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EASTERN REGION RIVER FORECAST CENTER BACKUP RESPONSIBILITIES

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<signed>

January 11, 2006

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1. Purpose. The purpose of this Supplement is to define the criteria under which River Forecast Centers (RFCs) shall activate backup operations and it will define the terms on-site backup and off-site backup. This supplement also specifies the responsibilities of the various NWS entities to support the backup operations of Eastern Region (ER) RFCs. Backup operations of the Southern Region RFCs supporting Eastern Region offices can be found in Southern Region Supplement 01-2004 “Backup Operations”. Detailed notification procedures applicable to backup operations can found in Eastern Region Supplement 04-2004 Significant Event/Emergency Notification Requirements and Procedures.

2. Background. NWSI 10-911 “River Forecast Center Operations” states that RFC Forecast Services will be provided nominally 16 hours per day and 7 days a week. The NWSPD 10-22 “Readiness” adds the requirement that arrangements be made to provide RFC services from a remote location. This document specifies the means for ER RFCs to provide a basic level of forecast services during times of emergency evacuations, equipment, software, power, and/or telecommunications failures or any other occurrence whereby the RFC facilities could not be used.

The NWSI 10-2201 “Backup Operations” defines the **critical** products as:

- river stage and flow forecasts (product category RVF) issued during flood situations.

Additionally, the following RFC products should be provided with minimal break in service:

- river stage and flow forecasts
- headwater guidance (product category FFH)
- flash flood guidance for basins and counties (product category FFG)
- gridded flash flood guidance
- Hydrometeorological coordination message (HCM), and

- RFC Quantitative Precipitation Forecasts (QPF/QPS).

Also, in the case of OHRFC and MARFC, backup operations will include: the receipt of data from the Army Corps of Engineers (COE) and providing data/products to the COE.

RFCs are not required to support web pages or probabilistic capabilities (ESP) during backup.

3. Beginning and Ending Backup Operations. Backup operations for RFCs will take two forms: on-site or off-site.

On-site backup occurs when an RFC's AWIPS is down or impaired in its function, such that alternate means of conducting operations are necessary. RFC staff will remain on station during on-site backup. During on-site backup, some aspects of web page, ESP and/or AHPS functions may be performed at local RFC discretion. On-site backup will end when the RFC's AWIPS returns to full-function. Local RFC management will determine when on-site backup operations commence or cease.

Off-site backup occurs when an event has occurred at an RFC, such that the equipment and/or facilities to conduct normal operations are completely unavailable. RFC staff will relocate to an alternate location during off-site backup. In ER, the off-site backup locations are: NERFC - WFO Albany, OHRFC - WFO Cleveland, and MARFC - WFO Pittsburgh. In the event of the backup location being unavailable, RFC management will have the choice of relocating to Eastern Region Headquarters (ERH) or another ER RFC. Off-site backup will end when the situation at the RFC returns to a nominal status. Local RFC management will determine when off-site backup operations commence or cease.

Since off-site RFC backup will require the relocation of RFC staff to an alternate location, WFOs should be prepared to handle hydrologic situations without RFC support for up to 24 hours (Eastern Region Supplement 03-2003 Backup Plan For Eastern Region Offices).

4. Responsibilities During RFC Backup Operations

4.a On-Site Backup. During on-site backup, the responsibilities to support RFC operations exist at various NWS groups, including: the impacted RFC, ERH, and an alternate site for backup product transmission to AWIPS.

The RFC will:

- Provide equipment and software to generate products required during RFC backup operations.
- Notify ERH. Early notification for backup operations that are scheduled is recommended. (See Eastern Region Supplement 04-2004 for procedures.)
- Notify pre-arranged alternate site for backup product transmission to AWIPS.

The ERH will:

- Provide a data feed for the RFC to conduct backup operations
- Provide access to LDAD for product transmission to occur.

The alternate site for backup product transmission to AWIPS will:

- Provide access to LDAD for product transmission to occur in the event that the ERH LDAD is unavailable.

Specific on-site backup technical details can be found at:

http://www.werh.noaa.gov/Hyd/rfc_backup/rfcbackup_main.htm

4.b Off-Site Backup. During off-site backup, the responsibilities to support RFC operations exist at various NWS groups, including: the impacted RFC, ERH, the backup location, and an alternate site for backup product transmission to AWIPS.

The RFC will:

- Have the backup server laptop with software available to generate products required during RFC backup operations. The baseline software (Linux, Informix, and LDM) will not be altered without permission from ERH.
- Notify ERH and backup location as soon as possible. Early notification for backup operations that are scheduled is recommended. (See Eastern Region Supplement 04-2004 for procedures.)
- Determine staff that will relocate and begin coordination with ERH and the backup location assist with travel arrangements.
- Pre-arrange the locations for backup support.
- Pre-arrange a **local** off-site storage location for the backup server laptop, and local update procedures.
- Provide staff with operational instructions to perform backup.
- Perform semi-annual test of off-site backup to ensure staff familiarity.
- Issue and ERHADMERH AWIPS message when regular RFC operations resume.

The ERH will:

- Make arrangements for backup client laptops to arrive at the supporting WFO location as soon as possible (see http://www.werh.noaa.gov/Hyd/rfc_backup/rfcbackup_main.htm).
- Make necessary networking changes (IP address entries) to ensure access of RFC backup equipment to data feeds and ERH LDAD.
- Provide a data feed for the RFC to conduct backup operations, this includes access to 72-hour of data, OFS files, etc.
- Provide 24x7 beeper duty support to ensure availability of backup data feed.
- Provide access to ERH AWIPS/LDAD for product transmission to occur.
- Provide assistance with travel arrangements as requested by supporting WFO and RFC staff, (e.g. Blanket travel orders.)

The backup location will:

- Pre-arrange network access (IP addresses) for backup equipment (up to 5 laptops).
- Issue an AWIPS message under the AWIPS ID ERHADMERH addressed to ALL to identify RFC backup will be necessary and that RFC personnel are enroute to the backup location. Other pertinent and factual information should be included, such as the reason for the outage. In addition, ERH will be paged by the backup location following procedures as outlined in Eastern Region Supplement 04-2004. Pertinent and factual information should be included, such as the reason for the outage.
- Provide 24x7 access to the facility for the RFC staff to conduct backup RFC operations.
- Provide physical space for up to 4-6 persons with associated equipment to conduct RFC backup operations.
- Provide ESA/ET support as requested by RFC staff. At a minimum, this will include assistance with equipment connection to network and IP assignments.
- Provide access to office equipment/software to support RFC operations. At a minimum, this will include: one dedicated telephone, an AWIPS workstation (with 12Planet), one PC with Internet access, and access to the Hurricane Hotline.
- Provide access to AWIPS/LDAD for product transmission to occur, in the event that the ERH LDAD is unavailable.
- Provide administrative support for RFC staff relocated to WFO
- As an option, provide one additional PC for client use (e.g. Exceed software)

Specific off-site backup technical details can be found at:

http://www.werh.noaa.gov/Hyd/rfc_backup/rfcbackup_main.htm

5. **RFC Backup Resource Page** The technical details for on-site and off-site backup, laptop shipping procedures, and ERH system administration instructions are located on the RFC Backup Resource Page at http://www.werh.noaa.gov/Hyd/rfc_backup/rfcbackup_main.htm