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JOINT BASE CHARLESTON**

**JOINT BASE CHARLESTON
INSTRUCTION 15-101**



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Weather
WEATHER SUPPORT**

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This instruction implements Air Force Policy Directive (AFPD) 15-1, *Air Force Weather Operations*, Air Force Instruction (AFI) 15-114, *Functional Resource and Weather Technical Performance Evaluation*, AFI 15-128, *Air Force Weather Roles and Responsibilities*, AFI 10-206, *Operational Reporting*, AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, AFI 11-208 IP, *Department of Defense Notice to Airmen (NOTAM) System*, Air Force Manual (AFMAN) 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, AFMAN 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129v1, *Air and Space Weather Operations - Characterization*, AFMAN 15-129v2, *Air and Space Weather Operations - Exploitation*, and Air Mobility Command Instruction (AMCI) 15-101, *Weather Operations And Support*. It establishes responsibilities, weather support procedures and provides general information for weather services, including weather observations and forecasts, weather warnings, watches, and advisories; space weather data, information dissemination, and base-wide reciprocal support. It applies to units assigned to the 437th Airlift Wing (437 AW), 315th AW (315 AW), 628th Air Base Wing (628 ABW), and units assigned, attached, or supported by Joint Base Charleston (JB CHS). Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFMAN 33-363, *Management of Records*, and disposed of IAW the Air Force Records Information System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form

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SUMMARY OF CHANGES

This document has been extensively revised to cover the changing support to staff and mission agencies. It should be reviewed completely.

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Chapter 1

CHARACTERIZATION UNIT (CU) & EXPLOITATION UNIT (EU) INTERACTIONS

1.1. General. The 26th Operational Weather Squadron (26 OWS), the 618th Air Operations Center Weather Directorate, (618 AOC/XOW), and the 437th Operations Support Squadron Weather Flight (437 OSS/OSW) are the official weather information agencies for JB CHS, SC. These agencies provide weather information in support of the 437th AW, the 628th ABW, the 315th AW, and subordinate units and units assigned, attached, or supported by JB CHS. The 437 OSS/OSW is commonly referred to as both the Weather Flight (WF) and Exploitation Unit (EU), and is the focal point for all weather-related issues. This instruction is reviewed and revised no greater than biennially or IAW with host/parent unit procedures if the time is less than biennially.

1.1.1. The 26 OWS is considered the characterization unit for JB CHS. Characterization encompasses the “collect, analyze and predict” weather core competencies. Characterization depends on Air Force Weather’s ability to collect accurate data, correctly analyze that data, and use the results to produce a coherent picture of the present and future state of the air and space environment.

1.1.2. 437 OSS/OSW and 618 AOC/XOW are considered EUs. Exploitation is the ability to minimize the impact of environmental threats to friendly forces while simultaneously capitalizing on environmental conditions that maximize the operational advantage over enemy forces. Exploitation units tailor the characterization provided by the characterization unit. Tailoring is the extraction of data that is pertinent to a specific mission profile from the overall characterization of the air and space environment. Tailoring does not mean changing the characterization. To the greatest extent possible, exploitation units utilize the characterized data provided to them.

1.2. Concept of Operations. The 26 OWS at Barksdale Air Force Base (AFB)afw, Louisiana, provides regional and operational-level weather products and information to Air Force and Army units in the southeast region of the Continental United States (CONUS).

1.2.1. Meteorological Watch (METWATCH). The 26 OWS performs a continuous METWATCH for JB CHS. METWATCH is a deliberate process for monitoring terrestrial weather or the space environment in an area or region. The purpose of a METWATCH is to identify when and where observed conditions significantly diverge from forecast conditions, determine courses of action to update or amend a forecast product or group of products, and notify designated agencies.

1.2.2. The WF and 618 AOC/XOW are the primary source of tailored weather services in support of the 437 AW, the 315 AW, the 628 ABW, various headquarters elements, and visiting aircrews. The WF and 618 AOC/XOW make every effort to ensure that mission-limiting weather is anticipated and exploited, and that safety and RP are maintained.

1.3. Responsibilities. General responsibilities of the 26 OWS and WF are outlined in AFI 15-128, para 4.1. and para 6.2., respectively.

1.3.1. **Observing.**

1.3.1.1. Charleston International Airport (KCHS). The Federal Aviation Administration (FAA) contracted weather office – Charleston, SC takes/disseminates all weather observations.

1.3.1.2. North Auxiliary Airfield (KXNO). Automated observations at KXNO are provided by the Air Force owned certified observing system (AN/FMQ-19). No augmentation (e.g., supplementation and/or backup) of the system is required. Administration and maintenance support for the AN/FMQ-19 is provided by the WF and 437 OSS/OSAM (Air Traffic Control and Landing Systems (ATCAL)).

1.3.2. **Terminal Aerodrome Forecast (TAF).**

1.3.2.1. JB CHS. The National Weather Service Forecast Office – Charleston, SC issues the JB CHS TAF.

1.3.3. **Weather Watch/Warning/Advisories**

1.3.3.1. The 26 OWS issues forecast weather watches, warnings, and advisories (WWA), Special Weather Statements (SWS), and may provide flight weather briefings to transient aircrews passing through JB CHS. Additionally, the OWS issues observed warnings and advisories when the WF is closed.

1.3.3.2. The WF issues all observed advisories and warnings for Charleston Airfield when the WF is open.

1.3.3.3. WF will issue weather warnings for forecast phenomena when imminent weather conditions pose a hazard to life and property, and time of onset does not allow collaboration with the servicing CU/26 OWS.

1.3.4. **Mission Weather Products (MWP)/Controlled Mission Weather Products (CMWP).**

1.3.4.1. Air Mobility Command (AMC) and AMC-Gained Weather Briefings

1.3.4.1.1. As part of a Mobility Air Force (MAF) core process, Integrated Flight Management (IFM), and non-IFM, weather resources (e.g., Mission Weather Packages) for AMC and AMC-gained units are centrally planned to aid aircrews in the execution of MAF sorties/missions. Under this construct, weather operations are aligned under a lead weather unit (LWU) that is responsible for producing the CMWP (e.g., flight weather briefing (FWB)), and servicing the command and control (C2) agency and aircrew for IFM/non-IFM missions. The construct is explained in Table 1.1. below:

Table 1.1. Lead Weather Unit for IFM Missions.

MAF C2 Agency	Lead Weather Unit	Mission Type	Location/Area
618 AOC (TACC)	618 AOC/XOW	Strategic Airlift/Air Refueling	Global
603 AOC/AMD (USAFE)	21 OWS/FWB	Theater Airlift/Air Refueling	EUCOM/AFRICOM
613 AOC/AMD (PACAF)	17 OWS/FWB	Theater Airlift/Air Refueling	PACOM

1.3.4.1.2. JB CHS WF personnel are only allowed to update takeoff data for AMC and AMC-gained IFM and non-IFM missions, and will notify 618 AOC/XOW if the update includes any of the criteria listed and/or display perishable weather data (e.g., meteorological satellite, radar, lightning) to those local and transiting aircrews. Any additional change requests for enroute or destination weather must be arranged for through 618 AOC/XOW.

1.3.4.1.3. WF personnel are only allowed to update takeoff (from KCHS) and perishable weather data (e.g., meteorological satellite, radar, lightning) for FWBs produced by/missions flight managed (FM) by units identified in paragraphs 1.3.4.1.1.-1.3.4.1.2. above. Those IFM, and/or non-IFM FWB/Mission Weather Packages, are completed in the Global Decision Support System (GDSS) by 618 AOC/XOW; this also includes IFM/non-IFM Pacific Air Forces (PACAF) and United States Air Forces, Europe (USAFE) missions transiting through JB CHS. Any requests for updates to enroute and/or destination weather will be referred back to 618 AOC/XOW.

1.3.4.2. Transient Aircrew Weather Briefings

1.3.4.2.1. The WF will provide FWBs for transient aircrews not engaged in the following mission types: strategic airlift (AMC), theater airlift (PACAF, USAFE), air refueling. FWBs will be provided IAW the WF duty priorities listed in [Table 1.2](#) For those mission-types identified above, strategic airlift, theater airlift, and air refueling, the WF will arrange for support through the designated lead weather unit IAW AFMAN 15-129v2.

1.3.4.2.2. The WF will create MWP that fuse theater scale products with local mission requirements to enable the direct inject of weather impacts into warfighter planning and/or execution.

1.3.5. Additional Forecast Support.

1.3.5.1. The 26 OWS issues SWS, Tropical Cyclone Threat Assessments (TC-TAP), and all meteorological analysis charts and aviation hazard forecasts.

1.3.6. **JB CHS Installation Data Page (IDP).** The 26 OWS and WF coordinate on and maintain the JB CHS IDP. Data page details WF primary/Alternate Operating Location (AOL) contact information, TAF Specification and Amendment (SPEC/AMD) criteria, WWA criteria, lead times and areas of coverage, SWAP activation criteria, and

primary/alternate person of contact (POC) for WWA. The following link can be used to access the IDP for JB CHS: <https://26ows.us.af.mil/idp/index.cfm?&icao=KIGC>.

1.3.7. Eyes Forward & Collaboration. The WF acts as the eyes forward for the 26 OWS by relaying significant, time-sensitive meteorological information not found in coded meteorological reports to the assist in forecast operations.

1.3.7.1. WF will contact the 26 OWS when WWA criteria are occurring, or forecast to occur, and the 26 OWS has yet to issue the WWA.

1.3.7.2. WF personnel will contact the OWS when WWA criteria are forecast by the OWS, but are not expected to occur.

1.3.7.3. WF will complete and provide an Operational Report (OPREP-3) to 628 ABW Command Post (CP) if the following occur at JB CHS:

1.3.7.3.1. Severe Weather

1.3.7.3.2. Aircraft/Ground Mishap

1.3.7.4. WF will notify the 26 OWS and/or 618 AOC/XOW when products (e.g., hazard charts, Weather Threat Assessment (WTA), etc.) do not accurately reflect observed conditions.

1.3.7.5. WF will pass any significant Pilot Report (PIREP) and Air Report (AIREP) information to the 26 OWS and/or 618 AOC/XOW for use in updating:

1.3.7.5.1. Current weather charts

1.3.7.5.2. Verification of forecasted conditions

1.3.7.6. WF will report all Unofficial Weather Reports from individuals who are not certified to take official weather observation (e.g., a pilot or law enforcement official) to the 26 OWS.

1.3.8. Duty Priorities. All tasks cannot be accomplished simultaneously. Therefore, IAW AFMANs 15-129v1 and 15-292v2, the 26OWS, WF, and 618 AOC/XOW have established duty priorities as listed in **Table 1.1**, **Table 1.2**, and **Table 1.3.**, respectively, based on order of relative importance to mission accomplishment. Since not all situations affecting operations at JB CHS can be anticipated, personnel use sound risk management principles to determine the need to recall additional personnel to assist in meeting surges in operations.

Table 1.2. 26 OWS Weather Forecaster Duty Priority Listing.

Order of Priority	Duties
1	Perform 26 OWS Emergency War Order (EWO) Taskings
2	Respond to aircraft/ground emergencies/mishaps (responding consists of obtaining data specific to incident).
3	Execute OWS Evacuation/Continuity of Operations
4	Respond to PMSV Contacts.
5	Disseminate Urgent (UUA) PIREPs.
6	Provide weather products for Force Protection (WWAs, etc.).
7	Assist other regions in providing weather products for Force Protection as required.
8	Ensure horizontal consistency of WWAs, Forecaster-in-the-Loop (FITL) products and TAFs.
9	Prepare and Disseminate Military Operating Area Forecasts (MOAFs)/Joint Operational Area Forecasts (JOAFs) as required.
10	Prepare and Disseminate Terminal Aerodrome Forecasts.
11	Disseminate Routine (UA) PIREPs.
12	Monitor Plan of The Day.
13	Conduct 15-minute spin-up.
14	Accomplish other routine weather requirements (5-day forecasts, Quality Assurance, Forecast Reviews, Lessons
15	Participate in shift change.
16	Accomplish administrative tasks.

Table 1.3. 437 OSS/OSW Duty Priority Listing.

Order of Priority	Duties
1	Execute WF/EU evacuation
2	Perform EWO Taskings (JCS Alerts, Alpha Alerts, Crisis Action Team, Disaster Control Group and Hurricane Support)
3	Respond to Aircraft/Ground Emergencies (These include aircraft emergencies and mishaps, accidental release of toxic chemicals, or any operation involving the safety of aircraft, materiel, or personnel)
4	Support Airborne Aircraft via PMSV phone call or phone patch
5	Issue Observed Weather Warnings or Advisories
6	Perform SWAP procedures
7	Disseminate urgent PIREPs and AIREPs. Relay urgent PIREPs and Special AIREPs to 26th OWS
8	Collaborate with 26 OWS on Forecast Weather Warnings, Advisories, and Watches (Disseminate as necessary when acting as backup to the 26th OWS)
9	Produce and Disseminate MWPs and Other Flight Weather Briefings to local customers when there is an extended outage at 618 AOC/XOW or Global Decision Support System (GDSS) services are unavailable. Provide support briefings as required when acting as Lead Weather Unit
10	Perform coordinated METWATCH support & provide "Eyes Forward" support to 26 OWS
11	Transmit PIREPs and AIREPs long line
12	Provide other briefing and support to transient aircrews as necessary
13	Prepare and disseminate Web-based planning products
14	Conduct mission essential training
15	Accomplish Administrative and Other Duties

Table 1.4. 618 AOC/XOW Duty Priority Listing.

Order of Priority	Duties
1	Respond to EWO Tasking to include Operations Plan (OPLAN) 8010 actions.
2	Complete 618 AOC (618 AOC/XOW)/XOOS missions.
3	Execute 618 AOC/XOW Evacuation.
4	Respond to aircraft/ground emergencies.
5	Respond to in-flight aircraft (i.e. Aircraft Communications Addressing and Reporting System (ACARS) and PMSV phone patches).
6	Perform support of deployed Contingency Response Group (CRG) personnel IAW mission-specific CONOPS.
7	Produce and disseminate IFM mission control and mission execution forecasts.
8	Produce and disseminate Non-IFM mission control and mission execution forecasts.
9	Disseminate urgent PIREPs/AIREPs longline and to respective OWS.
10	Disseminate PIREPs/AIREPs longline.
11	Perform METWATCH/MISSION WATCH Activities.
12	Resolve meteorological differences with other centers.
13	Provide briefings (i.e. planning weather, Flight Manager Shift Change brief, etc).
14	Complete weather function training.
15	Accomplish administrative duties/details.

1.4. Hours of Operation.

1.4.1. **WF.** The WF is normally open from 0700L – 1600L Monday through Friday, excluding federal holidays and/or AMC approved family days, to support the mission of JB CHS.

1.4.1.1. The 437 Operations Group Commander may authorize modified weather service duty hours for temporary manning issues.

1.4.1.1.1. IAW AFI 11-208, a NOTAM will be issued for changes in service hours that do not exceed 90 days. Changes in service hours anticipated to exceed 90 days will be reflected in the appropriate Flight Information Publication (FLIP).

1.4.1.1.2. The WF will maintain a forecaster on telephone standby whenever the OG/CC authorizes modified weather service hours. WF forecaster recall requirements are outlined in para 2.8.3.

1.4.2. **26 OWS and 618 AOC/XOW.** Hours of operation are 24/7, 365 days a year.

1.4.3. A web-based aircrew-briefing terminal is located in the base operations flight planning room. This briefing terminal allows aircrews to self-brief or schedule a flight weather briefing from the 26 OWS.

1.5. Contact Information.

1.5.1. **WF** (843) 963-3011/3016 / DSN 673-3011/3016

1.5.2. **WF AOL** (843) 963-3140 / DSN 673-3140

1.5.3. **618 AOC/XOW** (618) 229-0353/0308 / DSN 779-0353/0308

1.5.4. **26 OWS** (318) 529-2600 / DSN 331-2600 / **Briefing Cell** DSN 331-2651

1.6. Continuity of Operations Plan (COOP). Continuity of support to the installation and flying operations is susceptible to equipment and communication outages at the 26 OWS, 618 AOC/XOW, and WF. The WF participates in various Wing, 26 OWS, and AMC COOP exercises to maintain proficiency at tasks necessary to ensure continuity of operations.

1.6.1. **WF COOP.** In the event of a building evacuation, the WF relocates to building 174 (437 Aerial Port Squadron Combat Readiness Flight), room 118, Unit Training (a map showing the directions from the primary WF location to the AOL is in Attachment 10). WF members utilize evacuation checklists and standard operating procedures (SOPs) to expedite resumption of installation weather support. For flight safety reasons, the WF does not evacuate during exercises.

1.6.1.1. Upon arriving at the AOL, the following agencies will be contacted: 628 ABW/CP, 437 OSS/OSAA, 26 OWS, 618 AOC/XOW, and WF leadership.

1.6.1.2. **AOL LIMITATIONS.** The primary limitation of the AOL is associated with its location, as a code is required for all customers entering through the pedestrian gate. However, all customers entering from the flightline will not encounter this obstacle and the gate code is available to all customers by contacting Airfield Management. Other limitations include some service degradation (weather products, pilot briefings, etc.) due to limited facilities and loss of dedicated data services, including sensors and various data types.

1.6.2. **26 OWS COOP.**

1.6.2.1. For short-term disruptions in 26 OWS support (in which the Joint Environmental Toolkit (JET) server is not able to be transferred to another CU beforehand), the WF assumes weather WWA responsibility (for up to 72 hours).

1.6.2.2. For long-term disruptions in 26 OWS support (greater than 72 hours), the 26 OWS receives back-up support from the 15 OWS (WWAs) and the 25 OWS (graphics and flight weather briefings).

1.6.3. **618 AOC/XOW COOP.** IAW AMCI 15-101, if the 618 AOC/XOW loses the capability to provide flight weather briefing services, the WF assumes responsibility for all JB CHS IFM and Non-IFM weather packages. If the WF is unable to provide the required support, briefing responsibility is transferred to the 26 OWS.

Chapter 2

AIRFIELD SUPPORT

2.1. General. Airfield support includes those actions affecting JB CHS to include the Charleston aerodrome (defined within a 5NM radius of the airfield), North Auxiliary Airfield, Naval Weapons Station – Charleston, and Short Stay Recreation Area as applicable. These functions include, but may not be limited to, weather observing, METWATCH, and resource protection.

2.2. Automated Observations. The automated recording and dissemination of weather elements and parameters includes: wind, visibility, runway visual range (RVR), present weather/obstructions to vision, sky condition, temperature, dew point, pressure, and precipitation. An automated observation is any observation evaluated, prepared, and transmitted by an observing system without human intervention. When operating in automated mode, the FMQ-19 or ASOS determines sky condition based on an evaluation of sensor data gathered during the 30-minute period ending at the actual time of the observation. All other evaluated elements are based on sensor data that is within 10 minutes or less of the actual time of the observation.

2.2.1. Charleston Airfield. International Civil Aviation Organization (ICAO): KCHS. All weather observations are recorded and disseminated by the FAA, who is also responsible for augmentation procedures. Any customers wishing to decode the official observations should utilize AFMAN 15-111.

2.2.2. North Auxiliary Airfield (KXNO) – ICAO: KXNO. The FMQ-19 Automated Meteorological Observing System (AMOS) works in concert with the JET to evaluate, prepare, and transmit weather observations for KXNO. The FMQ-19 at KXNO operates in full-automated mode with no augmentation, to include supplementation and back-up. The two basic types of observations provided are Aviation Routine Weather Report (METAR) and Aviation Selected Special Weather Report (SPECI).

2.2.3. Meteorological Terminal Aviation Routine Report (METAR). METAR is a routine scheduled observation disseminated locally and long-line between 55 and 59 minutes after the hour. METAR contains a complete report of wind, visibility, runway visual range, present weather and obstructions, sky condition, temperature, dew point, and altimeter setting. In addition, a METAR may contain encoded and/or plain language remark information that elaborates on data in the report.

2.2.4. Aviation Selected Special Weather Report (SPECI). A SPECI is an unscheduled observation completed and transmitted when any of the special criteria listed in section 2.2.5. below are observed or sensed. SPECI contains all data elements found in a METAR plus additional remarks that elaborate on data in the body of the report.

2.2.4.1. A SPECI is prepared and transmitted as soon as possible after the relevant criteria are observed.

2.2.4.2. Operators requiring an observation for a threshold not listed in section 2.2.5. below should contact the WF at any of the numbers listed in paragraph 1.5.1.

2.2.4.3. SPECI observation criteria KXNO is validated/updated by the WF. The FAA has sole responsibility for KCHS METAR and SPECI observations.

2.2.5. **SPECI criteria – North Auxiliary Airfield.** A SPECI is taken and disseminated for listed criteria:

2.2.5.1. **Visibility.** When the prevailing visibility decreases below or, if below, increases to equal or exceeds any of the thresholds listed below:

Table 2.1. Visibility Thresholds.

Visibility (Statue Mile (SM)/M)	<u>3</u> *	2*	<u>1 ½</u>	<u>1 3/8</u>	<u>1</u> *	<u>¾</u> *	½*	¼*
	<u>4800</u>	3200	<u>2200</u>	<u>2000</u>	<u>1600</u>	<u>1200</u>	0800	0400
* AFMAN 15-111 standard								
Note: Items in bold/underline indicate criteria found in the high and low altitude FLIPs.								

2.2.5.2. **Ceiling.** When the ceiling decreases to less than or, if below, increases to equal or exceeds any of the thresholds listed below:

Table 2.2. Ceiling Thresholds.

Height (feet)	3,000*	2,000*	1,500*	<u>1100</u>	1,000*	<u>800</u>	<u>700</u>	<u>600</u>	<u>500</u>	<u>300</u>	<u>200</u>	<u>100</u>
	0*	*	*	<u>0</u>	*	*	*	*	*	*	*	*
* AFMAN 15-111 standard												
Note: Items in bold/underlined indicate criteria found in the high and low altitude FLIPs												

2.2.5.3. **Sky Condition.** A layer of clouds or obscuring phenomena aloft is observed below the highest published instrument landing minimum (including circling) applicable to the airfield, and no layer aloft was reported below this height in the previous METAR or SPECI (**1,100FT Above Ground Level (AGL)**).

2.2.5.3.1. **Wind.**

2.2.5.3.2. **Shifts.** Wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.

2.2.5.3.3. **Squall.** A strong wind characterized by a sudden onset in wind speed increasing at least 16 knots and sustained at 22 knots or more for at least 1 minute.

2.2.5.4. **Thunderstorm.**

2.2.5.4.1. Begins (**Note:** A Special observation is not required to report the beginning of a new thunderstorm if one is currently reported as in progress at the airfield).

2.2.5.4.2. Ends (**Note:** 15 minutes after the last occurrence of criteria for a thunderstorm).

2.2.5.5. **Precipitation.**

2.2.5.5.1. Hail begins or ends.

2.2.5.5.2. Freezing precipitation begins, ends, or changes intensity.

2.2.5.5.3. Ice pellets begin, end, or change in intensity.

2.2.5.5.4. Any other type of precipitation begins or ends. **NOTE:** Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (e.g., snow changing to rain and snow).

2.2.5.6. **Runway Visual Range (RVR).** The highest value during the preceding 10 minutes from the designated RVR runway decreases to less than, or if below, increases to equal or exceed criteria listed in [Table 2.3](#)

Table 2.3. RVR Reporting.

Runway Visual Range (RVR)
- Prevailing visibility first observed < 1SM/1600 meters, again when prevailing visibility goes above 1SM/1600 meters.
- RVR for active runway decrease to less than or, if below, increase to equal or exceed: - 6,000 feet (P1500 meters) - 5,000 feet (1500 meters) - 4,000 feet (1300 meters) - 2,400 feet (750 meters) - 2,000 feet (600 meters) - 1,600 feet (400 meters) - 1,200 feet (400 meters) - 1,000 feet (320 meters) - 0600 feet (200 meters)
- RVR is first determined as unavailable (RVRNO) for the runway is use, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

2.2.5.7. **Volcanic Eruption.** There are no known volcanos in the area; however, in the event that a volcanic eruption or an ash cloud is observed, it will be noted in the SPECI.

2.2.5.8. **Tornado, funnel cloud, or waterspout.**

2.2.5.8.1. Is observed

2.2.5.8.2. Disappears from sight or ends

2.2.5.9. **Not applicable SPECI elements.** Tower visibility, upon resumption of observing function, and aircraft mishap remarks are not reported in the SPECI at KXNO

since they are optional data based on local operational requirements. There are no locally established SPECI criteria at KXNO.

2.2.6. Point Of Observation. The official point where a weather observation is taken. On KXNO, the point of observation is where the FMQ-19 sensors are located.

2.2.7. Observing Location Limitations.

2.2.7.1. The FMQ-19 is properly sited and no limitations are currently noted. There is no human augmentation.

2.2.8. ATC limited observation program. There are no requirements for the WF to provide Air Traffic Control (ATC) Observer Training and/or an ATC Cooperative Weather Watch at KXNO or KCHS.

2.3. Terminal Aerodrome Forecasts (TAFs). The TAF for Charleston is produced by the NWS Forecast Office – Charleston, SC. Any customers wishing to decode the TAF should utilize AFMAN 15-124.

2.4. Resource Protection (RP) Products. SWSs and weather WWAs are special notices used to alert decision makers that hazardous weather is occurring, or that there is a potential for hazardous weather to occur, within the area of operations. Customer responses to WWAs are listed in **Attachment 3**.

2.4.1. **SWS.** A notice issued by the 26 OWS to assist with RP decisions. SWS advise of the potential for widespread hazardous weather conditions in a specified geographical region. The WF utilizes the SWS to assist in maintaining situational awareness of environmental conditions that have the potential to negatively impact JB CHS or the local flying area.

2.4.2. **Weather Watch.** A special notice to notify installation personnel and supported units of a **POTENTIAL** for environmental conditions of such intensity as to pose a hazard to life or property. Watches are issued for the criteria defined in **Table 2.4** and are valid for a 5 nautical mile (NM) radius from the center of the point location (with the exception of the watch for lightning at Naval Weapons Station within 10NM).

2.4.2.1. Watches are issued by the 26 OWS for JB CHS (Charleston Airfield, Charleston Naval Weapons Station, Short Stay Rec Area, North Auxiliary Airfield) and are standalone products based upon **potential** and are unaffected by warnings or advisories for the same phenomena.

2.4.2.2. Multiple watches may be in effect at the same time.

Table 2.4. Weather Watches.

Watch	Criteria	Desired Lead Time	Charleston Airfield	North Auxiliary Airfield	Naval Weapons Station	Short Stay Rec
Tornado	Within 5NM	As potential warrants	X	X		
		120 Minutes			X	X
Severe Thunderstorms	Winds \geq 50 knots (kts) and/or Hail \geq 3/4in	As potential warrants	X	X		
		120 Minutes			X	X
Damaging Winds (non-convective)	\geq 50 kts	As potential warrants	X	X		
		120 Minutes			X	X
Strong Winds (non-convective)	\geq 35 kts < 50 kts	120 Minutes			X	X
Strong Winds (Associated with TS)	\geq 35 kts < 50 kts	As potential warrants			X	
Measurable Snowfall	Trace or greater in 12 hours	As potential warrants	X	X	X	
Freezing Precipitation	Any intensity	As potential warrants	X	X	X	X
Lightning	Within 5NM	30 Minutes	X	X	X	X
Lightning	Within 10NM	30 Minutes			X	

2.4.3. **Weather Warning.** A special notice to inform installation personnel when an established weather condition of such intensity as to pose a hazard to life or property **IS OCCURRING OR IS EXPECTED TO OCCUR**. Warnings are issued for criteria defined in [Table 2.5](#) and are valid for a 5NM radius from the center of the point location.

2.4.3.1. Only one warning can be in effect at a time for a given location. When multiple warning criteria are forecast to occur at a given location, a single warning containing all applicable criteria is issued. A separate valid time may be specified for each criterion as necessary. Exception: Tornado and lightning warnings are issued separately from other warnings.

2.4.3.2. Warnings provide concise information outlining environmental threats. If a warning is issued for one weather criterion and it becomes necessary to warn for another weather criterion, a new warning with a new number is issued, combining both criterion.

2.4.3.3. A **Forecasted Weather Warning** is issued by the 26 OWS for JB CHS (Charleston Airfield, Charleston Naval Weapons Station, Short Stay Rec Area, North Auxiliary Airfield) and takes precedence over advisories for the same phenomenon and should maintain horizontal consistency with TAFs and other forecasts products.

2.4.3.4. **Observed Weather Warnings.** Lightning warnings are the only observed warning issued for JB CHS. The WF issues the lightning warning for Charleston Airfield when open; see para 1.4.1. for normal duty hours. The 26 OWS issues the observed lightning warning for Charleston Airfield when the WF is closed, and for all other JB CHS locations. Lightning warnings are issued when lightning is observed within 5NM (and/or 10NM at Charleston NWS). Observed thunderstorm determinations are made IAW AFMAN 15-111, para 8.6.4.1.

Table 2.5. Weather Warnings.

Warning	Criteria	Desired Lead Time	Charleston Airfield	North Auxiliary Airfield	Naval Weapons Station	Short Stay Rec
Tornado	Tornado or Funnel Cloud	15 Minutes	X	X	X	X
Severe Thunderstorms	Winds \geq 50 kts and/or Hail \geq $\frac{3}{4}$ "	1 hour	X	X	X	X
Moderate Thunderstorms	Winds \geq 35 kts but <50 kts or Hail <3/4 inch	1 hour	X	X	X	X
Damaging Winds (non-convective)	\geq 50 kts	1 hour	X	X	X	X
Strong Winds (non-convective)	\geq 35 kts < 50 kts	1 hour	X	X	X	X
Measurable Snow	Trace or greater in 12 hours	2 hours	X	X	X	
Freezing Precipitation	Any intensity	1 hour	X	X	X	X
Lightning	Within 5NM	Observed	X*	X	X	X
Lightning	Within 10NM	Observed			X	
* Issued by WF when open						

2.4.4. **Weather Advisories.** A notice to inform end users when an established environmental condition **affecting operations** is occurring or is expected to occur at JB CHS. Observed and forecast weather advisory criteria are defined in [Table 2.6](#)

Table 2.6. Weather Advisories.

Advisory	Criteria	Desired Lead Time	Charleston Airfield	North Auxiliary Airfield	Naval Weapons Station	Short Stay Rec
Winds	≥ 25 kts < 35 kts	1 hour	X	X	X	X
Temperature	< 25°F	1 hour	X	X		
Ceiling/Visibility	Ceiling < 200 Feet And/or visibility < ½ SM	Observed	X*			
Crosswinds	≥ 30 kts	Observed	X*			
Crosswinds	≥ 25 kts < 30 kts	Observed	X*			
Turbulence	\geq Moderate below 10K AGL W/I 25 NM	Observed	X*			
Icing	\geq Moderate below 10K AGL W/I 25 NM	Observed	X*			
Low Level Wind Shear	Below 2000 Feet AGL	Observed	X*			
Wind Chill	$\leq 10^\circ\text{F}$	Observed	X*			
* Issued by WF when open						

2.4.5. **WWA Numbering Scheme.** Advisories, watches, and warnings are numbered consecutively by identifying the type of weather message (watch, warning, or advisory) followed by a five-digit number. The first two numbers indicate the current month while the next three numbers indicate the sequence number. For example, the message “Weather Warning 02-005” means the month is February (02) and this is the fifth (005) warning issued in the month. The message “Weather Advisory 12-013” means the month is December (12) and this is the thirteenth (013) advisory issued in the month. An example of an observed weather advisory is contained in **Attachment 2**.

2.4.6. **WWA Upgrades/Downgrades.** An upgrade is a change to an active WWA resulting from adding additional WWA phenomenon, or an increase in phenomenon intensity that crosses to a higher threshold (e.g., winds increase from 35 knots to 50 knots). A downgrade is a change to an active WWA resulting from removing WWA phenomenon or a decrease in

phenomenon intensity that crosses to a lower threshold (e.g., hail decreases to less than $\frac{3}{4}$ inch). All upgrades/downgrades are issued with the same WWA number

2.4.7. **WWA Amendments.** Amendments are issued when an active WWA no longer adequately describes a phenomenon's expected occurrence. All amendments are issued with the same WWA number, and should clearly state what affect the new WWA has on any previously issued notices.

2.4.8. **WWA Extensions.** Extensions are issued when a phenomenon's occurrence is expected to last longer than originally forecast. Extensions are issued prior to the expiration of the original WWA utilizing the same WWA number. Extensions should clearly state what effect they have on any previously issued notices.

2.4.9. **WWA Cancellation.** WWA are canceled when the weather phenomena is no longer occurring or expected to occur. A WWA not extended or canceled automatically expire at the end of the valid period. Observed advisories are canceled when the criteria has not occurred in the last 30 minutes. See [para 2.4.3.4.](#) for cancellation of observed lightning warnings.

2.5. Dissemination Process.

2.5.1. **KXNO Observations.** Observations taken by the FMQ-19 are automatically disseminated via JET. When JET is nonoperational, weather information may still be available to advisors in the KXNO tower via the FMQ-19 Operator Interface Display (OID).

2.5.2. **KCHS TAFs.** Issued through the NWS Forecast Office – Charleston, SC.

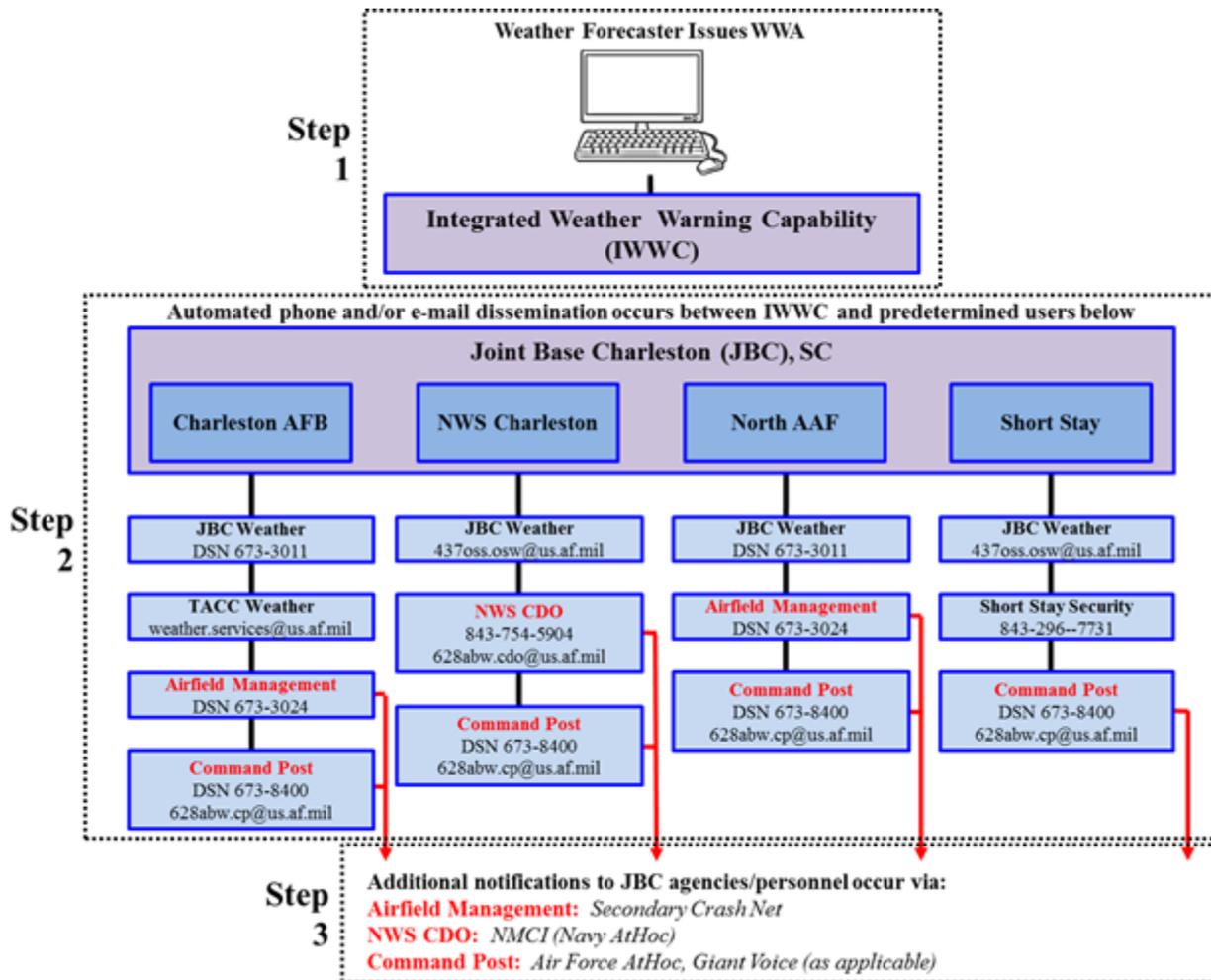
2.5.3. **SWSs.** 26 OWS transmits SWSs to WF leadership via email. WF leadership forwards SWSs to JB CHS leadership as applicable.

2.5.4. **WWAs.** The 26 OWS or the WF enters WWAs into JET for automated dissemination to 628 ABW/CP, 437 OSS/OSA Airfield Management and 618 AOC/XOW. If JET is out-of-service, the 26 OWS or the WF disseminates WWAs via back-up calls. Upon notification, units identified in [Figure 2.1](#) should further disseminate *all* WWAs using the pyramid notification scheme. In addition, the 628 ABW/CP disseminates all WWAs via email and/or AtHoc.

2.5.4.1. **Lightning Warnings.** All lightning warnings are disseminated by the 628 ABW/CP to the base populace via the Giant Voice system.

2.5.4.2. **Tornado Warnings.** The 628 ABW/CP has the primary responsibility for sounding the base siren for a tornado warning issuance.

Figure 2.1. Weather Pyramid Alerting.



2.6. Cooperative Weather Watch (CWW). The WF has established a CWW IAW AFMAN 15-111. Of primary concern is the report of tower visibility differing from the prevailing surface visibility, local PIREPs, and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. Specifically:

2.6.1. The FAA and 437 OSS/OSA Airfield Management are in agreement to pass on urgent weather reports. These reports will be channeled from Airfield Management to the WF.

2.6.2. Security Forces (628 SFS) will report any hazardous weather conditions observed by SFS personnel (tornado, hail, etc).

2.6.3. The WF will pass any significant PIREPs and AIREPs information to the OWS for use in updating current weather charts and verification of forecasted conditions.

2.6.3.1. Per the JB Charleston Letter of Agreement between Charleston ATC Tower, JB CHS (437 AW/628 ABW), and the Charleston County Aviation Authority, the Charleston ATC Tower will forward the following PIREPs to the JB Charleston WF, workload permitting, via the Base Ops shout line:

2.6.3.1.1. Moderate or greater turbulence.

2.6.3.1.2. Moderate or greater icing.

2.6.3.1.3. LLWS within 10 miles of KCHS.

2.6.3.1.4. All other URGENT PIREPs.

2.6.4. The WF will report all Unofficial Weather Reports from individuals who are not certified to take official weather observations (e.g. a pilot or law enforcement official) to the OWS.

2.7. PMSV Support. The WF does not maintain a PMSV radio. Weather information is available via phone call/phone patch during duty hours by contacting 628 ABW/CP.

2.8. Emergency Action(s) Response.

2.8.1. **Aircraft Mishap.** When notified on an aircraft mishap, the WF initiates a save of applicable data used in the development of any weather products provided. The WF also contacts the FAA weather observer for any aircraft mishap occurring within 120 NM of JB CHS and requests that a local surface observation be taken and transmitted (the observation should include the same elements as a record hourly). Archived weather data is available to investigating agencies upon request.

2.8.1.1. The WF notifies the 26 OWS Senior Duty Officer of all aircraft mishaps as soon as possible after notification of the event. The WF coordinates with the 26 OWS to save all applicable data and products. If products from other OWSs were used, the WF coordinates with all applicable OWSs to ensure the correct data is saved. OWSs save sufficient data in order to fully reconstruct environmental conditions before and after the mishap.

2.8.1.2. If an OWS, 618 AOC/XOW, or another WF provided the MWP, they are responsible for conducting the data save in coordination with any other Air Force Weather units involved.

2.8.2. **SWAP.** The SWAP ensures sufficient manpower is available to meet the increased demand for timely weather information during significant weather events. During normal duty hours, the WF duty forecaster initiates the SWAP when any of the criteria in **Table 2.7** are forecast to occur. During non-duty hours, the 26 OWS notifies the WF standby forecaster when conditions listed in **Table 2.7** are forecast to occur. Upon notification from the 26 OWS, the WF standby forecaster initiates the SWAP.

Table 2.7. Conditions Requiring SWAP Activation.

SWAP ACTIVATION Criteria
Weather Watch or Warning for Tornado(s)
Weather Warning for Severe Thunderstorms
Weather Warning for Hail $\geq \frac{3}{4}$ inch
Weather Warning for Winds ≥ 50 knots
Weather Warning for Measurable Snowfall (trace or greater in 12 hours)
Weather Warning for Freezing Precipitation

2.8.3. WF Forecaster Recall Requirements. The WF standby forecaster is notified/recalled under the following circumstances:

2.8.3.1. The 26 OWS notifies the standby forecaster prior to issuing any watch or warning for Charleston airfield. The stand-by forecaster, in coordination with the WF flight chief, will use applicable ORM to determine reporting requirements/times.

2.8.3.2. The 628 ABW/CP, Wing leadership, and/or flight leadership can recall WF personnel as required (e.g., security incidents, natural disasters, Crisis Action Team (CAT) activation).

2.8.4. Chemical, Biological, Radiological, and Nuclear (CBRN) Response. The WF works closely with Emergency Management (EM) to ensure supported commanders receive the relevant information needed to obtain a timely and accurate picture of the environmental situation. Upon request, the WF provides EM:

2.8.4.1. Surface observations and/or alphanumeric forecasts representative of the location and time of the CBRN event.

2.8.4.2. The appropriate Chemical Downwind Messages obtained from the servicing CU and/or Air Force Weather Web Service (AFW-WEBS).

2.9. Tropical Weather Monitoring. Official Atlantic Basin tropical cyclone monitoring and classification is controlled by the National Hurricane Center (NHC), a division of National Oceanic and Atmospheric Administration (NOAA). NHC will identify and categorize threat areas on: Graphical Tropical Weather Outlook. The 26 OWS monitors these products, and tailors the information into the Tropical Cyclone-Threat Analysis Product (TC-TAP) for use by the EU.

2.10. Hurricane Advisory Support.

2.10.1. The WF receives tropical cyclone information from the 26 OWS derived from the NHC and specialized tropical forecast software. These forecasts include information describing the initial and forecast locations, movement, intensity, and horizontal dimensions of significant winds. Forecasts which could change Hurricane Conditions/Tropical Cyclone Condition of Readiness will be relayed to CP, 628 ABW CAT, and/or senior leadership.

2.10.1.1. The WF will not deviate from the official forecast position, track, movement, maximum wind speed, or intensity. However, the WF can provide tailored weather forecasts for JB CHS; tailoring may include local effects of vegetation/ground cover,

terrain, and position relative to the storm. Inland locations may often require the use of frictional TC-TAP for tailoring.

2.10.1.2. The tailored forecasts for JB CHS will be collaborated with the 26 OWS in the form of a TC-TAP that is posted to the 26 OWS webpage when a tropical system poses a threat to the 26 OWS Area of Responsibility.

2.10.1.3. 48-hour and 72-hour outlooks (or longer if issued) contain a high degree of uncertainty, are for planning purposes only, and are subject to change. This notification will include the forecast error probability statements included in the discussion bulletins or on the forecast products.

2.10.1.4. The WF will inform the 437 AW/CC, 628 ABW/CC, 315 AW/CC, and all Group CCs when hurricane conditions exist and have potential to affect JB CHS, as well as any updates to tropical cyclone forecasts.

2.10.1.4.1. The WF will begin to send updates when either the forecast track or the cone of uncertainty is forecast to impact South Carolina and will discontinue sending once the track/cone no longer includes South Carolina.

Table 2.8. Hurricane Conditions (HURCON).

HURCON	CRITERIA
5	General Hurricane Season, 1 June to 30 November.
4	Indicates surface winds in excess of 58 mph (50 knots) could arrive within 96 hours.
3	Indicates surface winds in excess of 58 mph (50 knots) could arrive within 72 hours.
2	Indicates surface winds in excess of 58 mph (50 knots) could arrive within 48 hours.
1	Indicates surface winds in excess of 58 mph (50 knots) could arrive within 24 hours.
1E	Indicates surface winds in excess of 58 mph (50 knots) are occurring and other dangerous conditions associated with the storm are present. All outside activity is strictly prohibited.
1R	Indicates life-threatening storm hazards have passed but damage may persist and only emergency responders and damage assessment personnel are released to move about.

Table 2.9. Hurricane Evacuation (HUREVAC).

HUREVAC	CRITERIA
4	30 knots winds or higher within 72 hours.
3	30 knot winds within 48 hours.
2	30 knot winds within 24 hours.
1	30 knot winds within 12 hours.

2.10.2. Forecasted hurricane conditions for any part of JB CHS are for official use only and are not for release to the general public.

2.10.3. Release of HURCON status to non-JBC organizations will be coordinated through Public Affairs for approval.

2.10.4. JB CHS hurricane actions are directed by the 628 ABW/CC under the umbrella of JBCI 10-2, *Installation Emergency Management Plan*.

Chapter 3

MISSION SERVICES

3.1. General. Mission services are those actions directly related to supporting each customer's daily mission(s). The WF, 26 OWS, and 618 AOC/XOW support the JB CHS flying and non-flying missions. This chapter identifies the flying and non-flying missions and the weather support provided.

3.2. Flying Missions. The WF and 618 AOC/XOW provide weather support to the flying units listed in [Attachment 7](#). The bulk of flying operations at JB CHS are supported by 618 AOC/XOW (reference para 1.3.4.).

3.2.1. **Alert Missions.** WF provides support via an automated online weather briefing package designed specifically for Alert Missions. The Weather Information page is located at: <https://globalreach.amc.af.mil/User/WeatherInformation/?FileID=8327>.

3.3. MWP. MWPs fuse theater scale products with local mission requirements enabling the direct inject of weather impacts into warfighter planning and/or execution. The result is a product designed to provide timely, accurate, and relevant environmental information for planning and execution. MWPs should be horizontally consistent with (but not necessarily mirror) products issued by the CU.

3.3.1. **GDSS Weather Briefings.** GDSS is the primary command and control system used by AMC owned/gained flying units to obtain weather briefings. GDSS provides a unique product that incorporates the requirements of all AMC-based flying units into a common format. Updates can be obtained by calling 618 AOC/XOW. Unless in a COOP situation, all 437 AW and 315 AW FWBs are produced by the 618 AOC.

3.3.2. **Planning Air Operations Directive (AOD) Forecast.** The WF provides a 3-day AOD Forecast for mission planning purposes, posted on the AMC Global Reach website.

3.3.3. **5-Day Forecast.** The WF provides a Charleston 5-day weather forecast for non-operational use.

3.4. MISSIONWATCH. A deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors that may adversely impact missions in execution. The MISSIONWATCH process is intended to identify previously unidentified environmental threats and alert decision-makers at the operational unit and/or airborne mission commanders, enabling dynamic changes to mission profiles that may mitigate the environmental threat and optimize the chance of mission success.

3.4.1. **WF Briefed Sorties.** The WF utilizes a continuous MISSIONWATCH process to validate that MWPs accurately reflect environmental conditions. When MWPs differ from observed conditions to the extent that it has the potential to impact operations, the WF coordinates MWP amendments/updates with the appropriate OWS. Additionally, when previously unforeseen weather conditions expose a mission to potential risk, the WF directly updates the 628 ABW/CP. The 628 ABW/CP retains responsibility for relaying updated weather information to the aircrew.

3.4.2. **618 AOC/XOW Briefed Sorties.** 618 AOC/XOW performs MISSIONWATCH and weather risk assessment for all 618 AOC/XOW briefed sorties. 618 AOC/XOW uses the WTA to relay information on missions considered “at risk” based on the Operational Risk Management Thresholds identified in AMCI15-101. Users can access the WTA at <https://tacc.scott.af.mil/?action=WTAMain>.

3.4.2.1. The 628 ABW/CP automatically receives WTA notifications for wing-specific missions through a subscription service. Upon receipt of weather threat notification, the ABW/CP notifies appropriate Squadron Operations Centers/aircrews to pass along weather threats and instruct the aircrew to contact 618 AOC/XOW to mitigate the threat.

3.4.2.2. The WF performs a continuous MISSIONWATCH on all non-IFM JB CHS sorties. Additionally, the WF monitors GDSS for situational awareness on IFM missions involving 437 AW, and 315 AW assets. The WF coordinates with 618 AOC/XOW whenever observed weather conditions deviate significantly from the published WTA.

3.5. Post-Mission Analysis/Feedback. Aircrews should contact 618 AOC/XOW or the WF with post-mission information and/or follow-up support. 618 AOC/XOW and the WF utilize customer feedback to improve internal processes and enhance training, forecast proficiency, and product accuracy. Formal/informal feedback methods include:

3.5.1. 437 OSW/OSW

3.5.1.1. Feedback worksheet maintained on Global Reach at the following web address

3.5.1.1.1. <https://globalreach.amc.af.mil/User/WeatherInformation/?FileID=12391>

3.5.1.2. Phone call to on-duty Forecaster, NCOIC, or Flight Chief at DSN 673-3011

3.5.1.3. Face-to-face feedback after briefing and/or mission completion

3.5.1.4. Through the 437 OSS Director of Operations (437 OSS/DO) at DSN 673-6198

3.5.2. 618 AOC/XOW

3.5.2.1. Feedback solicitation via mail to the following e-mail

3.5.2.1.1. Weather.Services@us.af.mil

3.5.2.2. Phone call to the 618 AOC/XOW at (618) 229-0353/DSN 779-0353

3.6. Transient Aircrew Support.

3.6.1. Non-theater/strategic airlift and/or air refueling transient aircrews may submit request for flight weather briefings (DD 175-1s) in person or via phone. If the WF workload is such that they are unable to support transient crew requests (see **Table 1.2** 437 OSS/OSW Duty Priority Listing), the WF may direct aircrews to contact the 26 OWS briefing cell for flight weather information.

3.7. Non-Flying Missions. The WF and 26 OWS support various non-flying missions (e.g., NAVY munitions movements, Wg Picnics, change of command ceremonies, Morale Welfare and Recreation, etc.) with tailored forecast support and RP products (WWAs). Specific support to non-flying missions is identified in Chapter 4. Specialized weather information can be

provided to support any non-flying mission upon request. Non-governmental agencies should request weather information and support through 628 ABW Public Affairs.

3.8. Space Weather Impacts. JB CHS has a wide-variety of operations affected by various space-weather parameters (High Frequency and Ultra High Frequency communication, radar, Global Positioning System communications, etc.). The WF and 618 AOC/XOW provide space impacts on their MWPs. More detailed space environmental situational awareness products are available at https://ows.scott.af.mil/by_type/space/index.cfm.

Chapter 4

STAFF SERVICES

4.1. General. Staff services are typically accomplished by WF leadership (e.g., Flight Chief and NCOICs) and include meteorological functions (briefings), ensuring the WF is trained and equipped for day-to-day operations, and cultivating relationships with base agencies to ensure WF support is optimal.

4.2. Staff Meteorological Functions. Staff meteorological functions aid leadership in identifying and understanding specific weather and environmental impacts. The WF is available to assist commanders in determining weather support requirements and impacts to operations. Examples of staff meteorological functions provided are:

4.2.1. **Wing Staff Briefings.** Staff weather briefings for 628 ABW & 437 AW (Wing stand up/MUM) are provided as required. Standard information may include, but is not limited to, CONUS satellite imagery, 30 hour outlook, radar imagery, and a 5-day JB CHS weather outlook with a focus on any affected Wing events.

4.2.2. **Emergency Operations Center (EOC)/Crisis Action Team (CAT) Briefings.** The WF provides weather support as required for EOC/CAT briefings. This includes real-world emergency, exercise, and deployment briefings. Each briefing is tailored to provide the appropriate weather intelligence required by JB CHS leadership.

4.2.3. **Instrument Refresher Course (IRC) Briefings.** The IRC program for 437 AW and 315 AW aircrews is managed by L3 Communications, and incorporates all required training IAW AFMAN 11-210, *Instrument Refresher Course (IRC) Program*; to include weather. However, if required, computer based training by the WF is available, and can cover detailed local weather effects and impacts to operations. This briefing includes airfield and mission services, WF capabilities, RP, seasonal/regional weather, and space weather impacts (when applicable).

4.2.4. **Pre-deployment Planning Briefings.** The WF provides pre-deployment weather briefings as requested. Briefing content is tailored to meet customer requirements. For example, an aviation unit receives weather impacts for the deployed location based on their flying mission, in addition to the standard surface weather information usually presented to ground units. A ground-based unit may receive a briefing on surface temperatures, wind speed, potential for blowing sand and dust, and precipitation.

4.2.5. **Climatology Services.** The 14 WS is the POC for climatology support. The WF can provide a wide variety of climatology products upon request. Example products include, but are not limited to, historical surface observations, long-range outlooks, global cloud cover, and upper level wind climatology.

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

4.3.1. **437 AW/XP, 628 ABW/XP, and 315 AW/IGI.** The WF assists in periodic exercises tailored to upcoming seasonal weather or other environmental concerns, and educates base agencies on the purpose and applicability of weather WWAs.

4.3.2. **628 ABW CP.** The WF notifies the CP whenever the WF primary facility is evacuated and/or the AOL is activated.

4.3.3. **628 ABW/Public Affairs.** The WF provides tours of the WF facility for community groups and others when coordinated by Public Affairs.

4.3.4. **437 OSS/OSAA.** The OWS or WF provides notification of all forecasted and observed weather WWAs via an automated Integrated Weather Warnings Capability (IWWC) telephone call, e-mail, or in-person during airfield hours of operations.

4.3.4.1. The WF notifies Airfield Management (OSAA) whenever the WF primary facility is evacuated and/or the AOL is activated.

4.3.4.2. WF leadership participates as a member of the Airfield Operations Board (AOB) as directed in AFI 13-204v3.

4.3.5. **All Supported Flying Units.** The WF provides services as outlined throughout this publication.

4.4. Reciprocal Support.

4.4.1. 628 ABW/CP.

4.4.1.1. Ensure dissemination of all WWA as outlined in [Table 2.1](#) of this document.

4.4.1.2. Immediately notify the WF forecaster-on-duty of any aircraft or ground mishaps (weather-related or not) requiring OPREP-3 reporting or local reporting requirements IAW AFI 10-206.

4.4.1.3. Subscribe to and monitor the 618 AOC/XOW WTA notifications for 437 AW and 315 AW missions IAW AMCI 15-101.

4.4.1.4. Upon notification, by either the WF or 26 OWS, of the potential for severe weather, utilize applicable Quick Reaction Checklists (QRCs) to alert wing leadership and various base agencies.

4.4.1.4.1. Activate base peacetime emergency sirens when a tornado WARNING is issued.

4.4.1.5. Notify WF of any wing events or incidents that may require weather support (e.g., CAT activation).

4.4.2. 628 ABW/Public Affairs.

4.4.2.1. Coordinate requests for weather information from non-DoD agencies and tours of WF facilities with the WF.

4.4.2.2. Coordinate weather messages to JB Charleston personnel through WF for accuracy/verification of data.

4.4.3. **437 OSS/OSAA.**

4.4.3.1. Notify WF personnel of in-flight, ground emergencies, or mishaps and termination via the secondary crash network.

4.4.3.2. Disseminate weather warnings and advisories as outlined in **Table 2.1** of this instruction.

4.4.4. **437 OSS/OSAM.**

4.4.4.1. Provide, coordinate, or arrange for the installation, maintenance, and repair of weather communication and meteorological sensing equipment; except for the communication and meteorological equipment maintained by contract.

4.4.4.2. Coordinate with the weather technician prior to performing maintenance on weather communications or equipment. Ensure routine maintenance does not degrade METWATCH and/or MISSIONWATCH performed by the WF during periods of inclement weather.

4.4.4.3. Utilize the restoration priorities for weather communications and meteorological sensing equipment outlined in this document.

4.4.4.4. Notify the responsible service agents for weather communications and meteorological sensing equipment outages.

4.4.4.5. Coordinate with off-base agencies to repair off base lines.

4.4.4.6. Perform necessary follow-up actions as required until full service is restored.

4.4.4.7. Ensure weather data and telephone circuits are assigned repair priorities.

4.4.4.8. Ensure established maintenance response times are met.

4.4.4.9. Ensure a 24-hour point of contact for reporting outages and assigning job control numbers is available.

4.4.4.10. Provide copies of and updates to Technical Orders on all weather equipment they maintain to the WF upon request for reference purposes.

4.4.4.11. Assist the WF FMQ-19 System Manager in verifying SPECI criteria is correct annually and/or after every software upgrade using the criteria listed in section 2.2.5. of this document. Changes to SPECI criteria in the FMQ-19 server will be coordinated between the WF and CS.

4.4.4.12. Assist the WF with barometry program (e.g., TMQ-53, FMQ-19).

4.4.5. **437 AW/SE & 628 ABW/SE.** Request a JB CHS WF briefer for seasonal weather briefings; provide 2 weeks advance notice when possible.

4.4.6. **628 Civil Engineering Squadron (CES).** Contact the WF Chief to request climatological data and specialized support for projects on JB CHS.

4.4.7. **628 SFS.** Promptly inform the WF of any hazardous weather reported by Security Forces personnel (e.g., tornado, hail, etc.).

4.4.8. **All Supported Flying Units (437 AW and 315 AW)**

4.4.8.1. Notify the WF of current and planned weather alternates and any special considerations affecting the duration of the mission (i.e., weather categories, exercise/deployment considerations, etc.).

4.4.8.2. Notify the WF of required additional support as soon as it becomes known to include monitoring of alternate observations/forecast and tracking of weather conditions affecting local flying operations.

4.4.8.3. Provide timely notification of changes to scheduled operations affecting weather support requirements as soon as the change is identified.

4.4.8.4. Provide PIREPS either directly to the WF or through CP.

4.4.8.5. Provide feedback on weather briefings via e-mail or survey to the WF or 618 AOC/XOW.

4.4.8.6. Provide the WF a minimum of 2 weeks advanced notification of any requirement for training conducted by the WF or any changes in requirements to previously scheduled weather training.

4.4.8.7. Alert WF as soon as possible (more than six hours) or any Aircrew Self-File and Plan (ASFP) missions requiring FWB support.

4.4.9. **Base Operations FLIP Manager.** Submit FLIP updates provided by the WF to Air Force Flight Standards Agency/Operating Location-D (AFFSA)/OL-D.

4.4.10. **628 AMDS/SGPB (Bioenvironmental Flight).** Provide the base populace with the Wet Bulb Globe Temperature as required. Inquiries should be directed to (843) 963-6289 / DSN 673-6289.

4.4.11. **All Weather Support Recipients.** Notify the WF when new weather support requirements are identified or when changes to current weather support is deemed necessary.

4.4.11.1. Provide a minimum of 3 working days' notice for known weather support requirements entailing out of station support.

Chapter 5

WEATHER EQUIPMENT

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

5.2. Meteorological Equipment.

5.2.1. **FMQ-19 (KXNO).** The FMQ-19 samples, measures, and reports: temperature, wind speed and direction, visibility, cloud base height and amount of coverage, pressure, liquid equivalent precipitation accumulation, and ice accretion during freezing precipitation. These measurements are processed to create properly formatted, fully automated observations that comply with applicable reporting standards and protocols defined by the World Meteorological Organization (WMO), FAA, National Weather Service (NWS), and military reporting standards. **Note:** TMQ-53 is a tactical automated observing system that is used by the WF during contingency and exercise operations. The TMQ-53 provides a capability that is very similar to the FMQ-19.

5.2.2. **Gibson Ridge Software (GRS).** The WF utilizes the GRS applications including GRLevel2 for viewing Level II radar data and GRLevel3 for viewing Level III data. Both viewers feature high speed, high quality radar displays with an intuitive user interface. Weather technicians make use of the software to analyze complex radar signatures and obtain detailed information on storm intensity, movement, internal circulation, and general wind flow. Weather technicians routinely incorporate the latest radar information into all mission execution forecasts and RP products.

5.2.3. **Tactical Decision Aids (TDAs).** The WF does not utilize TDAs to support the JB Charleston aviation mission. Typically, TDAs such as the Target Acquisition Weather Software (TAWS) and Integrated Weather Effects Decision Aids (IWEDA) are used for detection and/or lock-on range of air-to-ground electro-optical weapons and sensor systems.

5.3. Communications Equipment. The following systems are the backbone of the WF communications network:

5.3.1. **JET.** JET is the primary system for disseminating/retrieving forecast, observations, warnings, watches, and advisories, and locally produced FWBs.

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

5.3.3. **Local Area Network (LAN).** The WF relies heavily on the LAN to improve the timeliness and accuracy of weather intelligence to our customers.

5.4. Maintenance.

5.4.1. Organizations providing preventive maintenance and repair of weather and communications equipment are listed in **Table 5.1**.

Table 5.1. Equipment Maintenance List.

Organization	Equipment
437 OSS/OSAM (ATCALs)	FMQ-19
437 OSS/OSAM (ATCALs)	TMQ-53 *Comparison and calibration only
557 th Weather Wing Fielded Systems	JET
628 CS/CFP (Telephone Systems)	Phones
628 CS/CFP (Network Maintenance)	LAN/Internet Connectivity

5.4.2. **Restoral Priorities.** Priorities for restoring critical systems exist in the event of natural disasters or any other anomaly, simultaneously impacting systems base-wide. **Critical** indicates a situation where the equipment is completely inoperative, while **low** means the equipment is in limited operation. Response times for weather equipment are listed in **Table 5.2** below (priorities may be adjusted based on forecasted weather).

Table 5.2. Equipment Restoral Priorities.

Equipment	Organization	Response Time/Update/Monitor
FMQ-19	437 OSS/OSAM (ATCALs)	Immediate/24 hours/Daily
LAN/Internet Connectivity/Phones/ JET	628 CS/CPF	CFP technicians are on call 24 hours a day. After hours support response time will be determined by the AMC Major Command Coordination Center (MCCC) which can be reached by dialing DSN: 673 2666.

5.5. Building Power. In the event of a commercial power interruption, Bldg 169 automatically switches to generator backup power.

ROBERT K. LYMAN, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- AFPD 15-1, *Air Force Weather Operations*, 19 February 2010
- AFI 10-206, *Operational Reporting*, 06 September 2011
- AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 24 January 2007
- AFI 11-2C-21v3, *C-21 Operations Procedures*, 24 September 2010
- AFI 11-208 IP, *Department of Defense Notice to Airmen (NOTAM) System*, 3 June 2011
- AFI 13-204v3, *Airfield Operations Procedures and Programs*, 1 September 2010
- AFI 15-114, *Functional Resource and Weather Technical Performance Evaluation*, 7 December 2001
- AFI 15-128, *Aerospace Weather Operations – Roles and Responsibilities*, 07 February 2011
- AFI 11-202v3, *General Flight Rules*, 22 October 2010
- AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, 13 March 2013
- AFMAN 11-210, *Instrument Refresher Program (IRP)*, 3 February 2005
- AFMAN 15-111, *Surface Weather Observations*, 27 February 2013
- AFMAN 15-124, *Meteorological Codes*, 28 February 2013
- AFMAN 15-129v1, *Air and Space Weather Operations- Characterization*, 06 December 2011
- AFMAN 15-129v2 AMCSUP, *Air and Space Weather Operations-Exploitation*, 27 June 2014
- NWSI 10-813, *Terminal Aerodrome Forecasts*, 2 October 2014
- OSAA OI 13-204, *Airfield Management*, 31 July 2011
- SAFBI 13-201, *Airfield Management and ATC*, 22 September 2010

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

618 AOC/XOW—618 Air Operations Center (Tanker Airlift Control Center), Global Weather Operations Directorate

ABW—Air Base Wing

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFB—Air Force Base

AFFSA—Air Force Flight Standards Agency
AFPD—Air Force Policy Directive
AFRIMS—Air Force Records Information System
AFW-WEBS—Air Force Weather Web Service
AGL—Above Ground Level
AIREP—Air Report
AMC—Air Mobility Command
AMCI—Air Mobility Command Instruction
AMOS—Automated Observing System
AOB—Airfield Operations Board
AOD—Air Operation Directive
AOL—Alternate Operating Location
ASFP - Aircrew Self-File and Plan
ATC—Air Traffic Control
ATCALS—Air Traffic Control and Landing Systems
AW—Airlift Wing
CAT—Crisis Action Team
CBRN—Chemical, Biological, Radiological, and Nuclear
CC—Commander
CES—Civil Engineering Squadron
CMWP—Controlled Mission Weather Products
CONUS—Continental United States
COOP—Continuity of Operations Plan
CP—Command Post
CU—Characterization Unit
CWW—Cooperative Weather Watch
EM—Emergency Management
EOC—Emergency Operations Center
EU—Exploitation Unit
EWO—Emergency War Orders
FAA—Federal Aviation Administration
FITL—Forecaster-in-the-Loop

FLIP—Flight Information Publication
FWB—Flight Weather Briefing
GDSS—Global Decision Support System
GRS—Gibson Ridge Software
HF—High Frequency
HURCON—Hurricane Conditions
HUREVAC—Hurricane Evacuation
IAW—In Accordance With
ICAO—International Civil Aviation Organization
IDP—Installation Data Page
IFM—Integrated Flight Management
IRC—Instrument Refresher Course
IWEDA—Integrated Weather Effects Decision Aids
IWWC—Integrated Weather Warnings Capability
JBCHS—Joint Base Charleston
JET—Joint Environmental Toolkit
JOAF—Joint Operational Area Forecast
KCHS—Charleston International Airport
KT—Knot
KXNO—North Auxiliary Airfield
LAN—Local Area Network
LWU—Lead Weather Unit
MAF—Mobility Air Force
METAR—Meteorological Terminal Aviation Routine Report
METWATCH—Meteorological Watch
MISSIONWATCH—Mission-Scale Meteorological Watch
MOAF—Military Operating Area Forecast
MWP—Mission Weather Product
NHC—National Hurricane Center
NOAA—National Oceanic and Atmospheric Administration
NOTAM—Notice to Airmen
NWS—National Weather Service

OG—Operations Group
OID—Operator Interface Display
OPLAN—Operations Plan
OPR—Office of Primary Responsibility
OPREP-3—Operational Report
OSS—Operations Support Squadron
OWS—Operational Weather Squadron
PACAF— Pacific Air Forces
PIREP—Pilot Report
PMSV—Pilot-to-Metro Service
POC—Point of Contact
QRC— Quick Reaction Checklists
RDS—Records Disposition Schedule
RP—Resource Protection
RVR—Runway Visual Range
RVRNO—Runway Visual Range Not Available Remark
RWY—Runway
SE—Safety Office
SFS—Security Forces Squadron
SM—Statute Mile
SOP—Standard Operating Procedure
SPEC/AMD— Specification and Amendment
SPECI—Aviation Selected Special Weather Report
SWAP—Severe Weather Action Plan
SWS—Special Weather Statement
TAF—Terminal Aerodrome Forecast
TAWS—Tactical Acquisition Weather Software
TC-TAP - Tropical Cyclone Threat Assessment
TDA— Tactical Decision Aids
UA— Disseminate Routine
USAFE— United States Air Forces, Europe
UFN—Until Further Notice

UUA— Disseminate Urgent

VIS—Visibility

WF—Weather Flight

WMO— World Meteorological Organization

WTA—Weather Treat Assessment

WWA—Watch, Warning, and Advisory

Attachment 2

SAMPLE WEATHER ALPHANUMERIC PRODUCT

Table A2.1. Observed Weather Warning.

<p>JB CHS WEATHER WARNING 05-001 VALID 17/1921Z (17/1321L) TO Until Further Notice (UFN) LIGHTNING IS OBSERVED WITHIN 5NM 08/RS 1. FORECAST WEATHER WARNING. JB CHS WEATHER WARNING 11-051 VALID 10/1500Z(10/0900L) TO 10/2200Z(10/1600L) WINDS ASSOCIATED WITH MODERATE THUNDERSTORMS ARE FORECAST TO BE 35-49 KNOTS AT JB CHS. MAXIMUM GUST EXPECTED: 41 KNOTS 18/THB 2. WEATHER WATCH. JB CHS WEATHER WATCH 05-215 VALID 15/1858Z (15/1358L) TO 15/2100Z (15/1600L) A LIGHTNING WATCH IS NOW IN EFFECT FOR JB CHS UNTIL 1600L. A WARNING WILL BE ISSUED LATER IF REQUIRED. 58/GO 3. OBSERVED WEATHER ADVISORY. JB CHS WEATHER ADVISORY 09-134 VALID 08/1408Z (080908L) TO UFN CROSSWINDS OBSERVED TO BE EQUAL TO OR GREATER THAN 25KTS 44/ST</p>

Attachment 3

CUSTOMER RESPONSE MATRIX

Table A3.1. Customer Response Matrix.

Weather Phenomena	Lead Time	Impact	Customer Action
Tornado anywhere on JB CHS, North Auxiliary Field, or Short Stay Recreation Area	15 min	Personal injury Equipment damage	Seek shelter
Hail (3/4" or more)	60 min	Personal injury Equipment damage	Seek shelter; hangar or divert aircraft
Freezing Precipitation	60 min	Delay or cease operations	Cease flying; hangar or protect aircraft
Surface winds ≥ 50 knots	60 min	Flight hazard Equipment damage Maintenance Delays	Cease unnecessary flying; secure or hangar aircraft; secure light objects outside
Surface winds ≥ 35 knots < 50 knots	60 min	Flight hazard Equipment damage Maintenance delays	Cease unnecessary flying; secure or hangar aircraft Maintenance impacted
Lightning w/in 5 nm of KCHS / KXNO Airfields	Observed	Delay operations	Cease flightline work; clear pool/golf course if applicable
Surface winds ≥ 25 knots ≤ 34 knots	60 min	Equipment damage/ Maintenance Delays	Secure light objects outside/ Maintenance Impacted
Low Level Wind Shear	Observed	Delay or cease operations	Delay or cease take-off/landing Evaluate shear conditions
Measureable Snowfall within 12 hours	120 minutes	Delay operations	Activate snow removal plan Hangar aircraft
Equivalent Wind Chill Temp < +10°F	Observed	Slow/delay outside work	Work 40 minutes Rest 20 mins in heated area
Surface Temp < +25°F	60 minutes	Slow/delay outside work	Work 40 minutes Rest 20 mins in heated area
Lightning w/in 5 nm of Naval Weapon Station	Observed	Delay operations	Clear pool/golf course

Lightning w/in 10 nm of Naval Weapon Station	Observed	Delay operations	Cease munitions work
Surface winds ≥ 25 knots ≤ 34 knots (Small Craft Advisory at Short Stay Recreation Area)	60 min	Increase vigilance	Recall small craft Notify boaters

Attachment 4

FLYING UNITS SUPPORTED AND MISSION LIMITING ENVIRONMENTAL CONDITIONS

Table A4.1. Flying Units Supported.

Organization	Mission	MWP Provider
437 AW (C-17)	Provide airlift and training missions for war, peacetime, and contingency requirements.	618 AOC/XOW
315 AW (AFRC) (C-17)	Provide airlift and training missions for war, peacetime, and contingency requirements.	618 AOC/XOW
Transient (Non airlift/air-refueling)	N/A	WF (As duty priorities allow)

A4.1. Mission Limiting Thresholds.

A4.1.1. **Airframe-Specific Weather Limitations.** Table A4.2 – A4.5 provide the general airframe weather limitations based on AFI 11-202V3, *General Flight Rules* and the limitations from aircraft specific AFI 11-2.

Table A4.2. USAF General Flight Rules Weather Limitations.

(Ref: AFI 11-202V3)		
Weather Condition	Impact	Customer Action
Cig/Visibility (Vis) < 2,000 / 3	IFR Alternate required	Add fuel to allow divert
Cig/Vis < 1,000/ 2, if MAJCOM approved	IFR Alternate required	Add fuel to allow divert
Cig/Vis < 500 / 2	Terminal not suitable for alternate	Select another alternate

Table A4.3. C-17 Weather Sensitivities.

Condition	Limit	Response Action
Normal Landing CAT II (Runway (Rwy) 15) Landing Mins at CHS REF: FLIP	Visibility RVR	Cannot and with < ½ SM Cannot land with < 1200 foot RVR
All AF Aircraft: Overseas destination REF: AFI 11-202V3	N/A	Alternate required
Icing REF: AFI 11-2C-17V3	Intensity	Should not cruise in moderate or greater (will avoid once encountered) Will not fly into forecasted or reported severe
Turbulence REF: AFI 11-2C-17V3	Intensity	Should not cruise in moderate or greater (will avoid once encountered) Will not fly into forecasted or reported severe
Thunderstorms REF: AFI 11-2C-17V3	Avoidance parameters	At/Above FL230: 20NM separation Below FL230: 10NM separation
Wind Ref: TO 1C-17A-1	Evacuation intensity	Evacuate to safe weather location if winds in excess of 70KTS expected
Crosswinds Ref: TO 1C-17A-1	Intensity	Cannot exceed 30KTS real world Cannot exceed 25KTS for Touch & Go training
Tailwind Ref: TO 1C-17A-1	Intensity	Cannot land with a tailwind greater than 10KTS
Headwind Ref: TO 1C-17A-1	Intensity	Cannot land with a headwind greater than 40KTS

Table A4.4. C-17 Mission Specific Limiting Weather.

(Ref: AFI 11-2C-17, Volume 3, <i>C-17 Operations Procedures</i>)		
Maneuver	Ceiling/Visibility Minimums	Other Restriction
Touch & Go Training AFI 11-2C-17V3	Ceiling / Visibility	Cannot perform with < 300FT and 3/4SM
North Auxiliary Airfield: Training Sorties AFI 11-2C-17V3	Ceiling / Visibility	600FT/2SM due to no instrument approaches into North Auxiliary Airfield
Air Refueling AFI 11-2C-17V3	Visibility	Single receiver cannot refuel with < 1SM For formations of two or more tankers/receivers; cannot refuel with < 2SM
Air Refueling AFI 11-2C-17V3	Thunderstorms	Cannot refuel in thunderstorms
Air Refueling AFI 11-2C-17V3	Turbulence	Cannot refuel in moderate or greater turbulence & will not launch with severe turbulence forecasted
Air Refueling AFI 11-2C-17V3	Icing	Cannot refuel with moderate or greater icing
Airdrop: Unilateral (Air Force) training AFI 11-2C-17V3	Ceiling/Visibility	Cannot drop with < 300FT / 1/2SM
Airdrop: Joint Operations AFI 11-2 C-17V3	Ceiling/Visibility	Weather minimums are at the discretion of the using agency
Personnel Airdrops above 3000ft AGL: (Land) i.e.: HALO/HAHO AFI 13-217 (FCB A-12)	Wind (including gusts)	Wind limits are at the discretion of the using agency
Personnel Airdrops above 3000FT AGL: (Water) AFI 13-217 (FCB A-12)	Wind (including gusts)	Wind limits are at the discretion of the using agency

Satellite Communications	Limited by changing conditions in the ionosphere	May not be able to communicate when ionospheric conditions are forecasted to be marginal or red along route of flight
High Frequency (HF) Communications	Limited by changing conditions in the ionosphere	May not be able to communicate when ionospheric conditions are forecasted to be marginal or red along route of flight
**These can be raised or lowered if using different types of chutes or at the discretion of the user.		

Table A4.5. Weather Minimums for Takeoff Summary for C-17.

Mission	Visibility	Remarks
Operational	RVR 1000FT (300 meters)	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off if mission priority dictates, provided the runway has dual RVR readouts and displays (minimum RVR 1000 on both) and runway centerline lighting is operational. For any takeoff below 1600 RVR, the crew
All others	RVR 1600 (490 meters)	For runways with more than one operating RVR readout, all RVR readings/sensors must be \geq 1600 on all.

Attachment 5
AOD EXAMPLE

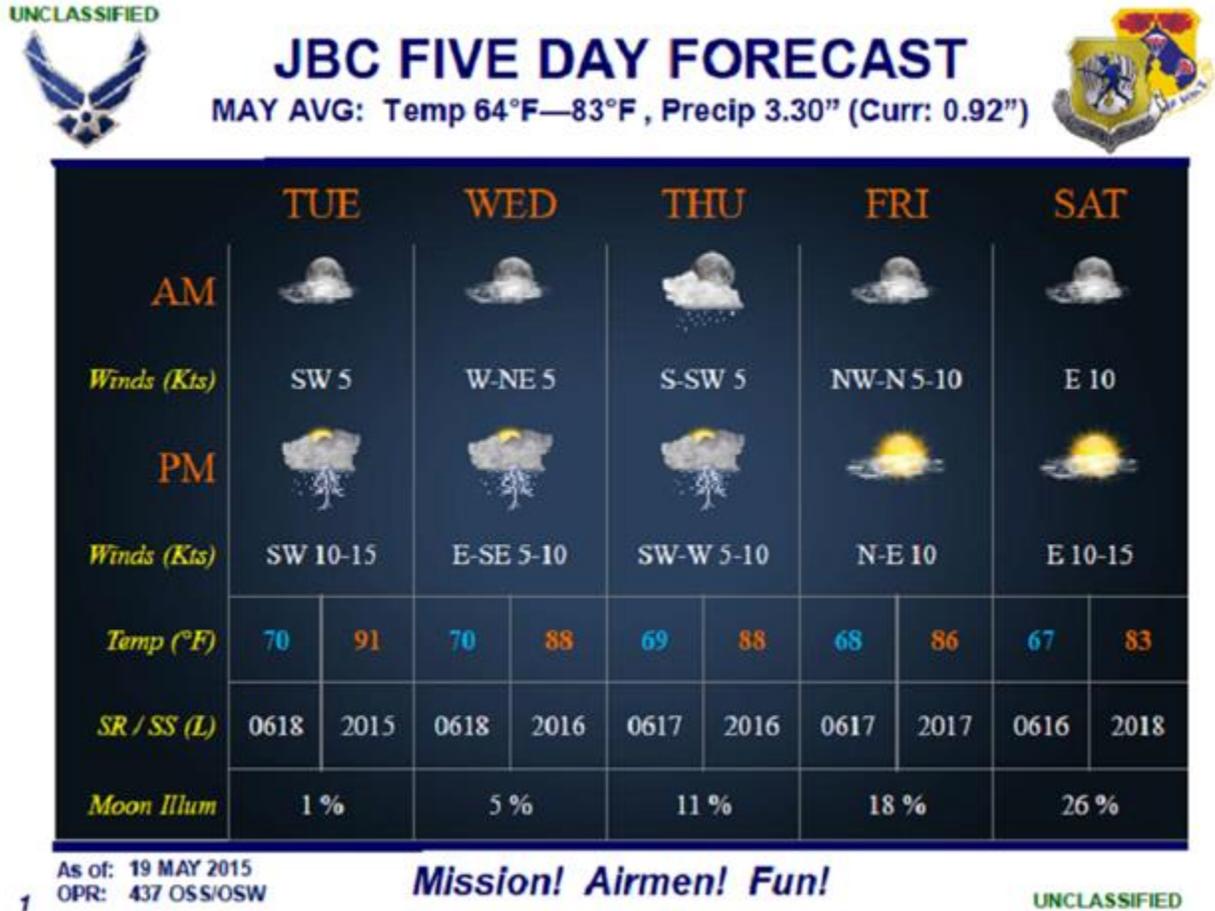
Figure A5.1. AOD Example.

PLANNING ONLY			PLANNING ONLY			PLANNING ONLY											
OPR: 437 OSS/OSW TITLE: Planning Forecast, 72-hr AOD CONTACT: DSN 673-3011 / COMM (843) 963-3011 , E-MAIL 437oss.osw@us.af.mil PRODUCTION: Monday—Friday NLT 1600Z (we desire your FEEDBACK)																	
This product is for PLANNING PURPOSES ONLY , and is prepared daily utilizing meteorological modeling data that is updated automatically every six hours. Aircrew/schedulers/mission planners are advised to supplement the planning forecast by contacting the Joint Base Charleston Weather Flight during normal operating hours (M-F, 0700-1600L), or by using the provided links below. *** All Day-time blocks are LOCAL ***																	
FRI 20 May 16			SAT 21 May 16			SUN 22 May 16											
NORTH AUXILIARY AIRFIELD (KXNO)																	
AM		PM		AM		PM		AM		PM							
CIG	VIS	WX	CIG	VIS	WX	CIG	VIS	WX	CIG	VIS	WX	CIG	VIS	WX	CIG	VIS	WX
SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)		SFC Wind (KT)			
07010		08010G15		23010		32010G20		08010		04010G15		04010G15		04010G15			
Min Temp (°C/°F)		Max Temp (°C/°F)		Min Temp (°C/°F)		Max Temp (°C/°F)		Min Temp (°C/°F)		Max Temp (°C/°F)		Min Temp (°C/°F)		Max Temp (°C/°F)			
19/66		22/72		18/65		25/77		16/61		23/74		16/61		23/74			
AIR REFUELING ROUTE (AR-216)																	
AM		PM		AM		PM		AM		PM							
CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX
TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG		
FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)			
25040		24050		26050		29040		28060		02050		02050		02050			
AIR REFUELING ROUTE (AR-207)																	
AM		PM		AM		PM		AM		PM							
CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX
TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG		
FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)			
24040		23045		25045		26045		27055		34035		34035		34035			
AIR REFUELING ROUTE (AR-202)																	
AM		PM		AM		PM		AM		PM							
CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX	CLD	VIS	WX
TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG	TURBC	ICG		
FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)		FL270 Wind (KT)			
26035		25040		24040		25050		26045		28050		28050		28050			
KXNO: Metogram Hazards WX Obs/TAFs KCHS 5-Day 4-Day Outlook 3-Day Precip			AR-216: Metogram Metogram Metogram FL270 Winds > 5K Ft CLDs CIGs < 3K Ft			AR-207: Metogram Metogram Metogram FL270 Winds > 5K Ft CLDs CIGs < 3K Ft			AR-202: Metogram Metogram FL270 Winds > 5K Ft CLDs CIGs < 3K Ft								
*** KEY ***																	
KXNO	CEILING	≥ 1100FT	< 1100 but ≥ 600FT	< 600FT													
	WEATHER	NONE	NON-SEVERE	SEVERE													
	VISIBILITY	≥ 3SM	< 3SM but ≥ 2SM	< 2SM													
AR TRACK (FL 260-280)	CLOUDS AT FL	CLR-FEW	SCT	BKN-OVC													
	FL VISIBILITY	> 2NM	1-2NM	< 1NM													
	WEATHER	NO THUNDERSTORMS		THUNDERSTORMS													
	TURBULENCE	NONE	≤ LGT OCNL MDT	≥ MDT													
	ICING	NONE	LGT	≥ MDT													
PLANNING ONLY			PLANNING ONLY			PLANNING ONLY											

Attachment 6

5-DAY PLANNING PRODUCT EXAMPLE

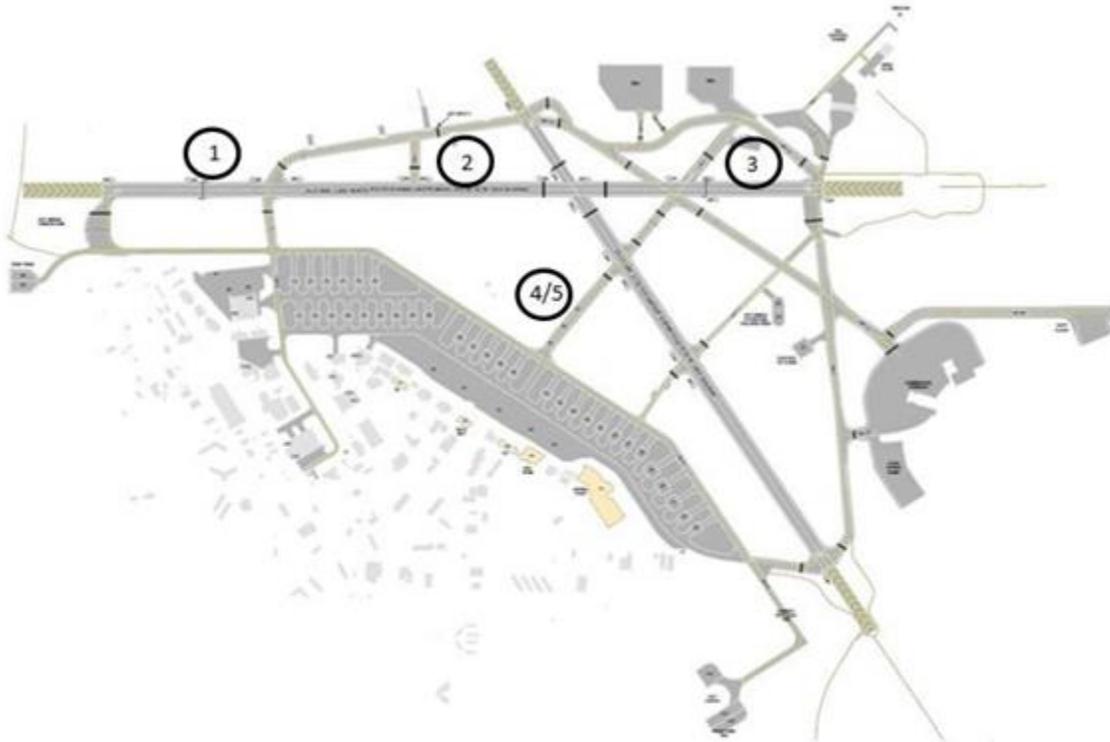
Figure A6.1. 5-Day Planning Product Example.



Attachment 7

JOINT BASE CHARLESTON INTERNATIONAL AIRPORT FAA WEATHER SENSOR LOCATIONS

Figure A7.1. Joint Base Charleston International Airport FAA Weather Sensor Locations.

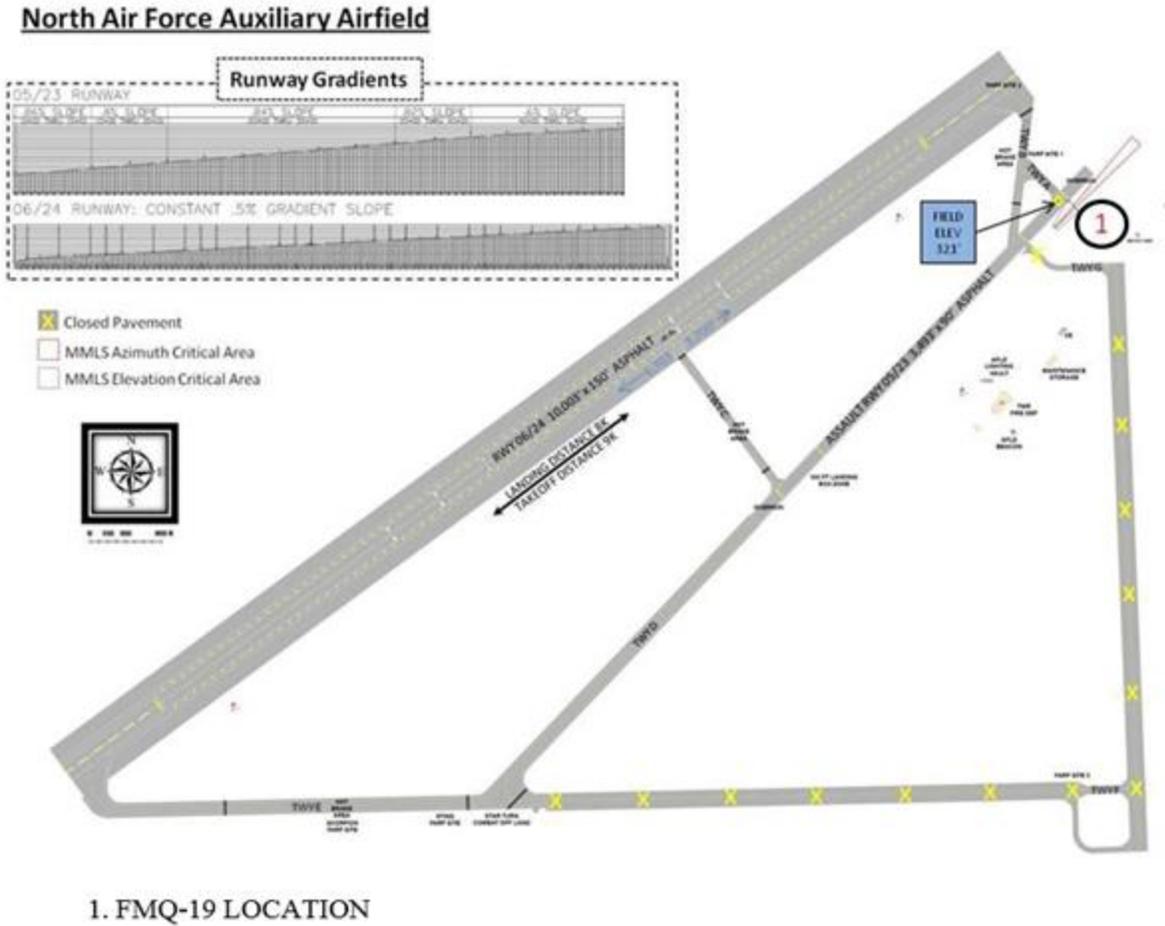


1. RVR Sensor, approach to RWY 15
2. RVR Sensor, Center RWY 33/15
3. RVR Sensor, approach to RWY 33
4. Automated Surface Observing System (ASOS)
5. Lightning Detection Sensor (LDS)

Attachment 8

NORTH AUXILIARY AIRFIELD WEATHER SENSOR LOCATIONS

Figure A8.1. North Auxiliary Airfield Weather Sensor Locations.



Attachment 9

SAMPLE HURRICANE NOTIFICATION FORMAT

Figure A9.1. Sample Hurricane Notification Format.

*** EXAMPLE ONLY ***

Sir/Ma'am,

BLUF

Name: Tropical Storm Erika

Location: 16.8N 61.5W , 1,400 nautical miles southeast of JB Charleston and making landfall along the northern Lesser Antilles Islands

Intensity: Max sustained winds 45 knots with gusts to 55 knots, minimum central pressure 1003 millibars

Movement: West (280 degrees) at 14 knots

CONUS Landfall Location / Date / Time: None at this time

JB Charleston Impacts:

- Potential for tropical storm and/or hurricane conditions at JB Charleston continue to rise with this system as it's track orients more towards the SC coastline
 - Based on current NHC forecast track/intensity guidance, and ensemble modeling, the following tropical conditions have the *potential* to occur:
 - Above normal tide levels with storm surge (greatest risk 1 Sep/2300L during high tide)
 - 30 knots or greater easterly winds by midday Tuesday (1 Sep/1200L)
 - Strengthening to 50 knots or greater easterly winds by midnight Tuesday (2 Sep/0000L)
 - Weakening to less than 30 knots by Wednesday afternoon (2 Sep/1500L)
- NOTE 1: With any tropical system...high winds, torrential rainfall, deadly rip-currents/storm surge, and tornadic threats cannot be ruled out
- NOTE 2: Focus should not be solely on the track itself; history has proven that track errors at day 4 are about 180 miles, and 240 miles by day 5

Future Updates:

- The JB Charleston Weather flight will continue to monitor this storm and send regular updates during normal duty hours (M-F, 0700-1600L)

Figure A9.2. Fleet Weather Center Warning Graphic.

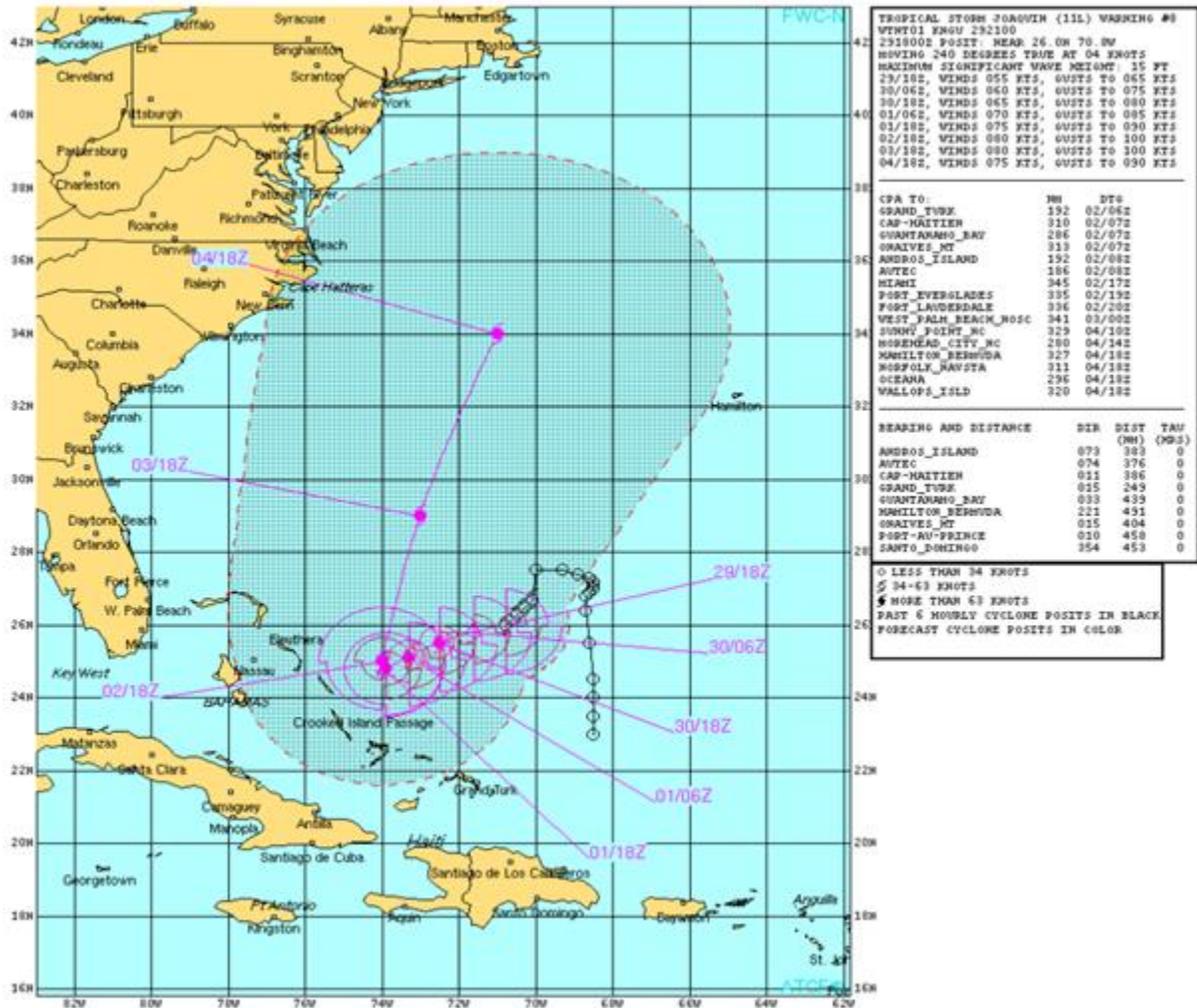


Figure A9.3. National Hurricane Center Warning Graphic (accessed from 26 OWS).

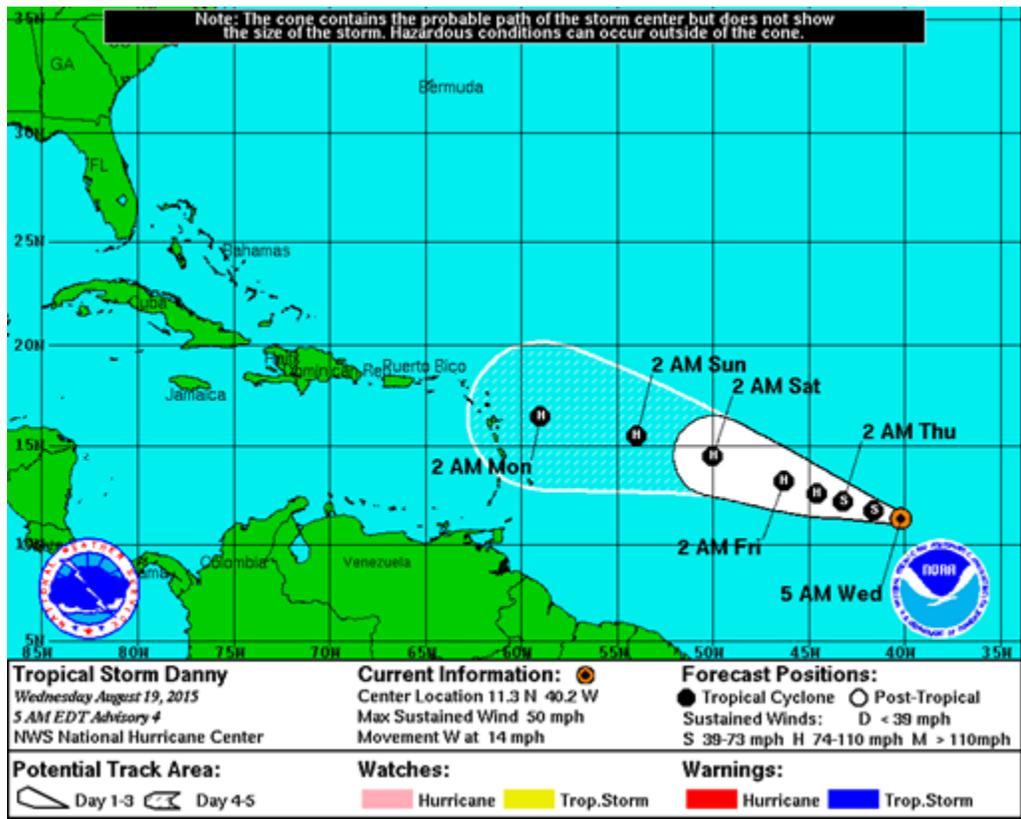
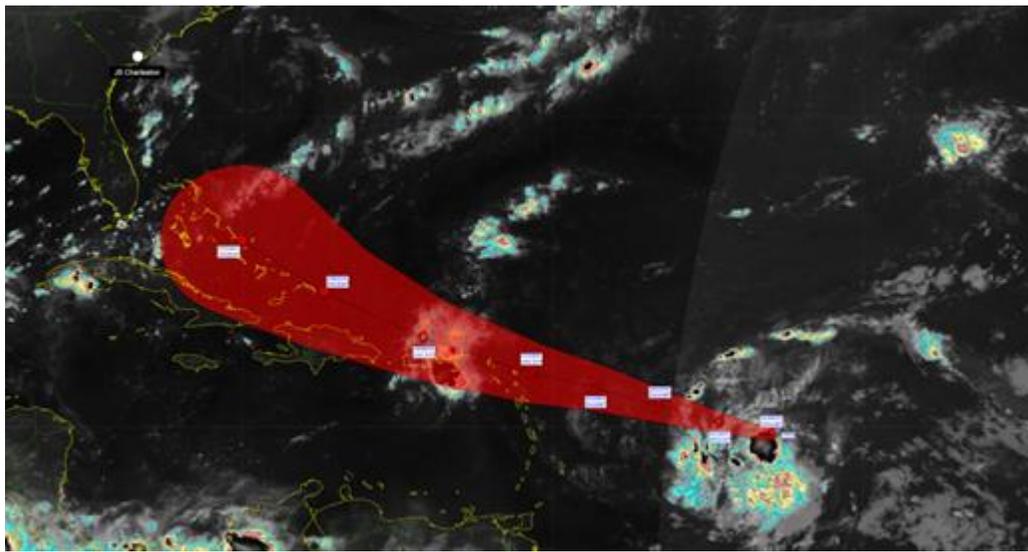


Figure A9.4. Air Force Weather Web Service (AFW-WEBS) Tropical Cyclone Overlay.



Attachment 10

MAP TO ACCESS AOL FROM PRIMARY LOCATION

Figure A10.1. Map to Access AOL From Primary Location.

