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Weather

WEATHER SUPPORT FOR PACAF

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OPR: HQ PACAF/DOWV
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This instruction provides basic responsibilities for weather support to Pacific Air Forces (PACAF) and forces from other commands operating in the PACAF AOR (excluding AMC strategic airlift resources which follow AMCI 15-101) and supersedes PACAFI 15-101 dated 7 December 2001. This instruction implements AFD 15-1, *Atmospheric and Space Environmental Weather Support* and applies to all USAF PACAF wing, NAF and PACAF-gained Reserve Component (RC) units when they are mobilized in support of PACAF. This publication does not apply to Air National Guard (ANG) units and members.

SUMMARY OF REVISIONS

This document contains substantial revisions that incorporate operational concepts and responsibilities implemented under Air Force weather (AFW) Reengineering. The revisions update procedures for synergistic weather operations between Operational Weather Squadrons (OWS), Weather Squadrons (WSs), Combat Weather Teams (CWTs) and Operating Locations (OLs) in the Pacific theater. It outlines responsibilities for specific products and updates procedures for requesting specialized support. It consolidates PACAF unique responsibilities and procedures for tropical cyclone warning support operations. This publication must be completely reviewed. New or revised material is indicated by a bar (|).

Section A—General

1. Background. HQ PACAF operates and maintains air forces in the Pacific, and other Air Force major commands dispatch forces to operate in the Pacific. PACAF weather units provide peacetime weather services to enhance safety of flight, increase flying training effectiveness, protect resources and are designed to smoothly transition from peacetime to combat operations.

1.1. The procedures, duties and responsibilities outlined in this instruction establish standards for consistent weather support throughout the command.

Section B—Organization

2. HQ PACAF DOW. Is responsible to the Director of Air and Space Operations, Pacific Air Forces, for organizing, training and equipping weather forces to enhance the combat effectiveness of Air Force and Army operations. Evaluates and provides functional management of, and advice to, PACAF weather forces. Develops deliberate and contingency plan support, command policy and guidance, standardized procedures, and career field training requirements for PACAF weather forces. Monitors health and sustainment of AFW standardized equipment and identifies new system requirements.

2.1. Deputy DOW (DDOW).

2.1.1. 15WX and 1WXXX Functional Manager for PACAF.

2.1.1.1. Focal point for weather manning, assignments, utilization and personnel management issues.

2.1.1.2. Assists with issues dealing with force structure.

2.1.1.3. Provides guidance on enlisted grade allocations (CPG Drill) and CME trainers and communication billets.

2.1.1.4. Assists with career field education and training plan issues to include specialty training standard, formal course development, training deficiency reports, and CDC, QTP and upgrade training issues.

2.1.2. Assist with issues concerning PACAF P-Plan, strategic vision, and re-engineering.

2.1.3. Liaison for MGPACOM, USARPAC and PACFLEET.

2.2. Operations and Capabilities Branch (DOWO).

2.2.1. Assists PACAF staff agencies and PACAF weather units in documenting weather support requirements and environmental sensitivities of emerging acquisition programs.

2.2.2. Coordinates on installation of weather communications-computer system projects (equipment and circuits).

2.2.3. Evaluates technical requirements and arranges environmental support for PACAF projects, studies or programs.

2.2.4. Evaluates weather support requirements and processes Statement of Operational Need (SON), System Operational Requirement Document (SORD) and Weather Operational Support Plan (WOSP).

2.2.5. Manages development and integration of AFW standardized support systems to support USAF weapons system.

2.2.6. Prepares weather support concept of operations and documents equipment and facility requirements for weapon acquisition systems and for programming directives and plans.

2.2.7. Coordinates, evaluates and validates U.S. Army Statements of Requirements for direct meteorological support.

2.3. Policies and Procedures Branch (DOWV).

- 2.3.1. Identifies shortfalls and provides solutions and guidance to improve product quality where it is considered deficient.
- 2.3.2. Conduct staff assistance visits on PACAF weather units and manages PACAF meteorological and climatological technical programs.
- 2.3.3. Identifies PACAF environmental research and development or technique development requirements and forwards to Air Force Weather Agency.
- 2.3.4. Determines standards for CWT operations and procedures that inform weather personnel of new or revised procedures, policies and operational directives.
- 2.3.5. Incorporates PACAF weather requirements into the appropriate PACAF instructions, manuals, supplements and pamphlets.
- 2.3.6. Monitors and evaluates operational product quality and technical health of weather units.
- 2.3.7. Establishes PACAF Technical Standardization and Evaluation policy to ensure the effectiveness of the Air Force Weather Technical Standardization and Evaluation (AFWTSE) program at all levels of command.
- 2.3.8. Develops and provides guidance to PACAF weather units on operational observing, forecasting, training, and weather communications and equipment operation; monitors field weather operations.
- 2.3.9. Serves as the PACAF focal point for CWT and OWS operations.
- 2.3.10. Conducts AFWTSE evaluations in conjunction with the Air Force Weather Agency (AFWA).
- 2.3.11. Augments HQ PACAF/DOYA for Air Traffic System Analysis Program (ATSEP) visits.
- 2.3.12. Monitors CWT, in-garrison and field weather operations and provides guidance on observing, forecasting, training and weather communications and meteorological equipment operations. Develops policies and procedures for providing scientific and technical environmental services to the Air Force and Army.

2.4. Deliberate and Contingency Plans Branch (DOWX).

- 2.4.1. Evaluates, validates and coordinates on PACAF weather unit structure and manpower changes.
- 2.4.2. Develops environmental and communications sections of the war and contingency plans.
- 2.4.3. Develops, coordinates, and refines inputs to Time-Phased Force Deployment Data (TPFDDs).
- 2.4.4. Monitors weather support for exercises involving various commands in the USPACOM area of responsibility and arranges weather support for tactical deployments to areas of operations.
- 2.4.5. Monitors contingency and exercise activities; processes exercise after-action reports; analyzes problem areas; recommends actions to improve wartime readiness.
- 2.4.6. Develops and maintains meteorological and oceanographic (METOC) support concepts for PACAF supporting plans in Annex H (per AFI 10-401).

- 2.4.7. Manages Expeditionary Aerospace Force (EAF) weather support resources. Develops and maintains Aerospace Expeditionary Force (AEF) libraries' PACAF weather support records and coordinates deployments with the AEF Pacific office and the AEF center.
- 2.4.8. Maintains PACAF weather support records in the Air Force wide UTC Availability and Tasking Summary (AFWUS) database following USAF's War and Mobilization Plan (WMP Vol. 3) apportionment of resources and WMP, Vol. 1, Annex CC weather support templates.
- 2.4.9. Manages Designed Operational Capabilities (DOC) statements for PACAF weather units and monitors Status of Resources and Training Systems (SORTS) reporting.
- 2.4.10. Provides resource allocation assistance on force employment decisions of personnel.
- 2.4.11. Advises PACAF weather units of environmental effects in support systems development, employment concept and operations.

3. Operational Weather Squadron (OWS). PACAF operates three OWSs providing regional scale forecast products for their AORs.

- 3.1. **11 OWS.** The commander of the 11 OWS, Elmendorf AFB Alaska, is the Staff Weather Officer (SWO) to the 11 AF/CC, Alaskan NORAD Region (ANR) and the Senior Meteorological Officer (SMO) for the Alaskan Command (ALCOM). The 11 OWS provides regional scale forecast products for ALCOM.
- 3.2. **17 OWS.** The commander of the 17 OWS, Hickam AFB Hawaii is the SWO to the 13 AF/CC. The 17 OWS provides regional scale forecast products for the 13 AF AOR.
- 3.3. **20 OWS.** The commander of the 20 OWS, Yokota AB Japan is the Staff Weather Officer (SWO) to the 5 AF commander and has the additional duty as SWO to USFJ and US Army Japan. The 20 OWS provides regional scale forecast products for the 5 AF and 7 AF AORs.
- 3.4. **607 WS.** The commander of the 607 WS, Yongsan AIN Korea is the 7 AF SMO, and the Joint Meteorological Officer (JMO) for the Korean theater of operations (USFK). In addition, the 607 WS commander is the combined meteorological officer (CMO) to the COMMUNC/CFC/USFK.
- 3.5. 607 COS/DOW is the SWO to the 7 AF/CC with additional combined and joint responsibilities.

Section C—Support

4. Weather Personnel Utilization. Weather personnel perform a critical wartime function. Unit weather personnel should not be designated as augmentees for other base functions during wartime, contingencies, or exercises that take them away from their primary duties for extended periods of time.

- 4.1. Weather flight commanders, wing weather officers, weather team OICs and staff meteorologists are officers who have highly specialized, technical degrees/training in meteorology. As such, they provide scientific and technical leadership to PACAF weather units which have a direct bearing on the timeliness and quality of observations, forecasts, warnings and other meteorological services provided to all weather unit customers. These officers should not be assigned duties, projects or tasks which would compromise their ability to provide scientific and technical leadership through daily face-to-face involvement and mentoring in the weather work center.

4.2. Weather craftsman, journeymen and apprentices performing METWATCH tasks need to remain within their work centers to ensure a proper weather situational awareness is maintained. They should not be assigned additional duties which conflict with their METWATCH responsibilities or cause them to be away from the weather center during their assigned shifts.

4.3. The effective employment of Air Forces requires consideration of weather factors from planning to execution. Weather information provided to the various organizational elements must follow, as a minimum, current regulatory guidance and where there is no specific guidance it must be in sufficient detail and in a format to meet their needs.

4.4. Sources of Weather Support. The OL, CWT, OWS, WS and AFWA will be the primary sources for operational support when they are available. Base agencies and other weather customers are permitted to use various agencies and sources to obtain weather information required for their operations.

4.4.1. Though direct contact between USAF customers and indigenous weather personnel is permitted, customers must be made aware that indigenous weather personnel may not be able to provide all the support they normally require. Additionally, they may not have access to US forces forecasts and other weather products produced specifically for DoD operations and there is no mechanism available to enforce host nation weather support arrangements.

4.5. Weather units are encouraged to be innovative in developing and delivering products as well as acquiring feedback from their customers. Processes that have met with remarkable success or failure should be crossfed to HQ PACAF/DOW.

4.6. Theater aircraft movements in the Pacific are controlled by HQ PACAF or HQ ACC's AOS/AOD. Movements controlled by ACC AOS/AOD will be supported in accordance with COMACC Deployment/Redeployment Plan 100 and ACCI 15-150, ACC Weather Operations.

4.7. Air Mobility Operations Control Center (AMOCC). The AMOCC controls intra-theater tanker and airlift aircraft and is supported by 17 OWS.

Section D—Responsibilities

5. Commander responsibility. Wing commanders are responsible for ensuring the weather support requirements of the wing, tenant and transient units are met.

5.1. Commanders of PACAF units deploying within or outside the PACAF AOR (or theater) will ensure weather support requirements for their unit at its deployed location are met. Depending on the mission and deployment location commanders will consider taking weather personnel for support. If assigned weather personnel do not deploy, then the CWT will ensure customers receive weather support to accomplish the mission.

5.2. Agencies requiring weather information will clearly state their support requirements to their servicing weather unit. State the mission requiring support, type of information required, update frequency, format, media, frequency of delivery and preferred delivery method.

5.3. PACAF weather units will:

5.3.1. CWTs/OLs will develop procedures to satisfy the support needs of the Supervisor of Flying (SOF). This support should include frequent updates of local, range or MOA, and primary and secondary divert base weather. CWT personnel should maintain a high situational awareness of

daily flying activities, including takeoff and recovery times, range or MOA times, and primary and secondary divert bases and pilot categories.

5.3.2. CWTs/OLs will develop and administer weather indoctrination training for air traffic control personnel IAW AFI 13-203. This training should provide a general overview of the types of weather, climatological summary of VFR/IFR conditions, types and location of weather equipment, basic and cooperative weather watch procedures, tower visibility, prevailing versus sector visibility and any observing limitations.

5.3.3. Ensure local weather forecasts are based on tropical cyclone warnings issued by official US typhoon or hurricane warning centers and disseminate them to USAF and Army agencies, joint commands (where the SWO, or designated representative, is an Air Force officer), and other agencies.

5.4. Aero Club Support:

5.4.1. OLs, CWTs and OWSs will provide flight weather briefing support to Aero Club members who are performing official functions IAW AFMAN 15-129. Responsibility for recreational weather support is at the discretion of the local wing commander. The CWT commander should work with the local Aero Club to determine the best way to meet the needs of the club within the scope of weather reengineering. As an example, weather support to Aero Club members could be provided by a link in the units web page. Support must be documented in the WSD and coordinated with the Aero Club IAW AFMAN 15-129.

Section E—Tropical Cyclone (TC) Information Bulletin

6. Purpose. During periods when tropical cyclones are threatening US Pacific Command (USPACOM) installations, the National Military Command Center, Air Force Operations Center and major commands possessing assets or facilities on these installations continually monitor the weather and on-site actions taken to prevent or minimize damage. In addition to JTWC TC warnings, the WDPN and WHKO bulletins serve as a vital source of tropical cyclone forecast information for briefings to operational customers at selected commands and operations centers.

6.1. Responsibilities.

6.1.1. OWSs will produce WDPN bulletins for each installation in their AOR where they own TAF responsibility, except for Republic of Korea (ROK) locations. For ROK locations (USAF and USA), a single WHKO RKSZ will be issued in lieu of WDPN bulletins.

6.1.2. The local weather unit (e.g. CWT, OL SWO) will provide supported installation commander(s) with forecasts of the expected onset, intensity and end times of significant winds, and other weather associated with tropical cyclones at their installations. The local weather unit is not authorized to tailor WDPN bulletins without extensive coordination with the issuing agency. Local weather units are authorized to tailor WHKO bulletins due to the broader area forecasts of WHKOs.

6.2. **Preparation of Bulletins.** At a minimum, OWSs will prepare an initial bulletin whenever a tropical cyclone is located, or is forecast to be located during the next 24 hours, within 300NM of any installation where a TAF is generated. A bulletin will also be prepared in those instances when a tropical cyclone is not forecast to be within the area, but significant operational decisions such as evacuation, termination of exercise, etc., are being made because of a tropical cyclone. If the tropical cyclone

is not expected to significantly affect facilities, installations, or operations, and local customers have determined that a change in tropical cyclone condition of readiness is not warranted, bulletins need only contain the words "NEGATIVE-SEE LATEST TAF(s)."

6.2.1. A new WDPN will be issued after each JTWC warning, or until such time as the tropical cyclone no longer poses a threat to the installation(s), in which case, the last bulletin will be identified as "LAST." Bulletins will not be extended. A new bulletin will be issued when new or revised information is briefed to the local customer.

6.2.2. Site-specific WDPN and WHKO bulletin forecasts must be consistent with terminal aerodrome forecasts (TAFs) and JTWC warnings.

6.2.3. When available and applicable, weather units will use nomograms in 1 WW/TN-80/001, Prediction of Typhoon induced Peak Winds at Four Pacific Stations, or other locally approved methods to aid in preparing WDPN and WHKO bulletins.

6.3. **Bulletin Content.** WDPN and WHKO bulletins will contain meteorological information that is not already generally available to the weather community. Operational decisions other than TCCOR status, such as those pertaining to aircraft evacuation, time of evacuation or aircraft recovery will not be mentioned.

6.3.1. The information listed below is mandatory for WDPN.

6.3.1.1. Wind Forecast. Based on timing of operationally significant winds (determined locally).

NOTE: Crosswinds are based on gusts.

6.3.1.2. Onset, end time and speed of operationally significant crosswinds (determined locally).

6.3.1.3. Onset and end time of 25-knot crosswinds.

6.3.1.4. Onset, end time and speed of 50-knot winds.

6.3.1.5. Maximum sustained wind.

6.3.1.6. Peak wind and time of occurrence, including gusts.

6.3.1.7. Closest point of approach (CPA) and time of occurrence.

6.3.1.8. Remarks. Remarks for the WDPN will include TCCOR conditions, mention of heavy precipitation and the amount expected and any other additional significant information briefed to local customers.

6.3.1.9. **Attachment 1** contains a sample WDPN bulletin.

6.3.2. The information listed below is mandatory for WHKO.

6.3.2.1. Brief storm summary (Storm Name, Location, Movement, etc).

6.3.2.2. Wind forecast for onset/end time of 50 knots for USFK Areas 1, 2, 3, 4 and Cheju-Do.

6.3.2.3. Wind forecast for onset/end time of winds greater than or equal to 35 knots but less than 50 knots for USFK Areas 1, 2, 3, 4 and Cheju-Do.

6.3.2.4. Wind Forecast for Osan AB and Kunsan AB to include the following information:

- 6.3.2.4.1. Onset/end time of operationally significant crosswinds (determined locally).
 - 6.3.2.4.2. Onset/end time of 25kt crosswinds.
 - 6.3.2.4.3. Onset/end time of 50-knot winds.
 - 6.3.2.4.4. Peak wind and time of occurrence, including gusts.
 - 6.3.2.5. Forecast precipitation amounts for USFK Areas 1, 2, 3, 4 and Cheju-Do.
 - 6.3.2.6. Remarks.
- 6.3.3. **Attachment 2** contains a sample WHKO bulletin. Local tailoring of USFK Area forecasts are authorized to meet forecast objectives (i.e. Eastern USFK Area 4, South USFK Area 2, etc).
- 6.4. **Bulletin Dissemination.** Disseminate bulletins as soon as possible after local command and control agencies (i.e., commander, command post) have been briefed.
- 6.5. **Use of Bulletins.** Weather personnel at all echelons will use WDPN and/or WHKO bulletin data to brief operational decision makers. Coordinate any forecast deviations with the issuing agency.

DAVID A. DEPTULA, Maj Gen, USAF
Director of Air and Space Operations

Attachment 1

SAMPLE WDPN BULLETIN FORMAT

WDPN RODN

TROPICAL CYCLONE FORECAST FOR KADENA AB, OKINAWA

TROPICAL STORM CHOI-WAN AS FORECASTED BY JTWC WARNING #4

ISSUED AT 181500Z

A. Wind Forecast

181200Z	10010G20KT
181500Z	10010G20KT
181800Z	10010G20KT
182100Z	10015G25KT
190000Z	10015G25KT
190300Z	10015G25KT
190600Z	11015G25KT
190900Z	11015G25KT
191200Z	11015G25KT
191500Z	12020G30KT
191800Z	13025G35KT
192100Z	13025G35KT
200000Z	13025G35KT
200300Z	13025G35KT
200600Z	13030G45KT
200900Z	00040G60KT
201200Z	00040G65KT
201500Z	30025G40KT
201800Z	30025G35KT
202100Z	32025G35KT

B. Duration of 15KT Crosswind: 181500Z to 211200Z

c. Duration of 25KT Crosswind: 191500Z to 211200Z

d. Duration of 50KT Wind: 200800Z to 201400Z

e. Max Sustained Wind: 40KT

f. Max Peak Wind (including gusts): 65KT at 201200Z

g. CPA: 0nm at 201100Z

H. Remarks: TCCOR III. 5 INCHES OF RAINFALL EXPECTED. STARTING AT 18/0600Z.

Attachment 2

SAMPLE WHKO BULLETIN FORMAT

VALID: 121000Z SEP 03

1. THIS BULLETIN DESCRIBES THE POTENTIAL EFFECTS OF TYPHOON MAEMI(15W) ON THE ROK AND IS A TAILORED INTERPRETATION OF WARNING #26 (BULLETIN WTPN31 PGTW) PRODUCED BY THE JOINT TYPHOON WARNING CENTER AT 12/090000Z. IT IS INTENDED FOR USE BY WEATHER PERSONNEL AND SHOULD NOT BE RELAEASED TO NON-WEATHER AGENCIES. AT 12/0600Z, **TYPHOON MAEMI** WAS LOCATED AT **32.7N, 127.0E** WITH CENTRAL WINDS OF **105G120KTS**.

2. WIND FORECAST FOR USFK AREAS 1, 2, 3, 4 AND CHEJU-DO:

A. FCST ONSET/END TIME OF 50KT AND GREATER WINDS:

- 1) CHEJU-DO: **85G105KTS** CURRENT TO 12/14Z
- 2) USFK AREA 4: 75G105KT 12/11Z TO 12/20Z
- 3) USFK AREA 3: 45G65KT 12/13Z TO 12/21Z
- 4) USFK AREA 2: N/A
- 5) USFK AREA 1: 35G55KT 12/15Z TO 12/22Z

B. FCST ONSET/END TIME OF 35KT WINDS BUT LESS THAN 50KT WINDS:

- 1) CHEJU-DO: 30G45KTS 12/14Z TO 12/17Z
- 2) USFK AREA 4: 30G45KT CURRENT TO 13/00Z
- 3) USFK AREA 3: 20G40KT 12/10Z TO 12/21Z
- 4) USFK AREA 2: 20G45KT 12/15Z TO 12/18Z
- 5) USFK AREA 1: 20G40KT 12/12Z TO 13/00Z

3. WIND FORECAST FOR:

A. OSAN AB:

- 1) ONSET / END TIME of 15kt CROSSWINDS: 12/12Z TO 13/00Z
- 2) ONSET / END TIME of 25kt CROSSWINDS: 12/13Z TO 13/23Z

- 3) ONSET / END TIME OF 50KT WINDS: NONE
- 4) MAX PEAK WINDS (TO INCLUDE GUSTS): 35 KT

B. KUNSAN AB:

- 1) ONSET / END TIME of 15kt Crosswinds: 12/12Z TO 13/00Z
- 2) ONSET / END TIME of 25kt Crosswinds: 12/13Z TO 12/23Z
- 3) ONSET / END TIME OF 50KT WINDS: NONE
- 4) MAX PEAK WINDS (TO INCLUDE GUSTS): 45 kT

4. TCCOR: NONE

5. HEAVY RAIN WILL CONTINUE IN USFK AREA 4 AND CHEJU-DO AND SPREAD ACROSS THE ROK THROUGHOUT THE COURSE OF THE EVENING. HEAVY RAIN ASSOCIATED WITH TYPHOON MAEMI WILL END IN THE ROK BY 13/06Z. FORECAST TOTAL STORM PRECIPITATION:

- A. USFK AREA 1: 3-5 IN
- B. USFK AREA 2: 3-5 IN
- C. USFK AREA 3: 10-12 IN / UPSLOPE AREAS AREA 3 18-24 IN
- D. USFK AREA 4: 10-12 IN / UPSLOPE AREAS AREA 4 18-24 IN

6. THE 20 OWS WILL CLOSELY MONITOR STORM MOVEMENT. ALL WEATHER UNITS SHOULD MONITOR JTWC AND WHKO KQOR BULLETINS. NEXT WHKO CONFERENCE CALL WILL BE AT 12/1530Z. NEXT WHKO BULLETIN WILL BE ISSUED AT 12/1600Z.

TDO: OKC