Department of the Army
Headquarters, U.S. Army Garrison
462 Hamilton Road Suite 120
Fort Sill, Oklahoma 73503
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***Fort Sill Regulation 115-9**

Climatic, Hydrological, and Topographic Services

FORT SILL WEATHER SUPPORT

Summary. This regulation implements Army Regulation (AR) 115-10 (Weather Support for the US Army {AFI 15-157 (IP)}) at Fort Sill.

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

Supplementation. Supplementation of this regulation is prohibited, unless specifically approved by Directorate of Plans, Training, Mobilization, and Security (DPTMS), 455 McNair Avenue, Suite 201-A, Fort Sill, Oklahoma 73503.

Suggested Improvements. The proponent of this regulation is DPTMS. Users may send comments and suggested improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to DPTMS, ATTN: IMSI-PLA, Fort Sill, Oklahoma 73503.

Distribution. This regulation is distributed solely through the Directorate of Human Resources, Administrative Services Division Homepage at http://sill-www.army.mil/USAG/publications2012.html.

Table of Contents

*This regulation supersedes Fort Sill Regulation 115-9, 14 November 2014.

Chapter 1
Introduction

1-1. Purpose. This regulation defines the responsibilities of Operating Location 'E' (OL-E), 3d Weather Squadron (3 WS) 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 Vol. 2, *Air and Space Weather Operations – Exploitation*. 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 WS IAW AR 115-10 (AFJI15-157), *Weather Support for the US Army*. This publication will be reviewed and revised at least biennially IAW AFMAN15-129, Vol. 2.

1-2. References. Required and related publications; and, prescribed and referenced forms, are listed in appendix A.

1-3. 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' (OL-E), 3d Weather Squadron (3 WS) interaction.
The 26 OWS is the regional weather center for the south central and southeastern United States (US). The 26 OWS is responsible for providing and arranging operational-level weather forecast products and support to Department of Defense (DoD) units assigned within and/or deployed into its area of responsibility (AOR) IAW AFI 15-128, *Air Force Weather Roles and Responsibilities*, and AFMAN 15-129, Vol. 1, *Air and Space Weather Operations – Characterization*. Specifically, the 26 OWS produces and disseminates forecast weather watches, and warnings for Fort Sill. In addition, the 26 OWS produces and disseminates the terminal aerodrome forecast (TAF) for Henry Post Army Airfield (HPAAF) and provides flight weather briefings to transient aircrews operating within their AOR. Similarly, OL-E, 3 WS provides or arranges for tactical-level weather support for Fort Sill and associate units in-garrison and deployed. OL-E, 3 WS provides tailored weather products translating decision-quality environmental information into operational impacts for mission planning and execution of Army training and combat operations. OL-E, 3 WS 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. In addition, the OL-E, 3 WS Weather Operations Center (WOC) 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 WS are identified, maintained and disposed of IAW AFMAN 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 WS is an AF Air Combat Command (ACC) unit, reporting directly to Headquarters (HQ), 3 WS, Fort Hood, Texas. The OL-E, 3 WS Superintendent, Weather Operations (SWO) serves as the staff weather officer to HQ USAFCOEFS and subordinate units.

2-2. OL-E, 3 WS SWO will:

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 0800 to 1700, 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, 3WS Weather Operations Center (WOC) will:

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

b. Provide observed weather warnings and observed weather advisories for Fort Sill (including HPAAF). Provide forecast weather watches and warnings for the entire Fort Sill Reservation (including Cantonment Area and Range Boundaries). Refer to appendix E for specific criteria.

c. Provide mission weather products (MWPs) (i.e., flight weather briefings, mission/staff planning briefs, etc.) for Fort Sill assigned units operating in garrison. The WOC forecaster(s) will 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, Vol. 2.

d. Act as the liaison with the 26 OWS (regional weather center).

e. Assist the HPAAF air traffic control (ATC) tower personnel to create and maintain visibility chart(s) or photo file of local visibility markers IAW Cooperative Weather Watch (CWW) program (appendix C).

f. Provide limited weather observation training and certification to ATC personnel IAW the CWW program.

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

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

i. 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).

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

k. Notify HPAAF Airfield Operations personnel during extended PMSV outages. Request they disseminate a notice to airmen (NOTAM) for the outage. The WOC will notify Airfield Operations personnel when PMSV service is restored.

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

m. 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.

n. 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 (via Defense Collaboration Services (DCS), 26 OWS webpage, and/or telephone) for the following criteria:

(a) Conditions requiring HPAAF TAF amendment occurring or about to occur.

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

(c) Whenever a WOC forecaster issues a Weather Watch, Warning, or Advisory (WWA) for Fort Sill.

(d) An urgent Pilot Report (PIREP) is received by the WOC.

(e) All weather products issued by the 26 OWS for the Fort Sill Reservation and/or HPAAF during WOC 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 and the HPAAF TAF IAW AFMAN15-129, Vol. 1.

(4) Coordinate and update the Installation Data Page for Fort Sill 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 OL-E, 3WS Alternate Operating Location (AOL). Provide temporary telephone numbers and any changes in WWA notification procedures to the 26 OWS.

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

2-4. 26 OWS will:

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

(1) The 26 OWS, in coordination with the WOC forecaster(s), has the primary responsibility for issuing WWAs for the Fort Sill Reservation IAW AFMAN15-129, Vol. 1 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) IOC:	(DSN) 639-3240	Alternate:	639-3241
(b) HPAAF ATC Tower:	639-6748	Alternate:	639-4004
(c) HPAAF ATC ARAC:	639-2004	Alternate:	639-1866
(d) OL-E, 3WS WOC:	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 for the WOC (i.e., during IWWC and JET outage) and during WOC non-duty hours.

c. Issue a TAF for HPAAF.

(1) The TAF will be produced for HPAAF lAW AFMAN 15-124, *Meteorological Codes*, using the International Civil Aviation Organization (ICAO) identifier "KFSI".

(2) The TAF is issued every eight hours and is valid for a 30-hour period.

(3) Forecast elements in the main body of the TAF apply to the area within a 5 nautical mile radius of HPAAF.

(4) The TAF will specify time of onset, duration, and intensity for the standard criteria lAW AFMAN 15-129, Vol. 1 throughout the valid period.

(5) The TAF will be amended for standard criteria lAW AFMAN 15-129, Vol. 1.

(6) The TAF will be disseminated using standard AF weather communication systems into the international weather information network. The TAF will also be available on the 26 OWS Websites.

d. Provide MWPs (i.e., flight weather briefings) to transient aircrews operating from HPAAF when WOC forecaster(s) are unable to provide support.

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

2-5. Commanders of supported units will:

a. Provide OL-E, 3 WS with weekly flight/training schedules and any changes to these schedules via e-mail to the WOC:
usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil

b. Assist OL-E, 3 WS 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 WOC forecaster(s).

2-6. Directorate of Plans, Training, Mobilization, and Security (DPTMS) will:

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

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

c. Provide OL-E, 3WS 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, 3WS. This will include staff coordination and staff representation.

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

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

g. Ensure OL-E, 3WS 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 WOC forecaster(s) to Fort Sill units and/or agencies.

(2) Notify the WOC 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 WOC forecaster(s).

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

(5) Include the WOC on Alert Notification and Access Rosters.

(6) Notify the WOC of significant events/incidents that may affect operations.

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

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

j. Range Branch will:

(1) Disseminate all WWAs received from the FSOC and/or the WOC forecaster(s) to units on Fort Sill training ranges.

(2) Include the WOC’s unit mailbox (usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil) and the SWO (james.c.adams3.civ@mail.mil) on the distribution list for the weekly Air Activities Report.

(3) Assist the WOC in conducting a CWW for the Fort Sill Reservation, 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 HPAAF Airfield Manager will:

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

(2) Allow or arrange for unrestricted access to meteorological equipment located on HPAAF by OL-E, 3 WS personnel.

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

(4) Assist the WOC 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, 3WS personnel.

l. HPAAF Aviation Safety Officer will:

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

(3) 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.

m. HPAAF Airfield Operations will:

(1) Notify the WOC when local NOTAMs and applicable directives change airfield minima.

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

(3) Notify the WOC 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 WOC 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 the WOC.

n. HPAAF ATC Branch will:

(1) Provide and maintain Army-owned radio equipment supporting PMSV.

(2) Participate in Fort Sill's CWW program. The specifics can be found in appendix C.

(3) Provide working space and a telephone for OL-E, 3 WS personnel during WOC evacuations.

(4) Notify the WOC when current weather data is <u>not</u> available via the ATC Army Automated Airfield System (AAAS).

(5) Provide notification of all WWAs received from the 26 OWS, the FSOC or the WOC to military aircraft operating in the local flying area.

(6) Monitor the PMSV frequency (306.5 UHF), as other duties permit, during WOC equipment outages or evacuations.

(7) Provide a basic orientation of tower and army radar approach control (ARAC) facilities to newly assigned OL-E, 3 WS personnel.

(8) Notify the WOC when the active runway changes.

2-7. Directorate of Public Works (DPW) will:

a. Prioritize the status of work orders to avoid catastrophic equipment failure to OL-E, 3 WS's heat sensitive FMQ-19's Operator Interface Display and Terminal Data Acquisition Unit sensors.

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 WS through HPAAF Airfield Operations when a test of the back-up power system to Building 4907 (Airfield Operations) will occur. If local weather conditions are unfavorable, DPW will delay the test. This will be coordinated through the DPW Maintenance Division and the HPAAF Airfield Manager.

2-8. Network Enterprise Center (NEC) will:

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

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 the Fort Sill Reservation, to include HPAAF.

e. Maintain and update the OL-E, 3WS webpage, https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws/ on the Fort Sill Intranet under "Intranet Links (internal) under subcategory, "Force Protection/Weather".

2-9. Directorate of Emergency Services (DES) will:

a. Upon notification from a member of OL-E, 3WS, or competent authority, sound the Tornado Warning siren (Giant Voice) on Fort Sill.

b. Coordinate with OL-E, 3WS to verify that the Tornado danger has passed prior to sounding the “all clear” signal on Fort Sill.

c. Notify 911 and the FSOC after the Tornado Warning sirens are sounded on Fort Sill and when the “all clear” signal is sounded.

d. Assist WOC forecaster(s) in conducting a CWW for the Fort Sill cantonment area, by reporting the following conditions when observed on Fort Sill:

(1) Tornado or funnel cloud.

(2) Any damage or injury caused by weather.

Chapter 3
Airfield Weather Services

3-1. Location. OL-E, 3WS is located in Building 4907, HPAAF. The Weather Operations Center (WOC) is in room 106, the SWO’s office is room 115 and the Weather Maintenance technician’s office is room 114. The primary Alternate Operating Location (AOL) is in building 4915, room 13, HPAAF.

3-2. Operating hours. The WOC is manned 16 hours a day, 5 days a week, and closed on weekends and federal holidays.

a. Forecasters are on duty from 0600-2200, Monday through Friday. Refer to appendix L for contacts and phone numbers.

b. 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 WS SWAP criteria (appendix G).

3-3. Duty priorities. The following is a list of prioritized duties performed by WOC forecasters. Individual(s) may alter these priorities if the situation warrants using Operational Risk Management (ORM) principles/processes, particularly if imminent danger to life and property is expected to occur.

a. Perform Emergency War Order (EWO) tasking(s).

b. Execute emergency weather station/facility evacuation.

c. Respond to Aircraft /Ground emergencies.

d. Respond to Force Protection Officer during emergencies.

e. Respond to Pilot-to-Metro Service (PMSV) contacts.

f. Provide “Eyes Forward”/collaborate with 26 OWS.

g. Issue/relay weather watches, warnings, and advisories for Fort Sill.

h. Perform Severe Weather Action Procedures (SWAP).

i. Augment surface weather observations for HPAAF (as required).

j. Disseminate urgent Pilot Reports (PIREPs) – relay to the 26 OWS.

k. Perform mission execution forecast process (MEFP) – produce and disseminate forecasts.

l. Disseminate routine PIREPs.

m. Perform Mission-Scale Meteorological Watch (MISSIONWATCH) activities.

n. Provide other briefings.

o. Perform weather functional training.

p. Accomplish administrative tasks.

3-4. Airfield Weather Observations. Weather observations at HPAAF are fully automated via the FMQ-19. METAR (hourly) and SPECI (for significant changes or occurrences) observations are automatically and continuously disseminated into the military and national weather networks. Refer to Figure 3-1 for HPAAF weather sensor location.

a. There are inherit 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 WOC forecasters and HPAAF ATC tower personnel work together to maintain situational awareness of current weather conditions and the FMQ-19 observation.

c. Under certain conditions, forecasters are required to supplement FMQ-19 observations. Supplement is the 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.

(1) WOC forecasters will supplement the FMQ-19 automated observations when:

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

(b) Hail ≥ ¼ inch is observed to begin, is in progress, or ends.

(c) Volcanic Ash is observed.

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

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

(f) A “Heavy Snow” or “Snow” warning is in effect, snow is falling during WOC operating hours, and ‘Snow Depth’ is required to be appended to the FMQ-19 observation.

(g) Either the surface prevailing visibility or the HPAAF ATC tower visibility is **less than 4 miles** and the tower visibility differs from the surface prevailing visibility by a reportable value.

d. There are also times when WOC forecasters are required to backup the FMQ-19. Back-up is 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 and/or communication failure.

(1) There is no requirement to backup Fort Sill’s FMQ-19 when HPAAF 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 the WOC).

(2) The following is a list of the most commonly used elements of FMQ-19 observations that will be backed up:

(a) Wind Speed & Direction.

(b) Prevailing Visibility.

(c) Present Weather & Obscurations.

(d) Sky Cover.

(e) Temperature/Dew point.

(f) Altimeter Setting.

e. When supplementing or backing up the FMQ-19 observations the WOC forecaster is responsible for the completeness and accuracy of the observations even though the automated observing system generates the report. WOC 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.

f. AFMAN 15-111, *Surface Weather Observations*, and Army ATC directives requires AF weather units to establish a Cooperative Weather Watch (CWW) program with ATC and other appropriate base and/or post agencies.

(1) Of primary concern is the report of tower visibility different from the prevailing surface visibility, local PIREPs, and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources.

(2) In lieu of a formally documented letter of agreement, the specifics of the CWW can be found in appendix C. Primary responsibilities include:

(a) Certified air traffic controllers will evaluate tower visibility to report changes in tower prevailing visibility to the WOC when tower visibility is less than 4 statute miles and different from the surface prevailing visibility.

(b) WOC forecasters will notify the tower as soon as possible, whenever the prevailing visibility at the official weather observation point decreases to less than or increases to equal or exceed 4 miles.

(c) WOC forecasters will re-evaluate surface prevailing visibility as soon as practical, upon initial receipt of a differing control tower value and upon receipt of subsequent reportable changes at the control tower level.

(d) WOC forecasters will use control tower values of prevailing visibility as a guide in determining the surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc. The presence of a surface-based obscuration, uniformly distributed to heights above the level of the tower, is sufficient reason to consider HPAAF's surface prevailing visibility to be the same as the control tower level.

(e) WOC forecasters will supplement FMQ-19 automated observations to encode Tower Visibility as a remark when either the surface prevailing visibility or the reported tower visibility is < 4 miles and the reported tower visibility differs from the surface prevailing visibility by one or more reportable value(s).

(f) ATC personnel will relay local PIREPs to the WOC within 5 minutes of receipt (or as ATC duties allow). In addition, relay any occurrence of previously

unreported weather conditions that affect flight safety or be critical to the safety or efficiency of other local operations and resources.

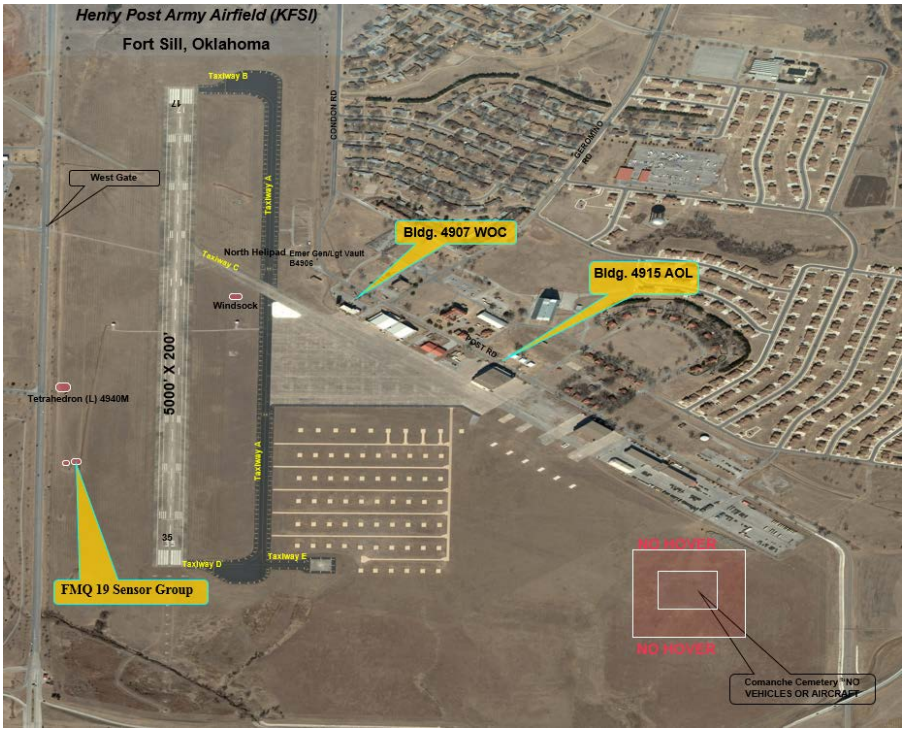


Figure 3-1. HPAAF Weather Sensors and Official Observing Points (Backup)

3-5. Pilot-to-Metro-Services (PMSV). The PMSV at HPAAF is monitored continuously during the WOC 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 the HPAAF ATC Tower or Airfield Operations and request personnel pass information, PIREPs, or potential problems with the PMSV radio to the WOC.

c. During PMSV outages or WOC evacuation, the HPAAF ATC Tower will, as their duties permit, monitor the PMSV frequencies and pass contact information to the WOC (or AOL). During extended PMSV outages, a NOTAM will be disseminated by HPAAF Airfield Operations to highlight the unavailability of PMSV service.

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

3-6. Dissemination of Weather Information and/or Products. The 26 OWS and the WOC 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., HPAAF [KFSI] weather observations and WWAs) to Fort Sill units and agencies.

a. The Fort Sill Operations Center (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 Army Automated Airfield System (AAAS). Weather information from the HPAAF FMQ-19, other observations and forecasts, and WWAs can be viewed through the AAAS.

c. If the JET is inoperative, the 26 OWS will disseminate WWAs IAW section 2-4 of this publication.

d. If the JET is inoperative, the WOC will disseminate WWAs issued by OL-E, 3WS for Fort Sill via telephone to:

(1) FSOC

(2) HPAAF ATC Tower

(3) HPAAF ATC ARAC

e. If the JET is inoperative, the WOC will disseminate all observations for HPAAF to the following agencies during operating hours (see paragraph 3-2) in the order listed:

(1) HPAAF ATC Tower

(2) HPAAF ATC ARAC

f. Current weather conditions for HPAAF to include active weather watches, warnings and advisories can always be viewed from the OL-E, 3 WS website at https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws or the 26 OWS website at https://26ows.us.af.mil/.

3-7. Evacuation of Weather Station Facilities. It could become necessary for OL-E, 3 WS personnel to evacuate the weather station to an alternate operating location (AOL) for actual emergencies (i.e., toxic spill, bomb threat or natural disaster). OL-E, 3 WS 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, Room 13, and the weather maintenance technician will relocate to the alternate maintenance facility in Building 4915, Room 12 (refer to appendix L for telephone numbers).

a. OL-E, 3WS will contact the FSOC, HPAAF ATC Tower, HPAAF ARAC, Range Control, the MP Desk Sergeant, 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). Since HPAAF Airfield Operations will likely relocate in such emergencies, OL-E, 3 WS personnel will coordinate with HPAAF Operations during evacuation.

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 evacuation site. The HPAAF ATC Tower will, as their duties permit, monitor the PMSV frequencies and pass contact information to the weather forecaster(s) at the AOL.

(3) Weather forecasters will have a limited view of the horizon due to obstructions of buildings and/or hangars in the immediate vicinity of Building 4915 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 FMQ-19 on the airfield is not operational.

c. Weather forecasters will implement back-up procedures using ORM 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 WS personnel will return to the WOC and resume normal weather operations as the situation dictates.

Chapter 4
Mission Weather Services

4-1. MWP (Flight Weather Briefings) Description, Format and Delivery Method.

a. Requests for flight weather briefings from aircrews on temporary duty (TDY) to Fort Sill can be made in person, by phone, via fax, or e-mail to the WOC. 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, the WOC 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 WOC or from the servicing AF regional weather center (OWS).

c. Flight weather briefings and updates to briefings will only be provided to the “pilot of record” recorded on the aircrew’s flight plan.

d. Flight weather briefings 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, briefings 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.

(3) Forecasted enroute weather (including flight hazards and SIGMETs/AIRMETs).

(4) 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 WOC forecaster. 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 WOC 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) WOC forecaster(s) may provide weather briefings or updates to existing briefings IAW duty priorities for transient aircrews at HPAAF. If the WOC is unable to provide a briefing, the aircrew will be directed to contact the servicing OWS. WOC personnel will provide access to a computer and/or provide telephone numbers for the OWS or refer to the FLIP. WOC personnel will not deny assistance to an aircrew seeking a flight weather briefing.

(2) Transient aircrews should request weather briefings 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 weather briefings as time permits depending on current workload, available manpower and duty priorities.

No-notice flight weather briefings 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 flight weather briefing 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. MWP (MEF) Description, Format and Delivery Method.

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 (MWP) 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 trafficability) 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 HPAAF, 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.

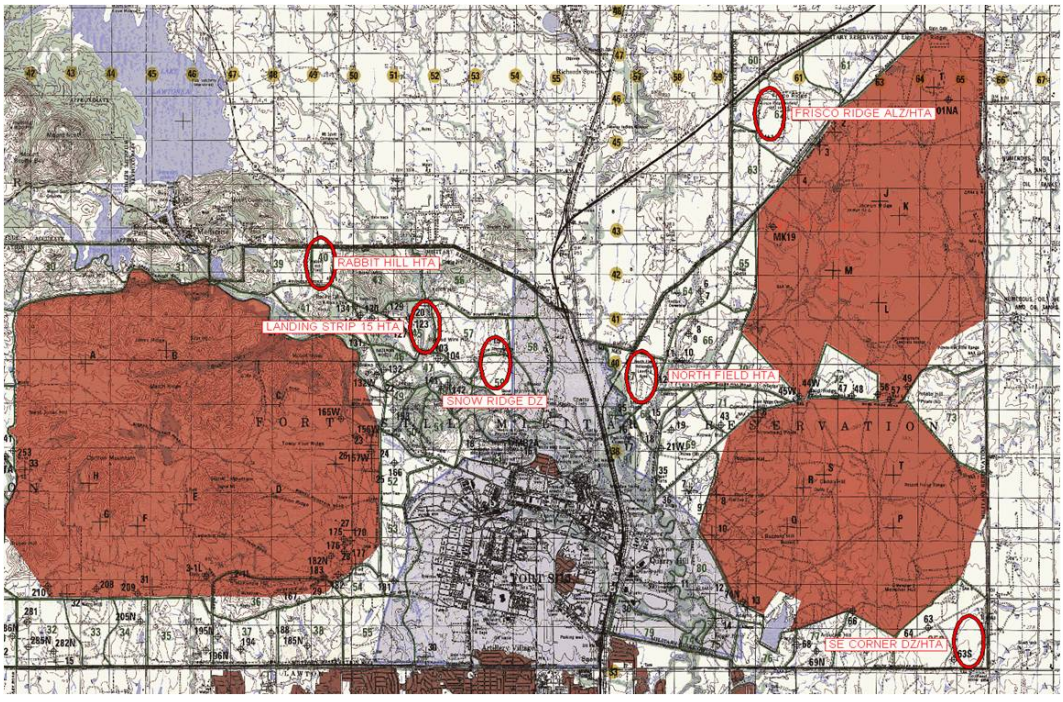


Figure 4-1. MEF Forecast Areas

c. This MWP is produced twice each day during the WOC operating hours listed in section 3-2 of this publication and will be posted to the OL-E website at https://sillc2nnec002mv.nasw.ds.army.mil/weather/3dws/ and the 26 OWS website at https://26ows.us.af.mil/. 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 25th 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

NOTE: A 'C' MEF will be generated/disseminated during extended hours of operations (contingency support). The dissemination time of this MWP will be 0100L with a 0100L – 1300L 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 (Table J-1 and Table J-2):

(1) Occurs; 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. WOC forecaster(s) will actively MISSIONWATCH all missions briefed from brief time through mission completion using ORM concepts during the MISSIONWATCH process.

c. WOC forecasters will prioritize missions IAW the ORM category listed below:

(1) High Risk: Highest priority—Environmental Mission Limiting Thresholds (MLT) in appendix J (Table J-1 and Table J-2) are observed or expected.

(2) Medium Risk: Middle priority—Environmental conditions observed or expected near MLTs in appendix J (Table J-1 and Table J-2).

(3) Low Risk: Lowest priority—Environmental MLT conditions in appendix J (Table J-1 and Table J-2) are not observed or expected.

d. WOC forecaster(s) will place more focus on missions identified as "High Risk" and "Medium Risk".

e. At a minimum, WOC 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 environmental MLT conditions in appendix J (Table J-1 and Table J-2) are expected or observed, WOC forecaster(s) will increase the frequency of MISSIONWATCH checks.

g. When environmental MLT conditions in appendix J (Table J-1 and Table J-2) may impact success and were not originally forecast and/or briefed, WOC forecaster(s) will:

(1) Assess the situation and amend impacted MWPs.

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

(3) Contact impacted 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, HPAAF airfield operations, Range Control, S3).

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

(5) Document the changes/updates on respective mission's MWP lAW local procedures.

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

h. WOC 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 Information.

a. WOC 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 MWPs. 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 WOC to be forwarded to the Air Force's 557th Weather Wing (557 WW) via Air Force Weather Web Service (AFW-WEBS).

4-5. Tropical Cyclone Support.

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. WOC 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 the WOC.

c. The WOC forecaster(s) will provide tropical cyclone 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. The WOC forecaster(s) will use local mission execution forecast processes to tailor official tropical cyclone forecasts into a specific MWP 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. The WOC forecaster(s) will follow Fort Sill, PAO policies and procedures regarding the release of tropical cyclone 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. The WOC 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

c. The WOC forecaster(s) will provide volcanic ash forecasts and updates to supported organizations as required for mission execution decisions.

4-7. Climatological Support.

a. Standard climatological summary data for HPAAF can be viewed from the OL-E webpage.

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

c. Climatological support for any location worldwide can also be obtained through the WOC 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) Support.

a. The WOC 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 (^{o}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. The IOC at Fort Sill does not require/use traditional Chemical Downwind Messages (CDMs) in response to CBRNE events. In the event a CDM is requested, the WOC 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 positive and negative feedback to the WOC forecaster(s) or the SWO on the quality and/or accuracy of OL-E, 3 WS MWPs.

b. Aircrews can simply complete the feedback form provided with the flight weather briefing and fax back to the WOC (refer to appendix L for fax number).

c. All users can provide feedback via e-mail by clicking on the envelope feedback icons or the ICE comment card icon on the MEF found on the OL-E home page.

d. 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 ORM, and WOC 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 0800 to 1700 (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 WOC 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 MWPs 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 mission 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 the WOC 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 WOC 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

Section I
Required Publications

AR 95-1
Flight Regulations (Cited in Appendix D Table D-1, D-2, D-3, and Section II Terms)

AR 115-10 (AFJI 15-157**)**
Weather Support for the U.S. Army (Cited in Summary, paras 2-2, 2-7 c., 5 a. and Appendix D D-1 d.)

USAFCOEFS Severe Weather OPLAN (SWOP).

Fort Sill Reg 95-1
General Provisions and Flight Regulations (Cited in paras 2-6 l.(3), 4-1 d., 4-2 a., 4-2 b. (1) and Appendix D D-1 e.)

Section II
Related Publications

AFI 11-202 Volume 3
General Flight Rules (Cited in Appendix D D-1 b., Table D-2, and Section II Terms)

AFMAN 15-111
Surface Weather Observations (Cited in paras 2-3 a., 3-4 f., Appendix D Tables D-1, D-2, D-3, and D-1 a.)

AFMAN 15-124
Meteorological Codes (Cited in para 2-4 c.(1))

AFI 15-128
Air and Space Weather Operations – Roles and Responsibilities (Cited in paras 1-1, 1-4, and 5 j.(1))

AFMAN 15-129 Volume 1
Air and Space Weather Operations – Characterization (Cited in paras 1-4, 2-3 n.(3), 2-4 a., 2-4 c.(4), 2-4 c.(5), Appendix E E-2 a. and E-3 a.

AFMAN 15-129 Volume 2
Air and Space Weather Operations – Exploitation (Cited in paras 1-1, 2-3 c. and Appendix G G-1 a.

Section III
Prescribed Forms

DD Form 175-1
Flight Weather Briefing (Cited in paras 4-1 d. and 4-1 e.)

Section IV
Referenced Forms

This section contains no entries.

Appendix B
Fort Sill 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 WS local procedures. The FSOC will maintain the notification list of Major Subordinate Commands (MSCs) and other Fort Sill units/organizations.

b. When weather watches and warnings are issued for Fort Sill, by either the 26 OWS or WOC 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.

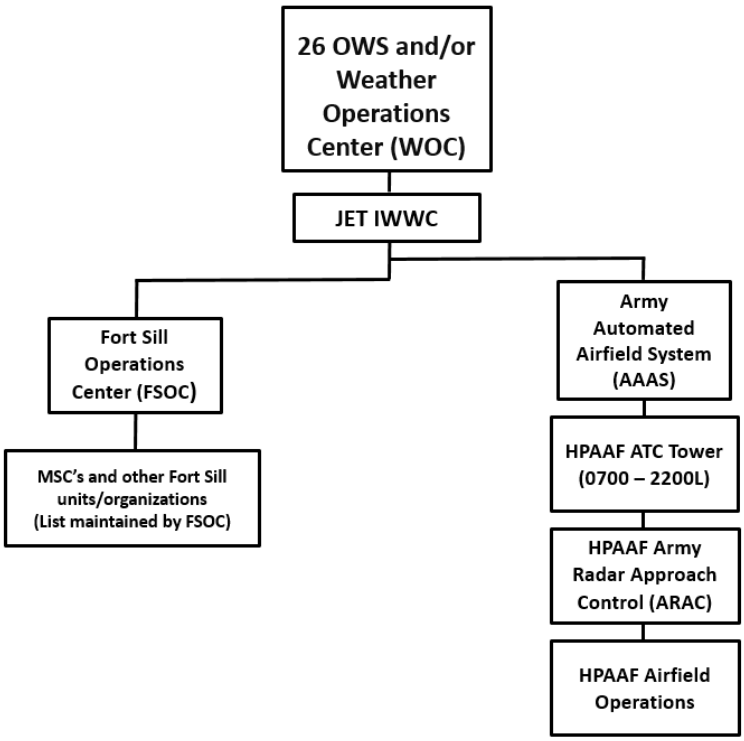


Figure B-1. Example of Fort Sill weather notification pyramid

Appendix C
Support Agreement with Air Traffic Control Branch, DPTMS

C-1. Cooperative Weather Watch (CWW) program. CWW is the name given for the collaboration between weather personnel and air traffic control (ATC) personnel in identifying significant weather changes. The primary concern is the report of tower visibility different from the prevailing surface visibility, local PIREPs, and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources.

a. Fort Sill's CWW agreement is a method of assisting WOC forecasters performing a BWW. This requires HPAAF ATC personnel to help monitor weather conditions. HPAAF ATC personnel will:

(1) Make tower visibility observations when the prevailing visibility at the tower level is less than 4SM. HPAAF ATC Tower personnel certified to take visibility observations are instructed by their agency to:

(a) Notify the WOC forecaster(s) when the tower visibility is less than 4SM and is different from the latest reported surface visibility. Report all changes of one or more reportable values to the WOC forecaster(s).

(b) Use the lower of either the tower or surface visibility as the prevailing visibility (IAW FAA Order 7110.65) for aircraft operations.

(c) Notify the WOC forecaster(s) of any observed sector visibilities at the tower level less than 4SM.

(2) Solicit and relay all PIREPs received to the WOC forecaster(s) within 5 minutes of receipt.

(3) Report any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources to the WOC forecaster(s). For example:

(a) Improving or deteriorating sky conditions.

(b) Tornado/Funnel Clouds, thunderstorm, or lightning activity.

(c) Beginning or ending of precipitation.

(d) Any other meteorological phenomena, which, in the opinion of ATC personnel, may affect the safety of flight.

(4) Provide the WOC forecaster(s) with radar reports (ARAC upon request) on precipitation echoes.

(5) Notify the WOC forecaster(s) of active runway changes (Tower personnel).

(6) Notify the WOC forecaster(s) forecaster immediately of all aircraft emergencies, mishaps, or accidents.

(7) ARAC personnel will ensure the FSOC recalls the “On-Call” forecaster (refer to appendix L for phone numbers.) during WOC non-duty hours (refer to Chapter 3) when an aircraft/ground mishap occurs on or near Fort Sill.

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

(9) Monitor the PMSV radio frequency during outages and relay information to/from the WOC forecaster(s).

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

(11) Make available the use of an ATC vehicle for the OL-E, 3 WS maintenance technician to respond to FMQ-19 sensor outages in the event an airfield operations vehicle is unavailable or the use of an airfield operations vehicle (2-wheel drive) is unfeasible.

(12) Notify the SWO as soon as possible whenever the HPAAF ATC Tower will operate outside of FLIP published hours.

(13) Place the sensor switch (ARAC personnel) located on the Beacon Monitor Rack to the active runway.

(14) Provide a basic orientation of ATC Tower and ARAC facilities to newly assigned OL-E, 3 WS personnel.

(15) Develop and maintain a visibility checkpoint chart or list of visibility markers and post in the tower.

b. WOC forecasters will:

(1) Notify the HPAAF ATC Tower as soon as possible, whenever the prevailing visibility at the official weather observation point decreases to less than, or increases to equal or exceed **4 SM**.

(2) Re-evaluate surface prevailing visibility, as soon as practicable, upon initial receipt of a differing control tower value and upon receipt of subsequent reportable changes at the control tower level.

(3) Use HPAAF ATC Tower values of prevailing visibility as a **guide** in determining surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc. The presence of a surface-based obscuration, uniformly distributed to heights above the level of the tower, is sufficient reason to consider surface prevailing visibility to be the same as the control tower level.

(4) Include a Tower Visibility remark in subsequent METAR or SPECI observations during WOC operating hours (refer to Chapter 3) when either the surface prevailing visibility or the control tower visibility is less than 4 statute miles and the control tower visibility differs from the surface prevailing visibility by a reportable value.

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

(6) Provide all HPAAF ATC personnel with weather facility familiarization and local phenomenon training.

(7) Task-certify tower controllers to evaluate values for prevailing visibility observations from the control tower; inform them of weather phenomenon which might affect ATC operations.

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

(b) Provide assistance, upon request, to help HPAAF ATC personnel prepare a chart or markers of suitable objects for determining tower visibility.

(c) The SWO will annually review and document approval of tower visibility aids.

Appendix D
Henry Post Army Airfield (HPAAF) Special (SPECI) and LOCAL Weather 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 weather 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:

Table D-1. Visibility

3miles (AFMAN 15-111)
2miles (AFMAN 15-111 & FLIPs)
1 3/4miles (FLIPs)
1 1/2miles (FLIPs)
1 1/4miles (FLIPs)
1mile (AFMAN 15-111 & FLIPs)
3/4mile (FLIPs)
1/2mile (FLIPs—**Airfield Minimum**)
1/4mile (AR 95-1)

b. Ceiling. The ceiling (rounded off to reportable values) forms or dissipates below, decrease to less than, or if below, increases to equal or exceed:

Table D-2. Ceiling

2,000 feet AGL (AFI11-202Vol3)
1,500 feet AGL (AFMAN 15-111)
1,000 feet AGL (AFMAN 15-111)
800 feet AGL (AFMAN 15-111)
700 feet AGL (AFMAN 15-111)
600 feet AGL (FLIPs)

500 feet AGL (AFMAN 15-111 & FLIPs)
400 feet AGL (FLIPs)
200 feet AGL (FLIPs—**Airfield Minimum**)
100 feet AGL (AR 95-1)

c. Sky condition. A layer of clouds or obscuring phenomena aloft is observed below **800 feet** above ground level (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). HPAAF – Runway 35 only.

(1) Prevailing visibility first observed ≤ 1SM, again when prevailing visibility goes above 1SM.

(2) RVR for RNWY 35 decreases to less than or, if below, increases to equal or exceed:

Table D-3. RVR (HPAAF - RNWY 35)

6000 feet (AFMAN 15-111 & FLIPs)
5000 feet (AFMAN 15-111 & FLIPs)
4000 feet (FLIPs)
2400 feet (AFMAN 15-111 & FLIPs)
2000 feet (AFMAN 15-111)
1200 feet (AR 95-1)

(3) RVR is first determined as unavailable (RVRNO) for Runway 35, and when it is first determined RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

k. Tower Visibility. Transmit a SPECI with Tower Visibility (TWR VIS) as a remark when notified by the HPAAF ATC Tower that tower visibility has decreased to less than or, if below, increased to equal or exceed 1, 2, or 3 statute miles and the tower visibility differs from the prevailing visibility. Continue to carry the last reported tower visibility in subsequent METAR or SPECI observations unless otherwise notified by the HPAAF ATC Tower.

l. Upon resumption of observing functions. A SPECI observation will be taken within 15 minutes after the weather technician 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.

m. Aircraft Mishap. When the FMQ-19 is already operating in an augmented mode (refer to paragraph 3-4. c. Supplement and d. Back-up) take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing location.

D-3. Local weather 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 at HPAAF for LOCAL observations under normal operations as the FMQ-19 operates in AUTO mode.

c. During back-up (refer to paragraph 3-4. d.) operations of the KFSI FMQ-19 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 an disseminated as a ‘single element’ LOCAL.

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

Appendix E
Weather Watch and Warning Criteria

E-1.General. Weather watch and warning criteria were established based on supported unit supplied critical weather elements and Air Force directives.

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

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

c. In rare circumstances, the Weather Operations Center (WOC) 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 WOC forecaster(s) will contact the 26 OWS as soon as possible after local dissemination.

d. Weather warnings will be cancelled when the warning criteria is no longer occurring or forecast to occur. Weather watches will be cancelled when the potential for the watch criteria no longer exists.

e. Watches and warnings will be issued for the entire Fort Sill Reservation, to include HPAAF for the criteria in Table E-1 and E-2. Exception: The observed lightning watch/warning for Fort Sill is for aircraft refueling support and is issued for within 7nm of the HPAAF runway complex.

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

g. Only one warning will be in effect at a given time (and will include multiple warning criteria as required) except for the forecast tornado warnings and/or observed lightning warnings.

E-2.Weather Watches. The 26 OWS issues the following weather watches for Fort Sill when the potential exists for the listed threats/thresholds within the Fort Sill cantonment area or range boundaries.

a. Some of Fort Sill’s weather watch threshold values deviate from standard AF criteria as defined in AFMAN15-129V1.

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

Table E-1. Fort Sill Weather Watches

Threat/Threshold (Potential exists within Fort Sill's cantonment area or range boundaries)	**Impact**	**Watch** **Desired Lead-time**
Tornado / Funnel Cloud (detected by radar or visually observed) AND threatening Fort Sill	Immediate threat of catastrophic damage to personnel and property.	**1 hour**
Severe Thunderstorm Damaging Wind ≥ 50*KT associated with thunderstorms -AND/OR- Damaging Hail ≥ 1* inch	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft/equipment.	**3 hours**
Moderate Thunderstorm Strong Wind ≥ 35KT but < 50KT associated with thunderstorms -AND/OR- Large Hail ≥ ¼ inch but < 1 inch	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	**2 hours**
Damaging Wind Surface wind not associated with thunderstorm ≥ 50*KT	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	**3 hours**
Strong Wind Surface wind not associated with thunderstorm ≥ 35KT but < 50KT	Increased risk to exposed personnel; increased risk of damage to unsecured property.	**2 hours**
Heavy Rain ≥ 2 inches within 12 hours	Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel.	**2 hours**
Heavy Snow ≥ 8 inches within 24 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	**6 hours**
Snow ≥ 6 inches within 12 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	**4 hours**

Freezing Precipitation 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.	**3 hours**
Blizzard Conditions Falling and/or blowing snow AND visibility ≤ ¼ mile AND winds ≥ 30 knots lasting at least 3 hrs.	Imposes significant risk to personnel movement; significant risk to maneuver or flight line activities.	**3 hours**
Dust-Storm Visibility ≤ 5/8 mile in blowing dust	Disrupts personnel movement and aviation operations.	**2 hours**
Lightning Lightning within 7* miles of HPAAF	Immediate threat to exposed personnel; increased risk of damage to equipment and delay in operations.	**30 minutes**

E-3.Weather Warnings. The 26 OWS issues the following weather warnings for Fort Sill when the listed threats/thresholds are forecast to occur within the Fort Sill cantonment area or range boundaries.

a. Some of Fort Sill's weather warning threshold values deviate from standard AF criteria as defined in AFMAN15-129V1.

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

Table E-2. Fort Sill Weather Warnings

Threat/Threshold (Forecast within Fort Sill's cantonment area or range boundaries)	**Impact**	**Warning Desired Lead-time**
Tornado / Funnel Cloud (detected by radar or visually observed) AND threatening Fort Sill	Immediate threat of catastrophic damage to personnel and property.	**15 minutes**
Severe Thunderstorm Damaging Wind ≥ 50*KT associated with thunderstorms -AND/OR- Damaging Hail ≥ 1* inch	Immediate threat to exposed personnel; high risk of damage to facilities and exposed aircraft/equipment.	**1 hour**
Moderate Thunderstorm Strong Wind ≥ 35KT but < 50KT associated with thunderstorms -AND/OR- Large Hail ≥ ¼ inch but < 1 inch	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	**1 hour**
Damaging Wind Surface wind not associated with thunderstorm ≥ 50*KT	Immediate threat to exposed personnel; increased risk of damage to facilities and equipment.	**1 hour**
Strong Wind Surface wind not associated with thunderstorm ≥ 35KT but < 50KT	Increased risk to exposed personnel; increased risk of damage to unsecured property.	**1 hour**
Heavy Rain ≥ 2 inches within 12 hours	Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel.	**1 hour**
Heavy Snow ≥ 8 inches within 24 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	**1 hour**
Snow ≥ 6 inches within 12 hours	Disrupts personnel and vehicle movement or airfield activities; increased risk of unsafe driving conditions.	**1 hour**

Freezing Precipitation 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.	**1 hour**
Blizzard Conditions Falling and/or blowing snow AND visibility ≤ ¼ mile AND winds ≥ 30 knots lasting at least 3 hrs.	Imposes significant risk to personnel movement; significant risk to maneuver or flight line activities.	**1 hour**
Dust-Storm Visibility ≤ 5/8 mile in blowing dust	Disrupts personnel movement and aviation operations.	**1 hour**
Lightning Lightning within 7* miles of HPAAF	Immediate threat to exposed personnel; increased risk of damage to equipment and delay in operations.	**As observed**

Appendix F
Weather Advisory Criteria

F-1. General. Weather advisories were established based on supported unit supplied critical weather elements that will impact operations. Criteria may change as operational requirements change.

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

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

F-2. Weather Advisories. The WOC forecaster(s) (26 OWS during WOC non-duty hours) will issue observed weather advisories when criteria below occur at Fort Sill.

Table F-1. Fort Sill Weather Advisories

Criteria
Lightning within 25 nautical miles of HPAAF
Equivalent wind chill temperature ≤ -01°C (31°F)
Equivalent wind chill temperature ≤ -29°C (-20°F)
Temperature ≥ 31°C (88°F)
Temperature ≤ -09°C (16°F)
Ceiling ≤ Highest Published Airfield Landing Minima (800FT)
Visibility ≤ Highest Published Airfield Landing Minima (2SM)

Appendix G
Severe Weather Action Procedures (SWAP)

G-1. General. The WOC is manned with at least one certified weather forecaster 16 hours a day (0600 – 2200 hrs) Monday through Friday.

a. To help mitigate the threat of severe and/or mission-limiting weather, OL-E, 3WS will maintain procedures IAW AFMAN 15-129V2 to ensure sufficient personnel are recalled and/or available during potential and/or actual severe weather events as listed in Table G-1.

Table G-1. WOC SWAP criteria

Tornado Watch is issued by 26 OWS and Valid Time is in effect
Tornado Warning is issued by 26 OWS
Severe Thunderstorm Warning is issued by 26 OWS
Damaging Wind (GTE 50KT) Warning is issued by 26 OWS
Freezing Precipitation Warning is issued by 26 OWS

b. SWAP may be activated at the discretion of the WOC 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. Specifically, the WOC will maintain procedures to conduct expanded “Eyes Forward” and enhanced MISSIONWATCH to enable forecasters to focus activities and allocate resources to exploit weather conditions, mitigate mission delays, and enhance overall effectiveness of operations.

d. Upon activation of SWAP, WOC 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 Weather Product Dissemination

H-1. General. Table H-1 depicts examples of weather products disseminated to Fort Sill agencies by the 26 OWS and/or the Weather Operations Center.

Table H-1. Examples of Weather Products

Product	Example	Explanation
Weather Observation	METAR KFSI 151355Z AUTO 02014KT 10SM FEW035 SCT100 BKN250 29/22 A3037 RMK AO2 SLP289 T02920220	• METAR: Type of observation (may also be SPECI or LOCAL) • KFSI: Location identifier for HPAAF • 151355Z: Date (15) and Time (1355Z) of observation (UTC) • AUTO: Designates FMQ-19 observation is fully automated (AUTO designator is removed when observation is supplemented or backed up – refer to section 3-4, this regulation) • 02014KT: Wind direction from 020 degrees (magnetic) at 14 knots • 10: Prevailing visibility (statute miles) • FEW035: Clouds less than 3/8th total cloud cover at 3,500 feet AGL • SCT100: Clouds 3/8 to 4/8ths total cloud cover at 10,000 feet AGL • BKN250: Clouds 5/8 to 7/8ths total cloud cover at 25,000 feet AGL • 29/22: Temperature and dew point (degrees Celsius) • A3037: Altimeter setting (inches of mercury) • RMK: Significant remarks – automated system indicator (AO2A when observation is supplemented or backed up) • SLP289: Sea level pressure (millibars) • T02920220: temperature and dew point to the tenth of a degree (C)
Terminal Aerodrome Forecast (TAF)	TAF KFSI 1514-1620 01015KT 9999 FEW030 SCT250 520004 QNH3031INS BECMG 1517/1518 16015G25KT 8000 -SHRA BKN030 OVC250 QNH3019INS TEMPO 00-03 VRB25G35KT 1600 +TSRA BKN015CB OVC030 T34/1521Z T23/1611Z	• TAF: 30-hour forecast • KFSI: Location identifier for HPAAF • 1514-1620: Forecast valid 15th 1400Z to 16th 2000Z (UTC) • 01015KT: Forecast wind direction (from) and speed (knots) • 9999: Forecast prevailing visibility (meters) • FEW030: Clouds less than 3/8th total cloud cover at 3,000 feet AGL • SCT250: Clouds 3/8 to 4/8ths total cloud cover at 25,000 feet AGL • 520004: Light turbulence surface - 4,000 feet AGL • QNH3031INS: Forecast minimum altimeter setting (inches of mercury) • BECMG 1517/1518: Forecast gradual change between 1700 & 1800Z • 16015G25KT: Forecast wind direction, speed and gusts (knots) • 8000 -SHRA: Prevailing visibility (meters) in light rain showers • BKN030: Clouds 5/8 to 7/8ths total cloud cover at 3,000 feet AGL • OVC250: Clouds 8/8 total cloud cover at 25,000 feet AGL • QNH3019INS: Forecast minimum altimeter setting (inches of mercury) • TEMPO 00-03: Forecast temporary condition between 0000Z & 0300Z • VRB25G35KT: Forecast wind direction, speed and gusts (knots) • 1600 +TSRA: Prevailing visibility (meters) in thunderstorm & heavy rain • BKN015CB: Clouds 5/8 to 7/8ths total cloud cover at 1,500 feet AGL with cumulonimbus cloud (thunderstorm) • OVC030: Clouds 8/8 total cloud cover at 3,000 feet AGL

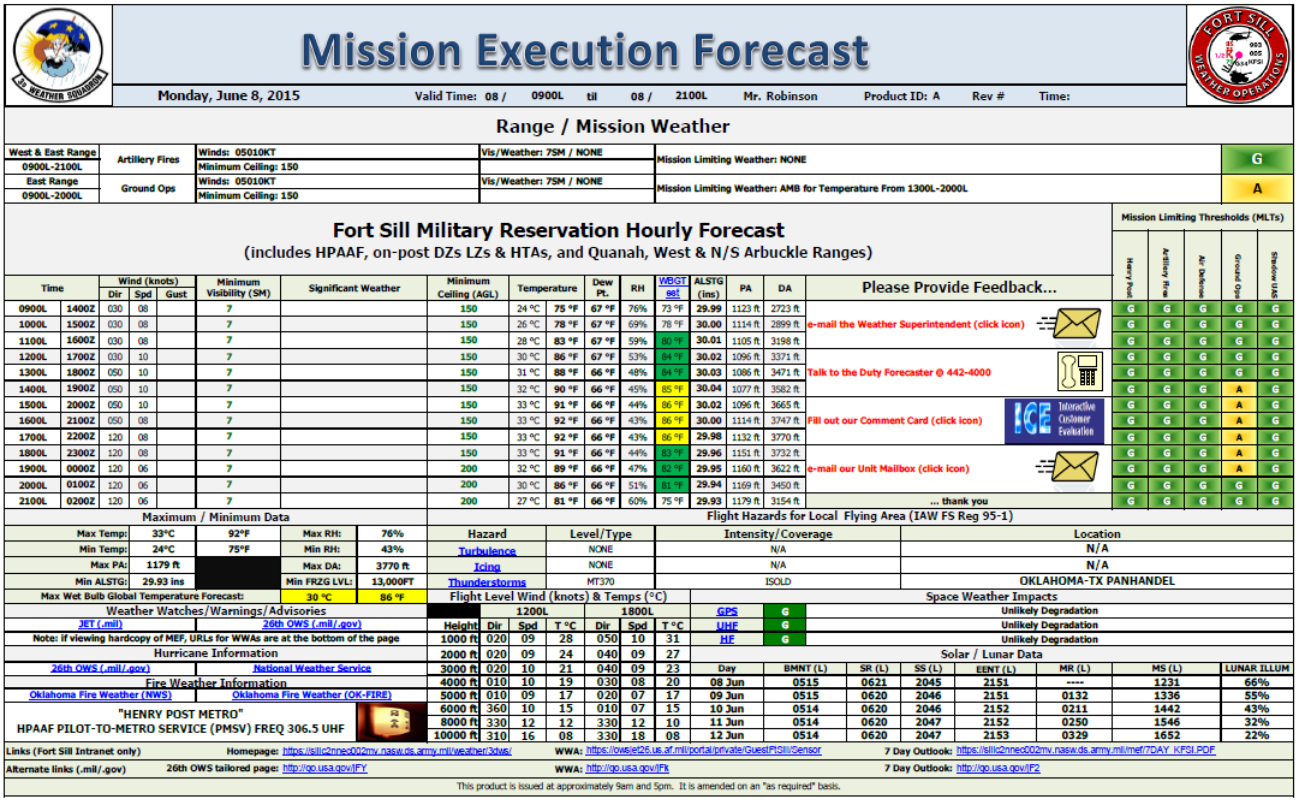
		• T34/1521Z: Forecast maximum temperature (C) and time • T23/1611Z: Forecast minimum temperature (C) and time
PIREP	KFSI UUA /OV KFSI 360005/TM 1440/FL220/ TP C12/SK BKN012-TOP045/WX FV99SM/TA M25/WV 24085KT/TB NEG/IC LGT RIME/RM LLWS +25KT DURC KFSI	• KFSI: Location identifier for HPAAF receiving PIREP • UUA: Urgent PIREP indicator (UA = Routine PIREP) • OV KFSI360005: Location of report; 5 nautical miles north of HPAAF • TM 1440: Time of report 1440 UTC • FL220: Aircraft altitude - 22,000 feet MSL • TP C12: Type of aircraft • SK BKN012-TOP045: Clouds 5/8 to 7/8ths total cloud cover at 1,200 feet MSL; tops of clouds 4,500 feet MSL • WX FV99SM: Flight-level visibility and weather = unrestricted visibility in statue miles • TA M25: Outside air temperature at flight level minus 25 degrees Celsius • WV 24085: Flight level wind direction and speed (from 240 degrees at 85 knots) • TB NEG: Turbulence = negative turbulence (none) • IC LGT RIME : Light rime icing at flight level • RM LLWS +25KT DURC KFSI: Remarks Low-level Wind Shear with 25 knot gain in airspeed during climb from HPAAF
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	• 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 • 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

Product	Example	Explanation
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	• 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 • 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
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.	• WEATHER ADVISORY 06-002 FOR FORT SILL (KFSI): Second weather advisory issued by the WOC for Fort Sill for the month of June • VALID 20/1830Z (20/1330L) UFN: Observed advisory meaning conditions are occurring and the advisory is valid until further notice • OBSERVED TEMPERATURE GREATER THAN OR EQUAL TO 31C AT HENRY POST ARMY AIRFIELD: Specific weather conditions occurring

H-2. Legend. The following is an explanation of terms contained in Table H-1.

A – observed altimeter setting
AGL – above ground level coverage
BECMG – becoming
BKN – broken (as in sky condition of 5/8ths to 7/8ths cloud coverage)
C – Celsius
CB – Cumulonimbus
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
MOV – moving
MSL – meters above sea level
NEG – negative
OVC – overcast (as in sky condition of 8/8ths cloud coverage)
PIREP – pilot report
RM – remarks follow
SCT – scattered (as in sky condition of 3/8ths to 4/8ths cloud coverage)
SFC – surface
SHRA (-/+) – rain showers (- indicates light intensity and + indicates heavy intensity)
SK – sky condition
SM – statute miles
SPECI – special weather report
TA – outside air temperature
TAF – terminal aerodrome forecast
TB – turbulence
TEMP – temperature
TEMPO – temporary conditions
TM – time
TP – aircraft type
TSRA (-/+) – thunderstorms (- indicates light intensity and + indicates heavy intensity)
UFN – until further notice
UA – Routine PIREP
UUA – Urgent PIREP
VRB – variable
WV – flight level wind direction and speed
WX – weather at flight level
Z – Zulu time

Appendix I
Sample Weather Products



Mission Execution Forecast

Monday, June 8, 2015 | Valid Time: 08 / 0900L til 08 / 2100L | Mr. Robinson | Product ID: A | Rev # | Time:

Range / Mission Weather

West & East Range 0900L-2100L	Artillery Fires	Winds: 05010KT Minimum Ceiling: 150	Vis/Weather: 7SM / NONE	Mission Limiting Weather: NONE	G
East Range 0900L-2000L	Ground Ops	Winds: 05010KT Minimum Ceiling: 150	Vis/Weather: 7SM / NONE	Mission Limiting Weather: AMB for Temperature From 1300L-2000L	A

Fort Sill Military Reservation Hourly Forecast
(includes HPAAF, on-post DZs LZs & HTAs, and Quanah, West & N/S Arbuckle Ranges)

Time		Wind (knots) Dir	Spd	Gust	Minimum Visibility (SM)	Significant Weather	Minimum Ceiling (AGL)	Temperature	Dew Pt.	RH	WBGT 88°	ALSTG (ins)	PA	DA	Please Provide Feedback...	Mission Limiting Thresholds (MLTs): Heavy Pwd	Artillery Firing	Air Defense	Ground Ops	Shadow UAS
0900L	1400Z	030	08		7		150	24 °C	75 °F	67 °F	76%	73 °F	29.99	1123 ft	2723 ft		G	G	G	G	G
1000L	1500Z	030	08		7		150	26 °C	78 °F	67 °F	69%	78 °F	30.00	1114 ft	2899 ft	e-mail the Weather Superintendent (click icon)	G	G	G	G	G
1100L	1600Z	030	08		7		150	28 °C	83 °F	67 °F	59%	80 °F	30.01	1105 ft	3198 ft		G	G	G	G	G
1200L	1700Z	030	10		7		150	30 °C	86 °F	67 °F	53%	84 °F	30.02	1096 ft	3371 ft	Talk to the Duty Forecaster @ 442-4000	G	G	G	G	G
1300L	1800Z	050	10		7		150	31 °C	88 °F	66 °F	48%	84 °F	30.03	1086 ft	3471 ft		G	G	G	G	G
1400L	1900Z	050	10		7		150	32 °C	90 °F	66 °F	45%	85 °F	30.04	1077 ft	3582 ft		G	G	G	A	G
1500L	2000Z	050	10		7		150	33 °C	91 °F	66 °F	44%	86 °F	30.02	1096 ft	3665 ft		G	G	G	A	G
1600L	2100Z	050	08		7		150	33 °C	92 °F	66 °F	43%	86 °F	30.00	1114 ft	3747 ft	Fill out our Comment Card (click icon)	G	G	G	A	G
1700L	2200Z	120	08		7		150	33 °C	92 °F	66 °F	43%	86 °F	29.98	1132 ft	3770 ft		G	G	G	A	G
1800L	2300Z	120	08		7		150	33 °C	91 °F	66 °F	44%	83 °F	29.96	1151 ft	3732 ft		G	G	G	A	G
1900L	0000Z	120	06		7		200	32 °C	89 °F	66 °F	47%	82 °F	29.95	1160 ft	3622 ft	e-mail our Unit Mailbox (click icon)	G	G	G	A	G
2000L	0100Z	120	06		7		200	30 °C	86 °F	66 °F	51%	81 °F	29.94	1169 ft	3450 ft		G	G	G	G	G
2100L	0200Z	120	06		7		200	27 °C	81 °F	66 °F	60%	75 °F	29.93	1179 ft	3154 ft	... thank you	G	G	G	G	G

Maximum / Minimum Data

Max Temp:	33°C	92°F	Max RH: 76%
Min Temp:	24°C	75°F	Min RH: 43%
Max PA:	1179 ft		Max DA: 3770 ft
Min ALSTG:	29.93 ins		Min FRZG LVL: 13,000FT
Max Wet Bulb Global Temperature Forecast:	30 °C	86 °F	

Flight Hazards for Local Flying Area (IAW FS Reg 95-1)

Hazard	Level/Type	Intensity/Coverage	Location
Turbulence	NONE	N/A	N/A
Icing	NONE	N/A	N/A
Thunderstorms	MT370	ISOLD	OKLAHOMA-TX PANHANDEL

Weather Watches/Warnings/Advisories

JET (.mil) | 26th OWS (.mil/.gov)

Note: If viewing hardcopy of MEF, URLs for WWAs are at the bottom of the page

Hurricane Information

26th OWS (.mil/.gov) | National Weather Service

Fire Weather Information

Oklahoma Fire Weather (NWS) | Oklahoma Fire Weather (OK-FIRE)

"HENRY POST METRO"
HPAAF PILOT-TO-METRO SERVICE (PMSV) FREQ 306.5 UHF

Flight Level Wind (knots) & Temps (°C)

Height	1200L Dir	Spd	T °C	1800L Dir	Spd	T °C
1000 ft	020	09	28	050	10	31
2000 ft	020	09	24	040	09	27
3000 ft	020	10	21	040	09	23
4000 ft	010	10	19	030	08	20
5000 ft	010	09	17	020	07	17
6000 ft	360	10	15	010	07	15
8000 ft	330	12	12	330	12	10
10000 ft	310	16	08	330	18	08

Space Weather Impacts

GPS	G	Unlikely Degradation
UHF	G	Unlikely Degradation
HF	G	Unlikely Degradation

Solar / Lunar Data

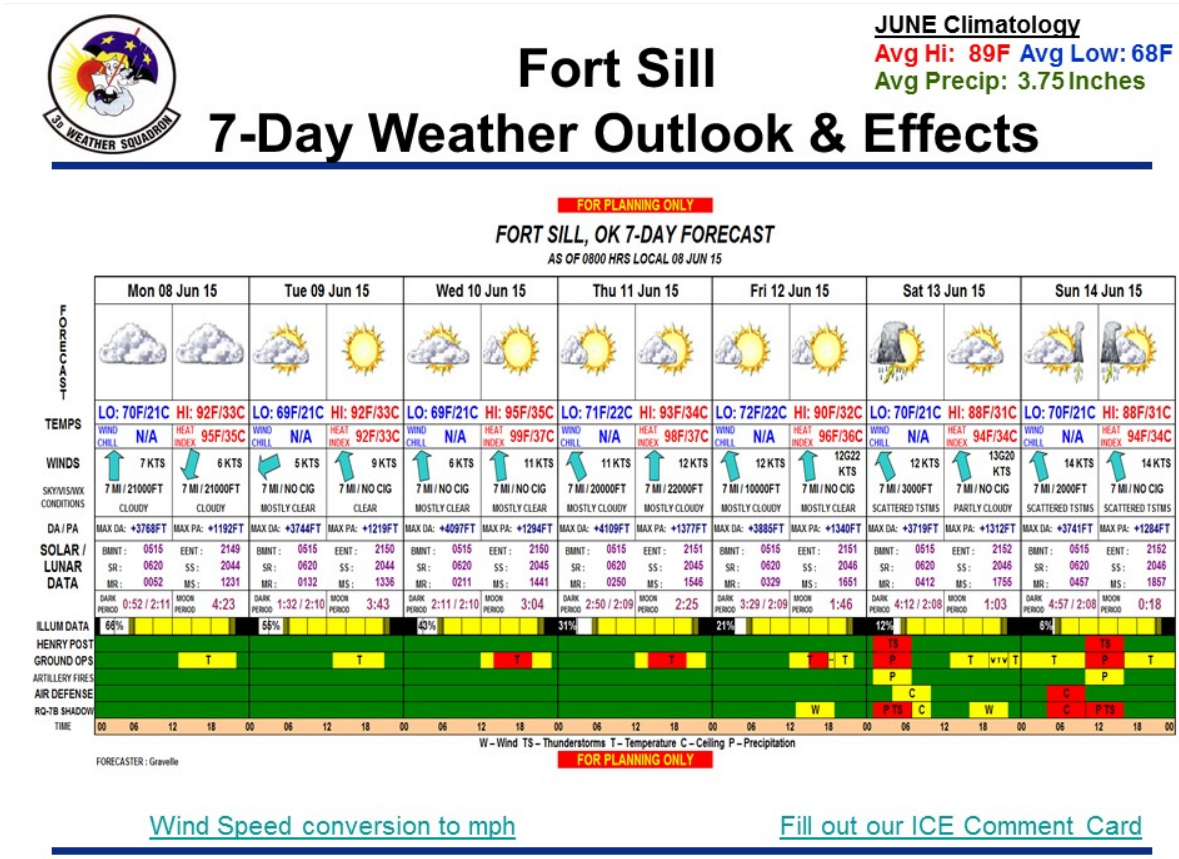
Day	BMNT (L)	SR (L)	SS (L)	EENT (L)	MR (L)	MS (L)	LUNAR ILLUM
08 Jun	0515	0621	2045	2151	-----	1231	66%
09 Jun	0515	0620	2046	2151	0132	1336	55%
10 Jun	0514	0620	2046	2152	0211	1442	43%
11 Jun	0514	0620	2047	2152	0250	1546	32%
12 Jun	0514	0620	2047	2153	0329	1652	22%

Links (Fort Sill Intranet only) Homepage: https://sillc2nnec002nv.nasw.ds.army.mil/weather/3dws/ WWA: https://ows/et26.us.af.mil/portal/private/GuestFtSill/Sensor 7 Day Outlook: https://sillc2nnec002nv.nasw.ds.army.mil/mef/7DAY_KFSI.PDF

Alternate links (.mil/.gov) 26th OWS tailored page: http://go.usa.gov/fFY WWA: http://go.usa.gov/fFk 7 Day Outlook: http://go.usa.gov/fF2

This product is issued at approximately 9am and 5pm. It is amended on an "as required" basis.

Figure I-1. Sample of Mission Execution Forecast



Integrity - Service - Excellence

Figure I-2. Sample of 7-Day Weather Outlook and Effects

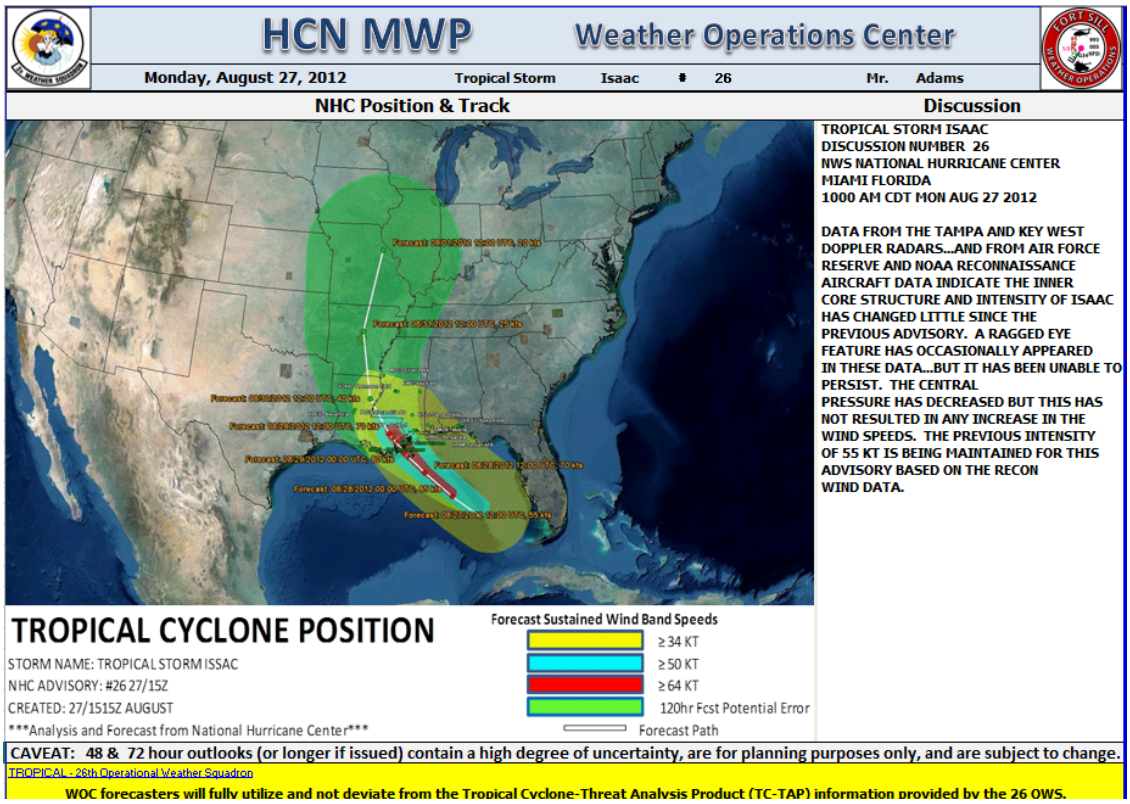


Figure I-3. Sample of Tropical Weather Outlook

Appendix J
Environmental Mission Limiting Thresholds (MLTs)

J-1. General. Compiled from 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*), various equipment technical documents (i.e., Technical Orders, TOs), and local operating procedures, this list is designed to present a general picture of weather impacts on operations. This list is not all-inclusive.

a. WOC 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 identifying and documenting weather sensitivities and thresholds applicable to supported units' operations, missions, aircraft, and weapon systems.

c. Supported units will provide the SWO and/or the WOC with weather support requirements and environmental MLTs no later than 15 days prior to exercises and contingency operations.

Table J-1. Aviation Operations – Environmental MLTs

Launch / Recovery	Fixed Wing	Rotary	UAS (Shadow)
Ceiling (ft) / Visibility (mi)	200 / ½	1000 / 3 500 / ½	3000 / 3
Surface Wind (knots)	N/A	≥ 45	≥ 25
Cross Wind (knots)	N/A	N/A	≥ 20 G25
Winds Aloft	N/A	N/A	≥ 50
Precipitation	N/A	Mod+ Freezing	Any Precip
Thunderstorms	Avoid all	Avoid all	Avoid all
Turbulence	Fcst / Obsvd Severe	Fcst / Obsvd Moderate	Fcst / Obsvd Severe (CAT I)
Icing	Fcst / Obsvd Severe	Fcst / Obsvd Moderate	Any Fcst / Obsvd
Space Weather	Severely degraded HF/UHF or High GPS (Single-Frequency) Impacts (≥ 50 meter errors)		

(1) Legend for Table J-1:

CAT – aircraft category
ft – feet
GPS – Global-Positioning System
HF – High Frequency
mi – miles
N/A – not applicable
UAS – unmanned aircraft system
UHF – Ultra High Frequency

Table J-2. Ground Operations – Environmental MLTs

Scheduled Ops	Artillery Fires (FA)	Air Defense Artillery (ADA)	Ground Operations
Ceiling (ft) / Visibility (mi)	N/A / ½	2500 / N/A	N/A / ½
Surface Wind (knots)	> 35	> 35	> 30
Precipitation	Heavy	N/A	Heavy
			Hail (GR)
			Any Freezing
Temperature	> 125°F	> 125°F	> 95°F
	< 20°F		< -15°F
Other	N/A	N/A	Wind Chill ≤ -20°F
			Snow/Ice on Roads

(2) Legend for Table J-2:

ft – feet
mi – miles
N/A – not applicable

Table J-3. Garrison Operations – Environmental MLTs

Threshold Value	Impact	Supported Unit Action(s)
Tornado / Funnel Cloud (detected by radar or visually observed) AND threatening the Fort Sill Cantonment Area or Range Boundaries	Immediate threat of catastrophic damage to personnel and property	Warn populace (**refer to FS EM Plan**)--seek immediate shelter; recall/ground all aircraft—hangar high priority aircraft, divert aircraft; secure equipment; man emergency control centers / disaster response teams
Severe Thunderstorm (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
Moderate Thunderstorm (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
Damaging Wind (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
Strong Wind (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
Lightning within 7 NM	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
Freezing Precipitation, or **Heavy Snow** ($\geq$ 8 inches in 24 hours), or **Snow** ($\geq$ 6 inches in 12 hours)	Disrupts personnel movement or flightline activities; Poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle	Cease flying, hangar or protect aircraft; report runway conditions (runways/taxiways/ramps); sand/salt on overpasses and intersections, close roads—

	movement that cannot easily be mitigated as conditions worsen; icing on roads—hazard to driving; icing on aircraft / equipment—delay or curtailment of operations	limit and/or restrict post driving (Refer to FS EM Plan)
Blizzard Conditions (falling and/or blowing snow AND visibility ≤ 1/4 mile AND winds ≥ 30 knots lasting at least 3 hrs.)	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
Heavy Rain (> 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
Dust Storm (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

(3) Legend for Table J-3:

EM – emergency management
NM – nautical mile

Table J-4. Army Combat Operations – Environmental MLTs

OPERATION/SYSTEM	Favorable (No degradation)	Marginal (Some degradation)	Unfavorable (Significant degradation)
Rotary Wing (HELO)			
Ceiling/Visibility	≥ 1000 ft and/or 3 SM (4800 m)		< 500 ft and/or 1/2 SM (800 m)
Weather/Precipitation	None	Blowing Sand	Thunderstorms or Freezing Precipitation
Wind Speed	< 35 kt		≥ 45 kt
Density altitude	< 5000 ft		≥ 6,000 ft
Turbulence	None - Light (CAT II)	Moderate (CAT II)	Severe (CAT II)
Icing	None - Light	Moderate	Severe
Unmanned Aerial Systems (UAS)			
Ceiling/Visibility	≥ 3000 ft and/or 3 SM (4800 m)		< 3000 ft and/or 3 SM (4800 m)
Weather/Precipitation	None	Light - Moderate	Heavy Precipitation, Thunderstorms, or Freezing Precipitation
Wind Speed	< 25 kt		≥ 25 kt
Turbulence	None - Light (CAT I)	Moderate (CAT I)	Severe (CAT I)
Icing	None		Any
Close Air Support (CAS)			
Ceiling/Visibility	≥ 10,000 ft and/or 3 SM (4800 m)		< 5000 ft and/or 3 SM (4800 m)
Weather/Precipitation		Thunderstorms / Blowing Sand	
Air Interdiction			
Ceiling / Visibility	≥ 300 ft / 1/4 SM (400 m)		< 300 ft and/or 1/4 SM (400 m)
Aerial Reconnaissance			
Ceiling/Visibility	≥ 5000 ft and/or 3 SM (4800 m)		Less than 1,000 ft and/or 1,600 m
Weather/Precipitation	None	Blowing Sand	Thunderstorms
Wind Speed	< 60 knots		≥ 60 knots
Icing	None	Trace	Light - Severe
Night Vision Goggles			
Cloud Cover or Ceiling	< 50% or ≥ 3000 feet	≥50% or < 3000 feet	
Visibility	≥ 1/2 SM (800 m)	< 1/2 SM (800 m)	
Precipitation	Light - Moderate	Heavy	
Temperature	33° F to 124° F	≥ 125° F or < 33° F	
Smoke			
Precipitation	None	Light - Moderate	Heavy
Temperature	< 80° F		> 120° F

Nuclear, Biological, Chemical			
Ceiling and/or Temperature	> 600 ft and/or 86º F to 32º F	< 600 ft and/or > 86º F	< -15º F
Precipitation	None	Light	Moderate
Low level inversion and/or stability	Yes or Stable	No or Unstable	
Wind Speed	0-9 knots		> 20 knots
Personnel			
Temperature or Heat Index	84º F to 33º F	> 85º F or < 33º F	> 95º F or < -25º F
Wind Chill	> 15º F		< -25º F
Weather or Precipitation	Light Liquid or Snow	Moderate or Freezing Drizzle	Heavy or Freezing Rain
Vehicles			
Snow depth	< 6 in		> 12 in
Weather / Precipitation	None or Light	Moderate or Light Freezing Rain	Heavy or Moderate to Heavy Freezing Rain
Temperature	104º F to 1º F	> 105º F or < 0º F	
Air Defense Artillery			
Ceiling and/or Visibility	> 5000 ft and/or 1 SM (1600 m)		< 2500 ft and/or 1/2 SM (800 m)
Wind	< 35 knots		> 50 knots
Weather/Precipitation	None - Light	Blowing Sand or Dust	Heavy
Visual Systems			
Visibility and/or Weather	≥ 2 SM (3200 m) and/or Light Precipitation		< 5/8 SM (1000 m) and/or Heavy Precipitation
Temperature or Relative Humidity (RH)	< 100º F or RH < 80 %	≥ 100º F or < -25º F or RH ≥ 80 %	
Infrared (IR) Sensors			
Visibility and/or Weather/Precipitation	≥ 2 SM (3200 m) and/or Light Precipitation	< 2 SM (3200 m) and/or Moderate Precipitation	Heavy Precipitation and/or Fog and/or Blowing Sand and/or Snow
Temperature or Relative Humidity (RH)	125º F to 20º F or RH < 80 %		> 125o F or < -25o F or RH > 85 %
Electro-Optic Air and Ground			
	Detect Range > 5 km	3-5 km	< 3 km or IR Crossover

(4) Legend for Table J-4:

CAT – category
f – Fahrenheit
ft – feet
km - kilometers
m - meters
NM – nautical mile
SM - statue mile

Appendix K
Support Agreement with Lawton/Comanche County Emergency Management

K-1. Purpose. To outline the agreement between OL-E, 3WS 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. A direct telephone hotline has been furnished between the WOC and Lawton/Comanche County Emergency Management.

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

K-3. The WOC will –

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

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

K-4. Lawton/Comanche County Emergency Management will –

a. Relay tornado/funnel cloud sighting and significant reports of severe weather to the WOC forecaster(s) as soon as possible after receipt.

b. Notify the WOC forecaster(s) upon activation of tornado warning sirens.

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

d. Provide and/or arrange for any direct telephone circuit between Emergency Management and the WOC.

Appendix L
OL-E, 3d Weather Squadron Contact Information

Table L-1. Directory

Office	Commercial	DSN	Fax and/or E-mail
Superintendent, Weather Operations	580-442-3200	639-3200	mailto: james.c.adams3.civ@mail.mil
WOC—Forecaster(s)	580-442-4069 580-442-4887	639-4069 639-4887	580-442-7761 mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil
Weather Maintenance Technician	580-442-4043	639-4043	mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil
26 OWS Flight Weather Briefings	318-529-2651 318-529-2652 318-529-2653	331-2651 331-2652 331-2653	318-529-2609 DSN: 331-2609
OL-E Alternate Operating Location Bldg 4915, Room 13	580-442-2614	639-2614	580-442-7126 mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil
OL-E Alternate Maintenance Facility Bldg 4915, Room 12	580-442-2975	639-2975	580-442-7045 mailto: usarmy.sill.imcom.mbx.ft-sill-dptms-weather@mail.mil

Glossary

Section I
Abbreviations

ACC
Air Combat Command

ACFT
Aircraft

ADA
Air Defense Artillery

AF
Air Force

AFB
Air Force Base

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

AOB
Airfield Operations Board

AOL
Alternate Operating Location

AOR
Area of Responsibility

AR
Army Regulation

ARAC
Army Radar Approach Control

ARIMS
Army Records Information Management System

ASD
Administrative Services Division

ATC
Air Traffic Control

AUTO
Automated Report

BECMG
Becoming

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

BMNT
Beginning of Mean Nautical Twilight

BWW
Basic Weather Watch

C
Celsius

CAT
Category

CB
Cumulonimbus

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

CDM
Chemical Downwind Message

CIG
Ceiling

CLR
Clear of Clouds

COOP
Continuity of Operations

CWW
Cooperative Weather Watch

DCO
Defense Connect Online

DD
Department of Defense (Forms)

DES
Director of Emergency Services

DHR
Directorate of Human Resources

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

FA
Field Artillery

FAA
Federal Aviation Administration

FCST
Forecast

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

FM
Frequency Modulation

FOD
Field Officer of the Day

FSOC
Fort Sill Operations Center (when activated, Emergency Operations Center)

FT
Feet

FV
Flight Level Visibility

FWB
Flight Weather Briefing

FZG LVL
Freezing Level

GPS
Global Positioning System

HCN
Hurricane Conditions

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

IFR
Instrument Flight Rules

IN
Inches

IWWC
Integrated Weather Warning Capability

JET
Joint Environmental Toolkit

KFSI
ICAO locator for Henry Post Army Airfield

KM
Kilometer

KT
Knots

L
Local Time

LA
Louisiana

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

MEDEVAC
Medical Evacuation

MEFP
Mission Execution Forecast Process

METAR
Aviation Routine Weather Report (Observation)

MI
Miles

MIN
Minimum

MISSIONWATCH
Mission-Scale Meteorological Watch

MLT
Mission Limiting Thresholds

MOV
Moving

MP
Military Police

MPH
Miles Per Hour

MSC
Major Subordinate Command

MSL
Meters Above Sea Level

MWP
Mission Weather Product

N/A
Not Applicable

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

ORM
Operational Risk Management

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

OWS
Operational Weather Squadron

PA
Pressure Altitude

PAO
Public Affairs Office

PARA
Paragraph

PIREP
Pilot Report

PMSV
Pilot to Metro Service

POC
Point of Contact

R5601
Restricted Area

RA
Rain

REG
Regulation

RMK
Supplementary Remarks Follow

RVR
Runway Visual Range

RVRNO
Runway Visual Range Not Available

RWY
Runway

SAR
Support Assistance Request

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

SFC
Surface

SHRA
Rain Showers

SIGMET
Significant Meteorological Information

SK
Sky Condition

SLP
Sea Level Pressure

SM
Statute Mile

SOP
Standard Operating Procedure

SPECI
Aviation Selected Special Weather Report (Observation)

SQ
Squall

SWAP
Severe Weather Action Procedures

SWO
Superintendent, Weather Operations

TA
Outside Air Temperature

TAF
Terminal Aerodrome Forecast

TB
Turbulence

TC-TAP
Tropical Cyclone-Threat Analysis Product

TEMP
Temperature

TEMPO
Temporary Conditions

TM
Time

TP
Aircraft Type

TSRA
Thunderstorm with Rain

TURB
Turbulence

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

VHF
Very High Frequency

VIS
Visibility

VRB
Variable

WBGT
Wet Bulb Globe Temperature

W/I
Within

WMO
World Meteorological Organization

WND SHFT
Wind Shift

WOC
Weather Operations Center

WV
Flight Level Wind Direction and Speed

WWA
Weather Watch Warning or Advisory

WX
Weather

Z
Zulu (i.e., Coordinated Universal Time)

2 WS
2nd Weather Squadron

3 WS
3rd Weather Squadron

14 WS
14th Weather Squadron

557 WW
557th 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.

Automated Weather Network
A global communications network used for collecting and distributing weather data throughout the Air Force, Navy, and Army weather systems; and federal and foreign meteorological, space, and aviation centers.

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 (BWW)
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 knows 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 26OWS 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.

International Civil Aviation Organization
A United Nations organization specializing in matters dealing with international aviation and navigation.

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 (Meteorological Watch)
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 (MEF)
A tailored mission weather product issued for the specific support of military operations.

Mission Weather Product (MWP)
Any weather product or group of weather products generated by a weather unit that is integrated into the military decision making process. MWPs may be planning or execution products and are not limited to aviation missions.

MISSIONWATCH (Mission Meteorological Watch)
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.

Observation
A combined visual and instrumental evaluation of current weather conditions and elements at a specific location.

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

Operational Event/Incident Report (**OPREP-3)**
Reports submitted using command post channels to immediately notify commanders of any significant event or incident that rises to the level of MAJCOM, HQ USAF, or DOD interests. Submit the applicable OPREP-3 regardless of whether or not the event is being reported through other channels.

Operational Weather Squadron (OWS)
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.

Terminal Aerodrome Forecast (TAF)
A standard text forecast containing the cloud cover, cloud heights, and visibility for general flight rule conditions (IAW AFI 11-202, Volume 3, General Flight Rules; and AR 95-1, Flight Regulations), as well as wind, altimeter, and other weather parameters needed to sustain the landing and takeoff of aircraft.

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.

IMSI-PL

GLENN A. WATERS
COL, FA
Garrison Commander

JAMES A. MILLER
Director of Human
Resources

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