BY ORDER OF THE COMMANDER
36TH WING

36TH WING INSTRUCTION 15-101

14 AUGUST 2020

Weather

WEATHER SUPPORT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing web site at **www.e-Publishing.af.mil**

RELEASABILITY: There are no releasability restrictions on this publication

---

OPR: 36 OSS/OSW

Certified by: 36 OSS/CC
(Lt Col Brian B. Neal)

Supersedes: 36WGI 15-101, 6 October 2017

Pages: 12

This instruction implements PACAFI15-101 and establishes policy, procedures, and responsibilities to provide weather support on Andersen Air Force Base (AAFB). Additionally, this instruction provides guidance for weather services including weather observations and forecasts, weather warnings, watches, and advisories, dissemination of weather information and reciprocal support. This instruction applies to all assigned, attached, and associate units or units supported by the 36th Wing (36 WG). 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. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with Air Force Records Disposition Schedule located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Information Management Tool (AF IMT) 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate chain of command.

SUMMARY OF CHANGES

This publication has been revised and must be completely reviewed. Terminal aerodrome forecast responsibilities and tropical cyclone processes for AAFB have changed since the previous version. Mission-limiting environmental conditions stop-light charts have been updated to standardize impacts to operations depicted on weather products developed by the AAFB Weather Flight.

1. General Information. This instruction establishes weather support for AAFB not already defined in Joint and Air Force Directives, Instructions, Manuals, and Publications or in 36 WG operations plans.

1.1. **AAFB Weather Flight (WF) Mission.** Provide timely, accurate, and relevant weather services to the 36 WG by integrating weather into the planning and execution phases of garrison and contingency operations.

1.2. **WF Location and Hours of Operation.** The WF is located in Building 17002, AAFB, Guam. The WF provides or arranges for weather support 24 hours a day, 7 days a week.

1.3. Contact Information:

1.3.1. Flight Commander, DSN/Commercial 315/671-366-1407

1.3.2. Flight Chief, DSN/Commercial 315/671-366-3176

1.3.3. Weather Technician, DSN/Commercial 315/671-366-5230

1.3.4. Secure Weather Phone, 315-366-6366

1.3.5. WF organizational email, **36oss.osw1@us.af.mil**

1.4. **Concept of Operations.** The WF, 17th Operational Weather Squadron (OWS), and the Joint Typhoon Warning Center (JTWC) work as a team to provide weather services for AAFB. The WF provides weather services via four overarching functions: staff integration function, mission integration function, airfield support function, and specialized support. Details for each of these functions are found in AFI 15-128, *Weather Force Structure*, AFMAN 15-129, *Air and Space Weather Operations*.

1.5. **Duty Priorities.** Not all WF tasks can be accomplished simultaneously. Therefore, duty priorities are established to ensure tasks are accomplished in order of relative importance and publicized to avoid misunderstanding among supported agencies. Established duty priorities ensure timely response to situations under normal conditions; however, the list does not replace good judgment. The weather technician may deviate in the best interest of safety and/or protection of personnel or property. The weather operator will use the following priority list in **Table 1** as a guide for accomplishing duties.

Table 1. WF Duty Priorities.

Priority	Duties
1	Perform Emergency War Order Tasks (e.g., Deploy Personnel)
2	Execute Evacuation/Continuity of Operations Plan
3	Issue/Disseminate Imminent Hazardous Weather Warnings
4	Respond to Aircraft/Ground Emergencies
5	Issue/Disseminate Imminent Weather Advisories
6	Coordinate/Disseminate Terminal Aerodrome Forecasts
7	Provide Flight Weather Briefings
8	Collaborate Weather Products with Supported Units
9	METWATCH/Amend Weather Characterization Products
10	Respond to Support Assistance Request (SAR) or Request for Information
11	Provide Staff Briefings/Non-Standard Weather Products
12	Accomplish Weather Functional Training
13	Accomplish Administrative Tasks

1.6. **Assumptions and Limitations.** The WF relies heavily on network communication systems and cannot effectively conduct weather operations without access to network communications for receiving/transmitting data. Interruption in network service severely degrades the WF's capability to provide weather services.

1.7. **Alternate Operating Location (AOL).** In the event that the weather station has to be evacuated, weather operators will relocate to and establish weather services in the air traffic control tower (Building 18015). The contact number at the AOL is 366-2183. Pilot-to-Metro Service (PMSV) capability does not exist at any AOL.

2. Airfield Support Function. The WF will perform airfield support function duties in accordance with AFMAN 15-129, *Air and Space Weather Operations.*

2.1. **Weather Observing.** Aviation Routine Weather Reports (METARs) will be recorded and disseminated through the Joint Environmental Toolkit (JET) website hourly. Aviation Selected Special Weather Report (SPECI) and Aviation Selected Local Weather Report (LOCAL) observations will be recorded and disseminated when criteria dictate as prescribed in AFMAN 15-111, *Surface Weather Observations*, and the Department of Defense (DoD) Flight Information Publication (FLIP), *High and Low Altitude – Pacific, Australasia, and Antarctica*.

2.1.1. The AN/FMQ-19 Automated Meteorological Observing System (AMOS) is the primary piece of equipment used to observe weather conditions at AAFB. If the AMOS is not operational or if there is a sensor or communication failure, the weather operator will back-up the system through manual observing procedures. The weather operator will augment the AMOS when necessary.

2.1.2. The AMOS, both the primary sensor group and the discontinuity sensor group, is the primary observation site. The primary sensor group is located on AAFB runway 06R and the discontinuity sensors are on runways 24L, 24R, and 06L.

2.1.3. The manual observation site is located behind Building 17002. The point of observation is 74 feet from the west side of the building on a small concrete pad marked with a compass rose.

2.2. **Terminal Aerodrome Forecast (TAF).** The WF, in coordination with the 17 OWS, will issue the AAFB TAF three times daily at 02Z, 10Z, and 18Z and will amend the TAF when necessary. The TAF is disseminated via standard communication systems (e.g., NIPRNET, SIPRNET) and the JET website.

2.3. **Flight Weather Briefings.** The WF will provide flight weather briefings for transient aircrew. Transient aircrews should request routine flight weather briefings a minimum of two hours prior to brief time in order to give the WF and OWS adequate time to produce a forecast.

2.4. **Pilot-to-Metro Service (PMSV).** The WF will monitor ultra-high frequency (UHF) 344.6 MHz continuously to assist aircrews (either airborne or on the ground). Range is approximately 200 nautical miles (nm) at normal operating altitudes.

2.4.1. PMSV outages will be documented in the current airfield Notice to Airmen (NOTAM). The WF will ensure that Air Traffic Control (ATC) is aware of the current PMSV status and expected time of return to service. Aircrews will be briefed on PMSV outages during their flight weather brief. A phone patch through the 36 WG/CP to the WF may be used during extended PMSV outages.

2.5. **Pilot Reports (PIREPs).** The WF can receive PIREPS via global airways facilities, relayed from the tower, the 36 WG/CP, or over the PMSV. Dissemination format will be IAW AFMAN 15-124, *Meteorological Codes*. Aircrews are encouraged to provide timely PIREPS when those reports include: meteorological elements observed that may be of operational significance to other aircraft or to surface activities (i.e. thunderstorms, low-level wind shear, tornadic activity, etc.), cloud bases and/or tops when departing/arriving, upper-level winds, turbulence, or icing.

2.6. **Resource Protection.** The WF will issue forecast and observed weather warnings, advisories and lightning watches for AAFB when conditions warrant. The OWS will issue all other weather watches. The valid region for all weather warnings, advisories and watches is the area within a 5 nm radius centered on the AAFB airfield unless otherwise noted.

2.6.1. **Table 2.** below lists all weather warnings, advisories and watches for AAFB and Northwest Field. Desired Lead Time (DLT) is the total amount of time required to disseminate a notice from the WF or OWS to all affected end-users plus the amount of advance notice a supported agency requires to complete mandatory protective actions before the onset of a particular weather phenomenon. The WF and OWS will make every effort to issue notices as near the DLT as possible. **NOTE:** Lightning warnings and many advisories do not require a lead time and are issued and valid when observed only.

Table 2. Weather Warning, Advisory, and Watch Criteria.

Weather Warning Criteria	**DLT**	**Issued By**
Lightning	Observed	WF
Lightning w/in 5 nm of Northwest Field	Observed	WF
Moderate thunderstorm (hail ≥ ¼ inch but < ½ inch and/or winds ≥ 35 knots but < 50 knots)	60 min	WF
Severe thunderstorm (hail ≥ ½ inch and/or winds ≥ 50 knots)	90 min	WF
Surface wind ≥ 35 knots but < 50 knots (including gusts)	60 min	WF
Surface wind ≥ 50 knots (including gusts)	120 min	WF
Heavy Rain (≥ 4 inches in 6 hours)	60 min	WF
Tornado/funnel cloud/waterspout	15 min	WF
Weather Advisory Criteria	**DLT**	**Issued By**
Lightning w/in 10 nm but outside of 5 nm of AAFB	Observed	WF
Lightning w/in 20 nm but outside of 10 nm of AAFB	Observed	WF
Icing outside of thunderstorms ≥ light intensity w/in 50 nm of AAFB*	30 min	WF
Turbulence outside of thunderstorms ≥ moderate intensity w/in 50 nm of AAFB*	30 min	WF
Crosswind ≥ 15 knots but < 25 knots* (including gusts)	Observed	WF
Crosswind ≥ 25 knots* (including gusts)	Observed	WF
Surface wind ≥ 20 knots but < 30 knots (including gusts)	Observed	WF
Surface wind ≥ 30 knots (including gusts)	Observed	WF
Non-convective low-level wind shear* (surface-2000 ft AGL)	Observed	WF
**Denotes advisories that are only issued when the airfield is open*		
Weather Watch Criteria	**DLT**	**Issued By**
Lightning	30 min	WF
Lightning w/in 5 nm of Northwest Field	30 min	WF
Severe thunderstorm (hail ≥ ½ inch and/or wind ≥ 50 knots)	150 min	OWS
Surface wind ≥ 50 knots (including gusts)	150 min	OWS
Tornado/funnel cloud/waterspout	75 min	OWS

2.6.2. The primary means of disseminating weather watches, warnings, and advisories is through the JET website. If key agencies do not acknowledge receipt of automated notification via JET within 5 minutes of issue time, the WF will make confirmation calls to 36 WG/CP, AAFB Air Terminal Operations Center (ATOC), 36 MUNS, 21 SOPS – Det 2, 319 OG – Det 1, HSC-25, Tanker Maintenance Operations Center (MOC), Task Force Talon, and VUP-19 for all weather warnings, advisories, and watches. The OWS will back-up the WF when the WF has no means of issuing notifications (i.e. during communication outages).

2.6.3. The WF and the OWS will issue weather watches, warnings, and advisories using a standard numbering convention. The first two numbers represent the current month and the following three numbers represent the number of the watch, warning, or advisory that month. All will be numbered sequentially and independent of one another. For example, WW 07-011 would be the 11th weather warning issued during July. WA 06-005 would be the 5th weather advisory issued during June.

3. Mission Integration Function. The WF will perform mission integration function duties in accordance with AFMAN 15-129, *Air and Space Weather Operations*.

3.1. **Mission Weather Products (MWP).** The WF will develop and maintain MWPs to support planning and execution of supported operations. MWPs fuse theater-scale weather products with local mission requirements. MWPs include mission planning briefs, mission execution forecasts (MEF), flight weather briefings, Intelligence Preparation of the Operational Environment products, environmental staff estimates, and any other weather product prepared to meet the needs of a supported unit's mission.

3.1.1. The WF will develop and issue an extended, local weather forecast product (i.e. 5-day) once daily Monday through Friday no later than 01Z or when the mission dictates. This a non-amendable product and should be utilized for planning purposes only. The primary means of disseminating this product is through the JET website. Supported agencies can request to receive this product via email. See **Attachment 2** for mission-limiting environmental conditions used to build this product.

3.2. **Tropical Cyclone Support.** The WF will generate and broadcast tropical cyclone warnings tailored to AAFB when tropical cyclones are forecasted to impact AAFB. These warnings can be retrieved directly from the JET website or by email, and will be briefed at 36 WG staff meetings and heavy weather briefs. The WF will utilize **Table 3** and the AAFB Installation Emergency Management Plan (AAFB IEMP 10-2) to determine when and how frequent tropical cyclone warnings are required for the 36 WG to respond effectively. Real-world TCCOR updates will be sent via the AtHoc Inc. notification system.

Table 3. WF Tropical Cyclone Warning Criteria.

Type	Distance to AAFB	Action/Frequency
Invest/TCFA	500 mi – 1000 mi	Email warning to WG leadership
Invest/TCFA	< 500 mi	Email warning every 24h to WG leadership
Tropical Cyclone	> 1200 mi	Email warning to WG leadership
Tropical Cyclone	700 – 1200 mi	Email warning every 24h to WG leadership
Tropical Cyclone	< 700 mi	Email warning every 6h to WG leadership

4. Reciprocal Support. For effective weather support, the WF provides services and receives services from various agencies.

4.1. Any agency who receives forecasts, observations, or alerts from the WF is considered a supported agency. Supported agencies will:

4.1.1. Coordinate weather support requirements with the WF, and provide access to plans, operations, programs, and support agreements to ensure weather services and impacts are fully considered.

4.1.2. Define mission-limiting environmental conditions for the WF.

4.1.3. Use the JET website, **https://owsjet17.us.af.mil/portal/private/GuestAndersonAFB/Sensor**, to the greatest extent possible as the official source of weather information at AAFB. Contact the WF for training on the JET website.

4.2. 36 WG/CP will:

4.2.1. Promptly disseminate warnings, watches and advisories to appropriate agencies.

4.2.2. Allow aircrews to phone patch the WF (DSN 315-366-5230) for PMSV.

4.2.3. Provide a copy of weather-related Operational Reports to the WF after transmittal.

4.3. 36 OSS/OSA will:

4.3.1. Promptly disseminate warnings, watches and advisories to appropriate agencies/aircraft under ATC control.

4.3.2. Notify the WF of locally initiated changes to the DoD FLIP, *High and Low Altitude – Pacific, Australasia, and Antarctica*, and DoD FLIP, *Supplement – Pacific, Australasia, and Antarctica* that may affect the WF.

4.3.3. Relay all PIREPs to the WF within 5 minutes after receipt.

4.3.4. Monitor the PMSV frequency (344.6) at the ATC tower if the WF PMSV handset is inoperative and advise aircrew to contact Airfield Management at UHF 372.2 for weather services.

4.3.5. Monitor the PMSV frequency (344.6) at the ATC tower while the WF is at the AOL.

4.3.6. Notify WF of any changes in tower prevailing visibility when tower visibility is less than 4 statute miles and different from the reported surface prevailing visibility.

4.3.7. Coordinate with the WF prior to performing maintenance or repairs on weather equipment.

4.3.8. Maintain 24/7 response capability and respond to weather equipment outages and malfunctions. 60 minutes is an acceptable response time for responding to WSR-88D, FMQ-19, and PMSV radio handset outages. The WSR-88D has the highest priority for repair followed by the FMQ-19 and then the PMSV radio handset. These priorities can be adjusted based on operational risk management.

4.4. 36 CS will:

4.4.1. Notify the WF of scheduled and unscheduled maintenance and network outages expected to impact external or internal access to the JET Service Component Architecture (SCA) and AAFB MARK-IVB server or the reception and processing of satellite data.

4.4.2. Maintain 24/7 response capability and respond to JET SCA and AAFB MARK-IVB server outages and malfunctions. 60 minutes is an acceptable response time for responding to these outages.

4.5. 36 CES will provide routine facility repairs and maintain back-up power generators at the WSR-88D site.

4.6. Supported Flying Units. All permanent and temporarily assigned flying units will:

4.6.1. Provide a daily flight schedule to include mission type to the WF.

4.6.2. Provide sortie statistics to include weather cancellations, delays, and impacts to the WF on a weekly basis or at the end of a named exercise/operation, as crew duties allow.

4.6.3. Provide feedback to the WF after every mission utilizing the following website, **https://ice.disa.mil/index.cfm?fa=service_provider_info&sp=139676&s**, as crew duties allow.

JEREMY T. SLOANE,
Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoD FLIP, *High and Low Altitude – Pacific, Australasia, and Antarctica, 30 January 2020*

DoD FLIP, *Supplement – Pacific, Australasia, and Antarctica, 16 July 2020*

AAFB IEMP 10-2, *12 April 2018*

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

AFI 33-322, *Records Management and Information Governance Program, 23 March 2020*

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

AFMAN 15-124, *Meteorological Codes, 16 January 2019*

AFMAN 15-129, *Air and Space Weather Operations, 9 July 2020*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AAFB—Andersen Air Force Base

AFI—Air Force Instruction

AFMAN—Air Force Manual

AMOS—Automated Meteorological Observing System

AOL—Alternate Operating Location

ATC—Air Traffic Control

CP—Command Post

DoD—Department of Defense

DLT—Desired Lead Time

FLIP—Flight Information Publication

JET—Joint Environmental Toolkit

JRM—Joint Region Marianas

JTWC—Joint Typhoon Warning Center

LOCAL—Aviation Selected Local Weather Report

METAR—Aviation Routine Weather Report

MEF—Mission Execution Forecast

MHZ—Megahertz

MIN—Minute

MISSIONWATCH—Mission-scale Weather Watch

MOC—Maintenance Operations Center

MWP—Mission Weather Product

NM—Nautical mile

NOTAM—Notice to Airmen

OWS—Operational Weather Squadron

PIREP—Pilot Report

PMSV—Pilot-to-Metro Service

SPECI—Aviation Selected Special Weather Report

TAF—Terminal Aerodrome Forecast

TC-TAP—Tropical Cyclone-Threat Assessment Product

UHF—Ultra-high Frequency

WF—Weather Flight

WG—Wing

Terms

METAR/SPECI/LOCAL—An international code used for reporting, recording, and transmitting weather observations.

MISSIONWATCH—A deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental conditions. The MISSIONWATCH process identifies and alerts decision makers to changes affecting mission success.

PIREP—A report of in-flight weather provided by an aircrew member.

PMSV—A service to provide weather information to aircrew in the cockpit typically via UHF radio waves. PMSV communication systems are not required for weather personnel to accomplish their mission; however, if installed, these systems provide a valuable service to aircrews.

TAF—A standard aviation text forecast containing the cloud cover, cloud heights, and visibility for general flight rule conditions, as well as wind, altimeter, and other weather parameters needed to sustain the landing and takeoff of aircraft.

Tropical Cyclone—A warm-core, non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters with organized deep convection and a closed surface wind circulation about a well-defined center with at least 33 knot sustained wind speeds.

Weather Advisory—A special product notifying an end user when an established environmental condition effecting operations is occurring or is expected to occur.

Weather Warning—A special weather product to facilitate resource protection decisions. Weather Warnings alert designated agencies to the imminent or actual occurrence of weather

conditions of such intensity as to pose a hazard to life or property for which the agency must take immediate protective actions.

Weather Watch—A special weather product to facilitate resource protection decisions. Weather Watches provide advance notice to designated agencies of the existence of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the agency should consider taking protective measures.

Attachment 2

MISSION-LIMITING ENVIRONMENTAL CONDITIONS

Table A2.1. Mission-Limiting Environmental Conditions.

MISSION-LIMITING ENVIRONMENTAL CONDITIONS FOR 5-DAY		
FAVORABLE (No Degradation)	**MARGINAL (Some Degradation)**	**UNFAVORABLE (Significant Degradation)**
X-WINDS < 15 KT	X-WIND 15 - 24 KT	X-WIND ≥ 25 KT
SUSTAINED WINDS < 25 KT	SUSTAINED WINDS 25-34 KT	SUSTAINED WINDS ≥ 35 KT
CEILING ≥ 3000 FT	CEILING 600 - 2900 FT	CEILING < 600 FT
VISIBILITY ≥ 5 SM	VISIBILITY 1 - 4 SM	VISIBILITY < 1 SM
NO TSTMS	ISOLD TSTMS	FEW TSTMS
WAVES < 6 FT	WAVES 6-10 FT	WAVES > 10 FT
LGT TURBC	MDT TURBC	SVR TURBC
NO ICING	LGT ICING	MDT ICING