BY ORDER OF THE COMMANDER OF THE 47TH FLYING TRAINING WING (AETC)

LAUGHLIN AIR FORCE BASE INSTRUCTION

15-101

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Weather

WEATHER SUPPORT

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This instruction implements Air Force Policy Directives (AFPD) 15-1, *Air Force Weather Operations*, AFI 15-128 *Air Force Weather Roles and Responsibilities*, and DAFMAN 15-129 *Air and Space Weather Operations.* It establishes responsibilities and weather support guidance in support of 47th Flying Training Wing (47 FTW) operations and applies to all assigned, subordinate, attached, or supported units. It outlines weather support functions and operations to include data dissemination, resource protection, weather reporting, and reciprocal support between the 47th Operations Support Squadron, Weather Flight (WF) and all other units and agencies. 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.* This publication will be reviewed and updated as required due to equipment, mission, operational, or overarching guidance changes and republished at least biennially. Ensure that all records created because of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Changes include updated Weather Station Open Hours, updated WF's Roles & Responsibilities, updated 26TH Operational Weather Squadron's Roles & Responsibilities, updated Terminal Aerodrome Responsibility to WF, update Duty Priorities, update WF SharePoint Site, update Squadron Staff

Meeting, updated SWAP Criteria, updated Mission Execution Forecast, added annual CBRNE Exercise requirement with 47 CES/CEX, updated SWAT Procedure Criteria, updated OPREP Hail Reporting Criterion, updated PMSV Support During WF Relocation to AOL, added Mark IV B Software Description, updated Supplementation Criteria, updated New TAF Zulu Times, removed Frostbite Risk Level (Moderate) & Frostbite Risk Level (Severe), added WF Evacuation Advisory, updated Alternate Operating Location, updated Laughlin AFB Forecast Weather Watches and Warnings, added Fighter Index of Thermal Stress Table, added Communications Squadron Reciprocal Support Requirement, and updated References.

Chapter 1

GENERAL INFORMATION

1.1. General. This document serves as formal documentation of operational weather support requirements and the 47th Operations Support Squadron Weather Flight's (referred to throughout this instruction as the WF) capability to meet Laughlin Air Force Base's (LAFB) operational weather requirements. It also documents reciprocal support requirements between any units or agencies providing support to, or receiving support from, the WF eliminating the need for separate letters of agreement. WF functions include the Staff Integration function, Mission Integration function and the Airfield Support function. The WF provides weather support at the direction of the 47 OSS/CC. The WF is the primary point of contact for weather information at LAFB and is charged with providing or arranging for all strategic, operational, and tactical-level weather support for LAFB units.

1.1.1. **Assumptions.** Manning, equipment, and communications will be available to conduct the provisions of this instruction.

1.1.2. **WF Operating Hours.** The WF is open Monday through Friday 2:30 hours prior to airfield open until airfield closed, and Sunday 1 hour prior to airfield open until airfield closed, unless otherwise coordinated IAW AFMAN 15-111 for Airfield Open Hours, to ensure high-quality, full-spectrum weather support to all Laughlin AFB agencies and community partners around the clock, IAW AFMAN 15-129.

1.1.3. **WF Closure Hours.** During WF closure hours, WF personnel will have a standby forecaster on call IAW DAFMAN 15-129 Pg. 43, **Para. 5.4.1.2.6**.

1.1.4. **Local Area Network (LAN) and SharePoint.** The LAN and SharePoint are primary data and product ingest and dissemination tools for WF products and services. In the event of LAN failure, WF mission support capabilities are degraded. The WF maintains back-up internet capability in the primary operation area in the event of an outage.

1.1.5. **Telephone.** The WF has 4 multi-line phones located in the operations area, with others nearby that can be used to relay information.

Table 1.1. WF Duty Phone Numbers (Commercial).

Mission Integration Forecaster	298-5870
Airfield Support Forecaster	298-5870
Flight Commander/ Flight Chief	298-5972/5973
Standby Technician	830-703-0035

1.2. OWS Support. The Air Force Weather Career field operates using a tiered support system consisting of the 557th Weather Wing, formerly known as the Air Force Weather Agency (AFWA), Operational Weather Squadrons (OWS-commonly referred to as "hubs"), and Weather Flights (WF). Under this construct, the WF primarily provides forecast weather watches, warning, and advisories, along with the airfield and mission forecasts. In the event the WF loses any or all of its capability, weather back-up support capabilities are taken over by the OWS. The OWS primarily provides model output and manually generated (forecaster-in-the-loop) forecast products. WF technicians will notify the OWS when weather products do not accurately reflect

observed conditions, particularly when conditions impact safety of flight. The 26th OWS at Barksdale AFB, LA, is responsible for providing this support for the southeast U.S. including Laughlin AFB.

1.3. Duty Priorities. The duty priorities of the WF outlined below exist to match and balance limited manning and mission critical tasks according to mission support priority. Duty priorities focus efforts during peak work periods prone to task saturation and prioritize any conflicts. WF technicians will use good judgment in complying with these duty priorities, especially where there is imminent danger to life and property.

Table 1.2. WF Duty Priorities.

Priority	Duties
1	Wartime Defense of the Duty / Site Location
2	Perform Emergency War Order Tasks (e.g., Deploy Personnel)
3	Execute Evacuation / Continuity of Operations Plan
4	Issue / Disseminate Imminent Hazardous Weather Warnings
5	Respond to Aircraft / Ground Emergencies
6	Issue / Disseminate Imminent Weather Advisories
7	Respond to PMSV Calls Supplementation / Backup
8	Disseminate Weather Observations
9	Disseminate Urgent PIREPs (UUAs)
10	Disseminate Terminal Aerodrome Forecasts (TAFs)
11	Provide Weather Flight Briefings
12	Collaborate WPs with Supported Units
13	METWATCH / Amend Weather Products (WPs)
14	Respond to Support Assistant Request (SAR) or Request for Info.
15	Provide Staff Briefs / Non-Standard Weather Products
16	Accomplish Weather Functional Training
17	Accomplish Administrative Tasks

1.4. Continuity of Operations (COOP). In the event the WF is unable to fulfill its primary duties (issue weather watches, warnings, advisories, forecast products, etc.) for LAFB, due to an evacuation or equipment failure, the OWS will temporarily assume these responsibilities.

1.5. WF-OWS Installation Data Page (IDP). The IDP is now used as the AFW standardized format for capturing the agreed upon support between the OWS and the WF. It serves as formal documentation of all installation specific support requirements and is updated as required and re-validated at least annually. The 47 OSS/OSW Installation Data Page can be found at this link: **https://26ows.us.af.mil/tech_ref/idp/index.cfm?icao=KDLF**. The WF will also have a copy available locally and on the OSW SharePoint site.

1.6. WF SharePoint Site. The WF maintains a SharePoint site to be a one stop shop for weather information. The site, located under 47 FTW > OG > OSS > OSW contains MEF products, the 5-day Outlook, the IDP and links to the JET portal, radar and satellite websites found at the following link: **https://usaf.dps.mil/sites/47FTW/OG/OSS/OSW/**

Chapter 2

STAFF INTEGRATION FUNCTION

2.1. General. The Staff Integration Element (SIE) primarily consists of and refers to the WF Leadership and NCOIC. Staff integration functions include, but are not limited to, wing staff weather briefings, Instrument Refresher Course (IRC) briefings, Supervisor of Flying (SOF) briefings, student weather lab briefings, mass deployment briefings, planning, execution, and support of exercises, and Wing Operations Center (WOC/Emergency Operations Center (EOC) response and support. WF leadership may delegate these duties to qualified personnel within the flight. The SIE is normally available Monday-Friday during normal duty hours but remains flexible and tailored to meet the staff weather support needs of the wing as arranged for in advance by squadron/group/wing leadership, and on a standby recall basis.

2.2. Squadron Staff Meeting. The WF will attend squadron staff meetings as directed by the OSS/CC. At a minimum, mission impacting issues, personnel updates, facility issues, equipment status, and budget matters will be reported. The WF will coordinate with required personnel (OSS/CCE, OSS/DO) on any other reporting requirements as needed.

2.3. Wing Operations Center /Emergency Operations Center (WOC/EOC) Support. The WF is a regular member of WOC/EOC and will report as directed or recalled. Upon notification, designated WF personnel will report to the WOC/EOC prepared to brief applicable weather conditions and impacts based on the situation or as directed by wing leadership using the appropriate format.

2.4. Deployment/Concept Briefings. The WF will provide a mass weather briefing in the event of any mass deployment of personnel or aircraft from or through LAFB. Briefing format will be tailored to the mission and include forecast and climatological weather information for the duration of the mission/deployment as applicable. The WF will need as much applicable information as possible to create the briefing and be given as much advance notice as possible.

2.5. Wing Staff Brief. The WF will provide staff briefing slides as required for the wing briefing. The slides will be created each duty day and briefed to base leadership during scheduled staff, Ops/Mx scheduling meetings, and stand-up meetings. WF leadership will brief wing leadership on the expected weather impacts to operations using the format below. The briefing will be tailored to the FTW mission and any upcoming events or operations of interest to the FTW staff. It will typically consist of a 5-Day Outlook but will be tailored to the weather situation and may include additional slides as needed or directed.

2.6. Instrument Refresher Course (IRC) Weather Briefings. The WF will provide briefing support for all local IRC briefings. This briefing focuses on seasonal climatology, flight hazards, weather codes, local phenomena and any current weather related matters to include methods of retrieving weather data on and off station.

2.7. Supervisor of Flying (SOF) Briefings. The WF will provide weather briefings at quarterly SOF meetings as coordinated by 47 OG/OGV. In addition to any requested information, the briefing will cover climatology for the upcoming month, seasonal weather patterns and challenges, associated flight hazards, and operational issues pertaining to the SOF- WF interaction in support of the 47 FTW mission.

2.8. Exercise Planning and Input. The WF will maintain a Wing Inspection Team (WIT) member and will participate in exercise planning and evaluation as directed by the 47 FTW/IG. The WF will also provide real and/or "canned" exercise weather information for exercise scenarios as directed. The WF will participate in a CBRNE Exercise annually with 47 CEX Emergency Management.

2.9. Climatology Support. The WF tracks climate statistics at LAFB and passes climatology data to various base agencies. Units requiring climatology support should contact the WF at least three duty days in advance. Most requests can be filled within three duty days, but processing time will vary on the complexity and output format of the data required.

2.10. Severe Weather Action Procedures (SWAP). SWAP will be implemented anytime tornadoes, wind speed greater than or equal to 50 knots, and/or any hail is forecast, freezing precipitation (any intensity), heavy rain or heavy snow has the potential to occur. SWAP provides a means for WF personnel to systematically and collectively manage the additional strain and decision-making processes that accompany severe weather. A member of the SIE will be present during SWAP activation to direct SWAP operations.

2.10.1. Upon notification or identification of pending severe weather, the Severe Weather Action Team (SWAT) is activated IAW AFMAN10-206_AETCSUP. The SWAT Lead will recall additional members as needed to collectively manage the threat, operate the radar, augment the automated observing system, and/or continue the mission integration and airfield support functions as the situation warrants.

2.10.2. WF personnel will supplement the automated observation system for tornadoes and hail, as well as any other representative weather as applicable. If there is a system outage, the WF will back-up (observe, record and disseminate) observations using manual methods.

2.10.3. SWAP will remain in effect until the expiration or cancellation of all severe watches and/or warnings or until determined necessary by the SWAT lead.

2.11. Operational Reports (OPREPs). As soon as possible after the conclusion of a significant weather event or a significant emergency, the WF will complete an OPREP-3 worksheet summarizing the event and conditions experienced and forward the worksheet via email, fax, or telephone to the 47 FTW/CP, 26 OWS, and AETC/A3OW. WF leadership will provide or arrange for delivery of hard copies of relevant forecasts, observations, watches, warnings, and any other pertinent data to the 47 FTW/CP, to be included in an OPREP-3 as required.

2.11.1. The WF will submit a report containing weather information to 47 FTW/CP for inclusion in an OPREP-3 when:

2.11.1.1. A tornado is observed on base.

2.11.1.2. Wind $\geq$ 50 knots (including gusts) is observed on base.

2.11.1.3.[¾" or greater hail is observed on base.

2.11.1.4. Requested by 47 FTW/CP as a result of Class A/B damage, base closure or mission degradation.

2.12. Tropical Cyclone Weather Support. The National Hurricane Center (NHC) issues the official tropical cyclone forecast and related information for all tropical depressions, storms, and hurricanes in this area. The forecast position, track, movement, and wind speed or intensity trend

WILL NOT be deviated from. Tropical cyclone forecasts and advisories may be accessed from the NHC webpage located at **https://www.nhc.noaa.gov/**

2.12.1. Unless otherwise directed, the WF will brief 47 FTW leadership as required on any tropical depression, tropical storm, or hurricane that is currently located or forecast to track within 400 miles of LAFB and/or within a region of interest, determined by 47 FTW leadership.

2.12.2. Tropical Cyclone Threat Assessment Products (TC-TAPs) are standardized products, coordinated with the OWS, anytime 35 knot or greater sustained wind speeds associated with a tropical cyclone are expected to impact the installation within 96 hours. WF leadership will use this product to outline expected impact to the installation and HURCON recommendations to wing leadership and emergency management personnel for protective actions and potential evacuation options as warranted.

2.12.2.1. The TC-TAP is the official forecast for the installation and will be tailored by the WF to account for local terrain effects, vegetation etc. to produce local mission execution forecast products.

2.12.2.2. The TC-TAP will include: the date/time of the NHC product used, the onset/duration of 35 and 50 knot winds, the maximum wind speed expected and time of occurrence, onset/duration/speed of crosswinds, the closest point of approach of the storm center (if applicable), and the "forecast cone" (a graphic indicating the probability of error for the forecasted storm track).

2.12.3. **Hurricane Conditions (HURCONs)** are used to trigger local readiness actions when a tropical cyclone threatens. These conditions are based on the threat of damaging wind speeds of 50 knots or 58 miles per hour (mph) to occur on the installation.

2.12.3.1. HURCON 5: 50 kt/58 mph winds or higher are possible within 96 hours.

2.12.3.2. HURCON 4: 50 kt/58 mph winds or higher are possible within 72 hours.

2.12.3.3. HURCON 3: 50 kt/58 mph winds or higher are possible within 48 hours.

2.12.3.4. HURCON 2: 50 kt/58 mph winds or higher are forecast to occur within 24 hours.

2.12.3.5. HURCON 1: 50 kt/58 mph winds or higher are forecast to occur within 12 hours.

2.12.3.6. HURCON 1C: Caution for winds of 40-57 mph/35-49 knots sustained are occurring.

2.12.3.7. HURCON 1E: Emergency: Winds of 58 mph/50 knots sustained and/or gusts of 69 mph/60 knots or greater are occurring.

2.12.3.8. HURCON 1R: Recovery: Destructive winds have subsided and are no longer forecast to occur; survey and work crews are permitted to determine the extent of the damage and to establish safe zones around hazards (e.g. downed power lines, unstable structures). Non-essential personnel are asked to remain indoors.

2.12.4. The 47 FTW/CC will issue a change in HURCON status as necessary. The WF will notify the OWS of any change in HURCON status. The WF will provide briefings and updates on the forecast for the tropical system with each new bulletin issued by the NHC and/or TC-TAP issued by the OWS or more frequently as directed by wing leadership.

2.12.5. The WF will provide weather support to any 47 FTW/CC directed evacuation order and maintain operational hours to support that evacuation as directed.

2.13. Release of Weather Data to Non-Department of Defense (DoD) Agencies and Individuals. The WF will not normally release weather data or products to non-DoD agencies o r personnel without the approval of Public Affairs (47 FTW/PA) and/or the 47 FTW Staff Judge Advocate (47 FTW/SJA).

2.14. Weather Support to the Fitness Assessment Cell (FAC). The WF will provide real-time weather conditions via the automated airfield observing sensors for LAFB and can assist the FAC monitors in interpreting the information in order to facilitate wing physical fitness testing. In the event this link is not operational, the FAC can request the required information via phone.

2.15. Flight Information Publication (FLIP) Weather Updates. The WF is responsible for ensuring all LAFB weather information in the FLIP is accurate and incorporating and changes in airfield weather minima are captured and incorporated into WF processes and procedures. Any weather data changes/updates will be requested through Airfield Management Operations Section (AMOPS). Weather technicians will review each new publication to ensure data accuracy.

2.16. Chemical/Effective Downwind Message(s). The WF maintains a web page link to the Chemical Downwind Message (CDM) generated by the OWS and the Effective Downwind Message (EDM) generated by the 557th Weather Wing. In the event of an OWS outage, the WF retains the ability to manually calculate and construct CDMs and will provide a wind forecast in lieu of the EDM. Also, the WF will provide weather data for the purpose of building a Toxic Corridor forecast, as needed.

2.17. Sample Staff Integration Products.

2.17.1. **5-Day Outlook.** This product is produced each flying day and posted to the LAFB SharePoint and the Laughlin Public Webpage. This is the primary long range planning forecast product created by the WF.

2.17.2. **Tropical Cyclone Advisory.** A Tropical Cyclone Advisory graphic will be included in applicable briefings if a tropical cyclone threat is expected to impact for LAFB operations or this information is requested by wing leadership.

Chapter 3

MISSION INTEGRATION FUNCTION

3.1. General. The Mission Integration Function of the WF provides direct support to all 47 FTW agencies, five flying units: 47 STUS, 85 FTS, 87 FTS, 434 FTS, and the 96 FTS, and special periodic support to transient aircrew as requested.

3.1.1. Area of Responsibility (AOR). The 47 FTW conducts the majority of its training within LAFB Ranch, Burr, and Ski Military Operating Areas (MOAs), the local pattern, and a variety of low-level and hi-level routes throughout Texas.

3.2. Mission Weather Products (MWPs). Mission Weather Product is the generic term used to describe all products created by the WF in support of 47 FTW operations. The Mission Execution Forecast (MEF) is the primary mission tailored WF generated product used in support of day-to-day flying training operations.

3.2.1. **The Laughlin AFB Mission Execution Forecast (MEF).** The LAFB MEF is a tailored WF tailored forecast, known as the Mission Execution Forecast Process. This process uses an 8-step repeatable approach of determining thresholds, ingesting and tailoring weather information from approved sources, then creating and injecting a customer focused product into all phases of the operational process. The MEF will be published to the LAFB SharePoint and accessible on ForeFlight. If the MEF is unavailable on either of these platforms, it will be delivered via email or by hand to the FTS duty desks.

3.2.1.1. The MEF is broken into two parts–the aerodrome forecast and the regional flying hazards forecast. The MEF also contains many links to Air Force and third-party websites which contain more detail about regional forecasts. These third-party websites are not controlled or maintained by 47 OSS/OSW and should be used with proper precaution.

3.2.1.2. The MEF will be horizontally consistent with products issued by the WF, OWS and the 557th Weather Wing, except where tailoring the information to meet local mission thresholds OR when deviations are imminently necessary to protect life and property. During rapidly changing weather conditions, the WF will amend the MEF to reflect accurate conditions and notify customers.

3.2.1.2.1. The Airfield and Alternates section of the MEF covers common mission-limiting weather conditions within the Laughlin 5NM aerodrome updated when conditions change but may not reflect minute-by-minute real-time observations. The Alternates section should be used in conjunction with the official TAF at the applicable airfield and is intended to assist with Take-Off and Landing Data. Unless significant deviation is observed, the alternates section is not amendable.

3.2.1.2.2. The Forecasted Aviation Hazards section contains forecasting aviation hazards stretching across Laughlin AFB-used MOAs, Flight Routes, Air Refueling Tracks, Airfields, and Alternate Airfields. In order to provide greater forecast accuracy, the local flying area and all applicable areas could be broken down into regions and specific flight hazards. These are intended to show wide- spread threats and may not cover small-scale hazards.

3.2.1.2.2.1. Due to the high use of the local MOAs, Ranch, North, C West, Burr,

and Ski will have tailored clouds forecasts to describe the depth and coverage of clouds.

3.2.1.2.2.2. Large areas of reduced visibility and/or lower ceilings, along with present weather and thunderstorms are characterized using different sub-regions. Significant flying hazards will be coded in red text.

3.2.2. **MEF Specification and Amendment Criteria.** The MEF will be amended in accordance to the WF duty priorities based on the following categories:

3.2.2.1. Any hazardous flight weather that is not accurately depicted on the MEF that will affect an alternate airfield, Laughlin AFB or any route, MOA, or Air Refueling Track. Due to the size of the forecast region, small-scale hazards may not require amendments.

3.2.2.2. Any criteria as outlined in DAFMAN 15-129 Table 5.1., Standard Specification and Amendment Criteria, is reached.

3.2.2.3. Any criteria considered TAF-Amendable per Laughlin AFB Installation Data Page (IDP), PLUS ceiling/visibility of 1500ft/3SM.

3.2.2.4. For representative conditions deemed important by the Lead Forecaster.

3.2.3. **Flight Weather Briefings.** Flight weather briefings are provided for specific missions and are documented on a DD Form 175-1 or on the verbal briefing log. Briefings will be accomplished IAW procedures outlined in DAFMAN 15-129, Attachment 2. In addition, at a minimum, briefings will include the criteria outlined within AFMAN 15-129, Para. 4.4. to better assist focusing on supported unit needs and tailor briefings to the mission.

3.2.3.1. Flight weather briefings can be placed on request in advance by calling the WF, in-person requests, or using the electronic request form located on the WF SharePoint. Requests for 175-1 weather briefings should be submitted as soon as the flight route has been planned and the pick-up time should be no earlier than two hours prior to the take-off time to ensure the timely and accurate weather is provided.

3.2.3.2. **Transient Aircrew Services.** Transient aircrews will receive flight weather briefings from the WF IAW the duty priorities outlined in **Chapter 1** of this instruction. Aircrews should provide AT LEAST TWO HOURS notice for flight weather briefing support from the WF. The WF also maintains a designated area equipped with communication systems configured to allow transient aircrews to contact their home station WF or the OWS and request/retrieve flight weather briefings.

3.2.3.3. 47 FTW aircrew in transient status should reach back to the WF for weather support or contact the OWS if the WF is closed.

3.2.4. **Self-Brief.** The self-brief page is a suite of the WF and OWS weather products used for a weather brief within 400 nm of LAFB. Aircrew can “self-brief” using WF produced Mission Execution Forecasts, OWS produced hazards charts, and all airfield weather forecasts. Aircrews will contact the WF with any questions or for any required clarification.

3.3. Mission Weather Watch (MISSIONWATCH). Mission weather watch is a deliberate and systematic process used to maintain awareness and focus on the defined mission-limiting weather thresholds of 47 FTW operations to include all weather watch, warning, and advisory criteria. The WF conducts MISSIONWATCH by monitoring satellite, radar, lightning detection, PIREPS,

forecasts, observations, and hazard charts in the vicinity of LAFB, all routes, MOAs, and out-bases used by 47 FTW aircraft with appropriate emphasis and focus areas where mission impact weather conditions are occurring or forecast to occur. The WF will apply sound Risk Management practices to processes covering MISSIONWATCH within designated areas of operations across the spectrum of air and ground mission profiles and for the duration of those missions.

3.3.1. **Limitations.** MISSIONWATCH will be performed by the WF for all flying areas, as manning and duty priorities permit. Deviations from flight plans are not tracked by the WF.

3.3.2. **Amendment/Update/Notification.** The WF will amend the MEF per the criteria list in this instruction and update/notify the SOF and FTS Sups, and all affected aircrew if possible, of any weather impacts that may affect particular missions or training areas. The WF will provide the SOF with as much weather specific information as possible. In addition to the criteria and customer actions listed in **Chapter 4**, the criteria below are mission limiting criteria and are used when preparing all MWP supporting flying operations at LAFB.

3.4. Space Weather. Communications and navigations systems use radio waves in High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF) and Global Positioning Systems (GPS) which can be impacted by electro-magnetic radiation from the sun. The WF will monitor space weather impact analysis and forecast products produced by the 557th Weather Wing with a focus on UHF impacts and impacts to GPS and inform aircrew of any known or forecasted impacts when requested.

3.5. Pilot-to-Metro Service (PMSV). While training flying operations are occurring at LAFB, the WF monitors the PMSV radio frequency 354.6 MHz. The WF will provide weather observations, forecasts and updates to all aircrew that contact LAFB. The WF will also solicit pilot reports (PIREPs) during each PMSV contact and log each contact in the PMSV log. PIREPs are useful in assisting the WF with forecast verification, maintaining situational awareness and enhancing flight safety by ensuring timely relevant and accurate information is relayed to other aircrews in the area. Per DAFMAN 15-129, the WF will not vector aircraft around hazards, such as thunderstorms. In the event of a building evacuation forcing the WF to relocate to the AOL, ATC will provide PMSV support to pilots.

3.6. Pilot Reports (PIREPs). PIREPs will be solicited and recorded by WF personnel. PIREPs will be disseminated IAW AFMAN 15-124 long-line by JET or the Air Force Weather-Webs (AFW-WEBS) interface by WF personnel UNLESS:

3.6.1. The information reported appears erroneous.

3.6.2. The information reported within the Laughlin AFB Aerodrome is the same as the information reported in the latest METAR or SPECI.

3.6.3. The information reported is the same data reported and transmitted within the past 30 minutes.

3.6.4. The information reported is only “NEGATIVE” reports for areas in which no hazardous weather was forecasted.

Chapter 4

AIRFIELD SUPPORT FUNCTION

4.1. General. Airfield Support includes all weather-related functions directly supporting the airfield. These functions primarily include management and dissemination of the official weather observation, the Terminal Aerodrome Forecast (TAF), and all weather watches, warnings and advisories (WWAs) for Laughlin AFB.

4.1.1. Weather flight personnel will also perform a continuous meteorological watch by checking the weather at intervals not to exceed 20 minutes whenever the mandatory supplemental criteria listed below is forecast to occur within 1 hour:

4.1.1.1. Tornado, Funnel Cloud, or Waterspout

4.1.1.2. Hail

4.1.1.3. Volcanic Ash

4.1.1.4. Sandstorm or Dust Storm

4.1.1.5. Ice Pellets

4.1.1.6. Freezing Precipitation (Any Intensity)

4.1.1.7. Tower Visibility (when less than 4 SM and differs from the prevailing visibility by at least one reportable value

4.2. Meteorological Watch (METWATCH). The term METWATCH is used to provide an organized approach for weather personnel to maintain situational awareness of both current and future meteorological situations with the primary focus on unforecasted changes in the weather. It is a deliberate process for monitoring terrestrial weather and space environment that could impact the region. The OWS and the WF together perform a continuous METWATCH for LAFB. Changes in the status of weather elements result in notification disseminated from the WF and/or the OWS to base agencies.

4.2.1. Per DAFMAN 15-129, Para. 4.7., the METWATCH process employs RM steps to identify weather threats impacting products and maximize effectiveness of resources and encompasses:

4.2.1.1. Weather watch, warning, and advisory criteria

4.2.1.2. SPECI observation criteria

4.2.1.3. Weather conditions with potential impact to LAFB operations

4.2.2. **Eyes Forward Support.** Being “on the ground” at Laughlin, WF forecasters act as the eyes forward for the OWS and integrate radar, satellite, lightning detection, PIREPS/PMSV, forecasts, observations, and all other available means to monitor weather conditions that may impact LAFB or FTW operations.

4.2.3. Meteorological Equipment:

4.2.3.1. **AN/FMQ-19 Automated Meteorological Observing Station (AMOS).** The AN/FMQ-19, also referred to as an Automated Meteorological Observing System (AMOS), is an integrated suite of multiple weather sensors and data automation

components that continually measure environmental conditions in an effort to provide responsive, reliable, accurate, and real-time weather data. It measures airfield weather conditions to include but not limited to wind direction, wind speed, present weather, runway visual range, visibility, cloud height and coverage, temperature, dew point, atmospheric pressure and lightning detection. There are two certified and properly sited weather sensor suites, one located on each approach end of the runway. The system is designed to autonomously detect and derive the official weather observation for the airfield and feed it into the JET system for automatic dissemination across LAFB and externally into the world-wide database. Due to potential mission-impacting limitations of the AN/FMQ-19, WF personnel are required to verify the transmission of representative weather conditions prior to dissemination on the JET system while on shift. These representative weather observations will be published in a METAR and/or SPECI, but may not appear in the real-time live sensor display (see below).

4.2.3.2. **Joint Environmental Toolkit (JET).** JET is a web-based weather display and dissemination system and is the primary means of weather data relay for the WF and OWS. Real-time weather sensor data, current observations, forecasts, watches, warnings and advisories are disseminated and displayed using this software. It is available to all users on the "dot mil" network. The display for Laughlin AFB can be accessed at the following link: **https://owsjet26.us.af.mil/portal/private/GuestLaughlinAFB/Sensor**. The Air Force is transitioning to a new system called Bifrost, the transition to this system at Laughlin AFB is underway.

4.2.3.3. **Gibson Ridge Levels 2 & 3 Software.** This software is the WF's primary means of ingesting, displaying and interrogating Doppler Next-Generation Radar (NEXRAD) data. Most of the functionality and capability for radar data interrogation transfers to this new system. This software gives the WF the ability to monitor the atmosphere from the Radar Data Acquisition Site (RDA) located just east of Brackettville, TX. Thunderstorm characteristics, atmospheric motion (vertical and horizontal), and radar reflectivity products assist the WF and OWS during their weather METWATCH for LAFB and the surrounding area and are part of a nation- wide radar coverage map. While some of this data is available via other means for use by non-weather personnel, this software is an AF approved program and is primarily used by and available to WF personnel.

4.2.3.4. **Mark IV B.** The Mark IV-B is a meteorological satellite terminal designed to support tactical operations as part of the Defense Meteorological Satellite Program (DMSP) User Segment. The new Mark IV-B terminals are capable of simultaneously ingesting high resolution electro-optical and microwave data from both polar and geostationary satellites. While some of this data is available via other means for use by non-weather personnel, this software is an AF approved program and is primarily used by and available to WF personnel.

4.3. Airfield Weather Observations. The AN/FMQ-19 is the AF standard system for taking and disseminating observations, with WF technicians augmenting the automated system when required. In the automated mode, the system continually senses, calculates and reports the following weather elements: wind speed and direction, visibility, precipitation type and intensity/obstructions to vision, cloud height, sky coverage, temperature, dew point, altimeter setting and lightning. When augmentation is required, the WF observes, records and disseminates observations IAW AFMAN 15-111. The FMQ-19 will be augmented, backed-up, and quality-

checked to ensure proper, error-free weather observations when weather technicians are on shift IAW AFMAN 15-111 and FAA Order JO 7900.5C Appendix D, and quality- checks on all daily observations will be performed again prior to being submitted to the Air Force Climatology Center.

4.3.1. **Types of Observations.** The WF provides two types of observations: Aviation Routine Weather Report (METAR) and Special (SPECI). All observations are taken by the AMOS corresponding to the approach end of the active runway. When technicians are manually augmenting the observation, the outdoor elements will be observed from the official observing point.

4.3.1.1. **METAR (Routine Meteorological Observation Report).** METAR is a routine scheduled observation as well as the primary observation code used world- wide to satisfy requirements for reporting surface meteorological data. METARs contains a complete report of wind, visibility, runway visual range, present weather and obscurations, sky condition, temperature, dew point, and altimeter setting collectively referred to as "the body of the report." In addition, encoded and/or plain language information that elaborates on data in the body of the report may be appended to the METAR as remarks.

4.3.1.2. **SPECI (Special Observation).** SPECI is an unscheduled observation completed and transmitted when any of the special criteria for the airfield have been observed. SPECI observations will contain all data elements found in a METAR plus additional remarks that elaborate on data in the body of the report. All SPECI reports will be prepared and transmitted as soon as possible after the relevant criteria are observed.

4.3.1.3. **SPECI Observation Criteria.** Between the hourly METARs, the AN/FMQ-19 takes and disseminates SPECIs, quality-checked prior to dissemination by WF personnel, for the following weather criteria:

4.3.1.3.1. **Aircraft Mishap.** The WF upon notification of an aircraft mishap will immediately encode and disseminate a full element SPECI IAW AFMAN15-111 Attachment 2 unless there has been an intervening observation. Note: A SPECI is not required for an in-flight emergency (IFE); however, this should alert weather personnel to be prepared to take a SPECI if the IFE becomes a mishap.

4.3.1.3.2. **Visibility.** The surface visibility decreases to less than, or if below, increases to equal or exceed the following distances measured in the following statute miles:

Table 4.1. Visibility Threshold.

Threshold (statute miles)	Reference
Visibility 3	AFMAN 15-111
Visibility 2 1/4	DoD FLIP
Visibility 2	DoD FLIP , AFMAN 15-111
Visibility 1 3/4	DoD FLIP
Visibility 1 1/2	AFI 11-2V3(T-6/T-38), AFMAN 15-111
Visibility 1 3/8	DoD FLIP
Visibility 1	DoD FLIP, AFMAN 15-111
Visibility 7/8	DoD FLIP

Visibility 3/4	DoD FLIP, AFMAN 15-111
Visibility 1/2	DoD FLIP

4.3.1.3.3. **Ceiling.** The ceiling forms or dissipates below, decreases to less than, or if below, increased to equal or exceed the following altitudes measured in the following feet above ground level (AGL):

Table 4.2. Ceiling Threshold.

Threshold (ft AGL)	Reference
Ceiling 3,000	AFMAN 15-111
Ceiling 2,500	AFMAN 15-111
Ceiling 2,000	AFI 11-2V3, AFMAN 15-111
Ceiling 1,500	AFMAN 15-111
Ceiling 1,000	AFMAN 15-111
Ceiling 800	AFMAN 15-111
Ceiling 700	DoD FLIP, AFMAN 15-111
Ceiling 500	DoD FLIP, AFMAN 15-111
Ceiling 400	DoD FLIP
Ceiling 300	DoD FLIP, AFMAN 15-111
Ceiling 200	DoD FLIP, AFMAN 15-111
Sky condition: a layer of clouds or obscuring phenomena aloft appears below 700 feet AGL and was not reported in the preceding observation	15-111 special criteria table

4.3.1.3.4. **Sky condition.** A layer of clouds or obscuring phenomena aloft appears below 700 feet AGL and was not reported in the preceding observation.

4.3.1.3.5. **Wind shift.** Wind direction changes by 45 degrees or more in less than15 minutes when the wind speed is 10 knots or more throughout the wind shift.

4.3.1.3.6. **Squall.** A sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots or more for at least 1 minute.

4.3.1.3.7. **Volcanic Eruption.** Eruption or volcanic ash cloud is first observed.

4.3.1.3.8. **Thunderstorm.** Begins or ends. A thunderstorm is considered to have ended 15 minutes after last occurrence of criteria for a thunderstorm.

4.3.1.3.9. **Precipitation.** Hail begins or ends. Freezing precipitation begins, ends, or changes intensity. Ice pellets begin, end, or change in intensity. Any other type of precipitation begins or ends.

4.3.1.3.10. **Tornado or Funnel Cloud.** Tornado or funnel cloud appears or disappears.

4.3.1.3.11. **Runway Visual Range (RVR).** When prevailing visibility is first observed ≤ 1SM and again when it goes above 1 SM. The value from the designated RVR runway decreases to less than, or if below, increases to equal or exceed the following feet found below. When RVR becomes unavailable or again becomes available and conditions for reporting RVR exist (visibility ≤ 1 SM).

Table 4.3. Runway Visual Range Threshold.

Threshold (ft)	Reference
RVR 6,000	AFMAN 15-111, Laughlin WSD
RVR 5,000	AFMAN 15-111, Laughlin WSD
RVR 4,000	DoD FLIP, AFMAN 15-111, Laughlin WSD
RVR 2,600	DoD FLIP, Laughlin WS
RVR 2,400	AFMAN 15-111, DoD FLIP, Laughlin WSD
RVR 2,000	AFMAN 15-111, Laughlin WSD
RVR 1,600	AFMAN 15-111, Laughlin WSD
Note: weather flight personnel do not have the necessary equipment to augment/back-up this element	

4.3.1.3.12. **Resumption or Termination of Observing Services.** If there was a break in human-observing coverage, then a SPECI will be taken within 15 minutes of resuming human-observing coverage only if the FMQ-19 is at any point non-operational.

4.3.1.3.13. **Other.** Any other event occurs that, in the opinion of the technician on-duty, justifies a SPECI observation, such as an in-flight emergency (IFE).

4.3.1.4. **Observation Formats.** Observations are automatically formatted by JET into two transmission types: local and longline. As a result, users viewing the observation locally through JET will see a slightly different version than those viewing the data externally.

4.3.2. **Official Points of Observation.** The official observing point is the AN/FMQ-19 position at the approach end of the active runway. If necessary due to back up, the WF personnel collect data manually on the ramp in front of AMOPS Operations (Bldg 308). This location suffers from a viewing limitation due to buildings and landscape to the west.

4.3.2.1. **WF Observing Location and Limitations:**

4.3.2.1.1. The primary official point of observation is on the "N" painted on the pavement, located on the northeast side of Bldg 308, on the east side of 1st street, and to the left of the red "I". This site does not allow a clear, unobstructed 360 degree view of the runway complex. The WF's view from north through southeast is partially obstructed by trees, buildings, and hangars. The obstructions interfere with accurate visibility measurements and may obscure features moving in from the stated directions.

4.3.2.1.2. The alternate official point of observation is on the "K" painted on the pavement, located on the northeast side of Bldg 320. Like the primary point, this site

does not allow a clear, unobstructed 360 degree view of the runway complex because of the sun shades obstructing the view. The WF's view from north through southeast is partially obstructed by trees, buildings, and hangars. The sun shade obstructions interfere with accurate visibility measurements and may obscure features moving in from the stated directions.

4.3.2.1.3. WF observers will make every effort to encode representative weather conditions, using the primary observing point and by various unofficial locations for a more clear view of the celestial dome.

Figure 4.1. Official Observation Points (Augmented Observations).

Figure 4.2. Official Observation Points (AN/FMQ-19).

4.3.3. **AN/FMQ-19 Operations.** The LAFB WF has two fully-automated weather observing systems on the airfield. However, due to the wide-range of weather criteria affecting Laughlin AFB operations–flying and non-flying–and the array of weather features that cannot be accurately determined by the automated weather observing system, the AN/FMQ-19 will be placed in "Auto" mode, and will be augmented IAW AFMAN 15-111 whenever Laughlin AFB

weather personnel are on shift to ensure proper, realistic, quality-checked weather observations disseminated and stored for climatology purposes.

4.3.3.1. **Augmentation.** Augmentation is the process of having position-qualified WF technicians manually add or edit data to observations generated by the AN/FMQ-19. The two augmentation processes are supplementation and back-up.

4.3.3.1.1. **Supplementation.** A term used to describe manually adding to the automated observation weather data beyond the capability of the AN/FMQ-19 to detect and/or report. WF technicians will supplement observations whenever the WF is open and the following conditions are observed, in addition to incorrect or non- observed phenomena of all types:

4.3.3.1.1.1. Tornado **(+FC)** *Notes 1 & 2

4.3.3.1.1.2. Water Spout **(+FC)** *Notes 1 & 2

4.3.3.1.1.3. Funnel Cloud **(FC)** *Notes 1 & 2

4.3.3.1.1.4. Freezing Precipitation **(FZDZ/FZRA)**

4.3.3.1.1.5. Ice Pellets **(PL)**

4.3.3.1.1.6. Hail **(GR)**

4.3.3.1.1.7. Sandstorm **(SS)**/Dust Storm **(DS)** *Note 3

4.3.3.1.1.8. Volcanic Ash **(VA)**

4.3.3.1.1.9. Tower Visibility remark.

4.3.3.1.1.9.1. Notes:

4.3.3.1.1.9.1.1. The immediate reporting of tornadic activity takes precedence over all other phenomena.

4.3.3.1.1.9.1.2. Be prepared to supplement whenever a tornado watch is valid, or warning has been issued; regardless of airfield closure status.

4.3.3.1.1.9.1.3. Based on local weather warning criteria; if no warning criteria exists, this is not required.

4.3.3.1.1.9.1.4. Only required during controlled airfield hours.

4.3.3.1.2. **Back-up.** A term used to describe manually providing weather data and/or disseminating an AN/FMQ-19 generated observation when the automated equipment is not operational or unavailable due to individual sensor(s), system, or communications failure.

4.3.3.1.2.1. When an AN/FMQ-19 sensor is no longer working properly, the WF will report the outage to Radar and Weather Systems (RAWS) Flight and perform back-up, inputting the corrected or missing data in the METAR/SPECI, until the equipment is operational.

4.3.3.2. **Back-up Dissemination Procedures.** During JET or communications outages, the WF will disseminate weather observations locally to Air Traffic Control and flying units, as appropriate, and record dissemination on Local Dissemination Log.

4.4. Terminal Aerodrome Forecast (TAF).

4.4.1. TAFs are 30 hour coded aviation weather forecasts that specify expected conditions for an airfield. The TAF for LAFB is produced and disseminated by the WF. The TAF for LAFB will be posted at least 1:30 hours prior to the airfield open time.

4.4.2. The WF disseminates the TAF locally and longline using JET. In the event of a JET outage, the WF will disseminate the TAF utilizing AFW-WEBS. In the event of a Comm outage, the OWS will disseminate the TAF utilizing JET or AFW-WEBS.

4.4.3. **TAF Specification/Amendment Criteria.** TAFs (scheduled or amended) will specify time of occurrence to the nearest hour (and/or minute as appropriate), the duration and intensity of the minimum criteria outlined within this chapter.

4.4.4. **TAF Amendment Actions.** The WF is primarily responsible for TAF amendment. In the event that the WF is unable to amend, the OWS will amend the TAF during normal hours of operation. TAF Amendments will be accomplished with guidelines found within AFMAN 15-124.

4.4.5. **LAST NO AMDS.** During periods when flying operations are suspended for the day, unless other specified, WF will append the last line of the TAF with the words "LAST NO AMDS AFT YYGG NEXT YYGG," where YY is the day of the month UTC and GG is the time to the nearest whole hour UTC after which the TAF will not be amended. During these times the forecast will not be amended.

4.4.6. The WF will specify within and amend the TAF as described in the figure below.

Figure 4.3. Ceiling & Visibility TAF Thresholds.

TAF Criteria			
Ceiling	Visibility	Category	Reference
Ceiling or Visibility observed or expected to decrease to less than, or if below, increase to equal or exceed:			
< 200	< 1/2	A	AFMAN 15-129/DOD FLIP
< 700	< 2	B	AFMAN 15-129/DOD FLIP
< 1000	< 3	C	AFMAN 15-129
< 2000	< 3	D	AFMAN 15-129
>= 2000	>= 3	E	AFMAN 15-129

4.5. Alternate Operating Location (AOL). In the event of evacuation of the primary operating facility (Bldg 308), the WF will move operations to the AOL located in Bldg 404. Per the LOA with Base Safety, if the building is needed for a Safety or Accident Investigation Board, Safety will have priority. Once established at the AOL, the WF will continue to provide observing and resource protection services. Support may be degraded as noted below.

4.5.1. In the event of an evacuation, the limitations of support will be highly dependent upon the operational status of the WF's primary means of dissemination on the Joint Environmental Toolkit (JET).

4.5.2. If JET is operational, all support will be provided as in normal operations with the exception of the following limitations:

4.5.2.1. Flight weather briefings and Mission Execution Forecast (MEF) provided as normal to local customers only.

4.5.2.2. Full observation services with limited view of west through northeast including the northwest end of the runway (13 approach).

4.5.2.3. No PMSV. For short term AOL operations, the ATC tower will monitor the WF's PMSV frequency. If the AOL usage will be long term or ATC cannot monitor weather frequency, aircraft with phone patch capabilities can contact the OWS for assistance and current weather. A NOTAM will be submitted for long term outages.

4.5.3. If JET is not operational all the above limitations will be incurred with the addition of the following:

4.5.3.1. Surface observations will contain all standard parameters with pressure and wind values estimated.

4.5.3.2. Local dissemination of forecasts, observations, warnings, watches, and advisories will be accomplished by phone call, and will be limited to agencies listed in this instruction.

4.6. Weather Watches Warnings and Advisories (WWAs).

4.6.1. **Weather Watches.** A weather watch is issued by the WF when weather conditions exist that have **potential to threaten life or property**. When forecasters issue a watch, base personnel should take appropriate actions or prepare to take appropriate actions based on the threat. No two watches will be in effect at the same time for the same criteria. Watches will be upgraded or downgraded as required to add or remove weather phenomena. The TAF is not required to be amended to include weather watch criteria, with the exception of the lightning watch.

4.6.2. **Weather Warnings.** Forecast weather warnings are issued by the WF (unless prior coordination has been made with the OWS) to provide notification for LAFB units that weather conditions **posing a threat to life or property are occurring or are expected to occur**. The TAF for the airfield will be consistent with any warning issued and contain the specified criteria or be amended to include the criteria if not already specified. Observed weather warnings are issued upon first occurrence of the phenomena and cancelled when the condition requiring the warning is no longer occurring. When weather personnel issue a warning, units should perform actions to protect lives and resources.

4.6.3. **Weather Advisories.** Weather advisories provide notification of specific, locally determined weather criteria that have potential to impact local operations. Advisories are issued by the WF.

4.6.4. **Desired Lead Time.** Desired Lead Time (DLT) is the amount of prior-notice required for watches, warnings, and advisories as outlined in Table 6.2. of AFMAN15- 129.

4.6.4.1. DLT **DOES NOT** override the prior notice Laughlin AFB weather personnel will provide to customers in support of operations and safety/security of personnel and property. Laughlin AFB personnel will make every effort to provide prior-notice of **at least 3-hours** of the *potential* of any Hail, Damaging Winds (≥ 50kts), Heavy Rain (4" in 4-hrs), and Tornadic Activity. This prior notice will run concurrent with the applicable Weather Watch with a DLT of 180 minutes (3 hours).

4.6.5. **Actions by Base Agencies.** Base agencies that have specific actions required when notified of imminent severe weather conditions have identified these actions within this instruction. Base agencies should review and perform these actions upon receiving notification of the applicable weather watch, warning or advisory issued by either the WF or the OWS.

4.6.6. **Wet Bulb Globe Temperature (WBGT)/Heat Stress.** The 47 MDG/SGOJ disseminates WBGT for LAFB. The WF only disseminates weather advisories for Index of Thermal Stress in support of flying operations. The table below shows the Fighter Index of Thermal Stress values as calculated from Temperature and Dew Point. The Memorandum of Agreement between the MDG/CC and OG/CC regarding FITS is found in the attachments section of this document.

Table 4.4. Fighter Index of Thermal Stress (FITS) Values.

Fighter Index Thermal Stress (FITS)

Temperature \ Dew Point Temperature	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	21	21	22	22	22	22	23	23	23	23	24	24	24	25	25	25	26	26	27	27	27	28	28	29	29	30	31	31			
23	22	22	22	23	23	23	23	23	24	24	24	25	25	25	26	26	26	27	27	28	28	29	29	30	30	31	31	32	32		
24	23	23	23	23	24	24	24	24	24	25	25	25	26	26	26	27	27	27	28	28	29	29	30	30	31	31	32	32	33	33	
25	23	23	23	24	24	24	25	25	25	25	26	26	26	27	27	27	28	28	29	29	29	30	30	31	31	32	32	33	34	34	35
26	24	24	25	25	25	25	25	26	26	26	26	27	27	27	28	28	28	29	29	30	30	31	31	31	32	32	33	34	34	35	35
27	25	25	25	25	26	26	26	26	27	27	27	27	28	28	28	29	29	29	30	30	31	31	32	32	33	33	34	34	35	35	36
28	26	26	26	26	26	26	27	27	27	27	27	27	27	28	29	29	30	30	30	31	31	32	32	33	34	34	35	35	35	36	36
29	26	26	27	27	27	27	27	28	28	28	28	29	29	29	30	30	30	31	31	31	32	32	33	33	34	34	35	35	36	36	37
30	27	27	27	27	28	28	28	28	29	29	29	29	30	30	30	31	31	31	32	32	33	33	33	34	34	34	35	36	36	37	38
31	28	28	28	28	28	29	29	29	29	29	30	30	30	31	31	31	32	32	32	33	33	34	34	34	35	35	36	36	37	38	38
32	28	29	29	29	29	29	29	30	30	30	30	31	31	31	32	32	32	33	33	33	34	34	35	35	36	36	37	37	38	38	39
33	29	29	29	30	30	30	30	30	31	31	31	31	32	32	32	33	33	33	34	34	34	35	35	36	36	37	37	38	38	39	39
34	30	30	30	30	30	31	31	31	31	31	32	32	32	33	33	33	34	34	34	35	35	35	36	36	37	37	38	38	39	39	40
35	30	30	31	31	31	31	31	32	32	32	32	33	33	33	33	34	34	34	35	35	36	36	36	37	37	38	38	39	39	40	40
36	31	31	31	31	32	32	32	32	32	33	33	33	34	34	34	34	35	35	35	36	36	37	37	37	38	38	39	39	40	40	41
37	32	32	32	32	32	33	33	33	33	33	34	34	34	34	35	35	35	36	36	36	37	37	38	38	39	39	39	40	40	41	41
38	32	32	33	33	33	33	33	34	34	34	34	35	35	35	35	36	36	36	37	37	37	38	39	39	39	40	40	40	41	42	42
39	33	33	33	33	34	34	34	34	34	35	35	35	35	36	36	36	37	37	37	38	38	38	39	39	40	40	41	41	42	42	43
40	34	34	34	34	34	34	35	35	35	35	36	36	36	36	37	37	37	38	38	38	39	39	39	40	40	41	41	42	42	43	43
41	34	34	35	34	34	34	34	35	36	36	36	36	37	37	37	37	38	38	38	39	39	40	40	40	41	41	42	42	43	43	44
42	35	35	35	35	36	36	36	36	36	37	37	37	37	38	38	38	38	39	39	39	40	40	41	41	41	42	42	43	43	44	44
43	36	36	36	36	36	36	37	37	37	37	37	38	38	38	38	39	39	39	40	40	40	41	41	42	42	42	43	43	44	44	45
44	36	36	36	37	37	37	37	37	38	38	38	38	38	39	39	39	40	40	40	41	41	41	42	42	43	43	43	44	44	45	45
45	37	37	37	37	37	38	38	38	38	38	39	39	39	39	40	40	40	41	41	41	42	42	42	43	43	44	44	44	45	45	46

Table 4.5. Laughlin AFB Forecast Weather Watches and Warnings.

Weather Phenomena	Desired Lead Time of Watch (Before Start of Event)	Desired Lead Time of Warning (Before Start of Event)
Tornado	240 minutes	15 minutes
Damaging Winds (≥ 50 knots)	240 minutes	60 minutes
Strong Winds (>35 < 50 knots)	240 minutes	60 minutes
Severe Thunderstorm with wind ≥ 50 kts and/or hail ≥ ¾ inch	240 minutes	60 minutes

Moderate Thunderstorm with wind ≥35 < 50 kts and/or hail ≥ ≥ ¼ < ¾ inch	240 minutes	60 minutes
Freezing Precipitation (any intensity)	240 minutes	60 minutes
Heavy Snow (≥ 1/2 inches in 12 hours)	Not required	60 minutes
Heavy Rain (≥ 4 inches in 4 hours)	180 minutes	60 minutes
Heavy Rain (≥ 2 inches in 6 hours)	180 minutes	60 minutes
Sandstorm/Dust Storm	Not required	60 minutes
Blizzard (Note 1)	Not required	Not required
Lightning (within 5 NM of the base)	30 minutes	When Observed
Note 1: The WF and the OWS does not watch or warn for Blizzard criteria at Laughlin AFB.		

Table 4.6. Laughlin AFB Observed Weather Warnings.

Criteria	If Airfield Open	If Airfield Closed
LTG within 5NM	X	X
LTG within 10NM	X	X
LTG within 15NM	X	
LTG within 20NM	X	
LTG within 30NM	X	
LTG within Local Flying Area (LFA)	X	

Table 4.7. Spofford Auxiliary Airfield Observed Weather Warnings.

Criteria	Weather Station Open	Weather Station Closed
Lightning within 5NM	X (Airfield Open Only)	
Lightning within 20NM	X (Airfield Open Only)	

Table 4.8. Southwinds Marina Observed Weather Warnings (0900L-1900L).

Criteria	Weather Station Open	Weather Station Closed
Lightning observed within 30NM	X	X

4.7. Weather Advisories:

4.7.1. **Observed Weather Advisories.** Observed advisories are issued to alert LAFB units to the existence of weather conditions impacting operations. They are issued when the weather conditions meet or exceed the criteria listed. Weather personnel will cancel the advisory when the weather phenomenon warranting the advisory no longer exists.

Table 4.9. Laughlin AFB Observed Weather Advisories.

Criteria	**Threshold**	Weather Station Open **(WF Issued)**	If Weather Station Closed **(WF Issued)**
Cross Wind	≥ 10 knots ≥ 15 knots ≥ 20 knots ≥ 25 knots	X	
Cross Wind	≥ 10 knots with wet runway	X	
Cross Wind	≥ 5 knots with ice or standing water on runway	X	
Observed Strong Wind	≥30 knots < 50 kts	X	X
Ceiling/Visibility	≤ 200/ ½ for runway 13 or ≤ 300/ ⅞ for runway 31	X	
Thermal Stress (Caution Zone)	Thermal Stress ≥33° C* (91° F)	X	
Thermal Stress (Danger Zone)	Thermal Stress ≥39° C* (102° F)	X	
Temperature	= 42° C/106° F = 43° C/109° F > 44° C/111° F	X	X
Low Level Wind Shear	Observed LLWS	X	
Wind Chill	≤ 0°C/32°F	X	X
Weather Notice-To-Airmen	Discretionary Sig WX	X	X
WF Evacuation	Evacuation to Bldg 404	X	
* Thermal Stress / Frostbite Risk Level guidance from AFI 48-151			

4.7.2. **Forecast Weather Advisories.** A special notice to Laughlin AFB agencies giving them advance notification (with sufficient time for protective actions) of mission limiting, non-severe weather conditions expected to directly affect Laughlin AFB units.

Table 4.10. Forecast Weather Advisory Criteria and Minimum Desired Lead-Times.

Criteria	**Desired Lead-Time**
Temperature is forecast to fall below and stay below 32°F for 24 hrs or more	60 minutes

4.8. Base Dissemination. The WF and the OWS use the Integrated Weather Warning Capability (IWWC) within JET to promptly disseminate WWAs for LAFB. The JET allows for an automated display notification and the IWWC provides an automated telephonic and email notification. The WF initiates the notification process by disseminating a WWA via JET. The 47.TH FTW/CP and other organizations follow internal notification procedures to inform subordinate units as required.

Groups will coordinate with their units to determine if they require notification for adverse weather events. If so, units will contact the Command Post Superintendent to be added to appropriate QRC(s). Units will only request addition to Command Post QRCs if they need to take resource protection measures during adverse weather and will not ask to be added for informational purposes only. Back-up notifications are made via telephone. The graphics below indicate the pyramid notification scheme used at LAFB.

Figure 4.4. WWAs Issued by the WF.

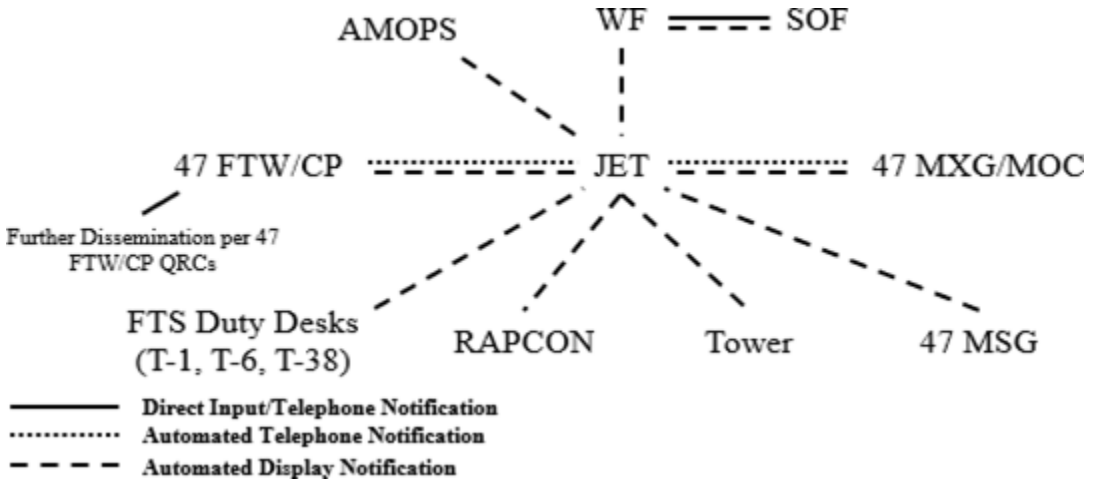


Figure 4.5. WWA Back-up Dissemination During Operating Hours.

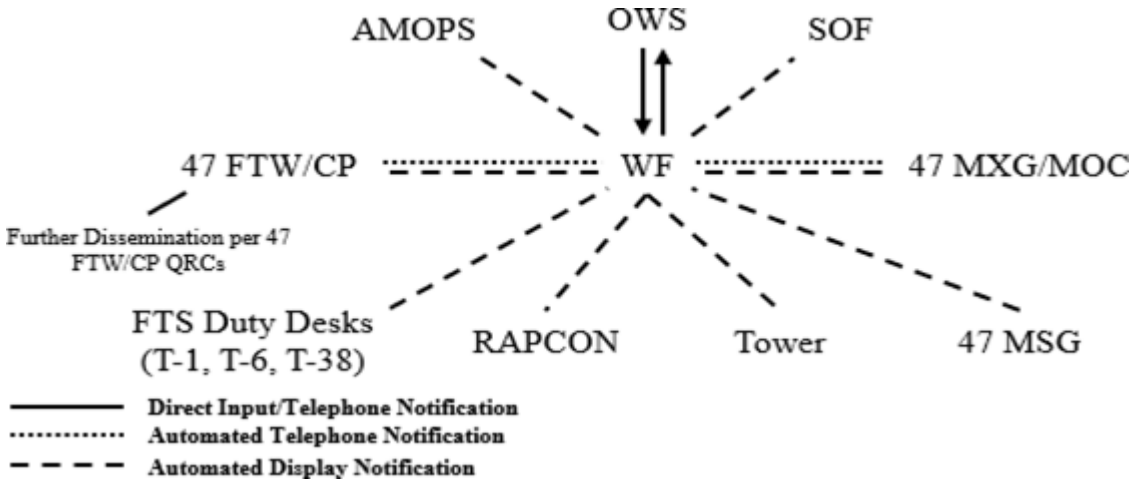
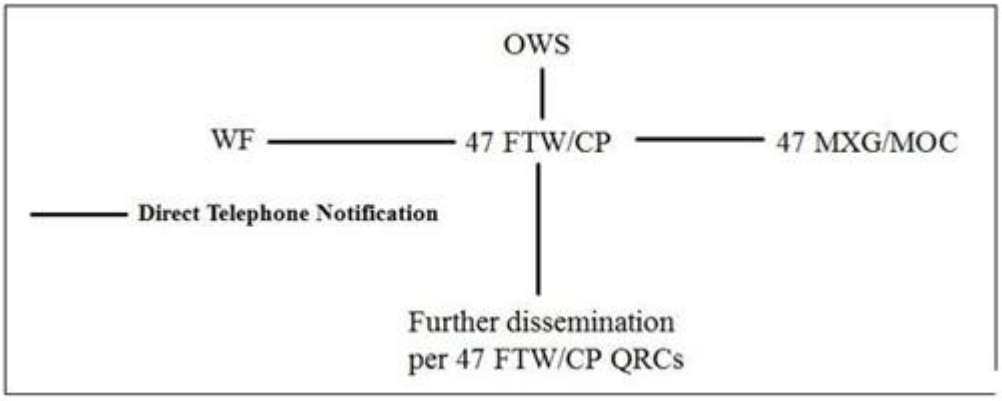


Figure 4.6. WWA Back-up Dissemination in Event That WF is Non-Operational.



4.9. Customer Response Matrix. Outlines actions customers normally take when a WWA is issued by the OWS or the WF and the impact to operations.

Table 4.11. 87th Flying Training Squadron (T-38).

Critical Element	Action	Impact
Tornado Warning	Evac/Divert Acft	Lost sorties
Thunderstorms/Lightning w/in the LFA	Avoid thunderstorm areas–use other training areas	Restricted sorties
Thunderstorms/Lightning w/in 30nm	Recall solo aircraft to pattern	Lost or restricted sorties
Thunderstorms/Lightning w/in 20nm	Recall dual aircraft to pattern, solos on the ground	Lost or restricted sorties
Thunderstorms/Lightning w/in 10nm	Recall all aircraft, go to standby	Lost sorties
Thunderstorms/Lightning w/in 5nm	Airborne aircraft must stay away from the field until the thunderstorms pass. Stop launch.	Lost or diverted Sorties
Wind ≥ 30 knots	Recall all aircraft, go to standby	Lost sorties
ITS Caution	Restrict aircrew time on ramp, monitor for symptoms of heat stress	Lost or restricted sorties
ITS Danger	More restrictive aircrew time on ramp, monitor for symptoms of heat stress	Lost or restricted sorties
Low Level Wind Shear (LLWS)	Airborne aircraft must stay away from the field until LLWS is over. Stop launch.	Lost Sorties
Crosswind ≥ 15 knots	Dual Status	Restricted Sorties

Ceiling/Visibility < 200/ ½ on RWY 13 or < 300/ ⅞ on RWY 31	Stop Launch/Divert	Lost Sorties

Table 4.12. [85th/434th Flying Training Squadron (T-6).

Critical Element	**Action**	**Impact**
Tornado Warning	Evac/Divert Acft	Lost sorties
Thunderstorms/Lightning w/in the LFA	Avoid thunderstorm areas– use other training areas	Restricted sorties
Thunderstorms/Lightning w/in 30nm	Recall solo aircraft to pattern	Lost or restricted sorties
Thunderstorms/Lightning w/in 20nm	Recall dual aircraft to pattern, land solos	Lost or restricted sorties
Thunderstorms/Lightning w/in10nm	Land aircraft	Lost sorties
Thunderstorms/Lightning w/in 5nm	Airborne aircraft must stay away from the field until the thunderstorms pass. Stop launch.	Lost or diverted Sorties
Wind ≥ 30 knots	Recall aircraft, go to standby	Lost sorties
Wind ≥ 50 knots	Recall aircraft, go to standby	Lost sorties
ITS Caution	Restrict aircrew time on ramp, monitor for symptoms of heat stress	Lost or restricted sorties
ITS Danger	More restrictive aircrew time on ramp, monitor for symptoms of heat stress	Lost or restricted sorties
Low Level Wind Shear (LLWS)	Airborne aircraft must stay away from the field until LLWS is over. Hold launch.	Lost Sorties
Temperature > 106°F	Stop Launch	Possible Avionics failures
Crosswind > 25 knots	Stop Launch/ Divert	Lost Sorties
Ceiling/Visibility < 200/ ½ on RWY 13 or < 300/ ⅞ on RWY 31	Stop Launch/Divert	Lost Sorties

Table 4.12. Flight Simulator.

Critical Element	**Action**	**Impact**
Tornado Warning	Terminate all training and seek shelter	Lost Training
Thunderstorms/Lightning w/in 5nm	Terminate all training	Lost Training

Table 4.13. Maintenance Operations Center.

Critical Element	Action	Impact
Tornado warning	Stop work immediately and seek shelter	Stops maintenance operations
Wind ≥ 30-40 knots	Close hangar doors. Ensure unnecessary AGE is cleared off flight-line and aircraft parking areas.	May slow maintenance operations.
Wind ≥ 40 knots	Coordinate with Supervisor of Flying [if applicable]. Maximum hangaring of aircraft, secure remaining aircraft on parking apron. Close all hangar doors, remove AGE from aircraft parking areas.	Slows flying operations, maximum loss of personnel from regular duties, severely restricts maintenance operations.
Hail ≥ ¾ inch	Coordinate with Supervisor of Flying [if applicable]. Maximum hangaring of T-6 & T-38. Remaining T-38 will have protective wing covers installed and be parked under available shelters. Secure remaining aircraft on parking apron. Close hangar doors, shelter vehicles, remove AGE from parking areas and unnecessary items.	Stops flying operations. Maximum loss of personnel from regular duties, and severely restricts maintenance operations.
Hail ¼ to < ¾ inch	Coordinate with Supervisor of Flying [if applicable]. Place hail covers on T-38, hangar T-6	Some personnel lost from regular duties
Lightning w/in 5nm	Cease refuel/de-fuel operations and fuel cell maintenance, LOX and oxygen servicing operations, explosives and egress maintenance. Cease test cell engine runs. (Maintenance may continue.) Cease flight line activities and take cover immediately.	Stops flying operations. Maximum loss of personnel from regular duties, and severely restricts maintenance operations.
Wind Chill Observed < 32° F	Take protective measures against colder temperatures	May slow maintenance operations

3 inches of rain in 6 hours	Relocate affected aircraft IAW part/all of maintenance Operating Instruction 15-001, *High and Dry Parking Plan*, as directed by MX Director or designated representative	Slows flying operations. Maximum loss of personnel from regular duties, severely restricts maintenance operations.

Table 4.14. 47th Civil Engineer Squadron.

Critical Element	Action	Impact
Tornado	Prepare for emergency operations; Take Shelter	Work stoppage in some work centers
Wind ≥ 50 knots	Evacuate various buildings	Work stoppage or reduced service in some work centers
Temperature < 32° F for 24 hours or more consecutively	Notify all building and housing occupants of an extended freeze.	Reduced services in some work centers so notification can be made.
Thunderstorms/Lightning w/in 5nm	Cease all outside operations and secure loose equipment outdoors. Prepare to respond to weather related repairs or clean-up.	Limits operations to inside only. Delays other work.

Table 4.15. [47th Communications Squadron.

Critical Element	Action	Impact
Tornado Warning	Secure classified, Take Shelter	Working with classified suspended, Loss of Services
Thunderstorms/Lightning w/in 5nm	Notify personnel working on utility pole/towers	Delays repairs.
Wind ≥ 50 knots	Float rotating log periodic antennas	Possible loss of WSR-88D data

Table 4.16. Air Traffic Control–Tower.

Critical Element	Action	Impact
Tornado Warning	Evacuate Control Tower	Loss of ATC services
Wind ≥ 50 knots	Evacuate Control Tower	Loss of ATC services

Table 4.17. Air Traffic Control–RAPCON.

Critical Element	Action	Impact
Thunderstorms/Lightning w/in 5nm	Go to backup power 30 minutes prior to onset	None

Tornado Warning	Monitor Control Tower frequency	Loss of personnel's time while monitoring
Wind ≥ 50 knots	Monitor Control Tower frequency	Loss of personnel's time while monitoring

Table 4.18. [47th Medical Group.

Critical Element	Action	Impact
Tornado Warning	Take Shelter	Loss of Medical Services
Thunderstorms/Lightning w/in 5nm	Exercise caution	Training Restrictions

Table 4.19. Commissary Service.

Critical Element	Action	Impact
Tornado Warning	Take Shelter	Loss of Service

Table 4.20. Fuels Management.

Critical Element	Action	Impact
Tornado Warning	Take Shelter	Lost Sorties
Thunderstorms/Lightning w/in 5 nm	Cease refueling operations	Lost sorties
Wind ≥ 30 knots	Secure all loose items outside facilities, park refueling equipment in protected areas and group vehicles together	Lost sorties
Hail ≥ ¼ inch	Secure all loose items outside facilities, park refueling equipment in protected areas and group vehicles together	Lost sorties

Table 4.21. Fire Department.

Critical Element	Action	Impact
Tornado Warning	Take Shelter	No fire or crash response until all clear
Thunderstorms/Lightning w/in 5nm	Secure station	Could interfere with fire and crash response
Thunderstorms/Lightning w/in 10nm	Secure station	Could interfere with fire and crash response
Wind ≥ 30 knots	Secure station	Could interfere with fire and crash response
Hail ≥¼ inch	Secure station	Could interfere with fire and crash response

Table 4.22. Security Forces.

Critical Element	Action	Impact
Tornado warning	Alert base housing as needed, evacuate FAMCAMP, move military working dogs to a safe location	Loss of 2 to 3 patrols and vehicles from regular duty
Wind ≥ 50 knots	Alert base housing, evacuate family camp, move military working dogs to a safe location	Loss of 2 to 3 patrols and vehicles from regular duty
Temperature < 32° F for 24 hours or more consecutively	Prepare for cold weather operations (request AGE heaters Main/West gates	Reduced timeliness of service at Main/West gate
Hail ≥ ¾ inch	Use Giant Voice system to notify all personnel to remain indoors. Move military working dogs to a safe location	Loss of 2 to 3 patrols and vehicles from regular duty

Table 4.23. Swimming Pool/Golf Course.

Critical Element	Action	Impact
Thunderstorms/Lightning w/in 5nm	Evacuate pool / golf course	No swimming or golfing
Tornado warning	Evacuate pool / golf course	No swimming or golfing
Wind ≥ 50 knots	Evacuate pool / golf course	No swimming or golfing
Hail ≥ ¾ inch	Evacuate pool / golf course	No swimming or golfing
Hail >¼ inch	Evacuate pool / golf course	No swimming or golfing

Table 4.24. Vehicle Operations.

Critical Element	Action	Impact
Tornado warning	Take shelter	Loss of service
Hail > ¾ inch	Move staff vehicles under cover	Reduced service

4.9.1. **Unit Requirements.** Each unit at LAFB is responsible for coordinating additional watch/warning/advisory support or special notification for existing watches/warnings/advisories with WF. Also, each customer requesting such support must validate the requirement by providing WF with a list of protective actions taken each time the special notification is given or unique watch/warning/advisory is made. Recommend units require their personnel to notify at least their unit control centers (UCCs) of completion of protection measures. If the request falls within the operational capabilities of WF or OWS, then weather personnel will monitor, advise, watch, and warn of such significant weather formations.

4.10. Cooperative Weather Watch (CWW). The CWW allows non-weather personnel i.e. air traffic controllers, SOF, Security Forces, Local Law Enforcement & Emergency Management, and weather spotters to help monitor weather conditions and relay information to the WF. The primary concern is the occurrence of previously unreported weather conditions that could affect flight safety or could be critical to the safety or efficiency of other local operations and resources. Weather technicians will reevaluate weather conditions whenever a reliable source reports weather conditions different from the last disseminated observation and take appropriate action i.e. generate a SPECI observation or issue a WWA if the different conditions warrant immediate dissemination. Participants in the cooperative weather watch at Laughlin AFB include:

4.10.1. ATC personnel will pass PIREPS received from aircrews to the WF as soon as possible and will relay the following conditions to the WF when observed:

4.10.1.1. Significant prevailing and sector visibility changes that reduce visibility below, or if below raise it above 4 statute miles (6000 m) or when prevailing tower visibility is below 4 miles and differs from the visibility in the current observation.

4.10.1.2. Precipitation begins or ends.

4.10.1.3. Thunderstorms or lightning are observed.

4.10.1.4. Tornado or funnel cloud is sighted.

4.10.1.5. Low Level Wind Shear is reported.

4.10.1.6. Any other significant meteorological condition not previously reported.

4.10.2. **National Weather Service Watches, Warnings, Advisories, Outlooks, Statements, and Other Forecasts.** The National Weather Service (NWS) issues weather alerts and forecasts for the local area, encompassing Laughlin AFB. While Laughlin AFB's authoritative weather source is Air Force Weather via the Laughlin AFB WF, the Laughlin AFB WF will relay certain NWS alerts to the 47th Civil Engineering Squadron Emergency Management Flight via the 47th Command Post through the Joint Environmental Toolkit (JET) dissemination system. At a minimum, the Laughlin WF will relay the following NWS Alerts upon notification on the **www.weather.gov** website made available on the Laughlin AFB WF SharePoint:

4.10.2.1. Any Flood Watches, Warnings, Advisories, Outlooks, or Statements

4.10.2.1.1. Includes Flash Flooding, River Flooding, or flooding of any kind.

4.10.2.2. Any Fire Weather Watches, Warnings, Advisories, Outlooks, or Statements

4.10.2.2.1. Includes Red Flag Watches, Warnings, and Advisories, and areas highlighted as "Elevated", "Critical", and "Extreme" as outlined on the Storm Prediction Center Fire Weather Outlook page found here: **http://www.spc.noaa.gov/products/fire_wx/overview.html**.

4.11. ATC Limited Observer Training. The WF and ATC collaborates on a standardized weather observation training regime to be conducted during ATC upgrade training. Upon arrival at LAFB, ATC personnel will receive an orientation of the WF, followed by the standardized weather observation training, and finally the weather test administered by WF leadership to receive their Observer Training certificate.

Chapter 5

RECIPROCAL SUPPORT REQUIREMENTS

5.1. General. The WF requires the support outlined from the offices listed below in order to provide support to the 47 FTW.

5.2. 47 FTW/CC:

5.2.1. Will ensure the installation is prepared to manage severe weather threats

5.3. 47 OG/CC:

5.3.1. Coordinate all additional requirements with the WF Flight Commander or NCOIC via the OSS/CC.

5.4. 47 OG/OGV:

5.4.1. Coordinate SOF, IRC, and seasonal awareness briefings with WF leadership as early as possible but at least three duty days in advance.

5.5. 47 OG Flying Squadron Commanders & Directors of Operations:

5.5.1. Encourage aircrews to pass PIREPs to the WF, ATC and/or the SOF.

5.5.2. Provide feedback/mission debrief to the WF.

5.6. 47 OSS/CC:

5.6.1. Provide a location for suitable WF Alternate Operating Location with 24/7 access.

5.6.2. Ensure back-up internet service is available during LAN outages.

5.7. 47 OSS/OSO:

5.7.1. Ensure current flying schedule and any changes are available to the WF.

5.8. 47 OSS/OSAM:

5.8.1. Maintain the AN/FMQ-19 and Spofford's FMQ-23 Automatic Meteorological Station (AMS), Automated Surface Observing System, WSR-88D Next-Generation Radar (NEXRAD), Pilot to Metro Radio System (PMSV).

5.8.2. Ensure a 24-hour point of contact for reporting outages is available.

5.8.3. Utilize restoration priorities to restore weather communications and meteorological sensing equipment following outages.

5.8.4. Notify the responsible service agents for outages and perform necessary follow-up actions as required until full service is restored.

5.8.5. Pre-coordinate with the WF before performing routine maintenance on any weather communications or meteorological sensing equipment.

5.8.6. In the event a particular outage cannot be resolved at unit level, advise appropriate organizations of the equipment and/or circuit trouble, providing full details.

5.8.7. Notify 557th Weather Wing Fielded Systems Service Center (FSSC) when repairing or replacing parts on the FMQ-19 and/or FMQ-23.

5.8.8. Apply all directed Time Compliance Network Order (TCNO) patches to the JET server and provide initial troubleshooting and/or reset of the server as required.

5.9. 47 OSS/OSA:

5.9.1. Pass all PIREPs to the WF within 5 minutes of receipt, mission permitting.

5.9.2. Conduct a Cooperative Weather Watch IAW with this instruction.

5.9.3. Notify the WF of changes in the active runway.

5.9.4. Initiate a daily performance check of PMSV radio and weather/tower hotline.

5.9.5. Notify the WF of changes in the high intensity runway light setting when prevailing visibility is 1 mile or less, or RVR is 6,000 feet or less.

5.9.6. Monitor the WF's PMSV radio frequency (354.6 UHF) during both short-term and long-term outages.

5.10. 47 OSS/OSAM:

5.10.1. Provide airfield orientation with emphasis on airfield weather sensors for all newly assigned WF personnel.

5.10.2. Notify the WF of a change in the runway condition, an aircraft mishap, and in-flight or ground emergencies.

5.10.3. Forward WF initiated Flight Information Publications (FLIP) changes to the appropriate agencies for action.

5.10.4. Notify the WF of any impending changes in the FLIP that may affect LAFB observing and or forecasting requirements.

5.10.5. Submit Notices to Airmen (NOTAMs) as requested by the WF for any long term deviations from the published FLIP for any support related to the WF.

5.10.6. Apply all directed Time Compliance Network Order (TCNO) patches to the JET server and provide initial troubleshooting and/or reset of the server as required.

5.11. 47 FTW/CP:

5.11.1. Provide orientation to all newly assigned WF personnel.

5.11.2. Disseminate weather warnings, watches, and advisories (initial, updates, and cancellations) over the Emergency Mass Notification System (EMNS) and Giant Voice broadcast speaker system, as applicable. In the event ENS is inoperative, the 47 FTW/CP will use direct lines/telephones/Reach back Plus to relay weather watches, warnings, and advisories.

5.11.3. Activate the base siren, the EMNS, and Giant Voice upon notification/recommendation of 47 OSS/OSW of a Tornado Warning. Once an "All Clear" determination by recommendation of 47 OSS/OSW, command post will disseminate through ENS and other means as applicable.

5.11.4. Notify/recall the standby technician when requested.

5.11.5. Notify the WF upon receipt of any report of a known or suspected tornado.

5.11.6. Notify the WF of any damage on LAFB or to any 47 FTW assigned or attached assets if significant weather is suspected as a factor.

5.11.7. Coordinate with the WF leadership on all weather-related Operations Event/Incident Reports (OPREP-3) to higher headquarters.

5.12. 47 SFS:

5.12.1. Inform the WF of any sighting of tornadic activity, hail, or freezing precipitation.

5.13. 47 CES:

5.13.1. Ensure emergency electrical power is available to all the WF meteorological equipment. If a power outage is expected, pre-coordinate with the Facility Manager.

5.13.2. Ensure emergency backup electrical power provides automatic start capability with manual override.

5.13.3. Ensure proper personnel are available 24 hours/7 days a week to maintain the emergency power generator that serves Bldg 308.

5.13.4. Provide assistance starting and stopping the emergency power generator as required.

5.13.5. Prevent damage to, and allow uninterrupted operation of environmentally sensitive computer and communications equipment by continuously maintaining weather station temperature and humidity within the following limits:

5.13.5.1. Temperature: 15º-32º C (59º-90º F)

5.13.5.2. Humidity: 20-80%, non-condensing

5.14. 47 MX/MOC:

5.14.1. Provide the WF with daily off-station aircraft report.

5.14.2. Provide orientation to all newly assigned WF personnel.

5.15. 47 FTW/PA:

5.15.1. Vet any weather data requested for public releasability to a non-governmental agency.

5.16. 47 FTW/SJA:

5.16.1. Provide a legal review or analysis on legal requirements pertaining to the releasability of investigatory materials or weather data work products to federal agencies, state or local governments and/or private individuals or the media pursuant to applicable law and policy.

5.17. Support Requests/Changes to Support:

5.17.1. Request support through WF leadership with approval of the OSS/CC.

5.17.2. Coordinate changes in support as soon as such changes are anticipated to mitigate any mission impact.

TYLER J. ELLISON, Col, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

September 2018 AFI 10-206 AETC Supplement, *Operational Reporting*, 28 November 2018 AFI 11-2T-6, Vol 3, *T-6 Operations Procedures*, 18 July 2016

AFI 11-2T-38, Vol 3, AETC Supplement, *T-38 Operations Procedures*, 3 October 2016 AFI 11-201, *Flight Information Publication*, 30 November 2018

AFI 11-202, Volume 3, *General Flight Rules*, 2 October 2018

AFI 11-202, Volume 3, AETC Supplement, *General Flight Rules*, 30 January 2017

AFI 11-418 AETC Supplement, *Operations Supervision*, 14 October 2015 AFI 13-213/LAFB Supplement, *Airfield Driving Instruction*, 30 June 2015 AFI 15-128, *Air Force Structure*, 7 May 2018

AFI 48-151, *Thermal Injury Prevention Program*, 7 April 2016

AFMAN 10-206, *Operational Reporting*, 31 January 2019

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 1 September 2017

AFMAN 11-251, Vol. 1, *T-38C Flying Fundamentals*, 1 August 2013

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

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

DAFMAN 15-129, *Air and Space Weather Operations*, 07 September 2023 AFPD 11-2, *Aircrew Operations*, 31 January 2019

AFPD 15-1, *Air Force Weather Operations*, 14 November 2019

FAA Order JO 7900-5C, *Air Traffic Organization Policy*, 21 December 2012 LAFBI 13-204, *Airfield Operations*, 09 August 2016

Prescribed Forms

None

Adopted Forms

AF Form 3803, *Surface Weather Observations (METAR/SPECI)* AF Form 3807, *Watch/Warning Notification and Verification* DD Form 175-1, *Flight Weather Briefing*

Abbreviations and Acronyms

26 OWS—26th Operational Weather Squadron

47 CS—47th Communications Squadron

47 CES—47th Civil Engineering Squadron47 FTW–47th Flying Training Wing

47 FTW/CP—47th Flying Training Wing Command Post47 FTW/PA–47thFlying Training Wing Public Affairs47 FTW/SE–47th Flying Training Wing Safety Office

47 FTW/SJA—47th Flying Training Wing Staff Judge Advocate

47 MX/MOC—47th Maintenance Operations Center

47 OG—47th Operations Group

47 OG/CC—47th Operations Group Commander

47 OSS/CC—47th Operations Support Squadron Commander

47 OSS/OSA—47th Operations Support Squadron Airfield Operations

47 OSS/OSAM—47th Operations Support Squadron Airfield Management

47 OSS/OSM—47th Operations Support Squadron Radar, Airfield, and Weather Systems

47 OSS/OSO—47th Operations Support Squadron Current Operations

47 OSS/OSW—47th Operations Support Squadron Weather Exploitation Unit

47 SFS–47th Security Forces Squadron AFPD—Air Force Policy DirectivesAGL–Above Ground Level

AOL—Alternate Operating Location

AOR—Area of Responsibility

AMOS—Automated Observing SystemAMOPS–Airfield Management OperationsATC–Air Traffic Control

BLDG—Building

CAT—Crisis Action Team

CDM—Chemical Downwind Message

CDT—Central Daylight timeCST–Central Standard TimeCES–Civil Engineer SquadronCP–Command Post

CWW—Cooperative Weather Watch

DoD—Department of Defense

EOC—Emergency Operations CenterEDM–Effective Downwind MessageENS–Emergency Notification SystemETA–Estimated Time of ArrivalEWO–Emergency War Order

FITS—Fighter Index of Thermal StressFLIP–Flight Information PublicationFTW–Flying Training Wing

HQ—Headquarters

HURCON—Hurricane Condition

IAW—In Accordance With

ICAO—International Civil Aviation Organization

IDP—Installation Data Page

IFE—In-Flight Emergency

IRC—Instrument Refresher Course

ITS—Index of Thermal Stress

JET—Joint Environmental Toolkit

KDLF–4—letter ICAO identifier for LAFB

L–Local—LAN–Local Area NetworkLAFB–Laughlin Air Force BaseLFA–Local Flying AreaLOCAL–Local Observation

MEF—Mission Execution Forecast

METAR—Routine Meteorological Observation Report

METWATCH—Meteorological WatchMISSIONWATCH–Mission Weather WatchMOA–Military Operating Area

MPH—Miles Per Hour

MWP—Mission Weather ProductNEXRAD–Next Generation RadarNHC–National Hurricane CenterNM–Nautical Miles

NOTAM—Notice to AirmenNWS–National Weather ServiceOG–Operations Group

OPR—Office of Primary Responsibility

OPREP—Operational Reports

OSS—Operations Support Squadron

OSW—Weather Flight

OWS—Operational Weather Squadron

PIREP—Pilot Report

PMSV—Pilot-to-Metro Service

RAWS—R a d a r a n d W e a t h e r S y s t e m s

RCR—Runway Conditions ReportRVR–Runway Visual RangeSFS–Security Forces SquadronSM–Statute Mile

SOF—Supervisor of Flying

SPECI—Special Observation

SWAP—Severe Weather Action ProceduresSWAT–Severe Weather Action TeamTACC–Tanker Airlift Control Center

TAF—Terminal Aerodrome Forecast

UFN—Until Further Notice

UTC—Universal Time Coordination

VFR—Visual Flight Rules

WBGT—Wet Bulb Globe Temperature

WF—Weather Flight

WWA—Weather Watch/Warning/Advisory

Z–Zulu—Terms and Definitions

Alternate Operating Location—The location to which WF will move if Bldg 308 is evacuated.

Cooperative Weather Watch—A method of collective observing shared by the weather observer, tower personnel, and SOF, to enhance the mission of BWW. The weather observer collates information from other sources and disseminates as needed.

Flight Information Publication—Booklet containing aircraft approach, landing, and takeoff guidance at various airfields, including LAFB. It also lists weather restrictions for airfields.

Hurricane Condition—A condition outlining the threat of a tropical storm or hurricane to LAFB.

Instrument Refresher Course—Annual continuation training for aircrews. The WF provides a briefer and materials for the weather segment of the course.

Joint Environmental Toolkit (JET)—The installation's primary means of disseminating alphanumeric weather information.

LOCAL—A coded weather observation taken to meet locally determined requirements that is only disseminated to entities on the installation

METAR–A regularly scheduled coded weather observation taken and disseminated both across the installation and world—wide.

METWATCH—Meteorological Watch. A method of monitoring weather conditions for any hazards that might create an impediment to flying operations or pose a threat to life or assets.

Military Operating Area—An area used for local flying training.

Mission Execution Forecast–A mission weather product produced by the WF used to directly support a flying or non—flying operation.

MISSIONWATCH—A method of observing and forecasting which monitors conditions along routes of flight and in the MOAs for any hazards that might create an impediment to flying operations.

Operational Weather Squadron—An Air Force Weather regional forecast center. Commonly referred to as a "hub." LAFB's servicing OWS is the 26th OWS located at Barksdale AFB, LA.

Pilot Report—A report containing weather data passed from aircrew to the weather support entities to enhance the weather forecast process and flight safety.

SPECI–A coded weather observation taken to report the occurrence of predetermined special criteria as determined by AF flying guidance and the local airfield weather criteria. These observations are taken and disseminated across the installation and world—wide.

Terminal Aerodrome Forecast—The world-wide standardized coded aviation weather forecast used for planning purposes for the area within a five-mile radius of the airfield.

Weather Watch—A weather alert notification issued when the potential exists for a weather condition that poses a threat to human life and/or damage to property.

Weather Warning—A weather alert notification issued when a weather condition that poses a threat to human life and/or damage to property is imminent or occurring.

Weather Advisory—A weather alert notification of a locally determined weather condition that hinders flight operations.

Attachment 2

MEMORANDUM OF AGREEMENT

Figure A2.1. Memorandum of Agreement between 47 OSS/OSW & 47 FTW/SE for Alternate Operations Location.

DEPARTMENT OF THE AIR FORCE
47TH FLYING TRAINING WING (AETC)

06 December 2024

MEMORANDUM FOR 47 FTW/SE

FROM: 47 OSS/OSW FLT/CC

SUBJECT: LOA for Alternate Operating Location

1. 47 OSS/OSW utilizes building 404 as their Alternate Operating Location (AOL) to join Airfield Management in the event an evacuation is ordered from our current location in building 308. OSW also uses the building once in the 3rd quarter for exercise purposes and would verify availability of the building with Safety before use.

2. If Bldg 404 were needed for a Safety or Accident Investigation Board, Safety would have priority for building use. OSW would then proceed to their back-up AOL in Bldg 320.

3. This letter will serve as the approval letter and agreement of both parties (Weather Flight and Base Safety) until a new agreement or change is required on this subject.

4. If you have any questions, please contact me at DSN: 732-5973/Comm: 830-298-5973 or paul.hillsman.1@us.af.mil.

PAUL C. HILLSMAN, 2d Lt, USAF
Flight Commander, OSW

AARON A. BORSZICH, Lt Col, USAF
Chief, Wing Safety

Attachment 3

MEMORANDUM OF AGREEMENT

Figure A3.1. Memorandum of Understanding between 47th Operations Group (Weather Flight) and 47th Medical Group (Biomedical Engineering) Regarding Index of Thermal Stress Part 1.

DEPARTMENT OF THE AIR FORCE
47TH FLYING TRAINING WING (AETC)

13 January 2024

MEMORANDUM FOR 47 MDG/CC

FROM: 47 OG/CC

SUBJECT: Memorandum of Understanding Between 47th MDG and 47th OG

1. This Memorandum of Understanding (MOU) executed on 6 December 2024 is between the 47th Medical Group (MDG), Laughlin AFB, TX, and the 47th Operations Group (OG), Laughlin AFB, TX.

2. Purpose. This MOU sets forth an agreement between the 47 MDG and 47 OG concerning the monitoring and reporting of the Fighter Index of Thermal Stress Condition (FITS).

3. Background. IAW AFI 48-151, Thermal Injury Prevention Program, the Bioenvironmental Engineering Flight (47 MDOS/SGOJ) in the 47th MDG must ensure that the appropriate FITS zone is determined IAW Table 3.1 of the AFI on a daily basis during the hot summer months.

a. The FITS zone is determined by calculating the FITS reference value using either:

1. The ground psychometric wet bulb and dry bulb temperatures and Table 3.1 in AFI 48-151.

2. Or the FITS calculator on the 26th OWS webpage with the dew point and dry bulbtemperatures.

b. The Bioenvironmental Engineering Flight does not have the capability to calculate theFITS reference value and determine the FITS zone as needed during airfield hours, but theWeather Flight (47 OSS/OSW) in the 47 OG does.

4. Responsibilities. The 47 OSS/OSW will:

a. Calculate the FITS reference value from the 26th OWS webpage using the dew pointand dry bulb temperatures.

b. Using the FITS reference value determine the FITS zone IAW Table 3.1 in AFI 48-151.

c. Provide FITS zone information to the 47 OG, as requested.

5. Responsibilities. The 47 MDOS/SGOJ will:

Figure A3.2. Memorandum of Understanding between 47th Operations Group (Weather Flight) and 47th Medical Group (Biomedical Engineering) Regarding Index of Thermal Stress Part 2.

a. Provide guidance to the Weather Flight in regards to questions about the FITS zone andAFI 48-151.

6. Therefore let it be known that this MOU, as expressed by the complete contents herein, and in witness whereof evidenced by the signatures of the Parties below, shall be in effect for a period of three (3) years from the execution date and is furthermore subject to reasonable amendment of termination by the same parties during this period.

7. Any questions or concerns regarding this MOU, please contact the 47 OSS/OSW at COMM: (830) 298-5870.

JOSEPH D. McCANE, Colonel, USAF
Commander, 47th Operations Group

1st Ind, 47 MDG/CC 13 January 2025

MEMORANDUM FOR 47 OG/CC

Approved. Please review and if you have any questions, please contact the 47 OG/CCE at COMM: (830) 298-5293.

KELLY L. VERMILLION, Colonel, USAF
Commander, 47th Medical Group