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Eastern Region River Forecast Center Backup Responsibilities

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SUMMARY OF REVISIONS:

This Supplement contains the following revisions from the version dated March 25, 2008:

1. Section 2 – “flash flood guidance for basins and counties (product category FFG)” has been changed to a critical product issued during backup operations by Eastern Region River Forecast Centers.
2. Section 2 – “Ensemble Forecasts” have been added to the list of products provided with a minimal break in service.

The following revisions were made to the version dated November 6, 2014:

1. The URL links in Sections 4a, 4b, and 5 have be changed.

<signed>

March 31, 2016

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Date

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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 define the terms on-site backup and off-site backup. This supplement also specifies the responsibilities of the various National Weather Service (NWS) entities to support the backup operations of Eastern Region (ER) RFCs. Backup operations of the Southern Region RFCs supporting ER offices can be found in Southern Region Supplement 01-2004 “Backup Operations”. Detailed notification procedures applicable for backup operations can found in ER 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.

Critical products provided during backup operations are:

- River Stage and Flow Forecasts (product category RVF) issued during flood situations.
- Flash Flood Guidance for basins and counties (product category FFG)

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

- Short-Term Hydrologic Forecast Product (RVF)
- Headwater Guidance (product category FFH)
- Ensemble Forecasts
- Gridded Flash Flood Guidance (FFD)

- Hydrometeorological Coordination Message (HCM)
- RFC Quantitative Precipitation Forecasts (QPF/QPS)
- Hydrometeorological Discussions (HMD)
- Flood Outlook Products (ESG)
- Winter/Spring Flood Outlooks (ESG)
- Drought Guidance (ESP)

Also, in the case of Ohio River Forecast Center (OHRFC) and Middle Atlantic River Forecast Center (MARFC), backup operations will include the receipt of data from the US Army Corps of Engineers (USACE) and providing data/products to the USACE.

RFCs should make efforts to keep web pages as up to date as possible.

3. Beginning and Ending Backup Operations. Backup operations for RFCs will be accomplished 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 (or their designee) 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: Northeast River Forecast Center (NERFC) – to Weather Forecast Office (WFO) Albany; OHRFC – to WFO Cleveland; and MARFC – to WFO Pittsburgh. If the backup location is 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 routine status. Local RFC management (or their designee) 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 (ER Supplement 03-2003 Backup Plan for ER Offices).

4. Responsibilities During RFC Backup Operations.

4a. On-Site Backup. On-site RFC backup operations are supported by NWS offices in the following manner:

The RFC will:

- Provide equipment and software to generate products required during RFC backup operations. The baseline software (Linux, Postgres, and LDM) will be maintained to perform necessary operations and to be as compatible with current AWIPS software as possible.
- Notify ERH. Early notification for scheduled backup operations is recommended. (See ER Supplement 04-2004 for procedures.)
- Notify pre-arranged alternate site for backup product transmission to AWIPS.

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 ERH's LDAD is unavailable.

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

<https://sites.google.com/a/noaa.gov/nws-eastern-region-hq/hydrologic-services-division/rfc-backup-resource-page>

4b. Off-Site Backup. Off-site RFC backup operations are supported by NWS offices in the following manner:

The RFC will:

- Have the backup server laptop with software available to generate products required during RFC backup operations. The baseline software (Linux, Postgres, and LDM) will be maintained to perform necessary backup and be as compatible with current AWIPS software as possible.
- Notify ERH and backup location as soon as possible. Early notification for scheduled backup operations is recommended. (See ER Supplement 04-2004 for procedures.)
- Notify ERH for any support/assistance related to backup data receipt or product transmission. (See ER Supplement 04-2004 for procedures.)
- Determine the staff that will relocate and coordinate with ERH and the backup location for assistance 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 review of off-site backup procedures and conduct an annual test of off-site backup capabilities to ensure staff familiarity.
- Issue an ERHADMERH AWIPS message when regular RFC operations resume.

ERH will:

- Make arrangements for backup client laptops to arrive at the supporting WFO location as soon as possible (see <https://sites.google.com/a/noaa.gov/nws-eastern-region-hq/hydrologic-services-division/rfc-backup-resource-page>).
- 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-hours of data, OFS files, etc.
- Provide access to ERH AWIPS/LDAD for product transmission to occur.
- Provide assistance with travel arrangements as requested by supporting WFO and RFC staff.

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 RFC personnel are enroute to the backup location. Other factual information may be included if it is deemed appropriate for public broadcast. In addition, ERH will be paged by the backup location following procedures as outlined in ER 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

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

<https://sites.google.com/a/noaa.gov/nws-eastern-region-hq/hydrologic-services-division/rfc-backup-resource-page>.

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 <https://sites.google.com/a/noaa.gov/nws-eastern-region-hq/hydrologic-services-division/rfc-backup-resource-page>.