

**BY ORDER OF THE COMMANDER  
305TH AIR MOBILITY WING (AMC)**

**305TH AIR MOBILITY WING  
INSTRUCTION**



**15-101**

**26 APRIL 2023**

**Weather**

**WEATHER SUPPORT PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive 15-1, *Air Force Weather Operations*, AFI 15-114, *Functional Resource and Weather Technical Performance Evaluation*, AFI 15-128, *Air Force Weather Roles and Responsibilities*, AFI 10-206, *Operational Reporting*, AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, AFI 11-208\_IP, *Department of Defense Notice to Airmen (NOTAM) System*, AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, AFMAN 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129, *Air and Space Weather Operations*, and Air Mobility Command (AMCI) 15-101, *Weather Operations and Support*. It establishes responsibilities, weather support procedures and provides general information for weather services, including weather observations and forecasts, weather warnings, watches, and advisories; space weather data, information dissemination, and base-wide reciprocal support. It applies to units assigned to the 87th Air Base Wing (ABW), 305th Air Mobility Wing (AMW), 108th Wing (WG) Air National Guard (ANG), 514th Air Mobility Wing Force Reserves (AFRES) and units assigned, attached, or supported by the Joint Base McGuire-Dix-Lakehurst (JB MDL). Ensure that all records created as a result of processes prescribed in this publication are maintained In Accordance With (IAW) Air National Guard Manual (ANGMAN) 33-363, *Management of Air National Guard Records*, and disposed of IAW with the Air Force Records Information Management System (AFRIMS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of*

*Publication*; route AF Form 847s from the field through the appropriate functional's chain of command.

### ***SUMMARY OF CHANGES***

This document has been substantially revised and must be completely reviewed. Changes within this rewrite include: changes the designated AF mission weather provider for AFRC and ANG Mobility Air Forces (MAF) flying units that do not have a collocated AF weather support team to 618 AOC/WXD; designates AMC Weather Flights (WFs) as the weather provider for MAF units home-stationed at AMC bases, AMC-led joint bases (JB); identifies alternate weather providers in the event the primary designated provider is unavailable; updates approved observing equipment. Changes to PSMV support and JB MDL Weather MilSuite site and Mattermost channel added as replacement for managed leadership distribution list for significant weather notification. METAR code explanation was removed and can be found in local instrument refresher courses.

<b>Chapter 1—GENERAL INFORMATION</b>	<b>5</b>
1.1. General.....	5
1.2. Concept of Operations.....	5
Table 1.1. {305. OSS/OSW} Duty Priority Listing.....	7
1.3. Hours of Operation.....	7
1.4. Contact Information.....	7
1.5. Continuity of Operations Plans (COOP).....	8
<b>Chapter 2—AIRFIELD SUPPORT</b>	<b>10</b>
2.1. General.....	10
2.2. Automated Observation.....	10
Table 2.1. Mandatory Supplementary Weather Conditions.....	11
2.3. Terminal Aerodrome Forecasts (TAFs).....	12
2.4. Resource Protection (RP) Products.....	12
Table 2.2. Weather Watches.....	12
Table 2.3. Weather Warnings.....	13
Table 2.4. Forecasted/Observed Weather Advisories.....	14
2.5. Dissemination Process.....	15
Table 2.5. Notification Priority.....	15
Table 2.6. JET Dissemination Agencies.....	16
2.6. Cooperative Weather Watch (CWW).....	16
2.7. Pilot to Metro Service (PMSV) Support.....	17
2.8. Emergency Action(s) Response.....	17

Table 2.7.	SWAP Activation. ....	17
<b>Chapter 3—MISSION SERVICES</b>		<b>19</b>
3.1.	General.....	19
3.2.	Flying Missions.....	19
3.3.	Mission Weather Products (MWP).....	19
3.4.	MISSIONWATCH. ....	19
3.5.	Post-Mission Analysis/Feedback. ....	20
3.6.	Transient Aircrew Support.....	20
3.7.	Non-Flying Missions. ....	20
3.8.	Space Weather Impacts.....	20
3.9.	Mission Planning. ....	20
<b>Chapter 4—STAFF SERVICES</b>		<b>21</b>
4.1.	General.....	21
4.2.	Staff Meteorological Functions.....	21
Table 4.1.	Hurricane Conditions (HURCON) and Tropical Cyclone Conditions of Readiness (TCCOR) [AFMAN 10-206]. ....	23
4.3.	Staff Integration Functions. ....	24
4.4.	Reciprocal Support. ....	24
<b>Chapter 5—WEATHER EQUIPMENT</b>		<b>28</b>
5.1.	General.....	28
5.2.	Meteorological Equipment. ....	28
5.3.	Communications Equipment.....	28
5.4.	Maintenance.....	28
Table 5.1.	Equipment Maintenance List. ....	29
Table 5.2.	Equipment Restoral Priorities. ....	29
5.5.	Building Power. ....	29

<b>Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION</b>	<b>30</b>
<b>Attachment 2—CUSTOMER RESPONSE MATRIX</b>	<b>34</b>
<b>Attachment 3—FLYING UNITS SUPPORTED &amp; MISSION LIMITING ENVIRONMENTAL CONDITIONS</b>	<b>36</b>
<b>Attachment 4—MISSION EXECUTION FORECAST (MEF) EXAMPLE</b>	<b>43</b>
<b>Attachment 5—FIVE DAY OUTLOOK EXAMPLE</b>	<b>45</b>
<b>Attachment 6—WINTER WEATHER TIMELINE EXAMPLE</b>	<b>46</b>

## Chapter 1

### GENERAL INFORMATION

**1.1. General.** The 305th Operations Support Squadron Weather Flight (305 OSS/OSW) is the official weather information agency for Joint Base McGuire-Dix-Lakehurst (JBMDL), New Jersey. The 618th Air Operations Center (Tanker Airlift Control Center) Weather Directorate is the primary weather provider for 305 AMW Integrated Flight Management (IFM) Missions. This instruction prescribes local procedures and policies concerning weather support and services to the 305 AMW, 87 ABW, 514 AMW, 108 Wg, subordinate units and units assigned, attached, or supported by JB MDL. It is reviewed and revised no greater than biennially or IAW with host/parent unit procedures if the time is less than biennially.

**1.2. Concept of Operations.** 305 OSS/OSW provides flight weather briefings for all non-IFM missions, creates and transmits terminal aerodrome forecasts and augments surface weather observations as required during airfield operating hours, and creates and issues weather watches, warnings, and advisories (WWAs) for the McGuire-Dix side of base. TACC/WXD provides Flight Weather Briefings for all IFM missions. The 15th Operational Weather Squadron (15 OWS) issues WWAs for Maxfield Field (KNEL) Lakehurst and provides backup support should the WF not be able to provide required/requested support.

1.2.1. 305 OSS/OSW issues WWAs for McGuire Airfield (KWRI) providing resource protection (RP) for a geographic area centered on the runway complex and expanding outward in concentric circles of 5.3, 10, and 25 nautical miles (NM). The OSS/OSW has assumed full characterization and forecast responsibilities for Terminal Aerodrome Forecast (TAF) responsibility. The OSS/OSW collects, analyzes, and predicts all weather core competencies. The OSS/OSW tailors TAF and other extracted data for full-spectrum mission support across the air and space environments. **Note:** Issuing WWAs for up to 5.3 NM deviates from AFMAN15-129 standard area of no larger than 5 NM and is due to local requirements.

1.2.1.1. Creates Mission Weather Products (MWP) that fuse theater scale products with local mission requirements to enable the direct inject of weather impacts into warfighter planning and/or execution. The OSS/OSW provides or arranges for MWP support for transient aircrews IAW the OSS/OSW duty priorities listed in **Table 1.1**.

1.2.1.2. Designated MWP provider for all Non-Integrated Flight Management (Non-IFM) sorties for all AMC and USTC-assigned ANG and AFRC units originating out of JB MDL IAW AMCI 15-101 2.2.3.

1.2.1.3. Responsible for providing or arranging for support for Aircrew Self Plan and File Sorties (ASPF) when 618 AOC flight planning and weather briefing services are not available.

1.2.1.4. Provides or arranges for flight weather briefings for transient aircraft at JB MDL that do not have a Service-aligned reach-back briefing service.

1.2.2. 618 AOC/WXD currently provides mission support and synoptic level weather hazard charts utilized in building MWP to support refueling missions led by 305 AMW assets.

1.2.2.1. Serves as main provider for all Integrated Flight Management (IFM) sorties IAW AMCI15-101 2.2.1.

1.2.3. 15 OWS issues weather watches and warnings for Maxfield Field (KNEL) Lakehurst and Special Weather Statements (SWS) for JB MDL. **Note:** 15 OWS is the primary backup for issuing watches, warnings, and advisories in the rare event the OSS/OSW must close.

1.2.4. Meteorological Watch (METWATCH). OSS/OSW and 15 OWS perform a collaborative and continuous METWATCH for JB MDL. METWATCH is a deliberate process for monitoring terrestrial weather or the space environment in an area or region. The purpose of a METWATCH is to identify when and where observed conditions significantly diverge from forecast conditions, determine courses of action to update or amend a forecast product or group of products, and notify designated agencies.

1.2.5. General Aviation Support for non-IFM Sorties. OSS/OSW is the primary source of tailored weather services in support of the 305 AMW, 87 ABW, 514 AMW, 108 Wg, various headquarters elements, and visiting aircrews. OSS/OSW is the designated provider for all non-IFM sorties flown by AMC and for USTC-assigned ANG and AFRC units. OSS/OSW will make every effort to ensure that mission-limiting weather is anticipated and exploited, and that safety and RP are maintained. **Note:** Per JB MDL Memorandum of Agreement (MOA) Annex Q-1, Paragraph 5.3, US Army and US Navy flying units receive MWP services from the 15 OWS and the Naval Aviation Forecast Center-Norfolk Virginia, respectively.

1.2.6. JB MDL Installation Data Page (IDP). The 15 OWS and OSS/OSW coordinate and maintain the JB MDL IDP. The IDP details include TAF specification and amendment criteria, WWA thresholds for KWRI and KNEL, desired lead times, mission impacts, unit information, Joint Environmental Toolkit (JET) back-up contacts and local outage back-up information. [https://15ows.us.af.mil/tech\\_ref/idp/index.cfm?icao=KWRI](https://15ows.us.af.mil/tech_ref/idp/index.cfm?icao=KWRI)

1.2.7. Duty Priorities. The vast amount of potential OSS/OSW tasks cannot possibly be accomplished simultaneously. **Table 3.1.** AFMAN 15-129 establishes the OSS/OSW's duty priorities. Since not all situations affecting JB MDL operations can be anticipated, OSS/OSW personnel use sound risk management principles to determine the need to recall additional personnel to assist in meeting surges in operations.

**Table 1.1. {305. OSS/OSW} Duty Priority Listing.**

Priority	Duty
1	Wartime defense of the duty site/location
2	Perform Emergency War Order Tasks (e.g., Deploy Personnel)
3	Execute Evacuation / Continuity of Operations Plan
4	Issue/Disseminate Imminent Hazardous Weather Warnings
5	Respond to Aircraft/Ground Emergencies
6	Issue/Disseminate Imminent Weather Advisories
7	Respond to PMSV calls supplementation/backup
8	Disseminate weather observation
9	Disseminate Urgent PIREPs (UUAs)
10	Disseminate Terminal Aerodrome Forecasts
11	Provide Flight Weather Briefings
12	Collaborate WPs with Supported Units
13	METWATCH/Amend Weather Products
14	Respond to Support Assistance Request (SAR) or Request for Information
15	Provide Staff Briefings / Non-Standard WPs
16	Accomplish Weather Functional Training
17	Accomplish Administrative Tasks

### 1.3. Hours of Operation.

1.3.1. OSS/OSW Airfield and Mission. Services are available 24/7, 365 days a year. Staff services are available Monday-Friday 0800L-1600L or as required.

1.3.1.1. The 305 AMW Commander may authorize temporary modified weather service duty hours for temporary manning issues up to 90 days.

1.3.1.2. IAW AFI 11-208\_IP, a NOTAM will be issued for changes in service hours that do not exceed 90 days. Changes in service hours anticipated to exceed 90 days will be reflected in the appropriate Flight Information Publication (FLIP).

1.3.1.3. OSS/OSW will maintain a Weather Operator on telephone standby whenever authorized for modified weather service hours.

### 1.4. Contact Information.

1.4.1. OSS/OSW: Comm (609) 754-1130/3568 / DSN 650-1130/3568

1.4.2. OSS/OSW AOL: Comm (609) 754-3703/3456 / DSN 650-3703/3456

1.4.3. 618 AOC/WXD: Comm (618) 229-0351/0353 / DSN 779-0351/0353

1.4.4. 15 OWS: Comm (618) 256-9699 / DSN 576-9699

**1.5. Continuity of Operations Plans (COOP).** Continuity of support to the installation and flying operations is susceptible to equipment and communication outages at the 15 OWS, 618 AOC/WXD, and OSS/OSW.

1.5.1. OSS/OSW COOP. In the event of a building 1758 evacuation, the OSS/OSW will re-establish support to installation and flying operations from the Alternate Operating Location (AOL). During AOL activation, weather information may be obtained via the standard phone numbers listed previously. OSS/OSW members utilize evacuation checklists and standard operating procedures (SOPs) to expedite resumption of installation weather support.

1.5.1.1. If access to automated observing equipment is lost, manual equipment will be used to take observations.

1.5.1.2. For MWP consideration, the loss of NIPR services will cause severe reduction in ability to provide any reliable MWPs covering outside 5SM of KWRI.

1.5.1.3. For flight safety reasons, the OSS/OSW **WILL NOT** evacuate, shelter-in-place, or remain confined to building 1758 during exercises (active shooter, etc.).

1.5.2. 15 OWS COOP. The 15 OWS performs COOP exercises at regular intervals determined and provided by the 15 OWS to maintain procedures and proficiency at tasks necessary to ensure COOP.

1.5.2.1. For disruptions lasting less than 72 hours, the 15 OWS will transfer support responsibilities to another regional hub. Should a disruption last for greater than 72 hours, coordination may be arranged to have 15 OWS members physically integrate with another OWS. Allowing the 15 OWS to resume support responsibilities from determined location.

1.5.3. 618 AOC/WXD COOP. IAW AMCI 15-101 Attachment 2, if the 618 AOC/WXD loses the capability to provide flight weather briefing services, the OSS/OSW assumes responsibility for all JB MDL IFM and non-IFM weather packages. If the OSS/OSW is unable to provide the required support, briefing responsibility is transferred to the 15 OWS.

1.5.3.1. **Note:** The 15 OWS does not maintain access to GDSS. All weather brief requests through the 15 OWS must be submitted through JET.

1.5.4. AMC Weather COOP Exercises. AMC/A3AW issues Special Instructions (SPINS) outlining the functions and capabilities that are to be exercised. As a courtesy, the OSS/OSW coordinates COOP timelines and potential impacts with supported units prior to all scheduled COOPs.

1.5.4.1. Global Decision Support System (GDSS) Proficiency/Outage Exercise. GDSS proficiency exercises ensure the OSS/OSW is prepared to support continuity of operations during 618 AOC/WXD evacuations, operational surges beyond 618 AOC/WXD's capability to support, or GDSS outages. During 618 AOC/WXD GDSS proficiency/outage exercises, the OSS/OSW will:

- 1.5.4.1.1. Provide mission weather packages through GDSS or alternate means if a GDSS outage is simulated.
- 1.5.4.1.2. Ensure all briefing packages are completed and available to the aircrews NLT 4 hours prior to scheduled departure.
- 1.5.4.2. Manual/Tactical Observing Exercises. Manual/Tactical observing exercises ensure the OSS/OSW is proficient in the use of tactical weather systems and manual observing methods needed to disseminate accurate weather support operations during partial or total automated observing system failure. Additionally, these exercises provide the opportunity to conduct required operations checks of deployable weather equipment and ensure OSS/OSW personnel are proficient in its operation. During Manual/Tactical Observing Exercises OSS/OSW will:
  - 1.5.4.2.1. Follow AMC/A3AW published SPINS. These SPINS contain the specifics for each exercise.
  - 1.5.4.2.2. The OSS/OSW Flight Leadership will ensure all personnel are certified on manual/tactical observing.
- 1.5.4.3. TAF Exercises. TAF exercises ensure OSS/OSW proficiency in production of TAFs in a data limited environment. This exercise will test OSS/OSW's ability to provide support to an austere location and METWATCH techniques during limited and reduced data availability. During TAF Exercises the OSS/OSW will:
  - 1.5.4.3.1. Ensure local real-world missions take priority
  - 1.5.4.3.2. Follow AMC/A3AW published SPINS. These SPINS identify specific areas of verification and requirements to accomplish.
- 1.5.4.4. AOL Exercise. AOL exercises fulfill the AFMAN 15-129 requirements for OSS/OSW Leadership to ensure all personnel are task certified to operate at the AOL and meet annual exercise requirements.

## Chapter 2

### AIRFIELD SUPPORT

**2.1. General.** Airfield support includes those actions affecting the KWRI aerodrome (locally defined within a 5.3NM radius of the airfield) or JB MDL as a whole. These functions include, but may not be limited to, weather observing, meteorological watch, and RP.

**2.2. Automated Observation.** The AN/FMQ-19 Fixed Base Weather Observing System (FBWOS) works in concert with the JET to evaluate, prepare, and transmit weather observations for KWRI. IAW AFMAN 15-111 paragraph 1.3., during controlled airfield hours, position-certified weather personnel will be physically present at an airfield weather services location to augment FBWOS observations. The three basic types of observations provided are METAR, SPECI, and LOCAL.

2.2.1. Aviation Routine Weather Report (METAR). METAR is a routine scheduled observation disseminated locally and long-line between 55 and 59 minutes after the hour. METAR contains a complete report of wind, visibility, runway visual range, present weather and obstructions, sky condition, temperature, dew point, and altimeter setting. In addition, a METAR may contain encoded and/or plain language information that elaborates on data in the report.

2.2.2. Aviation Selected Special Weather Report (SPECI). SPECI is an unscheduled observation completed and transmitted when any of the KWRI special criteria are observed or sensed. SPECI contains all data elements found in a METAR plus additional remarks that elaborate on data in the body of the report.

2.2.2.1. A SPECI is prepared and transmitted as soon as possible after the relevant criteria are observed.

2.2.3. Aviation Selected Local Weather Report (LOCAL). LOCAL is an unscheduled observation, not meeting SPECI criteria. When performing AN/FMQ-19 backup the OSS/OSW takes a single element LOCAL for altimeter setting, at an interval not to exceed 35 minutes, when there has been a change of 0.01 inches of mercury (iHg) (0.3 hectopascals [hPa]) or more since the last disseminated altimeter value. This observation is not transmitted longline.

2.2.4. Point Of Observation. The Point of Observation is the official point where a weather observation is taken. On McGuire Field, the point of observation is where the reporting AN/FMQ-19 sensor is located. During periods of augmentation the point of observation is approximately 60 feet away from the south side of building 1758 (Airfield Operations). When augmentation is required from the AOL, the point of observation approximately 100 feet away from is the southwest side of building 1929 (RAWS).

2.2.5. Observing Location Limitations.

2.2.5.1. The AN/FMQ-19 is properly sited and no limitations are currently noted.

2.2.5.2. When augmenting observations at the primary site (building 1758), surrounding buildings and obstructions severely limit the observers view in all observable quadrants. Additionally, observers may not hear thunder due to the level of noise on the flight line.

2.2.5.3. When augmenting observations at the AOL, no limitations are currently noted. If situation and manning levels allow, a weather observer can be present at building 1758 to allow face-to-face briefings with aircrews during augmentation at the AOL.

2.2.6. Automated AN/FMQ-19 Observation. An automated observation is any observation evaluated, prepared, and transmitted by an observing system without human intervention. When operating in automated mode, the AN/FMQ-19 determines sky condition based on an evaluation of sensor data gathered during the 30-minute period ending at the actual time of the observation. All other evaluated elements are based on sensor data that is within 10 minutes or less of the actual time of the observation.

2.2.7. AN/FMQ-19 Augmentation. Augmentation is a method of having a position-qualified Weather Operator manually add or edit data to an observation generated by the AN/FMQ-19. The two augmentation processes used are supplementing and back-up.

2.2.7.1. Supplementing. Supplementing is the process of manually adding meteorological information to an observation generated by the AN/FMQ-19 that is beyond the system's capability to detect and/or report. For example, the sensor cannot sense tornadoes or hail.

2.2.7.2. Supplementing procedures. OSS/OSW personnel supplement observations when the airfield is open and the weather conditions in [Table 2.1](#) are observed or are forecast to occur.

**Table 2.1. Mandatory Supplementary Weather Conditions.**

Tornado (+FC)	(Notes 1 & 2)
Waterspout (+FC)	(Notes 1 & 2)
Funnel Cloud (FC)	(Notes 1 & 2)
Freezing Precipitation (FZDZ/FZRA)	
Ice Pellets (PL)	
Hail (GR)	
Sandstorm (SS) / Dust Storm (DS)	(Note 3)
Volcanic Ash (VA)	
Tower Visibility remark	(Note 4)
<b>Notes:</b>	
1. The immediate reporting of funnel clouds takes precedence over any other phenomena.	
2. Be prepared to supplement whenever a tornado watch is valid or warning has been issued; regardless of airfield closure status.	
3. Based on local weather warning criteria; if no warning criteria exists, this is not required.	
4. Only required during controlled airfield hours.	

2.2.7.3. Back-up. Back-up is a method of manually providing meteorological data and/or dissemination of an AN/FMQ-19 generated observation when the primary automated method is not operational or unavailable due to sensor and/or communication failure.

2.2.7.4. Back-up procedures. In the event of AN/FMQ-19 malfunction or failure, back-up procedures are implemented during airfield operating hours. OSS/OSW personnel use manual observing procedures when performing back-up operations. When required, the OSS/OSW encodes and disseminates METAR and SPECI observations IAW AFMAN 15-111. All element entries are observed within 15 minutes of the actual time of the

observation with the exception of wind gusts and squalls, which are reported only if they are observed within 10 minutes of the time of the observation. During back-up conditions if pressure and wind are being backed-up they will always be considered estimated data.

**2.3. Terminal Aerodrome Forecasts (TAFs).** KWRI TAFs are produced and disseminated by the OSS/OSW IAW AFI 15-128, AFMAN 15-124, AFMAN 15-129, and the JB MDL IDP. TAFs are valid for 30 hours, apply to the area within 5.3NM of the KWRI airfield complex, and are issued at 0200Z, 1000Z, and 1800Z.

**2.4. Resource Protection (RP) Products.** SWSs and WWAs are special notices used to alert decision makers that hazardous weather is occurring or that there is a potential for hazardous weather to occur within the area of operations. Customer responses to WWAs are listed in [Attachment 2](#).

2.4.1. Special Weather Statement (SWS). A notice issued by the 15 OWS for JB MDL to assist with RP decisions. SWS advise of the potential for widespread hazardous weather conditions in a specified geographical region. The OSS/OSW utilizes the SWS to assist in maintaining situational awareness of environmental conditions that have the potential to negatively impact JB MDL or the local flying area.

2.4.2. Watch, Warning, Advisory (WWA).

2.4.2.1. Weather Watch. A special notice to notify installation personnel and supported units of the potential for environmental conditions of such intensity as to pose a hazard to life or property. Watches are issued for the criteria defined in [Table 2.2](#) and are valid for a 5.3NM radius from the center of the McGuire airfield.

2.4.2.1.1. Watches are standalone products based upon *potential* and are unaffected by warnings or advisories for the same phenomena.

2.4.2.1.2. Multiple watches may be in effect at the same time.

**Table 2.2. Weather Watches.**

Watch Type	Criteria	Desired Lead Time
Tornado	within 5 NM	As potential warrants
Freezing Precipitation	any intensity	As potential warrants
Lightning	within 5 NM	30 Minutes
Heavy Rain	≥ 2 inch accumulation within 12 hours	As potential warrants
Heavy Snow	≥ 2 inch accumulation within 12 hours	As potential warrants
Strong Winds	≥ 35 knots but < 50 knots	As potential warrants
Damaging Winds (non-convective)	≥ 50 knots	As potential warrants
Blizzard	Duration ≥ 3 hours; Sustained winds/gusts ≥ 30 knots; Considerable falling and/or blowing snow; Prevailing visibility frequently < 1/4 SM (all criteria must be met)	As potential warrants
Severe Thunderstorms	Hail ≥ 3/4 inch Winds ≥ 50 knots	As potential warrants

Moderate Thunderstorms	Hail $\geq$ 1/4 inch but $<$ 3/4 inch Winds $\geq$ 35 knots but $<$ 50 knots	As potential warrants
Hurricane Effects	Rain $\geq$ 2 inch accumulation; Potential f/ Tornadoes; Sustained winds $\geq$ 63 knots	72 Hours
Tropical Storm Effects	Rain $\geq$ 2 inch accumulation; Potential f/ Tornadoes; Sustained winds $\geq$ 33 knots but $<$ 64 knots	72 Hours

2.4.2.2. Weather Warning. A special notice to inform installation personnel when an established weather condition of such intensity as to pose a hazard to life or property **is occurring or is expected to occur**. Warnings are issued for criteria defined in [Table 2.3](#) and are valid for a 5.3NM radius from the center of the McGuire airfield.

2.4.2.2.1. **Only one warning can be in effect at a time.** When multiple warning criteria are forecast to occur, a single warning containing all applicable criteria is issued. A separate valid time may be specified for each criterion as necessary. *Exception: Tornado and lightning warnings are issued separately from other warnings.*

2.4.2.2.2. Warnings provide concise information outlining environmental threats. If a warning is issued for one weather criterion and it becomes necessary to warn for another weather criterion, a new warning, with a new number, is issued.

2.4.2.2.3. Forecast warnings take precedence over advisories for the same phenomenon and should maintain horizontal consistency with TAFs and other forecasts products.

**Table 2.3. Weather Warnings.**

Warning Type	Criteria	Desired Lead Time
Tornado	within 5 NM	15 Minutes
Freezing Precipitation	any intensity	1 Hour
Lightning	within 5 NM	Observed
Heavy Rain	$\geq$ 2 inch accumulation within 12 hours	1 Hour
Heavy Snow	$\geq$ 2 inch accumulation within 12 hours	1 Hour
Strong Winds	$\geq$ 35 knots but $<$ 50 knots	1 Hour
Damaging Winds (non-convective)	$\geq$ 50 knots	1 Hour
Blizzard	Duration $\geq$ 3 hours; Sustained winds/gusts $\geq$ 30 knots; Considerable falling and/or blowing snow; Prevailing visibility frequently $<$ 1/4 SM (all criteria must be met)	1 Hour
Severe Thunderstorms	Hail $\geq$ 3/4 inch Winds $\geq$ 50 knots	1 Hour
Moderate Thunderstorms	Hail $\geq$ 1/4 inch but $<$ 3/4 inch Winds $\geq$ 35 knots but $<$ 50 knots	1 Hour

Hurricane Effects	Rain $\geq$ 2 inch accumulation; Sustained winds $\geq$ 63 knots	50 Hours
Tropical Storm Effects	Rain $\geq$ 2 inch accumulation; Sustained winds $\geq$ 33 knots but $<$ 64 knots	50 Hours
Pre-Tropical Storm Effects	Rain $\geq$ 2 inch accumulation and/or winds gusts $\geq$ 35 knots	2 Hours
Post-Tropical Storms Effects	Rain $\geq$ 2 inch accumulation and/or winds gusts $\geq$ 35 knots	No Desired Lead Time

2.4.2.2.4. Observed Weather Warnings. Lightning warnings are the only observed warning issued for McGuire airfield. Lightning warnings are issued when lightning is observed within 5.3NM, either visually seen, audibly heard, or verified via the National Lightning Detection Network. Lightning warnings are cancelled when lightning has not been observed within the past 15 minutes and radar indicates thunderstorms are no longer occurring within 5.3NM.

2.4.2.2.3. Weather Advisories. A notice to inform end users when an established environmental condition effecting operations is occurring or is expected to occur at McGuire airfield. Weather advisory criteria are defined in [Table 2.4](#).

**Table 2.4. Forecasted/Observed Weather Advisories.**

Criteria	Desired Lead Time
Crosswinds $\geq$ 20 knots ( <b>Note 1</b> )	Observed
Frost on Station	18Z Day Prior
Lightning within 10NM	Observed
Lightning within 25NM	Observed
Low Level Wind Shear	Observed
Moderate Snow $\geq$ ½ inch but $<$ 2 inches accumulation in 12 hours	1 hour
Wind Chill temperature $\leq$ 15°F but $>$ -20°F	Observed
Wind Chill temperature $\leq$ -20°F	Observed
Surface winds $\geq$ 25 knots but $<$ 35 knots	1 hour
<b>Notes:</b>	
1. Crosswinds are calculated based on the maximum observed wind speed (to include gusts) and worst case observed direction including variability.	

2.4.2.2.4. WWA Numbering Scheme. WWAs are numbered consecutively by identifying the type of weather message (watch, warning, or advisory) followed by a five-digit number. The first two numbers indicate the current month while the second three numbers indicate the sequence number. For example, the message “Weather Warning 02-005” means the month is February (02) and this is the fifth (005) warning issued in the month. The message “Weather Advisory 12-013” means the month is December (12) and this is the thirteenth (013) advisory issued in the month.

2.4.2.2.5. WWA Upgrades/Downgrades. An upgrade is a change to an active WWA resulting from adding additional WWA phenomenon or an increase in phenomenon intensity that crosses to a higher threshold (e.g., winds increase from 35 knots to 50 knots).

A downgrade is a change to an active WWA resulting from removing WWA phenomenon or a decrease in phenomenon intensity that crosses to a lower threshold (e.g., hail decreases from  $\frac{3}{4}$  inch to  $\frac{1}{4}$  inch).

2.4.2.6. **WWA Amendments.** Amendments are issued when an active WWA no longer adequately describes a phenomenon's expected occurrence and does not fit the criteria for an upgrade or downgrade. All amendments are issued with a new WWA number and should clearly state what affect the new WWA has on any previously issued notices.

2.4.2.7. **WWA Extensions.** Extensions are issued when a phenomenon occurrence is expected to last longer than originally forecast. Extensions are issued prior to the expiration of the original WWA utilizing the same WWA number. Extensions should clearly state what effect they have on any previously issued notices.

2.4.2.8. **WWA Cancellation.** WWA are cancelled when the weather phenomena is no longer occurring or expected to occur. WWAs not extended or cancelled automatically expire at the end of the valid period. Observed advisories are cancelled when the criteria has not occurred in the last 15 minutes.

## 2.5. Dissemination Process.

2.5.1. **Observations.** Observations taken by either the AN/FMQ-19 or the Weather Operator are primarily disseminated via JET. When JET is nonoperational, OSS/OSW will attempt backup dissemination procedures. If said backup procedures are unable to properly disseminate, OSS/OSW will then relay observations to the following organizations in order of priority listed in [Table 2.5](#).

**Table 2.5. Notification Priority.**

Organization	Contact Number
1. McGuire Air Traffic Control (ATC) Tower	(609) 754-2524
2. JB MDL Command Post (87 ABW/CP)	(609) 754-3935/3936
3. Airfield Management (305 OSS/OSAA)	(609) 754-2712
4. 15 OWS	(618) 256-9699

2.5.2. **TAFs.** OSS/OSW disseminates TAFs primarily via JET. When JET is nonoperational, OSS/OSW will attempt backup dissemination procedures. If said backup procedures are unable to properly disseminate, OSS/OSW will then relay the TAF to ATC, 87 ABW/CP, and 15 OWS via telephone or e-mail.

2.5.3. **SWSs.** 15 OWS transmits SWSs to OSS/OSW via email. OSS/OSW will incorporate SWSs into appropriate weather forecasts, products, and briefs.

2.5.4. **WWAs.** WWAs are issued through the JET system and notifications are disseminated automatically to the agencies outlined in [Table 2.6](#) In the event of outage/closure, OSS/OSW will coordinate with 15 OWS to assume WWA dissemination responsibility. **Note:** Due to safety of flight and RP the OSS/OSW will limit the amount of individual notifications required for WWAs to ATC, CP, and OSS/OSAA.

2.5.4.1. Once notified, 87 ABW/CP disseminates all WWAs via e-mail and/or the AtHoc system per their procedures. **Note:** OSS/OSW has no influence in 87 ABW/CP's dissemination of WWAs

2.5.4.1.1. Lightning Warnings. All lightning warnings are disseminated by the 87 ABW/CP to the base populace via the Giant Voice system.

2.5.4.1.2. Tornado Warnings. The 87 ABW/CP has the primary responsibility for sounding the base siren for a tornado warning issuance.

**Table 2.6. JET Dissemination Agencies.**

<b>Organization</b>
1. JB MDL Command Post (87 ABW/CP)
2. RAPCON
3. McGuire Air Traffic Control (ATC) Tower
4. Airfield Management (305 OSS/OSAA)
5. Maxfield Field (KNEL) Lakehurst Ops
6. Maxfield Field (KNEL) Lakehurst Ops (Alt)
7. 108th Wg Command Post

**2.6. Cooperative Weather Watch (CWW).** The OSS/OSW and ATC have established a CWW IAW AFMAN 15-111. The agreement outlines each unit's responsibilities when specific meteorological phenomena are observed. Of primary concern is the report of tower visibility differing from the prevailing surface visibility, local PIREPs, and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. OSS/OSW operators and ATC personnel should thoroughly understand and be able to execute the CWW agreement. Specifically:

2.6.1. ATC personnel will:

2.6.1.1. Notify the Weather Operator when the observed tower prevailing visibility decreases to less than 4 SM or increases to equal or exceeds 4 SM and differs from surface prevailing visibility by one reportable value.

2.6.1.2. Notify the Weather Operator when PIREPs are received of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. PIREP information should be relayed to weather personnel no later than 5 minutes after receipt.

2.6.1.3. Notify the Weather Operator when tower personnel detect significant weather phenomena (i.e., lightning, precipitation, low ceilings, etc.) and the phenomena is not reflected in the current surface weather observation.

2.6.2. OSS/OSW will:

2.6.2.1. Re-evaluate the surface weather observation when tower personnel report significant weather phenomena not reflected in the current observation.

2.6.2.2. Re-evaluate the surface prevailing visibility, as soon as practicable, upon notification that the control tower prevailing visibility is different than the surface prevailing visibility and either the surface visibility or tower visibility is less than 4 miles.

2.6.2.2.1. Use control tower reported prevailing visibility as a guide in determining the surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc.

2.6.2.2.2. Include a tower visibility remark in the next METAR or SPECI when either the surface prevailing visibility or the control tower prevailing visibility is less than 4 statute miles and they differ by one or more reportable values.

2.6.3. ATC Certification Program: OSS/OSW oversees the JB MDL ATC Certification Program. The one-time certification is composed of various reading selections followed by a test that must be passed with an 80%. ATC members will need to come to the weather flight office to receive the study guide and take the test. Lastly they will receive a quick verbal brief explaining how tower can help us here in the weather flight.

**2.7. Pilot to Metro Service (PMSV) Support.** OSS/OSW does not have a physical PMSV. However, all contacts with airborne aircrews, including phone patches, aircrew generated computer messages, satellite communications equipment, and cell phones are considered PMSV contacts.

### 2.8. Emergency Action(s) Response.

2.8.1. Aircraft Mishap. When notified of an aircraft mishap, the OSS/OSW follows all guidance provided in local SOPs concerning Aircraft, Ground, and IFEs.

2.8.2. Severe Weather Action Plan (SWAP). The SWAP ensures sufficient manpower is available to meet the increased demand for timely weather information during significant weather events. During normal duty hours, the OSS/OSW duty Weather Operator initiates the SWAP when any of the criteria in [Table 2.8](#) are forecast to occur.

**Table 2.7. SWAP Activation.**

<i>Conditions Requiring Activation of SWAP</i>
Weather Condition
<b>One of the following Weather Watches is expected to be issued:</b>
Tornado
Severe Thunderstorm (Hail GTE ¾ inch and/or Winds GTE 50 knots )
Moderate Thunderstorm (Hail GTE ¼ but LT ¾ and/or Winds GTE 35KTS but LT 50KTS)
Damaging Winds (GTE 50 knots)
Freezing Precipitation (Any Intensity)
Heavy Snow (GTE 2 inches in 12 hrs.)
Blizzard (GTE 3hr of GTE 30kt winds with visibility LT 1/4SM)
Hurricane (Rain Accumulation GTE 2" and Winds GT 63KTS)
Tropical Storm (Rain Accu GTE 2", Tornadic Conditions, and Winds GTE 33KTS but LT 34KTS)
<b>One of the following Weather Warnings/Advisory is expected to be issued:</b>
Tornado
Severe Thunderstorm (Hail GTE 3/4 inch and/or Winds GTE 50 knots )
Damaging Winds (GTE 50 knots)
Freezing Precipitation (Any Intensity)
Heavy Snow (GTE 2 inches in 12 hrs.)
Blizzard (GTE 3hr of GTE 30kt winds with visibility LT 1/4SM)

Moderate Snow (GTE ½ inch in 12 hrs.)
Hurricane (Rain Accumulation GTE 2” and Winds GT 63KTS)
Tropical Storm (Rain Accu GTE 2”, Tornadic Conditions, and Winds GTE 33KTS but LT 64KTS)
Pre-Tropical Storm (Rain Accumulation GTE 2” and Winds GTE 35KTS)
Post-Tropical Storm (Rain Accumulation GTE 2” and Winds GTE 35KTS)
<b>Any of the following occurs:</b>
Immediately upon notice of Storm Prediction Center (SPC) issuing a convective outlook for anything other than general thunderstorms within 50nm of KWRI
National Weather Service (NWS) issues a severe weather watch/warning within 50nm of KWRI
Notification of CAT activation (requiring a weather representative)
Any amount of freezing precipitation, moderate-heavy snow accumulation, blizzard conditions, or any otherwise severe weather is forecast to occur.
<b>305 OSS/OSW owns resource protection and flight safety.</b>

2.8.3. Chemical, Biological, Radiological, and Nuclear (CBRN) Response. The OSS/OSW works closely with Emergency Management (EM) to ensure supported commanders receive the relevant information needed to obtain a timely and accurate picture of the environmental situation. Upon request, the OSS/OSW provides EM:

- 2.8.3.1. Surface observations and/or alphanumeric forecasts representative of the location and time of the CBRNE event.
- 2.8.3.2. The appropriate Chemical Downwind Messages obtained from the 15 OWS or 557th Weather Wing (557 WW).

## Chapter 3

### MISSION SERVICES

**3.1. General.** The OSS/OSW, 618 AOC/WXD, and 15 OWS support JB MDL flying and non-flying missions. This chapter identifies the flying and non-flying missions and the weather support provided.

**3.2. Flying Missions.** The OSS/OSW and 618 AOC/WXD provide weather support to the flying units listed in [Attachment 3](#).

**3.3. Mission Weather Products (MWP).** MWPs fuse theater scale products with local mission requirements enabling the direct inject of weather impacts into warfighter planning and/or execution. The result is a product designed to provide timely, accurate, and relevant environmental information for planning and execution. MWPs should be horizontally consistent with (but not necessarily mirror) products issued by 15 OWS, 618 AOC/WXD and 557 WW.

3.3.1. GDSS Weather Briefings. GDSS is the primary command and control (C2) system used by AMC owned/gained flying units to obtain weather briefings. GDSS provides a unique product that incorporates the requirements of all AMC owned/gained flying units into a common format. Updates can be obtained by calling 618 AOC/WXD or by contacting OSS/OSW.

3.3.2. 305 OSS/OSW Mission Execution Forecast (MEF). The 305 OSS/OSW MEF is used to provide standardized weather briefings to non-AMC owned/gained flying units that are briefed by the OSS/OSW. In the event of a GDSS outage, the OSS/OSW may also use the 305 OSS/OSW MEF when executing 618 AOC/WXD COOP procedures. An example 305 OSS/OSW MEF is in [Attachment 4](#).

3.3.3. Contingency/Exercise Crisis Action Team (CAT) Brief. The OSS/OSW will provide weather briefings as required for CAT briefings. This includes wartime, real-world emergency, exercise, and deployment briefings. Each briefing will be flexible in format and tailored to provide the appropriate weather intelligence required as directed by flight and wing leadership.

**3.4. MISSIONWATCH.** A deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors that may adversely impact missions in execution. The MISSIONWATCH process is intended to identify previously unidentified environmental threats and alert decision-makers at the operational unit and/or airborne mission commanders, enabling dynamic changes to mission profiles that may mitigate the environmental threat and optimize the chance of mission success.

3.4.1. OSS/OSW Briefed Sorties. The OSS/OSW utilizes a continuous MISSIONWATCH process to validate that MWPs accurately reflect environmental conditions. When MWPs differ from observed conditions to the extent that it has the potential to impact operations, the OSS/OSW coordinates MWP amendments/updates with aircrews through appropriate channels. Additionally, when previously unforecasted weather conditions expose a mission to potential risk, the OSS/OSW directly updates the 87 ABW/CP. The 87 ABW/CP retains responsibility for relaying updated weather information to the aircrew.

3.4.2. 618 AOC/WXD Briefed Sorties. 618 AOC/WXD performs MISSIONWATCH and weather risk assessment for all 618 AOC/WXD briefed sorties. 618 AOC/WXD uses the Weather Threat Assessment (WTA) to relay information on missions considered “at risk” based on the Operational Risk Management Thresholds IAW AMCI 15-101 A3.6.

3.4.2.1. The 87 ABW/CP automatically receives WTA notifications through a subscription service. Upon receipt of weather threat notification, the CP notifies appropriate Squadron Operations Centers/aircrews to pass along weather threats and instruct the aircrew to contact 618 AOC/WXD to mitigate the threat.

3.4.2.2. The OSS/OSW performs a continuous MISSIONWATCH on all non-IFM 305 AMW, 108 Wg, and 514 AMW sorties. Additionally, the OSS/OSW monitors GDSS for situational awareness on IFM missions. The OSS/OSW coordinates with 618 AOC/WXD whenever observed weather conditions deviate significantly from the published WTA.

**3.5. Post-Mission Analysis/Feedback.** Aircrews should contact 618 AOC/WXD or the OSS/OSW with post-mission information and/or follow-up support. 618 AOC/WXD and the OSS/OSW utilize customer feedback to improve internal processes and enhance training, forecast proficiency, and product accuracy. Formal/informal feedback methods include:

3.5.1. Completion of 305 OSW/OSW feedback worksheet or 618 AOC/WXD feedback solicitation email.

3.5.2. Phone call or an e-mail to 618 AOC/WXD or the OSS/OSW.

3.5.3. Face-to-face feedback after briefing and/or mission completion.

**3.6. Transient Aircrew Support.** Transient aircrews coordinate support primarily through 618 AOC/WXD. OSS/OSW can provide current/updated weather upon request. Any significant deviations will be relayed to 618 AOC/WXD.

**3.7. Non-Flying Missions.** The OSS/OSW supports various non-flying missions (e.g., Wg Picnic, change of command ceremonies, Morale Welfare and Recreation, etc.) with tailored forecast support and RP products (WWAs). Specific support to non-flying missions is identified in [Chapter 4](#). Specialized weather information can be provided to support any non-flying mission upon request. Non-governmental agencies should request weather information and support through 87 ABW Public Affairs. All weather outlooks will be hosted on the JB MDL Weather milSuite page (<https://www.milsuite.mil/book/groups/jb-mdl-weather>) as well as our Mattermost channel (305OSS\_OSW (Weather)). These are the primary sources for push/pull weather support.

**3.8. Space Weather Impacts.** JB MDL has a wide-variety of operations affected by various space-weather parameters (High Frequency and Ultra High Frequency communication, radar, Global Positioning System communications, etc.). The OSS/OSW and 618 AOC/WXD provide space impacts on their MWP.

**3.9. Mission Planning.** The 5-Day Outlook Weather product is produced daily and is a 5-day weather outlook for base impacts and 24-hour outlook for mission impacts tailored to support mission planning. The product is posted by 0700L. An example 5-Day Outlook Weather Product is in [Attachment 5](#).

## Chapter 4

### STAFF SERVICES

**4.1. General.** Staff services are typically accomplished by OSS/OSW leadership. These include meteorological functions (briefings), ensuring the OSS/OSW is trained and equipped for day-to-day operations, and cultivating relationships with base agencies to ensure OSS/OSW support is optimal. Daily staff and MX/OG operations briefings are typically accomplished by the on duty Weather Operator.

**4.2. Staff Meteorological Functions.** Staff meteorological functions aid leadership in identifying and understanding specific weather and environmental impacts. The OSS/OSW is available to assist commanders in determining weather support requirements and impacts to operations. Examples of staff meteorological functions provided are:

4.2.1. MilSuite site. The primary site for hosting 5-day outlooks and winter-weather timelines will be the JB MDL Weather MilSuite page: <https://www.milsuite.mil/book/groups/jb-mdl-weather>. All base Leadership and priority positions are highly encouraged to sign up for automated emails for updates. The MilSuite site replaces the managed significant weather distribution email list historically maintained by OSS/OSW.

4.2.2. Mattermost. The 305 AMW Mattermost is the alternate site for hosting 5-day outlooks, winter-weather timelines, MWPs, and WWAs: <https://chat.il4.dso.mil/>. All base Leadership and priority positions are highly encouraged to join the 305OSS OSW (Weather) channel if available.

4.2.3. 305 AMW Staff Briefings. Briefings are held virtually Wednesdays and Fridays at 0900L. OSS/OSW will send current weather products (5-day, winter timelines, tropical, etc.) to 305 AMW/MOC prior to the briefing as well as be present to brief weather portion during the briefing. If briefing is set to be in person, a briefer will be present if manning allows.

4.2.3.1. Installation Control Center (ICC)/Crisis Action Team (CAT) Briefings. The OSS/OSW provides weather support as required for ICC/CAT briefings. This includes real-world emergency, exercise, and deployment briefings. Each briefing is tailored to provide the appropriate weather intelligence required by the 87 ABW, 305 AMW, 108 Wg, 514 AMW, and/or 621 CRW leadership. Due to lack of communications connectivity within the CAT, reach-back support to the Weather Operator desk is often required. CAT briefings can be accomplished by on-duty Weather Operator considering proximity of CP and OSS/OSW [same building].

4.2.4. Instrument Refresher Course (IRC) Briefings. IAW AFMAN 11-210, *Instrument Refresher Course (IRC) Program*, computer based training is available for the weather portion of the briefing. When requested, the OSS/OSW provides a briefer to discuss more detailed local weather effects and impacts. This briefing includes airfield and mission services, OSS/OSW capabilities, RP, seasonal/regional weather and space weather impacts (when applicable).

4.2.5. Winter Weather Timeline. OSS/OSW monitors forecast and model trends for indication of winter weather. When a reasonable consensus in model and forecast judgement indicates a possibility of winter weather within 5 days, but greater than 60 hours, an initial notification email will be sent from MilSuite. When winter weather is expected to impact JB MDL within

60 hours, a winter weather timeline slide will be produced and hosted on MilSuite as well as Mattermost. The winter weather slide will be updated every 12 hours at a minimum at 0700L & 1900L, or as requested by leadership. Additional updates will be sent as necessary when conditions change and an update is warranted or requested by OSS/OSW or Wg Leadership. Timeline includes 3-hour block forecasts for weather, intensity, visibility, ceiling, winds and temperature and persist 12-24 hours after onset of forecasted event. An example Winter Weather Timeline is in [Attachment 6](#).

4.2.6. Tropical Weather Briefing. OSS/OSW will monitor tropical activity in the Gulf of Mexico and entire Atlantic Ocean during the tropical season as part of routine operations. At a minimum, SA of potential tropical systems will be completed prior to producing the 5-day product and included when disseminating the 5-day product.

4.2.6.1. The 26 OWS (Primary) or 17 OWS (Alternate) will produce a Tropical Cyclone Threat Assessment Product (TC-TAP) for locations within their area of responsibility (AOR) expected to receive sustained winds > 35-knots during the next 96 hours as a result of a tropical cyclone.

4.2.6.2. OSS/OSW will fully utilize and not deviate from the TC-TAP once it has been issued. However, OSS/OSW can provide adjustments to account for local terrain and foliage effects. The TC-TAP is derived from specialized tropical forecast organizations (i.e. NHC). This product will be used to provide installation commander(s) with tailored forecasts of the expected onset, intensity, end times of significant winds, and closest point of approach for the associated storm.

4.2.6.3. The TC-TAP forecast cone and data including the expected onset, intensity, end times of significant winds (i.e. 35 and 50KTs), and closest point of approach will be included in our MWP and briefed to all installation agencies as required

4.2.6.3.1. **Note:** National Hurricane Center (NHC) Atlantic Ocean products will be fully utilized (and not deviated from) when tropical cyclone information is requested > 96 hours out, or within 96 hours and the OWS's TC-TAP product is not available.

4.2.6.4. Tropical weather briefings will be provided by OSS/OSW personnel when:

4.2.6.4.1. A tropical system has the potential to affect JB MDL or AOR within 5-7 days.

4.2.6.4.2. The TC-TAP or NHC forecast places a tropical system within 100 nautical miles of JB MDL within 96 hours.

4.2.6.4.3. Any named storm will be included in the daily 5-day outlooks and briefed at Wing Stand-up.

**Table 4.1. Hurricane Conditions (HURCON) and Tropical Cyclone Conditions of Readiness (TCCOR) [AFMAN 10-206].**

HURCON/TCCOR	Criteria
5	Destructive winds are possible within 96 hours. (2)
4	Destructive winds are possible within 72 hours.
3	Destructive winds are possible within 48 hours.
2	Destructive winds anticipated within 24 hours.
1	Destructive winds anticipated within 12 hours.
1C	Caution: Winds of 40-57 mph/35-49 knots sustained are occurring.
1E	Emergency: Winds of 58 mph/50 knots sustained and/or gusts of 69 mph/60 knots or greater are occurring.
1R	Recovery: Destructive winds have subsided and are no longer forecast to occur; survey and work crews are permitted to determine the extent of the damage and to establish safe zones around hazards (e.g. downed power lines, unstable structures). Non-essential personnel are asked to remain indoors.
<p>Note: (1) Commanders shall follow Combatant Commander guidance if that guidance conflicts with Air Force policy. (T-1).</p> <p>Note: (2) Commanders may direct an installation to stay in HURCON/TCCOR 5 for an entire Tropical Cyclone or Hurricane season if desired. This is discouraged due to the potential of the base/installation population becoming complacent in a prolonged HURCON/TCCOR 5 status. (T-1).</p>	

*Note: JB MDL IEMP 10-2 3.4.1. Destructive winds are defined as winds of 39 mph [34kts] or greater*

4.2.7. Pre-deployment Planning Briefings. OSS/OSW provides pre-deployment weather briefings as requested. Briefing content is tailored to meet customer requirements. For example, an aviation unit receives weather impacts at the deployed location on their flying mission, in addition to the standard surface weather information usually presented to ground units. A ground-based unit receives a briefing on surface temperatures, wind speed, potential for blowing sand and dust, and precipitation.

4.2.7.1. Climatology Services. OSS/OSW can provide a wide variety of climatology products upon request. Example products include but are not limited to historical surface observations, long-range outlooks, global cloud cover, and upper level wind climatology. Requests requiring detailed studies may be forwarded to the Air Force Combat Climatology Center (14th Weather Squadron), and may add additional turnaround time to requests.

4.2.8. Limitations. Due to manning constraints, staff service availability may be impacted. A weather flight member may not be present in the EOC or CAT 24/7, but support is available via the on-duty Weather Operator.

**4.3. Staff Integration Functions.** In addition to leadership and management of unit activities, these unit members also function as a direct interface with the supported unit commander and staff, and provide direct support to command, control and planning functions. Specific integration with base agencies is outlined below.

4.3.1. 87 ABW, 305 AMW, 108 Wg, and 514 AMW Plans (XP). OSS/OSW assists in periodic exercises tailored to upcoming seasonal weather or other environmental concerns and educates base agencies on the purpose and applicability of weather watches, warnings and advisories.

4.3.1.1. 108<sup>th</sup> Wg Special Exercise Support. OSS/OSW provides 2-3 Weather Operators in support of 108<sup>th</sup> Nuclear Operational Readiness Exercises (NORE) approximately four times a year. 108<sup>th</sup> Wg will provide 2 week advance notice to 305 OSS/OSW to allow time to adjust schedules.

4.3.2. 87 ABW/CP. OSS/OSW notifies the CP whenever the OSS/OSW primary facility is evacuated and/or the AOL is activated.

4.3.3. 87 ABW/Public Affairs. OSS/OSW provides tours of the OSS/OSW facility for community groups and others when coordinated by Public Affairs.

4.3.4. 305 OSS/OSAA (Airfield Management). The OWS or OSS/OSW provides notification of all forecast weather watches, warnings, and advisories via Integrated Weather Warnings Capability (IWWC), telephone, e-mail, or in-person during airfield hours of operations.

4.3.4.1. The OSS/OSW notifies the OSAA whenever the OSS/OSW primary facility is evacuated and/or the AOL is activated.

4.3.4.2. OSS/OSW leadership participates as a member of the Airfield Operations Board (AOB) as directed in AFI 13-204 v1.

4.3.5. 305 OSS/OSAB (McGuire Tower).

4.3.5.1. OSS/OSW provides notification of weather watches, warnings, and advisories via IWWC, telephone, or e-mail.

4.3.5.2. OSS/OSW notifies the OSAB whenever the OSS/OSW primary facility is evacuated and/or the AOL is activated.

4.3.5.3. OSS/OSW notifies the OSAB of all outages prior to contacting any maintenance agency.

4.3.6. 87 CEG. The OSS/OSW provides climatology reports upon request.

4.3.7. All Supported Flying Units (305 AMW, 108 Wg, 514 AMW). OSS/OSW provides services as outlined throughout this publication.

#### **4.4. Reciprocal Support.**

4.4.1. 87 ABW/CP.

4.4.1.1. Ensure dissemination of all WWA as outlined in **Chapter 2** of this document.

4.4.1.2. Activate base emergency sirens when a WARNING for tornadoes is issued. Disseminate all warnings via email and/or via AtHoc.

4.4.1.3. Immediately notify the OSS/OSW Weather Operator on-duty of any aircraft or ground mishaps (weather-related or not) requiring OPREP-3 reporting or local reporting requirements IAW AFI 10-206.

4.4.1.4. Subscribe to and monitor the 618 AOC WTA notifications for 305 AMW, 108 Wg, and 514 AMW missions.

4.4.1.5. Upon notification, by either the OSS/OSW or 15 OWS, of the potential for severe weather, utilize applicable Quick Reaction Checklists to alert wing leadership and various base agencies.

4.4.2. 87 ABW/Public Affairs. Coordinate requests for weather information from non-DoD agencies and tours of OSS/OSW facilities with the OSS/OSW Leadership.

4.4.3. 305 OSS/OSAA (Airfield Management).

4.4.3.1. Notify OSS/OSW personnel of in-flight, ground emergencies, or mishaps and termination via the secondary crash network.

4.4.3.2. Activate base emergency sirens when a WARNING for tornadoes is issued and the 87 ABW/CP does not have the capability to activate the sirens.

4.4.3.3. Disseminate weather warnings and advisories as outlined in **Chapter 2** of this instruction.

4.4.3.4. Submit FLIP updates provided by the OSS/OSW to Air Force Flight Standards Agency/Operating Location-D (AFFSA)/OL-D.

4.4.4. 305 OSS/OSAB (McGuire Tower).

4.4.4.1. Participate in and follow the procedures outlined in CWW program.

4.4.4.2. Notify the OSS/OSW of all changes in active runway.

4.4.4.3. Notify the OSS/OSW of any light setting changes on the high-intensity runway lights.

4.4.4.4. Provide control tower orientation training for weather personnel.

4.4.5. 305 OSS/OSAM (RAWS).

4.4.5.1. Provide, coordinate, or arrange for the installation, maintenance, and repair of weather communication and meteorological sensing equipment except for the communication and meteorological equipment maintained by contract.

4.4.5.2. Perform AN/FMQ-19 Automated Meteorological Observing System pressure sensor calibrations annually or when comparisons between the tactical pressure sensor and aircraft altimeters (or similar reliable sensors) indicate calibration is warranted.

4.4.5.3. Perform all maintenance functions for AN/TMQ-53 in accordance with applicable technical orders.

4.4.5.4. Coordinate with the Weather Operator prior to performing maintenance on weather communications or equipment. Ensure routine maintenance does not degrade METWATCH and/or MISSIONWATCH performed by the OSS/OSW during periods of inclement weather.

- 4.4.5.5. Utilize the restoration priorities for weather communications and meteorological sensing equipment outlined in this document.
  - 4.4.5.6. Notify the responsible service agents for weather communications and meteorological sensing equipment outages.
  - 4.4.5.7. Coordinate with off-base agencies to repair off-base lines.
  - 4.4.5.8. Perform necessary follow-up actions as required until full service is restored.
  - 4.4.5.9. Ensure weather data and telephone circuits are assigned repair priorities.
  - 4.4.5.10. Ensure established maintenance response times are met.
  - 4.4.5.11. Ensure a 24-hour point of contact for reporting outages and assigning job control numbers is available.
- 4.4.6. 87 ABW/SE. Request a JB MDL OSS/OSW briefer for seasonal weather briefings and provide 2 weeks advance notice.
- 4.4.7. 87 ABW/CS. Assist with maintenance when needed for JET IAW the memorandum of agreement between 24 AF, AF Director of Weather, and the JET Program Management Office.
- 4.4.8. 87 CEG. Contact OSS/OSW Flight Leadership to request climatological data and specialized support for projects on JB MDL.
- 4.4.9. 87 SFS. Promptly inform the OSS/OSW of any hazardous weather reported by Security Forces personnel (e.g., tornado, hail, etc.).
- 4.4.10. All Supported Flying Units (305 AMW, 108 Wg, 514 AMW)
- 4.4.10.1. Notify the OSS/OSW of current and planned weather alternates and any special considerations affecting the duration of the mission (i.e., weather categories, exercise/deployment considerations, etc.).
  - 4.4.10.2. Notify the OSS/OSW of required additional support as soon as it becomes known to include monitoring of alternate observations/forecast and tracking of weather conditions affecting local flying operations.
  - 4.4.10.3. Provide timely notification of changes to scheduled operations affecting weather support requirements as soon as the change is identified.
  - 4.4.10.4. Provide PIREPS either directly to OSS/OSW through Comm line, CP phone patch, or via ATC.
  - 4.4.10.5. Provide feedback on weather briefings via e-mail or survey to the OSS/OSW or 618 AOC/WXD.
  - 4.4.10.6. Provide a minimum of 1 week advanced notice of any requirement for training/briefing needed to be conducted by OSS/OSW or any changes in requirements to previously scheduled weather training.
  - 4.4.10.7. Provide any changes to aircraft weather limitations as well as verify with OSS/OSW that limitations are current at least annually.

4.4.11. 87 OMRS/SGPB (Bioenvironmental Flight). Provide the base populace with the Wet Bulb Globe Temperature (WBGT) as required. 87 AMDS/SGPB can be reached at Comm (609) 754-9057/DSN 650-9057.

4.4.12. All Weather Support Recipients. Notify the OSS/OSW when new weather support requirements are identified or when changes to current weather support is deemed necessary.

4.4.13. All Highly Invested Personnel. To include all Commanders Sq level and up and any invested actors/agents/personnel will sign up for MilSuite automated emails and Mattermost channel for updates of all MWP from OSS/OSW.

## Chapter 5

### WEATHER EQUIPMENT

**5.1. General.** This chapter provides a brief description of the meteorological and communications equipment used by the OSS/OSW. Additionally, it provides information on backup systems, maintenance, and restoring priorities.

**5.2. Meteorological Equipment.** The OSS/OSW uses the AN/FMQ-19, AN/TMQ-53, satellite, weather models, and various weather radars to determine the current state of the atmosphere. These critical systems provide customers the most timely, accurate, and relevant weather intelligence possible.

5.2.1. AN/FMQ-19. The AN/FMQ-19 is a fixed meteorological system that samples, measures, and reports: temperature, wind speed and direction, visibility, cloud base height and amount of coverage, pressure, liquid equivalent precipitation accumulation, and ice accretion during freezing precipitation. These measurements are processed to create properly formatted, fully automated observations that comply with applicable reporting standards and protocols defined by the WMO, FAA, NWS, and military reporting standards.

5.2.2. AN/TMQ-53. The AN/TMQ-53 is a tactical automated observing system that is used by the OSS/OSW during contingency and exercise operations. The AN/TMQ-53 provides a capability that is similar to the AN/FMQ-19 and can be used as backup for the AN/FMQ-19.

5.2.3. Gibson Ridge Software (GRS). The OSS/OSW utilizes the GRS applications including GRLevel2 for viewing Level II radar data and GRLevel3 for viewing Level III data. Both viewers feature high speed, high quality radar displays with an intuitive user interface. Weather Operators make use of the software to analyze complex radar signatures and obtain detailed information on storm intensity, movement, internal circulation, and general wind flow. Weather Operators routinely incorporate the latest radar information into all mission execution forecasts and RP products.

**5.3. Communications Equipment.** The following systems are the backbone of the OSS/OSW communications network:

5.3.1. JET. JET is the primary system for disseminating forecast, observations, warnings, watches, and advisories. Telephones are used as a backup for key aircraft controlling agencies.

5.3.2. Phones/Hotlines. Phones and hotlines serve primarily for rapidly passing along critical, time-sensitive information, as well as to serve for backup services.

5.3.3. Local Area Network (LAN). The OSS/OSW relies heavily on the NIPR LAN to improve the timeliness and accuracy of weather intelligence to our customers. On-line access both through government and commercial means is absolutely critical for OSS/OSW to provide weather support outside of manual station weather observations.

**5.4. Maintenance.**

5.4.1. Organizations providing preventive maintenance and repair of weather and communications equipment are listed in [Table 5.4a](#). below:

**Table 5.1. Equipment Maintenance List.**

Organization	Equipment
305 OSS/RAWS	AN/FMQ-19
305 OSS/RAWS	AN/TMQ-53
557 WW Fielded Systems Support Center	JET
87 CS/SCXP (Telephone Systems)	Phones/Hotlines
87 CS/SCOO (Network Maintenance)	LAN/Internet Connectivity

5.4.2. Restoral Priorities. Priorities for restoring critical systems exist in the event of natural disasters or any other anomaly, simultaneously impacting systems base-wide. Significant indicates a situation where the equipment is completely inoperative, while minimal means the equipment is in limited operation. Response times for weather equipment are listed in **Table 5.4b.** below, priorities may be adjusted based on forecast weather.

**Table 5.2. Equipment Restoral Priorities.**

Equipment	Organization	Response Times Significant/Minimal
AN/FMQ-19	305 OSS/RAWS	Immediate/24 hours
AN/TMQ-53	305 OSS/RAWS	Immediate/24 hours (If being used as primary)
LAN/Internet Connectivity/Phones/Hotlines/JET	87 CS/SCOS CFP	Immediate/12 hours

**5.5. Building Power.** In the event of a commercial power interruption, building 1758 and the AOL automatically switch to generator backup power.

5.5.1. This instruction has been reviewed and agreed upon by the Commanders of the following supported units 87th ABW, 514th AMW, and 108th WG, with final approval authority from the 305th AMW/CC for a minimum of a two-year periodicity.

B. WESLEY ADAMS, Col, USAF ELIZABETH  
A. D. HANSON, Col, USAF  
Commander, 87th Air Base WingCommander,  
305th Air Mobility Wing

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

AFMAN 10-206, Operational Reporting, 18 June 2018

AFMAN 10-206 AMC Supt, Operational Reporting, 04 November 2021

AFI 10-2501, Air Force Emergency Management (EM) Program Planning and Operations, 10 March 2020

AFMAN 11-2C-21V3, C-21 Operations Procedures, 06 June 2019

AFMAN 11-2KC-10V3, KC-10 Operations Procedures, 12 March 2019

AFI 11-2KC-10V3, McGuire Air Force Base Sup, KC-10 Operations Procedures, 19 April 2010

AFMAN 11-2KC-135V3, KC-135 Operations Procedures, 10 September 2019

AFMAN 11-2KC-46V3, KC-46 Operations Procedures, 12 July 2021

AFMAN 11-202V3, Flight Operations, 10 January 2022

AFI 11-208, Department of Defense Notice to Airmen (NOTAM) System, 13 February 2018

AFMAN 11-210, Instrument Refresher Program (IRP), 21 December 2021

AFI 15-114, Functional Resource and Weather Technical Performance Evaluation, 16 March 2017

AFI 15-128, Weather Force Structure, 21 June 2019

AFMAN 15-111, Surface Weather Observations, 12 March 2019

AFMAN 15-124, Meteorological Codes, 16 January 2019

AFMAN 15-129, Air and Space Weather Operations, 09 July 2020

ANGMAN 33-363, Management of Air National Guard Records, 10 May 2018

AMCI 15-101, Weather Operations and Support, 22 Jan 2020

JB MDL, Installation Emergency Management Plan 10-2, 17 September 2018

305 AMWI 13-204, Airfield Operations and Flying Procedures, 04 January 2022

305 AMWI 1-2501, Control Center & Accountability Guidelines, 18 August 2014

***Abbreviations and Acronyms***

**ABW**—Air Base Wing

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFSSA**—Air Force Flight Standards Agency

**AFWKC**—Air Force Weather Knowledge Center

**AOC**—Air Operations Center  
**AOL**—Alternate Operating Location  
**AMC**—Air Mobility Command  
**AMCI**—Air Mobility Command Instruction  
**AMOS**—Automated Observing System  
**AMW**—Air Mobility Wing  
**AOR**—Area of Responsibility  
**ATC**—Air Traffic Control  
**AW**—Airlift Wing  
**CAT**—Crisis Action Team  
**CBRN**—Chemical, Biological, Radiological, and Nuclear  
**CBT**—Computer Based Training  
**CEG**—Civil Engineering Group  
**CONUS**—Continental United States  
**COOP**—Continuity of Operations Plan  
**CP**—Command Post  
**CRW**—Contingency Response Wing  
**CS**—Communications Squadron  
**CWW**—Cooperative Weather Watch  
**EM**—Emergency Management  
**FAA**—Federal Aviation Administration  
**FLIP**—Flight Information Publication  
**AN/FMQ-19**—Fixed Meteorological Equipment  
**GDSS**—Global Decision Support System  
**GPS**—Global Positioning System  
**GRS**—Gibson Ridge Software  
**HF**—High Frequency  
**IAW**—In Accordance With  
**ICAO**—International Civil Aviation Organization  
**ICC**—Installation Control Center  
**IDP**—Installation Data Page  
**IFM**—Integrated Flight Management

**IRC**—Instrument Refresher Course  
**IWWC**—Integrated Weather Warnings Capability  
**JB MDL**—Joint Base McGuire, Dix, Lakehurst  
**JET**—Joint Environmental Toolkit  
**KT**—Knots  
**KNEL**—Lakehurst Maxfield Field Airport ICAO  
**KWRI**—McGuire Airfield ICAO  
**LAN**—Local Area Network  
**LOCAL**—local observation (not transmitted longline)  
**MEF**—Mission Execution Forecast  
**METAR**—Meteorological Terminal Aviation Routine Report  
**METWATCH**—Meteorological Watch  
**MWP**—Mission Weather Product  
**NOTAM**—Notice to Airmen  
**NWS**—National Weather Service  
**OPR**—Office of Primary Responsibility  
**OSAA**—Airfield Management  
**OSAB**—McGuire Tower  
**OSS**—Operations Support Squadron  
**OSW**—Operations Support Weather Flight  
**OWS**—Operational Weather Squadron  
**PIREP**—Pilot Report  
**PMSV**—Pilot-to-Metro Service  
**RAWS**—Radar Airfield and Weather Systems  
**RDS**—Records Disposition Schedule  
**RP**—Resource Protection  
**RVR**—Runway Visual Range  
**RWY**—Runway  
**SE**—Safety Office  
**SFS**—Security Forces Squadron  
**SM**—Statute Mile  
**SOP**—Standard Operating Procedure

**SPECI**—Special Observation  
**SPINS**—Special Instructions  
**SWAP**—Severe Weather Action Plan  
**SWS**—Special Weather Statement  
**TAF**—Terminal Aerodrome Forecast  
**TMQ-53**—Tactical Meteorological Equipment  
**TWR**—Tower  
**UFN**—Until Further Notice  
**VFR**—Visual Flight Rules  
**Wg**—Wing  
**WMO**—World Meteorological Organization  
**WSHFT**—Wind Shift  
**WTA**—Weather Threat Assessment  
**WWA**—Weather Watch, Warning & Advisory  
**WXD**—Global Mobility Weather Operations Directorate

## Attachment 2

## CUSTOMER RESPONSE MATRIX

Table A2.1. Customer Response Matrix.

Weather Phenomena	Lead Time	Impact	Customer Action
Tornado	15 min	Personal injury/death Equipment damage	Seek shelter
Hail (3/4" or more)	60 min	Personal injury/death Equipment damage	Seek shelter; hangar or divert aircraft
Freezing Precipitation	60 min	Delay or cease operations	Cease flying; hangar or protect aircraft
Surface winds $\geq$ 50 knots	60 min	Flight hazard Equipment damage	Cease unnecessary flying; secure or hangar aircraft; secure light objects outside
Surface winds 35-49 knots	60 min	Flight hazard Equipment damage	Cease unnecessary flying; secure or hangar aircraft
Lightning w/in 5 NM of McGuire Airfield (KWRI)	Observed	Personal injury/death Delay operations	Cease flight-line work; clear pool/golf course; all personnel seek shelter indoors
Crosswinds $\geq$ 25 knots	Observed	Flight hazard	Cease/delay take-off for C-21A and KC-135E/R
Crosswinds $\geq$ 15 knots but $<$ 25 knots	Observed	Flight hazard	Cease take-off/landings for small private aircraft; no touch and goes
Low Level Wind Shear	Observed	Delay or cease operations	Delay or cease take-off/landing evaluate shear conditions
Snow accumulation GTE 2" in 12 hours	60 min	Delay operations	Activate snow removal plan Hangar aircraft
Equivalent Wind Chill Temp $-20$ to $-29$ °F	Observed	Personal injury Slow/delay outside work	Work 45 minutes; Rest 15 minutes in heated area
Equivalent Wind Chill Temp $-30$ to $-39$ °F	Observed	Personal injury/death Slow/delay outside work	Work 30 minutes; Rest 30 minutes in heated area
Equivalent Wind Chill Temp $-40$ to $-49$ °F	Observed	Personal injury/death Slow/delay outside work	Work 15 minutes; Rest 45 minutes in heated area

Equivalent Wind Chill Temp -50 °F or colder	Observed	Personal injury/death Stop outside work	Stay indoors
Ice Pellets	Observed	Reduces de-icing effectiveness	Evaluate de-icing effectiveness

## Attachment 3

## FLYING UNITS SUPPORTED &amp; MISSION LIMITING ENVIRONMENTAL CONDITIONS

Table A3.1. Flying Units Supported.

Organization	Mission	MWP Provider
305 AMW	We provide Rapid Global Mobility excellence by generating ready, professional Airmen and equipment to deliver superior air refueling, airlift, maintenance, aerial port, and mission support operations for the United States and our Allies anytime, anywhere.	618 AOC/WXD OSS/OSW
514 AMW	Recruit, Train and Sustain Combat – Ready Airmen To Fly, Fight and Win	618 AOC/WXD OSS/OSW
108 WG	To Provide Fully Mission-Ready Mobility Forces, Aircraft and Equipment for Rapid Deployment Providing Critical Combat and Support Capabilities to the State and Nation in the Militia Tradition.	618 AOC/WXD OSS/OSW

## A3.1. Mission Limiting Thresholds.

A3.1.1. **Airframe-Specific Weather Limitations.** Tables A6.2 - A6.10 provide the general airframe weather limitations based on AFI 11-202V3, *General Flight Rules* and the limitations from aircraft specific AFI 11-2.

Table A3.2. USAF General Flight Rules Weather Limitations.

Weather Condition	Impact	Customer Action
Cig/Vis < 2,000ft / 3SM (Fixed Wing)	Alternate required	Add fuel to allow divert
Cig/Vis < 500ft above lowest approach minima / 2 SM or published visibility minima whichever is greater (Fixed Wing)	Terminal not suitable for alternate	Select another alternate
Cig/Vis < 1,000ft or 400ft above lowest approach minima whichever is higher / 2 SM (Helicopters)	Alternate required	Add fuel to allow divert
Cig/Vis < 200ft/1 SM above lowest landing minima (Helicopters)	Terminal not suitable for alternate	Select another alternate

**Table A3.3. Minimum Standard AMC Mission-Limiting Thresholds.**

<u>Departure ICAO</u>	<u>Arrival ICAO</u>	<u>Enroute Events</u>
Cig/Vis < 200/0.5 or Field Mins	Cig/Vis < 200/0.5 or Field Mins	Tropical Storm impacting route
Low Level Wind Shear	Low Level Wind Shear	Volcanic Ash impacting route
Thunderstorms	Thunderstorms	Thunderstorms enroute ( $\geq$ SCT)
Freezing Precipitation	Freezing Precipitation	Severe Turbulence
Turbulence $\geq$ Severe	Turbulence $\geq$ Severe	Moderate Mountain Wave Turbulence
Severe Icing	Severe Icing	Moderate Turbulence in AR
Crosswinds sustained $\geq$ 20kts	Crosswinds sustained $\geq$ 20kts	Moderate Icing in the AR
Temperatures > 90 °F for C5		Visibility < 1nm in AR
High Risk/High Visibility Missions		

**Table A3.4. KC-10 Weather Restrictions.**

<b>Condition</b>	<b>Limit</b>	<b>Response Action</b>
Dry Crosswind Landing or Take Off (T/O)	> 30 Knots (KT)	Delay or proceed to Alternate (ALT)
Wet Crosswind Landing	> 19KT	Delay or proceed to ALT
Wet Crosswind T/O (rwy 06/24)	> 20KT	Do not accomplish
Wet Crosswind T/O (rwy 18/36)	= / > 10KT	Do not accomplish
Wet/Dry Crosswind Touch & Go	15KT or greater	Do not accomplish
Tailwind	10KT or greater	Delay or proceed to ALT
Airframe Icing	Visible moisture is present	De-ice prior to moving
Freezing or Frozen Precip at T/O	Actively falling	De-ice prior to moving
Freezing Rain	Moderate or greater	Delay or cancel
Turbulence	Observed Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Avoid
Mountain Wave Turbulence	Observed or Forecast Moderate	Avoid
Low Level Wind Shear	Speed Loss	Avoid
Low Level Wind Shear	> 15KT considered severe	Delay or proceed to ALT
Wet snow, Ice , Water on RWY	> 1/2 inch	Delay or proceed to ALT
Dry snow on runway	> 4 inches	Delay or proceed to ALT
HF Communication Degraded	No specific limit	Use ALT communication

**Table A3.5. KC-46 Weather Restrictions.**

<b>Condition</b>	<b>Limit</b>	<b>Response Action</b>
Dry Crosswind Landing	greater than 29KT	Delay or proceed to ALT
Dry Crosswind (Training Sortie)	greater than 29KT	Delay or proceed to ALT
Wet Crosswind Landing	Greater than 29kt	Delay or proceed to ALT
Wet/Dry Crosswind Touch and Go	Greater than 25kt (Instructor Pilot)	Do not accomplish
Wet/Dry Crosswind Touch and Go	Greater than 15kt (Aircraft Commander)	Do not accomplish
Engine Icing	Temperature is less than 10C and visible moisture is present	Apply anti-ice
Freezing Rain at Takeoff	Actively falling	Do not takeoff
Freezing Drizzle at Takeoff	Actively falling	May takeoff after certain actions
Flight in Severe Icing	Any	Will be avoided
Flight in Freezing Rain	Any	Will be avoided
Turbulence	Observed or Forecast Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Avoid
Mountain Wave Turbulence	Known/Forecast moderate or greater	Avoid
Low Level Wind Shear	15KT considered severe	Delay or proceed to ALT
Water on RWY	Greater than .12 inches of water or slush on runway (reported braking action medium to poor)	Do not takeoff or land
Ice	Reported braking action poor	Do not takeoff or land
Wet or Dry Snow	Greater than .12 inches and reported braking action medium to poor or worse	Do not takeoff or land
HF Communication Degraded	No Specific Limit	Use ALT Communication

**Table A3.6. KC-135 Weather Restrictions.**

<b>Condition</b>	<b>Limit</b>	<b>Response Action</b>
Dry Crosswind Landing	greater than 25KT	Delay or proceed to ALT
Dry Crosswind (Training Sortie)	greater than 25KT	Delay or proceed to ALT

Wet Crosswind Landing	Approx 20KT or greater, depending on gross weight and other factors	Delay or proceed to ALT
Wet/Dry Crosswind Touch and Go	15KT or greater (Instructor Pilot)	Do not accomplish
Wet/Dry Crosswind Touch and Go	10KT or greater (Aircraft Commander)	Do not accomplish
Engine Icing	Temperature is less than 10C and visible moisture is present	Apply anti-ice
Freezing Rain at Takeoff	Actively falling	Do not takeoff
Freezing Drizzle at Takeoff	Actively falling	May takeoff after certain actions
Flight in Severe Icing	Any	Will be avoided
Flight in Freezing Rain	Any	Will be avoided
Turbulence	Observed Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Is prohibited
Mountain Wave Turbulence	Observed or Forecast Moderate	Avoid
Low Level Wind Shear	Speed Loss	Avoid

**Table A3.7. C-17 Weather Restrictions.**

Condition	Limit	Response Action
Dry Crosswind Landing or T/O	> 30KT	Hold or proceed to ALT
Wet Crosswind Landing	> 30KT	Hold or proceed to ALT
Wet Crosswind T/O	> 30KT	Delay or Do not accomplish
Wet/Dry Crosswind Touch & Go	>25KT	Do not accomplish
Tailwind	> 10KT	Hold or proceed to ALT
Headwind	> 40KT	Hold or proceed to ALT
Airframe Icing	Visible moisture is present	De-ice prior to takeoff
Freezing or Frozen Precip at T/O	Actively falling	Delay or cancel
Freezing Rain	Any	Delay or cancel
Turbulence	Observed Moderate CAT III	Avoid if possible
Turbulence	Observed or Forecast Severe CAT III	Avoid
Mountain Wave Turbulence	Observed or Forecast Moderate	Avoid
Low Level Wind Shear	Speed Loss	Avoid
Low Level Wind Shear	> 15KT considered severe	Hold or proceed to ALT

Ceiling / Visibility (Touch & Go Training Sortie)	< 300 feet (FT) and/or 3/4 statute miles (SM) or any RSC	Delay or cancel
Visibility plus crosswind for CAT II Instrument Landing System	< 1/2 SM / Runway Visual Range (RVR) less than 1200FT and crosswind > 10KT	Hold or proceed to ALT
High Frequency (HF) Communication Degraded	No specific limit	Use ALT communication
Global Positioning System (GPS) error	No RAIM	No GPS Departure/Arrival

**Table A3.8. C-32 Weather Restrictions.**

Condition	Limit	Response Action
Dry Crosswind Landing or T/O	> 30KT	Delay or proceed to ALT
Wet Crosswind Landing or T/O	> 30KT	Delay or proceed to ALT
Wet/Dry Crosswind Touch & Go	> 25KT	Do not accomplish
Tailwind	Greater than 10KT	Delay or proceed to ALT
Airframe Icing	Visible moisture is present	De-ice prior to moving
Freezing or Frozen Precip at T/O	Actively falling	Go through Anti-ice Pad
Freezing Rain	Moderate or greater	Delay or cancel
Turbulence	Observed Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Avoid
Mountain Wave Turbulence	Observed or Forecast Moderate	Avoid
Low Level Wind Shear	Speed Loss	Avoid
Low Level Wind Shear	> 15KT considered severe	Training – Delay or Cancel / Operational Mission avoid if possible
Ceiling / Visibility (Training Sortie)	Below applicable minimums	Delay or cancel
HF Communication Degraded	No specific limit	Use ALT communication

**Table A3.9. AH-1Z / UH-1Y Weather Restrictions.**

Condition	Limit	Response Action
Strong Winds	> 45KT	Do not start rotors delay and/or cancel
Tailwind	> 15KT	Do not start rotors
Moderate Winds	> 25KT	Tie down aircraft

**Table A3.10. CH-53E Weather Restrictions.**

Condition	Limit	Response Action
Strong Winds	> 45KT	Do not start/stop rotors delay and/or cancel Do not fold/unfold blades Do not fold/unfold pylons
Crosswind	> 35KT	Conduct landing into wind
Rolling Take-off Winds	> 40KT	Do not accomplish

**Table A3.11. C-12B Weather Restrictions.**

Condition	Limit	Response Action
Dry Crosswind Landing or T/O	> 25KT	Delay or proceed to ALT
Wet Crosswind Landing	> 25KT	Delay or proceed to ALT
Wet Crosswind T/O (rwy 06/24)	> 25KT	Do not accomplish
Wet Crosswind T/O (rwy 18/36)	> 25KT	Do not accomplish
Wet/Dry Crosswind Touch & Go	> 25KT	Delay or proceed to ALT
Tailwind	>10KT	Delay or proceed to ALT
Airframe Icing	Visible moisture is present	Delay or cancel
Freezing or Frozen Precip at T/O	Actively falling	Delay or cancel
Freezing Rain	Visible moisture is present	Delay or cancel
Turbulence	Observed Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Avoid
Mountain Wave Turbulence	Observed or Forecast Moderate	Avoid
Low Level Wind Shear	Speed Loss	Avoid
Low Level Wind Shear	> 15KT considered severe	Avoid
Wet snow, Ice , Water on RWY	> 1/2 inch	Avoid
Dry snow on runway	> 1/2 inch	Avoid
HF Communication Degraded	Not capable	Use ALT communication
GPS error	Precision Approach not allowed	None

**Table A3.12. C-130T Weather Restrictions.**

Condition	Limit	Response Action
-----------	-------	-----------------

Dry Crosswind Landing or T/O	> 35 KT	Proceed to ALT; Delay or cancel
Wet Crosswind Landing or T/O (RCR $\leq$ 12)	> 30 KT	Proceed to ALT; Delay or cancel
Icy Crosswind Landing or T/O (RCR $\leq$ 5)	> 24 KT	Proceed to ALT; Delay or cancel
Airframe Icing	Visible moisture is present	De-ice prior to moving; visually verify clear of ice prior to runway.
Heavy Snow	Visibility < ¼ mi	Proceed to ALT; Delay or cancel
Freezing Rain	Actively falling	Proceed to ALT; Delay or cancel
Freezing Drizzle	Moderate; Actively Falling	Proceed to ALT; Delay or cancel
Ice Pellets	Actively Falling	Proceed to ALT; Delay or cancel
Turbulence	Observed Moderate	Avoid if possible
Turbulence	Observed or Forecast Severe	Avoid if possible
Low Level Wind Shear	Speed Loss	Avoid if possible

**Attachment 4**

**MISSION EXECUTION FORECAST (MEF) EXAMPLE**

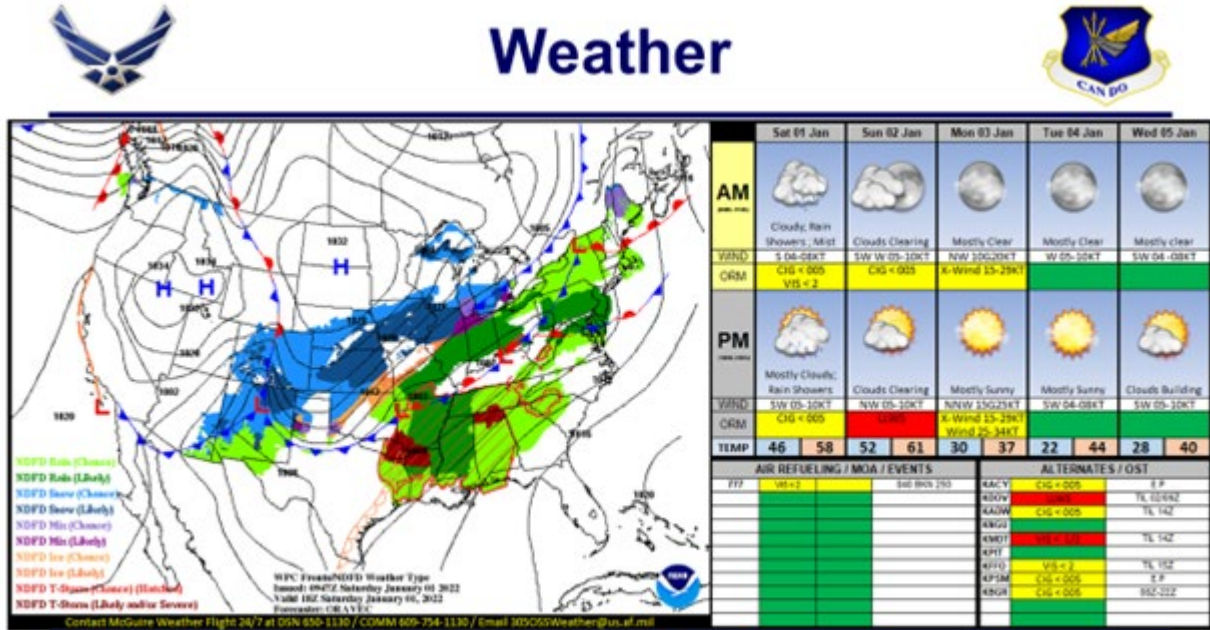
**Figure A4.1. Mission Execution Forecast (MEF) Example.**

FLIGHT WEATHER BRIEFING									
TAKEOFF DATA									
DATE	ACFT TYPE/CALL SIGN	DEP POINT/ETD	RUNWAY TEMP	DEWPOINT	ALSTG	PRES ALT			
SURFACE WIND (KT)		CROSSWIND (KT)	LOCAL WEATHER WATCH/WARNING/ADVISORY						
0		NONE							
REMARKS: VISIBILITY / WEATHER / CEILING / TEMPORARY CONDITIONS									
7SM NSW									
EN ROUTE & MISSION DATA									
FLIGHT LVL	CLIMB WINDS	LL INVERSION	HEIGHT	MIN FZ LEVEL AND LOCATION: XXX : STATE/AREA FT AGL					
	SFC : KT	YES/NO	N/A	MIN CEILING AND LOCATION: XXX : STATE/AREA FT AGL					
	:KT	LOW LEVEL WIND SHEAR		OBSCURATIONS AT FLIGHT LEVEL: CLOUD / IN AND OUT					
	:KT	YES/NO		MAX CLOUD TOPS AND LOCATION: XXX : STATE/AREA FT AGL					
<b>**THIS SECTION ONLY COMPLETED IF FORECAST DEVIATES FROM ATTACHED CHARTS**</b>									
THUNDERSTORMS			TURBULENCE			ICING			PRECIPITATION
NONE	AREA	LINE	NONE	IN CLR	IN CLD	NONE	RIME	MIXED	CLEAR
ISOLATED 1-2%		MT	LIGHT			TRACE			
FEW 3-15%		MT	MODERATE			LIGHT			
SCATTERED 16-45%		MT	SEVERE			MODERATE			
NUMEROUS >45%		MT	EXTREME			SEVERE			
HAZ: SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR EXPECTED IN AND NEAR LOCATION			LEVELS FT MSL			LEVELS FT MSL			PRECIPITATION
SEE CHARTS			LOCATION SEE CHARTS			LOCATION SEE CHARTS			NONE
A RELEVANT FORECAST (FT AGL)									
LOCATION/FLT LVL	VALID TIME	WINDS	CLOUDS	MIN VIS (NM)	HAZARDS/WX				
	/ Z TO	KT							
	/ Z TO	KT							
	/ Z TO	KT							
	/ Z TO	KT							
AERODROME FORECASTS									
DEST/ALTN	VALID TIME	SURFACE WIND (KT)	VIS/WEA	CLOUD LAYERS	ALT IMETER	RWY TEMP	PRES ALT		
DESTINATION	/ Z TO				INS	°C	FT		
KWRI	/ Z TO	CROSSWIND 0 KT				°F			
MC GUIRE AFB NEW JERSEY									
ALTERNATE	/ Z TO				INS	°C	FT		
KDOV	/ Z TO	CROSSWIND 0 KT				°F			
DOVER AFB DELAWARE									
ALTERNATE	/ Z TO				INS	°C	FT		
KACY	/ Z TO	CROSSWIND 0 KT				°F			
ATLANTIC CITY INTL NEW JERSEY									
ALTERNATE	/ Z TO				INS	°C	FT		
	/ Z TO	CROSSWIND 0 KT				°F			
ALTERNATE	/ Z TO				INS	°C	FT		
	/ Z TO	CROSSWIND 0 KT				°F			
ALTERNATE	/ Z TO				INS	°C	FT		
	/ Z TO	CROSSWIND 0 KT				°F			
ADDITIONAL INFORMATION									
All heights are AGL. Contact KWRI Weather Flight at DSN 650-1130 / COMM 609 754-1130									
BMNT: ## #N/A	SR: ## #N/A	SS: ## #N/A	EENT: ## #N/A	MR: ## #N/A	MS: ## #N/A	Illumination: #N/A			
Space Weather impacts:		HF:	NO IMPACTS			UHF:	NO IMPACTS		
BRIEFING RECORD									
WEATHER BRIEFED TIME	FORECASTER'S INITIAL	VOID TIME	AIR FORCE	EXTENDED TO / REBRIEF TIME / INITIALS					
E Z Z			Z/ Z	Z					

Attachment 5

FIVE DAY OUTLOOK EXAMPLE

Figure A5.1. Five Day Outlook Example.



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Attachment 6

WINTER WEATHER TIMELINE EXAMPLE

Figure A6.1. Winter Weather Timeline Example.

Joint Base MDL, NJ Winter Weather Event Forecast 305 OSS/OSW - Last Updated:													11 Jan 2019 0700L		00-24HR		
Total Accumulation				0"				SN=Snow, RA=Rain, OZ=Ozizzle, FZ=Freezing, FL=Icefall, SH>Showers, BL=Blowing FG=FG, FOG=Fog, TS=Thunderstorm, Crosswinds are based on runway 06/24									
Date	Hour (Z)	Hour (L)	Forecast Weather	Total Accu.	Visibility (SM)	Ceiling	Wind Direction	Wind Speed (kt)	Wind Gust (kt)	Wind Speed (mph)	Gust Speed (mph)	Cross Wind (kt)	Cross Wind Gust (kt)	Temp (°F)	Temp (°C)	Wind Chill (°F)	
13-Jan-19	00	19								00	00	00	00	-18		36	
13-Jan-19	03	22								00	00	00	00	-18		36	
13-Jan-19	06	01								00	00	00	00	-18		36	
13-Jan-19	09	04								00	00	00	00	-18		36	
13-Jan-19	12	07								00	00	00	00	-18		36	
			Sunrise 0719L							00	00	00	00	-18		36	
13-Jan-19	15	10								00	00	00	00	-18		36	
13-Jan-19	18	13								00	00	00	00	-18		36	
13-Jan-19	21	16								00	00	00	00	-18		36	
			Sunset 1656L							00	00	00	00	-18		36	
NOTES: Sign up for Distro @ <a href="https://www.milsuite.mil/book/groups/jb-mdl-weather">https://www.milsuite.mil/book/groups/jb-mdl-weather</a> OR on our Mattermost Channel 305OSS_O6W (Weather) This product is updated at a minimum of twice daily NLT 0700L/1900L, or more frequently as forecast changes require. It is posted to the above link. Snow intensity determined by visibility: -SN (light snow) > 1/2SM SN (moderate snow) > 1/4 but < 1/2SM -SN (heavy snow) < 1/4SM Contact information: 305 OSS/OSW (JBMDC Weather Office) CGN 650-7992 COMM 609-754-3962 305OSSWeather@us.af.mil																	

Joint Base MDL, NJ Winter Weather Event Forecast 305 OSS/OSW - Last Updated:													11 Jan 2019 0700L		24-48HR		
Total Accumulation				0"				SN=Snow, RA=Rain, OZ=Ozizzle, FZ=Freezing, FL=Icefall, SH>Showers, BL=Blowing FG=FG, FOG=Fog, TS=Thunderstorm, Crosswinds are based on runway 06/24									
Date	Hour (Z)	Hour (L)	Forecast Weather	Total Accu.	Visibility (SM)	Ceiling	Wind Direction	Wind Speed (kt)	Wind Gust (kt)	Wind Speed (mph)	Gust Speed (mph)	Cross Wind (kt)	Cross Wind Gust (kt)	Temp (°F)	Temp (°C)	Wind Chill (°F)	
14-Jan-19	00	19								00	00	00	00	-18		36	
14-Jan-19	03	22								00	00	00	00	-18		36	
14-Jan-19	06	01								00	00	00	00	-18		36	
14-Jan-19	09	04								00	00	00	00	-18		36	
14-Jan-19	12	07								00	00	00	00	-18		36	
			Sunrise 0719L							00	00	00	00	-18		36	
14-Jan-19	15	10								00	00	00	00	-18		36	
14-Jan-19	18	13								00	00	00	00	-18		36	
14-Jan-19	21	16								00	00	00	00	-18		36	
			Sunset 1656L							00	00	00	00	-18		36	
NOTES: Sign up for Distro @ <a href="https://www.milsuite.mil/book/groups/jb-mdl-weather">https://www.milsuite.mil/book/groups/jb-mdl-weather</a> OR on our Mattermost Channel 305OSS_O6W (Weather) This product is updated at a minimum of twice daily NLT 0700L/1900L, or more frequently as forecast changes require. It is posted to the above link. Snow intensity determined by visibility: -SN (light snow) > 1/2SM SN (moderate snow) > 1/4 but < 1/2SM -SN (heavy snow) < 1/4SM Contact information: 305 OSS/OSW (JBMDC Weather Office) CGN 650-7992 COMM 609-754-3962 305OSSWeather@us.af.mil																	