



Weather

WEATHER SUPPORT

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This instruction implements AFPD 15-1, *Atmospheric and Space Environmental Support*. It identifies the specific support services and related responsibilities performed by the 75th Operations Support Squadron Combat Weather Team, 75 OSS/OSW, for the Ogden Air Logistics Center (OO-ALC), tenant units, and all other agencies associated with Hill AFB, Utah and outlines the responsibilities of supported organizations. See Attachment 1 for Glossary of References and Supporting Information. Maintain and dispose of records in accordance with AFMAN 37-123, *Management of Records*, and the WebRIMS Records Disposition Schedule (RDS).

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This document has been substantially revised and must be completely reviewed.

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Chapter 1

WEATHER STATION OPERATIONS

1.1. General. The 75 OSS Combat Weather Team (CWT) is organized, trained and equipped to provide mission execution forecasts for customers aligned under 75 ABW, 388 FW, OO-ALC, and 419 FW located on Hill AFB UT. The CWT provides timely, accurate, and relevant weather products as follows: Surface weather observations; weather watches, warnings, and advisories; tactical-level weather products, in-flight pilot to forecaster service support; and flight weather briefings. Please refer to Attachment 11 for customer requirements. The 75 OSS/OSW is located on the north side of building 1. See Attachment 1 for a list of weather-related definitions.

1.2. Operating Hours. The base weather station provides services during airfield operation. During times of airfield closure, the 25th Operational Weather Squadron (OWS) will assume all METWATCH responsibilities for Hill AFB. The 75 OSS/OSW will maintain a stand-by forecaster and Severe Weather Action Team (SWAT) leader.

1.3. Duty Priorities. All base agencies, aircrew and weather personnel must ensure higher priority tasks are completed first. Weather station duty priorities are listed below. Requests for changes to these duty priorities must be submitted to the weather flight commander (WFC).

1.3.1. Perform Emergency War Order (EWO) Taskings

1.3.2. Respond to aircraft and ground emergencies by taking/disseminating a local observation, if required.

1.3.3. Respond to pilot to metro service (PMSV) contacts.

1.3.4. Provide supervisor of flying (SOF) support.

1.3.5. Take and disseminate surface weather observations locally and provide “eyes forward” support to the 25th OWS.

1.3.6. Perform coordinated METWATCH support.

1.3.7. Severe Weather Action Process (SWAP) operations.

1.3.8. Produce and disseminate mission execution forecasts (MEF).

1.3.9. Disseminate PIREPs locally.

1.3.10. Disseminate PIREPs locally.

1.3.11. Relay urgent PIREPs and special AIREPs to OWS.

1.3.12. Transmit surface observations and PIREPs/AIREPs longline.

1.3.12. Perform MISSIONWATCH.

1.3.13. Provide other briefing support.

1.4. Release of Weather Information. Operations security and communications security will be considered prior to any release of weather information. Specific restrictions do not exist on the dissemination of weather information to other military agencies. Information exchange between the CWT and the local National Weather Service office is encouraged in the interest of public safety and resource protection. Routine working agreements will be maintained in writing from either agency. Support to other non military agencies, foreign governments or individuals will be coordinated with the staff judge advocate (OO-ALC/JA) before service or information can be provided. The OO-ALC or 75 ABW public affairs office will approve all direct media requests for weather information. This restriction does not include indirect routine weather information, which is passed on automated weather circuits, or information passed through the National Weather Service in the interest of public safety.

1.5. Alternate Operating Location for Weather Support. Both the observing/forecasting services will relocate to an alternate site in the event of an emergency that could impact building 1. The duty observer/forecaster will not relocate for exercises unless qualified personnel are available to man the weather station during their absence. The primary back-up weather station is the Air Traffic Control Simulator Building (Building 10011). Access to a Class A telephone and local area network access will be required. If available, a back- up radio will be set to 342.3 MHz for PMSV support. When evacuated, the duty observer/forecaster will notify Hill Hill Command Post that weather is relocating and to phone patch PMSV contacts to the alternate location. Alternate forecast/observer kits will be kept in the base weather station and available for immediate relocation.

1.5.1. Observing/Forecasting Services. Limited weather observations will be taken from the alternate site and provided to the air traffic control tower and 299th Range Control Squadron (Clover Control.) These observations will include sky condition, visibility, winds, altimeter setting, pressure altitude, temperature, dew point, weather and obstructions to vision. All weather watches, warnings and advisories, that would normally be disseminated using NTFS, will be passed to NTFS users via telephone.

1.5.2. Flight Weather Briefings. Due to limited access to weather information, flight crews will be instructed to contact Davis-Monthan AFB AZ for support until forecast/observing service is restored at the base weather station.

1.6. Severe Weather Action Procedures (SWAP) The 25 OWS and the 75 OSS/OSW are responsible for the protection of Hill AFB resources at risk to severe weather conditions. These procedures are designed to facilitate Hill AFB operational risk management practices by recalling weather personnel as needed to monitor severe weather conditions, and take appropriate action to aid other base agencies in the protection of Hill AFB resources.

1.6.1. Severe weather conditions. Weather conditions of such intensity that could be a hazard to life or property at Hill AFB are defined as tornadic activity (funnel cloud, water spout or tornado), hail greater than or equal to $\frac{3}{4}$ inch, surface winds greater than or equal to 50 knots, snowfall of 2" or greater and freezing precipitation

1.6.2. Severe Weather Notification. Base agencies will be notified of severe weather via two methods: The NTFS client/server system and telephone. All severe weather warnings will be disseminated via NTFS first. Follow-up telephone notification will be made to the 75 ABW/CP (hotline), 388 MXOOM (hotline), 75 OSS/OSAME, base operations (hotline). NTFS client notification will be via the notification matrix in Attachment 10 of this document. It is important that all base agencies requiring notification of severe weather events monitor an active NTFS client session for severe weather messages. Agencies needing NTFS client software should call the CWT to arrange for software installation and NTFS account set up.

1.6.3 75 OSS/OSW Actions. In the event that severe weather is imminent, or occurs on Hill AFB, the 75 OSS/OSW acting as "Eyes Forward" coordinate with the 25 OWS to issue weather watches and warnings with an attempt to meet or exceed the desired lead times listed in Attachment 8, table 8.2.1. If the hazard to life or property is immediate, the 75 OSS/OSW duty forecaster will issue watches and warnings as necessary and brief the 25 OWS as soon as practical. Notification to Hill AFB agencies will be conducted per the notification matrix in Attachment 10

1.6.4. Recall of Severe Weather Action Team (SWAT). The 75 OSS/OSW duty forecaster will implement the immediate recall of the 75 OSS/OSW SWAT whenever the potential for severe weather exists, or when severe weather is imminent or in progress. At a minimum, the SWAT will consist of the on duty forecaster, the 75 OSS/OSW severe weather standby technician, and either the OIC, NCOIC or ANCOIC. The severe standby technician will be able to report for duty within 45 minutes of being recalled. The severe weather standby technician can be reached through the command post.

1.6.5. SWAT Duty Priorities. In the event of a severe weather recall, 75 OSS/OSW duty priorities will be directed toward resource protection of Hill AFB. Duties such as staff weather briefings, mission execution forecasts and transient aircrew briefings may be delayed until the severe weather threat has diminished or until enough personnel arrive on duty to handle the tasks.

1.6.6. SWAT during Non Duty Hours. In the event a severe weather event is imminent or in progress when the base weather station is closed, the 25 OSW will activate the SWAT to assemble by calling the severe weather standby technician and the weather flight commander.

1.6.7. Unforeseen Circumstances. In the event a communications outage or critical equipment outage exists, the 25 OWS, in the interest of safety, will have the prerogative to implement a SWAT recall of the 75 OSS/OSW.

1.6.8. Post Severe Weather Procedures. The 75 OSS/OSW will provide required data for an OPREP-3 BEELINE message to the Hill Consolidated Command Post.

Chapter 2

WEATHER OBSERVING SERVICES

2.1. Official Observing Location. Routine weather observing services are provided from approximately 200 feet north of the CWT in building 1. Observations are hampered at Hill AFB by obstructions to the south.

2.2. Basic Weather Watch (BWW). A BWW is performed from the observation point. When significant changes in the weather are expected or detected, the technician will evaluate the need to take special or local observations. This will be done at an interval not to exceed 20 minutes when any of the following conditions are observed or forecast to occur within one hour:

2.2.1. Ceiling 1,500 feet or less.

2.2.2. Visibility 3 miles or less.

2.2.3. Precipitation (any form).

2.2.4. Fog.

2.3. Cooperative Weather Watch (CWW). To augment the BWW, a CWW will be established in which ATC personnel and other appropriate base agencies provide additional weather information to the technician when significant and unreported weather phenomena are detected. Significant phenomena include, but are not limited to, precipitation, lightning and reduced visibility. When a reliable source reports previously unreported weather conditions CWT personnel will reevaluate the weather conditions per AFMAN 15-111 *Surface Weather Observations*.

2.4. Surface Weather Observations. The duty weather technician takes, records and disseminates an official observation from the official observing location between 55 and 59 minutes after every hour. All weather observations at Hill AFB are taken in accordance with instructions in AFMAN 15-111. The following are the elements observed by the CWT duty technician and disseminated locally and longline, in the order they appear in the observation, for use by various agencies using the NTFS:

2.4.1. Time. All time entries on NTFS will be in UTC.

2.4.2. Wind Speed and Direction. A printed recording of the two-minute averaged wind speed and direction is made every minute. Wind direction is reported to the nearest ten degrees and speed to the nearest whole knot. Wind direction is transmitted true for longline dissemination and magnetic for local dissemination.

2.4.3. Prevailing Visibility. This is defined as the greatest visibility equaled or exceeded in at least half of the horizon circle, not necessarily continuous. Prevailing visibility is a visual determination made by the technician (usually at a height of 6 feet). All visibilities are reported in statute miles.

2.4.4. Runway Visual Range (RVR). RVR is reported immediately following the prevailing visibility. RVR will be reported when the prevailing visibility is one statute mile or less, or when the RVR is 6,000 feet or less.

2.4.5. Weather and Obstruction to Vision. This consists of both weather and non weather phenomena, which are observed and/or restrict visibility. The table below identify the more common phenomena and the observing code used:

Table 2.1. Common Phenomena and Observing Code

QUALIFIER		WEATHER PHENOMENA		
Intensity or Proximity	Descriptor	Precipitation	Obscuration	Other
- Light	MI Shallow	DZ Drizzle	BR Mist (Visibility > 1000m)	PO Well-Developed Dust/Sand Whirls
(No symbol) Moderate	PR Partial	RA Rain	FG Fog (Vis < 1000m)	
+ Heavy	BC Patches	SN Snow	FU Smoke	SQ Squalls
	DR Low Drifting	SG Snow Grains	VA Volcanic Ash	FC Funnel Clouds (Tornado or Waterspout)
VC Vicinity (5-10 statute miles)	BL Blowing	IC Ice Crystals (Diamond Dust)	DU Dust	
	SH Shower(s)			
	TS Thunderstorm	PL Ice Pellets	SA Sand	SS Sandstorm
	FZ Freezing (Supercooled)	GR Hail	HZ Haze	DS Duststorm
		GS Small Hail and/or Snow Pellets	PY Spray	
		UP Unknown Precipitation		

2.4.6. Sky Condition. This consists of sky coverage (SKC = 0/8, FEW = 1/8-2/8 of the sky covered, SCT = 3/8-4/8 of the sky covered, BKN = 5/8-7/8 of the sky covered, OVC = 8/8 of the sky covered, VV = 8/8 coverage Vertical Visibility is the height which can be seen when looking vertically) and height above ground level (AGL) in hundreds of feet. The lowest layer covering 5/8 of the sky is the ceiling.

2.4.7. Temperature and Dew Point. Readings are reported in degrees Celsius.

2.4.8. Altimeter Setting. Altimeter setting values are determined using a digital barometer and transmitted on all observations, except for some single element observations (i.e., tornadoes). Altimeter setting is reported to the nearest hundredth of an inch of mercury.

2.4.9. Sea-Level Pressure (SLP). This is the atmospheric pressure at mean sea level empirically determined from the observed station pressure. SLP is reported in millibars.

2.4.10. Remarks. Significant remarks will be disseminated on all observations to present a more precise picture of existing weather conditions.

2.5. Types of Observations. The duty technician makes the following types of observations: Aviation Routine Weather Report (METAR), Aviation Select Special Weather Report (SPECI), and Local Surface Observation (LOCAL). Attachments 2 and 3 list the special and local observation criteria respectively. All observations are sent to local base agencies using the NTFS. All observations, except locals, are also sent to the Automated Weather Network (AWN) for world wide military and civilian use. In the event of an NTFS outage, observations will be passed to the air traffic control tower via telephone to ensure flight safety.

2.5.1. Aviation Routine Weather Report (METAR). METAR observations are transmitted between 55-59 minutes past the hour. Elements included in METAR observations are listed in paragraph 2.4.

2.5.2. Aviation Select Special Weather Report (SPECI). SPECI observations are taken when the conditions for special criteria are met. The established criteria for special observations are listed in **Attachment 2**. Specials contain all elements included in a METAR except for sea-level pressure.

2.5.3. Local (LOCAL). LOCAL observations are taken when conditions for local criteria listed in Attachment 2 are met. LOCAL observations contain the same elements as a SPECI but are only transmitted locally. Single element LOCAL observations are taken for RVR and altimeter settings.

2.6. Additional Requirements. Equivalent Chill Temperature (ECT), commonly known as “wind chill,” will be appended to each hourly observation when the ECT is -18 degrees Celsius (0 degrees Fahrenheit) or less. Additionally, when advisories have been issued for potential and observed lightning for Hill AFB, local observations will include the latest information on direction and distance of thunderstorms.

2.7. Observing Instrumentation. Instruments are located at various points on the airfield. Readouts from this equipment and the digital barometer are all located in building 1, Base Weather Station. Attachment 3 lists the weather sensors and their approximate location on the airfield.

2.8. Radar. The CWT uses MARTA internet based Radar software using data from the main Doppler Weather Surveillance Radar (WSR-88D) operated by the National Weather Service (NWS) office in Salt Lake City (SLC), Utah. The NWS in SLC and the CWT work together to

ensure operation of the radar meet the needs of both parties. The radar antenna and transmitter are located atop Promontory Point.

Chapter 3

FORECASTING SERVICES

3.1 General. Mission tailored forecast services are available from the CWT during normal operational hours of the airfield. The Terminal Aerodrome Forecast (TAF) is generated, and amended by the 25 OWS. The OWS will also perform all meteorological watch (METWATCH) for Hill AFB. In the event that the OWS is unable to provide weather support to Hill AFB due to unforeseen events (i.e., evacuation, communication outages) the CWT will assume full weather support responsibility for Hill, AFB and the Utah Test and Training Range (UTTR).

3.2 Terminal Aerodrome Forecasts (TAFs). TAFs will be produced and disseminated by the 25 OWS IAW AFMAN 15-129, *Air and Space Operations*, AFMAN 15-124 *Meteorological Codes*, and MOA 15-21. Forecast specification and amendment criteria are listed in Attachment 6. TAFs are valid for 24 hours and will be issued at:

- 3.2.1. 0400Z (1900L)
- 3.2.2. 1200Z (0500L)
- 3.2.3. 2000Z (1300L)

3.3. Mission Execution Forecasts (MEF). The Mission Execution Forecast (MEF) is the primary tool used to accomplish day-to-day weather support for Hill AFB. MEFs are tailored to individual customer requirements and may be anything from a web-based flight weather briefing to a change-of-command weather forecast. The MEF is developed using a 12-step process outlined in AFMAN 15-129, AFMAN 15-135, *Combat Weather Team Operations*, and local procedures. During this process, the CWT will fuse and tailor products created by strategic and theater weather centers, as well as information supplied by local units (e.g. flying schedule) and agencies. The end result is a product designed to provide timely, accurate, and relevant weather support to customers. The MEF must be horizontally consistent with products issued by the OWS and the Air Force Weather Agency (AFWA). However, during rapidly changing conditions, emergencies, or when conditions threaten resource protection, the CWT will amend the MEF to accurately reflect conditions and brief the OWS when time permits.

3.4. TAF Dissemination. The primary means for dissemination of the TAF and TAF amendments by the OWS is via NTFS. The elements included are time, wind direction, wind speed, visibility, obstructions to vision, sky cover, cloud height, icing, turbulence, minimum altimeter and significant remarks. If NTFS is inoperative, the technician will disseminate forecast elements to the tower and Clover Control by telephone.

3.5. UTTR Forecast. A range weather forecast is prepared and transmitted by the OWS over NTFS two hours prior to range opening time. The forecast is valid for the entire time the UTTR is open. The forecast will specify elements listed in Attachment 7. Amendments to the weather forecast are issued in accordance with Attachment 6. The UTTR forecast should be used as a pre brief only. A verbal update should be accomplished prior to departure. Additional weather

support requirements for activities in the UTTR should be coordinated with OWS at least one day prior to ensure adequate support can be provided.

3.6. Weather Internet Homepage. The weather flight maintains a web page on the World Wide Web available to .mil users only. A wide variety of weather information is available from this site. This information is for planning purposes only. A 5-day forecast is available on the weather flight homepage. This forecast is updated everyday as duties permit and is for non operational use only.

Chapter 4

THE METEOROLOGICAL WATCH (METWATCH) PROGRAM

4.1. General. Meteorological Watch (METWATCH) is monitoring weather conditions for resource protection. This is accomplished through a joint effort between the OWS and the CWT. The OWS is responsible for issuing all forecast weather watches, warnings and advisories for Hill AFB. The CWT is responsible for issuing all observed warnings and advisories. However, if the hazard to life or property is immediate or in circumstances where the OWS is unable to issue products, the CWT can issue any forecast warning. In these cases, the CWT will brief the OWS as soon as time permits. Watches, warnings and advisories apply to Hill AFB and the area within 5 nautical miles of the center of the runway. They are issued consistent with minimum desired lead time (DLT). The DLT 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 requirements through the 75 OSS/CC to the CWT.

4.2. Weather Advisories. Weather advisories are a special notice to supported agencies that established weather conditions are occurring or are expected to occur for which they may have to take protective action. There are two types of advisories, observed and forecast. Observed advisories are issued when the specified weather condition is occurring and is canceled when the condition no longer exists. Forecast advisories are issued when the established weather condition is expected to occur. These advisories are canceled when the condition is no longer expected or if a weather warning supersedes the advisory. Attachment 9 lists the criteria for weather advisories and the DLT for forecast advisories. Weather advisories are disseminated via the NTFS. When the NTFS is inoperative, advisories will be disseminated to NTFS users via telephone.

4.3. Weather Watch. Weather watches are issued to alert using agencies of the potential for weather conditions of such intensity as to pose a hazard to life or property. Weather watches are generally issued prior to weather warnings, and are intended to provide advance notice of potentially significant weather. Weather watches will be issued on the potential for the weather condition to occur and will be canceled when the potential no longer exists, or upgraded to weather warnings when the potential is determined to be significant enough that protective measures must be taken to protect property and life. Attachment 9 lists criteria for weather watches. Weather watches are disseminated via the NTFS. When the NTFS is inoperative, watches will be disseminated to NTFS users via telephone.

4.4. Weather Warning. A weather warning is a special notice to supported agencies that established weather conditions are occurring or are expected to occur of such intensity as to pose a hazard to life or property. Weather warnings differ from weather advisories in that the severity of the weather conditions is greater for weather warnings. The criteria for weather warnings and the desired lead times are listed in Attachment 9. Warnings are disseminated via the NTFS, with

the exception of tornadoes, which will first be telephoned to the 75th Air Base Wing Command Post (CP) and then sent via NTFS. Each agency with an NTFS terminal is the primary dissemination point of contact for all sections within that agency for all weather information. To ensure timely dissemination of critical weather warning information, the CWT should not be telephoned for information that is already disseminated on the NTFS. When the NTFS is inoperative, warnings will be disseminated to 75 ABW/CP telephonically for further dissemination to NTFS users.

Chapter 5

BRIEFING SUPPORT

5.1. General. 75 OSS/OSW provides a wide variety of weather briefings to support each customer's needs.

5.2. Flight Weather Briefings. Weather personnel will provide DD Form 175-1, **Flight Weather Briefings**, to aircrews as requested. Briefings will be either at the weather station, via fax, or phone. To ensure adequate preparation time, all aircrews should notify the duty forecaster the day prior to the briefing, whenever possible. Mass briefings for special missions require 48 hours advanced notice, are subject to manning availability and must be coordinated with weather station leadership. Aircrews receiving faxed briefings can contact the duty forecaster for any updates and/or clarification. Transient aircrews receive flight weather briefings from the OWS. The OWS can be contacted by phone, fax, or via web access, all located at the weather support terminal, located in the flight planning room building 1.

5.3. 388/419 Fighter Wing MEF. As CWT manning permits, a forecaster will be assigned to the 388 FW flying squadron to perform in-person planning and flight briefings in accordance with AFI 15-128. The MEF is designed to provide critical go/no-go weather information, for all phases of each sortie, to the flying squadron. Weather thresholds, defined by our flying customers, are combinations of aircraft, aircrew, mission tactics and operating location limitations. Aircrews can contact the duty forecaster for any update and clarification pertaining to the MEF. **NOTE:** The Mission Execution Forecast is available through the CWT homepage. Please call the weather station to get the weblink. In the event of a LAN outage, the 388 FW MEF will be faxed to individual flying units to post at their operation's desk. Please refer to Attachment 5 for amendment criteria.

5.3.1. Issue Times. The MEF will be issued dependant on the flying schedule. It is normally required 15 minutes prior to earliest brief time.

5.3.2. Specification Criteria. The MEF is posted to a web page containing the following information, if necessary:

5.3.2.1. Take-Off/Alternates

5.3.2.2. Hazards/Winds

5.3.2.3. Range Weather

5.3.2.4. Low Level/Air Refueling Weather

5.3.2.5. Target Acquisition Weather Software (TAWS) Information

5.3.2.6. Night Operations Weather Software (NOWS) Information

5.4. Supervisor of Flying (SOF). The duty forecaster will inform the SOF (388 FW and 419 FW) of significant weather developments either in-station, by telephone or hotline.

5.5. Pilot to Metro Service (PMSV). The CWT operates a PMSV radio to provide updated weather information to airborne aircrews and to receive PIREPs. The UHF channel 342.3 MHz is continually monitored by the CWT. Due to obstructing terrain, the PMSV is unusable from 010 to 100 degrees beyond 20 nautical miles below twenty thousand feet and from 100 to 150 degrees beyond 25 nautical miles below fifteen thousand feet. Aircrews should relay PIREPs of weather conditions encountered during take off/climb-out, approach, landing, and on the ranges when practical. The PIREPs can be passed directly to the CWT via the PMSV, to ATC personnel or to the SOF. The ATC personnel and/or the SOF will then pass the PIREP on to the weather station, time permitting. The CWT will disseminate PIREPs locally when weather conditions in the terminal area or the UTTR are significantly different from those briefed or previously forecast, or when the conditions could impact the safety of flight operations. These conditions include, but are not limited to, low-level wind shear below 2,000 feet above ground level (AGL), icing of any type or intensity, moderate or greater turbulence or any other significant weather phenomena reported.

5.6. Planning Briefings. Upon request, the duty forecaster will provide planning briefings for areas within the Continental United States (CONUS) for up to five days. Coordination is required for planning briefings for areas outside the CONUS or for periods beyond five days.

5.7. Staff Weather Briefings. The 75 OSS/OSW will present weather briefings as scheduled or upon request. Unscheduled briefings must be requested at least four hours in advance to allow for adequate preparation. Examples of staff briefings include, but are not limited to, 75th Air Base Wing Commander (75 ABW/CC) stand-up, 388th Fighter Wing Commander (388 FW/CC) stand-up, 388th Operations Group Commander (388 OG/CC) stand-up, and Instrument Refresher Course (IRC) briefings.

5.8. Exercise Support and Briefings. The 75 OSS/OSW will participate, to the fullest extent possible, in both Phase I and Phase II exercises conducted by the 388 FW. At a minimum, this support will include battle staff and deployment briefing support..

Chapter 6

SPECIAL TECHNICAL SERVICES

6.1. Hazardous Spills. In the event that toxic chemicals are released into the atmosphere on Hill AFB, the CWT will relay current and forecast weather conditions upon request. In the event that toxic chemicals are released into the atmosphere in the vicinity of Hill AFB or the UTTR, the CWT will relay current and forecast weather conditions from the nearest observation site to the Fire Protection Operations Section (75 CEG/CEUF) or the on-scene toxic spill experts upon request.

6.2. Climatological Data. There is various climatological information available for most major airfield locations around the world available at the CWT. This information is available for operational planning purposes only. Historical weather data is also available for Hill AFB. The CWT will be the office of primary responsibility for any climatological data requests to the Air Force Combat Climatology Center (AFCCC). Urgency, complexity of the request and workload dictate the required time to acquire climatological data from AFCCC.

6.3. Target Acquisition Weather Software (TAWS). The CWT is capable of providing electro optic/infrared information to support specialized weapons systems and other types of special operations equipment. Planning TAWS data is available on the Mission Execution Forecast each day the 388 FW and 419 FW has scheduled flying. Detailed mission-specific TAWS products are available on a by-request basis. Capability exists for infrared, television, or laser sensors. Any aircrew requiring detailed support should provide mission input to the CWT no later than four hours prior to flight mission brief. If specific target acquisition or lock-on ranges are needed, requests must include specific target information, time over target, and weapon type. All appropriate security safeguards must be maintained. To enhance mission support, aircrews should provide feedback to the CWT as to the accuracy and usefulness of the EO information provided either using email or phone call to the CWT.

6.4. Nuclear Fallout Winds. In the event of a nuclear incident, the CWT will provide upper level wind data to disaster preparedness upon request.

6.5. Earthquake Reports. AFMAN 15-111 requires all USAF weather units with observing and/or forecasting functions located in the United States to obtain and report earthquake occurrences. Immediately following an earthquake, a message is sent to Tinker AWN via NTFS. The message will contain information outlined in AFMAN 15-111. A follow-up message on a USGS Form 9-3013 will be sent to the United States Geological Survey address listed on the form within 3 working days or if internet capability is available, the report can be sent electronically via <http://earthquake.usgs.gov>.

Chapter 7

NEW TACTICAL FORECAST SYSTEM (NTFS)

7.1. NTFS Concept of Operations. The NTFS is designated as the single point from which weather personnel disseminate weather products. It automates the way in which weather products are prepared in support of customer missions. The NTFS system manager (NSM) will be designated by the WFC to manage the system. NTFS outage reporting is handled through the CWT and Air Force Weather Agency (AFWA) NTFS support branch at Offutt AFB NE. General Dynamics has a maintenance contract with a local representative who is responsible for all NTFS equipment and software. Under the contract, General Dynamics is responsible for all outages. CWT personnel accomplish outage reporting. In the event that the NTFS server in building 1 becomes inoperative, information will not be transmitted or received by NTFS client workstations. Telephone or Internet backup systems will be used. Please refer to Attachment 4 for more information on this equipment and other meteorological equipment

7.2. NTFS Local Training Process. Training for the NTFS client software application will be provided by the 75 OSS/OSW on initial installation of the NTFS client software. Continuing training requirements for equipment and operations will be the responsibility of each agency utilizing the application software. Any specialized training requests will be coordinated with the 75 OSS/OSW.

7.3. NTFS Operational Responsibilities.

7.3.1. 75 OSS/OSW. Weather personnel will provide weather products through NTFS as contained in this publication. The NSM is responsible for overall system management and will be the NTFS focal point for all agencies with NTFS terminals, to include interaction, outage reporting, and any special training requests. Anytime there are NTFS software revisions, the NSM will notify each agency that could be affected and provide any necessary training on that revision.

7.3.2. NTFS Users. The units listed in Attachment 9 should designate a primary and alternate NTFS monitor to be the focal point of any NTFS issues. Further, units will notify base weather station personnel in case of non receipt of scheduled weather or Notice to Airmen (NOTAM) data, of any NTFS outages, or if the NTFS client software will need to be re installed. Units may be asked to perform simple trouble-shooting procedures when outages are reported. If the problem cannot be resolved through these procedures, contract maintenance will be called by 75 OSS/OSW. During NTFS outages, 75 OSS/OSW will pass watches, warnings and advisories via telephone to NTFS users. To avoid unnecessary delays in relaying critical weather information to aircrews, air traffic control and command authorities, units with NTFS client workstations should use the information provided and refrain from routinely contacting the weather station.

7.3.3. Non-NTFS Users. Due to flight safety concerns, individual organizations that do not have NTFS client workstations should refrain from contacting the base weather station directly. This can cause delays in relaying information to aircrews, air traffic control agencies and command authorities. Non-NTFS users should call their respective dissemination agency or unit control center for information or connect to the weather station homepage and view the latest weather information.

Chapter 8

LOCAL DISSEMINATION PROCEDURES

8.1. Primary Dissemination Methods. The primary method of local dissemination for observations, Terminal Aerodrome Forecasts, weather watches/warnings/advisories, special messages, and PIREPS will be via the NTFS client / server system. Base agencies requiring NTFS client software should call the base weather station. Electronically developed Mission Execution Forecasts and staff weather briefings will be disseminated via e-mail and over the Hill AFB local area network.

8.2. Back-up Procedures and Priorities. Back-up procedures and priorities for local dissemination for observations, Terminal Aerodrome Forecasts, weather watches/warnings/advisories, special messages, and PIREPS will be passed via telephone. Back-up telephone contact is limited to the following agencies:

- 8.2.1. Air Traffic Control Tower (Hotline)
- 8.2.2. 388 FW Supervisor of Flying (Hotline)
- 8.2.3. 388 Maint (Hotline)
- 8.2.4. Hill Command Post (Hotline)
- 8.2.5. Base Operations (Hotline)

8.3. NTFS Local Dissemination Format Examples.

8.3.1. Surface Observation

```
Received 22/1958Z
KHIF METAR 1955Z 22007KT 7 -TSRA BKN050CB BKN200 27/04 ALSTG
30.15 RMK TS 10SW MOVG NE OCNL LTG ICCG WND DATA ESTMD PA +4578
58/NR;
```

8.3.2. Terminal Aerodrome Forecast.

```
Received 22/1902Z
KHIF FCST 2219-2319 22006KT 7 VCTS SCT050 BKN220
  ALTIMETER30.11INS
  TEMPO 19-23 VRB25KT 6 -TSRA BKN050CB OVC220
  BECMG 23-24 32009KT 7 NSW FEW070 SCT120 SCT220
  ALTIMETER30.13INS
  BECMG 09-10 10015G25KT 7 SCT200 LGT TURB SFC-050
  ALTIMETER30.13INS WND VRB06KT AFT 16Z T28/23Z T12/12Z
  04/ENC
```

8.3.3. Weather Watch.

HILL AFB WEATHER WATCH #05-012
VALID 22/1905Z (22/1305L) TO 22/2330Z (22/1730L)
THE POTENTIAL EXISTS FOR THUNDERSTORMS WITH LIGHTNING TO BE
WITHIN 5NM OF HILL AFB. AN OBSERVED LIGHTNING WARNING WILL BE
ISSUED WHEN IT OCCURS.
30/JW

8.3.4. Weather Warning.

HILL AFB WEATHER WARNING #05-009
VALID 22/1945Z (22/1345L) TO UFN (UFN)
OBSERVED LIGHTNING WARNING: LIGHTNING IS BEING OBSERVED WITHIN 5
NM OF HILL AFB. THIS WARNING WILL BE CANCELED WHEN LIGHTNING HAS
NOT BEEN OBSERVED WITHIN 5 NM OF HILL AFB FOR AT LEAST 15 MINUTES

HILL AFB WEATHER ADVISORY #05-038
VALID 22/1935Z (22/1335L) TO UFN (UFN)
THUNDERSTORMS WITH LIGHTNING ARE OBSERVED WITHIN 25NM OF HILL
AFB.
35/JW

8.3.5. Weather Message

HILL AFB WEATHER ADVISORY #05-038
VALID 22/1935Z (22/1335L) TO UFN (UFN)
THUNDERSTORMS WITH LIGHTNING ARE OBSERVED WITHIN 25NM OF HILL
AFB.
35/JW

Chapter 9 RECIPROCAL SUPPORT

9.1. General. Mutual support and cooperation are key elements in the 75 OSS/OSW's ability to provide complete and timely weather support to its customers. This section outlines reciprocal support for base agencies and individual unit responsibilities.

9.2. The Command Post Will:

9.2.1. Notify 75 OSS/OSW of any accident, mishap or event in which weather or weather service may be involved by notifying the duty forecaster.

9.2.2. Disseminate all weather warnings, watches and advisories in accordance with established checklists.

9.3. Flying Units Will:

9.3.1. Provide 75 OSS/OSW with flying schedules, to include changes as necessary. 48 hours notice for brief support during non-traditional flying hours.

9.3.2. Pass all significant PIREPs to the 75 OSS/OSW through the PMSV radio, the control tower, or supervisor of flying.

9.3.3. Provide electro-optics/infrared feedback when possible.

9.4. 75th Communications Squadron (CS) Will:

9.4.1. Provide or arrange for the maintenance of weather and communications equipment operated by the CWT not under maintenance contract and within the scope of 75 CS capabilities (specifically, equipment listed in section A3.2, A3.3, A3.8, A3.9 and A3.11)

9.4.2. If requested, provide a weather sensor tour to CWT personnel during certification training.

9.4.3. Provide telephone and computer maintenance through normal base procedures.

9.4.4. Ensure internet communications between the OWS and the CWT are secure and operational.

9.5. 75th Civil Engineering Squadron (CES) Will:

9.5.1. Provide emergency back-up power for weather station operations. Emergency power is generated and supplied to the weather station from the airfield lighting vault, building 14. The CES personnel will notify 75 OSS/OSAMB and the duty forecaster at least 15 minutes before a scheduled change from commercial to emergency power or emergency to commercial power.

9.6. Air Traffic Control Will:

9.6.1. As duties permit, tower personnel will perform a CWW and notify the duty observer of significant changes in the weather including, but not limited to, visibility, ceiling, thunderstorms, lightning, precipitation and any other weather that may affect flight safety.

9.6.2. Tower personnel will assist with daily operational checks of the PMSV radio when requested by weather. In the event of an extended PMSV outage at the BWS, tower will place an outage advisory on the Automatic Terminal Information System (ATIS) and workload permitting monitor 342.3 MHz until a portable radio is available for the CWT.

9.6.3. Notify the duty observer of a change in the active runway or runway light settings.

9.6.4. Relay all weather related PIREPS to the duty forecaster or observer.

9.6.5. In the event of weather station evacuation provide the observer and forecaster adequate space and access to a telephone and a UHF radio tuned to 342.3 MHz in the control tower, if available.

9.6.6. When requested provide tower indoctrination training to new weather personnel.

9.7. Base Operations Will:

9.7.1. Disseminate all weather watches, warnings and advisories in accordance with established checklists during operational hours.

9.7.2. Enter weather information into flight information publications as provided by letter from 75 OSS/OSW.

SEBASTIAN V. ROMANO III, Colonel, USAF
Commander, 75th Air Base Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 15-1, *Atmospheric and Space Environmental Support*
AFMAN 15-111, *Surface Weather Observations*
AFMAN 15-124, *Meteorological Codes*
AFMAN 15-129, *Air and Space Weather Operations*
AFMAN 15-135, *Combat Weather Team Operations*
AFMAN 37-123, *Management of Records*

Abbreviations and Acronyms

AFWA—Air Force Weather Agency
AFWIN—Air Force Weather Information Network
ATIS—Automatic Terminal Information System
AWN—Automated Weather Network
BWW—Base Weather Watch
CCW—Cooperative Weather Watch
CWT—Combat Weather Team
DLT—Desired Lead Time
DSNT—Distant
ECT—Equivalent Chill Temperature
EWO—Emergency War Order
MEF—Mission Execution Forecasts
METAR—Meteorological Aerodrome Weather Report
NTFS—New Tactical Forecast System
NWS—National Weather Service
OWS—Operational Weather Squadron
PIREP—Pilot Report
PMSV—Pilot to Metro Service
SLP—Sea-level Pressure
SOF—Supervisor of Flying
SPECI—Special Weather Report
STR—Strong Thunderstorm
SVR—Severe Thunderstorm
SWAP—Severe Weather Action Process
SWAT—Severe Weather Action Team

TAF—Terminal Aerodrome Forecasts
TAWS—Target Acquisition Weather Software
UTC—Universal Time Coordination
VC—Vicinity
WFC—Weather Flight Commander

Terms

Air Force Weather Information Network (AFWIN) —A military internet weather information system that constantly provides worldwide observed and forecasted data to help aircrews and military forecasters. AFWIN is run by the Air Force Weather Agency at Offutt AFB.

New Tactical Forecast System (NTFS) —A client/server communications system consisting of a LINUX server at the Combat Weather Team (CWT) facility and remote clients at various locations on and off base.

Basic Weather Watch (BWW) —Conducted from the base weather station by an observer who, because of other duties, cannot monitor the weather continuously. In addition to taking and disseminating required record observations each hour, the BWW program requires that the observer recheck weather conditions at intervals not to exceed 20 minutes.

Combat Weather Team (CWT) —75 OSS CWT is located on the north side of building 1.

Cooperative Weather Watch (CWW) —A CWW is established between air traffic control (ATC) and the CWT. 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.

Coordinated Universal Time (UTC) —An atomic time scale that is the basis for broadcast time signals. In practice, it is the universally accepted time of reference.

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.

Distant (DSNT) —Used to observe/forecast weather phenomena beyond 10 statute miles.

Eyes Forward — An open and continuous dialog of communication from the Hill AFB CWT to the 25th OWS designed to enhance Meteorological Watch processes and to share information about the development of significant meteorological conditions that may put Hill AFB resources at risk.

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

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

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

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—The area within a 5 nautical-mile radius of the center point of the Hill AFB runway complex.

Terminal Aerodrome Forecast (TAF)—A 24-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).

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

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

Strong (STR) Thunderstorm—A thunderstorm capable of producing winds 35 to 49 knots and/or hail 1/2 inch to less than 3/4 inch.

Weak Thunderstorm—A thunderstorm capable of producing winds 25 to 34 knots and/or hail less than 1/2 inches in diameter.

Vicinity (VC)—The area between five and ten statute miles of the center point of the Hill AFB runway complex.

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

Observed Advisory—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.

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—forecasted advisories issued for Hill AFB are for conditions forecast to affect the terminal aerodrome.

Weather Warning—A special message transmitted over **NTFS** 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 terminal aerodrome.

Weather Watch—A special message transmitted over **NTFS** 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 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, decrease to less than, or if below, increases to equal or exceed

- 3,000 ft
- 1,500 ft
- 1,000 ft
- 700 ft
- 600 ft
- 500 ft
- 400 ft
- 300 ft
- 200 ft

A2.2. Sky Condition. A layer of clouds or obscuring phenomena aloft (i.e., smoke) is observed below 600, 500 or 400 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:

- 3 miles.
- 2 miles.
- 1 3/4 miles.
- 1 1/2 miles.
- 1 1/4 miles.
- 1 mile.
- 3/4 mile.
- 1/2 mile.

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

A2.4.1. Prevailing visibility is first observed \leq 1SM/1600M, again when the prevailing visibility goes above 1SM/1600M.

A2.4.2. RVR for the active runway decreases to less than or if below, increases to equal or exceed:

- 6000 FT

5000 FT

2000 FT

1600 FT

A2.5. Tower Visibility: Transmit a SPECI with either the tower visibility or the surface visibility as a remark:

A2.5.1. Code and report a tower visibility remark upon receipt of a reportable tower visibility value, when either the weather observing site or tower prevailing visibility is less than 4 miles and the tower visibility differs from the weather observing site visibility by a reportable value.

A2.5.2. Tower visibility differs from the observing sites visibility by a SPECI value as defined in AFMAN 15-111.

A2.6. Thunderstorm: Transmit a SPECI when:

A2.6.1. When a thunderstorm begins (Not required if a thunderstorm is currently in progress).

A2.6.2. When a thunderstorm ends.

A2.7. Precipitation: Transmit a SPECI when:

A2.7.1. Hail begins or ends.

A2.7.2. Freezing precip begins, ends or changes intensity.

A2.7.3. Ice pellets begin, end or change intensity.

A2.7.4. Any other type of precip begins or ends.

A2.8. Runway Conditions: Upon receipt (with the exception of a dry runway report), transmit runway condition readings as a SPECI or append to a METAR or SPECI being taken at the time of notification. This is non weather criteria and is treated as a SPECI only for the purposes of timely longline reporting. It is consider additional data and not SPECI criteria.

A2.9. Wind Shift: Take a SPECI when a wind shift occurs.

A2.10. Tornado, Funnel Cloud, or Waterspout: Take a SPECI when:

A2.10.1. A tornado, funnel cloud or waterspout is observed.

A2.10.2. Disappears from sight or ends.

A2.11. Squall (SQ): Take a SPECI when squalls occur.

A2.12. Aircraft Mishap: Take a LOCAL immediately following notification or sighting of an aircraft mishap at or near the station.

A2.13. Nuclear Accident: When notified of a real-world accident, take and disseminate a SPECI. Append the remark AEROB as the last remark.

A2.14. Volcanic Ash: When first observed.

A2.15. 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.

A2.16. Single-Element SPECI: Single-element specials are only authorized for tornadic activity and volcanic eruptions.

A2.17. Any other meteorological situation, which in the opinion of the weather personnel, is significant to the safety of aircraft operations or resource protection.

Attachment 3

LOCAL OBSERVATION CRITERIA

A3.1. Ceiling. A ceiling (the height assigned to the lowest broken or overcast layer of clouds which is predominately opaque) forms or dissipates below, decrease to less than, or if below, increases to equal or exceed:

A3.1.1. 5,000 ft (514 FLTS)

A3.1.2. 2,500 ft (514 FLTS)

A3.2. Runway Visual Range (RVR). RVR (may be a single element local) decreases to less than, or if below, increases to equal or exceed:

A3.2.1. 4,000 ft

A3.2.1. 1,200 ft

A3.2.2. When RVR is first determined as unavailable (RVRNO) for the runway in use, or when RVR data becomes available again (providing reporting conditions still exists)

A3.3. Aircraft Mishap. An aircraft mishap requires a full element local observation unless there has been a METAR/SPECI in previous ten minutes. The remark "ACFT MISHAP" is added to the remark section, but is **not** transmitted locally or longline.

A3.4. Altimeter Setting. Altimeter setting and pressure altitude locals are taken at a frequency not to exceed 35 minutes when there has been a change of .01 inch Hg or more since the last locally transmitted value.

A3.5. Runway Change. A full element local observation is taken two minutes after notification of a runway change to allow sensors to stabilize.

Attachment 4

METEOROLOGICAL EQUIPMENT AND COMMUNICATIONS

A4.1. NTFS. The New Tactical Forecast System (NTFS) is an integrated, automated system designed to provide weather, air traffic control and base operations products to complete the mission. Alphanumeric weather data flows through Tinker AFB OK. Graphical products are received from the AFWA located at Offutt AFB NE. The NTFS is the primary dissemination system for observations, forecasts, advisories, watches, warnings and PIREPs.

A4.2. Digital Barometer Altimeter Setting Indicator (DBASI ML-658GM)/Aneroid Barometer (ML-102-G). The Digital Barometer Altimeter Setting Indicator and Aneroid Barometer are used to provide measurement of station pressure. Station pressure is used to determine sea-level pressure, altimeter setting and pressure altitude. These instruments are located in the BWS.

A4.3. Laser Ceilometer (AN/GMQ-13). A laser ceilometer is used to determine the height of the cloud ceiling when the ceiling is at or below 12,000 feet AGL. It is located at the north end of the runway.

A4.4. Lightning Detection System (LDS). The LDS is used to display real-time cloud-to-ground lightning strikes for the entire continental United States. Data is received via satellite communications.

A4.5. Pilot to Metro Service Radio (PMSV). The PMSV operates at a UHF frequency of 342.3 MHz and allows ground-to-air-to-ground radio communications.

A4.6. Rain Gauge (ML-17). A rain gauge is used to measure precipitation. The rain gauge is located 150 feet southeast of the control tower.

A4.7. Satellite Imagery Receivers. Weather satellite imagery is an integral part of day-to-day weather operations and is a valuable visual aid for aircrew briefings. Currently, all satellite imagery is received through the MARTA system, AMIS and internet resources.

A4.8. Temperature/Dew Point Sensors (AN/FMQ-8). Temperature and dew point sensors are used to determine the ambient air temperature and dew points (the temperature the air would have to be cooled to in order to have water vapor condense). These sensors are located east of the midpoint of the runway.

A4.9. Transmissometer (AN/FMN-1A and GMQ-32). A transmissometer is used to electronically measure the visibility when visibility is one mile or less. This sensor is located at the north end of the runway.

A4.10. MARTA Doppler RADAR System. The MARTA is a sophisticated internet based weather radar capable of detecting not only all types of precipitation, but clouds and wind information as well. It displays information gathered from the NWS radar located on Promontory point, approximately 25 miles northwest of Hill AFB.

A4.11. Wind Measuring Sensors (AN/FMQ-13). The wind measuring sensors are used to determine the wind direction in degrees and speed in knots. Sensors are located at each end and at the midpoint of the runway.

Attachment 5

MISSION EXECUTION FORECAST SPECIFICATION

A5.1. General. The Mission Execution Forecast (MEF) will specify the expected occurrence, duration and intensity of the following weather conditions:

A5.1.1. Ceiling. Ceiling decreases to less than, or if below, increases to equal or exceed the following values:

- A5.1.1. 1. 5,000 ft. (514 FLTS)
- A5.1.1. 2. 3,000 ft.
- A5.1.1. 5. 1,000 ft.
- A5.1.1. 8. 500 ft.
- A5.1.1. 10. 300 ft.
- A5.1.1. 11. 200 ft.

A5.1.2. Visibility. Visibility decreases to less than, or if below, increases to equal or exceed:

- A5.1.2.1. 3 miles.
- A5.1.2.2. 2 miles.
- A5.1.2.4. 1 1/2 miles.
- A5.1.2.6. 1 mile.
- A5.1.2.8. 1/2 mile.

A5.1.3. Wind. Wind speed change of 10 knots or more, or a direction change of more than 30 degrees when the wind speed (including gusts) is expected to be in excess of 15 knots.

A5.1.4. Precipitation. Any precipitation.

A5.1.5. Thunderstorms. Any thunderstorms.

A5.1.6. Weather Warnings. All forecasted weather warning criteria.

A5.1.7. Icing and Turbulence. Icing or turbulence not associated with thunderstorms, from surface to 10,000 feet mean sea level (MSL) for category II aircraft.

A5.1.8. Low-Level Wind Shear. Low-level wind shear below 2,000 feet that is not associated with thunderstorms.

Attachment 6

MISSION EXECUTION FORECAST AMENDMENT CRITERIA

A6.1. General. The Mission Execution Forecast (MEF) will be amended verbally and posted to the Hill AFB intranet as time permits when any of the following are expected to occur or have occurred and are expected to persist for more than 30 minutes.

A6.2. Ceiling. Ceilings decrease to less than, or if below, increase to equal or exceed:

A6.2.1. 3,000 ft.

A6.2.2. 1,000 ft.

A6.2.3. 500ft

A6.2.4. 300FT

A6.2.5. 200 ft.

A6.3. Visibility. Visibility decreases to less than, or if below, increases to equal or exceed:

A6.3.1. 3 miles.

A6.3.2. 2 miles.

A6.3.3. 1 1/2 miles

A6.3.4. 1 mile

A6.3.5. 1/2 mile

A6.4. Winds. Wind speed change of 10 knots or more, or a direction change of more than 30 degrees when the wind speed (including gusts) is expected to be in excess of 15 knots.

A6.5. Precipitation. Precipitation when:

A6.5.1. Freezing precipitation begins or ends.

A6.5.2. The beginning or ending of precipitation causes an advisory or warning to be issued, canceled, or amended.

A6.5.3. The occurrence or non occurrence of precipitation is deemed operationally significant.

A6.6. Weather Warnings. Warning criterion which occurs or is expected to occur and is not specified in the TAF or was forecast and is no longer occurring, or is no longer expected to occur.

A6.7. Icing or Turbulence. Icing or turbulence of moderate or greater intensity (SFC - 10,000 ft MSL) which occurs or is expected to occur and is not specified in the TAF or was forecast and is no longer occurring, or is no longer expected to occur.

A6.8. Low-Level Wind Shear. Low-level wind shear below 2,000 feet not associated with thunderstorms occurs or is expected to occur and is not specified in the TAF or is forecast but is no longer occurring or expected to occur.

A6.9. Other. Though not an amendment criterion, a remark special to Hill AFB during winter and transition times will be annotated in the remarks section or the TAF and sent out locally and long-line. 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 7

WEATHER ADVISORIES

A7.1. Observed Weather Advisories. The duty forecaster will issue/cancel the following observed weather advisories pertinent to flight operations and resource protection over the NTFS. Attachment 10 details the notification matrix for agencies that do not have an NTFS terminal.

A7.1.1. Observed Lightning Advisory. Issued when lightning is observed within a 10 nautical mile 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 nautical miles for at least 15 minutes.

A7.1.2. Observed Weak Thunderstorm Advisory. Issued when weak thunderstorms are observed within 25nm of the center of the airfield complex.

A7.1.3. F-16 Ice FOD Advisory. Issued as an observed advisory when the temperature is below 45F. The Ice FOD Advisory will be sent via NTFS and will contain the following message: "Hill Air Force Base F-16 Ice FOD Procedures are in Effect including information indicating if we are within 5C (9F) or outside 5C (9F) temperature and dew point spread". The advisory will be cancelled when the temperature rises above 45F. Aircrews and maintenance personnel will follow their own locally directed guidance when determining the need to employ anti-icing systems and inlet icing monitors.

A7.1.4. Fighter Index of Thermal Stress (FITS). FITS CAUTION, and FITS DANGER observed advisories will be issued when the combination of dry bulb temperature and dew point temperature enter into FITS value zones found in AFI 11-202 Vol 3, ACC sup #1 table A2.1.2 . (as shown in this publication) Only one FITS observed advisory may be in effect at one time. FITS observed advisories will be cancelled when FITS conditions are in the NORMAL zone.

Table A2.1.2. Dew Point Temperature (Extracted from ACC Supplement)

Dry Buldb Temp (°F)	ZONE	≤30	40	50	60	70	80	90	100	≥110
70		70	73	76	81	86	X	X	X	X
75		74	77	80	84	89	X	X	X	X
80	NORMAL	77	80	83	87	92	98	X	X	X
85		81	83	86	90	95	101	X	X	X
90		84	87	90	93	98	104	110	X	X
95		88	90	93	96	101	108	112	X	X
100		91	93	96	99	104	109	115	122	X
105	CAUTION ¹	94	96	99	102	107	112	118	124	X
110		97	99	102	105	109	114	120	126	133
115	DANGER ²	100	102	105	109	112	117	123	129	136
120		104	105	108	111	115	120	125	131	138
									CANCELLATION ³	

A7.1.5. Wind Chill Advisory. Issued when the wind chill calculated using the peak gust during the last 15 minutes is less than or equal to 0 degrees Fahrenheit. The wind chill will be appended to all record observations until criteria are no longer met. This advisory is canceled when conditions are no longer met.

A7.1.6. Low-Level Wind Shear (LLWS) Advisory. Issued when LLWS below 2,000 feet above ground level (AGL) not associated with thunderstorms is occurring based on PIREPs or other observation techniques. This advisory is canceled when conditions are no longer occurring.

A7.1.7. Wind Conditions.

A7.1.7.1. Wind Condition 1. Issued when wind speeds are observed between 30 and 40 knots. When the criteria is observed it will be valid for the period of one hour from occurrence. When one hour lapses after the last occurrence, the wind condition will be cancelled.

A7.1.7.2. Wind Condition 2. Issued when wind speeds are observed between 41 and 49 knots. When the criterion is observed it will be valid for the period of one hour from occurrence. When one hour lapses after the last occurrence, the wind condition will be cancelled or downgraded.

A7.1.7.3. Wind Condition 3. Issued when wind speeds are observed between 50 and 70 knots. When the criterion is observed it will be valid for the period of one hour from occurrence. When one hour elapses after the last occurrence, the wind condition will be cancelled or downgraded.

A7.1.7.3. Wind Condition 4. Issued when wind speeds are observed over 70 knots. When the criterion is observed it will be valid for the period of one hour from occurrence. When one hour elapses after the last occurrence, the wind condition will be cancelled or downgraded.

A7.2. Forecast Weather Advisories. The OWS will issue/cancel the following forecast weather advisories pertinent to flight operations and resource protection over the NTFS. Agencies with NTFS terminals will notify subordinate agencies that do not have NTFS.

A.7.2.1. Surface Wind Advisory. The OWS hub will issue/cancel when surface winds are forecasted to be greater than 24 knots but less than 35 knots. The desired lead-time is 30 minutes. This advisory is canceled when conditions are no longer expected.

A.7.2.2. Cross Wind Advisory. The OWS hub will issue/cancel when cross winds are forecasted to be greater than 24 knots. The desired lead-time is 30 minutes. This advisory is canceled when conditions are no longer expected.

Attachment 8

WEATHER WATCHES AND WARNINGS

A8.1. Weather Watches. Weather watches will be issued on the potential for the weather condition to occur and will be canceled when the potential no longer exists or upgraded to weather warnings when the potential is significant enough that protective measures must be taken to protect property and life. Weather watches will have defined begin and end times.

Weather Watch Criteria.

- Tornado
- Severe thunderstorms (Winds >50 knots and/or Hail > 3/4 inches)
- Lightning within 5 nautical miles
- Snow accumulation (> 2 inches in 2 hours)
- Freezing precipitation

A8.2. Weather Warnings. Weather warnings will be issued when the potential for established weather criteria is significant enough that protective measures must be taken to protect property and life. All warnings are valid for the area within a five nautical mile radius of the center of the runway complex. All weather warnings are forecasts, that is, they are issued prior to the onset of the expected condition. The exception to this is the lightning observed within five nautical miles warning. When lightning is actually observed within a five nautical mile 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.

A8.2.1. Weather Warning Criteria and Desired Lead Times.

<u>CRITERIA</u>	<u>DESIRED LEAD TIME</u>
Tornado	30 minutes
Severe Thunderstorms (Hail \geq 3/4")	120 minutes
Severe Winds \geq 50 knots	120 minutes
Strong Thunderstorms (Hail \geq 1/2" < 3/4")	90 minutes
Strong Winds \geq 35 \leq 49 knots	90 minutes
Freezing Precipitation	90 minutes
Snow Accumulation (\geq 2" in 2 hours)	120 minutes
Lightning within 5 nautical miles	As Observed

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

A8.3. Blizzard Watch and Warning. The blizzard watch and warning outlined in AFI 10-229 will not be issued at Hill AFB until customer requirements dictate otherwise. The current wind/snow watches and warnings cover all blizzard criteria except visibility. Any operational need for the blizzard watch and warning will be coordinated with the WFC upon which, implementation will occur immediately.

Attachment 9

NTFS CLIENT SOFTWARE LOCATIONS

UNIT	BUILDING#	Advisories/Watches/Warnings
388th OPS GROUP Commander (388 OG/CC)	36	A-I, N-Z
4 th FIGHTER SQUADRON Ops Officer (4 FS/DO)	119	A-I, N-Z
34 th FIGHTER SQUADRON Ops Officer (34 FS/DO)	5	A-I, N-Z
421 st FIGHTER SQUADRON	5	A-I, N-Z
388 th RANGE SQUADRON	1A	C, G, I, N-Z
729th AIR CONTROL SQUADRON	1938	C, G, I, N-Z
388th MAINT OPS CTR (388 OSS/OSM)	36	ALL
75th Air Base Wing COMMAND POST (75 ABW/CP)	133	ALL
75th Ops Support Sq Airfield Ops Flight ATC (75 OSS/OSA)	10	A-I, N-Z
75th Ops Support Sq BASE OPS (75 OSS/OSAMB)	1	C, E, R, S-Z
649th MUNITIONS Sq	1626	A-I, N-Z
75th Logistics Group Management FUELS FLIGHT (75 LG/LGSF)	914	A, B, C, F, G, N-Z
419 th Fighter Wing COMMAND POST (419 FW/CP)	593	ALL
466 th FIGHTER SQUADRON	593	A-I, N-Z
419 th MAINT OPS CTR (466 FS/MAOD)	593	ALL
CLOVER CONTROL (299 RCS/DOS)	1276	A-I, N-Z
514 FLTS Ops Officer (514 FLTS/DO)	233	A-I, N-Z
AIRCRAFT OPERATIONS DIVISION (OO-ALC/MABP)	225	A-I, N-Z

Advisories		Watches		Warnings	
A	Ice FOD	N	Tornado	S	Tornado
B	FITS	O	Severe Thunderstorm	T	Severe Thunderstorm
C	LTG Observed w/in 10nm	P	Snow	U	Strong Thunderstorm
D	Gust Spread	Q	Freezing Precipitation	V	Severe Winds > 50 knots
E	Wind Chill	R	LTG w/in 5 nm	W	Strong Winds ≥ 35 ≤ 49 knots
F	Weak Thunderstorms w/in 25nm			X	Freezing Precipitation
G	Low-Level Wind Shear			Y	Snow > 2" in 2 Hrs
H	Winds ≥ 25 ≤ 34 5nm			Z	Observed LTG w/in
I	Cross Winds >24 knots				
J	Wind Condition 1				
K	Wind Condition 2				
L	Wind Condition 3				
M	Wind Condition 4				

Attachment 10

NOTIFICATION MATRIX

75 ABW/CP Notifications (Duty Hours)													
Duty Hours: Monday – Friday 0730-1630 except federal holidays													
	75 ABW/CC	OO-ALC/CV	388 FW/CC	388 OG/CC	388 LG/CC	388 FW/SE	OO-ALC/SE	OO-ALC/MAAC	75 CS	75 CEG	729 ACS		
Advisories													
Ice Fod						x	x	x					x
FITS (Caution or Danger)						x	x	x					x
Lightning Observed within 10nm	x					x	x	x	x	x			x
Gust Spread (> 15Kts)						x							
Wind Chill (< 0 Fahrenheit)						x	x	x	x				x
Weak Thunderstorms within 25 nm (Hail < 1/2")						x	x	x					x
Low-Level Wind Shear						x							
Winds (25-34Kts)						x	x	x					x
Cross Winds(> 25Kts)						x		x					
Warnings													
Tornado *	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Hail \geq 3/4") *	x	x	x	x	x	x	x	x				x	x
Severe Winds (\geq 50Kts) *	x	x	x	x	x	x	x	x				x	x
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x	x	x	x	x	x				x	x
Strong Winds (35-49Kts)						x	x	x				x	x
Lightning Observed (within 5nm) *	x					x		x	x	x		x	x
Freezing Precipitation *	x	x	x	x	x	x	x	x				x	x
Snow > 2" in 2 Hours	x	x	x	x	x	x	x	x				x	x
Watches													
Tornado	x	x	x	x	x	x	x	x				x	x
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x		x	x	x	x	x	x				x	x
Lightning within 5nm	x					x		x	x	x		x	x
Snow > 2" in 2 Hours	x					x		x				x	x
Freezing Precipitation	x		x	x		x		x				x	x

* Severe Weather Conditions

75 ABW/CP Notifications (Duty Hours) – (cont.)	75 MSG/SV	466 FS/MAOD	75 CEG/CEUF	75 ABW/MU	649 MUNS	75 SFS/SFOA	75 LRS/LGRR	75 LRS./LGRVO
Advisories								
Ice Fod		x						
FITS (Caution or Danger)		x						
Lightning Observed within 10nm	x	x	x	x	x	x	x	
Gust Spread (> 15Kts)		x						
Wind Chill (< 0 Fahrenheit)	x	x	x	x	x	x	x	x
Weak Thunderstorms within 25nm (Hail < 1/2")	x	x		x	x			
Low-Level Wind Shear								
Winds (25-34Kts)	x	x		x	x			
Cross Winds(> 25Kts)								
Warnings								
Tornado*	x	x	x	x	x	x	x	
Severe Thunderstorm (Hail \geq 3/4")*	x	x	x	x	x	x	x	
Severe Winds (\geq 50Kts)*	x	x	x	x	x	x	x	
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x	x	x	x	x	
Strong Winds (35-49Kts)	x	x	x	x	x	x	x	
Lightning Observed within 5nm*	x	x	x	x	x	x	x	
Freezing Precipitation*		x	x	x	x	x	x	
Snow > 2" in 2 Hours		x	x	x	x	x	x	
Watches								
Tornado	x	x		x	x			
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x	x		x	x			
Lightning within 5nm	x	x	x	x	x	x	x	
Snow > 2" in 2 Hours		x		x	x			
Freezing Precipitation		x		x	x			

* Severe Weather Conditions

75 ABW/CP Notifications (Non-duty Hours)	75 ABW/CC	OO-ALC/CV	388 FW/CC	388 OG/CC	388 LG/CC	388 FW/SE	OO-ALC/SE	OO-ALC/MAAC	75 CS	75 CEG	729 ACS	466 FS/MAOD
Advisories												
Ice Fod								x			x	x
FITS (Caution or Danger)											x	x
Lightning Observed within 10nm								x	x		x	x
Gust Spread (> 15Kts)												x
Wind Chill (< 0 Fahrenheit)								x	x		x	x
Weak Thunderstorms within 25nm (Hail < 1/2")								x			x	x
Low-Level Wind Shear												
Winds (25-34Kts)								x			x	x
Cross Winds(> 25Kts)								x				
Warnings												
Tornado*	x	x	x	x	x	x	x	x	x	X	x	x
Severe Thunderstorm (Hail \geq 3/4")*	x	x	x	x	x	x	x	x		X	x	x
Severe Winds (\geq 50Kts)*	x	x	x	x	x	x	x	x		X	x	x
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x	x	x	x	x	x		X	x	x
Strong Winds (35-49Kts)						x		x		X	x	x
Lightning Observed within 5nm*								x	x		x	x
Freezing Precipitation*	x	x	x	x	x		x	x		X	x	x
Snow > 2" in 2 Hours	x							x		X	x	x
Watches												
Tornado	x	x	x	x	x		x	x		X	x	x
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x		x	x	x		x	x		X	x	x
Lightning within 5nm	x							x	x			x
Snow > 2" in 2 Hours	x							x		X	x	x
Freezing Precipitation	x		x	x						X	x	x

* Severe Weather Conditions

75 ABW/CP Notifications (Non-duty Hours) – (cont.)	75 MSG/SV	75 CEG/CEUF	75 SFS/SFOA	75 LRS/LGRVO	75 ABW/MU	75 CEG/CEUF	75 LRS/LGX	OO-ALC/EMC
Advisories								
Ice Fod								
FITS (Caution or Danger)								
Lightning Observed within 10nm	x	x	x		x	x	x	
Gust Spread (> 15Kts)								
Wind Chill (< 0 Fahrenheit)		x	x	x	x	x	x	
Weak Thunderstorms within 25nm (Hail < 1/2")	x				x			
Low-Level Wind Shear								
Winds (25-34Kts)	x				x			x
Cross Winds(> 25Kts)								
Warnings								
Tornado*	x	x	x		x	x	x	
Severe Thunderstorm (Hail \geq 3/4")*	x	x	x		x	x	x	
Severe Winds (\geq 50Kts)*	x	x	x		x	x	x	x
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x		x	x	x	
Strong Winds (35-49Kts)	x	x	x		x	x	x	x
Lightning Observed within 5nm*	x	x	x		x	x	x	
Freezing Precipitation*		x	x		x	x	x	
Snow > 2" in 2 Hours		x	x		x	x	x	
Watches								
Tornado	x				x			
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x				x			
Lightning within 5nm	x	x	x		x	x	x	
Snow > 2" in 2 Hours					x			
Freezing Precipitation					x			

* Severe Weather Conditions

OO-ALC/MAAC Notifications	OO-ALC/MAB	OO-ALC/MABR	649 CLSS	OO-ALC/MA Director	OO-ALC/MABC	OO-ALC/MABF	OO-ALC/MABCC	OO-ALC/MABA	OO-ALC/MAL	AGE DISPATCH	OO-ALC/MAK	514 FLTS/622 RSG, OL-B	OO-ALC/MAD	OO-ALC/MAN
Advisories														
Ice Fod	x		x									x		
FITS (Caution or Danger)	x		x									x		
Lightning Observed within 10nm	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gust Spread (≥ 15 Kts)														
Wind Chill (≤ 0 Fahrenheit)	x	x	x	x	x	x	x	x	x	x	x		x	x
Weak Thunderstorms within 25nm (Hail $< 1/2$ ")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Low-Level Wind Shear												x		
Winds (25-34Kts)	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Cross Winds (≥ 25 Kts)												x		
Warnings														
Tornado*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Hail $\geq 3/4$ ")*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Winds (≥ 50 Kts)*	x	x	x						x	x	x	x	x	x
Strong Thunderstorm (Hail $\geq 1/2 < 3/4$ ")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Strong Winds (35-49Kts)	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lightning Observed within 5nm*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Freezing Precipitation*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Snow > 2 " in 2 Hours	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Watches														
Tornado	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Winds ≥ 50 Kts and/or Hail $\geq 3/4$ ")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lightning within 5nm	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Snow > 2 " in 2 Hours	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Freezing Precipitation	x	x	x	x	x	x	x	x	x	x	x	x	x	x

* Severe Weather Conditions

75th Communications Squadron Notifications	75 CS/SCMPC	75 CS/SCBN	75 CS/SCMEA	75 CS/SCMER	75 CS/SCBT	75 CS/SCMEF	75 CS/SCMA	75 CS/SCMPS	75 CS/SCMPT
Advisories									
Ice Fod									
FITS (Caution or Danger)									
Lightning Observed within 10nm	x	x	x	x	x	x	x	x	x
Gust Spread (≥ 15 Kts)									
Wind Chill (≤ 0 Fahrenheit)	x		x	x			x		
Weak Thunderstorms within 25nm (Hail $< 1/2"$)									
Low-Level Wind Shear									
Winds (25-34Kts)									
Cross Winds (≥ 25 Kts)									
Warnings									
Tornado*	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Hail $\geq 3/4"$)*	x		x	x		x	x		x
Severe Winds (≥ 50 Kts)*									
Strong Thunderstorm (Hail $\geq 1/2 < 3/4"$)	x		x	x		x	x		x
Strong Winds (35-49Kts)									
Lightning Observed within 5nm*	x	x	x	x	x	x	x	x	x
Freezing Precipitation*	x		x	x		x	x	x	x
Snow $> 2"$ in 2 Hours									
Watches									
Tornado									
Severe Thunderstorm (Winds ≥ 50 Kts and/or Hail $\geq 3/4"$)									
Lightning within 5nm	x	x	x	x	x	x	x	x	x
Snow $> 2"$ in 2 Hours									
Freezing Precipitation									

* Severe Weather Conditions

75 Civil Engineering Group Notifications			
	75 CES/CEOR	75 CEG/CEX	75 CEG/CED
Advisories			
Ice Fod			
FITS (Caution or Danger)			
Lightning Observed within 10nm	x	x	x
Gust Spread (≥ 15 Kts)			
Wind Chill (≤ 0 Fahrenheit)			
Weak Thunderstorms within 25nm (Hail $< 1/2$ ")			
Low-Level Wind Shear			
Winds (25-34Kts)			
Cross Winds (≥ 25 Kts)			
Warnings			
Tornado*	x	x	x
Severe Thunderstorm (Hail $\geq 3/4$ ")*	x	x	x
Severe Winds (≥ 50 Kts)*	x	x	x
Strong Thunderstorm (Hail $\geq 1/2 < 3/4$ ")	x	x	x
Strong Winds (35-49Kts)	x	x	x
Lightning Observed within 5nm*	x	x	x
Freezing Precipitation*	x		
Snow > 2 " in 2 Hours	x		
Watches			
Tornado	x	x	x
Severe Thunderstorm (Winds ≥ 50 Kts and/or Hail $\geq 3/4$ ")	x	x	x
Lightning within 5nm	x	x	x
Snow > 2 " in 2 Hours	x		
Freezing Precipitation	x		

* Severe Weather Conditions

75 MSG/SV Notifications	75 MSG/SVMP	75 MSG/SVMF	DeCa (commissary)	75 MSG/SVMG	75 MSG/SVML	75 MSG/SVRW	75 MSG/SVMX	75 MSG/SVR	75 MSG/SVRB	75 MSG/SVRE	75 MSG/SVRF	75 MSG/SVRME	75 MSG/SVRMC	75 MSG/SVRS
Advisories														
Ice Fod														
FITS (Caution or Danger)														
Lightning Observed within 10nm	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gust Spread (> 15Kts)														
Wind Chill (< 0 Fahrenheit)														
Weak Thunderstorms within 25nm (Hail < 1/2")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Low-Level Wind Shear														
Winds (25-34Kts)	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Cross Winds(> 25Kts)														
Warnings														
Tornado*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Hail \geq 3/4")*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Winds (\geq 50Kts)*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Strong Winds (35-49Kts)	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lightning Observed within 5nm*	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Freezing Precipitation*														
Snow > 2" in 2 Hours														
Watches														
Tornado	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lightning within 5nm	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Snow > 2" in 2 Hours														
Freezing Precipitation														

* Severe Weather Conditions

75 MSG/SV Notifications (cont.)	75 MSG/SVRV	75 MSG/SVX	75 MSG/SVYC	75 MSG/SVYR	75 MSG/SVYY	75 MSG/SVMM	SVBT Golf Course
Advisories							
Ice Fod							
FITS (Caution or Danger)							
Lightning Observed within 10nm	x	x	x	x	x	x	x
Gust Spread (> 15Kts)							
Wind Chill (< 0 Fahrenheit)							
Weak Thunderstorms within 25nm (Hail < 1/2")	x	x	x	x	x	x	x
Low-Level Wind Shear							
Winds (25-34Kts)	x	x	x	x	x	x	x
Cross Winds(> 25Kts)							
Warnings							
Tornado*	x	x	x	x	x	x	x
Severe Thunderstorm (Hail \geq 3/4")*	x	x	x	x	x	x	x
Severe Winds (\geq 50Kts)*	x	x	x	x	x	x	x
Strong Thunderstorm (Hail \geq 1/2 < 3/4")	x	x	x	x	x	x	x
Strong Winds (35-49Kts)	x	x	x	x	x	x	x
Lightning Observed within 5nm*	x	x	x	x	x	x	x
Freezing Precipitation*							
Snow > 2" in 2 Hours							
Watches							
Tornado	x	x	x	x	x	x	x
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	x	x	x	x	x	x	x
Lightning within 5nm	x	x	x	x	x	x	x
Snow > 2" in 2 Hours							
Freezing Precipitation							

* Severe Weather Conditions

75 MSG/SVMP (Main Gym) Notifications	75 MSG/SVMP (Base Pools)	75MSG/SVMP (West Side Gym)
Advisories		
Ice Fod		
FITS (Caution or Danger)		
Lightning Observed within 10nm	x	x
Gust Spread (≥ 15 Kts)		
Wind Chill (≤ 0 Fahrenheit)		
Weak Thunderstorms within 25nm (Hail $< 1/2$ ")	x	x
Low-Level Wind Shear		
Winds (25-34Kts)	x	x
Cross Winds (≥ 25 Kts)		
Warnings		
Tornado*	x	x
Severe Thunderstorm (Hail $\geq 3/4$ ")*	x	x
Severe Winds (≥ 50 Kts)*	x	x
Strong Thunderstorm (Hail $\geq 1/2 < 3/4$ ")	x	x
Strong Winds (35-49Kts)	x	x
Lightning Observed within 5nm*	x	x
Freezing Precipitation*		
Snow > 2 " in 2 Hours		
Watches		
Tornado	x	x
Severe Thunderstorm (Winds ≥ 50 Kts and/or Hail $\geq 3/4$ ")	x	x
Lightning within 5nm	x	x
Snow > 2 " in 2 Hours		
Freezing Precipitation		

* Severe Weather Conditions

75 OSS/OSAMB Notifications	75 OSS/OSC
Advisories	
Ice Fod	X
FITS (Caution or Danger)	X
Lightning Observed within 10nm	X
Gust Spread (> 15Kts)	X
Wind Chill (< 0 Fahrenheit)	X
Weak Thunderstorms within 25nm (Hail < 1/2")	X
Low-Level Wind Shear	X
Winds (25-34Kts)	X
Cross Winds(> 25Kts)	X
Warnings	
Tornado*	X
Severe Thunderstorm (Hail \geq 3/4")*	X
Severe Winds (\geq 50Kts)*	X
Strong Thunderstorm (Hail \geq 1/2 < 3/4")*	X
Strong Winds (35-49Kts)	X
Lightning Observed within 5nm*	X
Freezing Precipitation*	X
Snow > 2" in 2 Hours	X
Watches	
Tornado	X
Severe Thunderstorm (Winds \geq 50Kts and/or Hail \geq 3/4")	X
Lightning within 5nm	X
Snow > 2" in 2 Hours	X
Freezing Precipitation	X

* Severe Weather Conditions

NOTE: Rainbow announcement of the nature of severe weather threat is broadcast over Hill Ramp Net by Base Operations

Attachment 11

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

SUPPORTED UNIT REQUIREMENTS

1. **General:** 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/requirements as well as unit mission descriptions for all supported units.

A11.2. 388th FIGHTER WING/419th AIR RESERVE FIGHTER WING/514th FLIGHT TEST SQUADRON

a. **Mission:** The 388th FS and the 419th maintains and operates F-16 Falcons in support of various theater contingencies, by providing air superiority to all who call upon its service. The 514th Test Squadron performs depot maintenance and routine “flight check” tests on the F-16, A-10s, C-130s.

b. Weapon Systems or Resource/Assets:

(1) **Aircraft:** F-16A/B/C/D, A-10, C-130

(2) **Weapons:** JDAM, AMRAAM, AIM-9, CBU-87, ALQ-184 ECM pod, GB -10,12,24

(3) **Other Resources/Assets:** N/A

c. Mission-limiting Weather Parameters:

(1) **Space:** None.

(2) **Terrestrial:**

TAKEOFF CEILING/VISIBILITY AND CROSSWIND RESTRICTIONS

<u>AIRCRAFT</u>	<u>TAKEOFF</u>	<u>REQUIRED MINIMUMS</u>	<u>IMPACT</u>	<u>FORECAST SUPPORT</u>
F-16	Single Ship	<u>CIG/VIS</u> E 1500/3 D 700/2 C 500/1 1/2 B 300/1	NO GO IF LESS THAN 300/1 OR LESS THAN PILOT CATEGORY	FORECAST AT TAKEOFF TIME
F-16	Single Ship	<u>CROSSWIND</u> >=25 KTS WITH DRY RUNWAY, OR >=23 KTS WITH WET RUNWAY	NO GO	NONE
F-16	Formation	<u>CIG/VIS</u> E 1500/3 D 700/2 C 500/1 1/2 B 300/1	NO GO IF LESS THAN 300/1 OR LESS THAN PILOT CATEGORY	FORECAST AT TAKEOFF TIME
F-16	Formation	<u>CROSSWIND</u> >=15 KTS WITH DRY RUNWAY *	NO GO	NONE

LANDING CEILING/VISIBILITY AND CROSSWIND RESTRICTIONS

<u>AIRCRAFT</u>	<u>TAKEOFF</u>	<u>REQUIRED MINIMUMS</u>	<u>IMPACT</u>	<u>FORECAST SUPPORT</u>
F-16	Single Ship	<u>CIG/VIS</u> E 1500/3 D 700/2 C 500/1 1/2 B 300/1	DIVERT IF LESS THAN 300/1 OR LESS THAN PILOT CATEGORY	FORECAST AT LANDING FIELD OR IF POSSIBLE DIVERT FIELD
F-16	Single Ship	<u>CROSSWIND</u> >=25 KTS WITH DRY RUNWAY, OR >=23 KTS WITH WET RUNWAY	DIVERT OR HOLD	NONE
F-16	Formation	<u>CIG/VIS</u> E 1500/3 D 700/2 C 500/1 1/2 B 300/1	DIVERT IF LESS THAN 300/1 OR LESS THAN PILOT CATEGORY	FORECAST AT LANDING FIELD OR IF POSSIBLE DIVERT FIELD
F-16	Formation	<u>CROSSWIND</u> >=15 KTS WITH DRY RUNWAY *	DIVERT OR HOLD	NONE

* NO F-16 FORMATION TAKEOFF OR LANDING IF RUNWAY IS WET, SUBJECT TO SOF DISCRETION.

ROUTE CEILINGS/VISIBILITY RESTRICTIONS

<u>AIRCRAFT</u>	<u>ROUTE</u>	<u>REQUIRED MINIMUMS</u>	<u>IMPACT</u>	<u>FORECAST SUPPORT</u>
F-16	IR VR	<u>CIG/VIS</u> 3000/5 3000/5	MAY ALTER PLANS	CLOUDS/WX SFC-100 EMPHASIS ON MID-LVL CLDS

MISSION RESTRICTIONS (AIR-TO-GROUND)

<u>AIRCRAFT</u>	<u>REQUIRED MINIMUMS</u>	<u>IMPACT</u>	<u>FORECAST SUPPORT</u>
F-16	<u>CIG/VIS</u> 1500/3 DAY 3500/5 NIGHT	NO GO IF LESS THAN MINIMUMS	RANGE FORECASTS AND OBSERVATIONS

INCLUDES POINSETT, DARE COUNTY, TOWNSEND, BT9/11, PALMETTO POINT AND STUMPY POINT

MISSION RESTRICTIONS (AIR-TO-AIR)

<u>AIRCRAFT</u>	<u>REQUIRED MINIMUMS</u>	<u>IMPACT</u>	<u>FORECAST SUPPORT</u>
F-16	CLEAR HORIZON AT FLIGHT LEVEL AND 2000 FT CLEAR AIR SPACE	MAY ALTER MISSION	CLOUD BASES, TOPS, AND WEATHER

INCLUDES W177, RACCOON (W161), SOAS, D-MOA (11,000-23,000), C-MOA (SFC-10,000), A-MOA (7,000-20,000), I-MOA (SFC-6,000), BULL A (SFC-10,000), AND BULL B (1,000-23,000)

OTHER POSSIBLE MISSION-IMPACTING WEATHER PARAMETERS

<u>PARAMETER</u>	<u>IMPACT</u>
TERMINAL 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, OR THUNDERSTORMS	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.

AIRCRAFT MAINTENANCE REQUIREMENTS

<u>CRITICAL ELEMENT</u>	<u>WX</u>	<u>LEAD TIME</u>	<u>IMPACT</u>	<u>ACTIONS</u>
CIG/VIS 8000/5		OBSERVED	MINIMAL FUNCTIONAL FLIGHT (FCF)	FOR CHECK FCF NOT FLOWN IF BELOW MINIMUMS
LIGHTNING WITHIN 5NM		1/2 HOUR	HEADS-UP	EVACUATE NONESSENTIAL PERSONNEL FROM FLIGHT LINE AND GROUND ALL AIRCRAFT
LIGHTNING WITHIN 3NM		OBSERVED	WEATHER HOLD	WHEN LIGHTNING IS OBSERVED WITHIN 3NM, ALL MAINTENANCE WILL CEASE, EQUIPMENT AND TOOL KITS SECURED, AND PERSONNEL REMOVED FROM THE FLIGHT LINE
HAIL >= 3/4 INCH		1 HOUR	HEAD-UP	HANGER AIRCRAFT
WINDS KNOTS	25-34	1/2 HOUR	HEADS-UP	TAKE ACTION TO SAFEGUARD EQUIPMENT. IF TOTAL AIRCRAFT WEIGHT IS 15,000 LBS OR LESS, AIRCRAFT MUST BE HANGERED IF WINDS EXCEED 30 KTS.
WINDS KNOTS	35-70	1 HOUR	WEATHER HOLD	SAME AS ABOVE, REMOVE ALL EQUIPMENT FROM THE FLIGHT LINE.
WINDS KNOTS	>=70	1 HOUR	WEATHER HOLD	SEVERE WEATHER CONDITIONS ARE EXPECTED, TAKE ACTIONS TO EVACUATE AIRCRAFT AND SHELTER PERSONNEL. NON-FLYABLE F-16 AIRCRAFT MUST BE HANGERED OR MOORED.
ICE POTENTIAL	FOD	OBSERVED	MAY DAMAGE TURBO BLADES	TURN ON ANTI-ICE MECHANISMS
SNOWFALL 1 INCH		OBSERVED	HEADS-UP	ACTIVATE 20 FW PLAN 105 FOR SNOW AND ICE REMOVAL

- d. **Weather Support Requirements:** Electronic MEF; IWDS updates of WW/WA criteria; phone contact with SOF; in-person briefings prior to step during inclement weather.

2. AIR LOGISTICS CENTER / 75th AIR BASE WING

a. **Mission:** Provides the installation with traditional military services, to include civil engineering, personnel, logistics, communications, planning/strategic management, computer, medical, security, recreational services, munitions and all other host services.

- b. **Weapon Systems or Resource/Assets:**

(1) **Aircraft:** N/A

(2) **Weapons:** Munitions Storage Area consisting of a wide spectrum of munitions.

(3) **Other Resources/Assets:** Facilities, equipment and personnel on Hill AFB.

c. **Mission-limiting Weather Parameters:**

(1) **Terrestrial:** Thunderstorms/lightning; Winds; Hail; Snowfall

(2) **Space:** None.

d. **Weather Support Requirements:** Briefs Hill Battle staffs and 75 ABW staff meetings upon request.