

DEPARTMENT OF THE ARMY  
HEADQUARTERS, US ARMY GARRISON, FT RUCKER  
FORT RUCKER, ALABAMA 36362-5105

Fort Rucker Regulation  
No. 115-1

4 December 2012

**Climatic, Hydrological, and Topographic Services**  
**US ARMY AVIATION CENTER OF EXCELLENCE (USAAACE) WEATHER SUPPORT**

	<u>Paragraph</u>	<u>Page</u>
CHAPTER 1.	FORT RUCKER WEATHER OPERATIONS (FRWXOPS)	
	INTRODUCTION	
	FRWXOPS Mission.....	1-1 3
	FRWXOPS Overview.....	1-2 3
	Contact Information.....	1-3 3
	FRWXOPS Responsibilities.....	1-4 3
	Release of Weather Information to Non-DOD Agencies/ Individuals.....	1-5 3
	Release of Weather Information to DOD Agencies/ Individuals.....	1-6 3
2.	OBSERVING PRODUCTS AND SERVICES	
	Overview.....	2-1 4
	Surface Observation Products.....	2-2 4
	Surface Observation Equipment.....	2-3 4
	Surface Observation Dissemination.....	2-4 6
	Surface Observation Code.....	2-5 7
	Observing Limitations.....	2-6 10
	Pilot Reports (PIREPs).....	2-7 12
3.	FORECAST PRODUCTS AND SERVICES	
	Overview.....	3-1 13
	Forecast Products.....	3-2 13
	Forecast Product Dissemination to Aircrews.....	3-3 15
	Resource Protection Products.....	3-4 17
	Other Forecast Services.....	3-5 19
	Forecast Product Limitations.....	3-6 21
4.	RECIPROCAL SUPPORT AND RESPONSIBILITIES	
	FRWXOPS Roles and Responsibilities.....	4-1 22
	Fort Rucker Activity Requirements.....	4-2 23

---

\*This regulation supersedes Fort Rucker Reg 115-1, 29 Jun 11.

	<u>Page</u>
APPENDIX A. Weather Station Duty Priorities .....	27
B. SPECI Criteria (Cairns AAF) .....	28
C. SPECI Criteria (Troy MAP) .....	30
D. FMQ-19/ASOS Augmentation Parameters .....	32
E. Weather Watch/Warning/Advisory Criteria .....	34
F. Breakdown of the Local DD Form 175-1 .....	38
G. Breakdown of the MEF.....	41
H. MEF Forecast Areas Defined.....	44
I. MEF Specification/Amendment Criteria .....	46
J. USAACE Weather Support Requirements/Customer Actions ...	48
K. Customer Mission-Limiting Weather Thresholds.....	50

## CHAPTER 1

### FORT RUCKER WEATHER OPERATIONS (FRWXOPS) INTRODUCTION

1-1. **FRWXOPS MISSION.** FRWXOPS provides meteorological support to Fort Rucker, the USAACE, and other assigned and tenant units at Fort Rucker listed in this regulation.

1-2. **FRWXOPS OVERVIEW.** FRWXOPS consists of personnel and equipment located at Cairns Army Airfield (AAF). Troy Weather Operations (TWXOPS) consists of personnel and equipment located at Troy Municipal Airport (MAP). Both sites are part of Operating Location (OL)-C, which reports directly to the 18th Weather Squadron at Fort Bragg. OL-C is led by a site supervisor located at FRWXOPS. Locally, FRWXOPS is aligned under the Airfield Division, Directorate of Plans, Training, Mobilization, and Security (DPTMS).

1-3. **CONTACT INFORMATION.** FRWXOPS is located in building 30101D, Wallace Street, Fort Rucker, AL 36362. The phone numbers are DSN 558-8385/8397 (commercial 334-255-8385/8397). The fax number is DSN 558-8521 (commercial 334-255-8521). TWXOPS is located at 302 Airport Road, building L0006M, Troy, AL 36079. The phone number is DSN 558-0606 (commercial 334-255-0606). The fax number is 334-566-4806.

1-4. **FRWXOPS RESPONSIBILITIES.** This regulation outlines the responsibilities and services provided by FRWXOPS and TWXOPS. FRWXOPS's primary responsibility is to provide tailored mission planning and execution weather services for the USAACE's aviation flight training along with augmenting the automated observing sensors as needed. TWXOPS's primary tasks are augmenting automated weather sensors and recording and disseminating observations. These services are outlined in chapters 2 and 3. Reciprocal roles and responsibilities are outlined in chapter 4. All weather services provided by FRWXOPS are accomplished in accordance with (IAW) the duty priorities listed in appendix A. The general responsibilities of the Air Force and Army in regard to weather support are outlined in Army Regulation (AR) 115-10, Weather Support for the U.S. Army, 6 January 2010.

1-5. **RELEASE OF WEATHER INFORMATION TO NON-DOD AGENCIES/INDIVIDUALS.** FRWXOPS and TWXOPS will not release weather information to non-DOD agencies or individuals without prior coordination with the Fort Rucker Installation Operations Center (IOC) for severe weather events or the Public Affairs Office (PAO) for routine weather information. The IOC or PAO will provide written evidence of coordination before any release of information.

1-6. **RELEASE OF WEATHER INFORMATION TO DOD AGENCIES/INDIVIDUALS.** FRWXOPS is required to release an item of interest (IOI) report in the event of a weather-related aircraft mishap (Class A, B, or C) or upon occurrence of a severe weather event where damage has occurred to the post. These weather summaries are prepared and disseminated to the appropriate agencies as soon as possible. In the case of a severe weather event, the weather summary will be sent to the IOC. All IOI reports will be sent to the Air Combat Command (ACC), 26th Operational Weather Squadron (26 OWS), and DPTMS. Basic climatology for Cairns AAF, Hanchey Army Heliport (AHP), and Lowe AHP is available on FRWXOPS's homepage at <http://www.rucker.army.mil/6weather/index.htm>. Any other request for data should be made to FRWXOPS, in writing or electronically, with a minimum of 3 hours notice.

## CHAPTER 2

### OBSERVING PRODUCTS AND SERVICES

2-1. **OVERVIEW.** FRWXOPS provides weather observing services at two locations within the USAACE local flight training area as described in Fort Rucker Regulation (Reg) 95-2, Directory of Aviation Training Facilities and Procedures, 31 August 2011. Automated meteorological observing systems at each location automatically collect and disseminate observations using a continuous weather watch. When the automated sensors require augmentation by a weather technician or observer, a basic weather watch (BWW) is conducted IAW Air Force Manual (AFMAN) 15-111, Surface Weather Observations, 10 March 2009. A BWW means that weather personnel will recheck weather conditions at intervals not to exceed 20 minutes since the last observation/recheck to determine the need for a SPECI observation when certain criteria are occurring or are forecast to occur within 1 hour.

a. **FRWXOPS.** With the advent of the FMQ-19 automated observing system at Cairns AAF, FRWXOPS is now an automated reporting station. Weather technicians are available to augment the FMQ-19 IAW AFMAN 15-111 from 0100L Monday through 0100L Saturday (excluding federal holidays) or until the termination of USAACE local flying, whichever is later. During all other hours, a weather technician is on call and will be available to augment the FMQ-19 automated capability when recalled to implement severe weather action procedures (SWAP) described in paragraph 3-4f. The Cairns AAF observation is the official observation for the Class D (control tower is operational) or Class E (control tower is not operational) airspace. FRWXOPS also provides “eyes forward” feedback to the 26 OWS as part of a Fort Rucker weather support partnership.

b. **TWXOPS.** Weather observers augment a Federal Aviation Administration (FAA)-owned automated surface observing system (ASOS) IAW AFMAN 15-111 between the hours of 0830L-1630L, Monday through Friday, except federal holidays.

c. **Cooperative Weather Watch (CWW).** FRWXOPS has established a CWW with the air traffic control (ATC) towers at South Alabama Regional Airport (RAP), Troy MAP, and all basefields and stagefields. ATC personnel will notify the observer/technician when they observe significant weather conditions that differ from those reported in official observations, and the observer/technician will incorporate that information into local flight briefings. Pilot reports (PIREPs) are another crucial element of the CWW (reference paragraph 2-7). FRWXOPS will reevaluate weather conditions whenever a reliable source reports weather that differs from the last observation to determine if a new observation is required and determine if automated weather sensors require troubleshooting. The CWW is detailed in paragraph 4-2b.

2-2. **SURFACE OBSERVATION PRODUCTS.** The FMQ-19 and ASOS provide METAR and SPECI weather observations IAW the criteria and guidelines in AFMAN 15-111. METAR observations are disseminated approximately 5 minutes before each hour. SPECI observations are disseminated whenever significant weather changes occur (reference appendixes B and C for SPECI criteria).

2-3. **SURFACE OBSERVATION EQUIPMENT.** FRWXOPS uses the FMQ-19 automated observing system to provide observing services to the Fort Rucker area. Additionally, there are several ASOSs and two tactical meteorological observing systems-permanent (TMOS-Ps) in the local flying area that provide surface observations.

a. Fixed Meteorological Instrumentation. The Air Force and Army provide electronics technicians to maintain the instrumentation and displays of all fixed meteorological equipment; however, there may be instances when various Fort Rucker agencies must assist in repairing equipment when an outage involves aspects that are beyond the responsibility and capability of the technicians (i.e., communication or power lines).

(1) The Air Force owns and maintains the following meteorological equipment:

Equipment	Measures	Cairns AAF	Troy MAP	South Alabama RAP
ML-17 <sup>(1)</sup>	Precipitation	X	X	X
Kestrel 4000 <sup>(1)</sup>	Temperature, dewpoint, windspeed, pressure	X	X	X
FMQ-19	Pressure, cloud height, winds, temperature, dewpoint, visibility, present weather, precipitation	X		

Note:

<sup>(1)</sup> Backup Weather Equipment. Measurements taken by the weather observer/technician are a backup to other weather equipment; pressure and winds will be considered as estimated.

(2) ASOS. There are several ASOSs in the local area. The agency that owns the equipment and maintenance responsibility is listed below. The ASOS provides continuous readouts of pressure, altimeter, temperature, dewpoint, wind direction and speed, present weather, visibility, cloud height, and cloud amount (up to 12,000 feet). The ASOS at Troy MAP is augmented by a weather observer 0830L-1630L. The remaining ASOSs always operate in automated mode without augmentation. For ASOS limitations, reference paragraph 2-6c. Data from these ASOSs may be accessed on very high frequencies (VHF) or telephonically. The ASOSs' VHF frequencies and telephone numbers are listed below.

Location	ICAO	Owned and Maintained By	VHF Frequency	Telephone Number
South Alabama RAP, AL	K79J	Air Force	134.875	334-222-9770
Lowe AHP, AL	KLOR	Air Force	118.225	334-255-4013
Hanchey AHP, AL	KHEY	Army	None	334-255-5428
Greenville MAP, AL	KPRN	Army	120.000	334-383-9676
Eufaula (Weedon Field), AL	KEUF	Army	128.35	334-687-5596
Florala MAP, AL	K0J4	Army	124.175	334-858-4843
Bonifay (Tri-County) MAP, FL	K1JO	Army	None	850-547-1431
Troy MAP, AL	KTOI	FAA	120.925	334-566-3081

b. FMQ-13 Wind Measuring Equipment. The 1st Battalion, 11th Aviation Regiment (1-11th Avn Regt) owns and maintains FMQ-13 wind measuring equipment at most basefields and stagefields. Maintenance is performed by Navigational Aids (NAVAIDS).

c. TMOS-P. The Army owns and maintains two TMOS-Ps. These ASOS-like sensors are located at Shell AHP and Molinelli Range. Data from the TMOS-P cannot be remotely accessed. Only the respective towers have a continuous display of the data.

d. The priority for Air Force-owned equipment maintenance/restoral is as follows:

- (1) Open Principal User Processor/Radar.
- (2) FMQ-19.
- (3) ASOS (at non-dually instrumented locations).
- (4) ASOS (at dually instrumented locations).

e. The priority for Army-owned equipment maintenance/restoral is as follows:

- (1) ASOS (at non-dually instrumented locations).
- (2) ASOS (at dually instrumented locations).
- (3) TMOS-P.

2-4. **SURFACE OBSERVATION DISSEMINATION.** Surface observations are disseminated locally and long line. Procedures vary at each location and are described below.

a. Local Dissemination.

(1) FRWXOPS. The primary means for ATC agencies to receive the Cairns observation is through the Joint Environmental Toolkit (JET) via the Army Airfield Automation System (AAAS). For non-ATC customers, there are secure and nonsecure hyperlinks on the Fort Rucker weather homepage. The JET, via the AAAS, provides local and area observations, forecasts, and weather watches, warnings, and advisories to ATC agencies at Cairns AAF (Army radar approach control [ARAC], HUB Radio, and tower) and the towers at Lowe AHP, Shell AHP, and Hanchey AHP. Observations are also available on the Cairns closed circuit television (CCTV) network on Channel 5. If the JET is not working, the weather observations will be posted to the FRWXOPS Web page and accessed by ATC agencies using a link from AAAS. When the local area network (LAN) and the JET are both inoperative, Cairns weather technicians will relay observations to the Cairns ATC facilities and Lowe AHP, Shell AHP, and Hanchey AHP control towers telephonically.

(2) TWXOPS. The primary means of receiving the Troy MAP observation is via the airfield's ASOS. If the ASOS is inoperative, an observer will relay the observations to the airfield's respective tower telephonically.

b. Long Line Dissemination.

(1) FRWXOPS. IAW Air Force directives, FRWXOPS technicians augment the FMQ-19 observations (when required), and long line dissemination is accomplished via the JET. In the event of a JET outage, observations will be transmitted long line via the Joint Air Force and Army Weather

Information Network (JAAWIN) Web server. In the event of an LAN outage, the observation will be transmitted by another weather station or OWS as prescribed in AFMAN 15-111.

(2) TWXOPS. IAW Air Force directives, TWXOPS observers augment the ASOS observations (when required), and long line dissemination is accomplished via the ASOS. In the event of an ASOS outage, the observation will be transmitted long line via the JAAWIN Web server. In the event of an LAN outage, the observation will be transmitted by another weather station as prescribed in AFMAN 15-111.

c. Aircrews with a VHF radio or telephone may access near real-time ASOS weather observation data at area locations with an ASOS (reference paragraph 2-3a). Systems may not be augmented and should be used with caution. As stated in Fort Rucker Reg 95-2, the only official observation for Fort Rucker basefields is the Cairns AAF observation.

**2-5. SURFACE OBSERVATION CODE.** Official surface weather observation abbreviations and codes are documented in AFMAN 15-111. Examples of a long line and JET/AAAS (primary and backup) METAR observation display follow below.

a. Example of a Long Line METAR Observation:

**KOZR (1) 181955Z (2) AUTO (3) 24015G30KT (4) 2SM (5) +TSRA (6) SCT005 BKN020 OVC250 (7) 29/27 (8) A2990 (9) RMK AO2 SLP195 T01950092 10196 20105 58011 (10)**

Notes:

- (1) Location Identifier: This observation is from Cairns AAF (KOZR).
- (2) Date/Time Group: The date/time of this observation is the 18th at 1955Z.
- (3) AUTO: This indicates that the observation is from an automated reporting site.
- (4) Wind Direction/Speed: In this observation, the winds are from 240 (southwest) at 15 knots with gusts to 30 knots.
- (5) Visibility: In this observation, the visibility is 2 statute miles (SM).
- (6) Present Weather: In this observation, the present weather is a thunderstorm (TS) with heavy rain (+RA).
- (7) Sky Condition: In this observation, the sky condition is SCT005 BKN020 OVC250.
- (8) Temperature/Dewpoint: In this observation, the temperature is 29 degrees Celsius, and the dewpoint is 27 degrees Celsius.
- (9) Altimeter (ALSTG): In this observation, the ALSTG is 29.90.
- (10) Remarks: Any applicable long line remarks would be entered in this line. These remarks are automatically generated and generally mean little to aviators.



(9) Observation: This shows the current, official observation for KOZR.

(10) Warnings, Watches, and Advisories: This shows all warnings, watches, and advisories in effect for KOZR and the Fort Rucker complex.

c. Example of a Backup Weather Observation Display (posted to the weather Web page and on CCTV in the event of a JET outage):

KOZR (1)	METAR (2)	18/1955 (3)
WINDS: (4)	24015G30KT	
SKY CONDITION: (5)	SCT005 BKN020 OVC250	
VISIBILITY: (6)	2SM	
RVR: (7)		
PRESENT WX: (8)	+TSRA	
TEMP/DEW: (9)	29/27	
ALSTG: (10)	29.90	
PA: (11)	-84	
DA: (12)	+613	
REMARKS: (13)	<b>JET IS INOPERATIONAL AT THE CURRENT TIME. WE APOLOGIZE FOR THE INCONVIENCE.</b>	

Notes:

- (1) Location Identifier: This observation is from Cairns AAF (KOZR).
- (2) Type of Observation: This observation is a METAR.
- (3) Date/Time Group: The date/time of this observation is the 18th at 1955Z.
- (4) Wind Direction/Speed: In this observation, the winds are from 240 (southwest) at 15 knots with gusts to 30 knots.
- (5) Sky Condition: In this observation, the sky condition is SCT005 BKN020 OVC250.
- (6) Visibility: In this observation, the visibility is 2 SM.
- (7) RVR: RVR, if applicable, would be reported in this group.

(8) Present WX: In this observation, the present weather is a thunderstorm (TS) with heavy rain (+RA).

(9) Temperature/Dewpoint: In this observation, the temperature is 29 degrees Celsius, and the dewpoint is 27 degrees Celsius.

(10) Altimeter (ALSTG): In this observation, the ALSTG is 29.90.

(11) PA: In this observation, the PA is -84 feet.

(12) DA: In this observation, the DA is +613 feet.

(13) Remarks: Any applicable local remarks would be entered in this line.

2-6. **OBSERVING LIMITATIONS.** The official points of observation at Cairns AAF and Troy MAP are, respectively, the FMQ-19 sensor and the ASOS sensors. Buildings located at Cairns AAF and Troy MAP limit the observer's ability to take completely representative weather observations when augmenting the FMQ-19 and ASOS.

a. FRWXOPS Limitations.

(1) The backup observation point is located approximately 30 feet off the southeast corner of building 30101. From this vantage, the Cairns technician does not have a full 360 degree view of the airfield. Buildings obstruct the technician's view of the aerodrome from the southwest through the northwest. This limits the technician's ability to accurately determine prevailing visibility when backing up the FMQ-19.

(2) Emergency evacuation of the weather station temporarily disrupts observing and forecasting services. Technicians relocate to the alternate operating location (AOL): a location with a Class A telephone, a computer with an LAN connection, and a view of the airfield (normally building 30311, the FLATIRON facility). Observing and forecasting services will be available at the AOL. The phone number at the AOL is DSN 558-8535 (commercial 334-255-8535). While operating from the AOL, backup equipment may be used to record the observation.

(3) Pilot to metro service (PMSV) is subject to the limitations inherent in the use of VHF and ultra high frequencies (UHF). Pilots in the local area may not be able to reach the FRWXOPS technicians via PMSV due to various circumstances that affect the signal from reaching the radio tower. Reference paragraph 3-5 for the PMSV frequencies and backup procedures.

b. TWXOPS Limitations.

(1) The backup observation point is located approximately 30 feet west of the tower. From this vantage, the TWXOPS observer does not have a full 360 degree view of the airfield. Buildings obstruct the observer's view of the aerodrome from the northeast through the east. This limits the observer's ability to accurately determine prevailing and sector visibility when backing up the ASOS.

(2) The ASOS wind sensor is located along an abandoned north-south runway. ASOS winds may not be representative for fixed wing operations or operations on other parts of the airfield.

(3) Emergency evacuation of the weather station temporarily disrupts observing services. Observers relocate to the AOL: a location with a Class A telephone, a computer with an LAN connection, and a view of the airfield (normally the Flight Briefing Office building). Although the ASOS will not be augmented during an evacuation, observing support will be provided at the AOL. The phone number at the AOL is 334-566-7457. While operating from the AOL, backup equipment may be used to record the observation.

c. General Limitations of the ASOS/TMOS-P.

(1) Cloud height and coverage are determined by a laser beam ceilometer and are dependent on what is directly above the sensor. The ASOS/TMOS-P attempts to determine sky condition but may provide an incorrect cloud coverage amount if clouds are stationary or moving very slowly. Additionally, the ASOS/TMOS-P systems cannot determine cloud height above 12,000 feet.

(2) Visibility is determined using a forward scatter visibility meter; ASOS/TMOS-P reported values may be highly variable and not representative for the entire airfield.

(3) The freezing rain sensor does not report occurrence until ice has accumulated to  $\geq 0.01$  inch. Aircraft operations may be affected before the ASOS/TMOS-P reports freezing rain occurrence (i.e., icing).

(4) An ASOS/TMOS-P may not detect all thunderstorms or hail occurrences. An ASOS/TMOS-P cannot detect virga (precipitation not reaching the ground), sector visibility, tower visibility, or tornadoes.

d. General Limitations of the FMQ-19. As with any automated system, the FMQ-19 has inherent weaknesses. However, FRWXOPS has developed procedures to mitigate any weaknesses of the system.

(1) Cloud height and coverage are determined by a laser beam ceilometer, which looks at the small portion of the atmosphere directly above the sensor. Algorithms use time averaging and weighting in order to determine the sky condition. This sensor-derived sky condition is considered to be functionally equivalent to a manually generated sky condition; the sensor samples the atmosphere directly above the sensor, and the algorithms calculate the sky condition which simulates that of the entire celestial dome. The FMQ-19 measures cloud heights between 100 feet and 25,000 feet.

(2) Visibility is determined at the sensor group, so it may not always be representative of the entire airfield. Furthermore, the FMQ-19 cannot report visibility less than 1/4 SM.

(3) The FMQ-19 may not detect all thunderstorms and lightning and cannot report thunderstorm and lightning remarks. Furthermore, the system cannot detect hail, virga, tower visibility, volcanic ash, cloud types, or tornadoes/funnel clouds/waterspouts.

(4) Due to the characteristics of the algorithms, the FMQ-19 may be slow to respond and report accurate sky condition, visibility, and present weather during periods of rapidly changing weather conditions.

e. Other Equipment Limitations.

(1) Due to the location of the TMOS-P at Molinelli Range, the reported winds are sometimes too high because of channeling effects.

(2) Due to unknown reasons, the reported winds from the Shell TMOS-P are sometimes too high.

(3) Because the FMQ-13 at Runkle Stagefield is 70 feet high, the surface windspeeds will generally be lower than the sensor-reported values.

(4) The ASOS at Troy MAP is located at the end of the runway rather than the center, so the winds are not always representative.

**2-7. PILOT REPORTS (PIREPs).** The local training area is approximately 32,000 square miles and is a data-sparse region in which weather can vary widely over short distances. PIREPs are an extremely important source of weather information provided by aircrews operating in the local area.

a. Criteria. FRWXOPS disseminates all PIREPs received.

b. PIREP Format and Dissemination. At a minimum, a PIREP must contain location, time, altitude, type of aircraft, and at least one other weather element such as winds, temperature, icing, turbulence, low level wind shear (LLWS), visibility, or present weather in order to be disseminated. However, any reports of significant weather elements are useful and important to weather technicians. PIREPs may be reported to the weather station via PMSV radio, or they may be relayed to the weather station through ATC agencies. Technicians also include PIREPs, as appropriate, in flight weather briefings.

## CHAPTER 3

### FORECAST PRODUCTS AND SERVICES

3-1. **OVERVIEW.** Forecasting support is provided by the Air Force and is organized in tiers to serve various levels of military organizations and operations. The 26 OWS, located at Barksdale Air Force Base (AFB), Louisiana, is at the operational level focusing on meteorology and the production of weather products for the southeastern portion of the US. FRWXOPS partners with the 26 OWS to produce weather products for Fort Rucker but also tailors these products into decision-quality weather information focused on the mission needs of operational customers at Fort Rucker.

a. Onsite forecasting services from FRWXOPS are available from 0100L Monday through 0100L Saturday (excluding holidays) or until the termination of USAACE local flying, whichever is later. An onsite weather forecaster will also be available to support any scheduled USAACE weekend flying. The 110th Aviation Brigade (110th AB) shall inform FRWXOPS of any weekend flying not later than 1600L Thursday each week. When USAACE flying is not scheduled, onsite forecasting services may not be available. However, weather services will be augmented by the 26 OWS whenever onsite forecasting services are not available.

(1) A weather technician is on call during nonduty hours and is prepared to respond when recalled to implement SWAP described in paragraph 3-4f. Contact information will be provided to the 26 OWS to initiate the recall of the on-call technician whenever a weather watch or warning is issued for Fort Rucker.

(2) Should onsite forecasting services not be available for aviation support, customers should call the 26 OWS for flight weather briefings (DSN 331-2651, commercial 866-223-9328, toll free).

(3) For any other onsite forecasting support including major outdoor events (i.e., Freedom Fest) that are outside of normal onsite forecast hours, a written request should be made to FRWXOPS at least 14 calendar days in advance.

b. FRWXOPS produces various forecasts to assist mission planning, training operations, and resource protection. FRWXOPS is responsible for mission execution forecasts (MEFs) and DD Form 175-1 flight weather briefings for flights originating from Cairns AAF. FRWXOPS provides flight weather information to authorized aircrew members and pilots upon request. Also, flight weather briefing products are produced for display on the FRWXOPS homepage, and some are also displayed on CCTV. FLATIRON search and rescue crews are supported on nontraining missions as a priority service.

c. The 26 OWS produces the TAF for Cairns AAF, in addition to regional scale weather forecasts and analysis for the southeastern US. The 26 OWS, in conjunction with FRWXOPS, is responsible for resource protection in the form of weather watches, warnings, and advisories. FRWXOPS collaborates with the 26 OWS during the production of all products for Fort Rucker. The 26 OWS will continue these services when FRWXOPS forecasting services are not available, along with flight weather briefing support. In the event that the 26 OWS is unable to perform any of these services, FRWXOPS will act as a backup to 26 OWS support. FRWXOPS provides “eyes forward” for the 26 OWS.

3-2. **FORECAST PRODUCTS.** The MEF and local DD Form 175-1 flight weather briefing are issued at the beginning of each flying period and are valid until the end of that period. Reference paragraph 3-3c for the issue and valid times for each flying period. These products are primarily disseminated via the

Fort Rucker LAN on the FRWXOPS homepage. Certain highlights from the MEF are also displayed on Cairns CCTV Channel 6 as a PowerPoint presentation. In the event of an LAN outage, the MEF will be faxed. Expect delays when the MEF must be faxed to multiple customers.

a. MEF.

(1) The MEF primarily focuses on weather conditions affecting the USAACE local flight training areas and is tailored to specific criteria that impact local aviation operations. It contains a separate forecast for each of the seven MEF forecast areas (reference appendix H) within the USAACE local flying area and is amended or updated as required (reference appendix I).

(2) The format of the MEF may change occasionally based on local requirements and feedback from aviators. However, the MEF will always contain the forecasted information below. All times on the MEF are in Zulu time, except as noted.

(a) Present weather such as precipitation and obstructions to visibility.

(b) Surface winds.

(c) Aviation hazards such as LLWS, icing, and turbulence. Note: Turbulence intensity in the MEF is for Category I aircraft (gross weight < 12,500 lbs).

(d) Thunderstorms and the amount of coverage. Coverage amounts are Isolated (1 percent-10 percent), Few (11 percent-25 percent), Scattered (26 percent-50 percent), and Numerous (> 50 percent).

(e) Sky condition (above ground level [AGL]).

(f) Flight level winds provided in 1,000-foot intervals from 1,000 feet to 8,000 feet. Wind data is valid for the midpoint of the flying period.

(g) Flight level temperatures (in degrees Celsius).

(h) The forecast maximum and minimum temperatures (in degrees Celsius) for the period for Cairns AAF and for the local flying area.

(i) The forecast maximum PA and DA (in feet) for the period for Cairns AAF and for the local flying area.

(j) Solar and lunar data, including the end evening nautical twilight, sunrise, sunset, moonrise, moonset, percent of maximum lunar illumination, and lunar azimuth and elevation. These events are listed in local time. Lunar azimuth and elevation data is valid for 2100L.

(k) Any weather watches, warnings, or advisories that are in effect, or will be in effect, at any time during the period. Note: Only weather watches, warnings, and advisories that affect flight operations will be included. The observed lightning warning/advisory will not be included.

(l) The amendment or update number and time of issuance for any amendments or updates issued to the MEF.

(m) Planning data for the next period. The planning data will include the forecast maximum temperature (in degrees Celsius) and PA (in feet) for Cairns AAF, along with a forecast of visual flight rules (VFR) or instrument flight rules (IFR) for each MEF forecast area.

(3) The MEF is continuously monitored for accuracy and is amended as needed IAW the amendment criteria listed in appendix I.

b. DD Form 175-1. The standard flight weather briefing is a DD Form 175-1. FRWXOPS produces a local DD Form 175-1 for aircrews planning flights within 150 nautical miles (NM) of Cairns AAF, including those filing IFR flight plans and cross-country flights. The DD Form 175-1 includes terminal weather for locations within 100 NM of Cairns AAF. During the AM and PM flying periods, a DD Form 175-1 continuation sheet is also produced with weather for locations outside of 100 NM but within the Fort Rucker local flying area. These products are primarily disseminated via the Fort Rucker LAN on the FRWXOPS homepage. The local DD Form 175-1 is posted to the homepage at the beginning of each period with valid times concurrent with the MEF and is updated every hour. The DD Form 175-1 briefing may not have information in all blocks, as it is available elsewhere. Reference appendix F for a breakdown of the local DD Form 175-1. Sometimes, technicians will use all stops (A/S) or all stations within 100 NM rather than a list of individual location identifiers. Note that A/S refers to all stations within 100 NM of Cairns AAF when all forecast conditions are similar. If a customer requires a DD Form 175-1 for locations outside the local flying area or for airfields not listed on the DD Form 175-1, contact the FRWXOPS technician for assistance. Technicians can provide these flight weather briefings over-the-counter, over the telephone, via e-mail, or by fax. For routine or scheduled flights, aircrews should submit their DD Form 175-1 request at least 2 hours prior to departure for the timeliest service. FRWXOPS technicians perform other duties that take priority over routine weather briefings (reference appendix A). This policy does not apply to emergency FLATIRON flights.

c. MEF/DD Form 175-1 Updates/Amendments. The MEF/DD Form 175-1 will be updated/amended IAW FRWXOPS's duty priorities (reference appendix A) when it becomes evident that the forecast is not on target and when the criteria of appendix I are met. When the MEF/DD Form 175-1 is amended, FRWXOPS will print copies for the students at Cairns AAF and post it to the FRWXOPS homepage. FRWXOPS will also issue a weather advisory to notify the Fort Rucker basefield ATC agencies and operations of the change. Basefield control towers will ensure airborne crews within their controls are notified. HUB Radio will contact all active stagefields, to include Molinelli Control Tower, Troy Control Tower, and all other airborne crews within the HUB remote radio control. Furthermore, when the basefields' Operations sections call for a weather void time, FRWXOPS will brief them on any amendments.

d. TAF. Every 8 hours, the 26 OWS produces a TAF for a 5 NM radius centered on Cairns AAF, valid for 24 hours. The 26 OWS and FRWXOPS will coordinate to ensure the TAF and the forecast for forecast area Goldfish are consistent. The TAF is available to ATC agencies via the JET display on the AAAS and to other customers via secure and nonsecure hyperlinks on the FRWXOPS homepage.

### **3-3. FORECAST PRODUCT DISSEMINATION TO AIRCREWS.**

a. The primary means of disseminating forecast products to aircrews is via the Fort Rucker LAN on the FRWXOPS homepage. The FRWXOPS homepage contains various products and links to products depicting current and forecast weather worldwide, to include radar imagery, satellite imagery, surface observations, and TAFs. All locally generated products are also posted to the homepage. These local products are described below.

(1) A secure link from the Web site provides access to the current observation, TAF, and all watches, warnings, and advisories in effect.

(2) The AM, PM, and N1 MEFs are posted to the Web site at 0500 CDT (0445 CST), 1045 CDT (1015 CST), and 1715 CDT (1630 CST). Between postings, the MEF will be amended or updated as appropriate, and the amendments or updates will be posted to the Web site.

(3) The AM, PM, and N1 local DD Forms 175-1 are posted to the Web site at 0500 CDT (0445 CST), 1045 CDT (1015 CST), and 1715 CDT (1630 CST). Between postings, the local DD Form 175-1 will be updated every hour, and the updates will be posted to the Web site.

(4) MEF/DD Form 175-1 amendments, along with weather watches, warnings, and advisories, are also disseminated via the Fort Rucker Weather mobile application and Facebook and Twitter accounts. This additional networking capability helps reach as many people as possible in a short amount of time. Customers can configure Facebook to receive e-mails when products are posted, while Twitter can be set up to receive text messages. The mobile application can be used on any smart phone to gather pertinent weather data on the go. The scrolling banner quickly alerts customers to important changes.

(5) A link to regional observations and TAFs is also accessible on the Web site.

(6) Climatology data for Cairns AAF, Hanchey AHP, and Lowe AHP is available on the Web site.

(7) The 7-day outlook is posted to the Web site every Monday, Wednesday, and Friday morning. This product is for planning purposes only.

(8) Night vision goggle information is posted to the Web site each Monday morning for the next week. Additionally, a 30-day illumination planning chart is posted.

(9) Hurricane information may also be found on the Web site when a storm is impending. When a storm is threatening, updates are posted every 6 hours under the Hurricane Central section.

b. CCTV. FRWXOPS utilizes CCTV as an alternate method of providing weather information for Cairns AAF. Cairns CCTV Channel 4 displays the current local, regional, or national radar loop; Cairns CCTV Channel 5 displays the current observation, and Cairns CCTV Channel 6 displays highlights from the current MEF in a PowerPoint slideshow. CCTV should be used for backup purposes only.

c. Briefing Schedule. The issue times and valid times of forecast products for each period are as follows:

(1) AM Period (CDT): Issued at 0500L; valid 0600L-1230L  
AM Period (CST): Issued at 0445L; valid 0600L-1200L

(2) PM Period (CDT): Issued at 1045L; valid 1230L-1900L  
PM Period (CST): Issued at 1015L; valid 1200L-1830L

(3) N1 Period (CDT): Issued at 1715L; valid 1900L-0230L  
N1 Period (CST): Issued at 1630L; valid 1830L-0230L

d. Backup Procedures. The primary means for receiving aviation weather forecasts is via the Fort Rucker LAN on the FRWXOPS homepage. In the event that the homepage is nonoperational, the FRWXOPS technicians will fax the MEF and DD Form 175-1 to the Base Operations section of each basefield. Base Operations is then responsible for disseminating the flight weather briefing to those sections without access to the data. Expect delays when the briefings must be faxed to multiple organizations.

3-4. **RESOURCE PROTECTION PRODUCTS.** The 26 OWS and FRWXOPS issue weather watches, weather warnings, terminal weather advisories (TWAs) (forecast and observed), and area weather advisories (AWAs) (forecast and observed). All watches, warnings, and advisories are issued IAW AFMAN 15-129, Volume 1, Air and Space Weather Operations – Characterization, 6 December 2011. Reference appendix E for weather watch, warning, and advisory criteria. Post officials and aviators can use these products to make informed risk decisions about resource protection and flight training operations.

a. Weather Watches. The 26 OWS issues forecast weather watches for a 60 NM radius centered on Cairns AAF. Weather watches alert post agencies of the potential for severe or hazardous weather to occur within 60 NM of Cairns AAF. The 26 OWS issues a forecast weather watch for lightning potential within a 15 NM radius centered on Cairns AAF. The 26 OWS also issues a forecast lightning watch for a 5 NM radius centered on Troy MAP during duty hours. The 26 OWS will cancel a watch when the potential for the condition for which it was issued no longer exists or when upgraded to a weather warning, if required.

b. Weather Warnings. The 26 OWS issues forecast weather warnings for a 15 NM radius centered on Cairns AAF. FRWXOPS issues observed weather warnings (i.e., observed lightning within 5 NM) for Cairns AAF. The 26 OWS issues forecast and observed weather warnings for a 5 NM radius centered on Troy MAP during duty hours. Weather warnings alert post agencies to the occurrence or imminent occurrence of severe or hazardous weather conditions requiring specific actions to ensure safety of flight, life, and/or property. Only one weather warning will be in effect for a particular site at any time. The exception is the lightning warning; while in effect, another warning may also be in effect. The 26 OWS forecaster will cancel a weather warning when the condition for which it was issued no longer exists. The FRWXOPS technician will cancel the lightning warning when lightning is no longer observed within 5 NM of Cairns AAF.

c. Weather Advisories. The 26 OWS and FRWXOPS technicians issue observed and forecast TWAs and AWAs. Weather advisories alert post agencies of weather conditions which could affect operations or post support. Forecast weather advisories are issued when the conditions within the advisory are expected to occur within the valid times of the advisory. Depending on the criteria of the forecast weather advisory, these advisories may be issued by the 26 OWS or FRWXOPS. Observed weather advisories are issued when the condition is first observed within the specified area. Observed weather advisories are issued by FRWXOPS and are valid until the condition is no longer occurring. The only exceptions are advisories issued for specific flying periods. N1 advisories will expire or be canceled at the end of the flying period even if the conditions are still occurring. Low instrument flight rules (LIFR) advisories are issued during AM and PM periods and will expire or be canceled at the end of the PM flying period even if the conditions are still occurring.

(1) TWAs. These advisories alert post agencies to the occurrence or forecast of weather within 15 NM of Cairns AAF that potentially affects flight operations or post support.

(2) AWAs. These advisories alert post agencies to the occurrence or forecast of weather potentially affecting flight operations within 60 NM of Cairns AAF.

d. Dissemination of Watches, Warnings, and Advisories. All watches, warnings, and advisories are disseminated to ATC agencies at Cairns AAF, Shell AHP, Lowe AHP, and Hanchey AHP through the JET via the AAAS. Non-ATC customers may access watches, warnings, and advisories via secure hyperlink on the Fort Rucker weather homepage. For all watches, warnings, and advisories issued or canceled by the 26 OWS, Cairns Base Operations will receive an automated telephone message from the 26 OWS to ensure receipt. For all watches, warnings, and advisories issued or canceled by FRWXOPS, followup telephone calls are made to certain customers, depending upon the criteria of the watch, warning, or advisory. During duty hours, FRWXOPS will notify Cairns Base Operations telephonically to confirm receipt of any watch, warning, or advisory that is issued. Additionally, the IOC is always notified by e-mail when any watch, warning, or advisory is issued.

e. Backup Dissemination of Watches, Warnings, and Advisories. In the event of a local JET outage, the 26 OWS will issue all watches, warnings, and advisories that FRWXOPS would normally issue. When complete JET dissemination capabilities are lost, FRWXOPS will locally disseminate all watches, warnings, and advisories by making phone calls to the basefields' towers, ARAC, HUB Radio, Cairns Base Operations, and IOC (watches and warnings only). The watches, warnings, and advisories may also be obtained from the MEF/DD Form 175-1 on the FRWXOPS homepage and/or by secure link from the Web page.

f. SWAP. These procedures are in place to ensure sufficient personnel are available to augment automated weather sensors and to collaborate and partner with the 26 OWS to monitor and manage potential/actual severe weather events or during meteorological/operational events critical to mission success. For the purposes of these procedures, severe weather is defined as any weather phenomenon considered critical enough by the customer to require advance/special notice and subsequent actions to prevent serious injury or damage to personnel, property, or resources. It is imperative that timely and accurate weather watches, warnings, and advisories are disseminated to all Fort Rucker agencies to ensure personnel and resource protection. FRWXOPS will perform the SWAP responsibilities as defined in AFMAN 15-129; Air Force Instruction (AFI) 10-229, Responding to Severe Weather Events, 15 October 2003, with 1 supplement, and AFI 10-206, Operational Reporting, 6 September 2011, with 12 supplements.

(1) Activation. SWAP will be activated when any of the following occur: a weather watch is issued for the local flying area; a tornado,  $\geq$  50-knot wind,  $\geq$  1/2-inch hail, freezing precipitation, or snow warning is issued for Cairns AAF; a tornado,  $\geq$  50-knot wind, or  $\geq$  1/2-inch hail warning is issued for Troy MAP, and/or a hurricane or tropical storm is forecast to affect the area.

(2) Notification. During FRWXOPS operating hours, the on-duty weather technician will implement SWAP by notifying the on-call severe weather manager. The on-duty technician will coordinate with the on-call severe weather manager to determine the level of support required. The on-call severe weather manager will report to the weather station when it appears that severe weather is imminent and will, time permitting, conduct a meteorological conference with the 26 OWS forecaster/regional weather supervisor. The on-call severe weather manager will remain at the weather station until the watch or warning is canceled or until it is determined that the threat has passed. During nonduty hours, the on-call technician will be contacted by the 26 OWS and will report to the weather station. Upon arriving at the weather station, the on-call technician will partner with the 26 OWS to monitor and manage the weather threat when any of the conditions in the preceding paragraph occur and

will remain at the weather station until the watch or warning is canceled or until it is determined that the threat has passed. The on-call technician will contact the IOC upon arriving and departing the weather station.

(3) Severe Weather Reporting Procedures. FRWXOPS will provide an IOI report via e-mail to the ACC, 26 OWS, IOC, and DPTMS when any of the following occur and produce damage and/or incur casualties within the warning radii of Cairns AAF (15 NM) or Troy MAP (5 NM): winds  $\geq$  50 knots; hail  $\geq$  1/2 inch; tornado; lightning, and snowstorms.

(4) Severe Weather Summary Content. The IOI report will include the following information: executive summary; relevant observations +/- 1 hour of the event; TAF; MEF; forecast hazards; watches, warnings, and advisories with leadtimes/timing errors; damage/casualty assessment and cost estimates if known; weather discussion, and status of equipment. IOIs are normally distributed the same day or within 24 hours of the severe event unless the event occurs over the weekend or on a holiday, in which case it is distributed the next staff duty day.

**3-5. OTHER FORECAST SERVICES.** FRWXOPS also provides the following forecast products and services, in addition to those previously described:

a. Hurricane Support. When a hurricane threatens the Gulf Coast or upon initial notification from the IOC, Cairns technicians begin providing post leadership with tropical updates via the FRWXOPS homepage four times daily. These updates will contain the following information: storm name; date/time; current winds; current minimum pressure; current movement; when Fort Rucker will be impacted; how Fort Rucker will be impacted; onset/duration of 35-knot sustained winds and 50-knot sustained winds; time of maximum winds at Fort Rucker; onset of precipitation at Fort Rucker, and total rainfall expected at Fort Rucker. Note: Per Air Force policy, FRWXOPS will not deviate from official forecasts issued by the 26 OWS's Tropical Cyclone Threat Assessment Products and the National Hurricane Center. Graphics showing the current storm position; storm information block; 5-day storm track, and wind swath will also be posted. The update will be posted to the homepage at 0430L, 1030L, 1630L, and 2230L. Follow the link <http://www.rucker.army.mil/6weather/hurr.htm> to the Hurricane Central section, and select "Hurricane Briefing Update." Additionally, FRWXOPS will provide an e-mail update to the IOC at 0430L, 1030L, 1630L, and 2230L. FRWXOPS will also provide a briefer to the IOC when the Battle Staff convenes. Aircraft evacuation planning/mission forecasts will be produced as needed. FRWXOPS will provide an IOI report via e-mail to the ACC, 26 OWS, IOC, and DPTMS if aircraft are evacuated due to a storm.

b. PMSV Support. PMSV support is available at Cairns AAF from 0100L Monday through 0100L Saturday (excluding federal holidays) or until the termination of USAACE local flying. Frequencies are 348.8 MHz on the UHF channel and 134.1 KHz on the VHF channel. Technicians will provide requested forecast support and will solicit PIREPs from all airborne aircrews. In the event of a PMSV outage and during nonduty hours, aircrews should utilize pilot to dispatch radio on 371.35 MHz on the UHF channel and 126.2 KHz on the VHF channel. Note: TWXOPS does not provide PMSV support.

c. Aircraft Mishaps/Incidents. Weather information for aircraft mishaps (Class A or B) or incidents within 60 NM of Cairns AAF is available upon request from an authorized agency. Upon notification of an aircraft mishap, FRWXOPS will coordinate with the 26 OWS to perform a data save and prepare a preliminary weather summary containing the observed and forecast weather in the area at the time of the accident. These weather summaries are prepared and disseminated to the appropriate unit's Safety Office

as soon as possible. FRWXOPS will provide an IOI report via e-mail to the ACC, 26 OWS, IOC, and DPTMS for any weather-related Class A, B, or C aircraft accident.

d. 7-Day Outlook. FRWXOPS will provide a 7-day outlook every Monday, Wednesday, and Friday morning. The outlook will be posted on the FRWXOPS homepage. Please note that this product is for planning purposes only and does not meet requirements for a flight weather briefing or MEF.

e. Weekend Flying Planning Forecast. FRWXOPS will issue a weather (Go/No Go) planning forecast by 0730L each Friday if USAACE weekend flying is scheduled. 110th AB will include FRWXOPS in weekend flight planning correspondence.

f. Semiannual Weather Briefings. Briefings highlighting weather patterns and unique hazards for each season are available upon request. Requests for semiannual briefings should be made at least 3 days in advance, if possible. When FRWXOPS personnel present briefings to groups, it is the responsibility of the unit requesting the briefing to have a computer with PowerPoint and a projector available for the briefer.

g. Presidential Weather Support. Presidential weather support will be provided IAW Air Force directives.

h. Staff Weather Briefings. Weather risk discussions are provided to senior leaders through the IOC whenever significant weather threatens the Fort Rucker area. In-person weather briefings are given to the Command Group, Battle Staff, or other staffs upon request.

i. Predeployment Planning Support. Upon request, FRWXOPS will provide weather planning information and climatology data for any Fort Rucker agency or unit preparing for deployment. Requests should be submitted at least 1 week in advance, as some data may take time to research and collect.

j. Climatological Services. Climatological studies and information are available upon request. Climatology for Cairns AAF, Hanchey AHP, and Lowe AHP is provided on the FRWXOPS homepage. Requests for additional data should be made with a minimum of 3 days notice. Due to their complex nature, some requests for climatology must be submitted to the Climate Service Center at the 14th Weather Squadron. Such requests may take longer to complete.

k. ATC Weather Training. FRWXOPS will provide initial and recurring training on limited observing procedures to all ATC personnel in order for ATC personnel to provide the required CWW. This training will be provided via PowerPoint presentation to the 1-11th Avn Regt. FRWXOPS will train the individual tower chiefs as requested.

l. OWS Briefing Responsibilities. Time and mission permitting, FRWXOPS will provide weather briefings to transient aircrews. Otherwise, transient aircrews may contact the 26 OWS for weather support.

m. Emergency/Crisis Action Response. FRWXOPS will provide emergency/crisis action response such as weather information and/or briefing support as requested.

**3-6. FORECAST PRODUCT LIMITATIONS.** The following forecast product limitations should be considered:

a. Generally, forecast accuracy decreases as the length of the forecast term increases. Additionally, if the weather station loses capabilities for a period of time (e.g., communications outage, weather station evacuation, etc.), forecast accuracy worsens as weather information becomes obsolete and no updated information is available to forecasters. Forecast performance metrics are available on the FRWXOPS Web page.

b. Technicians cannot always provide forecasting service on a first-come-first-served basis, or they may be unable to quickly handle every request for weather service during periods of adverse weather or heavy workloads. FRWXOPS's duty priority list, provided in appendix A, ensures tasks are performed according to their importance using a risk management approach.

## CHAPTER 4

### RECIPROCAL SUPPORT AND RESPONSIBILITIES

4-1. **FRWXOPS ROLES AND RESPONSIBILITIES.** FRWXOPS accomplishes the following tasks:

- a. Provide the weather forecasting and observing services described in chapters 2 and 3 and appropriate appendixes of this regulation.
- b. Notify the IOC upon opening and closing operations.
- c. Provide an on-call roster with contact information to the IOC for the scheduled on-call weather technicians during FRWXOPS closure hours.
- d. Provide peacetime weather support to Army Reserve components assigned to Fort Rucker, using products and procedures described in this regulation.
- e. Submit a weather summary or IOI report to the IOC and ACC whenever severe weather or an aircraft accident occurs.
- f. Notify Cairns Base Operations of all PMSV outages and returns to service. Since FRWXOPS does not have the ability to conduct a daily radio check, FRWXOPS will use the first PMSV contact of the day as a radio check and will so document.
- g. Provide ATC weather support.
  - (1) FRWXOPS will provide initial and recurring training on limited observing procedures to ATC personnel. The weather station will provide this training via PowerPoint presentation to the 1-11th Avn Regt. FRWXOPS will train the individual tower chiefs as requested.
  - (2) Establish a CWW with 1-11th Avn Regt personnel.
- h. Upon request, provide assistance to investigating officials reviewing Fort Rucker aircraft mishaps.
- i. Notify the Garrison Commander, through the Director, DPTMS, of any limitations in providing weather support, and provide information to DPTMS in order to update the notices to airmen (NOTAMs) and DOD flight information publications (FLIP) accordingly.
- j. Release weather information to DOD agencies upon request (reference paragraph 1-6).
- k. Coordinate with the 26 OWS on all issues related to weather support to Fort Rucker provided by the 26 OWS.
- l. Conduct a monthly tornado siren test when directed by the IOC.
- m. Operate the tornado siren.

4-2. **FORT RUCKER ACTIVITY REQUIREMENTS.** FRWXOPS requires support from various units assigned to Fort Rucker.

a. DPTMS will—

- (1) Inform the site supervisor, in writing, of any weather support requirement changes.
- (2) Provide the site supervisor and other FRWXOPS personnel access to all plans that require or impact weather support.
- (3) Disseminate weather watches, warnings, and advisories through the IOC IAW the Fort Rucker Mobilization and Operational Planning System (RMOPS) Weather Plan.
- (4) Notify the site supervisor if an alert or contingency requires weather support.
- (5) Notify the site supervisor at least 7 days in advance if an exercise requires weather support.
- (6) Promptly report significant events that involve FRWXOPS resources, personnel, or services, or reports of damage caused by a weather event.
  - (a) Coordinate with FRWXOPS prior to submitting a report concerning such events.
  - (b) Include ACC LANGLEY AFB VA in message reports, with information copies to A3W LANGLEY AFB VA//DIW//.
  - (c) Provide FRWXOPS an information copy of any command-level event or incident report that involves weather.
- (7) Relay EMERGENCY ACTION MESSAGES which affect the post to FRWXOPS.
- (8) Notify FRWXOPS of all force protection condition changes.
- (9) Budget funds for support of OL-C, HQ ACC as prescribed in AR 115-10.
- (10) Submit changes in weather operations (e.g., PMSV frequencies, operating hours) to DOD FLIP and NOTAMs.
- (11) Provide administrative support.
- (12) Coordinate with FRWXOPS to conduct a monthly tornado siren test.

b. The 1-11th Avn Regt will—

- (1) Conduct a CWW at all ATC facilities. Notify the weather station when the following occur:
  - (a) Winds  $\geq$  25, 35, or 50 knots occur at any basefield or stagefield with wind measurement capability.

(b) There are significant weather phenomena, such as fog or thunderstorms that may affect flight operations.

(c) Cairns Tower will notify the weather station when tower visibility is < 4 SM and is different from the visibility reported on the current Cairns observation (i.e., the surface visibility).

(d) Hanchey and Lowe Towers will notify the weather station when their ceiling is  $\leq$  1,000 feet and/or visibility  $\leq$  3 SM and is different from the observation at Cairns.

(e) Hanchey and Lowe Towers will notify the weather station if a cloud ceiling forms below, decreases to less than, or, if below, increases to equal or exceed 500 feet. Additionally, notify the weather station when visibility decreases to less than or, if below, increases to equal or exceed 1/2 SM.

(f) Relay all PIREPs received to weather personnel within 5 minutes. If air traffic responsibilities cause delays beyond 5 minutes, relay as soon as possible. It is very important to relay local PIREPs and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety and efficiency of other local operations and resources.

(2) Disseminate weather watches, warnings, and advisories and any other significant information IAW the RMOPS Weather Plan.

(3) Maintain the PMSV radio and monitor the radio during short-duration outages. Provide a radio check upon request.

(4) ATC tower personnel at Cairns AAF and the other basefields will notify the weather station upon opening and closing. Cairns ATC Tower will provide the active runway upon opening the airfield and changing runways and will inform the weather station of the current runway light setting upon opening, closing, or changing the light setting.

(5) Provide orientation tours of ARAC and ATC operations to newly assigned weather personnel upon request.

(6) Notify the weather station of meteorological equipment outages, communications outages, and aircraft mishaps. Provide the weather station a copy of the initial mishap report, upon request, or when a Class A or B accident occurs.

(7) ARAC/HUB will relay PIREPs, weather watches, warnings, and advisories, and weather reports to and from all basefields, stagefields, and airborne aircraft.

(8) HUB Radio will relay all MEF amendments to all active stagefields (including Molinelli Tower) and airborne crews.

(9) Provide backup radar support upon request.

c. 110th AB will notify FRWXOPS, in writing, of—

(1) Additional briefing or weather services needed due to changing aircraft or training requirements.

(2) Weekend flight training activities by 1600L Thursday and include a courtesy copy of any weekend flight training coordination that takes place during the week leading up to Thursday at 1600L.

d. Army Reserve components will notify FRWXOPS when—

(1) Weather or weather service may be a factor in a Class A, B, or C mishap being investigated.

(2) Flying is planned for the weekend.

e. Cairns AAF Operations will relay all MEF amendments to Cairns Tower, Lowe/Hanchey/Knox/Shell/FLATIRON Operations, and HUB Radio.

f. FRWXOPS personnel require support from various agencies at Fort Rucker to complete official duties and provide for unit members' quality of life. All requirements concerning Fort Rucker responsibilities regarding training, operations, communications, administration, budget, and logistics are outlined in AR 115-10. Units providing support services to FRWXOPS include, but are not limited to:

(1) The Network Enterprise Center (NEC) provides telephone/communication lines, communications/administrative support, and computer network services (LAN access, e-mail accounts). NEC provides commercial, long distance, and DSN telephone access. NEC technicians repair FRWXOPS network capability 24 hours per day, 7 days per week, at a priority just below that given to airfield NAVAIDS and the IOC's communications capabilities.

(2) The Logistics Readiness Center – Rucker provides government vehicles and refuel generators.

(3) The Directorate of Public Works (DPW) provides and maintains FRWXOPS facilities (at Cairns AAF and Troy MAP) and restores/maintains backup generators at high priority.

(4) NAVAIDS maintains/repairs the PMSV radio and restores/maintains the CCTV capability of FRWXOPS.

g. Each Fort Rucker agency and tenant unit will—

(1) Provide FRWXOPS feedback on its forecasting, observing, and training products and services.

(a) Aviation customers will debrief IAW locally established policies and procedures. Weather information from the debriefing will be routed to the weather station through local communication channels (e-mail or fax).

(b) Customers may also utilize the Interactive Customer Evaluation system to provide feedback on weather products and services.

(c) All non-aviation customers may use a Fort Rucker Weather Operations Customer Satisfaction Survey to tell FRWXOPS how satisfied they are with various products and services. This form may be found on the FRWXOPS homepage.

- (2) Review weather support requirements at least annually. Notify FRWXOPS through DPTMS when changes are required.
- (3) Notify NAVAIDS maintenance whenever a weather CCTV outage occurs.
- (4) Notify NEC whenever an LAN-related outage occurs affecting weather support.
- (5) All aviators will pass significant flight weather information to FRWXOPS via HUB, PMSV, ATC, Base Operations, or telephone.
- (6) Notify FRWXOPS when weekend flying is planned.

The proponent agency of this regulation is the Directorate of Plans, Training, Mobilization, and Security. Users are invited to send comments and suggested improvements to the US Army Garrison Command, ATTN: IMRC-PLA, Fort Rucker, AL 36362-5105.

FOR THE GARRISON COMMANDER:



DEBORAH L. SEIMER  
Director of Human Resources

Appendixes  
A-K

## APPENDIX A

### WEATHER STATION DUTY PRIORITIES

FRWXOPS provides weather support on a priority basis to ensure tasks are performed in the order of their importance. Tasks are accomplished with the following priority as a guide unless the weather technician's operational risk management assessment dictates otherwise:

1. Operate tornado siren.
2. Execute weather station evacuation.
3. Respond to aircraft and ground emergencies (e.g., aircraft emergencies and mishaps, accidental release of toxic chemicals, or any operation involving the safety of aircraft, materiel, or personnel).
4. Respond to PMSV contacts.
5. Respond to telephone HOTLINES (FLATIRON medical evacuation [MEDEVAC] missions, ARAC, Cairns, Hanchey, Lowe, HUB, IOC).
6. Augment and disseminate FMQ-19 observations for mandatory items.
7. Provide "eyes forward"/collaborate with the 26 OWS.
8. Disseminate weather watches, warnings, and advisories.
9. Perform SWAP duties.
10. Relay urgent PIREPs and air reports (AIREPs) to the 26 OWS.
11. Prepare and transmit MEFs.
12. Disseminate PIREPs and AIREPs.
13. Perform MISSIONWATCH activities.
14. Respond to other telephones (non-HOTLINES).
15. Provide flight weather briefings to local aircraft departing Cairns AAF.
16. Provide assistance to transient aircraft departing Cairns AAF.
17. Provide weather function training.
18. Provide other briefing support.
19. Accomplish administrative tasks.

## APPENDIX B

### SPECI CRITERIA (CAIRNS AAF)

1. Ceiling: The ceiling is observed to form below, decrease to less than, or, if below, increase to equal or exceed:

3,000 feet (AFMAN 15-111 and Fort Rucker Reg 115-1, US Army Aviation Center of Excellence [USAACE] Weather Support, 4 December 2012)

1,500 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)

1,000 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)

800 feet (AFMAN 15-111)

700 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)

600 feet (DOD FLIP and Fort Rucker Reg 115-1)

500 feet (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)

400 feet (DOD FLIP and Fort Rucker Reg 115-1)

300 feet (DOD FLIP and Fort Rucker Reg 115-1)

200 feet (AFI 13-204, Volume 3, Airfield Operations Procedures and Programs, 1 September 2010, with Change 1, 9 January 2012, and 1 supplement; DOD FLIP, and Fort Rucker Reg 115-1)

2. Sky Condition: A layer of clouds or obscuring phenomena aloft is observed 600 feet or below and no layer was reported in a previous METAR or SPECI. (AFMAN 15-111 and Fort Rucker Reg 115-1)

3. Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed:

3 SM (AFMAN 15-111 and Fort Rucker Reg 115-1)

2 SM (AFMAN 15-111; AFI 13-204, Volume 3; DOD FLIP, and Fort Rucker Reg 115-1)

1 1/2 SM (DOD FLIP and Fort Rucker Reg 115-1)

1 1/4 SM (DOD FLIP and Fort Rucker Reg 115-1)

1 SM (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)

3/4 SM (DOD FLIP and Fort Rucker Reg 115-1)

1/2 SM (AFI 13-204, Volume 3; DOD FLIP, and Fort Rucker Reg 115-1)

1/4 SM (AR 95-1, Flight Regulations, 12 November 2008)

4. Tornado or Funnel Cloud: Is observed or disappears from sight. (AFMAN 15-111 and Fort Rucker Reg 115-1)

5. Precipitation begins or ends. Note: A SPECI is not required for changes in type or the beginning or ending of one type while another is in progress. (AFMAN 15-111 and Fort Rucker Reg 115-1)

6. Freezing precipitation begins, ends, or changes intensity. (AFMAN 15-111 and Fort Rucker Reg 115-1)

7. Thunderstorms begin or end. (AFMAN 15-111 and Fort Rucker Reg 115-1)

8. Squall (speed increases 16 knots and is  $\geq 22$  knots for at least 1 minute). (AFMAN 15-111 and Fort Rucker Reg 115-1)

9. Hail begins or ends. (AFMAN 15-111 and Fort Rucker Reg 115-1)

Fort Rucker Reg 115-1 • 4 December 2012

10. Wind Shift: When the direction changes by 45 degrees or more in less than 15 minutes with sustained winds (or gusts) of 10 knots or more throughout the shift. (AFMAN 15-111 and Fort Rucker Reg 115-1)

11. Upon Resumption of Observing Function (only when supplementing or operating in backup mode): Take a SPECI within 15 minutes after returning following a break in coverage.

12. Aircraft Mishap (only when the FMQ-19 archive capability is not operating or when operating in backup mode): Include (ACFT MSHP) in the remarks section of Air Force Forms 3803 (Surface Weather Observations [METAR/SPECI]) or 3813 (Federal Meteorological Surface Weather Observations [METAR/SPECI]) but do not disseminate the remark.

13. RVR decreases to less than or, if below, increases to equal or exceed:

2,000 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)

2,400 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)

4,000 feet (DOD FLIP and Fort Rucker Reg 115-1)

5,000 feet (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)

6,000 feet (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)

RVR conditions (Runway 06 only) are unavailable (RVRNO), are first determined, or when RVRNO is no longer applicable.

Prevailing visibility is first observed to be  $\leq$  1 SM and again when prevailing visibility goes above 1 SM.

Note: RVR is only reported long line for Runway 06, when active.

## APPENDIX C

### SPECI CRITERIA (TROY MAP)

1. Ceiling: The ceiling is observed to form below, decrease to less than, or, if below, increase to equal or exceed:

- 3,000 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 1,500 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 1,000 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 800 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 700 feet (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 600 feet (DOD FLIP and Fort Rucker Reg 115-1)
- 500 feet (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)
- 400 feet (DOD FLIP and Fort Rucker Reg 115-1)
- 300 feet (DOD FLIP and Fort Rucker Reg 115-1)
- 200 feet (DOD FLIP and Fort Rucker Reg 115-1)

2. Sky Condition: A layer of clouds or obscuring phenomena aloft is observed 600 feet or below and no layer was reported in a previous METAR or SPECI. (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)

3. Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed:

- 3 SM (AFMAN 15-111 and Fort Rucker Reg 115-1)
- 2 SM (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)
- 1 3/4 SM (DOD FLIP and Fort Rucker Reg 115-1)
- 1 1/2 SM (DOD FLIP and Fort Rucker Reg 115-1)
- 1 1/4 SM (DOD FLIP and Fort Rucker Reg 115-1)
- 1 SM (AFMAN 15-111, DOD FLIP, and Fort Rucker Reg 115-1)
- 3/4 SM (DOD FLIP and Fort Rucker Reg 115-1)
- 3/8 SM (DOD FLIP and AR 95-1)

4. Tornado or Funnel Cloud: Is observed or disappears from sight. (AFMAN 15-111 and Fort Rucker Reg 115-1)

5. Hail begins or ends. (AFMAN 15-111 and Fort Rucker Reg 115-1)

6. Freezing precipitation or ice pellets begin, end, or change intensity. (AFMAN 15-111 and Fort Rucker Reg 115-1)

7. Thunderstorms begin or end. (AFMAN 15-111 and Fort Rucker Reg 115-1)

8. Squall (speed increases 16 knots and is  $\geq$  22 knots for at least 1 minute). (AFMAN 15-111 and Fort Rucker Reg 115-1)

9. Wind Shift: When the direction changes by 45 degrees or more in less than 15 minutes with sustained winds (or gusts) of 10 knots or more throughout the shift. (AFMAN 15-111 and Fort Rucker Reg 115-1)

10. Upon Resumption of Observing Function (only when supplementing or operating in backup mode): Take a SPECI within 15 minutes after returning following a break in coverage.

11. Aircraft Mishap (only when the ASOS archive capability is not operating or when operating in backup mode): Include (ACFT MSHP) in the remarks section of Air Force Forms 3803 or 3813 but do not disseminate the remark.

## APPENDIX D

### FMQ-19/ASOS AUGMENTATION PARAMETERS

1. On 13 June 2007, the FMQ-19 automated observing system was commissioned, thereby transitioning Cairns AAF from a manual reporting station to an automated reporting station. IAW Air Force directives, the FMQ-19 must remain in AUTO mode at all times unless the technician is performing augmentation for criteria listed in AFMAN 15-111. The ASOSs at Troy MAP and South Alabama RAP are also augmented as required and applicable. Augmentation consists of supplementing and/or backing up. Supplementing is the process of manually adding data to an observation generated by an automated surface weather observing system that is beyond that system's capability to measure and report. Backup is the process of manually providing meteorological data, documentation, and/or communication of an automated weather observation when the primary automated method is unavailable or unrepresentative. All manually observed elements will be observed from the weather station's backup observation point. The technician is responsible for ensuring the validity of all augmented data. Augmentation will not normally occur when the weather station is closed unless tornadic activity is occurring or forecast to occur.
2. The following elements will be supplemented (AFMAN 15-111):
  - a. Tornado, funnel cloud, or waterspout.
  - b. Volcanic ash.
  - c. Hail.
  - d. Visibility < 1/4 SM.
  - e. Duststorm or sandstorm.
  - f. Snow depth.
3. The following is a list of the most commonly used mandatory parameters of the FMQ-19/ASOS (and equipment used) which will be backed up when conditions impact operations based on criteria in appendixes I, J, and K:
  - a. Windspeed and direction (Kestrel 4000).
  - b. Visibility (technician and visibility chart).
  - c. Present weather elements and obscurations (technician).
  - d. Sky cover, up to and including 12,000 feet (technician).
  - e. Temperature/dewpoint (Kestrel 4000).
  - f. Altimeter setting (Kestrel 4000).
  - g. Lightning location (JAAWIN applet, technician).

- h. Layer of clouds or obscuring phenomena aloft observed at or below 600 feet SPECI (technician).
- i. Other remarks.
- j. Additive data.

## APPENDIX E

### WEATHER WATCH/WARNING/ADVISORY CRITERIA

1. Forecast Weather Watch Criteria (issued by the 26 OWS with FRWXOPS as a backup).

<b>Table F.1 - Forecast Weather Watches</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Tornado	As potential warrants
Severe Thunderstorm: winds $\geq$ 45 knots and/or hail $\geq$ 1/2 inch	As potential warrants
Damaging Winds $\geq$ 45 knots	As potential warrants
Heavy Rain ( $\geq$ 2 inches in 12 hours)	As potential warrants
Snowfall $\geq$ 1/2 inch accumulation	As potential warrants
Freezing Precipitation	As potential warrants
Lightning within 15 NM	60 minutes

Note: Except as noted, weather watches are issued for a 60 NM radius around Cairns AAF.

2. KTOI Forecast Weather Watch Criteria (issued by the 26 OWS with FRWXOPS as a backup).

<b>Table F.2 - Forecast Weather Watch Criteria and Desired Leadtime (KTOI, K79J)</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Lightning within 5 NM	30 minutes

3. Forecast Weather Warning Criteria (issued by the 26 OWS with FRWXOPS as a backup).

<b>Table F.3 - Forecast Weather Warning Criteria and Associated Minimum Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Tornado	5 minutes
Severe Thunderstorm: winds $\geq$ 45 knots and/or hail $\geq$ 1/2 inch	60 minutes
Moderate Thunderstorm: winds 30-44 knots and/or hail $<$ 1/2 inch	60 minutes
Damaging Winds $\geq$ 45 knots	60 minutes
Strong Winds 30-44 knots	60 minutes
Freezing Precipitation	60 minutes
Heavy Rain $\geq$ 2 inches in 12 hours	60 minutes
Snowfall $\geq$ 1/2 inch accumulation	60 minutes

Note: Forecast warnings are issued for a 15 NM radius around Cairns AAF.

4. KTOI Forecast Weather Warning Criteria (issued by the 26 OWS with FRWXOPS as a backup).

<b>Table F.4 - Forecast Weather Warning Criteria and Desired Leadtimes (KTOI, K79J)</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Tornado	5 minutes
Severe Thunderstorm: winds $\geq$ 45 knots and/or hail $\geq$ 1/2 inch	60 minutes
Damaging Winds $\geq$ 45 knots	60 minutes

Note: Forecast warnings are issued for a 5 NM radius around Troy MAP and are issued during duty hours at Troy only.

5. Observed Weather Warning Criteria (issued by FRWXOPS with the 26 OWS as a backup).

<b>Table F.5 - Observed Weather Warning Criteria and Desired Leadtime</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Lightning within 5 NM	Observed

Note: Observed warnings are issued for a 5 NM radius around Cairns AAF.

6. KTOI Observed Weather Warning Criteria (issued by the 26 OWS with FRWXOPS as a backup).

<b>Table F.6 - Observed Weather Warning Criteria and Desired Leadtime</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Lightning within 5 NM	Observed

Note: Observed warnings are issued for a 5 NM radius around Troy MAP and are issued during duty hours at Troy only.

7. Forecast AWA Criteria (issued by FRWXOPS with the 26 OWS as a backup).

<b>Table F.7 - Forecast AWA Criteria and Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Forecast IFR conditions (< 1000/3) within 60 NM during the N1 flying period	60 minutes
Forecast IFR conditions associated with thunderstorms within 60 NM during the N1 flying period	60 minutes
Forecast Predominant LIFR conditions (< 500/1) within 60 NM during the AM and/or PM flying period	30 minutes
Forecast severe or greater TURBC within 60 NM (below 10,000 feet)	60 minutes
Forecast icing (any type/amount) within 60 NM (below 10,000 feet)	60 minutes

Note: Forecast AWAs are issued for a 60 NM radius around Cairns AAF.

8. Observed AWA Criteria (issued by FRWXOPS with the 26 OWS as a backup).

<b>Table F.8 - Observed AWA Criteria and Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Winds $\geq$ 20 knots observed within 60 NM (not associated with thunderstorms)	Observed
Moderate or greater TURBC observed within 60 NM (below 10,000 feet)	Observed
LLWS observed within 60 NM (below 2,000 feet)	Observed
Falling snow occurring at or below 2,000 feet	Observed
IFR conditions (< 1000/3) observed within 60 NM during the N1 flying period	Observed
Cig/Vis $\leq$ 1500/5 observed in Goldfish during the N1 flying period	Observed

Note: Unless otherwise noted, observed AWAs are issued for a 60 NM radius around Cairns AAF.

9. Forecast TWA Criteria (issued by the 26 OWS with FRWOPS as a backup).

<b>Table F.9 - Forecast TWA Criteria and Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Temperature $\leq$ 0 degrees Celsius for $\geq$ 5 hours	60 minutes
Temperature $\leq$ -6 degrees Celsius	60 minutes

Note: Forecast TWAs are issued for a 15 NM radius around Cairns AAF.

10. Forecast TWA Criteria (issued by FRWXOPS with the 26 OWS as a backup).

<b>Table F.10 - Forecast TWA Criteria and Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Forecast IFR conditions (< 1000/3) within 15 NM during the N1 flying period	60 minutes
Forecast IFR conditions associated with thunderstorms within 15 NM during the N1 flying period	60 minutes
Forecast Predominant LIFR conditions (< 500/1) within 15 NM during the AM and/or PM flying period	30 minutes

Note: Forecast TWAs are issued for a 15 NM radius around Cairns AAF.

11. Observed TWA Criteria (issued by FRWXOPS with the 26 OWS as a backup).

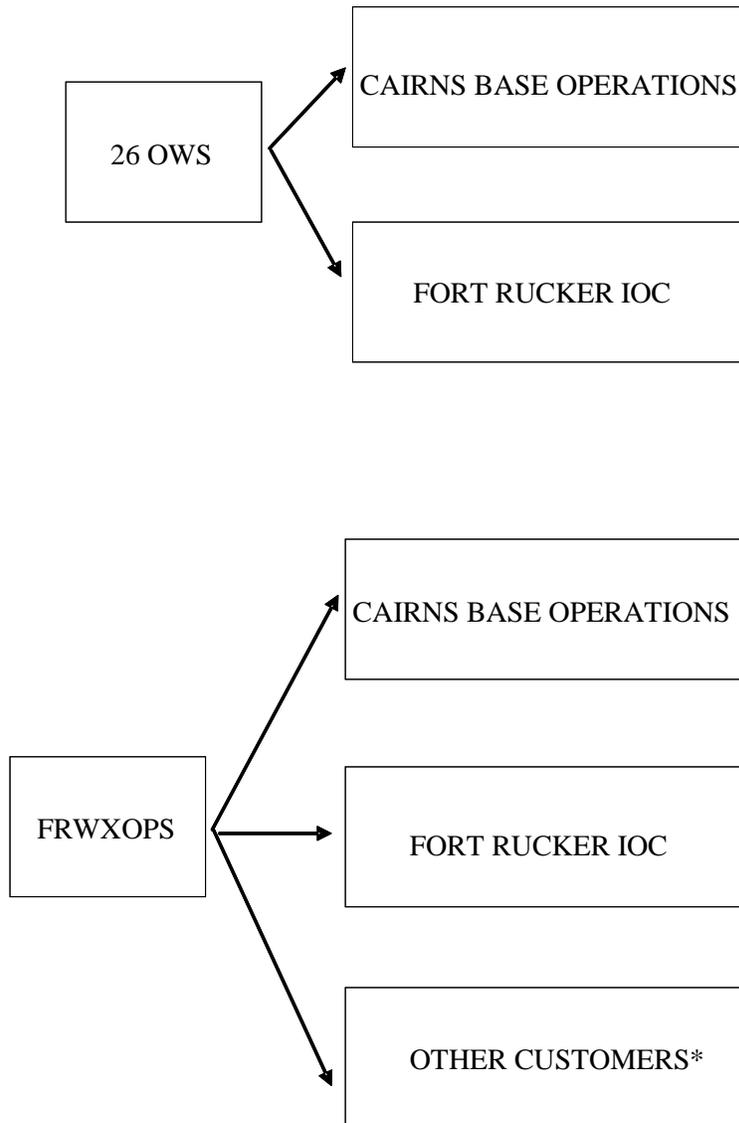
<b>Table F.11 - Observed TWA Criteria and Desired Leadtimes</b>	
<b>Criteria</b>	<b>Desired Leadtime</b>
Gust Spread $\geq$ 15 knots	Observed
Lightning observed within 10 NM	Observed
$\geq$ 25-knot crosswind	Observed
IFR conditions (< 1000/3) observed within 15 NM during the N1 flying period	Observed

Note: Unless otherwise noted, observed TWAs are issued for a 15 NM radius around Cairns AAF.

12. Weather watches, warnings, and advisories are each numbered sequentially by month. For instance, the first weather watch in August would be #08-001, the third weather warning in November would be #11-003, and the tenth weather advisory in December would be #12-010. Watches, warnings, and advisories issued by FRWXOPS are prefixed with a letter (e.g., #08-A012).

**FIGURE 1**

**RESOURCE PROTECTION NOTIFICATION CHAIN**



\*For freezing precipitation, snow, heavy rain, and temperature watches/warnings/advisories, the Emergency Management Control Section/DPW will be notified. For lightning within 10 NM and 5 NM, Refuel will be notified. For the N1 IFR advisories and the AM and PM LIFR advisories, ARAC and HUB Radio will be notified. For the N1 Goldfish advisory, ARAC will be notified. For the falling snow advisory, the Primary Division will be notified.

Generally speaking, Cairns Base Operations disseminates watches, warnings, and advisories through operational channels via the weather phone. The IOC disseminates watches and warnings through administrative channels. For details of how Cairns Base Operations and the IOC disseminate watches, warnings, and advisories and a further breakdown of dissemination through individual organizations, refer to the Fort Rucker RMOPS Weather Plan.

## APPENDIX F

### BREAKDOWN OF THE LOCAL DD FORM 175-1

1. Takeoff Data.

FLIGHT WEATHER BRIEFING							
PART I - TAKEOFF DATA (VALID AT 14)							
1. DATE (YYMMDD) 120628	2. ACFT TYPE / NO.	3. DEPT / LTD z	4. RUNWAY TEMP. 34 °C	5. DEWPOINT 15 °C	6. TEMP DEV °C	7. PRESSURE ALT. 170 FT	8. DENSITY ALT. FT
13. REMARKS / TAKEOFF ALIN FCST / LOCAL WWAS							

Block  
Number

- 1 - Date of mission (Zulu).
- 2-3 - Typically not included on the local DD Form 175-1; available upon request.
- 4 - Runway temperature for specific flight period times (AM - 0800L, PM - 1400L, N1 - 2000L).
- 5 - Dewpoint temperature for specific flight period times (AM - 0800L, PM - 1400L, N1 - 2000L).
- 6 - Typically not included on the local DD Form 175-1; available upon request.
- 7 - PA for specific flight period times (AM - 0800L, PM - 1400L, N1 - 2000L).
- 8 - Typically not included on the local DD Form 175-1; available upon request.
- 9-12 - Not included on the local DD Form 175-1.
- 13 - Any watch, warning, or advisory (that affects flight operations) in effect at takeoff.  
Exception: Lightning observed within 10 NM and 5 NM. If there are more than two watches, warnings, or advisories in effect, they will appear in the Remarks section, block 35. If none are valid for the flight period, NONE is entered in this block.

2. Enroute & Mission Data.

PART II - ENROUTE & MISSION DATA																		
14. FLT LEVEL / WIND / TEMP						15. SPACE WEATHER				16. SOLAR / LUNAR								
010	27006	/	+31 C	050	33006	/	+21 C	NO IMPACT		MARGINAL	SEVERE	BMNT	28/ 0439	All Times Local				
020	28006	/	+28 C	060	VRB06	/	+19 C	FREQ	X			SR	28/ 0541	MR 28/ 1435				
030	28006	/	+26 C	070	03010	/	+17 C	GPS	X			SS	28/ 1951	MS 28/ 0100				
040	30006	/	+24 C	080	03015	/	+15 C	RAD	X			EENT	28/ 2053	ILLUM 65 %				
17. 675: VISIBLE MOISTURE & TEMPS ≤ 4000 FT AGL																		
18. OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY																		
19. MINIMUM CEILING - LOCATION																		
20. MAXIMUM CLOUD TOPS - LOCATION																		
21. MINIMUM FREEZING LVL - LOCATION																		
22. THUNDERSTORMS				23. TURBULENCE (ACFT ≤ 12,500 LBS)				24. ICING				25. PRECIPITATION						
X	NONE	AREA	LINE	X	NONE	IN CLEAR	IN CLOUD	X	NONE	RIME	MIXED	CLEAR	X	NONE	DRZ	RAIN	SNOW	PELLET
ISOLATED 1-2%				LIGHT				TRACE				LIGHT						
FEW 3 - 15%				MODERATE				LIGHT				MODERATE						
SCATTERED 16 - 45%				SEVERE				MODERATE				HEAVY						
NUMEROUS-MORE THAN				EXTREME				SEVERE				SHOWERS						
HAIL, SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR EXPECTED IN AND NEAR THUNDERSTORMS				LEVELS				LEVELS				FREEZING						
LOCATION				LOCATION				LOCATION				LOCATION						

Block  
Number

- 14 - Flight level, winds, and temperatures (degrees Celsius). For USAACE operations, flight levels typically range 010-080 feet, and these will be listed in this block.
- 15 - Space weather.

Block  
Number

- 16 - Solar/Lunar data. Sunrise (SR), sunset (SS), begin morning nautical twilight (BMNT), end evening nautical twilight (EENT), moonrise (MR), moonset (MS), and percent illumination (ILLUM) are included in this block.
- 17 - Visible Moisture & Temps  $\leq 4$  degrees Celsius at flight level.
- 18 - Obscurations at flight level restricting visibility in the local flying area. If flight visibility is  $< 7$  SM, an obstruction will be indicated.
- 19 - Minimum ceiling (AGL) in the local flying area.
- 20 - Maximum cloud tops (mean sea level [MSL]) en route. Typically not included on the local DD Form 175-1; available upon request.
- 21 - Minimum freezing level (MSL) in the local flying area.
- 22 - Thunderstorms. Includes the type, coverage, maximum tops, and location.
- 23 - Turbulence (Category I aircraft). Includes the type, intensity, levels, and location.
- 24 - Icing. Includes the type, amount, levels, and location.
- 25 - Precipitation. Includes the type, intensity, and location.

3. Aerodrome Forecasts.

PART III - AERODROME FORECASTS						PART IV - COMMENTS/REMARKS
26. AIRDRUME	27. VALID TIME		28. SFC WIND	29. VSBY/WEA	30. CLOUD LAYERS	31. ALTIMETER
DEST/ALTN KOZR	1730	1930	VRB06	6-SHRA	BKN020 OVC060	30.00
DEST/ALTN TEMPO	1730	1930	VRB12G20	2 TSRA	BKN008 OVC015	INS
DEST/ALTN FROM	1930	0000	VRB06	7	BKN030 OVC250	29.94
DEST/ALTN TEMPO	1930	0000	VRB15G25	1+TSRA	BKN015 OVC030	INS
DEST/ALTN						INS
DEST/ALTN						INS
DEST/ALTN						INS
DEST/ALTN						INS
DEST/ALTN						INS
DEST/ALTN						INS
DEST/ALTN						INS

Block  
Number

- 26 - Destination or alternate destination for the mission. The local DD Form 175-1 primary destinations are Cairns AAF (KOZR), Dothan (KDHN), Marianna (KMAI), Montgomery (KMGM), South Alabama RAP (K79J), Bonifay (K1J0), Troy (KTOI), Lawson AAF (KLSF), Albany (KABY), Columbus (KCSG), Tallahassee (KTLH), Panama City (KECP), Eufaula (KEUF), Crestview (KCEW), and Pensacola (KPNS).
- 27 - Valid time. On the local DD Form 175-1, the valid time begins at briefing time plus 1 hour and ends when significant changes occur which require additional lines to the forecasts. The end of the forecast period is the end of the scheduled flying period.
- 28 - Forecast surface wind in DDDSSGSS. DDD indicates the direction from which wind is forecast to be blowing; SS indicates windspeed in knots; G indicates gusts, if any, and SS indicates maximum forecast wind gust in knots.
- 29 - Forecast visibility and any weather or obstructions which limit visibility to  $< 7$  SM.
- 30 - Forecast cloud layers in METAR code.
- 31 - Forecast minimum ALSTG.

NOTE: Large blocks to the right will indicate destinations in the local flying area that have the same or similar forecast. If all locations are the same, there will be a remark stating A/S or all stations are the same or better.

4. Comments/Remarks.

PART IV - COMMENTS/REMARKS				
PMSV: 348.8 (UHF) 134.1	PHONE: 334-255- 8385 DSN: 558-8385	FAX: 344-255- 8521 DSN: 558-8521	SOCIAL: FB: /ftruckerwx twitter@ftruckerwx	WWW.RUCKER.ARMY.MIL/6WEATHER/INDEX.HTM FREE MOBILE APP AVAILABLE AT: FTRUCKER.MOBI
KOZR MAX	35C (95F)	KOZR MAX PA: + 230	KOZR MAX DA: + 2780	
35. REMARKS:				

This area includes several methods to contact FRWXOPS for updates, including PMSV frequencies, phone numbers, and social media sites.

Block  
Number

- 35 - Remarks. Used to comment on significant phenomena not covered elsewhere. Includes KOZR maximum temperature, PA, and DA for the flying period.

5. Briefing Record.

PART V - BRIEFING RECORD					
36. WX BRIEFED TIME E 15:45Z	37. FLIMSY BRIEFING PM (1730-0000Z)	38. FORECASTER'S INITIALS AB	39. VOID TIME 17:15 Z	40. EXTENDED TO/INITIALS Z	41. WX REBRIEF TIME/INITIALS Z

Block  
Number

- 36 - WX briefed time. Initial weather brief time (Zulu) for each applicable flying period.
- 37 - Flimsy briefing number. Applicable flying period and valid times posted in this block.
- 38 - Forecaster's initials.
- 39 - Typically not included on the local DD Form 175-1.
- 40 - Void time. Initial weather void time (Zulu) for each applicable flying period.
- 41 - Extended to/initials. The new void time is entered in this block, along with the forecaster's initials.
- 42 - WX rebrief time/initials. The new brief time is entered in this block, along with the forecaster's initials.
- 43 - Not included on the local DD Form 175-1.

## APPENDIX G

### BREAKDOWN OF THE MEF

1. Part I: Date/Time/Briefer.

<b>AMENDED</b>		<b>6TH WEATHER FLIGHT MISSION EXECUTION FORECAST</b>		<b>UPDATED at 1331Z</b>	
<b>DATE:</b> 20 Jan 11	<b>VALID PERIOD:</b> AM (1200Z - 1800Z)	<b>ISSUE TIME</b> 20/ 10:45	<b>Briefer:</b> CH		

2. Part II: Solar & Lunar Data (Local Time). The azimuth and elevation are valid for 2400L.

<i>SOLAR &amp; LUNAR DATA (all times are LOCAL)</i>							
<i>Sunrise</i>	<i>Sunset</i>	<i>EENT</i>	<i>Moonrise</i>	<i>Moonset</i>	<i>Azimuth</i>	<i>Elevation</i>	<i>% Illum</i>
20/ 0641L	20/ 1707L	20/ 1802L	20/ 1821L	20/ 0703L	140 °	65 °	99 %

3. Part III: Flight level winds and temperatures (degrees Celsius) are listed 010-080.

<i>FLIGHT LEVEL WINDS &amp; TEMPS (All heights are MSL)</i>						<i>MIN FZ LVL: &gt;100</i>
<i>FLT LEVEL</i>	<i>WIND</i>	<i>TEMP</i>	<i>FLT LEVEL</i>	<i>WIND</i>	<i>TEMP</i>	
010	17015KT	+09 C	050	24025KT	+08 C	
020	19015KT	+08 C	060	25025KT	+07 C	
030	22020KT	+10 C	070	26030KT	+06 C	
040	24020KT	+09 C	080	26030KT	+05 C	

4. Part IV: Any flight hazards are identified in this block. Turbulence (Category I aircraft) is identified by type, intensity, and levels. Icing is identified by type, intensity, and levels. Thunderstorms are identified by type, coverage, and maximum tops.

<i>FLIGHT HAZARDS (All heights are MSL)</i>			
<i>TURBULENCE (Category I Aircraft)</i>	LIGHT	SFC-060	ALL AREAS
<i>ICING</i>	NONE		
<i>THUNDERSTORMS</i>	SCT	MT 450	FL PANHANDLE
<i>LOW LEVEL WIND SHEAR</i>	NONE		

5. Part V: KOZR & Area Forecast Data. This block lists the maximum/minimum temperatures (degrees Celsius) at KOZR and in the local flying area, the minimum ALSTG at KOZR and in the local flying area, the maximum PA/DA at KOZR and in the local flying area, the minimum ceiling at KOZR and in the local flying area, and the minimum visibility/weather at KOZR and in the local flying area.

<i>KOZR &amp; AREA FORECAST DATA</i>								
	<i>MAX TEMP</i>	<i>MIN TEMP</i>	<i>MIN ALSTG</i>	<i>MAX PA</i>	<i>MAX DA</i>	<i>MIN CIG</i>	<i>MIN VIS</i>	<i>MIN WX</i>
<i>KOZR</i>	14C (57F)	3C (37F)	29.86	360 FT	460 FT	012	1SM	TSRA
<i>AREA</i>	15C (59F)	0C (32F)	29.84	580 FT	920 FT	007	0.5SM	+TSRA

6. Part VI: MEF Area Forecasts. This block breaks down the forecast for each MEF forecast area for the entire period. In the example below, thunderstorms (TSRA) are forecast in all areas, with the maximum instantaneous coverage in each area listed in the blocks to the right. VANGUARD S and BEARCAT have two time periods with different thunderstorm coverage specified in parenthesis (ISOLD and SCT). The greatest coverage for those two areas is listed in the blocks to the right. Appendix H defines each of the seven MEF forecast areas.

<i>AREA FORECASTS (All heights are AGL)</i>		<i>TS COVERAGE</i>
<i>GOLDFISH</i>	22012G22KT 7SM SCT006 BKN012 ISOLD 16-18Z: VRB15G25KT 1SM TSRA	<b>ISOLD (1-10%)</b>
<i>VANGUARD N</i>	22012G22KT 7SM SCT006 BKN012 ISOLD 16-18Z: VRB15G25KT 1SM TSRA	<b>ISOLD (1-10%)</b>
<i>VANGUARD C</i>	22012G22KT 7SM SCT006 BKN012 ISOLD 16-18Z: VRB15G25KT 1SM TSRA	<b>ISOLD (1-10%)</b>
<i>VANGUARD S</i> <i>AMD#1 at 1245Z</i>	22012G22KT 7SM BKN010 OVC015 ISOLD 13-15Z: VRB15G25KT 1SM TSRA (ISOLD) AFT 15Z: 22012KT 7SM BKN007 OVC010 ISOLD 16-18Z: VRB25G35KT 1/2SM +TSRA (SCT)	<b>SCT (26-50%)</b>
<i>HAWK</i>	22012G22KT 7SM SCT006 BKN012 ISOLD 16-18Z: VRB15G25KT 1SM TSRA	<b>ISOLD (1-10%)</b>
<i>BEARCAT</i> <i>AMD#1 at 1245Z</i>	22012G22KT 7SM BKN010 OVC015 ISOLD 13-15Z: VRB15G25KT 1SM TSRA (ISOLD) AFT 15Z: 22012KT 7SM BKN007 OVC010 ISOLD 16-18Z: VRB25G35KT 1/2SM +TSRA (SCT)	<b>SCT (26-50%)</b>
<i>FIXED WING</i>	22012G22KT 7SM SCT006 BKN012 ISOLD 16-18Z: VRB15G25KT 1SM TSRA	<b>ISOLD (1-10%)</b>

7. Part VII: Planning Data. This block gives planning data for the next flying period. Planning data includes a forecast condition for each forecast area (VFR, marginal VFR, or IFR), as well as maximum temperature (degrees Celsius) and maximum PA (in feet) for KOZR. There is also space for any remarks.

<b>***FOR PLANNING ONLY*** PM PLANNING DATA FORECASTS (All heights are AGL) ***FOR PLANNING ONLY***</b>							
<i>AREA FORECAST</i>	<i>Goldfish</i>	<i>Vanguard N</i>	<i>Vanguard C</i>	<i>Vanguard S</i>	<i>Hawk</i>	<i>Bearcat</i>	<i>Fixed Wing</i>
<i>CONDITION</i>	MVFR ENT PD	MVFR ENT PD	MVFR ENT PD	MVFR ENT PD	MVFR ENT PD	MVFR ENT PD	MVFR ENT PD
<i>PM KOZR MAX TEMP</i>	<i>17C</i>						
<i>PM KOZR MAX PA</i>	<i>290FT</i>						
<i>Remarks - THUNDERSTORMS WILL LINGER UNTIL MID-AFTERNOON</i>							

8. Part VIII: Contact Information. This block lists FRWXOPS's commercial/DSN telephone and fax numbers and UHF/VHF PMSV frequencies.

<b>CONTACT 6TH WEATHER FLIGHT</b>		
<i>FORECASTER PHONE</i>	<i>PMSV</i>	<i>FAX</i>
<i>(334) 255-8385 (DSN 558-8385)</i>	<i>VHF 134.1</i> <i>UHF 348.8</i>	<i>(334) 255-8521 (DSN 558-8521)</i>

9. Part IX: Weather Watches, Warnings, and Advisories. This block lists all weather watches, warnings, and advisories (affecting flight operations) that are in effect or are forecast to be in effect during the period.

<i><b>WEATHER WATCHES, WARNINGS, ADVISORIES</b></i>			
Type	Number	Valid Time	Description
WATCH	#01-A002	VT: 1300Z - 2100Z	COND FAVORABLE FOR TORNADOES W/I 60NM OF CAAF
AWA	#01-A014	VT: CURR - UFN	SFC WNDS 20KTS OR GTR OBSVD W/I 60NM OF CAAF

## APPENDIX H

### MEF FORECAST AREAS DEFINED

1. The MEF includes seven forecast areas. In the context of this weather plan and all forecast products issued by FRWXOPS, these seven forecast areas are:

a. BEARCAT. Synonymous with Area of Operations (AO) Bearcat as defined in Fort Rucker Reg 95-2. Specific airfields include High Falls Stagefield, Tri-County MAP, and Marianna MAP.

b. HAWK. Synonymous with AO Hawk as defined in Fort Rucker Reg 95-2. Specific airfields include Molinelli Range, Tabernacle Stagefield, Hunt Stagefield, Hatch Stagefield, Hooper Stagefield, Ech Stagefield, and Goldberg Stagefield.

c. FIXED WING. Synonymous with Fixed Wing Training Areas A and B as defined in Fort Rucker Reg 95-2. Specific airfields include Blakely, GA.

d. VANGUARD. The boundaries of VANGUARD are the same as AO Vanguard as defined in Fort Rucker Reg 95-2. However, in an effort to provide a more detailed forecast, we will refer to VANGUARD NORTH, VANGUARD CENTRAL, and VANGUARD SOUTH, as defined below.

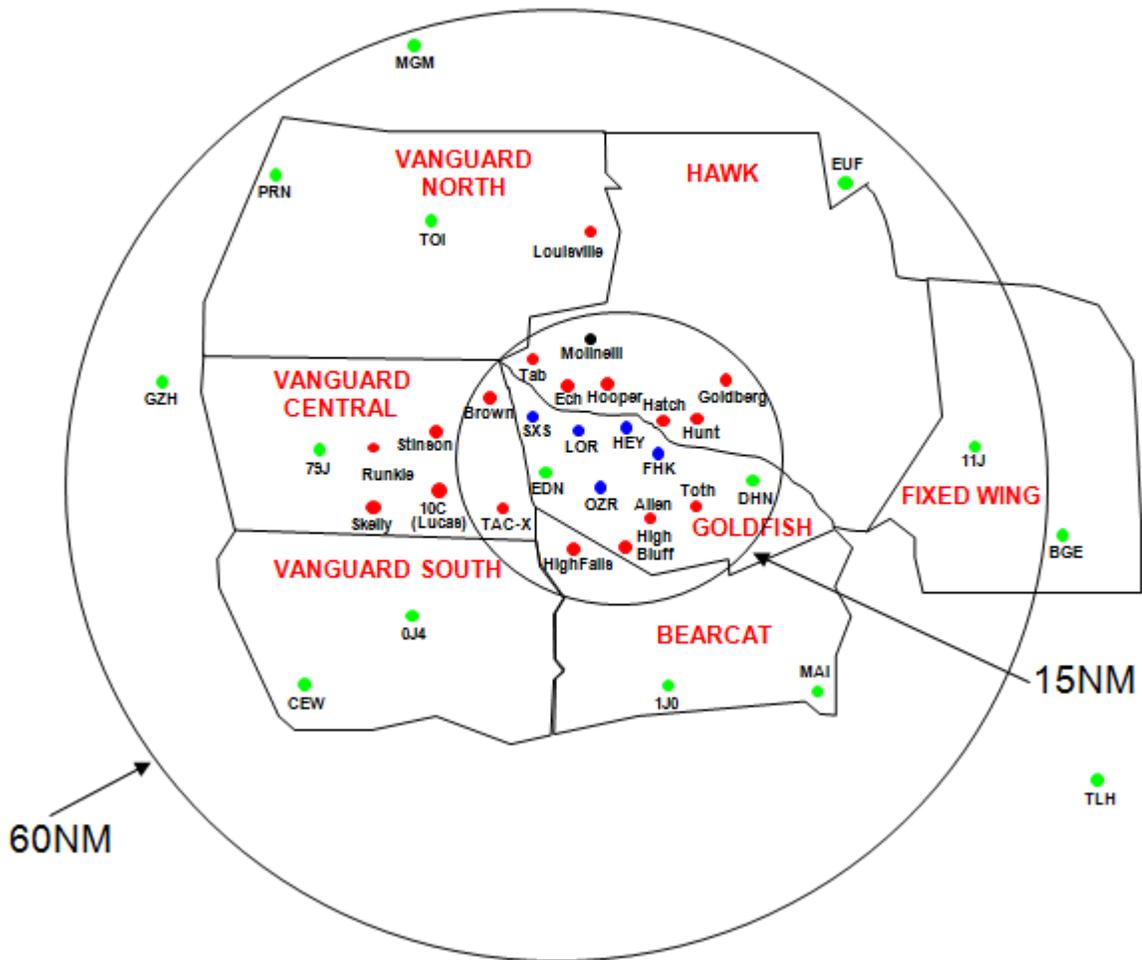
(1) VANGUARD NORTH. The southern boundary is a parallel line along  $31^{\circ} 31'$  (north of Gantt Lake but south of Wolfpit). Specific airfields include Troy MAP, Louisville Stagefield, and Greenville MAP.

(2) VANGUARD CENTRAL. The northern boundary is a parallel line along  $31^{\circ} 31'$  (north of Gantt Lake but south of Wolfpit). The southern boundary is a parallel line along  $31^{\circ} 05'$  (bisects Hacoda; north of Florala but south of Samson). Specific airfields include South Alabama RAP, Stinson Stagefield, Runkle Stagefield, Skelly Stagefield, Brown Stagefield, 10C (Lucas Stagefield), and TAC-X.

(3) VANGUARD SOUTH. The northern boundary is a parallel line along  $31^{\circ} 05'$  (bisects Hacoda; north of Florala but south of Samson). Specific airfields include Florala MAP and Crestview, FL.

e. GOLDFISH. Class D Airspace. Specific airfields include Hanchey AHP, Knox AHP, Dothan RAP, Cairns AAF, Lowe AHP, Shell AHP, Highbluff Stagefield, Allen Stagefield, Toth Stagefield, and Enterprise MAP.

2. The seven MEF forecast areas are depicted below.



## APPENDIX I

### MEF SPECIFICATION CRITERIA

1. Specification Criteria. The VFR MEF specifies the onset and duration of the following elements:
  - a. Thunderstorms. Timing and coverage.
  - b. Weather watches, warnings, and advisories that are in effect or will be in effect during the period.
  - c. Surface winds gusting to  $\geq 20$  knots within the local flying area.
  - d. Ceiling. When a ceiling decreases to less than or, if below, increases to equal or exceed:
    - 3,000 feet (TAF)
    - 1,500 feet (Head Hunter night minimum)
    - 1,000 feet (Primary Division launch minimum, Head Hunter day minimum, Advanced Division, 23d Flying Training Squadron [23d FTS], FLATIRON, AH-64D, OH-58A/C/D, UH-60, UH-72A, TH-67, CH-47 night training minimum)
    - 700 feet (Primary Division launch minimum and stagefield training minimum, 23d FTS day training minimum)
    - 600 feet (Air Force Detachment [AF Det] 5 circling minimum)
    - 500 feet (FLATIRON night training on Cairns AAF minimum, AH-64D, OH-58A/C/D, UH-60, UH-1, UH-72A, TH-67, CH-47 day training minimum)
    - 300 feet (FLATIRON day training minimum, Advanced Division Special VFR minimum)
    - 200 feet (AF Det 5, C-12 Reserves launch minimum, Advanced Division day training minimum)
    - 100 feet (MEDEVAC launch minimum)
  - e. Visibility. When visibility decreases to less than or, if below, increases to equal or exceed:
    - 3 SM (Primary Division launch minimum, Advanced Division, 23d FTS, FLATIRON, AH-64D, OH-58A/C/D, UH-60, UH-72A, UH-1, TH-67, CH-47 night training minimum; Head Hunter day/night minimum)
    - 2 SM (AF Det 5 circling minimum, 23d FTS day training minimum)
    - 1 SM (Primary Division launch minimum and stagefield training minimum, FLATIRON night training on Cairns AAF minimum, AH-64D, OH-58A/C/D, UH-60, TH-67, UH-72A, UH-1, CH-47 day training minimum)
    - 1/2 SM (Advanced Division Special VFR minimum, AF Det 5, C-12 Reserves launch minimum, FLATIRON, AH-64D, OH-58D, UH-72A, UH-60 day training minimum)
    - 1/4 SM (Advanced Division day training minimum, MEDEVAC launch minimum)

## MEF AMENDMENT CRITERIA

2. Amendment Criteria. The VFR MEF is amended when any of the following elements have been incorrectly forecast:

- a. Thunderstorms. Timing and/or coverage of Few or greater.
- b. Weather Watches, Warnings, or Advisories. Weather watch, warning, or advisory criteria are met and were not forecast or, if specified, are no longer expected to occur.
- c. Surface Winds. When the forecast surface windspeed, including gusts, is in error by 10 knots or more.
- d. Surface Winds. When the direction of the forecast surface winds is in error by 30 degrees or more and the predominant windspeed, including gusts, is over 15 knots.
- e. Ceiling and Visibility. When ceilings decrease to less than or, if below, increase to equal or exceed the following categories (category is determined by the lower ceiling or visibility value):

Category F: Ceiling  $\geq$  1,000 feet; visibility  $\geq$  3 SM.

Category E: Ceiling  $<$  1,000 feet and  $\geq$  700 feet; visibility  $<$  3 SM and  $\geq$  2 SM.

Category D: Ceiling  $<$  700 feet and  $\geq$  600 feet; visibility  $<$  2 SM and  $\geq$  1 1/4 SM.

Category C: Ceiling  $<$  600 feet and  $\geq$  500 feet; visibility  $<$  1 1/4 SM and  $\geq$  1 SM.

Category B: Ceiling  $<$  500 feet and  $\geq$  200 feet; visibility  $<$  1 SM and  $\geq$  1/4 SM.

Category A: Ceiling  $<$  200 feet; visibility  $<$  1/4 SM.

Note: Categories B, C, and D are required during AM and PM period only.

## APPENDIX J

### USAAACE WEATHER SUPPORT REQUIREMENTS/CUSTOMER ACTIONS

The following table lists weather events or thresholds that impact or potentially impact Fort Rucker operations. Customer actions to these weather events or thresholds are also listed.

<u>Weather Event</u>	<u>Affected Unit</u>	<u>Impact</u>	<u>Customer Action</u>
<b>Tornadoes</b>			
Tornado	All	Threat to post populace, resources	Sound alarm; take cover, cancel flight ops.
<b>Wind Thresholds</b>			
Wind ≥ 45 knots	IOC	Possible damage to post	Override CCTV; implement HURCON Plan, if appropriate.
	110th AB	Possible aircraft damage	Cancel flights; recover aircraft, hangar/secure aircraft. Run up limit for UH-72A, UH-60, AH-64, TH-67, and OH-58A/C/D.
	Aircraft	Possible damage to aircraft and equipment	Stack, hangar, or secure aircraft.
	Logistics Mgmt Div		Secure flight line equipment.
	DPW	Damage to unsecured job sites	Secure job sites and materials.
Wind 35-44 knots	110th AB	Possible aircraft damage	Cancel or hold flights.
Wind ≥ 30 knots	110th AB	Hazard to rotary wing aircraft during runup	Delay flights. Affects TH-67 and UH-1 aircraft.
Gust Spread ≥ 15 knots	110th AB	Hazard to rotary wing aircraft during runup	Delay flights. Affects UH-1, TH-67, and OH-58A/C/D models.
Wind ≥ 20 knots	110th AB	Decision point	Alert crews that winds could approach airframe limits. Limit training on autorotation landings. Aircraft cannot be on jacks.
Gusty	Chief of Staff (CoS)/Secretary of the General Staff (SGS)	Outdoors formation undesirable	Move formation indoors.
LLWS	110th AB	Hazard to light aircraft	Cancel or hold flights.
X wind ≥ 25 knots	110th AB/ AF Det 5	Aircraft restriction	Cancel or hold flights.
<b>Flight/Ground Hazards</b>			
Turbulence			
Moderate+	110th AB	Hazard to light aircraft	Cancel student solo flights.
Severe+	110th AB	Hazard to aircraft	Cancel flights.
Icing			
Moderate+	110th AB	Hazard to rotary wing aircraft	Cancel flights.
Lightning within 5 NM	110th AB	Hazardous to operations	Suspend operations.
Lightning within 10 NM	110th AB; Refuel	Provides a “heads up” that lightning is in the area	Maintain situational awareness, as lightning within 5 NM may soon occur.
Lightning within 15 NM	110th AB	OH-58D avionics (expensive to repair if struck)	Hangar OH-58Ds. <sup>(1)</sup>

<u>Weather Event</u>	<u>Affected Unit</u>	<u>Impact</u>	<u>Customer Action</u>
<b>Precipitation</b>			
Hail ≥ 1/2 inch	Aircraft Logistics Mgmt Div	Aircraft damage	Hangar part of USAACE fleet.
≥ 2 inches rain in 12 hours	IOC	Flooding threat	Command and control for flood control.
	DPW	Affects outside activity	Defer outside work.
Freezing precipitation	DPW	Affects outside activity and road conditions	Defer outside work; sand bridges/roads.
≥ 1/2 inch snow	IOC	Road conditions	Coordinate snow removal.
Falling snow	110th AB	Hazard for TH-67s	Suspend or cancel flights.
Any type	CoS/SGS	Outdoors formation undesirable	Move formation indoors.
<b>Other</b>			
< 500 feet/ 1 SM (AM and PM period)	110th AB	Affects launch/recovery during daytime operations	Cancel flights <sup>(2)</sup> ; recover aircraft. <sup>(2)</sup>
< 1,000 feet/ 3 SM (N1 period)	110th AB	Prevents VFR recovery	Cancel flights <sup>(2)</sup> ; recover aircraft. <sup>(2)</sup>
< 1,500 feet/ 3 SM (N1 period)	ARAC	Impacts hours of operations	Extend operating hours in order to recover Army aircraft (radar approached, low altitudes, etc.)
<b>Temperatures</b>			
≤ 00 degrees Celsius for 5+ hours	DPW	Outdoor pipes may freeze.	Make provisions to prevent freezing and bursting.
< M06 degrees Celsius for 1+ hour	DPW	Outdoor pipes may freeze.	Alert standby crews during nonduty hours for emergency repairs and cleanup.

Notes:

<sup>(1)</sup> Original Commanding General (Major General Robinson) policy levying requirement, 9 March 1994. Requirements to hangar OH-58Ds and other aircraft may vary based on the season and thunderstorm threat.

<sup>(2)</sup> As applicable for the pilots scheduled for training.

**APPENDIX K**

**CUSTOMER MISSION-LIMITING WEATHER THRESHOLDS**

<b>Aircraft Weather Thresholds on MEF</b>			
<b>UH-1 KOZR/KLOR/KSXS CAT 1 23D</b>	<b>RESTRICTIONS</b>	<b>NO GO DAY</b>	<b>NO GO NIGHT</b>
X WIND		≥ 30 KNOTS HOVER	≥ 30 KNOTS HOVER
TAILWIND		≥ 30 KNOTS	≥ 30 KNOTS
WIND VELOCITY		≥ 30 KNOTS	≥ 30 KNOTS
GUST SPREAD		≥ 15 KNOTS	≥ 15 KNOTS
ICING		ALL	ALL
TURBULENCE	MDT	SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<700/<300 FI/<100 MV	<1,000/<500 FI/<100 MV
VISIBILITY	-	<2/<1/2 FI/<1/4 MV	<3/<1 FI/< 1/4 MV
<b>TH-67 KOZR/KSXS CAT 1 P/A</b>	<b>RESTRICTIONS</b>	<b>NO GO</b>	<b>NO GO</b>
X WIND		> 35 KNOTS HOVER	> 35 KNOTS HOVER
TAILWIND		> 35 KNOTS	> 35 KNOTS
WIND VELOCITY		> 45 KNOTS	> 45 KNOTS
GUST SPREAD		> 15 KNOTS	> 15 KNOTS
ICING		ALL	ALL
TURBULENCE	MDT	SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<1,000PO/<700PF/<500S/<200AO	<1,000
VISIBILITY	-	<2	<3
<b>UH-60 KLOR CAT 2 (&amp; HEAD HUNTERS)</b>	<b>RESTRICTIONS</b>	<b>NO GO</b>	<b>NO GO</b>
WIND VELOCITY		≥ 45 KNOTS	≥ 45 KNOTS
ICING	TRACE/LGT/MDT	SVR	SVR
TURBULENCE		SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<500/<1,000 HUNTERS	<1,000/<1,500 HUNTERS
VISIBILITY	-	<1/2/<3 HUNTERS	<3
<b>CH-47 KFHK CAT 2</b>	<b>RESTRICTIONS</b>	<b>NO GO</b>	<b>NO GO</b>
WIND VELOCITY		≥ 40 KNOTS	≥ 40 KNOTS
ICING	TRACE/LGT	MDT/SVR	MDT/SVR
TURBULENCE	MDT	SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<500	<1,000
VISIBILITY	-	<1	<3
<b>OH-58 KSXS/KHEY AH-64 KHEY CAT 2</b>	<b>RESTRICTIONS</b>	<b>NO GO</b>	<b>NO GO</b>
WIND VELOCITY		> 45 KNOTS	> 45 KNOTS
ICING		ALL	ALL
TURBULENCE	MDT	SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<500	<1,000
VISIBILITY	-	<1 OH-58/<1/2 AH-64	<3
<b>C-12 (BE20) KOZR</b>	<b>RESTRICTIONS</b>	<b>NO GO</b>	<b>NO GO</b>
X WIND		≥ 25 KNOTS	≥ 25 KNOTS
ICING		SVR	SVR
TURBULENCE		SVR/EXT	SVR/EXT
THUNDERSTORMS/LIGHTNNG		ANY	ANY
CEILINGS	-	<200	<200
VISIBILITY	-	<1/2	<1/2

Fort Rucker Reg 115-1 • 4 December 2012

<b>Aircraft Weather Thresholds on MEF</b>			
<b>UH-72A KOZR CAT 1FI&amp;MVAC</b>	<b>RESTRICTIONS</b>	<b>NO GO DAY</b>	<b>NO GO NIGHT</b>
WIND VELOCITY		<b>≥ 30 KNOTS</b>	<b>≥ 30 KNOTS</b>
ICING		<b>ALL</b>	<b>ALL</b>
TURBULENCE		<b>SVR/EXT</b>	<b>SVR/EXT</b>
THUNDERSTORMS/LIGHTNING		<b>ANY</b>	<b>ANY</b>
CEILINGS	-	<b>&lt;700/&lt;300 FI/&lt;100 MV</b>	<b>&lt;1,000/&lt;500 FI/&lt;100 MV</b>
VISIBILITY	-	<b>&lt;2/&lt;1/2 FI/&lt;1/4 MV</b>	<b>&lt;3/&lt;1 FI/&lt; 1/4 MV</b>