BY ORDER OF THE COMMANDER
82D TRAINING WING (AETC)

SHEPPARD AIR FORCE BASE
INSTRUCTION 15-101

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Weather

WEATHER SUPPORT

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This instruction implements Air Force Policy Directive (AFPD) 15-1*, Air Force Weather Operations,* Air Force Strategic Plan on Weather Reengineering, Air Force Instruction (AFI) 10-206_Air Education Training Command Supplement I, *Operational Reporting*, AFI 15-114, *Weather Technical Readiness Evaluation*, AFI 15-128, *Air Force Weather Roles and Responsibilities,* AFI 10-2501_Sheppard Air Force Base (SAFB) Supplement, *Air Force Emergency Management (EM) Program Planning and Operations*, Installation Emergency Management Plan (IEMP) 10-2, Air Force Manual (AFMAN) 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, and AFMAN 15-129, *Air and Space Weather Operations*. It establishes responsibilities and weather support procedures provided by the 80th Operations Support Squadron's Weather Flight (80 OSS/OSW) to all units physically residing at SAFB. It also provides general information for weather services, including observations and forecasts, warnings, watches, and advisories; space weather data, information dissemination, and base-wide reciprocal support. This publication applies to the Regular Air Force. This publication does not apply to the United States Space Force, the Air Force Reserve, and the Air National Guard. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFMAN 33-363, *Management of Records*, and disposed of IAW Air Force (AF) Records Information Management System Records Disposition Schedule, or any updated statement provided by the AF Records Management office (SAF/CIO A6P). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command. See **Attachment 1** for a Glossary of References and Supporting Information. The use of the name or

mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the AF.

SUMMARY OF CHANGES

This document has been substantially revised and must be reviewed in its entirety. Clarifies special weather statement recipients. Documents local procedures for weather observations transmitted to Air Traffic Control facilities. References have been updated to reflect most recent publications.

Chapter 1

OPERATIONAL WEATHER SQUADRON AND WEATHER FLIGHT INTERACTIONS

1.1. General.

1.1.1. The 80 OSS/OSW weather flight (WF) are the official weather information agencies for SAFB, Texas. These agencies provide weather information in support of the 82d Training Wing (82 TRW), the 80th Flying Training Wing (80 FTW), subordinate units and units assigned, attached or supported by SAFB. The 80 OSS/OSW WF is the focal point for all weather-related inquiries. This instruction will be reviewed and revised no greater than biennially or IAW host/parent unit procedures if the time is less than biennially.

1.1.2. The 80 OSS/OSW WF exploits DoD or other government weather data to minimize the impact of environmental threats to friendly forces while simultaneously capitalizing on environmental conditions that maximize the operational advantage over enemy forces. WF's tailor the characterization provided by other weather units such as the OWS. The WF tailors data that is pertinent to a specific mission profile from the overall characterization of the air and space environment. Tailoring does not mean changing the characterization, but to the greatest extent possible weather flights will use the characterized data provided to them.

1.2. Concept of Operations.

1.2.1. The 26 OWS provides regional and operational-level weather products and information to AF and Army units in the Southeast region of the Continental United States. The 26 OWS provides 24-hour forecasting services, meteorological watch, and resource protection.

1.2.2. The 80 OSS/OSW WF is the primary source of tailored weather services in support of the 82 TRW and the 80 FTW, various headquarters elements, and visiting aircrews. The 80 OSS/OSW WF will make every effort to ensure that mission-limiting weather is anticipated and exploited, that safety and resource protection are maintained.

1.3. Responsibilities.

1.3.1. General responsibilities of the 26 OWS and the 80 OSS/OSW WF are outlined in AFI 15-128, paragraphs 2.3.3.-2.3.4. and AFMAN 15-129, paragraphs 2.4. and 2.22.

1.3.1.1. If the Sheppard Weather Flight cannot disseminate their weather products (i.e. WWAs, observations, 175-1s etc.), or provide support to their supported customers via primary or alternate methods, due to unforeseen (emergency) situations, then the Weather Flight will contact the 26 OWS to coordinate support requirements and product dissemination. The 26 OWS will take over support requirements and production of customer required products (i.e. WWAs, 175-1s etc.) to enable mission operations to continue until Weather Flight capability resumes. Reach back to the OWS will be limited to emergency/contingency situations and is not a substitute for sustained direct support by the local Weather Flight.

1.3.1.2. The 80 OSS/OSW WF issues WWAs when the airfield is open or closed. When the WF is closed during holidays or family days with favorable weather, weather personnel will maintain remote meteorological watch and will reopen the weather flight if unexpected weather watch or warning criteria develop or there are errors in automated weather observations.

1.3.1.2.1. 80 OSS/OSW WF leadership establishes station closure and resource protection procedures IAW AFMAN 15-129.

1.3.1.3. The 80 OSS/OSW WF issues all observed weather advisories. Base-wide advisories will be issued when the forecaster is manning the duty desk, while flying-specific advisories will be issued only when the tower is open. Reference **Table 2.4**.

1.3.1.4. The 80 OSS/OSW WF will create Mission Weather Products that provide and arrange for all strategic, operational and tactical-level weather information for SAFB units. 80 OSS/OSW personnel furnish SAFB with tailored forecasts for mission execution, staff weather services, climate data, and local Mission Watch.

1.3.2. SAFB Installation Data Page. The 26 OWS and 80 OSS/OSW WF will coordinate and maintain a SAFB Installation Data Page on the 26 OWS website as governed by AFMAN 15-129. This page will detail WWA thresholds, desired lead times, mission impacts, unit information, Joint Environmental Toolkit (JET) back-up contacts and local outage back-up information.

1.3.3. The 80 OSS/OSW WF will provide a standby contact roster for 82d Training Wing Command Post (82 TRW/CP) in the event the forecaster cannot be contacted. This memo will be reviewed on a semi-annual basis for currency.

1.4. Duty Priorities. IAW AFMAN 15-129, paragraph 3.3.3.1., the 80 OSS/OSW WF has created the following duty priorities based on 82 TRW and 80 FTW mission requirements.

Table 1.1. 80 OSS/OSW Duty Priorities.

Priority	Duties
1	Perform Emergency War Order Taskings
2	Execute Evacuation Procedures
3	Respond to Aircraft/Ground emergencies
4	Pilot-to-Metro Service (PMSV) Contacts
5	Issue Warnings for SAFB (activating Severe Weather Action Procedures as needed)
6	Provide Weather Information for the Supervisor of Flying
7	Take/Disseminate Surface Observation
8	Perform Meteorological Watch and Issue Watches and Advisories for SAFB
9	Collect/Disseminate Pilot Reports, Issue Urgent First
10	Mission Execution Forecast Process – Produce and Disseminate Forecasts
11	Perform Mission Watch Activities
12	Provide Briefing Support (both 82 TRW and 80 FTW)
13	Weather Functional Training
14	Accomplish Administrative Tasks

1.5. Hours of Operation, Contact Information, and Operating Location.

1.5.1. The 80 OSS/OSW WF is open during 80 FTW flying operations, as set by the IFR Supplement, or modified via NOTAM, typically Monday through Friday from 0400L to 2000L and Sunday from 1200L to 1700L. 80 OSS/OSW WF personnel will remotely monitor weather conditions during closure, and 80 OSS/OSW WF leadership may be reached through the command post if urgent weather requirements arise.

1.5.2. Operating Location. The weather station is co-located with Airfield Management Operations in the Airfield Operations Complex in building 1903, room 113. The WF operates a customer service counter at this location to provide flight weather briefings to pilots and prepares operational weather products/information for other on-base personnel, contact WF call Commercial (940)-676-2730. If customers require weather information during WF closure, they should contact 82 TRW/CP, who will put them in touch with the 80 OSS/OSW WF standby forecaster.

1.6. Continuity of Operations Plan. Continuity of support to the installation is susceptible to communication outages.

1.6.1. Alternate Operating Location (AOL). In the event that the weather station must be evacuated, the WF operations will move to building 1360. WF members will resume services at the AOL as soon as possible. Mission services functions will be maintained; however, PMSV is not available at the AOL and the ASOS cannot be augmented at the AOL. As a result, the weather observations transmitted under the International Civil Aviation Organization station identifier for KSPS may be automatically generated and may not match the weather observed at the AOL and transmitted locally under the local station identifier (KSHP) for SAFB thru the JET. To reach WF personnel in the event of an evacuation, refer to the AOL phone number listed above in **paragraph 1.5.2** For flight safety reasons, WF will not evacuate during exercises. However, WF personnel will perform an AOL evacuation annually to maintain certification. See **Attachment 7** for location of primary and AOL.

1.6.2. If the 80 OSS/OSW experiences a full communication/electrical outage (network, phone, cell phone, power), the 26 OWS may take responsibility for WWAs and flight weather briefings until outages can be corrected or overcome. Capabilities may be delayed or omitted based on the situation.

1.6.3. 26 OWS Continuity of Operations Plan.

1.6.3.1. The 26 OWS may occasionally experience communication outages disabling access to web-based applications (such as JET) or weather forecasting resources. When possible, the 26 OWS will designate an alternate OWS to provide continuity of operations during the outage. Otherwise, similar products can generally be found at other OWS websites or other Air Force Weather websites.

1.6.3.2. Exercises. In coordination with weather flights, the 26 OWS conducts monthly/quarterly Continuity of Operations Plan exercises.

Chapter 2

AIRFIELD SERVICES

2.1. General. Airfield services include those actions affecting the SAFB aerodrome (defined as 5 NM ring from the airfield center) or the installation as a whole.

2.2. Observations. Observations are taken, recorded, and disseminated IAW AFMAN 15-111, utilizing the ASOS. The ASOS must be supplemented with basic weather watch and augmentation from a WF forecaster to ensure the most accurate weather observation. (**Note:** There are three stand-alone Fixed Meteorological Equipment-13s (FMQ-13s) for additional wind data on the airfield.) The following observations are created and disseminated:

2.2.1. Aviation Routine Weather Report (METAR). METARs are disseminated longline 52 minutes after the hour as the ASOS is programmed. These observations are transmitted under the civilian identifier KSPS. A weather technician will transcribe each METAR observation for local viewing via the JET Form 3813 by the top of the hour after the longline observation.

2.2.2. Aviation Selected Special Weather Report (SPECI). A SPECI is an unscheduled observation completed and transmitted under the KSPS identifier when any of the SAFB special criteria listed in **Attachment 2** have been observed or sensed. SPECIs will contain all data elements found in an METAR plus additional remarks that elaborates on data in the body of the report. All SPECIs will be transcribed for local viewing as soon as possible after the ASOS transmits the observation.

2.2.3. Aviation Selected Local Weather Report (LOCAL). An abbreviated report on conditions that do not meet SPECI criteria but are significant to local operations and are only transmitted to local customers under the military weather identifier for SAFB (KSHP). All official KSPS airfield METAR and SPECI observations and observations meeting other LOCAL criteria are transcribed using LOCAL observation procedures. The WF disseminates full-element LOCAL reports during ATC hours of operation only to help aviators safely complete their mission. LOCAL criteria for SAFB is listed in **Attachment 2**.

2.2.3.1. The joint-use nature of SAFB prevents ATC agencies from viewing the full, live weather data feed available at most other Air Force bases. ATC uses LOCAL observations to transmit current weather data to locally flying aircraft via ATIS. Because that system does not automatically ingest and transmit LOCAL observations, the WF must send LOCAL observations through the JET Form 3813 encoded as either a METAR (to transcribe KSPS METAR observations) or SPECI (to transcribe KSPS SPECI observations or to send observations meeting other LOCAL criteria). Regardless, all KSHP weather observations transmitted via the JET Form 3813 and viewable on the AFAS will be treated as LOCAL observations to distinguish them from the official KSPS weather observation. All locally transmitted observations will remain within the special criteria categories of the most recent official KSPS METAR or SPECI observation.

2.2.3.2. All LOCAL observations transmitted to ATC agencies will be saved on a LOCAL dissemination log in accordance with AFMAN 15-111.

2.2.4. Official Observing Points. The official observing point is outside the door of Building 1903 from the WF door, next to the fire hydrant on the corner of the AOC apron. During

relocations to the AOL, the observation point is located southeast of the AOL on a yellow circle painted on the concrete. (See **Attachment 7**.)

2.2.5. Observing Point Limitations.

2.2.5.1. The ASOS is properly sited and maintained by the NWS. A review of the current flight information publication requires SPECI observations for the values of 1 7/8 statute mile, 1 3/8 statute mile, 1 1/8 statute mile, and 5/8 statute mile. However, these values are not reportable by the ASOS according to the *ASOS Ready Reference Guide*, Table 2-2. The observer will only report prevailing visibility values the ASOS will accept; therefore, the lower of the two values should be used. There is no runway visual range capability at SAFB. Observations will be properly augmented with Basic Weather Watch outlined in **paragraph 2.2.6**.

2.2.5.2. Augmented observations taken at the primary augmentation site (building 1903) are degraded because the observer's view to the west (prevailing direction for weather changes) is blocked by the building and thunder may not be heard due to airfield noise. Weather technicians may walk to the north end of the building from the observing point to see to the west.

2.2.6. Perform Basic Weather Watch. This will be conducted during periods when the airfield is controlled and during periods when any of the mandatory ASOS augmentation criteria is occurring, such as when SWAP is activated (See **Table 24**). During Basic Weather Watch, weather personnel will check weather conditions at intervals not to exceed 20 minutes to determine the need for a SPECI observation when any of the SPECI conditions are observed or are forecast to occur within 1 hour.

2.2.7. Perform Observation Augmentation. Augmentation is the process of having a certified weather forecaster manually add or edit data to an observation generated by ASOS. The two augmentation processes used are *supplementing* and *back-up*. The definitions are defined in **attachment 1**.

2.2.7.1. Supplementing Procedures. WF personnel will supplement observations when the airfield is open and the weather conditions in **Attachment 2** are observed. WF personnel will be ready to supplement observations if the conditions in **Attachment 2** are forecast to occur within 2 hours. WF personnel are required to log on to the ASOS at the beginning of each shift and be prepared to supplement each observation.

2.2.7.2. Back-Up Procedures. In the event of ASOS malfunction or failure, back-up procedures will be implemented. WF personnel will use alternate observing equipment procedures when performing back-up operations. A weather Kestrel will be used to take observations while performing back-up procedures. When required, the WF will encode and disseminate METAR and SPECI observations IAW AFMAN15-111, Table 3.2. All element entries must be observed within 15 minutes of the actual time of the observation with the exception of wind gusts and squalls, which are reported only if they are observed within 10 minutes of the time of the observation. When utilizing back-up equipment, all wind and pressure values will be estimated IAW AFMAN15-111.

2.2.8. ATC System Support. The weather sensor on SAFB does not feed into ATC's AFAS; therefore, the WF will generate observations within the JET system to support this requirement.

This will be accomplished only when local ATC agencies are open and will include information required by local ATC agency requirements.

2.2.8.1. In the event of a JET outage, the WF will enter each observation and current altimeter setting directly into AFAS using the provided workstation.

2.3. Terminal Aerodrome Forecast (TAF) Support. The NWS office in Norman, Oklahoma produces the TAF for Wichita Falls, Texas, under the civilian identifier KSPS. The 80 OSS/OSW WF produces a locally tailored TAF for the flying squadrons consistent with the MEF. This TAF is only available through JET or AFAS. It is not transmitted longline, and it should never be confused with the official KSPS TAF.

2.4. Resource Protection Support and Weather Watch, Warning, and Advisory. Special Weather Statements (SWS) are special notices provided by the 26 OWS that notify 80 OSS/OSW WF of potential weather watch or warning criteria forecast to occur within the next three to four days. These products provide notice of weather events posing a hazard to life or property to assist military decision makers with resource protection decisions. The 80 OSS/OSW WF is responsible for all SAFB WWAs. WWA products will specifically state the area effected which is a 5NM radius from the center point of the SAFB runway complex. The 80 OSS/OSW WF tailors these notifications based on local mission parameters and forwards the information to key SAFB leaders and agencies. As hazardous weather approaches, the 80 OSS/OSW WF will issue WWAs triggering protective actions as required by each SAFB organization. WWAs are defined in **attachment 1**.

Table 2.1. SAFB Weather Watches.

Watch Type	Criteria	Desired Lead Time
Tornado	Tornado within 5 NM or Funnel Cloud within 5 NM (Detected by radar or visually observed)	As potential warrants
Severe Thunderstorm	Damaging wind ≥ 50 knots (kts) associated with thunderstorms AND/OR Damaging Hail ≥ ¾ inch at SAFB.	As potential warrants
Damaging Wind	Surface winds not associated with thunderstorms ≥ 50 kts.	As potential warrants
Freezing Precipitation	Liquid precipitation of any type and intensity falls and produces glaze ice on exposed surfaces.	As potential warrants
Heavy Snow	2" in 12 hours.	As potential warrants
Blizzard	All of the following must occur: a) Surface visibility less than or equal to ¼ mile/400 meters b) Falling and/or blowing snow c) Sustained wind speeds or gusts ≥ 30 kts d) Duration ≥ 3 hours.	As potential warrants
Heavy Rain	2" in 12 hours.	As potential warrants
Lightning	Lightning within 5 NM.	30 Minutes

Table 2.2. SAFB Weather Warnings.

Warning Type	Criteria	Desired Lead Time
Tornado	Tornado within 5 NM or Funnel Cloud within 5 NM (Detected by radar or visually observed)	15 minutes
Severe Thunderstorm	Damaging wind ≥ 50 kts associated with thunderstorms AND/OR Damaging Hail ≥ ¾ inch at SAFB.	60 Minutes
Moderate Thunderstorm	Strong wind ≥ 35 kts associated with thunderstorms AND/OR Large Hail > ½ inch and less than < ¾ inch at SAFB.	60 Minutes
Damaging Wind	Surface winds not associated with thunderstorms ≥ 50 kts.	60 Minutes
Strong Wind	Surface winds not associated with thunderstorms ≥ 35 kts and less < 50 kts.	60 Minutes
Freezing Precipitation	Liquid precipitation of any type and intensity falls and produces glaze ice on exposed surfaces.	60 Minutes
Heavy Snow	2" in 12 hours.	60 Minutes
Blizzard	All of the following must occur: a) Surface visibility less than or equal to ¼ mile/400 meters. b) Considerable falling and/or blowing snow. c) Sustained wind speeds or gusts ≥ 30 kts. d) Duration ≥ 3 hours.	60 Minutes
Heavy Rain	2" in 12 hours.	60 Minutes
Lightning	Lightning within 5 NM	Observed

2.4.1. Observed Weather Warnings. Lightning warning w/in 5 NM is the only observed warning issued for SAFB and extends 5 NM in all directions from the airfield. The lightning warning is not issued until lightning is observed, either visually or via the National Lightning Detection Network. The lightning warning will remain valid until lightning is no longer observed within 5 NM for at least **15 minutes**. **Exception:** A lightning warning will not be cancelled if a storm core capable of producing lightning remains within 5 NM (as indicated on radar by 40 dBz reflectivity returns elevated to above the -10°C height).

Table 2.3. SAFB Weather Advisories.

Criteria	Forecast/Observed	Desired Lead Time
Frostbite Risk Level Caution: Wind chill less than or equal to 32°F, but greater than 0°F.	Observed	Observed*
Frostbite Risk Level Danger: Wind chill less than or equal to 0°F, but greater than -18°F.	Observed	Observed*
Frostbite Risk Level High: Wind chill less than or equal to -18°F, but greater than -32°F.	Observed	Observed**

Anti-Ice with Temperature: Observed temperature less than 4°C or density altitude less than -1000 feet.	Observed	Observed*
Winds ≥ 25 kts.	Observed	Observed**
Low Level Wind Shear.	Observed	Observed*
Index of Thermal Stress Caution (90-99°F or 32.2-37.2°C).	Observed	Observed*
Index of Thermal Stress Danger (≥100°F or 37.8°C).	Observed	Observed*
Thunderstorms within 10 miles.	Observed	Observed**
* For flying operations. Issued by the WF only during 80 FTW flying hours. ** Issued by the WF any time a weather technician is present for duty.		

2.4.2. Weather Advisories. A weather advisories is defined in **attachment 1**. Observed weather advisories will remain valid until the criteria is no longer occurring and has not occurred in the last 30 minutes (exception: Lighting w/in 10 NM will remain valid until criteria is no longer occurring and has not occurred in the last 15 minutes). SAFB advisories are defined in Table

2.4.3. **A chart to determine the Index of Thermal Stress category is located in Attachment 8.**

2.5. Rules for WWAs.

2.5.1. WWA Numbering Scheme. WWAs are numbered consecutively by identifying the type of weather message (watch, warning, or advisory) followed by a five-digit number. The first two numbers indicate the current month while the second three numbers indicate the sequence number. For example, the message "Weather Warning 02-005" means the month is February (02) and this is the fifth (005) warning issued in the month. The message "Weather Advisory 12-013" means the month is December (12) and this is the thirteenth (013) advisory issued in the month.

2.5.2. WWA Upgrades/Downgrades. WWAs will be upgraded (i.e., winds increase from 35 kts to 50 kts) or downgraded as required. Upgrades should meet the desired lead time specified in Table **2.1**, **2.2**, and **2.3** Warnings will be in effect at a given time for specific phenomena (this could include multiple warning criteria as required). If a warning is issued for one criteria and it becomes necessary to warn for another criteria, a new warning and new number will be issued, to include all criteria expected. Separate valid times may be specified for each criterion, if necessary.

2.5.3. WWA Amendments. When WWAs no longer adequately describe the phenomenon's expected occurrence, a completely new WWA with a new number will be issued. The amendment will clearly state how the amendment or extension affects any previously issued notices.

2.5.4. WWA Extensions. WWAs may be extended provided the extension is issued prior to the expiration of the original notice.

2.5.5. WWA Cancellation. Warnings and watches are canceled when the weather phenomena is no longer occurring or expected to occur. Warnings not extended or canceled will automatically expire at the end of the valid period. Observed warnings will be canceled when

the criteria is no longer occurring and has not occurred in the last 15 minutes. Observed advisories will be canceled when the criteria is no longer occurring and has not occurred in the last 30 minutes.

2.6. Dissemination Process for Observations, TAFs, SWS.

2.6.1. Observations. Observations taken by either the ASOS observing system or with back-up equipment are disseminated via JET and the ASOS interface. When JET is nonoperational, the weather flight will input the observations directly into AFAS. If both systems are down, the weather flight will relay observations directly to the tower, RAPCON, and the Supervisor of Flying. The observation can still be obtained through National Weather Service sites.

2.6.2. Terminal Aerodrome Forecast (TAF). The official SAFB/Wichita Falls Municipal Airport TAF is produced and disseminated solely by the NWS. A tailored local TAF issued by the 80 OSS/OSW WF for SAFB flight operations is available on the JET Portal for the use of the SOF during flying hours only.

2.6.3. Special Weather Statements. Special Weather Statements provide advance notice of widespread hazardous weather conditions that have the potential to affect SAFB. 26 OWS posts the SWS to the 26 OWS webpage. The 80 OSS/OSW WF leadership will forward tailored information from the Special Weather Statements via e-mail to SAFB leadership and SAFB agencies with a focus on potential impacts the weather will have on the mission, equipment and personnel.

2.6.4. Weather Watches, Warnings, and Advisories (WWAs). The 80 OSS/OSW WF will enter WWAs into JET which will automatically disseminate the information to the 82 TRW/CP. The 80 OSS/OSW WF will also notify ATC, the SOF, Airfield Management Operations (80 OSS/OSAA), Flying Operations Supervisors, and the Maintenance Operations Center via telephone. The 80 OSS/OSW WF contacts these key offices to verify receipt according to local procedures. If JET is out-of-service, the 80 OSS/OSW WF will make back-up calls. In addition, the 82 TRW/CP disseminates WWAs as required via e-mail, Land Mobile Radios, and the Air Force Emergency Mass Notification System (otherwise known as AtHoc).

2.7. Cooperative Weather Watch. The Cooperative Weather Watch is a program in which ATC personnel are trained by SAFB weather personnel to assist in monitoring local weather conditions for significant changes. Due to their location in the tower, they have a full 360-degree field of view of the horizon.

2.7.1. ATC personnel will notify weather personnel when:

2.7.1.1. Tower visibility is less than 4 statute miles and tower visibility changes by a reportable value (3, 2¾, 2½, 2¼, 2, 1¾, 1½, 1¼, 1, ¾ and ½ statute miles), or when tower visibility increases to 4 miles or more.

2.7.1.2. A thunderstorm is observed.

2.7.1.3. Lightning is first observed.

2.7.1.4. A tornado or funnel cloud is observed or disappears.

2.7.1.5. Precipitation begins or ends.

2.7.1.6. Any other meteorological situation exists that, in the opinion of the ATC, is critical to safety of flight.

2.7.1.7. Notify the weather technician of active runway changes and corresponding changes to wind sensor equipment.

2.7.1.8. Respond to WF requests for radio checks of the PMSV frequency 339.65 Megahertz, and provide back-up, as able, when the PMSV is out of service.

2.7.1.9. Obtain Pilot Reports when conditions warrant, or upon request, and relay the reports to the weather flight within 5 minutes of receipt, unless higher priority duty exists.

2.7.1.10. Provide indoctrination training for weather personnel, as requested.

2.7.2. ATC Cooperative Weather Watch. The 80 OSS/OSW WF oversees the SAFB Cooperative Weather Watch training program. ATC personnel requiring training should contact the weather flight Noncommissioned Officer in Charge at DSN: 736-2730/Commercial: (940) 676-2730 to schedule an appointment. To satisfy Cooperative Weather Watch requirements, personnel are required to receive an orientation of the weather facilities, attend a weather observer briefing, and be certified on observing procedures.

2.8. Pilot-to-Metro Service (PMSV) Support. Weather information is available via PMSV during duty hours on frequency 339.65 Megahertz. The duty forecaster will monitor PMSV traffic for all aircraft contacts. For aircraft outside the range of our PMSV system, the 80 OSS/OSW WF can provide PMSV support through a phone patch with the 82 TRW/CP. PMSV outages are discussed in **paragraph 5.3.2**.

2.9. Emergency Action(s) Response.

2.9.1. Aircraft Mishap. When notified of an aircraft mishap, the weather flight will save data used to develop weather products for the aircrew and then provide this data to investigating agencies upon request.

2.9.1.1. The 80 OSS/OSW WF will save all applicable data and products. The 80 OSS/OSW WF will coordinate with any applicable OWS to ensure data is saved. Enough data covering weather conditions before and after the mishap will be saved to fully reconstruct environmental conditions. Additionally, the 80 OSS/OSW WF will save locally available data and products including but not limited to satellite imagery (visible, infrared, and water vapor products), radar imagery (base reflectivity, base velocity, echo tops, velocity azimuth display, and composite reflectivity products), WWAs, observations, and any forecast products provided to the aircrew.

2.9.1.2. If an OWS or another WF provided the Mission Weather Product, they will conduct the data save in coordination with any other AF weather units involved.

2.9.2. Severe Weather Action Procedures. The 80 OSS/OSW WF will initiate Severe Weather Action Procedures in accordance with criteria listed in **Table 2.4**, Severe Weather Action Procedures ensures sufficient manpower is available to meet the increased demand for timely weather information from its supported unit(s) during significant weather events. It is imperative that timely and accurate WWAs are disseminated to all agencies to ensure personnel and Resource Protection. The 80 OSS/OSW WF will initiate a heightened Meteorological Watch. The weather technician will notify the WF's NCOIC of Severe Weather Action Procedures activation during normal staff duty hours.

Table 2.4. Conditions Requiring Severe Weather Action Procedures Activation.

80 OSS/OSW Severe Weather Action Procedures Activation Criteria
1. Tornado Watch/Warning
2. Severe Thunderstorms Watch/Warning
3. Freezing Precipitation Watch/Warning
4. Blizzard Watch/Warning
5. Heavy Snow Watch/Warning

2.9.3. Chemical Downwind Message/Toxic Corridor Predictions. When on duty, the 80 OSS/OSW WF will provide the SAFB Emergency Operations Center with weather information for toxic corridor predictions. During weather flight downtime, the EOC may access the current weather observation via the ASOS observation line at Commercial: (940) 855-9045). The SAFB Chemical Downwind Message is available on AF Weather-Web Service's website (**https://weather.af.mil/AFW_WEBS/**) and can be requested through the 80 OSS/OSW WF. If this message is not accessible due to communications failure, WF personnel will provide a wind forecast. The Fire Department (82 CES/CEF) has plume forecast capability. The 80 OSS/OSW WF will provide back-up support.

2.9.4. Effective Downwind Fallout Message. The 82d Civil Engineer Squadron's (82 CES) Emergency Management Office predicts the extent of nuclear fallout using the SAFB Effective Downwind Fallout Message. This message is available on the AF Weather-WEB Service's website and can be requested through the 80 OSS/OSW WF as lower tonnage (EDM FUUS22) and higher tonnage (EDM FUUS45). If this message is not accessible due to communications failure, 80 OSS/OSW WF will provide a wind forecast.

Chapter 3

MISSION SERVICES

3.1. General. The 80 OSS/OSW WF support the SAFB flying and non-flying missions. This chapter identifies the flying and non-flying missions and the weather support provided by the weather flight.

3.2. Flying Missions. The 80 OSS/OSW WF provides weather support to the 80 FTW and subordinate units including the 80th Operations Group (OG), 89th Flying Training Squadron (FTS), 90 FTS, 97 FTS, 459 FTS, 469 FTS, 88th Fighter Training Squadron, and 80 OSS.

3.3. Mission Weather Products. Mission Weather Products fuse theater scale products with local mission requirements enabling the direct inject of weather impacts into warfighter planning and/or execution. The result is a product designed to provide timely, accurate, and relevant environmental information for planning and execution. The Mission Weather Product must be horizontally consistent with (but not necessarily mirror) products issued by any OWS and 557th Weather Wing (557 WW).

3.3.1. **(Added)** Flight Weather Mission Weather Products. The MEF is designed for online access. This can be found via local webpages for flying units (\\vnvm-fs-002\Stu\Weather\KSHP_Flying.htm). The MEF specification and amendment criteria are tailored to the weather conditions that affect 80 FTW aircrews, as listed in **Attachment 3**. This is the primary source to receive weather updates and local area flying conditions for supported flying units on SAFB as well as an extended next-day and 5-day forecast. E-mailing flying schedules to the weather flight's organizational box. This is the primary source to receive requests from supported flying units. Requests, briefings, and updates can be obtained also by calling the weather flight. An example of the Mission Weather Products can be found in **Attachment 4**.

3.3.1.1. **(Added)** All other briefing requests that are not covered by the standard MEF will receive a standard 175-1. These requests can be made by e-mailing the 80 OSS/OSW WF e-mail distribution list, calling the WF, or request support in person. To receive the briefing, the requestor must indicate receipt preference (normally via e-mail or saved to the 80 FTW Student shared drive).

3.4. Mission Watch. This is a deliberate process for monitoring terrestrial weather and/or the space environment for specific mission-limiting environmental factors.

3.4.1. Weather Flight Briefed Missions. It is through Mission Watch that Mission Weather Product amendments/updates are accomplished. When potential hazards are identified (generally within 25 miles of the flight route and/or 5,000 feet of the flight level), missions will be monitored continuously by the weather technician. The 80 OSS/OSW WF will utilize operational risk management processes during all stages of the forecast process. By utilizing proper risk management principles, technicians will remain situationally aware of weather criteria or system outages that might require augmentation of the system to provide the most accurate weather data for safety of flight and ground personnel. The 80 OSS/OSW WF will amend/update the Mission Watch that Mission Weather Product as necessary. **Note:** Mission Watch is only conducted for missions that received weather briefings from 80 OSS/OSW WF.

3.5. Post-Mission Analysis/Feedback. Aircrews are encouraged to contact the 80 OSS/OSW WF with post-mission information and/or follow-up support. The 80 OSS/OSW WF will utilize customer feedback to adjust Mission Watches, improve internal processes, enhance training, forecast proficiency, and ensure product accuracy. Formal/informal feedback methods include:

3.5.1. 80 OSS/OSW WF Feedback Form. This is located at the WF's briefing desk and linked with the MEF/175-1 correspondence.

3.5.2. Phone call, e-mail, or in-person discussion with the WF after mission completion.

3.6. Transient Aircrew Support. Weather technicians will provide or arrange for weather support for transient aircrews IAW the duty priorities list **Table 1.1** The 80 OSS/OSW WF may provide flight weather briefings (175-1s), and/or updates to aircrews. Transient aircrews can request and receive briefings in person at the 80 OSS/OSW WF in building 1903 or through the WF's contact information listed in **paragraph 1.5.2**.

3.7. Non-Flying Missions. The 80 OSS/OSW WF supports various non-flying missions (e.g., enlisted technical training, wing picnics, change of command ceremonies, Morale Welfare and Recreation events) through resource protection (WWAs). Specific support to non-flying missions is identified in **Chapter 4**. Specialized weather information can be provided to support any government-sponsored non-flying mission or event upon request. Non-governmental agencies should request weather information and support through 82 TRW Public Affairs (82 TRW/PA).

3.8. Space Weather Impacts. SAFB's missions have a wide-variety of parameters affected by various space conditions (High Frequency and Ultra High Frequency communication, radar, Global Positioning System communications, etc.). The 80 OSS/OSW WF provides space impacts on their daily Mission Weather Products.

3.9. Tropical Weather. The 80 OSS/OSW WF will disseminate tropical weather forecasts to base agencies if applicable. The 80 OSS/OSW WF will not deviate from the JTWC, NHC, or 26 OWS forecast tropical storm tracks or intensities.

Chapter 4

STAFF SERVICES

4.1. General. Staff services are typically accomplished by 80 OSS/OSW WF leadership and include meteorological functions (briefings), ensuring the WF is trained and equipped for day-to-day operations, and cultivating relationships with base agencies to ensure optimal weather support.

4.2. Staff Meteorological Functions. Staff meteorological functions aid leadership in identifying and understanding specific weather and environmental impacts. The 80 OSS/OSW WF is available to assist commanders in determining weather support requirements and impacts to operations. The following paragraphs provide examples of staff weather briefings and support. Any other weather-related support requests should be made through weather flight leadership.

4.2.1. **(Added)** Command Weather Briefing. 80 OSS/OSW WF provides the 82 TRW and 80 FTW commanders and staff with a current weather synopsis and an extended planning forecast. This briefing is given upon request by the 82 TRW and 80 FTW. The briefing format will be tailored to effectively address additional weather impacts on SAFB missions. **Note: The 82 TRW command briefing may also be known as the Installation Synch or Installation Staff Meeting.**

4.2.2. Crisis Action Team Weather Brief. The 80 OSS/OSW WF provides the CAT with a current weather synopsis and an extended planning forecast. Immediately upon recall, a weather liaison leaves to brief the CAT while another WF technician prepares and forwards this briefing to CAT e-mailing it to **82trw.battlestaffadmin@us.af.mil**.

4.2.3. 80 FTW Inclement Weather Plan. Implements deliberate actions to protect ENJJPT personnel and aircraft from weather severe thunderstorms and tornadoes. 80 OSS/OSW WF leadership will activate the plan at the first indication of severe weather likely to affect ENJJPT operations and will relay pertinent information (such as changes to forecast timing and intensity or recommendations for aircraft dispersal corridors) to 80 FTW and 80 OG leadership until the threat has passed.

4.2.4. Instrument Refresher Course Weather Brief. Conducted as the 80 OG training office requires (usually once per month), this brief describes seasonal weather experienced at SAFB, aviation weather hazards and weather services provided by the 80 OSS/OSW WF.

4.2.5. Cross-Country Weather Brief. The 80 OSS/OSW WF provides a detailed briefing to the 80th Operations Group Commander (80 OG/CC), weekend SOF, and weekend Duty Desk by request for cross-country missions. The briefing includes current weather synopsis, aviation weather hazards, flight level winds and forecast conditions at SAFB through the weekend.

4.2.6. Special Occasion Forecasts and Briefs. The 80 OSS/OSW WF will provide a current weather synopsis and/or planning forecast for air shows, organizational picnics, change of command ceremonies or other special events as requested by leadership. Requests for special forecasts should be submitted through 80 OSS/OSW WF leadership.

4.2.7. Weather Capabilities Brief. The 80 OSS/OSW WF will provide a weather capabilities brief for the installation as wing leadership requests and will address pertinent weather support concerns.

4.2.8. Climatology Data. The 80 OSS/OSW WF can obtain climate statistics from all over the world through the 14th Weather Squadron and locally-saved data. Requests for climatology data should be submitted through 80 OSS/OSW WF leadership.

4.2.9. Local Weather Orientation. 80 OSS/OSW WF personnel will provide briefings on weather capabilities and procedures for obtaining weather services for the following personnel:

4.2.9.1. Newly-assigned 80 FTW SOF.

4.2.9.2. New classes of student pilots.

4.2.9.3. Radar Approach Control (RAPCON) and ATC Personnel. Personnel assigned to the ATC control tower must also pass a written test to obtain certification for Cooperative Weather Watch.

4.3. Staff Integration Functions. 80 OSS/OSW WF leadership will ensure their unit is adequately resourced to meet both operational and staff requirements. In addition to leadership and management of unit activities, these unit members will also function as a direct interface with the supported unit commander and staff, and provide direct support to command, control and planning functions. Specific integration with base agencies is outlined below.

4.3.1. The 82 TRW. The 80 OSS/OSW WF will assist in periodic exercises tailored to upcoming seasonal weather or other environmental concerns and will educate base agencies on the purpose and applicability of WWAs.

4.3.2. The 82 TRW/CP. The 80 OSS/OSW WF will notify the 80 TRW/CP of weather station closures, evacuation, or AOL activation. The 80 OSS/OSW WF will also follow up with 80 TRW/CP for dissemination of WWAs.

4.3.3. The 82 TRW/PA. The 80 OSS/OSW WF t provides tours of the base weather station for community groups and others (including non-government agency weather requests) when coordinated by 82 TRW/PA.

4.3.4. The 82 CES. 80 OSS/OSW WF will provide a weather or climatology report on request.

4.3.5. The 80 OSS Airfield Operations (80 OSS/OSA). The 80 OSS/OSW WF provides notification of all forecasted WWAs via JET, telephone, e-mail, or in-person during airfield hours of operations.

4.3.5.1. The 80 OSS/OSW WF will notify the 80 OSS/OSA whenever the base weather station is evacuated and/or the Alternate Operating Location is activated.

4.3.5.2. 80 OSS/OSW WF leadership will participate as a member of the Airfield Operations Board as directed in AFI 13-204 Vol 3, *Airfield Operations Procedures and Programs*.

4.3.6. All Supported Flying Units (80 FTW). The 80 OSS/OSW WF will provide services as outlined throughout this publication as well as provide other climatology updates upon request.

4.3.7. 82 TRW/80 FTW Exercise Planning and Exercise Weather Input. The 80 OSS/OSW WF provides a primary and alternate member to the base Exercise Evaluation Team. These members provide atmospheric and space-environment expertise to help develop realistic weather scenarios. Additionally, weather Exercise Evaluation Team representatives may provide exercise weather inputs to help the base assess its ability to respond to severe weather.

IAW AFI 10-2501, SAFBSUP, the base is required to perform quarterly Table-Top exercises to address Emergency Management core capabilities including natural disasters and severe weather notification and response plans and procedures tailored to upcoming seasonal severe weather threats and other environmental concerns specific to the region.

4.4. Reciprocal Support.

4.4.1. The 82 TRW/CP will:

4.4.1.1. Inform 80 OSS/OSW WF leadership of all CAT recalls during WF closure and disseminate weather observations, forecasts, and WWAs based on base wing leadership guidance.

4.4.1.2. During 80 OSS/OSW WF closure, refer base leadership to WF leadership if they have questions that 82 TRW/CP controllers cannot answer.

4.4.1.3. Notify 80 OSS/OSW WF technicians when experiencing JET outages.

4.4.1.4. Establish and maintain a notification list of SAFB agencies for each official WWA.

4.4.1.5. Disseminate all official WWAs issued by the 80 OSS/OSW WF for SAFB according to **Attachment 5**. In addition to local dissemination requirements, 82 TRW/CP will relay all official weather warnings for SAFB to the Command Center. See Table **2.1** through **2.3** for a list of WWAs.

4.4.1.6. Activate the base alert siren when directed to do so by the 82 TRW/CC. The highest-ranking weather personnel present in the weather flight will assume this authority if time does not permit prior approval from the base commander.

4.4.1.7. Notify the 80 OSS/OSW WF personnel of the following:

4.4.1.7.1. All changes in readiness conditions.

4.4.1.7.2. All local events/incidents which are affected by weather.

4.4.1.7.3. All weather-related damage to DoD personnel and resources, reported within a 120-mile radius of SAFB.

4.4.1.7.4. SAFB CAT recalls.

4.4.1.8. Coordinate with the 80 OSS/OSW WF on all weather-related Operations Event/Incident Reports (OPREPs) to higher headquarters.

4.4.1.9. Publish alerts to the installation via AtHoc after a tornado. This guidance is annotated in Installation Emergency Management Plan 10-2.

4.4.2. The 82d Communications Squadron (82 CS) will provide:

4.4.2.1. Support to JET server and work with the weather flight to allow firewall access for the JET server to access the 557th Weather Wing NIPRNET Communications Handler server. Do not push updates to JET without prior approval from 557th Weather Wing and/or the JET Help Desk. NIPRNET Communications Handler access requires:

4.4.2.1.1. A static IP address for the JET server.

4.4.2.1.2. A passive File Transfer Protocol communications access for the JET server.

4.4.2.1.3. Point-to-point access between the JET server and the 557 WW NIPRNET Communications Handler server.

4.4.2.1.4. The 557 WW NIPRNET Communications Handler server IP address added to any Access Control Lists for the firewall.

4.4.3. The 82 CES will:

4.4.3.1. Ensure that emergency electrical power is available to all the 80 OSS/OSW WF equipment, including and meteorological data displays for remote sensors.

4.4.3.2. 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:

4.4.3.2.1. Temperature between 15-32 ºC (59-90 ºF).

4.4.3.2.2. Relative humidity between 20-80%, (non-condensing).

4.4.4. The 80 FTW Safety Office (80 FTW/SE) will:

4.4.4.1. Provide aircraft Safety Investigation Board training to the 80 OSS/OSW Flight Commander, or designee, if a weather board member is requested by the convening authority.

4.4.4.2. Promptly notify the 80 OSS/OSW WF whenever damage occurs to aircraft, either in flight or on the ground, and weather may have been a contributing factor.

4.4.4.3. Notify 80 OSS/OSW WF leadership of all flying safety meetings so weather personnel can attend and/or support these meetings.

4.4.5. The 80 OG will:

4.4.5.1. Ensure a representative sample of aircrews provide post-mission weather debriefs IAW AFMAN 15-129 upon tasking.

4.4.6. The SOF Program Manager (80 OG/OGV) will:

4.4.6.1. Ensure the SOF relays timely Pilot Reports to the 80 OSS/OSW WF .

4.4.6.2. Ensure the SOF notifies the Mission Services Technician of:

4.4.6.2.1. The requirement for additional MEF updates due to extended flying hours.

4.4.6.2.2. Any designated alternate fields and the requirement for alternate and auxiliary field weather information.

4.4.6.2.3. Weather recalls and changes in aircraft flying status.

4.4.6.2.4. Weather communications equipment outages in the tower or at the duty desks.

4.4.7. The 80 OG Scheduling Division (80 OG/OGS) will:

4.4.7.1. Ensure the weekly flying schedule is posted to SharePoint by the Friday prior.

4.4.7.2. Ensure cross-country documents are posted to the shared computer drive on the day before cross-country takeoffs.

4.4.7.3. Ensure timely notification is made to the 80 OSS/OSW WF regarding non-routine weather support requirements, including fly-bys, weekend syllabus flying and air show support.

4.4.8. The 80 OG Training Division (80 OG/OGT) will:

4.4.8.1. Ensure the bookstore manager provides the 80 OSS/OSW WF with current copies of the following publications:

4.4.8.1.1. **(Added)** DoD FLIPs, Instrument Flight Rules Supplements, United States; Visual Flight Rules Supplement, United States; High Altitude United States Southwest, High Altitude United States Northwest, High Altitude United States East; Low Altitude United States Volumes 1-22; and Flight Information Handbook. **(Note: These publications may be readily available in the flight planning section via Airfield Management.)**

4.4.8.1.2. **(Added)** United States Government FLIPs: Instrument Flight Rules Enroute Low Altitude L1-L28; Instrument Flight Rules Area Charts, United States; Instrument Flight Rules Enroute High Altitude, United States H1-H11; Airport/Facility Directory, South Central United States. **(Note: These publications may be readily available in the flight planning section via Airfield Management.)**

4.4.9. The Airfield Operations Flight (80 OSS/OSA) will:

4.4.9.1. Notify the 80 OSS/OSW WF leadership of quarterly Airfield Operations Boards.

4.4.9.2. Coordinate with the 80 OSS/OSW WF to ensure all ATC personnel receive local weather phenomena and code familiarization training/certification to take limited weather observations, and/or to participate in the Cooperative Weather Watch. Reference **paragraph 2.6**.

4.4.9.3. Coordinate with the 80 OSS/OSW WF to ensure all newly-assigned weather personnel receive ATC (to include both control tower and RAPCON) orientation.

4.4.9.4. Provide flight line driving training and/or annual refresher training for the NWSASOS technician prior to allowing airfield access.

4.4.9.5. Notify the 80 OSS/OSW WF whenever the airfield extends or shortens its hours of operations.

4.4.10. Airfield Management Operations (80 OSS/OSAA) will:

4.4.10.1. Update DoD FLIP when advised by 80 OSS/OSW WF leadership of changes to the weather station's hours and services or PMSV updates.

4.4.10.2. Ensure 80 OSS/OSW WF personnel receive prompt notification of all aircraft mishaps and in-flight emergencies via the Secondary Crash Net.

4.4.11. Radar, Airfield, and Weather Systems (80 OSS/OSAM):

4.4.11.1. Upon request, Airfield Systems technicians will provide new weather personnel with a tour of the airfield to see the specific location of weather equipment.

4.4.11.2. Upon notification of an outage or degraded weather system, Airfield Systems will issue a job control number. 80 OSS/OSW WF personnel will provide mission impact

statements when equipment outages degrade mission support capability. The 80 OSS/OSW Flight Chief, or representative, determines the operational impact of outages and consults with 80 OSS/OSAM Flight Chief, or representative, regarding Division Special Interest reports sent to higher headquarters when outages occur.

4.4.12. The **82d Mission Support Group (82 MSG) will:**

4.4.12.1. The 82 MSG/CC, 82 MSG Deputy Commander (82 MSG/CD) or designated authority will work with the 80 OSS/OSW WF, 82 CES, 82 SFS, and 82 TRW/SE to make the final recommendation for the 82 TRW/CC decision to suspend training/operation at SAFB due to extreme weather conditions. If the hazardous weather occurred over night, the decision affecting SAFB will be issued by base leadership or delegated authority.

4.4.12.2. The recommended weather condition category will be based on first-hand observations of actual weather conditions both on and off base. This information could come from 82 SFS patrols, gate guards or other first responders.

4.4.13. The 82 SFS will:

4.4.13.1. Ensure hazardous road conditions due to inclement weather shall be passed on to the 82 CES Energy Management Control System and 82 TRW/CP (676-6266). Energy Management Control System will ensure the appropriate ice and/or snow removal equipment and personnel are mobilized to mitigate hazardous driving conditions on base. 82 TRW/CP will relay the info to the SAFB weather station or the standby weather personnel. Weather should then use that info to issue or verify pertinent WWAs.

4.4.14. The 82d Aerospace Medicine Squadron (82 OMRS) will:

4.4.14.1. According to AFI 48-151, *Thermal Injury Prevention Program*, the 82 OMRS Bioenvironmental Flight would normally monitor weather conditions for the Index of Thermal Stress. Due to manning constraints, the Bioenvironmental Flight has a permanent waiver on file giving the 80 OSS/OSW WF authority to monitor the Index of Thermal Stress condition and issue weather advisories accordingly. The 82 OMRS will reinitiate the waiver process following each 82 TRW or 82d Medical Group change of command in order to remain in compliance with this requirement.

4.4.15. All Weather Support Recipients will:

4.4.15.1. Notify 80 OSS/OSW WF leadership through the proper chain of command when new weather support requirements are identified.

4.4.15.2. Coordinate changes/additions to weather support requirements as soon as they are foreseen.

Chapter 5

WEATHER EQUIPMENT

5.1. General. This chapter provides a brief description of the meteorological and communications equipment used by the 80 OSS/OSW WF. Additionally, it provides information on backup systems, maintenance, and restoring priorities.

5.2. Meteorological Equipment. The 80 OSS/OSW WF uses the below equipment on a daily basis. The locations of the weather equipment on the airfield are shown in **Attachment 7**.

5.2.1. ASOS. The NWS owns and maintains the ASOS, while the maintenance cost is shared amongst NWS (Department of Commerce), SAFB (Department of Defense) and the Federal Aviation Administration (Department of Transportation). The ASOS provides for SAFB's official weather observation 24/7 and includes temperature, dew point, wind speed and direction, ceiling height, visibility, present weather, precipitation accumulation and atmospheric pressure. Call (940) 855-9045, an automated phone line paid for by the Federal Aviation Administration, to obtain the latest weather observation. Following a catastrophic event, contact the ASOS Operations and Monitoring Center at 1-800-242-8194/8895, to request 12-hour data archive. Locations are as referenced above.

5.2.2. Wind Measuring Set FMQ-13. The FMQ-13 sensors continuously provide wind speed and direction information. Two additional FMQ-13 sensors are located at Frederick Municipal Airport. These are used as the primary wind sensors for the RSUs and the SOF. Both the 80 OSS/OSW WF and ATC view wind readings from these sensors on dedicated displays within their work centers. The Runway Supervisory Units use FMQ-13 wind speed and direction information to make to-the-second landing decisions for 80 FTW aircrews and the SOF uses them to determine the flying status. The 80 OSS/OSW WF uses FMQ-13 wind sensors as a supplement to the ASOS wind sensor.

5.2.3. Kestrel ®4500 and ®5500 Pocket Weather Tracker. The Kestrel is a commercial off-the-shelf product capable of providing measurements of wind direction and speed, temperature, wind chill, humidity, heat index, dew point, wet-bulb temperature, barometric pressure, pressure altitude and density altitude. It is used during evacuations to the AOL and as a backup to the ASOS. Any wind and pressure readings from the Kestrel are considered estimated. The Kestrel is stored in the weather station.

5.2.4. Tactical Meteorological Observing System. Otherwise known as the Tactical Meteorological Equipment-53 (TMQ-53), this system is designated as a training aid for weather personnel to maintain deployment readiness. If all of the above systems fail, the TMQ-53 can also provide backup weather observation data. All wind and pressure data from the TMQ-53 is considered estimated unless the system is properly configured and sited in strict compliance with the TMQ-53 technical order and FCM-S4-1994, *Federal Standard for Siting Meteorological Sensors at Airports*, Chapters 3 and 4.

5.2.5. Gibson Ridge (GR), GR2Analyst/GR3. WF utilizes the GR2Analyst/GR3 as its primary source of radar data. Weather technicians make use of this software to analyze complex radar signatures, indicate lightning positions, and obtain detailed information on storm intensity, movement, internal circulation, and general wind flow. Weather technicians

will routinely incorporate the latest radar information into all mission execution forecasts and resource protection products.

5.3. Communications Equipment. The following systems are the backbone of the 80 OSS/OSW WF communications network:

5.3.1. JET. It is AF weather's incumbent communications server platform. Both the ATC and RAPCON share direct access to JET information and the JET software can also be installed on any computer connected to the base network. The 80 OSS/OSW WF uses JET to locally disseminate observations and WWAs to the SOF, ATC Tower, RAPCON, Duty Desks and the 82 TRW/CP. If JET malfunctions in any of these offices, users should inform the WF. During JET outages, WF technicians relay observations and WWAs using e-mail, fax, or telephone. In the event of a JET failure or outage the 80 OSS/OSW WF will track observations via hard copy AF Form 3803, *Surface Weather Observations (METAR/SPECI)* and WWAs via AF Forms 3806, *Weather Watch Advisory Log*, or AF Form 3807, *Watch/Warning Notification and Verification*, as applicable.

5.3.2. Pilot-to-Metro Service (PMSV) Radio. The 80 OSS/OSW WF monitors a frequency of 339.65 Megahertz for the purpose of providing weather information to airborne aircrew members. Aircraft may contact the weather flight on this frequency to request weather information, assuming that they are within radio range of SAFB. If aircrew members are out of range of the Sheppard PMSV radio, they can request a phone patch through the 82 TRW/CP. During 80 OSS/OSW WF closure. The PMSV equipment is located inside the weather station and is maintained by the 80 OSS Radar, Airfield, and Weather Systems team.

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

5.3.4. Local Area Network. The 80 OSS/OSW WF relies heavily on the Local Area Network to improve the timeliness and accuracy of weather intelligence to our customers.

5.3.5. Slack. Slack is a commercial off the shelf service to share information throughout the 80 FTW. Weather personnel will use the service to disseminate the MEF and to relay pertinent information supporting the 80 FTW Inclement Weather Plan.

5.4. Maintenance.

Table 5.1. Equipment Maintenance List.

Organization	Equipment
National Weather Service	ASOS, Radar
80 OSS/OSAM (Airfield Systems)	PMSV Radio, FMQ-13, TMQ-53
557th Fielded Systems	JET, Mark IV B, Gibson Ridge Software Approval
82 CS	Phones/Hotlines, Local Area Network /Internet Connectivity
80 FTW CS Support	Computer Workstations
80 OSS/OSW	Gibson Ridge Software

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

Table 5.2. Equipment Repairing Priorities.

Equipment	Organization	Response Time/Fix Time
ASOS, Radar	National Weather Service	Immediate/12 hours
PMSV Radio, FMQ-13	80 OSS/OSAM	Immediate/24 hours
JET	26 OWS/557 WW	Immediate/12 hours
Local Area Network/Internet Connectivity	82 CS	Immediate/12 hours
Phones/Hotlines	82 CS	Immediate/12 hours
Gibson Ridge Software	80 OSS/OSW	Immediate/12 hours
Mark IV B Weather Satellite Data Feed	557 WW	Routine/72 hours
TMQ-53	80 OSS/OSAM	Routine/1 Week

5.5. Building Power. In the event of a commercial power interruption, building 1903 will automatically switch to a backup generator. Additionally, the 80 OSS/OSW WF will contact NWS ASOS Center in Norman, OK for situational awareness.

KIRK W. PETERSON, Colonel, USAF
Vice Commander82 TRW

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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AF Form 3807, *Watch/Warning Notification and Verification*, 1 January 1992

Abbreviations and Acronyms

26 OWS—26th Operational Weather Squadron

557 WW—557th Weather Wing

80 FTW—80th Flying Training Wing

80 FTW/SE—80th Flying Training Wing Safety Office

80 OG—80th Operations Group

80 OG/CC—80th Operations Group Commander

80 OG/OGT—80th Operations Group Training Division

80 OG/OGS—80th Operations Group Scheduling Division

80 OG/OGV—80th Operations Group Supervisor of Flying Program Manager

80 OSS—80th Operations Support Squadron

80 OSS/CC—80th Operations Support Squadron Commander

80 OSS/OSA—80th Operations Support Squadron Airfield Operations

80 OSS/OSAA—80th Operations Support Squadron Chief of Airfield Management

80 OSS/OSAM—80th Operations Support Squadron Radar, Airfield, and Weather Systems

80 OSS/OSW—80th Operations Support Squadron Weather Flight

82 CS—82d Communications Squadron

82 CES—82d Civil Engineer Squadron

82 CES/CEF—82d Civil Engineer Squadron Fire Department

82 MSG—82d Mission Support Group

82 MSG/CC—82d Mission Support Group Commander

82 MSG CD—82d Mission Support Group Deputy Commander

82 SFS—82d Security Forces Squadron

82 TRW—82d Training Wing

82 TRW/CC—82d Training Wing Commander

82 TRW/CP—Command Post

82 TRW/PA—82d Training Wing Public Affairs

89 FTS—89th Flying Training Squadron

90 FTS—90th Flying Training Squadron

97 FTS—97th Flying Training Squadron

459 FTS—459th Flying Training Squadron

469 FTS—469th Flying Training Squadron

AF—Air Force

AFI—Air Force Instruction

AFAS—Air Force Airfield Automation System

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AOC—Airfield Operations Center

AOL—Alternate Operating Location

ASOS—Automated Surface Observing System

ATC—Air Traffic Control

ATIS—Auto Terminal Info Service

CAT—Crisis Action Team

DETS—Detachments

DoD—Department of Defense

DSN—Defense Switched Network

EDM FUUS22—Low Tonnage Effective Downwind Message

EDM FUUS45—High Tonnage Effective Downwind Message

EOC—Emergency Operations Center

EM—Emergency Management

FLIP—Flight Information Publication

FMQ-13—Fixed Meteorological Equipment-13 Wind Sensor

IAW—In Accordance With

IEMP—Installation Emergency Management Plan

IFF—Introduction to Fighter Fundamentals

IP—Internet Protocol

JET—Joint Environmental Toolkit

JTWC—Joint Typhoon Weather Center

KSHP—military station identifier for Sheppard AFB

KSPS—civilian station identifier for Sheppard AFB/Wichita Falls Municipal Airport

KTS—Knots (Nautical Miles per Hour)

LOCAL—Aviation Selected Local Weather Report

MEF—Mission Execution Forecast

METAR—Aviation Routine Weather Report

NHC—National Hurricane Center

NIPRNET—Non-Classified Internet Protocol Router Network

NM—Nautical Mile

NOTAM—Notice to Air Missions

NWS—National Weather Service

OPR—Office of Primary Responsibility

OWS—Operational Weather Squadron

RAPCON—Radar Approach Control

RSU—Runway Supervisory Units

SAFB—Sheppard Air Force Base

SOF—Supervisor of Flying

SPECI—Aviation Selected Special Weather Report

SWAP—Severe Weather Action Procedures

SWS—Severe Weather Statement

TAF—Terminal Aerodrome Forecast

TMQ-53—Tactical Meteorological Equipment-53 Observing System

WF—Weather Flight

WWAs—Weather Watches Warnings and Advisories

Terms

Airfield Services Element—The element of weather support that is responsible for collecting and documenting current weather information and disseminating reports on current weather conditions, disseminating weather advisories based on current conditions and updating local climatology records.

Air Force Emergency Mass Notification System—A program, better known as AtHoc, that the 80 TRW/CP uses to push alerts (weather or other) to network computers.

Back-Up Observations—The process of providing meteorological data and/or dissemination of an ASOS generated observation when the primary automated method is not operational or is unavailable due to sensor and/or communication failure

Basic Weather Watch—A method of taking surface weather observations wherein the airfield service technician is required to perform other duties in addition to completing surface weather observations and may not be able to continuously monitor changes in the weather. In Basic Weather Watch, the airfield service technician must recheck weather conditions at intervals not to exceed 20 minutes to determine the need for a SPECI or LOCAL observation.

Combined Services Element—The element of weather support that performs the functions of both Mission Services and Airfield Services when sufficient personnel are not available to perform each separately.

Cooperative Weather Watch—A method of assisting the Airfield Services Technician in performing a Basic Weather Watch. ATC personnel, as duty priorities permit, notify the Airfield Services Technician either directly or through intermediary weather flight personnel of significant changes from reported conditions.

Desired Lead-Time—The amount of advance notice a supported agency needs to protect personnel and resources from a weather threat.

Eyes Forward—The function of weather support where the weather flight immediately notifies the proper OWS of any changes in the local weather that impact the SAFB mission and/or are significantly different than the OWS forecast for SAFB.

Meteorological Watch—The close monitoring of observed and forecast weather conditions. The Meteorological Watch concept requires informing supported agencies when certain weather conditions that could pose a hazard or affect operations occur or are expected to occur.

Mission Watch—The close monitoring of observed and forecast weather conditions relating to a specific mission. This concept generally refers to flying missions, but can also be applied to any ground missions that may be significantly impacted by changes in the weather conditions.

Mission Weather Element—The element of weather support that provides decision-quality environmental weather information for mission planning and execution for SAFB units and users, including pilots, the Supervisor of Flying, and other training units.

Operational Weather Squadron—Regional centers of expertise providing theater support, aviation services and overwatch functions supporting WF/Dets in the primary area of interest.

Pilot Reports—A report of in-flight weather made by an aircrew member.

Resource Protection—The issuing of weather watches, warnings and advisories (WWAs) to notify SAFB units of impending weather conditions to allow SAFB units to take any necessary actions to protect their assets and personnel.

Severe Weather—Severe weather (or a severe thunderstorm) is classified as any winds 50 kts, hail ¾ inch, and/or any occurrence of a tornado.

Staff Weather Element—The element of weather support that leads and manages weather flight activities and functions as the direct interface with SAFB commanders and staff providing direct support to command, control and planning functions.

Special Weather Statements—Special Weather Statements are special notices issued by the 26 OWS to assist military decision makers with resource protection decisions.

Supplementing Observations—Manually adding meteorological information to an observation generated by the ASOS that is beyond that system's capability to measure and report. For example, the sensor cannot sense a tornado, hail, or read cloud heights greater than 13,000 feet.

Surface Weather Observation—A report on weather conditions observed on the SAFB runway complex.

Weather Advisory—A special notice notifying specified SAFB units when an established weather condition affecting operations is occurring.

Weather Warning—A special notice that alerts SAFB units when an established weather condition of such intensity as to pose a hazard to life or property **is occurring or is imminent**. Weather warnings provide concise information outlining environmental threats to be used by commanders to make force protection decisions. It is intended for dissemination with enough lead-time for units to take action to protect their people and property.

Weather Watch—A special notice that alerts SAFB units of the potential for weather conditions of such intensity as to pose a hazard to life or property. Weather watches indicate a potential for environmental threats to be used by commanders to make force protection and risk management decisions.

Attachment 2

SPECIAL AND LOCAL OBSERVATION CRITERIA

A2.1. Special Observation Criteria.

A2.1.1. Special Observation Criteria observations are unscheduled observations taken when any of the criteria listed below have been observed. When Special Observation Criteria conditions are occurring or forecasted to occur within 1 hour, the observer is required to perform a Basic Weather Watch in intervals not to exceed 20 minutes.

A2.2. Weather Elements Special Observation Criteria:

A2.2.1. Ceiling. The ceiling forms or dissipates below, decreases to less than or, if below, increases to equal or exceed these thresholds in feet Above Ground Level:

A2.2.1.1. 3000 (AFMAN 15-111 and ASOS).

A2.2.1.1.1. 2000 (AFMAN 15-111).

A2.2.1.1.2. 1500 (AFMAN 15-111 and ASOS).

A2.2.1.1.3. 1100 (DoD FLIP).

A2.2.1.1.4. 1000 (AFMAN 15-111 and ASOS).

A2.2.1.1.5. 800 (AFMAN 15-111).

A2.2.1.1.6. 700 (AFMAN 15-111).

A2.2.1.1.7. 600 (DoD FLIP).

A2.2.1.1.8. 500 (DoD FLIP, AFMAN 15-111, and ASOS).

A2.2.1.1.9. 400 (DoD FLIP).

A2.2.1.1.10. 300 (AFMAN 15-111).

A2.2.1.1.11. 200 (DoD FLIP and AFMAN 15-111).

A2.2.1.1.12. 100 (AFMAN 15-111 and ASOS).

A2.2.2. Sky Condition. A layer of clouds or obscuring phenomena aloft is present below 1100 above ground level (highest published landing minima) and was not reported in the preceding record or special observation (AFMAN 15-111). ASOS takes a SPECI observation for a layer of clouds below 1,000 feet above ground level that was not reported in previous observation.

A2.2.3. Visibility. The prevailing visibility decreases to less than or, if below, increases to equal or exceeds these thresholds in Statute Mile:

A2.2.3.1. 3 (AFMAN 15-111, DoD FLIP, and ASOS).

A2.2.3.2. 2 (AFMAN 15-111, DoD FLIP, and ASOS).

A2.2.3.3. 1 ¾ (AFMAN 15-111 and DoD FLIP).

A2.2.3.4. 1 ½ (AFMAN 15-111 and DoD FLIP).

A2.2.3.5. 1 ¼ (DoD FLIP).

A2.2.3.6. 1 (AFMAN 15-111, DoD FLIP, and ASOS).

A2.2.3.7. ¾ (AFMAN 15-111 and DoD FLIP).

A2.2.3.8. ½ (AFMAN 15-111 and DoD FLIP).

A2.2.3.9. ¼ (AFMAN 15-111 and ASOS).

A2.2.3.10. DoD FLIP also requires the following visibility thresholds: 5/8, 7/8, 1 1/8, 1 3/8, and 1 7/8 which are not reportable values on the ASOS in use at SAFB. For each of these values the next lower reportable value will be used in accordance with Memorandum for Record on SPECI Criteria and ASOS Limitations.

A2.2.4. Tower Visibility. When notified by the control tower that tower visibility has decreased to less than or, if below, increased to equal or exceed 1, 2, or 3 statute miles and the tower visibility differs from the prevailing surface visibility by a reportable value (Federal Aviation Administration Order JO 7110.65X and AFMAN 15-111).

A2.2.5. Tornado, Funnel cloud, or Waterspout. A tornado, funnel cloud, or waterspout is observed or disappears from sight (AFMAN 15-111 and ASOS).

A2.2.6. Thunderstorm. Begins or ends (AFMAN 15-111 and ASOS).

A2.2.7. Precipitation.

A2.2.7.1. Hail begins or ends (AFMAN 15-111).

A2.2.7.2. Freezing precipitation begins, ends, or changes in intensity (AFMAN 15-111 and ASOS).

A2.2.7.3. Ice pellets begin, end, or change intensity (AFMAN 15-111).

A2.2.7.4. Any other type of precipitation begins or ends. **Note:** With the exception of freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (e.g. snow changing to rain and snow) (AFMAN 15-111 and ASOS).

A2.2.8. Wind shifts or squalls.

A2.2.8.1. Squall. A strong wind characterized by a sudden onset in which the wind speed increases at least 16 kts and is sustained at 22 kts or more for at least 1 minute (AFMAN 15-111 and ASOS).

A2.2.8.2. Wind direction changes by 45 degrees or more in less than 15 minutes when the wind speed is 10 kts or more throughout the wind shift (AFMAN 15-111 and ASOS).

A2.2.9. Miscellaneous.

A2.2.9.1. Aircraft Mishap (at manual observing locations and at automated observing locations when an ASOS is in supplement or back-up mode). Take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing location unless there has been an intervening observation (AFMAN 15-111).

A2.2.9.2. Volcanic Ash. When first observed (AFMAN 15-111 and ASOS).

A2.2.9.3. Any other meteorological situation which, in the opinion of the observer, is critical to the safety of aircraft operation (AFMAN 15-111 and ASOS).

A2.3. Local Observation Criteria.

A2.3.1. LOCAL observations are observations taken to report changes in conditions significant to local airfield operations but that do not meet SPECI criteria. The observation will include all key areas and will report current conditions observed unless SPECI criteria has been met, then a SPECI will be issued. LOCAL observations are viewable through JET and AFAS, and they will be encoded as METAR or SPECI for the reasons specified in **paragraph 2.2.3.1** The following criteria apply:

A2.3.1.1. Altimeter Setting. Anytime there has been a change of 0.01 inch Hg or more since the last observation (METAR or SPECI) a LOCAL observation will be issued in JET. The criteria will follow AFMAN 15-111.

A2.3.1.2. Miscellaneous. Airfield services may report any other meteorological development that may impact local operations (AFMAN 15-111 and SAFBI 15-101).

Attachment 3

FORECAST AMENDMENT CRITERIA AND THRESHOLDS

A3.1. Real-Time Weather Deviations.

A3.1.1. When real-time weather deviates from the Mission Execution Forecast, the SAFB forecaster will make every attempt to notify users before weather parameters cross mission limiting thresholds listed below. Once the users are notified, proceed with the Mission Execution Forecast amendment. The following actions will be taken:

A3.1.1.1. The forecaster will contact the following personnel when amending the Mission Execution Forecast:

A3.1.1.2. SAFB Observer and Briefer.

A3.1.1.3. Supervisor of Flying.

A3.1.1.4. T-6, T-38, and Introduction to Fighter Fundamentals (IFF) Duty Desks.

A3.1.2. Coordinate with the proper OWS for horizontal consistency between local and OWS products.

A3.1.3. When amending, annotate the time and reason for update at the top of the Mission Execution Forecast to include watch and warning info as necessary. Update valid time to match amend or update time.

A3.2. Mission Limiting Thresholds.

A3.2.1. Amendment criteria for all flying areas when not previously forecast:

A3.2.1.1. ≥ Light Rime icing.

A3.2.1.2. Any Clear/Mixed icing.

A3.2.1.3. ≥ Light Turbulence.

A3.2.1.4. Weather Watch/Warning criteria.

A3.2.1.5. Thunderstorms.

A3.2.1.6. Freezing Precipitation.

A3.2.1.7. Low Level Wind Shear.

A3.3. Amendment Criteria for Takeoff/Landing at SAFB. The following amendment criteria are required when parameters decrease to less than the thresholds, or if below, increase to equal or exceed the thresholds.

A3.3.1. Temperature (in Celsius): >35, >40, >43.

A3.3.2. Surface Winds (steady state, in kts): >25, >35.

A3.3.3. Crosswind (in kts): >10 (if wet runway), >15, >20, >25, >30.

A3.3.4. Ceiling (in feet above ground level): <200, <300, <500, <1,900, <2,300, <2,500.

A3.3.5. Visibility (in statute miles): <½, <1, <2, <3, <5.

A3.4. Amendment Criteria for Mission Weather Products.

A3.4.1. Weather flight technicians will generate amendments to the Mission Execution Forecast when conditions cross "Go/No Go" thresholds outlined below:

Table A3.1. "Go/No Go" Thresholds.

SAFB	> Light Rime Icing Any Clear/Mixed Icing > Moderate Turbulence Weather Watch/Warning Criteria Thunderstorms Freezing Precipitation with Low Level Wind Shear
SAFB (when parameters decrease to less than, or if below, increase to equal or exceed)	Temp (in Celsius): >35, >40, >42, >43 Surface Winds (steady state, in kts): >25, >35 Crosswind (in kts): >10 (if wet runway), >15, >20, >25, >30 Ceiling (feet in above ground level): <200, <300, <500, <1,900, <2,300, <2,500, <3,500, <4,000 Visibility (statute miles): <½, <1, <2, <3, <5
Fort Sill/Lawton/ Henry Post Army Air Field	Surface Winds (steady state, in kts): >25, >35 Crosswind (in kts): >10 (if wet runway), >15, >25, >30 R35 tailwinds (kts): >10, >20 Ceiling (feet above ground level): <200, <300, <2,300, <2,500 Visibility (statute miles): <½ , <1, <3, <5
Falcon	Ceiling (feet above ground level): <1,500, <10,000 Visibility (statute miles): <3, <10
Frederick (Hacker)	Surface Winds (steady state, in kts): >25, >35 Crosswind (in kts): >10 (if wet runway), >15, >25 Ceiling (feet above ground level): <2,600, <5,300 Visibility (statute miles): <3, <5
Sheppard 1 and 2 Military Operating Areas	Scattered, Broken, or Overcast<14,000
Westover 1 and 2, Hollis and Washita	< 4,000 feet workable space between 070 Mean Sea Level and 230 Mean Sea Level
East/West Low Levels	Ceiling (feet above ground level): <1,500, <3,000, <5,000 Visibility (statute miles): <3, <5, <10

Attachment 4

MISSION EXECUTION FORECAST AND MISSION WEATHER PRODUCTS

Figure A4.1. Sample Airfield Mission Execution Forecast Tab.

KSHP SHEPPARD MISSION EXECUTION FORECAST								
DATE:	19-Nov-21	VALID:	19/18Z-20/06Z	AMD:	1200L	FORECASTER:	GCW	METRO:	339.65
ORDER -1 HERE	PHONE: (940)676-2730 / DSN 736-2730					Hrs: 24/7 (Closed holidays w/favorable wx)			
SOLAR/LUNAR:	SR:	0710	SS:	1728	MR:	1747	MS:	0723	EENT:	1825	ILLUM %:	100%
SPACE:	GPS	No Effect	UHF	No Effect	HF	No Effect	WWAs		FZ LVL	120
FEEDBACK	ALTERNATES	LIVE SENSOR	TAF MANAGER	DA CALCULATOR
PRINTABLE MEF	NATIONAL RADAR	FL WINDS	OWS HAZARDS	SATELLITE

SHEPPARD LOCAL FORECAST								
	12Z / 06L	14Z / 08L	16Z / 10L	18Z / 12L	20Z / 14L	22Z / 16L	00Z / 18L	02Z / 20L-24L
TEMP (C)				14	16	15	14	13
DEW PT				-3	-3	-4	-4	-3
ITS/FRL								
ALSTG				30.32	30.23	30.16	30.15	30.13
PA				619	709	779	789	809
DA				739	1069	1019	909	809
WIND				18012G22	18015G25	18015G25	16012G18	15012
XWIND				11	13	13	3	0
CIG (AGL)				FEW070 SCT250	SCT250	SCT250	SCT250	SCT250
VIS				7	7	7	7	7
HAZARDS								
RMK								

FREDERICK TERMINAL AERODROME FORECAST								
WIND				19015G25	19015G25	18015G25	16015	15012
CIG				FEW070 SCT250	SCT250	SCT250	SCT250	SCT250
VIS				7	7	7	7	7
HAZARDS								
RMK								

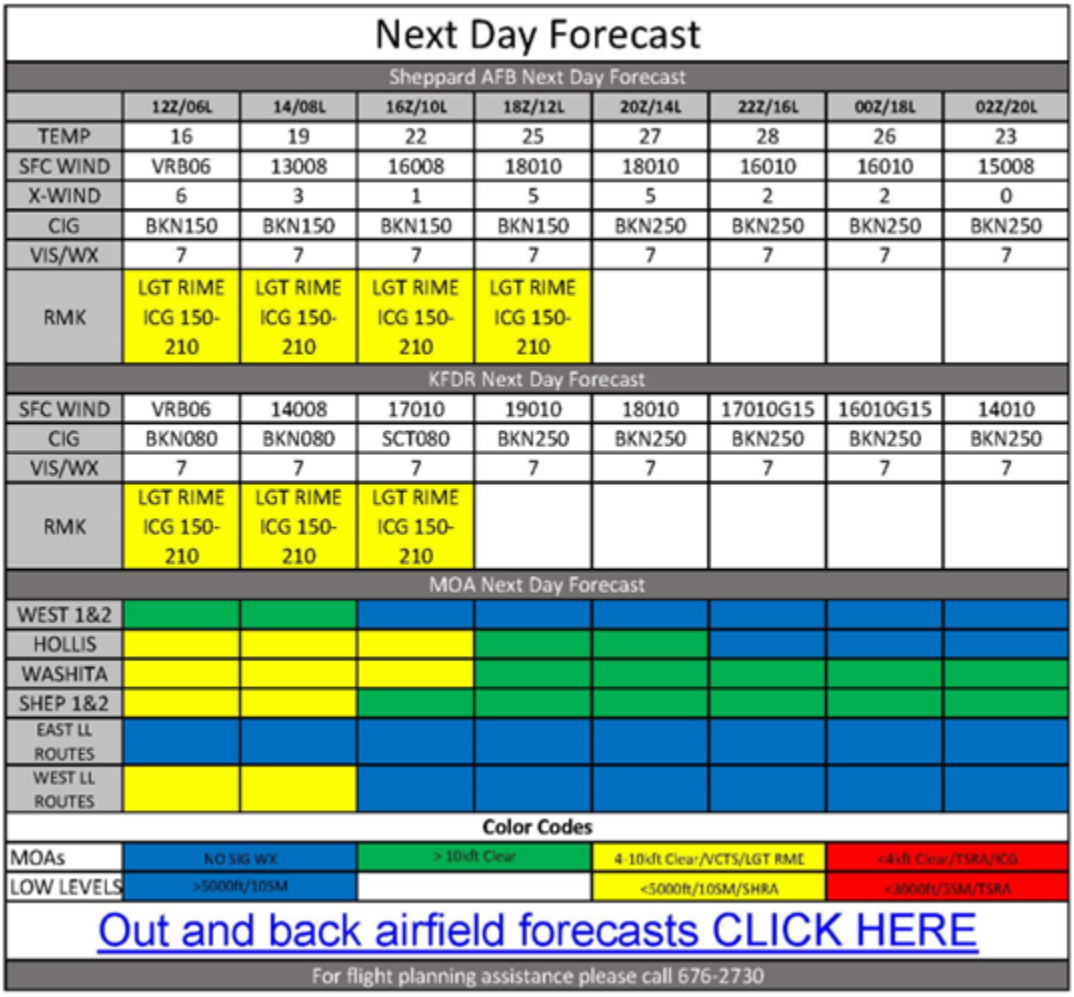
LAWTON TERMINAL AERODROME FORECAST
KLAW 191120Z 1912/2012 14004KT P6SM SCT250 FM191500 18014G23KT P6SM SCT250 FM200400 17008G13KT P6SM SCT250 WS020/21040KT

RECENT PIREPS AND REMARKS	FCF Temps(Celsius)	
	33000	-49
	35000	-54
	37000	-59
	38900	-60
	40700	-62
	42600	-64
	44400	-64
	46300	-65

Figure A4.2. Sample Airfield Mission Execution Forecast Tab (Continued).

WEST LL ROUTES SFC-050 (*APPLIES TO ALL W RTEs UNLESS DEPICTED IN RMK)								
	11Z / 06L	13Z / 08L	15Z / 10L	17Z / 12L	19Z / 14L	21Z / 16L	23Z / 18L	01Z / 20L-24L
CIGS (AGL)	SCT040	SCT050	SCT050	SCT045	BKN045	BKN050	BKN050	SCT050
ICG/TURB								
RMK					TS	TS	TS	
ALSTG	30.08	30.10	30.11	30.09	30.05	30.01	29.97	29.98
EAST LL ROUTES SFC-050 (*APPLIES TO ALL E RTEs UNLESS DEPICTED IN RMK)								
CIGS (AGL)	SKC	SKC	SKC	SCT050	SCT040	BKN040	BKN040	BKN040
ICG/TURB								
RMK						TS	TS	
ALSTG	30.04	30.08	30.10	30.09	30.06	30.02	30.00	30.02
SHEP 1 & 2 (FL070-230)								
CLOUDS Base/Tops (MSL)	BKN050/100	BKN050/100	BKN060/100	BKN065/100 BKN120/150	BKN065/100 BKN120/210	BKN065/250	BKN060/210	BKN060/150
ICG/TURB					LGT RIME 160/210	LGT RIME 160/250	LGT RIME 160/210	
RMK					TS	TS	TS	
WESTOVERS (FL070-230)								
CLOUDS Base/Tops (MSL)	FEW070/110	FEW070/110	SCT070/110	BKN070/120	BKN070/120	BKN070/120	BKN070/100	SCT070/100
ICG/TURB								
RMK								
HOLLIS (FL070-230)								
CLOUDS Base/Tops (MSL)	BKN060/100	BKN065/100 BKN120/150	BKN065/100 BKN120/210	BKN065/250	BKN060/210	BKN060/150	BKN060/150	BKN060/150
ICG/TURB			LGT RIME 160/210	LGT RIME 160/250	LGT RIME 160/210			
RMK			TS	TS	TS			
WASHITA/FALCON RANGE (FL SFC-230)								
CLOUDS Base/Tops (MSL)	BKN060/090 SCT130/160	BKN050/100 BKN130/160	BKN060/100 BKN130/210	BKN060/100 BKN130/210	BKN065/210	BKN065/150	SCT065/150	SCT065/150
ICG/TURB			LGT RIME 160/210	LGT RIME 160/210	LGT RIME 160/210			
RMK				TS	TS			
AOR WINDS *FOR DETAILS REF FL WIND LINK*								
	005' AGL	010' AGL	015' AGL	020' AGL	030' AGL	050' MSL	100' MSL	200' MSL	300' MSL	400' MSL
AFT 11Z	16015/28	16015/26	16010/25	16010/23	18005/20	30000/15	31015/07	23020/-12	24030/-35	28015/-58
AFT 17Z	20020/25	21020/24	21015/23	22015/23	23005/20	31000/15	33010/04	24030/-13	24035/-37	31025/-53

Figure A4.3. Sample Next Day Planning Tab.



Next Day Forecast

Sheppard AFB Next Day Forecast								
	12Z/06L	14/08L	16Z/10L	18Z/12L	20Z/14L	22Z/16L	00Z/18L	02Z/20L
TEMP	16	19	22	25	27	28	26	23
SFC WIND	VRB06	13008	16008	18010	18010	16010	16010	15008
X-WIND	6	3	1	5	5	2	2	0
CIG	BKN150	BKN150	BKN150	BKN150	BKN250	BKN250	BKN250	BKN250
VIS/WX	7	7	7	7	7	7	7	7
RMK	LGT RIME ICG 150-210	LGT RIME ICG 150-210	LGT RIME ICG 150-210	LGT RIME ICG 150-210				

KFDR Next Day Forecast								
SFC WIND	VRB06	14008	17010	19010	18010	17010G15	16010G15	14010
CIG	BKN080	BKN080	SCT080	BKN250	BKN250	BKN250	BKN250	BKN250
VIS/WX	7	7	7	7	7	7	7	7
RMK	LGT RIME ICG 150-210	LGT RIME ICG 150-210	LGT RIME ICG 150-210					

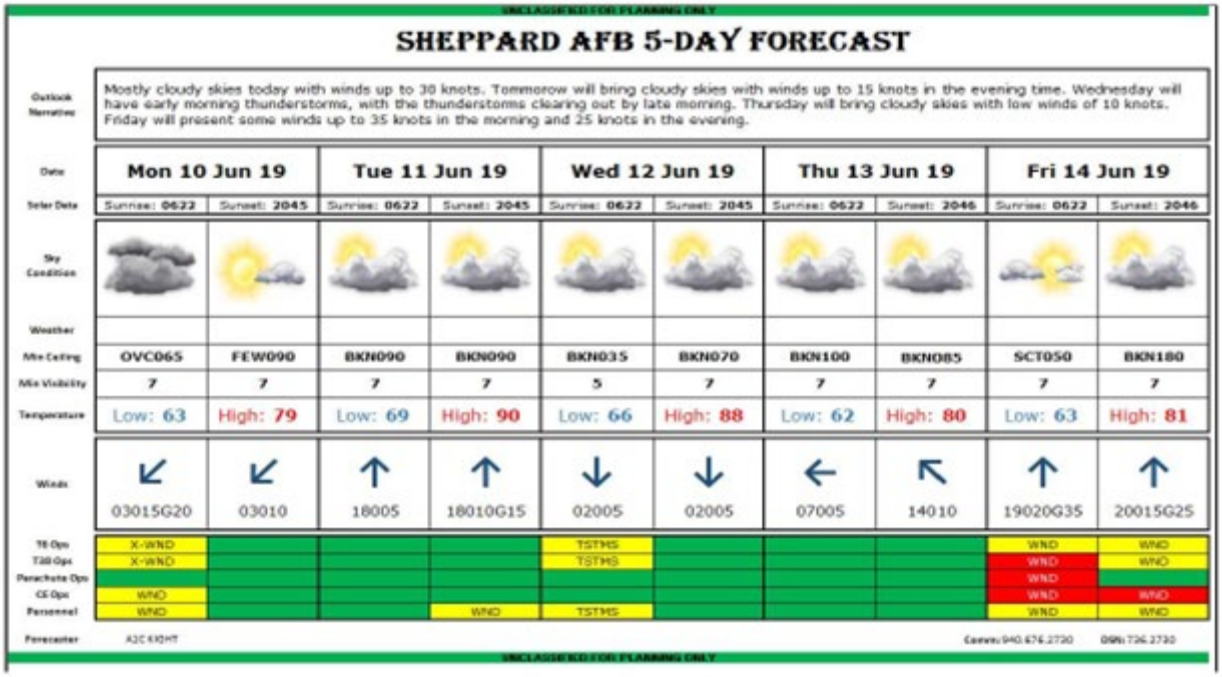
MOA Next Day Forecast								
WEST 1&2								
HOLLIS								
WASHITA								
SHEP 1&2								
EAST LL ROUTES								
WEST LL ROUTES								

Color Codes				
MOAs	NO SIG WX	> 10kft Clear	4-10kft Clear/VCTS/LGT RME	<4kft Clear/TSRA/ICG
LOW LEVELS	>5000ft/10SM		<5000ft/10SM/SHRA	<3000ft/3SM/TSRA

Out and back airfield forecasts CLICK HERE

For flight planning assistance please call 676-2730

Figure A4.4. Sample 5-Day Outlook Tab.



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SHEPPARD AFB 5-DAY FORECAST

Outlook Narrative	Mostly cloudy skies today with winds up to 30 knots. Tommorow will bring cloudy skies with winds up to 15 knots in the evening time. Wednesday will have early morning thunderstorms, with the thunderstorms clearing out by late morning. Thursday will bring cloudy skies with low winds of 10 knots. Friday will present some winds up to 35 knots in the morning and 25 knots in the evening.									
Date	Mon 10 Jun 19		Tue 11 Jun 19		Wed 12 Jun 19		Thu 13 Jun 19		Fri 14 Jun 19	
Solar Data	Sunrise: 0622	Sunset: 2045	Sunrise: 0622	Sunset: 2045	Sunrise: 0622	Sunset: 2045	Sunrise: 0622	Sunset: 2046	Sunrise: 0622	Sunset: 2046
Sky Condition										
Weather										
Min Ceiling	OVC065	FEW090	BKN090	BKN090	BKN035	BKN070	BKN100	BKN085	SCT050	BKN180
Min Visibility	7	7	7	7	5	7	7	7	7	7
Temperature	Low: 63	High: 79	Low: 69	High: 90	Low: 66	High: 88	Low: 62	High: 80	Low: 63	High: 81
Winds	03015G20	03010	18005	18010G15	02005	02005	07005	14010	19020G35	20015G25
T6 Ops	X-WND				TSTMS				WND	WND
T38 Ops	X-WND				TSTMS				WND	WND
Parachute Ops									WND	
CE Ops	WND								WND	WND
Personnel	WND			WND	TSTMS				WND	WND
Forecaster	A3C KNIGHT								Comm: 940.676.2720	DSN: 736.2720

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Attachment 5

SUPPORTED UNIT NOTIFICATION AND RESPONSE

A5.1. Primary Notification Network for Weather Watch, Warning, and Advisories.

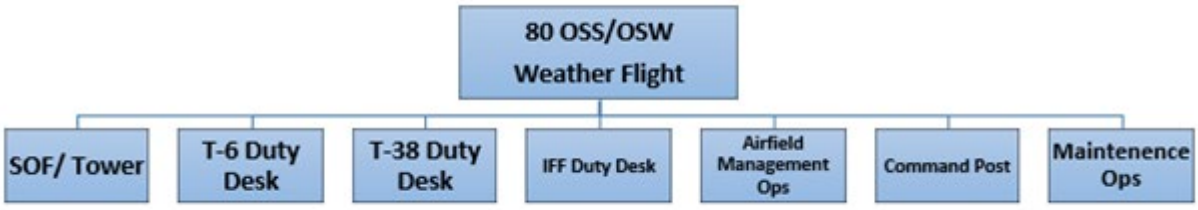
A5.1.1. The 80 OSS/OSW WF initiates the notification process by disseminating, extending, or canceling WWAs through JET. The WWA is then displayed on JET monitors at the 82 TRW/CP, RAPCON, Tower, 80 FTW Duty Desks, and the 80 OSS/OSW WF.

Note: Any DoD network user with a Common Access Card may access the JET display at **https://owsjet26.us.af.mil/portal/private/GuestSheppardAFB/Sensor** . 82 TRW/CP then relays the message to the other units on base via Giant Voice or AtHoc, as required. Finally, each organization follows internal notification procedures to inform subordinate units.

A5.1.2. If the Giant Voice or AtHoc fails, the 82 TRW/CP will directly notify key agencies and leadership by phone as required by their checklists.

A5.2. Backup Phone Calls. To verify receipt, extension, or cancellation of most weather advisories, watches, and warnings, SAFB uses the backup call roster in **Figure A5.1**.

Figure A5.1. Weather Watch and Warning Backup Phone Calls.



Attachment 6

SUPPORTED UNITS AND MISSION LIMITING THRESHOLDS

Table A6.1. Supported Units and Mission Limiting Thresholds (Watches).

Weather Condition	Units Impacted	Impacts	Customer Action
WATCHES			
Tornado	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Be ready to stop all training and shelter in place. 2. Tie down equipment, secure buildings, doors, & hangars. 3. Secure/divert aircraft. 4. Possible initiation of Crisis Action Team Recall.
Severe Thunderstorm Hail ≥ 3/4" and/or Winds ≥ 50 kts	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Only conduct indoor training. 2. Tie down equipment, secure buildings, doors, & hangars. 3. Secure/divert aircraft. 4. Increase vigilance with respect to imminent weather conditions.
Winds ≥ 50 kts	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Cancel parasail activity and only conduct indoor training. 2. Tie down equipment, secure buildings, doors, & hangars. 3. Secure/divert aircraft. 4. Increase vigilance with respect to imminent weather conditions.
Freezing Precipitation	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding. 3. May initiate weather recalls, delays, or early work releases.	1. Be ready to stop outdoor training, flying training, and move inside. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring outdoor activities/travel and conduct indoor duties only.
Heavy Rain/Snow ≥ 2" in 12 hours	All	1. Safety risk to personnel and operations. 2. May be unable to perform any outdoor training. 3. Requires extra precautions, sheltering and grounding. 4. May initiate weather recalls, delays, or early work releases.	1. Be ready to stop outdoor training, flying training, and move inside. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring

Weather Condition	Units Impacted	Impacts	Customer Action
WATCHES			
			outdoor activities/travel and conduct indoor duties only.
Blizzard Conditions	All	1. Safety risk to personnel and operations. 2. May be unable to perform any outdoor training. 3. Requires extra precautions, sheltering and grounding. 4. May initiate weather recalls, delays, or early work releases.	1. Be ready to stop outdoor training, flying training, and move inside for an extended period of time. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring outdoor activities/travel and conduct indoor duties only.
Lightning within 5 NM	All	1. Safety risk to personnel and equipment. 2. Prepare to shelter personnel and equipment.	1. Only conduct indoor training, divert or cancel flying, and limit transition outdoors. 2. Increase vigilance with respect to imminent weather conditions.

Table A6.2. Supported Units and Mission Limiting Thresholds (Warnings).

Weather Condition	Units Impacted	Impacts	Customer Actions
WARNINGS			
Tornado	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Be ready to stop all training and shelter in place. 2. Tie down equipment, secure buildings/doors, hangar/secure/divert aircraft. 3. Possible initiation of Crisis Action Team Recall.
Severe Thunderstorm Hail ≥ 3/4" and/or Winds ≥ 50 kts	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Only conduct indoor training. 2. Tie down equipment, secure buildings/doors, hangar/secure/divert aircraft. 3. Increase vigilance with respect to imminent weather conditions.
Moderate Thunderstorm Hail ≥ 1/2", but < 3/4" and/or Winds ≥ 35 kts, but < 50 kts	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Cancel parasail activity and only conduct indoor training. 2. Tie down equipment, secure buildings/doors, hangar/secure/divert aircraft. 3. Increase vigilance with respect to imminent weather conditions.
Winds ≥ 50 kts	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding. 3. May initiate weather recalls, delays, or early work releases.	1. Be ready to stop outdoor training, flying training, and move inside. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring outdoor activities/travel and conduct indoor duties only.
Winds ≥ 35 kts		1. Safety risk to personnel and	1. Be ready to stop outdoor training, flying

Weather Condition	Units Impacted	Impacts	Customer Actions
WARNINGS			
		operations. 2. May be unable to perform any outdoor training. 3. Requires extra precautions, sheltering and grounding. 4. May initiate weather recalls, delays, or early work releases.	training, and move inside. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring outdoor activities/travel and conduct indoor duties only.
Freezing Precipitation	All	1. Safety risk to personnel and operations. 2. May be unable to perform any outdoor training. 3. Requires extra precautions, sheltering and grounding. 4. May initiate weather recalls, delays, or early work releases.	1. Be ready to stop outdoor training, flying training, and move inside for an extended period of time. 2. Extreme caution necessary when traveling in these conditions. 3. Delay those duties requiring outdoor activities/travel and conduct indoor duties only.
Heavy Rain/Snow ≥ 2” in 12 hours	All	1. Safety risk to personnel and equipment. 2. Prepare to shelter personnel and equipment.	1. Only conduct indoor training, divert or cancel flying, and limit transition outdoors. 2. Increase vigilance with respect to imminent weather conditions.
Blizzard Conditions	All	1. Significant safety risk to all operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	1. Be ready to stop all training and shelter in place. 2. Tie down equipment, secure buildings/doors, hangar/secure/divert aircraft. 3. Possible initiation of Crisis Action Team Recall.
Lightning within 5 NM	All	1. Significant safety risk to all	1. Only conduct indoor training.

Weather Condition	Units Impacted	Impacts	Customer Actions
WARNINGS			
		operations, personnel, and equipment. 2. Requires extra precautions, sheltering, and grounding.	2. Tie down equipment, secure buildings/doors, hangar/secure/divert aircraft. 3. Increase vigilance with respect to imminent weather conditions.

Table A6.3. Supported Units and Mission Limiting Thresholds (Advisories).

Weather Condition	Units Impacted	Impacts	Customer Actions
OBSERVED WEATHER ADVISORIES			
Frostbite Risk Level Low Caution (Wind chill ≤ 32°F but > 0°F)	80 FTW, 82 MDG, 82 MSG, 82 CES, 82 SFS, 82 TRG, 782 TRG, 982 TRG	1. Reduces time allotted outdoors. 2. Increased risk for cold stress injuries. 3. Flying preparation times reduced.	1. Reduce amount of work conducted outdoors and adjust schedules. 2. Prepare for cold stress injuries. 3. Allot for reduced flying preparation time.
Frostbite Risk Level Low Danger (Wind chill ≤ 0°F but > -18°F)	All	1. Reduces time allotted outdoors. 2. Increased risk for cold stress injuries. 3. Flying preparation times reduced.	1. Reduce amount of work conducted outdoors and adjust schedules. 2. Prepare for cold stress injuries. 3. Allot for reduced flying preparation time.
Frostbite Risk Level High (Wind chill ≤ -18°F)	All	1. Reduces time allotted outdoors. 2. Increased risk for cold stress injuries. 3. Flying preparation times reduced.	1. Reduce amount of work conducted outdoors and adjust schedules. 2. Prepare for cold stress injuries. 3. Allot for reduced flying preparation time.
Index of Thermal Stress Caution	All	1. Reduces time allotted outdoors. 2. Increased risk for heat stress injuries. 3. Flying preparation times reduced.	1. Reduce amount of work conducted outdoors and adjust schedules. 2. Prepare for heat stress injuries. 3. Allot for reduced flying preparation time.
Index of Thermal Stress Danger	All	1. Reduces time allotted outdoors. 2. Increased risk for heat stress injuries. 3. Flying preparation times reduced.	1. Reduce amount of work conducted outdoors and adjust schedules. 2. Prepare for heat stress injuries. 3. Allot for reduced flying preparation time.
Engine Anti-ice with temperature < 4°C or density altitude < -1000 ft	80 FTW	Extra precaution necessary for approach/landing of aircraft.	Incorporate into flight planning for T-38 aircraft.
Winds ≥ 25 kts	82 MSG, 82 CES, 82 CES SP	1. Limits hoisting. Operations. 2. Light equipment, loose objects can be damaged.	1. Physical Training Tests canceled/rescheduled. 2. Telephone pole and other hoisting operations should be halted. 3. Ground/secure light equipment.
Low Level Wind Shear	80 FTW	Affects approach and take-off operations.	Adjust flight planning to mitigate approach, take-off risks
Thunderstorms w/in 10 NM	80 FTW	1. Significant flight risk. 2. Adjust flight plans.	Reroute, recall or grounding of aircraft.

Table A6.4. 80 FTW T-6 Flying Status Weather Matrix Example (Refer to AFI 11-2T-6 Volume 3, Operations Group Supplement for current matrix).

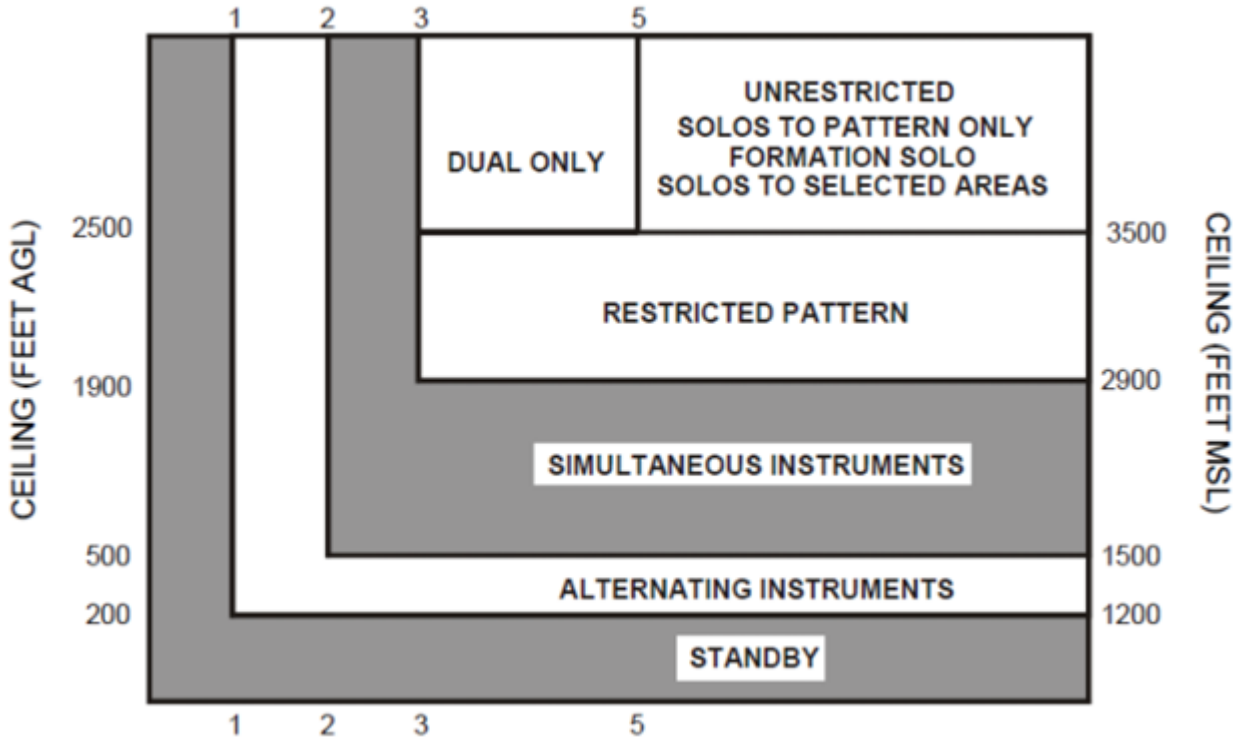


Table A6.5. 80 FTW T-38 Flying Status Weather Matrix Example (Refer to AFI 11-2T-38 Volume 3, Operations Group Supplement for current matrix).

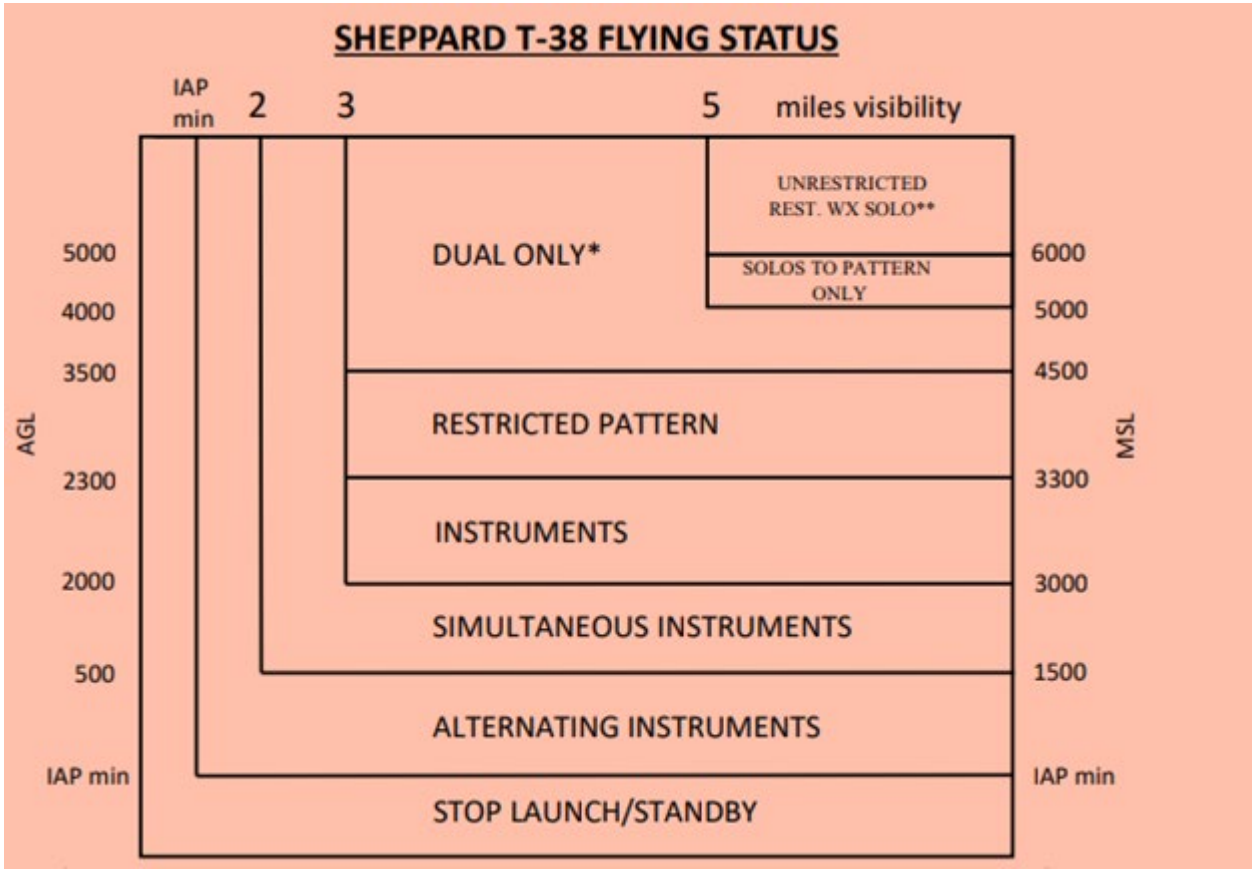


Figure A6.1. SAFB Flying Status and Min Ceiling/Visibility Required (Above Ground Level).

SAFB Flying Status	Min Ceiling/Visibility Required (Above Ground Level)
Unrestricted	N/A
Solos to the Pattern Only	4,000/5
Restricted Weather Solos	Ceiling above 5K, no more than 2K thick w/5 miles visibility
Supervised Form Solos	
Dual Only	3,500/3
Dual Crosswind	>15 kts of crosswind
Restricted Pattern	2,300/3
Instruments	1,900/3 *T-6 pattern open
Sim Instruments	500/2
Alt. Instruments	Lowest compatible approach

Table A6.6. T-6 Weather Thresholds (by Military Operating Area).

SAFB	***Any Restrictions***	***No Go***
Index of Thermal Stress/ Frostbite Risk Level	Caution	Danger
Temperature	≥ 32°C	≥ 37°C
Surface Wind	> 25 kts	> 35 kts
Crosswind	> 15 kts	> 25 kts; > 10 kts with Wet Runway
Ceilings	< 2,500 Feet	< 200 Feet
Visibility/Weather	< 5 Statute Miles	Thunderstorm, Freezing, Fog, or < 1/2 Statute Miles
Icing/Turbulence	Light Rime Icing (okay to climb thru if < 5K feet thick); Moderate Turbulence	> Light Rime & any Clear/Mixed Icing; ≥ Severe Turbulence
Remarks	Low Level Wind Shear, Thunderstorm Temporary Forecast Conditions (TEMPO)	
Fort Sill/Lawton/Henry Post Army AF	***Any Restrictions***	***No Go***
Surface Wind	> 25 kts	> 35 kts
Crosswind	> 15 kts	> 25 kts; > 10 kts with Wet Runway
Runway 35 Tailwind	> 10 kts	> 20 kts
Ceilings	< 2,500 Feet	< 200 Feet
Visibility/Weather	< 5 Statute Miles	Statute Miles, Freezing, Fog or < 1/2 Statute Miles
Icing/Turbulence	Light Rime Icing (okay to climb thru if < 5K feet thick); Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
Remarks	Low Level Wind Shear, Thunderstorm Temporary Forecast Conditions (TEMPO)	
Frederick Municipal Airfield (Hacker)	***Any Restrictions***	***No Go***
Surface Wind	> 25 kts	> 35 kts
Crosswind	> 15 kts	> 25 kts; > 10 kts with Wet Runway
Ceilings	≤ 5,300 Feet	< 2,600 Feet
Visibility/Weather	< 5 Statute Miles	Thunderstorm, Freezing, Fog, or < 3 Statute Miles
Icing/Turbulence	Light Rime Icing (okay to climb thru if < 5K feet thick); Moderate Turbulence	> Light Rime and any Cear/Mixed Icing; ≥ Severe Turbulence

SAFB	***Any Restrictions***	***No Go***
Remarks	Low Level Wind Shear, Thunderstorm Temporary Forecast Conditions (TEMPO)	
Sheppard 1 and 2	***Any Restrictions***	***No Go***
Ceiling Base/Top	Scattered, Broken or Overcast < 140	
Icing/Turbulence	Light Rime Icing (okay to climb thru if < 5K feet thick); Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
East and West Low Levels	***Any Restrictions***	***No Go***
Ceiling	< 3,000 Feet	< 1,500 Feet
Visibility/Weather	< 5 Statute Miles	Thunderstorm, Freezing, Fog, or < 3 Statute Miles
Wind 500 Feet Above Ground Level	> 25 kts	> 35 kts
Icing/Turbulence	Light Rime Icing (okay to climb thru if < 5K feet thick); Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence

Table A6.7. T-38 Weather Thresholds (by Military Operating Area).

SAFB	***Any Restrictions***	***No Go***
Index of Thermal Stress/ Frostbite Risk Level	Caution	Danger
Temperature	≥ 32°C	≥ 37°C
Surface Wind	> 25 kts	> 35 kts
Crosswind	> 15 kts	> 30 kts
Ceiling	< 2,300 Feet	< 200 Feet
Visibility/Weather	< 3 Statute Miles	Thunderstorm, Freezing, Fog or < 1 Statute Mile
Icing/Turbulence	Any Icing; Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
Remarks	Low Level Wind Shear, Thunderstorm, Temporary Forecast Conditions (TEMPO)	
Fort. Sill/Lawton/Henry Post Army AF	***Any Restrictions***	***No Go***
Surface Wind	> 25 kts	> 35 kts
Crosswind	> 15 kts	> 30 kts
Runway 35 Tailwind	> 10 kts	> 20 kts
Ceiling	< 2,300 Feet	< 300 Feet
Visibility/Weather	< 3 Statute Miles	Thunderstorm, Freezing, Fog or < 1 Statute Mile
Icing/Turbulence	Any Icing; Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
Remarks	Low Level Wind Shear, Thunderstorm, Temporary Forecast Conditions (TEMPO)	
Westover 1 and 2, Hollis and Washita	***Any Restrictions***	***No Go***
Icing/Turbulence	Any Icing; Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
Minimum 4,000 Feet workable space within FL070-230	NO	
Remarks	Isolated Thunderstorms	> Isolated Thunderstorms
Falcon Range	***Any Restrictions***	***No Go***
Ceiling	< 10,000 Feet	< 1,500 Feet
Icing/Turbulence	Any Icing; Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence

SAFB	***Any Restrictions***	***No Go***
Visibility/Weather	< 10 Statute Miles	< 3 Statute Miles
Remarks		Thunderstorm, Freezing, Fog
East and West Low Levels	***Any Restrictions***	***No Go***
Ceiling	< 5,000 Feet	< 3,000 Feet
Visibility/Weather	<10 Statute Miles	Thunderstorm, Freezing, Fog or < 5 Statute Miles
Wind 500 Feet Above Ground Level	> 25 kts	> 35 kts
Icing/Turbulence	Any Icing; Moderate Turbulence	> Light Rime and any Clear/Mixed Icing; ≥ Severe Turbulence
Remarks	Isolated Thunderstorms	> Isolated Thunderstorms

Attachment 7

LOCATION OF AIRFIELD WEATHER SENSORS, WEATHER STATION, AND ALTERNATE OPERATING LOCATION

Figure A7.1. Airfield Weather Sensor Locations.

Attachment 8

INDEX OF THERMAL STRESS DETERMINATION CHART

Figure A8.1. Index of Thermal Stress Determination Chart.

Dewpoint (°F) \ Dry Bulb Temperature (°F)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116
10	N/A	N/A	N/A	N/A	N/A	82	83	84	86	87	88	90	91	92	94	95	96	98	99
12	N/A	N/A	N/A	N/A	N/A	82	83	85	86	87	89	90	91	93	94	95	96	98	99
14	N/A	N/A	N/A	N/A	N/A	82	83	85	86	87	89	90	91	93	94	95	97	98	99
16	N/A	N/A	N/A	N/A	N/A	82	84	85	86	88	89	90	92	93	94	96	97	98	99
18	N/A	N/A	N/A	N/A	N/A	83	84	85	87	88	89	91	92	93	95	96	97	98	100
20	N/A	N/A	N/A	N/A	N/A	83	84	85	87	88	90	91	92	93	95	96	97	99	100
22	76	77	79	80	82	83	84	86	87	88	90	91	92	94	95	96	98	99	100
24	76	78	79	81	82	83	85	86	87	88	90	91	93	94	95	97	98	99	100
26	77	78	80	81	82	84	85	86	87	88	90	92	93	94	96	97	98	99	101
28	77	79	80	81	83	84	85	87	88	89	91	92	93	95	96	97	98	99	101
30	77	79	80	81	83	84	85	87	88	89	91	92	94	95	96	97	98	99	101
32	78	79	80	81	83	84	85	87	88	89	91	92	94	95	96	97	98	99	101
34	79	80	81	82	83	85	86	87	88	90	91	93	94	95	96	98	99	100	102
36	79	80	82	82	84	86	87	87	89	90	92	93	95	96	97	98	99	100	102
38	80	81	82	83	84	86	87	88	89	91	92	94	95	96	97	99	100	101	103
40	81	82	83	83	85	87	88	89	90	92	93	94	95	97	98	99	100	101	103
42	81	82	83	84	85	87	88	89	91	92	93	95	96	97	98	100	101	102	104
44	82	83	84	85	86	88	89	90	91	93	94	95	96	98	99	100	101	103	104
46	82	84	84	85	87	88	90	91	92	93	95	96	97	98	99	100	102	103	104
48	83	84	85	86	87	89	90	91	93	94	95	96	97	99	100	101	102	104	105
50	84	84	85	87	88	90	91	92	93	94	96	97	98	99	100	101	103	104	105
52	84	85	87	88	90	91	92	93	94	95	96	98	99	100	101	102	103	105	106
54	84	86	88	89	90	91	92	93	95	96	97	98	99	101	102	102	104	106	107
56	85	87	89	90	91	92	93	94	95	96	97	99	100	101	102	103	104	106	107
58	86	88	90	90	91	92	93	94	96	97	98	100	101	102	103	104	105	107	108
60	87	89	90	91	92	93	94	95	97	98	99	101	102	103	104	105	106	107	108
62	88	89	91	92	93	94	95	96	97	99	100	101	102	103	104	105	106	108	109
64	89	90	91	93	94	95	96	97	98	100	101	102	103	104	105	106	107	108	109
66	90	91	93	94	95	96	97	98	99	100	101	103	104	105	106	107	108	109	110
68	91	92	94	95	96	97	98	99	100	101	102	103	104	106	107	108	109	110	111
70	92	93	95	96	97	98	99	100	101	102	103	104	105	106	108	109	109	110	112
72	93	94	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	113
74	94	95	97	98	99	100	101	102	103	104	105	106	107	109	110	111	112	112	114
76	95	96	98	99	100	102	102	103	104	105	106	108	109	110	111	112	113	114	115
78	97	98	99	100	101	103	104	105	106	107	108	109	110	111	112	113	114	115	116
80	98	100	100	101	102	104	105	106	107	108	109	110	111	112	113	114	115	116	117
82	99	100	101	102	103	105	106	107	108	109	110	111	112	113	114	115	116	117	118
84	101	102	101	103	104	106	107	108	109	110	111	112	113	114	115	116	117	118	119
86	102	103	104	104	106	108	108	109	110	111	112	113	114	115	116	117	118	119	120
88	103	104	105	106	107	109	109	110	111	112	113	114	115	116	117	118	120	121	121
90	105	106	107	108	109	110	110	111	112	113	113	114	115	117	118	119	120	122	123