



Raytheon

AWIPS Operational Build 8.1: FINAL Release Notes

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Revision History

Date	Version	Description
6/28/07	N/A	Initial Version
9/14/07	Rev.A	Added "Revision History" (this page)
		Deleted text from Section I, Part 1.15, WarnGen (p. 1-9)

AWIPS OB8.1 FINAL Release Notes

Section I – New Functionality in OB8.1

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1.0 D2D/TEXT/OTHER APPLICATIONS

1.1 Radar

No Changes.

1.2 Grib Decoder

Supplemental Medium Range Guidance

- Capability to decode the Supplemental Medium-Range Guidance (ECMWF) grid (GRIB2 format) upon receipt.
- The decoded ECMWF grid will be stored at the Forecast Office in a standard format (currently netCDF) for use in AWIPS applications.
- Forecast Offices will have the capacity to store, retain, and retrieve a minimum of one day (2 cycles) of ECMWF grids.
- The ECMWF grids will be displayable in D-2D from the volume browser as another model data source.

User Interface associated with Supplemental Medium Range Guidance

- 1) Grib2Decoder will handle the decoding of the ECMWF product.
- 2) The netCDF directory:
/data/fxa/Grid/SBN/netCDF/LATLON/ECMWF_HiRes
- 3) Two netCDF data files will be kept (two cycles per day).
- 4) Grid 232 defined to store and display ECMWF grid.
- 5) The current ECMWF Common Data Language (CDL) form file will be used as a template for the ECMWF_HiRes form file.
- 6) The grid will be displayable on D-2D at N. Hemisphere and North American scales.

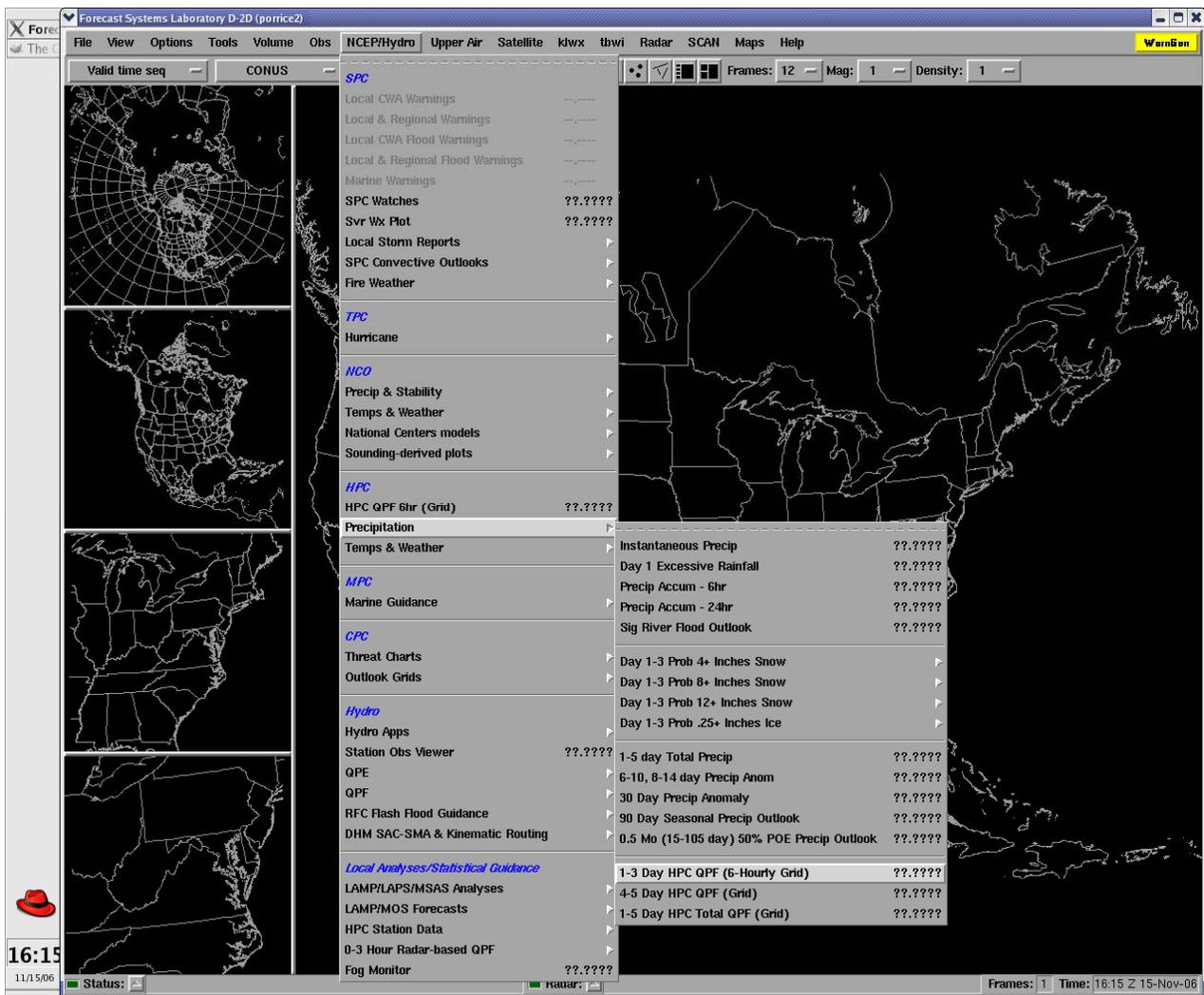
Note: For Volume Browser Changes associated with Supplemental Medium Range Guidance, please refer to Section 1.7.

1.3 NCEP

NCEP Short and Medium Range Outlook HPC QPF Product

- AWIPS will have the capability to decode the HPC Short- and Medium-Range QPF Guidance grids (GRIB2 format) upon receipt.
- The decoded HPC QPF grids will be stored at the Forecast Office in a standard format (currently netCDF) for use in AWIPS applications.
- Forecast Offices will have the capacity to store, retain and retrieve a minimum of seven days of HPC QPF grids.

- The HPC QPF grids will be displayable in D-2D from the NCEP/Hydro Menu under HPC → Precipitation.
- The HPC QPF grids shall be stored and displayable in D-2D in the following manner:
 - For a full forecast cycle covering both the short- and medium-range forecasts, the display will include projections for 0 to 72 hours at 6-hour increments; a projection interval of 72 to 120 hours in a 48-hour increment; and a projection interval of 0 to 120 hours in a 120-hour increment. HPC will provide one such forecast cycle twice per day.
 - For a partial forecast cycle, which covers part of the short-range forecast (roughly days 1-2), the display will include projection interval 0 to 54 hours at 6-hour increments. HPC will provide one such forecast cycle twice per day.
- AWIPS will store and display the HPC QPF data for the 5km NDFD grid.
- HPC-QPF data will be received for CONUS and shall be displayable on the CONUS, Regional, State(s) and WFO scales.



- **Enhancement**

Currently the D-2D has options for all of the various warning types separate under the NCEP menu header. An option that bundles all of the warning types for both local and regional display view was added to save forecasters additional clicks.

1.4 System for Convection Analysis and Nowcasting (SCAN)

- The direction of the attribute column ranking can now toggle from one direction to the other – and back again, if desired.
- Time of Arrival Tool fix (Bug fix): The Time of Arrival Tool (under the Tools menu in the D2D) was occasionally crashing. This should no longer happen.
- Unwarned Function: The function in the SCAN Cell Table that had been called the “Unwarned County” Function is now called simply the “Unwarned” function, and works with warning polygons instead of counties.

1.5 System on AWIPS for Forecasting and Evaluation of Seas and Lakes (SAFESEAS)

- Moving the cursor over county/zone/station IDs in the table will reveal the actual name of the area/station in the sample text: One consistent complaint about the SAFESEAS table is that it displays counties and zones by their obscure FIPS codes (e.g., MDC030 or ANZ530) as opposed to their actual names. Cursor sampling over the Area ID boxes reveals the same FIPS ID information. This DCS allows users to instead see the actual area names in the sample text. This capability applies to station names as well. SNOW was also given this capability.
- SAFESEAS localization files was reorganized to make use of tokens and improved formatting.
- This software was subject to behind-the scenes work to improve the maintainability of the localization software. The functionality did not change. These procedures are almost identical to those used in OB7.2, and will serve as a regression test. The procedures demonstrate how the monitoring area GUI will affect a key localization file, which in turn determines which zones, counties, and stations appear in the SAFESEAS table.

1.6 NGM-LAMP

With the AWIPS OB8.1 release, the NGM-LAMP guidance will no longer be available, and the NGM-LAMP software will no longer run locally at CONUS WFOs in AWIPS. AWIPS release OB7.2 introduced the new GFS-based LAMP system (GFS-LAMP). In OB7.2, the previous version of LAMP (NGM-LAMP) and GFS-LAMP was available concurrently. GFS-LAMP will be run centrally at NCEP, with the data disseminated to the WFOs, the RFCs, and the National Centers. NGM-LAMP will continue to be run locally at the WFOs. The intention is for both LAMP systems to be available until GFS-LAMP is operational for as many cycles as NGM-LAMP. This is expected to be the case by the time of the OB8.1 AWIPS release. Therefore, beginning with the OB8.1 release,

AWIPS will no longer contain the NGM-LAMP system.

User Interface

- BufrMosDecoder shall no longer copy JSMT41-46 NGM MOS files to /data/adapt/tdlfs/bufr/NGM.

The following directories, and files contained therein, shall no longer exist on any platform:

- /awips/adapt/lamp
 - /awips/adapt/prelamp
 - /data/adapt/tdlfs
 - /data/fxa/Grid/ TDL/netCDF/LAMP_Grid
 - /data/fxa/point/lamp
- The following NGM-LAMP menu options shall no longer be contained on the D-2D NCEP/HYDRO menu:
 - NGMLAMP LAMP Station Plot
 - NGMLAMP LAMP Ceiling and Visibility Station Plot
 - NGMLAMP QPF 1 Hr Forecasts
 - NGMLAMP QPF 3 Hr Forecasts
 - NGMLAMP QPF 6 Hr Forecasts
 - The D-2D LAMP/LAPS/MSAS Analyses menu shall be renamed LAPS/MSAS, and its submenu options shall no longer contain:
 - 'LAMP' and all of its 'Basic Field' and 'Derived Field' submenus
 - AWIPS IDs with 'FLP' as the product category (NNN) shall no longer be valid.
 - The following applications shall no longer use the file /awips/adapt/prelamp/bin/LAMPsetup.
 - Climate
 - IFPS

The following source directories shall no longer in Dimensions:

- /build/OB8.1/adapt/lamp
- /build/OB8.1/adapt/prelamp
- /build/OB8.1/D-2D/src/dm/gridLAMP
- /build/OB8.1/D-2D/src/dm/gridLAMPQPF
- /build/OB8.1/D-2D/src/dm/lamp
- /build/OB8.1/D-2D/src/extensions/lampTimeSeries
- /build/OB8.1/D-2D/src/textBulletinLAMP
- /build/OB8.1/awips_common/src/lamplib

- The following files shall no longer exist in Dimensions:
 - /build/OB8.1/D-2D/dm/grid/lampGrid*.cdl

[**Note:** For Volume Browser Changes associated with NGM-LAMP, please refer to Section 1.7.]

1.7 Volume Browser

Volume browser menu changes for Supplemental Medium Range Guidance

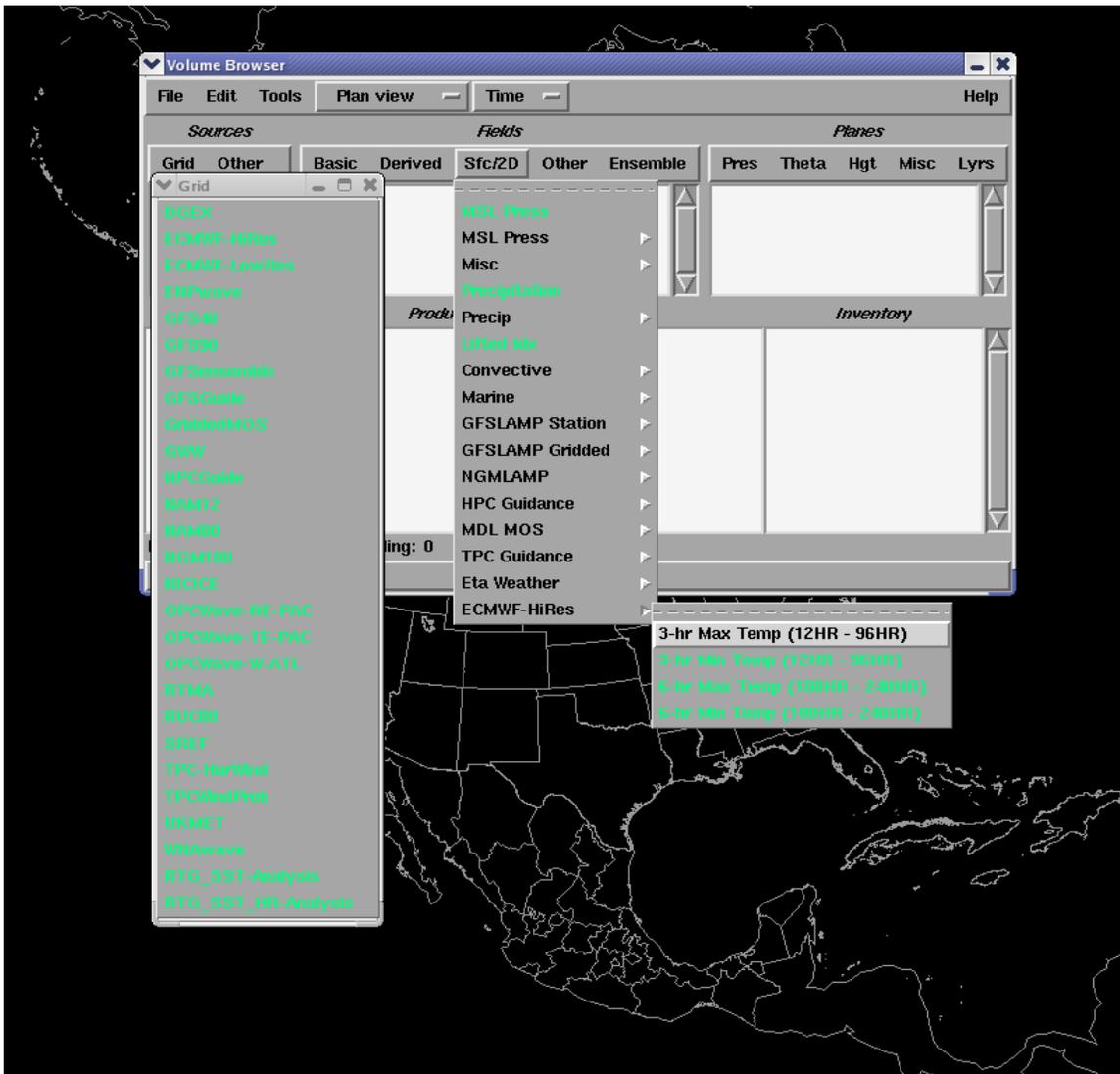
- a. Grid source: ECMWF-HiRes
Current ECMWF (2.5-degree) was changed to ECMWF-LowRes. 1 –degree ECMWF grids are available. These are available via the Volume Browser for NH, N, American, CONUS and Regional scales.
- b. The following fields are already defined in the Volume Browser
(No change):
 - Geopotential Height
 - MSLP
 - Temperature
 - Dewpoint temperature
 - Relative Humidity
 - Wind (U wind component, V wind component)
 - Td(sfc)
- c. For the QPF parameter, the precipitation accumulation fields will be modified for ECMWF in the Volume Browser:

Precipitation accumulation options already appear on the Volume Browser for 6-hour, 12-hour, 24-hour, 36-hour, 48-hour, and Model Run increments. The ECMWF data will be available for 12-hour, 24-hour, 36-hour, 48-hour, and Model Run accumulations. For other models these are derived by adding together the accumulations for previous and current forecast periods. However, ECMWF does not ‘empty its bucket’ when reporting precipitation accumulation, effectively supplying model-run accumulation for each projection. Therefore this part will be designed to subtract out the irrelevant parts of the total accumulation in order to calculate the smaller-period accumulations.
- d. The following fields were added to the Volume Browser:
 - Under Sfc/2D:
 - ECMWF-HiRes → 3-hr Max Temp (12HR – 96HR)
 - 3-hr Min Temp (12HR – 96HR)

- 6-hr Max Temp (108HR – 240HR)
- 6-hr Min Temp (108HR – 240HR)

For the 12-hour through 96-hour projections, the ECMWF data contain 3-hour maximum and minimum temperatures over the last 3 hours of the forecast period (e.g., for the 36-hour projection, the 3-hour maximum and minimum are given for the 33-hour to 36-hour period); for the 108-hour through 240-hour forecast projections the data contain 6-hour maximum and minimum temperatures over the last 6 hours of the period (e.g., for the 120-hour projection, the 6-hour maximum and minimum are given for the 114-hour to 120-hour period).

A screenshot illustrating the Volume Browser changes described in a and d follows.



Volume Browser Menu Changes for Removing NGM-LAMP

The Volume Browser's Sources → Grid menu shall no longer contain the 'NGMLAMP' option.

The following NGM-LAMP menu options shall no longer be contained in the 'Fields' section of the Volume Browser:

- Sfc/2D → NGMLAMP → Saturation Deficit
- Sfc/2D → NGMLAMP → Mixing Ratio
- Sfc/2D → NGMLAMP → Mixing Ratio Div
- Sfc/2D → NGMLAMP → 2 Hr Chg in Mixing Ratio
- Sfc/2D → NGMLAMP → 2 Hr Chg in Mixing Ratio Div
- Sfc/2D → NGMLAMP → 2 Hr Chg in SLP

There is a 30-min Local data QC plot on the main obs menu.

1.8 Local Storm Report

Bug Fixes

LSR text decoder never updated for current product format: There has been a protracted discussion in awipsinfo about a failure to display LSR data on D2D. Investigation shows that depict/LsrPlotDepict.C has not been updated to reflect the LSR text format change implemented in Dec 03. This affects the Local and Region plots on the menu – the Office product, which reads from the LSR netCDF created when reports are entered using the LSR GUI, works fine. Lacking these displays, forecasters can see their own reports plotted, but not those from surrounding offices.

1.9 FFMP

- Basin Trace Clear

While viewing FFMP Basin Traces, if you wish to clear the last trace, simply make the FFMP layer 'uneditable' by middle-clicking the legend.

- FFG Sort in Basin Table (Bug Fix)

The sort action in the Basin table now works correctly for the FFG attribute.

1.10 GFE

Bug Fixes

- **Session values lost after a grid manager change:** Session values are the various wx types, hazards, and other values chosen during the current GFE session. These are normally maintained throughout the session so the user can easily reuse them if needed.

Whenever a change was made to the grid manager, such as changing the view between vertical and horizontal or changing the wx element group, these session values were wiped out.

- **Previous Discussion not included in AFD:** The ER does not include the Prelim entry in the definition of topicDividers. This causes no text to be included in the previous discussion bullet.

- **Start time of hazard erroneously changed by software:** MQT changed the end time of a hazard on 10/11. They did this around the start time of the particular hazard. GFE saw the change in end time and correctly assigned an EXT. But the start time was changed to the current time rather than to 000000Z, which is what it should have been for an ongoing hazard (it had gone into effect 18 minutes earlier). The segments that had no change were correctly coded with 000000Z for the start time.
- **Cutover_mhs script fails in OB7.2:** The cutover_mhs script points to the DS when it makes it NIS changes. However, in OB7.2 the NIS has been moved to the DXs, so the script fails when run at OB7.2. This DR is slated for the GFE-ISC release, but care must be taken to ensure that the fixed file is only installed at OB7.2 sites. If the install takes place before the MHS cutover, care must be taken to ensure that any sites installing OB7.2 get the fixed script. The script could be modified to work at both OB7.1 and OB7.2 sites, but this would take longer and introduce a little more risk.

1.11 Decommission DS

MHS Server and NIS Master have been decommissioned on DS1 and moved to DX1 in 7.2.

Presently, the SEC and SWIT-ENV teams are still working with the Mission Assurance and OOS teams to de-install the DSs at the WFOs and the RFCs. The prerequisite conditions that have to be met before software de-installation occurs are that:

- All AWIPS Software on the DSs should have been migrated to the DXs and PXs.
- All sites should have migrated their local applications.
- All external interfaces that are connected to the AWIPS DSs should have been updated with new rules.
- All sites should have been switched to SMTP.
- All sites should have installed OB7.2 .

[*Note:* The Collocated WFO's and RFC's will have the DS's thru Release 8.1.]

1.12 Satellite

No Enhancements.

1.13 Guardian

No Enhancements.

1.14 NWRWAVES

No Enhancements.

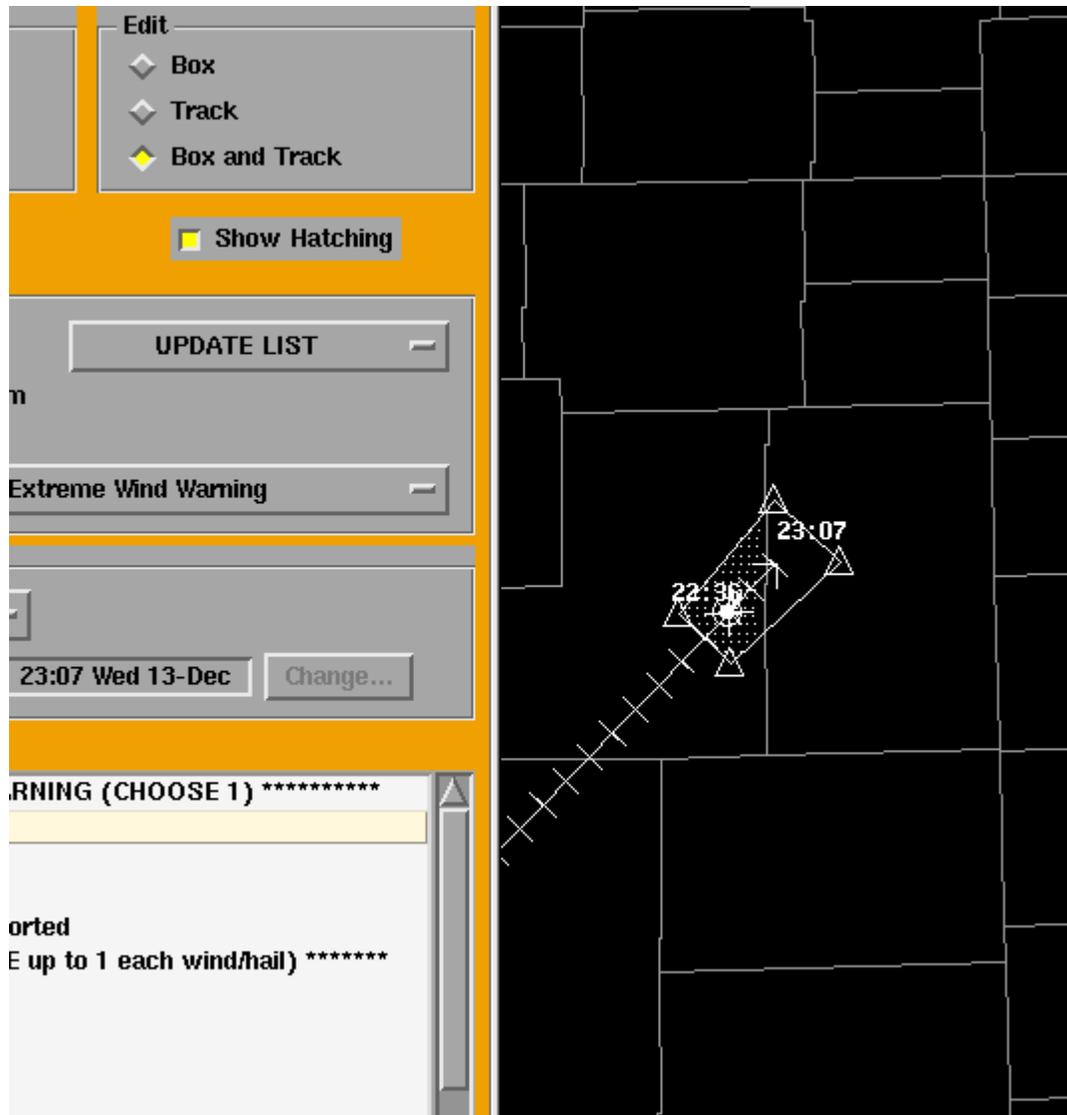
1.15 WarnGen

POLYGON

- Encode the polygon in the scratch product such that it describes the hatched area on the screen.
- Prohibit expanding the area warned for follow-up products.
- Encode the location and motion of the weather event in the scratch product.
- Always auto-update the warning display when a new warning is issued.
- Show separate fixed color overlays for each warning type.

Unlike so many other new warngen features in the past, there are no turnkeys available for activating the warning by polygon features; they are unconditionally invoked when the 8.1 release is installed. Warning by polygon has been designed in a way that makes template changes to invoke its features unnecessary.

This is by far the most important change made to support warning by polygon. Note that in the screen shot that follows, the hatched area is different than the area of the polygon.



There are three ways this happens when one initially issues a warning. First, users are allowed to set adaptable thresholds in the template that automatically remove counties from the warning if only a small part of the county is in the box. Second, a user can toggle a county on or off using the third button over the county in question. Finally (as is the case in this example), if the polygon extends past the county warning area boundary the hatched area will be truncated to the CWA boundary. The hatched area will also be truncated to land areas for non-maritime products and to water areas for maritime products, but this is really just a specific instance of the CWA truncation case.

Upon using OB8.1 warnGen, one will notice that the polygon on the screen will not necessarily immediately reconfigure to match the hatched area. There is a reason for this. Suppose one is in the process of manipulating the polygon to account for the weather near a coastline or some other complex feature. This could make it difficult to continue to adjust for the weather if suddenly there were 20 additional vertices forced into the

polygon. If one toggles some unrelated county on and off with the third button to activate the polygon redo feature, one could always then select Redo Box to see what the encoded polygon will look like.

Remember: THE AREA THAT IS HATCHED IS WHAT WILL BE DESCRIBED BY THE ENCODED POLYGON. This will be true no matter where the polygon is on the screen. The logic that invokes this feature is will not require any template changes, just in the OB8.1 version of the warnGenWish executable.

Note:

It's no longer possible to issue a warning that extends beyond your CWA (except for the extended-area dam break warning). While you can still draw a box crossing your CWA boundary, the polygon encoded in the LAT...LON line will follow the boundary.

The warned area may not be expanded for follow-ups.

A new TIME...MOT...LOC line at the bottom of the product encodes the time, motion (180DEG 0KT for flood warnings and other non-motion products), and location. This is used to better support follow-ups.

Warnings displays (NCEP/Hydro menu) now show each type (SVR, FLW, TOR, etc.) in a unique color, and the display will auto-update whenever a new warning is issued. The top section of the NCEP/Hydro menu now includes All Local Warnings and All Regional Warnings selectors.

Bug Fixes

- WarnGen sometimes crashes on zone-based products. That is, WarnGen will crash if one either toggles a zone on or off while issuing a zone-based product or issues a zone-based product with the polygon partially outside the CWA area.
- WarnGen AUX_INFO errors in Dam Break FFW template were corrected.
- Under DR16657, the Partial backup button in WarnGen was changed to read "Dambreak Partial." A decision was made to back out this change, pending a decision to remove the button entirely (DR18551).

1.16 Product Maker

The Product Maker has been removed.

1.17 lfp/fcst

- g e t_ofs_data script:

The OB8.1 version of this script is still only a partial solution to the problem of the /data/dhm filling up on the lx workstations and copying ofs data taking too long.

A more complete solution is being worked on for OB8.2. In the meantime, if RFCs are not using DHM, commenting out line 327, a call to a new function (copy_precip_xmrg_files) that copies

xmrg files to a local directory, is fine.

If RFCs want to try and use DHM, they can change the token ifp_griddb_dir to equal \$ofs_griddb_dir (ifp_griddb_dir=\$ofs_griddb_dir) and keep the copy part of the get_ofs_data script commented out.

1.18 Distributed Hydrologic Modeling (DHM)

This is for RFC only software. One minor change is that the RFC boundary coordinates are now extracted from the following file:

```
$geo_data/$ifp_rfc/ascii/coord_$ifp_rfc_dat
```

2.0 WATCH WARNING ADVISORY (WWA)

No Enhancements.

3.0 HYDROLOGY

3.1 Forecast Services Database and Interface

New database tables were created to store information on the forecast services provided for official NWS river forecast points. An interactive application is also provided to support the management of this information. This information will satisfy the NWS' need for a standardized way to collect, manage, and store logistical measures for hydrologic forecast systems. Logistical measures are used to quantify characteristics and implementation of the Hydrology program.

3.2 HydroGen

HydroGen Software extracts data from the IHFS database, encodes it in XML, and transfers the XML to a regional Web server, which generates hydrographs accessible via the Rivers tab of weather.gov.

3.3 SRA Tools Enhancement

Operational use and testing of RES-J, including its application to streamflow regulation accounting at the Missouri Basin River Forecast Center (MBRFC), has revealed the need for and value of enhancing RES-J functionality. Specific to this task are four Enhancements:

1. RES-J hindcasting capability
2. RES-J "LOOKUP3" capability
3. RES-J diversion from a node
4. RES-J variable lag in the LAGK method.

The LOOKUP3 functionality was implemented as a new method that can apply to both reservoir and node components, thereby allowing simulation of a diversion from a node. The enhanced functionality will be available in the following NWSRFS programs:

- the Forecast Component Initialization Program (FCINIT)
- The Forecast Program (FCST) including Forecast Execute (FCEXEC) and Ensemble Streamflow Prediction (ESP) functions
- The Interactive Forecast Program (IFP)
- The Manual Calibration Program (MCP3)
- The Automated Optimization Program (OPT3).

3.4 HydroView/MPE

Integration of Local QPE Tools Into National Baseline

No Enhancements. Work was completed on the integration of QPE tools into MPE and evaluations of MPE software.

3.5 RiverPro

No Enhancements.

3.6 WHFS/IHFS Database

No Enhancements.

3.7 RFC Archive Database (RAX)

No Enhancements.

3.8 Precipitation Processing

No Enhancements.

3.9 Interactive Verification Program

No Enhancements.

3.10 Historical Data Browser

No Enhancements.

4.0 SYSTEM

4.1 COTS Software

Eliminate Compiler Warnings.

4.2 Processes

- Migration of NetMetrix software after MPLS replaces AWIPS WAN in OB8.1.
- Performance Enhancement: Move local storage of text prods (with NO_STORE) to a local device.

Currently, the acqserver process makes a temporary copy of ALL data as it arrives, and then moves copies of the data to a directory specified in acq_patterns.txt. However, the data that is tagged "NO_STORE" is never moved to a directory. For performance, the software in acq_patterns.txt was changed to create a temporary storage for this data on a LOCAL disk to the DX, not the new NAS device.

4.3 Purging and Crons

LAMP CRON removed from PX1.

4.4 Database Engine and Operating System

- No changes to the Database Engine and Operating System.

The Operating System is Red Hat Enterprise Linux 4u2, and the Kernel has been upgraded to 2.6.9-42.19 between releases OB7.2 and OB8.1.

4.5 AVNFPS

AVNFPS 3.4 is used in OB8.1.

Enhancements include:

- Improved guidance TAFs based on GFS-LAMP data.
- TWEB QC function enhanced to adhere to NWSI 10-805.
- Various balloon pop-ups to describe various MOS categories.
- MOS/LAMP category class information provided.
- Transmit privilege should be granted on forecaster basis: Privilege to queue products for transmission should be granted on a forecaster-by-forecaster basis.

4.6 System for Nowcasting of Winter Weather (SNOW)

Moving the cursor over county/zone/station IDs in the table will reveal the actual name of the area/station in the sample text.

- Increase precision of Hourly Precip thresholds: The hourly precip column in SNOW has a precision 0.1 inch, but the configuration threshold GUI only allows red and yellow threshold setting at a precision of 1 inch. A forecaster suggested that the threshold precision was too crude, and that it be adjusted to a finer scale. A 0.01 inch precision would match the units in the table, but it would cause the user to have to do an inordinate amount of button-clicking to set the thresholds. MDL will adjust the threshold precision to 0.1 inch.

4.7 MHS Server

MHS Servers at BNCF are to be updated to have the correct configuration for the NDFD interface. Also, the BNCF version of the address handler table (addr_handler.tbl.bnfc) needs to be corrected to point to the BNCF for DEFAULTNCF and ALLNCF. These issues were both discovered during SMTP testing during the last BNCF operational switch. They affect SMTP only, which will be operational by OB8.1.

4.8 Simple Mail Transfer Protocol (SMTP)

Note: The SMTP (Simple Mail Transfer Protocol) section is for reference only as it is more of a OB7 note. The Transition hasn't been completed. The SMTP testing is still in progress. **The date for Beta Testing is TBD.**

- **Transition Plan**

All sites will be transitioned from X.400 to SMTP after the deployment of OB7.1 is complete. X.400 and SMTP are generally incompatible message protocols because of differences in addressing and mail formats. Mail gateways are the standard method of translating messages from one form to the other. AWIPS cutover to SMTP should be done only after all sites are at OB7.2.

- **Deployment Strategy**

OB7.1 deployment has to be completed before SMTP migration occurs. Alpha and Beta testing will be performed at various sites first, and after a successful cutover to SMTP, there will be a national deployment to cutover all sites to SMTP.

4.9 NIS Migration: This was accomplished in 7.2. This is for reference only.

- **Shadow Password Entries.** With the NIS migration from the DS to the DXs, shadow password entries have been implemented for tightened security. However, because the shadow file is a Linux construct, those entries will not work for any HP-UX workstations a site might have. This is likely to be a problem for RFCs that still use HP-UX workstations. To correct this problem, please add your users to the local /etc/passwd file so that they can log in and use those workstations. These boxes will need to be managed outside of the NIS.
- **User Accounts.** The NIS migration migrated user accounts in /home that were in the fxalpha group (standard awips user accounts with a group id of 200). Sites were responsible for the migration of any other user accounts (not in /home or not in

fxalpha) that are non-standard. Exceptions were awips admin accounts fxa, oper, etc. NIS migration migrated those because they are baseline awips accounts.

- **Password.** The Department of Commerce requires that passwords be changed every 90 days. Beginning with the NIS cutover from DS1 to DX1, password aging was implemented in OB7.2. NIS user account passwords expire after 90 days (including root). Users will begin receiving warnings of the impending password expiration 15 days in advance. AWIPS admin accounts fxa, oper, ldad, and ifps will age only if those accounts had real passwords on DS1 at the time of the NIS migration.

Within the 15-day window, the user will only receive a warning of the impending password expiration. If the password has already expired or expires on the day the user attempts to log in, the user will be prompted to change his or her password immediately. A bug fixed in OB7.2.1 and detailed in DR 18393 had been previously encountered at this point. Upon changing the password, the user was logged in, but the password had remain unchanged. The user could then use yppasswd to change his or her password officially. Also, a user who logs in after his or her password has expired will be prompted to change the password, and upon doing so in this way, it will be changed.

[Note: At any time within the 15-day window (or even prior to this window), a user can use yppasswd to change his or her password. There is no need to wait until the password expires. After logging in, the user can open a terminal window and use the 'yppasswd' command to change the password. Users can also log into DX1 and run the 'chage -l [username]' command to find out when they last changed their password and when their current passwords will expire.]

4.10 DMD

Improved performance of DMD display on volume scan change.

4.11 NWR Browser

Products getting stuck in NWR Browser was corrected.

4.12 Localization

The CitiesInfo.txt file is limited to approximately 25 characters by a localization error. This was corrected.

4.13 Configuration Management

The baseline source code from all the AWIPS Development Organizations was transferred to Raytheon's Configuration Management System, Serena Dimensions 9.1.3 web client.

5.0 NWRWAVES

NWRWAVES version 2.6 (used in OB6.1 baseline) is maintained in OB8.1. No Enhancements.

6.0 LDAD

AWIPS has recently performed a full system upgrade to the Local Data Acquisition and Dissemination system (LDAD). This LDAD system upgrade entailed a full porting of all local applications running on HP 9000 architecture in the HP-UX Operating System to HP ProLiant DL320 in the Red Hat Enterprise Linux 4u2 Operating System. One of main differences in the new setup is the two-node Linux cluster, providing high availability and eliminating single point of failure. As the sites go through migration, they will essentially operate in dual-mode configuration. The primary goal of dual-mode configuration is for sites to operate in Mode A (LS1 as main LDAD server) as they slowly switch over to Mode B (LS2 as main LDAD server and Primary cluster member). Dual mode configuration involves three systems, namely LS1, LS2, and LS3. In Operating Mode A, the old LS1 LDAD server is configured with 192.168.1.10 as its listening address for handling all LDAD requests, and the LS2/3 cluster is configured with Virtual IP address 192.168.1.13. In Operating Mode B, the old LS1 LDAD server is configured with 192.168.1.20 as its IP address, and LS2/3 is configured with 192.168.1.10 as its listening address for handling all LDAD requests. Hence, attempting to connect to LS1 while in Operating Mode B will actually log you into LS2, it being the Primary server handling requests in Mode B. In both modes, LS2 and LS3 have their own IP addresses independent of the Operating Modes described herein.

The LS machines provide the focal point for all external communications between the AWIPS site and the community, functioning as a pass-through device for all incoming and outgoing data. In OB8.1, only one of the three LS machines is actively working as the LDAD server at any time, and it will be the one reachable through the address 192.168.1.10 ("ls1") via the LDAD LAN hub.

- Dissemination via the Web and the Bulletin Board System is obsolete once switched to the new LDAD Server.
- Emergency Management Decision Support (EMDS) is obsolete once switched to the new LDAD Server.