BY ORDER OF THE COMMANDER
1ST SPECIAL OPERATIONS WING
(AFSOC)

HURLBURT FIELD INSTRUCTION 15-101

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Weather

WEATHER SUPPORT

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This publication implements Air Force Policy Directive (AFPD) 15-1, *Air Force Weather Operations* (AFI) 15-128, *Air and Space Weather Roles and Responsibilities*. It implements/incorporates the requirements as stated within (AFI) 91-203, *Air Force Consolidated Occupational Safety Standard, Chapter 11*. It establishes the responsibilities and procedures for providing and using weather services at Hurlburt Field. It provides general information on weather services including weather observations and forecasts, weather warnings and advisories, dissemination of weather information, and reciprocal support. This publication should supplement existing base instructions and plans such as CEMP 10-2 *Hurlburt Field Comprehensive Emergency Management Plan*. This publication does not apply to Air Force Reserve Command (AFRC) Units or the Air National Guard (ANG). Refer recommended changes and questions about this publication to the OPR listed above using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate chain of command. Requests for waivers must be submitted to the OPR listed above, or as otherwise stipulated within this publication, for consideration and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This manual revision incorporates and reflects changes in Desired Lead Times to winter weather warnings reduced from two hours down to one hour. Policies outlining agency requirements and actions taken in response to impending inclement weather were also removed to coincide with the rescinding of HFI 91-203

Chapter 1

GENERAL INFORMATION

1.1. General.

1.1.1. The 26th Operational Weather Squadron (OWS), (also known as the Characterization Unit (CU) as referenced by AFMAN 15-129V1), and 1st Special Operations Support Squadron Weather Flight (1 SOSS/OSW), commonly referred to as the Weather Flight (or Exploitation Unit (EU) as outlined by AFMAN 15-129V2, but will be referred to as Weather Flight for common understanding of the general populace), are the official weather information agencies for and provide weather services to the 1st Special Operations Wing (1 SOW) and other units assigned to Hurlburt Field, Florida. Basic concepts and procedures are outlined in Air Force and Air Force Special Operations Command directives. Weather support is directed by AFMAN 15-129 *Air and Space Weather Operations* which is split into two separate volumes; one for the Characterization Unit (CU) in volume 1 and one for the Exploitation Unit (EU) in volume 2. For common understanding, this directorate will be referenced simply as AFMAN 15-129. Additional information and details of support provided by the 26th Operational Weather Squadron are provided in a Memorandum of Agreement between the 1st Special Operations Support Squadron and the 26th Operational Weather Squadron. Please see **Attachment 1** for a glossary of abbreviations and acronyms.

1.1.2. This instruction establishes requirements and procedures for weather support, which must be coordinated at the local level to meet mission needs. It consolidates weather support requirements and procedures for peacetime operations and eliminates the need for written agreements between the weather unit and supported operations. It does not cover weather support procedures for emergency war operations or certain other special operations or procedures. These are covered in applicable plans/regulations. This publication supersedes Hurlburt Field Support Plan dated 25 Mar 2003.

1.1.3. This document is UNCLASSIFIED and does not come within the scope of directives governing the protection of information affecting national security. Although it is unclassified, it is FOR OFFICIAL USE ONLY in accordance with AFI 33-332, *Air Force Privacy Act Program.*

1.1.4. **OPSEC.** Operational security has been considered in the development of this plan. The nature of operational support identified does not violate OPSEC.

1.2. Designators. All weather products disseminated by or for Hurlburt Field will use KHRT as the ICAO location indicator. The WMO index number is 74777.

1.3. Weather Operations.

1.3.1. Operational Weather Squadrons provide resource protection, Terminal Aerodrome Forecasts (TAFs), regional and operational-level weather products and information, meteorological watch (METWATCH), Pilot-to-Metro Service (PMSV), and limited flight weather Mission Execution Forecast (MEF) support for Air Force and Army locations within designated geographic regions.

1.3.2. The 26 OWS at Barksdale AFB, Louisiana provides regional and operational-level weather products and information to Air Force and Army units operating in the southeast CONUS. The Weather Flight at each Air Force and Army location will focus on providing tactical-level weather products and information needed for mission execution and provide weather products and information to the commander of deployed forces during wartime, contingency, and exercise operations.

1.3.3. The Weather Flight Commander, 1 SOSS/OSW, is the designated Staff Weather Officer (SWO) to the 1st Special Operations Wing and will coordinate all weather support required by units assigned to Hurlburt Field.

1.4. Assumptions. Adequate resources and communications will be available to execute this instruction and sufficient weather intelligence will be available from various sources on which to base weather operations and production.

1.5. Shortfalls and Limiting Factors. None.

1.6. Duty Priorities. All base weather station tasks cannot be accomplished simultaneously. Therefore, duty priorities are established to ensure tasks are accomplished in order of relative importance and publicized to avoid misunderstanding among supported agencies. Duty priorities will ensure timely response to situations under normal conditions. However, the list will not replace good judgment. The weather technician may deviate in the best interest of flight safety and/or protection of personnel or property. The weather technician will use the following priority list as a guide for accomplishing duties.

1.6.1. Complete Emergency War Order (EWO) Tasking.

1.6.2. Execute Base Weather Station Evacuation.

1.6.3. Respond to Aircraft/Ground Emergencies.

1.6.4. Respond to Pilot-to-Metro Service Contacts.

1.6.5. Provide weather information for Supervisor of Flying (SOF).

1.6.6. Augment AN/FMQ-19 Observations for Mandatory Elements.

1.6.7. Provide eyes forward support to the 26th Operational Weather Squadron Barksdale AFB.

1.6.8. Severe Weather Action Plan (SWAP) Operations.

1.6.9. Produce and disseminate Mission Execution Forecasts (MEFs).

1.6.10. Relay Urgent (PIREPs) and Special AIREPs to OWS.

1.6.11. Disseminate PIREPs/AIREPs.

1.6.12. Perform MISSIONWATCH.

1.6.13. Provide Flight Weather Briefings.

1.6.14. Accomplish Weather Function Training.

1.6.15. Accomplish Administrative Tasks and Other Duties. **Note:** When the airfield is closed, priorities **paragraph 1.6.7** and **paragraph 1.6.8** are reversed.

1.7. Geographic Area of Responsibility. The area of responsibility for products and services provided by the Weather Flight is the terminal area, which is the area located within a 5 nautical mile radius around the center of the Hurlburt airfield complex. The weather flight (WF) will also MISSIONWATCH all areas and routes in which Hurlburt flying units are conducting operations.

1.8. Operating Hours and Contact Information.

1.8.1. Staff services are available from 0730 to 1600, Monday through Friday, except federal holidays, Wing Goal Days, Family Days, or other directed down days.

1.8.2. Weather technicians are available in the Base Weather Station (BWS) to provide all services 24-hours a day, Monday - Friday and on Saturday and Sunday when the airfield is open. A standby forecaster will be available and recalled by the 1 SOW Command Post, or as weather conditions dictate.

1.8.3. The WF can be contacted at DSN 579-7423/6527/6198 or Commercially 850-884-7423/6527/6198.

1.9. Backup Weather Support. If weather operations at 26 OWS are interrupted (e.g., power outage, natural disaster), the 26 OWS will contact the WF. The Hurlburt Terminal Aerodrome Forecast (TAF), weather watch, weather warning, and weather advisory responsibility will be transferred to 1 SOSS/OSW until such time 26 OWS is postured to resume operations. Responsibility for other 26 OWS products (e.g., graphical products) will be transferred to other agencies as necessary to continue weather information flow to Hurlburt customers.

1.10. Base Weather Station Evacuation. If the WF is required to evacuate the BWS, the operations will relocate to the Alternate Operating Location (AOL), which is in building 90220 (Weather Warehouse located on the back side of the Education Office) until able to move back into the primary location.

1.10.1. The 26 OWS will assume the following duties until the WF resumes operations.

1.10.1.1. Perform METWATCH and MISSIONWATCH for 1 SOW operations and issue all terminal and flying area weather warnings and advisories to the best of their ability. Since 26 OWS is limited to cloud-to-ground strike data from the National Lightning Detection Network, it does not have the capability to detect or observe other lightning strike occurrences (e.g., cloud-to-cloud lightning).

1.10.1.2. Mission Execution Forecast. If the WF is unable to produce MEFs from the alternate site, the 26 OWS will produce and update the MEFs for the 1 SOW using their standard format. The MEFs will be posted on the 26 OWS website under the Unit Tailored Pages link or via fax or email.

1.10.1.3. The 26 OWS will assume responsibility for all other flight weather MEFs for missions departing Hurlburt Field and conduct limited MISSIONWATCH for these flights.

1.10.2. Upon arrival at the AOL, the WF will standup operations and notify Air Traffic Control (ATC), the command post, Eglin RAPCON, Airfield Management, 26 OWS, and all of the flying squadrons in 1 SOW that they have resumed operations at the new site.

1.10.3. The weather technician will provide the following services from the alternate operations location.

1.10.3.1. Continue to issue and update MEFs (AFSOC Form 87, *AFSOC Mission Weather Briefing*, and electronic Weather Briefing Flimsy) if the capability exists. The MEF will be faxed or emailed to the flying squadrons.

1.10.3.2. Provide METWATCH for Hurlburt Field from the alternate work center. An additional technician will be posted to a location that provides visibility of the airfield. This person may be co-located in the air traffic control tower if possible.

1.10.3.3. Brief aircrews and MISSIONWATCH flights. Briefings will be conducted via phone or fax.

1.10.4. PMSV radio support will not be available from the alternate operations location. However, the Eglin AFB WF's PMSV frequency will be added to all Mission Execution Forecasts (MEF) and briefed to aircrew.

1.10.5. Timeliness and accuracy of services provided from the alternate work center may suffer somewhat due to limited communications and use of backup equipment.

1.11. Joint Environmental Toolkit (JET). JET is the primary weather data dissemination system on Hurlburt Field. All required agencies will have the JET software loaded and running at all times so they automatically receive weather updates as they occur. Examples of products disseminated over JET are in **Attachment 5**. 1 SOW Command Post will also use the ReachPlus Popup Alerts Client as a secondary dissemination to get watches, warning and advisories to the base populace.

1.12. Release of Weather Information. Support to non-DoD agencies and the general public will not be provided unless authorized by the Wing Public Affairs Office.

Chapter 2

AIRFIELD SERVICES ELEMENT

2.1. Weather Observations.

2.1.1. Automated Observations. The Weather Flight uses the FMQ-19 Automated Weather Observing Station System as its primary surface weather observation source. The FMQ-19 is a sophisticated set of weather instruments that measure pressure, precipitation, wind speed, wind direction, visibility, runway visual range, sky cover, cloud height, temperature, dew point and lightning. The FMQ-19 has three different operational modes. Normal, Augmented, and Backup.

2.1.1.1. Automatic Mode. When the FMQ-19 is in Automatic Operational Mode, the system records, encodes and disseminates weather observations without human intervention.

2.1.1.2. Supplemented Mode. Supplementing is a method of manually adding meteorological information to an automated observation that is beyond the capabilities of the AMOS to detect and/or report. The FMQ-19 will be placed in Supplemented Operational Mode during the following conditions:

2.1.1.2.1. Tornadic activity, including funnel clouds and water spouts (2 hrs. prior to onset).

2.1.1.2.2. Hail 3/4 inch or greater (2 hrs. prior to onset).

2.1.1.2.3. Volcanic Ash (2 hrs. prior to onset).

2.1.1.2.4. Ceiling height less than or equal to 5,000 ft. (during operational hours only).

2.1.1.2.5. Visibility less than or equal to 5 statute miles (during operational hours only).

2.1.1.2.6. Any weather condition that is considered operationally significant (e.g. has a significant mission impact or mission failure).

2.1.1.3. Backup Mode. The FMQ-19 will be placed in Backup Operational Mode when there is a partial system failure, or determined that specific sensors are not representative with actual conditions.

2.1.1.4. Limitations. Although the FMQ-19 is an advanced system, it does have limitations compared to human observed weather conditions. Some of the limitations of the system are its ability to determine prevailing visibility, cloud cover and ceilings. The FMQ-19 only sample cloud data directly above the sensor, and is a different type of cloud observation than the human observer's celestial dome, or entire sky, observation. There are algorithms within the software suite which uses the sensed data to compute sky coverage. The visibility sensor samples a small part of the air in the vicinity of the sensor to determine visibility. The FMQ-19 will not be able to detect reduced visibilities away from the sensor, or sector visibility.

2.1.2. Manual Observations. The Weather Flight will manually observe weather observation elements when all or part of the FMQ-19 in not operational. The location of the weather observing site does not permit a 360degree unrestricted view of the weather and is further limited by the lack of visibility markers beyond 5 statute miles. Visibilities at night are limited due to the lack of distinguishable nighttime visibility references. Specific limitations are:

2.1.2.1. Daytime:

2.1.2.1.1. Azimuth 200 degrees through 230 degrees restricted to 1/8 SM due to Eason hangar.

2.1.2.1.2. Azimuth 030 degrees through 070 degrees restricted to 5/8 SM due to high tree line.

2.1.2.1.3. No daytime markers beyond 5 SM.

2.1.2.2. Nighttime:

2.1.2.2.1. No nighttime references beyond a 1/2 SM from azimuth 150 degrees through 350 degrees.

2.1.2.2.2. No nighttime references beyond 1 SM from azimuth 360 degrees through 090 degrees.

2.1.3. Dissemination. Automated Observations are taken by the FMQ-19 Automated Weather Observing System, and disseminated locally and long-line via the JET system and identified by the heading "KHRT, (type of observation), and time (UTC)." During periods when the FMQ-19 or JET system is inoperative, observations will be relayed via telephone and/or hotlines in the following order: ATC, Eglin RAPCON, and the 1 SOW/CP. When received by telephone/hotline, these agencies will provide the caller with their initials and a read-back of the entire observation to ensure accurate reception of the information.

2.2. Basic Weather Watch (BWW). A Basic Weather Watch will be used when the FMQ-19 is in Augment or Backup mode (see **paragraph 2.1.1.2** and **paragraph 2.1.1.3**). Weather personnel normally conduct a BWW from the base weather station (BWS). Due to other duties, along with other restrictions such as a building design that does not allow a 360-degree view of the runway complex, etc., weather personnel cannot monitor the weather continuously and cannot be expected to detect and report all weather changes as they occur. In addition to taking and disseminating required observations, the BWW observing program includes minimum requirements to recheck weather conditions at intervals not to exceed 20 minutes since the last observation/recheck, to determine the need for a LOCAL or SPECI observation.

2.2.1. When reliable source (ATC personnel, pilots, law enforcement, etc.) reports weather conditions different from the last report, weather personnel will recheck the weather and, if required, disseminate a new observation.

2.3. Cooperative Weather Watch. A Cooperative Weather Watch is the name given for the cooperation between weather personnel and control tower operators in identifying significant weather changes. The primary concern is the occurrence of previously unreported weather conditions that could affect flight safety or could be critical to the safety or efficiency of other local operations and resources. Due to the weather technician's limited view of the horizon, tower personnel will notify the weather technician of the occurrence of previously unreported

weather conditions. These include prevailing visibility which meets special criteria as listed in **Attachment 2**; tower prevailing visibilities less than 4 statute miles (6000 meters) when different from surface prevailing visibility; sector visibilities which differ from prevailing visibility, especially in the area where the weather technician's view of the horizon is restricted; beginning or ending of precipitation, thunderstorms, lightning, and any other significant weather. Tower personnel will relay PIREP's in accordance with paragraph 7.8.8. The assistance provided by tower personnel will not interfere with their primary duties and does not reduce the responsibility of weather personnel to identify changes in weather conditions. When reliable sources (i.e., ATC, pilots, and security forces) report weather conditions different from the last disseminated observation, the weather technician will reevaluate the weather conditions. If the FMQ-19 is in Backup or Augment mode and based on reevaluation of the different weather conditions reported and local policy, the technician will:

2.3.1. Take and disseminate a SPECI or LOCAL observation if different conditions warrant immediate dissemination, (AFMAN 15-111, *Surface Weather Observations*, paragraph 2.17.2.1.).

2.3.2. Include the report of the differing conditions in the next METAR, SPECI, or LOCAL observation if the different conditions alone do not warrant immediate dissemination, (AFMAN 15-111, paragraph 2.17.2.2.).

2.4. Eyes Forward.

2.4.1. The WF integrates weather radar data, meteorological satellite imagery, lightning detection readouts, and non-standard weather data systems to create an integrated weather picture and near-term trend forecast for the 26 OWS/WXA. Eyes forward yields meaningful meteorological information not contained in coded observations to the OWS and is an integral part of the METWATCH for Hurlburt Field.

2.4.2. The WF will provide the "eyes forward" function by providing significant information to 26 OWS concerning local area weather patterns and un-forecasted changes. The WF will contact 26 OWS when:

2.4.2.1. Severe weather signatures on radar displays or METSAT imagery are identified that will affect the Hurlburt Field installation or mission.
2.4.2.2. Warning/advisory criteria are occurring or forecast to occur and 26 OWS has yet to issue the warning/advisory. The WF will also contact 26 OWS when warning/advisory criteria are forecast by 26 OWS and are not expected to occur. The WF will ensure 26 OWS receives all severe weather reports in the area of concern (e.g., from National Weather Service, local news media, and unit/base personnel).

2.4.2.2. When local weather phenomena are forecast to occur (next 30 minutes) and will affect 26 OWS and WF products (i.e., TAFs and MEFs). The WF will also contact 26 OWS when significant forecast elements on 26 OWS products are not expected to occur. Communication is to help the 26 OWS technicians anticipate changes and subsequently adjust forecast products.

2.4.2.3. When the FMQ-19 is no longer in Normal Operational Mode (Automatic) and requires human observations.

Chapter 3

MISSION WEATHER ELEMENT

3.1. Terminal Aerodrome Forecast (TAF).

3.1.1. Weather technicians at 26 OWS will prepare and disseminate a TAF over JET at 0900Z, 1700Z, and 0100Z and cover a 30-hour period. See **Attachment 9** for code breakdown. When the airfield is scheduled to close, TAF issue time will be modified in accordance with **Attachment 4**.

3.1.2. Specification and Amendment Criteria. The TAF Specification and Amendment criteria are listed in **Attachment 4** and are specified IAW AFMAN 15-129, *Air and Space Weather Operations-Processes and Procedures* and mutually agreed upon criteria specific to the mission needs of customers at Hurlburt Field.

3.1.3. Dissemination. The 26 OWS will disseminate the TAF over JET. If JET is inoperative, forecasts will be disseminated by phone to the command post and to the WF. The command post will notify any other agencies on an as-needed basis. The forecast is also available via the WF webpage whenever JET is operational.

3.2. Mission Execution Forecast (MEF).

3.2.1. Weather Briefing Flimsy. The Weather Flight will use the Weather Briefing Flimsy as its primary means of producing a flight weather briefing for all scheduled flights that are within the local flying area, defined as the Florida Panhandle and southern Alabama. The Flimsy is in a spreadsheet format that outlines takeoff and landing data along with range zone forecasts.

3.2.2. AFSOC Form 87. The Weather Flight will use the AFSOC Form 87 as a primary means of producing a flight weather briefing for all scheduled flights that are outside of the local flying area, or for missions that have unique needs that the Weather Briefing Flimsy does not cover. The AFSOC Form 87s will be pre-filled the day prior using scheduled flight data located in the C2 Database. The AFSOC Form 87 will be completed, faxed or digitally sent to an email address, and will have an electronic transmission time in the "briefing time" block. This time will be prefixed with an "E". It is the aircrew's responsibility to call the duty forecaster for a step brief to see if there are any changes. At this time an official brief time and forecaster's initial will be given.

3.2.3. Local/Verbal Briefing. If an aircrew is conducting local flying, they may request a "local" weather briefing which will be given face to face at the weather station or via phone. All Local/Verbal briefings will be documented on a Local Aircrew Briefing Log. The Local/Verbal Briefing may be in the same format as the Weather Briefing Flimsy described in **paragraph 3.2.1**

3.3. Mission Watch. The WF will conduct a continuous MISSIONWATCH of all routes and flying areas used by Hurlburt flying units during the times they are using them. During emergency situations or rapidly changing conditions, the WF will immediately notify the 1 SOW/CP to relay important weather information to airborne aircraft.

3.4. Pilot-to-Metro Service (PMSV). The WF will provide full service PMSV on the assigned frequency of 335.45 MHz Aircrews are highly encouraged to relay pilot reports during PMSV contacts. When the Hurlburt PMSV is inoperative, aircrews will be given the Eglin AFB PMSV frequency of 342.2 MHz.

3.5. Space Weather Support. Space weather data and forecasts for Hurlburt customers are available upon request. Information available includes space weather impacts on radio frequencies and the Global Positioning System (GPS).

3.6. Toxic Corridors. IAW AFMAN 32-4004, *Emergency Response Operations*, the WF will provide the 1 SOCES/CEX with weather information so they can calculate toxic corridors for chemical spills. The WF will not be responsible for producing toxic corridors.

3.7. Chemical Downwind Messages: The WF will provide Chemical Downwind Messages (CDM) upon request for disaster response, chemical/nuclear attack, and exercise purposes. Automated CDMs can also be found at the 26 OWS homepage. The "CDM" link located at the bottom right of the page will provide both CDM and Effective Downwind Message (EDM) data for a selected ICAO or site name.

Chapter 4

STAFF WEATHER ELEMENT

4.1. Wing Staff Meeting. Upon request, the WF will present a weather briefing at the 1 SOW Commander's staff meeting. The content of the briefing is flexible but should include a current satellite picture, a 5-day forecast for Hurlburt and any other graphics determined relevant by the briefer.

4.2. Battle Staff. The WF will provide weather briefings to the Wing Battle Staff as necessary. The format of the briefing will be tailored to the scenario driving the Battle Staff's formation.

4.3. Mobility Concept Briefing. The WF will provide a briefing at all Mobility Concept Briefings as necessary. The focus of this briefing will be on departure conditions, deployed area conditions and climatology. As a minimum, the briefing will include forecast conditions at Hurlburt Field for departure time, deployed area climatological conditions, and forecast conditions for destination arrival time. Other topics will be briefed as required.

4.4. Frag-break Briefing. The WF will provide a briefing at the Frag-break meeting. Weather will generally be limited to a 5-day forecast for Hurlburt Field with a focus on activity on the airfield for maintenance prep of aircraft and logistics prep of cargo.

4.5. Instrument Refresher Course (IRC). A WF representative will provide a local weather effects briefing to all IRC classes. The briefing format is fixed. IRC schedulers will provide the WF with a schedule of upcoming IRCs as early in the process as possible.

4.6. Climatology Support. Climatological data will be available upon request including data for other locations. Requests should be made at least 1 business day in advance in order to allow the WF to research and compile the data. Urgent requests will be compiled as soon as possible and in accordance with WF duty priorities (See **paragraph 1.6**).

4.7. Air Traffic Control Training/Orientation. The WF will provide training and certification for ATC personnel on METAR code, TAF code, and visibility determination. Training/certification will be conducted Monday-Friday, between the hours of 0800-1600L, upon coordination with the WF.

Chapter 5

METEOROLOGICAL WATCH

5.1. General.

5.1.1. The 26 OWS and the WF will jointly monitor observed and forecast weather conditions and notify selected agencies when pre-established weather conditions occur or are expected to occur.

5.1.2. Desired Lead Time. Advanced warning of threatening weather conditions allows local agencies to take specific actions prior to occurrence. The desired lead-time is the minimum amount of advanced notice an agency requires prior to the onset of a particular weather phenomenon.

5.1.3. All weather watches, warnings, and advisories are issued IAW AFMAN 15-129. Warnings and advisories may be issued as forecast or observed. These watches warning and advisories are issued as Terminal (within 5nm of Hurlburt) with the exception of the Thunderstorms within 10 NM.

5.1.4. The WF may issue or supersede a 26 OWS -issued weather warning only when imminent weather conditions pose a hazard to life or property and prior coordination with 26 OWS is not practical or communications do not allow. The WF will be responsible for local dissemination and contact 26 OWS as soon as possible afterward so 26 OWS can assume responsibility/accountability.

5.2. Responsibilities. Detailed responsibilities of the 26 OWS and the WF are outlined in a Memorandum of Agreement (MOA) Between 1st Special Operations Support Squadron and 26th Operational Weather Squadron. This MOA is reviewed triennially and updated as needed.
5.2.1. The 26 OWS will:

5.2.1.1. Perform a continuous Terminal METWATCH for Hurlburt Field.

5.2.1.2. Issue all watches, forecast weather warnings, and forecast weather advisories.

5.2.2. WF will:

5.2.2.1. Perform “eyes forward” function. Assist with METWATCH for the Hurlburt Field terminal area and advise the 26 OWS when hazardous conditions that could affect Hurlburt, or pose a hazard to life or property, are observed or expected to occur.

5.2.2.2. Issue all observed weather advisories and the observed weather warning for lightning.

5.2.2.3. Notify the 26 OWS when local mission-watch indicates a 26 OWS-issued watch, warning, or advisory is, or may become, unrepresentative of current or expected weather conditions.

5.2.3. The 1 SOW Command Post will:

5.2.3.1. Monitor weather information disseminated over JET.

5.2.3.2. Disseminate weather watches, warnings and advisories to required agencies.

5.2.3.3. When called by the 26 OWS or the WF, acknowledge receipt of the weather watch, warning, or advisory. The 26 OWS and WF should not have to read the text of the weather watch, warning, or advisory to the Command Post unless their JET is not working.

5.2.4. The Control Tower will:

5.2.4.1. Monitor weather information disseminated over JET.

5.2.4.2. Disseminate weather watches, warnings and advisories to airborne aircraft via radio and ATIS.

5.2.4.3. When called by the WF, acknowledge receipt of the weather watch, warning, or advisory. The WF should not have to read the text of the weather watch, warning, or advisory to Airfield Operations unless their JET is not working.

5.3. Weather Watches. 26 OWS will issue a forecast weather watch for within 5 nm of the center of the Hurlburt Field runway complex when the potential for the criteria defined in **Table 5.1** exists.

Table 5.1. Forecasted Weather Watch Criteria and Minimum Desired Lead-Times.

Forecasted Weather Watch Criteria and Minimum Desired Lead-Times	
Criteria	**Desired Lead-Time**
Tornado/Waterspout*	At Least 60 Minutes Prior to Possible Occurrence
Severe Thunderstorm* (Damaging Winds ≥ 45 kts associated with thunderstorms **and/or** Severe Hail ≥ 3/4 inch)	At Least 60 Minutes Prior to Possible Occurrence
Freezing Precipitation (Any Intensity)*	At Least 60 Minutes Prior to Possible Occurrence
Heavy Rain (≥ 3 Inches in ≤ 12 Hours)*	At Least 60 Minutes Prior to Possible Occurrence
Heavy Snow (≥ 1/2 Inch in ≤ 12 Hours)*	At Least 60 Minutes Prior to Possible Occurrence
Lightning Within 5 NM*	30 minutes prior to first Lightning Strike
*Note: 26 OWS will contact the 1 SOSS/OSW standby forecaster, via the CP when the WF is closed.	

****** The Severe Thunderstorm watch will be issued with the wind and hail criteria both combined into a single watch for precautionary purposes.

5.4. Weather Warnings.

5.4.1. Forecast Weather Warnings. Forecasted warnings are issued IAW AFMAN 15-129. 26 OWS will issue a forecasted weather warning for within 5 NM of the center of Hurlburt Field when the criteria defined in **Table 5.2** occurs, or is expected to occur.

Table 5.2. Forecasted Weather Warning Criteria and Minimum Desired Lead-Times

Forecasted Weather Warning Criteria and Minimum Desired Lead-Times		
Warning	**Criteria**	**Desired Lead-Time**
Tornado[1]	Tornado, Waterspout or Funnel Cloud	5 minutes*
Severe Thunderstorm[1]**	Damaging Winds ≥ 45 kts associated with thunderstorms **and/or** Damaging Hail ≥ 3/4 inch at Hurlburt Field	120 minutes
Damaging Winds[1]	Surface winds not associated with thunderstorms ≥ 50 kts	120 minutes
Heavy Rain ≥ 3 inches[1]	Heavy Rain ≥ 3 inches within 12 hrs	120 minutes*
Heavy Snow ≥ 1/2 inch[1]	Heavy Snow ≥ 1/2 inch within 12 hrs	60 minutes*
Freezing Precipitation[1] (Any Intensity)	Liquid precipitation of any type and intensity falls and produces glaze ice on exposed surfaces	60 minutes*
[1] Severe Weather Action Plan Criteria. 26 OWS will contact the 1 SOSS/OSW standby forecaster, via the CP when the WF is closed.		
* Lead-time and weather requirements have been determined by the needs of the installation commander and default lead-times and criteria are not being used.		

****** The Severe Thunderstorm warning can be issued with either the wind or the hail criteria separately or both the hail and wind criteria combined into a single warning criteria.

5.4.2. Observed Weather Warnings. The WF will issue an observed weather warning for within 5 nm of Hurlburt Field runway complex when the criteria defined in **Table 5.3** occurs. 26 OWS will issue an observed weather warning when the conditions in **paragraph 1.10** of this document are met, when the WF personnel are not on duty, or if local lightning detection systems are inoperable. However, since 26 OWS is limited to cloud-to-ground strike data from the National Lightning Detection Network, it does not have the capability to detect or observe other lightning strike occurrences (e.g., cloud-to-cloud lightning).

Table 5.3. Observed Weather Warning Criteria and Desired Lead Times.

Criteria	Desired Lead-Time	Issued By
Lightning From Thunderstorms (Within 5nm)	First Observed	WF

5.5. Weather Advisories.

5.5.1. Forecast Weather Advisories. Forecast advisories are issued IAW AFMAN 15-129. 26 OWS will issue a forecast weather advisory for within **5 nm** of the center of the Hurlburt Field runway complex when the criteria defined in **Table 5.4** is occurring, or is expected to occur.

Table 5.4. Forecast Weather Advisory Criteria and Associated Desired Lead Times.

Criteria	Desired Lead-Time	Issuing Agency
Winds ≥ 30 but < 45 Knots *	60 minutes	26 OWS
Surface Air Temperature ≤ 32°F	120 minutes	26 OWS
*26 OWS will contact the 1 SOSS/OSW standby forecaster, via the CP when the WF is closed.		

5.5.2. Observed Weather Advisories.

5.5.2.1. Observed Terminal Weather Advisories. The WF will issue an observed terminal weather advisory for within 5 nm of Hurlburt Field runway complex when the criteria defined in **Table 5.5** occurs. Exception: An observed advisory will be issued for Thunderstorms within 10 NM.

Table 5.5. Observed Terminal Weather Advisory Criteria and Desired Lead Times.

Criteria	Desired Lead-Time	Issued By
Ceiling less than 200 FT and/or visibility less than ½ mile	First Observed	WF
Cross winds ≥ 25 kts (wet runway)	First Observed	WF
Cross winds ≥ 35 kts (dry runway)	First Observed	WF
Gust spread ≥ 20 kts	First Observed	WF
Low-level wind shear (LLWS) (Not associated with thunderstorms)	First Observed	WF
Winds ≥ 20 but < 30 Knots*	First Observed	WF
Visibility ≤ ⅛ statute mile	First Observed	WF
Surface Air Temperature ≤ 40°F*	First Observed	WF
Thunderstorms within 10 nautical miles*	First Observed	WF
***When the WF is closed, or has to evacuate the work center, 26 OWS will issue the observed weather advisories listed in **Table 5.5.**, if the Automated Observation System is operable.		

5.6. Dissemination of Watches/Warnings/Advisories. All weather warnings, watches, and advisories will be disseminated using JET. Telephone confirmation will be used to ensure the Command Post, Airfield Management Operations, and the tower has received them. If the JET is inoperative, warnings, watches, and advisories will be disseminated by phone to the same agencies. The Command Post and Airfield Management Operations will disseminate information to the agencies listed in **Attachment 6**.

5.7. Weather Warning/Watch/Advisory Text Format. The text of weather warnings, watches, and advisories will contain the warning/watch/advisory number, the specific valid time period (until further notice for observed products), and specific conditions expected. They will be numbered consecutively with the number of the month, and the number of the warning. For example, the first warning issued in March will be No. 3-1; the next is No. 3-2. A warning for observed lightning is the only criterion that will be issued separately from other warning criteria. More than one advisory may be in effect at the same time. The following additional requirements apply to warnings issued for criteria other than observed lightning.

5.7.1. Only one warning will be in effect at a time (other than observed lightning), and it will include all elements meeting warning criteria. The only exception to this rule will be a Tornado Warning. In the interest of safety, this warning will be issued as soon as possible and may be issued as a separate warning allowing for two warnings to be simultaneously valid.

5.7.2. Warnings issued to add or delete a weather phenomenon (for example, adding hail greater than or equal to 1/2 inch to an existing warning for winds greater than 45 knots) will include the explanation "This warning upgrades/downgrades Weather Warning # (previous warning)".

5.7.2.1. UPGRADES. The new warning forecasts more severe weather.

5.7.2.2. DOWNGRADES. The new warning forecasts less severe weather.

5.7.2.3. EXTENDS. The valid period of a previously issued warning is extended.

5.7.3. Warnings and watches issued to extend the valid time will not be re-issued or re-numbered. These will include the explanation "This is an extension of Weather Warning Number (current warning)".

5.7.4. When the weather technician believes that phenomena meeting warning, watch, or advisory criteria are no longer expected during the valid time, they will be canceled with the explanation "Weather Warning Number (current warning) is canceled". See **Attachment 5** for dissemination formats.

5.8. Severe Weather Action Procedures (SWAP). The purpose of SWAP is to ensure 26 OWS and the WF has sufficient personnel available to provide effective resource protection during potential and/or actual severe weather events. SWAP may be implemented for any warning criteria (**Table 5.2**) but will primarily be used for severe thunderstorm, high wind, and tornado/waterspout events. SWAP may also be implemented in the event of unforeseen circumstances (i.e. communications line or critical equipment failure). SWAP will be implemented at the discretion of the 26 OWS in coordination with WF leadership and/or the standby forecaster.

5.8.1. WF Responsibilities. WF will perform the WF SWAP responsibilities as defined in AFMAN 15-129, AFI 10-229, *Responding to Severe Weather Events*, AFMAN 10-206, *Operational Reporting* and this instruction. More specifically, WF will accomplish the following procedures:

5.8.1.1. Notification. 26 OWS will notify the WF if any of the criteria in **Table 5.2** are occurring or are expected to occur within the next 4 hours. If WF personnel are not on duty, 26 OWS will contact the WF standby forecaster. Once the WF has been contacted,

26 OWS and WF personnel will jointly evaluate the weather situation and decide whether to recall the Severe Weather Action Teams (SWATs) in accordance with local standard operating procedures. 26 OWS will provide backup SWAT support for the WF in the event of communications failure, equipment outages, personnel unavailability, etc.

5.8.1.1.1. During normal staff duty hours (0730 to 1600, Monday through Friday, except federal holidays/authorized down days) the weather technician will implement SWAP by notifying the WF Commander, the Operations Manager, Wing Weather Officer (WWO) and/or the SWAT standby member in their office or cell. It is likely that the above personnel are present in the weather station and do not need to be recalled/activated.

5.8.1.1.2. During nights, weekends and federal holidays/authorized down days the weather technician will implement SWAP by notifying the SWAT standby member, as indicated on the current duty schedule, by home phone or cell phone.

5.8.1.2. Activation. The weather person on duty will discuss the meteorological situation, manning requirements, and the recall of additional personnel (or place on standby) with the SWAT standby member (If the SWAT standby member is unavailable, coordinate with the WF Commander, Operations Manager, WWO, or WF assistant NCOIC). If deemed necessary the SWAT standby member will report to the weather station no later than 30 minutes after notification by the weather technician or as soon as possible. Once the SWAT standby member has arrived they will assist in evaluating the situation, determine the need to recall additional personnel, and execute the SWAP duties/responsibilities in **Attachment 10**.

5.8.1.3. Upon arrival at the weather station the SWAT standby member, time permitting, will conduct a METCON with the 26 OWS Technician/Zone Supervisor.

5.8.1.4. The FMQ-19 will be placed in Augment Mode if severe weather is expected to occur.

5.8.1.5. Post Event Procedures. If severe weather actually occurs the following procedures will be executed if necessary.

5.8.1.5.1. OPREP-3 BEELINE Reporting procedures. When damage to the installation or aircraft has occurred due to weather, provide the information in **Attachment 13** to the 1st Special Operations Wing Command Post. OPREP-3 must be coordinated with 26 OWS to ensure appropriate information is included. A copy of OPREP-3 information will be sent to AFSOC/A3W.

5.8.1.5.2. If the event is to be used as one of the semi-annual SWAP tests, complete a memorandum for record documenting the event. Also, contact 26 OWS flight leadership and provide them with the memorandum or an e-mail for their records.

5.8.1.6. The WF personnel's home and cell phone numbers will be reviewed monthly or when a change in personnel occurs to ensure the most current numbers are available for SWAP.

Chapter 6

MISSION AND REQUIREMENTS OF SUPPORTED AGENCIES

6.1. General. The WF supports numerous units with diversified missions assigned to Hurlburt Field. Each unit has unique weather requirements to accomplish their mission.

6.2. 1st Special Operations Wing.

6.2.1. Mission. The 1 SOW mission focus is unconventional warfare: counter-terrorism, combat search and rescue, personnel recovery, psychological operations, aviation assistance to developing nations, "deep battlefield" re-supply, interdiction and close air support.

6.2.2. Weather Support Requirements. The WF will provide briefings for the Wing Standup Briefings (as requested) and Battle Staff Briefings.

6.3. 1 SOW Flying Units.

6.3.1. The 1 SOW Flying Units have a vast blend of aircraft with a wide range of missions. See attachment 8 for specific details on the mission-limiting weather parameters.

6.3.2. Weather Support Requirements. The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

6.4. Air Traffic Control (ATC). WF will provide timely updates to surface weather observations and forecasts. Provide METWATCH information.

6.5. 1st Special Operations Civil Engineering Squadron/Readiness Flight. WF will provide weather information for calculating toxic corridors.

6.6. Emergency Operations Center (EOC). WF will provide a forecaster when the EOC is activated and it is deemed necessary for continuous support. The WF is better postured to provide critical support from the Base Weather Station, but some significant situations may exists where a forecaster should be embedded in the EOC (e.g. After declaring HURCON 2, NBC attack, etc.).

Chapter 7

RECIPROCAL SUPPORT

7.1. General. The agencies listed in this chapter will provide services as described below.

7.2. 1st Special Operations Wing. IAW AFI 10-229, the 1 SOW/CC will chair a review of installation severe weather preparedness, capabilities, requirements, and procedures, no less than annually. The 1 SOW/CCE (executive officer) will notify the WF of all requirements for or changes to the Commander's scheduled briefings. Notify WF of all changes to 1 SOW meeting times and requirements.

7.3. 1st Special Operations Group Commander.

7.3.1. Establish operational weather support requirements and procedures with the WF.

7.3.2. Notify the WF of all changes in mission weather support.

7.4. 1 SOW Flying Squadrons.

7.4.1. Notify WF at least 24 hours in advance for mass briefs.

7.4.2. Ensure all pilot reports (PIREPs) during departure, in-flight, post-flight are relayed to the weather technician in a timely manner.

7.4.3. Provide at least 72-hour notice for seasonal safety presentations.

7.4.4. Provide feedback on MEFs when encountered weather conditions are not as forecasted, or if weather had an impact in completing the mission.

7.5. Command Post.

7.5.1. Monitor JET for updates to weather conditions.

7.5.2. Notify weather technician of all requirements for briefings in the Command Post.

7.5.3. Be the single point of contact for notification of weather warnings, watches, and advisories, and disseminate them to agencies listed in **Attachment 6.**

7.5.4. Notify WF of JET outages. When the JET is not operational, weather information will be disseminated via hotline or other suitable means such as the weather web page.

7.5.5. Notify duty technician of recalls requiring WF briefing support, plus initial briefing time, if required.

7.5.6. Notify duty technician of any weather-related difficulties reported to the command post (including from weapon ranges, refueling areas, or other training areas).

7.5.7. Notify the WF of changes in FPCON status.

7.5.8. Provide earliest possible notification of requirements for Battle Staff Weather Briefings associated with exercises/contingencies.

7.6. 1 SOW Maintenance Operations Center (MOC) Senior Controller.

7.6.1. Notify duty technician of any weather-dependent maintenance activities requiring weather support.

7.6.2. Establish procedures to ensure affected maintenance activities are promptly notified of all applicable Weather Warnings, Watches and Advisories.

7.7. Airfield Management Operations.

7.7.1. Notify weather personnel of in-flight emergencies inbound to Hurlburt Field.

7.7.2. Include appropriate weather information in the Flight Information Publications (FLIP). Required changes will be submitted when requested by the WF.

7.7.3. Relay weather warnings, watches, and advisories to the agencies listed in **Attachment 6**.

7.7.4. Notify the WF of aircraft mishaps/incidents at, or in the vicinity of Hurlburt Field and all aircraft mishaps involving Hurlburt based aircraft.

7.7.5. Notify WF of any changes to normal airfield operating hours. This includes the notification of early opening and closing of the airfield.

7.7.6. When notified by the WF that the back-up dissemination tree is in use, update applicable units IAW **Attachment 8**.

7.8. Control Tower.

7.8.1. Notify WF of weather communications equipment (JET) outages. When the JET is not operational, weather information will be disseminated via hotline or other suitable means.

7.8.2. Conduct daily operational checks of the PMSV radio.

7.8.3. Notify WF via hotline or other suitable means runway and runway light setting changes.

7.8.4. Notify WF via hotline or other suitable means of any changes to navigational aids status.

7.8.5. Tower personnel will receive local weather training prior to certification. The WF will assist with initial training/familiarization, but tower personnel will administer recurring training with WF assistance as necessary.

7.8.6. Provide a cooperative weather watch as outlined in **paragraph 2.3**

7.8.7. Provide weather personnel with initial ATC indoctrination.

7.8.8. Relay PIREPs to the weather flight within 5 minutes of receipt.

7.9. Safety Office.

7.9.1. Notify WF of any local aircraft mishap/incidents where weather or weather service may have been a factor.

7.9.2. Notify the WF of any damage on Hurlburt caused by weather.

7.9.3. Coordinate with WF on all messages containing references to weather.

7.10. Security Forces. Notify WF of observed hail, tornadoes, freezing precipitation, or other significant weather encountered during routine patrols.

7.11. 1st Special Operations Civil Engineering Squadron.

7.11.1. Provide emergency backup power to the weather station equipment at building 90730.

7.11.2. Notify WF prior to planned switches from commercial power to backup power and back to commercial power, which will affect weather equipment at building 90730 and/or the airfield.

7.12. 1st Special Operations Communications Squadron.

7.12.1. Provide routine and emergency maintenance for weather observing, weather-related communications located on Hurlburt not covered by contractor logistics.

7.12.1.1. Fully maintain the JET server, including but not limited to ensuring that all TCNO's and software upgrades from Air Force Weather Agency (AFWA) are installed and compliance reported to the weather flight in order to facilitate timely reporting compliance to AFWA.

7.12.2. **Priorities for restoring inoperative weather sensing equipment.** The WF reserves the right to change priorities of weather equipment when existing or forecasted weather requires such change. Maintenance personnel will receive permission from the weather technician before taking the following equipment down for maintenance.

7.12.2.1. FMQ-19 (Weather observation equipment).

7.12.2.2. OPUP (UD86, Weather surveillance RADAR).

7.12.3. Respond to an equipment outage. If the outage is judged to be significant by the weather personnel. The weather person will provide a verbal mission impact statement upon notification of outage. Weather personnel may defer maintenance for minimal outages during non-duty hours if backup equipment is available. Maintenance will only be deferred until the beginning of the next duty day.

7.12.4. Arrange for restoration of weather communications equipment in the following priority:

7.12.4.1. PMSV.

7.12.4.2. Joint Environmental Toolkit (JET).

7.12.4.3. Telephone lines or equipment.

7.12.4.4. Network and internet connectivity and provide 24-hour notice of any downtime or interruption to service.

7.12.5. Provide for locally procured non-standard weather equipment/capabilities.

7.13. Emergency Operations Center (EOC).

7.13.1. During an emergency condition such as a hurricane, toxic spill, or any other condition that would require the EOC to stand up. The EOC will provide a weather technician with a desk, NIPR computer with specialized weather software and a phone**.**

Chapter 8

TROPICAL WEATHER

8.1. General.

8.1.1. Hurlburt Field is located in a hurricane threat zone. The hurricane season lasts from June through November; however, hurricanes have occurred at other times throughout the year. The intensity of the storm surge and high winds will depend on the strength of the hurricane/tropical storm. Serious threats that can occur with the hurricane are storm surge, tornados, extreme wind gusts, and flash flooding. These natural phenomena cause extensive damage and degrade the mission of the 1 SOW.

8.1.2. The National Hurricane Operations Plan establishes policies, procedures and responsibilities for all locations on the Atlantic and Gulf Coasts.

8.1.3. The WF will use the tropical cyclone forecasts issued by the National Hurricane Center (NHC). No deviation from the official forecast position, track, movement, maximum wind speed, or intensity trend is authorized. The WF is authorized to tailor the official tropical cyclone forecasts into a specific mission forecast product for the 1 SOW. Tailoring may include factors such as specific local effects such as terrain or relative position to the storm.

8.1.4. The 26 OWS will perform METWATCH and serve as the liaison between the NHC and the WF.

8.1.4.1. The 26 OWS will use the wind forecasts from the tropical cyclone bulletins and tailor the forecasts for terrain effects to issue TAFs and weather warnings, watches, and advisories. 26 OWS will produce a TC-TAP when Hurlburt Field is expected to receive sustained winds > 35-knots during the next 96 hours as a result of a tropical cyclone.

8.1.4.2. The WF will translate the official tropical cyclone forecast and OWS forecasts, to include TC-TAP when available, into a specific mission forecast for Hurlburt units.

8.2. Hurricane Categories. The extent of damage expected with a tropical cyclone is dependent upon the strength or wind speed. Hurlburt Field uses the Saffir/Simpson Hurricane Scale to classify hurricanes. The Saffir/Simpson Hurricane Scale is a 1-5 rating based on the hurricane's present intensity. This is used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. Wind speed is the determining factor in the scale, as storm surge values are highly dependent on the slope of the continental shelf in the landfall region. Note that a "major" hurricane is one that is classified as category three or higher.

Table 8.1. Saffir/Simpson Hurricane Scale.

Category One
Winds 74-95 mph (64-82 kts). Storm surge generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs.

Category Two
Winds 96-110 mph (83-95 kts). Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.
Category Three
Winds 111-130 mph (96-113 kts). Storm surge generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtain wall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Flooding near the coast destroys smaller structures with larger structures damaged by battering from floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.
Category Four
Winds 131-155 mph (114-135 kts). Storm surge generally 13-18 ft above normal. More extensive curtain wall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).
Category Five
Winds greater than 155 mph (135 kts). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

8.3. Hurricane Conditions (HURCON)/Response Phases. The prerequisite for any preparatory and survival situation is a positive means of relaying warning or disaster information to organizations and assigned personnel. HURCON/Response Phases is the tool Hurlburt Field uses to ensure pre-disaster information is passed. These conditions/phases give sufficient preparation time to safeguard personnel, aircraft, equipment, and facilities. HURCON/Response Phases are determined by the 1 SOW/CC or a designated representative and disseminated throughout the base by all available means.

Table 8.2. Hurricane Conditions (HURCON)/Response Phases.

HURCON 4 - Alert Phase Destructive winds of 50 knots or greater are possible within 72 hours
HURCON 3 - Preparation Phase Destructive winds of 50 knots or greater are possible within 48 hours.
HURCON 2 - Final Preparation Phase Destructive winds of 50 knots or greater are possible within 24 hours.
HURCON 1 - Secure Phase Destructive winds of 50 knots or greater are possible within 12 hours.
Recovery Phase Actions taken to reestablish primary mission capability and return Hurlburt Field to normal operations.

8.4. Notification Procedures.

8.4.1. The WF will provide initial notification via email through the 1 SOSS/OSW Tropical Update (Distribution List).

8.4.2. Area of Concern (AOC). North Atlantic Ocean, Caribbean Sea, and the Gulf of Mexico.

8.4.3. Once the hurricanes/tropical storm enters our AOC, the WF will provide a 120 hour storm track (either hand plotted or computer generated) at the initial time the hurricane or tropical storm enters the AOC and then at each 6 hour forecast with the following information:

8.4.3.1. Center Position (latitude and longitude).

8.4.3.2. Intensity of the winds (knots).

8.4.3.3. Radius of 50-knots winds.

8.4.3.4. Direction and speed of movement.

8.4.3.5. All forecast positions up to 120 hours.

8.4.4. The WF will provide continuous tropical storm or hurricane information when Hurlburt is in HURCON 4.

8.4.4.1. The 1 SOW/CC or a designated representative will be briefed on the latest advisories and recommended times that hurricane condition are effective.

8.4.4.2. All data will be provided in Zulu and local times and in nautical miles.

8.4.5. The WF will provide a forecaster to the Emergency Operations Center on a full time basis when HURCON 2 is declared. The technician will be responsible to continuous updates to the EOC and Battle Staff. The EOC will provide the weather technician with a desk, NIPR computer with specialized weather software and a phone.

8.4.6. The WF will provide 2 forecasters to the Hurricane Ride-out team. These technicians will provide continual updates on the hurricane and also provide recovery forecasts.

8.5. WF Responsibilities.

8.5.1. Consider activating the SWAT.

8.5.2. When requested, advise the 1 SOW/CC or CP of the most suitable aircraft refuge.

8.5.3. Provide a weather briefing for the Battle Staff when activated. The briefing will include, as a minimum, Current Weather, Hurricane Update, Hurricane Conditions, and Hurricane Categories, surge potential, total rainfall amounts, most likely Course of Action (COA)/Impact and Most Dangerous Course of Action/Impact.

8.5.4. Provide flight weather MEFs for all aircraft leaving Hurlburt due to HUREVAC.

JAMES C. SLIFE, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 15-1, *Air Force Weather Operations,* 19 February 2010

AFI 10-229, *Responding to Severe Weather Events,* 15 October 2003

AFI 15-128, *Air Force Weather Roles and Responsibilities,* 7 February 2011

AFI 34-116, *Air Force Golf Course Program,* 24 June 2011

AFI 33-332, *Air Force Privacy Act Program,* 16 May 2011

AFMAN 15-111, *Surface Weather Observations,* 10 March 2009

AFMAN 15-124, *Meteorological Codes,* 28 October 2009

AFMAN 15-129,V1, *Air and Space Weather Operations - Characterization,* 6 December 2011

AFMAN 15-129,V2, *Air and Space Weather Operations - Exploration,* 7 December 2011

AFMAN 33-363, *Management of Records,* 1 March 2008

AFSOSH Standard 91-504, *Air Force Consolidated Occupational Safety Standard,* 7 July 2004

FCM-P12-2006, *National Hurricane Operations Plan,* (2006)

Prescribed Forms:

None.

Adopted Forms:

AF Form 847, *Recommendation for Change of Publication*

AFSOC Form 87, *AFSOC Mission Weather Briefing*

Abbreviations and Acronyms

ACFT MISHAP—Aircraft Mishap

AFW—Air Force Weather

AFWA—Air Force Weather Agency

AFRC—Air Force Reserve Command

AGE—Aerospace Ground Equipment

ALSTG—Altimeter

ALT—Actual Lead Time

AMD—Amendment

AFRIMS—Air Force Records Information Management System

ANG—Air National Guard

AOC—Area of Concern

AOL—Alternate Operating Location

AOS—Automated Observing System

ASOS—Air Support Operations Squadron/Automated Surface Observing System

ATC—Air Traffic Control

BKN—Broken

BWS—Base Weather Station

BWW—Basic Weather Watch

CAT—Clear Air Turbulence

CB—Cumulonimbus

COA—Course of Action

CU—Characterization Unit

CWW—Continuous Weather Watch

DLT—Desired Lead Time

EO—Electro-Optics

EOC—Emergency Operations Center

ETA—Estimated Time of Arrival

ETD—Estimated Time of Departure

EU—Exploitation Unit

EWO—Emergency War Order

FLIP—Flight Information Publication

FW—Fighter Wing

FWA—Forecast Weather Advisory

GPS—Global Positioning System

GTE—Greater Than or Equal To

HURCON—Hurricane Conditions

HURREVAC—Hurricane Evacuation

IAW—In Accordance With

ICAO—International Civil Aviation Organization.

IRC—Instrument Refresher Course

IWEDA—Integrated Weather Effects Decision Aid

JET—Joint Environmental Toolkit

KT—Knot

LLWS—Low-Level Wind Shear

LTE—Less Than or Equal To

MAJCOM—Major Command

MBWW—Modified Basic Weather Watch

MEF—Mission Execution Forecast

METAR—Aviation Routine Weather Report

METCON—Meteorological Conference or Discussion

METWATCH—Meteorological Watch

METSAT—Meteorological Satellite

MISSIONWATCH—Mission Meteorological Watch

MOA—Memorandum of Agreement

MOAF—Military Operation Area Forecast

MOCC—Maintenance Operations Control Center

MWA—Military Weather Advisory

NHC—National Hurricane Center

NLT—No Later Than/Negative Lead Time

NM—Nautical Mile

NOWS—NVG (Night Vision Goggles) Operations Weather Software

N-TFS—New Tactical Forecast System

NVG—Night Vision Goggles

NWS—National Weather Service

RDS—Records Disposition Schedule

SOF—Supervisor of Flying

SOSS—Special Operations Support Squadron

OPR—Office of Primary Responsibility

OPUP—Open Systems Principle User Processor

OVC—Overcast

OWA—Observed Weather Advisory

OWS——Operational Weather Squadron

OWW—Observed Weather Watch

PIREP—Pilot Weather Report

PMSV—Pilot –to-Metro Service

RCR—Runway Condition Reading

RVR—Runway Visual Range

SOP—Standing Operating Procedures

SPECI—Aviation Selected Special Weather Report

SWO—Staff Weather Officer

SWAP—Severe Weather Action Plan

SWAT—Severe Weather Action Team

TAF—Terminal Aerodrome Forecast

TOLD—Takeoff and Landing Data

UTC—Coordinated Universal Time

VFR—Visual Flight Rules

VT—Valid Time

WA—Weather Advisory

WF—Weather Flight

WSD—Weather Support Document

WSR—88D—NEXRAD (Next Generation Doppler Radar)

WWO—Wing Weather Officer

WW—Weather Warning

Terms

Actual Lead—time—The elapsed time between issue time of a watch, warning, or advisory and the first occurrence of the event.

Aircraft Mishap—Term used to denote any event resulting in damage to, or destruction of any aircraft to include lightning strikes, inadvertent departure from the paved runway or taxiway surface, aircraft or Aerospace Ground Equipment (AGE) fires, and forced landings due to in-flight emergencies.

Amendment (AMD)—Used as a message modifier when transmitting an aerodrome forecast amendment.

Climatology—The historical records of weather conditions measured or observed at a specific location is known as climatology. Some data goes back over 100 years, but generally, a 10- to 25-year history is more common. Climatology is useful in planning operations beyond 5 to 7 days. It usually describes the average (or mean) conditions such as high and low temperatures and extremes.

Desired Lead-time (DLT)—The amount of advance notice a supported agency desires before the onset of a particular weather phenomenon.

Eyes Forward—Weather Flight technicians are the eyes forward for the technicians in the Operational Weather Squadron (OWS) and integrate weather radar data, meteorological satellite imagery, lightning detection readouts, and non-standard weather data systems (vertical profilers, mesonet data, etc.) to create an integrated weather picture and near-term trend forecasts for the OWS. Eyes forward yields meaningful meteorological information not contained in coded observation to the servicing OWS and is an integral part of the meteorological watch for an installation or contingency operating location.

Forecast Weather Advisory (FWA)—A weather advisory issued when the customer requires advance notification of an impending weather condition with sufficient time to allow for protective actions.

Issue Time—The time when an agency is notified of a watch, warning, or advisory. When more than one agency is notified, the issue time is the time the last agency is notified. Follow-up notifications are not considered when determining issue time.

Joint Environmental Toolkit (JET)—The computer system and associated interfaces that provide an automated weather support and communications capability to the Weather Flight. JET is the computer software and hardware that replaced the N-TFS for weather information dissemination.

LOCAL Observation—An unscheduled observation taken when specific local criteria are met. All LOCALs shall be made as soon as possible after the relevant criteria are observed. This only applies when the FMQ-19 is in Augment or Backup Mode.

METAR Observation— Meteorological Aviation Report. A routine scheduled surface weather observation. It contains a report of wind, visibility, runway visual range, present weather, sky condition, temperature, dew point, and altimeter setting. In addition, significant remarks are appended to the METAR observation.

METWATCH—Monitoring aerospace weather for a route, area, or terminal and advising concerned organizations when phenomena that could affect their operations or pose a hazard to life or property are occurring or about to occur.

Mission Execution Forecast (MEF)—A customized weather product providing terrestrial and space weather data and forecasts for a specific mission, or set of missions. It fully integrates aerospace weather with the customer's tactics, weapon systems, environmental sensitivities of equipment, and other operational requirements.

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

New Tactical Forecasting System (NTFS)—The computer system and associated interfaces that provide an automated weather support and communications capability to the Weather Flight.

Observed Weather Advisory (OWA)—A weather advisory issued when a particular weather event first occurs and the customer does not require advanced notification of the observed weather phenomena.

Operational Weather Squadron (OWS)—An organization comprised of management, technician, and training personnel responsible for providing regional weather support. Their

mission is to produce theater-scale tailored weather forecast products and services to customers within their area of responsibility.

Pilot Report (PIREP)—A report of in-flight weather provided by an aircrew member.

Severe Thunderstorm—A thunderstorm that produces hail greater than or equal to ¾ inch diameter and/or surface wind greater than or equal to 50 knots.

Severe Weather—Any weather condition that poses a hazard to property or life.

SPECI Observation—An unscheduled observation taken when significant changes in weather elements meet special criteria. All SPECIs shall be made as soon as possible after the relevant criteria are observed.

Terminal Aerodrome Forecast (TAF)—A weather forecast prepared by the 26th Operational Weather Squadron (OWS) composed of required weather elements for Hurlburt airfield and covers a 24-hour period. Forecast elements in the body of the forecast text refer to the area within 5 SM of the center of the aerodrome complex. Operationally significant elements outside this area are included in remarks (e.g., TS OMTNS or VCTS). The term VC (vicinity) refers to the area between 5 SM and 10 SM of the aerodrome complex.

Weather Flight (WF)—A military weather organization providing direct operational support at the tactical level.

Weather Advisory (WA)—A special notice provided to a supported agency when an established weather condition that could affect its operation is occurring or is expected to occur.

Weather Warning (WW)—A special notice provided to a supported agency when an established weather condition of such intensity as to affect operations, pose a hazard to life or property, and requires protective action, is occurring or is expected to occur.

Weather Watch—A special notice provided to supported customers that alerts them of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the customer must take protective action.

Attachment 2

SPECIAL OBSERVATION CRITERIA

A2.1. Special observation: Special observation will be disseminated when the following conditions are reached. This may be generated by the FMQ-19 when in Automatic Mode or manually by the weather forecaster when in Manual Mode.

A2.2. Ceiling. The ceiling is observed to form below, decrease to less than or, if below, increase to equal or exceed:

A2.2.1. 3000 feet (AFMAN 15-111, Attachment 2, Special Criteria).

A2.2.2. 1500 feet (AFMAN 15-111).

A2.2.3. 1000 feet (AFMAN 15-111).

A2.2.4. 900 feet (DOD FLIP)

A2.2.5. 800 feet (AFMAN 15-111 and DOD FLIP).

A2.2.6. 700 feet (AFMAN 15-111 and DOD FLIP).

A2.2.7. 500 feet (AFMAN 15-111 and DOD FLIP).

A2.2.8. 400 feet (DOD FLIP).

A2.2.9. 200 feet (AFMAN 15-111 and DOD FLIP).

A2.3. Sky Condition. A layer of clouds or obscuring phenomena aloft is observed below 800 ft (the highest published landing minimum), and no layer aloft was reported below this height in the previous METAR or SPECI observation.

A2.3.1. Prevailing Visibility. Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed:

A2.3.2. 3 miles (AFMAN 15-111).

A2.3.3. 2 miles (AFMAIN 15-111 and DOD FLIP).

A2.3.4. 1¾ miles (DOD FLIP).

A2.3.5. 1½ miles (DOD FLIP).

A2.3.6. 1¼ miles (DOD FLIP).

A2.3.7. 1 mile (AFMAN 15-111 and DOD FLIP).

A2.3.8. 3/4 mile (DOD FLIP).

A2.3.9. 1/2 mile (AFMAN 15-111 and DOD FLIP).

A2.4. Tornado, Funnel Cloud, or Waterspout. Is observed or disappears from sight**.** (AFMAN 15-111).

A2.5. Thunderstorm. (AFMAN 15-111).

A2.5.1. Begins (A SPECI is not required to report the beginning of a new thunderstorm if one is currently being reported).

A2.5.2. Ends (15 minutes after last occurrence of thunder).

A2.6. Precipitation. (AFMAN 15-111).

A2.6.1. Hail begins or ends. (AFMAN 15-111).

A2.6.2. Freezing precipitation begins, ends, or changes in intensity. (AFMAN 15-111).

A2.6.3. Any other type of precipitation begins or ends. Note that, except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type or the beginning or ending of one type while another is in progress. (AFMAN 15-111).

A2.7. Squall. A strong wind characterized by a sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots for at least one minute. A SPECI is not required to report a squall if one is currently in progress. (AFMAN 15-111).

A2.8. Wind Shift. The wind direction changes by 45 degrees or more in less than 15 minutes with sustained winds of 10 knots or more throughout the wind shift. (AFMAN 15-111).

A2.9. Runway Visual Range (RVR).

A2.9.1. Visibility conditions for reporting RVR are first observed (i.e. $\leq$ RVR 6000 ft or prevailing visibility $\leq$ 1 SM), and when the conditions no longer exist. (AFMAN 15-111).

A2.9.2. RVR for the active runway is observed to decrease to less than or, if below, increase to equal or exceed:

A2.9.3. 6000 feet (AFMAN 15-111 and DOD FLIP).

A2.9.4. 5000 feet (AFMAN 15-111 and DOD FLIP).

A2.9.5. 4000 feet (DOD FLIP).

A2.9.6. 2400 feet (AFMAN 15-111)

A2.9.7. RVR is first determined as unavailable (RVRNO) for the runway in use, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

A2.9.8. Reporting RVR values: When runway 18 is active the RVR value from runway 36 will be evaluated at the time of SPECI/METAR observations and carried as **a local remark whenever the prevailing visibility is equal to or less than 1 SM or the RVR reading is less than 6000 ft.** The remarks will appear as **RVR36/xxxx (xxxx being the value in feet).** A SPECI will not be initiated based on RVR36 values unless runway 36 is the active runway. **Note:** This information is provided for ATC to authorize aircraft to land using the inactive runway if the RVR value is greater than or equal to 2400 ft (airfield minimum) and the aircraft commander so desires when the reported prevailing visibility and ceiling are below airfield minimums.

A2.10. Miscellaneous.

A2.10.1. Volcanic Ash. When first observed. (AFMAN 15-111).

A2.10.2. Any other meteorological situation which, in the opinion of the technician, is critical to the safely of aircraft operations. (AFMAN 15-111).

A2.11. SPECI Upon Resumption of Observing Services. Required within 15 minutes after returning to duty following a break in hourly coverage if a METAR was not filed as scheduled during that 15-minute period. (AFMAN 15-111).

A2.12. Aircraft Mishap (AFMAN 15-111). A SPECI local will be transmitted when an aircraft mishap/accident is observed or when weather personnel are notified of an aircraft mishap/major accident in the local flying area and the FMQ-19 is in back-up or supplemented mode.

Attachment 3

LOCAL OBSERVATION CRITERIA

A3.1. Special (AFMAN 15-111). A SPECI observation will be generated by the FMQ-19 when in Automatic Mode or a local will be generated by the forecaster when in Manual Mode for the following conditions.

A3.2. Altimeter Setting (AFMAN 15-111). At an interval not to exceed 35 minutes when there has been a change of .01 inch Hg or more since the last locally disseminated value. This observation may be disseminated as a single element local.

A3.3. Advisories (AFMAN 15-111). Disseminated anytime criteria for observed advisories occurs or is no longer occurring, and a METAR or SPECI would not be required.

A3.4. Other Meteorological Situations. For any other meteorological situation which is significant to local operations.

Attachment 4

TAF SPECIFICATION AND AMENDMENT CRITERIA

A4.1. Specification Criteria. 26 OWS will issue the Hurlburt Field TAF using the specification criteria listed in **Table 2.7** of AFMAN 15-129 and the ceiling/visibility criteria listed in **Table A4.1** below.

Table A4.1. Hurlburt Field Terminal Aerodrome Forecast Specification Criteria.

Forecast Element/Occurrence	Standard TAF Amendment Criteria	
Ceiling and/or visibility decreases to less than, or if below, increases to equal or exceed:	Ceiling (feet) 3,000	Visibility (miles) 3
	1,000	2
	700	1
	500	1
	200	½

A4.2. Icing and Turbulence Criteria. As an exception to AFMAN 15-129, any intensity of icing or turbulence will be specified in the Hurlburt Field TAF.

Table A4.2. Hurlburt Field Terminal Aerodrome Forecast Specification Criteria.

Forecast Element/Occurrence	TAF Amendment Criteria
Turbulence (for Cat II aircraft), Not associated with thunderstorms, from the surface to 10,000 feet AGL.	The beginning or ending of turbulence first meets, exceeds, or decreases below light to moderate or greater thresholds and was not specified in the forecast.

A4.3. Amendment Criteria. 26 OWS will amend the Hurlburt Field TAF using the amendment criteria listed AFMAN 15-129 and the ceiling/visibility criteria listed in **Table A4.3** below.

Table A4.3. Hurlburt Field Terminal Aerodrome Forecast Amendment Criteria.

Forecast Element/Occurrence	Standard TAF Amendment Criteria	
Ceiling and/or visibility decreases to less than, or if below, increases to equal or exceed:	Ceiling (feet) 3,000	Visibility (miles) 3
	1,000	2
	500	1
	200	½

A4.4. TAF Issue Times. The Hurlburt Field TAF will be issued at the times shown in **Table A4.4** below:

Table A4.4. Hurlburt Field Terminal Aerodrome Forecast Issue Times.

Day	TAF Times	(CDST/CST)
Monday – Friday	0500L	1000/1100Z
	1300L	1800/1900Z
	2100L	0200/0300Z
Sunday	2100L	0200/0300Z

Attachment 5

EXAMPLE JET DISSEMINATION FORMATS

A5.1. WEATHER WARNING.

A5.1.1. Received 09/1242Z.

A5.1.2. HURLBURT FLD, FL WEATHER WARNING 11-005.

A5.1.3. VALID 06/2105Z (06/1705L) TO UFN (UFN).

A5.1.4. STRONG WINDS GTE 45 KNOTS ARE EXPECTED AT HURLBURT FROM 1500Z TO 2200Z. MAXIMUM SPEED 55 KNOTS.

A5.1.5. 16/RD.

A5.2. WEATHER WATCH.

A5.2.1. Received 09/1242Z.

A5.2.2. HURLBURT FLD WEATHER WATCH 11-005.

A5.2.3. VALID 06/2100Z (06/1700L) TO 07/0100Z (06/2100L).

A5.2.4. POTENTIAL EXISTS FOR LIGHTNING TO OCCUR WITHIN 5NM OF HURLBURT FLD. A WARNING WILL BE ISSUED LATER IF REQUIRED.

A5.2.5. 18/RD.

A5.3. WEATHER ADVISORY.

A5.3.1. Received 12/2148Z.

A5.3.2. HURLBURT FLD, FL WEATHER ADVISORY.

A5.3.3. VALID 06/2058Z (06/1658L) TO UFN (UFN).

A5.3.4. SURFACE WINDS GTE 30 KNOTS LTE 45 KNOTS WILL OCCUR AT HURLBURT FLD PEAK GUST EXPECTED 40 KNOTS.

A5.3.5. 15/R.

A5.4. SURFACE WEATHER OBSERVATION.

A5.4.1. Received 08/1959Z.

A5.4.2. KHRT METAR 1956Z COR 26005KT 7 SCT035 BKN250 32/23 ALSTG 30.00 COR 2000 PA 62 59/TH; TERMINAL AERODROME FORECAST.

A5.4.3. Received 08/1800Z.

A5.4.4. KHRT FCST 0818-0918 21009KT 7 SCT080 SCT120 BKN220.

A5.4.5. ALTIMETER29.92INS.

A5.4.6. BECMG 19-20 25009KT 7 VCSH SCT040 SCT120 BKN220.

A5.4.7. ALTIMETER29.90INS.

A5.4.8. BECMG 00-01 25007KT 7 NSW FEW040 SCT250.

A5.4.9. ALTIMETER29.90INS.

A5.4.10. BECMG 06-07 24007KT 4 BR FEW015 SCT250.

A5.4.11. ALTIMETER29.93INS.

A5.4.12. BECMG 12-13 22007KT 7 NSW FEW040 SCT250.

A5.4.13. ALTIMETER29.88INS.

A5.4.14. TEMP 32C AT 2000Z TEMP 24C AT 1000Z 02/KA.

Attachment 6

WEATHER WARNING /WATCH NOTIFICATION DIAGRAM

A6.1. The JET is the primary method of disseminating weather advisories, warnings and watches to key installation agencies.

A6.2. When the JET is inoperable notifications from weather will be done via telephone according to the attached BACK-UP diagram.

A6.3. Upon receipt, the 1 SOW/CP, 1 SOSS/OSAB, 1 SOMSG/SFS, 1 SOW/MOCC, and 1 SOFSS/CC, will notify all agencies that are listed in the attached dissemination diagrams.

A6.3.1. The PRIMARY method of disseminating weather advisories, warnings and watches from the 1 SOW/CP to installation users is through the use of computer pop-up's with the ReachPlus Popup Alters Client. A select few users are also notified via radio. The installation LAN protocol, for all NIPRNET (unclassified work station) users is configured so that pop-up messages transmitted by the CP will be received by all (installation and host) computer users immediately, within 3 minutes of transmission. Users who do not immediately receive pop-ups must contact their respective CSA's, and if necessary submit a work order (ticket), to correct the deficiency.

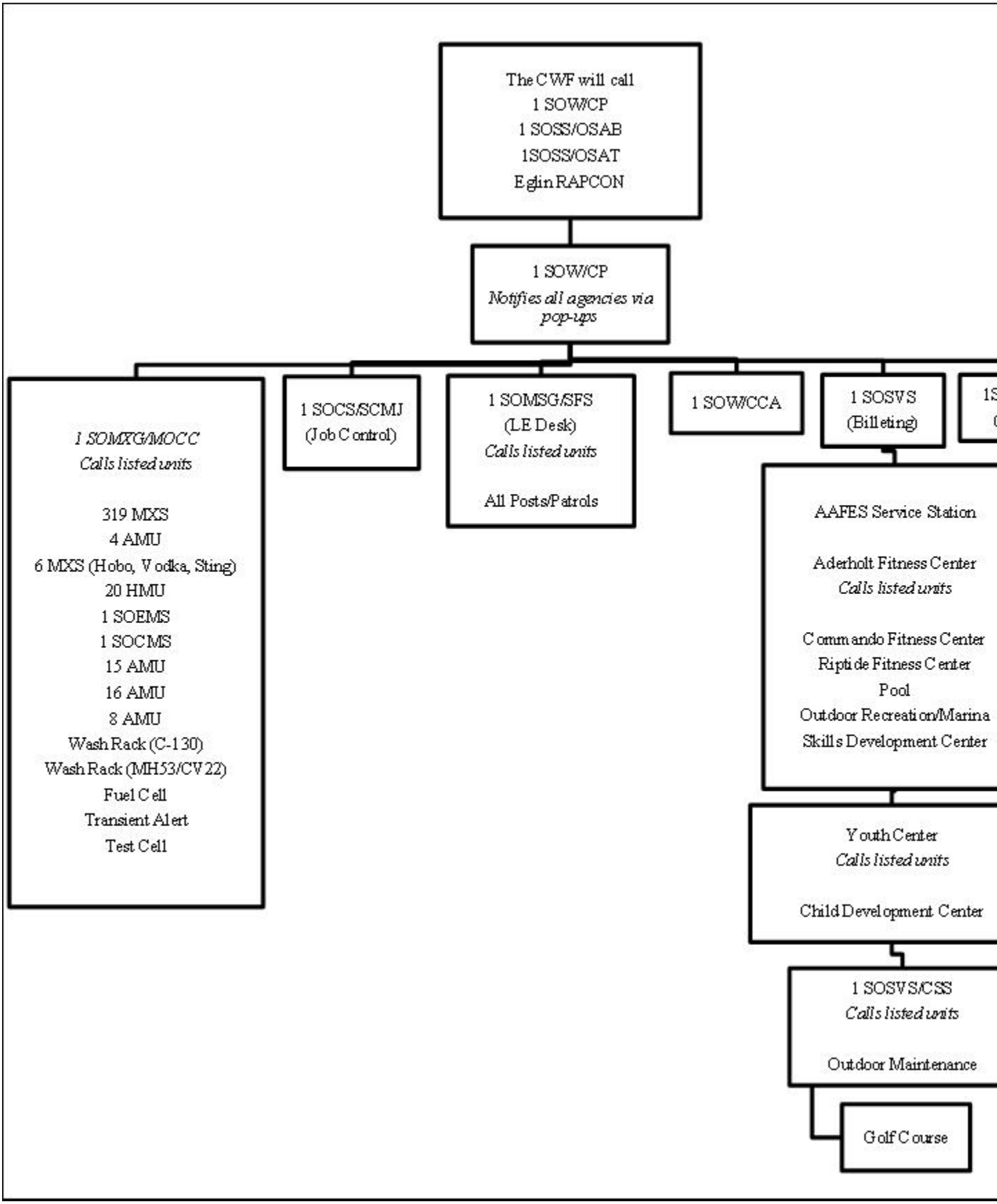
A6.3.2. The BACK-UP method of disseminating weather advisories, warnings and watches, when the pop-up system is down or major computer outages are present, will be via phone/conference calls, radio, Giant Voice, etc. as detailed in the back-up dissemination tree.

A6.4. Organizations will establish their own PRIMARY and BACK-UP checklists, as required, to ensure all other internal and subordinate agencies/units are notified as required of advisories and warnings. Forward a copy of unit established checklists, flowcharts, or plans (and changes as they occur) to 1 SOSS/OSW.

Attachment 7

WEATHER WATCH/WARNING ADVISORY PRIMARY DISSEMINATION TREE

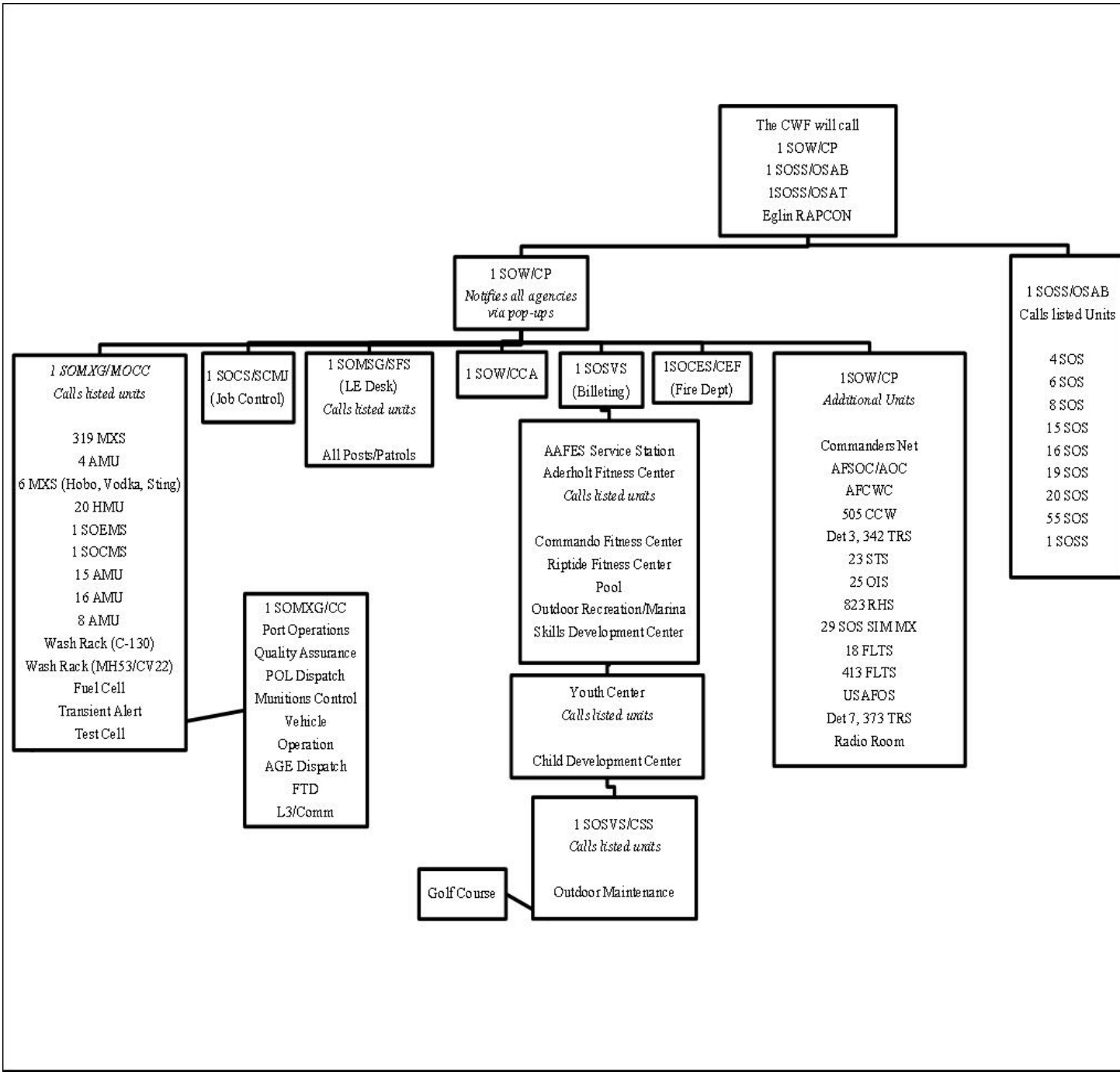
Figure A7.1. Weather Watch/Warning Advisory Primary Dissemination Tree.


The CWF will call
1 SOW/CP
1 SOSS/OSAB
1SOSS/OSAT
Eglin RAPCON
1 SOW/CP
Notifies all agencies via pop-ups
1 SOMXG/MOCC
Calls listed units
319 MXS
4 AMU
6 MXS (Hobo, Vodka, Sting)
20 HMU
1 SOEMS
1 SOCMS
15 AMU
16 AMU
8 AMU
Wash Rack (C-130)
Wash Rack (MH53/CV22)
Fuel Cell
Transient Alert
Test Cell
1 SOCS/SCMJ
(Job Control)
1 SOMSG/SFS
(LE Desk)
Calls listed units
All Posts/Patrols
1 SOW/CCA
1 SOSVS
(Billeting)
AAFES Service Station
Aderholt Fitness Center
Calls listed units
Commando Fitness Center
Riptide Fitness Center
Pool
Outdoor Recreation/Marina
Skills Development Center
Youth Center
Calls listed units
Child Development Center
1 SOSVS/CSS
Calls listed units
Outdoor Maintenance
Golf Course

Attachment 8

WEATHER WATCH/WARNING ADVISORY BACKUP DISSEMINATION TREE

Figure A8.1. Weather Watch/ Warning AdvisoryBackup Dissemination Tree.



Attachment 9

FORMAT FOR WEATHER WARNING, WATCHES, AND WEATHER ADVISORIES

A9.1. TORNADO WATCH. THE POTENTIAL EXISTS FOR A TORNADO, WATERSPOUT, OR FUNNEL CLOUD AT HURLBURT FIELD.

A9.2. SEVERE THUNDERSTORM WATCH. THE POTENTIAL EXISTS FOR SEVERE THUNDERSTORM DEVELOPMENT AT HURLBURT FIELD. WINDS OF 45 KNOTS OR GREATER AND/OR HAIL OF 1/2 INCH OR GREATER ACCOMPANYING SEVERE THUNDERSTORMS. A WARNING WILL BE ISSUED LATER, IF REQUIRED.

A9.3. SURFACE WIND WATCH. THE POTENTIAL EXISTS FOR SURFACE WINDS 45 KNOTS OR GREATER AT HURLBURT FIELD.

A9.4. HAIL WATCH. THE POTENTIAL EXISTS FOR THUNDERSTORMS WITH ⅛ INCH HAIL, BUT LESS THAN ½ INCH AT HURLBURT FIELD.

A9.5. FREEZING RAIN WATCH. FREEZING PRECIPITATION IS POSSIBLE. A WARNING WILL BE ISSUED LATER, IF REQUIRED.

A9.6. LIGHTNING WATCH. POTENTIAL EXISTS FOR THUNDERSTORMS WITH LIGHTNING WITHIN 5NM OF HURLBURT FIELD. A WARNING WILL BE ISSUED LATER IF REQUIRED.

A9.7. TORNADO WARNING. A TORNADO HAS EITHER BEEN SIGHTED OR CONFIRMED ON RADAR. THIS TORNADO IS (DIRECTION) MOVING (DIRECTION OF MOVEMENT). TAKE IMMEDIATE SHELTER!

A9.8. SEVERE THUNDERSTORM WARNING. SEVERE THUNDERSTORMS WITH SURFACE WINDS OF 45 KNOTS OR GREATER AND HAIL 3/4 INCH OR GREATER AT HURLBURT FIELD. MAX WIND ____ AND MAX HAIL SIZE ____.

A9.9. SURFACE WIND WARNING. (DIRECTION) SURFACE WINDS 45 KNOTS OR GREATER WILL OCCUR AT HURLBURT FIELD. PEAK GUST EXPECTED XX KNOTS.

A9.10. HAIL WARNING. THUNDERSTORMS WITH HAIL 3/4 INCH WILL OCCUR AT HURLBURT FIELD.

A9.11. FREEZING PRECIPITATION WARNING. FREEZING PRECIPITATION WILL OCCUR AT HURLBURT FIELD. EXPECT (freezing rain, freezing drizzle or both).

A9.12. HEAVY SNOW WARNING. HEAVY SNOW GTE 1/2 INCHES IN 12 HOURS WILL OCCUR AT HURLBURT FIELD. EXPECT (amount) INCHES.

A9.13. HEAVY RAIN WARNING. HEAVY RAIN GTE 3 INCHES IN 12 HOURS WILL OCCUR AT HURLBURT FIELD. EXPECT (amount) INCHES.

A9.14. LIGHTNING WARNING. OBSERVED THUNDERSTORMS WITH LIGHTNING WITHIN 5NM OF HURLBURT FIELD FROM THE CURRENT TIME UNTIL FURTHER NOTICE.

A9.15. FORECASTED TERMINAL WEATHER ADVISORY FOR WINDS. (Direction of winds) SURFACE WINDS GTE 30 KNOTS LTE 44 KNOTS WILL OCCUR AT HURLBURT FIELD. PEAK GUST EXPECTED (speed) KNOTS.

A9.16. OBSERVED TERMINAL ADVISORY FOR THUNDERSTORMS WITHIN 10 NM. THUNDERSTORMS ARE OCCURRING WITHIN 10NM OF HURLBURT FIELD.

A9.17. OBSERVED TERMINAL ADVISORY FOR CROSSWIND GTE 25 KTS. CROSSWIND GTE 25 KTS AT HURLBURT FIELD.

A9.18. OBSERVED TERMINAL ADVISORY FOR CROSSWIND GTE 35 KTS. CROSSWIND GTE 35 KTS AT HURLBURT FIELD.

A9.19. OBSERVED TERMINAL ADVISORY FOR TEMPERATURE. TEMPERATURE LTE 40 DEGREES FAHRENHEIT AT HURLBURT FIELD.

Attachment 10

TERMINAL AERODROME FORECAST CODE BREAKDOWN

Table A10.1. Terminal Aerodrome Forecast (TAF) Code Breakdown.

EXAMPLE	KHRT TAF AMD 021111 18010KT 8000 BR SCT040 BKN250 QNH3010INS **(1) (2) (3) (4) (5) (6) (7) (8) (9)** 620046 510003 **(10) (11)** BECMG 1314 22012G18KT 9999 VCTS SCT040 BKN250 QNH3008INS TEMPO 1718 23015G25KT 4800 TSRA BKN015CB OVC050 T25/21Z T18/11Z **(12)**
KHRT **(1)**	Location identifier. This four letter identifier states the location that the forecast is valid for. (i.e BECMG states that there's a gradual change in the weather between 1300Z and 1400Z.
TAF **(2)**	Message identifier of "TAF" (Terminal Airdrome Forecast).
AMD **(3)**	Modifier (AMD, COR, AMD COR, RTD) AMD - Forecast was amended. COR -Forecast was corrected. AMD COR - Forecast was initially amended then corrected. RTD - Forecast was transmitted late.
021111 **(4)**	Valid Period. The valid period consists of the current date and the 24 hr. period of the forecast.
18010KT **(5)**	Surface Wind Direction, Speed, and Gust if any. **180**. Forecast true wind direction (from which wind is blowing) to the nearest 10 degrees. **10**. Mean forecast wind speed in whole knots (**KT**) which is the unit indicator for speed.
8000 **(6)**	Forecast prevailing visibility in meters. Whenever visibility is forecast to be 9000 or less, the weather phenomena, obscuration to visibility, or vicinity remark will be included.
BR **(7)**	Forecast weather phenomena, obstruction to visibility, or vicinity remark which will cause visibility to decrease or weather that is expected within 5 to 10 miles (vicinity e.g. VCTS).
SCT040 **(8)**	Cloud layer group. This group has two sections: Cloud amount: SKC (no clouds), FEW (TRACE to 2 oktas), SCT (3 to 4 oktas),

	BKN (5 to 7 oktas), and OVC (8 oktas). Cloud heights: Forecast height (AGL) of cloud base to nearest 100 feet from surface (040; ten thousands, thousands, and hundreds of feet).
QNH3010INS **(9)**	Minimum altimeter setting. (30.10 inches)
620046 **(10)**	Icing Group **6**. Icing Indicator **2**. Type of Icing forecast. **004**. Height of the icing layer base in hundreds of feet AGL. **6**. Thickness of the icing layer in thousands of feet AGL.
510003 **(11)**	Turbulence Group **5**. Turbulence Indicator. **1**. Turbulence type and intensity. **000**. Height of the turbulence layer base in hundreds of feet AGL. **3**. Thickness of the turbulence layer in thousands of feet AGL.
T25/21Z **(12)** **T18/11Z**	The Forecast Surface Temperature Group. **T** - an indicator, meaning temperature **25** - the forecast max/min temperature in whole degrees Celsius (C) **21Z** -the valid time to the nearest whole hour UTC of the temperature forecast and Z is an abbreviated symbol meaning Universal Coordinated Time (UTC)

Figure A10.1. Manual Reportable Visibility Values/Conversion Chart (Statue Miles,Meters).

Statute Miles	Meters	Statute Miles	Meters
0	0000	---	3400
1/16	0100	---	3500
1/8	0200	2 1/4	3600
3/16	0300	---	3700
1/4	0400	---	3800
5/16	0500	---	3900
3/8	0600	2 1/2	4000
---	0700	---	4100
1/2	0800	---	4200
---	0900	---	4300
5/8	1000	2 3/4	4400
---	1100	---	4500
3/4	1200	---	4600
---	1300	---	4700
7/8	1400	3	4800
---	1500	---	4900
1	1600	---	5000
---	1700	4	6000
1 1/8	1800	---	7000
---	1900	5	8000
1 1/4	2000	6	9000
---	2100	7	9999
1 3/8	2200	8	9999
---	2300	9	9999
1 1/2	2400	10	9999
---	2500	11	9999
1 5/8	2600	12	9999
---	2700	13	9999
1 3/4	2800	14	9999
---	2900	15	9999
1 7/8	3000	20	9999
---	3100	25	9999
2	3200		
---	3300		

Table A10.2. Present Weather Identifiers.

QUALIFIER		**WEATHER PHENOMENA**		
Intensity or Proximity **1**	**Descriptor** **2**	**Precipitation** **3**	**Obscurations** **4**	**Other** **5**
-Light	MI Shallow	DZ Drizzle	BR Mist (Fog)	PO Well Developed Dust/Sand Whirls
Moderate	PR Partial (covering part of the aerodrome)	RA Rain	FG Fog	SQ Squalls
+ Heavy (well developed in the case of	BC Patches	SN Snow	FU Smoke	FC Funnel Cloud(s) (Tornado or

dust/sand whirls, dust devils and tornadoes/waterspouts)	DR Drifting	SG Snow Grains	VA Volcanic Ash	Waterspout)
	DR Low Drifting	IC Ice Crystals (Diamond Dust)	DU Widespread Dust	SS Sand Storm
VC In the Vicinity	BL Blowing	PL Ice Pellets	SA Sand	DS Duststorm
	SH Shower(s)	GR Hail	HZ Haze	
	TS Thunderstorm	GS Small Hail and or Snow Pellets	PY Spray	
	FZ Freezing			

Table A10.3. Icing Intensity Chart.

Code	Icing
0	Trace
1	Light mixed
2	Light Rime
3	Light clear
4	Moderate Rime
5	Moderate rime
6	Moderate clear
7	Severe mixed
8	Severe rime
9	Severe clear

Table A10.4. Turbulence Intensity.

Code	Turbulence
1	Light
2	Moderate in clear air, occasionally
3	Moderate in clear air, frequent
4	Moderate in cloud, occasionally
5	Moderate in cloud frequent
6	Severe in clear air, occasionally
7	Severe in clear air, frequent

8	Severe in cloud, occasionally
9	Severe in cloud, frequent

Table A10.5. Observation Code Breakdown.

EXAMPLE	KHRT METAR 1655Z 26014G22KT 170V270 1SM R36/1600FT –TSRA BR FEW005 **(1) (2) (3) (4) (5) (6) (7) (8) (9)** OVC008 28/16 A29.99 RMK TS OVD MOV E TWR VIS 2 PA+4231 55/BS **(10) (11) (12) (13) (14)**
ICAO **(1)**	Location identifier. This four letter identifier states the location that the forecast is valid for.
Type **(2)**	METAR – Regularly scheduled hourly observation transmitted between H+55 and H+59 SPECI – Special Observation – taken to report significant changes in weather elements. LOCAL – Local Observation – taken to report changes in conditions significant to local operations which do not meet special criteria.
Time **(3)**	Time in ZULU (Z).
Winds **(4)**	Wind direction, speed, and gusts reported to the nearest 10 degrees in 2 digits and in knots using 3 digits with gusts following a "G."
Variability **(5)**	Variability of wind direction 60 degrees or more.
Visibility **(6)**	Visibility measured in Statue miles (SM) from normal point of observation.
RVR **(7)**	Runway Visual Range (RVR) – instrument determined visibility in hundreds of feet; in this example, RVR for Runway 22 is 1600ft.
Present Weather **(8)**	In this example, thunderstorm with light rain (-TSRA) and mist (BR) see **Table A11.3.** for full present weather identifiers.
Sky Condition	Sky Condition with cloud layers measured in eights of cloud coverage and heights measured in hundreds of feet above ground level (AGL).

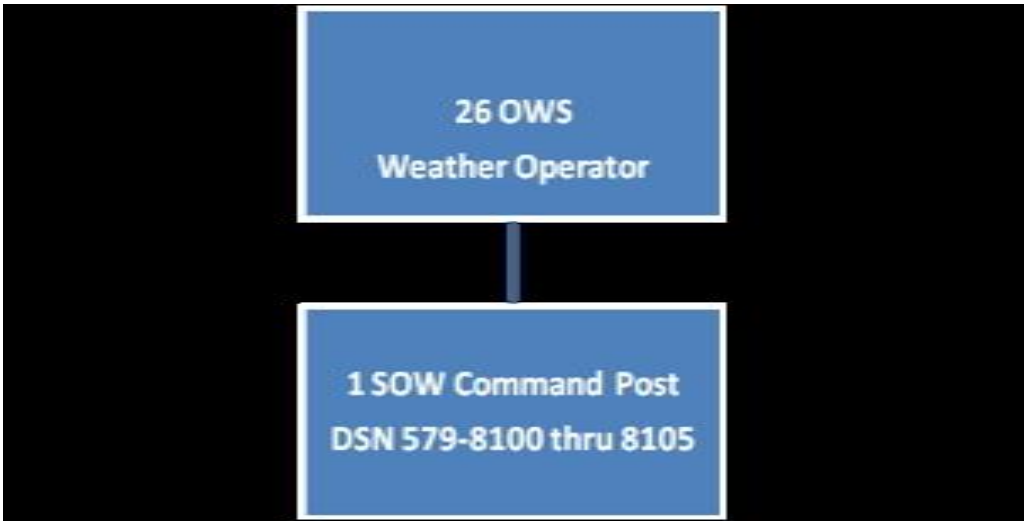
(9)	Examples: FEW005 = Few clouds at 500ft, OVC008 = Overcast skies at 800ft. Sky coverage contractions. CLR = Clear 0/8 coverage. FEW = Few 1/8 to 2/8 coverage. SCT = Scattered 3/8 - 4/8 coverage. BKN = Broken 5/8 - 7/8 coverage. OVC = Overcast 8/8 coverage. VV = Indefinite definite ceiling cannot be determined. Vertical visibility reported as how far can be seen into the clouds.
Temp and Dewpoint **(10)**	Temperature and dewpoint in degrees Fahrenheit locally and degrees Celsius longline.
Altimeter **(11)**	Altimeter setting (ALSTG) in inches of mercury.
Remarks **(12)**	Remarks to surface observation.
Pressure Altitude **(13)**	Pressure Altitude in feet.
Time and Initials **(14)**	Time past the hour observation was transmitted and weather technician's initials.

Attachment 11

RESOURCE PROTECTION NOTIFICATION CHAIN

A11.1. Resource **Protection Notification Chain.** Due to limited staffing and the time-critical nature of this information, 26 OWS personnel cannot individually notify every agency requiring weather watches, warnings, and advisories; hence, the application of a notification chain that exploits installation command and communications channels. Procedures developed to this end ensure weather personnel do not spend more time communicating than monitoring weather conditions. All units receiving these weather products must be involved in a continuous program of evaluation and improvement of the weather dissemination system, including inter-unit dissemination. Agencies must make certain that weather dissemination procedures ensure those needing information receive it. Individual commanders of units in need of weather information are responsible for having their units listed in the notification chain that follows.

Figure A11.1. The 26 OWS to Hurlburt Field Notification Chain.



Attachment 12

SEVERE WEATHER ACTION PROCEDURES DUTIES/RESPONSIBILITIES

A12.1. If the SWAP is implemented the actions in Table A12 2. will be performed when the conditions in paragraph 5.7.1 are expected to occur or are occurring.

Table A12.1. Duty Forecaster.

1.	Initiate and maintain an events log as time permits IAW local policy.
2.	Notify/recall SWAT Standby Member as necessary.
3.	Constantly coordinate with 26 OWS on the issuance of Watches/Warnings.
4.	Notify appropriate agencies of the issuance of Watches/Warnings.
5.	Advise senior base leadership of the situation as requested.
6.	Review SWAT Standby Member/Team Chief checklist and begin any duties, as necessary, until the member arrives.
7.	Conduct a concise forecast discussion of the current situation to apprise SWAT Standby Member/Team Chief upon their arrival.
8.	Perform Duty Observer functions in the absence of the Duty Observer.
9.	Issue observed Warnings/Advisories.
10.	Review PIREPs, SIGMETs, and area NWS forecasts products for severe weather reports. If applicable, incorporate into products.
11.	Update Mission Execution Forecast (MEF) as needed.
12.	Work closely with the SWAT members. Allow them to accomplish tasks which will free duty forecaster to handle critical tasks such as watch/warning/advisory issuance/notification, MEF amendments and coordination with 26 OWS/WXA.
13.	Provide inputs to post-event OPREP-3 report (if required). Archive data for and perform forecast review.

Table A12.2. SWAT Standby Member/Team Chief.

1.	When first notified report to the station within 30 minutes of notification. Determine if the situation warrants the recall/stand-by placement of additional personnel.

2.	Upon arrival, receive initial forecast discussion from Duty Forecaster.
3.	Ensure duty positions are delegated and members are performing assigned tasks (combine duty positions when necessary). a. Duty Forecaster. b. Duty Observer. c. OPUP operator.
4.	Ensure the following tasks are accomplished on a recurring basis: a. Recall additional personnel if needed. b. Adjust duties as deemed necessary. c. As requested, keep senior base leadership, command post and customers apprised of latest developments. d. Keep personnel focused on assigned tasks. e. Ensure all applicable watches/warnings/advisory are issued and notification has been accomplished. f. Review all forecast products for accuracy and horizontal consistency (e.g.,watches/warnings/advisories, TAF's, and MEF's). g. Provide meteorological expertise and guide decision making.
5.	Conduct post –event review and discussion to provide team members with feedback (positive and negative).
6.	Consolidate inputs and coordinate with 26 OWS for OPREP-3 report and provide to Hurlburt Command Post (if required).

Table A12.3. Duty Observer.

1.	Begin performing a Modified Basic Weather Watch (MBWW).
2.	Continue normal observing duties.
3.	Update the Duty Forecaster and Team Chief on latest conditions.
4.	Assist other team members as needed.
5.	During thunderstorm events, advise the SWAT members when thunderstorms are within 10nm and 5 nm.
6.	Provide inputs to forecast review and OPREP-3 report as needed.

Table A12.4. OPUP Operator.

1.	Interrogate storms and related phenomena using OPUP and, during thunderstorms, lightning detection products.

2.	Keep Duty Forecasters and Team Chief informed of local severe activity.
3.	Monitor RPS list and change as the situation warrants.
4.	During tornado and thunderstorm events, provide the Duty Weather technician with storm positions and movements.
5.	During thunderstorm events, advise the SWAT members when thunderstorms are within 10nm and 5 nm.
6.	Answer phones and questions. Prioritize calls for the Duty Forecaster and Team Chief. Direct calls from unofficial sources to Public Affairs.
7.	Answer PMSV calls.
8.	Assist other team members as needed.
9.	Archive data if deemed necessary.
10.	Provide inputs to and contribute to forecast review. Provide inputs to OPREP-3 report (if required).

Attachment 13

OPREP-3 REPORT FORMAT

A13.1. Type of report: BEELINE.

A13.1.1. A. Actual severe weather experienced: (e.g. 75 knot gust at 2115Z, 15 June 2000).

A13.1.2. B. Text of MEF and TAF in effect at the time of the event.

A13.1.3. KHRT MEF 151500, etc.

A13.1.4. KHRT AMD 151817 AMD, etc.

A13.1.5. C. Weather watches and warnings issued.

A13.1.6. HURLBURT FIELD WEATHER WATCH #06-002.

A13.1.7. VALID 20/2000Z (20/1600L) to 20/2300Z (20/1900L).

A13.1.8. LIGHTNING WATCH:, etc.

A13.1.9. Issued at: (time).

A13.1.10. Lead time: (time).

A13.1.11. Desired lead time: (time).

A13.1.12. HURLBURT FIELD WEATHER WARNING #06-003.

A13.1.13. VALID 20/2000Z (20/1600L) to 20/2300Z (20/1900L).

A13.1.14. THUNDERSTORMS WITH SFC WIND OF 50 KNOTS,etc.

A13.1.15. Issued at: (time).

A13.1.16. Lead time: (time).

A13.1.17. Desired lead time: (time).

A13.1.18. All Other watches and warnings.

A13.1.19. D. Operational status of meteorological equipment.

A13.1.20. All observing equipment 100% operational. OPUP was operating at full capacity.

A13.1.21. JET was 100% operational.

A13.1.22. Essential addresses for OPREP-3 Beeline.

A13.1.23. AFOC Washington DC, HQ USAF Washington DC//.

A13.1.24. HQ USAF WASHINGTON DC//XOW//.HQ AFWA OFFUT AFB NE/XO//.

A13.1.25. HQ AFSOC COMMAND CENTER HURLBURT FIELD FL//.

A13.1.26. HQ AFSOC HURLBURT FIELD FL//A3W//.

A13.1.27. POC: RANK NAME, 1 SOSS/OSW.

A13.1.28. DSN 579-7423 e-mail address.