

# Memorandum of Agreement

Between

**The National Centers for Environmental Prediction**  
The National Weather Service  
The National Oceanic and Atmospheric Administration

And

**The Air Force Weather Agency**  
The United States Air Force

Regarding

**The Backup of Operational Services of the Aviation Weather Center and the Storm  
Prediction Center by the Air Force Weather Agency at Offutt AFB, NE**

MAY 2004

## **1. Introduction**

**1.1** This Memorandum of Agreement (MOA) between the National Centers for Environmental Prediction (NCEP) of the National Weather Service (NWS) of the National Oceanic and Atmospheric Administration (NOAA) and the Air Force Weather Agency (AFWA) of the United States Air Force (USAF) provides for the AFWA to backup the operational services of the Aviation Weather Center (AWC) and the Storm Prediction Center (SPC) and provide an interim site for AWC and SPC forecasters in the event of a prolonged outage at the AWC or SPC respectively. AFWA in turn receives an ancillary data source, the National-Automated Weather Information Processing System (N-AWIPS) from NCEP on a dedicated communications circuit. This capability could be used as a backup source by AFWA for limited NCEP model data in the event of a catastrophic failure of the NWS Telecommunications Gateway or an Information Assurance-driven lockdown of the unclassified data networks at AFWA (DATMS-U, NIPRNET, etc.).

**1.2** Specifically, this MOA sets forth a framework for mutually beneficial cooperation, and delineates the respective roles of the AWC, the SPC, and the AFWA in administering the operational backup program. For the purposes of this agreement, the backup of services is defined in National Weather Service Policy Directive (NWSPD) 10-22, December 3, 2003, and in Operations and Services Readiness, National Weather Service Instruction (NWSI) 10-2201, February 5, 2004, entitled Backup Operations. Further, the backup responsibility falls under the Office of the Federal Coordinator for Meteorological Services and Supporting Research's Federal Plan for Cooperative Support and Backup Among Operational Processing Centers FCM-P14-2002.

## **2. Authority**

NWS is authorized to enter into this agreement pursuant to 15 USC 313, 49 USC 44720 and 15 USC 1525, the Department of Commerce's joint project authority. AFWA is authorized to enter into this agreement pursuant to DoDI 4000.19 Interservice and Intragovernmental Support. The parties certify that they have a mutual interest in ensuring delivery of the NWS products described herein to the public. The costs associated with this project have been equitably apportioned with each party bearing the costs associated with its participation. This agreement does not involve the transfer of funds between the parties.

## **3. Agency Responsibilities**

### **3.1 AWC Responsibilities**

**3.1.1** In the event of any ground system malfunction, security or safety concerns, failure, or degradation to normal AWC operations, the AWC will notify, via Cell phone and Conference Bridge, the AFWA Operations

Center (Tel 402-294-2586 option 1) and brief the problem. If deemed necessary by the AWC Lead Forecaster, the AFWA will assume backup operations for the AWC until notified by the AWC that they are prepared to resume normal operations or AWC forecasters arrive at the AFWA. The AWC Lead Forecaster will also notify the Senior Duty Meteorologist (SDM) at NCEP Central Operations (NCO) of all changes in status. AWC will also issue an Area Forecast amendment message notifying users of the outage. The AWC Lead Forecaster will also call the Honolulu Forecast Office and the Tropical Prediction Center to notify them that backup is required for the Flight Information Regions (FIR) in the Pacific and Atlantic Oceans. The AWC Lead Forecaster will notify all parties when the emergency has ended.

3.1.2 If the emergency continues for more than 8 hours, the AWC will send forecasters to AFWA and they will work in a designated area on workstations previously provided to AFWA by the AWC. While stationed at AFWA, the AWC forecasters will resume the full operational tactical program of Significant Meteorological Forecasts (SIGMETs), Convective SIGMETs, Airman's Meteorological Information (AIRMETs), and Area Forecasts.

### **3.2 SPC Responsibilities**

3.2.1 In the event of any ground system malfunction, security or safety concerns, failure, or degradation to normal SPC operations, the SPC will notify, via telephone, the AFWA Operations Center (Tel 402-294-2586 option 1) and brief the problem. If it is deemed necessary by the SPC Lead Forecaster, the AFWA will assume backup operations for the SPC until notified by the SPC that they are prepared to resume operations or SPC forecasters arrive at the AFWA. The SPC Lead Forecaster will also notify the SDM at NCO of all changes in status.

3.2.2 If the backup is expected to continue for more than 24 hours, the SPC will send forecasters to the AFWA. They will work in a designated area on workstations provided by the AFWA. The SPC Lead Forecaster will also notify the SDM at NCO of all changes in status.

### **3.3 AFWA Responsibilities**

3.3.1 Once notified by the AWC to begin backup operational support, the AFWA will provide, as required, the following products to the appropriate NWS customers until AWC forecasters arrive at the AFWA or the backup is terminated.

3.3.1.1 Convective SIGMETs, Non-Convective SIGMETs, and AIRMETs as defined in NWSI 10-811.

**3.3.1.2** AFWA will provide additional space for AWC forecasters to carryout Area Forecast (FA) backup responsibility.

**3.3.2** Once notified by the SPC to start operational backup, the AFWA Lead Meteorologist will call the SPC to acknowledge and confirm assumption of operational backup. Upon assumption of operational backup, the AFWA will provide, as required, the following products to the appropriate NWS customers until SPC forecasters arrive at the AFWA or the backup is terminated.

**3.3.2.1** Day 1/Day 2/Day 3 Convective Categorical Outlooks (text and graphics).

**3.3.2.2** Weather Watches (text and graphics).

**3.3.3** The AFWA will provide for necessary maintenance on appropriately designated computer hardware located at the AFWA to properly run all required software for AWC/SPC backup operations. The AFWA Systems and Network Management Branch (SCHS) will also provide access to the NWS equipment for AWC/SPC technical personnel to install and maintain operating software.

**3.3.4** The AFWA will ensure there is a fully trained cadre of forecasters to provide AWC/SPC backup operations. This will include travel by AFWA Strategic Center Backup Lead Meteorologist to the AWC/SPC biannually for training. The AFWA shall be solely responsible for all costs associated with such travel to AWC/SPC.

**3.3.5** The AFWA will be responsible for providing technology refresh, upgrades, and sustainment to all AFWA owned hardware.

#### **3.4 NWS/NCEP Responsibilities**

**3.4.1** The NCEP/NCO SDM, upon notification by either SPC or AWC that AFWA has assumed backup operations, will issue a notification message of a change in status that will be transmitted on Automated Weather Information Processing System (AWIPS) and sent to TOC/Gateway for distribution to all other appropriate communication circuits.

**3.4.2** The NCEP will provide appropriate data sets (e.g., model output, satellite, observations, pireps, etc.) for use on appropriately designated workstations at the AFWA. In addition, training and training materials will be provided as required on system hardware and software.

3.4.3 The NCEP will provide software support, installation, and maintenance to the AFWA for all backup software requirements, including software upgrades for AWC/SPC unique applications and product generation software.

3.4.4 The NCEP will be responsible for providing technology refresh, upgrades, and sustainment to all NWS hardware located at the AFWA.

3.4.5 The NCEP will be solely responsible for all costs associated with travel to AFWA for AWC/SPC technology exchange visits.

### **3.5 Joint NWS/AFWA Responsibilities**

3.5.1 AFWA/XOG and NCEP (AWC and/or SPC) will maintain a mutually coordinated and agreed upon listing of equipment (computer hardware and software), floor plans, communication circuits, etc. associated with this operational backup support. Listing will also document ownership of the equipment.

3.5.2 AFWA and NCEP will share equally the costs incurred for the communications link between NCEP and AFWA.

3.5.3 NWS and AFWA will conduct scheduled practice backup exercises on a quarterly basis. (Request AWC/SPC personnel present)

## **4. Additional Terms and Conditions**

4.1 NWS and AFWA participation in this agreement is subject to the availability of appropriated resources. Nothing herein is intended to conflict with current NOAA and USAF directives. If any terms of this agreement are inconsistent with directives of either of the agencies entering into the agreement, then those portions of the agreement that are inconsistent shall be held invalid. Remaining terms and conditions not affected by the inconsistency shall continue in full force and effect.

4.2 Should a disagreement arise in interpretation of the provisions contained herein, or of any amendment or revision, the parties shall attempt to reconcile the differences first at the operating level. Each party for consideration shall state the areas of disagreement in writing. If the agreement cannot be reached in thirty days, the disputing parties shall forward the written presentation and documents relating to the disagreements to respective higher officials for appropriate resolution.

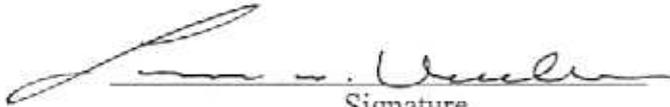
## **5. Effective Date, Period of Performance, and Termination**

5.1 The procedures outlined in this MOA are detailed in NWS directives (Operations Manual Chapters and associated Operations Manual Letters). These procedures will be implemented beginning on the effective date of the update(s) to those directives that reflect this MOA. This MOA becomes effective on the date of the final signature and shall remain in effect until terminated.

5.2 This MOA shall remain in effect for 5 years from the latest date appearing below and shall be reviewed at least annually by all parties concerned to ensure completeness and accuracy. At such time, and at any other time agreed to by the parties, this agreement may be modified as appropriate, and mutually agreed. This MOA may be terminated by either party, but shall require 180 days advance written notification by the terminating party.

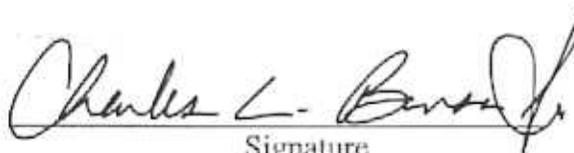
*In witness whereof, the parties do hereby execute this Agreement.*

For the National Weather Service:

  
Signature 6 May 2004  
Date

Louis W. Uccellini  
Director, National Centers for Environmental Prediction

For the Air Force Weather Agency:

  
Signature 25 May 2004  
Date

Charles L. Benson Jr., Colonel, USAF  
Commander