

**BY ORDER OF THE COMMANDER  
HILL AIR FORCE BASE**

**HILL AIR FORCE BASE INSTRUCTION  
15-101**



**25 FEBRUARY 2025**

**Weather**

**WEATHER SUPPORT**

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This instruction implements Air Force Manual (AFMAN) 10-206, *Operational Reporting*, Department of the Air Force Instruction (DAFI) 10-2501, *Emergency Management Program*, AFMAN 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, DAFMAN 15-129, *Air and Space Weather Operations*. It identifies the specific support services and related responsibilities of the 75th Operations Support Squadron Weather Flight (75 OSS/OSW), for the 75th Air Base Wing (75 ABW), associated units, and other agencies associated with Hill Air Force Base, Utah, and outlines reciprocal support required from those same organizations. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. Ensure records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Disposition Schedule located in the Air Force Records Information Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the DAF.

**SUMMARY OF CHANGES**

This document has been significantly changed and should be reviewed in its entirety. Most, but not all of the changes, include the removal of back-up procedures from the 75 OSS Weather Flight to the 25 Operational Weather Squadron. Also, annual sensitivity reviews have been added.

Formatting for this instruction has been adjusted from previous versions to reflect the most recent Air Force weather guidance found in DAFMAN 15-129, Air and Space Weather Operations, and AFMAN 15-111, Surface Weather Observations.

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## Chapter 1

### ROLES & RESPONSIBILITIES

**1.1. Overview.** The 75th Operations Support Squadron (OSS) Operations Support Weather (OSW) flight provides 24/7 weather awareness and manages weather intelligence application for Hill Air Force Base, including all tenant and supporting units, see [Attachment 4](#). Throughout this document 75 OSS/OSW will also be referred to as the Weather Flight (WF). This instruction establishes the requirements and procedures pertaining to 75 OSS/OSW's weather support and will be reviewed at least biennially.

**1.2. Concept of Operations.** The WF is the focal point for all weather support to Hill AFB. The WF alerts decision makers on mission-limiting environmental factors potentially impacting base resources, personnel, and mission execution.

## Chapter 2

### WEATHER FLIGHT OPERATIONS

**2.1. General.** 75 OSS/OSW is organized, trained, and equipped to provide detailed weather information for customers aligned under the 75th Air Base Wing (ABW), 388th Fighter Wing (FW), 419th Fighter Wing (FW), the Ogden Air Logistics Complex (OO-ALC), and all Team Hill tenant organizations. 75 OSS/OSW mission is to provide timely, accurate, and relevant weather products; including, surface weather observations; weather watches, warnings, and advisories (WWA); operations integration services; in-flight pilot-to-metro radio services (PMSV); staff-level weather intelligence services; and flight weather briefings (FWB). The 75 OSS/OSW facility is located on the flight line in the north side of Building 1. The mission support forecaster is located at the Operations Desk in Building 5.

#### **2.2. Operating Hours.**

2.2.1. Airfield Support. 75 OSS/OSW is open 24 hours a day, Monday through Friday, and from 0900L-1700L on weekends. Exceptions will be coordinated through WF leadership and approved by the 75 OSS Director of Operations (75 OSS/DO). The WF can be contacted at DSN 777-2018 or commercial (801) 777-2018, during operating hours. Additionally, the WF provides 24/7 resource protection for Hill AFB. A standby forecaster will be on shift during hours of airfield closure; see [Attachment 8](#) for standby guidance. In emergency situations, customers can contact the standby forecaster, outside of standard operating hours, through the Hill Command Post (HCP) at DSN 777-3007, or commercial (801) 777-3007.

2.2.2. Mission Support. Mission Support hours are based off supported units' flying schedules.

2.2.3. Staff Support. Staff Support services are provided from 0800L-1600L, except federal holidays and family days.

**2.3. Duty Priorities.** 75 OSS/OSW duty priorities are listed in [Table 2.1](#). Requests for changes to these duty priorities must be submitted to the WF leadership at DSN 777-3629.

**Table 2.1. 75OSS/OSW Duty Priority Listing.**

Priority	Duties
1	Wartime Defense of the Duty Site/Location
2	Perform Emergency War Order Tasks (e.g., Deploy Personnel)
3	Execute Evacuation / Continuity of Operations Plan
4	Issue/Disseminate Imminent Hazardous Weather Warnings
5	Respond to Aircraft/Ground Emergencies
6	Issue/Disseminate Imminent Hazardous Weather Advisories
7	Respond to PMSV Calls Supplementation/Backup
8	Disseminate Weather Observation
9	Disseminate Urgent PIREPs (UUA's)
10	Disseminate Terminal Aerodrome Forecasts
11	Provide Flight Weather Briefings
12	Collaborate WPs Supported Units
13	METWATCH/Amend Weather Products
14	Respond to Requests for Information
15	Provide Staff Briefings / Non-Standard WPs
16	Accomplish Weather Functional Training
17	Accomplish Administrative Tasks

**2.4. Release of Weather Information.** Operations and communications security is applied prior to the release of weather information. Specific restrictions do not exist on the dissemination of weather information to other military agencies. Information exchange between 75 OSS/OSW and the National Weather Service (NWS) is encouraged in the interest of public safety and resource protection. Support to other non-government agencies, foreign governments, or individuals, must be coordinated with 75 ABW Public Affairs (75 ABW/PA) before service or information is provided.

**2.5. Continuity of Operations (COOP).** In the event of an emergency requiring the evacuation of Building 1, the WF will relocate to an Alternate Operating Location (AOL). The primary AOL is Building 10A, the Tower Simulation System Facility, at DSN 777-3537. When evacuated, the on-duty weather forecaster notifies the Air Traffic Control (ATC) Tower, Airfield Management Operations (AMOPS), and the HCP that WF operations have relocated.

2.5.1. Mission Services. In the event of an emergency requiring the evacuation of Building 5, the mission support forecaster will relocate to the WF in Building 1.

**2.6. Annual Sensitivity Reviews.** The WF will coordinate annual weather sensitivity reviews with the 309 MXG, 388 & 419 FW, 388 MXG, and the 514 FLTS.

## Chapter 3

### WEATHER EQUIPMENT & TECHNOLOGIES

**3.1. General.** This chapter provides a brief description on the wide range of equipment used by the WF to perform staff, airfield, and mission services. Additionally, this chapter outlines equipment maintenance responsibilities.

**3.2. Weather Sensing Equipment.** The WF uses a wide range of equipment to determine the current state of the atmosphere. These critical systems are used continuously to provide customers the most timely, accurate, and relevant weather intelligence possible.

3.2.1. Fixed Meteorological Equipment (FMQ)-19, Automatic Meteorological Station. The FMQ-19 is an automated, integrated system of weather sensors that continually measure weather conditions to provide reliable, real-time weather data in support of flying, resource protection, and any other operations on Hill AFB. The FMQ-19 measures or detects: wind speed and direction, temperature and dew point, pressure, prevailing visibility and present weather, cloud amounts and heights, precipitation, freezing rain, runway visual range, and lightning strikes. Hill AFB has three FMQ-19 Automated Observing Systems: one primary weather sensor, one discontinuity, and one mid-field sensor. See [Figure 3.1](#) for a diagram of the Airfield Automated Weather Sensor locations and capabilities.

**Figure 3.1. Airfield Automated Weather Sensor Locations & Capabilities.**



3.2.1.1. FMQ-19 Limitations. The FMQ-19 ceilometers use a 30-minute time-phased algorithm to determine cloud coverage amounts over the airfield. As a result, there are times where the reported cloud amounts differ from those instantaneously seen outside. Typically, this will resolve itself as the sensor averages in the new amounts to the algorithm.

3.2.2. Kestrel. The Kestrel is a hand-held weather instrument that provides measurements of 10 different environmental conditions: wind speed, temperature, wind chill, humidity, heat index, dew point, wet bulb, barometric pressure, pressure altitude, and density altitude. It serves as the primary back-up for the FMQ-19 sensors. The WF has two Kestrel hand-held weather instruments.

3.2.3. Tactical Meteorological Equipment (TMQ)-53. The TMQ-53 is a deployable sensor suite that provides weather data via a landline or radio frequency communications. The information is displayed on a computer with automated observation system software that can be used to disseminate weather observations. The TMQ-53 serves as a secondary back-up to the FMQ-19. The WF has one TMQ-53 sensor suite. The WF will notify 75 OSS Air Traffic Control and Landing Systems (ATCALs) if the TMQ-53 is tasked for deployment or of any maintenance actions.

**3.3. PMSV Radio.** The WF uses a PMSV radio to provide updated weather information to, and receive Pilot Reports (PIREP) from, aircrews. The radio is tuned to Ultra High Frequency (UHF) channel 342.3 MHz, and is monitored by weather technicians during airfield operating hours.

3.3.1. PMSV Limitations. PMSV is unusable from 010 to 100 degrees beyond 20 NM below 20,000 feet Mean Sea Level (MSL) and from 100 to 150 degrees beyond 25 NM below 15,000 feet MSL due to local terrain obstructions.

### **3.4. Software & Web-based Tools.**

3.4.1. Joint Environmental Toolkit (JET).

3.4.1.1. JET Concept of Operations. The JET is designated as the single point from which weather personnel disseminate weather products. It provides weather personnel and operational end-users with real-time weather data through a web-based portal. The WF Commander designates a JET Site Manager to oversee weather product criteria and system access.

3.4.1.2. JET Access. The JET portal guest user site can be accessed at <https://owsjet25.us.af.mil/portal/private/Guesthillafb/Sensor>. If this link becomes obsolete, contact the WF for the most updated web address. The guest portal has limited capability; user accounts are required for individuals requesting automated WWA notifications, and aircrews requesting a Department of Defense (DD) Form 175-1, *Weather Flight Briefing*, electronically through the JET portal. User accounts can be requested through the guest portal JET webpage.

3.4.1.3. JET Local Training Process. JET training is provided by the WF for new users, JET updates affecting functionally, and by request. Continuation training requirements for operations are the responsibility of each agency utilizing the JET portal. Submit all training requests to WF leadership.

3.4.1.4. JET Operational Responsibilities.

- 3.4.1.4.1. 75 OSS/OSW. Weather personnel create, disseminate, and manage weather products through the JET, as outlined in this publication. The JET Site Manager is the JET focal point for all agencies to include access and criteria coordination, outage reporting, and any special training requests. During scheduled maintenance outages or software revisions, the JET Site Manager will notify all affected agencies.
- 3.4.1.4.2. JET Users. Users who have a valid common access card (CAC), and access to “.mil” websites, can access the JET portal as a guest user. Through the guest portal, users are able to view current sensor data and any WWAs in effect. During JET outages, the WF passes WWAs via telephone to agencies listed in **Attachment 3** of this publication. To avoid unnecessary delays in relaying critical weather information to aircrew, ATC, and command authorities, units and users with the appropriate access credentials, should utilize the information provided through the JET portal in lieu of contacting the WF to request information available on the JET portal.
- 3.4.2. WF SharePoint Website. The WF maintains a webpage limited to military users only. It is located at [https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW\\_Weather.aspx](https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW_Weather.aspx) and provides a conduit for customers to access the WF’s 5-day Planning Forecast, in addition to the current Mission Execution Forecast (MEF). Additional detail regarding these products can be found in **Paragraph 4.2.4.1** and **Paragraph 6.4** of this publication, respectively.
- 3.4.3. Air Force Weather Web Services (AFW-WEBS). The WF uses AFW-WEBS for day-to-day weather analysis, forecasting, and as a back-up product dissemination portal. AFW-WEBS is also available to all “.mil” users with a CAC and provides access to a suite of weather applications for DoD operations worldwide. An AFW-WEBS account is required for use and can be requested through the AF Portal.
- 3.4.4. Gibson Ridge (GR). The WF uses the application GR to access data from the Doppler Weather Surveillance Radar (WSR-88D) network operated by the NWS. The WF works with the NWS to ensure operation of the radar meets the needs of both parties.
- 3.4.4.1. WSR-88D Limitations. The primary radar for Hill AFB, KMTX, is located 24 miles NW of Hill AFB on Promontory Point at 6,594 feet MSL. The main limitation to radar coverage is the Wasatch Mountains to the east, which limits northeastern to southeastern returns. An additional limitation is the higher elevation of the radar in relation to Hill AFB. To provide enhanced coverage of the lower portions of the atmosphere, the radar has an additional 0.0 degree slice.
- 3.4.5. Mark IV-B. Mark IV-B is a meteorological satellite terminal designed to support tactical operations as part of the Defense Meteorological Satellite Program (DMSP) User Segment. The WF utilizes Mark IV-B to analyze real-time atmospheric conditions.
- 3.4.6. Target Acquisition Weather Software (TAWS). TAWS provides United States Air Force, Navy, and Army mission planners and warfighters with appropriate information for optimal sensor and/or weapon systems selection, acquisition range determination, and mission routing under degraded weather conditions. The WF utilizes TAWS to support training and contingency operations, upon request.
- 3.5. Maintenance of Equipment.** WF personnel will track and document all outages per local procedures and DAFMAN 15-129. ATCALs maintains the equipment account listing in Integrated Maintenance Data System for all weather equipment.

3.5.1. FMQ-19 Maintenance. The FMQ-19 is maintained by ATCALs.

3.5.2. Kestrel Maintenance. The kestrels are maintained by the WF. This includes a biannual barometric comparison.

3.5.3. TMQ-53. The TMQ-53 is maintained by the WF.

3.5.4. PMSV. The PMSV is maintained by ATCALs.

3.5.5. JET Maintenance. JET outages must be reported through the WF. Once reported, the WF will submit a ticket to the Jet Help Desk. If an outage prevents information from being transmitted or received through the JET portal, telephone or internet backup systems will be used. The WF will contact ATCALs prior to any remote JET maintenance or upgrades to the Sensor Collection Apparatus.

## Chapter 4

### STAFF INTEGRATION

**4.1. General.** Staff services are typically accomplished by WF leadership to include meteorological functions (briefings), ensuring the WF is trained and equipped for day-to-day operations, and cultivating relationships with base agencies to ensure support is optimal.

**4.2. Recurring Meetings & Briefings.**

4.2.1. Air Operations Board (AOB). The WF will participate as a member of the AOB as directed by AFMAN 13-204V1, *Management of Airfield Operations*.

4.2.2. Unit Radar Committee (URC). The WF will attend, either in person or via teleconference, the URC meetings hosted by the NWS to address requirements and operational concerns as directed in the tri-agency NEXRAD Memorandum of Agreement and DAFMAN 15-129.

4.2.3. Emergency Management Working Group (EMWG). The WF will attend EMWG meetings to provide subject matter expertise as directed by the Hill AFB Installation Emergency Management Plan (IEMP).

4.2.4. Staff Weather Briefings. The WF will provide staff weather briefings as scheduled or upon request. Unscheduled briefings must be requested at least 3 hours in advance to allow for preparation. Examples of staff briefings include, but are not limited to, 75th Air Base Wing Commander (75 ABW/CC), 388th Fighter Wing Commander (388 FW/CC), and 388th Operations Group Commander (388 OG/CC) stand-ups.

4.2.4.1. 5-Day Planning Forecast. The WF produces a 5-Day Planning Forecast posted to the WF SharePoint Website Monday to Friday. This forecast is for planning purposes only and is utilized for staff weather briefings.

4.2.5. Instrument Refresher Course (IRC). As requested, the WF will provide IRC briefings which may include the following topics: airfield and mission services, WF capabilities, resource protection (RP), seasonal and regional weather, and space weather impacts.

4.2.6. Supervisor of Flying (SOF). The WF will provide orientation and quarterly briefings to SOFs, to include Cooperative Weather Watch responsibilities and WF duties, hours, capabilities, limitations, equipment, and seasonal weather threats.

**4.3. Climatology Requests.** The WF will provide climatology briefings and coordinate climatological data requests through the 14th Weather Squadron (14 WS) in Asheville, NC.

**4.4. Wing Notifications.** The WF will issue WWAs. Any WWAs that are issued will be disseminated base-wide via AtHoc.

**4.5. Emergency Operations Support.**

4.5.1. Installation Emergency Management Plan. The WF will assist in the creation of the IEMP IAW DAFI 10-2501, *Emergency Management Program*.

4.5.2. Crisis Action Team (CAT) & Emergency Operations Center (EOC) Support. The WF provides weather support for CAT and EOC activations; this includes real-world emergencies, exercises, and pre-deployment planning briefings.

4.5.2.1. CAT & EOC Exercise Support. When required, the WF participates in exercises conducted by the 75 ABW, 388 FW, and 419 FW. This support includes CAT, EOC, concept briefings, and pre-deployment planning briefings.

4.5.3. Emergency Management (EM) Support. The WF will provide weather briefings and forecasts for disasters and contingency response events at the request of EM. Events that may require weather support include, but are not limited to, floods, periods of extreme heat or cold, evacuee bed downs, hazardous spills, and Chemical, Biological, Radiological, and Nuclear (CBRN) events.

## Chapter 5

### AIRFIELD WEATHER SERVICES

**5.1. General.** The airfield weather services function consists of weather observing, Terminal Aerodrome Forecast (TAF) generation, meteorological watch (METWATCH), RP, and PMSV for the Hill AFB aerodrome (a five nautical mile (NM) dome encircling the installation and centered on the runway).

**5.2. Airfield Weather Observations.** The WF provides continuous weather observing services utilizing the FMQ-19 weather sensors. The WF provides backup to, and augmentation of, the system IAW local standard operating procedures.

5.2.1. Official Observing Locations. The official observing location is located approximately 200 feet north, at ground level, across from Building 1 next to the ATC Tower.

5.2.1.1. Observing Limitations. Manual observations at Hill AFB are hampered by visual obstructions from multiple base structures in the direction of 120 to 260 degrees.

5.2.2. Weather Observation Types. The WF provides three basic types of weather observations: Aviation Routine Weather Report (METAR), Aviation Selected Special Weather Report (SPECI), and Aviation Selected Local Weather Report (LOCAL).

5.2.2.1. METAR. A METAR is a regularly scheduled observation taken and disseminated every hour at 55-59 minutes after the hour. **Table 5.1** describes common weather phenomena and how it is encoded in weather observations.

5.2.2.2. SPECI. SPECI observations are unscheduled observations completed and transmitted when any of the Hill AFB special criteria listed in **Attachment 2** are observed or sensed. SPECI observations are disseminated locally and longline.

5.2.2.3. LOCAL. A LOCAL is an unscheduled observation, taken and reported to the nearest minute, for elements not meeting SPECI criteria. LOCAL observations are only disseminated through local networks.

**Table 5.1. Common Phenomena and Observing Code.**

QUALIFIER		WEATHER PHENOMENA		
INTENSITY OR PROXIMITY 1	DESCRIPTOR 2	PRECIPITATION 3	OBSCURATION 4	OTHER 5
- Light  Moderate  + Heavy (well-developed in the case of tornadoes or waterspouts)  VC In the Vicinity	MI Shallow  PR Partial (covering part of the aerodrome)  BC Patches  DR Low Drifting  BL Blowing  SH Shower(s)  TS Thunderstorm  FZ Freezing (super-cooled)	DZ Drizzle  RA Rain  SN Snow  SG Snow Grains  IC Ice Crystals (Diamond Dust)  PL Ice Pellets  GR Hail  GS Snow Pellets	BR Mist  FG Fog  FU Smoke  VA Volcanic Ash  DU Widespread Dust  SA Sand  HZ Haze  PY Spray	PO Well-Developed Dust/Sand Whirls  SQ Squalls  FC Funnel Cloud(s) (Tornado, or Waterspout)  SS Sand storm  DS Dust storm

**5.3. Weather Observation Augmentation.** The FMQ-19 has the capability to automatically transmit observations rapidly to keep up with current weather conditions, but occasionally requires human augmentation due to certain weather criteria. The two augmentation processes used are: supplementing and back-up. In all instances of human augmentation, flight safety is the highest priority.

5.3.1. Supplementing. Supplementing is the process of manually adding meteorological information to an observation generated by the FMQ-19, beyond the system’s capability to measure and report. WF personnel will supplement observations when the airfield is open and check weather at intervals not to exceed 20 minutes whenever the weather conditions in **Table 5.2** are observed or forecast to occur within 1 hour.

**Table 5.2. Mandatory Supplement Weather Criteria for Hill AFB.**

Tornado (+FC)
Funnel Cloud (FC)
Waterspout (+FC)
Freezing Precipitation (FZDZ/FZRA)
Hail (GR)
Volcanic Ash (VA)
Ice Pellets (PL)
Snow Depth
Tower Visibility remark (NOTE 1)
Ceiling <3,000 feet and/or visibility <3SM (NOTE 1)
Thunderstorms/Lightning observed, but not detected by the FMQ-19 (NOTE 1)
NOTES: 1. Only required during controlled airfield hours.

5.3.2. Back-up. Back-up is the process of manually providing meteorological data or dissemination of observations when the primary automated method is not operational or unavailable due to sensor or communication failure. During equipment failures, back-up procedures are taken IAW local procedures and DAFMAN 15-129.

**5.4. Cooperative Weather Watch (CWW).** CWW is a program where qualified non-weather personnel assist the WF in monitoring weather conditions for the occurrence of previously unreported weather conditions which could affect flight safety or be critical to the safety or efficiency of local operations/resources. Of primary concern is the report of tower visibility differing from the prevailing surface visibility, reporting of sector visibility, local PIREPs and occurrences of previously unreported weather conditions affecting flight safety or may be critical to the safety or efficiency of other local operations and resources.

5.4.1. ATC. ATC personnel, task certified to evaluate tower visibility, report changes in tower visibility to the WF when tower visibility is less than 4 statute miles (SM) (6000 meters) and tower visibility differs from the prevailing visibility by at least one reportable value. The WF will include the tower visibility as a remark at the end of the observation. Additionally, ATC personnel will relay PIREPs to the WF as soon as practical, within ATC established duty priorities. If continuous Runway Visual Range (RVR) is needed, the WF will notify ATC personnel that the RVR system requires the runway lights to be left on in order to work properly.

5.4.2. Other base agencies. Other base agencies (e.g. Security Forces) can provide additional weather information to the WF when significant and unreported weather phenomena are observed.

**5.5. TAF.** The TAF shall be the official airfield forecast for Hill AFB (KHIF) and are produced and disseminated by the WF based on operational requirements. Forecasts are valid for a 30-hour period and issued at a frequency not to exceed every 8 hours. TAFs are issued at 0500Z, 1300Z, and 2100Z Mountain Daylight Time and 0600Z, 1400Z, and 2200Z Mountain Standard Time. In the event where an off-hour TAF is required, a forecast will be issued as soon as possible, but not more than 3 hours prior to airfield opening, then issued at routine scheduled times thereafter.

5.5.1. TAF Dissemination. The primary means for dissemination of the TAF and TAF amendments by the WF is accomplished via JET. If JET is inoperative, the on-duty forecaster will disseminate forecast elements using AFW-WEBS, then the ATC Tower via telephone if neither of the two are operational. ATC personnel relay TAF updates to Clover Control. TAFs are valid for 3 hours and apply to the area within 5 NM of the center of the Hill AFB airfield complex.

**5.6. RP Support.** The WF is responsible for the resource protection of Hill AFB. This includes METWATCH and the issuance of all WWAs for the base.

**5.7. METWATCH.** The WF will METWATCH to identify when and where observed conditions significantly diverge from forecast conditions, determine courses of action to update or amend a forecast product or group of products, and notify designated agencies.

**5.8. WWAs.** The WF produces, disseminates, and amends WWAs to inform supported units of potential and observed weather conditions that require protective actions. WWAs apply to Hill AFB and the area within 5 NM of the center of the runway unless otherwise specified. Weather events occurring within the geographic confines of the area are considered “at the location” for verification purposes. WWAs are issued consistent with minimum desired lead time (DLT) which is defined as the minimum amount of advance notice a supported customer requires to prepare for the onset of a particular weather phenomenon. Any on-base agency requiring specialized weather warning support not specified in this instruction must coordinate WWA requirements through the WF leadership. WWA criteria will be reviewed by the WF annually.

5.8.1. Weather Advisory. Weather Advisories are issued to alert an end user of the occurrence of, or imminent occurrence of weather conditions impacting operations. Observed advisories are issued when the specified weather condition is occurring and is canceled when the condition no longer exists. [Attachment 6](#) lists the criteria for Weather Advisories.

5.8.2. Weather Watch. Weather Watches provide advance notice to designated agencies of the existence of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the agency should consider taking protective measures. Weather Watches are generally issued prior to Weather Warnings and are intended to provide advance notice of potentially significant weather. Weather Watches are canceled when the potential no longer exists. Watches are standalone products based upon potential and are unaffected by warnings or advisories for the same phenomena. [Attachment 7](#) lists criteria for Weather Watches.

5.8.3. Weather Warning. Weather Warnings alert designated agencies to the imminent or actual occurrence of weather conditions of such intensity as to pose a hazard to life or property for which the agency must take immediate protective actions. Weather Warnings should be considered as more severe than Weather Advisories. The criteria for Weather Warnings and the desired lead times are listed in [Attachment 7](#).

5.8.4. WWA Dissemination. WWAs are primarily disseminated via JET. When JET is inoperative, WWAs are disseminated to customers via telephone as listed in **Attachment 3**, and posted to the 75 OSS SharePoint under “Category: WWAs” [https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW\\_Weather.aspx](https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW_Weather.aspx). Tornado warning notifications will be disseminated via telephone to HCP and Maintenance Operation Centers (MOC) first, and then disseminated via JET. Tower, SOF and Airfield Management Operations are notified by an audible alert through Information Display System 5 (IDS5).

5.8.5. NWS Watches & Warnings. The WF will evaluate, tailor, and disseminate any required NWS flood & fire watches and warnings, which are housed on the NWS website at the following link: <https://www.weather.gov>.

5.8.6. Standby WWA Support. The WF will provide 24/7 resource protection to Hill AFB, regardless of airfield operational hours. During non-duty hours, the WF standby forecaster will assume responsibility for issuing any potential WWAs.

**5.9. Severe Weather Action Plan (SWAP).** The WF is responsible for alerting supported base agencies of imminent or forecasted severe weather threats that will impact Hill AFB. The SWAP enhances the WF’s response capability during severe weather events and directs the recall of the on-call SWAP Lead. Notification of severe weather events within the SWAP will follow the standard WWA notification procedures.

5.9.1. Initiation of SWAP. During duty hours, the on-duty forecaster will notify the SWAP Lead and WF leadership anytime severe weather is imminent or forecasted. During non-duty hours, the standby forecaster will notify the SWAP Lead anytime severe weather is imminent or forecasted. If off-duty, the SWAP Lead must be able to report to the 75 OSS/OSW facility within 45 minutes of being notified. The SWAP Lead determines, on a case-by-case basis, the need to recall additional personnel.

5.9.2. SWAP Duty Priorities. In the event of a severe weather recall, WF duty priorities are directed toward protection of Hill AFB resources. Duties such as staff weather briefings, MEFs, and transient aircrew briefings may be delayed until the severe weather threat has diminished or until enough personnel are on-duty to support other functions.

5.9.3. Severe Weather Conditions. Severe weather conditions requiring SWAP activation are defined as: tornadic activity (e.g., funnel cloud, water spout, or tornado), hail greater than or equal to ¾ inch, surface winds greater than or equal to 50 knots, wind condition 3 or 4, freezing precipitation, snowfall of 6 inches or greater in 12 hours, and snowfall of 2 inches or greater in 12 hours that is expected between the hours of 0500L-0900L (commuting hours), Monday through Friday.

5.9.4. Post Severe Weather Procedures. The WF provides required data for an Operational Report-3 (OPREP) BEELINE message to the HCP upon request. Any reports that involve resource damage or injuries due to weather phenomena will be reported to Air Force Materiel Command Weather and Environmental Sciences Branch (AFMC/A3OW).

**5.10. Flight Information Publication (FLIP) Review.** The DoD FLIP is used for flight planning, en route, and terminal operations. The WF, IAW DAFMAN 15-129, will review each new edition of applicable DoD FLIPs as soon as possible after publication, including the Radar Instrument Approach Minimums, local Notice To Airmen (NOTAMs), and applicable directives. The WF will coordinate updates or changes to DoD FLIPs through the local Airfield Management office or responsible agency using the standardized procedures and formats found in the General Planning FLIP. Changes include:

- 5.10.1. Airfield minima affecting SPECI/LOCAL observation criteria (reference Radar Instrument Approach Minimums).
- 5.10.2. PMSV contact information (reference Instrument Flight Rules (IFR) Supplement).

## Chapter 6

### MISSION INTEGRATION

**6.1. General.** This chapter identifies availability of weather products created to support local flying and non-flying missions.

**6.2. Area of Responsibility (AOR).** The WF's AOR includes the Hill AFB aerodrome and the Utah Test and Training Range (UTTR). Support for non-standard operating areas will be coordinated through the WF NCOIC, Mission Weather Integration.

**6.3. Mission Support Forecaster.** As WF manning permits, a forecaster will be embedded with the 388 FW and 419 FW flying squadrons to perform in-person planning and flight weather briefings.

**6.4. MEF.** The MEF is the primary tool used to accomplish day-to-day weather support for Hill AFB flying units. The WF utilizes a standardized MEF process (MEFP) IAW DAFMAN 15-129 to develop the Hill AFB MEF. See [Attachment 9](#) for an example.

6.4.1. The Hill AFB MEF. The Hill AFB MEF is produced twice daily, Monday – Friday (excluding holidays and family days), to cover the 514th Flight Test Squadron (514 FLTS) flying window from 0900-1030L and 1215-1315L, and 1445-1530L. The MEF is then adjusted to cover the 388 FW flying window.

6.4.1.1. Concept of Operations. The MEF is designed to provide critical go or no-go weather information to the flying squadron for all phases of each sortie. Weather thresholds are defined by our flying customers and incorporate aircraft, aircrew, mission tactics, and operating location limitations. Aircrews may contact the duty forecaster for updates and clarification pertaining to the MEF. The MEF will be amended when observed or forecasted conditions unexpectedly cross mission critical thresholds, are significantly different than originally reported, or anytime a weather Warning, Watch or Advisory is issued, upgraded or cancelled. NOTE: The MEF is available through the WF SharePoint Website at the following URL: [https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW\\_Weather.aspx](https://usaf.dps.mil/sites/75ABW/OSS/SitePages/OSW_Weather.aspx). In the event of a Local Area Network (LAN) outage, the 388 FW or 419 FW MEF is faxed to individual flying units to post at the fighter operations desk.

6.4.1.2. Issue Times. The MEF is required 30 minutes prior to the mass brief time.

6.4.1.3. MEF Criteria. The MEF contains the following information:

6.4.1.3.1. Take-Off and Alternate Weather.

6.4.1.3.2. Hazards and Winds.

6.4.1.3.3. UTTR Range Weather.

6.4.1.3.4. Low Level and Air Refueling Weather.

6.4.1.3.5. TAWS and/or additional operating area weather will be included, upon request.

6.4.1.3.6. The MEF must be consistent with relevant products issued by 15 OWS and 557 WW. However, during rapidly changing conditions, emergencies, or when conditions threaten resource protection, the WF amends the MEF to accurately reflect conditions. Forecast specification and amendment criteria are listed in [Attachment 5](#).

**6.5. UTTR Forecast.** UTTR weather information is available in the daily MEF. Pilots should call the WF for a verbal update prior to departure. Additional weather support requirements for activities in the UTTR should be coordinated with the WF at least 30 days prior to ensure adequate support can be provided.

**6.6. TAWS.** The WF is capable of providing electro-optic/infrared (EO/IR) information to support specialized weapons systems and other types of special operations equipment, upon request.

**6.7. Flight Weather Briefing (FWB).** The WF provides FWBs in the form of step briefings to the 388 FW and 419 FW, verbal briefings, and DD Form 175-1s, to aircrews upon request during normal duty hours. Aircrews can receive briefings in person at the 75 OSS/OSW facility, over phone, or by email. To ensure adequate preparation time, aircrews should notify the on-duty forecaster the day prior to the briefing, but no later than 4 hours prior to take-off. Mass briefings for special missions require 24 hours advanced notice, are subject to manning availability, and must be coordinated with WF leadership. Aircrews receiving emailed briefings may contact the on-duty forecaster for any updates or clarification. Transient aircrews may receive FWBs, workload and schedule permitting, from the WF.

6.7.1. The WF will provide FWBs in the form of step briefings to visiting units for the Weapons System Evaluation Program (WSEP) when visiting unit support is not available due to reclama or shortfall. WF support to WSEP will be requested NLT 30 days prior to WSEP visiting unit arrival. If WF manning does not allow for an additional forecaster to provide in-person step briefings, WF support will be provided via the Weather Forecast Desk in Building 1.

**6.8. Mission-Scale Meteorological Watch (MISSIONWATCH).** MISSIONWATCH is a deliberate process for monitoring terrestrial weather and the space environment for specific mission-limiting environmental factors. This process is accomplished and documented by WF personnel for MEFs, FWBs, and verbal weather briefings. When significant changes to forecasted conditions are identified, WF personnel relay notice of those changing conditions to pertinent customers and amend forecasts as necessary, IAW DAFMAN 15-129.

**6.9. Mission Planning Briefings.** Upon request, the NCOIC, Mission Weather Integration provides mission planning briefings for areas within the Continental United States (CONUS) for a forecast period up to 5 days. Requests should be submitted 3 days prior to scheduled briefing time. Additional coordination is required for mission planning briefings for areas outside the CONUS or for forecast periods longer than 5 days.

**6.10. Fighter Mission Design Series (MDS) Support.** The WF maintains and postures two weather forecasters to support 3-Series Aviation Unit Type Code requirements for each Air Combat Command (ACC) flying squadron assigned to Hill AFB that own a "Strike Mission" Design Series Force package. Each two-person enabler team deploys with and provides weather support to each tasked ACC flying squadron.

## Chapter 7

### RECIPROCAL SUPPORT

**7.1. General.** Mutual support and cooperation are key elements in the WF's ability to provide complete and timely weather support to its customers. This section outlines reciprocal support for base agencies, partner organizations, and individual unit responsibilities.

**7.2. All Supported Agencies.** Supported agencies will establish and coordinate all weather support requirements and procedures with the WF and notify the WF of any changes in weather support requirements. This should be done with sufficient notice (normally 5 working days) to offset impacts to WF operations. Agencies with JET accounts/capabilities will utilize JET and/or the WF SharePoint Website to the greatest extent possible as a source of weather data.

**7.3. HCP will:**

7.3.1. Notify WF on-duty or standby forecaster of:

7.3.1.1. Any report of significant weather phenomena

7.3.1.2. Any significant weather-related event (e.g. material damage, injuries, etc.). If significant weather warrants the HCP to issue an OPREP-3 BEELINE, a copy will be e-mailed to WF leadership.

7.3.2. Disseminate WWAs for Hill AFB over the Emergency Notification System, AtHoc Alert System, and/or Giant Voice broadcast system as agreed upon, and notify wing leadership of pertinent WWAs.

7.3.2.1. The base is notified via Giant Voice for the following warnings:

7.3.2.1.1. Tornado Warning.

7.3.2.1.2. Lightning Warning Observed within 5 NM between 0700L – 1759L.

**7.4. Hill AFB Flying Units:**

7.4.1. 388 FW will:

7.4.1.1. Local Operations.

7.4.1.1.1. Provide the WF with flying schedules.

7.4.1.1.2. Provide the WF with the date, time, and location of the quarterly SOF meeting at least 5 working days prior to the event.

7.4.1.1.3. Provide the WF with the date, time, and location of the quarterly IRC meeting at least 5 working days prior to the event.

7.4.1.1.4. Provide forecast feedback to include PIREPs.

7.4.1.1.5. Provide aircrew and airframe limitations during annual sensitivity reviews.

7.4.1.1.6. Provide 48-hour notice for briefing support during non-traditional flying hours.

7.4.1.1.7. Through the SOF, notify the WF forecaster when a weather recall is initiated.

7.4.1.1.8. Through the Top 3, provide mission updates to the WF.

#### 7.4.1.2. Temporary Deployments (TDYs)/Exercises.

7.4.1.2.1. Provide WF leadership notice of all TDYs/exercises requiring weather support as soon as possible prior to the TDY/exercise.

7.4.1.2.2. The WF is required to provide or arrange weather support for home station flying units regardless of where flying operations occur. This includes in-place weather support (75 OSS/OSW), reach-back support (75 OSS/OSW), or coordination of support from other weather units, IAW DAFMAN 15-129.

7.4.1.2.2.1. If requesting personnel for in-place support, coordinate with WF leadership for all TDYs/exercises no later than 30 days in advance, when possible.

#### 7.4.1.3. Deployments.

7.4.1.3.1. Coordinate with 75 OSS Unit Deployment Manager (UDM) for all weather support deployment tasking requests.

7.4.1.3.2. Provide WF leadership with the date, time, and location of pre-deployment planning briefings at least 48 hours prior to the brief.

7.4.1.3.3. Coordinate training requirements & timelines for WF personnel with 75 OSS/UDM.

#### 7.4.2. 419 FW will:

7.4.2.1. Request weather support IAW **Paragraph 6.7**.

7.4.2.2. Provide the WF with the date, time, and location of the quarterly SOF meeting at least 5 working days prior to the event.

7.4.2.3. Provide forecast feedback to include PIREPs.

7.4.2.4. Provide aircrew and airframe limitations during annual sensitivity reviews.

#### 7.4.3. 514FLTS will:

7.4.3.1. Request weather support IAW **Paragraph 6.7**.

7.4.3.2. Provide aircrew and airframe limitations during annual sensitivity reviews.

### **7.5. 75OSS Airfield Operations.**

#### 7.5.1. 75OSS ATC will:

7.5.1.1. Participate in the CWW and notify the WF forecaster of significant changes in the weather including, but not limited to, visibility, ceiling, thunderstorms, lightning, precipitation, and any other weather affecting flight safety.

7.5.1.1.1. Notify the WF when they observe tower prevailing visibility decrease to less than or increase to equal or exceed 4 miles (6000 meters).

7.5.1.1.2. Report changes of one or more reportable values to WF when the prevailing visibility at the tower or the surface is less than 4 miles (6000 meters).

- 7.5.1.1.3. Inform the WF with the sector visibility observations, especially from the southern sector to the western sector (surface visibility is obstructed in these quadrants) when visibility is below 3 miles (4800 meters), and sector visibility differs from prevailing visibility by one or more reportable values.
- 7.5.1.1.4. Use the lower of either the tower or surface visibility as the prevailing visibility for aircraft operations as required by Federal Aviation Administration (FAA) Job Order 7110.65, *Air Traffic Control*.
- 7.5.1.2. Report the following to the WF if not carried in the observation:
  - 7.5.1.2.1. The onset of precipitation.
  - 7.5.1.2.2. The occurrence of lightning.
  - 7.5.1.2.3. Tornadoes, funnel clouds or changes to the sky condition that may affect the safety of flight.
- 7.5.1.3. Notify the WF when JET is inoperative, if weather readings differ from visual references, or of any weather equipment outages/problems.
- 7.5.1.4. Relay all PIREPs containing weather information to the WF as soon as practical but no later than 5 minutes after receipt per DAFMAN 15-129.
  - 7.5.1.4.1. Workload permitting, when notified by an aircraft of a failed attempt to contact the WF by means of PMSV; obtain the aircraft's location and altitude, pass the information to the WF and relay the weather information back to the aircraft.
- 7.5.1.5. Notify the WF of a change in the active runway.
- 7.5.1.6. Perform a PMSV radio check (daily at minimum).
- 7.5.1.7. Ensure all ATC personnel receive local weather phenomena training and certification to take limited weather observations.
- 7.5.1.8. Report changes in runway light settings when prevailing visibility is equal to or less than 1 mile (1600 meters).
- 7.5.2. 75 OSS AMOPS will:
  - 7.5.2.1. Relay Runway changes, condition readings and runway surface conditions to the WF.
  - 7.5.2.2. Provide airfield openings, including operating hours outside of published airfield hours, to the WF.
  - 7.5.2.3. Publish a NOTAM for extended PMSV outages (over 24 hours).
  - 7.5.2.4. Notify the WF of all aircraft emergencies, aircraft mishaps, and ground emergencies via SCN.
  - 7.5.2.5. Publish necessary changes for DoD FLIPs for WF operation changes.
- 7.5.3. 75OSS ATCALs will:
  - 7.5.3.1. Maintain weather equipment IAW [Paragraph 3.5](#) of this document.
- 7.5.4. 86th Fighter Weapons Squadron (86 FWS) will:

- 7.5.4.1. Provide WSEP units with Hill AFB WF contact information.
- 7.5.4.2. Provide the WF with the schedule of WSEP rotations.
- 7.5.4.3. Request weather support IAW **Paragraph 6.7**.
- 7.5.4.4. If requesting WF support for WSEP, provide the WF the daily flying schedule and daily briefing times.
- 7.5.4.5. If requesting WF support for WSEP, provide the WF access to WSEP facilities and all required systems.

DANIEL L. CORNELIUS, Colonel, USAF  
Commander

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020  
DAFI 10-2501, *Emergency Management Program*, 16 October 2023  
DAFI 48-151, *Thermal Stress Program*, 2 May 2022  
AFMAN 10-206, *Operational Reporting (OPREP)*, 18 June 2018  
AFMAN 13-204V1, *Management of Airfield Operations*, 22 July 2020  
AFMAN 15-111, *Surface Weather Observations*, 12 March 2019  
AFMAN 15-124, *Meteorological Codes*, 15 January 2019  
DAFMAN 15-129, *Air and Space Weather Operations*, 7 September 2023  
FAA JO 7110.65, *Air Traffic Control*, 23 April 2023

***Adopted Forms***

DAF Form 847, *Recommendation for Change of Publication*  
DD Form 175-1, *Flight Weather Briefing*

***Abbreviations and Acronyms***

**ABW**—Air Base Wing  
**ACC**—Air Combat Command  
**ACS**—Air Control Squadron  
**AFB**—Air Force Base  
**AFI**—Air Force Instruction  
**AFMAN**—Air Force Manual  
**AFMC**—Air Force Materiel Command  
**AFPD**—Air Force Policy Directive  
**AFRC**—Air Force Reserve Command  
**AFW-WEBS**—Air Force Weather Web Services  
**AGL**—Above Ground Level  
**AMOPS**—Airfield Management Operations  
**AOB**—Air Operations Board  
**AOL**—Alternate Operating Location  
**AOR**—Area of Responsibility

**ATC**—Air Traffic Control  
**ATCALs**—Air Traffic Control and Landing Systems  
**CAC**—Common Access Card  
**CAT**—Crisis Action Team  
**CBRN**—Chemical, Biological, Radiological, and Nuclear  
**CC**—Commander  
**CDM**—Chemical Downwind Message  
**CONUS**—Continental United States  
**COOP**—Continuity of Operations  
**CWW**—Cooperative Weather Watch  
**DAF**—Department of the Air Force  
**DAFI**—Department of the Air Force Instruction  
**DD**—Department of Defense  
**DLT**—Desired Lead Time  
**DMSP**—Defense Meteorological Satellite Program  
**DoD**—Department of Defense  
**ECT**—Equivalent Chill Temperature  
**EM**—Emergency Management  
**EMWG**—Emergency Management Working Group  
**EO/IR**—Electro-Optics/Infrared  
**EOC**—Emergency Operations Center  
**FAA**—Federal Aviation Administration  
**FITS**—Fighter Index of Temperature Stress  
**FLIP**—Flight Information Publication  
**FLTS**—Flight Test Squadron  
**FMQ-19**—Fixed Meteorological Equipment  
**FOD**—Foreign Object Debris  
**FW**—Fighter Wing  
**FWB**—Flight Weather Briefing  
**GR**—Gibson Ridge  
**HCP**—Hill Command Post  
**IAW**—In Accordance With

**IDS5**—Information Display System  
**IEMP**—Installation Emergency Management Program  
**IFR**—Instrument Flight Rules  
**IRC**—Instrument Refresher Course  
**JET**—Joint Environmental Toolkit  
**JO**—Job Order  
**LAN**—Local Area Network  
**LLWS**—Low-Level Wind Shear  
**LOCAL**—Aviation Selected Local Weather Report  
**MDS**—Mission Design Series  
**MEF**—Mission Execution Forecast  
**MEFP**—Mission Execution Forecast Process  
**METAR**—Aviation Routine Weather Report  
**METWATCH**—Meteorological Watch  
**MISSIONWATCH**—Mission-Scale Meteorological Watch  
**MSL**—Mean Sea Level  
**NCOIC**—Non-Commissioned Officer in Charge  
**NM**—Nautical Miles  
**NOTAM**—Notice to Airmen  
**NWS**—National Weather Service  
**OG**—Operations Group  
**OO-ALC**—Ogden Air Logistics Complex  
**OPR**—Office of Primary Responsibility  
**OPREP**—Operational Report  
**OPSEC**—Operations Security  
**OSS**—Operations Support Squadron  
**OSW**—Operations Support Weather  
**OWS**—Operational Weather Squadron  
**PIREP**—Pilot Report  
**PMSV**—Pilot to Metro Service  
**RP**—Resource Protection  
**RVR**—Runway Visual Range

**SCA**—Sensor Collection Apparatus  
**SM**—Statute Mile  
**SOF**—Supervisor of Flying  
**SPECI**—Aviation Selected Special Weather Report  
**SWAP**—Severe Weather Action Plan  
**TAF**—Terminal Aerodrome Forecast  
**TAWS**—Target Acquisition Weather Software  
**TDY**—Temporary Duty  
**TMQ-53**—Tactical Meteorological Equipment  
**UDM**—Unit Deployment Manager  
**UHF**—Ultra High Frequency  
**URC**—Unit Radar Committee  
**UTTR**—Utah Test and Training Range  
**WF**—Weather Flight  
**WP**—Weather Product  
**WS**—Weather Squadron  
**WSEP**—Weapons System Evaluation Program  
**WSR-88D**—Weather Surveillance Radar  
**WW**—Weather Wing  
**WWA**—Watch, Warning, and Advisory

*Office Symbols*

**14WS**—14th Weather Squadron  
**25OWS**—25th Operational Weather Squadron  
**75ABW**—75th Air Base Wing  
**75ABW/CC**—75th Air Base Wing Commander  
**75ABW/PA**—75th Air Base Wing Public Affairs  
**75OSS**—75th Operations Support Squadron  
**75OSS/CC**—75th Operations Support Squadron Commander  
**75OSS/DO**—Director of Operations  
**75OSS/OSW**—75th Operations Support Squadron Weather Flight  
**86FWS**—86th Fighter Weapons Squadron  
**309AMXG**—309th Aircraft Maintenance Group

**388FW**—388th Fighter Wing

**388FW/CC**—388th Fighter Wing Commander

**419FW**—419th Fighter Wing

**419FW/CC**—419th Fighter Wing Commander

**514FLTS**—514 Flight Test Squadron

**557WW**—557th Weather Wing

**AFMC/A3OW**—Air Force Materiel Command Weather and Environmental Sciences Branch

**OO-ALC**—Ogden Air Logistics Complex

### *Terms*

**Alternate Operating Location (AOL)**—Location to which duties can be performed during an outage at, or evacuation of, the primary operating location.

**Chemical Downwind Message (CDM)**—Weather product that contains weather information needed to calculate a chemical downwind hazard. Weather information includes wind speed, surface wind direction, air stability, air temperature, relative humidity, significant weather, and total cloud cover.

**Cooperative Weather Watch (CWW)**—A CWW is established between air traffic control (ATC) and the weather flight. The occurrence of previously unreported weather conditions which could affect flight safety or which could be critical to the safety or efficiency of other local operations and resources is of primary concern.

**Desired Lead Time (DLT)**—The amount of advance notice a supported agency requires to complete necessary actions prior to the onset of an established weather event.

**Joint Environmental Toolkit (JET)**—Weather information evaluation and dissemination system. It is designed to consolidate legacy weather systems over the spectrum of weather operations and enhance the war fighter decision process.

**Meteorological Watch (METWATCH)**—The process of actively comparing observed weather conditions with those forecasted and updating forecasts with the latest information.

**Mission Execution Forecast (MEF)**—A customized, tactical-level weather product provided by the 75 OSS/OSW for its supported units to conduct military missions.

**Mission Execution Forecast Process (MEFP)**—The process of establishing meteorological situational awareness and applying environmental characterizations for the parent/host unit's decision cycle. The end result of the MEFP is a WP.

**Mission-Scale Meteorological Watch (MISSIONWATCH)**—The deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors.

**Notice to Airmen (NOTAM)**—A Notice to Airmen contains information concerning the establishment, condition, or change in any aeronautical facility, service, procedures, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

**Pilot Report (PIREP)**—A report of observed flight weather conditions usually passed to weather personnel through the PMSV radio.

**Pilot to Metro Service (PMSV)**—An Ultra High Frequency (UHF) radio service (342.3 MHz for Hill AFB) that allows aircrews to contact weather personnel for updated weather conditions and to pass on significant flight weather reports.

**Sensor Collection Apparatus (SCA)**—The SCA processes data sent from a data collection point, e.g. TMQ-53 or FMQ-19, and forwards the weather sensor data to the Air Force Weather's regionalized forecasting centers for use by forecasters worldwide.

**Severe Weather**—Established weather conditions that are deemed to pose a hazard to flight safety, property or life. Examples include but are not limited to tornadoes, heavy snow and winds greater than 50 knots.

**Terminal Aerodrome Forecast (TAF)**—A 30-hour forecast for cloud layers, prevailing visibility, weather obstructing visibility, surface winds, altimeter setting, and icing and turbulence from the surface to 10,000 ft mean sea level (MSL). Produced and disseminated by the 75 OSS/OSW.

**Thunderstorm**—Atmospheric condition consisting of lightning, thunder, and heavy precipitation. Potential exists for gusty winds, hail, severe turbulence, icing and wind shear.

**Severe Thunderstorm**—A thunderstorm capable of producing winds 50 knots or greater and/or hail 3/4 inches or greater.

**Vicinity**—The area between 5SM and 10SM of the center point of the Hill AFB runway complex.

**Weather Advisory**—A special message disseminated via JET, which notifies of established weather conditions that require certain protective actions by various base agencies.

**a. Observed**—An observed weather advisory will be issued only when established weather conditions are actually observed to be occurring at the terminal aerodrome. These advisories will be canceled when the conditions are no longer being observed.

**b. Forecast Advisory**—A forecast advisory will be issued when an established weather condition is expected to occur. Advisories will be amended, upgraded, or canceled as required to accurately reflect conditions.

**Weather Product (WP)**—All possible weather products created utilizing the MEFP which are provided to supported units. A MEF is an example of an WP.

**Weather Warning**—A special message transmitted over JET to highlight established weather conditions that require certain protective actions by various base agencies. A weather warning will be issued when an established weather condition of such intensity as to pose a hazard to flight safety, property, or life is occurring or is expected to occur. Warnings will be amended, upgraded, or canceled as required to accurately reflect conditions. Warnings issued for Hill AFB are for conditions forecast to affect the aerodrome.

**Weather Watch**—A special message transmitted over JET to advise supported agencies of the potential for an established weather condition to occur. If required, weather watches will be upgraded to weather warnings. Agencies should review required actions.

## Attachment 2

**SPECIAL (SPECI) AND LOCAL OBSERVATION CRITERIA**

**A2.1. Ceiling.** A ceiling (the height assigned to the lowest broken or overcast layer of clouds which is predominately opaque) forms or dissipates below, decreases to less than or if below, increases to equal or exceeds:

**A2.2. Sky Condition.** A layer of clouds or obscuring phenomena aloft (i.e., smoke) is observed below 1,100 feet and no layer was reported below this height previously.

**A2.3. Visibility.** Prevailing visibility is observed to decrease to less than or if below, increases to equal or exceed:

**Figure A2.1. Visibility.**

<b>CEILING</b>	<b>VISIBILITY</b>
3,000 FT (AFMAN 15-111)	3 SM (DoD FLIP / AFMAN 15-111)
2,000 FT (AFMAN 15-111)	2 SM (DoD FLIP / AFMAN 15-111)
1,500 FT (AFMAN 15-111)	1 ½ SM (DoD FLIP / AFMAN 15-111)
1,100 FT (DoD FLIP)	1 ¼ SM (DoD FLIP)
1,000 FT (AFMAN 15-111)	1 SM (DoD FLIP / AFMAN 15-111)
800 FT (AFMAN 15-111)	¾ SM (DoD FLIP / AFMAN 15-111)
700 FT (AFMAN 15-111)	½ SM (DoD FLIP / AFMAN 15-111)
600 FT (DoD FLIP)	¼ SM (AFMAN 15-111)
500 FT (DoD FLIP / AFMAN 15-111)	
400 FT (DoD FLIP)	TOWER VISIBILITY*
300 FT (DoD FLIP / AFMAN 15-111)	3 SM (AFMAN 15-111)
200 FT (DoD FLIP / AFMAN 15-111)	2 SM (AFMAN 15-111)
100 FT (AFMAN 15-111)	1 SM (AFMAN 15-111)

**A2.4. RVR.** Transmit a SPECI for RVR when the following criteria are met:

A2.4.1. RVR for the active runway decreases to less than or if below, increases to equal or exceed:

**Figure A2.2. Runway Visual Range.**

6,000 FT	DoD FLIP / AFMAN 15-111
5,000 FT	DoD FLIP / AFMAN 15-111
4,000 FT	DoD FLIP / AFMAN 15-111
2,400 FT	DoD FLIP / AFMAN 15-111
2,000 FT	AFMAN15-111
1,600 FT	AFMAN 15-111
1,200 FT	AFMAN 15-111
1,000 FT	AFMAN 15-111
600 FT	AFMAN 15-111

**A2.5. Thunderstorm.** Transmit a SPECI when:

A2.5.1. A thunderstorm begins (not required if a thunderstorm is currently in progress).

A2.5.2. A thunderstorm ends. (15 min after last occurrence of criteria for a thunderstorm)

**A2.6. Precipitation:** Transmit a SPECI when:

A2.6.1. Hail begins or ends.

A2.6.2. Freezing precipitation begins, ends, or changes intensity.

A2.6.3. Ice pellets begin, end or change intensity.

A2.6.4. Any other type of precipitation begins or ends.

**A2.7. Wind Shift:** Any wind direction change of 45 degrees or more in less than 15 minutes when the wind speed after the shift is 10 knots or more.

**A2.8. Tornado, Funnel Cloud, or Waterspout:** Take a SPECI when a tornado, funnel cloud or waterspout:

A2.8.1. Is observed.

A2.8.2. Disappears from sight or ends.

**A2.9. Squall:** Take a SPECI when squalls occur. Any sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots or more for at least 1 minute.

**A2.10. Aircraft Mishap:** Regardless of operating mode, a SPECI will be encoded and disseminated. The remark "ACFT MISHAP" will be appended to the observation form after transmission and will not be disseminated locally or long line.

**A2.11. Volcanic Ash:** When eruption or volcanic ash cloud first observed.

**A2.12. Upon Resumption of Observing Services:** Take a SPECI 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.

**A2.13. Change in the active runway:** Take and disseminate a full element SPECI observation only if specifically requested by a supported agency (such as Tower, Fire Dept etc.). (Only required when in operating in back-up mode).

**A2.14. Altimeter Setting:** ALSTG observations are taken at an interval not to exceed 35 minutes when there has been a change of 0.01" Hg or more since the last determined ALSTG value. A single element LOCAL or a SPECI taken within the established time interval will meet this requirement. (Only required when in operating in back-up mode)

**A2.15. Any other meteorological situation.** Which in the opinion of the weather personnel, is significant to the safety of aircraft operations or resource protection.

**A2.16. Tower visibility:** Take and disseminate a full element SPECI, with tower visibility as a remark, when Cooperative Weather Watch (CWW) criteria has been met.

### Attachment 3

## LOCAL DISSEMINATION PROCEDURES

**A3.1. Primary Dissemination Methods.** The primary method of local dissemination for observations, terminal aerodrome forecasts, weather WWAs and PIREPS are via JET portal. Electronically developed MEFs, flight weather briefs and staff weather briefings are disseminated via email and over the Hill AFB local area network.

**A3.2. Back-up Procedures and Priorities.** Back-up procedures and priorities for local dissemination for observations, MEFs, WWAs, special messages, and PIREPS are passed via telephone. Back-up telephone contact is limited to the following agencies:

- A3.2.1. Air Traffic Control Tower (Hotline)
- A3.2.2. 388 FW Supervisor of Flying (Hotline)
- A3.2.3. 388 FW Maintenance (Hotline)
- A3.2.4. HCP (Hotline)
- A3.2.5. 649 & 388 MUNS (Hotline)
- A3.2.6. AMOPS (Hotline/during weekend outages).

**A3.3. Figures A3.1 thru A3.5., provides JET Local Dissemination Format Examples.**

**Figure A3.1. Surface Observation.**

Observation
SPECI KHIF 281515Z COR AUTO 07003KT 3/48M R14/5000FT -SN BR VV006 00/00 A2980 RMK AO2A COR 1518

**Figure A3.2. TAF.**

TAF
TAF AMD KHIF 2815/2919 33009KT 1200 -SN BR VV005 620059 QNH2978INS TEMPO 2815/2818 0600 FG VV001 BECMG 2818/2819 10009KT 4800 -RASN OVC015 620159 QNH2951INS BECMG 2902/2903 05005KT 9999 VCSH SCT030 BKN045 610456 QNH2950INS BECMG 2905/2906 14009KT 9999 NSW SCT080 QNH2945INS BECMG 2914/2915 14009KT 9000 -RA BKN070 620703 QNH2948INS TX07/2823Z TN00/2912Z AMD 281515

Figure A3.3. Weather Watch.

Watches	
<b>Lightning</b>	

Weather Watch 03-004 for Hill AFB (KHIF) valid 29/2209Z to 30/0000Z  
Potential for Lightning forecast value 5 nm.

Figure A3.4. Weather Warning.

Warnings	
<b>Heavy Snow</b>	

Viewer - Sensor Data

Weather Warning 03-006 for Hill AFB (KHIF) valid 28/1600Z to 29/0000Z  
Snow >= 2" within 12 hours.

Figure A3.5. Weather Advisory.

Advisories	
<b>F-16 Ice FOD</b>	

Weather Advisory 03-025 for Hill AFB (KHIF) valid 28/1213Z UFN  
Observed F-16 Ice FOD

#### Attachment 4

### AIRCRAFT AND GROUND SUPPORT SENSITIVITIES AND ACTIONS TAKEN BY CUSTOMERS

**A4.1. Supported Unit Requirements.** Thoroughly understanding customer needs is critical in determining weather support requirements and subsequently providing the support. This attachment provides mission-limiting terrestrial and space weather parameters and requirements as well as unit mission descriptions for supported and local flying units.

**A4.2. The 388 FW, 419 FW (AFRC), 514 FLTS, and 309th Aircraft Maintenance Group (309 AMXG) (AFMC Depot).**

A4.2.1. Mission: The 388 FW and 419 FW maintain and operate F-35 aircraft. The 309 AMXG performs depot modification, repair, and overhaul on F-22, F-16, F-35, A-10, and C-130. The 514 FLTS performs functional check flights on 309 AMXG aircraft.

A4.2.2. Weapon Systems or Resource Assets:

A4.2.2.1. Aircraft: F-22, F-35, F-16A/B/C/D, A-10, C-130.

A4.2.2.2. Weapons: Weather will support the full range of customer munitions.

A4.2.3. Mission-limiting Weather Parameters:

A4.2.3.1. Space: Global Positioning System (GPS) correction.

A4.2.3.2. Weather Support Requirements. Electronic MEF, updates of WWA criteria, phone contact with SOF, and in-person briefings prior to step during inclement weather.

A4.2.3.3. Terrestrial Restrictions and Requirements:

Table A4.1. Takeoff Restrictions.

AIRCRAFT	TAKEOFF	REQUIRED MINIMUMS	IMPACT	FORECAST SUPPORT
F-35	Single Ship & Formation	Cig/Vis V 1500/3 IV 700/2 III 500/1 ½ II 300/1 I 200/ ½	No Go if less than 300/1 or less than pilot category	Forecast at takeoff time, divert, or destination
F-35	Single Ship	CIG/VIS 2000/3 (KHIF) 1000/2 (Alt AFLD)	CIG/VIS of 2000/3 at KHIF requires an alternate. Notification of CIG/VIS 2000/3 or less at the alternate airfield will be made and CIG/VIS of 1000/2 or less results in a NO GO	Forecasts at KHIF and all alternates
F-35	Formation	Cig/Vis Cat V 1500/3 Cat IV 700/2 Cat III 500/ 1 1/2 Cat II 300/1	DIVERT IF LESS THAN 300/1 OR LESS THAN PILOT CATEGORY	FORECAST AT LANDING FIELD OR IF POSSIBLE DIVERT FIELD
F-35	Single Ship	Sustained Surface Wind ≥ 35kts	No Go if sustained winds are occurring or forecast to occur ≥35kts	FORECAST AT TAKEOFF TIME, DIVERT, OR DESTINATION OR IN USED AIRSPACE.
F-35	Single Ship	Crosswind ≥ 25kts Dry Runway ≥ 20kts Wet Runway	No Go	Forecast at takeoff time, divert, or destination
F-35	Formation	Crosswind ≥ 15kts Dry Runway ≥ 10kts Wet Runway	No Go	Forecast at takeoff time, divert, or destination

F-35	Single Ship	Standing Water on Runway $\geq 0.10''$	No Go if 0.10'' standing water on runway (determined by Base Ops)	FORECAST AT TAKEOFF PROVIDED BY AMOPS. WX FORECASTS/OBSERVES PRECIPITATION ONLY.
* If standing water is reported, takeoff/landing is permitted when standing water is not present in the touchdown area or in a location where aircraft may contact it at speeds > 100kts.				

**Table A4.2. Landing Restrictions.**

AIRCRAFT	LAND	REQUIRED MINIMUMS	IMPACT	FORECAST SUPPORT
F-35	Single Ship & Formation	Cig/Vis Cat V 1500/3 Cat IV 700/2 Cat III 500/ 1 1/2 Cat II 300/1	Divert if less than 300/1 or less than pilot category	Forecast at landing field or if possible divert field
F-35	Single Ship	CIG/VIS 2000/3 (KHIF) 1000/2 (Alt AFLD)	CIG/VIS of 2000/3 at KHIF requires an alternate. The alternate airfield must have CIG/VIS of 1000/2 or it's a No Go	Forecasts at KHIF and all alternates
F-35	Formation	Cig/Vis Cat V 1500/3 Cat IV 700/2 Cat III 500/ 1 1/2 Cat II 300/1	Divert if less than 300/1 or less than pilot category	Forecast at landing field or if possible divert field
F-35	Single Ship	Sustained Surface Wind ≥ 35kts	Divert or hold if sustained winds are occurring or forecast to occur ≥ 35kts	Forecast at landing field or if possible divert field
F-35	Single Ship	Crosswind >25kts Dry Runway ≥20kts Wet Runway	Divert or hold	Forecast at landing field or if possible divert field
F-35	Formation	Crosswind ≥15kts Dry Runway ≥10kts Wet Runway	Land single ship, hold, or diver	Forecast at landing field or if possible divert field
* If standing water is reported, takeoff/landing is permitted when standing water is not present in the touchdown area or in a location where aircraft may contact it at speeds > 100kts.				

**Table A4.3. Route Ceilings/Visibility Restrictions.**

AIRCRAFT	ROUTE	REQUIRED MINIMUMS	IMPACT	FORECAST SUPPORT
F-35	IR VR	Cig/Vis 3000/5 3000/5	May alter plans	Clouds/Wx SFC-100; Emphasis on mid-level clouds

**Table A4.4. Mission Restrictions (Air-To-Ground).**

AIRCRAFT	REQUIRED MINIMUMS	IMPACT	FORECAST SUPPORT
F-35	Cig/Vis 1500/3 - Day 1500/5 - Night	NO GO if less than minimums	Range forecasts and observations

**Table A4.5. Mission Restrictions (Air-To-Air).**

AIRCRAFT	REQUIRED MINIMUMS	IMPACT	FORECAST SUPPORT
F-35	Clear horizon at flight level and 2,000ft clear air space	May alter mission	Cloud bases, tops, and weather

**Table A4.6. Other Possible Mission-Impacting Weather Parameters.**

PARAMETER	IMPACT
Terminal aerodrome forecast less than 3000/3 (including tempo group)	ALTERNATE REQUIRED -- MUST BE FORECASTING GREATER OR EQUAL TO 1000/2 (PREVAILING OR TEMPO)
TERMINAL OR AREA FORECAST FOR ICING, FREEZING PRECIPITATION, TURBULENCE,	ARE VIEWED AS MERELY "HEADS UP" INFORMATION. PILOTS BASE THEIR ACTIVITIES ON DO/SOF DISCRETION, AND PERSONAL EXPERIENCE. WHEN A VERIFYING OBSERVATION OR PIREP IS RECEIVED, THE PILOTS THEN ALTER THEIR PLAN IN ACCORDANCE WITH GUIDANCE FROM THE DO/SOF. HOWEVER, YOU SHOULD BE AWARE OF THE AIRCRAFT SENSITIVITIES AND BRIEF ACCORDINGLY.

**Table A4.7. Aircraft Maintenance Requirements.**

<b>WX ELEMENT CRITERIA/ADVISORY/WARNING</b>	<b>MISSION IMPACT</b>
LIGHTNING W/in 5, 10, 25NM	WHEN LIGHTNING IS OBSERVED W/IN 25 NM OR LESS NO F-35 WILL TAKE OFF UNTIL LIGHTNING IS OUTSIDE OF 25NM. AIRCRAFT WILL NOT FLY W/IN 25NM OF KNOWN LIGHTNING.
LIGHTNING WITHIN 5NM (OBSERVED)	WHEN LIGHTNING IS OBSERVED WITHIN 5NM, ALL MAINTENANCE WILL CEASE, EQUIPMENT AND TOOL KITS SECURED, AND PERSONNEL REMOVED FROM THE FLIGHT LINE
Hail >= 1/2 Inch	ENSURE RADOMES AND CANAPIES ARE CLOSED, HANGER AIRCRAFT IS POSSIBLE, TERMINATE FL MAINTENENCE
Freezing precipitation	- Ensure radomes and canopies are closed and secured on parked aircraft - Minimize vehicle movement
Snow greater than 2" in 12 hours	ACTIVATE PLAN FOR SNOW AND ICE REMOVAL.
Ice FOD	INLET MONITORS REQUIRED W/VISIBLE MOISTURE. SHUT DOWN ENGINES IF ICE IS OBSERVED AND REMOVE ICE ACCUM/INSPECT INTAKE AFTER REMOVAL
Wind Condition I (30-40kts)	ENSURE PANELS/DOORS AND CANOPIES ARE CLOSED. SECURE HANGAR DOORS UNLESS MOVING AIRCRAFT IN/OUT
Wind Condition II (41-49kts)	SAME AS WIND CONDITION 1. SECURE HANGAR DOORS UNLESS SHELTERING AIRCRAFT/EQUIPMENT
Wind Condition III (50-70kts)	SAME AS WIND CONDITIONS I AND II, ENSURE ALL AIRCRAFT ARE MOORED, REMOVE MISC ITEMS THAT CANNOT BE SECURED. SECURE HANGAR DOORS UNLESS SHELTERING AIRCRAFT/EQUIPMENT. EVAC PERSONNEL FROM FLIGHT LINE.
Wind Condition IV (above 71kts)	SAME AS I, II, III HANGAR AS MANY A/C AS POSSIBLE. EVAC PERSONNEL FROM FLIGHT LINE. SECURE HANGAR DOORS.
Wind Chill -30F or less	- Suspend outside work on flight lines

**Attachment 5****MISSION EXECUTION FORECAST SPECIFICATION/AMENDMENT CRITERIA**

**A5.1. General.** The MEF specifies the expected occurrence, duration, and intensity of the weather conditions listed below. If forecast conditions change, the MEF is amended verbally and posted to the Hill AFB intranet as time permits. An amendment is necessary when any of the following are expected to occur or have occurred and are expected to persist for more than 30 minutes.

**A5.2. Ceiling/Visibility.** Ceiling and/or visibility is observed or later forecast to decrease across the following thresholds:

A5.2.1. 3000' / 3 SM (514 FLTS)

A5.2.2. 1500' / 3 SM

A5.2.3. 700' / 2 SM

A5.2.4. 500' / 1 ½ SM

A5.2.5. 300' / 1 SM

A5.2.6. 200' / ½ SM

**A5.3. Wind. Sustained surface winds at KHIF, en-route, or destination.**

A5.3.1. ≥ 35 KTS

**A5.4. Crosswinds. At KHIF or destination.**

A5.4.1. ≥ 10 KTS (F-16 with ICY RWY)

A5.4.2. ≥ 25 KTS (F-16 with DRY RWY)

A5.4.3. ≥ 20 KTS (F-16 with WET RWY)

A5.4.4. ≥ 10 KTS (F-35 Formation with WET RWY)

A5.4.5. ≥ 15 KTS (F-35 Formation with DRY RWY)

A5.4.6. ≥ 20 KTS (F-35 Single Ship with WET RWY)

A5.4.7. ≥ 25 KTS (F-35 Single Ship with DRY RWY)

A5.4.8. ≥ 25 KTS (F-22 DRY or WET RWY)

A5.4.9. ≥ 35 KTS (C-130 DRY or WET RWY)

A5.4.10. ≥ 35 KTS (A-10 DRY or WET RWY)

**A5.5. Precipitation. When:**

A5.5.1. Freezing precipitation begins or ends.

A5.5.2. The beginning or ending of precipitation causes an advisory or warning to be issued, canceled, or amended.

A5.5.3. The occurrence or non-occurrence of precipitation is deemed operationally significant.

**A5.6. Thunderstorms.** Any thunderstorm activity or change in coverage or duration of thunderstorm activity.

**A5.7. Weather Warnings.** Warning criterion which occurs or is expected to occur and is not specified in the MEF or was forecasted and is no longer occurring or is no longer expected to occur.

**A5.8. Icing or Turbulence.** Icing or turbulence of moderate or greater intensity which occurs or is expected to occur and is not specified in the MEF or was forecasted and is no longer occurring or is no longer expected to occur.

**A5.9. Low-Level Wind Shear.** Low-level wind shear below 2,000 feet AGL not associated with thunderstorms occurs or is expected to occur, and is not specified in the MEF or is forecasted but is no longer occurring or expected to occur.

**A5.10. Other.** Though not an amendment criterion, a remark special to Hill AFB during winter and transition times is annotated in the MEF. If clouds are expected to be over the north or south end of the runway, the cloud layer is identified in the cloud layer section of the remarks. For example, if Hill AFB is expecting few clouds over the north end of the runway with bases at 500 feet the remark FEW 005 OVR N RWY will be annotated. Also, anytime the forecaster considers the forecast to be unrepresentative.

## Attachment 6

### WEATHER ADVISORIES

**A6.1. Observed Weather Advisories.** The duty technician issues and cancels the following observed weather advisories pertinent to flight operations and resource protection over JET. Advisories are valid for the area within a five nautical mile radius of the center of the runway complex unless otherwise specified.

A6.1.1. Observed Lightning Advisory. Issued when lightning is observed within a 10 or 25 nautical mile (NM) radius of the center of the airfield complex. This advisory is superseded when an observed lightning warning is issued or is canceled when lightning has not been observed within 10 and 25 NM for at least 15 minutes.

A6.1.2. Ice FOD Advisory. The Ice FOD Advisory is sent via JET and contains the following message: "Observed ICE FOD conditions exist." The advisory is cancelled when conditions are no longer met. Aircrews and maintenance personnel follow their own locally directed guidance when determining the need to employ anti-icing systems and inlet icing monitors. Issue the observed advisory when any of the following conditions exist:

A6.1.2.1. Dew point is within 9°F (5°C) of ambient temperatures between 25°F (-4°C) and 45°F (7°C) [F-16].

A6.1.2.2. When the ambient temperature is between 20°F (-7°C) and 45°F (7°C) and any precipitation is occurring [F-16].

A6.1.2.3. When the ambient temperature is below 45°F (7°C) and standing water is within the immediate proximity of the engine inlet [F-16].

A6.1.2.4. When the ambient temperature is below 40 degrees F (4 degrees C) with precipitation (rain, sleet, snow, or fog), standing water, snow, or ice within immediate proximity (approximately 10 feet) of aircraft engine inlet.

A6.1.2.5. When the ambient temperature is between 40 degrees F (4 degrees C) and -4 degrees F (-20 degrees C) and dew point temperature is within 5 degrees F (3 degrees C) of ambient temperature.

A6.1.3. Wind Chill Advisory. Issued when the wind chill calculated using the peak gust during the last 15 minutes is less than or equal to -18 degrees Celsius (0 degrees Fahrenheit). This advisory is canceled when conditions are no longer met.

A6.1.4. Low-Level Wind Shear (LLWS) Advisory. Issued when Low Level Wind Shear (LLWS) below 2,000 feet AGL not associated with thunderstorms is occurring based on PIREPs or other observation techniques. This advisory is canceled when conditions are no longer occurring.

A6.1.5. Wind Conditions.

A6.1.5.1. Wind Condition 1. Issued when wind speeds are observed greater than or equal to 30 but less than 40 knots. When the criteria are observed, it is valid for the period of one hour from occurrence. When one hour lapses after the last occurrence, the wind condition is cancelled.

A6.1.5.2. Wind Condition 2. Issued when wind speeds are observed greater than or equal to 40 but less than 50 knots. When the criterion is observed, it is valid for the period of one hour from occurrence. When one hour lapses after the last occurrence, the wind condition is cancelled or downgraded.

A6.1.5.3. Wind Condition 3. Issued when wind speeds are observed greater than or equal to 50 but less than 70 knots. When the criterion is observed, it is valid for the period of one hour from occurrence. When one hour elapses after the last occurrence, the wind condition is cancelled or downgraded.

A6.1.5.4. Wind Condition 4. Issued when wind speeds are observed greater than or equal to 70 knots. When the criterion is observed, it is valid for the period of one hour from occurrence. When one hour elapses after the last occurrence, the wind condition is cancelled or downgraded.

A6.1.6. Cross Wind Advisory. Issued when cross winds are greater than or equal to 20 knots (F-35 jets) and 25 knots (F-16 jets). Only one Cross Wind Advisory will be in effect at one time. This advisory is canceled when conditions are no longer occurring.

A6.1.7. Fighter Index of Thermal Stress (FITS). FITS CAUTION and FITS DANGER observed advisories are issued when the combination of dry bulb temperature and wet bulb temperature enter into FITS value zones found in Attachment 3 of DAFI 48-151, *Thermal Stress Program*. Only one FITS observed advisory may be in effect at one time. FITS observed advisories are cancelled when FITS conditions are in the NORMAL zone.

Figure A6.1. FITS Table.

T <sub>db</sub> (°F)	T <sub>pwb</sub> (°F)							
	60	65	70	75	80	90	100	110
70	83	87	92	96	100	108	117	125
75	85	89	93	98	102	110	118	127
80	87	91	95	99	103	112	120	128
85	89	93	97	101	105	113	122	130
90	90	94	99	103	107	115	124	132
95	92	96	100	105	109	117	125	134
100	94	98	102	106	110	119	127	135
105	96	100	104	108	112	120	129	137
110	97	101	106	110	114	122	131	139
115	99	103	107	112	116	124	132	141
120	101	105	109	113	117	126	134	142
FITS Normal Zone			FITS Caution Zone			FITS Danger Zone		

## Attachment 7

## WEATHER WATCHES AND WARNINGS

**A7.1. Weather Watches.** Weather watches are issued on the potential for the weather condition to occur and are canceled when the potential no longer exists or is upgraded to weather warnings when the potential is significant enough that protective measures must be taken to protect property and life. Weather watches must include defined begin and end times. Watches are valid for the area within a 5 NM radius of the center of the runway complex.

**Table A7.1. Weather Watch Criteria and Desired Lead Times.**

#	Weather Criteria	Desired Lead Time
1	Tornado	As potential warrants
2	Severe Winds $\geq$ 50 knots	As potential warrants
3	Severe Hail $>$ $\frac{3}{4}$ inch	As potential warrants
4	Freezing Precipitation	As potential warrants
5	Lightning within 5 NM	30 min
6	Heavy Snow ( $>$ 2 inches in 12 hrs)	As potential warrants

**A7.2. Weather Warnings.** Weather warnings are issued when observed conditions warrant protective measures must be taken to protect property and life. Warnings are valid for the area within a 5NM radius of the center of the runway complex. Weather warnings are forecasts issued prior to the onset of the expected condition. The exception to this is the lightning observed within 5NM warning. When lightning is actually observed within a 5NM radius of the center of the airfield complex (i.e., visual sighting by weather observer, forecasters, tower personnel, ramp personnel, lightning detection system, WSR-88D Doppler Radar, or other reliable sources), this observed warning would be issued. This warning is canceled when it has been at least 15 minutes since any of the above criteria was last met.

**Table A7.2. Weather Warning Criteria and Desired Lead Times.**

#	Weather Criteria	Desired Lead Time
1	Tornado	15 min
2	Severe Winds $>$ 50 knots	60 min
3	Winds $\geq$ 35 but $<$ 50 knots	60 min
4	Hail $>$ $\frac{3}{4}$ inch	60 min
5	Hail $>$ $\frac{1}{2}$ inch but $<$ $\frac{3}{4}$ inch	60 min
6	Freezing Precipitation	60 min
7	Heavy Snow ( $>$ 2 inches in 12 hrs)	120 min
8	Heavy Snow ( $>$ 6 inches in 12 hrs)	120 min
9	Lightning within 5 NM	As Observed

**NOTE: Watches and warnings specify size, strength, or amounts expected, as applicable.**

**Attachment 8****WEATHER FLIGHT STANDBY AND RECALL**

**A8.1. Weather Flight Standby.** The WF maintains a certified standby weather forecaster at all times during WF closure. The standby weather forecaster will report to the 75 OSS/OSW facility if any of the following conditions are forecast to occur:

A8.1.1. Weather watch or warning for hail > 1/2 inch or 3/4 inch

A8.1.2. Weather watch or warning for lightning within 5nm

A8.1.3. Weather watch or warning for a tornado

A8.1.4. Wind condition 3 or 4 (> 50-69 kts or > 70 kts)

A8.1.5. Weather watch or warning for freezing precipitation

A8.1.6. Weather watch or warning for snowfall > 2 inches within 12 hours

A8.1.7. Weather watch or warning for snowfall > 6 inches within 12 hours

A8.1.8. Anytime the fighter squadrons are alerted for mission

A8.1.9. Anytime there is a network, JET or FMQ-19 Outage

A8.1.10. Any situation in which, in the opinion of the duty forecaster, requires additional personnel (surge in workload, winter storm, station evacuation, etc.)

