Department of the Army
Headquarters, U.S. Army Garrison
462 Hamilton Road Suite 120
Fort Sill, Oklahoma 73503
8 August 2012

***Fort Sill Regulation 115-9**

Climatic, Hydrological, and Topographic Services

FORT SILL WEATHER SUPPORT

Summary. This is a comprehensive revision. It is necessary due to the publication of Air Force Manual (AFMAN) 15-129 (Air and Space Weather Operations – Processes and Procedures), 6 December 2011. This revision provides guidance and information on the weather forecasting support and services provided to Fort Sill, Oklahoma, by the Air Combat Command (ACC) Directorate of Weather and contain information concerning the integration and exploitation of weather data. This regulation implements Army Regulation (AR) 115-10 (Weather Support for the US Army) at Fort Sill.

Applicability. This regulation applies to all activities, departments, and units described herein. However, USAFCOEFS addresses upper air soundings generated by the USAFCOEFS Meteorological Station.

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 the DPTMS. Send comments and suggested improvements on 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 DHR, ASD Homepage at http://sill-www.army.mil/USAG/publications2012.html.

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*This regulation supersedes Fort Sill Regulation 115-9, 25 January 2011.

Chapter 1
Introduction

1-1. Purpose. This regulation defines the responsibilities of Fort Sill Weather Operations (FSWO) for providing weather support to Fort Sill organizations in accordance with (IAW) Air Force Instruction (AFI) 15-128 (Air and Space Weather Operations – Roles and Responsibilities) and AFMAN 15-129. It further specifies responsibilities incumbent upon USAFCOEFS and various Army units in providing support to FSWO IAW AR 115-10.

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

1-3. Explanation of Abbreviations and Terms. Abbreviations and terms used in this regulation are explained in the glossary.

1-4. Operational Constraints. The quality of weather support is dependent upon the availability of weather communications and meteorological equipment. Communication lines must be dedicated, consistent, and of high bandwidth.

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 FSWO 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. General.

a. The acronym "AFW" is used as a convenience term throughout this document and refers to the Air Force Weather functional community that supports national, Joint, AF, and Army operations. It is inclusive of all forces, units, and specialties that are involved in conducting weather operations and providing weather services. It does not imply any organizational or unit alignment. Specific organizations and units will be cited when critical to understanding concepts within this document.

b. The 26th Operational Weather Squadron (26 OWS) is the regional weather center for the south central and southeastern United States. 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). 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 (FWB) to transient aircrews operating within their AOR.

c. AFW forecasters provide, or arrange for, direct weather support at Fort Sill using the unit designator FSWO. FSWO provides tailored weather intelligence information for Army training and operational missions, translating terrestrial and space weather conditions into operational mission impacts. In addition, FSWO serves as the "eyes forward" for the 26 OWS by providing real-time interpretation of local weather information. The senior FSWO representative, traditionally referred to as the Staff Weather Officer (SWO), is the AFW liaison to HQ USAFCOEFS, and is responsible for providing, or arranging for, weather support for Fort Sill.

d. AR 115-10 requires the installation/unit commander to document weather support requirements and procedures. As the primary vehicle for that documentation, this regulation may contain details of responsibilities and procedures not normally seen in an Army regulation.

2-2. Staff Responsibilities.

a. USAFCOEFS staff, commanders, and staff of subordinate units and tenant activities will--

(1) Identify weather service requirements in their AOR and forward requirements to the SWO for review and inclusion into this regulation.

(2) Establish internal procedures for rapidly disseminating and effectively using weather information within their organizations.

b. Director, DPTMS will--

(1) Task weather support requirements.

(2) Provide office space for FSWO's technical, administrative, maintenance, and storage functions.

(3) Provide funding for FSWO's expendable supplies.

(4) Provide FSWO with logistic support, to include, but not limited to, budget for the Lightning Tracking System (LTS) and Weather Tap annual data contracts.

(5) Provide, or arrange for, administrative support to FSWO. This will include staff coordination and staff representation.

c. Fort Sill Operations Center (FSOC) will—

(1) Serve as the 24-hour single point of contact for initially acknowledging receipt of, and then contacting designated agencies to ensure they also acknowledge receipt of, AFW-issued resource protection (weather watches, warnings and advisories) products received from the 26 OWS (Air Force regional weather center) and/or FSWO.

(2) Call 911 or the MP Desk if a Tornado Warning for Fort Sill is received from AFW.

(3) Include FSWO on Alert Notification and Access Rosters.

(4) Coordinate appropriate Operations Plans (OPLANS) and Operation Orders (OPORDS) withthe SWO.

(5) Ensure FSWO is notified of significant events/incidents that may affect operations.

(6) Notify the SWO when damage reports due to a weather event are received on the Fort Sill Military Reservation.

(7) Recall the "On-Call" weather forecaster, during FSWO non-duty hours, when one or more of the Actions in Table 2-1 occur.

Table 2-1. On-Call Weather Forecaster Recall Criteria

Event	Action
A Tornado WATCH for Fort Sill	Is issued by the 26 OWS.
A Severe Thunderstorms WATCH for Fort Sill	Is issued by the 26 OWS & the Valid Time is in effect.
A Damaging Winds WATCH for Fort Sill	Is issued by the 26 OWS & the Valid Time is in effect.
A Tornado WARNING for Fort Sill	Is issued by the 26 OWS.
A Severe Thunderstorms WARNING for Fort Sill	Is issued by the 26 OWS.
A Damaging Winds WARNING for Fort Sill	Is issued by the 26 OWS.
A Freezing Precipitation WARNING for Fort Sill	Is issued by the 26 OWS.
An Aircraft/Ground Mishap	Occurs On or Near Fort Sill.
Response to Unforeseen Circumstances is Requested	As Requested by the 26 OWS.
Communications Line Failure/Critical Equipment Outage	As the Situation Warrants.

(8) Train all appropriate personnel to disseminate weather data IAW the Severe Weather Dissemination Instructions.

d. Range Branch will ensure Range Control disseminates all AFW-issued weather watches, warnings, and advisories for Fort Sill to units on Fort Sill training ranges.

e. HPAAF Airfield Operations will--

(1) Notify the SWO when local Notices to Airmen (NOTAMs) and applicable directives change airfield minima.

(2) Provide the Runway Surface Condition/Runway Condition Reading (RSC/RCR) to HPAAF Air Traffic Control (ATC) personnel during periods of precipitation. ATC relays this information to aircrews.

(3) Relay Pilot Reports (PIREPs) and other significant weather information to the duty forecaster.

(4) Monitor the Pilot-to-Metro Service (PMSV) frequency during FSWO PMSV equipment outages.

(5) Include information on PMSV outages, other than preventative maintenance, in local Airfield Advisories and NOTAMs.

(6) Advise the duty forecaster with notification of/when any emergency or precautionary landings are declared, or mishap/accident/incident occurs.

(7) Notify the duty forecaster with the status of active runways and tower closures.

(8) Provide working space and a telephone for FSWO personnel during weather station evacuations.

(9) Provide notification of weather watches, warnings, and advisories to Fort Sill aviation units and activities.

(10) Provide the most current copies of the Flight Information Publication (FLIP) to the weather station.

(11) Assist the weather station in updating weather support information (duty hours, PMSV frequency, etc.) in the FLIPs.

(12) Provide a basic orientation of the airfield, to include location of meteorological sensors, to newly assigned FSWO personnel.

f. HPAAF ATC Branch participates in Fort Sill's Cooperative Weather Watch (CWW) program. The specifics of the CWW can be found in Appendix C, this document. In addition to CWW responsibilities ATC personnel will--

(1) Provide and maintain FSWO's PMSV radio. (Frequency 306.5)

(2) Provide notification of all AFW-issued weather watches, warnings, and advisories to military aircraft operating in the local flying area.

g. Directorate of Emergency Services (DES) will--

(1) Upon notification from a member of AFW, or competent authority, sound the Tornado Warning siren on Fort Sill.

(2) Coordinate with FSWO to verify that the Tornado danger has passed prior to sounding the "all clear" signal on Fort Sill.

(3) Notify 911 and the FSOC after the Tornado Warning sirens are sounded on Fort Sill and when the "all clear" signal is sounded.

h. Network Enterprise Center (NEC) will--

(1) Provide planning, installation, and maintenance of on-post weather communications circuits and equipment, including computers.

(a) Prioritize the status of work orders to minimize down time of FSWO's Joint Environmental Toolkit (JET) computer assets.

(b) Provide a 24-hour Point of Contact number and technical assistance for JET Help Desk employees attempting to resolve JET issues at Fort Sill.

(c) Provide maintenance of Army-owned communications equipment operated by FSWO.

(d) Provide other weather communication support IAW AR 115-10.

(2) Maintain and update the FSWO webpage, https://sillc2doi462002/weather/3dws/ on the Fort Sill Intranet under "Intranet Links (internal) under subcategory, "Force Protection/Weather".

i. Directorate of Public Works (DPW) will--

(1) Prioritize the status of work orders to avoid catastrophic equipment failure to FSWO's heat sensitive Automatic Meteorological Station's (AMS) Operator Interface Display and Terminal Data Acquisition Unit sensors.

(2) Assist in providing monetary estimates to damaged resources on Fort Sill caused by severe weather events for after-action reports to AF higher headquarters.

j. HQ ACC/A3W, Joint Base Langley-Eustis, VA, will--

(1) Provide AFW forecasters and electronics maintenance personnel at Fort Sill.

(2) Fund or purchase consumable supplies and maintenance for AF-owned weather equipment at Fort Sill.

(3) Monitor the operational status of--

(4) AF-owned weather equipment at Fort Sill.

Chapter 3
General Information

3-1. Mission. FSWO provides direct weather support and services to the USAFCOEFS, the U.S. Army Garrison Fort Sill, and HPAAF. FSWO forecasters produce timely, accurate, and relevant mission weather products and observed weather warnings/advisories, augment AMS observations, conductmeteorological/mission watch for on-going missions, and act as the "eyes forward" element for the 26 OWS. FSWO is organized, trained, and equipped to conduct weather operations and provide weather products and information to all Fort Sill agencies.

a. FSWO is the liaison with the 26 OWS for resource protection (forecasted weather watches and warnings) support for Fort Sill and TAF and FWB support for HPAAF.

(1) The relationship between FSWO and the 26 OWS is formalized in a Unit Data Sheet (see Appendix F) IAW AFI 15-128 and AFMAN 15-129.

(2) FSWO assumes TAF, FWB and forecasted weather watch and warning responsibility for Fort Sill during significant 26 OWS communication outages, evacuations or catastrophic events.

b. FSWO forecasters will act as the "eyes forward" for the 26 OWS by providing input on local weather effects, current trends in the weather conditions, and PIREPS of weather hazards from the local area. FSWO forecasters will relay significant, time-sensitive meteorological information to the technicians conducting Meteorological Watch (METWATCH) and forecasting operations at the 26 OWS.

3-2. Location. FSWO is located in Building 4907, HPAAF. The operations area is located in room 106 and the SWO's office is located in room 115. The primary Alternate Operating Location (AOL) for FSWO is located in building 4915, room 12, HPAAF.

3-3. Operating Hours. FSWO forecasters are on duty M-F 0600-2200hrs. FSWO is closed on weekends and federal holidays. Forecasting and briefing services are available at the 26 OWS seven (7) days a week. A FSWO forecaster will coordinate with the 26 OWS to pick up briefing support during FSWO non-duty hours.

a. An "On-Call" forecaster will be recalled after duty hours based on conditions listed in table 2-1.

b. Staff services are routinely available from 0800-1700hrs and are provided by the SWO.

3-4. Duty Priorities. When there is a conflict, weather support to Fort Sill will be provided using operational risk management (ORM) to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. The ORM decision-making process allows FSWO forecasters the flexibility to exploit environmental conditions, mitigate mission delays, and enhance the overall effectiveness of operations. Typically, weather support to Fort Sill will be provided in the following order of priority:

a. Perform Emergency War Order Tasks.

b. Execute Weather Station Evacuation.

c. Respond to Aircraft/Ground -Emergencies andMishaps.

d. Respond to Immediate Launch (MEDEVAC/Dustoff) Operations.

e. Respond to the Force Protection Officer During Emergencies.

f. Respond to PMSV Contacts.

g. Severe Weather Action Procedures.

h. Augment AMS Observations.

i. "Eyes Forward" Support & Collaborate with 26 OWS Forecasters.

j. Disseminate Weather Warnings, Watches, and Advisories.

k. Produce/Disseminate Mission Execution Forecasts and TAFs when required.

l. Disseminate/Relay Urgent (UUA) PIREPs.

m. Disseminate/Relay routine PIREPs.

n. Perform MISSIONWATCH Activities.

o. Prepare & Provide Mission WeatherProducts.

p. Accomplish Administrative & Training Tasks.

q. All Other Duties.

3-5. Obtaining Official Weather Support. To obtain weather support, agencies must coordinate and validate their requirements with the SWO. Valid requirements exist out of mission necessity and are linked to instructions, manuals, mission orders, or similar directives. This document will not include unsubstantiated support requests. Units requiring weather support will:

a. Provide the SWO with operating instructions, checklists, and/or a list of actions taken as a result of the requested weather service.

b. Notify the SWO if this regulation does not contain requirements or meet requirements as stated.

c. Notify the SWO of changes in weather support requirements.

3-6. Release of Weather Information. Support to non-DOD agencies and the general public will not be provided until the Public Affairs Office (PAO) or Staff Judge Advocate has given permission.

a. Official weather records, Mission Execution Forecasts, Flight Weather Briefings, and Weather Advisories, Watches, and Warnings issued by AFW are official military products. Their use is restricted to Army and AF installations, activities, and personnel, and authorized DOD agencies.

b. The National Weather Service provides meteorological services to the public and the National Climatic Data Center provides meteorological data to the public. The SWO may approve written requests for weather support to nonmilitary agencies and individuals if their request meets the following requirements:

(1) No other national agency can provide the support or the agency responsible for providing the support asks FSWO to provide it.

(2) The requested support will not impair weather services for Fort Sill.

(3) Supported agencies or persons agree to reimburse the Army or AF for any costs incurred to fulfill their request.

(4) The request will not require the Army or AF to assume any legal, financial, or moral responsibility for the service provided.

(5) All requests are channeled to the weather station through the Fort Sill PAO.

Chapter 4
Weather Forecasting Services

4-1. General The 26 OWS is the AFW unit ultimately responsible for resource protection of the Fort Sill Military Reservation. 26 OWS forecasters, in collaboration with FSWO, will issue forecasted weather watches and warnings for Fort Sill.

a. If the 26 OWS is unable to create and/or disseminate forecasted weather watches or warnings, FSWO will take over this duty.

b. When FSWO is open, the duty forecaster will issue all observed warnings and advisories for Fort Sill.

c. The 26 OWS issues all observed warnings and advisories for Fort Sill during weekends or other times when FSWO is closed or unable.

4-2. Mission-Limiting Environmental Conditions. Weather impacts on assets at Fort Sill are generally aligned with standard weather watch/warning criteria. Additional impacts can be found in AR 95-1 and Fort Sill Regulation 95-1. Table 4-1 lists weather impacts to supported customers at Fort Sill and the actions taken to mitigate those environmental conditions. Operators should refer to Army manuals and other associated technical documents to define specific impacts to individual weapon systems and/or equipment and consult with the SWO for changes to FSWO mission weather products as necessary.

Table 4-1. Weather Impacts

Weather Event	Impact	Customer Action
Tornado	Immediate threat of catastrophic damage to personnel and property	Seek shelter; recall/ground all aircraft—hangar high-priority aircraft, divert aircraft; man emergency control centers; warn populace; man disaster response teams
Severe Thunderstorms	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 Thunderstorms	Increased risk to exposed personnel Increased risk of damage to unsecured property Increased risk to flightline activities and damage to exposed aircraft or vehicles	Seek shelter; hangar high-priority aircraft—consider hangar/tie down all aircraft; divert aircraft; secure loose equipment; limit outdoor high-risk activities--increase operational risk assessment
Damaging Winds	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 Winds	Increased risk to exposed personnel Increased risk of damage to unsecured property Increased risk to flightline activities and damage to exposed aircraft or vehicles	Consider hangar/tie-down aircraft; secure loose equipment; limit outdoor high-risk activities--increase operational risk assessment

Weather Event	**Impact**	**Customer Action**
Lightning observed within 7NM	Immediate threat to exposed personnel Lightning strike / static discharge damage—delay of operations	Cease aviation refueling; Cease 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 (≥ 2 8 inches in 12 24 hours), or Snow (≥ 6 inches in 12 hours).	Disrupts personnel movement or flight line activities Poses significant risk of damage to facilities and rapidly creates hazardous conditions for personnel and vehicle movement that cannot easily be mitigated as conditions worsen Icing on roads--hazard to driving; icing on aircraft / equipment--delay or curtailment of operations	Cease flying; hangar or protect aircraft; report runway conditions (runways/ taxiways/ ramps); sand/salt on overpasses and intersections, close roads—limit/restrict post driving
Blizzard Conditions	Imposes significant risk to personnel movement Significant risk to maneuver or flight line activities	Seek shelter; Cease flying; recall/ground all aircraft—hangar/tie down aircraft, divert aircraft; secure loose equipment; limit outdoor high-risk activities
Hail < 3/4 inch diameter	Possible personal injury/property/ aircraft/equipment damage	Seek shelter; hangar high-priority aircraft; divert aircraft--increase operational risk assessment

Weather Event	**Impact**	**Customer Action**
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 low water crossings; restrict UAV flight operations--increase operational risk assessment
Dust Storm	Disrupts personnel movement and aviation operations	Consider hangar/tie-down aircraft; limit outdoor high-risk activities--increase operational risk assessment

4-3. Weather Watches. Weather watches are used to advise agencies of the potential for severe weather before actually issuing a weather warning. Watches allow the customer more time to prepare for potentially damaging weather that may interrupt the mission and should be issued early enough to allow the customer enough decision time to take the appropriate actions. 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. The occurrence or nonoccurrence of a watch is not verified but its issuance does need to be justified. The 26 OWS will issue a weather watch for Fort Sill when the **potential** exists for any of the criteria in Table 4-2 within the boundaries of the Fort Sill Military Reservation.

a. Weather watches will be cancelled when it is determined that the potential for watch criteria no longer exists.

b. Fort Sill's weather watch criteria were established based on supported unit supplied critical weather elements and AF directives. Table 4-3 is an example of a Weather Watch message as it appears on the JET.

Table 4-2. Weather Watch Criteria

WATCH CRITERIA	Desired Lead Time
(a) Tornadoes	1 ½ Hours
(b) Severe Thunderstorms	3 Hours
(c) Moderate Thunderstorms	2 ½ Hours
(d) Damaging Winds (≥ 50 kts)	3 Hours
(e) Strong Winds (≥ 35 but < 50 kts)	2 ½ Hours
(f) Heavy Snow (≥ 8" in ≤ 24 hours)	6 Hours
(g) Snow (≥ 6" in ≤ 12 hours)	4 Hours
(h) Heavy Rain (≥ 2" in ≤ 12 hours)	2 ½ Hours
(i) Freezing Precipitation	3 Hours
(j) Blizzard Conditions	3 Hours
(k) Dust Storm	2 ½ Hours
(l) Lightning within 7NM of HPAAF	30 Minutes

Table 4-3. Weather Watch Example

WEATHER WATCH 04-009 FOR HENRY POST AAF (KFSI) VALID 011800Z (01/1300L) TO 021200Z (02/0700L) **Potential for Tornadic Activity exists within Fort Sill's cantonment area or range boundaries.**

4-4. Weather Warnings. Weather warnings are issued to provide customers notification that weather conditions of such intensity exist as to pose a hazard to life or property. The 26 OWS will issue a forecasted weather warning for Fort Sill when any of the criteria in Table 4-4, exception marked by an asterisk (*), occur or are expected to occur within the boundaries of the Fort Sill Military Reservation. Table 4-5 is an example of a Weather Warning message as it appears on the JET. Weather Warnings may be issued without a Weather Watch being previously issued.

a. A weather warning will not be issued for an unforecasted event that has since stopped and is not expected to recur.

b. Fort Sill's weather warning criteria were established based on supported unit supplied critical weather elements and AF directives.

c. Only one weather warning for Fort Sill will be in effect at a time, but it may have multiple criteria. A separate valid time may be specified for each criteria if necessary.

(1) The exceptions to this policy are the forecasted tornado warning and the observed lightning warning which are issued separately although other warnings may already be in effect.

(2) When on duty, FSWO forecasters issue an observed weather warning for lightning within 7 nautical miles of the center point of the HPAAF runway complex. If FSWO personnel are not on duty, evacuate the HPAAF weather station, or the local lightning detection system is inoperative, 26 OWS will provide this observed weather warning support.

d. When a weather warning no longer adequately describes the phenomenon or its onset, it will be cancelled and, if needed, issued as another weather warning using a new number.

e. Weather warnings may be extended, providing nothing changes except the duration. Extensions will be issued prior to the expiration of the original weather warning.

f. Weather warnings will be cancelled when previously forecast conditions are no longer expected to occur.

g. FSWO forecasters may issue or supersede a 26 OWS-issued weather warning only when imminent weather conditions pose a hazard to life or property and prior coordination with 26 OWS is not practical or communications do not allow.

(1) If FSWO issues a forecasted weather warning, they will be responsible for notifying local customers and will contact 26 OWS as soon as possible afterward to ensure warning information is entered into the OWS warning tracking and verification system and that expanded METWATCH is assumed.

Table 4-4. Weather Warning criteria

WEATHER WARNING CRITERIA	Desired Lead-Time
(a) Tornadoes	30 Mins
(b) Severe Thunderstorms	2 Hours
(c) Moderate Thunderstorms	2 Hours
(d) Damaging Winds (≥ 50 kts)	2 Hours
(e) Strong Winds (≥ 35 but < 50 kts)	1 ½ Hours
(f) Heavy Snow (≥ 8" in ≤24 hours)	1 ½ Hours
(g) Snow (≥ 6" in ≤ 12 hours)	1 ½ Hours
(h) Heavy Rain (≥ 2" in ≤ 12 hours)	1 ½ Hours
(i) Freezing Precipitation	1 ½ Hours

(j) Blizzard Conditions	1 ½ Hours
(k) Duststorm	1 ½ Hours
(l) Lightning within 7NM of HPAAF*	As Observed*

Table 4-5. Weather Warning Example

WEATHER WARNING 04-006 FOR HENRY POST AAF (KFSI) VALID 120000Z (11/2000L) TO 120130Z (11/2130L) **Heavy Snow ≥ 8 in. within 24 hrs forecast value 8 in. is forecast within the cantonment area or range boundaries.**

4-5. Weather Advisories. Weather Advisories are issued whenever any of the criteria listed in Table 4-6 are observed at HPAAF. Table 4-7 is an example of a Weather Advisory message as it appears on the JET.

a. Fort Sill's weather advisory criteria were established based on supported unit supplied critical weather elements.

b. Observed weather advisories are valid from the time of issue until cancelled. This will be included in the text of the advisory as valid "Until Further Notice (UFN)."

c. More than one observed weather advisory may be in effect at the same time.

d. When on duty, FSWO forecasters issue all observed weather advisories at HPAAF. If FSWO personnel are not on duty or evacuate the HPAAF weather station 26 OWS will issue observed weather advisories for HPAAF based on criteria observed from Ft Sill's AMS.

Table 4-6. Weather Advisory Criteria

Lightning Within 25 Nautical Miles of HPAAF
Equivalent Wind Chill Temperature ≤ -01C
Equivalent Wind Chill Temperature ≤ -29C
Temperature ≥ 31C
Temperature ≤ -09C
Ceiling ≤ Highest Published Airfield Landing Minima (800ft)
Visibility ≤ Highest Published Airfield Landing Minima (2SM)

Table 4-7. Weather Advisory Example

WEATHER ADVISORY 05-A14 FOR HENRY POST AAF (KFSI) VALID 19/1635Z (19/1135L) TO UFN TEMP ≥ 31C AT HENRY POST ARMY AIRFIELD

4-6. Weather Watch, Warning, and Advisory Numbering and Text. Weather watches, warnings, and advisories are identified by month and sequential number of the product issued. The text of all weather watches, warnings, or advisories will be worded so that all recipients may easily understand them.

a. Products issued by the 26 OWS are identified by a numeric sequence. The first group of numbers identifies the month the product was issued and the second group of numbers is the sequential number of the product.

b. For example, a weather warning number of "09-002" indicates the second warning (002) issued for the month of September (09).

c. Products issued by FSWO are identified alpha-numerically. The first group of numbers identifies the month the product was issued. The second group begins with the identifier A01 at the start of a new month for each product type (watches, warnings, and advisories). The 100th product of each type starts the sequence over with a new letter designator (alpha becomes beta, etc.).

d. For example, if Weather Advisory A99 is issued the next advisory will be identified B01. Sequential numbers for watches, warnings, and advisories increment independent of one another.

4-7. Severe Weather Action Procedures (SWAP). These procedures are in place to ensure sufficient AFW personnel are available during potential/actual severe weather events or during meteorological or operational events critical to mission success. For the purposes of these procedures severe weather is defined as any weather phenomenon considered critical enough by the customer to require advance/special notice and subsequent actions to prevent serious injury or damage to personnel, property, or resources. It is imperative that timely and accurate weather watches, warnings and advisories are disseminated to all Fort Sill agencies to ensure personnel and resource protection. These procedures document a two-tier system with FSWO and the 26 OWS sharing responsibilities for SWAP and resource protection.

a. The designated members of the Severe Weather Action Team (SWAT) are the FSWO on-duty or on-call forecaster and the SWO who is the team leader.

b. When FSWO is open, and one or more of the conditions listed in table 4-8 are occurring, or are forecast to occur, within the boundaries of the Fort Sill Military Reservation, the duty forecaster will notify the SWO. The weather station will remain open and SWAP will remain in effect until the expiration or cancellation of SWAP criteria.

Table 4-8. Conditions Requiring Notification/Activation of SWAT

Criteria	Action
A Tornado Watch or Tornado Warning for Fort Sill	Is issued by AFW.

A Severe Thunderstorm Watch for Fort Sill	Is issued by AFW & the Valid Time is in effect.
A Severe Thunderstorm Warning for Fort Sill	Is issued by AFW.
A Damaging Winds Watch	Is issued by AFW & the Valid Time is in effect.
A Damaging Winds Warning	Is issued by AFW.
A Freezing Precipitation Warning	Is issued by AFW.
Any other event or situation that the duty forecaster deems notification necessary.	
In the event of unforeseen circumstances, such as a communications line failures or critical equipment outages at either the 26OWS or FSWO, implement SWAP at the 26OWS's request.	

c. When FSWO is closed a forecaster will be on-call for SWAP. The on-call forecaster will remain in the local area, ready to respond to weather events. The 26 OWS will recall the on-call FSWO forecaster via the FSOC when one or more of the conditions listed in table 4-8 occur. The SWO will provide the FSOC with up-to-date on-call procedures and contact lists. The on-call forecaster will report to duty immediately when recalled and/or when any of the conditions in table 4-8 occur. The recalled forecaster will contact the 26 OWS and discuss the current weather situation. The recalled forecaster will then contact the SWO and relay the appropriate details. If warranted, the SWO will report to the weather station.

d. During SWAP the focus of the SWAT members is personnel safety and resource protection. Expanded eyes forward, augmenting observing equipment and enhanced MISSIONWATCH activities will supersede most weather station activities while SWAP is in effect to enable forecasters to focus activities and allocate resources to exploit weather conditions, mitigate mission delays, and enhance the overall effectiveness of operations.

4-8. Resource Protection Notification Chain. FSWO's JET server immediately notifies the FSOC whenever a watch, warning or advisory is issued for Fort Sill. The FSWO duty forecaster then makes backup calls to the agencies identified in figure 4-1 to ensure dissemination of resource protection products. Due to limited staffing and the time-critical nature of this information, FSWO personnel cannot individually notify every agency requiring weather watches, warnings, and advisories; hence, the application of a notification chain that exploits installation command and communications channels. Procedures developed to this end ensure weather personnel do not spend more time communicating than monitoring weather conditions. All units receiving these weather products must be involved in a continuous program of evaluation and improvement of the weather dissemination system, including inter-unit dissemination. Agencies must make certain that weather dissemination procedures ensure those needing information

receive it. Individual commanders of units in need of weather information are responsible for having their units listed in the notification chain.

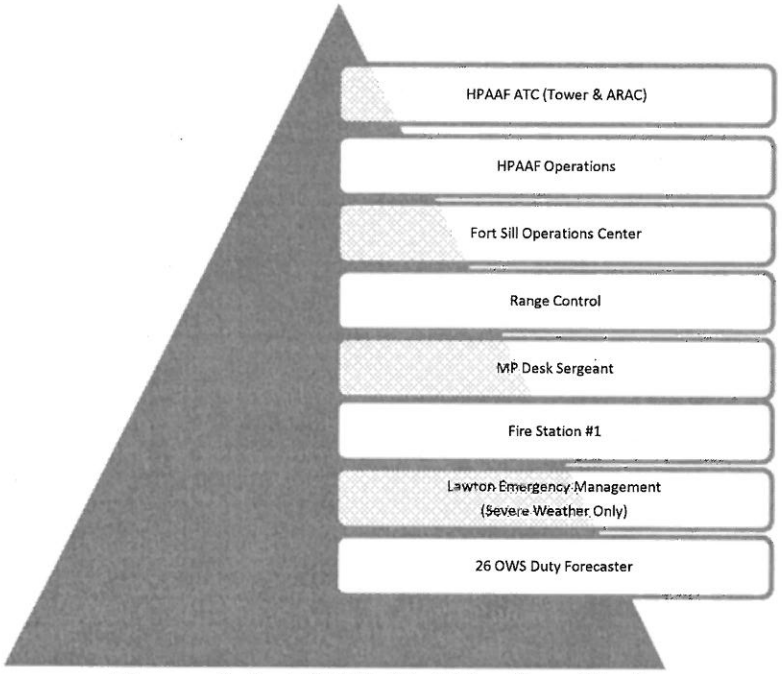


Figure 4-1. FSWO Notification Chain

4-9. Terminal Aerodrome Forecast (TAF). TAF responsibility for HPAAF lies with the 26 OWS. FSWO forecasters, as partners in resource protection efforts, will collaborate towards the logical construction of a quality TAF.

a. The 26 OWS produces a 30-hour TAF for HPAAF IAW AFMAN 15-124 (Meteorological Codes) using the international civil aviation organization (ICAO) identifier "KFSI".

b. The KFSI TAF will be issued at 0800L and 1600L and amended as required.

c. Unless otherwise specified, forecast elements in the main body of the TAF apply to the area within a 5 statute mile radius of HPAAF.

d. The 26 OWS disseminates the KFSI TAF via standard weather communication systems into the international weather information network.

(1) The KFSI TAF is available via the 26 OWS and FSWO websites.

(2) The KFSI TAF is available for HPAAF ATC Tower, ARAC, and Airfield Operations personnel via the Army Airfield Automation System.

(3) Other customers needing the KFSI TAF can access the Aviation Digital Data Service website (http://www.aviationweather.gov/adds/tafs/) or call the HPAAF weather station and receive the TAF verbally or via email.

e. Individual elements in the KFSI TAF will be forecast as accurately as the state of the art allows. As a minimum, the TAF will specify the time of occurrence to the nearest hour, the duration, and intensity (where applicable) when any of the weather criteria in Table 4-9 are expected to occur during the forecast period.

Table 4-9. KFSI TAF Specification/Amendment Criteria

Specification Element/Occurrence	**Amend If:**
Ceiling and/or visibility decreases to less than, or if below, increases to equal or exceed:	Ceiling (feet) / Visibility (miles) 1,500 / 3 600 / 1 ½ 200 / ½
Surface Winds	The difference between the observed wind speed (or gust) and the forecast wind speed (or gust) is ≥ 10 knots. Example: Amend a TAF specifying surface winds of 23018G25KT if observed predominant wind speed is 28 knots or more, or if the observed gusts are 35 knots or higher. Similarly, amend the TAF if predominate winds are 8 knots or less, or gusts are 15 knots or less. The wind direction changes > 30 degrees when the predominant wind speed (including gusts) is expected to be ≥ 15 knots.
Icing (for CAT II aircraft): not associated with thunderstorms, from the surface to 10,000 feet AGL	The beginning or ending of icing first meets, exceeds, or decreases below moderate or greater thresholds and was not specified in the TAF.
Turbulence (for Cat II aircraft), not associated with thunderstorms, from the surface to 10,000feet AGL	The beginning or ending of turbulence first meets, exceeds, or decreases below moderate or greater thresholds and was not specified in the TAF.
Weather Warning criteria	Warning criteria occur, or are expected to occur, during the forecast period, but were not specified in the TAF. Warning criteria were specified in the TAF, but are no longer expected to occur during the forecast period.
Altimeter Setting	The observed altimeter setting meets or exceeds 31.00 INS and was not specified in the TAF. The observed altimeter setting if above, drops below 31.00 INS and was not specified in the TAF.

	The observed altimeter setting drops below 28.00 INS and was not specified in the TAF. The observed altimeter setting if below, increases above 28.00 INS and was not specified in the TAF.
Thunderstorms	An incorrect start or end time for thunderstorms was specified in the TAF.
Temporary (TEMPO) Conditions	Conditions specified as TEMPO become predominant. Conditions specified as TEMPO do not occur during the cardinal hour as forecast. Conditions specified as TEMPO are no longer expected to occur.
Predominant (BECMG or FM) Conditions	Conditions specified as BECMG or FM occur before the beginning of the specified period of change and are expected to persist. Conditions specified as BECMG or FM do not occur within 30 minutes after the specified time. Conditions specified as BECMG or FM are no longer expected to occur.

f. The KFSI TAF will also be amended anytime it is considered advisable in the interest of safety, efficiency of aircraft operations, flight planning, operational control, or in-flight assistance to aircraft to ensure the forecast is representative of actual or forecast conditions.

g. In the event of an interruption in weather operations at the 26 OWS, FSWO will assume TAF responsibility for HPAAF until the 26 OWS resumes normal operations.

4-10. Mission Weather Products (MWPs). MWPs include flight weather briefings, unmanned aircraft systems briefings, mission execution forecasts, planning weather forecasts, mission planning briefings, climatology packages, inputs to mission analysis, and any other weather product prepared to meet the needs of a supported unit.

a. FSWO's MWPs will leverage Go/No-Go products to convey environmental information whenever possible.

b. Go/No-Go products are effective in the planning and allocation phases of an operational decision cycle and easily convey information to multiple users.

c. Go/No-Go criteria used in FSWO MWPs are customer driven and have been coordinated with the SWO. They are used in MWPs as guidelines. It is the operational commanders job to tailor these factors to a given mission and situation.

d. Table 4-7 is the current list of mission-tailored weather effects (Go/No-Go criteria) used in FSWO MWPs.

e. Units coordinate changes to, or additions/deletions to, Table 4-7 with the SWO IAW AR 115-10.

Table 4-10. Mission Tailored Weather Effects.

Customer	**GREEN (minimal degradation)**	**AMBER (some degradation)**	**RED (significant degradation)**
HPAAF	CIG ≥ 1500FT VIS ≥ 3SM	CIG 200 – 1400FT VIS ½ – 2 ¾SM TSTMS W/IN 28SM (25NM)	CIG < 200FT VIS < ½SM TSTMS W/IN 8SM (7NM)
RQ-7B (UAS) Operations	CIG ≥ 6000FT VIS ≥ 5SM WIND < 15KTS WIND GUST ≤ 19KTS NO TSTMS NO ICING NO TURBC REL HUMIDITY < 80% TEMP 33° – 100°F	CIG 3000 – < 6000FT VIS 3 – 4SM WIND 15 – 19KTS WIND GUST 20 – 24KTS WSCONDS LGT TURBC REL HUMIDITY 80 - 95% TEMP 32° – -4°F TEMP 101° – 122°F	CIG < 3000FT VIS < 3SM WIND ≥ 20KTS WIND GUST ≥ 25KTS ANY TSTMS ANY PRECIP ANY ICING MDT+ TURBC REL HUMIDITY > 95% TEMP < -4°F TEMP > 122°F
FA	CIG ≥ 1500FT VIS ≥ 2SM WIND < 30KTS NO – LGT PRECIP	CIG 600 – 1400FT VIS ½ – 1 ¾SM WIND 30 – 35KTS MDT PRECIP	CIG < 600FT VIS < ½SM WIND > 35KTS HVY PRECIP TEMP < 20°F TEMP > 125°F
ADA	CIG ≥ 5000FT VIS ≥ 3SM WIND < 25KTS	CIG 2500 – 4900FT VIS < 3SM WIND 25 – 35KTS	CIG < 2500FT TEMP > 125°F WIND > 35KTS
Ground Operations -Personnel -Maneuver -Trafficability	NO PRECIP WIND < 20KTS VIS ≥ 2SM NO TSTMS TEMP 15°F – 87°F DRY ROADS	LGT – MDT PRECIP WIND 20 – 30KTS VIS ½ – 1 ¾SM FEW TSTMS BLOWING DUST SMALL HAIL TEMP 88° – 95°F	HVY PRECIP WIND > 30KTS VIS < ½SM SCT – SVR TSTMS HAIL (GR) ANY FZ PRECIP TEMP > 95°F

		TEMP 14° – -15°F WINDCHILL 31° – -19°F WET ROADS	TEMP < -15°F WINDCHILL ≥ -20°F SNOW/ICE ON ROADS

4-11. MISSIONWATCH. FSWO's MISSIONWATCH activities are 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.

a. Effective, continuous monitoring of mission routes, training areas, airfields, etc. for weather that deviates from the mission-tailored weather effects (Go/No-Go criteria) identified in Table 4-7 forecast for a specific mission is the emphasis of FSWO's MISSIONWATCH.

b. Providing the "eyes forward" role and collaboration with the 26 OWS or other involved units gives FSWO forecasters an early warning for changing weather conditions.

c. FSWO forecasters employ sound ORM techniques to assign risk, allocate resources and direct activities to determine missions, or portion(s) of a mission, at greater risk due to terrestrial or space weather conditions.

d. FSWO forecasters notify operational customer(s) of weather conditions crossing mission-tailored weather effects (Go/No-Go criteria) thresholds.

e. Weather impacts are integrated into operational alternatives by providing alternative routes or timelines that will reduce, mitigate, or eliminate the threat and enable mission accomplishment.

f. FSWO forecasters amend MWPs as necessary to keep users continuously informed of observed, or the potential development of un-forecasted, operationally significant weather effects.

(1) Amendments to the FSWO Mission Execution Forecast (MEF) are posted to the Weather web page on the Fort Sill LAN.

(a) Amendments for Field Artillery (FA) or Air Defense Artillery (ADA) missions crossing Go/No-Go thresholds not originally forecasted and/or briefed are passed to the respective unit's G3.

(b) Amendments for Ground Ops missions crossing Go/No-Go thresholds not originally forecasted and/or briefed are passed to the respective unit's transportation motor pool (TMP) or field officer of the day (FOD) representative via FSWO MEF

amendments posted to the Weather web page on the Fort Sill LAN. TMP & FOD personnel are responsible for periodically checking the Weather web page for amendments to the FSWO MEF.

(2) Amendments to local Flight Weather Briefings (FWBs) are passed to aircrews via the PMSV or HPAAF's Army Radar Approach Control (ARAC) "Flight Following" services.

(3) An alternative method is for the duty forecaster to contact the unit's respective flight operations center, HPAAF ATC Tower, or Range Control and request the update be passed to the aircrew(s).

(4) Amendments to Unmanned Aircraft Systems (UAS) MWPs are passed directly to the UAS pilot or payload operator.

4-12. Mission Execution Forecast (MEF). FSWO forecasters enable the integration of actionable environmental impacts at every decision point in the mission planning and execution process of air and ground operations at Fort Sill in an effort to optimize mission success by producing and providing timely, accurate, and relevant environmental information tailored to specific weather thresholds that consider all aspects of operations (e.g., specific mission types; profiles; objectives). The SWO works closely with supported units to ensure FSWO forecasters are integrated into all phases of the decision cycle and key decision-makers are kept continuously aware of potential mission- impacting weather conditions.

a. The purpose of FSWO's MEF is to provide a mission-tailored forecast that contains decision-grade information applicable to the mission.

(1) FSWO's MEF is tailored to fit the mission needs of most Fort Sill units into a single product for mission planning of flight operations, ground operations, and live fire FA and ADA training missions.

(2) FSWO's MEF is used for mission execution of most local flights departing Fort Sill and operating within 100NM of the center point of the HPAAF runway complex.

(3) FSWO's MEF is used for ground operations (maneuver & trafficability) within the Fort Sill cantonment area (garrison).

b. The MEF will be provided, at a minimum, twice daily during FSWO duty hours. The current MEF will be posted onto the FSWO webpage, https://www1.doim.sill.army.mil/weather/3dws/, on the Fort Sill IntraNet and the 26 OWS webpage, https://ows.barksdale.af.mil/.

c. As a general rule, the issue time of FSWO's MEFs will be at 9am and 5pm. This ensures adequate time for collaboration with the 26 OWS forecasters.

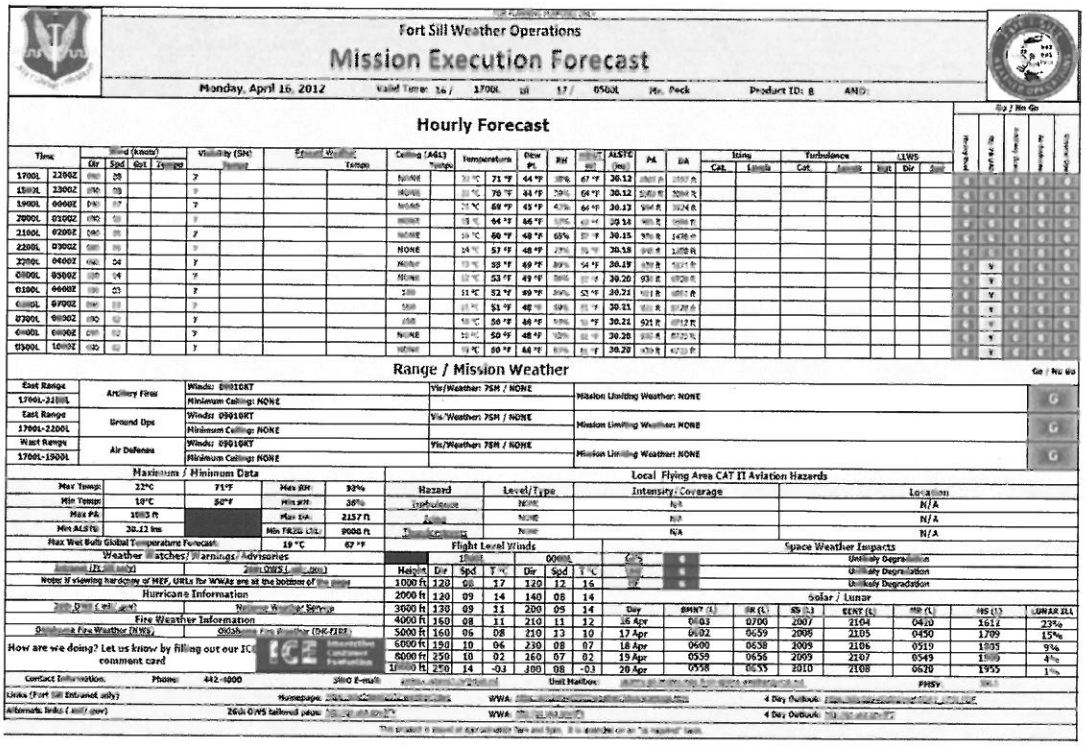
(1) FSWO's MEFs will be amended when conditions are observed at HPAAF or in Fort Sill's Restricted Training Area(RTA) and are not correctly forecasted; or are forecasted and no longer representative of expected conditions based on the supported customer's specific mission-tailored weather effects (Go/No-Go criteria) identified in Table 4-7.

(2) FSWO's MEFs will be amended when ceilings < 200ft, visibilities < ½SM, thunderstorms, or moderate or greater turbulence for Category II aircraft are observed at HPAAF (AMS or PIREPs) and was not correctly forecasted; or was forecasted and is no longer representative of expected conditions.

(3) FSWO's MEFs will be amended for Hurricane Conditions (HCN) as warranted.

d. FSWO will monitor installation and mission/flying area weather conditions and collaborate with the 26 OWS on OWS-issued installation forecast products and integrate OWS-issued TAFs, watches, warnings, and advisories into the MEF process to meet local operational requirements.

e. Figure 4-2 is an example of FSWO's MEF.



Fort Sill Weather Operations

Mission Execution Forecast

Monday, April 16, 2012 Valid Time: 16/ 1700L til 17/ 0500L Mr. Peck Product ID: 8 AMD:

Hourly Forecast

Time		Wind (Knots) Dir	Spd	Gst	Temps	Visibility (SM)	Forecast Weather	Temps	Ceiling (AGL)	Temps	Temperature	Dew Pt	RH	Altimeter	ALSTG	PA	DA	Icing Cat.	Icing Levels	Turbulence Cat.	Turbulence Levels	LLWS Int	LLWS Dir	LLWS Spd	Go / No Go
1700L	2200Z	[illegible]	08			7			NONE		21 °C	71 °F	44 °F	38%	67 °F	30.12	[illegible]	[illegible]							G
1800L	2300Z	[illegible]	08			7			NONE		21 °C	70 °F	44 °F	39%	66 °F	30.12	[illegible]	[illegible]							G
1900L	0000Z	[illegible]	07			7			NONE		21 °C	69 °F	45 °F	43%	64 °F	30.13	[illegible]	[illegible]							G
2000L	0100Z	[illegible]	03			7			NONE		18 °C	64 °F	46 °F	59%	[illegible]	30.14	[illegible]	[illegible]							G
2100L	0200Z	[illegible]	05			7			NONE		16 °C	60 °F	48 °F	65%	59 °F	30.15	[illegible]	[illegible]							G
2200L	0300Z	[illegible]	06			7			NONE		14 °C	57 °F	48 °F	73%	56 °F	30.18	[illegible]	[illegible]							G
2300L	0400Z	[illegible]	04			7			NONE		13 °C	53 °F	49 °F	89%	54 °F	30.19	[illegible]	[illegible]							G
0000L	0500Z	[illegible]	04			7			NONE		12 °C	53 °F	49 °F	94%	[illegible]	30.20	[illegible]	[illegible]							G
0100L	0600Z	[illegible]	03			7			[illegible]		11 °C	52 °F	49 °F	94%	52 °F	30.21	[illegible]	[illegible]							G
0200L	0700Z	[illegible]	03			7			[illegible]		11 °C	51 °F	48 °F	94%	51 °F	30.21	[illegible]	[illegible]							G
0300L	0800Z	[illegible]	02			7			[illegible]		10 °C	50 °F	48 °F	94%	50 °F	30.21	[illegible]	[illegible]							G
0400L	0900Z	[illegible]	02			7			NONE		10 °C	50 °F	48 °F	100%	50 °F	30.20	[illegible]	[illegible]							G
0500L	1000Z	[illegible]	02			7			NONE		10 °C	50 °F	48 °F	100%	50 °F	30.20	[illegible]	[illegible]							G

Range / Mission Weather

					Go / No Go
East Range 1700L-2100L	Artillery Fires	Winds: 0901GKT; Minimum Ceilings: NONE	Vis/Weather: 7SM / NONE	Mission Limiting Weather: NONE	G
East Range 1700L-2200L	Ground Ops	Winds: 0901GKT; Minimum Ceilings: NONE	Vis/Weather: 7SM / NONE	Mission Limiting Weather: NONE	G
West Range 1700L-1900L	Air Defense	Winds: 0901GKT; Minimum Ceilings: NONE	Vis/Weather: 7SM / NONE	Mission Limiting Weather: NONE	G

Maximum / Minimum Data

Max Temp:	22°C	71°F	Max RH:	92%
Min Temp:	10°C	50°F	Min RH:	38%
Max PA:	1083 ft	[redacted]	Max DA:	2157 ft
Min ALSTG:	30.12 ins	[redacted]	Min FRZG LVL:	9000 ft
Max Wet Bulb Global Temperature Forecast:			19 °C	67 °F

Local Flying Area CAT II Aviation Hazards

Hazard	Level/Type	Intensity: Coverage	Location
Turbulence	NONE	N/A	N/A
Icing	NONE	N/A	N/A
Thunderstorms	NONE	N/A	N/A

Flight Level Winds

	1700L			0000L			Go / No Go
Height	Dir	Spd	T °C	Dir	Spd	T °C	
1000 ft	120	06	17	120	12	16	G
2000 ft	120	09	14	140	08	14	G
3000 ft	130	09	11	200	05	14	G
4000 ft	160	08	11	210	11	12	G
5000 ft	160	06	08	210	13	10	G
6000 ft	190	10	06	230	08	07	G
8000 ft	250	10	02	260	07	02	G
10000 ft	250	14	-03	300	08	-03	G

Space Weather Impacts

GPS	Unlikely Degradation
HF	Unlikely Degradation
UHF	Unlikely Degradation

Solar / Lunar

Day	BMNT (L)	BR (L)	SS (L)	EENT (L)	MR (L)	MS (L)	LUNAR ILL
16 Apr	0603	0700	2007	2104	0420	1614	23%
17 Apr	0602	0659	2006	2105	0450	1709	15%
18 Apr	0600	0658	2005	2106	0519	1805	9%
19 Apr	0559	0656	2005	2107	0549	1900	4%
20 Apr	0558	0655	2010	2108	0620	1955	1%

Weather Watches/Warnings/Advisories

Hurricane Information

Fire Weather Information

How are we doing? Let us know by filling out our ICE comment card

Contact Information: Phone: 442-4000 SIPR E-mail: Unit Mailbox: PHSV:

Links (Fort Sill Intranet only) Homepage: WWA: 4 Day Outlook:

Alternate links (.mil/.gov) 26th OWS tailored page: WWA: 4 Day Outlook:

Figure 4-2. MEF

4-13. Flight Weather Briefings (FWBs). FWBs provide aircrews everything they need to know about the weather from takeoff to landing. Special emphasis is placed on severe weather and flight hazards. The focus of FWBs is on customer needs. FWBs are tailored to a particular mission.

a. FSWO will provide FWBs for aviation units at Fort Sill during forecaster duty hours.

b. During FSWO non-duty hours, FWBs will be provided by 26 OWS via telephone at Commercial (318) 529-2651 or DSN 331-2651. Pilots can also request a FWB via the 26 OWS webpage, https://ows.barksdale.af.mil/.

c. FWBs for transient aircrews will be provided by FSWO unless doing so hinders support to local operations. In the rare instance that a FWB cannot be provided to a transient aircrew, they will be referred to the 26 OWS weather briefer.

d. Figure 4-3 is an example of a FWB.

FLIGHT WEATHER BRIEFING

PART I - TAKEOFF DATA

1. DATE	2. ACFT TYPE / NO.	3. DEPT / ETD	4. RUNWAY TEMP	5. DEWPOINT	6. TEMP DEV	7. PRESSURE ALT	8. DENSITY ALT
3/28/2012	OH47 / 80040	KFSI / 1515 Z	20	16	N/A	+1168 FT	+2280 FT

9. SFC WIND	10. CLIMB WIND	11. DUAL WEATHER WATCH - WARNING - ADVISORIES	12. RSC/RUK
18012 M	SFC-020 19020KT 020-070 23015 KTS	NONE	N/A

13. REMARKS - TAKEOFF ALTN FOR:
TO: SCT020 7SM A2994 NEG HAZARDS

PART II - ENROUTE & MISSION DATA

14. FLT LEVEL / WINDS / TEMP: FL070
KFSI-KPNC 19015/14C
KPNC-KFRI 18020/12C

15. SPACE WEATHER

	NO IMPACT	MARGINAL	EXTREME		16. WX AR / LIFTER	LOCATION
				RWY	28/1119 Z	KFRI
PRED	X			SR	28/1217 Z	MR 28/1625 Z
CURR	X			SS	29/0047 Z	MS 29/0638 Z
FCST	X			SEAT	29/0146 Z	SUM 30 %

17. CLOUDS AT FLT LEVEL: FEW X SCT BKN OVC
18. OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY: YES X NO TYPE NONE
19. MINIMUM CEILING - LOCATION: 010 NW OK-SC KS FT AGL
20. MAXIMUM CLOUD TOPS - LOCATION: 300 N 1/2 KS FT MSL
21. MINIMUM FREEZING LEVEL - LOCATION: 110 N KS FT MSL

22. THUNDERSTORMS	23. TURBULENCE	24. ICING	25. PRECIPITATION
CHART OWS 28/12Z-29/00Z	CHART OWS 28/12Z-29/00Z	CHART OWS 28/12Z-29/00Z	CHART OWS 28/12Z-29/00Z
NONE X AREA LINE	X NONE / MODERATE / SEVERE	X NONE / TRACE / LIGHT / MODERATE / SEVERE	NONE / DRIZZLE / RAIN / SNOW / HAIL / SHOWERS X
X SCATTERED - 75% MT450			
FRAC 3 - 10%	MODERATE	LIGHT	MODERATE
SCATTERED 10 - 40%	SEVERE	MODERATE	HEAVY
TRANSIENT - MORE THAN 40%	EXTREME	SEVERE	SHOWERS X
LEVELS N/A	LEVELS N/A		FREEZING
LOCATION X N 1/2 KS AFT 00	LOCATION N/A	LOCATION N/A	LOCATION X N 1/2 KS AFT 00

PART III - AEROSPACE FORECASTS

28. AERODROME	27. VALID TIME	30. SFC WIND	29. VSBY / WEA	30. CLOUD LAYERS	31. ALTIMETER	TEMP	PRES ALT
DEST / ALTN KPNC	1630 Z TO 1730 Z	T 18012G15KT	7	FEW020 BKN040	IN 29.93	°C 22	FT +1001
DEST / ALTN	Z TO Z	T / M			IN	°C	FT
DEST / ALTN KFRI	1915 Z TO 2015 Z	T 18018G20KT	7	FEW050 SCT120 BKN250	IN 29.90	°C 25	FT +1085
DEST / ALTN	Z TO Z	T / M			IN	°C	FT
DEST / ALTN	Z TO Z	T / M			IN	°C	FT
DEST / ALTN	Z TO Z	T / M			IN	°C	FT
DEST / ALTN	Z TO Z	T / M			IN	°C	FT
DEST / ALTN	Z TO Z	T / M			IN	°C	FT

PART IV - COMMENTS / REMARKS

32. BRIEFED RECEIVED	YES	X NOT AVAILABLE	33. FMBU	34. ATTACHMENTS	YES	X NO
			UHF 308.5			

35. REMARKS: CALL FORT SILL WEATHER (DL-U) DSN 639-4000/4887 OR COMMERCIAL 580-442-4000/4887 FOR WEATHER UPDATES.

PART V - BRIEFING RECORD

36. WX BRIEFED TIME	37. FLIGHT BRIEFING NO.	38. FORECASTER INITIALS	39. NAME OF PERSON RECEIVING BRIEFING
1345 Z		DT	CW4 MCCLINTICK (KM)
40. VERD TIME 1515 Z	41. ATTENDED TO INITIALS Z	42. WX REBRIEF TIME / INITIALS Z	43. WX DEBRIEF TIME / INITIALS Z

DD FORM 175-1, OCT 2002 (MICROSOFT EXCEL) PREVIOUS EDITION MAY BE USED

Figure 4-3. FWB

4-14. Unmanned Aircraft Systems (UAS) MWPs. Army UAS' missions conducted within Fort Sill's RTA are typically launched and recovered near the Ground Control Station (GCS).

a. FSWO forecasters will provide direct weather support for Group 3-5 UAS pilots and payload operators IAW AFMAN 15-129.

(1) Weather support to the GCS crew will consist of MWPs, updates to support dynamic re-tasking and MISSIONWATCH.

(2) MISSIONWATCH will include the Launch/Recovery site (i.e. Taxiway Alpha), divert location(s), MOA(s), and mission/contingency flight routes.

b. FSWO forecasters will inform the 26 OWS when regional-scale weather products (e.g., hazards products) do not meet the unique temporal and spatial requirements for UAS support.

c. To ensure 26 OWS products keep pace with changing support requirements, the SWO will utilize the Support Assistance Request (SAR) process to request higher temporal/spatial fidelity weather products as new UAS support requirements emerge.

d. Figure 4-4 is an example of a UAS MWP.

UAS MISSION WEATHER PRODUCT

MONTH/YEAR: Apr-2012

UNIT / PHONE#:	A/C 45/ECT / (123) 456-7890	LOCATION: LSFR	
TAIL # 102	LAUNCH DTG: 21/2130Z	RECOVERY DTG: 21/2300Z	FLIGHT LEVEL: 3,500ft
TEMP (C)	+17	WIND/TEMP ALOFT (C)	
DEWPOINT (C)	+05	2K MSL	07012 / +23
RH (%)	45%	4K MSL	11009 / +13
ALSTG	30.11	6K MSL	16011 / +12
PA	+1129	8K MSL	
DA	+1733	10K MSL	
SFC WIND--LAUNCH	07012G20KT	THUNDERSTORMS	NONE
SFC WIND--RECOVERY	07010G15KT	TURBULENCE (CAT / Aircraft)	MDT FL 050 & ABV
MIN VIS / WX	7 / NONE	ICING	NONE
MIN CIG	BKN120		
FREEZING LVL	12,000ft	BRIEF / VOID TIME	2110 / 2240
WWA (#)	WA 04-A18	INITIALS BRIEFER/PILOT	JC / KO
		REBRIEF / EXTENDED TIME	
		INITIALS BRIEFER/PILOT	

Figure 4-4. UAS MWP

4-15. 5-Day Planning Weather (5-Day) MWP. The 5-Day MWP utilizes the same Go/No-Go criteria as found on FSWO's MEF.

a. The 5-Day MWP is for planning purposes only. It will be uploaded, ops permitting, to the FSWO webpage, https://www1.doim.sill.army.mil/weather/3dws/, on the Fort Sill IntraNet and the 26 OWS webpage, https://ows.barksdale.af.mil/by 10am each morning during FSWO duty hours.

b. Figure 4-5 is an example of the 5-Day MWP.

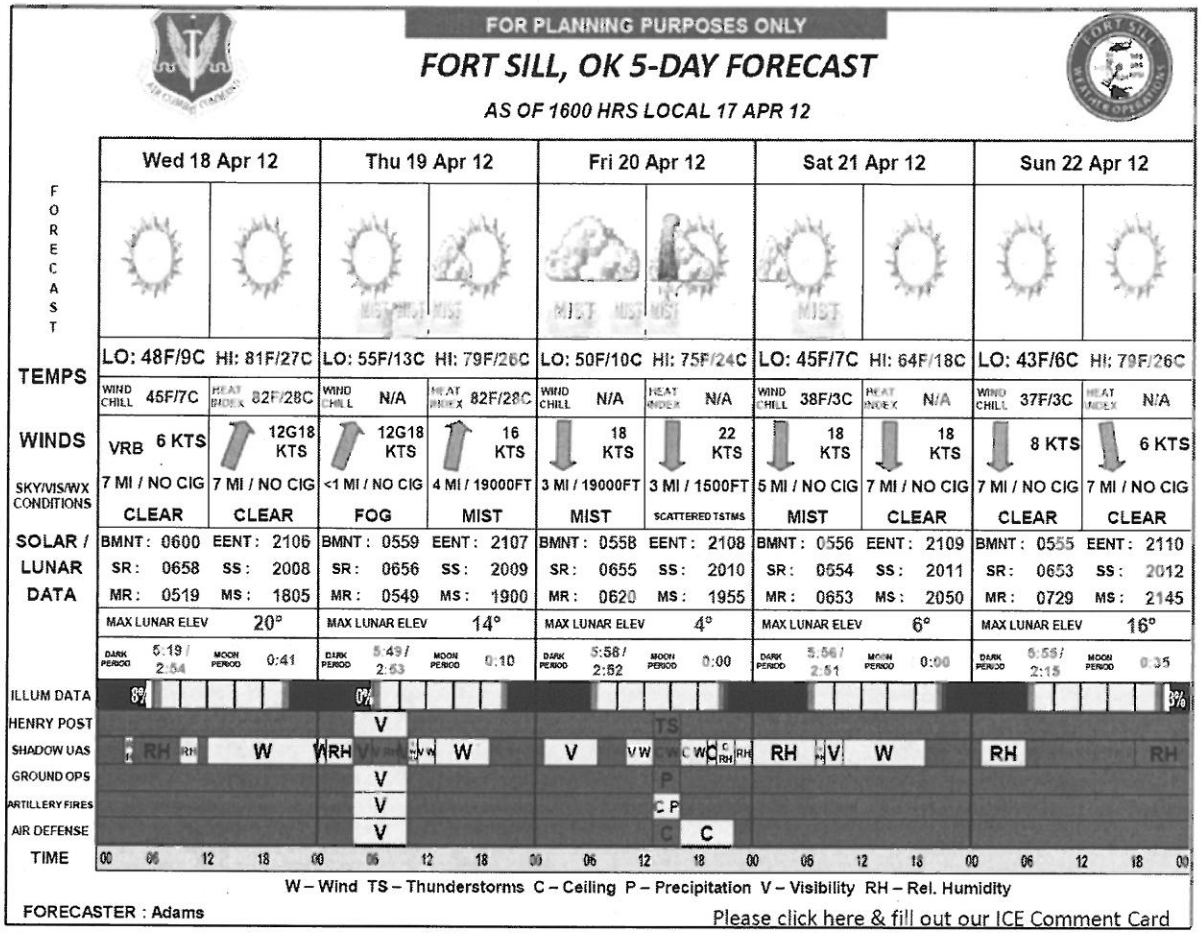


Figure 4-5. 5-Day MWP

4-16. Hurricane Conditions (HCN) MWPs. Although Fort Sill is not located in a hurricane threat zone, personnel and aircraft evacuated from an area threatened by a hurricane could be relocated to Fort Sill.

a. FSWO forecasters will fully utilize and not deviate from the Tropical Cyclone-Threat Analysis Product (TC-TAP) information provided by the 26OWS. This information is derived from specialized tropical forecast organizations.

b. FSWO forecasters *tailor* the official tropical cyclone forecasts into a HCN MWP.

c. FSWO forecasters will follow Fort Sill public affairs policies and procedures regarding the release of tropical cyclone forecasts to the general public.

d. Figure 4-6 is an example of a HCN MWP.

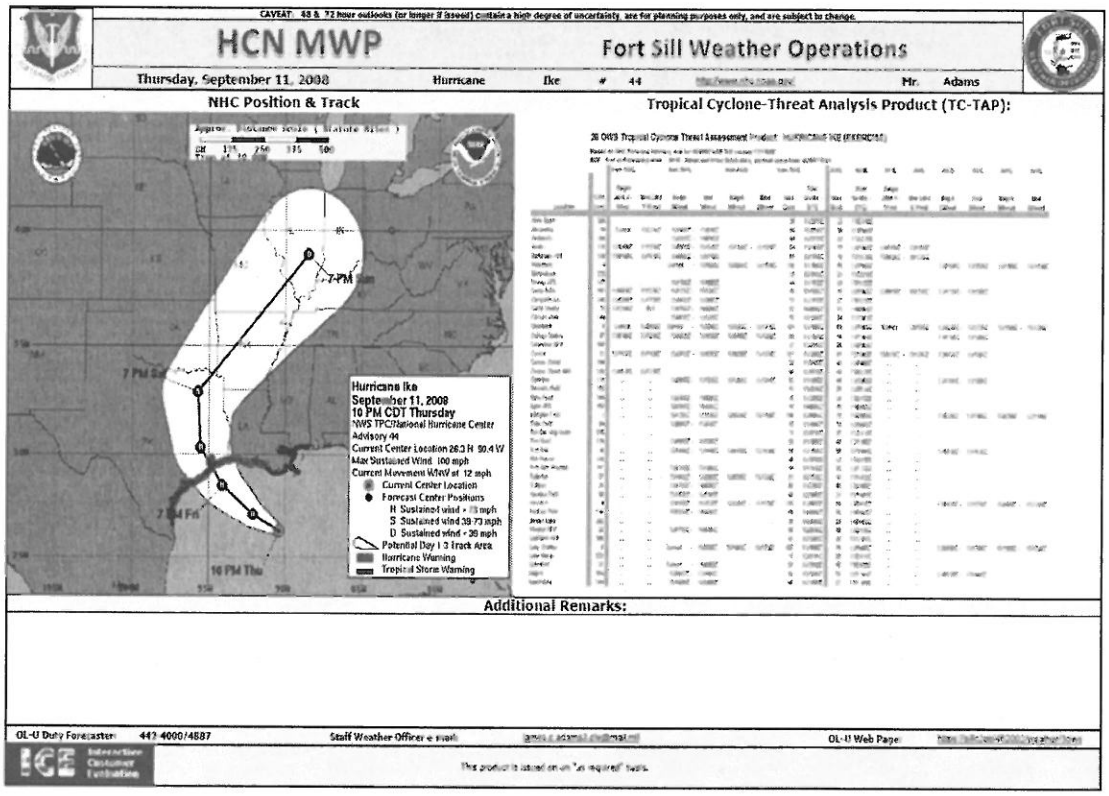


Figure 4-6. HCN MWP

4-17. Space Weather. Many weapons and communications systems use satellites and radio waves (High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF), and Satellite Communications (SATCOM)), that can be rendered useless by electro-magnetic radiation from the sun.

a. Operations at HPAAF, in Fort Sill's RTA , or the Local Training Areas can be affected on a *limited* scale by a wide-variety of parameters possibly affected by various space weather conditions (HF and UHF communication, radar, GPS Comm, etc). Broad coverage CONUS-based space weather products (graphics) are available at https://weather.afwa.af.mil/jaawin/space/main.jsp.
These products will be used to update the Space Weather Impacts portion (HF, UHF, and GPS) of FSWO's MEF and FWBs.

b. Operational units with valid requirements for space weather information need to coordinate support with the SWO.

4-18. Pilot to Metro Service (PMSV). FSWO provides PMSV support to HPAAF. Call sign "Henry Post Metro." The frequency is 306.5 MHz. Back-up services during FSWO PMSV outages are provided by a joint effort between HPAAF Operations (using the Pilot to Dispatch radio, frequency 123.05 MHz), HPAAF ATC Tower and ARAC.

HPAAF ATC Maintenance provides and maintains the weather station's PMSV radio. The 26 OWS provides aircrew telephone patch services. Aircrews will be required to initiate PMSV phone patches with the 26 OWS at DSN 331-2651.

4-19. Chemical, Biological, Radiological, Nuclear & High-Yield Explosive (CBRNE). AFW personnel serve as weather Subject Matter Experts to CBRNE operations. The SWO routinely meets with Emergency Management (EM), Fire Emergency Services (FES), and Bioenvironmental Engineering personnel to ensure the appropriate level of involvement in their missions.

a. Upon request from the Force Protection Officer, or any other airfield agency acting in that capacity, FSWO will provide a Chemical Downwind Message (CDM).

b. The CDM is a forecast of wind, stability, temperature, humidity, cloud cover, and weather.

c. The CDM format contains 3 lines of (12) digit code, in which each separate line of code represents a 2-hour forecast.

d. The 26OWS produces CDMs for on-scene emergency personnel supporting a major accident via their web page at https://ows.barksdale.af.mil/northcom/. The primary method of providing the CDM is by using the model output data available from the 26 OWS.

e. Figure 4-7 is an example of the 26 OWS CDM bulletin.

Chemical Downwind Message for: Fort Sill (KFSI) FOR PLANNING PURPOSES ONLY

Data based on a combination of the GFS MOS and the MM5 Output Bulletins Click here for an Explanation

Effective Downwind Fallout Message Low Yield High Yield

-- Change Location --

Valid Time: 08/1200 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	M	M	6	M	M	0	0
XM	M	M	6	12	7	0	0
YM	M	M	6	16	5	0	0

Valid Time: 08/1800 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	M	M	6	M	M	0	0
XM	360	007	6	M	M	0	0
YM	020	013	6	M	M	0	0

Valid Time: 09/0000 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	020	013	6	29	2	0	0
XM	360	014	6	26	3	0	0
YM	340	011	6	19	5	0	0

Valid Time: 09/0600 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	340	011	6	19	5	0	0
XM	320	009	6	538	9	0	0
YM	M	M	6	13	8	0	0

Valid Time: 09/1200 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	M	M	6	13	8	0	0
XM	M	M	6	19	6	0	0
YM	M	M	6	27	3	0	0

Valid Time: 09/1800 Z

Valid	DDD	FFF	S	TT	H	W	C
WM	M	M	6	27	3	0	0
XM	330	011	6	29	3	0	2

Figure 4-7. CDM Bulletin

4-20. Toxic Corridors. FSWO forecasters will provide EM and FES personnel with weather information so they can calculate toxic corridors for chemical spills. FSWO is not responsible for producing toxic corridors.

4-21. Bioenvironmental Information. FSWO provides observed bioenvironmental information in the form of weather advisories (temperature and equivalent chill temperature) and forecasted bioenvironmental information in various MWPs (see MEF, 5-Day MWP, etc.) FSWO does not have the capability to measure the wet bulb globe temperature (WBGT). Range Control measures WBGT for Fort Sill and is the point of contact for this service.

4-22. Tactical Decision Aids (TDAs). Requests for TDA support (i.e., electro-optical forecasts) should be made via the FSWO duty forecaster 24 hours in advance whenever possible. FSWO forecasters use the Target Acquisition Weapons Software (TAWS) program to compute TDAs.

a. TAWS predicts the maximum detection or lock-on range of air-to-ground electro-optical weapon and navigation systems.

b. FSWO forecasters use situational awareness products provided by the 26 OWS to initialize and adjust modeled parameters used in TAWS to improve the accuracy of the output.

c. TAWS software is also designed to support forces performing operations using Night Vision Goggles (NVGs) by predicting the impact of weather on NVG detection range.

d. TAWS provides NVG performance predictions for a specified mission (e.g., helicopter refueling, target acquisition/detection, search and rescue) and forecasted local conditions that can be used by mission planners to make "GO/NO GO" decisions, to modify mission execution tactics, or to evaluate the general suitability of environmental conditions for NVGs.

e. Figure 4-8 is an example of the FSWO TDA request worksheet.

TARGET DESCRIPTION					
	T62 TANK		SCUD LAUNCHER		CAUSEWAY BRIDGE
	T80 TANK		GENERATOR		GUNBOAT
	272 TANK		AH64 APACHE		EARTHEN BUNKER
	ZIL		Mi24 HIND HELO		DAM
	APC		F4 PHANTOM		POWERPLANT
	OTHER				
TARGET DATA					
OPERATING STATE:					
	OFF		IDLE		EXERCISED
DATE/TIME OVER TARGET (LST)					
TARGET COORDINATES					
LAT (include N or S)		LONG (include E or W)		Elevation (ft) AGL	
TARGET HEADING (direction target is facing)					
WEAPON SYSTEM					
Sensor ID #			Elevation (ft) AGL		
TARGET SURFACE DATA					
ALBEDO (pick one)					
	DESERT		CONTINENTAL		URBAN
BACKGROUND (pick one)					
	TREES		SHRUBS		SOIL
	GRASS		SNOW		WATER
	CONCRETE		ASPHALT		
GROWING STATE (pick one)					
	LIVE		DEAD		
COVERAGE (pick one)					
	DENSE		INTERMEDIATE		GROWING
SOIL MOISTURE (pick one)					
	DRY		INTERMEDIATE		WET
REQUESTED BY:					
NEED DATA BY:					
CONTACT INFO:					

Figure 4-8. TDA Request Worksheet

4-23. Weather Station Evacuation Procedures.

a. If FSWO is required to evacuate the weather station, it will relocate to the AOL located in Building 4915, Room 12, on HPAAF. FSWO will not evacuate the weather station for exercises or drills. Contact numbers for the AOL are 442-2614, FAX 442-7126. Time permitting, FSWO will notify the 26 OWS, HPAAF Operations, HPAAF ATC

Tower, ARAC, Range Control, MP Desk Sergeant, and the FSOC that an evacuation is in process.

b. The 26 OWS will assume responsibility for weather support and services to Fort Sill during an evacuation of the Fort Sill weather station until FSWO resumes operations.

c. Upon arrival at the AOL, FSWO will standup operations and notify the 26 OWS, HPAAF Operations, HPAAF ATC Tower, ARAC, Range Control, MP Desk Sergeant, and the FSOC.

(1) The first priority when operating from the AOL is to take and disseminate a weather observation within 15 minutes of arrival (when AMS is in backup mode). FSWO forecasters at the AOL will use AMS data accessed through JET first, if available. If the AMS is INOP or the LAN is down, tactical equipment will be used to take observations.

(2) The backup observing location for the AOL is approximately 25 ft southeast of Building 4915 on the airfield ramp just inside the perimeter fence. During backup procedures physical limitations restrict observation of the complete runway complex. Data from ATC Tower personnel and PIREPs may be used to backup visibility readings if required. The following limitations apply at the AOL:

(a) North, < 1/4 of a mile due to buildings.

(b) Northeast, < 1/4 of a mile due to buildings

(3) Limited weather forecasting and briefing services will continue but expect time delays. Weather support beyond FSWO's capabilities at the AOL will be pushed to the 26 OWS.

(4) FSWO forecasters cannot operate the PMSV while working from an AOL.

(5) ATC personnel will, IAW the CWW program, monitor the PMSV frequency and pass contact information to the FSWO forecaster at the AOL.

4-24. Staff Weather Support. The SWO provides staff weather services Monday through Friday (except federal holidays) from 0800 to 1700. For after hours and emergency and/or crisis response, contact the HPAAF weather station (see paragraph 3-3) or the FSOC.

a. The SWO integrates weather intelligence data into Army mission planning and execution of ground and aviation training and advises supported commanders on weather intelligence matters, including exploitation of weather to enhance combat power.

b. The SWO provides weather briefings for safety, seasonal training, pre-deployment, large aircraft movements, etc. upon request. These requests should be coordinated as far in advance as possible.

c. The SWO monitors space weather products and notifies supported units (see paragraph 4-17) when conditions may impact military operations.

d. The SWO provides weather support and assistance in preparing environmental services annexes to Fort Sill OPLANS and OPORDs.

e. The SWO provides or arranges for climatological studies and analyses in support of planned exercises, operations and commitments.

f. The SWO provides atmospheric and space environment expertise to exercise planners to help develop realistic weather scenarios. Upon request, the SWO may also provide exercise weather inputs to help Fort Sill assess its ability to react to threatening weather.

g. 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, TAFs or MEFs, FWBs, etc. or the integration of weather information into the supported units' command and control system(s).

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

i. The SWO provides weather intelligence for Emergency Operations Center (EOC)/Crisis Action Team (CAT) response briefings.

j. When a CAT recall occurs, the SWO (or a FSWO forecaster) prints the current observation and FSWO-MEF, and reports to the EOC immediately. The initial brief will be delivered without visual aids; however, if there are follow-up CAT briefings, slides will be provided.

k. The SWO prepares and presents the weather support/services section of HPAAF 95-1 (Instrument Refresher Course equivalent) briefings.

l. The SWO provides the current weather picture and/or planning forecasts for air shows, changes of command, or other special events upon request.

m. The SWO certifies ATC personnel to take limited surface observations, or make inputs to official weather observations, and participate in the Cooperative Weather Watch program.

4-25. Miscellaneous Services. FSWO forecasters provide miscellaneous meteorological support/services on an as-required basis. Miscellaneous support/services include, but are not limited to:

a. Training ATC personnel to take limited surface observations, or make inputs to official weather observations, . and participate in the Cooperative Weather Watch program.

b. Assisting the HPAAF ATC Tower with developing training aids and visibility charts.

c. Climate Data. FSWO tracks climate statistics for HPAAF and leverages the support of the 14th Weather Squadron for climate statistics all over the world. Locally, two separate DPW offices receive a monthly climatology package.

d. Units requiring climate information should contact the SWO or duty forecaster.

e. Weather input for Controlled Burns. A representative from the Fort Sill FES will contact the SWO or duty forecaster to receive a current weather and planning forecast for controlled burns.

f. Local Weather Orientation briefings. FSWO offers weather orientation to any Fort Sill unit that needs a better understanding of weather to accomplish their mission.

Chapter 5
Weather Observing Services

5-1. Continuous Weather Watch. Fort Sill's AMS performs a continuous weather watch at HPAAF. This means fully automated observations are transmitted 24 hours a day, 7 days a week. During forecaster duty hours defined in chapter 3-3, FSWO forecasters assume the dual role of forecaster & observer if/when the AMS observations require augmentation as defined in AFMAN 15-111 and locally established procedures and memos.

5-2. Official Observation Point. The official observation point is located 500 ft west of the centerline & 1000 ft north of the Runway 35 touchdown point. The sensor group is located just inside the perimeter fence, near the southernmost extent of Fort Sill Boulevard. The area is primarily grassy with several small ponds nearby. The grass area at the sensor group is well maintained. The surrounding area can be somewhat overgrown where gnats and other small insects thrive. Limitations, erroneous precipitation types and visibility readings have been observed due to gnats and spider webs on the sensors. Some delay in reporting cloud ceiling and visibility changes, especially during rapidly fluctuating weather conditions, due to automated sensor algorithm limitations, may occur. These inherit limitations are best mitigated with an effective CWW.

5-3. Backup Observation Point. The backup observation point is approximately 40 ft southeast of Building 4907 on the HPAAF ramp just inside the perimeter fence. During backup procedures physical limitations restrict observation of the complete runway complex. Data received from HPAAF ATC Tower personnel and PIREPs as part of Fort Sill's CWW may be used to backup visibility readings if required. The following limitations apply at HPAAF's backup observation point:

a. North, 1/4 of a mile due to buildings.

b. Northeast, 1/4 of a mile due to buildings.

5-4. Alternate Observing Point. The AOL observation point is approximately 25 ft southeast of Building 4915 on the airfield ramp just inside the perimeter fence. During AOL procedures (see paragraph 4-23) physical limitations restrict observation of the complete runway complex. Data from ATC Tower personnel and PIREPs as part of Fort Sill's CWW may be used to backup visibility readings if required. The following limitations apply at the AOL:

a. North, < 1/4 of a mile due to buildings.

b. Northeast, < 1/4 of a mile due to buildings

5-5. Augmentation. Augmentation is the process of having position qualified weather technicians 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*.

5-6. Supplementing. Supplementing is 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. Supplementation of the AMS by a FSWO forecaster is mandatory when any of the following criteria are met:

a. Tornado and/or Funnel Cloud is observed to begin, is in progress, or disappears from sight (ends).

b. The immediate reporting of tornados or funnel clouds takes precedent over any other phenomena.

c. Hail ≥ 1/4 inch is observed to begin, is in progress, or ends.

d. Volcanic Ash is observed.

e. A warning for Dustorm is in effect.

f. Snow Depth is observed when a "Heavy Snow" or "Snow" warning is in effect and snow is falling during HPAAF operating hours.

5-7. Backup. Backup 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. There is no requirement to back-up Fort Sill's AMS 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 AFW). The following is a list of the most commonly used mandatory parameters of AMS 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.

NOTE: During augmentation of the AMS the FSWO forecaster is responsible for the completeness and accuracy of the weather observations even though the automated weather observing system generates the report. FSWO 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.

5-8. Basic Weather Watch (BWW). During augmentation of the AMS a BWW is conducted from the HPAAF weather station by FSWO forecasters IAW AFMAN 15-111. FSWO forecasters cannot monitor the weather continuously due to other operational duties while backing up non-operational AMS sensors. As a result FSWO forecasters may not detect and report all weather changes immediately as they occur. The BWW program has been implemented to establish the minimum requirements needed to ensure the proper level of weather watch is maintained to ensure flight safety at HPAAF.

a. During a BWW the FSWO duty forecaster will recheck weather conditions, at intervals not to exceed 20 minutes since the last observation/recheck, to determine if the need exists to transmit an updated observation when any of the following conditions are observed to be occurring or are forecast to occur at HPAAF within 1 hour:

(1) Ceiling forms below or decreases to less than 1,500 feet.

(2) Ceiling dissipates, or increases to equal or exceed 1,500 feet.

(3) Visibility decreases to less than 3SM.

(4) Visibility increases to equal or exceed 3SM.

(5) Precipitation (any form).

(6) Thunderstorms.

(7) Fog or Mist.

b. In addition to the above requirements, the FSWO duty forecaster will remain alert for any other changes in weather conditions that will require the transmission of an updated observation. The FSWO duty forecaster will monitor local area observations and forecast products as often as necessary to keep abreast of changes expected to affect HPAAF.

5-9. Observation Types and Criteria. There are two types of observations routinely produced: METAR observations and Special observations.

a. Aviation Routine Weather Report (METAR). METAR observations are complete observations taken hourly, and disseminated between 55-59 minutes past the hour, regardless of weather changes. Each METAR is disseminated locally and longline over the JET IAW AFMAN 15-111. The observation is designated as KFSI METAR, followed by the time. Table 5-1 is an example of a METAR observation as it appears on the JET.

Table 5-1. METAR Observation Example

KFSI METAR 162355Z AUTO 12004KT 10SM CLR 24/06 A3006 RMK AO2 SLP172 T02390063 10254 20235 55010

b. Aviation Selected Special Weather Report (SPECI). SPECI observations are required to be taken to report significant changes in weather elements. Each SPECI is disseminated locally and longline over the JET IAW AFMAN 15-111. It is designated as KFSI SPECI, followed by the time. Table 5-2 is an example of a SPECI observation as it appears on the JET. SPECI criteria for HPAAF are listed below in items (1) - (12).

(1) Ceiling. The ceiling is observed to form or dissipate below, decrease to less than, or if below, increase to equal or exceed the levels listed in Table 5-3.

(2) Sky Condition. A layer of clouds or obscuring phenomena aloft is observed below 800 feet, and no layers aloft were reported below 800 feet in a preceding METAR or SPECI.

(3) Visibility. Prevailing visibility is observed to decrease to less than, or if below, increase to equal or exceed the values listed in Table 5-4.

(4) Runway Visual Range (RVR). When prevailing visibility is first observed ≤ 1SM, again when prevailing visibility goes above 1SM, and when the RVR is observed to decrease to less than, or if below, increase to equal, or exceed the distances listed in Table 5-5.

(5) Tornado or funnel cloud.

(a) Is observed

(b) Disappears from sight.

(6) Thunderstorm.

(a) Begins/ends (report not required for the beginning of a new thunderstorm if one is currently in progress).

(7) Precipitation.

(a) Hail ≥ ¼ Inch begins or ends.

(b) Freezing precipitation begins, ends, or changes intensity.

(c) Any other types of precipitation begins or ends.

(8) Wind Squalls and Wind Shifts.

(a) SQ. Wind speed increases 16kts and is sustained at 22kts or more for at least 1 minute.

(b) WND SHFT. A wind direction change of ≥ 45 degrees in < 15 minutes when the wind speed is at least 10kts throughout the shift.

(9) AIRCRAFT MISHAP. Only if already operating the AMS in the Backup mode. This SPECI is not required if there has been an intervening METAR or SPECI.

(10) Upon Resumption of Observing Services. Within 15 minutes after returning to duty following a break in hourly coverage if a METAR was not filed as scheduled during that 15 minute period.

(11) Volcanic Eruption (when first observed).

(12) Miscellaneous.

(13) Any other meteorological situation which, in the opinion of the weather forecaster, is critical to personnel, resource, or flight safety.

Table 5-2. SPECI Observation Example

KFSI SPECI 150223Z AUTO 01009KT 1 1/2SM R35/2400VP6000FT RA BR OVC009 14/13 A2995 RMK AO2 RAB0223 SLP136

Table 5-3. Ceiling Height SPECI Criteria

2000 feet	600 feet
1500 feet	500 feet
1000 feet	400 feet
800 feet	200 feet
700 feet	100 feet

Table 5-4. Prevailing Visibility SPECI Criteria

3 Statute Miles	1 Statute Mile
2 Statute Miles	¾ Statute Mile
1 ¾ Statute Miles	½ Statute Mile
1 ½ Statute Miles	¼ Statute Mile
1 ¼ Statute Miles	

Table 5-5. Runway Visual Range SPECI Criteria

6000 feet	2400 feet
5000 feet	2000 feet
4000 feet	1200 feet

5-10. CWW. IAW AFMAN 15-111 AFW units responsible for preparing surface weather observations will establish a CWW with ATC, and other appropriate base/post agencies, as required. 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. The specifics of FSWO's CWW with DPTMS, Air Traffic Control Branch, can be found in Appendix C, this document.

Chapter 6
Weather Equipment

6.1. General. This chapter provides a brief description of the meteorological and communications equipment used by FSWO. Additionally, it provides information on backup systems and maintenance.

6.2. Meteorological Equipment. FSWO uses the AMS as the primary system to determine the current state of the atmosphere. This critical system is used continuously to provide customers the most timely, accurate and relevant weather intelligence possible. The following is a list of the AMS meteorological sensors:

a. Ambient Air Temperature / Relative Humidity sensor. This instrument provides the current temperature and dew point. The Kestrel 4500 Pocket Weather Meter is the backup system used to determine the temperature and dew point.

b. Wind Monitor. This instrument provides wind direction, wind speed and gusts, and, if applicable, wind direction variability. The Kestrel 4500 Pocket Weather Meter and handheld compass are the backup systems used to determine the wind speed and direction. FSWO forecasters are also trained to use the Beaufort scale to determine winds.

c. Visibility sensor. This sensor determines the prevailing visibility. The weather forecaster serves as backup for determining visibility values.

d. Ambient Light sensor. This sensor determines the RVR for HPAAF. There is no backup capability to the RVR portion of this system.

e. Ceilometer. This sensor provides accurate and reliable cloud height information using a laser beam to detect the bases and amount of clouds near the airfield up to and including 25,000 ft AGL. The weather forecaster serves as backup for cloud heights and coverage.

f. Barometer. This sensor measures the current altimeter setting and barometric pressure. The Kestrel 4500 Pocket Weather Meter is the backup system used to determine pressure readings.

g. Lightning Detector. This sensor can detect cloud-to-cloud and cloud-to-ground lightning strikes out to 30 miles. The LTS workstation on the forecast counter in the weather station displays real-time lightning data. The 26OWS web-page lightning display and NWS internet-based Doppler radar serve as backup lightning sensors at HPAAF.

h. Freezing Rain sensor. This sensor detects the presence of freezing rain or drizzle. The weather forecaster serves as backup for freezing rain.

i. Precipitation Identification Sensor. This sensor has the capability of detecting a wide variety of precipitation types to include rain, drizzle, snow, etc. However, it is not capable of detecting ice pellets or hail. The weather forecaster serves as backup for precipitation types and intensities.

j. Liquid Precipitation Accumulation (Rain) Gauge. This sensor is mounted on its own pedestal and allows accurate, repeatable liquid precipitation measurements. The ML17 Rain Gauge next to the weather station operations area access door and Taylor (tactical) Rain Gauge are the backup systems used to measure precipitation at HPAAF.

6.3. Communications Equipment. Just as vital as meteorological equipment, communications equipment allows FSWO to get the right information to the right

customer. The following systems are the backbone of the FSWO communications network.

a. JET. This AFW system is the primary means for disseminating forecasts, observations, warnings, watches, and advisories. Telephones are used as a backup.

b. PMSV. This radio allows FSWO forecasters to communicate with aircrews, both on the ground and airborne, as well as with air traffic controllers.

c. LAN. FSWO relies heavily on the local area network to improve the timeliness and accuracy of weather intelligence to our customers. Much information can be obtained through other methods (e.g., satellite imagery, lightning data, etc.) but is far less efficient. FSWO maintains a webpage on the Fort Sill IntraNet @ https://www1.doim.sill.army.mil/weather/3dws/. Information available to Fort Sill users via this page include:

(1) Current MEF.

(2) Flight Planning data.

(3) Current Watches, Warnings and Advisories.

(4) Hurricane Forecasts (when applicable).

(5)Solar/Lunar tables and Climatology data.

(6) Aviation Hazards charts.

(7) Lightning, Satellite and Radar displays.

(8) Space Weather Impacts.

(9) PIREPs.

(1) 5-Day Planning Forecasts.

6.4. Maintenance. Maintenance for both equipment and communications are provided by a combination of Air Force, Army, and civilian contracted resources. The governing directive is AFJI 15-157.

Appendix A
References

Section I
Required Publications

AR 95-1
Flight Regulations.

AR 115-10/ AFJI 15-157
Weather Support for the U.S. Army.

USAFCOEFS Severe Weather OPLAN (SWOP).

Fort Sill Reg 95-1
General Provisions and Flight Regulations.

Fort Sill Mobilization Plan

Annex H to the Fort Sill Emergency Preparedness Plan

Section II
Related Publications

AFI 13-213
Airfield Management

AFMAN 15-111
Surface Weather Observations.

AFMAN 15-124
Meteorological Codes.

AFI 15-128
Air and Space Weather Operations – Roles and Responsibilities

AFMAN 15-129
Air and Space Weather Operations – Processes and Procedures.

Section III
Prescribed Forms

This section contains no entries.

Section IV
Referenced Forms

This section contains no entries.

Appendix B
Support Agreement with Aviation Division, DPTMS

B-1. Airfield Operations.

a. The HPAAF Airfield Manager or designated representative is responsible for determining and reporting RSC/RCR to ATC personnel, the FSOC, and FSWO. This information is available to aircrews from ATC upon approach to HPAAF or can be obtained from Airfield Operations personnel as needed.

B-2. Flight Weather Briefings. FWBs to aircrews will be provided as outlined in paragraph 4-13, this regulation.

B-3. Aircraft/Ground Mishaps and In-Flight Emergencies.

a. The dispatcher will notify the FSWO duty forecaster immediately upon gaining knowledge of any aircraft/ground mishap or in-flight emergency on or near Fort Sill during normal duty hours.

b. During non-duty hours the FSOC will recall the FSWO 'On-Call' forecaster in the event of an aircraft/ground mishap on or near Fort Sill.

c. FSWO personnel will take immediate action as prescribed in AFMAN 15-111 and AFMAN 15-129.

B-4. Safety. The Aviation Safety Section, Aviation Division, DPTMS, will--

a. Include FSWO in an Aviation Accident Prevention Survey at least once annually.

b. 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. 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.

B-5. Supply. Supply Branch, Aviation Division, DPTMS, will provide FSWO with the necessary funding and support for office, administrative, and operational supply items within the limits of regulations governing supply distribution.

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 ATC personnel in identifying significant weather changes. The primary concern is the report of tower visibility different from the prevailing surface visibility, reporting of sector 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. CWW is a method of assisting FSWO forecasters performing a BWW. This requires HPAAF ATC personnel to help monitor weather conditions. HPAAF ATC personnel will:

(1) Make tower and sector 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 FSWO duty forecaster 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 duty forecaster.

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

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

(2) Solicit and relay all PIREPs received to the FSWO duty forecaster in a timely manner.

(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. 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 FSWO forecasters with radar reports (ARAC upon request) on precipitation echoes.

(5) Notify the FSWO duty forecaster of active runway changes (Tower personnel).

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

(7) ARAC personnel will ensure the FSOC recalls the "On-Call" FSWO forecaster (see Table 2-1), during FSWO non-duty hours, 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 FSWO duty forecaster.

(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 AMS 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 FSWO maintenance technician to respond to AMS 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 an orientation to newly assigned FSWO personnel.

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

b. FSWO forecasters will:

(1) Reevaluate weather conditions as soon as practical when a reliable source (i.e., ATC, pilots, local law enforcement, etc.) reports weather conditions different from the last disseminated observation. Based on reevaluation of the different weather conditions reported, and local policy, the weather forecaster will:

(a) Begin supplementary augmentation of the AMS and generate an observation if the differing conditions warrant immediate dissemination. Log out the applicable sensor.

(b) Include the differing conditions in the next required observation if the conditions alone do not warrant immediate dissemination and the AMS does not carry the change.

(c) Continue AUTOMATED observations based on a determination that the instrumentation is correct.

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

(3) 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.

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

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

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

Appendix D
Supported Customers Weather Sensitivities

D-1. General. FSWO is responsible for providing tailored weather support required by the US Army Fires Center of Excellence and all other units assigned to, or attached to, Fort Sill, Oklahoma. FSWO provides in-garrison support of Field Artillery (FA), Air Defense Artillery (ADA), and Army Aviation (AVN) assets.

Table D-1. Mission Limiting Weather Effects.

Customer	GREEN (minimal degradation)	AMBER (some degradation)	RED (significant degradation)
HPAAF	CIG ≥ 1500FT VIS ≥ 3SM	CIG 200 – 1400FT VIS ½ – 2 ¾SM TSTMS W/IN 28SM (25NM)	CIG < 200FT VIS < ½SM TSTMS W/IN 8SM (7NM)
RQ-7B (UAS) Operations	CIG ≥ 6000FT VIS ≥ 5SM WIND < 15KTS WIND GUST ≤ 19KTS NO TSTMS NO ICING NO TURBC REL HUMIDITY < 80% TEMP 33° – 100°F	CIG 3000 – < 6000FT VIS 3 – 4SM WIND 15 – 19KTS WIND GUST 20 – 24KTS WSCONDS LGT TURBC REL HUMIDITY 80 - 95% TEMP 32° – -4°F TEMP 101° – 122°F	CIG < 3000FT VIS < 3SM WIND ≥ 20KTS WIND GUST ≥ 25KTS ANY TSTMS ANY PRECIP ANY ICING MDT+ TURBC REL HUMIDITY > 95% TEMP < -4°F TEMP > 122°F
FA	CIG ≥ 1500FT VIS ≥ 2SM WIND < 30KTS NO – LGT PRECIP	CIG 600 – 1400FT VIS ½ – 1 ¾SM WIND 30 – 35KTS MDT PRECIP	CIG < 600FT VIS < ½SM WIND > 35KTS HVY PRECIP TEMP < 20°F TEMP > 125°F
ADA	CIG ≥ 5000FT VIS ≥ 3SM WIND < 25KTS	CIG 2500 – 4900FT VIS < 3SM WIND 25 – 35KTS	CIG < 2500FT TEMP > 125°F WIND > 35KTS
Ground Operations **-Personnel** **-Maneuver** **-Trafficability**	NO PRECIP WIND < 20KTS VIS ≥ 2SM NO TSTMS TEMP 15°F – 87°F DRY ROADS	LGT – MDT PRECIP WIND 20 – 30KTS VIS ½ – 1 ¾SM FEW TSTMS BLOWING DUST SMALL HAIL TEMP 88° – 95°F	HVY PRECIP WIND > 30KTS VIS < ½SM SCT – SVR TSTMS HAIL (GR) ANY FZ PRECIP TEMP > 95°F

		TEMP 14° – -15°F WINDCHILL 31° – -19°F WET ROADS	TEMP < -15°F WINDCHILL ≥ -20°F SNOW/ICE ON ROADS

a. Go/No-Go criteria used in FSWO MWPs are customer driven and have been coordinated with the SWO. They are used in MWPs as guidelines. It is the operational commanders job to tailor these factors to a given mission and situation.

b. Units coordinate changes to, or additions/deletions to, Table D-1 with the SWO IAW AR 115-10.

D-2. Aviation (AVN) Support. AVN support consists primarily of low-level rotary aircraft conducting joint fires & effects training (i.e. reconnaissance & surveillance, troop movement, sling load, MEDEVAC, etc.) with artillery units and UAS training missions. The majority of these missions are flown by UH-60, CH-47 or RQ-7B aircraft. Rotary aircraft and UAS' are much more affected by environmental conditions only present in the lower levels than their fixed-wing counterparts.

a. **UH-60 Blackhawk.** The UH-60 Black Hawk is a light transport helicopter used for air assault, air cavalry, and aero-medical evacuation units. The Black Hawk is the primary division-level transport helicopter providing dramatic improvements in troop capacity and cargo lift capability compared to the UH-1 Series "Huey" it replaces. It can lift an entire 11-man fully equipped infantry squad in most weather conditions. Both the pilot and co-pilot are provided with armor-protective seats. Protective armor on the Black Hawk can withstand hits from 23mm shells. The Black Hawk has a cargo hook for external lift missions and is capable of moving a 105-millimeter howitzer with 30 rounds of ammunition. The Black Hawk has provisions for door mounting of two M60D 7.62mm machine guns, infrared jamming flares, and a chaff dispenser. Modified Black Hawks also fulfill command and control, electronic warfare, aerial mine laying, and special operations roles.

General Characteristics	
Aircraft: UH-60A	**Name:** Black Hawk
Manufacturer: Sikorsky Aircraft Corp.	**Category Aircraft:** II
Primary Mission: Light Transport, Air Assault, and MEDEVAC. Modified Black Hawks operate as command and control, electronic warfare, and special operations platforms.	**Crew:** Four
Max Range: 315 NM	**Ceiling:** 21,000 feet
Mission Equipment:	
Payload/Armament: 11 combat-loaded air assault troops and can be fitted with two M314 7.62mm mini-guns or .50 caliber machine guns. The MEDEVAC variant is configured to carry 3 to 6 acute care patients and their medical attendants.	
Weather Sensitivities	
Icing: Icing may degrade operations	**Turbulence:** May operate in areas of LGT/MDT
Lightning/TSTMS: Avoid all thunderstorms	**In-Flight Refueling:** No capability
Electro Optical: Night Vision Goggles	**Space:** Communications
Remarks: - Will not be started or shutdown in winds (including gusts) ≥ 45Kts - Light Turbulence: Intentional Flight into **any** turbulence with a sling load **and** an inoperative collective pith is Prohibited.	

b. **CH-47 Chinook.** The CH-47 is a tandem-rotor medium transport helicopter. Its primary mission is moving artillery, ammunition, personnel, and supplies on the battlefield. It also performs rescue, aero-medical, parachuting, aircraft recovery, and special operations missions. It can operate at night and in nearly all weather conditions. The Chinook can accommodate a wide variety of internal payloads, including vehicles, artillery pieces, 33 to 44 troops, or 24 litters plus two medical attendants. It can be equipped with two door mounted M60D 7.62mm machine guns as well as a ramp mounted M60D. The Special Operations variant, the MH-47E, has an aerial refueling capability, improved terrain following/terrain avoidance radar, and a Forward-Looking Infrared (FLIR) imaging capability for low-level, night, adverse weather insertion and extraction of special operations troops. It is armed with two M134 7.62mm mini-guns

General Characteristics	
Aircraft: CH-47D	**Name:** Chinook
Manufacturer: Boeing	**Category Aircraft:** II
Primary Mission: Medium-lift transport/assault helicopter	**Crew:** Four
Max Range: 1,091 NM	**Ceiling:** 10,150 feet
Mission Equipment:	
Payload: Vehicles, artillery pieces, 33 to 44 troops, or 24 litters plus two medical attendants.	
Weather Sensitivities	
Icing: LGT will degrade operations, will not fly into MDT	**Turbulence:** May operate in areas of LGT/MDT
Lightning/TSTMS: Avoid all thunderstorms	**In-Flight Refueling:** VSBY ≥ 1NM for Special Ops MH-47 airframe. All others, no capability exists
Electro Optical: Night Vision Goggles	**Space:** Communications
Remarks: - Will not be started or shutdown in winds (including gusts) ≥ 45Kts - Surface winds > 45kts exceed aircraft operational limits for take-off and hovering	

c. **RQ-7B Shadow.** The RQ-7B Shadow tactical UAS is the first in a new generation of UASs. The compact Shadow™ UAS provides brigade commanders with crucial intelligence — delivered efficiently from its electronic payload directly to tactical command centers.

General Characteristics	
Aircraft: RQ-7B	**Name:** Shadow
Manufacturer: AAI Corporation	**Category Aircraft:** I
Primary Mission: Reconnaissance	**Crew:** None
Range: 70 NM	**Max Altitude:** 15,000 feet MSL
Flight Endurance: 5-6 Hours	**Operating Altitude:** 3500 – 6000 feet AGL
Operating Speed: 60 kts loiter; 150 kts dash	**Armament:** None
Weather Sensitivities	
Icing: May not operate in icing	**Turbulence:** May operate in areas of LGT
Min Cig/Vis: 3000/3	**Precip:** May not operate in Mod/Heavy precip
Lightning/TSTMS: Avoid all thunderstorms	**In-Flight Refueling:** No capability
RH: > 95% non-condensing	**Temp Range:** minus (-) 22 F to positive (+) 122F
Electro Optical: Thermal Crossover (?)	**Space:** Communications Link
Remarks: Ice FOD with temp +4°C and 80% RH. Cannot take off in winds ≥ 25Kts.	

D-3. Ground (GND) Support. GND units are concerned with weather effects on equipment and troops and what affect, if any, weather will have on mission accomplishment. It is important to remember that adverse weather conditions can enhance, as well as degrade, military operations. For example, while low visibility hinders intelligence gathering and reduces the effectiveness of target acquisition it can also be beneficial since reduced visibilities can conceal the maneuver of offensive forces and increase the possibility of achieving surprise. Mud can inhibit troop movement, humidity can affect artillery ordinance, and extreme heat/cold can restrict the hours of physical activity.

Appendix E
Support Agreement with Lawton/Comanche County Emergency Management

E-1. The purpose of this appendix is to outline the agreement between FSWO 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.

E-2. The following is general information concerning the agreement:

a. A direct telephone hotline has been furnished between the Fort Sill weather station 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.

E-3. FSWO will--

a. Provide weather support and services to Fort Sill from the weather station at Henry Post AAF.

b. Notify Lawton/Comanche County Emergency Management whenever any of the Weather Watch or Warning Criteria Actions for Fort Sill in table 4-8 are met.

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

E-4. Lawton/Comanche County Emergency Management will--

a. Relay tornado/funnel cloud sighting and significant reports of severe weather to the FSWO duty forecaster as soon as possible after receipt.

b. Notify the FSWO duty forecaster 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 Fort Sill weather station.

Appendix F
FSWO/26 OWS Unit Data Sheet

F-1. This appendix implements the roles and responsibilities covered in AFI 15-128 including those that apply to establishment of unit data sheets in place of previous individual memorandums of agreement.

F-2. The relationship between FSWO and the 26 OWS is formalized in a Unit Data Sheet IAW AFMAN 15-129.

F-3. The unit data sheet will include, but is not limited to:

a. FSWO primary/AOL contact information.

b. TAF Specification and Amendment criteria.

c. Weather watch, warning and advisory (WWA) criteria, lead times and areas of coverage.

d. SWAP activation criteria.

e. Primary/alternate POC for WWA dissemination.

F-4. The SWO will review the unit data sheet within 90 days of assignment or annually, whichever occurs first; to ensure consistency with supported unit requirements.

a. Updated/reviewed unit data sheets will have the date of review or updated publication date published on the document.

b. The SWO will inform the 26 OWS of any changes that occur on Fort Sill to update the installation data sheet.

c. Any support issue between the 26 OWS and FSWO that cannot be resolved at the appropriate subordinate levels through the chain of command will be elevated to the functional higher headquarters for resolution.

F-5. The FSWO/26 OWS Unit Data Sheet is maintained in the SWO's office in the HPAAF weather station. A copy is available to supported customers upon request.

UNIT DATA SHEET

Reviewed By:
OWS BMW
FSWO JCA

OWS - WF Review Accomplished 25-Apr-12
Next Review (NLT) 24-Apr-13

Airfield Hours: Mon-Fri: 0600L-2200 LST; Sat-Sun/Federal Holidays: Closed

Link to FLIP/Appch Plates http://airnav.com/airport/KFSI
Alternate Link http://www.ftplan.com/AwMainToApproachPlates.exe?CRN10=1&CARRYUNAME=PILOT&MODE=SEARCH&end=end

Airfield ICAO
KFSI

Location	
BASE NAME:	Fort Sill
UNIT ADDRESS LINE 1:	Bldg 4907, Post Road
UNIT ADDRESS LINE 2:	Ft Sill, OK 73503-5100
UNIT ADDRESS LINE 3:	
ALT OPS LOCATION	Bldg 4915, Room 12
	Henry Post Army Air Field, OK

WF / Agency	DSN	COMM
Fort Sill Weather Operations (FSWO) #1	639-4000	(580) 442-4000
FSWO #2	639-4887	(580) 442-4887
FSWO #3	639-4069	(580) 442-4069
FSWO Fax	639-7761	(580) 442-7761
Staff Weather Officer (SWO) Telephone	639-3200	(580) 442-3200
SWO GCP		(580) 591-3051
SWO Fax	639-7269	(580) 442-7269
Installation Operations Center (IOC)	639-3240/41/42	(580) 442-3240/41/42
Airfield Operations	639-5808/3012	(580) 442-5808/3012
Airfield Operations Fax	639-7928	(580) 442-7928
AOL	639-2614	(580) 442-2614
AOL Fax	639-7126	(580) 442-7126

Unit Info | TAF Criteria | WWA & SWAP Criteria | BMWC Back-Up Contacts | Misc

Glossary

Section I
Abbreviations

ACC
Air Combat Command

ACC/A3W
Air Combat Command Weather Operations Division

ACFT
Aircraft

ADA
Air Defense Artillery

AF
Air Force

AFI
Air Force Instruction

AFJI
Air Force Joint Instruction

AFMAN
Air Force Manual

AFW
Air Force Weather

AGL
Above Ground Level

ALSTG
Altimeter Setting

AMD
Amendment

AMS
Automatic Meteorological Station

AO2
Observations from AMS without augmentation

AO2A
Observations from AMS include augmentation

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

BMNT
Beginning of Mean Nautical Twilight

BR
Mist

BWW
Basic Weather Watch

CAT
Crisis Action Team

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

CDM
Chemical Downwind Message

CIG
Ceiling

CLR
Clear of Clouds

CWW
Cooperative Weather Watch

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

EENT
Ending of Evening Nautical Twilight

EM
Emergency Management

EOC
Emergency Operations Center

FA
Field Artillery

FCST
Forecast

FES
Fire Emergency Services

FLIP

Flight Information Publication

FOD
Field Officer of the Day

FSWO
Fort Sill Weather Operations

FWB
Flight Weather Briefing

FZG LVL
Freezing Level

GCS
Ground Control Station

GPS
Global Positioning System

HCN
Hurricane Conditions

HF
High Frequency

HPAAF
Henry Post Army Airfield

IAW
In Accordance With

ICAO
International Civil Aviation Organization

ILLUM
Illumination

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

IWWC
Integrated Weather Warning Capability

JAAWIN
Joint Air Force & Army Weather Information Network

JET
Joint Environmental Toolkit

KT
Knots

LAN
Local Area Network

LGT OCNL MGT
Light, Occasionally Moderate

LTS
Lightning Tracking System

MEDEVAC
Medical Evacuation

MEF
Mission Execution Forecast

METAR
Aviation Routine Weather Report

METWATCH
Meteorological Watch

MP
Military Police

MR
Moonrise

MS
Moonset

MWP
Mission Weather Product

NEC
Network Enterprise Center

NM
Nautical Mile

NOTAM
Notice to Airmen

NSW
No Significant Weather

NVG
Night Vision Goggles

NWS
National Weather Service

OPLANS
Operation Plans

OPORDS
Operation Orders

ORM
Operational Risk Management

OVC
Overcast

OWS
Operational Weather Squadron

PA
Pressure Altitude

PAO
Public Affairs Office

PIREP
Pilot Report

PMSV
Pilot to Metro Service

RA
Rain

RCR
Runway Condition Reading

RMK

Supplementary Remarks Follow

RSC
Runway Surface Condition

RVR
Runway Visual Range

SAR
Support Assistance Request

SFC
Surface

SLP
Sea Level Pressure

SM
Statute Mile

SNINCR
Snow Increasing Rapidly

SOP
Standard Operating Procedure

SPECI
Aviation Selected Special Weather Report
SQ
Squall

SR
Sunrise

SS
Sunset

SWAP
Severe Weather Action Procedures

SWAT
Severe Weather Action Team

SWO
Staff Weather Officer

TAF
Terminal Aerodrome Forecast
TAWS
Target Acquisition Weapons Software.

TC-TAP
Tropical Cyclone-Threat Analysis Product

TDA
Tactical Decision Aid

TMP
Transportation Motor Pool

TSTMS
Thunderstorms

TURBC
Turbulence

UAS
Unmanned Aircraft System

UAV
Unmanned Arial Vehicle

UFN
Until Further Notice

UHF
Ultra-High Frequency

USAFCOEFS
US Army Fires Center of Excellence and Fort Sill

UUA
Urgent PIREP

VHF
Very High Frequency

VIS
Visibility

WBGT
Wet Bulb Globe Temperature

WND SHFT
Wind Shift

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

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)
During normal airfield operating hours, a BWW is conducted from the base/post weather unit by weather technicians who, because of other weather operations duties, cannot monitor the weather continuously. Due to these other weather duties, weather personnel on duty may not detect and report all weather changes as they occur. The BWW observing program has been implemented to establish the minimum requirements needed to ensure the proper level of weather watch is maintained.

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
Process where ATC and weather operations personnel work in concert to ensure the most accurate weather phenomenon is being reported.

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

Eyes Forward
Base/Post level weather technicians are the eyes forward for the forecasters in the 26OWS 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. 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)
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 operational customers.

Mission Weather Product (MWP)

Any weather product or group of weather products generated by AFW that is integrated into the military decision making process. MWPs may be planning or execution products and are not limited to aviation missions.

Mission Weather Services
Production of and provision of tailored mission planning and execution forecasts and mission-tailored weather effects (for example, weather impacts) to support operational decision-making and mission execution. Conducting mission focused meteorological overwatch (also known as, MISSIONWATCH) for the supported Army unit's area of operation (AO).

MISSIONWATCH (Mission Meteorological Watch)
A deliberate process for monitoring specific mission-limiting environmental factors. The MISSIONWATCH process identifies and alerts decision-makers to changes affecting 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 (AOR).

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.

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).

Unmanned Aerial Vehicle
A powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable and can carry a lethal or non-lethal payload. Ballistic or semi ballistic vehicles, cruise missiles and artillery projectiles are not considered unmanned aerial vehicles.

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 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 outlining environmental threats and are used by operational commanders to make force protection decisions.

Weather Watch
A special notice to notify operational commanders of a potential for environmental conditions of such intensity as to pose a hazard to life or property. Weather Watches indicate a potential for environmental threats and are used by operational commanders to make force protection and risk management decision

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