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Weather

WEATHER SUPPORT



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This instruction establishes requirements and responsibilities for weather support to Wright-Patterson Air Force Base (WPAFB). It applies to all agencies described herein. Special requirements and procedures for the National Airborne Operations Center (NAOC) and Defense Threat Reduction Agency (DTRA) are documented in separate support agreements, Annex H of HQ ACC OPORD 84-00, and the Open Skies Compliance Plan (WPAFB OSCOP). This instruction implements AFD 15-1, *Atmospheric and Space Environmental Support*.

SUMMARY OF REVISIONS

This revision updates WPAFB Instruction 15-101 dated 11 June 2002. Changes include, but are not limited to: identification of supported customers and associated weapon systems, identification of the lead weather unit during multi-unit operations; to adjust Severe Weather Action Procedures; to update weather advisory criteria; and to update and identify the New Tactical Forecast System (NTFS) and associated customer matrix.

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Chapter 1

GENERAL INFORMATION

1.1. Concept of Operations. In conjunction with Air Force Strategic Plan on Weather Reengineering (Aug 97) and AFI 15-128, the world map has been divided into ten Areas of Responsibility (AOR) with a designated “hub” or “OWS” supporting each region. The 15th Operational Weather Squadron (15 OWS), located at Scott Air Force Base, has been designated as the Weather Hub for WPAFB. The 15 OWS AOR includes the northeastern United States and adjacent Canadian Provinces (See [Attachment 10](#)). The 15 OWS – 88 WS/WEB team provides local forecasts, forecasted and observed weather watches, warnings and advisories as well as on and off-station briefing support for WPAFB. The term Weather Flight (WF) can be used interchangeably with 88 WS/WEB.

1.2. Supported Agencies, Missions, and Mission-Limiting Parameters. Wright-Patterson AFB is unique in that our main mission here is systems acquisitions with a secondary emphasis on research and development. We have two resident flying units and an Aero Club. Two of the primary missions we support are not located at this airfield, but instead fly in from other locations to use our facilities and personnel.

1.2.1. The Aero Club and Detachment 3 Civil Air Patrol (CAP) USAF provide for the training of pilots and personal pleasure/business flights by qualified pilots. CAP may be called upon for search and rescue operations. Primary aircraft is the PA-28

1.2.1.1. **Sensitivities:**

1.2.1.1.1. Thunderstorms within 5 NM of WPAFB.

1.2.1.1.2. Tornado watch/warning is in effect.

1.2.1.1.3. Surface winds ≥ 30 kt.

1.2.1.1.4. Crosswinds ≥ 15 kt.

1.2.1.1.5. Microburst report is received.

1.2.1.1.6. Wind shear is observed or forecast to be at or below 1000' with a differential of greater than 20kt between the surface and 1000'.

1.2.1.1.7. Severe or extreme turbulence is observed or forecast.

1.2.1.1.8. Light, moderate, or severe icing is observed or forecast.

1.2.1.1.9. Hail or ice pellets are observed or forecast.

1.2.1.1.10. VFR Flights: the ceiling and/or visibility deteriorate to less than VFR conditions.

1.2.1.1.11. IFR Flights: the ceiling and/or visibility deteriorate to less than IFR conditions.

1.2.1.1.12. HF, UHF, and GPS degradation.

1.2.1.2. **Responses:** The Supervisor of Flying (SOF) shall broadcast any weather recall and will direct aircraft be placed in the hangar when any of the following conditions occur:

1.2.1.2.1. There is an advisory for thunderstorms within 5NM of the base.

1.2.1.2.2. Tornado watch/warning is in effect.

1.2.1.2.3. Surface winds \geq 30kt.

1.2.1.2.4. Conditions are favorable for a microburst.

1.2.1.2.5. Hail or ice pellets are forecast.

1.2.1.2.6. All flying operations will cease if any of the conditions stated in paragraph [1.2.1.1](#) exist.

1.2.2. The 445th Air Wing provides global airlift and medivac capabilities for military missions and humanitarian operations. Primary aircraft is the C-141.

1.2.2.1. **Sensitivities:**

1.2.2.1.1. Thunderstorms within 5 NM of WPAFB.

1.2.2.1.2. Winds/gusts \geq 40 knots.

1.2.2.1.3. Crosswinds \geq 25 knots.

1.2.2.1.4. Ceiling and/or Visibility deteriorates to less than 200' or $\frac{1}{2}$ mile.

1.2.2.1.5. HF, UHF, and GPS degradation.

1.2.2.2. **Responses:** When a Weather Watch, Warning, or Advisory is received via NTFS (or voice) the 445th Command Post implements a local checklist to notify all personnel and vehicles equipped with radios, the Support Section, Fuel Shop, 445th LG/CC, and the Squadron Operations Section. Additional actions and criteria follow.

1.2.2.2.1. The following actions will take place when lightning is observed within 5 NM or the potential exists for lightning within 5 NM of WPAFB.

1.2.2.2.1.1. Flightline personnel locate equipment that may need securing and remain aware of current weather situation. All servicing operations and outside work can continue until lightning is observed within 5 NM of WPAFB.

1.2.2.2.2. The following actions will take place for observed lightning within 5 NM of WPAFB.

1.2.2.2.2.1. All outside servicing operations will cease. All other work outside the aircraft will be terminated. 1.2.1.4.5. Work on the aircraft interior can be accomplished as long as the aircraft is properly grounded.

1.2.2.2.2.2. The Production Superintendent will direct evacuation of all personnel from the flightline if required.

1.2.2.2.2.3. The Maintenance Control Function (MCF) will ensure the fuel shop and docks have been notified.

1.2.2.2.3. The following actions will take place for winds \geq 40 knots. One (1) hour lead time is required for actions.

1.2.2.2.3.1. Moor aircraft with less than 45000lbs of fuel IAW T.O. 141B-2-00GE-00-1.

1.2.2.2.4. The following actions will take place for winds \geq 50 knots.

1.2.2.2.4.1. Moor all aircraft IAW T.O. 141B-2-00GE-00-1. Gross weight of aircraft will be utilized in selecting the order to moor.

1.2.2.2.5. The following actions will take place for winds ≥ 70 knots or there are indications that aircraft have been moved by wind.

1.2.2.2.5.1. Inspect the aircraft IAW T.O. 141B-2-00GE-00-1.

1.2.2.2.6. The following actions will be taken for severe weather.

1.2.2.2.6.1. The 445th AW Command Post will implement the local Weather Watch/Warning and Natural Disaster Checklist.

1.2.3. The 47th Airlift Flight provides executive and operational support airlift for military personnel and government civilians on a global scale. Primary aircraft is the LJ-35.

1.2.3.1. Sensitivities:

1.2.3.1.1. Cross winds ≥ 25 knots.

1.2.3.1.2. Winds ≥ 50 knots.

1.2.3.1.3. Thunderstorms within 5 nm of WPAFB.

1.2.3.1.4. Severe Icing.

1.2.3.1.5. Severe turbulence.

1.2.3.1.6. Ceiling and/or Visibility deteriorate to less than 200' or $\frac{1}{2}$ mile.

1.2.3.1.7. HF, UHF, and GPS degradation.

1.2.3.2. Responses:

1.2.3.2.1. The following actions will take place for cross winds ≥ 25 knots.

1.2.3.2.1.1. The 47th ALF will suspend flight operations.

1.2.3.2.2. The following actions will take place for winds ≥ 50 knots.

1.2.3.2.2.1. Aircraft will be moored or hangared for all winds ≥ 50 knots. Two (2) hour lead-time is required for actions.

1.2.3.2.3. The following action will take place for thunderstorms within 5 nm of WPAFB.

1.2.3.2.3.1. Flight operations will continue at pilot discretion.

1.2.3.2.4. The following actions will take place for occurrence of severe icing.

1.2.3.2.4.1. The 47th ALF will suspend flight operations.

1.2.3.2.5. The following actions will take place for occurrence of severe turbulence.

1.2.3.2.5.1. The 47th ALF will suspend flight operations.

1.2.3.2.6. The following actions will take place for occurrence of cig/vis $< 200'$ or $\frac{1}{2}$ mile.

1.2.3.2.6.1. The 47th ALF will suspend flight operations.

1.2.4. The National Airborne Operations Center (NAOC) provides National Command Authority with the means to conduct offensive and defensive operations at all times. Primary aircraft is the E-4 based at Offutt AFB, Nebraska.

1.2.4.1. Sensitivities:

- 1.2.4.1.1. Tornado.
- 1.2.4.1.2. Moderate or greater thunderstorm: Hail greater than or equal to ½” *and/or* (specified when warning is issued) Surface winds ≥35kt.
- 1.2.4.1.3. Surface winds ≥35kt (not in TSTMS).
- 1.2.4.1.4. Freezing precipitation.
- 1.2.4.1.5. Heavy snow (2” accumulation or more expected within 12 hrs).
- 1.2.4.1.6. Thunderstorms within 50 NM of WPAFB.
- 1.2.4.1.7. Thunderstorms within 25 NM of WPAFB.
- 1.2.4.1.8. Thunderstorms within 10 NM of WPAFB (Implying lightning within 5 NM).
- 1.2.4.1.9. Visibility less than 1 statute mile at station.
- 1.2.4.1.10. Crosswinds ≥20kt at station.
- 1.2.4.1.11. Low level wind shear at station (outside TSTMS).
- 1.2.4.1.12. Icing, moderate or greater within 50 NM of WPAFB and below 10,000’ MSL (outside TSTMS).
- 1.2.4.1.13. Turbulence, moderate or greater within 50 NM of WPAFB and below 10,000’ MSL (outside TSTMS).
- 1.2.4.1.14. Surface winds ≥25kts.
- 1.2.4.1.15. Hail less than ½”.
- 1.2.4.1.16. Ceiling and/or Visibility deteriorate to less than 200’ or ½ mile.
- 1.2.4.1.17. HF, UHF, and GPS Degradation.

1.2.4.2. Responses:

- 1.2.4.2.1. Aircraft will be hangared or will depart the airfield for all weather warning criteria.
- 1.2.4.2.2. Departure or hangar for non-warning criteria will be at discretion of NAOC commander.
- 1.2.4.2.3. Note: Aircraft will depart for ANY criteria that may prevent it from departing the airfield in the event of an emergency National Command Authority order.

1.2.5. The 45th RECONNAISSANCE SQUADRON (OPEN SKIES) provides aerial photography and data collection in support of the Open Skies Treaty. Primary aircraft is the OC135 based at Offutt AFB, Nebraska.

1.2.5.1. Sensitivities:

- 1.2.5.1.1. Tornado.
- 1.2.5.1.2. Moderate or greater thunderstorm: Hail greater than or equal to ½” *and/or* (specified when warning is issued) Surface winds ≥35kt.
- 1.2.5.1.3. Surface winds ≥35kt (not in TSTMS).
- 1.2.5.1.4. Cross-winds ≥ 25 knots.

- 1.2.5.1.5. Thunderstorms within 10 NM of WPAFB.
- 1.2.5.1.6. Freezing precipitation.
- 1.2.5.1.7. Heavy snow (2" accumulation or more expected within 12 hrs).
- 1.2.5.1.8. Ceiling and/or Visibility deteriorates to less than 200' or ½ mile.
- 1.2.5.1.9. HF, UHF, and GPS degradation.

1.2.5.2. Responses:

- 1.2.5.2.1. Aircraft will be moored or hangared for all weather warning criteria if possible.
- 1.2.5.2.2. Departure or hangar for non-warning criteria will be at discretion of aircraft commander.

1.3. 15 OWS Roles and Responsibilities. To provide operational-level aerospace weather support to operational units assigned within and/or deployed into its AOR. The 15 OWS conducts a Meteorological Watch (METWATCH) within its AOR and amends for specified amendment criteria. All 15 OWS products are available on their website: <https://ows.scott.af.mil> and include the Terminal Aerodrome Forecast (TAF), forecasted weather watches, warnings and advisories, and off-station flight weather briefings. This suite of products is transmitted by the 15 OWS via the New Tactical Forecast System (NTFS) after collaboration with the Weather Flight.

1.4. OWS Duty Priorities.

- 1.4.1. Perform 15 OWS Emergency War Order (EWO) taskings.
- 1.4.2. Execute 15 OWS Evacuation.
- 1.4.3. Provide products and services in support of Combat, Contingency & Military Operations other than War (MOOTW) Operations.
- 1.4.4. Provide Airborne Aircrew Support.
- 1.4.5. Provide Resource Protection Products (forecast weather watches, warnings, advisories, etc.).
- 1.4.6. Prepare and disseminate Peacetime/Exercise Regional and Operational-Level Graphics and Alphanumerical Products.
- 1.4.7. Prepare and disseminate Terminal Aerodrome Forecasts (TAF).
- 1.4.8. Provide scheduled flight weather Mission Execution Forecasts (MEF) and Tactical-Level, Non-contingency MEFs.
- 1.4.9. Provide other aerospace weather products, information, and weather briefings.
- 1.4.10. Accomplish other routine weather requirements.
- 1.4.11. Accomplish recurring training.
- 1.4.12. Accomplish administrative tasks.

1.5. 88 WS/WEB Roles and Responsibilities. To provide weather observing, forecasting, briefing, terminal METWATCH support and resource protection services for WPAFB as well as NAOC and DTRA aircraft while they are located at WPAFB. The 88 WS/WEB will disseminate Observed weather watches,

warnings and advisories. All supported units should coordinate with 88 WS/WEB to change this instruction or request special support not specified within this instruction.

1.5.1. **Unit Overview.** The 88th Weather Squadron (88 WS) consists of two flights: the Weather Flight (88 WS/WEB) and the Staff Meteorology Flight (88 WS/WES). The squadron is functionally aligned under the 88th Mission Support Group (88 MSG).

1.6. Contacting the Weather Flight (WF): Weather Flight personnel can be reached by phone at DSN 787-7779/3102 (Commercial at (937) 257-7779/3102) or telefax at DSN 787-1205 (Commercial at (937) 257-1205). Requests for weather support should be directed to the Site Manager at DSN 787-6801.

1.7. Releasing Weather Information. All weather information produced by the weather station is for use by government and DoD-agencies only. Coordinate all requests for release of weather information from non-DoD agencies or individuals to the ASC Public Affairs office at (937) 255-3334.

Chapter 2

WEATHER OPERATIONS

2.1. Duty Hours. Weather services are available for WPAFB 24 hours a day, 7 days a week.

2.2. Duty Priorities.

- 2.2.1. Complete Emergency War Order (EWO) tasking; support to NAOC alert activities.
- 2.2.2. Respond to aircraft/ground emergencies (aircraft emergencies and mishaps, accidental release of toxic chemicals, or any operation involving the safety of aircraft, material, or personnel).
- 2.2.3. Support airborne aircraft (PMSV, radio phone patch, etc.).
- 2.2.4. Provide Supervisor of Flying (SOF) Support.
- 2.2.5. Take and locally disseminate surface weather observations/ Provide "Eyes Forward" support to 15 OWS.
- 2.2.6. Perform Coordinated METWATCH Support.
- 2.2.7. Severe Weather Action Process (SWAP) Operations (locally disseminate weather watches, warnings, and advisories).
- 2.2.8. Produce and disseminate Mission Execution Forecasts (MEFs).
- 2.2.9. Locally disseminate PIREPs.
- 2.2.10. Relay Urgent PIREPs and Special PIREPs/AIREPs Longline.
- 2.2.11. Transmit surface observations and PIREPs/AIREPs Longline.
- 2.2.12. Perform MISSIONWATCH.
- 2.2.13. Provide other briefings and duties as required.
- 2.2.14. Weather Function Training.
- 2.2.15. Accomplish administrative tasks.

2.3. Responsibilities.

- 2.3.1. 88 WS/WEB will provide:
 - 2.3.1.1. Twenty-four-hour weather observation services to WPAFB.
 - 2.3.1.2. Weather support to 88th Air Base Wing, Air Force Materiel Command (AFMC) Headquarters, Aeronautical Systems Center (ASC), the 445th Airlift Wing, 47th Airlift Flight, and other units at WPAFB.
 - 2.3.1.3. Seasonal weather briefings and Instrument Refresher Course (IRC) briefings, as requested.
 - 2.3.1.4. Climatological briefings and services. Monthly climatologic summaries will be sent to:
 - 2.3.1.4.1. HQ AFMC/CE.
 - 2.3.1.4.2. 88 ABW/PKE, CETB, CEMM.

2.3.1.4.3. 88 MSG/SVBG.

2.3.1.4.4. 74 AMDS/SGPOA.

2.3.1.5. Weather support, when executing operations plans or orders (real-world or exercise).

2.3.1.6. Mission execution forecasts and weather briefing to support to WPAFB aircraft when requested.

2.3.1.7. Provide space weather support and service when requested.

2.3.1.8. Perform the “Eyes Forward” function in support of 15 OWS operations.

2.3.1.9. Report expected or actual snow accumulation GTE 18 inches to the Control Tower.

2.3.1.10. Provide airfield pavement forecasts (ice, snow, high water) to Base Operations upon request.

2.3.1.11. Provide Tropical Storm/Hurricane updates to the following:

2.3.1.11.1. HQ AFMC/CP.

2.3.1.11.2. 88 ABW/CC.

2.3.1.11.3. 88 MSG/CC.

2.3.1.11.4. 88 OSS/OSAM.

2.3.1.12. Provide Chemical Downwind Message (CDM) support when requested to Bio-environmental Engineering, Disaster Preparedness Command Post, and Disaster Preparedness.

2.3.1.13. NAOC support. Provide warning/watch support, flight weather briefings and observations as outlined in this WSD and unit SOPs.

2.3.1.14. Review Flight Information Publications (FLIPs) on a monthly basis for changes in airfield minima (CIG, VIS, and RVR), operating hours, and frequencies. Update Special/Local criteria as required and notify the 88 OSS/OSA of any changes or errors.

2.3.2. Supported units will:

2.3.2.1. Notify the Weather Flight when new operational weather support requirements become known.

2.3.2.2. Notify the Weather Flight of changes to briefing schedules, exercises, EWO requirements and other weather support needs.

2.3.2.3. Relay all PIREPs to the Weather Flight through the SOF and/or Air Traffic Control (ATC) agencies.

2.3.2.4. Notify the Weather Flight when they observe any significant weather in the local area.

2.4. Basic Weather Watch. The weather specialist checks weather conditions visually not to exceed 20 minutes since the previous observation when significant weather is present. If significant weather changes are known to be occurring or are forecast to occur, the specialist rechecks the weather as frequently as possible. Specific elements are listed in [Attachment 3](#).

2.5. Cooperative Weather Watch Program. The Weather Flight will develop and administer the Cooperative Weather Watch Training Program. This program will ensure WPAFB Air Traffic Controllers have the knowledge and skill to meet the requirements of the Cooperative Weather Watch Program. Additionally, the weather station will administer the AT-G-60 Tower Visibility Observation Certification Test. The tower will notify the weather station when any of the following conditions occur:

- 2.5.1. Tower visibility is less than 4 statute miles and the tower visibility changes by a reportable value ([Attachment 2](#) lists reportable values).
- 2.5.2. Thunder is first heard.
- 2.5.3. Lightning is first observed.
- 2.5.4. A tornado or funnel cloud appears or dissipates.
- 2.5.5. Precipitation begins or ends.
- 2.5.6. Any meteorological situation that, in the opinion of the controller, is critical to flight safety.
- 2.5.7. The wind sensor is changed.
- 2.5.8. The High Intensity Runway Light (HIRL) settings change and the prevailing visibility is 1 mile or less or the Runway Visual Range (RVR) is 6,000 feet or less.
- 2.5.9. The active runway changes.
- 2.5.10. The controller receives a PIREP containing meteorological data.

2.6. Terminal Aerodrome Forecast (TAF). The TAF is the official forecast for the airfield covering a 24-hour period. The TAF is issued every eight hours at 0100, 0900, and 1700 Zulu time. The TAF specifies the duration, intensity, and time of occurrence of the elements listed below. Detailed forecast, specification, and amendment criteria are listed in [Attachment 2](#).

- 2.6.1. Hazardous or severe weather.
- 2.6.2. Precipitation and weather phenomena (i.e. fog, haze).
- 2.6.3. Ceiling and visibility.
- 2.6.4. Average wind speed, gusts, and direction.
- 2.6.5. Altimeter setting.
- 2.6.6. Turbulence and icing from the surface to 10,000 feet above mean sea level (MSL).
- 2.6.7. Wind shear conditions (WSCONDS) from surface to 2,000 feet above ground level (AGL).
- 2.6.8. Maximum/minimum temperature and time of occurrence.

2.7. Extended Forecast. The Weather Flight also provides a 7-Day Weather Outlook. This product is available on the World Wide Web (WWW) at <http://weather.wpafb.af.mil>. This long-range forecast is updated NLT 1000L, Monday through Friday. It is for non-operational purposes only and will not be amended.

2.8. Flight Weather Briefings. The weather station provides flight weather briefings to aircrew members on request. In the case of multi-unit operations the lead unit will provide the weather briefing(s). The

lead unit is the unit that has command and control responsibilities for the operation. The standard flight weather briefing, documented on DD Form 175-1, Flight Weather Briefing, details departure, en route, and destination weather conditions. Information includes take off data (ceiling, visibility, temperature, winds, pressure altitude, and hazards), en route data at flight level (turbulence, icing, thunderstorms, flight level winds, and temperature), and destination weather (ceiling, visibility, temperature, winds, pressure altitude, and hazards). Contact information is also provided to aircrews for obtaining weather updates or new flight weather briefings at their next destination.

2.9. Mission Execution Forecast (MEF). The Weather Flight produces a MEF for flying units assigned to Wright-Patterson AFB. Based on the TAF, the MEF is tailored to particular missions and ensures local customer mission needs are met.

2.10. Mission Watch. The weather station performs a mission watch by flight following each assigned flying unit's aircraft during their missions. The weather specialist will focus on weather that significantly deviates from the original MEF with specific emphasis on mission limiting weather thresholds for the specific mission or airframe. The use of "Owl Net" aids in the recognition of airframe/weather thresholds.

2.10.1. The weather specialist will advise the 47 ALF Operations Officer (937) 257-7606 and/or the 445 AW Command Post (937) 257-3551 when any of the following conditions occur and were not previously forecast. NOTE: Transient aircrews will be notified by Base Operations when advised by the weather specialist.

2.10.1.1. Ceiling and/or visibility is observed or later forecast to decrease across the following thresholds.

2.10.1.1.1. 1000' / 2SM (3200M).

2.10.1.1.2. 300' / ¾SM (1200M) for 47 ALF training missions only.

2.10.1.1.3. 200' / ½SM (0800M).

2.10.1.2. Crosswinds \geq 25Kts at KFFO or destination.

2.10.1.3. ANY thunderstorm activity not previously forecast or thunderstorm activity increasing in severity from previous forecast.

2.10.1.4. Turbulence. The beginning or ending of turbulence not associated with thunderstorms which first meets, exceeds, or decreases below moderate or greater thresholds for CAT II aircraft and was not specified in the forecast.

2.10.1.5. Non-convective Low-Level Wind shear. Wind shear is occurring below 2000', is expected to continue, but is not specified in the forecast. Wind shear is forecast to occur on the MEF, but is not expected to occur during the mission time.

2.10.1.6. Icing. The beginning or ending of icing not associated with thunderstorms which were not specified in the MEF or any change in icing intensity threshold for CAT II aircraft.

2.11. Pilot-to-Metro Service (PMSV). Available 24 hours a day at 344.6 MHz.

2.11.1. Pilot Reports (PIREP). PIREPs are an important source of weather information provided by aircrews operating in the local area. The duty forecaster disseminates all PIREPs unless they meet the following conditions:

- 2.11.1.1. Contain only negative reports of icing/turbulence outside forecast areas of these phenomena.
- 2.11.1.2. Contain only the heights of cloud bases, which are reported in the current surface observation.
- 2.11.1.3. Contain the same information transmitted by Weather Flight personnel in the last 30 minutes.

2.12. Limitations.

2.12.1. Forecasts. Experience shows forecast accuracy decreases as the length of the forecast term increases. Therefore, short-term operational forecasts are generally more accurate than 24-hour forecasts, which, in turn, are generally more accurate than outlooks beyond 24 hours. In the event data is cut off (communication outage, evacuation, etc.), forecasting skill degrades as weather information available to a forecaster decreases.

2.12.2. Duty Priorities. AFMAN 15-129, *Aerospace Weather Operations-Processes and Procedures*, requires the Weather Flight to establish a duty priority list. (See paragraph 1.7.). The list ensures tasks and weather services are performed according to relative importance

2.12.3. Observations. Weather Flight personnel cannot detect and report every weather change as it occurs. Changes that occur while the specialist is disseminating information may go unreported until the next opportunity to observe (usually no more than 20 minutes later). A cooperative weather watch, in which control tower personnel are trained to assist in observing as a secondary function, reduces the impact of this limitation. The weather specialist must walk through the Flight Planning Area in order to exit the building to take the official observation. Once outside of Building 206, the specialist proceeds approximately 50 feet out from Base Operations to the AFMC crest located at the top of the red welcome "T". This allows them to see 180 degrees SSW-NNE overlooking the runway. Consequently, weather occurring southeast of the building and airfield may not be reflected in the official weather observation. However, since the vast majority of weather patterns approach WPAFB from the west, this limitation has minimal impact. Jet engine noise may impede the specialist's ability to hear thunder. Ramp lights may hinder nighttime visibility.

2.12.4. Alert Weather Observation. Weather Flight personnel are required to disseminate an alert weather observation via NTFSS within 60 seconds of alert notification. The ability to meet this dissemination requirement becomes questionable when FMQ-13 wind equipment or FMQ-8 temperature/dew point equipment becomes inoperative. Should either of these pieces of equipment become inoperative, weather personnel will use the latest available data (no older than 30 minutes) within 60 seconds of alert notification. This data will be considered estimated and prefixed with an E (estimated). Weather Flight personnel will then manually derive the estimated data and amend the alert weather observation as needed.

2.12.5. Alternate Observing Site (AOS). In the event Base Weather is evacuated all weather functions will relocate to Building 101. Phone numbers are: Commercial - (937) 257-2375, DSN - 787-2375; and Cell - 272-1849). Because the observation point is on the northwest side of Building 101, observations of weather phenomenon occurring in the southeast quadrant may not be reflected in the official weather observation. Weather information collected using tactical weather equipment will be prefixed with the remark E (estimated). Weather data received from the Automated Observing System is not considered estimated and need not be prefixed.

2.12.6. Weather Equipment and Restoral Priority. To provide quality, timely observations and forecasts the weather station relies on a variety of meteorological sensing and processing equipment. Outages to this equipment may hamper or degrade weather data collection capabilities resulting in a delay of weather products. [Attachment 9](#) lists all weather equipment, mission impacts and restoration priorities.

2.12.7. Runway Visual Range (RVR). AFMAN 15-111, *Surface Weather Observations*, requires a 10-minute average when reporting RVR in long-line observation transmissions. WPAFB does not have this capability and will disseminate instantaneous RVR on local disseminations only.

Chapter 3

DISSEMINATION OF WEATHER INFORMATION

3.1. General. The New Tactical Forecast System (NTFS) is used to acquire, process, display, and disseminate weather information. The NTFS server is located at the weather station with a link to the Air Force Weather Agency (AFWA) at Offutt AFB NE and users on and off base (**Attachment 8**). Weather Flight personnel use the NTFS to display weather graphic and Alpha/Numeric products. It is also used to transmit and receive weather observations and forecasts for local and off-base agencies. It is the primary long line/local dissemination tool for weather watches, warnings, and advisories.

3.2. Communication Outages.

3.2.1. NTFS External Communications. In the event communication lines between the NTFS server and AFWA are inoperative Weather Flight personnel will make every attempt to reestablish communications. In the interim, weather data will be retrieved using the Air Force Weather Information Network (AFWIN), 15th Operational Weather Squadron Homepage, or other meteorological WWW pages. Support may be delayed or degraded until reliable communications can be reestablished.

3.2.2. NTFS Local Communications. If the NTFS communication line between the server and the tower is inoperative weather data will be disseminated by telephone and/or IDS5. All other users are on the LAN. If the LAN is down all weather information will be passed telephonically to the following and call logged on the 88 WS form 7:

3.2.2.1. Agencies notified: Control Tower, 88 ABW Command Post, 445 AW Command Post, Base Operations, TRACON and NAOC.

3.2.2.2. In the event of a NTFS and phone outage, Weather Flight personnel will use the LMR or cell phone to transmit all weather information to the tower.

3.2.3. Telephone and/or Telefax lines. In the event the telephone or telefax lines are inoperative, the weather station will work closely with 88th Communications Squadron to resolve the problem. In the interim, weather support will continue from the weather station for local aircrews. Support to external customers may be delayed or degraded during this outage.

3.2.4. 15 OWS Outages: If the 15 OWS cannot disseminate products Weather Flight personnel will assume the responsibility with little interruption in service. If the 15 OWS has an interruption of less than 24 hours, the Weather Flight will assume weather responsibility for Wright-Patterson. If the 15 OWS has an interruption of more than 24 hours the Weather Flight will assume weather responsibility for Wright-Patterson with the understanding products and services may be severely degraded. During this time the 15 OWS will evaluate the situation and augment as necessary.

3.3. Alternate Observing Site (AOS).

3.3.1. Weather Flight personnel will contact the following agencies, inform them the AOS is activated, and provide them with contact numbers (Primary: 937-257-2375 (DSN 787-2375), Cell: 937-272-1849. Weather services will be degraded at this time. All calls will be logged on a Local Dissemination Form.

- Tower 257-7199

- Dayton Approach (TRACON) 454-7336
- 88 ABW Command Post 257-6314
- Base Ops 257-7655 (bldg. 101, Rm. 155)
- 15 OWS DSN 576-9755
- 445 AW SOF 257-0239 (flying hours only)
- AFWA Duty Ops Center DSN271-2586
- 445 AW Command Post 257-3551
- Site Manager and Assistant Site Manager (Recall SOP)
- Call Ft Campbell AIN, DSN 635-5989/2519 or Grissom AFB, DSN 928-2203/2423 and ask them to monitor our PMSV.

3.3.2. Weather Observations: Weather Flight personnel will contact the Tower and Dayton Approach with each weather observation until operations return to primary facility.

3.3.3. Weather Watches, Warnings and Advisories: Weather Flight personnel will contact the following agencies with weather watches, warnings and advisories until operations return to primary facility.

- Tower
- Dayton Approach (TRACON)
- 88 ABW Command Post
- Base Ops
- 445 AW Command Post
- Site Manager and Assistant Site Manager

3.3.4. Upon return to normal operations Weather Flight personnel will contact the agencies listed above (para 3.3.1.) and inform them the AOS is deactivated with a return to normal weather support operations.

Chapter 4

WEATHER WATCHES, WARNINGS, AND ADVISORIES

4.1. General. Base and airport agencies needing special warning or advisory support should document their requirements and forward them to 88 WS/WEB for review and validation. Customer requirements must include weather phenomena and thresholds (when applicable), lead-time required for notification, and actions taken by the customer upon receipt of a watch, warning, or advisory. Final decision authority is left to the 88 ABW/CC to approve changes to lead times due to mission requirements and will be included in this instruction under section [4.3](#).

4.2. Severe Weather Action Procedures (SWAP).

4.2.1. The 15 OWS and Weather Flight will initiate and maintain a heightened meteorological watch and implement severe weather action procedures IAW HQ USAF/XOWP policy.

4.2.2. Whenever a watch or warning is issued, 15 OWS personnel will coordinate with Weather Flight personnel to coordinate the following actions as noted in section [4.3](#).

4.2.2.1. Recommend additional forecaster assistance be recalled to augment the WF.

4.2.2.2. Increase Radar, METSAT, Lightning Detection System, and Met watch functions.

4.2.2.3. Increase frequency of observations.

4.2.3. The Severe Weather Action Team (SWAT) consists of the Site manager and/or Assistant Site Manager. They will analyze the situation and assess the threat before an expected occurrence of severe weather. If the SWAT determines WPAFB is at risk for severe weather they will remain on duty and recall additional personnel as needed until the threat has passed.

4.2.4. SWAT Activation. The SWAT will be activated when any of the following conditions occur:

4.2.4.1. The potential for severe weather exists within the next 4 hours.

4.2.4.2. The 15 OWS issues a severe thunderstorm/tornado watch or warning.

4.2.4.3. The NWS issues a severe thunderstorm or tornado watch/warning for Montgomery, Preble, Darke, Miami, or Greene counties.

4.2.4.4. Any situation, in the opinion of the duty forecaster, requires additional personnel (surge in workload, winter storm, hurricane evacuation, etc.).

4.2.5. If a watch, warning, or advisory becomes necessary without enough time to coordinate with the 15 OWS, the Weather Flight has the authority to disseminate any watch, warning, or advisory. Otherwise, coordination between the 15 OWS and the WF will occur prior to issuance of any criteria in section [4.3](#).

4.2.6. Post-event procedures will include a verbal review of actions taken by the WF and 15 OWS as soon as weather permits. The review will be held via teleconference with the WF Site Manager, the 15 OWS Subregional Supervisor and/or Floor Manager. Forecast reviews will be accomplished IAW WF and 15 OWS SOPs.

4.3. Weather Watch, Warning, and Advisory Criteria. The following forecasted weather watches, warnings, and advisories are issued by the 15 OWS (noted with *). The Weather Flight issues observed warnings and advisories. **NOTE:** Lead times and thresholds based on customer requirements and may not mirror AFMAN 15-129/135. There is no requirement for Sandstorm watch/warnings.

Table 4.1. Weather Watch, Warning and Advisory Criteria.

Forecast Weather Watch Criteria and Minimum Desired Lead-Times		
Criteria	Desired Lead-Time	
Tornadic Activity *	240 minutes	
Hail 1/2 " or greater *	240 minutes	
Convective Winds GTE 50 Kts *	240 minutes	
Lightning From Thunderstorms Within 5 Nautical Miles *	30 minutes	
Freezing Precipitation *	240 minutes	
Blizzard (wind GTE 30 Kts and visibility LTE 1/2 NM and lasting more than three hours) *	240 minutes	
Heavy Snow (GTE 2 Inches or More of Snow in LTE 12 Hours) *	240 minutes	
Forecast Weather Warning Criteria and Associated Minimum Desired Lead-Times		
Tornado *	10 minutes	
Hail GTE 1/2" *	90 minutes	
Convective Winds GTE 50 Kts *	90 minutes	
Non-Convective Winds GTE 50 Kts *	90 minutes	
Convective Winds 35-49 Kts *	60 minutes	
Non-Convective Winds 35-49 Kts *	60 minutes	
Freezing Precipitation *	60 minutes	
Blizzard (wind GTE 30 Kts and visibility LTE 1/2 NM and lasting more than three hours) *	120 minutes	
Heavy Snowfall (GTE 2 Inches or More of Snow in LTE 12 Hours) *	120 minutes	
Observed Weather Warning Criteria and Minimum Desired Lead-Times		
Criteria	Desired Lead-Time	
Lightning From Thunderstorms Is Occurring Within 5 Nautical Miles	Observed	

Forecast Weather Advisory Criteria and Minimum Desired Lead-Times		
Criteria	Desired Lead-Time	
Hail LT ½" *	30 minutes	
Winds 25kts-34Kts *	30 minutes	
Equivalent Chill Temperature <0° F *	180 minutes	
Observed Weather Advisory Criteria and Minimum Desired Lead-Times		
Criteria	Desired Lead-Time	
Cross-Winds GTE 20kts	Observed	
Snow Depth GTE 18 inches	Observed	
Low-Level Wind Shear	Observed	
Thunderstorms Within 50NM (NAOC Only)	Observed	
Thunderstorms Within 25NM (NAOC Only)	Observed	
Thunderstorms Within 10NM (NAOC Only)	Observed	
Moderate or Greater Icing Below 10,000 feet MSL (NAOC Only)	Observed	
Moderate or Greater Turbulence Below 10,000 feet MSL (NAOC Only)	Observed	
Visibility < 1 Statute Mile (NAOC Only)	Observed	

4.4. Dissemination of Weather Watches, Warnings, and Advisories. The 15 OWS disseminates **forecasted** weather watches, warnings, and advisories to base agencies through NTFS. Weather Flight personnel disseminate **observed** weather warnings and advisories to base agencies through NTFS (see [Attachment 7](#) for dissemination formats). Weather Station personnel make back-up calls to the 88 ABW Command Post, 445 AW Command Post, and NAOC to verify receipt of all watches, warnings, and/or advisories issued. See [Attachment 4](#) for Automated Notification System (ANS) WPAFB flow chart. The flow chart does not depict internal notifications within using activities. Each watch, warning, or advisory is numbered sequentially. The first two numbers indicate the month and the last three numbers indicate the actual number of the watch, warning, or advisory (e.g., 10-003 is the third notice issued in October).

4.5. Communication Outages. In the event there is a 15 OWS NTFS outage and they are unable to disseminate a Watch, Warning, or Advisory, the Weather Flight will assume dissemination responsibility.

4.6. Customer Response Matrix. [Attachment 6](#) is a response matrix for Wright-Patterson customers and required actions for each weather Watch, Warning, and Advisory.

Chapter 5

RECIPROCAL SUPPORT

5.1. General. This chapter specifies working relationships between the Weather Flight and key WPAFB agencies.

5.2. 88 ABW Command Post.

5.2.1. 88 ABW/CP will:

5.2.1.1. Make secondary dissemination of weather watches, warnings, and advisories, IAW, [Attachment 4](#).

5.2.1.2. Transmit an OPREP 3 Beeline report based on severe weather criteria and information received from the Weather Flight.

5.3. 445 AW Command Post.

5.3.1. 445 AW/CP will accomplish secondary dissemination of weather watches, warnings, and advisories, IAW, [Attachment 4](#).

5.4. 88 ABW Operations Support Squadron.

5.4.1. 88 OSS/OSAM (Base Operations) will:

5.4.1.1. Provide Runway Surface Conditions (RSC) and Runway Condition Readouts (RCR) to Weather Flight personnel.

5.4.1.2. Notify Weather Flight personnel of in-flight or ground emergencies/mishaps and their termination.

5.4.1.3. Post any PMSV outage information on the facility's status board located in Base Operations.

5.4.1.4. Accomplish secondary dissemination of weather watches, warnings, and advisories IAW, [Attachment 4](#).

5.4.2. 88 OSS/OSAT (Control Tower) will:

5.4.2.1. Notify the Weather Flight if weather conditions observed from the tower differ from the latest surface observation.

5.4.2.2. Immediately notify Weather Flight personnel of all active runway changes.

5.4.2.3. Notify the Weather Flight of changes in the settings of the high-intensity runway lights when surface visibility is one mile or less, or the RVR is 6,000 feet or less.

5.4.2.4. Relay all PIREPs (as duty priorities permit) to Weather Flight personnel.

5.5. 88th Communications Group (88 CG).

5.5.1. Provide maintenance to repair, replace or maintain computer systems.

5.5.2. Provide email services and assured communications paths between local workstations and all servers on-base via local area network services.

5.5.3. Provide access to Defense Systems Network (DSN) telephone and data services.

5.5.4. Provide telecommunications service in accordance with Defense Metropolitan Area Telephone System – Dayton Directives.

5.5.5. Perform maintenance as specified in technical orders and in accordance with standard accepted maintenance practices for the following equipment: FMQ-8, FMQ-13, WSR-88, GMQ-32, GMQ-34, ML658, ML-102, ML-17.

5.5.6. Restore services due to equipment degradations and outages as specified in [Attachment 9](#).

5.6. 88 ABW Civil Engineer.

5.6.1. 88 CE/CEMPE (Power Production) will maintain generators in Bldg 206 for back-up power.

5.6.2. 88 CE/CEMPM will maintain the air conditioning unit in the computer room. The Weather Flight has a weather radar principle user processor and the NTFS server.

5.7. 47th Airlift Flight (47 ALF).

5.7.1. 47 ALF will provide PIREP support, ensuring PIREPs are passed on to the Weather Flight. Information to be included in the PIREP are as follows: Aircraft location, time of observation, flight level, type of aircraft, sky cover, weather, temperature, wind directions and speed, turbulence, icing and any remarks.

5.7.2. Provide the Weather Flight the daily flying schedule to include applicable changes.

5.7.3. Provide the Weather Flight a completed copy of the weather feedback form, paper or electronic, after mission completion.

5.8. 445th Airlift Wing (445 AW).

5.8.1. 445 AW will provide PIREP support, ensuring PIREPs are passed on to the Weather Flight. Information to be included in the PIREP are as follows: Aircraft location, time of observation, flight level, type of aircraft, sky cover, weather, temperature, wind directions and speed, turbulence, icing and any remarks.

5.8.2. Provide the Weather Flight the daily flying schedule to include applicable changes.

5.8.3. Provide the Weather Flight a completed copy of the weather feedback form, paper or electronic, after mission completion.

5.9. Detachment 3, CAP-USAF (Great Lakes Region).

5.9.1. Det 3, CAP-USAF will provide PIREP support, ensuring PIREPs are passed on to the Weather Flight via the tower. Information to be included in the PIREP are as follows: Aircraft location, time of observation, flight level, type of aircraft, sky cover, weather, temperature, wind directions and speed, turbulence, icing and any remarks.

5.10. 15th Operational Weather Squadron (15 OWS).

5.10.1. Support provided between the 15th OWS and the Weather Flight is outlined in a separate Memorandum of Agreement.

MICHAEL J. BELZIL, Colonel, USAF
Commander, 88th Air Base Wing

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****Abbreviations and Acronyms***

AFMC—Air Force Materiel Command, WPAFB
AFWA—Air Force Weather Agency, Offutt AFB NE
ALSTG—Altimeter setting
AFB—Air Force Base
AFMAN—Air Force Manual
AGL—Above ground level
AOA—Airfield Operations Area
AOS—Alternate observing site
ATAD—Automatic telephone answering device
ATC—Air Traffic Control
ATCALS—Air Traffic Control and Landing System
AW—Airlift Wing
AWDS—Automated Weather Distribution System
AWN—Automated Weather Network
BECMG—Becoming
BWS—Base Weather Station
BWW—Basic Weather Watch
CAP—Civil Air Patrol
CIG—Ceiling
CEZFC—Climate Control
CLR—Clear
CP—Command Post
CWT—Combat Weather Team
CWW—Continuous or cooperative weather watch
DBASI—Digital Barometer Altimeter Setting Indicator
DIGIWX—Digital Weather System
DLT—desired lead time
DTRA—Defense Threat Reduction Agency
EWO—Emergency War Order

FCST—Forecast

FLIP—Flight Information Publication

GTE—Greater than or equal to

HIRL—High intensity runway lights

ICAO—International Civil Aviation Organization

ICG—Icing

KFFO—ICAO identifier for WPAFB

KOFF—ICAO identifier for Offutt AFB

L—Local observation

LFA—Local flying area

LLWS—Low level wind shear

LT—Less than

LTE—Less than or equal to

LTG—Lightning

METAR—Aviation Routine Weather Report

Mile—Refers to statute mile (i.e., 5280 feet or 1609 meters)

MBWW—Modified Basic Weather Watch

MEF—Mission Execution Forecast

METWATCH—Meteorological Watch

MOOTW—Military Operations other than War

MSL—Mean sea level

NAOC—National Airborne Operations Center

NAVAID—Navigational Aid

NM—Nautical mile (i.e., 6076 feet or 1852 meters)

NTFS—New Tactical Forecast System

NWS—National Weather Service

OBS—Weather observation

OBSVD—Observed

OWS—Operational Weather Squadron

PA—Pressure altitude

PIREP—Pilot weather report

PMSV—Pilot-to-metro service

PUP—Principal User Processor
PWW—Point Weather Warning
RCR—Runway condition reading
RFC—Radar final control
ROS—Representative observation site
RS—Record Special observation
RSC—Runway surface condition
RVR—Runway visual range
RVRNO—Runway Visual Range Not Operational
SA—Record observation
SM—Statute Mile(s)
SOF—Supervisor of Flying
SPECI—Aviation Selected Special Weather Observation
SWAP—Severe Weather Action Process
SWAT—Severe Weather Action Team
TAF—Terminal aerodrome forecast
TEMPO—Temporary
TRACON—Terminal Radar Approach Control (FAA)
TS—Thunderstorm
TURBC—Turbulence
UHF—Ultra high frequency
UTC—Universal Coordinated Time (i.e., Zulu)
VSBY—Visibility
VHF—Very High Frequency
WA—Weather advisory
WF—Weather Flight
WPAFB—Wright-Patterson AFB
WPAFBI—WPAFB Instruction
WSCONDS—Wind Shear Conditions
WSP—Weather support plan
WSR-88D—Weather Surveillance Radar-88 Doppler
WW—Weather warning

WX—Weather

Z—Zulu time

Terms

Actual Lead Time (ALT)—The elapsed time between issuance of a Forecast Weather Advisory or Weather Warning and the first occurrence of the event.

Blizzard Conditions—Surface winds of 30 knots or greater and considerable falling and/or blowing snow reduces prevailing visibility to 1/2 mile or less for a period of more than 3 hours.

DIGIWX (pronounced "diji - wicks") is an acronym for Digital Weather—It is an automated weather station which consists of a 15 foot aluminum tower outfitted with weather sensors designed to measure local wind speed, direction, gusts, temperature, dew-point, relative humidity and barometric pressure. Weather data is transmitted up to 10 nm away and can be received using a variety of wireless receivers including: 1) voice-activated Unicom broadcast, 2) dedicated handheld, 3) internet display, and 4) telephone dial-in. It is used as the primary backup when WPAFB weather instrumentation becomes inoperative.

Desired Lead-Time (DLT)—The advanced notice time a customer needs to react to a Forecast Weather Advisory or Weather Warning.

Local and Longline Dissemination—Weather information is disseminated locally to WPAFB and long-line to bases worldwide over NTFS.

Meteorological Watch (METWATCH)—The process of monitoring the weather and informing supported agencies when certain established weather conditions that could affect their operations or pose a hazard to property or life are occurring or are expected to occur.

Mission Watch—The monitoring of aerospace weather for a specific mission (i.e., ground, air or space) and informing supported agencies when mission-limiting phenomena could effect operations.

Off-Station Briefings—Weather briefings given to aircrews assigned to Wright-Patterson, but temporarily operating from a different location.

On-Station Briefings—Weather Briefings given to aircrews assigned to Wright-Patterson or to transient aircrews when time and weather conditions permit.

Operational Weather Squadron (OWS)—An organization comprised of management, technician, and training personnel responsible for providing regional weather support. Their mission is to provide fine scale tailored weather forecast products and services to customers within their area of responsibility.

Pilot to Metro Service (PMSV)—Radio equipment used by the weather station for disseminating weather information to air-and ground-based aircraft. WPAFB is assigned frequency 344.6 MHz.

Pilot Report (PIREP)—An in-flight weather report provided by an aircraft crewmember. A PIREP should include the location and flight level of the aircraft, time of the observation, aircraft type, and description and extent of meteorological elements. PIREP format is listed in [Attachment 6](#).

Terminal Aerodrome Forecast (TAF)—The TAF is the official forecast for the airfield covering a 24-hour period.

Thunderstorm (TS)—A convective storm which implies the presence of lightning, hail, gusty winds, wind shear, any type heavy precipitation, icing, and turbulence.

Weather Advisory (WA)—A special notice provided to a supported agency when an established weather condition that could affect operations is occurring or is expected to occur within 5 NM of the base.

Weather Flight (WF)—A generic term used to describe a weather team that provides mission-tailored weather products and services to a supported unit in garrison

Weather Radar—Radar data is received from a 10-centimeter wavelength WSR-88D, Doppler Weather Radar Principal User Processor (PUP). It is capable of detecting and displaying precipitation areas located within 248 NM of the antenna located at Wilmington OH, 27 miles southeast of WPAFB.

Weather Satellite Imagery—The weather station uses NTFS and the Internet to retrieve and display Geostationary Operational Environmental Satellite (GOES) visual, infrared, and water vapor imagery Worldwide.

Weather Watch (WATCH)—A special notice provided to a supported agency to alert that agency of the potential for tornadoes, moderate or severe thunderstorms, lightning, freezing precipitation, or heavy snow is expected to occur within 5 NM of the base.

Weather Warning (WW)—A special notice provided to a supported agency when established weather conditions are expected to occur that pose hazards to property or life for which the supported agency should take protective action. Weather warnings specify type of condition, intensity and duration. Warnings for severe weather will be verified within a 5NM radius of WPAFB.

Wind Chill—The National Weather Service and Air Force Weather have implemented a new Wind Chill Temperature (WCT) index. The Wind Chill Index is designed to provide a more accurate, understandable, and useful formula for calculating the dangers from winter winds and freezing temperatures.

Attachment 2

TAF SPECIFICATION AND AMENDMENT CRITERIA

A2.1. TAF Specifications. The following are weather conditions which, when expected, are detailed in the TAF.

Table A2.1. (Base/Post) Terminal Aerodrome Forecast Specification Criteria

Forecast Element/Occurrence	Standard TAF Specification Criteria
Ceiling decreases to less than, or if below, increases to equal or exceed:	10,000 feet 3,000 feet 1,500 feet 1,000 feet 200 feet (airfield min)
Prevailing visibility decreases to less than, or if below, increases to equal or exceed:	3 statute miles 2 statute miles 1 statute mile ½ statute mile (airfield min)
Wind	Speed change of 10 knots or more. Wind speeds predominate or gusting to or in excess of 25 knots Direction change of greater than 30 degrees when the predominant wind speed (including gusts) is expected to be over 15 knots.
Precipitation	Onset, duration, type, and intensity.
Thunderstorm	Onset, duration, type, and intensity.
Icing, not associated with thunderstorms, from the surface to 10,000 feet MSL	Onset, duration, type, and intensity.
Turbulence (for Cat II aircraft), not associated with thunderstorms, from the surface to 10,000 feet MSL	Onset, duration, type, and intensity.
Non-convective low level wind shear	Onset, duration, type, and intensity.
Altimeter Setting	The lowest altimeter setting forecast for the period.
Forecast weather warning criteria and/or forecast weather advisory criteria that can be specified in the TAF	A forecast weather warning and/or advisory has been issued (ensures consistency between forecast weather warnings and/or advisories and the TAF).

A2.2. TAF Amendment Criteria. The duty forecaster may amend the TAF any time it is considered unrepresentative of the local weather conditions. The following criteria require TAF amendments when the condition is occurring or is expected to occur for more than 30 minutes and is not correctly forecasted by the next whole hour.

Table A2.2. (Base/Post) Terminal Aerodrome Forecast Amendment Criteria

Forecast Element/Occurrence	Standard TAF Amendment Criteria
Ceiling observed or later expected to decrease to less than, or if below, increase to equal or exceed:	3,000 feet 1,000 feet 200 feet (airfield min)
Prevailing visibility observed or later expected to decrease to less than, or if below, increase to equal or exceed:	3 statute miles 2 statute miles 1/2 statute mile (airfield min)
Wind	The difference between the predominant wind speed (or gust) and the forecast wind speed (or gust) is 10 knots or more. Direction change greater than 30 degrees when the predominant wind speed or gusts are expected to be over 15 knots.
Precipitation	Unforecast freezing precipitation begins or ends. The beginning or ending of precipitation causing a local weather warning or weather advisory that can be specified in the TAF to be issued, canceled, or amended. The weather operator considers the occurrence or nonoccurrence of precipitation to be operationally significant.
Icing, not associated with thunderstorms, from the surface to 10,000 feet MSL	The beginning or ending of icing first meets, exceeds, or decreases below moderate or greater thresholds (for CAT II aircraft) and was not specified in the forecast.
Turbulence (for Cat II aircraft), not associated with thunderstorms, from the surface to 10,000 feet MSL	The beginning or ending of turbulence first meets, exceeds, or decreases below moderate or greater thresholds (for CAT II aircraft) and was not specified in the forecast.
Non-convective low-level wind shear	Is occurring and is expected to continue, or is expected to begin, but is not specified in the forecast. Is forecast in the TAF, but is no longer expected to occur during the forecast period.

Forecast Element/Occurrence	Standard TAF Amendment Criteria
Forecast weather warning criteria and/or weather advisory criteria that can be specified in the TAF	<p>Is occurring and is expected to continue, or is expected to begin, but is not specified in the forecast.</p> <p>Is forecast in the TAF, but is no longer expected to occur during the forecast period.</p>

Attachment 3

SPECIAL AND LOCAL OBSERVATION CRITERIA

A3.1. METAR or Hourly Observations (disseminated local and longline). An official weather observation is made each hour and logged on AF Form 3803, Surface Weather Observations. Records are maintained locally for 5 years. The hourly observation consists of sky condition, visibility, present weather, sea-level pressure, temperature, dew point, wind, altimeter setting, and optional remarks (significant weather in the vicinity but not at the airfield, variable ceiling, visibility, or equivalent chill temperature when the ambient temperature is less than 32° F). All observations are disseminated via the New Tactical Forecast System (NTFS) to local agencies ([Attachment 8](#)) and longline to Air Force Weather for relay to other agencies.

A3.2. Special Observations (disseminated local and longline). Made when significant weather changes occur. This observation consists of time of the event, winds, visibility, RVR (if required, locally only), present weather, sky condition, air temperature, dew point temperature, altimeter setting, and optional remarks, and is transmitted the same way as the METAR or hourly observation. General criteria for special observations are listed below.

Table A3.1. (Base/Post) Special Observation Criteria

Observed Element/Occurrence	Standard Observation Criteria
Ceiling decreases to less than, or if below, increases to equal or exceed:	3,000 feet 1,500 feet 1,000 feet 700 feet 500 feet (All published landing minima per DoD FLIP Flight Information Publication)
Clouds or obscuring phenomena aloft first appear and none are currently being reported.	below 900 feet
Prevailing surface or Tower visibility decreases to less than, or if below, increases to equal or exceed:	3 statute miles 2 statute miles 1 statute mile (All published landing minima per DoD FLIP Flight Information Publication)

Observed Element/Occurrence	Standard Observation Criteria
Wind	Wind speed increases by at least 16 knots and is sustained at 22 knots or more for at least 1 minute. Any direction changes by 45 degrees or more in less than 15 minutes with sustained winds of 10 knots or more throughout the wind shift.
Tornado, Funnel Cloud, Waterspout	Is observed or disappears from sight.
Thunderstorm	Begins or ends.
Precipitation	Any precipitation or hail begins or ends. Freezing precipitation or ice pellets begin, end, change intensity or change type (e.g. freezing precipitation to snow or rain, rain to freezing rain).
Runway Conditions	Changes as determined and reported by Base Operations. (No special observation required for dry runway.)
Volcanic Ash	First observed.
AEROB	Notified of a real world nuclear accident.
Any meteorological condition	In the opinion of the observer, is critical to safety of aircraft operations.

A3.3. Local Observations (disseminated locally only). Made only for a significant operational event or weather changes significant to local operations. This observation is disseminated to *base agencies only*. Criteria for taking a local observation are:

Table A3.2. (Base/Post) Local Observation Criteria

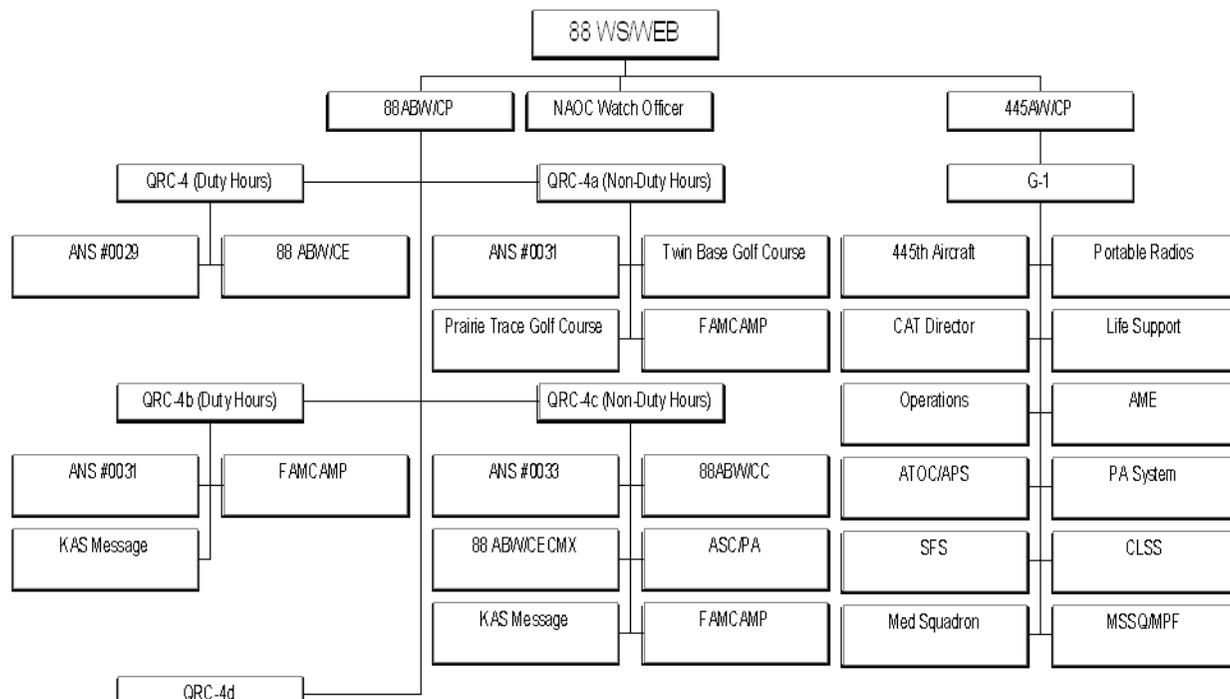
Observed Element/Occurrence	Standard Observation Criteria
Aircraft mishap	In local area.
Landing and departure of Air Force One	Ten minutes prior.
Control tower	On request.
Active runway	Changes.
Alert Weather Observation	Within 60 seconds of alert notification (to include wind, temperature, and altimeter setting only).
Wind speed	25 knots 35 knots 50 knots
Altimeter setting	Changes of 0.01 inch Hg or more since the last locally disseminated value, at a frequency not to exceed 35 minutes.

Observed Element/Occurrence	Standard Observation Criteria
Runway visual range drops below or rises above	6,000 feet 5,000 feet All published landing minima per DoD FLIP (Flight Information Publication) Visibility conditions for reporting RVR first observed and when conditions no longer exist. RVR is first determined as unavailable (RVRNO) for the runway in use, or when "RVRNO" is no longer applicable.
Any meteorological condition	In the opinion of the observer, is critical to safety of aircraft operations.

Attachment 4

WEATHER WATCH, WARNING, ADVISORY NOTIFICATION DIAGRAM

Figure A4.1. Weather Watch, Warning, Advisory Notification Diagram



QRC-4 & 4a = Lightning, Wind Chill, Flood
 QRC-4b & 4c = Thunderstorms, Wind, or Snow
 QRC-4d = Tornado
 QRC 4 = Weather Advisory (Duty Hours)
 QRC 4a = Weather Advisory (Non-Duty Hours)
 QRC 4b = Weather Watch/Warning (Duty Hours)
 QRC 4c = Weather Watch/Warning (Non-Duty Hours)
 QRC 4d = Tornado Watch/Warning
 G-1 = All weather Watches, Warnings, and Advisories

Attachment 5

WIND CHILL INDEX

Figure A5.1. Wind Chill Index

		Temperature Fahrenheit																Temperature Celsius																**Note Windchill Temps are in Fahrenheit															
MPH/Knots		32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14	0	-1	-2	-3	-4	-6	-7	-8	-9	-10	-11	-12	-13	-14	-16	-17	-18	-19	-20	-21	-22	-23	-24	-26
2	2	31	29	27	24	22	20	18	16	13	11	9	7	5	2	0	-2	-4	-13	-8	-10	-12	-14	-16	-19	28	26	23	21	19	17	14	12	10	7	5	3	0	-2	-4	-7	-9	-13	-12	-15	-17	-19	-22	-24
4	3	28	26	23	21	19	17	14	12	10	7	5	3	0	-2	-4	-7	-9	-13	-12	-15	-17	-19	-21	-23	27	25	22	20	18	15	13	11	8	6	4	1	-1	-3	-6	-8	-11	-13	-14	-16	-19	-21	-23	-26
5	4	27	25	22	20	18	15	13	11	8	6	4	1	-1	-3	-6	-8	-11	-13	-14	-16	-18	-20	-23	26	24	21	19	17	14	12	10	7	5	2	0	-2	-5	-7	-9	-12	-14	-16	-18	-20	-23	-25	-27	
6	5	26	24	21	19	17	14	12	10	7	5	2	0	-2	-5	-7	-9	-12	-14	-16	-18	-20	-23	25	23	21	18	16	13	11	9	6	4	1	-1	-3	-6	-8	-11	-13	-15	-17	-19	-22	-24	-26	-29		
7	6	25	23	21	18	16	13	11	9	6	4	1	-1	-3	-6	-8	-11	-13	-15	-17	-19	-22	24	22	20	18	15	13	11	8	5	3	0	-2	-4	-7	-9	-12	-14	-17	-18	-20	-23	-25	-27	-30			
8	7	25	22	20	18	15	13	10	8	5	3	0	-2	-4	-7	-9	-12	-14	-17	-18	-20	-23	24	22	19	16	14	11	9	6	4	1	-1	-4	-6	-8	-10	-13	-15	-18	-19	-21	-24	-26	-29	-31			
9	8	24	22	19	17	14	12	10	7	5	2	0	-3	-5	-8	-10	-13	-15	-18	-19	-21	-24	24	21	19	16	14	11	8	6	4	1	-1	-4	-6	-8	-11	-13	-16	-18	-20	-22	-25	-27	-29	-32			
10	9	24	21	19	16	14	11	9	6	4	1	-1	-4	-6	-8	-11	-13	-16	-18	-20	-22	-25	23	21	18	16	13	11	8	6	3	1	-2	-4	-7	-9	-12	-14	-17	-19	-20	-23	-25	-28	-30	-33			
11	10	23	21	18	16	13	11	8	6	3	1	-2	-4	-7	-9	-12	-14	-17	-19	-20	-23	-25	22	20	17	15	12	10	7	5	2	0	-3	-5	-8	-11	-13	-16	-18	-21	-22	-24	-27	-29	-32	-34			
13	11	22	20	17	15	12	10	7	5	2	0	-3	-5	-8	-11	-13	-16	-18	-21	-22	-24	-27	22	19	17	14	12	9	7	4	2	-1	-4	-6	-9	-11	-14	-16	-19	-21	-23	-25	-28	-30	-33	-35			
14	12	22	19	17	14	12	9	7	4	2	-1	-4	-6	-9	-11	-14	-16	-19	-21	-23	-25	-28	22	19	16	14	11	9	6	4	1	-1	-4	-7	-9	-12	-14	-17	-19	-22	-23	-26	-28	-31	-33	-36			
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18	16	21	18	15	13	10	8	5	2	0	-3	-5	-8	-11	-13	-16	-18	-21	-24	-25	-27	-30	20	17	15	12	9	7	4	2	-1	-4	-6	-9	-12	-14	-17	-19	-22	-25	-26	-28	-31	-34	-36	-39			
20	17	20	17	15	12	9	7	4	2	-1	-4	-6	-9	-12	-14	-17	-19	-22	-25	-26	-28	-31	20	17	14	12	9	7	4	1	-1	-4	-7	-9	-12	-15	-17	-20	-22	-25	-26	-29	-32	-34	-37	-39			
21	18	20	17	14	12	9	7	4	1	-1	-4	-7	-9	-12	-15	-17	-20	-22	-25	-26	-29	-32	19	17	14	12	9	6	4	1	-2	-4	-7	-10	-12	-15	-18	-20	-22	-25	-26	-29	-32	-34	-37	-39			
22	19	19	17	14	12	9	6	4	1	-2	-4	-7	-10	-12	-15	-18	-20	-23	-26	-27	-29	-32	19	17	14	11	9	6	3	1	-2	-5	-7	-10	-13	-15	-18	-21	-23	-26	-27	-30	-32	-35	-38	-40			
23	20	19	17	14	11	9	6	3	1	-2	-5	-7	-10	-13	-15	-18	-21	-23	-26	-27	-30	-32	19	16	14	11	8	6	3	0	-2	-5	-8	-10	-13	-16	-18	-21	-24	-26	-28	-30	-33	-36	-38	-41			
24	21	19	16	14	11	8	6	3	0	-2	-5	-8	-10	-13	-16	-18	-21	-24	-26	-28	-30	-33	19	16	13	11	8	5	3	0	-3	-5	-8	-11	-13	-16	-19	-21	-24	-27	-28	-31	-33	-36	-39	-41			
25	22	19	16	13	11	8	5	3	0	-3	-5	-8	-11	-13	-16	-19	-21	-24	-27	-28	-31	-34	18	16	13	11	8	5	2	0	-3	-6	-8	-11	-14	-16	-19	-22	-24	-27	-28	-31	-34	-36	-39	-42			
26	23	18	16	13	10	8	5	2	0	-3	-6	-8	-11	-14	-16	-19	-22	-24	-27	-28	-31	-34	18	15	13	10	7	5	2	-1	-4	-6	-9	-12	-14	-17	-20	-22	-25	-28	-29	-32	-34	-37	-40	-43			
28	24	18	15	13	10	7	5	2	-1	-4	-6	-9	-12	-14	-17	-20	-22	-25	-28	-29	-32	-34	18	15	12	10	7	4	2	-1	-4	-7	-9	-12	-15	-17	-20	-23	-26	-28	-30	-32	-35	-38	-40	-43			
29	25	18	15	12	10	7	4	2	-1	-4	-7	-9	-12	-15	-17	-20	-23	-26	-28	-30	-32	-35	18	15	12	9	7	4	1	-1	-4	-7	-10	-12	-15	-18	-20	-23	-26	-29	-30	-33	-35	-38	-41	-43			
30	26	18	15	12	9	7	4	1	-1	-4	-7	-10	-12	-15	-18	-20	-23	-26	-29	-30	-33	-35	17	15	12	9	7	4	1	-2	-4	-7	-10	-13	-15	-18	-21	-23	-26	-29	-30	-33	-36	-38	-41	-44			
31	27	17	15	12	9	7	4	1	-2	-4	-7	-10	-13	-15	-18	-21	-23	-26	-29	-30	-33	-36	17	14	12	9	6	4	1	-2	-5	-7	-10	-13	-16	-18	-21	-24	-27	-29	-31	-33	-36	-39	-41	-44			
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33	29	17	14	12	9	6	3	1	-2	-5	-8	-10	-13	-16	-19	-21	-24	-27	-30	-31	-34	-36	17	14	11	9	6	3	0	-2	-5	-8	-11	-13	-16	-19	-22	-24	-27	-30	-31	-34	-37	-39	-42	-45			
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36	31	16	14	11	8	5	3	0	-3	-6	-8	-11	-14	-17	-19	-22	-25	-28	-31	-32	-35	-37	16	14	11	8	5	2	0	-3	-6	-9	-11	-14	-17	-20	-22	-25	-28	-31	-32	-35	-37	-40	-43	-46			
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38	33	16	13	11	8	5	2	-1	-3	-6	-9	-12	-14	-17	-20	-23	-25	-28	-31	-32	-35	-38	16	13	10	8	5	2	-1	-3	-6	-9	-12	-15	-17	-20	-23	-26	-29	-31	-33	-35	-38	-41	-44	-46			
39	34	16	13	10	8	5	2	-1	-3	-6	-9	-12	-15	-17	-20	-23	-26	-29	-31	-33	-35	-38	16	13	10	7	5	2	-1	-4	-6	-9	-12	-15	-18	-20	-23	-26	-29	-32	-33	-36	-38	-41	-44	-47			
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44	38	15	12	10	7	4	1	-2	-4	-7	-10	-13	-16	-19	-21	-24	-27	-30	-33	-34	-37	-39	15																										

Attachment 6

CUSTOMER RESPONSE MATRIX

Table A6.1. Customer Response Matrix

Watch Criteria	Agency	Customer Action
Tornado	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Hangar aircraft or depart on discretion of Open Skies Team Chief and aircrew commander.
	445 AW	All personnel notified via 445th Weather Watch/ Warning & Natural Disaster Checklist.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice. Hangar aircraft.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88OSS/OSAM	Notify all aircraft in contact with base operations
	88 MSG	Notify all personnel via voice. Increase readiness posture.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance. Vehicle PA system used if required.
Hail 1/2" or greater	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
Convective Winds GTE 50 Kts		
	Open Skies	Hangar aircraft or, if outdoors, flightline personnel locate equipment that may need securing and remain aware of situation. Moor aircraft.
	445 AW	All personnel notified via 445th Weather Watch/ Warning & Natural Disaster Checklist.
	47 ALF	All personnel notified via 47 th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice. Hangar aircraft.

Watch Criteria	Agency	Customer Action
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Notify all personnel via voice. Increase readiness posture.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance. Vehicle PA system used if required.
Freezing Precipitation Blizzard (wind GTE 30 kts and visibility LTE 1/2 NM and lasting more than three hours) Heavy Snow (GTE 2 Inches or More of Snow in LTE 12 Hours)	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Hangar aircraft or, if outdoors, flightline personnel locate equipment that may need securing and remain aware of situation.
	445 AW	All personnel notified via 445th Weather Watch/ Warning & Natural Disaster Checklist.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice. Hangar aircraft.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 ABW/CE	Institute the Snow Control Plan and place road crews on standby.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Notify all personnel via voice. Increase readiness posture.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance. Vehicle PA system used if required.

Watch Criteria	Agency	Customer Action
Lightning From Thunderstorms Within 5 NM (Implies Thunderstorms W/I 10NM)	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Hangar aircraft or, if outdoors, flightline personnel locate equipment that may need securing and remain aware of situation.
	445 AW	Flightline personnel locate equipment that may need securing and remain aware of situation.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 ABWW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Notify all personnel via voice. Increase readiness posture.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance. Vehicle PA system used if required.
Tornado	NAOC	Time permitting, hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Time permitting, hangar aircraft or depart on discretion of Open Skies Team Chief and aircrew commander.
	445 AW	All personnel notified via 445th Weather Watch/Warning & Natural Disaster Checklist to take cover in Tornado Shelters. All operations cease.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk to take cover in Tornado Shelters. All operations cease.
	Det3 CAP-USAF	All personnel notified via voice to take cover in Tornado Shelters. All operations cease.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.

Watch Criteria	Agency	Customer Action
	88 SPTG	Disaster Response Force placed on alert.
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar aircraft and secure flightline operations (time permitting). All personnel take cover in Tornado Shelter.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance and take all necessary safety precautions. Vehicle PA system used if required.
Hail 1/2" or greater	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
Non-Convective and Convective Winds GTE 50 Kts		
	Open Skies	Hangar aircraft or depart on discretion of Open Skies Team Chief and aircrew commander.
	445 AW	All personnel notified via 445th Weather Watch/Warning & Natural Disaster Checklist. All flight operations cease. Moor all aircraft using gross weight criteria. Inspect aircraft for damage.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk. All flight operations cease. Moor or hangar all aircraft. Inspect aircraft for damage.
	Det3 CAP-USAF	All personnel notified via voice. Hangar aircraft. Inspect aircraft for damage after event.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 SPTG	Disaster Response Force placed on alert.
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar or secure aircraft and secure operations.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance and take all necessary safety precautions. Vehicle PA system used if required.

Watch Criteria	Agency	Customer Action
<p>Freezing Precipitation</p> <p>Blizzard (wind GTE 30 kts and visibility LTE 1/2 NM and lasting more than three hours)</p> <p>Heavy Snow (GTE 2 Inches or More of Snow in LTE 12 Hours)</p>	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Hangar aircraft or depart on discretion of Open Skies Team Chief and aircrew commander.
	445 AW	All personnel notified via 445th Weather Watch/ Warning & Natural Disaster Checklist.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice. Hangar aircraft.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System and a message posted on base cable network.
	88 SPTG	Disaster Response Force placed on alert.
	88 ABW/CE	Institute the Snow Control Plan and recall road crews to duty.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar or secure aircraft. Implement “buddy” system and take all necessary safety precautions.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance and take all necessary safety precautions. Vehicle PA system used if required.
<p>Lightning From Thunderstorms Within 5 NM</p>	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	All flightline operations cease.
	445 AW	All flightline operations cease. Special notice to fuels.
	47 ALF	All flightline operations cease.
	Det3 CAP-USAF	All flightline operations cease.

Watch Criteria	Agency	Customer Action
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System.
	88 ABW/CE	All outside operations cease.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	All flightline operations cease.
	88 SFS	All patrols briefed on situation and instructed to increase vigilance and take all necessary safety precautions. Vehicle PA system used if required.
Non-Convective and Convective Winds GTE 35 Kts	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	Moor aircraft.
	445 AW	Moor all aircraft with less than 45000lbs of fuel.
	47 ALF	All flight operations cease.
	Det3 CAP-USAF	All flight operations cease. Hangar aircraft.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System.
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar or secure aircraft and secure flightline operations.
	88 SFS	All patrols briefed.
Advisory Criteria	Agency	Customer Action
Equivalent Chill Temperature <0° F	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	No Actions.
	445 AW	All personnel notified via 445th Weather Watch/ Warning & Natural Disaster Checklist.
	47 ALF	All personnel notified via 47th Voice Intercom and Operations Desk.
	Det3 CAP-USAF	All personnel notified via voice.
	88 ABW CP	Notify base personnel IAW Alert Notification Checklists utilizing Automated Notification System..

Watch Criteria	Agency	Customer Action
	88 ABW/CE	All personnel notified via Severe Weather & Natural Disaster Checklist on radio, voice and e-mail. Outdoor activity limited to essential personnel/activities. Exposure limits instituted.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar aircraft (if required). Implement "buddy" system and take all necessary safety precautions.
	88 SFS	All patrols briefed on situation. Ensure adequate heat and cold weather gear available. Outdoor activity limited to essential personnel/activities. Exposure limits instituted.
Non-Convective Winds GTE 25 Kts	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	No Actions.
	445 AW	No Actions.
	47 ALF	If observed crosswinds involved, all flight operations cease.
	Det3 CAP-USAF	All flight operations cease. Hangar aircraft.
	88 ABW CP	No Actions.
	88 CEG	No Actions.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar or secure aircraft and secure flightline.
	88 SFS	No Actions.
Hail <1/2"	NAOC	Hangar aircraft or depart immediately on discretion of NAOC commander.
	Open Skies	No Actions.
	445 AW	No Actions.
	47 ALF	No actions.
	Det3 CAP-USAF	All flight operations cease. Hangar aircraft.
	88 ABW CP	No Actions.
	88 CEG	No Actions.
	88 OSS/OSAM	Notify all aircraft in contact with base operations.
	88 MSG	Hangar or secure aircraft and secure flightline.
	88 SFS	No Actions.

Attachment 7

WEATHER DISSEMINATION FORMATS

A7.1. OBSERVATION FORMAT.

A7.1.1. Station Identifier.

KFFO METAR 1055Z 19012G25KT 1 ½ -TSRA SCT015CB OVC030 85/63 ALSTG 29.80 RMK PK WND 18031/33 FRQ LTGICCCCG TS ALQDS MOV E

A7.1.2. Type and Time of Observation.

KFFO **METAR 1055Z** 19012G25KT 1 ½ -TSRA SCT015CB OVC030 85/63 ALSTG 29.80 RMK PK WND 18031/33 FRQ LTGICCCCG TS ALQDS MOV E

- METAR observations are regularly scheduled “hourly” observations, which are taken between 55 and 59 minutes after every hour. The time of a METAR is the time the last element was observed.

- SPECI observations are “special” observations taken when any of the criteria listed in [Attachment 2](#), paragraph [A2.2](#), is observed to occur. The time of the SPECI is the time the criteria are first observed. A single-element SPECI may be taken to quickly transmit a tornadic observation.

- Local observations are taken when any of the criteria listed in paragraph A2.3 is observed to occur. The time of the local is the time the criteria occurs. NOTE: Locals taken for runway changes are taken several minutes after notification to allow for stabilization of meteorological instruments on the newly activated runway.

A7.1.3. Wind.

KFFO METAR 1055Z **19012G25KT** 1 ½ -TSRA SCT015CB OVC030 85/63 ALSTG 29.80 RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Direction (magnetic) **from which** the wind is blowing. Reported in tens of degrees using three digits. In the example above, the wind is blowing from 190 degrees.

- Speed is encoded in two digits (or three for winds of 100 knots or more). In the example above, the wind speed is 12 knots.

- Gusts are encoded in two digits (three for gusts of 100 knots or more). In the example above, the wind has gusted to 25 knots during the period of observation (10 minutes).

A7.1.4. Visibility.

KFFO METAR 1055Z 19012G25KT **1 ½** -TSRA SCT015CB OVC030 85/63 ALSTG 29.80 RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Visibility is reported in statute miles and fractions thereof.

A7.1.5. Present Weather.

KFFO METAR 1055Z 19012G25KT 1 ½ **-TSRA** SCT015CB OVC030 85/63 ALSTG 29.80 RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Weather or obscuring phenomena occurring at the station is encoded in the body of the observation (as indicated in the example above).

- Weather observed at a distance, but not occurring at the station is encoded in the remarks (RMK) section of the observation.

- See Table A4.1 for a breakdown of present weather codes.

A7.1.6. Sky Condition.

KFFO METAR 1055Z 19012G25KT 1 ½ -TSRA **SCT015CB OVC030** 85/63 ALSTG 29.80 RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Layer amounts are reported in octas; SKC=Clear, FEW=1/8 to 2/8ths, SCT=3/8 to 4/8ths, BKN=5/8 to 7/8ths, OVC=8/8ths.

- Encoded in ascending order up to the lowest overcast layer.

- “VV” indicates vertical visibility when a surface-based obscuring phenomenon (e.g., dense fog) obscures the entire sky.

- Heights are given in hundreds of feet using three digits.

- A ceiling is considered as the height of the lowest BKN or OVC layer aloft, or the vertical visibility (VV) into a surface-based obstruction.

- A cloud layer followed by “CB” indicates cumulonimbus.

A7.1.7. Temperature and Dew Point.

KFFO METAR 1055Z 19012G25KT 1 ½ -TSRA SCT015CB OVC030 **85/63** ALSTG 29.80 RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Reported in degrees Fahrenheit.

- A solidus separates temperature and dew point.

A7.1.8. Altimeter Setting.

KFFO METAR 1055Z 19012G25KT 1 ½ -TSRA SCT015CB OVC030 85/63 **ALSTG 29.80**

RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33

- Altimeter is in reference to inches of mercury (Hg).

A7.1.9. Remarks.

KFFO METAR 1055Z 19012G25KT 1 ½ -TSRA SCT015CB OVC030 85/63 ALSTG 29.80 **RMK TS ALQDS MOV E FRQ LTGICCCCG PK WND 18031/33**

- Remarks are included to expand upon elements in the body of the observation. Remarks follow the remark (RMK) indicator.

- Movement of significant features will be indicated by the contraction “MOV,” followed by the direction **towards which** the feature is moving.

- Distances (from the station) of significant features are in statute miles.

In the example above; a thunderstorm is observed in all quadrants (ALQDS-every direction in relation to the station) and is moving towards the east. Frequent lightning (FRQ LTG) is observed in-cloud (IC), cloud-to-cloud (CC), and cloud-to-ground (CG); and the peak wind (PK WND) during the preceding hour was from 180 degrees, was 31 knots, and occurred at 33 minutes past the hour.

Table A7.1. Weather Phenomena Code Table

Qualifier		Weather Phenomena		
Intensity	Descriptor	Precipitation	Obscuration	Other
- Light	MI Shallow	DZ Drizzle	BR Mist	PO Well Developed Dust/ Sand Whirls
Moderate	PR Partial	RA Rain	FG Fog	SQ Squall
+ Heavy	BC Patches	SN Snow	FU Smoke	FC Funnel Cloud, Tornado, or Water Spout
VC Vicinity	DR Low Drifting	SG Snow Grains	VA Volcanic Ash	SS Sand Storm
	BL Blowing	IC Ice Crystals	DU Dust	DS Dust Storm
	SH Showers	PL Ice Pellets	SA Sand	
	TS Thunderstorm	GR Hail	HZ Haze	
	FZ Freezing	GS Small Hail or Snow Pellets	PY Spray	
		UP Unknown Precipitation		

A7.2. TERMINAL AERODROME FORECAST (TAF) FORMAT

A7.2.1. Station and Forecast Identifiers.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS TEMP 30C 2100Z TEMP 22C AT 1100Z TEMPO 16-02 1 +SHRA BKN025 OVC050 BECMG 02-03 18012G22KT 7 SKC ALSTG 30.05INS

A7.2.2. Valid Time Period.

KFFO FCST **12-12** 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Time is in reference to Zulu.

- Forecast period is 24 hours, except for amendments. Amendments are valid from the whole hour during which the amendment is issued, until the end of the regular forecast period. In the example above, if an amendment is issued at 1515Z, the valid time of the amended forecast would read "15-12."

A7.2.3. Wind.

KFFO FCST 12-12 **15012G25KT** 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Direction (magnetic) **from which** the wind is expected to blow. Reported in tens of degrees using three digits. In the example above, the wind is forecast to blow from 150 degrees.

- Speed is encoded in two digits (or three for winds of 100 knots or more). In the example above, the forecast wind speed is 12 knots.

- Gusts are encoded in two digits (three for gusts of 100 knots or more). In the example above, wind gusts of 25 knots are forecast.

A7.2.4. Visibility.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Visibility is reported in statute miles and fractions thereof.

A7.2.5. Forecast Weather.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

‘NSW’ (no significant weather) will be used to specify the termination of all obstructions and/or pre-dominant weather for the period of the forecast.

A7.2.6. Sky Condition.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Layer amounts are reported in octas; SKC=Clear, FEW=1/8 to 2/8ths, SCT=3/8 to 4/8ths, BKN=5/8 to 7/8ths, OVC=8/8ths.

- Encoded in ascending order to report all forecast cloud (or obscuring phenomena aloft layers).

“VV” indicates vertical visibility when a surface-based obscuring phenomenon (e.g., dense fog) is expected to obscure the entire sky.

- Heights are given in hundreds of feet using three digits.

- A ceiling is considered as the height of the lowest BKN or OVC layer aloft, or the vertical visibility (VV) into a surface-based obscuration.

A7.2.7. Icing.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Intensity and type of icing is established by AFMAN 15-124 and is required in forecasts when icing is expected below 10,000 feet above ground level. Intensities are reported as: LGT = Light, MOD = Moderate, SVR = Severe. Type is reported as RIME = Rime, MXD = Mixed, CLR = Clear. The example shows light rime icing.

- Bases and tops of icing are encoded in ascending order in three digits using thousands of feet. The example shows the base of the icing begins at the 2,000 feet above the surface and extends to 8,000 feet above the surface.

A7.2.8. Turbulence.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 ALSTG29.97INS

- Intensity of turbulence is established by AFMAN 15-124 and requires turbulence be specified for Category II type aircraft in the forecast below 10,000 feet above ground level.

- Det 3, CAP-USAF and Aero Club aircraft are Category I aircraft; all other aircraft assigned to WPAFB are Category II aircraft. Turbulence for Category II aircraft can be converted to turbulence for other category aircraft using the following table:

Table A7.2. Aircraft Category.

I	II	III	IV
N	N	N	N
(L)	N	N	N
L	(L)	N	N
L-(M)	L	(L)	N
M	L-(M)	L	(L)
M-(S)	M	L-(M)	L
S	M-(S)	M	L-(M)
S-(X)	S	M-(S)	M
X	S-(X)	S	M-(S)
X	X	S-(X)	S
X	X	X	S-(X)
X	X	X	X

NOTE 1:

() = Occasional (less than 1/3 of the time)

NOTE 2:

N = None L = Light

M = Moderate S = Severe

X = Extreme

NOTE 3:

Use caution when converting extreme turbulence reports between various types of aircraft. Extreme turbulence covers the widest range of turbulence, ranging from rapid airspeed fluctuations of greater than 25 knots to structural damage.

- Encoded in ascending order to report all forecast turbulence below 10,000 feet above ground level.

- Bases and tops of turbulence are encoded in three digits using thousands of feet. The example shows the base of the turbulence begins at the surface and extends to 5,000 feet above the surface.

A7.2.9. Minimum Altimeter Setting.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 **ALSTG29.97INS**

- Altimeter is in reference to inches of mercury (Hg).
- Forecasted value is the minimum altimeter expected for the time covered in the applicable forecast group.

A7.2.10. Remarks.

KFFO FCST 12-12 15012G25KT 5 –RA SCT090 BKN140 OVC250 LGT RIME ICG 020-080 LGT TURBC SFC-050 **ALSTG29.97INS T25/21Z T05/11Z**

- Remarks (if any) are always the last entries for each forecast group.
- Forecast maximum and minimum temperatures in Celsius, and projected hour of occurrence are included on the first line of the forecast.

A7.2.11. Temporary Condition Groups. (TEMPO).

TEMPO 16-02 1 +SHRA BKN025 OVC050

- Indicates a temporary fluctuation to forecast conditions (e.g., intermittent rain).
- May contain all, some, or just one of the elements (excluding altimeter setting) listed in the above paragraphs.
- When used, the valid time for the forecast intermittent conditions is from whole hour to whole hour as listed immediately after the TEMPO identifier. In the example above, the intermittent conditions are expected to occur from 16Z until 02Z.

A7.2.12. Change Groups. (BECMG).

BECMG 02-03 18012G22KT 7 SKC **ALSTG 30.05INS TEMP 30C 2100Z TEMP 22C AT 1100Z**

- Used to indicate a change in forecast conditions expected to occur within a specified time period.
- The specified time period will normally be 1 hour and will never exceed 2 hours.
- BECMG groups will contain all elements.
- The valid time of this group will be from the end time of the change, to the ending time of either forecast period or until the ending time of a subsequent BECMG group. In the example above, the change is forecast to begin after 02Z and end at 03Z. Therefore, the valid time for the conditions within the BECMG group would be from 03Z until the end of the forecast (12Z) since there are no subsequent BECMG groups.

A7.3. WEATHER WATCH, WARNING, AND ADVISORY FORMATS

A7.3.1. Statement Type and Number.

WPAFB WEATHER WATCH (warning or advisory) 07-002

03/2200Z (03/1700L) TO 04/0600Z (04/0100L)

THE POTENTIAL FOR DANGEROUS LIGHTNING EXISTS WITHIN 5NM OF WPAFB DURING THE VALID TIMES ABOVE. A WARNING WILL BE ISSUED LATER IF REQUIRED.

13/GNH

- Numbered sequentially in five digits. The first two digits represent the month in which the watch was issued, while the last three digits represent the sequential number for the watch. In the example above, the watch is the second (002) weather watch to be issued during the month of July (07).

- Watches, warnings, and advisories are all numbered independently of one another (e.g., the first watch in July will be numbered 07-001, as will the first warning and first advisory).

A7.3.2. Valid Period.

WPAFB WEATHER WATCH 07-002

03/2200Z (03/1700L) TO 04/0600Z (04/0100L)

THE POTENTIAL EXISTS FOR LIGHTNING TO OCCUR WITHIN 5NM OF WPAFB DURING THE VALID TIME. A WARNING WILL BE ISSUED LATER IF REQUIRED.

13/MAM

- The first two digits represent the date and four digits following solidus represent the time, first in Zulu, then local (in parentheses).

A7.3.3. Message Text.

WPAFB WEATHER WATCH 07-002

03/2200Z (03/1700L) TO 04/0600Z (04/0100L)

THE POTENTIAL EXISTS FOR LIGHTNING TO OCCUR WITHIN 5NM OF WPAFB DURING THE VALID TIME. A WARNING WILL BE ISSUED LATER IF REQUIRED.

13/GNH

- The text is self-explanatory and will describe the conditions expected.

A7.4. PIREP FORMAT.

A7.4.1. Station and Product Identifier.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

A7.4.2. Time.

KFFO PIREP **TIME 0240** KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- All times are Zulu.

A7.4.3. Aircraft Location.

KFFO PIREP TIME 0240 **KFFO090045** FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- Nearest very high frequency navigational aid (VHF NAVAID) or airport followed by the direction and distance from the VHF NAVAID. In the above example, the aircraft location is 45 miles east (090 degrees) of WPAFB (KFFO).

A7.4.4. Aircraft Flight Level.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- “FL” indicates flight level.

- Flight level is in hundreds of feet above mean sea level (MSL). In the example above, the flight level is 33,000 feet.

A7.4.5. Aircraft Type.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- “TP” indicates aircraft type. This example is a Lear Jet 35.

A7.4.6. Sky Cover.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA -45 WND 22055KT TURBC LGT CHOP

- “SK” indicates sky condition.

- Layer amounts are reported in octas; SKC=Clear, FEW=1/8 to 2/8ths, SCT=3/8 to 4/8ths, BKN=5/8 to 7/8ths, OVC=8/8ths.

- Encoded in ascending order.

- Multiple cloud layers are separated by a solidus “/.”

- Heights are given in hundreds of feet using three digits. In this example the aircrew is reporting scattered clouds with bases at 25,000 ft and tops at 30,000 ft.

- This field may be omitted if the pilot does not report sky condition.

A7.4.7. Air Temperature at Flight Level.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- “TA” indicates temperature in Celsius.

- Subzero temperatures are prefixed with “M” (minus).

- This field may be omitted if the pilot does not report the temperature.

A7.4.8. Wind.

KFFO PIREP TIME 0240 KFFO090045 FL330 TP LJ35 SK SCT250-TOPS300 TA M45 WND 22055KT TURBC LGT CHOP

- “WND” indicates wind.

- Wind direction is in reference to the direction **from which** the wind is blowing and is indicated by the first three digits. In the example above, the wind is blowing from 220 degrees (southwesterly).

- Wind speed is in whole knots and follows the direction.

- Speeds less than 100 knots are encoded in two digits. In the example above, the wind speed is 55 knots.
- Speeds of 100 knots or more are encoded in three digits.
- The wind field may be omitted if the pilot does not report wind.

A7.4.9. Turbulence and/or Icing.

KFFO PIREP TIME 0240 KFFO090045 FL330 SK SCT250-TOPS300 TP LJ35 TA M45 WND 22055KT **TURBC LGT CHOP**

- "TURBC" indicates turbulence. This example is an aircraft experiencing light chop.
- "ICG" indicates icing.
- These fields may be omitted if not reported by the pilot.

A7.4.10. Remarks.

- "RMK" indicates remarks.
- Plain language (using contractions whenever possible) remarks as received from the pilot. Comments expand upon elements reported in the body of the PIREP.

Attachment 8

NTFS USER LOCATIONS

Table A8.1. NTFS User Locations

NTFS Identifier	Customer	Location	Circuit Identification
SERVER	BWS	Bldg. 206, Suite 1	LAN
FCSTR	BWS	Bldg. 206, Suite 1	LAN
BRIEFER	BWS	Bldg. 206, Suite 1	LAN
OBSVR	BWS	Bldg. 206, Suite 1	LAN
ATC00	Control Tower (Flight Data)	Bldg. 206	NTFS-05
ATC01	Control Tower (Gnd Control)	Bldg. 206	NTFS-19
ATC02	Control Tower (Local Control)	Bldg. 206	NTFS-04
CLIENT	Dayton TRACON	FAA, Dayton TRACON	LAN
CLIENT	445 AW Command Post	Bldg. 4010	LAN
CLIENT	Base Operations	Bldg. 206	LAN
CLIENT	88 ABW Command Post	Bldg. 266 Area A	LAN
CLIENT	Aero Club	Bldg. 153 Area C	LAN
CLIENT	Transient Alert	Bldg. 145 Area C	LAN

Attachment 9

BASE WEATHER STATION EQUIPMENT

A9.1. Equipment listing, impact on mission, and maintenance responsibility. Note: (937) 257-6041 is the phone number for Maintenance Control at the 88th Communications Squadron. The list is in order of restoral priority with the top being the highest priority.

Table A9.1. Equipment Listing Impact.

If the outage affects:	And the situation is:	Then the impact is:	And the mission impact is:	Responsible for the maintenance of:
FMQ-13 Digital Wind Sensor	Active end out	Significant	Information obtained from this equipment is essential to safe flight operations	ATCALs - (937) 257-6041
	All other outages	Minimal	None	
FMQ-8 Temperature and Dew Point sensor	Digiwx inoperative	Significant	Information obtained from this equipment is essential for safe flight operations	ATCALs - (937) 257-6041
	Digiwx operative	Minimal	Temperature observations require additional 10-15 minutes, reducing efficient operations	
WSR-88D Doppler Weather Radar	Radar is inoperative or communication lines are down	Significant	Weather warning support is severely degraded	Air Traffic Control & Landing Systems (ATCALs) - (937) 257-6041
	All other outages	Minimal	None	

If the outage affects:	And the situation is:	Then the impact is:	And the mission impact is:	Responsible for the maintenance of:
NTFS New Tactical Forecast System	Critical path terminals are down: Server, ATC00, ATC01, ATC02, AFMC & 445 th Command Posts, Base Operations Other terminals are down	Significant Minimal	Relay of essential weather information is delayed Weather data is not relayed to customers	NTFS Tech Control, DSN 271-3244
PMSV Pilot to Metro Radio	Any outage	Significant	Unable to support airborne aircraft	ATCALs - (937) 257-6041
Telephone	Total outage Any partial outage	Significant Minimal	Weather support to base and remote customers is severely degraded Weather support to base and remote customers is degraded	Telephone Maintenance, 115
GMQ-32 Runway Visual Range Sensor	Active end out All other outages	Significant Minimal	Information obtained from this equipment is essential to safe flight operations None	ATCALs - (937) 257-6041
ML-658 DBASI Barometer	Aneroid reading estimated or inoperative Aneroid operational	Significant Minimal	Information obtained from this equipment is essential for safe flight operations Pressure observations require additional time reducing efficient operations.	ATCALs - (937) 257-6041

If the outage affects:	And the situation is:	Then the impact is:	And the mission impact is:	Responsible for the maintenance of:
GMQ-13/ 1P-1456 Laser Beam Ceilometer	Active end out All other outages	Significant Minimal	Information obtained from this equipment is essential to safe flight operations None	ATCALs - (937) 257-6041
MARTA Satellite System	Any outage, if NTFS/Internet are down Any outage, if NTFS/Internet are up	Significant Minimal	Information obtained from this equipment is essential to safe flight operations Weather support to base and remote customers is degraded	MARTA Systems Inc., (805) 525-4637
Telefax	Any outage	Minimal	Weather briefings to remote locations are delayed and degraded	Telephone Maintenance, 115
DIGIWX Weather System	Any Outage	Minimal	Degrades ability to obtain weather data used as a backup to primary weather equipment	Belfort Instrument Co., (410) 342-2626

Attachment 10

15 OWS AREA OF RESPONSIBILITY (AOR)

A10.1. General. Using automation and Internet technology, the 15 OWS provides weather information and products to units from the Dakotas to Maine. Supported units have over 1600 aircraft whose varied mission requirements involve forecasting for destinations throughout the world.

A10.2. Services. The 15 OWS prepares approximately 1,800 flight weather briefings and 760 regional graphic products monthly in direct support of military operations. Graphic product requirements are assessed and reviewed annually by a customer group. Products and services are continuously updated based on customer service requests on a daily basis. The 15 OWS distributes PWWs to over 170 units across the AOR and provides support to 127 special support areas including Air Refueling (AR) and low-level routes, Military Operating Areas (MOAs), and Drop/Landing Zones (DZ/LZs).

A10.3. Communication. The 15 OWS communication experts maintain over 100 unit-tailored web pages and answer approximately 80 requests per month for web site and communication support. They maintain individual passwords for .com users without .mil Internet capability and link weather data from eighteen other military and governmental web sites, enabling one-stop shopping for critical aviation products.

A10.4. 15 OWS AOR.

Figure A10.1. 15 OWS AOR.

