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Training and Education
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Use of Weather Event Simulator ,NWSI 20-101

WEATHER EVENT SIMULATOR IMPLEMENTATION AND OPERATIONS POLICY-
WESTERN REGION

OPR: W/WR3 (A. Edman)   **Certified by:** W/WR3 (A. Edman)
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SUMMARY OF REVISIONS: This is a new directive.

_____   03/03/03
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Director, Western Region

1.   Introduction. The Weather Event Simulator (WES) was deployed during the Fall of 2001. NWS management has placed a very high priority on making sure that the WES is used as part of an aggressive training program for all NWS forecasters. As part of the Government Performance and Results Act (GPRA), there will be a growing focus on improving NWS performance measures. The WES is viewed by senior management as an integral part of the forecaster training program and the performance measurement improvement program. Since the Scientific Operations Officers (SOOs) are responsible for the training program, they have the responsibility to make effective use of the WES.

2.   Implementation and Operations Policy. This document supplements the national WES Policy and national WES Implementation and Operations Plan. This Western Region (WR) supplement adds regional goals that shall be met by all WR WFOs.

At least two winter case studies shall be archived by March 31 of each year in preparation for the following winter season. For definitions of case study and simulation see Appendix B. Each forecaster is required to go through these winter simulations no later than December 1st of the same year. Report the completion of these tasks as soon as they are completed (with a one or two sentence summary of each case study) to the WR WES coordinator.

At least two summer case studies shall be archived by September 30 of each year in preparation for the following summer season. Each forecaster is required to go through these summer simulations no later than June 1st of the next year. Report the completion of these tasks as soon as they are completed (with a one or two sentence summary of each case study) to the WR WES coordinator.

Each year, each WR WFO shall produce a WES TA-Lite from one of their two winter WES simulations and from one of their two summer WES simulations. Emphasis shall be on the dynamic and mechanical meteorology of the event versus forecast model performance. The winter WES TA-Lite is due in electronic form to WR SSD by December 15th of each year, and the summer WES TA-Lite by June 15th of each year.

Instructions on how to set-up and run the WES and the WES Archive are found in Appendix A. Training on how to develop simulations will be provided by the SOO/STRC Coordinator.

COMET and WDTB will be providing nationally produced simulations that can be used by WFOs in their training (see National WES Plan). If the SOO at a WFO feels that any of their local case studies and/or simulations would be useful to other WFOs, the SOO should notify the WR WES coordinator and the case study and/or simulation will be made available via the WR web page. WR-SSD will also archive and make at least 2 case studies available to all WFOs by September 30, 2002. Definitions of simulation and case study can be found in Appendix B.

APPENDIX A - Setting Up and Running the WES and WES Archive Software

Detailed WES installation instructions were included in the delivery of the WES software in the Fall, 2001. The broad overview of how the WES is to be set up is in the WES National Plan (section 2). There are plans to buy a second linux PC to act as the archive WES (for local archiving) but these funds, if approved, will come from NWSHQ and approval is not expected for several months.

In the interim, before the national archiving system is approved and purchased, the Western Region has developed a solution for archiving case study data. This solution has the approval of NWSHQ and will be in affect until the national archiving solution is implemented. The WES PC shall be used to perform the local archiving. The software used to perform the local archiving was developed by Paul Kirkwood (Southern Region Headquarters) and is called the AWIPS Archiver software. Updates to the software will be made available periodically through announcements by the Western Region WES Coordinator. In order to perform local archiving, the WES needs to be installed on the AWIPS network. An IP address for the archive WES has been obtained from NWSHQ by WR-SOD for each office. Appendix C lists these IP addresses. If an IP address has already been assigned to the WES, it should be changed to this new IP address. If your office plans to use a different solution, please provide details to the Western Region WES Coordinator.

Instructions for setting up the WES Archiver software are available at ww2.wrh.noaa.gov/ssd/wes.htm. Other WES-related information is also available at that address.

Since the WES/Archive PC is on the AWIPS network it needs to be configured so that warnings are not sent out over the AWIPS network while training. To do this, the afos2awips.txt file in /awips/fxa/data directory needs to be empty. Also, to minimize the possible effect on operational AWIPS, the network connection from the WES to the AWIPS LAN shall be disconnected during the use of the WES simulation software. This is accomplished using the following steps:

> 1.1 Turn off the AWIPS Archiver software
>> a. cd ~fxa/Archiver
>> b. crontab crontab.arcoff
> 1.2 Disconnect WES from AWIPS LAN (simply unplug the network cable to the WES)
> 1.3 Run the simulation software (following WES instructions)
> 1.4 Stop simulation software (following WES instructions)
> 1.5 Reconnect WES to AWIPS LAN (simply plug network cable back in to WES)
> 1.6 Turn on the AWIPS Archiveer software
>> a. cd ~fxa/Archiver
>> b. crontab crontab.arcon

**NOTE**: If you are just browsing case study data using D2D on the WES (not running the simulation software) it is **NOT** necessary to disconnect the WES from the AWIPS LAN.

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APPENDIX B - Definitions

Case Study - Archived data that can be used for drills and in-depth study of a given weather situation.

Simulation - Archived data that is played back in realtime. Also available to the user are extensive instructional information (such as spotter reports, coordination issues, systems issues, etc). A simulation can be run at different levels of expertise (see national plan) and involvement from the person conducting the training.