

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

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



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Weather

WEATHER SUPPORT

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This instruction implements Air Force Policy Directive (AFPD) 15-1, *Air Force Weather Operations*, Air Force Manual (AFMAN) 10-206, *Operational Reporting*, Air Force Instruction (AFI) 15-114, *Weather Technical Readiness Evaluation*, AFI 15-128, *Weather Force Structure*, Air Mobility Command Instruction (AMCI) 15-101, *Weather Operations And Support*, AFI 10-2501, *Air Force Emergency Management Program Planning and Operations*, AFMAN 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129V1, *Air and Space Weather Operations - Characterization*, AFMAN 15-129V2, *Air and Space Weather Operations - Exploitation*. It establishes responsibilities and weather support procedures. It also 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 92d Air Refueling Wing (ARW), subordinate units, and units assigned, attached, or supported by Fairchild Air Force Base (AFB). Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFI 33-322, *Records Management Program*, and disposed of in accordance with the Air Force Records Information System Records Disposition Schedule. 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 Forms 847 from the field through the appropriate functional's chain of command.

SUMMARY OF CHANGES

This document has been revised and must be completely reviewed. Formatting has been updated to comply with the Air Mobility Command, Airfield Operations Division, Weather (AMC/A3AW) recommended template. **Chapter 2, para 2.4** has been updated to include a new attachment. A new paragraph has been added to **Chapter 2** to cover Air Quality procedures during fire season. The previous **attachments 4** and **5** are now **attachments 5** and **6**. **Attachment 6** has been updated with the latest edition.

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Chapter 1

CHARACTERIZATION UNIT (CU) & EXPLOITATION UNIT (EU) INTERACTIONS

1.1. General. The 25th Operational Weather Squadron (25 OWS), the 618th Air Operations Center Weather Directorate, (618 AOC/XOW), and the 92d Operations Support Squadron (92 OSS) and the 92d Operations Support Weather Flight (92 OSW) are the official weather information agencies for Fairchild AFB, Washington. These agencies provide weather information in support of the 92 ARW, the 141 ARW, and subordinate units and units assigned, attached, or supported by Fairchild AFB. The 92 OSS/OSW is commonly referred to as the Weather Flight (WF) and is the focal point for all weather-related issues. This instruction will be 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. The 25 OWS at Davis-Monthan AFB, Arizona, provides regional and operational level weather products and information to Air Force and Army units in the Western region of the Continental United States.

1.2.1. Meteorological Watch (METWATCH). The 25 OWS performs a continuous METWATCH for Fairchild AFB. METWATCH is a deliberate, continuous 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.

1.2.2. The WF and 618 AOC/XOW are the primary source of tailored weather services in support of the 92 ARW, the 141 ARW, various headquarters elements, and visiting aircrews. The WF and 618 AOC/XOW will make every effort to ensure that mission-limiting weather is anticipated and exploited, and that safety and resource protection are maintained.

1.3. Responsibilities. General responsibilities of the 25 OWS and WF are outlined in AFI 15-128, para 2.3.3 and para 2.3.4, respectively.

1.3.1. The 25 OWS issues forecast weather watches (except lightning), and may provide flight weather briefings to transient aircrews passing through Fairchild AFB. Additionally, they will issue all watches, warnings and advisories during periods of WF closure.

1.3.2. The WF issues all Terminal Aerodrome Forecasts (TAFs), advisories, warnings and lightning watches during normal operating hours.

1.3.3. The WF creates Mission Weather Products (MWPs) that fuse theater scale products with local mission requirements to enable the direct inject of weather impacts into warfighter planning and/or execution. Upon request, the WF provides flight weather briefings and operational weather support for the 36th Rescue Squadron (36 RQS) and Army Aviation Support Facility (AASF) number 2. The WF will also provide flight weather briefings for transient aircrews IAW the WF duty priorities listed in [Table 1.1](#).

1.3.4. The 618 AOC/XOW. The 618 AOC/XOW provides flight weather briefings and operational weather support for the 92 ARW and 141 ARW.

1.3.5. Fairchild AFB Installation Data Page. The 25 OWS and Fairchild WF coordinate and maintain the Fairchild AFB Installation Data Page. Data page details include TAF specification and amendment criteria, Watch, Warning, and Advisory (WWA) thresholds, desired lead times, mission impacts, unit information, Joint Environmental Toolkit (JET) back-up contacts and local outage back-up information.

1.3.6. Eyes Forward & Collaboration. The Fairchild WF acts as the eyes forward for the 25 OWS by relaying significant, time-sensitive meteorological information not found in coded meteorological reports to assist in forecast operations.

1.3.7. **Duty Priorities.** All WF tasks cannot be accomplished simultaneously, therefore, IAW AFMAN 15-129V2 the WF has established the duty priorities listed in [Table 1.1](#). based on the order of relative importance to mission accomplishment. Since not all situations affecting operations at Fairchild AFB can be anticipated, WF personnel use sound risk management principles to determine the need to recall additional personnel to assist in meeting surges in operations.

Table 1.1. 92 OSS/OSW Duty Priority Listing.

Priorit y	Duties
1	Perform WF Emergency War Orders Taskings.
2	Execute WF Evacuation.
3	Respond To Aircraft/Ground Emergencies.
4	Respond to Pilot to Metro Service (PMSV) Contacts and Phone Patch Contacts.
5	Disseminate WWAs.
6	Severe Weather Action Plan (SWAP) Operations.
7	Augment Automated Meteorological Observing System (AMOS) Observations for Mandatory Elements.
8	Disseminate Terminal Aerodrome Forecast
9	Mission Execution Forecast Process -- Produce and Disseminate Forecasts.
10	Disseminate Urgent Pilot Reports (PIREPs) Locally and Longline.
11	Disseminate PIREPs Locally and Longline.
12	Provide "Eyes Forward" Support to 25 OWS.
13	Perform MISSIONWATCH Activities.
14	Provide Other Briefing Support.
15	Weather Functional Training.
16	Accomplish Administrative Tasks.

1.4. Hours of Operation.

1.4.1. WF. Airfield and mission services are available on a 24/7 basis. Staff services are available Monday-Friday 0730L-1630L.

1.4.1.1. A Notice to Airmen (NOTAM) is issued for changes in service hours not to exceed 90 days. Changes in service hours anticipated to exceed 90 days will be reflected in the appropriate Flight Information Publication (FLIP).

1.4.2. The 25 OWS and 618 AOC/XOW. Hours of operation are 24/7, 365 days a year.

1.5. Contact Information.

1.5.1. WF (509) 247-8411 / DSN 657-8411

1.5.2. PMSV 234.8 MHz

1.5.3. The 618 AOC/XOW (618) 229-0353 / DSN 312-779-0353

1.5.4. The 25 OWS (520) 228-7338 / DSN 228-7338

1.6. Continuity of Operations Plan (COOP). Continuity of support to the installation and flying operations is susceptible to equipment and communication outages at the 25 OWS, 618 AOC, and WF. The WF participates in various Wing, 25 OWS, and AMC COOP exercises to maintain procedures and proficiency at tasks necessary to ensure continuity of operations.

1.6.1. WF COOP. In the event of a building evacuation, the WF relocates to building 1200, first floor. WF members utilize evacuation checklists and Standard Operating Procedures to expedite resumption of installation weather support. If access to fixed observing sensing equipment readouts is lost, backup equipment is used to take observations. Expect some services to be degraded (weather products, pilot briefings, etc.) due to limited facilities and loss of dedicated data services, including sensors and various data types (meteorological satellite, radar imagery, etc.). For flight safety reasons, the WF does not evacuate during exercises.

1.6.2. The 25 OWS COOP.

1.6.2.1. For short term disruptions in 25 OWS support (up to 72 hours), the WF assumes local weather watch responsibility.

1.6.2.2. For long term disruptions in 25 OWS support (greater than 72 hours), the 25 OWS resumes all support from an alternate location.

1.6.3. The 618 AOC/XOW COOP. IAW AMCI 15-101, *Weather*, if the 618 AOC/XOW loses the capability to provide flight weather briefing services, the WF will assume responsibility for all Fairchild AFB Integrated Flight Management (IFM) and non-IFM weather packages. If the WF is unable to provide the required support, briefing responsibility will be transferred to a regional OWS.

1.6.4. AMC Weather COOP Exercises. AMC weather units typically conduct coordinated COOP exercises on the second Wednesday/Thursday of each month. AMC/A3AW issues Special Instructions outlining the functions and capabilities that are to be exercised. As a courtesy, the WF coordinates COOP timelines and potential impacts with supported units prior to all scheduled COOPs.

Chapter 2

AIRFIELD SUPPORT

2.1. General. Airfield support includes those actions affecting the Fairchild aerodrome (defined within a 5 nautical miles (NM) radius of the airfield) or Fairchild AFB as a whole. These functions include, but may not be limited to, TAFs, weather observing, meteorological watch, and resource protection.

2.2. Observations. The FMQ-19 AMOS works in concert with the JET to evaluate, prepare, and transmit weather observations for Fairchild AFB. IAW AFMAN 15-111 automated systems at Air Force and Army controlled airfields are to operate in full-automated mode to provide the official airfield observation. The three basic types of observations provided are Meteorological Terminal Aviation Routine Report (METAR), Special (SPECI), and LOCAL. [Attachment 2](#) lists all special weather observation (SPECI) criteria for Fairchild AFB. [Attachment 3](#) provides an example of a typical SPECI observation.

2.2.1. Point of Observation. The official point where a weather observation is taken. On Fairchild AFB, the point of observation is where the FMQ-19 sensors are located. During periods of augmentation, the observation site is the manhole cover located on the runway side of building 1. During relocations to the Alternate Operating Location (AOL), and when augmentation is required, the observation point is marked by a compass rose on a raised cement block approximately 300 feet west of the AOL.

2.2.2. Observing Location Limitations.

2.2.2.1. The FMQ-19 is properly sited and no limitations are currently noted.

2.2.2.2. Augmented Observations Taken at the Primary Augmentation Site. An unobstructed view exists of the runway and its approaches. However, the view west and north-northeast is restricted because of buildings/structures. Additionally, observers may not hear thunder at either site due to the level of noise on the flight line.

2.2.3. FMQ-19 Automated Observation. An automated observation is any observation evaluated, prepared, and transmitted by an observing system without human intervention. When operating in automated mode, the 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.

2.2.4. FMQ-19 Augmentation. Augmentation is a method of having a weather technician manually add or edit data to an observation generated by the FMQ-19. The two augmentation processes used are supplementing and backup.

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

2.2.4.2. Supplementing Procedures. WF personnel supplement observations when the weather conditions in AFMAN 15-111, Table 5.1. are observed or are forecast to occur within 1 hour.

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

2.2.4.4. Backup Procedures. In the event of FMQ-19 malfunction or failure, WF personnel use manual observing methods when performing backup operations. When required, the WF 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. When backing up FMQ-19 wind sensors, the wind values will be reported as estimated. Unless a properly sited Tactical Meteorological Observing System (TMQ-53) is used to back-up the FMQ-19 pressure sensor, the pressure values will be reported as estimated.

2.3. TAFs. Fairchild AFB TAFs are produced and disseminated by the WF. TAFs are valid for 30 hours, apply to the area within the 5NM area of the Fairchild AFB airfield complex, and will be issued at 0300, 1100, and 1900 Zulu time. A complete list of TAF specification and amendment criteria can be found on the 25 OWS Installation Data Page. [Attachment 3](#) contains an example of a Fairchild AFB TAF.

2.4. Resource Protection Products. Special Weather Statements (SWS) 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 on the 25 OWS Installation Data Page. A complete list of all Fairchild AFB WWAs are outlined in [attachment 4](#).

2.4.1. SWS. A notice issued by the 25 OWS to assist with resource protection decisions. SWS advise of the potential for widespread hazardous weather conditions in a specified geographical region. The WF utilizes the SWS to assist in maintaining situational awareness of environmental conditions that have the potential to negatively impact Fairchild AFB or the local flying area.

2.4.2. Air Quality Monitoring and Alerting. During hours when the 92 and 141 Medical Group cannot monitor air quality due to lack of manning, the WF works with them and Command Post (CP) to disseminate alerts when air quality is degraded due to wildfires or pollution. See [Attachment 5](#), Air Quality Alerts, for recommended actions.

2.4.3. Weather Watch. A notice to installation personnel/supported units of a potential for environmental conditions of such intensity as to pose a hazard to life or property. Watches are valid for a 5NM radius from the center point of the Fairchild AFB runway complex.

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

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

2.4.4. Weather Warning. A notice to installation personnel/supported units 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 a 5NM radius from the center point of the Fairchild AFB runway complex.

2.4.4.1. 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.

2.4.4.2. 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.

2.4.4.3. Forecasted warnings take precedence over advisories for the same phenomenon and should maintain horizontal consistency with TAFs and other forecast products.

2.4.5. Observed Weather Warnings. Lightning warnings are the only observed warning issued for Fairchild AFB and extends 5NM in all directions from the airfield. Lightning warnings are not issued until lightning is observed, either visually or 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 5NM.

2.4.6. Weather Advisories. A notice to installation personnel/supported units when an established weather condition is occurring or expected to occur. Forecast weather advisories are issued when an established environmental condition is expected to occur. Observed weather advisories are issued when an established environmental condition is occurring.

2.4.7. WWA Numbering Scheme. Watches, warnings and advisories 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.

2.4.8. 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 (KTS) to 50 KTS). 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 1 inch to ½ inch).

2.4.9. WWA Amendments. Amendments are issued when an active WWA no longer adequately describes a phenomenon's expected occurrence. All amendments are issued with a new WWA number and should clearly state what affect the new WWA has on any previously issued notices.

2.4.10. WWA Extensions. Extensions are issued when a phenomenon's 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.

2.4.11. WWA Cancellation. Cancellations are issued when the weather phenomena is no longer occurring or expected to occur. WWAs not extended or canceled automatically expire at the end of the valid period. Observed advisories are canceled when the criteria has not occurred in the last 30 minutes.

2.5. Dissemination Process.

2.5.1. Observations. Observations taken by either the FMQ-19 or the weather technician are disseminated via JET. When JET is nonoperational, the WF relays observations to the following organizations in order of priority listed in **Table 2.1**.

Table 2.1. Notification Priority.

1. Tower commercial (509) 247-5152
2. 92 ARW/CP commercial (509) 247-4051/4056
3. Airfield Management commercial (509) 247-5202
4. 25 OWS commercial (520) 228-7338

2.5.2. TAFs. Primary dissemination for TAFs is JET. If JET is nonoperational, the WF disseminates TAFs through Air Force Weather-Web Services (AFW-WEBS). If the network is down, TAFs are disseminated to Air Traffic Control (ATC) and 92 ARW/CP via telephone, fax, or e-mail.

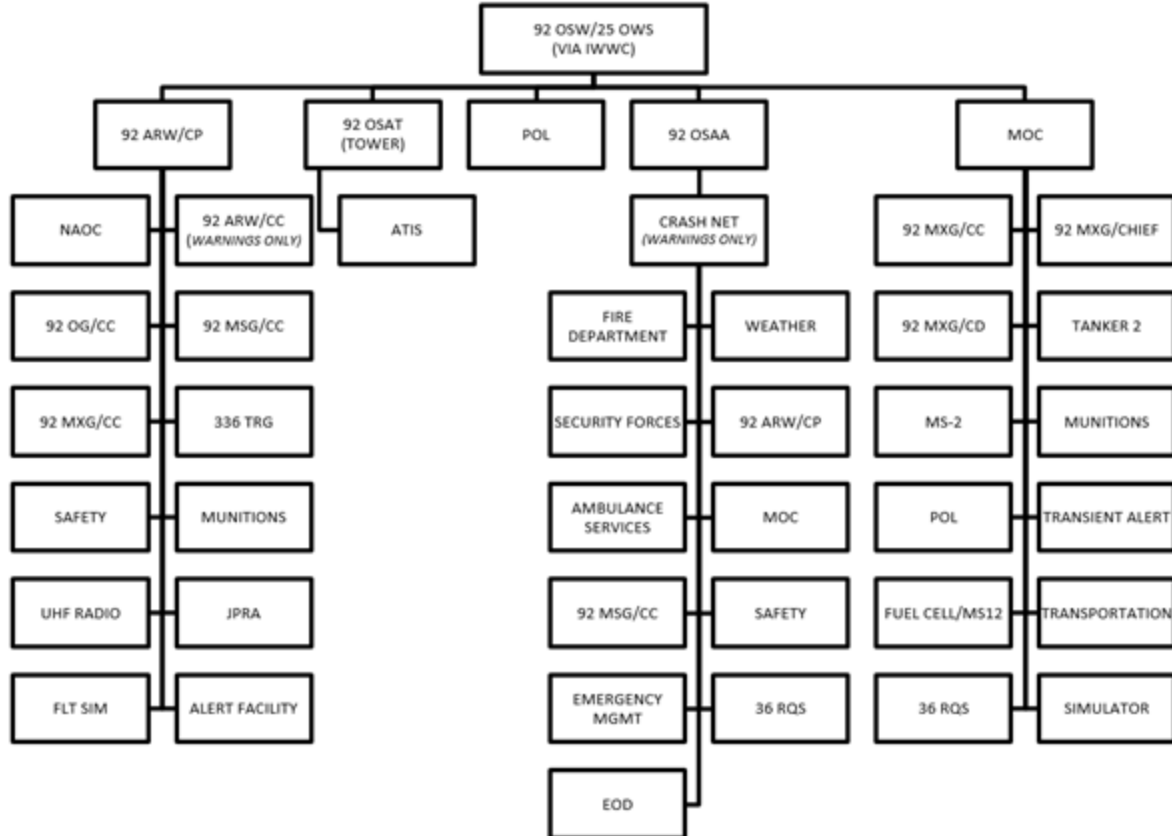
2.5.3. SWSs. 25 OWS transmits SWSs to WF leadership via email. WF leadership forwards SWSs to 92 ARW leadership if applicable.

2.5.4. WWAs. The WF or 25 OWS enters WWAs into JET for dissemination to ATC, 92 ARW/CP, Airfield Management (92 OSS/OSAA), Maintenance Operations Center (MOC), and Petroleum, Oils and Lubricants (POL). If JET is out-of-service the 25 OWS or the WF disseminates via back-up calls. Upon notification, these units will further disseminate all WWAs using the pyramid notification scheme shown in **Figure 2.1**. In addition, the 92 ARW/CP disseminates all WWAs via email and/or automated mass notification system (AtHoc) to appropriate base agencies.

2.5.4.1. Lightning Warnings. All lightning warnings are disseminated by the 92 ARW/CP to the base populace via the AtHoc system, allowing members on base to be prepared for dangerous weather. Airfield Management disseminates all lightning warnings via the Secondary Crash-net.

2.5.4.2. Tornado Warnings. The 92 ARW/CP has the primary responsibility for sounding the base siren for base tornado warning notification. The Alternate CP location has capabilities to sound the siren for a tornado warning.

Figure 2.1. Weather Pyramid Alerting.



2.6. Cooperative Weather Watch (CWW). The WF and ATC have established a CWW as required by 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. WF technicians should thoroughly understand and be able to execute every element in the local cooperative weather watch agreement.

2.6.1. Fairchild AFB ATC personnel will:

2.6.1.1. Notify the weather technician when the observed tower prevailing visibility decreases to less than or increases to equal or exceed 4 statute miles.

2.6.1.2. Notify the weather technician whenever tower prevailing visibility is less than 4 statute miles and different from the currently reported surface prevailing visibility.

2.6.1.3. Notify the weather technician 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.

2.6.1.4. Notify the weather technician 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. Fairchild AFB weather technicians 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 statute miles.

2.6.2.2.1. Use control tower values of 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 the control tower visibility differs from the surface prevailing visibility by a reportable value.

2.6.3. ATC Limited Observation Training. ATC personnel are required to complete the Air Force Weather Knowledge Center ATC Weather Training and receive an orientation of the weather facility.

2.7. PMSV Support. Weather information is available via PMSV on frequency 234.8 MHz. The duty forecaster monitors PMSV traffic for all aircraft contacts. Aircrews can obtain weather information via phone patch to the WF, 618 AOC/XOW or the 25 OWS when the aircraft is outside the range of Fairchild AFB or the PMSV is out of service.

2.8. Emergency Action(s) Response.

2.8.1. Aircraft Mishap. When notified of an aircraft mishap that requires an Operational Report (OPREP-3) reporting or local reporting requirements, the WF initiates a save of applicable data used in the development of any weather products provided. Archived weather data is available to investigating agencies upon request.

2.8.1.1. If the WF provided the MWP, the WF notifies the 25 OWS Operations Floor Production Supervisor of all aircraft mishaps as soon as possible after notification of the event. The WF coordinates with the 25 OWS to save all applicable data and products. If products from other OWSs were used, the WF coordinates with all applicable OWSs to ensure the correct data is saved. OWSs save sufficient data in order to fully reconstruct environmental conditions before and after the mishap.

2.8.1.2. If an OWS, 618 AOC/XOW, or another WF provided the MWP, they are responsible for conducting the data save in coordination with any other Air Force Weather units involved.

2.8.2. SWAP. The SWAP ensures sufficient manpower is available to meet the increased demand for timely weather information during significant weather events. The WF duty forecaster initiates the SWAP when any of the criteria in [Table 2.2.](#) are forecast to occur.

Table 2.2. Conditions Requiring SWAP Activation.

SWAP ACTIVATION Criteria
Tornado Watch
Tornado Warning
Severe Thunderstorm Warning (Damaging Winds \geq 50KTS and/or Damaging Hail \geq 3/4 inch)
Winds \geq 50 KTS Warning
Heavy Snow Warning
Freezing Precipitation Warning

2.8.3. Chemical, Biological, Radiological, Nuclear, and High-yield Explosive (CBRNE) Response. The WF 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 WF 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.

Chapter 3

MISSION SERVICES

3.1. General. The WF, 25 OWS, and 618 AOC/XOW support the Fairchild AFB flying and non-flying missions. This chapter focuses on routine products and services provided to aviation units. The mission limiting weather thresholds are outlined in [Attachment 6](#).

3.2. 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 any OWS and 557th Weather Wing (557 WW).

3.2.1. GDSS Flight Weather Briefings. GDSS is the primary command and control system used by AMC owned/gained flying units to obtain weather briefings. GDSS provides a unique product that incorporates the requirements of all Fairchild AFB-based flying units into a common format. Updates can be obtained by contacting the WF at DSN 657-8411 / Commercial (509) 657-8411 or by calling 618 AOC/XOW at DSN 576-0353 / Commercial (618) 229-0353.

3.2.2. The 92 OSS/OSW MWP. The 92 OSS/OSW MWP is used to provide standardized weather briefings to Team Fairchild flying units that are briefed by the WF. An example of a MWP is in [Attachment 7](#).

3.3. MISSIONWATCH. MISSIONWATCH is 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.

3.3.1. WF Briefed Sorties (Local Training Missions/Non IFM). The WF uses the continuous MISSIONWATCH process to validate MWPs accurately reflect environmental conditions. When MWPs differ from observed conditions to the extent that it could impact operations, the WF coordinates MWP amendments/updates with the appropriate agency. The WF will amend/update the MWP as necessary. Additionally, when previously unforecast weather conditions expose a mission to potential risk, the WF directly updates the 92 ARW/CP. The 92 ARW/CP retains responsibility for relaying updated weather information to the aircrew.

3.3.2. The 618 AOC/XOW Briefed Sorties. The 618 AOC/XOW performs MISSIONWATCH and weather risk assessment for all 618 AOC briefed sorties. The 618 AOC/XOW uses the Weather Threat Assessment (WTA) to relay information on missions considered "at risk" based on the Operational Risk Management Thresholds identified in AMCI15-101.

3.3.2.1. The 92 ARW/CP automatically receives WTA notifications for wing-specific missions through a subscription service. Upon receipt of weather threat notification, the CP notifies appropriate on call squadron contacts/aircrews to pass along weather threats and instruct the aircrew to contact 618 AOC/XOW to mitigate the threat.

3.3.2.2. The WF monitors GDSS for situational awareness on 618 AOC briefed missions involving 92 ARW and 141 ARW assets. The WF coordinates with 618 AOC/XOW whenever observed weather conditions deviate significantly from the published WTA.

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

3.4.1. Completion of the 92 OSS/OSW feedback worksheet or 618 AOC/XOW feedback solicitation email.

3.4.2. Phone call or e-mail to 618 AOC/XOW or WF.

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

3.5. Transient Aircrew Support. Transient aircrews may submit requests for flight weather briefings (175-1s) in person or via phone using the contact information listed in [para 1.5](#). If the WF workload is such that they are unable to support transient aircrew requests (see [Table 1.1](#) for WF duty priorities), the WF may direct aircrews to contact the 25 OWS briefing cell for flight weather information. The 25 OWS briefing cell can be reached at DSN 228-6598/6599/6588 / Commercial (509) 228-6598/6599/6588, or via web access from the computers located in the flight planning room.

3.6. The 336th Survival Training Group (336 TRG). The WF provides jump weather forecasts to support parachute drop operations and training. A 24-hour advance notice is required for weather forecasts.

3.7. Non-Flying Missions. The WF and 25 OWS support various non-flying missions (e.g., wing picnics, change of command ceremonies, Morale Welfare and Recreation) through resource protection. Specific support to non-flying missions is identified in [Chapter 4](#). Non- governmental agencies should request weather information and support through 92 ARW Public Affairs.

3.8. Space Weather Impacts. Fairchild AFB has a wide-variety of parameters affected by various space-weather conditions (High Frequency and Ultra High Frequency communication, radar, Global Positioning System communications, etc.). The WF and 618 AOC/XOW provide space impacts on their MWP's.

Chapter 4

STAFF SERVICES

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

4.2. Staff Meteorological Functions. Staff meteorological functions aid leadership in identifying and understanding specific weather and environmental impacts. The WF is available to assist commanders in determining weather support requirements and impacts to operations. Non-governmental agencies should request weather information and support through 92 ARW Public Affairs. Examples of staff meteorological functions provided are:

4.2.1. The 92 ARW Staff Briefings. Staff weather briefings for 92 ARW are provided as required. Standard information includes a satellite picture and Fairchild 5-Day weather outlook and any additional slides/information wing leadership requests.

4.2.2. Staff weather briefings for 36 RQS are provided with advance notice and available manning.

4.2.3. The WF provides weather briefings for 336 TRG senior staff meetings with advance notice and available manning.

4.2.4. Installation Control Center (ICC)/Crisis Action Team (CAT) Briefings. The WF will provide weather support as required for ICC/CAT briefings. This includes real-world emergency, exercise, and deployment briefings. Each briefing will be tailored to provide the appropriate weather intelligence required by 92 ARW and 141 ARW leadership.

4.2.5. Instrument Refresher Course (IRC) Briefing. In accordance with AFMAN 11-210, *Instrument Refresher Course (IRC) Program*, computer based training is available for the weather portion of the briefing. If requested, the WF can provide a briefer to discuss more detailed local weather effects and impacts. This briefing includes airfield and mission services, WF capabilities, resource protection, seasonal/regional weather and space weather impacts (when applicable).

4.2.6. Pre-deployment Planning Briefing. The WF will provide pre-deployment weather briefings as requested. Briefing content will be tailored to meet customer requirements. For example, an aviation unit will receive 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 will receive a briefing on surface temperatures, wind speed, potential for blowing sand and dust, and precipitation.

4.2.7. Execution Briefings. Upon notification of an Assumption of Alert briefing the WF provides in-depth weather briefings and weather packets to the alerted crews.

4.2.8. Climatology Services. The WF 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.

4.3. Staff Integration Functions. WF leadership ensures the unit is adequately resourced to meet both operational and staff requirements. 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. The 92 ARW, 141 ARW Plans and Programs (XP). The WF 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.

4.3.2. The 92 ARW CP. The WF notifies the 92 ARW CP whenever the WF primary facility is evacuated and/or the AOL is activated.

4.3.3. The 92 ARW Public Affairs. The WF provides tours of the base weather station for community groups and others when coordinated by Public Affairs.

4.3.4. The 92 OSS/OSAA. The OWS or WF provides notification of all forecasted weather watches, warnings, and advisories via the Integrated Weather Warnings Capability (IWWC), telephone, e-mail, or in-person during airfield hours of operations.

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

4.3.4.2. WF leadership participates as a member of the Airfield Operations Board.

4.3.5. Fairchild AFB, Air Traffic Control Tower (92 OSS/OSAT).

4.3.5.1. The WF provides notification of all-weather watches, warnings, and advisories via IWWC/telephone or e-mail.

4.3.5.2. The WF notifies 92 OSS/OSAT whenever the WF primary facility is evacuated and/or the AOL is activated.

4.3.5.3. The WF notifies 92 OSS/OSAT of all JET, FMQ-19 and PMSV outages.

4.3.6. The 92 Civil Engineering Squadron (CES). The WF provides a monthly climatology report.

4.3.7. All Supported Flying Units (92 ARW, 141 ARW, 36 RQS, and AASF 2). The WF provides services as outlined throughout this publication.

4.4. Reciprocal Support.

4.4.1. The 92 ARW and 141 ARW CPs:

4.4.1.1. Ensure dissemination of all WWA's as outlined in [Chapter 2](#) of this document.

4.4.1.2. Immediately notify the WF of any aircraft or ground mishaps (weather-related or not) requiring OPREP-3 reporting or local reporting requirements IAW AFMAN 10-206, *Operational Reporting*.

4.4.1.3. Subscribe to and monitor the WTA notifications for 92 ARW and 141 ARW missions.

4.4.1.4. Upon notification, by either the WF or 25 OWS, of the potential for severe weather, utilize applicable Quick Reaction Checklists (QRC) to alert wing leadership and various base agencies.

- 4.4.1.5. Activate base emergency sirens when a TORNADO WARNING is issued. Disseminate all warnings via email and/or AtHoc.
- 4.4.1.6. Provide Ultra High Frequency connectivity to aircrews via phone patch with the WF or 25 OWS when the WF PMSV is inoperative for an extended period.
- 4.4.2. The 92 ARW Public Affairs. Coordinate requests for weather information from non-DoD agencies and tours of WF facilities with WF leadership.
- 4.4.3. The 92 OSS/OSAA.
 - 4.4.3.1. Notify WF personnel of in-flight, ground emergencies, or mishaps and termination via the secondary crash network.
 - 4.4.3.2. Disseminate WWAs as outlined in **Chapter 2** of this instruction.
 - 4.4.3.3. Email the WF organizational account NOTAM updates. Include PMSV outages in Airfield Advisories and NOTAMs, when required.
 - 4.4.3.4. Publishes WF hours and pertinent operational information in the FLIP.
- 4.4.4. The 92 OSS/OSAT.
 - 4.4.4.1. Participates in and follow the procedures outlined in CWW program.
 - 4.4.4.2. Notify the WF of all changes in active runway.
 - 4.4.4.3. Notify the WF of any light setting changes on the high-intensity runway lights.
 - 4.4.4.4. Relay pilot weather reports to weather personnel.
 - 4.4.4.5. Provide control tower orientation training for weather personnel.
 - 4.4.4.6. Initiate radio checks to ensure proper PMSV operation.
- 4.4.5. The 92 ARW Safety Office.
 - 4.4.5.1. Request a Fairchild AFB WF briefer for seasonal weather briefings and provide two weeks advance notice when possible.
- 4.4.6. Airfield Systems Flight (92 OSS/OSAM).
 - 4.4.6.1. Perform AN/TMQ-53 pressure sensor calibrations annually or when comparisons between the tactical pressure sensor and aircraft altimeters (or similar reliable sensors) indicate calibration is warranted.
 - 4.4.6.2. Purchase equipment and fund for sustainment/repair of the PMSV radio capability.
 - 4.4.6.3. Respond to FMQ-19 outages as outlined in **para 5.4** of this document and the 92 OSS/OSA Operations Letter.
- 4.4.7. The 92d Communications Squadron (92 CS).
 - 4.4.7.1. 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.

- 4.4.7.2. Coordinate with the weather technician prior to performing maintenance on weather communications. Ensure routine maintenance does not degrade METWATCH and/or MISSIONWATCH performed by the WF during periods of inclement weather.
- 4.4.7.3. Utilize the restoration priorities for weather communications and meteorological sensing equipment outlined in this document.
- 4.4.7.4. Notify the responsible service agents for weather communications and meteorological sensing equipment outages.
- 4.4.7.5. Coordinate with off-base agencies to repair off base lines.
- 4.4.7.6. Perform necessary follow-up actions as required until full service is restored.
- 4.4.7.7. Ensure weather data and telephone circuits are assigned repair priorities.
- 4.4.7.8. Ensure established maintenance response times are met.
- 4.4.7.9. Ensure a 24-hour point of contact for reporting outages and assigning job control numbers is available.
- 4.4.8. The 92d Security Forces Squadron (92 SFS).
 - 4.4.8.1. Promptly inform the WF of any hazardous weather reported by 92 SFS personnel (tornado, hail, etc.).
- 4.4.9. All Supported Flying Units (92 ARW, 141 ARW, 36 RQS and AASF 2).
 - 4.4.9.1. Notify the WF of current and planned weather alternates and any special considerations affecting the duration of the mission (e.g., weather categories, exercise/deployment considerations).
 - 4.4.9.2. Notify the WF 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.
 - 4.4.9.3. Provide timely notification of changes to scheduled operations affecting weather support requirements as soon as the change is identified.
 - 4.4.9.4. Provide PIREPS either directly to the WF or through the PMSV, Tower, or Supervisor of Flying (SOF).
 - 4.4.9.5. Provide feedback on all-weather briefings via e-mail or survey to the WF or 618 AOC/XOW.
 - 4.4.9.6. Provide the WF a minimum of 2 weeks advanced notification of any requirement for training conducted by the WF or any changes in requirements to previously scheduled weather training.
- 4.4.10. Base Operations FLIP Manager. Submit FLIP updates provided by the WF to Air Force Flight Standards Agency/Operating Location-D.
- 4.4.11. Bioenvironmental Engineering Flight (92 OMRS/SGXB) . Provide the base populace with the Wet Bulb Globe Temperature (WBGT), Wind Chill, and Air Quality alerts as required.
- 4.4.12. All Weather Support Recipients. Notify the WF when new weather support requirements are identified or when changes to current weather support is deemed necessary.

Chapter 5

WEATHER EQUIPMENT

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

5.2. Meteorological Equipment. The WF uses the FMQ-19 and WSR-88D weather radar to determine the current state of the atmosphere. These critical systems provide customers the most timely, accurate, and relevant weather intelligence possible. **Note:** TMQ-53 is a tactical automated observing system that is used by the WF during contingency and exercise operations. The TMQ-53 provides a capability that is very similar to the FMQ-19.

5.2.1. FMQ-19. The FMQ-19 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 World Meteorological Organization, Federal Aviation Administration, National Weather Service, and military reporting standards.

5.2.2. Gibson Ridge Software (GRS). The WF utilizes the GRS applications to access radar data. This software allows technicians to observe a large variety of both meteorological and non-meteorological phenomena ranging from sunrise spikes to detailed information on complex thunderstorm circulations. Weather technicians routinely incorporate the latest radar information into all mission execution forecasts and resource protection products.

5.3. Communications Equipment. The following systems are the backbone of the WF communications network:

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

5.3.2. PMSV Radio. The PMSV Radio allows the WF to communicate time sensitive weather information with aircrews, both on the ground and in the air. Refer to [paragraph 2.7](#) for information on PMSV support.

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

5.3.4. Local Area Network (LAN). The WF relies heavily on the LAN to improve the timeliness and accuracy of weather intelligence to our customers.

5.4. Maintenance.

5.4.1. Organizations providing preventive maintenance and repair of weather and communications equipment are listed in [Table 5.1](#).

Table 5.1. Equipment Maintenance List.

Organization	Equipment
92 OSS/OSAM	FMQ-19; PMSV
557 WW Fielded Systems Support Center	JET
92 CS/SCOS (Telephone Systems)	Phones/Hotlines
92 CS/SCOI (Network Maintenance)	LAN/Internet Connectivity/Sensor Collection Appliance (SCA)

5.4.2. Restoral Priorities. Priorities for restoring critical systems exist in the event natural disasters or any other anomaly, simultaneously impact systems base wide. Significant indicates a situation where the equipment is completely inoperative, while minimal means the equipment is in limited operation. The priorities for weather equipment are listed in [Table 5.2](#) below (priorities may be adjusted based on forecasted weather).

Table 5.2. Equipment Restoral Priorities.

Equipment	Organization	Response Times Significant/Minimal
PMSV Radio	92 OSS/ OSAM (Airfield Systems)	Immediate/24 hours
FMQ-19	92 OSS/ OSAM (Airfield Systems)	Immediate/24 hours
LAN/Internet Connectivity/Phones/Hotlines/JET/SCA	92 CS/SCOI	Immediate/12 hours

5.5. Building Power. In the event of a commercial power interruption, building 1 automatically switches to backup generator power.

DEREK M. SALMI, Colonel, USAF
Commander

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

AFPD 15-1, *Weather Operations*, 12 November 2015
AFMAN 10-206, *Operational Reporting*, 17 June 2018
AFI 10-2501, *Air Force Emergency Management*, 18 April 2016
AFI 11-2KC-135V3, *KC-135 Operations Procedures*, 09 September 2019
AFI 11-2C-21V3, *C-21 Operations Procedures*, 15 June 2015
AFI 15-114, *Weather Technical Readiness Evaluation*, 15 March 2017
AFI 15-128, *Weather Force Structure*, 20 June 2019
AFI 11-202V3, *General Flight Rules*, 9 August 2016
AFMAN 11-210, *Instrument Refresher Program (IRP)*, 03 October 2019
AFMAN 15-111, *Surface Weather Observations*, 11 March 2019
AFMAN 15-124, *Meteorological Codes*, 15 January 2019
AFI 15-127, *Weather Training*, 19 January 2016
AFMAN 15-129V1, *Air and Space Weather Operations - Characterization*, 20 March 2017
AFMAN 15-129V2, *Air and Space Weather Operations - Exploitation*, 6 December 2011
AFMAN 15-129V2 AMCSUP, *Air and Space Weather Operations - Exploitation*, 31 Mar 2019
AFMAN 33-363, *Management of Records*, 20 July 2016
AMCI 15-101, *Weather Operations And Support*. 2 September 2019
AR 95-1, *Aviation Flight Regulations*, 22 March 2018

Adopted Form

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AASF—Army Aviation Support Facility
AFI—Air Force Instruction
AFMAN—Air Force Manual
AFB—Air Force Base
AFPD—Air Force Policy Directive
AFW-WEBS—Air Force Weather-Web Service
AOL—Alternate Operating Location

AMC—Air Mobility Command
AMCI—Air Mobility Command Instruction
OMRS/SGXB—Operational Medical Readiness Squadron/Bioenvironmental Flight
AMOS—Automated Meteorological Observing System
ARW—Air Refueling Wing
ATC—Air Traffic Control
ATHOC—Automated Mass Notification System
CAT—Crisis Action Team
CBRNE—Chemical, Biological, Radiological, Nuclear, and High-yield Explosive
CES—Civil Engineering Squadron
COOP—Continuity of Operations Plan
CP—Command Post
CS—Communications Squadron
CWW—Cooperative Weather Watch
EM—Emergency Management
FLIP—Flight Information Publication
GRS—Gibson Ridge Software
IAW—In Accordance With
ICC—Installation Control Center
IFM—Integrated Flight Management
INS—Inches
IRC—Instrument Refresher Course
IWWC—Integrated Weather Warning Capability
JET—Joint Environmental Toolkit
KTS—Knots
LAN—Local Area Network
METAR—Meteorological Terminal Aviation Routine Report
METWATCH—Meteorological Watch
MOC—Maintenance Operations Center
MWP—Mission Weather Product
NM—Nautical Mile
OPR—Office of Primary Responsibility

OPREP—Operational Report
OSAA—Operations Support Airfield Management
OSAM—Operations Support Airfield Systems Management
OSAT—Operations Support Air Traffic Control Tower
OSS—Operations Support Squadron
OSW—Operations Support Weather
OWS—Operational Weather Squadron
PIREP—Pilot Report
PMSV—Pilot-to-Metro Service
POL—Petroleum, Oils, and Lubricants
RQS—Rescue Squadron
RVR—Runway Visual Range
SCA—Sensor Collection Appliance
SFS—Security Forces Squadron
SM—Statute Mile
SPECI—Special
SWAP—Severe Weather Action Plan
SWS—Special Weather Statement
TACC—Tanker Airlift Control Center
TAF—Terminal Aerodrome Forecast
TRG—Training Group
WF—Weather Flight
WMO—World Meteorological Organization
WTA—Weather Threat Assessment
WWA—Watches, Warnings, Advisories
WW—Weather Wing
XP—Plans and Programs

Attachment 2

SPECIAL WEATHER OBSERVATION CRITERIA

A2.1. A Special weather observation will be taken and disseminated for listed criteria:

A2.1.1. Visibility. When the prevailing visibility decreases below or, if below, increases to equal or exceeds any of the values listed below:

Table A2.1. Visibility Levels.

Visibility (Statue Miles)	3	<u>2 1/2</u>	2	<u>1 3/4</u>	<u>1 5/8</u>	<u>1 1/2</u>	<u>1 3/8</u>	<u>1 1/4</u>	<u>1 1/8</u>	1	<u>3/4</u>	<u>5/8</u>	<u>1/2</u>	<u>3/8</u>	<u>1/4</u>
Note: Items in bold/underlined indicate criteria found in the high and low altitude FLIPs															

A2.1.2. Ceiling. When the ceiling goes below or, if below, increases to equal or exceeds any of the values listed below:

Table A2.2. Ceiling Levels.

Height (feet)	3,000	2,000	1,500	<u>1,100</u>	1,000	800	700	<u>600</u>	500	<u>400</u>	300	<u>200</u>	100
Note: Items in bold/underlined indicate criteria found in the high and low altitude FLIPs													

A2.1.3. Sky Condition. A layer of clouds (it does not have to be a ceiling) or obscuring phenomena aloft is observed below 1100 feet and no layer was reported below this height in the previous METAR or SPECI.

A2.1.4. Wind.

A2.1.4.1. Shifts. Wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 KTS or more throughout the wind shift.

A2.1.4.2. Squall. A strong wind characterized by a sudden onset in wind speed increasing at least 16 KTS and sustained at 22 KTS or more for at least 1 minute. A SPECI is not required to report a squall if one is currently in progress.

A2.1.5. Volcanic Eruption. Eruption or volcanic ash cloud first noted.

A2.1.6. Thunderstorm.

A2.1.6.1. Begins (**Note:** A SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.).

A2.1.6.2. Ends. A thunderstorm will be considered ended 15 minutes after the last occurrence of criteria for a thunderstorm.

A2.1.7. Precipitation.

A2.1.7.1. Hail begins or ends.

A2.1.7.2. Freezing precipitation begins, ends, or changes intensity.

A2.1.7.3. Ice pellets begin, end, or change intensity.

A2.1.7.4. Any other type of precipitation begins or ends. **Note:** Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (e.g., snow changing to rain and snow).

A2.1.8. Tornado, Funnel Cloud, or Waterspout. When a tornado is first observed, disappears from sight or ends.

A2.1.9. Runway Visual Range (RVR). WF provides RVR output according to the specifications listed in [Table A2.3](#).

Table A2.3. RVR Reporting.

Runway Visual Range (RVR)
- Prevailing visibility first observed \leq 1SM/1600 meters, again when prevailing visibility goes above 1SM/1600 meters.
- RVR for active runway decrease to less than or, if below, increase to equal or exceed: - 6,000 feet (P1500 meters) - 5,500 feet (1670 meters) - 5,000 feet (1500 meters) - 4,000 feet (1200 meters) - 3,500 feet (1100 meters) - 2,400 feet (0750 meters) - 2,000 feet (0600 meters) - 1,800 feet (0550 meters) - 1,600 feet (0500 meters) - 1,200 feet (0400 meters) - 1,000 feet (0300 meters) - 600 feet (0200 meters)
- All published RVR minima applicable to the runway in use.
- RVR is first determined as unavailable (RVRNO) for the runway in use, when it is first determined that the RVR capability is unavailable, provided conditions for reporting RVR exist.

A2.1.10. Tower Visibility. When either the surface prevailing visibility or the control tower visibility is less than 4 statute miles (6000 meters) and the control tower visibility differs from the surface prevailing visibility by a reportable value.

A2.1.11. Upon Resumption of Observing Services. Take, disseminate, and record a SPECI within 15 minutes after returning to duty following a break in hourly coverage, if a METAR was not filed as scheduled during the 15-minute period.

A2.1.12. Aircraft Mishap. When notified of an aircraft mishap, the WF will check the latest AN/FMQ-19 observation (i.e., METAR/SPECI/OMO (one minute observation) and perform augmentation/back-up if required. When operating in a back-up mode, the WF will immediately take a SPECI observation IAW AFMAN 15-111.

A2.1.13. Alert Observation. When requested by the 92 ARW Command Post, the weather technician provides magnetic winds, temperature, altimeter setting, and pressure altitude.

A2.1.14. Any other meteorological situation that, in the weather technician's opinion, is critical.

Attachment 3

SAMPLE WEATHER PRODUCT DISSEMINATION FORMAT/INTERPRETATION

A3.1. Observation.

Table A3.1. Sample Weather Observation.

Type	ICAO	Time	Mod	Wind	Vis	RVR	Wx
SPECI	KSKA	1506Z		17013G22KT	1	R23/5000FT	-RA
BKN015CB	OVC030		76/75	ALSTG 29.99		RMK AO2A CB OHD MOV NE	
Sky Condition			T/Td	Altimeter	Remarks		

A3.1.1. Type of Report. METAR or SPECI.

A3.1.2. ICAO (Station identifier). This code identifies the location of the observation.

A3.1.3. Date and Time of Report. This is in Zulu (GMT) as of the last element of the observation.

A3.1.4. Report Modifier. The report modifier can be either of the following two elements:

A3.1.4.1. COR is entered into the report modifier group when a corrected METAR or SPECI is transmitted.

A3.1.4.2. AUTO identifies the report as a fully automated report with no human intervention. It is automatically included in reports when the weather technician signs off the AMOS indicating the observations are no longer being augmented.

A3.1.5. Wind. The true direction the wind is blowing from and is encoded in tens of degrees using three digits. Directions less than 100 degrees are preceded with a "0." The wind speed is entered as a two or three digit group immediately following the wind direction.

A3.1.5.1. Gust. The wind gust is encoded in two or three digits immediately following the wind speed. The wind gust is encoded in whole KTS using the units and tens digits and, if required, the hundreds digit.

A3.1.5.2. Variable Wind Direction (speeds 6 KTS or less). Variable wind direction with wind speed 6 KTS or less may be encoded as VRB in place of the direction.

A3.1.5.3. Variable Wind Direction (speeds greater than 6 KTS). Wind direction varying 60 degrees or more with wind speed greater than 6 KTS are encoded as variable. The variable wind direction group is immediately following the wind group. The directional variability is encoded in a clockwise direction. For example, if the wind is variable from 180 degrees to 240 degrees at 10 KTS, it would be encoded 21010KT 180V240.

A3.1.5.4. Calm Wind. Calm wind is encoded as 00000KT.

A3.1.6. Visibility. Visibility is the distance at which a given object can be seen and identified with the unaided eye. On weather observations, visibility is the furthest predominant distance (at least 50% of the aerodrome) seen from the point of observation and is reported in statute miles.

A3.1.7. Runway Visual Range. The maximum distance in the direction of takeoff or landing at which the runway, or specified lights or markers delineating it, can be seen from a position above a specified point on its center line at a height corresponding to the average eye level of pilots at touch-down.

A3.1.8. Present weather. Present weather is the type of weather observed at the reporting time. These conditions may include types and intensities of precipitation such as light rain or heavy snow, as well as the condition of the air environment such as foggy, hazy, or blowing dust. A list of all reportable weather phenomena can be found in AFMAN 15-111 Table 10.1.

A3.1.9. Sky Condition and Cloud Height. Sky condition is a description of the amount of clouds or obscuration (smoke, ash, dust, etc.) either aloft or in contact with the surface of the earth. The amount is based upon octants (eighths) of the sky covered by opaque (not transparent) clouds. Sky condition falls into the following categories:

A3.1.9.1. SKC – Sky Clear.

A3.1.9.2. FEW – 1/8 to 2/8 coverage.

A3.1.9.3. SCT – Scattered; 3/8 to 4/8 coverage.

A3.1.9.4. BKN – Broken; 5/8 to 7/8 coverage.

A3.1.9.5. OVC – Overcast; 8/8 coverage.

A3.1.9.6. VV – Vertical visibility; normally used during heavy fog, indicates how far up into the obscuration can be seen.

A3.1.9.7. FEW000 – Surface-based obscuration.

A3.1.9.8. Cloud Height. A three-digit number describing the height of the base of cloud layers in hundreds of feet (e.g., 015 equals 1,500 feet). The CB and TCU descriptors may be appended to the cloud height to indicate the cloud is a cumulonimbus or towering cumulus.

A3.1.10. Temperature and Dew Point. (i.e., can be in degrees, either Fahrenheit or Celsius).

A3.1.10.1. Air Temperature. A measure of the average kinetic energy of air molecules. It is commonly measured according to the Fahrenheit and Celsius scales.

A3.1.10.2. Dew Point. The temperature to which a given parcel of air must be cooled at constant pressure and constant water vapor content in order for saturation to occur.

A3.1.11. Altimeter Setting. The current value aircraft altimeters must be set at to read an elevation of zero. The altimeter is measured in inches (INS) of mercury.

A3.1.12. Remarks. **Table A3.2.** contains some of the most commonly seen remarks in observations:

Table A3.2. Remarks Listing.

AO2—Fully Automated sensor
AO2A—Manual augmentation
CB—Cumulonimbus
DSNT—Distant
ESTMD—Estimated
FROPA—Frontal Passage
LTG—Lightening
LWR—Lower
MOV—Moving
MOVD—Moved
OHD—Overhead
PK WND—Peak Wind
PRESFR—Pressure Falling Rapidly
PRESRR—Pressure Rapidly Rising
RWY—Runway
TCU—Towering Cumulus
TWR—Tower
UNKN—Unknown
VIS—Visibility
WSHFT—Wind Shift
PA—Pressure Altitude
DA—Density Altitude

A3.2. TAF.**Table A3.3. Sample TAF.**

KSKA 0119/0301 31005KT 9999 SCT015 SCT250 QNH3015INS
BECMG 0120/0121 12010KT 6000 SHRA SCT010 BKN025 OVC080 QNH3005INS
TEMPO 0121/0200 VRB10G20KT 0800 TSRA SCT008 BKN015CB OVC030 TX24/0120Z
TN10/0210Z

A3.2.1. The forecast follows the same general format as the observation with the following exceptions:

A3.2.1.1. Valid Date/Time. Forecasts are valid for a 30-hour period. In this example, the forecast is valid from the first at 1900Z until the third at 0100Z.

A3.2.1.2. BECMG – This indicator is used to indicate the predominant conditions will change to (or become) the conditions listed in the line of the forecast. The conditions will change during the time period that follows the BECMG code (2000 to 2100Z in the example above).

A3.2.1.3. TEMPO – This indicator means the conditions forecast will occur at least once within a given hour, with potential fluctuations during the period, and no more than 30 minutes of any one hour period; the forecasted phenomenon must also occur for less than half of the total time frame following the TEMPO code (2100Z to 0000Z in this example). Exception: Organizations will allow 45 minutes for thunderstorms. The extra 15 minutes provide for the 15-minute period between the time thunder is last heard and the time the thunderstorm is officially ended.

A3.2.1.4. Maximum Temperature/Minimum Temperature. TX24 indicates a maximum temperature in Celsius to occur at 20Z. TN10 indicates a minimum temperature of 10 Celsius to occur at 10Z (**Note:** M indicates a minus sign in front of the number: M05 = -5 C).

A3.3. Weather Watches, Warnings and Advisories.

Table A3.4. Weather Watches, Warnings and Advisories.

1. OBSERVED WEATHER WARNING
FAIRCHILD AFB WEATHER WARNING 06-001
VALID 17/2100Z (17/1400L) TO UFN LIGHTNING IS OBSERVED WITHIN 5NM
02/RS

2. FORECAST WEATHER WARNING.
FAIRCHILD AFB WEATHER WARNING 07-010
VALID 10/1800Z (10/1100L) TO 11/0100Z (10/1800L)
MODERATE THUNDERSTORMS. HIGH WINDS FORECAST VALUE 35-49 KTS
AND/OR LARGE HAIL FORECAST VALUE ¼ INCH. 40/THB

3. WEATHER WATCH.
FAIRCHILD AFB WEATHER WATCH 06-002
VALID 10/2000Z (10/1300L) TO 10/2300Z (10/1600L)
POTENTIAL FOR LIGHTNING WITHIN 5NM OF FAIRCHILD AFB.
58/GO

4. OBSERVED WEATHER ADVISORY.
FAIRCHILD AFB WEATHER ADVISORY 09-015
VALID 08/1408Z (08/0708L) TO UFN
OBSERVED CROSSWINDS OBSERVED AT 25 KTS 44/ST

Attachment 4

FAIRCHILD AFB WATCHES, WARNINGS, AND ADVISORIES

Figure A4.1. Fairchild AFB Watches, Warnings, And Advisories.

Weather Advisories					
Criteria	Forecast/Observed	Area Affected	Desired Lead Time	Mission Impact (other than those stated in AFMAN 15-129)	Issued By
Lightning is occurring within 50 NM (NAOC Only)*	Observed	Aerodrome (50 NM)	0	1) NAOC support only	WF
Lightning is occurring within 25 NM	Observed	Aerodrome (25 NM)	0	1) KC-135 aircrews need to maintain at least 5NM separation from heavy rain showers, approaches may be attempted when thunderstorms are within 10 NM 2) Aircraft should contact METRO for thunderstorm position, movement, and associated weather in the area of the airfield	WF

<p>Lightning is occurring within 10 NM</p>	<p>Observed</p>	<p>Aerodrome (10 NM)</p>	<p>0</p>	<p>KC-135 aircrews need to maintain at least 5NM separation from heavy rain showers, approaches may be attempted when thunderstorms are within 10 NM ²⁾ Aircraft should contact METRO for thunderstorm position, movement, and associated weather in the area of the airfield</p>	<p>W F</p>
<p>Severe or Greater Turbulence below 10,000 feet MSL within 50NM (Outside of Thunderstorms)</p>	<p>Observed</p>	<p>Aerodrome (50 NM)</p>	<p>0</p>	<p>1) WADS divert option may be unavailable 2) KC-135 Take off and Landings cease if over station</p>	<p>WF</p>

Moderate or Greater Turbulence below 10,000 feet MSL within 50 NM (Outside of Thunderstorms)*	Observed	Aerodrome (50 NM)	0	¹⁾ KC-135 crews may not conduct low altitude operations in area of reported moderate turbulence ²⁾ Transitions and landings at Fairchild AFB (KSKA) or Spokane Int'l Airport (KGEG) may be inadvisable ³⁾ WADS divert option may be unavailable	WF
Moderate Or Greater Icing Below 10,000 feet MSL within 50 NM. (Outside of Thunderstorms)*	Observed	Aerodrome (5 NM)	0	1) NAOC support only	WF

<p>Light or Greater Icing below 10,000 feet within 50 NM. Specify Intensity and Levels.</p>	<p>Observed</p>	<p>Aerodrome (5 NM)</p>	<p>0</p>	<p>1) Potential hazard to airborne aircraft. Base agencies are advised to take appropriate de-icing actions if necessary to ensure safe flight operations Pilots exercise icing procedures 1. Consider canceling local training flights in the pattern due to continuous ice accumulation</p>	<p>WF</p>
<p>Low Level Wind Shear at or Below 2,000 feet</p>	<p>Observed</p>	<p>Aerodrome (5 NM)</p>	<p>0</p>	<p>1) Aircrews/aircraft alerted to the potential for changes in wind speed and/or direction while on final approach to Fairchild AFB (KSKA) to land or accomplish transition work.</p>	<p>W F</p>
<p>Surface Winds >= 45 kts</p>	<p>Observed</p>	<p>Aerodrome (5 NM)</p>	<p>0</p>	<p>1) Helicopter operations cease</p>	<p>WF</p>

Surface Winds \geq 25 kts	Observed	Aerodrome (5 NM)	0	1) Appropriate agencies perform the following 1. Aircraft doors, engine cowlings, and other aircraft parts to be closed and secured Suspend aircraft jacking operations	WF
Crosswinds \geq 25 kts	Observed	Aerodrome (5 NM)	0	1) Maximum crosswind component for KC-135 aircrews (including gusts) is 25KTS in peace time operations. Instructor Pilots (IPs) are authorized a maximum 15KT crosswind component and 10KT for non-instructors	WF
Crosswinds \geq 20 kts (NAOC ONLY)	Observed	Aerodrome (5 NM)	0	1) NAOC support only	WF
Crosswinds \geq 15 kts.	Observed	Aerodrome (5 NM)	0	1) Maximum crosswind component for KC-135 aircrews (including gusts) is 25KTS in peace time operations. Pilots are authorized a maximum 15KT crosswind component and 10KT for A/C	WF

Crosswinds >= 12 kts on wet runway. (NAOC ONLY)	Observed	Aerodrome (5 NM)	0	1) NAOC support only	WF
Crosswinds >= 10 kts	Observed	Aerodrome (5 NM)	0	1) Maximum crosswind component for KC-135 aircrews (including gusts) is 25KTS in peace time operations. Pilots are authorized a maximum 15 kt crosswind component and 10KTS for A/C	WF
Ceiling < 200 feet and/or Visibility < 1/2 SM	Observed	Aerodrome (5 NM)	0	1) Aircraft alert to weather conditions at or below runway approach minimums 2) Visual security degraded 3) Reduce vehicle speed on runway	WF
Visibility < 1 SM (NAOC ONLY)*	Observed	Aerodrome (5 NM)	0	1) NAOC support only	WF

Freezing Fog is occurring	Observed	Aerodrome (5 NM)	0	<ol style="list-style-type: none"> 1) Freezing fog may deposit ice on aircraft. Consider de-icing aircraft 2) Base agencies prepare for frozen surfaces and reduced visibilities 3) Visual security degraded 4) Reduce vehicle speed on runway 	WF
				1)	
Wind Chill LTE to -18F	Observed	Aerodrome (5 NM)	0	1) Personnel dress appropriately. Adjust work/rest cycles accordingly.	WF
Hail < 1/2 inch (NAOC ONLY)	Forecasted	Aerodrome (5 NM)	30 minutes	1) NAOC support only	WF
Surface Winds 25 to 34 kts. (NAOC Only)	Forecasted	Aerodrome (5 NM)	30 minutes	1) NAOC support only	WF
Snowfall GTE trace but less than 2 inches (NAOC only)	Forecasted	Aerodrome (5 NM)	30 minutes	1) NAOC support only	WF

Weather Watches					
Watch Type	Criteria	Area Affected	Desired Lead Time	Mission Impact (other than those stated in AFMAN 15-129)	Issued By
Tornado	Potential for Tornado exists (SWAP)	Aerodrome (5 NM)	As Potential Warrants	Cease operations and seek shelter	OWS

Lightning	Potential for Lightning within 5 NM	Aerodrome (5 NM)	30 minutes	<p>1) Potential mission stoppage or delay may exist, prepare to suspend the following activities if an actual strike is observed within 5 NM</p> <ul style="list-style-type: none">.Outdoor maintenance.POL and Fuel Cell.MunitionsFlight SimulatorAny outdoor flight line activitiesWADS divert option may not be available	WF
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<p>Severe Thunderstorms</p>	<p>Potential for Severe Thunderstorms Damaging Hail $\geq 3/4$ inch and/or Damaging Wind ≥ 50 KTS (SWAP)</p>	<p>Aerodrome (5 NM)</p>	<p>As Potential Warrants</p>	<p>1) > 70KTS ATC will evacuate 2) > 65KTS Aircraft are placed to face into the wind 3) > 50KTS 1. Place aircraft in safe location 1. Aircraft cargo doors remain closed . Maintenance purges flightline of all non-essential equipment 4) WADS divert option unavailable 5) NAOC will not depart and/or land 6) 36th RQF hanger aircraft 7) Consider cancelling training missions</p>	<p>OWS</p>
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Damaging Winds	Potential for Damaging Winds \geq 50 KTS	Aerodrome (5 NM)	As Potential Warrants	<ol style="list-style-type: none"> 1) 70KTS ATC will evacuate 2) $>$ 65KTS Aircraft are placed to face into the wind 3) $>$ 50KTS <ol style="list-style-type: none"> 1. Place aircraft in safe location 1. Aircraft cargo doors remain closed 1. Maintenance purges flight line of all non- essential equipment 4) WADS divert option unavailable 	OWS
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Freezing Precipitation	Potential for Freezing Precipitation exists	Aerodrome (5 NM)	As Potential Warrants	<ol style="list-style-type: none"> 1) Aircraft will not depart and/or land 2) 36th RQF cancels flights 3) Deice runway, intersections, and roads 4) Treacherous walking and driving conditions. Consider early release or late reporting of personnel and initiate base wide notification 5) During Ice Storms (> ½ inch) prepare for power outages, downed trees, and degraded emergency response 	OWS
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Heavy Snow	Potential for Heavy Snow >= 2 inches within 12 hrs	Aerodrome (5 NM)	As Potential Warrants	<ol style="list-style-type: none"> 1) Prepare for potential mission delay or stoppages due to <ul style="list-style-type: none"> . Aircraft de-icing 1. Towing difficulties . Pilots may not take off with snow adhering to wings . Aircraft maintenance timetables require 4-6 additional hours 2) Consider canceling training missions 3) Enhance runway and road clearing operations through <ul style="list-style-type: none"> 1. Potential personnel recall/extended shifts 1. Contract additional snowplows 4) Conduct early release or late reporting of personnel and initiate base wide notification as necessary 5) NAOC will not depart and/or land, if on station, will depart immediately 	OWS
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<p>Winter Storm</p>	<p>Potential for Blizzard Conditions exists lasting at least 3 hrs. Winds >= 30 kts and visibility <= 1/4 SM in snow/blowing snow</p>	<p>Aerodrome (5 NM)</p>	<p>As Potential Warrants</p>	<p>1) Prepare for potential mission delay or stoppages due to</p> <ol style="list-style-type: none"> 1. Winds > 30KTS, potential crosswinds, low visibility, blowing snow, and snow drifts 2) Personnel take protective actions against weather hazards stemming from cold temperatures, wet clothing, poor visibility, wind chill factors, and other winter concerns 3) Prepare for degraded visual security measure 4) Runway and road clearing operations seriously degraded by continuous blowing/drifted snow. May require <ol style="list-style-type: none"> 1. Potential personnel recall/extended shifts <ol style="list-style-type: none"> 1. Contract additional snowplows 5) Conduct early release or late reporting of personnel and initiate base wide notification as necessary 	<p>OWS</p>
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Heavy Rain	Potential for Heavy Rain \geq 2 inches within 12 hrs	Aerodrome (5 NM)	As Potential Warrants	1) General transportation difficulties 2) Potential base flooding	OWS
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Weather Warnings					
Warning Type	Criteria	Area Affected	Desired Lead Time	Mission Impact (other than those stated in AFMAN 15-129)	Issued By
Tornado	Tornado expected (SWAP)	Aerodrome (5 NM)	15 minutes	Cease operations and seek shelter	WF
Lightning	Observed Lightning within 5 NM	Aerodrome (5 NM)	0	Potential mission stoppage or delay may exist, prepare to suspend the following activities if an actual strike is observed within 5 NM .Outdoor maintenance .POL and Fuel Cell .Munitions 1. Flight Simulator 1. Any outdoor flight line activities 1. WADS divert option may not be available	WF

Severe Thunderstorm	Thunderstorm with Damaging Wind ≥ 50 kts and or Damaging Hail $\geq 3/4$ inch (SWAP)	Aerodrome (5 NM)	1 hour	<ol style="list-style-type: none"> 1) > 70KTS ATC will evacuate 2) > 65KTS Aircraft are placed to face into the wind 3) > 50KTS <ol style="list-style-type: none"> 1. Place aircraft in safe location 1. Aircraft cargo doors remain closed . Maintenance purges flightline of all non-essential equipment 4) WADS divert option unavailable 5) NAOC will not depart and/or land 6) 36th RQF hanger aircraft 7) Consider cancelling training missions 	WF
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Moderate Thunderstorm	Moderate Thunderstorms. High Wind \geq 35 but $<$ 50 kts and/or Large Hail \geq 1/4 but $<$ 3/4 inch	Aerodrome (5 NM)	1 hour	<ol style="list-style-type: none"> 1) Aircraft flaps placed in full up position and doors and windows closed 2) Suspend outdoor fuel system maintenance 3) Maintenance stands placed in hangers, passenger airstairs and deicers no longer used, and aircraft on stands are firmly secured 4) NAOC will not depart and/or land 5) 36th RQF hanger aircraft 6) Consider cancelling training missions 	WF
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<p>Damaging Winds</p>	<p>Damaging Winds \geq 50 kts (SWAP)</p>	<p>Aerodrome (5 NM)</p>	<p>1 hour</p>	<p>1) 70KTS ATC will evacuate 2) $>$ 65KTS Aircraft are placed to face into the wind 3) $>$ 50KTS 1. Place aircraft in safe location 1. Aircraft cargo doors remain closed 1. Maintenance purges flightline of all non- essential equipment 4) WADS divert option unavailable</p>	<p>WF</p>
<p>Strong Winds</p>	<p>Strong Winds \geq 35 KTS.</p>	<p>Aerodrome (5 NM)</p>	<p>1 hour</p>	<p>1) Aircraft flaps placed in full up position and doors and windows closed 2) Suspend outdoor fuel system maintenance 3) Maintenance stands placed in hangers, passenger airstairs and deicers no longer used, and aircraft on stands are firmly secured 4) NAOC will not</p>	<p>WF</p>

<p>Forecasted Freezing Precipitation Expected</p>	<p>Freezing Drizzle or Rain Forecast or observed</p>	<p>Aerodrome (5 NM)</p>	<p>1 hour</p>	<p> ¹⁾ Aircraft will not depart and/or land ²⁾ 36 RQF Cancels all flights ³⁾ Deice runways, intersections, and roads ⁴⁾ Prepare for treacherous walking and driving conditions ⁵⁾ Consider early release or late reporting of personnel and initiate base wide notification ⁶⁾ During Ice Storms (> ½”) prepare for power outages, downed trees, and degraded emergency response. </p>	<p>WF</p>
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Heavy Snow	Forecast Heavy Snow >= 2 inches within 12 hrs.	Aerodrome (5 NM)	1 hour	<ol style="list-style-type: none"> 1) Prepare for potential mission delay or stoppages due to Aircraft de-icing <ol style="list-style-type: none"> 1. Towing difficulties Aircraft maintenance timetables require 4-5 additional hours 2) Consider canceling training missions 3) Enhance runway and road clearing operations through <ol style="list-style-type: none"> 1. Potential personnel recall/extended shifts 1. Contract additional snowplows 4) Conduct early release or late reporting of personnel and initiate base wide notification as necessary 5) NAOC will not depart and/or land, if on station, will depart immediately 	WF
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<p>Winter Storm</p>	<p>Forecast Blizzard Conditions expected lasting at least 3hrs. Winds \geq 30kts and visibility \leq 1/4 SM in snow/blowing snow</p>	<p>Aerodrome (5 NM)</p>	<p>1 hour</p>	<p>1) Prepare for potential mission delay or stoppages due to</p> <ol style="list-style-type: none"> 1. Winds $>$ 30KTS, potential crosswinds, low visibility, blowing snow, and snow drifts 2) Personnel take protective actions against weather hazards stemming from cold temperatures, wet clothing, poor visibility, wind chill factors, and other winter concerns 3) Runway and road clearing operations seriously degraded by continuous blowing/drifting snow. May require <ol style="list-style-type: none"> 1. Potential personnel recall/extended shifts 1. Contract additional snowplows 4) Conduct early release or late reporting of personnel and initiate base wide notification as necessary 	<p>WF</p>
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Heavy Rain	Forecast Heavy Rain ≥ 2 inches within 12 hrs	Aerodrome (5 NM)	1 hour	¹⁾ General transportation difficulties ²⁾ Potential base flooding	WF
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Attachment 5

GUIDELINES FOR AIR QUALITY INDEX CATEGORIES

Figure A5.1. Guidelines For Air Quality Index Categories.

WASHINGTON STATE DEPT OF ECOLOGY GUIDANCE				FAIRCHILD GUIDANCE	
Air Quality Index Range	Air Pollution Category	Category Meaning	General Public Precautions to Take	Fairchild Specific Recommended Actions To Take	Avg Days/yr ('12-'16)
0 – 50	Good	Air pollution is minimal and there is little health risk.	None.	1. BE registers for Air Quality notifications from the Spokane Clean Air Agency website 2. Weather monitors air quality every 8 hours after hours/weekends	234
51 – 100	Moderate	People with asthma, respiratory infection, diabetes, lung or heart disease, or have had a stroke may	People with asthma, respiratory infection, diabetes, lung or heart disease, or have had a stroke should limit outdoor activities or do activities that take less effort, such as walking instead of running.	1. BE registers for Air Quality notifications from the Spokane Clean Air Agency website 2. Weather monitors air quality every 8 hours after hours/weekends	131

		begin to have breathing problems.			
101 – 150	Unhealthy for Sensitive Groups	More people than average may have breathing problems or have worsened symptoms of existing asthma or lung disease.	Sensitive groups include people with heart or lung disease, asthma, diabetes, infants, children, adults older than 65, pregnant women, or who have had a stroke. These people should limit time spent outdoors.	<ol style="list-style-type: none"> 1. BE continues to monitor air quality 2x day 0730-1630 2. FAC cancels outdoor PT testing 3. Weather monitors air quality every 8 hours after hours/weekends 	5
151 – 200	Unhealthy	Many more people than average may have breathing problems or have worsened symptoms of existing lung or	Everyone should limit time spent outdoors. Everyone should avoid exercising outdoors (including sports teams) and choose non-strenuous indoor activities. People with asthma, respiratory infection, diabetes, lung or heart disease, or have had a stroke should stay indoors. Infants, children, pregnant women and adults over age 65 should also stay indoors.	<ol style="list-style-type: none"> 1. BE continues to monitor air quality every 2 hours 0730-1630 2. Weather monitors air quality every 8 hours after hours/weekends 3. CP issues AtHoc message for AQI 151-200 4. FAC cancels all indoor and outdoor PT testing 5. Non-essential outdoor activities curtailed 6. Worker rotation increased for outdoor missions 	1

		heart disease.			
201 – 300	Very Unhealthy	Some healthy people can have breathing problems. People with asthma, lung and heart disease have an increased risk of symptoms or worsening of their disease. Studies show the number of people hospitalized for lung diseases can be 50 percent more	Everyone should stay indoors, do only light activities, and keep windows closed if it is not too hot. Run air conditioners on re-circulate and close the outside air intake. Use indoor air cleaners with HEPA filters, if available. If you must be outdoors, wear an N-95 respirator mask. People with chronic diseases should check with their health care provider before wearing a mask. Check with your local health department for health information. People with asthma, lung and heart disease, or have had a stroke should check with their health care provider for advice about leaving the area. Anyone with shortness of breath, wheezing, chest pain, heart palpitations, extreme fatigue, or difficulty moving or speaking should call their health care provider or call 911.	<ol style="list-style-type: none"> 1. BE continues to monitor air quality hourly 0730-1630 2. Weather monitors air quality every 8 hours after hours/weekends 2. CP issues AtHoc message for AQI 201-300 3. FAC continues to cancel indoor/outdoor PT testing 4. Non-essential outdoor activities canceled 5. Elective use N95 respirators authorized f/mission essential activities 6. Worker rotation increased for outdoor missions 	0

		than normal.			
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WASHINGTON STATE DEPT OF ECOLOGY GUIDANCE				FAIRCHILD GUIDANCE	
Air Quality Index Range	Air Pollution Category	Category Meaning	General Public Precautions to Take	Fairchild Specific Recommended Actions To Take	Avg Days/yr ('12-'16)
301 – 500	Hazardous	More healthy people are likely to have breathing problems. The people most susceptible are those with asthma or lung disease, diabetes, have had a stroke, infants, children,	Same recommendations as “Very Unhealthy.”	Fires likely burning in close vicinity. Mission essential tasks only at the Commander’s discretion. Emergency Operations Center activated at MSG/CC’s discretion.	0

		pregnant women, and adults older than 65. Studies suggest more people with asthma, lung or heart disease need medical attention.			
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Attachment 6

FLYING UNITS SUPPORTED & MISSION LIMITING ENVIRONMENTAL CONDITIONS

Table A6.1. Flying Units Supported.

Organization	Mission	MWP Provider
92 ARW & 141 ARW (KC-135R/T)	Provides the best air mobility for America through reliable air refueling, airlift, and operational support.	WF (For Local Area Training Missions)
36 RQS (UH-1N)	To support the activities of the USAF Survival School through hands-on helicopter operations; To support the National Search and Rescue Plan by providing assistance to local authorities; And to provide the Department of Defense with exceptionally qualified crewmembers.	WF
AASF 2 - Army National Guard (UH-72)	Support MDAY units with aviation assets.	WF

A6.1. Mission Limiting Thresholds.

A6.1.1. Airframe-Specific Weather Limitations. **Tables A6.2** – A6.7 provide the general airframe weather limitations based on AFI 11-202V3, *General Flight Rules* and the limitations from aircraft specific AFI 11-2 and AR 95-1.

Table A6.2. USAF General Flight Rules Weather Limitations.

(Ref: AFI 11-202V3, <i>General Flight Rules</i>)		
Weather Condition	Impact	Customer Action
Cig/Vis < 2,000/3SM	Alternate required	Add fuel to allow divert
Cig/Vis < 700/2SM	Terminal not suitable for alternate	Select another alternate
Notes: 1. KC-135 aircraft may take-off and land when airfield is below published weather minimums. 2. When weather is below approach and landing minimums (Ceiling/Visibility 200FT/½SM) a departure alternate is required.		

Table A6.3. KC-135 Weather Sensitivities.

(Ref: AFI 11-2KC-135V3, <i>C/KC-135 Operations Procedures</i>)		
Condition	Limit	Response Action
Max Crosswind Component	≥ 25KTS	RCR/Gross Weight may reduce this
Max Crosswind for RCR 0 - 5	No Operations	Waiver required to taxi
Max Crosswind for RCR 6 – 8	13KTS – 20KTS	
Max Crosswind for RCR > 8	16KTS – 25KTS	
Thunderstorms	Avoid by 10NM below FL230 Avoid by 20NM above FL230	Do not fly directly above (within 2,000FT) of thunderstorms/ cumulonimbus clouds. Avoid areas of high lightning potential (clouds within + or – 5000 feet of the freezing level or + or – 8°C of the freezing level).
Turbulence	≥ Severe or ≥ Moderate Mountain Wave	Flight into areas of forecast or reported severe turbulence is prohibited. Known or forecast areas of moderate or greater Mountain Wave turbulence.
Induction Icing		Engine anti-icing must be used in ice fog or when the temperature is below 50°F (10°C) and standing water is visible on the ramp or taxiways or visible moisture is present.
Icing	> Moderate	Must avoid observed or forecast severe. Avoid any flight through freezing rain.

Volcanic Ash	Avoid volcanic activity by 50NM.	Flight through forecast or known area of volcanic activity & dust is prohibited. Obtain Volcanic Ash Advisories (VAA) from Volcanic Ash Advisory Centers (VAAC) prior to using the 2nd WS or AFW-WEBS.
RVR (Operational)	1000FT	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off if mission priority dictates, provided the runway has dual RVR readouts and displays (minimum RVR 1000 on both) and runway centerline lighting is operational. For any takeoff below 1600 RVR, the crew must be fully qualified.
RVR (all others)	1600FT	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all.
All Missions	1. Freezing Rain 2. RCR measured 4 or greater	1. Do not take-off under conditions of freezing rain. Do not take-off under conditions of freezing drizzle except when aircraft has been properly de-iced/anti-iced IAW flight manual procedures 2. RCR measured 4 or greater
Notes: 1. Cannot take off with > .5 inches of slush or water on the runway. 2. If no RVR readout is available for the departure runway, visibility must be reported to be ½ mile (800) meters.		

Table A6.4. KC-135 Maneuver Restrictions.

<i>(Ref: AFMAN 11-2KC-135V3, C/KC-135 Operations Procedures)</i>		
Maneuver	Ceiling/Visibility Minimums	Other Restriction
Air Refueling (A/R)	Visibility \geq 1NM. (receiver dependent, some may be less)	<ol style="list-style-type: none"> 1. Thunderstorms within 10NM. 2. Moderate or greater turbulence.
Touch-and-go landings	<ol style="list-style-type: none"> 1. Minimum ceiling of 1,000 AGL and visibility of 2 SM for A/Cs. 2. Minimum ceiling of 300 AGL and RVR 4000 (3/4 SM visibility with direct IP supervision. 	<ol style="list-style-type: none"> 1. RCR measured 9 or greater. 2. Max crosswind 15 KTS with direct IP supervision (10KTS for non-instructors). 3. Not accomplished on slush-covered runways.

Table A6.5. UH-1N Weather Sensitivities.

(Ref: AFI 11-2UH-1NV3, <i>UH-1N Helicopter Operations Procedures</i>)		
Condition	Training Limit	Operational Limit
Ceiling/Visibility	Day – Single Pilot: 700FT/2SM	Day – Single Pilot: 700FT/1SM
	Day – Dual Pilot: 500FT/2SM	Day – Dual Pilot: 500FT/1SM
		Night – Unaided: 1000FT/2SM
		Night – NVG: 500FT/2SM
	Flyovers: 2500FT/3SM	Flyovers: 2500FT/3SM
	Functional Check Flight (FCF) minimum: 700FT/2SM	Functional Check Flight (FCF) minimum: 700FT/1SM
Winds	≥ 40KTS steady state (Training/Exercise); will not be started or shutdown	≥ 45KTS; starting and stopping rotors is prohibited
Thunderstorms	Avoid by minimum 5NM	Avoid by minimum 5NM
Turbulence	Avoid areas of greater than moderate (CAT 1 aircraft)	Avoid areas of greater than moderate (CAT 1 aircraft)
Icing	Avoid icing	Avoid icing
Temperature	> 52C or < -54C operations prohibited	> 52C or < -54C operations prohibited

Table A6.6. UH-72 Weather Sensitivities.

(Ref: AR 95-1, <i>Aviation Flight Regulations</i>)	
Condition	Limit
Ceiling/Visibility	100FT / ¼SM
RVR	1200FT
Thunderstorms	Will not be intentionally flown into thunderstorms.
Turbulence	Will not be intentionally flown into known or forecast severe turbulence or greater.
Icing	Will not be flown into known or forecast severe icing conditions.
Alternate Airfield	Ceiling 400ft above airfield minimum Visibility 1SM above airfield minimum

Table A6.7. Jump, Airdrop, and Hoist Weather Sensitivities.

(Ref: AFI 13-217, <i>Drop Zone and Landing Zone Operations</i>)
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Table A6.8. Surface Wind Limits for CDS/Equipment Airdrops.

TYPE CDS/EQUIPMENT DROP	SURFACE WIND LIMITS (KTS)
USAF Equipment	17
USAF CDS or LV-LCADS using G-12 parachutes	13
USAF CDS using G-13/14 parachutes	20
HAARS, HV CDS, HSLADS, or HV-LCADS	No Restriction
CDS/Equipment using Joint Precision Airdrop System (JPADS)	Refer to JPADS guidance system technical manuals
USAF Training Bundles (SATB)	25
RAMZ/ARC/CRRC Bundles	25 KTS IAW FXC Technical Manual change 4 dated Jun 2005
Non-USAF Equipment	Discretion of supported force DZSO

Table A6.9. Surface Wind Limits for Personnel Airdrops.

TYPE PERSONNEL DROP (See NOTE)	SURFACE WIND LIMITS (KTS)
USAF Static Line Land / Intentional Tree	13 / 17
USAF Static Line Water	25
USAF MFF Land / Intentional Tree	18 / 22
USAF MFF Water	25
USAF Tandem	18
Non-USAF Personnel	Discretion of unit DZSO
NOTE: During operational missions/contingencies, the airborne commander and/or team leader will coordinate wind restrictions with the air mission commander/aircraft commander based on operational requirements.	

Table A6.10. Airdrops.

Airdrops	
AF HALO/HAHO (Land & Water) MFF	Ceilings/Visibility \geq 3500FT/2SM
AF Static Line (Land & Water) C-9 Chute	Ceilings/Visibility \geq 2000FT/2SM
Hoist Training	
Hoist Training	Ceiling/Visibility \geq 400FT/2SM

