Notify OL-E, 3 CWS forecasters of active runway changes.

(4) Notify OL-E, 3 CWS forecasters immediately of all aircraft emergencies, mishaps, or accidents.

(5) Ensure the FSOC recalls the "On-Call" forecaster (refer to appendix L for phone numbers.) during weather station non-duty hours (refer to Chapter 3) when an aircraft/ground mishap occurs on or near Fort Sill.

(6) Conduct a radio check, upon request, over the PMSV radio frequency.

(7) Monitor the PMSV radio frequency during outages and relay information to/from OL-E, 3 CWS forecasters.

(8) Leave the runway and approach lights switches set on step 3, but off unless needed, to allow the FMQ-19 to continue reporting RVR. This is encouraged in case of an emergency aircraft divert into HPAAF.

(9) Make available the use of an ATC vehicle for the OL-E, 3 CWS maintenance technician to respond to automated weather sensor array outages in the event an airfield operations vehicle is unavailable or the use of an airfield operations vehicle (2-wheel drive) is unfeasible.

(9) Place the sensor switch on the Beacon Monitor Rack to the active runway.

(10) Provide a basic orientation of ATC facilities to newly assigned OL-E, 3 CWS personnel.

c. Range Operations and DES personnel will report the following conditions to OL-E, 3 CWS forecaster(s) when observed on Fort Sill or within the Fort Sill Ranges:

(1) Tornado or Funnel Cloud.

(2) Any damage or injury caused by weather.

d. OL-E, 3 CWS forecasters will:

(1) Notify ATC personnel immediately following sighting of an Aircraft Mishap.

(2) Provide ATC personnel with weather facility familiarization and local phenomenon training upon request.

(3) Task-certify ATC personnel to take limited weather observations.

(a) The ATC Facility Chief will coordinate this training with the SWO.

## **Appendix D**

### **Special (SPECI) and LOCAL Observation Criteria**

#### **D-1. References**

- a. Air Force Manual (AFMAN) 15-111 (*Surface Weather Observations*).
- b. Air Force Instruction (AFI) 11-202, Volume 3 (*General Flight Rules*).
- c. DOD Flight Information Publications (FLIPs).
- d. Army Regulation (AR) 95-1 (*Flight Regulations*).
- e. Fort Sill Regulation (FSR) 95-1 (*Flight Regulations*).
- f. Local operating procedures.

#### **D-2. SPECI observation criteria**

a. Visibility. Surface visibility (statute miles) as reported in the body of the report decreases to less than, or if below, increases to equal or exceed:

- (1) 3 miles (AFMAN 15-111)
- (2) 2 miles (AFMAN 15-111 & DOD FLIPS)
- (3) 1  $\frac{3}{4}$  miles (DOD FLIPS)
- (4) 1  $\frac{1}{2}$  miles (DOD FLIPS)
- (5) 1  $\frac{1}{4}$  miles (DOD FLIPS)
- (6) 1 mile (AFMAN 15-111 & DOD FLIPS)
- (7)  $\frac{3}{4}$  mile (DOD FLIPS)
- (8)  $\frac{1}{2}$  mile (DOD FLIPS – Airfield Minimum)
- (9)  $\frac{1}{4}$  mile (AR 95-1)

b. Ceiling. All heights are measured above ground level (AGL). The ceiling (rounded off to reportable values) forms or dissipates below, decrease to less than, or if below, increases to equal or exceed:

- (1) 3,000 feet AGL (AFMAN 15-111)
- (2) 2,000 feet AGL (AFI 11-202 Vol. 3)



- (3) 1,500 feet AGL (AFMAN 15-111)
- (4) 1,000 feet AGL (AFMAN 15-111)
- (5) 800 feet AGL (AFMAN 15-111)
- (6) 700 feet AGL (AFMAN 15-111)
- (7) 600 feet AGL (DOD FLIPS)
- (8) 500 feet AGL (AFMAN 15-111 & DOD FLIPS)
- (9) 400 feet AGL (DOD FLIPS)
- (10) 200 feet AGL (DOD FLIPS – Airfield Minimum)
- (11) 100 feet AGL (AR 95-1)

c. Sky condition. A layer of clouds or obscuring phenomena aloft is observed below **800 feet** AGL and no layer aloft was reported below 800 feet AGL in the previous METAR or SPECI.

d. Wind shift. Wind direction change by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.

e. Squall. A strong wind characterized by a sudden onset in which the wind speed increases by at least 16 knots and is sustained at 22 knots or more for at least 1 minute.

f. Volcanic eruption. Eruption or volcanic ash cloud is first noted.

g. Thunderstorm (occurring at the station). A SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.

(1) Thunderstorm begins.

(2) Thunderstorm ends.

h. Precipitation. Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (i.e., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (i.e., snow changing to rain and snow).

(1) Hail begins or ends.

(2) Freezing precipitation begins, ends or changes in intensity.

(3) Ice pellets begin, end or changes in intensity.

(4) Any other type of precipitation begins or ends.

i. Tornado or Funnel Cloud. If a tornado or Funnel Cloud:

(1) Is observed.

(2) Disappears from sight or ends.

j. Runway visual range (RVR). Runway 35 only. RVR decreases to less than or, if below, increases to equal or exceed:

(1) 6,000 feet (AFMAN 15-111 & DOD FLIPS)

(2) 5,000 feet (AFMAN 15-111 & DOD FLIPS)

(3) 4,000 feet (DOD FLIPS)

(4) 2,400 feet (AFMAN 15-111 & DOD FLIPS)

(5) 2,000 feet (AFMAN 15-111)

(6) 1,200 feet (AR 95-1)

(7) 1,000 feet (AFMAN 15-111)

(8) 600 feet (AFMAN 15-111)

NOTE: A SPECI is required when RVR is first determined as unavailable (RVRNO) for Runway 35, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

k. Upon resumption of observing functions. A SPECI observation will be taken within 15 minutes after the OL-E, 3 CWS forecaster(s) returns to duty following a break in observing coverage, or augmentation at the observing location, unless a METAR observation is filed during that 15 minute period.

l. Aircraft Mishap. When the automated weather sensor array is operating in an augmented mode (refer to paragraph 3-4. c. Supplement and d. Back-up) OL-E, 3 CWS forecaster(s) will take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing location.

### **D-3. Local observation criteria**

a. A LOCAL is an unscheduled observation, reported to the nearest minute, not meeting SPECI criteria. LOCALs will only be taken when the SWO determines there is a requirement in support of local operations or OPSEC considerations. .

b. There is no requirement for LOCAL observations under normal operations as the automated weather sensor array operates in AUTO mode.

c. During back-up (refer to paragraph 3-4. d.) operations of the pressure values, altimeter setting (ALSTG) observations will be taken at an interval not to exceed **35 minutes** when there has been a change of **0.01 inch Hg** (0.3 hPa) or more since the last ALSTG value.

(1) A METAR or SPECI taken within the established time interval will meet this requirement or the observation may be taken and disseminated as a LOCAL observation following the METAR format.

(2) All LOCAL ALSTG reports will be prepared and disseminated as soon as possible after the relevant altimeter setting change is observed.

## **Appendix E Watches and Warnings**

### **E-1. General**

a. Fort Sill's watch and warning criteria were established based on supported unit supplied critical weather elements and Air Force directives.

(1) Some of Fort Sill's watch & warning criteria deviate from standard AF criteria as defined in AFMAN15-129.

(2) Those that deviate from standard AF criteria are annotated with an asterisk (\*).

b. The watch can be thought of as a "heads up," at which time agencies need to consider implementing required protective actions should a subsequent warning be issued. Watches normally precede a warning.

c. Each watch and warning will be numbered by month and then sequentially (i.e., 02-008 would be the eighth watch or warning issued for the month of February).

d. In rare circumstances, OL-E, 3 CWS forecaster(s) may issue warnings for forecast phenomena when imminent weather conditions pose a hazard to life and property and notification to the 26 OWS is not possible. The OL-E, 3 CWS forecaster(s) will contact the 26 OWS as soon as possible after local dissemination.

e. Warnings will be cancelled when the criteria is no longer occurring or forecast to occur. Watches will be cancelled when the potential for the criteria no longer exists.

f. Watches and warnings will be issued for the entire Fort Sill Reservation.

**Exception:** The observed lightning watch/warning is for aircraft refueling support and is issued for within 7nm of the HPAAF runway complex.

g. Watches and warnings will include maximum wind speed, maximum hail size, maximum rain/snow accumulation expected.

h. Only one 'forecast' warning will be in effect at a given time for the same criteria. This does not prohibit the use of a watch and a forecast warning being valid at the same time for different thresholds of the same criteria (e.g., a watch for Damaging Winds and a warning for Strong Winds both valid at the same time).

i. The lightning watch and the observed lightning warning are stand-alone criteria and do not supersede watches and/or warnings previously issued for other criteria.

j. OL-E, 3 CWS' JET Portal has been configured to automatically issue and cancel the observed lightning warning.

## E-2. Watches

The 26 OWS issues watches for Fort Sill when the potential exists for the criteria listed in Table E-1 (below) to occur within the Fort Sill cantonment area or range boundaries.

**Table E-1. Watches**

<b>Criteria</b>	<b>Impact</b>	<b>Desired Lead-time</b>
<b>Tornado / Funnel Cloud</b>	Immediate threat of catastrophic damage to personnel and property.	<b>1 hour</b>
<b>Severe Thunderstorm</b> Damaging Wind $\geq 50$ *KT associated with thunderstorms -AND/OR- Damaging Hail $\geq 1$ * inch	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft/equipment.	<b>3 hours</b>
<b>Moderate Thunderstorm</b> Strong Wind $\geq 35$ KT but $< 50$ KT associated with thunderstorms -AND/OR- Large Hail $\geq \frac{1}{4}$ inch but $< 1$ inch	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	<b>2 hours</b>
<b>Damaging Wind</b> Surface wind not associated with thunderstorm $\geq 50$ *KT	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	<b>3 hours</b>
<b>Strong Wind</b> Surface wind not associated with thunderstorm $\geq 35$ KT but $< 50$ KT	Increased risk to exposed personnel; increased risk of damage to unsecured property.	<b>2 hours</b>
<b>Heavy Rain</b> $\geq 2$ inches within 12 hours	Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel.	<b>2 hours</b>
<b>Heavy Snow</b> $\geq 8$ inches within 24 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	<b>6 hours</b>
<b>Snow</b> $\geq 6$ inches within 12 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	<b>4 hours</b>

<b>Freezing Precipitation</b> Liquid precipitation falls and produces glaze ice on exposed surfaces accumulating > 0.10 inches	Range of impacts dependent on precipitation type/intensity Examples: Light freezing drizzle increases risk of unsafe driving conditions and disrupts airfield/maneuver activities and effects can be mitigated. Moderate or greater intensity freezing rain (ice storm) poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated.	<b>3 hours</b>
<b>Blizzard Conditions</b> Falling and/or blowing snow AND visibility $\leq \frac{1}{4}$ mile AND winds $\geq 30$ knots lasting at least 3 hrs.	Imposes significant risk to personnel movement; significant risk to maneuver or flight line activities.	<b>3 hours</b>
<b>Dust-Storm</b> Visibility $\leq 5/8$ mile in blowing dust	Disrupts personnel movement and aviation operations.	<b>2 hours</b>
<b>Lightning</b> Lightning within 7* miles of HPAAF	Immediate threat to exposed personnel; increased risk of damage to equipment and delay in operations.	<b>30 minutes</b>

### E-3. Warnings.

The 26 OWS issues warnings for Fort Sill when the criteria listed in Table E-2 (below) is forecast to occur within the Fort Sill cantonment area or range boundaries.

**Table E-2. Warnings**

<b>Criteria</b>	<b>Impact</b>	<b>Desired Lead-time</b>
<b>Tornado / Funnel Cloud</b> (radar detected <b>or</b> visually observed) AND threatening Fort Sill	Immediate threat of catastrophic damage to personnel and property.	<b>15 minutes</b>
<b>Severe Thunderstorm</b> Damaging Wind $\geq 50$ *KT associated with thunderstorms -AND/OR- Damaging Hail $\geq 1$ * inch	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft/equipment.	<b>1 hour</b>
<b>Moderate Thunderstorm</b> Strong Wind $\geq 35$ KT but $< 50$ KT associated with thunderstorms -AND/OR- Large Hail $\geq \frac{1}{4}$ inch but $< 1$ inch	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	<b>1 hour</b>
<b>Damaging Wind</b> Surface wind not associated with thunderstorm $\geq 50$ *KT	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	<b>1 hour</b>
<b>Strong Wind</b> Surface wind not associated with thunderstorm $\geq 35$ KT but $< 50$ KT	Increased risk to exposed personnel; increased risk of damage to unsecured property.	<b>1 hour</b>
<b>Heavy Rain</b> $\geq 2$ inches within 12 hours	Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel.	<b>1 hour</b>
<b>Heavy Snow</b> $\geq 8$ inches within 24 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	<b>1 hour</b>
<b>Snow</b> $\geq 6$ inches within 12 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	<b>1 hour</b>

<b>Freezing Precipitation</b> Liquid precipitation falls and produces glaze ice on exposed surfaces accumulating > 0.10 inches	Range of impacts dependent on precipitation type/intensity Examples: Light freezing drizzle increases risk of unsafe driving conditions and disrupts airfield/maneuver activities and effects can be mitigated. Moderate or greater intensity freezing rain (ice storm) poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated.	<b>1 hour</b>
<b>Blizzard Conditions</b> Falling and/or blowing snow AND visibility $\leq \frac{1}{4}$ mile AND winds $\geq 30$ knots lasting at least 3 hrs.	Imposes significant risk to personnel movement; significant risk to maneuver or flight line activities.	<b>1 hour</b>
<b>Dust-Storm</b> Visibility $\leq \frac{5}{8}$ mile in blowing dust	Disrupts personnel movement and aviation operations.	<b>1 hour</b>
<b>Lightning</b> Lightning within 7* miles of HPAAF	Immediate threat to exposed personnel; increased risk of damage to equipment and delay in operations.	<b>As observed</b>



## Appendix F Advisories

### F-1. General

a. Fort Sill's advisories were established based on critical weather elements supplied by supported units. Advisory criteria may change as operational requirements change.

b. Each advisory will be numbered by month and then sequentially (i.e., 02-008 would be the eighth advisory issued for the month of February).

c. Fort Sill's advisories are "observed" advisories, meaning when the condition is observed by weather radar, weather sensors, or PIREPs, the advisory will be issued. It will be valid "Until Further Notice" and cancelled when the condition is no longer occurring.

d. OL-E, 3 CWS' JET Portal has been configured to automatically issue and cancel the lightning and temperature advisories.

### F-2. Advisories

OL-E, 3 CWS forecaster(s) (26 OWS during weather station non-duty hours) issue "observed" advisories when criteria listed in table F-1 occur at Fort Sill.

**Table F-1. Advisories**

Criteria	Area Affected
<b>Lightning within 25 miles of HPAAF</b>	Falcon/Quannah Range, West Range, N/S Arbuckle Range, 6000 Training Area & Fort Sill Garrison
<b>Wind Chill Temperature <math>\leq -1^{\circ}\text{C}</math> (<math>31^{\circ}\text{F}</math>)</b>	
<b>Wind Chill Temperature <math>\leq -29^{\circ}\text{C}</math> (<math>-20^{\circ}\text{F}</math>)</b>	
<b>Temperature <math>\geq 31^{\circ}\text{C}</math> (<math>88^{\circ}\text{F}</math>)</b>	
<b>Temperature <math>\leq -9^{\circ}\text{C}</math> (<math>16^{\circ}\text{F}</math>)</b>	

## Appendix G

### Severe Weather Action Procedures (SWAP)

#### G-1. General

The OL-E, 3 CWS weather station is manned with at least one certified forecaster during the hours identified in paragraph 3-2.

a. To help mitigate the threat of severe and/or mission-limiting weather, OL-E, 3 CWS will maintain procedures IAW AFMAN 15-129 to ensure sufficient personnel are recalled and/or available during potential and/or actual severe weather events as listed in Table G-1 (below).

**Table G-1. SWAP**

Criteria	Impact	OL-E, 3 CWS will:
<b>Tornado / Funnel cloud</b> (detected by radar or visually observed) AND threatening the Fort Sill Garrison or R5601 Range Boundaries	Immediate threat of catastrophic damage to personnel and property	Implement SWAP if/when a Tornado WATCH <b>is valid</b> or a Tornado Warning has been issued by the 26 OWS.
<b>Severe Thunderstorm</b> <u>Damaging Wind</u> GTE 50KT associated with thunderstorms -AND/OR- <u>Damaging Hail</u> GTE 1 inch	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft and equipment	Implement SWAP if/when a Severe Thunderstorm Warning has been issued by the 26 OWS
<b>Damaging Wind</b> Surface wind not associated with thunderstorm GTE 50KT	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment	Implement SWAP if/when a Damaging Wind Warning has been issued by the 26 OWS
<b>Freezing Precipitation</b> Accumulating > 0.10 inches	Disrupts personnel movement or flightline activities; Poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated as conditions worsen; icing on roads—hazard to driving; icing on aircraft / equipment—delay or curtailment of operations	Implement SWAP if/when a Freezing Precipitation Warning has been issued by the 26 OWS.

b. SWAP may be activated at the discretion of the OL-E, 3 CWS forecaster(s), should they feel they need additional assistance during an operational mission(s) or significant

event such as response to natural or man-made disaster (i.e., CBRNE) where additional manpower is needed to meet customer requirements.

c. OL-E, 3 CWS will maintain risk management procedures to enable forecasters to focus activities and allocate resources to help enhance the overall effectiveness of weather station operations.

d. Upon activation of SWAP, OL-E, 3 CWS forecasters will divide duties IAW local procedures to ensure a heightened watch over the weather situation and to enhance interaction with supported units and the 26 OWS.

## Appendix H

### Examples of Alpha-Numeric Products

#### H-1. General

Table H-1 (below) depicts examples of weather products disseminated to Fort Sill agencies by the 26 OWS and/or OL-E, 3 CWS.

**Table H-1. Examples**

Product	Example	Explanation
Weather Observation	METAR KFSI 151355Z AUTO 02014KT 10SM FEW035 SCT100 BKN250 29/22 A3037 RMK AO2 SLP289 T02920220	<ul style="list-style-type: none"> <li>• METAR: Type of observation (may also be SPECI or LOCAL)</li> <li>• KFSI: Location identifier for HPAAF</li> <li>• 151355Z: Date (15) and Time (1355Z) of observation (UTC)</li> <li>• AUTO: Designates observation is fully automated (AUTO designator is removed when observation is supplemented or backed up – refer to section 3-4, this regulation)</li> <li>• 02014KT: Wind direction from 020 degrees (magnetic) at 14 knots</li> <li>• 10: Prevailing visibility (statute miles)</li> <li>• FEW035: Clouds less than 3/8th total cloud cover at 3,500 feet AGL</li> <li>• SCT100: Clouds 3/8 to 4/8ths total cloud cover at 10,000 feet AGL</li> <li>• BKN250: Clouds 5/8 to 7/8ths total cloud cover at 25,000 feet AGL</li> <li>• 29/22: Temperature and dew point (degrees Celsius)</li> <li>• A3037: Altimeter setting (inches of mercury)</li> <li>• RMK: Significant remarks – automated system indicator (AO2A when observation is supplemented or backed up)</li> <li>• SLP289: Sea level pressure (millibars)</li> <li>• T02920220: temperature and dew point to the tenth of a degree (C)</li> </ul>
PIREP	KFSI UUA /OV KFSI 360005/TM 1440/FL220/ TP C12/SK BKN012- TOP045/WX FV99SM/TA M25/WV 24085KT/TB NEG/IC LGT RIME/RM LLWS +25KT DURC KFSI	<ul style="list-style-type: none"> <li>• KFSI: Location identifier for HPAAF</li> <li>• UUA: Urgent PIREP indicator (UA = Routine PIREP)</li> <li>• OV KFSI360005: Location of report; 5 nautical miles north of HPAAF</li> <li>• TM 1440: Time of report 1440 UTC</li> <li>• FL220: Aircraft altitude - 22,000 feet MSL</li> <li>• TP C12: Type of aircraft</li> <li>• SK BKN012-TOP045: Clouds 5/8 to 7/8ths total cloud cover at 1,200 feet MSL; tops of clouds 4,500 feet MSL</li> <li>• WX FV99SM: Flight-level visibility and weather = unrestricted visibility in statute miles</li> <li>• TA M25: Outside air temperature at flight level minus 25 degrees Celsius</li> <li>• WV 24085: Flight level wind direction and speed (from 240 degrees at 85 knots)</li> <li>• TB NEG: Turbulence = negative turbulence (none)</li> <li>• IC LGT RIME : Light rime icing at flight level</li> <li>• RM LLWS +25KT DURC KFSI: Remarks Low-level Wind Shear with 25 knot gain in airspeed during climb from HPAAF</li> </ul>

Weather Watch	WEATHER WATCH 09-006 FOR FORT SILL (KFSI) VALID 13/1900Z (13/1400L) TO 14/0000Z (13/1900L) POTENTIAL FOR SEVERE THUNDERSTORMS WITH DAMAGING WINDS GREATER THAN OR EQUAL TO 50 KTS. FORECAST VALUE 55 KTS. AND DAMAGING HAIL GREATER THAN OR EQUAL TO 1 IN. FORECAST VALUE 1 1/2 IN. EXISTS WITHIN THE CANTONMENT AREA OR RANGE BOUNDARIES	<ul style="list-style-type: none"> <li>• WEATHER WATCH 09-006 FOR FORT SILL (KFSI): Sixth weather watch issued by the 26 OWS for Fort Sill for the month of September VALID 13/1900Z (13/1400L) TO 14/0000Z (13/1900L): Valid Time of expected conditions</li> <li>• POTENTIAL FOR SEVERE THUNDERSTORMS WITH DAMAGING WINDS GREATER THAN OR EQUAL TO 50 KTS. FORECAST VALUE 55 KTS. AND DAMAGING HAIL GREATER THAN OR EQUAL TO 1 IN. FORECAST VALUE 1 1/2 IN. EXISTS WITHIN THE CANTONMENT AREA OR RANGE BOUNDARIES: Specific weather watch conditions</li> </ul>
Weather Warning	WEATHER WARNING 09-006 FOR FORT SILL (KFSI) VALID 13/1900Z (13/1400L) TO 14/0000Z (13/1900L) SEVERE THUNDERSTORMS WITH DAMAGING WINDS GREATER THAN OR EQUAL TO 50 KTS. FORECAST VALUE 55 KTS. AND DAMAGING HAIL GREATER THAN OR EQUAL TO 1 IN. FORECAST VALUE 1 1/2 IN. ARE FORECAST WITHIN THE CANTONMENT AREA OR RANGE BOUNDARIES. weather watch 09-006 remains in effect	<ul style="list-style-type: none"> <li>• WEATHER WARNING 09-006 FOR FORT SILL (KFSI): Sixth weather warning issued by the 26 OWS for Fort Sill for the month of September VALID 13/1900Z (13/1400L) TO 14/0000Z (13/1900L): Valid Time of expected conditions</li> <li>• SEVERE THUNDERSTORMS WITH DAMAGING WINDS GREATER THAN OR EQUAL TO 50 KTS. FORECAST VALUE 55 KTS. AND DAMAGING HAIL GREATER THAN OR EQUAL TO 1 IN. FORECAST VALUE 1 1/2 IN. ARE FORECAST WITHIN THE CANTONMENT AREA OR RANGE BOUNDARIES: Specific weather conditions expected or occurring weather watch 09-006 remains in effect: Status of other current (active) watches, warnings, and/or advisories</li> </ul>
Weather Advisory	WEATHER ADVISORY 06-002 FOR FORT SILL (KFSI) VALID 20/1830Z (20/1330L) UFN OBSERVED TEMPERATURE GREATER THAN OR EQUAL TO 31C AT HENRY POST ARMY AIRFIELD.	<ul style="list-style-type: none"> <li>• WEATHER ADVISORY 06-002 FOR FORT SILL (KFSI): Second weather advisory issued by OL-E, 3 CWS for Fort Sill for the month of June</li> <li>• VALID 20/1830Z (20/1330L) UFN: Observed advisory meaning conditions are occurring and the advisory is valid until further notice</li> <li>• OBSERVED TEMPERATURE GREATER THAN OR EQUAL TO 31C AT HENRY POST ARMY AIRFIELD: Specific weather conditions occurring</li> </ul>

## **H-2. Legend**

The following is an explanation of terms contained in Table H-1 (above):

A – Observed altimeter setting

AGL – above ground level coverage

BKN – broken (as in sky condition of 5/8ths to 7/8ths cloud coverage)

C – Celsius

DURC – during climb

FEW – few (as in sky condition of 1/8ths to 2/8ths cloud coverage)

FL – flight level

FV – flight level visibility

HPAAF – Henry Post Army Airfield

IC – icing

IN – inches

KFSI – ICAO locator for Henry Post Army Airfield

KT – knots

L – Local time

LGT – light

METAR – aviation routine weather report

MSL – meters above sea level

NEG – negative

PIREP – pilot report

RM – remarks follow

SCT – scattered (as in sky condition of 3/8ths to 4/8ths cloud coverage)

SK – sky condition

SM – statute miles

SPECI – special weather report

TA – outside air temperature

TB – turbulence

TM – time

TP – aircraft type

UFN – until further notice

UA – Routine PIREP

UUA – Urgent PIREP

WV – flight level wind direction and speed

WX – weather at flight level

Z – Zulu time

## Appendix I Samples of Mission Weather Products

### I-1. General

The Mission Execution Forecast (MEF), 5-Day Outlook, and Severe Weather Threat are depicted below as samples of the quality of weather support & services provided to Fort Sill by OL-E, 3 CWS.

a. Mission weather products are available on the OL-E, 3 CWS webpages <https://sill-www.army.mil/weather/> and/or <https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws/>.

b. Mission weather products are available on the Fort Sill WebEOC weather boards.



		<h1>Mission Execution Forecast</h1>										<h2>Fort Sill Weather Operations</h2> <p>OL-E, 3rd Combat Weather Squadron</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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<b>Forecaster</b> Robinson		<b>Customer Feedback</b>  Please provide feedback: <a href="https://www.surveymonkey.com/r/7LCBV8P">https://www.surveymonkey.com/r/7LCBV8P</a>		<b>Flight Hazards</b>  See 26th OWS: <a href="https://26ows.us.af.mil/product/hazards/">https://26ows.us.af.mil/product/hazards/</a>		<b>Advisory / Warning / Watch</b>  See 26th OWS: <a href="https://26ows.us.af.mil/tech_ref/utp/index_utp.cfm?utp_id=52">https://26ows.us.af.mil/tech_ref/utp/index_utp.cfm?utp_id=52</a>		<b>Solar / Lunar Data</b> BMNT: 0558L MOONRISE: 0454L SUNRISE: 0653L MOONSET: 1500L SUNSET: 1836L MOON PCT: 11% EENT: 1930L <b>Oklahoma Fire Weather</b> <b>NWS</b> <b>OK-FIRE</b>						<b>Space Weather</b> GPS: Unlikely impact UHF: Unlikely impact HF: Unlikely impact		<b>Tropical Weather</b>  None		<b>Mission</b>  Equipment:  FA		<b>Briefing Record</b> Brief time/initials:  Void time/initials:  Rebrief/initials:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Figure I-1. Mission Execution Forecast





# Fort Sill

March Climatology  
Avg Hi: 69F Avg Low: 44F  
Avg Precip: 2.3 Inches

## 5-Day Weather Outlook & Effects

### FORT SILL 5-DAY FORECAST

AS OF 0000 HRS LOCAL 09 MAR 21

	Wed 10 Mar 21		Thu 11 Mar 21		Fri 12 Mar 21		Sat 13 Mar 21		Sun 14 Mar 21	
12H PRECIP	Trace	0.10 in	0.00 in	0.00 in	0.00 in	0.25 in	0.70 in	0.70 in	0.20 in	0.50 in
TEMPS	LO: 61F/16C DP: 63F/11C RH: 72%	HI: 79F/26C DP: 64F/19C RH: 42%	LO: 63F/17C DP: 66F/19C RH: 77%	HI: 81F/27C DP: 67F/14C RH: 45%	LO: 61F/16C DP: 64F/19C RH: 77%	HI: 75F/24C DP: 69F/19C RH: 67%	LO: 41F/5C DP: 41F/5C RH: 100%	HI: 66F/19C DP: 67F/14C RH: 73%	LO: 64F/18C DP: 67F/14C RH: 77%	HI: 66F/19C DP: 69F/19C RH: 78%
WINDS	↑ 12G22 KTS	↑ 20G30 KTS	↑ 12G18 KTS	↑ 12 KTS	↑ 12G22 KTS	↑ 15G25 KTS	↓ 20G30 KTS	↓ 25G35 KTS	↑ 20G30 KTS	↑ 20G30 KTS
X-WINDS	0019 LAR: 4 KTS	0019 LAR: 5 KTS	0019 LAR: 3 KTS	0019 LAR: 1 KTS	0019 LAR: 1 KTS	0019 LAR: 1 KTS	0019 LAR: 10 KTS	0019 LAR: 12 KTS	0019 LAR: 23 KTS	0019 LAR: 23 KTS
SKY/IS/WX	7 SM / 1000FT	7 SM / 1000FT	7 SM / 1000FT	7 SM / 25000FT	7 SM / 1000FT	4 SM / 1000FT	7 SM / 1000FT	7 SM / 2000FT	7 SM / 2000FT	7 SM / 2000FT
CONDITIONS	SCATTERED SHIMERS	RAINFALLERS	CLOUDY	MOSTLY CLOUDY	RAIN	THUNDERSTORMS	SCATTERED TS/MS	SCATTERED TS/MS	SCATTERED TS/MS	SCATTERED TS/MS
DA / PA	MAX DA: +3079FT	MAX PA: +1320FT	MAX DA: +2159FT	MAX PA: +1290FT	MAX DA: +2790FT	MAX PA: +1220FT	MAX DA: +1719FT	MAX PA: +1160FT	MAX DA: +2264FT	MAX PA: +1567FT
SOLAR / LUNAR DATA (LOCAL)	DMNT: 06:56 SL: 06:51 MS: 05:37	EENT: 19:32 SL: 18:37 MS: 16:03	DMNT: 06:55 SL: 06:49 MS: 06:14	EENT: 19:33 SL: 18:38 MS: 17:05	DMNT: 06:54 SL: 06:48 MS: 06:46	EENT: 19:34 SL: 18:39 MS: 18:06	DMNT: 06:52 SL: 06:46 MS: 07:15	EENT: 19:34 SL: 18:40 MS: 19:04	DMNT: 06:51 SL: 06:45 MS: 07:42	EENT: 19:35 SL: 18:41 MS: 20:01
ILLUM DATA	DARK PERIOD: 5:37 / 4:28	MOON PERIOD: 0:19	DARK PERIOD: 6:55 / 4:27	MOON PERIOD: 0:00	DARK PERIOD: 6:54 / 4:26	MOON PERIOD: 0:00	DARK PERIOD: 6:52 / 4:26	MOON PERIOD: 0:00	DARK PERIOD: 6:51 / 3:59	MOON PERIOD: 0:26
ARTILLERY FIRES										
AIR DEFENSE										
SHADOW UAS										
RAVEN SUAS										
ROTARY WING										
GROUND OPS										
VEHICLES										
TIME (LOCAL)	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00	00 06 12 18 00
TIME (ZULU)	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06	06 12 18 00 06

W - Wind TS - Thunderstorms C - Ceiling P - Precipitation RH - Rel. Humidity T - Temperature 1 - TS W 2 - C TS 3 - C TS W 4 - C PRHW 5 - CPW 6 - CW 7 - C PRHW 8 - C PRH TS W 9 - C PTS W 10 - C PTS 11 - PW 12 - PRHW 13 - PRH TS W 14 - TW

FORECASTER: Robinson

UNCLASSIFIED

*Integrity - Service - Excellence*

Figure I-2. 5-Day Outlook

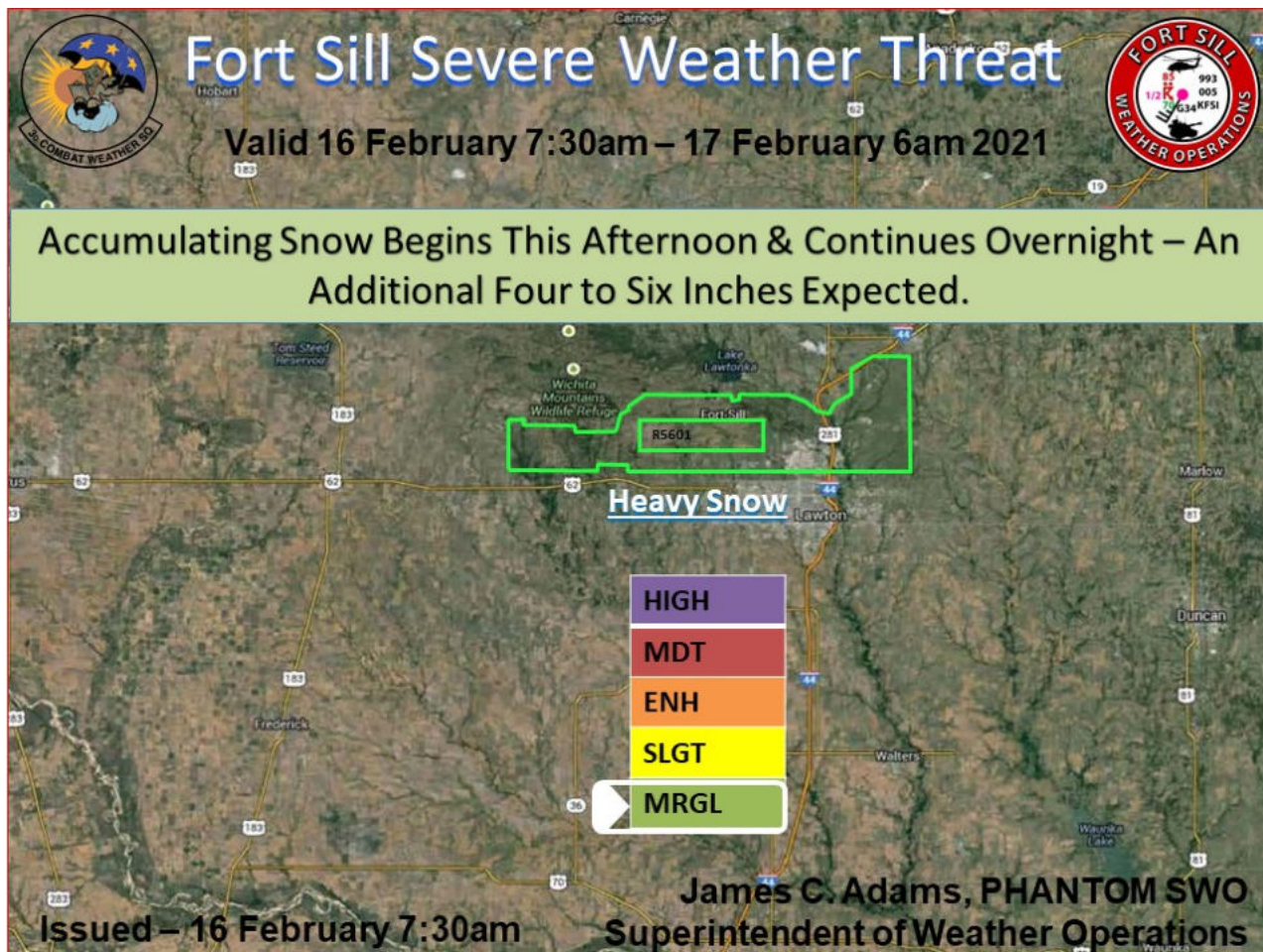


Figure I-3. Severe Weather Threat

## **Appendix J**

### **Environmental Mission Limiting Thresholds**

#### **J-1. General**

Mission Limiting Thresholds (MLTs) identified in this appendix are compiled from several sources including Joint Publication (JP) 3-59 *Meteorological and Oceanographic Operations*, Field Manual (FM) 34-81/Air Force Manual (AFM) 105-4 (*Weather Support for Army Tactical Operations*), Air Force Handbook (AFH) 11-203 volume 2/*Army Training Circular (TC) 3.04.14-2 Weather for Aircrews (Products and Services)*, various equipment technical documents (i.e., Technical Manuals (TM) and Technical Orders (TO)), and local operating procedures. This list is designed to present a general picture of weather impacts on operations and is not all-inclusive.

a. OL-E, 3 CWS forecasters will use this list as a baseline, expanding or changing it as required to support mission-specific operational requirements and limitations.

b. Supported units will assist the SWO by identifying and documenting weather sensitivities and thresholds applicable to their operations, missions, aircraft, and weapon systems IAW paragraph 2-10.

c. Supported units will provide the SWO and/or the OL-E, 3 CWS weather station with weather support requirements and environmental MLTs no later than 15 days prior to exercises and contingency operations IAW paragraph 2-10.

#### **J-2. Military Operations**

a. Table J-1 (below) lists general MLTs for a variety of military operations conducted at Fort Sill. This list is not all-inclusive and does not address the specific MLTs for each type of equipment or mission. Where more than one mission type falls under a specific operation/system header (e.g. Fixed Wing addresses both Close Air Support and Aerial Reconnaissance missions conducted at Fort Sill) the Favorable, Marginal, and Unfavorable categories have been blended to show a 'worst case' depiction for ease of reading and understanding. It is up to the specific unit commander, aircraft commander, or system operator (as applicable) to determine which MLTs apply to their specific mission type.

b. Conditions identified as unfavorable in Table J-1 do not prohibit units from conducting operations. Unit commanders ultimately determine if operations will be conducted. Commanders should consult appropriate organization/equipment – specific publications and conduct thorough risk assessments prior to conducting operations during unfavorable conditions.

c. Icing and Turbulence thresholds listed are standardized for Category II aircraft IAW AR 95-1 and AFI 11-202 V3. Aircraft Commanders/UAS Operators can contact the SWO

or OL-E, 3 CWS weather station for assistance, if necessary, to convert these values to their particular aircraft type.

d. Other policies such as Fort Sill Regulation 385-1 (*Range Regulation*) and Fort Sill Regulation 385-10 (*Safety Regulation*) may restrict activities based on weather conditions. Units should consult these policies when planning operations.

**Table J-1. Military Operations MLTs**

OPERATION/SYSTEM	Favorable (No degradation)	Marginal (Some degradation)	Unfavorable (Significant degradation)
<b>Rotary Wing (HELO)</b>			
Ceiling	≥ 1000 ft	< 1000 to ≥ 500 ft	< 500 ft
Visibility	≥ 3 SM (4800 m)	< 3 to ≥ 1/2 SM	< 1/2 SM (800 m)
Weather/Precipitation	None	Blowing Sand	Thunderstorms or Freezing Precipitation
Wind Speed	< 35 knots	35 to < 45 knots	≥ 45 knots
Density altitude	< 5000 ft	5000 to < 6000 ft	≥ 6,000 ft
Turbulence	None - Light	Moderate	≥ Severe
Icing	None - Light	Moderate	Severe
Space Weather			Severely Degraded HF/UHF or Single Frequency GPS Impacts
<b>Unmanned Aircraft Systems (UAS)</b>			
Ceiling	> 6000 ft	3000 to 6000 ft	< 3000 ft
Visibility	≥ 5 SM (8000 m)	5 to ≥ 3 SM	< 3 SM (4800 m)
Weather/Precipitation	RH < 80%	RH 80 to 95%	Any Weather/Precipitation and/or RH > 95%
Wind Speed	< 15 knots and/or Gusts < 20 knots	15 to 19 knots and/or Gusts 20 to 24 knots	≥ 20 knots and/or Gusts ≥ 25 knots
Winds Aloft			≥ 50 kt
Turbulence	None	Light & Light, Occasional Moderate / Any Wind Shear Conditions	≥ Moderate
Icing	None		Any below 10000 ft
Space Weather			Severely Degraded HF/UHF or Single Frequency GPS Impacts
<b>Fixed Wing</b>			
Ceiling	≥ 3000 ft	< 3000 to ≥ 1000 ft	< 1,000 ft
Visibility	> 3 SM (4800 m)	< 3 to 1/2 SM	< 1/2 SM (800 m)
Weather/Precipitation	None	Blowing Sand	Thunderstorms

Wind Speed Turbulence Icing	< 35 knots	35 to 49 knots	≥ 50 knots
	None - Light	Moderate	≥ Severe
	None - Trace	Light	≥ Moderate
Space Weather			Severely Degraded HF/UHF or Single Frequency GPS Impacts
Night Vision Goggles			
Cloud Cover or Ceiling Visibility Weather/Precipitation Temperature	< 50% or ≥ 3000 feet	≥50% or < 3000 feet	
	≥ 1/2 SM (800 m)	< 1/2 SM (800 m)	
	None or any Light to Moderate	Any Heavy	
	33° F to 124° F	≥ 125° F or < 33° F	
Smoke			
Weather/Precipitation	None	Any Light to Moderate	Any Heavy
Temperature	< 80° F	80° to 120° F	> 120° F
Chemical			
Ceiling	≥ 600 ft	< 600 ft	
Weather/Precipitation	None	Any Light	≥ Any_Moderate
Temperature	86° to 32° F	> 86° F and/or 31° to -15° F	< -15° F
Low level inversion and/or stability	Yes or Stable	No or Unstable	
Wind Speed	Calm to 9 knots	10 to 20 knots	> 20 knots
Personnel			
Temperature or Heat Index	84° F to 33° F	85° to 95° F or 32° to -25° F	> 95° F or < -25° F
Wind Chill	> 15° F	15° to -25° F	< -25° F
Weather / Precipitation	None or Light Rain or Snow	Moderate Rain, Snow, or any Freezing Drizzle	Heavy Rain, Snow, or any Freezing Rain
Vehicles			
Snow depth	< 6 in	6 to 12 in	> 12 in
Weather / Precipitation	None or Light Rain or Snow	Moderate Rain, Snow, or Light Freezing Rain	Heavy Rain, Snow, or ≥ Moderate Freezing Rain
Temperature	104° F to 1° F	> 105° F or < 0° F	
Air Defense Artillery			
Ceiling	> 5000 ft	2500 to 5000 ft	< 2500 ft
Visibility	≥ 3 SM (4800 m)	< 3 SM	
Wind	< 25 knots	25 to 35 knots	> 35 knots
Weather/Precipitation	None or Light Rain or Snow	Moderate Rain or Snow, Blowing or Suspended Dust	Heavy Rain or Snow Thunderstorms, or any Freezing Precipitation
Field Artillery			



<b>Visibility</b>	$\geq 2$ SM (3200 m)	2 to $< 1/2$ SM	$< 1/2$ SM (800 m)
<b>Wind</b>	$< 30$ knots	30 to 35 knots	$> 35$ knots
<b>Weather/Precipitation</b>	None or Light Rain	Moderate Rain or any Snow	Heavy Rain, Thunderstorms, or any Freezing Precipitation
<b>Temperature</b>	$\leq 125^{\circ}$ F		$> 125^{\circ}$ F
<b>Visual Systems</b>			
<b>Visibility</b>	$\geq 2$ SM (3200 m)	$< 2$ to $5/8$ SM	$< 5/8$ SM (1000 m)
<b>Weather/Precipitation</b>	<u>None or Light Rain or Snow</u>	Moderate Rain, Snow, or any Freezing Drizzle	Heavy Rain, Snow, or any Freezing Rain
<b>Temperature or Relative Humidity (RH)</b>	$< 100^{\circ}$ F or RH $< 80\%$	$\geq 100^{\circ}$ F or $< -25^{\circ}$ F or RH $\geq 80\%$	
<b>Infrared (IR) Sensors</b>			
<b>Visibility</b>	$\geq 2$ SM (3200 m)	$< 2$ SM (3200 m)	Heavy Precipitation and/or Fog and/or Blowing Sand and/or Snow
<b>Weather/Precipitation</b>	<u>None or Light Rain or Snow</u>	Moderate Rain, Snow, or any Freezing Drizzle	Heavy Rain, Snow, any Freezing Rain, Fog, Blowing or Suspended Dust, or Blowing Snow
<b>Temperature or Relative Humidity (RH)</b>	$125^{\circ}$ F to $20^{\circ}$ F or RH $< 80\%$	$19^{\circ}$ to $-25^{\circ}$ F or RH 80 to 85%	$> 125^{\circ}$ F or $< -25^{\circ}$ F or RH $> 85\%$
<b>Electro-Optic Air and Ground</b>			
	Detect Range $> 5$ km	3-5 km	$< 3$ km or IR Crossover

e. Legend for Table J-1:

**F – Fahrenheit**

**GPS – Global Positioning System**

**HF – high frequency**

**IR – infrared**

**m – meters**

**RH – relative humidity**

**SM – statute mile**

**UHF – ultra-high frequency**

### J-3. Garrison Operations

a. Table J-2 (below) lists general MLTs for a variety of garrison operations conducted at Fort Sill. Supported units should consider implementing these actions prior to the forecasted start of severe weather events (tornado, severe thunderstorm, and damaging winds) because there may not be sufficient time to take actions once the severe weather begins. Supported units should be prepared to implement actions upon the onset of lesser MLTs.

b. Processes for notification of forecasted and current MLT conditions are addressed in Chapter 3 and Appendix B of this regulation.

**Table J-2. Garrison Operations MLTs**

Threshold Value	Impact	Supported Unit Action(s)
<b>Tornado / Funnel Cloud</b> (radar detected or visually observed) AND threatening the Fort Sill Cantonment Area or Range Boundaries	Immediate threat of catastrophic damage to personnel and property	Warn populace ( <b>refer to FS EM Plan</b> )--seek immediate shelter; recall/ground all aircraft—hangar high priority aircraft, divert aircraft; secure equipment; man emergency control centers / disaster response teams
<b>Severe Thunderstorm</b> (Damaging Wind $\geq 50$ knots and/or Damaging Hail $\geq 1$ inch)	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft and equipment	Seek shelter; recall/ground all aircraft—hangar/tie down aircraft, divert aircraft; secure loose equipment; limit outdoor high-risk activities
<b>Moderate Thunderstorm</b> (Strong Wind $\geq 35$ to $< 50$ knots and/or Large Hail $\geq 1/4$ inch to $< 1$ inch)	Increased risk to exposed personnel; increased risk of damage to unsecured property; increased risk to outdoor activities and damage to exposed aircraft and vehicles	Secure loose equipment; hangar high priority aircraft—consider hangar/tie down all aircraft, divert aircraft; limit outdoor high-risk activities—increase operational risk assessment
<b>Damaging Wind</b> (surface wind not associated with thunderstorms $\geq 50$ knots)	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment	Recall/ground all aircraft—hangar/tie down aircraft; secure loose equipment; limit outdoor high-risk activities
<b>Strong Wind</b> (surface wind not associated with thunderstorms $\geq 35$ knots to $< 50$ knots)	Increased risk to exposed personnel; increased risk of damage to unsecured property; increased risk to outdoor activities and damage to exposed aircraft and vehicles	Consider hangar/tie down aircraft; secure loose equipment; limit outdoor high-risk activities—increase operational risk assessment
<b>Lightning within 7 NM</b>	Immediate threat to exposed personnel; lightning strike / static discharge damage—delay of operations	Cease aviation refueling, cease all ramp activities; cease explosives and/or ammunition operations; limit outdoor activities to protect personnel; shutdown computers—use backup generators
<b>Freezing Precipitation, or Heavy Snow</b>	Disrupts personnel movement or flightline activities; Poses significant risk of damage to	Cease flying, hangar or protect aircraft; report runway conditions

(≥ 8 inches in 24 hours), or <b>Snow</b> (≥ 6 inches in 12 hours)	facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated as conditions worsen; icing on roads—hazard to driving; icing on aircraft / equipment—delay or curtailment of operations	(runways/taxiways/ramps); sand/salt on overpasses and intersections, close roads—limit and/or restrict post driving (Refer to FS EM Plan)
<b>Blizzard Conditions</b> (falling and/or blowing snow AND visibility ≤ 1/4 mile AND winds ≥ 30 knots lasting at least 3 hours.)	Imposes significant risk to personnel movement; significant risk to maneuver or flightline activities	Seek shelter; cease flying; recall/ground all aircraft—hangar/tie down aircraft, divert aircraft; secure loose equipment; limit outdoor high-risk activities
<b>Heavy Rain</b> (> 2 inches in 12 hours)	Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel; disrupts flightline and maneuver activities; imposes increased risk on personnel movement	Restrict vehicle movement (off-road) —avoid water crossings; beware of flash flood potential; increase operational risk assessment
<b>Dust Storm</b> (blowing dust on station AND Visibility ≤ 5/8 mile)	Disrupts personnel movement and aviation operations	Consider hangar/tie-down aircraft; limit outdoor high-risk activities—increase operational risk assessment

c. Legend for Table J-2:

**EM – emergency management**

**NM – nautical mile**



## **Appendix K**

### **Lawton/Comanche County Support Agreement**

#### **K-1. Purpose**

To outline the agreement between OL-E, 3 CWS and Lawton/Comanche County Emergency Management in order to enhance local severe weather watch, promote the exchange of severe weather information, and to provide accurate, timely severe weather information to the overall Fort Sill and Lawton/ Comanche County community.

#### **K-2. General**

a. Lawton/Comanche County Emergency Management is responsible for civil defense of Lawton and the surrounding community during severe weather outbreaks.

#### **K-3. OL-E, 3 CWS:**

a. Notifies Lawton/Comanche County Emergency Management of any weather watch or warning that meets locally defined SWAP criteria (refer to Table G-1).

b. Assists Emergency Management in evaluation/verifying spotter reports, as time permits.

#### **K-4. Lawton/Comanche County Emergency Management:**

a. Relays tornado/funnel cloud sightings and significant reports of severe weather to OL-E, 3 CWS forecaster(s) as soon as possible after receipt.

b. Notifies OL-E, 3 CWS forecaster(s) upon activation of tornado warning sirens.

c. Recognizes that the NWS, through its designated forecast office, is responsible for issuing weather warnings, watches, advisories, and forecasts for the civilian population.

## Appendix L Contact Information

**Table L-1. Directory**

Office	Commercial	DSN	Fax and/or E-mail
<b>Superintendent</b>	580-442-3200	639-3200	<a href="mailto:james.c.adams3.civ@mail.mil">mailto:james.c.adams3.civ@mail.mil</a>
<b>Lead Forecaster</b>	580-442-4000	639-4000	<a href="mailto:darin.g.robinson.civ@mail.mil">mailto:darin.g.robinson.civ@mail.mil</a>
<b>Forecaster(s)</b>	580-442-4069 580-442-4887	639-4069 639-4887	Fax: 580-442-7761 <a href="mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil">mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil</a>
<b>Weather Maintenance</b>	580-442-4043	639-4043	<a href="mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil">mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil</a>
<b>26 OWS Flight Weather Briefings</b>	318-529-2651 318-529-2652 318-529-2653	331-2651 331-2652 331-2653	Fax: 318-529-2609 DSN: 331-2609
<b>Alternate Operating Location Bldg 4915, Room 13</b>	580-442-2614	639-2614	Fax: 580-442-7126 <a href="mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil">mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil</a>
<b>Alternate Maintenance Facility Bldg 4915, Room 12</b>	580-442-2975	639-2975	Fax: 580-442-7045 <a href="mailto:usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil">mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil</a>

## **Glossary**

### **Section I Abbreviations**

#### **ACC**

Air Combat Command

#### **AF**

Air Force

#### **AFI**

Air Force Instruction

#### **AFJI**

Air Force Joint Instruction

#### **AFMAN**

Air Force Manual

#### **AFW-WEBS**

Air Force Weather Web Services

#### **AGL**

Above Ground Level

#### **AIRMET**

Airmen's Meteorological Information

#### **ALSTG**

Altimeter Setting

#### **AO2**

Observations from FMQ-19 without augmentation

#### **AO2A**

Observations from FMQ-19 include augmentation

#### **AOL**

Alternate Operating Location

#### **AOR**

Area of Responsibility

#### **AR**

Army Regulation

**ARAC**

Army Radar Approach Control

**ARIMS**

Army Records Information Management System

**ATC**

Air Traffic Control

**AUTO**

Automated Report

**BKN**

Broken (as in sky condition of 5/8ths to 7/8ths cloud coverage)

**C**

Celsius

**CAT**

Crisis Action Team

**CBRNE**

Chemical, Biological, Radiological, Nuclear & High-Yield Explosive

**CDM**

Chemical Downwind Message

**CLR**

Clear of Clouds

**COOP**

Continuity of Operations

**CWW**

Cooperative Weather Watch

**DD**

Department of Defense (Forms)

**DES**

Director of Emergency Services

**DOD**

Department of Defense

**DPTMS**

Director of Plans, Training, Mobilization and Security

**DPW**

Director of Public Works

**DSN**

Defense Switched Network

**DURC**

During Climb

**EM**

Emergency Management

**EOC**

Emergency Operations Center

**ETC**

Et Cetera

**EWO**

Emergency War Order

**F**

Fahrenheit

**FES**

Fire Emergency Services

**FEW**

Few (as in sky condition of 1/8ths to 2/8ths cloud coverage)

**FL**

Flight Level

**FLIP**

Flight Information Publication

**FSOC**

Fort Sill Operations Center

**FT**

Feet

**FV**

Flight Level Visibility

**FWB**

Flight Weather Briefing

**GPS**

Global Positioning System

**HF**

High Frequency

**Hg**

Inches of Mercury

**HPAAF**

Henry Post Army Airfield

**HQ**

Headquarters

**IAW**

In Accordance With

**IC**

Icing

**ICAO**

International Civil Aviation Organization

**ISO**

In Support Of

**IWWC**

Integrated Weather Warning Capability

**JET**

Joint Environmental Toolkit

**KFSI**

ICAO locator for Henry Post Army Airfield

**KM**

Kilometer

**KT**

Knots

**L**

Local Time

**LAN**

Local Area Network

**LGT**

Light

**LLWS**

Low Level Winds Sheer

**LOCAL**

Aviation Selected Local Weather Report (Observation)

**LS**

Landing Strip

**LTS**

Lightning Tracking System

**M**

Meter

**MEFP**

Mission Execution Forecast Process

**METAR**

Aviation Routine Weather Report (Observation)

**MISSIONWATCH**

Mission-Scale Meteorological Watch

**MLT**

Mission Limiting Thresholds

**MPH**

Miles Per Hour

**MSC**

Major Subordinate Command

**MSL**

Meters Above Sea Level

**NEC**

Network Enterprise Center

**NEG**

Negative

**NHC**

National Hurricane Center

**NIPRNET**

Non-Secure Internet Protocol Router Network

**NM**

Nautical Mile

**NOTAM**

Notice to Airmen

**NWS**

National Weather Service

**OPLANS**

Operation Plans

**OPORDS**

Operation Orders

**OVC**

Overcast (as in sky condition of 8/8ths cloud coverage)

**OWS**

Operational Weather Squadron

**PAO**

Public Affairs Office

**PARA**

Paragraph

**PIREP**

Pilot Report

**PMSV**

Pilot to Metro Service

**POC**

Point of Contact

**R5601**

Restricted Area



**REG**

Regulation

**RM**

Risk Management

**RMK**

Supplementary Remarks Follow

**RVR**

Runway Visual Range

**RVRNO**

Runway Visual Range Not Available

**RWY**

Runway

**SCT**

Scattered (as in sky condition of 3/8ths to 4/8ths cloud coverage)

**SIGMET**

Significant Meteorological Information

**SK**

Sky Condition

**SLP**

Sea Level Pressure

**SM**

Statute Mile

**SPECI**

Aviation Selected Special Weather Report (Observation)

**SWAP**

Severe Weather Action Procedures

**SWO**

Superintendent of Weather Operations

**TA**

Outside Air Temperature

**TB**

Turbulence

**TC-TAP**

Tropical Cyclone-Threat Analysis Product

**TM**

Time

**TP**

Aircraft Type

**UA**

Routine PIREP

**UAS**

Unmanned Aircraft System

**UFN**

Until Further Notice

**UHF**

Ultra-High Frequency

**US**

United States

**USAF**

United States Air Force

**USAFCOEFS**

US Army Fires Center of Excellence and Fort Sill

**UTC**

Universal Time Code

**UUA**

Urgent PIREP

**VAAC**

Volcanic Ash Advisory Centers

**VFR**

Visual Flight Rules

## **VIS**

Visibility

## **WV**

Flight Level Wind Direction and Speed

## **WWA**

Weather Watch Warning or Advisory

## **WX**

Weather

## **Z**

Zulu (i.e., Coordinated Universal Time)

## **2 WS**

2<sup>nd</sup> Weather Squadron

## **3 CWS**

3<sup>rd</sup> Combat Weather Squadron

## **557 WW**

557<sup>th</sup> Weather Wing

## **26 OWS**

26th Operational Weather Squadron

## **Section II**

### **Terms**

#### **Augmentation**

The process of having certified weather personnel manually add or edit data to an observation generated by a properly sited automated observing system. The two augmentation processes used are supplementing and back up.

#### **Aviation Routine Weather Report (METAR)**

METAR is a routine scheduled observation as well as the primary observation code used by the United States to satisfy requirements for reporting surface meteorological data.

#### **Aviation Selected Special Weather Report (SPECI)**

SPECI is an unscheduled observation completed and transmitted when special weather criteria are observed at manual observing stations, or determined by sensor equipment at automated stations.

#### **Backup**

The method of manually providing meteorological data, and/or dissemination to an automated weather observation when the primary automated method is not operational or unavailable (due to sensor or communication failures) or when unrepresentative and operationally significant.

### **Basic Weather Watch**

A program to ensure weather forecasters provide the proper level of weather awareness to detect and report significant changes in specified weather elements.

### **Ceiling**

The height above ground level of the lowest broken (5/8 coverage or more) or overcast (8/8 coverage) cloud layer or total obscuration.

### **Climatology**

The historical record of weather conditions measured or observed at a specific location is known as climatology. Some data go back over 100 but generally a 10- to 25-year history is more common. Climatology is useful in planning operations beyond 5 to 7 days. It usually describes the average (or mean) conditions such as high and low temperatures and extremes.

### **Cooperative Weather Watch**

A practice of augmenting a basic weather watch with information received from non-weather sources. Air traffic controllers are the most common example.

### **Desired Lead-Time**

The amount of advance notice a supported customer requires to react to a weather watch, warning, and/or advisory.

### **Equivalent Chill Temperature**

An approximate measure of the cooling effect on exposed skin of the ambient air temperature and wind speed combined.

### **Eyes Forward**

Base/Post level weather forecasters are the eyes forward for the forecasters in the 26 OWS area of responsibility (AOR) and integrate weather radar data, satellite imagery, lightning detection readouts, and nonstandard weather data systems to create an integrated weather picture and near-term trend forecasts for the 26 OWS AOR. Eyes forward yields meaningful meteorological information not contained in coded observations to the servicing OWS and is an integral part of the meteorological watch for an installation.

### **ICAO Identifier**

A specifically authorized 4-letter identifier assigned to a location and documented in ICAO Document 7910. ICAO.

### **Meteorological Data**

Meteorological facts pertaining to the atmosphere, such as wind, temperature, air density, and other phenomena that affect military operations. See also weather data. In the context of this regulation, synonymous with weather data.

### **METWATCH**

A deliberate process for monitoring the terrestrial weather or space environment in an area or region. The purpose of a METWATCH is to identify when and where observed conditions significantly diverge from forecast conditions and determining courses of action to update or amend a forecast product or group of products and designated agencies notified.

### **Mission Execution Forecast**

A tailored mission weather product issued for the specific support of military operations.

### **MISSIONWATCH**

A deliberate process of monitoring specific mission-limiting environmental factors that may adversely impact missions in execution. The MISSIONWATCH process is intended to identify previously unidentified environmental threats and alert decision-makers at the operational unit and/or airborne mission commanders, enabling dynamic changes to mission profiles that may mitigate the environmental threat and optimize the chance of mission success.

### **Observed Weather Advisory**

A weather advisory issued when a particular weather event first occurs and the customer does not require advanced notification of the observed weather phenomenon.

### **Observed Weather Warning**

A weather warning issued when a particular weather event first occurs and the customer does not require advanced notification of the observed weather phenomenon.

### **Operation Plan**

A plan for the conduct of joint operations that can be used as a basis for development of an Operations Order.

### **Operational Weather Squadron**

An organization comprised of management, technician, and training personnel responsible for providing regional weather support. Their mission is to produce fine-scale tailored weather forecast products and services to customers within their area of responsibility.

### **Pilot Report**

A report of in-flight weather conditions relayed by an aircrew member.

### **Potential**

Conditions indicate a given weather phenomenon is capable of development within a specified amount of time.

**Prevailing Visibility**

The greatest visibility equaled or exceeded through half or more of the horizon circle.

**Staff Supervision**

As a member of the supported commander's special staff, the SWO requires Army staff guidance to fully execute those duties. A staff relationship consisting of formal guidance and assistance provided to AF SWOs by Army Chiefs of Staff, G-2/S-2s, and other staff members with Army administrative functions, interpretation of the Army guidance, staff, budget, and other issues.

**Staff Weather Officer**

The AF senior weather representative at each Army echelon, who serves as a member of the Army commander's special or personal staff.

**Supplement**

A method of manually adding meteorological information to an automated observation that is beyond the capabilities of the automated observing system to detect and/or report.

**Transient Missions**

Aviation missions passing through an airfield other than the flying unit's home station. Missions are considered transient when the mission aircraft lands or conducts pattern work at an airfield and subsequently departs to another location (or home station) in the same crew duty day. Usually this intermediate stop in the overall mission occurs for fuel and services, or to drop off/pick up duty passengers or equipment.

**Unmanned Aircraft System**

That system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft. Also called UAS Note: Unmanned aircraft may also be referred to as unmanned aerial vehicles (UAVs).

**Weather Advisory**

A special product notifying an end user when an established environmental condition effecting operations is occurring or is expected to occur.

**Weather Data**

See Meteorological Data.

**Weather Observation**

An evaluation of one or more meteorological elements that describes the state of the atmosphere at the observation location.

**Weather Operations**

Five core processes-collection, analysis, prediction, tailoring, and integration-to characterize the past, current, and future state of the atmosphere and space environment then enable the exploitation of this environmental information at key decision points.

### **Weather Services**

A specialized task performed by air and space forces to provide timely and accurate environmental information to support strategic, operational, and tactical military operations.

### **Weather Warning**

A special notice provided when weather meeting specified warning criteria is occurring or expected to occur. Weather Warnings provide concise information and alert designated agencies to the imminent or actual occurrence of weather conditions of such intensity as to pose a hazard to life or property for which the agency must take immediate protective actions.

### **Weather Watch**

A special notice provided to facilitate resource protection decisions. Weather Watches provide advance notice to designated agencies of the existence of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the agency should consider taking protective measures