## BY ORDER OF THE COMMANDER 8TH FIGHTER WING

8TH FIGHTER WING INSTRUCTION 15-101

8 APRIL 2020

Weather

WEATHER SUPPORT DOCUMENT



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This instruction implements Air Force Policy Directive (AFPD) 15-1, Weather Operations, Air Force Doctrine Document (AFDD) 3-59, Weather Operations, Air Force Instruction (AFI) 10-2501, Air Force Emergency Management Program, AFI 15-114, Weather Technical Readiness Evaluation, Air Force Manual (AFMAN) 15-111, Surface Weather Observations, AFMAN 15-124, Meteorological Codes, AFI 15-128, Weather Force Structure, AFMAN 15-129V1/V2, Air and Space Weather Operations - Characterization and Exploitation, and United States Forces Korea Regulation (USFK Reg) 115-1, USFK Area Weather Watches and Tropical Cyclone Procedures for the Republic of Korea. It provides guidance for using weather services at Kunsan Air Base, Republic of Korea. It applies to all personnel and units assigned, attached, or associated with the 8th Fighter Wing (8 FW), Kunsan Air Base (AB). 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 the AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

### **SUMMARY OF CHANGES**

This document is substantially revised and must be completely reviewed. This revision institutes changes required by the implementation of the new weather AFMAN 15-111, AFI 15-114, and updates to AFMAN 129 V1-V2, AFMAN 15-124, and PACAF 15-101. Added **3.6.8 Freezing Precipitation** to 3.6 Augmentation critieria. Table A4.1 change "**900**" to "**600**" regarding Sky Condition. Tabled A4.1 add "(**SPECI is not required**...)" to Squall criteria. Table A4.1 add 3818 verbiage for Acft Mishap. Corrected misspelling of "**Dissemination**" on Attachment 5. Updated pg. 15 OPREP reference. A glossary of references and supporting information is included as Attachment 1. 8FW Commander has delegated signature authority for this document to the 8OSS Commander.

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## WEATHER FLIGHT (WF) GENERAL INFORMATION

- **1.1. Introduction.** The 8 OSS Weather Flight (WF) is the focal point for official weather information at Kunsan AB. This plan defines the weather flight's duties, responsibilities and services, documents weather support requirements, illustrates the flow of information, and outlines the weather flight's coordination with other base agencies. All services are provided IAW appropriate Air Force instructions and Federal guidance.
- **1.2. Terms.** Terms and abbreviations in this document can be found in **Attachment 1**.

**Table 1.1. Duty Priorities.** 

Order Of Priority	Duties
1	Perform emergency war order taskings
2	Execute Wx Flight Evacuation
3	Respond to aircraft/ground emergencies
4	Respond to Pilot-to-Metro Service (PMSV) contacts
5	Provide Weather Information to Supervisor of Flying (SOF) and 8 FW Key Leaders
6	Severe Weather Action Procedures (SWAP) Operations and Disseminate/Record WWA's
7	Augment AMOS with Observations for Mandatory Elements
8	Collaborate with OWS
9	Mission Execution Forecast (MEF) Process—Produce and Disseminate Forecasts
10	Disseminate Urgent PIREPs
11	Disseminate Routine PIREPs
12	Perform MISSIONWATCH activities
13	Provide briefings
14	Weather Functional Training
15	Accomplish administrative tasks

**1.3. Duty Hours.** Airfield Weather Operations (AWO) maintain 24/7 coverage of the airfield to include weekends and holidays. AWO forecasters operate in Bldg. 2858. Mission Weather Operations (MWO) personnel are available for Fighter Squadron (FS) Mission Execution Forecast (MEF) support in conjunction with the daily flying schedule and work out of Bldg 2858 at minimum. When manning allows, MWO personnel may operate out of their respective FS.

### 1.4. Contact Information.

**Table 1.2. Contact Information.** 

Airfield Weather Operations Forecaster	782-4501/4262
Alternate Operating Location	782-4262
35th Fighter Squadron Forecaster	782-6194
80th Fighter Squadron Forecaster	782-7192
Flight Chief/Flight Commander/Staff	782-4235
Services	
Organizational Email	8OSS.OSW.ORG@us.af.mil

- **1.5. Dissemination of Weather Information.** Joint Environmental Toolkit (JET) (<a href="https://owsjet17.us.af.mil/portal/private/GuestKunsanAB/Sensor">https://owsjet17.us.af.mil/portal/private/GuestKunsanAB/Sensor</a>) is the primary weather data portal for dissemination of weather information and can be accessed by any Kunsan computer. Additional weather resources can be accessed on SharePoint: <a href="https://kunsan.eis.pacaf.af.mil/8OG/8OSS/Weather/SitePages/Home.aspx">https://kunsan.eis.pacaf.af.mil/8OG/8OSS/Weather/SitePages/Home.aspx</a>.
- **1.6. Release of Weather Information.** The WF will not provide support or information to non-Department of Defense (DoD) organizations or to the general public except as authorized by AFI, 7AF/CC or the 8 FW/CC (or designated representative). In addition, no Kunsan AB or 8 FW agencies will release weather data to outside agencies unless first coordinated with the WF.

## WEATHER FLIGHT OPERATIONS—FORECAST SERVICES

- **2.1. Terminal Aerodrome Forecast (TAF).** The 17th Operational Weather Squadron (OWS) issues the official Kunsan (RKJK) TAF in accordance with (IAW) AFI 15-128, AFMAN 15-124, AFMAN 15- 129V1 as supplemented, and the Installation Data Page (IDP) between the 17 OWS and 8 OSS/OSW. The TAF is issued at 0700Z, 1500Z, and 2300Z and is valid for a 30 hour period. The WF acts as 'eyes forward' for the 17 OWS to ensure accuracy of product and timeliness of amendments. The TAF will specify or be amended for criteria listed in **Attachment 2.**
- **2.2. Mission Integration Functions.** Mission integration requires gaining an in-depth understanding of supported mission platforms, equipment, and systems capabilities/sensitivities as well as mission processes (e.g., RM, COP, tactics) in order to reliably inject timely, accurate, and relevant environmental information at every decision point in the mission planning and execution process in an effort to optimize mission success.
  - 2.2.1. MWO Forecasters will:
    - 2.2.1.1. Produce Mission Weather Products as needed in support of 8th FW Flying Operations.
    - 2.2.1.2. Provide Flight Weather Briefings (FWB) using Mission Weather Products, verbally, or DD Form 175-1 to assigned aircraft during duty hours.
    - 2.2.1.3. Use the Mission Execution Forecast Process (MEFP) to tailor Mission Weather Products (MWP) and provide decision-quality environmental information for 8 FW operations mission planning and execution.
    - 2.2.1.4. Operate within the FS when manning allows.
    - 2.2.1.5. Work with AWO personnel to perform MISSIONWATCH, tailor the MEF, and coordinate support for 8 FW Flying Operations.
- **2.3. Mission Weather Product (MWP).** The MEF is the primary MWP for 8 FW Flying Operations. An example MEF is located in **Attachment 3**.
  - 2.3.1. Approval/Content. The MEF content is coordinated with the 8th Operations Support Squadron, 35th Fighter Squadron, and 80th Fighter Squadron. This product will specify the following:
    - 2.3.1.1. Current, take-off and landing conditions
    - 2.3.1.2. Surface wind speed and direction
    - 2.3.1.3. Surface visibility
    - 2.3.1.4. Present weather if applicable
    - 2.3.1.5. Cloud amount (FEW, SCT, BKN, and OVC) and layer altitude(s)
    - 2.3.1.6. Maximum and minimum surface temperatures
    - 2.3.1.7. Current dew point
    - 2.3.1.8. Altimeter

- 2.3.1.9. Applicable watch, warning, and advisory information
- 2.3.1.10. Solar and lunar data
- 2.3.1.11. Space weather to include Global Positioning System (GPS) Error, Ultra High Frequency (UHF), and HF communication
- 2.3.1.12. Flight levels conducive to contrail formation
- 2.3.1.13. Minimum freezing level
- 2.3.1.14. Tropopause height
- 2.3.1.15. Absolute humidity and 4K transmissivity
- 2.3.1.16. Thermal crossover
- 2.3.1.17. Flight level wind speed and direction
- 2.3.1.18. Wave height and water temperature (offshore local flying areas only)
- 2.3.1.19. Alternate airfield forecasts
- 2.3.1.20. Flight hazards
- 2.3.1.21. Military Operating Area (MOA) cloud amount (FEW, SCT, BKN, and OVC) and layer altitude(s)
- 2.3.2. Production. MWO forecasters will utilize the MEFP to produce the MEF during 8 FW flying hours.
- 2.3.3. Dissemination. The MEF will be posted to the 8 FW shared drive at the following location: \\mlwx-fs-021v\Base\_Data\8 OG Shared Folder\OSW\\_Operations\\_Briefings\\_Daily\\_8th FW Weather as well on SharePoint at: https://kunsan.eis.pacaf.af.mil/8OG/8OSS/Weather/SitePages/Home.aspx.
- 2.3.4. Amendment/Mission Meteorological Watch (MISSIONWATCH). The WF will MISSIONWATCH all missions briefed and will amend MWPs when observed or forecast conditions cross mission critical thresholds and/or anytime a pertinent Watch, Warning, or Advisory (WWA) is issued. Additionally, any significant changes to observed or forecasted conditions will be passed verbally to the Top 3 at both the 35th and 80th Fighter Squadrons and to the SOF.

## 2.4. Supervisor of Flying (SOF) Support.

- 2.4.1. The AWO forecaster supports the SOF as follows:
  - 2.4.1.1. Monitors MOAs, training areas, ranges, or any other operating location.
  - 2.4.1.2. Notifies SOF when actual or forecasted conditions deteriorate or improve through pilot weather categories defined in AFI 11-202V3, *General Flight Rules*, at Kunsan AB and SOF designated alternates.
  - 2.4.1.3. Monitors sea state and notifies SOF when waves reach heights greater than 10ft and/or sustained wind speeds exceed 25 knots.

- 2.4.1.4. Notifies SOF of any WWA issuance/cancellation, significant Pilot Report (PIREP) received, thunderstorms enter/exit a 10 Nautical Mile (NM) radius of Kunsan AB, or of any other phenomenon pertinent to flight safety.
- 2.4.2. The WF will provide cooperative weather watch training to all new SOFs IAW AFI 13-204V3, *Airfield Operations Procedures and Programs*.
- **2.5. Briefing Services.** If duty priorities permit, the AWO forecaster will provide a briefing or update an existing briefing form for transient aircrews. If FWB support cannot be provided, aircrews can contact the 17 OWS regional briefing cell at DSN 315-449-8333, x7950, x7973, or commercial 808-449-8333, x7950, x7973. A designated computer in the flight planning room in Bldg. 2858 provides all the necessary information to schedule transient flight weather briefings through the 17 OWS web page.
- **2.6. Pilot-to-Metro-Service (PMSV).** U.S. aircraft in radio range of Kunsan AB may contact 'Kunsan Metro' on 346.5 MHz to request weather information. Backup support for Kunsan AB is conducted by the 51 OSS/OSW at Osan AB.
- **2.7. Support to Deployed/Expeditionary Units.** Weather support for deployed or expeditionary units operating from Kunsan AB will be supported by their attached/home WF or support will be arranged by the expeditionary unit IAW AFMAN 15-129V2, para 2.5.1.
- **2.8. Space Weather Support.** Upon request, WF personnel will provide space weather support to all 8 FW agencies and tenant units.
- **2.9.** Chemical Downwind Messages (CDM). The WF will provide CDMs within the first hour after the stand-up of the Emergency Operations Center (EOC) Chemical, Biological, Radiological and Nuclear (CBRN) cell.
- 2.10. Backup Operations and the Alternate Operating Location (AOL).
  - 2.10.1. The WF maintains the capability and Standard Operating Procedures (SOP) to support 8 FW missions in a degraded/backup mode from the primary AOL in Building 2829.
  - 2.10.2. The following are limitations and corresponding mitigations identified for conducting operations out of the AOL:
    - 2.10.2.1. There is no dedicated Secure Internet Protocol Router (SIPR) terminal for WF personnel. WF personnel will work with units that require SIPR support and help arrange for this support to the greatest extent possible with the 17 OWS.
    - 2.10.2.2. WF Personnel will not have access to PMSV. Forecasters will execute procedures in local SOP to mitigate not having access to a PMSV, which includes coordinating backup support with the 51 OSS/OSW at Osan AB.
  - 2.10.3. In the event WF personnel are no longer able to provide support to 8 FW agencies, the 17 OWS will assume all weather support responsibilities as documented in AFMAN 15-129 V2 and in the current 8 OSS/OSW-17 OWS IDP.
  - 2.10.4. In the event the 17 OWS is unable to provide support, the WF will assume all responsibilities outlined in the IDP between the WF and the 17 OWS.

### WEATHER FLIGHT OPERATIONS—OBSERVING SERVICES

## 3.1. Types of Observations.

- 3.1.1. Aviation Routine Weather Report (METAR). A scheduled observation taken each hour at 55-59 minutes past the hour; disseminated locally at Kunsan AB and long line into the Automated Weather Network.
- 3.1.2. Aviation Selected Special Weather Report (SPECI). Special observations taken as required to report significant changes in weather elements; disseminated locally and long-line. A single- element SPECI is authorized for tornadic activity and volcanic eruptions when a delay in reporting all elements would cause an immediate threat to life or property. SPECI criteria can be found in **Attachment 4**.
- 3.1.3. Aviation Selected Local Weather Report (LOCAL). A LOCAL is an unscheduled observation, reported to the nearest minute, not meeting SPECI criteria. LOCALs are only taken when OSS leadership determines there is a requirement in support of local operations.
  - 3.1.3.1. LOCALs taken in support of aircraft operations are encoded in METAR format.
  - 3.1.3.2. Altimeter Setting (ALSTG) LOCALs are single element observations that contain the time and ALSTG. When ATC does not have access to real-time ALSTGs, Kunsan WF will disseminate an ALSTG LOCAL observation 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 ALSTG value. **Note**: A METAR or SPECI taken within the established time interval fulfills this requirement.
- **3.2. Observing Equipment.** WF weather observing services will be primarily accomplished by the FMQ-19, an automated observing system. The FMQ-19 produces METAR, and SPECI observations and disseminates them long line to the automated weather network or locally via JET. Back-up Observing Equipment consists of the TMQ-53 Tactical Observing System (TMOS) and the Handheld Kestrel Environmental Weather Meter.
  - 3.2.1. FMQ-19 Sensor Suite. The FMQ-19 has the following sensors: wind sensor (10 meter height), ceilometer, visibility sensor, runway visual range (RVR) sensor, temperature sensor, relative humidity sensor, liquid precipitation measurement sensor, lightning detection sensor, barometer (station pressure/altimeter setting).
  - 3.2.2. FMQ-19 Limitations. The FMQ-19 has the following sensor limitations:
    - 3.2.2.1. Present Weather Phenomena. This system is only able to sample atmospheric information in the immediate vicinity and may not provide an accurate representation of weather in the entire aerodrome complex (i.e. the 5 NM radius encompassing the Kunsan runway). Differing surrounding weather phenomenon will not be measured or reported.
    - 3.2.2.2. Visibility. When visibility changes rapidly, the AN/FMQ-19 observation will lag the actual weather due to the time-averaged algorithms used by the system. Visibility is based on a 10-minute average from the primary sensor suite.

- 3.2.2.3. Sky Condition. Sky condition is based on evaluation of ceilometer data gathered over a 30-minute period ending at the actual time of the observation. There is double weight placed on the most recent 10 minutes to better represent rapidly changing conditions. The AN/FMQ-19 ceilometer consists of a laser directed at a single point in the sky with the ability to detect clouds up to 25,000 feet. Sky condition is calculated based on the movement of clouds over the ceilometer.
- 3.2.2.4. All Other Weather Elements. All other weather elements sensed by the AN/FMQ-19 are evaluated based on sensor data averaged over the past 10 minutes or less.
- 3.2.2.5. Republic of Korea Air Force (ROKAF) Measurement of Snow Depth. The AN/FMQ-19 lacks equipment to measure snow depth. The WF will request snow measurements from the ROKAF observing section to record snowfall totals.
- 3.2.3. TMOS. The TMOS measures, processes, and reports wind speed and direction, temperature, relative humidity, dew point, pressure (altimeter pressure, sea level pressure, and pressure/density altitude), precipitation (type, amount, and intensity), visibility, present weather, sky condition, and lightning strikes. The AN/TMQ-53 includes a handheld monitor, laptop for transmitting long-line observations, solar panel, battery, and Alternating Current (AC) outlet connections. This sensor suite is used as a long-term backup to the AN/FMQ-19 as needed.

### 3.2.3.1. TMO-53 Limitations:

- 3.2.3.1.1. Enhanced Configuration is required for TMOS to report cloud height, visibility, present weather and lightning detection.
- 3.2.3.1.2. An external power source (i.e., commercial or generator power) is necessary for sustained operation of the enhanced configuration.
- 3.2.4. Kestrel Environmental Weather Meter. The Kestrel is a hand-held, commercial off-the-shelf device capable of providing measurements of wind speed, direction, temperature, wind chill, humidity, heat index, dew point, wet-bulb temperature, barometric pressure, pressure altitude, and density altitude. It is used during evacuations to the AOL and as a backup to the AN/FMQ-19. Weather technicians will enter WND DATA ESTMD and ALSTG ESTMD IAW AFMAN 15-111, Attachment 3.
- **3.3. Basic Weather Watch (BWW).** The FMQ-19 observing system performs an automatic Continuous Weather Watch. Weather personnel will perform a Basic Weather Watch when augmentation is required. The BWW observing program includes minimum requirements to recheck weather conditions at intervals not to exceed 20 minutes since the last observation/recheck to verify the need for a SPECI observation. Other duties and restrictions prevent weather personnel from monitoring the weather continuously and they cannot be expected to verify every report from the FMQ-19 prior to transmittal. Staff weather personnel may also augment observations. During significant, rapidly changing weather events, WF personnel will provide augmented Continuous Weather Watch until the threat has passed and normal observing can be resumed.

- **3.4.** Cooperative Weather Watch (CoWW). CoWW is the cooperation between weather personnel and Air Traffic Control (ATC), Security Forces (SF) and the SOF in identifying significant weather changes. This plan establishes the local CoWW agreement between the WF and these agencies. The CoWW addresses reporting tower visibility differing from the prevailing surface visibility, reporting sector 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. To conduct a CoWW, the WF will:
  - 3.4.1. Reevaluate the weather conditions whenever reliable sources (e.g., Airfield Operations Flight controller, SOF, pilot, local law enforcement) reports weather conditions different from the last disseminated observation (e.g., different ceiling height, visibility, present weather).
  - 3.4.2. Generate a SPECI observation if the different conditions warrant immediate dissemination.
  - 3.4.3. Include the differing conditions in the next required METAR or SPECI observation if the conditions alone do not warrant immediate dissemination.
  - 3.4.4. Notify the ATC tower as soon as possible, whenever the prevailing visibility at the weather unit's observation point decreases to less than, or increases to equal or exceed 4 miles (6,000 meters).
  - 3.4.5. Reevaluate surface prevailing or sector visibility, as soon as practical, upon initial receipt of a differing ATC tower value, and upon receipt of subsequent reportable changes at the ATC tower level.
  - 3.4.6. Use ATC tower values of prevailing or sector visibility as a guide in determining the surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc.
  - 3.4.7. Ensure visibility is determined. It may be manually determined at the surface, the tower level, or both. If visibility observations are made from only one level (e.g., the air traffic control tower), that level will be considered the "designated point of observation." The visibility from that designated point will be reported as surface visibility. If visibility observations are made from both levels, the visibility at the tower level may be reported as tower visibility (Optional based on operational requirements).
  - 3.4.8. Develop and maintain certification tests for limited weather observing and tower visibility certification IAW USAF ATC guidelines to evaluate competency of Airfield Operations Flight controllers.
  - 3.4.9. Immediately notify Tower, RAPCON, and Airfield Management Operations (AMOPS) of any problems with airfield weather equipment or local weather communications equipment.
  - 3.4.10. Flight Information Publications (FLIP) Updates. The WF will provide information to the Airfield Manager for FLIP entries. Data includes, but is not limited to, operating hours, PMSV frequency, 17 OWS contact information, automated equipment, and limitations hindering unobstructed visibility observations. FLIPs will include a brief description of the CoWW procedures with ATC tower. The WF will validate the accuracy of information each time the FLIP is published and take immediate steps to correct erroneous data.

- **3.5. Primary/Alternate Observing Point.** The FMQ-19 is the official observing point when operational. During FMQ-19 outages or observation augmentation, the Wolf Head located in front of Building 2858 is the official observation point at the primary operating location. The "O" in "FOD" at the Foreign Object Debris (FOD) checkpoint in front of the AOL is the backup observation point during FMQ-19 outages or augmentation.
- **3.6. Augmentation.** Forecasters will augment the FMQ-19 whenever any of the following criteria are met:
  - 3.6.1. Ceiling is below 2,000 ft and or visibility is less than 3 statute miles
  - 3.6.2. Tornadic Activity
  - 3.6.3. Severe Thunderstorms
  - 3.6.4. Severe Winds
  - 3.6.5. Large Hail
  - 3.6.6. Volcanic Ash
  - 3.6.7. Ice Pellets
  - 3.6.8. Freezing Precipitation
  - 3.6.9. Kunsan AB in Tropical Cyclone Condition of Readiness (TCCOR) 2
- **3.7. Dissemination of Observations.** The FMQ-19 will disseminate observations over the JET server.

## 3.8. Backup Procedures.

- 3.8.1. FMQ-19. A combination of TMQ-53, Kestrel, and human observer are utilized to backup FMQ-19 instruments, as applicable. Due to specific citing requirements, altimeter and winds will be reported as estimated and coded "estimated (ESTMD)". Additionally, RVR sensor outages are coded "RVR Information Not Available (RVRNO)".
- 3.8.2. JET. Technicians transmit observations manually, first to ATC agencies then continue with local dissemination. Observations are then transmitted longline through Air Force Weather Web Services (AFW-WEBS) or via another weather unit (e.g., 17 OWS, 51 OSS/OSW).

## WEATHER WATCHES, WARNINGS, AND ADVISORIES (WWA)

- **4.1. General Information.** There are 3 types of weather notifications that are issued to advise customers of environmental impacts: Watches, Warnings, and Advisories. All WWA's (with the exception of lightning within 25 nautical miles) are valid for 5 nautical miles from the center of the runway.
  - 4.1.1. Watch. The weather watch can be thought of as a "heads up" that agencies need to consider making plans to take required protective actions should an actual weather warning be issued later. All watches will contain the remark "A warning will be issued later if required."
  - 4.1.2. Warning. A weather warning signifies an environmental condition that can cause damage to life, limb, or property is imminent or already occurring.
  - 4.1.3. Advisory. Weather advisories are special products notifying an end user when an established environmental condition affecting operations is expected to occur (forecast advisory) or is occurring (observed advisory).
    - 4.1.3.1. Forecasted advisories have a lead time of 30 minutes to ensure proper actions can be taken prior to the onset of the environmental condition.
    - 4.1.3.2. Observed Advisories are issued after a particular threshold or weather phenomenon is first observed to occur. An observed advisory is valid Until Further Notice (UFN).
- **4.2. Issuing Authority.** The issuance of WWA's is a cooperative process between the 17 OWS and the Kunsan WF. IAW AFMAN 15-129V1 *AIR AND SPACE WEATHER OPERATIONS CHARACTERIZATION*, AFMAN 15-129V2 *AIR AND SPACE WEATHER OPERATIONS EXPLOITATION*, and the IDP between the 17 OWS and the Kunsan WF, the 17 OWS has the responsibility of issuing all watches with the exception of lightning watches. The Kunsan WF is responsible for issuing lightning watches, all warnings, and advisories. Outside of WF duty hours, the 17 OWS will issue observed advisories.
- **4.3. Dissemination.** Dissemination will be accomplished through both the automated JET Integrated Weather Warning Capability (IWWC) System and AtHoc notifications from the 8 FW Command Post (CP). **Attachment 5** details the dissemination process.
  - 4.3.1. The 17 OWS disseminates watches directly through the IWWC to AMOPS, RAPCON, ATC Tower, the CP, Maintenance Operations Center (MOC), and AFN. AMOPS and MOC notify supported agencies via internal checklists. The CP will disseminate watches via AtHoc IAW **Attachment 5**. The AWO forecaster will place follow-up calls IAW WF SOP to ensure proper notification was received.
  - 4.3.2. The WF disseminates warnings and advisories directly through the IWWC to AMOPS, RAPCON, ATC Tower, CP, the MOC, and American Forces Network (AFN). AMOPS and MOC notify supported agencies via internal checklists. The CP will disseminate warnings via AtHoc IAW Attachment 5. The AWO forecaster will place follow-up calls IAW WF SOP to ensure proper notification was received.

- **4.4. Back-Up Dissemination.** Back-Up Dissemination will be accomplished IAW WF SOP. Weather technicians will manually call the contacts listed in **Attachment 5** and log Watches and Warning on AF 3806, *Weather Watch Advisory Log* and Advisories on AF 3807, *Watch/Warning Notification and Verification*.
- **4.5. AtHoc Dissemination.** To ensure proper information flow and streamline use of AtHoc, only WWA's that affect the general base population will be disseminated by the CP using AtHoc. The list of WWA's that will be disseminated by the CP in **Attachment 5**. WWA's specific to operations will be disseminated by the IWWC system only to those agencies that need to know.
- **4.6. WWA Criteria.** WWA criteria can be found in **Attachment 6**.

### SIGNIFICANT WEATHER EVENTS

- **5.1. Significant Weather Event Notices.** Whenever the WF forecasts an event that could have large impacts to base operations, infrastructure, and/or base personnel, the WF will send a detailed email to at a minimum all Group Leadership and OSS Leadership. Additional contacts will be added on request. Impending events that would potentially require emails to leadership include tropical storms, moderate/severe thunderstorms, heavy rain > 2" in 12 hours, any freezing or frozen precipitation, damaging winds, etc. These notices may also cover volcanic eruptions/tsunamis as applicable.
- **5.2. Severe Weather Action Procedures (SWAP).** The 17 OWS has responsibility for issuing severe weather watches for Kunsan AB. When it becomes apparent that severe weather is a potential threat to Kunsan AB, the on-duty technician will inform Flight Leadership. Flight Leadership will discuss the need to recall additional personnel to address the situation. If severe weather is present/forecasted after duty hours, the 17 OWS will contact the stand-by forecaster to initiate SWAP. SWAP will be initiated when any of the following criteria are met:
  - 5.2.1. Tornadic Activity
  - 5.2.2. Severe Thunderstorm
  - 5.2.3. Moderate Thunderstorm
  - 5.2.4. Heavy Rain/Snow GTE 2" in 12 hours
  - 5.2.5. Freezing Precipitation
  - 5.2.6. Kunsan AB in Tropical Cyclone Conditions of Readiness 2 or 1 (TCCOR 2-1)
- **5.3. Tropical Cyclone Conditions of Readiness (TCCOR).** TCCOR are set for the Korean Theater of Operations (KTO) by the USFK/J3 Director of Operations IAW USFKR 115-1, upon recommendation by the 607 WS/CC. TCCOR are listed in **Attachment 7**.
  - 5.3.1. The WF will use the official tropical cyclone forecasts issued by the 17 OWS and Joint Typhoon Warning Center (JTWC) to provide support to 8 FW leadership when a tropical cyclone is expected to affect Kunsan AB. No deviation from the official forecast position, track, movement, and maximum wind speed or intensity trend is authorized.
  - 5.3.2. WWA Dissemination in TCCOR 1. Upon entering TCCOR 1, all pertinent WWA's (tornadoes, heavy rain, severe/moderate level winds, etc.) will be assumed possible. As a result, WWA dissemination will end upon entering TCCOR 1. WWA dissemination will begin when TCCOR ALL CLEAR is declared.
  - 5.3.3. Tropical cyclone forecasts support to non-DoD agencies and the general public will not be provided unless coordinated through the 8 FW Public Affairs Office.
- **5.4. OPREP-3/Significant Weather Reporting Procedures.** If significant weather (winds  $\geq$  50 knots, hail  $\geq$  3/4", lightning strikes, tornadoes, and/or snow storms) causes damage or personal injury at Kunsan AB, the WF will provide the following information to the 8FW/CP to facilitate immediate OPREP-3 reporting IAW AFMAN 10-206, *Operational Reporting (OPREP)*:
  - 5.4.1. Actual severe weather observed.

- 5.4.2. Airfield forecast valid at time of occurrence to include watches and warnings (include actual and desired lead time).
- 5.4.3. Operational status of meteorological equipment.
- 5.4.4. For purposes of Operational Report (OPREP) reporting for tropical cyclones, the WF will provide the following to the 8FW/CP:
  - 5.4.4.1. Current position of storm in relation to Kunsan.
  - 5.4.4.2. Closest expected position of storm to Kunsan.
  - 5.4.4.3. Wind Speed in closest proximity to Kunsan.

#### STAFF WEATHER SERVICES

## 6.1. Briefings.

- 6.1.1. Wing Staff Meeting. 8 OSS/OSW leadership or designated alternate will be present at weekly Wing Staff meetings to provide weather for 8 FW leadership situational awareness.
- 6.1.2. Instrument Refresher Course (IRC). The WF will provide an in-person weather briefing at each IRC as duty priorities and manpower allow.
- 6.1.3. Quarterly Flight Safety Meeting (QFSM). Upon request by 8th Fighter Wing Safety (8 FW/SE) or 8th Operations Group Stan/Eval (8 OG/OGV), weather briefings will be presented at the QFSM and SOF meetings addressing either seasonal weather patterns or other weather topics.
- 6.1.4. Upon notification by the Installation Deployment Officer (IDO), the WF will provide the weather portion of the deployment concept briefing.
- **6.2. Investigation Boards.** WF personnel will serve as the weather member of investigation boards upon appointment by Pacific Air Forces (PACAF) or 8 FW/CC and will provide weather data for inclusion in aircraft accident reports upon request by 8 FW/SE.
- **6.3. Five- 5-Day Outlook.** The WF will produce a 5-Day Outlook Monday through Friday and posted to SharePoint at: <a href="https://kunsan.eis.pacaf.af.mil/80G/80SS/Weather/SitePages/Home.aspx">https://kunsan.eis.pacaf.af.mil/80G/80SS/Weather/SitePages/Home.aspx</a>.
- **6.4. Climatology.** The WF can provide climatological data upon request. If no data is immediately accessible, the WF will request information from the 14th Weather Squadron. Upon receiving a response from the 14 WS, the WF will provide the data in a timely manner.
- **6.5. Aircraft Mishap Procedures.** Upon notification, the Kunsan WF will accomplish all procedures listed in the 8 FW Mishap Response plan and local SOP.
- **6.6.** Exercise, EOC, and Crisis Action Team (CAT) Response. The WF will provide personnel to report to the EOC during exercises or upon request to inform the CAT of weather impacts on operations.
  - 6.6.1. Emergency Response Support. Emergency Response Support operations help identify the critical weather information needed to determine the effects of weather on the use of Chemical, Biological, Radiological, and Nuclear (CBRN) weapons. Weather operations also analyze the seasonal or monthly normal variations in weather patterns that might affect the use of CBRN weapons. The CBRN Control Center, the EOC, and/or Incident Commander (IC) will contact AWO personnel or the standby forecaster (after duty hours) if any of the following are needed:
  - 6.6.2. CDM. The CDM provides required weather information during an initial 6-hour period.
  - 6.6.3. Effective Downwind Messages (EDM). The EDM provides downwind speeds and directions for the selected seven yield groups during an initial 6-hour period.

**6.7. Functional Area Agreement Coordinator (FAAC).** The Kunsan WF will provide 2 members to be FAAC's and review the OSS/OSW section of the Base Support Plan (BSP) in support of the 8th Logistics Readiness Squadron.

### RECIPROCAL SUPPORT

## 7.1. The 8th Operations Group Commander will:

- 7.1.1. Establish weather support requirements and procedures with the Weather Flight Commander or designated representative.
- 7.1.2. Notify the Weather Flight Commander or designated representative of changes in mission weather support requirements.
- 7.1.3. Arrange for seasonal weather briefings as required through the Weather Flight Commander or designated representative.

## 7.2. The 8th Operations Support Squadron Commander will:

7.2.1. Ensure all elements of OSA adhere to the Cooperative Weather Watch agreement outlined in this instruction.

## 7.3. Airfield Operations Flight Commander will:

7.3.1. Ensure training and certification of ATC Tower controllers on evaluating and reporting tower and sector visibility is accomplished.

#### 7.4. AMOPS will:

- 7.4.1. Ensure information concerning weather watches, warnings, and advisories are properly disseminated. AMOPS will also broadcast weather warnings over the secondary crash net. Agencies such as ATC Tower, SOF, RAPCON, CP, and the MOC personnel should reply that the weather updates have been received.
- 7.4.2. Ensure the forecaster/observer is notified of an in-flight emergency or aircraft mishap/incident at or in the vicinity of Kunsan AB and all mishaps involving Kunsan aircraft.
- 7.4.3. Ensure the Runway Surface Conditions (RSC) and Runway Condition Reading (RCR) are determined and passed to the weather observer.
- 7.4.4. Ensure specified DoD, Federal Aviation Administration (FAA), and International Civil Aviation Organization (ICAO) publications are requisitioned and distributed to the WF upon request.
- 7.4.5. Ensure weather updates are submitted for publication in FLIPs.
- 7.4.6. Ensure any long-term PMSV outages are published in Notices to Airmen (NOTAM).

### 7.5. RAPCON will:

- 7.5.1. Provide RAPCON orientation to WF personnel, upon request.
- 7.5.2. Schedule RAPCON personnel to receive WF indoctrination tour of weather facilities and modified meteorological code training (observation and TAF format), prior to completion of Front Load Training.
- 7.5.3. Solicit and relay PIREPs within 5 minutes after receipt.

#### 7.6. ATC Tower will:

- 7.6.1. Provide ATC Tower orientation to WF personnel, upon request.
- 7.6.2. Schedule ATC Tower personnel to receive indoctrination tour of WF, meteorological code training (observation and TAF format) and initial Limited Weather certification of ATC Tower personnel. They will be trained to make prevailing tower and sector visibility observations when the prevailing visibility at the usual point of observation, or at the tower level, is less than 4 miles.
- 7.6.3. Notify the WF when they observe tower prevailing visibility to decrease to less than, or increase to equal or exceed 4 statute miles (6,000 meters).
- 7.6.4. Report all changes of one or more reportable values to the WF when the prevailing visibility at the tower or the surface is less than 4 miles (6,000 meters).
- 7.6.5. Use the lower of the tower or surface visibility when reporting the prevailing visibility for aircraft observations as required by Federal Aviation Administration Job Order (FAAJO) 7110.65, *Air Traffic Organization Policy*.
- 7.6.6. Ensure all ATC Tower personnel will report the following conditions, or any previously unreported weather conditions that could affect flight safety, to the weather observer:
  - 7.6.6.1. Tornado, funnel cloud, thunder and lightning, to include approximate direction and distance from tower.
  - 7.6.6.2. Beginning and ending of precipitation.
  - 7.6.6.3. Any condition which, in the opinion of the controller, is significant to flight safety.
- 7.6.7. Solicit and relay PIREPs within 5 minutes after receipt.
- 7.6.8. Contact AWO personnel to augment the FMQ-19 if current observation is not representative.

### 7.7. Radar, Airfield, Weather Systems (RAWS) will:

- 7.7.1. Contact the WF when planning to perform normal maintenance. The WF shall be the determining authority on when the maintenance will occur based on ongoing weather operations.
- 7.7.2. Maintain response times to outages or malfunctions to airfield weather equipment when notified by the WF.
- 7.7.3. Provide Job Control Numbers and verify outages with the WF daily until fixed.
- 7.7.4. Uphold equipment restorable priorities.
- 7.7.5. Contact the WF and request an operational test of equipment after maintenance personnel report repair work complete.

### 7.8. The 8 OSS/OSK will:

- 7.8.1. Notify WF Commander in advance of Wing Verification and coordinate weather support requirements.
- 7.8.2. Provide the WF, via secure communications or through squadron briefers, information about assigned target areas and routing as soon as they are known.

## 7.9. Wing Scheduling will:

- 7.9.1. Provide flying schedule to the WF.
- 7.9.2. Assist WF members in gaining Windows Patriot Excalibur (WINPEX) Access.
- 7.9.3. Identify, in advance, changes in scheduled plans and any unusual flying activities to the Weather Flight Commander that may require weather support.
- 7.9.4. Coordinate with the Weather Flight Commander on scheduled exercise participation, exercise objectives, and weather support requirements.
- 7.9.5. Provide monthly and quarterly operations and training schedules to the WF.
- 7.9.6. Advise the Weather Flight Commander of changes in MOAs.

# 7.10. The 35th and 80th Fighter Squadrons will:

- 7.10.1. Provide workspace for MWO in their respective FSs.
- 7.10.2. Notify WF leadership for the need of special weather support (cross-country MEF, Coronet mission support, etc.) requirements, as early as possible.
- 7.10.3. Notify the WF of scheduled deployment/Temporary Duty (TDY) briefings as far in advance of the required briefing time as possible.
- 7.10.4. Relay PIREPs to the WF via the SOF, TOP-3, Tower or RAPCON.
- 7.10.5. Provide squadron orientations for weather technicians, upon request.

## 7.11. The 8th Fighter Wing Command Post will:

- 7.11.1. Notify the Flight Commander of any changes in protective postures and other emergency action messages via Crisis Action Team and/or Wing Recall.
- 7.11.2. Notify the WF of changes/requirements for scheduled or special briefings.
- 7.11.3. Coordinate with the Weather Flight Commander or designated representative on weather support requirements.
- 7.11.4. Disseminate information concerning weather watches, warnings, advisories, and tropical cyclone conditions IAW **Attachment 5**.
- 7.11.5. Notify the WF when the JET is inoperative.
- 7.11.6. Notify the weather station of any local aircraft mishap/incidents via the Chief of Safety, where weather or weather service may be a factor.

### 7.12. The 8th Communications Squadron will:

- 7.12.1. Provide network infrastructure for both airfield weather equipment (FMQ-19) and the JET system.
- 7.12.2. Notify WF personnel prior to performing any maintenance to prevent JET outages during 8 FW Flying hours or significant weather conditions. The WF reserves the right to delay maintenance when existing or forecast weather requires such change.

- 7.12.3. Contact the AWO forecaster and Non-Commissioned Officer in Charge (NCOIC) during duty hours in the event of a network outage to explain the situation and give estimated fix times, if able.
- 7.12.4. Follow-up on all network outages.

## 7.13. The 8th Civil Engineer Squadron will:

- 7.13.1. Contact WF for official snowfall forecast when preparing/conducting snow removal ops.
- 7.13.2. Contact WF for official wind and visibility forecast when planning/conducting Rapid Airfield Damage Assessment System (RADAS) flying operations.
- 7.13.3. Provide emergency power supply and air conditioning for weather sensors and communications equipment located in building 2858.

## 7.14. The 8th Security Forces Squadron will:

- 7.14.1. Assist weather flight by reporting any significant weather observed by SF personnel across base.
- 7.14.2. Contact WF for official snowfall forecast when recommending road condition changes.

## 7.15. The 8th Logistics Readiness Squadron will:

- 7.15.1. Train WF personnel on the development of the weather annex to the BSP Parts I and II.
- 7.15.2. Provide vehicles to the WF at the Minimum Essential Level (MEL). Assigned vehicles ensure weather support to 8 FW is timely and accurate.

### 7.16. The 8th Medical Group will:

7.16.1. Through Bioenvironmental Engineering (8 MDOS/SGOJ), request weather data from the WF as required to model toxic corridors during emergency response activities, update heat indices during summer months and wind chill during winter months.

### 7.17. The 8th FW Safety Office will:

- 7.17.1. Notify the WF as soon as possible when any mishap occurs requiring a weather data save. Notification should not exceed 5 hours. Failure to notify the WF within five hours will severely limit the weather data available for any subsequent investigation or actions.
- 7.17.2. Notify the WF when a weather representative is required for membership on an accident investigation board or other safety investigation board.

BRIAN S. KELLUM, Lt Col, USAF Commander

#### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

### References

AFPD 15-1, Weather Operations, 12 Nov 2015

AFDD 3-59, Weather Operations, 28 Jul 2011

AFI 10-2501, Air Force Emergency Management Program, 19 Apr 2016

AFI 15-114, Weather Technical Readiness Evaluation, 16 March 2017

AFI 11-202V3, General Flight Rules, 10 Aug 2016

AFI 13-204V3, Airfield Operations Procedures and Programs, 1 Sep 2010

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

AFI 48-151, Thermal Injury Prevention Program, 7 Apr 2016

AFMAN 10-206, Operational Reporting (OPREP), 18 Jun 2018

AFMAN 15-111, Surface Weather Observations, 11 Mar 2019

AFMAN 15-111\_PACAFSUP, Surface Weather Observations, 13 Jun 2013

AFMAN 15-124, Meteorological Code, 16 Jan 2019

AFMAN 15-129V1, Air and Space Weather Operations-Characterization, 6 Dec 2011

AFMAN 15-129V2, Air and Space Weather Operations-Exploitation, 7 Dec 2011

AFMAN 33-363, Management of Records, 1 Mar 2008

USFK Reg 115-1, USFK Area Weather Watches and Tropical Cyclone Procedures for the Republic of Korea, 22 Jul 2014

FAAJO 7110.65, Air Traffic Organization Policy, 26 May 2016

### Adopted Forms

AF Form 847, Recommendation for Change of Publication

AF Form 3806, Weather Watch Advisory Log

AF Form 3807, Watch/Warning Notification and Verification

AF Form 3622, Air Traffic Control/Weather Certification and Rating Record (LRA)

AF Form 3803, Surface Weather Observations (METAR/SPECI)

#### Abbreviations and Acronyms

**AB**—Air base

**AC**—Alternating Current

**AFDD**—Air Force Doctrine Document

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFN**—American Forces Network

**AFPD**—Air Force Policy Directive

**AFRIMS**—Air Force Records Information Management System

**AFW-WEBS**—Air Force Weather Web Services

**AGE**—Areo Space Ground Equipment

**ALSTG**—Altimeter Setting

**AMOPS**—Airfield Management Operations

**AOL**—Alternate Operating Location

ATC—Air Traffic Control

**AWO**—Airfield Weather Operations

**BSP**—Base Support Plan

BWW—Basic Weather Watch

**CAT**—Crisis Action Team

CBRN—Chemical, Biological, Radiological, and Nuclear

**CDM**—Chemical Downwind Message

**CoWW**—Cooperative Weather Watch

**CP**—Command Post

**CSAR**—Combat Search and Rescue

**DLT**—Desired Lead Time

**DoD**—Department of Defense

**ECM**—Electronic Counter Message

**EDM**—Effective Downwind Messages

**EOC**—Emergency Operations Center

**ESTMD**—estimated

**FAA**—Federal Aviation Administration

**FAAC**—Functional Area Agreement Coordinator

FAAJO—Federal Aviation Administration Job Order

**FLIP**—Flight Information Publication

**FOD**—Foreign Object Damage

**FS**—Fighter Squadron

**FW**—Fighter Wing

**FWB**—Flight Weather Briefing

**GPS**—Global Positioning System

**GTE**—Greater than or equal to

**GT**—Greater than

**IAW**—In Accordance With

**IC**—Incident Commander

ICAO—International Civil Aviation Organization

**IDO**—Installation Deployment Officer

**IDP**—Installation Data Page

IRC—Instrument Refresher Course

**IWWC**—Integrated Weather Warning Capability

**JET**—Joint Environmental Toolkit

JTWC—Joint Typhoon Warning Center

**KTO**—Korean Theater of Operations

**LOCAL**—Aviation Selected Special Weather Report

LT—Less than

LTE—Less than or equal to

**MEF**—Mission Execution Forecast

**MEL**—Minimum Expected Level

**MEFP**—Mission Execution Forecast Process

**METAR**—Aviation Routine Weather Report

**MWO**—Mission Weather Operations

**MWP**—Mission Weather Product

**METWATCH**—Meteorological Watch

MISSIONWATCH—Mission Meteorological Watch

**MOA**—Military Operating Area

**MOC**—Maintenance Operations Center

**NCOIC**—Non-Commissioned Officer in Charge

NIPRNET—Non-secure Internet Protocol Router Network

NM—Nautical Mile

**NOTAM**—Notice to Airmen

**OPR**—Office of Primary Responsibility

**OPREP**—Operational Report

**OWS**—Operational Weather Squadron

**PACAF**—Pacific Air Forces

**PIREP**—Pilot Report

**PMSV**—Pilot to Metro Service

**QFSM**—Quarterly Flight Safety Meeting

**RAPCON**—Radar Approach Control

**RAWS**—Radar, Airfield, Weather Systems

**RCR**—Runway Condition Reading

**RDS**—Records Disposition Schedule

RKJK—Kunsan AB

**ROKAF**—Republic of Korea Air Force

**RSC**—Runway Surface Condition

**RVR**—Runway Visual Range

RVRNO—Runway Visual Range Information Not Available

**SF**—Security Forces

**SIPRNET**—Secure Internet Protocol Router Network

**SOF**—Supervisor of Flying

**SOP**—Standard Operating Procedures

**SPECI**—Aviation Selected Special Weather Report

**SWAP**—Severe Weather Action Procedures

**TAF**—Terminal Aerodrome Forecast

**TCCOR**—Tropical Cyclone Condition of Readiness

**TDY**—Temporary Duty

**TMOS**—Tactical Meteorological Observing System

**TPG**—Targeting Pod

**UHF**—Ultra High Frequency

**USFK**—United States Forces Korea

**UFN**—Until Further Notice

**WF**—Weather Flight

**WS**—Weather Squadron

**WINPEX**—Windows Patriot Excalibur

**WWA**—Watch, Warning, Advisory

#### **Terms**

**Airfield Weather Operations (AWO)**—Primary location for AWO is Bldg. 2858. AWO forecasters are the focal point for airfield observations, forecast collaboration, installation resource protection (i.e. 'eyes forward'), and SOF support.

**Desired Lead Time (DLT)**—The amount of advance notice an agency requires prior to the onset of a particular weather phenomenon in order to take protective actions.

**Eyes Forward**—WF forecasters are the "eyes forward" for the forecasters in the 17 OWS and integrate weather radar data, meteorological satellite imagery, lightning detection readouts, etc to create an integrated weather picture and near-term trend forecasts for the OWS. "Eyes forward" yields meaningful meteorological information not contained in coded observations to the servicing OWS and is an integral part of the METWATCH for an installation or contingency operating location.

**Installation Data Page (IDP)**—Agreement between 17 OWS and WF enumerating responsibilities, WWA criteria, contact numbers and other pertinent data related to support between the two organizations. The IDP is posted on the 17 OWS webpage.

**Mission Weather Product (MWP)**—A MWP is a customized weather product providing terrestrial and space weather data and forecasts for a specific mission, or set of missions. It fully integrates aerospace weather with the customer's tactics, weapon systems, environmental sensitivities of equipment, and other operational requirements.

**Mission Meteorological Watch**—(MISSIONWATCH)—The monitoring of aerospace weather for a specific mission (e.g., ground, air or space) and informing supported agencies when unforecast mission-limiting phenomena could affect operations.

**Mission Weather Operations (MWO)**—Weather personnel who provide MWPs for the operational decision cycle of their host or parent unit function are designated MWO forecasters. This element also provides MWPs for sortie planning, generation, and execution.

**Operational Weather Squadron (OWS)**—An organization responsible for providing regional, operational-level weather forecast products and services to customers within their AOR. The 17 OWS serves the Korean Theater of Operations, and is responsible for issuance of TAFs, WWAs not issued by the WF, transient aircrew flight weather briefings, and Meteorological Watch (METWATCH) for resource protection purposes.

**Severe Thunderstorm**—A thunderstorm that produces hail greater than or equal to ¾ inch diameter and/or surface wind greater than or equal to 50 knots.

**Severe Weather**—Any weather condition that poses a hazard to property or life.

**Terminal Aerodrome Forecast (TAF)**—A structured, 30-hour weather forecast for the 5 NM aerodrome surrounding an airfield. Each TAF specifies the time of occurrence to the nearest hour, duration and intensity (if applicable) of weather conditions expected to occur.

Weather Flight (WF)—An umbrella term covering any military weather organization providing direct operational support at the tactical level.

**Weather Watch**—A special notice provided to supported customers that alerts them of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the customer must take protective action.

## TAF SPECIFICATION/AMENDMENT CRITERIA

**A2.1. General Information.** TAF specification/amendment criteria are derived from AFMAN 15-129V1 and local requirements. **Table A2.1** lists specification/amendment criteria for ceiling and visibility. **Table A2.2** lists specification/amendment criteria for all other weather elements.

Table A2.1. TAF Ceiling/Visibility SPECI/AMD Criteria

Terminal Aerodrome Forecast Specification/Amendment Criteria		
Forecast Element/Occurrence	Kunsan AB Specification/Amendment Criteria	
	CAT E	GTE 2000ft
Coiling observed or later aspected to	CAT D	LT 2000ft but GTE 1000ft
Ceiling observed or later expected to decrease to less than, or if below,	CAT C	LT 1000ft but GTE 700ft
increase to equal or exceed:	CAT B	LT 700ft but GTE 200ft
	CAT A	LT 200ft
	CAT E	GTE 3SM (4800M)
Prevailing visibility observed or later	CAT D	LT 3SM (4800M) but GTE 2SM
expected to decrease to less than, or if	CAT C	LT 3SM (4800M) but GTE 2SM
below, increase to equal or exceed:	CAT B	LT 2SM (3200M) but GTE 1/2SM
	CAT A	LT 1/2SM (800M)

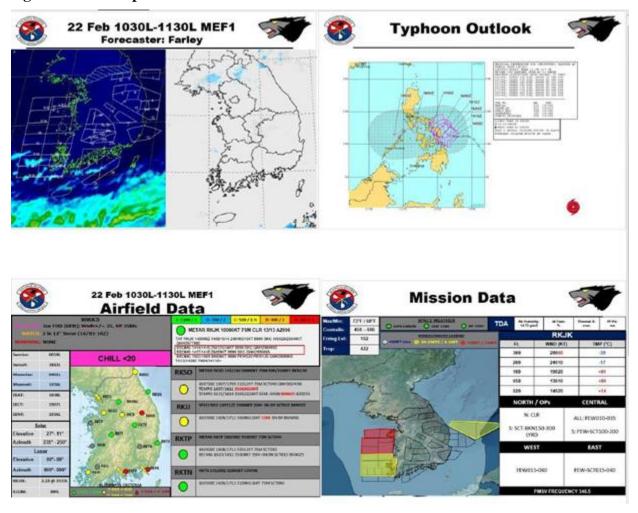
Table A2.2. TAF SPECI/AMD Criteria Other Than Ceiling/Visibility.

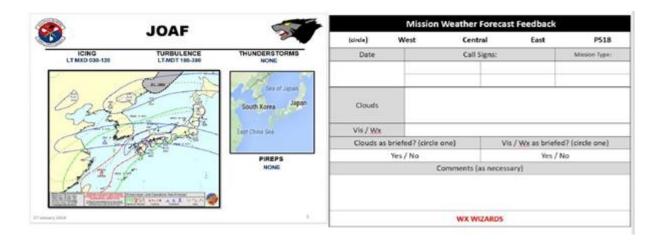
		Amend if predominant wind speed is in error
Surface Wind Speeds	Specify wind speed changes of 10 knots or more	by 10 knots or more
A STATE OF THE STA		Amend if wind gust speed is in error by 10
Surface Wind Gusts	Specify onset, duration, and intensity of wind gusts	
	Specify a change in prevaling wind direction of	Amend if prevailing wind speed is in error
ETTO 100 000 ES	more than 30 degrees when the predominant wind	by more than 30 degrees AND winds are 15
Surface Wind Direction	speed or gusts are expected to be 15 knots or more	knots or more
loing	Specify icing not associated with thunderstorms from surface to 10,000ft AGL	Amend if beginning or ending of icing meets exceeds, or decreases to less than moderate (or greater) intensity and was improperly specified
Turbulence	(Weather Category II Aircraft) Specify turbulence not associated with thunderstorms from surface to 10,000 ft AGL	Amend if the beginning or ending of turbulence meets, exceeds, or decreases to less than moderate (or greater) intensity an was improperly specified
Weather Warning Criteria	Specify the onset, duration, and intensity of weather warning criteria	Amend if weather warning criteria occurs and is not forecast or is no longer expected to occur
Altimeter Setting	Specify the onset of altimeter settings meeting or exceeding 31.00 INS or altimeter settings 28.00 INS or less. If less than the threshold specify when altimeter settings equal or exceed the thresholds, if greater than, specify when altimeter settings will decrease to equal or less than the thresholds.	Amend if the altimeter setting meets, or is expected to meet the threshold and was no specified in forecast
Forecast Weather Advisory Criteria (issued for TAF amendable criteria)	Specify the onset, duration, and intensity of forecast weather advisory criteria at the aerodrome complex	Amend if the forecast weather advisory criteria is improperly specified, occurs and was not forecast, or is no longer expected to occur
Thunderstorms	Specify onset and duration of thunderstorms at the aerodrome complex	Amend if the start or end time of the thunderstorm is incorrectly specified
Temporary Conditions	Specify the onset and duration of temporary conditions	Amend if temporary conditions become predominant.     Amend if temporary conditions do not occur as forecast.     Amend if temporary conditions are no longer expected to occur.     Amend if forecast changes conditions occur.
Changes to Predominant Conditions	Specify the onset, duration, and intensity (if applicable) of changes to predominant conditions	before the specified period of change, do not occur within 30 minutes after the specified time, or are no longer expected to Amend it forecast conditions are not
Representative Conditions		considered representative of the characterized state of the atmosphere and an amendment improves safety, fight planning, operational efficiency, or assists flight aircraft

## SAMPLE MEF/PLANNING WEATHER PRODUCT

**A3.1. General Information.** The Kunsan WF has coordinated with the 35th and 80th Fighter Squadrons regarding requirements for the MEF. **Figure A3.1** is the MEF that will be created by the weather flight.

Figure A3.1. Sample MEF.





## **SPECI CRITERIA**

**A4.1. General Information.** Special observations taken as required to report significant changes in weather elements. **Table A4.1** Lists SPECI criteria derived from FLIPs, local requirements, AFMAN 15-111, *Surface Weather Observations*, AFMAN 15-111\_PACAFSUP, *Surface Weather Observations*.

Table A4.1. SPECI Criteria.

The ceiling (rounded off to reportable values) forms or dissipates below, decreases to less than, or if below, increases to equal or exceed:	Ceiling (feet) 3000 (See Note 1) 2000 (See Note 1) 1500 (See Note 1) 1000 (See Note 1) 900 (See Note 2) 800 (See Note 1 & 2) 700 (See Notes 1 & 2) 600 (See Notes 1 & 2) 500 (See Notes 1 & 2) 300 (See Notes 1 & 2) 200 (See Notes 1 & 2) 100 (See Notes 1 & 2)
Visibility decreases to less than or, if below, increases to equal or exceed:	Visibility 3 (See Notes 1 & 2) 2 (See Notes 1 & 2) 1 3/4 (See Note 2) 1 3/8 (See Notes 2, 3 & 4) 1 1/4 (See Notes 1 & 2) 1 1/8 (See Notes 2, 3 & 4) 1 (See Notes 1 & 2) 3/4 (See Notes 1 & 2) 1/2 (See Notes 1 & 2) 1/4 (See Notes 1 & 2)
Sky Condition:	A layer of clouds or obscuring phenomena aloft is below 600 feet (highest landing minimum), and no layer aloft was reported below 600 feet in the preceding METAR or SPECI observation.

Wind Shift:	The wind direction changes by 45 degrees or more in less than 15 minutes with sustained winds of 10 knots or more throughout the wind shift.
Squall:	A strong wind characterized by a sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots for at least one minute. (A SPECI is not required to report a squall if preceding METAR or SPECI has already identified squalls with additional criteria.)
Thunderstorm:	Begins (A SPECI is not required to report the beginning of a new thunderstorm if one is currently being reported)  Ends (15 minutes after last occurrence of thunder)
Precipitation:	Hail begins or ends.  Freezing precipitation begins, ends, or changes in intensity.  Ice pellets begin, end, or change in intensity.
	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 or the beginning or ending of one type

or the beginning or ending of one type while another is in progress.

Tornado, Funnel Cloud, Waterspout:	Is observed, disappears from sight or ends.
Runway Visual Range (RVR): RVR for the active runway decreases to less than or, if below, increases to equal or exceed:  Additional RVR criteria:	RVR (feet) 6000 (See Note 1) 5500 (See Note 2) 5000 (See Note 1) 4000 (See Note 1) 2400 (See Note 1) 2000 (See Note 1) 1600 (See Note 1) 1200 (See Note 1) 1000 (See Note 1) RVR is first determined as unavailable (RVRNO) for the runway in use, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.
Tower Visibility:	(1) When notified by the control tower that tower visibility has decreased to less than or, if below, increased to equal or exceed 1, 2, or 3SM, 1600, 3200 or 4800 m (IAW FAA JO 7110.65X, Air Traffic Control) and the control tower visibility differs from the prevailing visibility.  (2) When notified by the control tower that tower visibility has decreased to less than or, if below, increased to equal or exceed locally developed tower special criteria (if applicable) and the control tower visibility differs from the prevailing visibility.
Upon resumption of observing services:	Required within 15 minutes after returning to duty following a break in hourly coverage if a METAR was not filed as scheduled during that 15-minute period.

Aircraft Mishap: Take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing location unless there has been an intervening observation.	Identify the observation by including the remark in column 13 remarks on the AF Form 3813 only; e.g., (ACFT_MSHP). This remark is not disseminated locally or longline.
Miscellaneous	Any other meteorological situation that the airfield weather personnel deem critical

Note 1: Reference AFMAN 15-111

**Note 2**: Reference Flight Information Publication (terminal)

Note 3: Required IAW Flight Information Publication when ALS is inoperative

**Note 4**: Value not reportable by FMQ-19. This value will be reported only during flying hours when Weather Station is open and an observer can augment for this value

## WWA DISSEMINATION

**A5.1. Dissemination Process.** When the 17 OWS/8 OSS/OSW issues a WWA, the IWWC system automatically calls those listed in **Figure A5.1**. The contacts being notified by IWWC will receive all the WWAs listed in **Attachment 6**. Upon receiving notification from IWWC, the 8 FW Command Post will disseminate the WWAs that affect the general base population. These WWAs can be found in **Table A5.1** and will be disseminated via AtHoc.

Figure A5.1. IWWC Dissemination Tree.

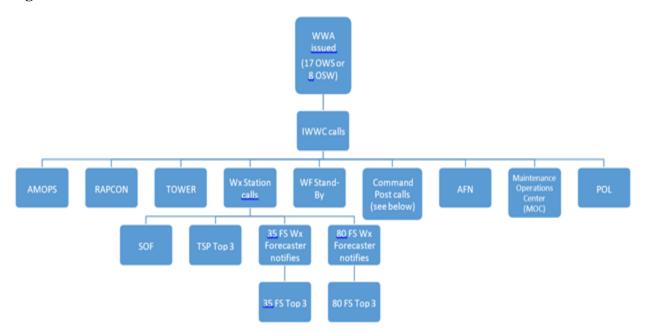


Table A5.1. Command Post Dissemination via AtHoc.

Type of	
Alert	Criteria
Watch	Tornado
	Severe Thunderstorm/Damaging
	Winds >= 50 kts and /or Damaging Hail >= 3/4"
Watch	diameter
	Moderate Thunderstorm/Strong
	Winds >=35 kts and/or Large Hail >=1/4" but
Watch	<=3/4"
Watch	Damaging Winds >=50 kts
Watch	Freezing Precipitation
Watch	Heavy Snowfall >=2 inches in 12 hrs
Watch	Lightning within 5nm
Warning	Tornado
	Severe Thunderstorm/Damaging
	Winds >= 50 kts and /or Damaging Hail >= 3/4"
Warning	diameter
	Moderate Thunderstorm/Strong
	Winds >=35 kts and/or Large Hail >=1/4" but
Warning	<=3/4"
Warning	Damaging Winds >= 50 kts
Warning	Heavy Snowfall >=2 inches in 12 hrs
Warning	Heavy Rainfall >=2 inches in 12 hrs
Warning	Strong Winds 35-49 kts
Warning	Freezing Precipitation
Warning	Lightning within 5nm
Advisory	Wind Chill < 20F, -20F, -40F

# WEATHER WATCHES, WARNINGS AND ADVISORIES (WWA)

**A6.1. WWA Criteria.** The Kunsan WF will issue the WWA's listed below to ensure resource protection at Kunsan AB. The criteria and desired lead times have been tailored to meet the needs of supported customers.

Table A6.1. Weather Watches, Warnings, and Advisories

Weather Watches						
Watch Type	Criteria		I	Desired Lead Ti	me	Issued By
Tornado	Tornado or Funnel	Cloud		As potential varrants		17 OWS
Severe Thunderstorm	Damaging Wind G' Hail GTE 3/4 in	FE 50kts and/or Damaging	g 2	240 minutes		17 OWS
Moderate Thunderstorm	Strong Wind GTE : Large Hail LT 3/4 i	35kts but LT 50kts and/or n	9	0 minutes		17 OWS
Damaging Winds(Non- convective)	Winds GTE 50kts r with thunderstorms		9	0 minutes		17 OWS
Freezing Precipitation	Any intensity		9	0 minutes		<b>17 OWS</b>
Heavy Snow	2 inches New Snow	fall in 12 hrs	9	0 minutes		<b>17 OWS</b>
Lightning	Potential for Lightr	ning within 5nm	3	30 minutes		WF
Weather Warnings						<u> </u>
Warning Type	Criteria		I	Desired Lead Ti	me	Issued By
Tornado	Tornado or Funnel	Cloud	3	0 minutes		WF
Severe Thunderstorm	Damaging Wind G' Hail GTE 3/4 in	ΓΕ 50ktsand/or Damaging	1	20 minutes		WF
Moderate Thunderstorm	Strong Wind GTE : Large Hail LT 3/4 i	Strong Wind GTE 35kts but LT 50kts and/or		0 minutes		WF
Damaging Winds(Non- convective)	Winds GTE 50kts r with thunderstorms		9	0 minutes		WF
Strong Winds (Non- convective)	Winds GTE 35kts b with thunderstorms	out LT 50kts not associated	d 9	0 minutes		WF
Freezing Precipitation	Any intensity		9	0 minutes		WF
Heavy Snow	2 inches New Snow	fall in 12hrs	9	0 minutes		WF
Heavy Rain	2 inches New Rainf	all in 12hrs	9	0 minutes		WF
Lightning	Lightning Observed	l w/in 5nm of the airfield	F	First Observed		WF*
Weather Advisories						
Criteria		Forecast/Observed	Des	sired	Iss	ued By
Snow Accumulation GT Tr	ace but LT 2"	Forecast	30 r	ninutes –	WI	7
Observed Surface Winds G than 35kts		Observed	Firs	st Observed	WI	
Observed Crosswinds GTE Runway) Observed Crosswi (Wet Runway)		Observed	Fir	st Observed	W	F
Observed Gust Spread GT	Observed Gust Spread GT 10kts		Fir	st Observed	W	F
Observed Crosswinds GTE	16kts (Grey Eagle)	Observed	Fir	st Observed	W	F

Observed Low Level Wind Shear below 2,000ft not associated with thunderstorms	Observed	First Observed	WF
Observed Turbulence greater GTE moderate not associated with thunderstorms below 10,000ft	Observed	First Observed	WF
Observed Icing GTE light not associated with thunderstorms from surface to 10,000ft	Observed	First Observed	WF
Observed Icing GTE moderate not associated with thunderstorms from surface to 10,000ft	Observed	First Observed	WF
Observed Ice FOD Potential*	Observed	First Observed	WF
Observed Ceiling/Visibility LTE 3000ft/3sm	Observed	First Observed	WF
Observed Wind Chill ≤ 40F	Observed	First Observed	WF
Observed Wind Chill ≤ 20F	Observed	First Observed	WF
Observed Wind Chill ≤ -20F	Observed	First Observed	WF
Observed Wind Chill ≤ -40F	Observed	First Observed	WF
Observed Fighter Index of Thermal Stress (FITS) - Caution and Danger Levels	Observed	First Observed	WF
Wave heights GTE 3 meters and/or winds GT 25kts sustained exist in the East Sea	Observed	First Observed	WF
Wave heights GTE 3 meters and/or winds GT 25kts sustained exist in the West Sea	Observed	First Observed	WF
Observed Lightning w/in 25nm of airfield	Observed	First Observed	WF

\*NOTE: Ice FOD potential is required when the any one or more of the following criteria exist: (cancel when criteria are no longer met). (1) Ambient temperatures between 20°F (-7°C) and 45°F (7°C) with precipitation (rain, fog, sleet, or snow). (2) Dewpoint within 9°F (5°C) of ambient temperatures between 25°F (-4°C) and 45°F (7°C). (3) Ambient temperature below 45°F (7°C) with standing water or a mixture of water with ice or snow within the immediate proximity of the engine inlet.

## TROPICAL CYCLONE CONDITIONS OF READINESS (TCCOR)

**A7.1. General Information.** TCCOR provide information on incoming tropical systems that will impact the Korean Peninsula. Kunsan AB falls under Area 4 for all TCCOR.

Table A7.1. TCCOR.

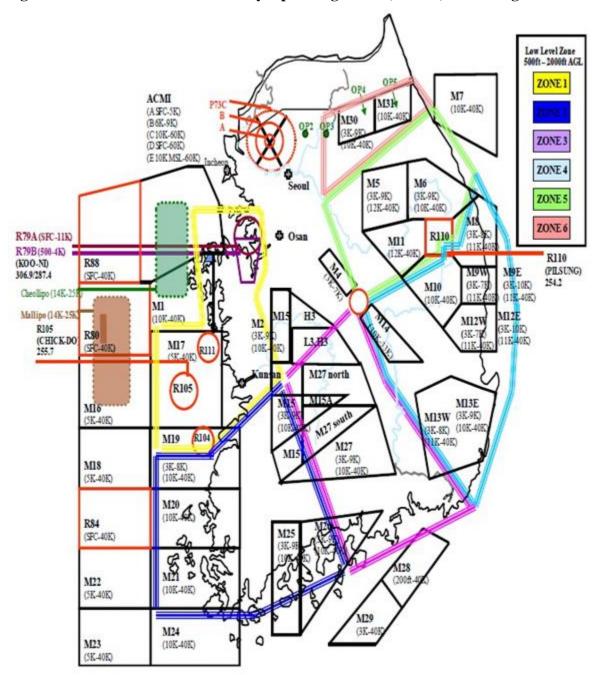
TCCOR FIVE*	Destructive winds are possible w/in 96 hours.
TCCOR FOUR	Destructive winds, greater than or equal to 50 knots (including gusts) are possible and forecasted to affect the designated area(s) within 72 hours.
TCCOR THREE	Destructive winds, greater than or equal to 50 knots (including gusts) are possible and forecasted to affect the designated area(s) within 48 hours.
TCCOR TWO	Destructive winds, greater than or equal to 50 knots (including gusts) are anticipated and forecasted to affect the designated area(s) within 24 hours.
TCCOR ONE**	Destructive winds, greater than or equal to 50 knots (including gusts) are occurring or are forecasted to affect the designated area(s) within 12 hours.
TCCOR ALL CLEAR	Winds greater than or equal to 50 knots (including gusts) are no longer forecast to affect the designated area.

<sup>\*</sup>Note 1: For the Korean Theater of Operations TCCOR FIVE is synonymous with the seasonal occurrence of Typhoons (1 Jun to 1 Oct) and will not require a formal declaration by the TCCOR authority.

<sup>\*\*</sup>Note 2: Upon entering TCCOR 1, all pertinent WWA's will be assumed possible, therefore WWA dissemination will end until TCCOR ALL CLEAR is declared.

## COMMON 8 FW MILITARY OPERATING AREAS (MOAS) AND RANGES.

Figure A8.1. Common 8 FW Military Operating Areas (MOAS) And Ranges.



## WEATHER SENSITIVITIES

**A9.1. General Information.** Weather phenomenon have varying impacts based on each onbase agency. With coordination from on-base agencies, the Kunsan WF has identified weather sensitivities for flying operation as well as severe weather impacts and protective measures taken by specific units.

Table A9.1. Flying Mission (Air-to-Air) Weather Thresholds.

Mission Type(s)	Significant Risk - Red	Marginal Risk - Amber	No Risk - Green	Reference
-Basic Flight Maneuvers (BFM) -Air Combat Maneuvers (ACM) -Tactical Intercepts (TI) -Defensive Counter Air (DCA) -Dissimilar Air Combat Training (DACT) FL 050-350	TS > 1/2 fcst period < 4,000ft clear airspace (consecutive CLR or FEW)	TS < 1/2 fcst period  ≥4,000ft - < 10,000ft clear airspace (consecutiv e CLR or FEW)	No TS  >10,000ft clear airspace (consecutive CLR or FEW)	35/80 FS Collaboration 15 Mar 18

	CIG < 3,000ft	CIG <u>&gt;</u> 3,000ft - < 10,000ft	CIG≥	
-Offensive Counter Air (OCA)	SFC VIS <	SFC VIS <u>&gt;</u> 3 − < 5sm	10,000ft SFC	25/00 FG
-Interdiction (INT)	3sm	TS < 1/2 fcst period	VIS <u>&gt; 5</u> sm No	35/80 FS Collaboration 15 Mar 18
FL SFC-	TS > 1/2 fcst		TS	
350	period	Target visible from FL200 and		
	Target visible from FL150 and below	below	Target visible from FL200 or above	

Table A9.2. Flying Mission (Air to Ground) Weather Thresholds.

Mission Type(s)	Significant Risk - Red	Marginal Risk - Amber	No Risk - Green	Reference
-Close Air Support (CAS) -Interdiction- Road Reconnaissance (XINT) -Alert Attack (XATK)	SFC VIS < 3sm  TS > 1/2 fcst period  Target visible from FL100 and below	SFC VIS > 3 - < 5sm  TS < 1/2 fcst period  Target visible between FL150 to FL110	SFC VIS ≥  5sm No TS  Target visible from FL150 or above	AFI 11-2F- 16V3 35/80 FS Collaborati on 15 Mar 18
-Basic Surface Attack (BSA) -Surface Attack Training (SAT) -Alert -Air Interdiction (AI) - Opposed Surface Attack (OPSAT) aka (OCA/AI)	< 5,000ft clear airspace (consecutiv e CLR or FEW)  CIG < 3,000ft  SFC VIS <  3SM  TS > 1/2 fcst period	≥5,000ft - < 10,000ft clear airspace (consecutive CLR or FEW)  CIG ≥3,000ft - < 10,000ft  SFC VIS ≥3 - < 5sm  TS < 1/2 fcst period	≥10,000ft clear airspace (consecutive CLR or FEW)  CIG ≥ 10,000ft  SFC ≥  5SM No  TS	AFI 11-2F- 16V3 35/80 FS Collaborati on 15 Mar 18

**Table A9.3. Severe Weather Impacts** 

	Weather			
	Watches			
SUPPORTED UNIT	MISSION IMPACT	CUSTOMER ACTION		
Tornado Watcl	n (DLT: As potential warrants)			
All	Potential for damage to life, limb, and property	Monitor situation for updates and prepare to take shelter		
Lightning With	nin 5 nm Watch (DLT: 30 min)			
All	Potential threat to life and property	Increase awareness and monitor for issuance of lightning warning		
F-16, MQ-1C, MXG	Potential threat to personnel	Prepare to take action upon issuance of lightning warning		
Moderate Thur	nderstorm Watch (DLT: As potential v	warrants)		
All	Potential threat to personnel.	Increase awareness and monitor situation for updates		
Damaging Win	ds GTE 50kts Watch (DLT: 240 min)			
All	Potential threat to life and property	Increase awareness and monitor situation for updates		
F-16, MQ-1, MXG	Potential hazard to ops	Monitor situation for updates and prepare to take actions when warning issued		
Freezing Precip	pitation (any intensity) Watch (DLT: A	As potential warrants)		
All	Potential for hazardous conditions to personnel movement	Increase awareness and monitor situation for updates		
F-16, MQ-1, MXG	Potential for aircraft icing and icy runways	Prepare to de-ice aircraft and potential divert		
Heavy Snow G	ΓΕ 2" in 12 hrs			
All	Potential for hazardous conditions to personnel movement	Increase awareness and monitor situation for updates		
F-16, MQ-1, MXG	Potential for aircraft icing and icy runways	Prepare to de-ice aircraft and potential divert		

Weather			
	Warnings	CYTCH OF THE TOWNS	
SUPPORTED UNIT	MISSION IMPACT	CUSTOMER ACTION	
Tornado Warn	ing (DLT: 30 min)		
All	Danger to life and property.	Take shelter immediately.	
Lightning With	nin 5nm Warning (DLT: Observed)		
SUPPORTED UNIT	MISSION IMPACT	PROTECTIVE MEASURES	
All	Danger to life and property	Take shelter indoors.	
MXG	operations.	<ol> <li>Discontinue all servicing and maintenance ops on the flight line and secure equipment and tool kits.</li> <li>Stop all munitions ops.</li> <li>Return vehicles containing explosives to dispatch area.</li> <li>Ground aircraft.</li> <li>Evacuate nonessential personnel from flight line.</li> </ol>	
	Hazard to flight line ops.	Advise personnel to seek shelter	
CE	Hazard to flight line ops.	Do not respond to barrier changes without direct instructions	
	35-50kts Warning (DLT: 90 min)		
SUPPORTED UNIT	MISSION IMPACT	PROTECTIVE MEASURES	
	1. Aircraft may fall from jacks. 2. Aircraft/equipment may be damaged.	1. Lower aircraft on jacks. 2. Close all radomes.	
	3. Loose objects may cause damage.	3. Close all canopies 4. Reinstall removed stress panels. 5. Upon direction from MXG/CC, hangar as many aircraft as possible.	
		6. Remove all support equipment from the flightline.	

		7. All munitions loading/unloading will cease, to include impulse cartridge installation, 20MM ammunition loading, all missiles and bombs and chaff and flare.  8. Dash 21 boxes can be kept on the line if an aircraft is to be on the spot.  9. Winds over 30 knots, F-16s must be hangared if total weight is 15,000 lb.
MQ-1C	1. Aircraft may fall from jacks.	or less (i.e. Eng. removed).  1. Lower aircraft on jacks.
	2. Aircraft/equipment may be damaged	2. All munitions loading/unloading will cease
	3. Loose objects may cause damage	3. Hangar aircraft when directed
		4. Remove all support equipment from the flightline.
CE	Increased unscheduled mx, damage to trees, buildings.	<ol> <li>Reschedule routine work.</li> <li>Remove fallen trees, repair</li> </ol>
SF	Loose objects may cause damage.	Advise personnel to secure all objects. Notify housing areas.
CS	Possible Interruption to comm	Prepare to repair any damage to communication lines/equipment
Surface Winds	s > 50kts Warning (DLT: 90 min)	
SUPPORTED UNIT	MISSION IMPACT	PROTECTIVE MEASURES
All	Danger to life and property.	Seek shelter indoors.
F-16, MO-1C	Cancels flight ops.	Reschedule flight ops.
	1. Aircraft may fall from jacks.	1. Lower aircraft on jacks.
	2. Aircraft/equipment may be	2. All munitions loading/unloading
	3. Loose objects may cause damage.	3. Hangar aircraft as directed
		4. Remove all support equipment from the flightline.
F-16, MXG	1. Aircraft may fall from jacks.	1. Lower aircraft on jacks.
	2. Aircraft/equipment may be	2. Close all radomes.
	3. Loose objects may cause damage.	3. Close all canopies
		4. Reinstall removed stress panels.
		5. Hanger as many aircraft as possible as directed by OG. Move AGE not in use to ready line, set brakes and
		chock.

	T	
		6. Secure all loose equipment on
		flight line and hanger areas.
		7. Remove AGE equipment from
		the flightline.
		8. MXG/CC will decide whether to
		take actions to evacuate aircraft and
		shelter personnel; non-flyable F-16s
		must be hangared or moored.
OG	1. Threat to personnel.	1. Evacuate control tower.
	2. Runway and taxiways hazardous.	2. Possibly divert if RCR<10.
SF	Loose objects may cause damage.	Advise personnel to secure all
CE	Increased unscheduled mx, damage	1. Reschedule routine work.
	to trees, buildings.	2. Remove fallen trees, repair
CS	Possible Interruption to comm	Prepare to repair any damage to
	- 0551624 2-10021 4-p vaoia 40 402-1-1-1	communication lines/equipment
Covere Thursday	 erstorm/Moderate Thunderstorm War	2 2
	MISSION IMPACT	PROTECTIVE MEASURES
UNIT	Dangar to life and manager.	Cook shalton in doors
All	Danger to life and property.	Seek shelter indoors
F-16,	Damage to aircraft.	1. Hanger as many aircraft as
MXG,		possible.
MQ-1C		2. Close canopies (N/A for MQ-1)
		3. Evacuate personnel from the
		flight line before hail starts.
SF	Loose objects may cause damage.	Advise personnel to secure all
~-		objects.
CE	Increased unscheduled mx, damage	1. Reschedule routine work.
	to trees, buildings.	
		2. Remove fallen trees, repair
		buildings.
CS	Possible Interruption to comm	Prepare to repair any damage to
		communication lines/equipment
Heavy Snow/F	reezing Precipitation (Any Intensity)	Warning (DLT: 90 min)
	MISSION IMPACT	PROTECTIVE MEASURES
UNIT		
All	Slows personnel movement.	Use caution when driving to work or
	_	walking on icy sidewalks.
F-16, MQ-1C	1. Icing on aircraft.	1. De-ice aircraft.
	2. Runway and taxiways hazardous.	2. Possibly divert if RCR<10.
MXG	Icing on aircraft	De-ice aircraft.
CE	1. Roadways dangerous.	1. Plan alternate response routes.
-		2. Prioritize responses to alarms.
	loss of power and alarms may go off.	3. Decrease response speeds.
	ross of power and arating may go off.	4. Sand roads.
	<u>l</u>	T. Dalla I vaus.

		5. Put urea on runway.			
CS	Possible Interruption to comm	Prepare to repair any damage to			
	•	communication lines/equipment			
MSG/SF	Roadways dangerous	Consider changing road condition			
Heavy Rain > 2" in 12 hrs (DLT: 90 min)					
All	Potential Flooding Base wide	Avoid flooded areas on base			
F-16, MXG	Affects Flight Operations	Consider lifting F-16 ECM pods			
CE	Possible Interruption to power	Take protective actions, prepare for any repairs			
CS	Possible Interruption to comm	Prepare for repairs to any			
		affected equipment			
	Weathe	r			
Advisories					
Observed Su	rface Winds 25-34 kts (DLT: As obse	rved)			
MXG	Hazardous conditions for aircraft	1. Cease the upload and download of			
	maintenance	tanks on open ramps.			
		2. Cease all open ramp operations			
		that require personnel to work on			
		top			
		3. Closely monitor weapons and pod			
		(ECM/TGP) loading/downloading			
		on open ramps and cease actions if			
		safety is in doubt			
		4. Close and secure radomes and			
		panels on all unsheltered aircraft			
		5. Install all -21gear on aircraft or			
		remove equipment from open ramps.			
		6. Remove all AGE and equipment			
		not in use from around unsheltered			
		aircraft. Secure and/or chock all			
		AGE and equipment in use on the			
		open ramp.			
		7. Position fire bottles on the open			
		ramp flat on the ground.			
		8. If aircrew or maintenance engine			
		runs are to be performed, give			
		extreme caution and awareness to			
		the possibility of FOD from blowing			
		objects.			
		•			

		wind, the start eximaintent aware of monitor necessary Supering the report of the telephone of telephone of the telephone of the telephone of te	craft is not facing into the e possibility of an engine hot sts. Aircrew and ance personnel should be f this possibility and closely engine start procedures. If cy, the Production tendent/Expediter will direct sitioning of the aircraft engine start.  educe the Hazards of debris, hangar and shelter at face into the wind will be except for access.		
<b>Observed Light</b>	tning within 25	nm (DLT: As observed)			
MQ-1C		Hazardous to	Potentially cease flight		
		takeoff/landing	operations		
Snow Accumu	lation > Trace b	ut <2" (DLT: 30 min)			
F-16, MQ-1C		1. Icing on aircraft.	1. De-ice aircraft.		
		2. Runways and taxiways	2. Potentially suspend ops		
		hazardous			
CE		Hazardous conditions on	Begin snow removal		
		runways and roads	actions		
Ceiling/Visibili	ity LT 3000ft/3S	M (DLT: As observed)			
MQ-1C		Hazardous to flight in the	Potentially cease flight ops		
		pattern, takeoff/landing			
Icing GTE Light Not Associated w/Thunderstorms from Surface to 10,000ft (DLT: As observed)					
MQ-1C		Hazardous to flight	Potentially cease flight ops		
	derate Not Asso	ciated w/Thunderstorms from	· · · · · · · · · · · · · · · · · · ·		
As observed)			, , , ,		
F-16, MQ-1C		Hazardous to flight	Potentially cease flight ops		
	tial Exists (DLT		,		
F-16, MXG		Hazardous to engine startup	MXG/SOF may implement		
			Ice FOD procedures		
Turbulence GTE Moderate Not Associated w/Thunderstorms from Surface to 10,000ft					
(DLT: As observed)					
F-16, MQ-1C	,	Hazardous to flight	Potentially cease flight ops		
<u> </u>					

Low Level Wind Shear below 2,000ft (DLT: As observed)						
F-16, MQ-1C	Hazard to takeoff and landing	1. SOF may declare alternate runway (F-16s only)				
		2. Potentially cease flight ops				
FITS Caution and Danger Zones (DLT: As observed)						
F-16	Sustained exposure hazardous to health	Refer to AFI 48-151, Thermal Injury Prevention Program				
Wind Chill LT 40F, 20F, -20F, -40F (DLT: As observed)						
All	Sustained exposure hazardous to health	Refer to AFI 48-151				
Wave Heights GTE 3 meters and/or winds GT 25kts sustained exist in the West Sea (DLT: As observed)						
F-16	CSAR ops degraded	Requires OG/CC approval for missions over water				
Wave Heights GTE 3 meters and/or winds GT 25kts sustained exist in the East Sea (DLT: As observed)						
F-16	CSAR ops degraded	Requires OG/CC approval for missions over water				
<b>Observed Gust Spread G</b>	10 kts (DLT: As observed)					
MQ-1C	Hazard to takeoff and landing	Potentially cease flight ops				
Crosswinds GTE 16 kts (Grey Eagles; DLT: As observed)						
MQ-1C	Hazard to takeoff and landing	Potentially cease flight ops				
Crosswinds GTE 23 kts (Wet Runway) or Crosswinds GTE 25 kts (Dry Runway) (DLT: As observed)						
F-16, MQ-1C	Hazard to takeoff and landing	1. SOF may declare alternate runway (F-16s only)				
		2. Potentially cease flight ops				