

# AWIPS OB8.2 FINAL Release Notes

## Section II – Discrepancy Report Fixes in OB8.2

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## 1.0 D2D/TEXT/OTHER APPLICATIONS

The following Discrepancy Reports (DR) have been fixed in AWIPS OB8.2.

### 1.1 Color Curve/Blinking/Image Combination

N/A

### 1.2 Looping/Sampling/Swapping Panes/Zooming

#### **Problem. Updates to Software Based on PIT Testing.**

Fixed problems involving default font/color changes, window manager crashing for KDE, and navigator panel updating for selected locations in scatter plot. **(DR 19169)**

#### **Problem. Updates to Software Based on PIT Testing.**

Fixing problems involving default font/color changes, window manager crashing for KDE, and navigator panel updating for selected locations in scatter plot. **(DR 19169)**

#### **Problem. PIT: 4-panel menus for TDWR radar not working.**

During OB8.2 PIT testing, Michael Magsig provided the following feedback in his notes regarding the TDWR four panel menu: "Four panels in menu don't work," and "4 panels TDWR not very user friendly."

Upon investigating the report, the developer found that in D2D, clicking the 4-panel menus for TDWR radar might only load one or two products (in 1 or 2 panels) because of the improper angles specified in the menu.

The developer believes that the 4-panel menus for TDWR radar should be changed and customized for each TDWR radar (since their angles are customized) so that products can be loaded to all 4 panels.

There is no workaround for this issue. If no action is taken, forecasters may not be able to use all four panels for TDWR products. **(DR 19217)**

### 1.3 Climate

#### **Problem. Change legends in Low Cloud Base product.**

The legends of Low Cloud Base Products have 'Sounder' in it.

Current legend for Low Cloud Base:

*GOES Sounder DPI Low Cloud Base (ft)...*

Correct legend should be:

*GOES DPI Low Cloud Base (ft)...* **(DR 19331)**

**Problem. Add RTMA data ingest for Alaska sites.**

DCS 3378 was supposed to include adding ingest of RTMA data for the Alaska Region sites. This part of the DCS was not completed, however, due to the late availability of sample data for Alaska. The purpose of this DR is to correct that.

This single DR will be used to check in changes to both D2D and GFE.

The following parameters will be ingested (see Brian Gockel's email attached):

1. Temperature
2. Temperature Analysis Uncertainty
3. Dewpoint Temperature
4. Dewpoint Temperature Analysis Uncertainty
5. Wind Speed
6. Wind Speed Analysis Uncertainty
7. Wind Direction
8. Wind Direction Analysis Uncertainty
9. U Component of Wind
10. V Component of Wind **(DR 19368)**

**Problem. Sunrise time stamps incorrect in Climate on TBW4.**

AN -- 10/18/07 -- TBW4. The Climate reports from Alaska sites show that the sunrise is in AKDT and the sunset is in AKST. This occurred after we set the system time to December 4, 2007 (one month after the change to Standard Time). **(DR 19561)**

Both events from this date should display AKST. **(DR 19561)**

**Problem. Unable to open Sunrise/Sunset GUI on TBW4**

AN 10/18/07 TBW4

On TBW4 the sunrise/sunset GUI will not open in D2D. The problem stems from the time stamp change. The old stamp was AST, and the new stamp is AKST. The fourth character "T" is unexpected. **(DR 19560)**

**Problem. Unable to display Climate products.**

While executing Baseline\_Climate\_OB8.1 test case, step #16 failed. When I click the product in the Review Climate Product GUI the product does not open. A window appears "The product is now ready to be edited" Product still does not open (or the product is simply blank). I tested this on OB8.1 and it worked just fine. On OB8.2 I tested the Morning and Intermediate reports, both failed. When closing the Review Climate Window the following error appears: "transfer NWS.pl error -- Error:Invalid afos ID. Cannot send product across WAN". When I click OK "Climate Error" window opens on right side of screen. (DR 19268)

**Problem. PIT: HPC Excessive Rainfall purges incorrectly.**

The new excessive rainfall products have some new forecast times that do not match up with the existing HPC QPF 4-per-day forecasts. This means there are more files for a given time period and older files get purged before they should. (DR 19210)

**Problem. Interpolating for missing dew point temperature plot (ref. OB8.1 DR 16752)**

Currently, the missing dew point temperature was computed by subtracting 50 degrees (50°) Fahrenheit from temperature. That creates spikes in the dew point temperature curve when the missing dew point temperature occurs near there surface or wherever the adjacent layers of air are not very dry, not to mention that that approach is not physically meaningful. A physically meaningful approach needs to be determined.

As the dew point temperature can change rapidly with height, a perfect solution may not exist for interpolation. To reveal the imperfect solution, a dashed-line segment will be used to connect any two data, i.e., two points in the curve, as long as one of them is interpolated. Moreover, as the datum at one endpoint of the dashed-line segment might be non-interpolated, a symbol, e.g., a filled circle or anything appropriate, needs to be used on that endpoint to clarify the fact. (DR 19122)

**Problem. Climate yearly product not running correctly.**

Climate summary for 2005 has missing data but the monthly for each month is there. (DR 16972)

**Problem. OB7.2: D-2D: Hourly precip and run total precip are inconsistent.**

In D2D, when you display "run-total-precip," it is not working. The one-hour increment model option is not adding up the run total correctly.

It should be adding it up in one-hour increments. Instead of adding up each hourly, it is adding up one 3-hour total and adding it 10 times. (DR 18995)

**Problem. Annual Climate report not producing cooling degree days.**

An annual climate report was configured to run all parameters. However, the cooling degree days is not showing up on the product. (DR 16971)

**Problem. Climate Snowfall is incorrect.**

The seasonal snowfall in the climate radio product is incorrect. However, the text product is right. The radio product simply states the seasonal snowfall amount as the monthly amount. **(DR 16968)**

**Problem. Problems in "Initialize Climate Database".**

For LOT, when they initially run the climate program, they cannot access monthly data. This is happening on lx3 and possibly elsewhere. Error: "SQL State = 3400 'Cursor does not exist on line 425'"

Log into the site LOT with NCF root access, the problem is reproducible. When "Initialize Climate Database" and select "Monthly", if change the month to different one, the error of

"Run time error occurred! (-400)

ERROR: SQLSTATE=34000

'cursor "d" does not exist' in line 425."

always occur. Repeating a few times would cause the climate application exited.

During the DR investigation we found the above mentioned problem is no longer reproducible. However, We found a different problem under "Initialize Climate Database": Cannot edit climate snowfall data from GUI --- Whenever a site goes to 'Initialize Climate Data' in the climate GUI and then clicks on monthly and then snowfall, any edits to the snowfall records are corrupted. **(DR 17312)**

**Problem. Negative Min/Max RH in Climate GUI.**

The time of Min RH and Max RH - displaying negative 32,768.

This is showing up in the GUI, but the product has the correct values. **(DR 17278)**

**Problem. Seasonal Climate Report is incorrect.**

Season Climate report for Winter 2005/2006 is reporting incorrect values for Minimum Temperature, Precipitation, Snowfall totals, and Computation of the average temperature. **(DR 17012)**

**Problem. Products being sent from Cafe to CRS are failing to be sent.**

Products being sent from Cafe to CRS are failing to be sent. **(DR 16682)**

**Problem. Climate F6 product won't run (Ref. OB7.2 DR 18422, OB8.1 DR 18423)**

The f6 product will not run correctly from the command line or the cron. This is due to the fact that when passing the parameter 0 to the application, it fails when going to build\_f6. (DR 18095)

## 1.4 Radar

### **Problem. Radar application menu entries.**

Two new radar applications were added in OB8.2, but their inconsistent menu locations will at times make them difficult to find. FSI was put only on the Radar menu, and EAV is on Tools and Radar menus. For consistency with existing practice, FSI should be on the Tools menu, both EAV and FSI should be on the kxxx menus, and EAV should be on the txxx menus. Also... The Radar Applications section is sorted alphabetically; EAV should be moved up above FSI. FSI should be spelled out - 4-D Storm Investigator (FSI) fits easily on the menu. Simple changes are required in tdlProductButtons.txt, dataMenus.txt, dataMenus.AK.txt, radarDataMenus.template, and tdwrDataMenus.template. **(DR 19192)**

### **Problem. Load radar mosaic locks up D-2D when missing data.**

From the TT:

Found a bizarre problem when loading a regional radar mosaic in D2D after our OB8.2 build today. If you do not have images for the entire time frame selected, then the main pane of D2D will act like a dead pane. Example... we finished our OB8.2 build at about 1530Z. If I tried to load 12 frames of regional radar, then it would lock up. This is because our radar was down during the build, and we were not receiving data from other offices. Once we got 12 frames removed from 1530Z, it would load fine and work fine. Currently, if I go in and request 36 frames, I get the same problem because I overlap the 1530Z data void time.

While this is not a big problem, it could become a large issue when an office goes offline and comes back again.

---

A *workaround* is to load a smaller number of frames.

It is not yet known if this problem existed before OB8.2. **(DR 19567)**

### **Problem. False radar alerts.**

Matt called. Matt says they switched to VCP32 a couple of hours ago, and ever since have been getting alerts that say "Not receiving RPS list products for KMPX." Every workstation gets an alarm every volume scan. This started right when they switched to VCP32.

These alerts seem to be false alarms. Matt looked at the RPS list and is so far able to pull up all of those products. This is not critical, it's just a nuisance.

This is a problem with the new radar watchdog functionality: The maximum allowed time between SRM is too short.

The *workaround* (and fix) is to increase the allowed time for SRM in /awips/fxa/data/radarWatchdog.txt to 5 minutes. **(DR 19550)**

**Problem. Update default RPS list for VCP80 and VCP90**

The default RPS list for VCP80 and VCP90 only contains the TDWR base products. In OB7.2 and OB8.2, more SPG products are available.

The default RPS list file KXXX.storm.VCP80 and KXXX.storm.VCP90 should be updated. **(DR 19164)**

**Problem. Radar products can be lost without any alarm.**

Several previous DRs have modified the way in which RadarMsgHandler presents alert messages to users via Guardian (or the old Announcer). The problems involve balancing timely notification of serious radar problems and avoidance of too many false alarms. It may be possible to find a good balance, but there is still a fundamental problem: AWIPS relies on the RPG to send the initial failure notifications. If the notifications are not sent, there will never be any user-visible alarms. When this happens, it may take too long for forecasters to realize the radar products are not updating.

An alternate approach to the problem is to add "watchdog" functionality to the AWIPS radar ingest system. Rather than wait for an active notification from the RPG, the absence of new data within a given time period would be the trigger for an alarm. **(DR 19180)**

**Problem. Radar All Tilts Reflectivity (Z) Display Blank.**

Site RNK reported in TT#295290 that during weather the site has sporadic versions of the all-tilts Z/SRM display blank out.

The problem was re-created consistently at both RNK and the WNCf test system (both OB7.2.1 sites). To re-create the display issue, on one d2d load an 8bit all tilts Z/SRM or Z/V display with 64 frames. After a minute or two, on a second D2D at the same workstation, load a radar cross section from the volume browser. Watch the all tilts display auto update until the Z portion will not show up, and the color bar goes to gray in the upper lefthand corner of the IGC. At this point the display title will show the generic reflectivity title (7.5 degrees) instead of the product which actually stored (8 degrees). It does not appear to be VCP dependent. The next scan may, or may not, come in 100% complete.

The exact time that the problem started is not know; however, the OB7.2 time frame was stated. Impact for the sites could include missing an elevation in a scan of the all tilts display.

**Workarounds** include clearing and reloading display, or waiting for the next volume scan, which could affect warning operations. **(DR 19144)**

**1.5 Text Alarms/Warnings**

N/A

## 1.6 Satellite

### **Problem. Non CONUS polar orbiter microwave products not filtered.**

On July 24, 2007, polar orbiter microwave products were turned on. At the CONUS sites, the Alaska, Hawaii, and Puerto Rico sectors are not filtered out. They cause the following kind of errors in the Satdecoder logs:

```
16:18:28.362 decodeSat.C EVENT: NCF_ENTRY [1/1] = TITB17KNES.14161828.060
```

```
16:18:28.363 pdsAdvise.C EVENT: NCF_FAIL Could not lookup key for: 5 17 4 1114116
```

```
16:18:28.363 decodeSat.C PROBLEM: NCF_FAIL Unknown product for channel = 17 sector = 4
```

```
16:18:28.363 decodeSat.C PROBLEM: NCF_FAIL error on file  
/data/fxa/sat/SBN/Raw/TITB17KNES.14161828.060
```

```
16:18:52.839 decodeSat.C EVENT: NCF_ENTRY [1/1] = TITI29KNES.14161852.061
```

```
16:18:52.840 pdsAdvise.C EVENT: NCF_FAIL Could not lookup key for: 5 29 6 1900550
```

```
16:18:52.840 decodeSat.C PROBLEM: NCF_FAIL Unknown product for channel = 29 sector = 6
```

```
16:18:52.840 decodeSat.C PROBLEM: NCF_FAIL error on file  
/data/fxa/sat/SBN/Raw/TITI29KNES.14161852.061
```

**(DR 19364)**

### **Problem. satDecoder decoded wrong polar imagery file.**

The TBDW machine was displaying the East CONUS Polar imagery. It's found that the satDecoder decode the West CONUS files. It's most likely because the configuration file westSatDataInfo.template has 1 in the 5th column for key 7491, 7494, and 7495. This problem has an impact to all West CONUS site who want to use the Polar Imageries. Test data can be request from NESDIS. **(DR 19565)**

### **Problem. F: Add Polar Vis/IR WMO headers to OCONUS specific config files.**

Modify src/co/acq/acq\_scripts/acqparms.<site\_id> and acq\_wmo\_parms.<site\_id>, where <site\_id> is acr, afc, afg, ajk, hfo, gum, mfl, mlb, mtr, pbp, sju, sto, and vrh. New entries need to be added to enable the following:

```
TITI 70 GOES_WEST  
TITB 50 GOES_WEST  
TITE 20 GOES_EAST  
TITW 30 GOES_WEST  
TITQ 90 GOES_EAST
```

East site gets the East entries; West sites get West entries. **(DR 19563)**

**Problem. VHW site wants NAM Buffer data.**

NAM Buffer sounding data and NCEP produce 60 that are not in AWIPS and they would like to add this to AWIPS. **(DR 18568)**

**Problem. Add 5 elements for NAM DNG 5km grids.**

Based on sample data from NCEP (11/29/2007), D2D needs to fix codes in order to store and display following elements for NAM DNG 5km grids:

1. Surface temperature
2. Surface dew point
3. 3-hour maximum surface relative humidity
4. U-component of surface wind
5. V-component of surface wind

Based on sample data from NCEP (11/29/2007), D2D needs to fix codes in order to store and display the following elements for NAM DNG 5km grids:

1. Surface temperature
2. Surface dew point
3. 3-hour maximum surface relative humidity
4. U-component of surface wind 5. V-component of surface wind. **(DR 19669)**

**Problem. Change to 5km NAM DNG data ingest for CONUS.**

Add/fix ingest of following parameters of the 5km NAM DNG data for CONUS:

- Surface temperature
- Surface dew point
- 3-hour maximum surface relative humidity
- U-component of surface wind
- V-component of surface wind. **(DR 19671)**

**Problem. DE -NAM12&GFS40 display wrong freezing-level heights (Ref. 8.1.1 DR 18962).**

This DR comes out of TT276800, reported by Matt Foster at OUN. Although this problem was discovered in OB7.2, it is believed to be pre-existing.

When displaying the Freezing Level Height, when there is a low-level inversion present (i.e. the surface temperature is at or below freezing and a temperature inversion results in the temperature going above freezing at some height above ground), D-2D display of NAM12 shows the freezing level at 0ft, when it should be higher due to the inversion. With the GFS40, it appears to show negative values. This problem happens when the Freezing Level Height is delivered as part of the SBN data flow (i.e., an NCEP-provided freezing level grid) and stored into the netCDF files. For models in which the Freezing Level Height is not included in the SBN data, it is calculated on D-2D load in AWIPS, and those cases do not show this problem.

It needs to be determined for this DR whether this is due to the data or to AWIPS software manipulation of the data, either upon storage or upon display.

Matt Foster, of OUN, who reported this problem states that the impacts can be pretty severe, especially during winter weather situations. The erroneous freezing level plan view plots make it much more difficult for the forecasters to determine the depth of a surface-based sub-freezing layer. This directly affects the determination of precipitation type...most notably discerning between freezing rain and sleet, which is an extremely high-impact decision.

This could also impact aviation icing forecasts, which we don't do at the WFO level, but could potentially affect other offices or centers that do these forecasts. **(DR 19310)**

**Problem. DE: Add RUC13 and SST headers to acq\_categories.txt (Ref. OB8.1 DR\_19001)**

In order for the RUC13 grids and RTG\_SST\_HR grids to be acquired by AWIPS upon arrival over the SBN, their respective WMO header patterns must be added to acq\_categories.txt.

For RUC13, the pattern is L\*D\* KWBG

For RTG\_SST\_HR, the pattern is ETWA88 KWBI

**Note:** The acq\_categories.txt additions for RUC13 were made a part of DCS\_3424 in order that the DCS would be complete. Therefore, for this DR, only the SST pattern will need to be added to acq\_categories.txt. **(DR 19048)**

**Problem. Aviation: Remove test executable names from Makefile BINS.**

In D-2D/src/dm/aviationAdvisories/Makefile, 'testAdvisoryRoutines' should be removed from BINS and listed only in TEST\_BIN.

In D-2D/src/dm/convSIGMET/Makefile, 'testConvSIGMETRoutines' and 'testCSBulletin' should be removed from BINS and listed only in TEST\_BIN.

These test executables are not meant to be part of the release and should not be built except when doing a 'make test.' **(DR 19336)**

**Problem. Aviation products user interface issues.**

A number of user interface issues regarding the new OB8.2 aviation products have been identified:

- \* Placement of the new Aviation menu in the D-2D menu hierarchy
  - \* Redundant text in menu titles
  - \* NCWF and Convective SIGMET products should be multi-loads
  - \* CCFP coverage descriptions are not consistent with standards
  - \* NCWF image sampling does not display whole numbers

It is necessary to correct these issues in order to make these new products useful to forecasters. **(DR 19521)**

**Problem. Aviation: Remove unused menu items.**

Some entries on the Aviation D-2D menu are related to products not implemented for the OB8.2 release; these entries should be removed. They are:

Under Aviation - Turbulence Products, AIRMET-->STG SFC WND and AIRMET-->LLWS

**Note:** Per discussion with Cyndie Abelman, these products are not expected to appear separately on the menu in future releases either, as they come in only as part of the turbulence AIRMET text. (DR 19339)

**Problem. GW: AIRMET polygon display needs improved sampling.**

The AIRMET and the non-convective SIGMET aviation products are displayed as polygons in D-2D. In order to see the associated text product while sampling the polygons, the user must align the cursor with one of the vertices of the polygon. This is neither very easy nor user-friendly, and it is preferable that the polygon interior can be sampled in order to display the text. **(DR 19390)**

## 1.7 GFE

**Problem. Add visibility element to 5km NAM DNG database.**

Add the visibility weather element to the 5km NAM DNG database and ingest the grids. **(DR 19688)**

**Problem. Problems with snow amount wording in ZFP.**

The following issues were found in OB8.2 pre-release:

- (1) ZFP erroneously reports snow descriptor as "new" if snow in 1st period, 1st period is less than 12 hours (thus an update) but snow has not fallen yet--rather it is imminent (past SnowAmt = 0).
- (2) ZFP erroneously ignores past SnowAmt grid in summing up total snow amounts if total snow phrase is generated in the 2nd or 3rd forecast periods.
- (3) ZFP erroneously obtains value for past SnowAmt grid. If the past SnowAmt grid is larger

than 12 hours than amounts obtained in ZFP formatter are tapered. **(DR 19676)**

**Problem. GFE ISC Compatibility with OB8.3.**

ISC Development of OB8.3 GFE Intersite Coordination has caused the method in which ISC traffic routing is to be changed. (See DCS3452.) Instead of ISC messages consisting of 1 attachment via the WAN, ISC messages will not contain 2 attachments. The OB8.2 ISC software is expecting only 1 attachment.

When OB8.3 is deployed, sites that are still at OB8.2 may no longer see ISC data from OB8.3 sites, nor will the VTEC active table be sharing work. In addition, the extra file may not get purged off the OB8.2 system, thus filling up disk space. **(DR 19457)**

**Problem. baseline GFE smartinit for MOSGuide has QPF in mm, not in.**

In GFE for the MOS guidance models. It's reporting QPF6 & QPF12 in millimeters instead of inches. It's been doing this for some time. It's a problem in the baseline SMARTINIT. **(DR 19629)**

**Problem. GFE headlines no longer unlocking.**

BCQ and GSP both reported that, with the latest OB8.2 beta delta install, GFE headlines can no longer be edited. **(DR 19628)**

**Problem. Missing GFE grids during service backup.**

In OB8.X the site that senses the grids uses an ifpnetCDF call with -s and -e flags that crop the GFE grids before sending them out. When this happens a new enhancement made in OB8.2 breaks due to "time constraint." This causes grid data for that element to be lost.

To fix this problem we remove the -s and -e flags from the service backup ifpnetCDF call. When this is done, the grids uploaded by the site to the central server have not been cropped and the grids will be saved correctly into GFE.

This DR has already been tested at live sites; no additional testing is needed. It has already been verified to work.

Related SPR - SPR 7347. **(DR 19593)**

**Problem. GFE - Autotest failures related to DR 18496.**

Eight GFE auto tests fail after installation of DR 18496. Most likely these are the result of the design change made in 18496. See attached auto test result log. **(DR 19529)**

**Problem. GFE service backup: change needed to assist in testing.**

Service backup cannot be tested using just the testbeds. I propose modifying the service backup and rsync scripts to allow either a 3-letter or a 4-letter site ID to be used. The change to the backup scripts should only be installed on the sites that have a 4 letter id. (DR 18510)

**Problem. GFE VTEC: Multiple action codes in same segment for same ETN.**

A number of sites have experienced GHG assigning 2 different action codes for the same ETN in the same segment. This causes severe dissemination and tracking issues with our customers. (DR 18496)

**Problem. DX4APPS needs changed to allow ifpServer start/stop on RFCs.**

With the full install of GFE on the RFCs, dx4apps now attempts to startup ifpServer. Because the RFCs don't get the full IFPS installation (that's only on WFOs), the ifpServer needs to be started with the script supplied by GFE. The dx4apps script, however, tries to start up the script included with the full IFPS install.

In /etc/ha.d/resource.d/dx4apps, sections start\_ifps and stop\_ifps, we need to add a check for ["\$SITE\_TYPE" = "rfc"], and have the proper script started up as user ifps:

```
su - ifps /awips/GFESuite/primary/bin/runIFPServer. (DR 19436)
```

**Problem. GFE portion of the code is missing for DCS#3437.**

GFE portion of the code is missing for DCS#3437 for OB8.2 release. (DR 19398)

**Problem. GFE -The Hazard\_HLS product did not create VTEC string.**

The Hazard\_HLS product for GFE did not create VTEC string on the operational mode. The VTEC string was created when used the practice mode with the formatter set to O\_VTEC. (DR 19401)

**Problem. Change needed for automated testing from lx (Ref: DR18124 & 19029)**

Change needed for automated testing from lx. (DR 19042)

**Problem. GFE (TBDR) - Start GFE is missing from AWIPS Startup Menu list on TBDR.**

The Start GFE is missing from AWIPS Startup Menu list on TBDR. Because of that we are not able to bring up GFE from the appLauncher on TBDR tested. (DR 19325)

**Problem. GFE - GFE products for FWF, SRF and ZFP failed during the checkout test.**

During the OB8.2 checkout test some of GFE products (FWF, SRF and ZFP) failed. The following errors message is displayed when the run the formatter was executed.

```
" 17:24:18.099 HazardsTable.py 645 EVENT: Analyzed Table length: 0
```

17:24:18.102 HazardsTable.py 649 VERBOSE: Analyzed Table:

17:24:18.159 TextFormatter.py 142 PROBLEM: Caught Exception: Traceback (most recent call last):

```
File "./headline/TextFormatter.py", line 140, in getForecast
File "FWF", line 746, in generateForecast
File "FWF", line 794, in _determineTimeRanges
File "ConfigurableIssuance", line 73, in getIssuanceInfo
TypeError: unsupported operand type(s) for +: 'int' and 'tuple'
```

17:24:18.163 TextFormatter.py 1154 PROBLEM: Caught Exception: Traceback (most recent call last):

```
File "./headline/TextFormatter.py", line 1152, in profMain
File "./headline/TextFormatter.py", line 1060, in main2
File "./headline/TextFormatter.py", line 143, in getForecast
Exception: Traceback (most recent call last):
File "./headline/TextFormatter.py", line 140, in getForecast
File "FWF", line 746, in generateForecast
File "FWF", line 794, in _determineTimeRanges
File "ConfigurableIssuance", line 73, in getIssuanceInfo
TypeError: unsupported operand type(s) for +: 'int' and 'tuple' ". ((DR 19273)
```

**Problem. GFE: iscMosaic/ifpnetCDF performance issues.**

It was observed that when Southern Region moved to 2.5 km, their ISC processing was extremely slow due to the ifpnetCDF/iscMosaic processing load. Other sites looked at ifpnetCDF/iscMosaic as it is used for ISC and have discovered it takes a long time to process these grids. Investigation by GSD found that the iscMosaic/ifpnetCDF uses the single-grid read/write protocol with the ifpServer, rather than the quicker multiple-grid read/write protocol. Experimentation showed that a speed up of up to 6 times was achieved by switching ifpnetCDf/iscMosaic to use this multiple protocol. With the solution, ISC traffic is not delayed by many minutes anymore, and the processing load on the dx4 is decreased, since the single grid read/write was incurring a large overhead.

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**Problem. GFE - installation script errors.**

New GFE installation for RFCs: masterGFEInstall\_Climo failed on install - a certain section was changed for other sites but not for RFCs (and this exists in masterGFEInstall\_Topo and masterGFEInstall\_Maps as well). Tested this on TBDR and the install succeeded with the change. In the GFE work set, edit the GFESuite/scripts/install/masterGFEDataInstall file as follows:

Change

```
INSTALLCONFIG_RFC = [
  {'host': 'dx4f', 'port': 98000000, 'dir': '/awips/GFESuite/primary',
   'gfeOnly': 0, 'restart': 1, 'version': 'RHE4', 'stagingHost': 'dx4',
   'configDir': '/awips/GFESuite/primary',
   'stagingDir': '/awips/GFESuite/gfeInstall',
   'site': '<default>'},
  {'host': 'dx4f', 'port': 98000000, 'dir': '/awips/GFESuite/ws',
   'gfeOnly': 1, 'version': 'RHE4', 'stagingHost': 'dx4',
   'configDir': '/awips/GFESuite', 'stagingDir': '/awips/GFESuite/gfeInstall',
   'restart': 0, 'site': '<default>'},
]
```

To

```
INSTALLCONFIG_RFC = [
  {'host': 'dx4f', 'dir': '/awips/GFESuite/primary', 'check': 1, 'restart': 1,
   'stagingHost': 'dx4', 'stagingDir': '/awips/GFESuite/gfeInstall'},
  {'host': 'dx4f', 'dir': '/awips/GFESuite/svcbu', 'check': 1, 'restart': 0,
   'stagingHost': 'dx4', 'stagingDir': '/awips/GFESuite/gfeInstall'}. (DR 19264)
```

**Problem. GFE - ETNs for TS and HU not being maintained in the CWF (Ref DR19096).**

CHS and JAX discovered upon preparing for TS Barry that their ETNs were not incrementing to 0002 as they should. I have created TS and HU products on nmtw and can get the ETN to increment as the previous product is recent.

The code that exists purges TS and HU hazards from the VTEC AT after 14 days. This does not impact the TPC-issued coastal zone hazards as they assign their own ETN. But it does negatively impact the WFO as the ETN is pulled from the AT. AFAIK, there is no workaround.

This may be able to be tested prior to 6/14 if a test bed is used to issue a TS or HU hazard via the CWF then push the system clock forward 15 days.

CHS and JAX discovered upon preparing for TS Barry that their ETNs were not incrementing to 0002 as they should. I have created TS and HU products on nmtw and can get the ETN to increment as the previous product is recent. My theory is code exists which purges TS and HU hazards from the VTEC AT after 14 days. This does not impact the TPC-issued coastal zone hazards as they assign their own ETN. But it does negatively impact the WFO as the ETN is pulled from the AT. AFAIK, there is no workaround. This may be able to be tested prior to 6/14

if a test bed is used to issue a TS or HU hazard via the CWF then push the system clock forward 15 days. (DR 19261)

**Problem. Wx tool crashes GFE (Ref OB8.1 DR 19072)**

There is a file in the GFE work set that was changed to fix a DR in version 7.2. The file is GFESuite/libs/ifpData/serverData/WeatherKey.H. However, since then, the previous version was somehow put back into the baseline and went unnoticed until now. We currently have several open trouble tickets related to this file. (DR 19073)

**Problem. GFE: FWS Formatter – Number Versions of STQ Bug (ref DR 19020).**

The baseline FWS\_??\_Definition file has a definition called “STQnumberVersions”. This allows a WFO to increase the number of spot forecast requests to select from in the first GUI. However, this definition should be “stqNumberVersions.” Thus, when a WFO tried to increase the number of spot forecast requests, the number remained at the default. Impact on operations: Some WFOs get 15-20 spot requests a day. Sometimes it is requested to produce the forecast the next day. After 10 or more spots, these requests are no longer listed in the first GUI.

**Workaround:** Replace "STQnumberVersions" with "stqNumberVersions" in-site definition file. (DR 19068)

**Problem. GFE master install file errors.**

OB8.2 will introduce the full GFE installation onto the RFCs. The installation of gfeClimo failed on TBDR due to an installation script error. Specifically, in masterGFEInstall\_Climo (as well as Topo and Maps presumably) the MANDATORY\_AWIPS\_VERSIONS = ['OB7'] needs to change to OB8 in order for the installation to succeed. (DR 19258)

**Problem. Text Database Purge Problems.**

There are two basic problems with the way things get purged out of the text database; these issues should be addressed regardless of warnGen. The current text database purging scheme has caused problems with WarnGen-related products, particularly with those PILs that have more than one phenomenon and significance code.

First, nothing should ever get purged out of the text database if it represents a significant weather event that is ongoing, for example, a flood warning that has not yet expired.

Second, nothing should ever get purged out of the text database if it is for the most recent event for a given VTEC event type (i.e., a given phenomenon and significance code [FA.Y]). “Most recent event” in this case means the largest ETN for the year. (DR 19256)

**Problem. GFE - VTEC Active Table UFN Hazards not purged (Ref DR18567-OB8.1.1)  
Found in testing Baseline\_GFE\_tp033\_3360\_V2 test case.**

The GFE VTEC Active Table (AT) contains hydro hazards issued until further notice (UFN). These products have no defined ending time. In OB7.2, these products should be purged from

the AT after 14 days. These products are not getting purged. The source code responsible for this is `./headline/VTECTableSqueeze.py`.

From Shannon White:

"It is actually a major issue as we are coming up on flood season and these entries can really clog up the GHG monitor. All sites will have point-specific H-VTEC active later this spring, so we will see an increase in the number of these UFN river floods."

The UFN products can be found by issuing the `/awips/GFESuite/primary/bin/dumpAT` command at an OB7.2 site (RNK, LUB, BCQ) or on an OB8.1 testbed (NHDA, TBW3). The entries look like this:

```
Vtec: /X.EXT.KRNL.FL.W.0003.060627T0300Z-000000T0000Z/
Hdln: ????
Start: Tue Jun 27 03:00:00 2006 1151377200.0 Action: EXT Pil: FLW
End: Tue Jan 19 03:14:07 2038 2147483647.0 UFN: 1
Purge: Mon Jun 26 23:24:00 2006 1151364240.0
Issue: Mon Jun 26 22:38:00 2006 1151361480.0
Phen: FL Sig: W Office: KRNL Etn: 0003 Seg: 1 Key: FL.W
Zone: ['VAC009', 'VAC019']. (DR 19292)
```

**Problem. OB8.2 GFE: FWS – Slight Chance Weather dropped in the forecast (ref 19058)**

The Baseline `FWS_??_Definition` file does not have a `hoursSChcEnds` definition, so it defaults to whatever is configured in the FWF formatter. If a WFO uses the baseline setting for the FWF, then the value for this definition defaults to 24 hours. This is not desirable and has the potential to cause forecasters to “forget” to include dropped slight chance thunderstorm forecasts. (This is more critical in the west than it is in the east, but the west issues most of the FWS forecasts.)

Solution: Add this line to the baseline `FWS_??_Definition` files...

Definition[“hoursSChcEnds”] = 240 (DR 19116)

**Problem. OB8.2 GFE: non-top of hour ignition cause FWS to sample incorrectly (ref 19039)**

From BYZ:

"When an ignition time entered by a customer is not at the top of the hour (i.e. 1030), the formatter doesn't sample forecasts for the table correctly. It is an average over two hours instead of the value for the labeled hour. It is a bug in `_determineTableTimeRange` in `FWS_Overrides` and ASM will be sent a fix."

**Workaround.** Local overrides. (DR 19115)

**Problem. Wrong Tabular transport wind forecast source used for FWS (ref 19037)**

From BZY.

"Tabular transport wind forecasts get the forecasts from the Wind or Wind20ft grids instead of the TransWind Grid. There is a bug in the \_getWindDirSpdStr method in FWS\_Overrides and ASM will be sent a fix."

**Workaround.** Local overrides. (DR 19114)

**Problem. Incorrect Tabular/Narrative format used for FWS (ref DR 19036)**

From BYZ:

"There is a check in the FWS formatter that ensures that there is a narrative forecast for wildfire spot requests (required by directive). The Tabular/Narrative format is changed to the Narrative Only format when it should be the Tabular Only format being changed to the Tabular/Narrative format. The Bug is in the \_qualityControlFormData method in FWS\_Overrides."

**Workaround.** Local overrides. (DR 19113)

**Problem. Missing cwr values in FWS when PoP is used for cwrParm (ref DR 19030).**

WFOs can configure in their FWS\_??\_Definition file a definition called cwrParm. This tells the formatter to use the PoP grid or the CWR grid for determining the Chance of Wetting Rain (CWR) forecast in the FWS. However, WFOs that used PoP for cwrParm would get Missing forecasts for the CWR narrative phrase. Solution: Baseline a new cwr\_words method in FWS\_Overrides that uses the cwrParm definition.

**Workaround.** Site overrides. (DR 19112)

**Problem. GFEOB8.1: The run Formatter is not working for a new product. (Ref 18937)**

Unable to Run Formatter for a new product during the SIT for AC010 test case. See below the error message from the log and the test steps:

Logs:

Traceback (most recent call last)

File "/usr/local-e4/python-2.4.2/lib/python2.4/lib-tk/Tkinter.py", line 1345, in \_\_call\_\_

File "./gfe/ui/ProductWorkstation.py", line 247 in run

File "./gfe/ui/ProductEditor.py", line 1131, in getActiveTable. (DR 18977)

**Problem. WWA block not removed from the previous AFD.**

OAX reports that the AFD does not remove the WWA block from the previous discussion.

Because of this, there are double \$\$ in the product, which can cause problems in automated reading of the products for some customers.

This DR was previously titled

"\$\$ not removed from previous discussion in AFD"

It was realized that this problem is really a part of the problem in DR 18630, and it will be fixed automatically when DR 18630 is fixed. I added the \$\$ issue to the text of DR 18630 - DR 18630 was canceled because it is a duplicate of this DR. Both issues will be fixed by this DR. **(DR 18665)**

**Problem. Temperature trends wording sometimes wrong in ZFP, FWF, and SAF.**

There is a definition in the ZFP, FWF, and SAF called priorPeriod. In the baseline, it is set to 24 hours. This is used to sample the 24 hours before the start time of your forecast. If you run the morning issuance, then the start time is 12Z. Thus the 24 hour prior period sampled will be from 12Z yesterday to 12Z today. If you run the morning update issuance, then the start time is around 16Z. Thus the 24 hour prior period sampled will be from 16Z yesterday to 16Z today.

With trends of today's max temperature, the morning issuance prior period only captures yesterday's max temperature. However, when morning update issuance is executed, then BOTH today's and yesterday's max temperature is within the 24 hour prior period, so they are averaged before it is used by reportTrends.

This has been a flaw in the infrastructure for as long as I can remember. The bad news is that priorPeriod sampling is at a level of infrastructure that we can not access and override.

Three changes that Raytheon should make...

1. Have priorPeriod always end at 00Z and 12Z depending on the issuance.
2. Sample priorPeriod using a 1 hour resolution instead of a 24 hour resolution.
3. Add sampling for preUpdatePeriod, so phrases have access to hourly temperature data between 12Z and the update time of the product. **(DR 18581)**

**Problem. The run Formatter is not working for a new product. (Ref 18937)**

Unable to Run Formatter for a new product during the SIT for AC010 test case.

See below the error message from the log and the test steps:

Logs:

Traceback (most recent call last)

File "/usr/local-e4/python-2.4.2/lib/python2.4/lib-tk/Tkinter.py", line 1345, in \_\_call\_\_

File "./gfe/ui/ProductWorkstation.py", line 247 in run

File "./gfe/ui/ProductEditor.py", line 1131, in getActiveTable.

Test Steps:

1. Bring up GFE GUI.
2. Create a new table product by selecting GFE -> Define Text Products. This brings up the Define Text Products Dialog. Over the left column (Text Products), MB3 popup and

select "New...". Enter ac010 as the name of the product, and ensure that the type is "table". Press Ok.

Result: A table template is displayed in the python window.

3. Do not change anything in the product. From the Python editor window, choose File->Save, then File->Exit. Close the Define Text Products Dialog after verifying that "ac010" now appears in the dialog window.
4. From the Formatter Launcher Dialog's Product menu, select only the "ac010" entry. Run the product.

Results from the test is no text product displays (the formatter launcher GUI is blank) - FAILED

Results should be: The product is generated and the output appears in a new Python window.

## 1.8 Volume Browser/Grid Products

### **Problem. Volume Browser Closes Unexpectedly.**

While testing on TBW3 (OB8.2)...

With Volume Browser open, I selected Plan View and Space from the top drop-down menus. Choose any source and any field... When I choose 'all mb' from the plane section the volume browser quits. Therefore I am unable to load any products using 'all mb'. This seems to be the only problem.

However, after this happened a few times in a row Volume Browser would not open at all and I got an Error Message: Error: Cannot find channel named "stdin".

I tested on TBDW (OB8.1) and had no problems with the above issue. Volume browser worked just fine. **(DR 19304)**

### **Problem. Location map missing from skew-T.**

When performing step #2 of SIT\_Baseline\_D2D\_Raob: Location map in upper left hand corner does not appear when a density below 1 is selected. When the density is reset to a value  $\geq 1.0$  the map reappears and is correct. I retested this on TBDW(OB8.1) and the results were the same. **(DR 19286)**

### **Problem. Gate-to-Gate shear scaling error.**

Mike Magsig reported from OB8.2 PIT:

-Vr shear appears to be incorrect by a factor of two in super res and other resolutions

Jim Ramer commented that there may be a miscommunication/disagreement on the issue of radius vice diameter of features.

This inconsistency between Vr shear and Gate-to-Gate shear turned out to be a problem with the Gate-to-Gate shear, which is what the fix will address. (DR 19257)

**Problem. ECMWF-HiRes - First frame shows negative precip contour**

The first display frame for each of the types of precipitation is showing some negative contours. See attached image. (DR 19321)

**Problem. Display of some grids overflows contour routine making pane unusable or hang.**

Some Volume Browser fields, like the RTMA Surface Divergence, are so dense that they overflow the contour routine. This can hang, and the render the pane unusable (other contoured fields now display as broken with no labels) or hang the pane completely. See attached images. The workaround is to use the Restart Dead Panes option. (DR 19571)

**Problem. ECMWF Hi-Res time series scale/units problem (Ref. OB8.1 DR 19129).**

This is the OB8.2 merge DR of OB8.1 DR 19129.

The scale is off by around a factor of 1000 for the ECMWF Hi-Res precipitation time series display. See the attached image showing the problem. The max value on the graph should be around 1.2 inches.

To replicate, using the volume browser load a plan view image of ECMWF Hi-Res precip. Load the points extension and move a point to an area with precipitation. Next, load the ECMWF Hi-Res precipitation time series from the volume browser selecting the point moved to an area with precipitation.

Also, Melissa Porricelli found that the unit on the ECMWF Hi-Res max/min temp time series is incorrect. The display is in Kelvin and it should be in degrees F. (DR 19160)

**Problem. PIT:12hr & 36hr precip not active for ECMWF-HiRes after OB8.2 upgrade**

If a user chooses the ECMWF-HiRes grid from the Volume Browser and then selects Fields: Sfc/2D -> Precip, the submenu has 12hr Precip Accum and 36hr Precip Accum grayed out (i.e. not active for display). These were active in OB8.1. (DR 19157)

**Problem. PIT: Extra fields automatically appear in VB for RUC13 CAPE, CIN.**

In the Volume Browser, when the user selects Grid: RUC13 Field: Sfc/2D -> Convective -> Pos Buoy En Planes: Lyr -> Layer, and then selects Field: Sfc/2D -> Convective -> Neg Buoy En, the Product Selection List box shows not only the Layer Pos Buoy En and Layer Neg Buoy En, but also the Surface level for each. The user can then deselect the ones that are not desired for display, but this is a bug. (DR 19156)

**Problem. GW: Display of Gridded MOS precip accumulations should use 12-hour precip**

Gridded MOS provides two types of total precip: 6-hour and 12-hour.

D-2D will display these from the Volume Browser from the "6hr Precip Accum" and "12hr Precip Accum" menu items, respectively. AWIPS also calculates 24-hour, 36-hour, 48-hour, and model-run precip accumulations for display. The Gridded MOS technical leads/data providers would prefer that these calculations use the 12-hour provided total precip rather than the 6-hour. Currently, the default in virtualFieldTable.txt is to use the 6-hour as the basis to calculate these.

A complication for switching this for G. MOS is that a 12-hour precip forecast is calculated every 6 hours. Therefore, if, for example, one adds up all of the previous 12-hour precip values to get the model-run accumulation, some periods could be added in twice. **(DR 19092)**

**Problem. OB8.2 Gridded MOS has embedded errors.**

OB8.2 delta release on TBDW and TBW3: When loading Gridded MOS data from the Volume Browser, data are plotted but seem to contain repeating errors. Some background data seem to be valid but are actually partially covered by the invalid data. Problem noted with GriddedMOS Topography, surface pressure, and surface potential temperature. **(DR 19412)**

**Problem. extended RFC QPF data all zeros**

The POC for this DR is Fred McMullen at site RLX (Charleston, SC, (304) 746-0188).

The OH RFC (TIR) typically issues QPF out 24hours. In situations when high water is possible they will do anywhere between 36-72hr QPF. This is when the problem surfaces. When they issue extended QPF /36hrs and beyond/ all of the grids that arrive in GFE are 0.00. Fred talked to a person at the NERFC and they were able to duplicate the problem. It's not clear if the grids are being generated incorrectly by the RFC or are being read incorrectly by GFE.

OHRFC was contacted by NCF, and they said that RLX is the only site in their area that uses this product. The operational significance is that the site does not have the benefit of the extended QPF forecasts issued by the HPC at times when those forecasts are issued.

**(DR 18701)**

**Problem. DE: Add keys to gridPurgeInfo.txt for ECMWF and HPC.**

Because of the way the purging functionality is designed, the key representing a given grid must be added to gridPurgeInfo.txt. In order to determine the correct key, one must be using a clean installation/localization. Therefore, it was not possible to add the purge keys prior to the NHDA OB8.1 upgrade. This applies to ECMWF HiRes and HPC QPF grids, which were implemented in DCSs 3377 and 3380, respectively. **(DR 18321)**

## 1.9 AVNFPS

**Problem. Missing verification data (Ref OB8.1.1 DR 19359).**

AvnFPS transmission server creates VFT product without trailing newline. NWSTG software strips the last line off because of that.

Duplicate of approved OB8.1.1 DR intended for OB8.2 (DR 19397)

**Problem. Verification problems involving pair qc The "Mark All Pairs as Bad" and "... Good" menu items are not working correctly.**

Selected pairs are being lost when the user clicks on a time series legend entry. (DR 19196)

**Problem. AvnFPS: Tweb forecasts truncated in collective product (DUP OB8.1 DR 19038).**

Tweb products disseminated by WFO are being truncated by the Message Handling System on AWIPS and further shortened by the 'collectivization' software at the NWS Telecommunications Gateway and being disseminated.

Example:

Original text

FRUS45 KBYZ 101300

TWB328

328 TWEB 101402 KBIL-KLVM-KBZN-KBTM. ALL HGTS MSL EXC CIGS. MTS

OCNLLY OBSCD. P6SM FEW-SCT150...18Z P6SM SCT-BKN150 WDLY SCT  
SFC

WND VRB25G40KT -TSRA CIGS BKN040CB.

Resulting TWEB under collective identifier WMO ID FRUS31...

FRUS31 K328 101325 RRF

328 TWEB 101402 KBIL-KLVM-KBZN-KBTM. ALL HGTS MSL EXC CIGS. MTS

OCNLLY OBSCD. P6SM FEW-SCT150...

This critical defect requires that the aviation forecaster either reissue the product using different software or avoid using AvnFPS for issuing TWEBs. (DR 19047)

**Problem. AvnFPS: Inconsistent alert levels with flight category monitoring.**

Alert color differs for flight category depending on whether taf or observation is out of tolerance. (DR 19173)

**Problem. AvnFPS: gamin upgrade.**

AvnFPS uses gamin to monitor changes made to files and directories. Current version is 0.1.7. Version 0.1.9 is now available. (DR 19320)

## 1.10 Fog Monitor

### **Problem. Fog Monitor - Doesn't launch on TBDW.**

The Fog Monitor table does not launch on TBDW. The Fog Monitor loading window comes up at the bottom left part of the screen, but it freezes at that point. The only way to close it is to close D2D. It does run on TBDW.

This issue causes the OB8.2 baseline and checkout Fog Monitor test cases to fail. It is also written up as Testbed Issue #93. **(DR 19473)**

### **Problem. Fog Monitor - FM Guardian button lists N/A as lowest visibility.**

The fog monitor table sorts visibility with the lowest observed visibility first. All N/A values are sorted after the observed values. The Guardian Fog Monitor reports the lowest visibility as N/A. It should probably report the lowest observed value instead. **(DR 19423)**

### **Problem. Inconsistent table appearance.**

This DR will address cosmetic problems found during Fog Monitor testing:

1. If the "vertical" button is turned on and then off, the table columns will grow to large widths.
2. Misalignment of parameter names in the table column -- in particular, "Dewpt Depr" doesn't quite fit.
3. The monitor threshold interface's columns don't line up vertically. **(DR 19188)**

### **Problem. Localization not creating mesonet file.**

The "-fogmon" localization switch should be able to check the /awips/fxa/data/localizationDataSets/\${FXA\_LOCAL\_SITE}/ directory for the SSmesonetStatinoInfo.txt file, and, if it doesn't exist, create it (-safeseas and -snow have the same capability).

On tbw3, however, it was discovered that the -fogmon localization was not creating the file. Should be able to have this DR checked in by Oct. 17 if it is sent to DEV-TL immediately. **(DR 19555)**

...

### **Problem. Fog Monitor - Error message from Configure Monitor Area GUI.**

When I run the Fog Monitor Configure Monitor Area GUI from a terminal window, I get the following error when add or remove a zone:

```
ERROR: couldn't open "/data/fxa/workFiles/fog_monitor//FM_monitorThresh.txt": no such file or directory
```

Note from M. Churma: This error prevents the user from being able to automatically jump from the monitoring area GUI to the monitor thresholds GUI after the monitoring area has been changed. **(DR 19554)**

**Problem. Vertical station table shrinks to little box.**

Discovered by Matt Moreland during SIT testing...when clicking on boxes in the station-level table with the Vertical option on, the table would often shrink to a very little box which could not be expanded. This did not happen at the "county/zone" level, nor did it happen when the Vertical option was off. **(DR 19549)**

**Problem. Fog Monitor - Monitor Area Config delete a newly added station not working.**

In the Fog Monitor Configure Monitor Area GUI the Delete a Newly Added Station function is not working. I added KDEN to CAC001 then tried to delete it. It showed up in the Delete Newly Added Station GUI. I selected it and pressed Delete, but when I checked the fm\_MA\_setup.dat file, the station was still there.

This test is step #18 of the FM-Add\_Obs\_Config\_GUI-DCS\_3267 test case. **(DR 19513)**

**Problem. Fog Monitor - Error message running the FMProcessor executable.**

The following message was displayed when I launched the FMProcessor on TBDW:

LOG-STATUS: Warning: "PointNetCDFProcessor.C", line 1484: message not terminated with \n or endl. **(DR 19450)**

**Problem. Fog Monitor - Clarify terminology for Fog Monitor Guardian Threshold config GUI.**

There are two Fog Monitor GUIs for configuring threat level thresholds. One is accessed from the appLauncher and one from the Fog Monitor Threat Level table. Their appearance is similar for the visibility threshold portion. The Monitor Threshold GUI launched from the appLauncher configures the alert thresholds for the Guardian Fog/Vis status button. The one launched from the Threat Level table controls the table display. This can be confusing to the user. It should be made clear that the one launched from the appLauncher pertains to Guardian and the one launched from the table is for the table display. This also applies to the SNOW and SAFESEAS appLauncher GUIs. **(DR 19447)**

**Problem. Fog Monitor - fogmon localization error.**

A localization error occurs when running the -fogmon localization:

Merging Fog Monitor MA setup files ...

MA setup merge failed!

Customized file

/data/fxa/workFiles/fog\_monitor/monitor\_thresholds/FM\_pointMonitorThresholds.txt.old does not exist. Exiting from merging monitor threshold.

fog monitor localization steps completed.

FOG\_MONITOR files done.

I haven't found any problems that this causes. The problem was found while running step 2 of the FM-Expanded\_Localization\_DCS\_3268-OB8.2 test case. **(DR 19446)**

**Problem. Fog Monitor - Monitor Area Configuration GUI issues.**

In the FM-Add\_Obs\_Config\_GUI\_DCS\_3267 test case the tester adds a new zone using the "Add a New Zone GUI," which is launched from the Fog Monitor Monitoring area Configuration GUI. The tester can enter a station value in lower case which sorts to the bottom of the Threat Level table. The entry should probably be converted to upper case before it's saved. Also, I was able to enter an invalid lat/lon. That didn't seem to cause any problems, but (in a perfect world) there should probably be a check to make sure the user can't enter something invalid. **(DR 19440)**

**Problem. Fog Monitor - Station choice not available in Monitoring Area Configuration GUI.**

The Station choice is greyed out in the Fog Monitor Monitoring Area Configuration GUI. The problem was found while executing steps 12-18 of the FM-Add\_Obs\_Config\_GUI\_DCS\_3267-OB8.2 test case. **(DR 19445)**

**Problem. Fog Monitor - Guardian Fog Monitor button does not show FM algorithm.**

The Guardian Fog Monitor button does not reflect the choice to include the Fog Monitor algorithm in the Guardian icon color. **(DR 19424)**

**Problem. Fog Monitor - Guardian FM button does not respond to FMprocessor state.**

The Guardian Fog Monitor button should change colors depending on the state of the FMprocessor. The SNOW button responds instead.

Executing the FM-Incorporate\_Obs-DCS\_3265 test case. In step 2, the user stops the FMprocessor using the stopFMprocessor command. The expected result is that the Guardian Fog Monitor button will turn white. Instead, the SNOW button turns white and the Fog Monitor button remains unchanged. In step 3, the user starts the FMprocessor using the startFMprocessor command. The SNOW button goes gray after the start and then updates to the appropriate color. **(DR 19420)**

**Problem. Fog Monitor: Thresholds and trend graphs don't match.**

The thresholds seen in the trend graphs for ceiling and other thresholds don't match what was set in the display configuration GUI. In addition, several configuration threshold columns did not allow the user to select proper values (for example, T-Td should have lower values set to red, but higher values assigned to red instead). The two problems listed above are believed to come from the same root source. (DR 19207)

**Problem. Guardian button not responding.**

The Fog Monitor icon in Guardian is stuck with a color of gray, and is not displaying up to date text information from the Fog Monitor's background processor. The icon should be receiving fog/visibility information from the Fog Monitor, to improve situational awareness. Either the processor is sending the wrong data or Guardian is not receiving it. (DR 19178)

**Problem. Vis/Ceiling data mismatch.**

Visibility and ceiling are being written correctly to output, but are not appearing in the table correctly -- they don't match the values seen in the raw METAR data when the cursor scrolls over the station in the D-2D map. (DR 19142)

**Problem. Bad RH values written to output.**

Some of the values being calculated for relative humidity by the FMprocessor are nonsensical. They should go from 0 to occasionally 100 percent (and almost never more than 100% at the surface). Instead, there are numbers being calculated in the thousands, manifesting themselves as big or "NaN" values in the table. (DR 19141)

**Problem. Fog "working" popup change.**

Minor cosmetic issue: The "working" Fog Monitor popup, which appears as the table updates, has an ugly gray border outside of it. The border is there because the Fog Monitor is now using more SAFESEAS software, and the SAFESEAS "working" popup is slightly larger -- the smaller Fog popup doesn't fit the "frame". The solution is to expand the Fog popup slightly, to match the uniform sizes of the SAFESEAS and SNOW "working" popups. (DR 19139)

**Problem. TCL error in display.**

In the Fog Monitor station table display, placing the cursor over a station name produces the following TCL popup error: "item array (station 16) No such element in array" (DR 19136)

**Problem. Fog Monitor display config table bug.**

When the Fog Monitor table is loaded, and the display configuration threshold GUI is selected from the table, a TCL error occurs (it can't find /data/fxa/workFiles/fog\_monitor/setup/display\_thresholds/.default), and the configuration table won't show up. (DR 19119)

**Problem. Fog Monitor process crashing.**

The Fog Monitor's FMprocessor is crashing on px1. It appears to be having trouble with ingest/processing of ceiling data. Data is being produced haltingly, but this needs to be fixed to allow for automatic updates and smooth, continuous testing. (DR 19110)

**Problem. Table not displaying.**

The Fog Monitor table won't display -- it crashes instead. The root cause looks to be a failed localization, because certain configuration files are not being delivered to their expected \$FXA\_HOME subdirectories. (DR 19085)

**Problem. Inconsistent table Appearance.**

This DR will address cosmetic problems found during Fog Monitor testing:

1. If the "vertical" button is turned on and then off, the table columns will grow to large widths.
2. Misalignment of parameter names in the table column -- in particular, "Dewpt Depr" doesn't quite fit.
3. The monitor threshold interface's columns don't line up vertically.

**Workaround.** Manually add source icon .xbm file in Guardian to each workstation. (DR 19188)

**Problem. GUARDIAN not displaying new info.**

From master.gcf file upon installation.

GUARDIAN did not automatically display the new fog monitor source icon upon installation despite proper master.gcf file update. (DR 19185)

**Problem. Guardian button is not responding.**

The Fog Monitor icon in Guardian is stuck with a color of gray, and is not display up to date text information from the Fog Monitor's background processor. The icon should be receiving fog/visibility information from the Fog Monitor, to improve situational awareness. Either the processor is sending the wrong data or Guardian is not receiving it. No known workaround. This is a PIT DR for OB8.2. (DR 19178)

**Problem. Sometimes doesn't receive notifications.**

The FMprocessor on occasionally does not receive notification server signals to update. A workaround available restart the notificationServer, but we wish to investigate if the FMprocessor is inadvertently timing itself out from receiving signals. This is an OB7.2 DR. The workaround is to restart the notificationServer, and then, on px1, run stopFMprocessor and startFMprocessor as "fxa". (DR 17026)

**Problem. NWRWAVES: Unable to handle double headlines for GLF product.**

Whenever an Open Waters Forecast (ARBGLFLS) is issued with double headlines for Western Lake Superior, NWRwaves drops the body of the forecast and uses the second headline as the body. Is there a work around for this? Thanks, *Amy Liles of MQT*

*Reply from Evan Bookbinder on 3/17/07:* I don't have a workaround for you unless it would be possible to either:

- 1.) Remove any blank lines between a double headline and the message body.

...HEADLINE 1...

...HEADLINE 2...

.TODAYS FORECAST BEGINS HERE

- 2.) Encapsulate both headlines into a single headline string.

...HEADLINE 1 IS CANCELLED. HEADLINE 2 REMAINS IN EFFECT...

Since I assume you're using GFE to generate these, I don't think either is possible. (DR 18775)

**Problem. NWRWAVES: Incorrectly issues red banner TEST message.**

*As reported by Brian Walawender of CR HQ:* The check for TEST wording or T VTEC coding occurs before the processing of listening area codes. So it is possible to get an FXA Red Banner message stating something similar to "TEST WORDING DETECTED IN STLWOU4...SENDING TO PENDING" even though the product has none of the sites' counties/zones in it.

This bug will impact all WFOs. The good news is that no messages are generated unless the product contains counties or zones in your listening area. The FXA red banner message can be safely ignored. (DR 19057)

**Problem. NWRWAVES: Unable to decode VTEC line that contains extra white space.**

On rare occasions, NWRWAVES fails to process subsequent VTEC lines of a multi-VTEC line segment.

Problem appears tied to a lack of a "trim" command on subsequent file read statements in the UGC\_VTEC\_Decoder library. (DR 18742)

**Problem. NWRWAVES: Crashes with an invalid time when one segment of a multi-segmented product.**

NWRWAVES Crashes with an invalid time when one segment of a multi-segmented product crosses into the new month

This scenario occurred in a very rare scenario under the following conditions:

1. Product issued at the end of the month (Jan 31st)
2. Multi-segmented product
3. First segment expires in the new month, but one or more subsequent segments do not

An example of such a scenario would be this: A WSW is issued early in the afternoon on the 31st. The first segment contains a higher-priority winter storm warning, which expires at noon the next day. The second segment contains a lower-priority winter weather advisory, which ends later that afternoon.

The UGC\_VTEC\_Decoder in the /bin directory does employ logic to determine whether the expiration time of a product carries into a new month (or year). The problem is that the *expiremonth* and *expireyear* variables were global. If the logic bumps the *expiremonth* forward one month, that change is maintained through the remainder of the processing routine.

In the case above, the first segment is correctly adjusted to February 1st. However, the second segment encounters a date of the 31st, resulting in an impossible date of February 31st.

*A similar NWRWAVES infolist report (may not be related) filed by Bill Goodman from OKX on 1/22/07: We noticed a problem with product UGC expiration times last week for products which are valid into next month. Our service hydrologist issued a winter/spring flood outlook ESF on the 19th, which of course does not get CRS display, but whose UGC expiration time (021800) caused a D2D red banner alert. Some offices may have very good reasons for issuing products with expiration times extending into the next month, and by the same token NWRWAVES ought to have equally good reasons for rejecting them, but perhaps less stringent than is now the case? (DR 18741)*

**Problem. NWRWAVES: Canceled/Upgrade Msgs do not contain intro or county/zone list phrasing.**

This appears to be a leftover from previous changes that originally had "canned" statements for cancellations/upgrades to remove the old message from CRS with MRD replace. Since NWRWAVES now uses the actual NWS body text for these products, it makes sense to include the optional phrasing for these products as designated in the NWRWAVES Setup GUI. **(DR 18740)**

**Problem. NWRWAVES: Inability to designate Overview Product to pending.**

The separate overview section, which accompanies many non-precipitation (NPW) and winter weather (WSW) product is a new addition to NWRWAVES in V2.6 (OB6.0.3 AWIPS). In this separate module, the code was inadvertently hard-coded to automatically place the output in the /ready directory for CRS transmission, instead of checking the transmit flag to see if the user wanted this product to go to the /pending directory instead. **(DR 18739)**

**Problem. NWRWAVES - 5 Indiana counties to return to Eastern Time Zone (Ref OB8.1.2 DR19504).**

The UGClookup.table is used by NWRWAVES setup GUI to establish the set of counties/zones associated with each NWR transmitter. It is similarly used by the NWRWAVES processor to

correlate decoded UGC line(s) with the appropriate English translation for those counties/zone as well as their inherent time zone for generation of summary messages and repeating headlines at the end of messages (used in warnings).

This file needs to be modified to account for the 5 Indiana counties/zones that are switching back from Central Time to Eastern Time effectively on November 4th, 2007 when daylight Savings Time ends and Standard Time starts.

The 5 counties, state, responding WFO, time code(C=Central), county/zone codes are:

Knox,IN,IND,C,INC083  
Knox,IN,IND,C,INZ067  
Daviess,IN,IND,C,INC027  
Daviess,IN,IND,C,INZ068  
Martin,IN,IND,C,INC101  
Martin,IN,IND,C,INZ069  
Pike,IN,PAH,C,INC125  
Pike,IN,PAH,C,INZ082  
Dubois,IN,LMK,C,INC037  
Dubois,IN,LMK,C,INZ083

**(DR 19530)**

**Problem. If a product segment contains two identical VTEC phenomenon hazards, but with separate event tracking numbers, only the first is processed.**

Trouble Ticket: 261656

If a product segment contains two identical VTEC phenomenon hazards, but with separate event tracking numbers, only the first is processed. For generated. The underlying problem is that the cancellation statement will expire from NOAA Weather Radio before the new hazard takes effect. This issue example, a product containing a cancelled heat advisory for today with a new heat advisory for tomorrow will only have the cancellation statement only affects those identical hazards which are not tone alerted. **(DR 17932)**

**Problem. Separate overview section is being inadvertently generated for the TCV product.**

Separate overview section is being inadvertently generated for the TCV product.

Trouble Ticket: 261655. **(DR 17931)**

**Problem. WCN products with "CAN" VTEC Hazard are not processed if contained as part of a watch replacement containing a separate "NEW" VTEC Hazard.**

WCN products with "CAN" VTEC Hazard are not processed if contained as part of a watch replacement containing a separate "NEW" VTEC Hazard.

Trouble Ticket: 261653. **(DR 17930)**

**Problem. NWRWAVES: routine update to UGClookup.table.**

Two offices have forwarded recent UGC/zone changes that they have made locally. NWRWAVES baseline UGClookup.table needs to be updated to reflect these changes. (DR 18348)

**Problem. NWRWAVES Silence Period failure when crossing calendar day.**

Site called to report that the 'new' NWRWAVES is unable to establish a silent period from 1201am to 501am. Development team researching TTR #270514 determined a software bug which prevents silence period from functioning correctly when the silence period crosses midnight from day one to day two. Fix has been identified for this bug; fix can be included in OB8.2 release of NWRWAVES. (DR 18341)

## 1.12 WarnGen

**Problem. Storm Track resets when selecting SVR, TOR, or FFW radial buttons in WG GUI.**

For non-hydrological warnings, a centroid, storm track, and polygon all should appear after the centroid is moved. Also, when selecting between these warnings the original track and polygon should remain. For hydrological warnings, the track and storm location are irrelevant, but at least the polygon should remain. It has been observed that when a track and polygon have been set for a particular warning type and then a Flash Flood, Severe Thunderstorm, or Tornado Warning radial button is selected, the track and polygon are reset and only a new centroid is displayed on the main pane. (DR 19695)

**Problem. WarnGen crashes when double clicking an existing product on D2D.**

**Workaround:** Using WarnGen GUI instead of "right click" to issue follow-up. The impact to use workaround for forecaster is not significant. (DR 19677)

**Problem. Dam Break FFWs cannot be followed-up. (19377).**

While executing the baseline WarnGen SWIT test case, I observed that non-convective FFW (Dam Break) warning could not be properly followed up. The NEW warnings are issued and WarnGen functions as expected, but all the follow-ups (COR, EXT, CON, CAN, EXP) do not. The issue is that all these follow-ups get placed in the convective FFW (flash flood warning) section. The follow-ups can be issued from this section, with the exception of extensions (EXT), but the cause gets automatically changed to extensive rainfall (ER) in the hydro-VTEC line. Usually the cause for a non-convective FFW (Dam Break) warning is a dam break (DM), ice jam IJ, etc. (DR 19377)

**Problem. FFW (dam break): rule of thumb text created when dam break scenario is not.**

When issuing a new flash flood (dam break) warning, the user is able to create text with "rule of thumb" when no dam break scenario is selected. This goes against requirement 1.2.8 of DCS 3388. (DR 19481)

**Problem. FFW (dam break): polygon not created for dam with an undefined dam area.**

When issuing a new flash flood (dam break) warning with no dam selected, the coordinates of the manually created polygon should be used. They are not. No coordinates are listed in the product. Also, a template error is given. The issue occurs when a dam is selected that does not have a predefined area, as well. Both these issues go against requirement 1.2.11 of DCS 3388. (DR 19478)

**Problem. FFW (dam break): Primary cause may be changed with extension.**

After a user creates a new flash flood (dam break) warning, the primary cause may be changed when sending out an extension. The primary cause may be changed to any primary cause, for example, "volcano induces snow melt."

There really is no reason why the user would want to change the primary cause, but either way it should not be allowed. It is not allowed when issuing a correction. (DR 19477)

**Problem. WarnGen: SMW/MWS does not provide storm motion in kts (OB8.1.1 DR 17917)**

According to NWS directive 10-313, Section 2.3.3 storm motion should be expressed in kts. WarnGen only does mph. And to stay consistent, distances should also be expressed in nm. (DR 19317)

**Problem. Warngen templates still have KDEN in WMO heading(TT#288577,OB8.1 DR18967)**

Some WarnGen templates still have KDEN instead of \$\$wmoValue! in the WMO heading line.

This can cause warnings with incorrect WMO headings to be generated.

**Workaround:** Manually fix the templates. (DR 19316)

**Problem. WarnGen FFW(Dam break) has incorrect H-VTEC (OB8.1 DR 18934)**

When "non-convective FFW (Dam Break)" product is selected and "floodgate opening" is selected as the primary cause the H-VTEC begins with 00000.U.DM, it should be 00000.U.DR. (DR 19315)

**Problem. VTEC ETN mis-match between WarnGen and TextWS QC(Ref OB8.1.1 DR 19081).**

There is suspected mismatch between WarnGen and the Text Workstation (Text WarnGen Window) QC program over the number of products examined in the text database. When this occurs, the following QC error occurs [see Attachment 1 for a screen shot from WFO SGF]: "The value of your ETN, 0008, is much higher than the highest ETN in the text database."

The SST has examined the text database using the following command [textdb -r ALL:STLFLSSGF | grep ^/X'] and found the following: [see Attachment 2.]

**Note:** The text database does have products stored FA.Y using ETNs 0001 - 0007 before the site rain into this problem.

Shannon White had indicated that she had seen this problem in previous VTEC testing.

A WarnGen archive was created for this problem 5/30/2007 and stored in /data/fxa/wgnTT.20070530\_1236. (DR 19270)

**Problem. WarnGen GUI improvement to the implementation for DCS 3388. Based on the suggestions from Susan Williams, Joe Wakefield (GSD), and Tim Helble (NWS), the following improvements are required to WarnGen GUI which was , implemented for DCS 3388:**

- a) Move Dam Break related text together in Optional Bullets box.
- b) Right justification of Dam Break Threat Area button. This may involve in justification of the adjacent tk components.
- c) Change the text corresponding to operator of dam from OPERATOR OF DAM to THE DAM OPERATOR.
- d) Change the text corresponding to Corps of Engineers from CORPS OF ENGINEERS to THE CORPS OF ENGINEERS.
- e) Add bureau of reclamation to DAM FAILURE REPORTED BY, and its corresponding text is THE BUREAU OF RECLAMATION.

Two defects found by Qinglu Lin (7/12/2007) are following:

- a) In prompt "was not provided in dam\_info.txt," site id should precede to dam\_info.txt, e.g., LWX-dam\_info.txt.
- b) In current implementation, both addInfo and scenario are included in warning product. scenarios should override addInfo if selected.

(7/25/2007) Additional changes were made in WarnGen.C and WarnGenWish.C. The defects were found partially by Joe Wakefield and partially by Qinglu Lin. No changes to the testing procedures were made due to these changes.

(8/1/2007) Joe Wakefield found the changes to Optional bullets box in wwa\_dam\_break.preWWA need to be done to that in wwa\_flflood\_sta.preWWA as well.

Qinglu Lin found that some wording changes in wwa\_dam\_break.preWWA, wwa\_flflood\_sta.preWWA, and in LWX-dam\_info.txt are needed to make the autohighlight work in dam break follow-ups. The attached LWX-dam\_info.txt should replace that attached to DCS 3388. (DR 19239)

**Problem. WarnGen: Basins not available for inclusion in warning.**

OB8.2 WarnGen was supposed to implement the ability for sites to add affected basins to a hydro warning via a CTA choice. This CTA choice relies on a particular FFMP shapefile. Unfortunately, this shapefile implementation has been pushed to OB8.3.

If a temporary solution to include these basins can be used for 8.2 which works for all WFOs, that is great. If not, then the option needs to be removed from the baseline templates so that forecasters cannot choose it and end up with a blank list of affected basins. **(DR 19181)**

**Problem. SPCcheck:LLL-tor/svrWatch.txt does not have all counties in a watch(OB8.1 18872)**

SPCcheck creates LLL\_torWatch.txt or LLL-srvWatch.txt for a tornado watch or a severe thunderstorm watch issued by SPC. Not all counties in the same CWA mentioned in the watch were included in LLL\_torWatch.txt or LLL-srvWatch.txt. WarnGen uses include mechanism to automatically ingest the content of LLL\_torWatch.txt/LLL-srvWatch.txt into warning products. The missing regions in LLL\_torWatch.txt/LLL-srvWatch.txt cause missing counties in WarnGen warning products.

The following is an example that occurred at ILM: "On Friday March 2nd, Tornado Watch #51 was issued for all of our Southeast North Carolina counties and Northeast South Carolina counties. ... Our Severe Thunderstorm Warning and Severe Weather Statements only contained a mention of the watch in North Carolina in the text."

The "missing counties" issue has been confirmed with svr tstm watch 69 on March 23, 2007 at site EPZ.

History: SAW produc was replaced by WOU, and new code were added to SELSparagraphs.C to handle WOU (DR 16231). There might be bugs in the code.

**Note:** The DR also relates to TT 284390 (OAX). The problems in TT 284390 and 286487 have the same causes.

**Workaround:** No.

**Operation impacts:** The user has to type in missing counties manually, which means that it takes more time to prepare for warnings. The extra time needed to type in the missing counties reduces the warning leading time. OB8.2; OB7.2. **(DR 18979)**

**Problem. WarnGen: GUI resets after pressing "Update List".**

During an attempt to create a COR (or EXT for hydro products), when "Update list" is pressed to update the list of current warnings, the WarnGen GUI and "Drag me to storm" icon reset themselves to the default state.

**Workaround:** There is a workaround. After the GUI resets, the forecaster can select the desired product, move "Drag me to storm" to the correct location, and issue the COR or EXT normally. This would delay the issuance of a product if the forecaster did not discover the workaround. If the forecaster knew the workaround, it would be considered a nuisance. Another possible workaround might be to right click on the D-2D warning polygon to select the desired product; this workaround was not tested.

The problem does not occur all the time. In two test sessions on nmtw (10/15/07 and 10/16/07), the problem occurred in about 7 out of 10 test products. The problem was experienced with the

FFW (convective and non-convective), SVR, FLW (Areal Flood Warning), and FLS (Areal Flood Advisory). The other WarnGen products were not tested (TOR and marine products), but they likely also have the same problem.

Test Instructions:

1. Create and send a short-duration warning using WarnGen, e.g., convective FFW (Flash Flood Warning).
2. Don't change any items on the WarnGen GUI or D2D.
3. Push the "Update List" button to refresh the list of active warnings (in preparation to issuing a COR or EXT).
4. The WarnGen GUI will reset in the upper left corner of D2D to default product "SVR" and "Drag me to storm" will reset away from the FFW polygon. **(DR 19553)**

**Problem. WarnGen: Reword WarnGen GUI content for dam break FFW.**

The content in WarnGen GUI for dam break FFW (wwa\_dam\_break.preWWA) should be reworded based on attached document and screenshot.

The content for dam break FFW follow-up (wwa\_flflood\_sta.preWWA) might need to be changed accordingly. **(DR 19505)**

**Problem. WarnGen: Dam Break template Call To Actions (CTA) out of place**

LAT...LON and Call to Action are out of place. The CTA should be above the LAT..LON info. **(DR 19494)**

**Problem. Alpha WarnGen (Dam Break): Leading IN cause false QC error.**

When user uses the new WarnGen feature - Automated Insertion of Dam Break Data into FFW/FFS (DCS 3388), the words in the first bullet wrapped and, by accident, the leading word in the second line is "IN". The leading IN causes false QC error.

**Workaround:** Insert one or two spaces before IN by the user will fix the problem – easy to do and no risk.

TT 306429 has the same issue as 306283. **(DR 19488)**

**Problem. Warning expiration box appears after warning cancellation.**

When an active warning is set to expire in 10 minutes, an expiration notification box appears on the text workstation. Also, when a canceled warning would have expired, had it not been canceled, an expiration notification box appears on the text workstation.

**Workaround:** The workaround is to simply ignore the message. The message is only a notification and nothing else.

Due to the fact that this could cause some confusion on the forecast floor during an event, I have given this issue a priority of “major.” **(DR 19475)**

**Problem. WarnGen: Dam Break template should only allow flood severity selection for DM.**

Currently, WarnGen allows for the selection of a flood severity (FS) no matter which immediate cause (IC) is selected. For ICs other than dam break (DM), the flood severity should only be U. (DR 19043)

**Problem. Flash Flood Warning followups disappear (Ref OB8.1 DR 19177).**

Generate and issue at least three and preferably 7 flash flood warnings and see that corresponding flash flood statements disappear from the warngen follow-up action list. (DR 19228)

**Problem. WarnGen: template name is confusing (Ref OB8.1.1 DR 18590).**

The template name at the top of the wwa\_flood\_sta.preWWA template is Areal Flood Followup. This should be Areal Flood Warning Followup, to distinguish it from the Areal Flood Advisory F. (DR 19269)

**Problem. Text workstation panic mode prevents sending warnings (OB8.1 DR 19105)**

When issuing a product using Warngen on LX3 (SVS-severe wx statement). Once the tester goes to the text workstation to click send in the edit pop-up GUI, a dialogue box appears saying "panic mode - the workstation mode has unexpectedly changed to send or save procedures, exit and change modes." The tester says he tried to change modes but it does not allow him to.

**Workarounds.** Log out of (or reboot) the workstations or send the message manually. These workarounds, however, are not practical during severe weather. (DR 19151)

**Problem. Flood Advisory type incorrectly changed for follow-up (OB8.1 19050)**

If an areal flood advisory is created with Small stream selected as the type, then that small stream option will NOT be selected when doing a follow-up. This results in the follow-up statement only stating generic flood advisory which is a mismatch to the original advisory. The option cannot be altered (by design) for the follow-up statements, so there is no workaround.

If other options are chosen, urban and ss, arroyo and ss or hydrologic, the follow-up works correctly. This only impacts a ss flood advisory. (DR 19150)

**Problem. gaps in WarnGen GELTs (Ref OB8.1 DR 18830)**

While testing an OB8.1 WarnGen DR, we observed a bizarre warning box generated by WarnGen (first attachment: Adams County, CO). Investigation revealed that the county GELT contains a gap (second attachment: display of Maps > WarnGen Tables > Counties). We also see a gap in a couple of zones (third attachment). At BOU, running OB7.2(.0.1, I guess), there is a similar gap in Grand County, CO.

The extra vertex shown in the snapshot can be removed manually.

We found that we can eliminate these problems on our OB8.1 test platform by running a non-optimized version of newGELTmaker. Jim Ramer has found that he can fix this by explicitly declaring a few variables in gelt\_maker.c to be doubles. **(DR 19003)**

**Problem. Warning expiration wording method needs to be propagated.**

The use of the "abstime" and "nowtime" methodology that affects the expiration wording ("will expire" vs. "has expired") is currently used in the wwa\_flflood\_sta\_county.preWWA, wwa\_flflood\_sta.preWWA, wwa\_flood\_adv\_sta.preWWA, and wwa\_flood\_sta.preWWA followup templates. This same logic needs to be placed into the other followup templates wwa\_mar\_wx\_sta.preWWA and wwa\_svrwx\_sta\_county.preWWA as well. **(DR 18592)**

**Problem. path cast wording is incorrect per directives.**

The NWS severe weather directives indicate using the phrase "LOCATIONS IMPACTED" instead of currently-used "AFFECTED LOCATIONS". **(DR 18591)**

**Problem. Incorrect grammar used in warning product.**

It was common for WarnGen to create text products with bad grammar like the following example: "ABOUT NEAR SPRINGFIELD." It seems to occur about 50-75% of the time.. **(DR 18565)**

**Problem. WarnGen small enhancement: change when CON is allowed to be issued.**

History: In OB4.1b, a change was made to only allow an EXP to be issued in the final 10 minutes of a warning. Once this EXP is issued, no more statements can be issued for that warning. This has caused a problem for the field, most notably during the Enterprise, AL outbreak. The field would like this behavior to change.

Requirements: Allow forecasters to have the option to either continue or expire a warning in the window between 5 and 10 minutes prior to expiration. Within the last 5 minutes of a warning, "expire" will continue to be the only option. Forecasters will be able to correct a continuation as long as they are still able to issue continuations. So, no corrections will be able to be issued in the last 5 minutes of a warning. **(DR 18992)**

**Problem. WarnGen: Can add back removed counties to a follow-up SVS (OB8.1 18946).**

WarnGen allows you to ADD counties back into the warning follow-up SVS after they have been removed in the previous SVS.

Steps to replicate the problem (copied from the TT):

1. Issue a warning for multiple counties.
2. Issue an SVS and remove one county from the warning.
3. Now – without touching any other button – select the redraw from "track" button. This results in the original warning polygon being displayed.
4. Issue an SVS.

5. The county that was removed from the warning is now placed back into the warning.

**Operational Impact:** Delay the issuance of SVS warning. (DR 18956)

**Problem. WarnGen Flood Advisory Hydro-VTEC is incorrect. (OB8.1 DR 18885)**

In the Areal Flood Advisory products the Hydro-VTEC begins with /00000.0.ER. It should begin with /00000.N.ER for both areal and point based flood advisories.

*As mentioned by Timothy Helble:* The idea was to use the letter indicating "no flooding" which is "N," since the products are for high water events that don't warrant a full-blown flood warning.. (DR 18912)

**Problem. Warned for cities outside the CWA (Ref. OB8.1 DR 18776)**

Sent out an FLS for BOX, which was only valid for Southern Washington County, RI. The product mentioned that the city of Mystic, CT in OKX's CWA was included in the flood advisory.

The initial polygon and the produced text and graphic warnings are attached to this DR. (DR 18902)

**Problem. WarnGen: part of county not included in partial cancellation (OB8.1 18764)**

WarnGen has the ability to delineate a county into 9 parts (NW, SW, etc.). These parts of counties help the public know which areas are under threat. There can be multiple warnings valid in a county at a given time. When a partial cancellation is done (removing one or more counties and having one or more remain), the part of county is not included. It is included for the remaining counties as well as for a full cancellation. This part of county is required for all warning products as multiple warnings could be in effect and not delineating them would cause confusion for the public.

This must be in the baseline follow-up templates in OB8.1 for the implementation of storm-based warnings. (DR 18901)

**Problem. GW: D2D not displaying all warnings by type (Ref OB8.1 DR 18855)**

The newer functionality described in DR 18428 added back the legacy functionality of a catch-all in addition to the separate warning displays. What I have found is that all warnings posted outside the CWA are not displayed in the separate warning displays, but the legacy display does. This DR is similar to DR 18777. (DR 18882)

**Problem. WarnGen shows multiple selections for IC in flood advisories.**

Even though the header for the IC group says choose 1, WarnGen does not toggle between selections. It keeps highlighting them. But when the product is created, only one is used (it appears to be the last one selected).

WarnGen should only allow one to be selected, so when another IC is chosen, the original is deselected. (DR 16416)

### 1.13 Guardian

#### **Problem. IGC\_Process locks up and fills up logs (Ref OB8.1.1 DR 19272)**

At CHS, there have been two occurrences of d2d locking up. This happened on two different workstations with two different users. (DR 19353)

#### **Problem. IGC\_Process locks up and fills up logs (Ref OB8.1.1 DR 19017)**

From the ticket:

Matt called , as Guardian has gone haywire.  
Tried killed the Guardian process, was unable to do so,  
Cannot access this device via the xyplex port.  
Unable to ge a prompt, site will have to powercycle lx3.

This is actually a problem that originates in IGC\_Process. It appears that IGC enters an infinite loop in which there is a segfault, the segfault is contained, and then a message is logged (and sent to Guardian.) See attached log excerpt.

The sequence of events leading up to this were reported as follows.

1. A number of products from GFS90 were loaded via Volume Browser in the main pane.
2. The main pane was swapped out to a small pane.
3. Some other operations were performed
4. The small main with the GFS90 products was swapped back in. At this point, the problem started occurring.

This lockup required a powercycle to clear and is, thus, very serious. It seems that the problem can be avoided by not swapping panes. (DR 19455)

#### **Problem. GUARDIAN not displaying new info. from master.gcf file upon installation.**

GUARDIAN did not automatically display the new fog monitor source icon upon installation despite proper master.gcf file update. (DR 19185)

**Workaround:** Manually add source icon .xbm file in Guardian to each workstation.

#### **Problem. Guardian popup window location.**

Guardian's pop-up window should re-appear in the location in which it last existed, thus allowing users to place the window in a location of their choice and have the window always appear in that location, until it is once again moved by the user. This is an enhancement based on direct feedback from the field. The field saw this in OB7.2, but this was verified using an OB8.2

testbed (fslld). Verification was necessary because I thought this functionality was already there - and because this was included in the Guardian OSIP. (DR 19155)

**Problem. Guardian and forced settings.**

Forecasters in the field have pointed out that Guardian does not allow for a forced sound file to be played. This was as designed, but the field states very clearly they want/need this sort of functionality. (DR 18729)

**Problem. artsplay will not play some sound files.**

Some sounds will not be played by Guardian... more specifically artsplay which Guardian calls.

“The issue is not a Guardian issue. It is an artsplay issue. In its early developmental stages, Guardian used the 'play' command to play sound files, but it was found that 'play' did not play all of the sound files (for some unknown reason) so Guardian switched to 'artsplay'. However, even 'artsplay' does not play all of the sound files delivered to AWIPS sites.” (DR 18678)

**Problem. Guardian: Color application error makes it hard to correct typo.**

When an erroneous color name or octal color string is entered in the priorities background or foreground text box of the Guardian Configuration GUI, it is exceedingly hard to correct the typo. For example here is what happened to me: I typed FFFFFFFF for white, but forgot the # before the octal color string. Due to the typo, an application error dialog box appeared. The Guardian Configuration GUI is inoperable when this dialog box is active, so to correct the error the dialog box must be close. After closing the dialog box, the dialog box reappeared before I could correct my error. The dialog box would reappear in less then a second in some cases, which made it rather difficult to make the correction.

In addition to my case, Guardian had originally opened on the left monitor and I moved to the right monitor. I made my typo in the Guardian Config GUI on the right monitor, but this error message would pop-up on the left monitor. It was extremely difficult to close the error message, move the curser all the way to the right monitor, and make the correction before the error message popped-up again on the left monitor. (DR 18642)

## 1.14 SNOW

**Problem. SNOW application is missing on TBW4 (Alaska site) (Ref OB8.1 DR 18896)**

In OB8.1 testing, while clicking on "Obs" from D2D display, no "SNOW" selection was available on TBW4 D-2D's. This was because the dataMenus.AK.txt file in the /data/fxa/nationalData/ directory was missing a "SNOW" entry. This was fixed in OB8.1 by DR 18896. (DR 18947)

**Problem. SNOW: processor hanging on px1.**

CYS and PUB observed px1 slowdowns due to a SNOWprocessor hang. The issue was investigated and it was found that the executable was not able to read the thousands of mesonet stations in its localization files – there wasn't enough memory assigned to handle them all. While this problem has not been widespread and can be worked around (by paring down the mesonet

lists in SNOW), the severity of the effect on px1 warrants a DR ranking of "critical" and a fix ASAP. The problem is known and isolated, so there will be minimal turnaround time on this DR. **(DR 18755)**

## 1.15 FFMP

### **Problem. Incorrect Color shown under Area\_Id attribute.**

The <<description>> was reported by the DMX field office.

<<From main FFMP screen in county view, click on a county, and list of numbered basins come up in the county, with a list at the end (because they are in the 8000s) or virtual gage basins for the county, these are colored purple. Sometimes sub-basins will show up, but now all the sub-basins are colored gray, and none of the "virtual gage basins" are purple, they are all gray. Can't bring back the purple virtual gage coloring without clearing and restarting FFMP. Also - although the basins are colored gray, the virtual link with the rain gage still works, you just can't tell, unless you know what the number is. Finally if you select HUC4 basins, the stream names come up, but when you click on a stream name, you are just taken to that basin and not into the window with the associated streams, so basically from HUC4 you cannot access the virtual gage basins at all.>>

Here is what I can re-produce:

1. Start FFMP in the D2D - at county level.
2. Re-sort according to Area ID;
3. Click on one specific County ID, then the Table shows all of basins for the selected County with all area IDs in GRAY;
4. Zoom back out to the full county list using the Group ID button. All of the counties were shown in GRAY as well;
5. Re-sorting according to a different attribute (i.e.: precip, rate) will color everything appropriately again.

Although there is a workaround (described in 5)) and there was no crash caused, we hope to have the fix into OB8.1 because the usage of the Virtual Gage Basin is important at most of sites. The incorrect color shown under the 'Area\_Id" made the identification of the VGB impossible from other regular basins. **(DR 18609)**

### **Problem. FFMP: default all-and-only-small-basins yields no names (xxxxx).**

If FFMP is started with the default layer set to "All and Only Small Basins," each basin entry in the Basintable will not have a name and will be labeled with "xxxxx". Early diagnosis of this problem (back when this issue was first recorded in MDL's FRA) incorrectly concluded that not all names were lost and that only some were labeled with the "xxxxx," which is expected. Recent testing yielded verification that, indeed, all were being labeled as "xxxxx." Thus, this needs to be fixed. Note that this only happens when "All and Only Small Basins" is the default layer (which we have consistently recommended against) and is worked around by changing layers to another layer, then back to All and Only Small Basins. **(DR 17815)**

**Problem. Basin list in warnings feature does not work.**

The DCS3431 feature to allow warning text to include a list of (FFMP) basins does not work. The fix is to add "area=wwa\_counties" to the wwa\_basins line in each of nine WarnGen templates:

```
wwa_dam_break.preWWA
wwa_ffw.preWWA
wwa_ffw_svr.preWWA
wwa_fflood_sta_county.preWWA
wwa_fflood_sta.preWWA
wwa_flood_adv.preWWA
wwa_flood_adv_sta.preWWA
wwa_flood_sta.preWWA
wwa_flood_wrn.preWWA
```

Also, three lines should be removed from wwa\_basins\_gsf.txt:

```
add_by_shape ${countyShape}
output_attr STATE FIPS|{2
output_fmt | %sC%s. (DR 19074)
```

**Problem. tcl error when zooming out using FFMP table (Ref. OB8.1 DR 18719)**

This is a duplicate for DR 18719. So please refer to DR 18719 for initial description of the problem.

More sites reported the same problem since Feb. 28, and ATAN 872 was created to test the fix at the 11 sites (including the one for COMET Training site). The fix sounds are working well after the re-installing. (DR 18957)

**Problem. FFMP: reg\_county GELT contains marine zones (Ref. OB8.1 DR 18631)**

During OB8.1 PIT, we discovered strange marine zone aggregates in the county listing in the FFMP Basin Table. The behavior of these entities is not as it should be, yielding tcl errors. We tracked it back to DR 16231 (SAW/WOU issues), which added marine zones to the reg\_county GELT! After speaking with the developer that fixed DR 16231 (Jim Ramer), we understand how that fix was allowed due to the late nature of the issue and the ease of the fix (no compiled code change); however, marine zones really do not belong in a county GELT, and the result is an FFMP that provides elements that can cause problems in FFMP. Now, you might think, "How in the heck would a small basin get geographically associated to an open-water marine zone?" I believe it has to do with edge conditions and resolution differences. Still, even if we changed the resolution of the reg\_county GELT, I do not believe we'd eliminate the problem – only reduce it. I suggest that marine zones be removed from the reg\_county GELT and have actual marine GELTs be used by DR 16231, which will require code change, test, and re-compile. (DR 18906)

**Problem. FFMP - Upstream Basin Trace not working.**

While testing DR 17357 I discovered that the FFMP Upstream Basin Trace was not working. The Up/Down, Downstream and Basin Trend selections are working fine. **(DR 19540)**

**Problem. FFMP - FFMP table crashes after several basin traces.**

On TBW3 and NHDA, I tested the FFMP basin trace function. To do this, launch FFMP, then make the FFMP Table Display editable, then press the 3rd mouse button over a basin to produce a trace. After running 3 or 4 traces, the FFMP table crashes. Logs have been provided to Scott O'Donnell the developer. The problem was found while testing DR 17357.

Logs have been provided to the developer, Scott O'Donnell. Scott believes this is a bug which was identified earlier (in a previous release), but a 'hack'-around solution was found. He wasn't involved in the previous diagnostic or 'solution', but believes it's the same problem he's chasing down now. **(DR 19511)**

**Problem. FFMP shapefile access.**

FFMP's shapefile accessor expects the DBF file to have a particular order of attributes.

If this order is changed (for example, during shapefile customization), the reader might break. We want to make the DBF accessor more flexible so that the order of the attributes does not matter. The possible outcome of this problem is an inoperable FFMP, but the change in attribute order during customization is thought to be very rare. If this problem is encountered, a *work-around* is to change the shapefile then re-localize for FFMP again. **(DR 17357)**

## 1.16 SAFESEAS

**Problem. OB8.2 SAFESEAS: Anchor button stuck on Red (Ref. OB8.1.1 DR 18996).**

The Juneau WFO has reported (TT 265700) a constant red color for their SAFESEAS anchor button (formerly on the D-2D pane, now in Guardian). This behavior makes the button unreliable as an alert tool, because forecasters cannot tell whether the button color properly reflects selected SAFESEAS thresholds for wind speed, wave height, and other parameters. Some workarounds, assuming various possible explanations for this behavior, have been tried unsuccessfully over the last few months. The root cause has just been diagnosed as a faulty initialization of certain mesonet parameters -- they proceed through the code with erroneously high values. This behavior could potentially affect the SNOW button as well, since it uses the same code. This DR is listed as "critical" because there is no workaround. **(DR 19109)**

## 1.17 Other

**Problem. Aviation: Add new processes to startIngest and to monitoring.**

There should be killProc calls for ConvSIGMETDecoder and AdvisoryDecoder added to stopIngest.dx3 and startIngest.dx3 (with killProc MetarDecoder). Also, these processes should be added to monitorProcesses.txt for the process monitor.

Also, determine if the new data should be included in the data monitor. OB8.2 OB8.2. (DR 19338)

**Problem. Inconsistencies in sunRiseSet utility.**

The sunRiseSet utility does not update its calculations automatically when values are changed, and the "Calculate" button does not accurately reflect whether a calculation has been performed. It also will not handle double-digit or negative GMT offsets OCONUS sites such as Hawaii and Guam. (DR 19619)

**Problem. RTMA Model could not store ws, wd fields.**

```
dx3-napo:/home2/qni]252> pwd
/data/logs/fxa/20071031
dx3-napo:/home2/qni]252> grep LNMA98KWBR Grib2Decoder12503dx3-napo173711 |
grep NCF_FAIL
18:51:28.616 GridRoutines.C Problem: NCF_FAIL LNMA98KWBR field not storable
WD (0) for RTMA
19:51:53.968 GridRoutines.C Problem: NCF_FAIL LNMA98KWBR field not storable
WS (1) for RTMA. (DR 19594)
```

**Problem. Mozilla screen displays SNOW process status incorrectly. (DR 19509)**

**Problem. No Guardian banners when failing dx3, px3, and px4. (DR 19508)**

**Problem. TBW4 HWR Reports do not display.**

AKST AN -- TBW4 -- 10/18/07

After setting the system time to December 4, 2007 (one month into Standard Time), the HWR reports that were created showed the correct time (Standard), but the time stamp was still AKDT.

The time stamp should read AKST. (DR 19562)

**Problem. HWR NWWS and NWR products blank On TBW4 OB8.2 delta.**

When creating products with HWR (NWR and NWWS), products are created but are missing data, and in most cases are completely blank. When trying to create some of the NWWS reports, a "callback" error occurs and the following is displayed: "No such file or directory: 'etc/nwWS/AFCSWRAK.product". The products that do not create an error are written to the correct directory and are successfully displayed in NWRWAVES browser but are still blank. In many cases station names are also missing from the report.

Also see DR 16808 for information regarding the missing "Degrees C" problem that is still occurring. (DR 19431)

**Problem. Missing GRID130RUC13.html file.**

Link to GRID130RUC13.html for RUC13 Grid Data on the Data Monitor on the AWIPS Monitor Web Page (yellow note icon) is broken. The following URL was not found: <http://px1f/infoPages/GRID130RUC13.html>. (DR 19523)

**Problem. D2D:HPC product for 1-3 Day Excessive Rainfall is missing from D2D gui. (DCS3437)**

The HPC gridded product for "1-3 Day Excessive Rainfall" is missing from D2D gui (NCEP/Hydro|HPC| 1-3 Day Excessive Rainfall). The step#3 failed for HPC Excessive Rainfall test procedure for DCS# 3437(D2D). (DR 19400)

**Problem. PIT Bias Messgen Site ID Length.**

The expected length of the site id was 5 characters and was changed to three characters. In bias messgen, this was not handled in all cases and resulted in no bias message being generated. (DR 19159)

**Problem. OB8.2: D-2D aviation menu not available.**

The aviation products added by DCS3436 are not available in D-2D. If the aviation products should be available by default, the nationalData version of aviationDataMenus.txt needs to be changed. If not, the release template for CWSU--aviationDataMenus.txt needs to be fixed and the appropriate mainConfig.txt files need to be changed. (DR 19318)

**Problem. Should remove use of textdbRemote from WFOA (Ref OB8.1 DR 16541).**

All uses of textdbRemote should be removed from the WFOA baseline products from the textDB. Here are details:

1. From the lx "Start D2D" menu use tmcp to set PRACTICE mode. The little orange practice mode windows appear on the lx and xt.
2. Start D2d/WarnGen and the orange WarnGen practice GUI appears.
3. Create an SVR and use CREATE TEXT
4. The SVR created in directory /data/fxa/flatText/WRKWG4
5. Use the lx editor (D2D tools/text window) to call up WRKWG4 - but the editor only sees WRKWG4 products from the textDB, it doesn't see any products from the flatText area.(DR 19237)

**Problem. Re-enable LAPS domain-change tool.**

Due to resource limitations, DRs 6407 ("LAPS relocalization doesn't indicate if it is successful or failed") and 18671 ("LAPS Configure Analysis Domain is grayed out") were closed during OB8.1 development. In April, we were able to work on this and get both of these items working again. The changes are ready to check into OB8.2. (DR 19044)

**Problem. LAPS was off by about two degrees from the metar observations (Ref OB7.1 DR 17160).**

The LAPS temperature (T) and dew point temperature (Td) were underestimating the current observations. In some cases there would be a minimum bull's-eye were there was no observation to call for that. LAPS was off by about two degrees Fahrenheit from the metar observations. **(DR 17191)**

**Problem. NMAP upgrade to 5.10.3.**

NMAP has been upgraded to 5.10.3, and needs to be included in this AWIPS release. **(DR 19235)**

**Problem. Extra '/' appears in AFD.**

OAX reports that an extra '/' appears after the forecaster number when only one forecaster number is present. **(DR 18666)**

**Problem. Bug in makeGridKeyTables may cause it not to run.**

A bug was found in the localization utility program, makeGridKeyTables. The problem is that in the module GridTableServer, the member called \_sourceMask in GridFunctionEntry needs to be dimensioned 8 instead of 4. **(DR 18736)**

## **2.0 WARNING ADVISORY (WWA)**

The following Discrepancy Reports (DR) have been fixed in AWIPS OB8.2.

### **Problem. Line entries appended to wwa\_counties.supress.**

While testing DCS 3431, I found that my edits in /data/fxa/customFiles/BOX-wwa\_counties.supress were being appended to /awips/fxa/data/localizationDataSets/BOX/wwa\_counties.supress after the -wwa localization. I ran mainScript -wwa 4 times today and my entries are in the produced localization file 4 times. **(DR 19415)**

### 3.0 HYDROLOGY

#### **Problem. River Monitor - Update info deleted after making group/location changes.**

After making modifications to either the River Monitor location or the group configuration, then saving and closing the configuration GUI, the Update information, Update time selection, and the Update button are deleted from the River Monitor table GUI. The *workaround* is to restart the River Monitor. (DR 19419)

#### **Problem. The TML line will be removed for most Hydro-products(Ref.OB8.1.1 DR19342).**

OS and the Regions have reviewed the use of the TML line in most of the Hydrological products and in the Stand-Alone MWS. In many of these instances, the significant weather is either not connected to convective storms or does not follow the same path as convective storms.

Therefore, they are requiring the following:

TML in OB8.1 and want it removed in OB8.1.1 (should be changed to the following in these templates).

FFW (convective) - wwa\_ffw.preWWA  
 FFS (convective) - wwa\_flflood\_sta\_county.preWWA  
 FLS (Areal Flood Advisory) - wwa\_flood\_adv.preWWA  
 FLW (Areal Flood Warning) - wwa\_flood\_wrn.preWWA  
 MWS (Stand-alone MWS) - wwa\_mws\_nosmw.preWWA

Never had a TML, because these templates do not contain the movement substitution () and we don't want a TML ( should be changed to in these templates).

FFW (dam break) - wwa\_dam\_break.preWWA  
 FFS (dam break follow-up) - wwa\_flflood\_sta.preWWA  
 FLS (areal flood warning follow-up) - wwa\_flood\_sta.preWWA  
 FLS (areal flood advisory follow-up) - wwa\_flood\_adv\_sta.preWWA  
 TML in OB8.1 and should continue to have TML:  
 EWW (only at 47 WFOs affected by hurricanes) - wwa\_eww.preWWA  
 FFW (FFW/SVR combined) - wwa\_ffw\_svr.preWWA  
 MWS (followup to SMW) - wwa\_mar\_wx\_sta.preWWA  
 SMW (Special Marine Warning) - wwa\_specmarine.preWWA  
 SVR (Severe Thunderstorm Warning) - wwa\_svr.preWWA  
 SVS (Severe Weather Statement) - wwa\_svrwx\_sta\_county.preWWA  
 SVS (EWW followup - only at 47 WFOs) - wwa\_eww\_svs.preWWA  
 TOR (Tornado Warning) - wwa\_tor.preWWA

OS and the Regions would like this functionality in a turnkey fashion that would be used by the sites after OB8.1.1 is deployed. OS, OST and OPS coordinated that a date in mid-December

would be this requirement and have some cushion room for the OB8.1.1 deployment. This DR is being written to make sure changes for OB8.1.1 are included in OB8.2 and future releases.

OS and the Regions have reviewed the use of the TML line in most of the Hydrological products and in the Stand-Alone MWS. In many of these instances, the significant weather is either not connected to convective storms or does not follow the same path as convective storms. Therefore, they are requiring the following: TML in OB8.1 and want it removed in OB8.1.1 (should be changed too in these templates). FFW (convective) - wwa\_ffw.preWWA FFS (convective) - wwa\_fflood\_sta\_county.preWWA FLS (Areal Flood Advisory) - wwa\_flood\_adv.preWWA FLW (Areal Flood Warning) - wwa\_flood\_wrn.preWWA MWS (Stand-alone MWS) - wwa\_mws\_nosmw.preWWA Never had a TML, because these templates do not contain the movement substitution () and we don't want a TML (should be changed too in these templates). FFW (dam break) - wwa\_dam\_break.preWWA FFS (dam break follow-up) - wwa\_fflood\_sta.preWWA FLS (areal flood warning follow-up) - wwa\_flood\_sta.preWWA FLS (areal flood advisory follow-up) - wwa\_flood\_adv\_sta.preWWA TML in OB8.1 and should continue to have TML: EWW (only at 47 WFOs affected by hurricanes) - wwa\_eww.preWWA FFW (FFW/SVR combined) - wwa\_ffw\_svr.preWWA MWS (followup to SMW) - wwa\_mar\_wx\_sta.preWWA SMW (Special Marine Warning) - wwa\_specmarine.preWWA SVR (Severe Thunderstorm Warning) - wwa\_svr.preWWA SVS (Severe Weather Statement) - wwa\_svrwx\_sta\_county.preWWA SVS (EWW follow-up - only at 47 WFOs) - wwa\_eww\_svs.preWWA TOR (Tornado Warning) - wwa\_tor.preWWA OS and the Regions would like this functionality in a turn-key fashion that would be used by the sites after OB8.1.1 is deployed. OS, OST and OPS coordinated that a date in mid-December would be this requirement and have some cushion room for the OB8.1.1 deployment. This DR is being written to make sure the turn-key script in OB8.1.1 is not being overwritten in OB8.2 and that the templates above contain the appropriate variable to match OS's requirements. **(DR 19343)**

### **Problem. Hydro VTEC - The VTEC Beginning Time errors.**

Two other issues were discovered by EAX via Trouble Ticket # 294097 and are likely related to each other, as well as DR 19218. On June 1, 2007, WFO EAX had several problems with the VTEC ETNs and in this case the VTEC Beginning Time not matching the Mass New Media Dissemination (MND) Time and it apparently getting stuck like the VTEC ETN. Beginning Time not matching ETM example: The P-VTEC begin time is 070524T1951Z and the MND issue time is 320 PM CDT THU MAY 24 2007 Beginning Time getting stuck at 070524T1951Z: /X.NEW.KEAX.FA.Y.0001.070530T1928Z-070531T0130Z/ ETN ERROR - SHOULD BE FA.Y.0003 STORED IN FXATEXT 19:31:31 Z FA.Y.0002 WAS FROM 5/27 0427Z /X.NEW.KEAX.FA.Y.0001.070530T1928Z-070531T0130Z/ ETN ERROR - SHOULD BE FA.Y.0002 STORED IN FXATEXT 19:55:00 Z /X.NEW.KEAX.FA.Y.0001.070530T1928Z-070531T0130Z/ ETN ERROR - SHOULD BE FA.Y.0002 STORED IN FXATEXT 20:02:36 Z

**(DR 19221)**

**Problem. Hydro VTEC - VTEC ETN did not increment for an FLS (Ref OB8.1.1 DR 19218).**

As documented in the escalation of TT# 294097 - FLSEAX ETN errors, we will be escalating TT 294097 - FLSEAX ETN coding errors.

In recent weeks, EAX has had 5 Urban and Small Stream FLS products issued with the incorrect ETN:

1. 5/24/07 0835Z - previous FA.Y had ETN 0009 but ETN 0001 was assigned
2. 5/30/07 1928Z - previous FA.Y had ETN 0002 but ETN 0001 was assigned
3. 5/30/07 1954Z - previous FA.Y had ETN 0001 but ETN 0001 was assigned
4. 5/30/07 2002Z - previous FA.Y had ETN 0001 but ETN 0001 was assigned
5. 5/30/07 2151Z - previous FA.Y had ETN 0002 but ETN 0010 was assigned

It is believed that this problem will affect any product in which multiple VTEC phenomenon and significance codes can go under one PIL. (DR 19220)

**Problem. HydroView application crash with "Show Data" feature.**

When pressing the "Show Data" button from the Display Best Estimate QPE window, the HydroView application crashed. (DR 19344)

**Problem. OB82 (dup 18686). Modify HydroGen to Create a Second XML File.**

Modify HydroGen to Create a Second XML File. (DR 19296)

**Problem. StoreHydroGrids decoder error.**

This problem occurs with the GRIB decoder dedicated to the processing of the RFC QPE products using the ZETA98 identifier.

Testing results were noted on tbw3 by Mark Glaudemans, using operational data sent from OHRFC (TIR) over the WAN to the testbeds, using the TNCF conduit.

OHD has coordinated with GSD, which is able to provide the software fix. (DR 19490)

**Problem. Riverpro crashes when issuing products with more than 20.**

WFO EAX was attempting to issue Flood Statements to include all of the locations in their HSA which were in flood. There were around 30 locations. When the created and issued this product, the product was disseminated to the public. However, Riverpro crashed before it could write the information to the hydro database.

Specifically, tables which record location-specific vtec information (vtecevent) previous product information (fpprevprod), as well as the entire text product (text product) were not updated. As a result, Riverpro does not retain the information from that product issuance. This can have severe, negative impacts on the application performance during wide-spread flood events. Sites could end up having flood events expire prematurely because the database wasn't updated with the

latest information. Also, service backup is impaired because the vtec information is not shared with the backup offices.

The limitation is products greater than 20000 characters. In practical terms, VTEC Flood Products which contain more than 20-25 locations will suffer the consequences of this behavior. EAX was issuing products including 28 locations when this happened.

As a workaround, sites can limit the number of locations in a product to less than 20. **(DR 19297)**

**Problem. River Monitor does not display flood or action stage depart.**

River Monitor does not display flood or action stage depart. **(DR 19295)**

**Problem. MPE Editor – DailyQC crashes when data is missing.**

DailyQC crashes when data is missing. **(DR 19430)**

**Problem. : DailyQC Temp Options window still has partial option (DR 19428)**

**Problem. DailyQC max/min temps need separate color schemes. (DR 19427)**

**Problem. MPE polygon edit not correcting derived grids.**

In MPE\_Editor, when a polygon is drawn on the field chosen as the Best Estimate QPE (normally the multi-sensor mosaic), the polygon should appear in the Best Estimate QPE Field when MPE Fieldgen is rerun. This was not happening. The end result is inaccurate data being generated by the rainfall-runoff component of NWSRFS. **(DR 19613)**

**Problem. Run\_mpe\_whfs has memory fault if NUM\_HOURS=5 or greater.**

Personnel at MSR examined the run\_mpe\_whfs script, and changed "NUM\_HOURS=3" to "NUM\_HOURS=5", to be compatible with current operations criteria. However, over the next 2 consecutive hours, a \$MPE\_LOG\_DIR/error.ccyymmddhhZ file was generated containing 2 lines of "Memory fault", and no mpe fields were generated. Personnel at MSR was able to generate them manually from the mpe\_editor GUI. The script was changed to "NUM\_HOURS=4" (as requested by HSD-RFC Support); since then the cron process has been running without fatal errors, and the mpe fields have been successfully generated. **(DR 19558)**

**Problem. MPE-Using Polygon option causes program to crash.**

After selecting the "Polygons" from the tool bar, highlighting the "Draw Polygon" from the drop down menu, drawing a polygon on the screen, and closing the polygon with a click of the right button on the mouse, the program crashes. This is due to the fact that not ALL of the MPE

products are being generated. The only workaround for this bug is to actually generate all of the products. No RFC or WFO intentionally generates all of the MPE products. (DR 19543)

**Problem. RFC/MPE Editor-DailyQC the pops up window.**

While testing the Baseline\_RFC\_MPE Editor test case on LX2-TBDR (A2). The 'Send to Database' pops up window does not appear when the DailyQC (daily precip, temperature and freezing level) are modified. Step 82 on the test procedure fails (see test procedure attached). This step is at the end of the test case where the application is being closed. (DR 19294)

**Problem. Incorrect permissions on /awips/hydroapps/lx/rfc/nwsrfs (Ref OB8.1 DR 19090)**

PTR: OB8.1 beta, there was a problem with the permissions on /awips/hydroapps/lx/rfc/nwsrfs in which they were 755, which meant that they couldn't write into that directory unless they were user oper and since they log into the workstations as their own users, it meant that users were not able to write into any of the directories below that.

This was a problem on all of the previous builds until OB7.1 and 7.2 in which it was fixed and now it is a problem again. (DR 19095)

**Problem. Problem in precipitation totaling operations.**

Problem in precipitation totaling operations. (DR 19086)

**Problem. ForecastServices limits user entries**

Forecast Services limits user entries. (DR 19193)

**Problem. Ref. OB8.2 program Batch Post not working. (Ref. OB8.1 DR 18889)**

Batchpost got memory fault when input file is over 50,000 lines.

**Problem: BATCHPST was not posting all of the data from the vl2v5.buf file.**

(This file is created when OFSDE pulls the latest data out of the PostgreSQL database) to the fs5files.

This program is responsible for moving model data from Postgres over to their hydrologic modeling programs. Usually when another program called OSFDE creates and input file for Batch Post that sometimes that input file can get too large and will create a Memory Fault error in Batch Post. (DR 18965)

**Problem. Riverpro: Inserts County Instead of Parish for LA Locations (OB81 18180).**

Riverpro variables, which output county names and the word "county," do not use the word "parish" for locations in LA.

Variables names are: <LocCntyList> and <ActionStateCntyList>. (DR 18960)

**Problem. OB7.2 MPE Editor - System Crashes on QC Freezing Level**

While executing Baseline\_RFC\_MPE\_Editor test case for SyAT on LX2-TBDR platform step 71 is failed (test procedure attached). On the "QC Freeze Options" window, when I clicked on the "Point display" button to change the 'data' option to 'name' option the system crashes instead of freezing level data values are supposed to be replaced by the RUC model grid point identifiers. (DR 18468)

**Problem. HydroGen Manager wont open through D2D.**

When trying to start Hydro Gen manager \*through D2D NCEP/Hydro menu\* an error message appears: "start\_hg\_bless has terminated abnormally." The program runs normally when opened from the main AWIPS menu, but not from D2D.

NCEP/Hydro>HydroApps>Hydro Gen Manager. (DR 19484)

**Problem. NCEP/Hydro Menu has too many items.**

The NCEP/Hydro menu has too many items: If the menu bar is not at the top of the screen, the menu pops in a way that makes it impossible to use the menu without holding down the mouse button. This is a feature of the Tcl/Tk GUI and is documented in a release note (DR 19515.)

The Regional Focal Points would like this menu to be broken up:

1. Keep the NCEP/Hydro menu name and keep Hydro in it.
  - a. Move the top "\*Field\*" portion of the menu to the "\*Obs\*" menu and put the entries in the "\*Hazards\*" section.
  - b. Move the bottom "\*Local Analyses/Statistical Guidance\*" section to its own "\*Local\*" menu minus the Fog Monitor that should go in the "\*Obs\*" menu under "\*Hazards\*".
2. Under the newly created "\*Local\*" menu, include the "\*Local data\*" section from the "\*Obs\*" menu. (DR 19646)

**Problem. HydroView/MPE color management too restrictive.**

HydroView/MPE color management too restrictive. (DR 18445)

**Problem. XNAV Site Identifier Problem.**

When locating certain precipitation data points in XNAV: if the first three letters of a 5-character ID match a three-letter ID, XNAV defaults to the three-letter ID for plotting and will not plot the location of the 5-character ID. (DR 18420)

**Problem. OHD PIT: ForecastServices limits user entries.**

ForecastServices limits user entries. (DR 19193)

**Problem. CM requires updated OHD files for OB8.2 builds.**

OHD has changed several build files for OB8.2 builds. CM is required to begin building OHD-OB8.2 files by 5/4/2007. **(DR 18953)**

## 4.0 LDAD

### **Problem. LDAD MSAS data not purged correctly (Ref. OB8.1 DR 19127).**

Data in /data/fxa/LDAD/mdl\_data is not being purged correctly. The most recent versions of the files are being purged instead of the oldest.

This problem is related to DR 18789.

**Workaround.** Change the purge method specified in nationalData/purgeInfo.txt from

```
999765| LDAD/mdl_data      | ,,i || 20
```

to

```
999765| LDAD/mdl_data      || 2- | 20 (DR 19183)
```

### **Problem. LDAD Admin Web Page: Stop and Restart Links do not work**

The LDAD System Administration Web page is opened from the LDAD Internal Process and System Web page from the AWIPS Monitor. It should be possible to stop and restart LDAD from the LDAD Admin page. However, neither function seems to work on TBW3 or TBDR. Apparently, there are missing or dead symbolic links to the Secure Shell configuration files. The *workaround* is to stop and restart LDAD from the command line on PX2 as UID LDAD. (DR 19276)

### **Problem. Could not verify that Alaska Profiler has processed data (Ref. DR18913).**

Test upper air data was processed by ldad on ls1 on the TBW4 testbeds. This was verified by examining the contents of the /data/ldad/Processed directory. However, there was no indication, either way, that the data products were processed on px2f-tbw4, in the routerStoreAk\* logs. Only the following message is repeated approximately every half-hour, "PROBLEM: No messages in time-out interval. (30 mins) Re-registering." Also, it seems that the ingested data is not available for D2D to display. Only the hourly data was available. (DR 19148)

### **Problem. Mesonet Analysis not correctly sorting observations (Ref. OB8.1 DR 18766)**

In OB7.2, the mesonet data received via LDAD is being stored in the wrong hour's netcdf file. It appears that the LDAD decoders are not working properly, specifically the routerStoreNetcdf process.

When mesonet data comes in, one product will contain data from several hours (a collective). Prior to OB7.2, the data would get broken up and stored to whichever hour it belonged. After OB7.2, it turns out that all of the pieces of data contained in one mesonet file will be stored in whichever hour the first line of the product contains.

For example, if a product comes in at 21Z and the first line of the product has information from site X at 21Z and the second line contains information from site Y at 07Z earlier that day, both pieces of data will be stored in the 21Z netcdf file.

Tim Barker, the SOO at BOI who originally reported this problem, said that this is a very important problem with huge repercussions and would like this to have the highest priority possible. This is serious because many wrong observations are being placed into a given hours mesonet analysis. The mesonet analysis is a very important part of severe weather forecasting. **(DR 19124)**

**Problem. LDAD MSAS data not purged correctly (Ref. OB8.1 DR 19127)**

Data in /data/fxa/LDAD/mdl\_data is not being purged correctly. The most recent versions of the files are being purged instead of the oldest.

This problem may be related to DR 18789.

**Workaround.** Change the purge method specified in nationalData/purgeInfo.txt from

```
999765| LDAD/mdl_data      | ,,i || 20
```

to

```
999765| LDAD/mdl_data      || 2- | 20 (DR 19183)
```

**Problem. MSAS: No observations will be processed from the maritime files.**

The impact of the bug is that no observations will be processed from the maritime files. This will cause a major degradation in the MSAS analysis in coastal regions and the Great Lakes. I have fixed the bug in my development system. Two source code files used by one executable program need to be changed. **(DR 19512)**

**Problem. MSAS adjustable pressure contour depictable is not labeled properly.**

By default, MSAS will produce and display an MSAS MSL pressure contour; however, this can be adjusted to any level between 0-2000 meters. I adjusted the level to 1500m by updating /data/fxa/customFiles/III-sysdef.txt and running the appropriate localizations. The instructions on what localizations to run are stated in the file. The grid graphic created at the next MSAS run was correct. As shown in the attachment, it produced pressure contours of around 850 mb, which is what one would expect at around 1500 m. The problem is that the depictable name, stated in the product legend, reads as follows (also see attachment): MSAS MSAS MLP. It should read: MSAS 1500 m Pressure.

Notes of clarification:

The menu option for this product was labeled correctly

The menu option and the depictable label of the obs product were both correct. **(DR 19402)**

**Problem. New LDAD can not retrieve LARC data through LDAD server (ref. 18852)**

While the LARC gauge is called using the LARC database information such as name, phone number, and communication protocols, the LARC data are not retrieved from the gauge. No status report information is displayed on the new request monitor. **(DR 19026)**

**Problem. New LDAD ls2 request for Handar guage data not Processed (ref. 18864)**

After submitting a request for HANDAR guage data, the HANDAR guage was not logged in /data/ldad/Processed or /data/logs/ldad/yyyymmdd. **(DR 19025)**

**Problem. New LDAD ls2 request for Sutron guage data not processed (Ref. 18865)**

After submitting a request for Sutron guage data, the Sutron guage was not logged in /data/ldad/Processed or /data/logs/ldad/yyyymmdd. **(DR 19024)**

**Problem. New LDAD can not retrieve Campbell data through its server (ref 18851).**

While the Campbell gauge is called using its database information such as name, phone number, and communication protocols, the Campbell data are not retrieved from the gauge. No status report information is displayed on the new request monitor. **(DR 19021)**

## 5.0 SYSTEM

The following Discrepancy Reports (DR) have been fixed in AWIPS OB8.2.

### 5.1 Product/Process/System Monitoring

**Problem. Mozilla screen displays FSI process status incorrectly.**

Mozilla screen displays FSI process status incorrectly. (DR 19414)

**Problem. /data/logs/ is frequently filling up.**

The NCF has reported that there has been an increase in tickets relating to /data/logs/ filling up. (DR 19635)

**Problem. PX2's ingProcMon does not start on PX1 when failed over.**

When px2 is failed over to px1, px2's ingProcMon.pl does not start up on px1. The script does an 'exit' instead of a 'break' when checking if it needs to start up. (DR 19485)

**Problem. new OB8.2 processes not monitored.**

OB8.2 includes a new FSIProcessor and its DataController on px1. These need to be added to dataMon/monitorProcesses.txt to be included in the process monitor. Lack of monitoring could potentially result in missing data for the FSI application and reduced surveillance/diagnosis of convective weather.

Process FSIProcessor also needs to be added to breakLogIngest. (DR 19079)

**Problem. AFC: NotifyTextProd runnin for wrong domain on PX3 (Ref. DR\_18945)**

The NotifyTextProd process is running for the wrong domain. Domain2 runs on DX4. See the process list that follows.

---

```
px3-tbw4{ willl } 1: ps -wef|grep awips
fxa  13343  1 0 Apr19 ?    00:00:00 /awips/fxa/bin/NotifyTextProd COMMS_ROUTER
/awips/GFESuite/Domain2/primary/data/acquire/notifyPattern.txt GFE
fxa  13344  1 0 Apr19 ?    00:00:00 /awips/fxa/bin/NotifyTextProd COMMS_ROUTER
/awips/GFESuite/Domain2/svcbu/data/acquire/notifyPattern.txt GFE
ifps 13564  1 2 Apr19 ?    00:31:46 /awips/GFESuite/primary/bin/run/ifpServer -D
fxa  14209  1 0 Apr19 ?    00:00:00 /awips/fxa/bin/ctrlCpu
```

(DR 19045)

**Problem. CLM: Leap year problems(Duplicate to DR14199)**

Neither the Linux or HP-UX version handles the monthly climate correctly for February of a leap year. The normals and the last year's values apparently aren't retrieved. (DR 19302)

**Problem. Problems found with two IVP batch commands.**

When the user specifies an issuance time that should restrict analysis to forecasts with a basis time within a window, that window is ignored and all forecasts are loaded.

When the user specified an analysis interval of MONTHLY, the statistics are produced for each month from start to end, separately. So, for example, January 2001 will have statistics computed independently from January 2002. However, it is supposed to aggregate the statistics across all years so that January has only one set of statistics. (DR 19282)

**Problem. Add ability to draw processed observations from peoosep table.**

When the user specifies and OBS\_TYPE of "PROCESSED", the IVP software will only access the pehpsep, pedpsep, and peqpsep tables of the archive database. However, at least one RFC posts "PROCESSED" data via the raw SHEF decoder to the peoosep table. Hence, the IVP software also needs to draw data from this table.

The IVP should acquire processed observations by, first, searching the the appropriate processed table (pehpsep, pedpsep, or peqpsep). If no observations are found in these tables, or if no table is appropriate, it will then query the peoosep table for data. (DR 19259)

**Problem. boxstats\_cleanlogs cron missing on servers**

The boxstats\_cleanlogs script is no longer functioning and cleaning the /usr/local/perfdat/ directory when it is run via cron daily.

**Solution:** Line 18 of the script should be changed from:

```
$numberoffilesnow = `ls -al /usr/local/perfdat | grep "top.out" -c`;
```

to

```
$numberoffilesnow = `ls -al /usr/local/perfdat/ | grep "top.out" -c`;
```

This problem seems to have started with the OB7.1 install, and is due to the fact /usr/local/perfdat is now a link to perfdat-1.0, and doing ls -al on the link will yield only the link, and not the contents of the directory it references.

**Workaround:** NCF has access to a fixed script that they can push to, and execute on, a device whose /usr directory has reached 90% and alarmed at the NCF.

**Impact:** If a site's /usr partition should reach 100%, programs that access this directory could cease to function. The probability of this occurring is very low, considering the NCF monitoring and that no live data is housed in this partition. (DR 18999)

**Problem\_19551 OB 8.2 GFE - ifpnetCDF performance DR 19223 bug.**

Changes were made in DR 19223 (GSD) in order to enhance performance of ifpnetCDF for ISC. A bug has been discovered (TT 308940 -MPX):

John called, they are OB 8.2, if there is a hazard grid in GFE they lose their capability to send grids to NDFD or their ISC grids. The ifpnetcdf program crashes.

10/12/2007 17:35:33 RichardO: If they remove the hazard grids everything sends just fine. Escalating to ASM/GFE

```
+ ifpnetCDF -o /awips/ifps/svcbu/boxGrd.netcdf -h dx4f -r 98000000 -d
BOX_GRID__Official_00000000_0000 -k -t -m ISC_Send_Area -s 20071011_1500 -e
20071020_2100
```

Traceback (most recent call last):

```
File "<string>", line 1, in ?
File "./ifpnetCDF/ifpnetCDF.py", line 1425, in main
File "./ifpnetCDF/ifpnetCDF.py", line 1152, in storeDiscreteWE
File "./ifpnetCDF/ifpnetCDF.py", line 359, in clipToExtrema
IndexError: too many indices. (DR 19551)
```

**Problem. GFE: HLS does not preserve NHC-issued ETN for coastal zones.**

The new VTEC HLS needs to be able to keep the ETN issued from NHC for the coastal zones. Instead, the ETN is being determined locally, like it is for the marine zones. This violates the VTEC and will prevent proper dissemination by NWS partners. There is no local workaround possible as the problem likely lies in the interaction with the HazardsTable.py. Changes will also be needed in the PlotTPCEvents procedure as the ETN needs to be appended to the Hazard grid itself. (DR 19542)

**Problem. GFE: remove unnecessary debug for headlineslock.**

The gfe logfiles are logging dozens of EVENTS every 5 or so minutes that state: "ProductEditor.py xxx EVENT: Before(or After) GFESUITE\_HEADLINESLOCK = 1". This debug line needs to be removed from the ProductEditor.py code.

This is ranked "Major" as some pre-release sites have attributed this logging to GFE freezes. This was not seen on the test beds. (DR 19541)

**Problem. GFE: WindGust tool shows up for all weather elements.**

The baseline WindGust tool appears as a viable tool for all weather elements. It should only appear when WindGust is the editable weather element. If it is chosen while any other element is editable, an error is received. (DR 19538)

**Problem. GFE: HLS does not allow multiple hazards in a segment.**

The HLS currently does not allow for multiple hazards in a given segment. This violates the policy and creates an incorrect product.

The corrected version can be found on tbw3 in /home/tester1/Hazard\_FPHLS.TextProduct. **(DR 19537)**

**Problem. MakeHazard Procedure creates a blank grid with no edit area selected.**

The MakeHazard Procedure allows for the selection of a hazard area based on either the map or an edit area. If no edit area is active in the grid manager and no zones are selected, GFE produces a blank grid without giving the forecaster any indication of a problem. This is different than the behavior when no phenomena is selected.

The corrected version can be found on tbdw in /home/tester1/MakeHazard.Procedure. **(DR 19536)**

**Problem. GFE: MergeHazards Procedure has several mistakes.**

The MergeHazards Procedure has numerous errors in it that either allow or disallow hazards to be merged; this should not happen based on policy. This problem causes the forecaster to waste time looking for inconsistencies, and to disregard error messages that may be real.

The corrected version can be found on tbw3 in /home/tester1/MergeHazards.Procedure. **(DR 19535)**

**Problem. GFE: HLS needs subheadlines to be unlocked in the final product.**

In the new HLS formatter all of the subheadlines need to be unlocked to make the formatter usable. The complexity of a segmented HLS paired with the less than intuitive nature of the interface makes the product too difficult to produce during a landfalling cyclone.

By unlocking the subheadlines, the interface can be streamlined to remove the selections of subheadlines as all will be placed in each segment and the forecaster will manually remove those which are unneeded. **(DR 19534)**

**Problem. GFE: An error message is displayed on GFE formatter launcher window DCS3434 – TPCWindProb.**

An error message was displayed on GFE formatter launcher window when the formatter launcher is launched at TBW3 testbed. See the following error message for more details. I am able to continue my testing after acknowledged the error message.

```
“ 07/09/19 14:17:22 U GET TEXT DATA Problem: Unable to get text data from server.
Unable to find text file data [(n=ZFPaopical,c=TextProduct,p=0,a=2)]
```

```
07/09/19 14:17:19 U GET TEXT DATA Problem: Unable to get text data from server.
Unable to find text file data [(n=CWFaopical,c=TextProduct,p=0,a=2)] “
```

Because we are not the Tropical Cyclone site, it is very difficult for us to test the TPCWindProb code. According to Pablo Santos his site (MFL) will be the test beta site.

The code for TPCWindProb was developed by the site. Peter Cooner our developer (ASM-Raytheon) is working with Pablo related to this matter. **(DR 19483)**

Problem\_19409: TPCWindProb localConfig.py entries should be baselined (DCS 3434). In order to display grids and generate products for the new DCS 3434 TPCWindProb tools, localConfig.py entries are needed. These changes should be made part of the baseline configuration files so sites that need the capability don't have to make the changes manually. Please consult with Pablo Santos to verify this DR. Changes in the localConfig.py include (taken from NHDA):

```

prob34 = ("prob34", SCALAR, "%", "WS34 CPROB", 100.0, 0.0, 0, NO)
prob50 = ("prob50", SCALAR, "%", "WS50 CPROB", 100.0, 0.0, 0, NO)
prob64 = ("prob64", SCALAR, "%", "WS64 CPROB", 100.0, 0.0, 0, NO)

pws34 = ("pws34", SCALAR, "%", "34WSIPROB", 100.0, 0.0, 0, NO)
pws50 = ("pws50", SCALAR, "%", "50WSIPROB", 100.0, 0.0, 0, NO)
pws64 = ("pws64", SCALAR, "%", "64WSIPROB", 100.0, 0.0, 0, NO)

pwsD34 = ("pwsD34", SCALAR, "%", "Day34WSIPROB", 100.0, 0.0, 0, NO)
pwsN34 = ("pwsN34", SCALAR, "%", "Night34WSIPROB", 100.0, 0.0, 0, NO)
pwsD64 = ("pwsD64", SCALAR, "%", "Day64WSIPROB", 100.0, 0.0, 0, NO)
pwsN64 = ("pwsN64", SCALAR, "%", "Night64WSI PROB", 100.0, 0.0, 0, NO)

PWSBTC = localTC(9*HOUR, 24*HOUR, 18*HOUR, 0)
PWSNTC = localTC(21*HOUR, 24*HOUR, 18*HOUR, 0)

parms = [
  ([prob34, prob50, prob64], TC6),
  ([pws34,pws50,pws64], TC6),
  ([pwsD34,pwsD64], PWSBTC),
  ([pwsN34,pwsN64], PWSNTC)
]

serverConfig.D2DDIRS.append(
  ('/data/fxa/Grid/SBN/netCDF/LATLON/TPCWindProb',
   'TPCProb')
)

TPCProb = ('TPCProb', GRID, "", NO, NO, 30, 0)
parmsTPCProb = [
  ([prob34, prob50, prob64], TC6),
  ([pws34, pws50, pws64], TC6)
]

dbs = [(TPCProb, parmsTPCProb)]
serverConfig.D2DDBVERSIONS["TPCProb"] = 30

```

**(DR 19483)**

**Problem. listed software version needs to be updated for GFE.**

The GFE pre-release needs to list the correct software version. **(DR 19190)**

**Problem. GFE ISC fails when SMTP turned on (Ref GFE-ISC DR 18499)**

A critical problem was found when testing GFE intersite coordination (GFE manual test ic019) using SMTP. When you send grids from site 1 to site 2, the grids are not received at site 2. Intersite coordination is an integral part of GFE operations. It is critical that this problem get fixed before SMTP is turned on.

The problem occurs because the iscd daemon which sends the intersite message is run as root rather than ifps. The problem is caused by an error in a GFE install script, /GFESuite/scripts/install/installISC in the "echo \* user" line:

```
echo " user = root" >> /etc/xinetd.d/gfeisc
echo " server = /awips/adapt/GFESuite/bin/iscd" >> /etc/xinetd.d/gfeisc
echo " }" >> /etc/xinetd.d/gfeisc
```

In the "echo \* user" line, root should be ifps. The contents are written to /etc/xinetd.d/gfeisc. This change was made in OB7.1 so all the OB7.1 sites have the incorrect gfeisc file. The OB7.2 installation script creates the gfeisc file if it does not exist and doesn't change it if it does exist so the problem needs to be corrected in OB7.2 also.

The script that performs the intersite coordination for GFE is /awips/adapt/GFESuite/bin/iscd. The iscd script creates a log file, /data/logs/adapt/ifps/<date>/iscd\_dx1-<site>. If iscd is run as root, the file will be owned by root. The log should be deleted so when iscd runs as ifps, it can write to its log.

Another problem was found while testing using the corrected gfeisc file. The iscd script sets several environment variables internally. One of these environment variables, CO\_MQR\_SERVER\_HOST is currently hardcoded to "ds". It should be "mhs". Before SMTP is turned on, mhs points to ds1-<site>. After SMTP is turned on, mhs points to dx1-<site>. **(DR 18933)**

**Problem. Bug in baseline Hazard\_WCN: Definition["purgeTime"] misspelled (Ref 18841).**

There is a spelling error in the baseline Hazard\_WCN. Definition["purgeTime"] = 12 is misspelled as "purgeTme". This was causing us to have a product exp time (segment) of 8 hours for a 12-hour watch (for some reason it defaulted to 8 hours, which is used in some other products). And yes, SPC does issue watches longer than 8 hours. Anyway, I overrode it locally (Hazard\_WCN\_Local) since the Weather Channel apparently still keys on this coding instead of the VTEC coding. **(DR 18926)**

**Problem. Conversion to metric wind speed values in the FWS (Ref 18838)**

The transport wind speed can also be expressed in metric values in the tabular section generated by the FWS formatter. There is a bug in the formatter where the speed remains in MPH.

**Solution:** Virgil Middendorf has a fix for the `_wind_value` and `_windSpd_value` subroutines in the `FWS_Overrides` module. Code was added to check to see if the `formatElement` is "TransMetWind". If it is, then the speed is converted to metric.

Code changes are already in OB8.2. Only test cases need to updated. **(DR 18924)**

## 5.2 Radar System

### **Problem. sendOTR.cfc.sh script.**

The script "sendOTR.cfc.sh" doesn't appear to be working properly. It runs every 6 hours as part of a cron. It gets started, but the product it's requesting never comes back from the radar. It's SDUS6 -- the product is called NCF. The clutter filter control product. **(DR 19680)**

### **Problem. Disable Radar Watchdog.**

The initial radar watchdog implementation did not consider the actual volume scan time, and thus often reports failures when there were none. (DR 19550). It was necessary to revise the requirements and design in order for the radar watchdog to be useful.

For OB8.2, the watchdog functionality will be disabled. **(DR 19672)**

### **Problem. Make National WSR-88D RPS lists National Dataset Files**

Put all 6 RPS lists in the the NDM. These lists are:

```
/awips/fxa/data/localization/nationalData/  
>> rps-assoc.clear-air  
>> rps-assoc.storm  
>> rps-RPGOP.clear-air  
>> rps-RPGOP.storm  
>> rps-RPGOP-tcp.clear-air  
>> rps-RPGOP-tcp.storm  
>>
```

These contain WSR-88D radar products which are added to a sites RPS list in order to support the central collection and distribution of radar products. There are also a few products that are requested by cron jobs periodically via One-Time-Requests(OTR). The file `prodList.txt` contains the full set of WSR-88D radar products, which are designated for central collection along with its product category and partial WMO ID. These two files must be updated whenever products are added or removed from central collection of radar products. The RPS list files are not currently national dataset files, however the `prodList.txt` is. The national RPS lists should be made National Dataset Files so that future changes can be quickly and efficiently fielded on a cycle independent of AWIPS software deployments. Updates to this file should be centrally maintained since all sites should be running with the same file. **(DR 17545)**

**Problem. Add radarWatchdog.txt to DATA in Makefile.**

radarWatchdog.txt, a new file added for 19180 needs to be included in the 'data' target of ipc/radar/Makefile. (DR 19463)

**Problem. RadarStorage mishandles the Mesocyclone Detection product.**

RadarStorage mishandles the Mesocyclone Detection product. (DR 19280)

**Problem\_19123 OB8.2: RadarMsgHandler crashes (Ref. OB8.1 DR 19063)**

*From the TT:* I have discovered that the RadarMsgHandler has been failing frequently. I am opening this ticket to try to troubleshoot the cause of the problem.

In all of the instances I have seen, the RadarMsgHandler fails on a priority 1 - RDA and base data unavailable alert from fxaAnnounce to signal a pop-up for Guardian.

----

This is a serious problem. If RadarMsgHandler is not running, D-2D/Guardian does not receive any information about the status of the RDA/RPG.

Analysis revealed a coding error in the AWIPS Common event dispatching code. The fix is already known.

Note that the changes made in DR OB8.1 19027 make this problem \*more\* likely to occur. (DR 19123)

**Problem. XNAV - Legend text missing.**

The color legend is missing when the radar data is displayed. (DR 19557)

**Problem. XNAV - Locator option by county causes program to crash.**

If you select "Locator" then "County", then choose any state, such as "MN", and any county, such as "Carver", xnav immediately disappears and "segmentation fault" is printed in the terminal window. (DR 19556)

**Problem. Reprioritize RadarMsgHandler messages sent to GUARDIAN (OB8.1 DR 19179)**

This DR is opened to reassess the alarming system built into RadarMsgHandler in conjunction with GUARDIAN.

Sites report that certain reported RDA events, which currently are coded to send priority 4, or 2, messages should be sent as priority 1. Sites have reported upwards of 15+ minutes to be notified by a pop-up that the RDA is down. This could impact operations during a severe weather event.

See below for suggestions from Matt Foster/OUN

We feel that as soon as this message was seen:

RDA Avail = Unavailable

That a priority 1 alarm should have been triggered. This probably corresponds to a message from the RDA like "RDA STATUS: Stat=Standby" or Oper=Inoperable. I don't know exactly what sorts of messages they get from the radar. I can see what's in the radar's log, but I don't know if that's exactly what AWIPS sees.

I've been advised by someone with much more 88D experience than me that the "Base Data =" entry should NOT be relied upon for anything. When that message says, "Base Data = Reflectivity Velocity Spectrum Width" (which may be something like 'Data=All' from the radar), it only means that the three base moments are enabled. It does not necessarily mean that they are flowing normally. There is an example of exactly this in this KFDR case. There is a point in the logs, after the initial failure at 0432Z, where the message, "Base Data = Reflectivity Velocity Spectrum Width", can be seen. This occurred when the staff here at the WFO tried to restart the RDA. The RDA software was in Startup, and generated that message, even though the radar was NOT actually collecting data yet.

Also, we were a bit troubled by the fact that this message...

RDA Avail = Available Maintenance Mandatory

Only rated a priority 4 message. Maintenance Mandatory should trigger priority 2, in our opinion. **(DR 19191)**

### 5.3 System Process/Log/Purging/Localization

**Problem. Remove LLL-.environ.site for GUM, AFC, AFG, and AJK.**

The the following item needs to be removed from OB8.2 workset:  
src/localization/localData/GUM-.environs.site

The existence of the item will override the timezone ID assigned to FXA\_LOCAL\_TZ in src/localizationDataSets/GUM/.environs.site created by localization scripts.

The following items need to be removed from OB8.2 workset as well for three sites in Alaska region:

src/localization/localData/AFC-.environs.site  
src/localization/localData/AFG-.environs.site  
src/localization/localData/AJK-.environs.site. **(DR 19367)**

**Problem. Line entries appended to wwa\_counties.supress.**

While testing DCS 3431 I found that my edits in /data/fxa/customFiles/BOX-wwa\_counties.supress were being appended to /awips/fxa/data/localizationDataSets/BOX/wwa\_counties.supress after the -wwa localization. I ran mainScript -wwa four times today and my entries are in the produced localization file four times. **(DR 19415)**

**Problem. text uplink send not connecting to dx3f (ref DR 19384 DS Decom)**

The text uplink\_send process on dx1f was not connecting to dx3f, as shown by acq\_stats, so no text products were being ingested by acqserver/ingest that came over the wan.

Two problems were found to be contributing.

1. start\_textdup\_process should be run after the wanbu\_site\_startup startup in dx1apps
2. A bug needs to be fixed in /awips/ops/bin/stop\_textdup\_process that prevents the text uplink\_send process from being killed. The "f" option needs to be removed from the ps command. **(DR 19385)**

**Problem. OHD SRATools LOOKUP3 Parsing Error (DUP of DR 19362) (This is a duplicate of DR 19362.)**

While the testing proceeded, RTi staff began to use the mcp3 executable for calibration exercises for RFCs on other task orders. Through this application it was discovered that one piece of functionality had not been tested and was in fact deficient. (The method allows expressions referencing component states to index the Lookup3 table based on component states. Complex, multi-part expressions (e.g., ResA.StartingInflow - ResB.StartingInflow) were not parsed correctly.)

This problem will have an impact on the following RFCs: MBRFC, SERFC, ABRFC, and NERFC. Segment definitions that use the Res-J Lookup3 method, which were previously expected to work in the OB8.1 release, will generate an error prohibiting successful definition. Although all new RES-J operations do not have the Lookup3 method, probably 95% do. Of these, the majority will have one or more complex expression (and thus the entire segment) obstructed by this bug. The only workaround will be to refer to an older, and presumably less accurate segment definition. **(DR 19379)**

**Problem. AF:Duptext products, missing entry in dx1apps (Ref DS Decom DR 19291) .**

Duptext products are not processed at the site as dx1apps package does not contain an entry for appropriate process (uplink\_send) that sends the data to acquisition server. Currently all sites process this data as uplink\_send process is executed on ds1 and its part of dsswap package. After DS decommissioning, these duptext products will not get processed unless it is added to DX1apps. **(DR 19305)**

**Problem. AF: Increase timeout value for service backup to complete (REF DR-18910)**

When the grids were imported by the sites with resolution of 2.5km, size becomes so huge and MHS discards the products when received at the site. This is because time taken for transmitting the products extends for few hours and hence site discards. So as part of the solution, the timeout value for the grid products transmitted from NCF is specified as part of service backup response that is sent from NCF. This problem has serious impact to the forecasters/end users. The problem occurs whenever the site imports grid data from central server with resolution of 2.5km

Import of configuration and grids are done by end users at the site and there is no workaround other than the code fix. **(DR 19000)**

**Problem. Remove ds references in AWIPS script.**

The ds references need removed and/or changed in /awips/ops/bin/AWIPS to support the decommissioning of the ds servers. **(DR 18998)**

**Problem. AF: Create program to monitor logs for ITO This is NOT a bug. It is a small enhancement strictly for ITO monitoring.**

There is a need to provide a helper application for ITO that will allow real-time triggering of important events (for instance, sendmail rejecting connections). The current method employed is to repeatedly grep log files on a periodic basis. This is both CPU and I/O intensive. In addition, critical events that occur when a log file rolls over between ITO scans will not be detected.

This program will be capable of monitoring any ASCII log file. Because the monitoring will be done in real time, it will not require redundant scans of the same file. It will also handle log file rollover issues.

This will be implemented initially on dx1/2 for monitoring MHS and sendmail logs for various events that require human intervention. It can be used to monitor any logs that are persistently located and named, however.

The requested release is OB8.3. **(DR 19371)**

**Problem. AF: Increase MHS log retention time on dx1/2. (DR 19355)**

Modify the dx1/2 logging parameters for MHS to keep logs for 7 days to allow troubleshooting of problems older than 48 hours.

This is not a bug in the code; it is a change in the requirements for future troubleshooting purposes. There is no impact to forecasters and it does not affect any mission-critical functionality.

Log archival is controlled by an environment variable. Emulate what is done in the MHS startup scripts at the NCF. Keep a full seven days of log archives plus the current day.

These logs must be archived via a cron job to prevent the disk storage from being filled. Copy the MH server root cron job that performs this task and implement on dx1/2 in the root crons. A cron must also compress archived log files older than two days.

**Problem. AF: Create generic program to perform operations at all sites. This is not a bug.**

It is a new small enhancement to allow the NCF to quickly and efficiently perform actions at multiple sites. For instance, this program could be used to get a copy of the current MHS logs from every site and copy them back to the NCF with a single command within 2-3 minutes.

This is for software that will only ever be installed at the NCF. It will never be a part of an OB release. **(DR 19370)**

## **5.4 Install**

**Problem. September 2007 testbed security scans detected vulnerabilities.**

Security vulnerabilities identified in the 9/12/07 Harris scans must be addressed in accordance with DOC (NOAA) security requirements. **(DR 19460)**

**Problem. NVIDIA driver update.**

NVIDIA drivers for the XT Replacement have been tested successfully on the LX workstations on TBW3. Drivers will update from version 8762 to version 9639 for all XT and LX workstations. Build done on lx1-tbw3. **(DR 19413)**

**Problem. Install kernel 2.6.9-55.0.2.**

The kernel needs to be upgraded to a RH supported kernel. We need to install kernel-2.6.9-55.0.2. **(DR 19275)**

**Problem. OB7.2 - AF: Install scripts relocate sendmail mailboxes from NAS to DX1/2.**

The release install script must remove the symbolic link that is /var/spool/mail from dx1/2 at all sites and put a directory in its place with ownership of root:mail and permissions of 775. If the "awipsmhs" mailbox exists on the NAS (/vol/DS\_shared/mhs/mail [mounted as /data/mhs/mail on dx1/2]). Sendmail must be stopped before removing the link and restarted when done. **(DR 19233)**

**Problem. June 2007 testbed security scans detected vulnerabilities.**

Security vulnerabilities identified by quarterly security scans must be addressed/resolved. **(DR 19128)**

**Problem. OB7.2 - MH: Modify dx1apps to not control sendmail.**

Due to an implementation change in MHS, sendmail must be run on both dx1 and dx2 at every site to allow for non-MHS e-mails to be delivered to their local destinations. Sendmail must be controlled by Linux during startup/shutdown instead of by the dx1apps package.

There are no trouble tickets associated with this issue because it is not yet operational. The problem was discovered in alpha testing of SMTP migration. The current *workaround* is for the NCF to manually turn on sendmail on either dx1 or dx2 when an ITO alarm is generated indicating that it is not running. **(DR 19019)**

**Problem. remove ds1 and ds2 refs from ifps install scripts (Ref OB8.1 DR 18887)**

The IFPS installation still references and tries to access the ds1 and ds2 machines. Because they will be decommissioned soon, and there should be no reason for the ifps install to touch the DSs, these references should be removed. The following files were found in the ifps install directory to have a ds1 or ds2 reference in them:

```
createIFPSPgDb.sql
final_commands.sh
init_install
lx_masterinstall
updateIFPSPgDb.sql. (DR 18908)
```

**Problem. Removing LDAD build from WFOA for OB8.2.**

Removing LDAD build from WFOA for OB8.2.

LDAD is referenced specifically in both the env/OB8.2-CM/build.sh and the env/OB8.2-CM/release.sh scripts. In all cases LDAD seems to be treated as a separate package to be compiled, linked and packaged separately. At the end of the release process all the separate packages are combined into a single large package. In particular it appears that no changes will be required in Makefiles not to build LDAD as part of WFOA. **(DR 18897)**

**Problem. DS decommissioning: Add legalArchiver.sh to dx1cron file (Ref. DR18786)**

The legalArchiver.sh script maintains a 30-day archive of Official User Products (OUP) and a 7-day archive of observations (such as ASOS and Upper Air products). In OB7.2 the legalArchiver.sh script is started by the DS1 fxa cron. Before the DS1/DS2 servers are decommissioned the legalArchiver.sh script should be run by one of the Linux server crons. As a suggestion, the legalArchiver.sh script could be added to the dx1cron and it should be executed by the fxa user. **(DR 18890)**

**Problem. Remove lamp account (Ref. OB8.1 DR 18811)**

The lamp account is no longer needed in AWIPS now that the lamp software has been removed from the system. Also, convenience scripts, such as VerifySSHkeys.sh need to be modified to no longer attempt to modify the lamp account. Other such scripts might exist; a search through AWIPS is needed in order to determine if there are other potential modifications needed. **(DR 18888)**

**Problem. Need to cleanup /data/fxa/backup\_root and /data/fxa/install\_root.**

During OB6 Phase 2 two directories are created under /data/fxa. These directories eventually need to be cleaned up. The directories in question are /data/fxa/backup\_root and /data/fxa/install\_root.. (DR 16746)

**5.5 Text and Graphic Workstation****Problem. TextWS: Enhance logging to track changes to WMO heading.**

In order to investigate possible incorrect or unexpected changes to the WMO product heading, Text Workstation should have additional logging. The idea is to "audit" any internal changes to the variable that controls the product heading. (DR 19408)

**Problem. The Text Workstation QC does not allow for SJU's use of municipalities (Ref OB811 DR19134)**

WFO San Juan, Rico (SJU), as a territory, does not contain counties. It contains smaller geographical units known as municipalities, which assigned county UGC codes. The shape file attaches the word counties to these municipalities and baseline testing at HQ indicates that is the default wording in the WarnGen text (e.g. AGUAS BUENAS COUNTY). SJU has adjusted the wording output to AGUAS BUENAS MUNICIPALITY. This results in the Short Duration Text Workstation QC (Text WarnGen QC) flagging the following warning "Template Warning" – 'AGUAS BUENAS' for PRC007 not found. Part of this problem may also occur because their warning format is incorrect. Below are various format examples. First, the Text WarnGen QC must be fixed to accept the word municipalities as a substitute for counties. Just as I would hope it can handle parishes in Louisiana. Secondly, there may need to be format changes with using the lengthy term municipalities. These would need to be coordinated with OS and Southern Region. If the warning is over a large enough portion of Puerto Rico, they will be unable to transmit a warning. What is deemed by the site, as unacceptable work around, is to issue several smaller warnings for the same event. Therefore, the site feels this is a critical problem and should be fixed ASAP. (DR 19354)

**Problem. Request to reserve DEPICT\_TYPE entries for GSD ALP.**

GSD requests that two values in the DEPICT\_TYPE enumerator be reserved for GSD's ALPS project. The enumerator entries would be:

PLUGIN\_DEPICT = 198,

STATIC\_PLUGIN\_DEPICT = 199,

These entries had to be changed to these values today in our ALPS branch because their previous values are now used by new AWIPS depict types. We would like to avoid having to change them again in the future.

We propose that these entries be added to the OB8.2 DEPICT\_TYPE enumerator. They would not be used in any of the standard AWIPS code and would therefore have no effect on it. **(DR 19299)**

**Problem. Cannot Edit Time Series Data in Graphical Display.**

Some of the functionality found in the tabular display of the time series data is not found in the graphical display of the time series data – particularly the ability to set a data value to missing. This functionality exists in the tabular display, but not in the graphical display. Including this functionality in the graphical display would make it more efficient to QC data. Otherwise, you have to work with both displays, one to find the bad data value on the graphical display, then set the value to missing in the tabular display. This can be slow and cumbersome.

Setting data to missing changes the value in the IHFS database, and the missing value is then passed on to the fs5files in NWSRFS through ofsde/batchpst. A deleted value does not get changed in the fs5files. **(DR 18183)**

**Problem. OB7.2: Expansion of MAPX in NWSRFS Not Working.**

The version of NWSRFS in release OB7.2 included expanding the capabilities of MAPX in order to improve the forecast support MARFC provides for the to the Susquehanna Flood Forecast Warning System (a joint project among multiple Federal agencies). Now that MARFC is attempting to utilize these new capabilities fully and to provide the agreed-to support, a number of problems have been found.

After a careful examination of the problem, the following changes need to be made in order for MARFC to fully utilize the increased MAPX capabilities:

**FCST**

nmapx.f - array length variable increase

**PPINIT**

sblock.f - DATA statement for array size increase

ssppp2.f - array length variable increase

**REORDER**

sblock.f - same as for PPINIT

urgtts.f - format statement change to handle increase in number of time-series.

**FILESIZE**

pppsiz.f - format change for increase in max number of parameters

**FILECRAT**

pppctl.f - format change to handle increased quantities

**SHARED\_S**

ssppp.f - format change to handle increased quantities.

**SHARED\_UTIL**

fcint.f - format change to handle increased quantities.

The array size changes keep the affected programs - FCST, PPINIT, and REORDER - from working with the expanded definitions. The FILESIZE changes are critical as the input for FILECRAT created by FILESIZE are "starred-out" (FORTRAN fixed format problems) without

the changes, preventing FILECRAT from working properly, while the format changes are mostly to keep the program output readable. (DR 18938)

## 5.6 General

### **Problem. Triggers not functioning, many apps affected.**

When using WarnGen, LSR GUI, RiverPro, etc. products generated do not get to NWRWAVES. The products are not created in /data/fxa/trigger but exist in the /data/fxa/siteConfig/textApps/siteTrigger.template file.

This prevents these text products from being sent to NWRWAVES and subsequently to the CRS. Found the problem to exist on TBW3 and NHDA (both OB8.2), also verified that the problem does not exist on TBDW and NMTW (both OB8.1). **(DR 19283)**

### **Problem. OB7.2: /awips/fxa/data/scour.conf.dx missing trigger entry.**

The /data/fxa/trigger directory houses text files created by the TextDB\_Server when a product stores for which there is a trigger set up. This directory is kept clean by an entry in the scour.conf.dx file. This entry has been removed in OB7.2. The entry which needs to be added, is as follows:

```
$FXA_DATA/trigger 1 *
```

This will remove everything older than 1 day from the directory.

Possible problems which may arise include performance degradation for any software which accesses this directory on a regular basis due to the large inode value of the directory when thousands of files build up there.

The NCF manually added this line after the OB7.2 install, and ENV added this line as part of the post install script for OB8.1. **(DR 18610)**

### **Problem. OB7.2 - AF: Bug in MHS compression/uuencode routines.**

The zlib decompression routines occasionally return without fully decompressing the buffer. The affected section of smtp\_recv does not properly check the return status and take the necessary action to complete the decompression operation.

The impact of this potentially affects all sites and the NCF. Currently, this is only known to affect a single hydro product transmitted by RFCs to the NCF, but there is a distinct possibility that it could be intermittently affecting others that we are not aware of. The work around is to disable MHS compression at all RFCs until a solution is deployed, which has been done. Compression could be disabled at all sites to be sure there aren't other products being affect, but this would have a noticeable negative impact on WAN traffic load and transmission times throughout AWIPS. Service backup times would be dramatically affected and most of the performance gains made by switching to SMTP would be lost. **(DR 19234)**

**Problem. OB7.2 - AF: Relocate sendmail mailboxes from NAS to DX1/2.**

This problem can cause MHS to temporarily stop processing messages until NFS eventually resets itself, which can take up to ten minutes. This means a potential delay in delivery of watches and warnings. This fix has already been performed at the NCF, which has the biggest risk of experiencing this problem.

This DR should be done in conjunction with DR 19019.

Modify dx1\_apps and ha\_dx1\_apps to copy the mailbox (/var/spool/mail/awipsmhs) conditionally. Reference what was done in mhs\_mta during start up. The difference is that sites don't need to worry about running multiple MHS packages like the NCF does, so the copy operation should always occur. Start\_smtp\_mhs also must be modified as it specifically references /data/mhs instead of /var/spool.

Installation script needs to delete the /var/spool/mail symbolic link and create a directory instead. Set ownership to root:mail and permissions to 775 on both dx1 and dx2 with MHS running on the opposite node. This should be a post install step (after new dx1\_apps script is installed) and requires a swap of MHS between nodes to accomplish (it should only be done when MHS is NOT running on a node). (DR 19225)

**Problem. Added User Option to disable JVM.**

Added user option to turn off JVM. This could be useful in helping to isolate any problems which the users think are related to the JVM and would not be used for routine operations. (DR 19224)

**Problem. POSTGRES DIR environment variable incorrect in .environs (Ref DR 19076)**

The POSTGRES DIR variable in the /awips/fixa/.environs file defines which directory Postgres is installed at. In the OB7.1 version of the .environs file the POSTGRES DIR variable is incorrectly set to /usr/local/pgsql. The /usr/local/pgsql directory is where Postgres resided in OB6. In OB7.1 the /usr/local/pgsql directory was deleted and Postgres was installed in a different location. The POSTGRES DIR variable should be corrected to the new OB7.1 location for Postgres. (DR 19080)

**Problem. Update NWSRFS MAT max/min 6-hour conversion coefficients.**

Update the maximum temperature/minimum temperature to 6-hour conversion coefficients for the Mean Areal Temperature Pre-Processor in NWSRFS. The current default coefficients are most appropriate for the Eastern United States. However, these coefficients are not appropriate for the western United States and Alaska. (DR 18651)

**Problem. OB7.2: Batchpst Not Utilizing All Available CurPC Data.**

The Batchpst program is not utilizing all available CurPC table precip data and therefore is returning the following message:

"INSUFFICIENT DATA IN CurPC table TO CALCULATE PPXX values".

The program named "ofsde" exports data from the Postgres IHFS database in a format that another program, "batchpst", can read and post to the fs5files (model database). One of the computations that "ofsde" performs is to calculate 6-hr and 24-hr PP (precipitation) data from PC (precipitation counter) data. This is not working as expected. In previous builds, if PC data had a timestamp other than 12Z (i.e., 1206Z, 1157Z, etc) it would not be used in computing PP totals. OB7.2 version of "ofsde" is supposed to be able to use precipitation counter data that falls within a specified window around 12Z.

All tokens have been properly set. **(DR 18648)**

## 5.7 TDWR

### **Problem. TDWR Radar ID Changes (Merge DR 19194 OB8.1.1).**

This is a proactive step to address a conflict in the three letter IDs used in the process of archiving radar products. As the Supplemental Product Generators (SPG) are deployed beginning during the summer of 2007, TDWR radar products will begin routinely flowing into more AWIPS sites and the need to centrally collect them will become more important. The current collection process for radar products uses only the last three letters of the radar ID in its processing.

Three of the TDWR sites will introduce a conflict with existing WSR-88D radars if the originally proposed IDs are used because the collection process does not distinguish between radars KXXX and TXXX. The three conflicting radar sites are Cleveland, Indianapolis, and Wichita. This conflict will lead to the inability to distinguish between products from the conflicting radar sites (for instance, KCLE and TCLE).

The only workaround would be to NOT centrally collect TDWR data.

While using the four character IDs would be preferable, there is a common understanding that that would require too large an effort for AWIPS within the time frame of the SPG deployment schedule. As an alternate approach, the radar IDs in the product headers should be changed to the following:

Cleveland - (Old: TCLE) New: TLVE  
Indianapolis - (Old: TIND) New: TIDS  
Wichita - (Old: TICT) New: TICH

These new IDs have been reviewed and accepted by the site ID database folks (Michelle Detommaso/Thomas Raffa).

Initial analysis shows that the following changes need to be made within AWIPS in order for the ingest and display to operate correctly:

1. Get a new radar shape file (fsl-w88d) with the new IDs
2. Modify the NDM file tdwrElevations.txt
3. Modify NDM file wmoSiteInfo.txt
4. Modify national file tdwrRadars.txt
5. Run localization -radar -dirs

## 6. Stop/start ingest. (DR 19293)

### **Problem. High elevations are not plotted in SPG Unit Status graphic.**

A problem in the TDWR SPG Unit Status graphic: Not all the elevations for VCP80 and VCP90 are plotted.

Error messages are found in IGC\_Process log:

```
IGC_Process 21133 1181748924.532061 15:35:24.532 PROBLEM: Invalid Elevation: 257 (DR 19165)
```

### **Problem: Incorrect color table for TDWR STP/DSP.**

The TDWR Storm Total Precip (4bit STP and 8bit STP (DSP)) products are using a different color table from 88D products. Thus it is hard to compare the TDWR products with 88D products. The same color table should be used for TDWR STP products. Also a menu for 4bit STP should be added to enable the comparison between 4 bit and 8 bit STP. For 88D radars, there is a menu for 4bit STP under the sub menu "4bit/legacy prods". (DR 19163)

### **Problem. TDWR VCP90 RPS list is not created during an -auxFiles localization.**

Testing for DR 16743 uncovered a problem generating the TDWR VCP90 RPS lists. An -auxFiles localization should cause the TDWR RPS lists to be regenerated. The TDWR VCP90 RPS list is not generated if the file doesn't exist, and it is not updated if it does exist.

In the test that uncovered the problem, on TBW3, updated /data/fxa/nationalData/tdwrElevations.txt to change lower elevations for TBWI for both hazard and monitor mode. Ran a -auxFiles localization on the workstation. The TBWI.storm.VCP90 file was not modified as it should have been. If the site already has a VCP90 list that doesn't need to be modified, this won't be a problem.

The localization log reports the following errors:

```
running createAuxFiles.csh
cat: NO_FILE: No such file or directory
```

According to the developer, this problem was introduced with a previous fix sometime last year.

Workaround - After localization, copy the TDWR VCP80 RPS list to the VCP90 list. If the angles are different, the ORPG will send the closest angle. If the angles are very different, then manually edit the VCP90 RPS list. (DR 17742)

### **Problem. VWP dataset key need to modify (reference DCS 3251).**

The purgeInfo.txt for the VWP dataset key need to change from 82 to 75.

(reference DCS 3251). (DR 17467)

## 5.8 QPE/MPE

### **Problem. OB82 PIT - MPE data doesn't display after DailyQC model**

MPE data doesn't display after DailyQC mode. (DR 19243)

## 5.9 NWSRFS

### **Problem. NWSRFS Executables do not recognize new DST Definition (dup of DR 18669)**

This is a duplicate/merge DR to incorporate the functionality addressed in OB8.1 DR 18669 into OB8.2...

A number of the executables within NWSRFS do not properly recognize the new Daylight Saving Time definition. This will lead to the incorrect local time stamps on product headers and potentially incorrect conversions to and from local time. (DR 19132)

## 5.10 IFPS

### **Problem. IFP not able to read mods file**

At NWSRFS IFP startup, a forecast group (TMO) is selected and the output in the program's background window indicates that everything appears to be going along normally, including the correct directory path for the mods. In the output window, around line 55, it copies the mods files to a working directory and writes out that it took 2 seconds:

```
On 20071013.1355 from lx2-msr using rp1-msr copy "mods" files
Finished ... 0 minutes 2 seconds to copy ofs files
```

Around line 121 it begins to parse the mods, but says there are no mods available:

```
"/awips/hydroapps/lx/rfc/nwsrfs/ifp/bin/RELEASE/parse_mods_by_segment
No mods from the OFS are available for forecast group TMO after
parse_mods_by_segment"
```

This is not true because the "/home/dam/.ifp\_files/mods\_from\_ofs/FGroups/MIS" file does exist.

If you realize the program parse (load) the mods and you exit IFP without saving results or sending mods back to OFS, nothing is affected. You can then restart IFP and repeat the startup process. It still takes 2 seconds to copy mod files, but this time the "parse\_mods\_by\_segment" routine has mods to parse and everything runs fine.

The problem is that if the mods had been sent back to OFS, when the program printed out that no mods had been read, it would have overwritten the existing mod file and created a zero length mod file because there were no mods loaded into IFP. This has already happened to 2 or 3 people at MSR since the OB8.2 beta build, and the site has had to dig into the snapshot directories to pull out the latest backup.

Through testing and examination of the source code, we have been able to determine that the warning "No mods from the OFS are available for forecast group TMO" would only occur if the mods file does exist in the working directory and has permissions of 000. **(DR 19575)**

**Problem. The IFP and OFS Programs are writing out incorrect version number.**

The version number of the hydro software written to the output screen as well as the log files is one version number off. The version numbers need to be correct in order for those troubleshooting forecast and software problems to know exactly what version of the software is running at any particular forecast office. **(DR 19510)**

**Problem. IFP: The Plot TS screen does not appears for the PEC Forecast Group.**

During the SWIT testing of IFP baseline test procedure on LX2-TBDR (build s0) it fails on Step #9 (refer to test procedure attached for test steps). When I try to run the PEC Forecast Group & YELEAGLE in Carryover Group with the date of 4/1/93 thru 4/6/93 the 'Plot TS' supposed to appears on the screen when I clicked on the Begin under File menu however, it does not. Refer to the attached log files for a reference. **(DR 19311)**

**Problem. IFPS: OB8.2 (Katrina DR) Failed Site grids creation problem \*\*\*Duplicate of OB8.1 DR 19167\*\*\***

The failed site's grids are to be staged at the site in the exportgrids directory. That directory is supposed to be owned by user ifps and have 755 permissions on it.

Most WFOs have these permissions, but a few don't. In order to allow all users at all WFOs the ability to write the failed site's grids to this directory, the export\_grid\_data script should be modified such that the grids are copied to the exportgrids directory as user ifps. The grids are already being cleaned up as user ifps, so this should eliminate permissions problems of that type. **(DR 19171)**

**Problem. IFP Not Able to Read All SSARREG Mods (Ref. OB8.1 DR 19061)**

When running the SSARREG program in IFP, the program fails to read all the lines associated with a SETQ MOD. The MOD is comprised of 262 lines. After line 197 IFP complains that line 198 does not conform to a MOD definition.

**\*\*NOTE\*\* THE ABOVE WARNING OCCURRED IN SEGMENT BONO3BPA FOR ROUTINE MTSCHN .**

0 3 **\*\*WARNING\*\* IN THE SSARREG MOD - INVALID FIELD ENTERED. THE CARD BEING PROCESSED IS:**

05290716Z 285000. &

**\*\*NOTE\*\* THE ABOVE WARNING OCCURRED IN SEGMENT BONO3BPA FOR ROUTINE MSSARR .**

The line in question does conform to this particular MOD definition, as do all previous and subsequent lines. **(DR 19100)**

**Problem. IFPS: (Katrina DR) Failed Site grids creation problem.**

\*\*\*Duplicate of OB8.1 DR 19167\*\*\*

The failed site's grids are to be staged at the site in the exportgrids directory. That directory is supposed to be owned by user ifps and have 755 permissions on it.

Most WFOs have these permissions, but a few don't. In order to allow all users at all WFOs the ability to write the failed site's grids to this directory, the export\_grid\_data script should be modified such that the grids are copied to the exportgrids directory as user ifps. The grids are already being cleaned up as user ifps, so this should eliminate permissions problems of that type. **(DR 19171)**

**Problem: IFPS: OB8.2 (Katrina) Failed WFO's SvcBu grids not automatically exported to CS.**

\*\*\*OB8.2 duplicate of OB8.1 DR 18781\*\*\*

\*\*\*\*\*

*Note:* The code for this DR is attached to SPR 7305 in the "adapt" database.

\*\*\*\*\*

When performing IFPS Service Backup, only the backup WFO's SvcBu grids are automatically exported to the Service Backup Central Server. The failed WFO's SvcBu grids must be manually exported.

Automatic attempts to export the failed WFO's grids fail due to a bug that causes the export script to look for the failed WFO's IFPS environment file in the wrong location.

The manual export of the failed WFO's SvcBu grids may only be done through the Service Backup GUI, not normally used during normal forecaster operations. As such, it is a step that is easily forgotten. This became a significant problem during the lengthy SvcBu in the aftermath of Hurricane Katrina.

If the failed WFO's SvcBu grids are not exported to the Central Server, it represents a single point of failure in an already stressed system. Because of this, Item #8 in the NOAA/NWS Katrina Assessment dictates that this bug should be corrected in order to avoid similar problems in the future.

When Service Backup exits, the failed site's netcdf file should be removed from theexportgrids directory. **(DR 19077)**

**Problem. RAX Problem with Verification Plots.**

Certain points are not readable in the plot because of the way the plot axis limits are computed. In addition, the help menu needs to be updated.

There is no workaround for this problem, but since it only involves the points at the range extremes it does not seem to be critical.

This problem is related to the enhancements to the Interactive Verification Program in DCS 3396. (DR 19064)

**Problem. RAX - Need to edit parameters of verification statistics.**

User needs to be able to edit parameters of verification statistics via the GUI interface and batch language. Currently, it is only allowable via the system settings file, if it is allowable at all. This does not allow for easy on-the-fly changes to these parameters while executing the software. (DR 19049)

**Problem. Run iscMosaic on server host.**

During Service Backup, iscMosaic should be run on dx2 instead of the local machine so that it runs faster.

Currently, in some cases, the import of Service Backup grids takes over 30 minutes. This delay adds an additional burden on an already overstretched WFO which has to forecast for two WFO domains. In addition, the delay causes confusion at the WFO, where it might be viewed as a failure of the Service Backup software. Forecasters may exit Service Backup, clean up, and try to import again thinking that a "restart" will fix things. In fact, it's just doubling the time it takes them to get started. (DR 16853)

## 5.11 Crons and Scripts

**Problem. RFC/DHM - Tab\_out executable is missing from the bin directory.**

During executing DHM baseline test procedure on LX1-tbdr (build s1), one of the test steps failed due to 'tab\_out' executable is missing from the /awips/hydroapps/lx/public/bin/ directory on TBDR testbed. (DR 19345)

**Problem. RF - Problem in DHM Utility tool.**

Directory selection in Scalar Grid Editor returns wrong value when double clicked. Disable Create button during DPRECIP, and SACST mod selection in the Mod Viewer window. (DR 19066)

**Problem. IFPS install script checks DX hosts incorrectly.**

For IFPS, the installation script uses an outdated method of gathering the list of DX and PX servers to install on. Instead, the AWIPS standard \$DX\_SERVERS and \$PX\_SERVERS variables should be used. This causes problems at sites such as NMTW where they have entries in their hosts files for DX servers on other sites (i.e., DX1-NHDA & DX1-NMTR) where the install fails unless the installation script is modified, or the hosts file changed prior and after installation. (DR 19570)

**Problem. MSAS autorej.txt on px1 link overwrite.**

The cron job /awips/fxa/ldad/MSAS/WFOA\_MSAS\_Asos.run is run daily on px1 at 00:05 Z. In this cron, a file autorej.tmp replaces the proper symlink at /awips/fxa/ldad/MSAS/fslparms/autorej.txt (during installation this link points to /data/fxa/LDAD/fslparms/autorej.txt). MSAS is inoperable at all sites after this happens. Here is the section which needs modified (very end of file):

# If weekly messages were created, generate the automated reject list.

```
JDAY=`echo $ATIME | cut -c3-5`
x=`expr $JDAY - 1`
y=`expr $x / 7`
DYWK=`expr $x % 7`
WK=`expr $y % 4`

if [ $DYWK -eq 6 ] ; then
  cd $RUN/sfcrej
  ./FSL_sfcrej.run $RUN $LOG $ERR $WK
  $BIN/sfcrej.exe
  cat TMPREJ $MAPS_PARMS/reject_end.txt > autorej.tmp
  mv autorej.tmp $MAPS_PARMS/autorej.txt
fi
```

**(DR 19569)**

**Problem. Failed site's database does not populate during service backup.**

The import\_dtbse script needs to be updated to use pg\_restore instead of pg\_dump to populate the failed site's database during backup. Now that the postgres/informix conversion is passed, import\_dtbse is solely responsible for doing all the database operations. **(DR 19533)**

**Problem. DHM Grid Editor Directory Selection is not user friendly.**

Selection of input directories in Grid Editor display is not user friendly, so many clicks. Need to allow user to type in directory. **(DR 19143)**

**Problem. DHM Grid Editor directory selection problem.**

From the main display, when a user wants to select either input or output directories, they can browse in higher level directories but then can't return to lower level directories. Attempting to navigate to a lower level directory causes an exception. **(DR 19106)**

**Problem. db rename script shell issue.**

db rename script shell issue. **(DR 19267)**

**Problem. OB7.2 - MH: Allow Linux to start/stop sendmail on boot/shutdown.**

The OB8.2 installation scripts must start sendmail according to the default rules (init levels 3 and 5) on dx1 and dx2. This DR must be performed in conjunction with DR 19019. Once the changes for DR19019 are implemented, sendmail will never be started on dx1/dx2 causing MHS to not function following a reboot of dx1/2. Refer to DR19019 for additional details. (DR 19254)

**Problem. stopORPGCommsMgr Missing From stopIngest.dx2 script (ref DR 19202)  
Ref DR 17859, DR 17610.**

The stopORPGCommsMgr was left out of the OB8.1 version of stopIngest.dx2 script. It was included in OB7.1 and OB7.2.

The problem comes on package failover, when there will be an ORPGCommsMgr running on both dx2 and dx1 in the scenario that dx2 doesn't crash, but the package just switches.

Having 2 ORPGCommsMgr processes running for the same connection prohibits sites from switching VCP modes, obtaining derived product and using OTR. (DR 19240)

**Problem. stopORPGCommsMgr Missing From stopIngest.dx2 script.**

Ref DR 17859, DR 17610, DR 19202 (OB8.1 duplicate for OB8.2)

The stopORPGCommsMgr was left out of the OB8.1 version of stopIngest.dx2 script. It was included in OB7.1 and OB7.2.

The problem comes on package failover, when there will be an ORPGCommsMgr running on both dx2 and dx1 in the scenario that dx2 doesn't crash, but the package just switches.

Having 2 ORPGCommsMgr processes running for the same connection prohibits sites from switching VCP modes, obtaining derived product and using OTR. (DR 19209)

**Problem. OB8.2 Svcbu attempts to convert infmx/psql for OB7->OB8 site (OB8.1 DR19054).**

When importing configuration from an OB7 site, the import\_dtbases script executes another script called ipco.py. ipco.py was created for the purpose of handling the informix to postgres conversion between OB6 and OB7 sites and should have been removed post-OB7, because all sites are now postgres. ipco.py only checks for whether the two sites in question are the same OB, or a combination of OB6 and OB7, thus when it encounters a pair of sites that are OB8 and OB7, it falls through to the execution. As mentioned above, the call to this script should be removed. (DR 19059)

**Problem. OB8.1 Beta: run\_adbinit script not running on RAX (Ref. OB8.1 DR 19087)**

The script /rfc\_arc/bin/adbinit/run\_adbinit which runs two C applications, is generating postgres errors. The first postgres error is 25P01 and because of it, other postgres errors follow.

This error occurs when either of the two C program attempts to open a cursor. As far as I can tell, data is available in both of the IHFS tables that are being queried. (DR 19161)

## 5.12 Documentation

### **Problem. OB8.2 Beta Release Notes: error in described HLS functionality**

On pages 1-5, the Release Notes state "WFOs would have the option to produce a single-segmented or multi-segmented HLS..." There is no option for segment numbers with this product as it is determined by the internal VTEC/formatter logic.

The notes should say: "The segments will be determined by VTEC actions, similar to other hazard products." (DR 19539)

### **Problem. Low Cloud Base Limitations Needed In Release Notes.**

Low Cloud Base imagery is useless during dawn, daytime, and dusk. This is because of the visible light contamination of channel 2, one of the inputs used by NESDIS to generate this product. This imagery is also useless for those areas where the soil has a certain composition. In such cases, the channel 2 sensor gives a misleading reading. These are limits inherent to IR channel 2. This needs to be documented in the release notes so users are aware of these limitations. (DR 19516)

### **Problem. Release Note for D2D NCEP/Hydro Menu.**

A Release Note needs to be added for the D2D NCEP/Hydro menu. The issue is that because the menu is as tall as the monitors used for AWIPS workstations, if you click and release the mouse, the NCEP/Hydro menu will disappear. You must click and hold the mouse for the menu to not disappear

"You must click and hold to display the NCEP/Hydro menu in D2D. Otherwise it will disappear." (DR 19515)

### **Problem. Update documentation links.**

*User's Manual* and *System Manager's Manual* links are displayed on the AWIPS System Monitor page (NCFStatus.html). Need for the *AWIPS System Manager's Manual* link to point to <http://165.92.25.138:85/smmob8.2/toc.htm> and the *User's Manual* link to point to <http://165.92.25.138:85/aumob8.2/toc.htm>. (DR 18968)

### **Problem. PIT IVP javadoc information is out-of-date.**

The javadoc documentation within the source code is out-of-date and needs to be updated to facilitate future code maintenance.

The workaround for out-of-date documentation is to deduce the correct information from the code itself. (DR 19084)

## 5.13 FSI

### **Problem. Products (e.g.velocity) at 250m resolution incorrectly plotted at 240m.**

The problem is that velocity and spectrum width at 250m resolution is actually being plotted at 240m. This results in velocity signatures being significantly displaced from the reflectivity, especially at longer ranges. For example, an error of 4km was noted at a range of 60nm. **(DR 19657)**

### **Problem. FSI rssid process does not launch.**

FSI would launch but not display any data and it was discovered that the rssid process would not launch on px1. When launched it would display an error message that it could not get info on host lx3. There are only 2 lx workstations on TBW4. It was found that /awips/fxa/.rssd.conf defined the number of workstations that the site had, and there were entries for 5 workstations. Not all sites will have 5 workstations, so this logic might need to be changed.

As a workaround, you can edit /awips/fxa/.rssd.conf on the PXs to have entries for the appropriate number of lx workstations. FSI will work now, but because this file is baselined, it could be overwritten in future installs. **(DR 19458)**

### **Problem. FSI delivered radar product list.**

The WDTB discovered that the list of radar products to handle for FSI included the wrong Spectral Width product. This needs to be corrected. The existing product only goes out to a range of 32 nmi. The fix involves a change only to one text file. If this is accepted into OB8.2, then we need to get this into OB8.3 as well. **(DR 19588)**

### **Problem. FSI texture cache management.**

FSI texture cache management. Users cannot overwrite or remove leftover cache files from abnormal FSI terminations, resulting in blank PPI textures during looping and volume navigation.

OB8.2 beta TT312601

FSI texture cache management. Users cannot overwrite or remove leftover cache files from abnormal FSI terminations, resulting in blank PPI textures during looping and volume navigation. **(DR 19658)**

### **Problem. FSI: CAPPI texture on 3df (Shortcut Key – C); Looping vs. Last Frame buttons.**

Two things:

1) *FSI – CAPPI texture on 3df (Short Cut Key – C)*: This option will indicate that it is turned on (with a check mark next to it), but will not actually work until you toggle it off and on. Typically this happens when you first start FSI with it already checked as “on”.

2) *FSI – Looping vs. Last Frame buttons*: In D2D, if you have an image looping and you select the Last Frame icon, the image will stop on the last frame. In FSI, if you have an image looping and you select the Last Frame icon, the image continues to loop. We believe that it should work similarly to D-2D. **(DR 19496)**

**Problem. FSI use of STI product.**

It was decided that the FSI will not ingest the STI radar product in OB8.2 (but will in the future). The delivered recognized product file needs to have the STI removed. **(DR 19208)**

**Problem. FSI: Add reset button.**

PIT testers requested a Reset button that would take the FSI focal point back to the original location at which the session began. **(DR 19204)**

**Problem. FSI Code Review changes.**

Miscellaneous minor issues were identified during the Code Review for the FSI processor and extension. This includes mostly cosmetic changes, but includes a few minor code changes as well. **(DR 19203)**

**Problem. FSI: Modify Color Scales.**

The FSI color scale phases gradually from one color to another. The PIT testers suggested that the scale should have more discernable breaks in color (similar to those in D-2D), to allow users to better identify quantitative values in the FSI displays. **(DR 19201)**

**Problem. FSI: Workstation Slowdown/Warngen Conflict.**

During PIT testing, LX workstation slowdowns were observed when using FSI. This behavior specifically was seen when FSI and Warngen were initiated from the same D-2D session. **(DR 19198)**

**Problem. FSI: 99% CPU Load.**

PIT testing revealed a sporadic FSI problem. Occasionally, the top right window, displaying the Constant Altitude Plan Position Indicator, would flicker. Shortly thereafter, the FSI would take up 99% of the workstation's CPU. There is now workaround. **(DR 19197)**

**Problem. FSI cross section and missing tilts.**

The FSI GUI expects to receive tilt elevation angle information in the linear buffer in the form ##.## when the tilt angle is less than 10 degrees, but it was being sent in the form #.##. For example: 0.5 degrees was sent in as 0.5 degrees, but needs to be sent in as 00.5 degrees. **(DR 19168)**

**Problem. FSI readenv issues.**

In readenv.csh, several environment variable definitions were added for FSI. At least one line has bad syntax, which makes readenv.csh fail. The line

```
setenv PATH $WDSS2:$WDSS2/bin:${PATH}
```

should read

```
setenv PATH ${WDSS2}:${WDSS2}/bin:${PATH}
```

Also, the Makefile in D-2D/src/fsi needs to have startWG.sh included in its scripts list to allow it to get published. **(DR 19091)**

**Problem. FSI: 99% CPU Load.**

PIT testing revealed a sporadic FSI problem. Occasionally, the top right window, displaying the Constant Altitude Plan Position Indicator, would flicker. Shortly thereafter, the FSI would take up 99% of the workstation's CPU. There is now workaroud. **(DR 19197)**

**5.14 Synoptic Decoder****Problem. Synoptic decoder failing once/day after OB8.1 install (Ref. 8.1 DR 19099)**

Synoptic decoder failing once a day after OB8.1 install. See more information in the attachment in DR19099. **(DR 19308)**

**5.15 AVNFPS****Problem. Parser code needs to be updated.**

The METAR and TAF decoders in AvnFPS are dependent on an add-on module called TPG. This software has not been updated since February 2005 and is now causing the AvnFPS METAR decoder to fail on NHDA. This is a critical function of AvnFPS. The solution is to upgrade the TPG package during installation of AvnFPS OB8.2 (3.5) so the METAR decoder will function. **(DR 19247)**

**Problem. TWEB product to be discontinued in AvnFPS.**

Based on recommendations from the OCWS Aviation Services Branch, the director has agreed to terminate the issuance of the TWEB product on 31 September 2007. AvnFPS software needs to be updated to remove the TWEB editor. **(DR 19246)**

**Problem. Installation script removes triggerTemplate file.**

Installation log of AvnFPS reveals that triggerTemplate file is not properly renamed and is inadvertently removed. **(DR 19176)**

**Problem. SFC VIS from obs not correctly displayed in Metar Viewer .**

When SFC VIS is given in remarks section of observation, if the information is 'word wrapped', the newline is preserved in the MetarViewer. This causes a jumbled, confusing display. **(DR 19174)**

**Problem. Metar decoder fails when VIS group in remarks.**

AvnWatch will not monitor surface observations that have variable visibility encoded in the remark section of the METAR. **(DR 19172)**

**Problem. Installation script removes triggerTemplate file.**

Installation log of AvnFPS reveals that triggerTemplate file is not properly renamed and is inadvertently removed. **(DR 19176)**

**Problem. SFC VIS from obs not correctly displayed in Metar Viewer.**

When SFC VIS is given in remarks section of observation, if the information is 'word wrapped', the newline is preserved in the MetarViewer. This causes a jumbled, confusing display. **(DR 19174)**

**Problem. Metar decoder fails when VIS group in remarks**

AvnWatch will not monitor surface observations that have variable visibility encoded in the remark section of the METAR. **(DR 19172)**

**Problem. Reorganize alert messages to forecasters w.r.t customer impacts**

Request to

1. Move customer impacts to the bottom of alert messages.
2. Add threshold values to customer impacts.
3. Remove duplicate METAR/TAF summary lines from alerts.

This is feedback on flight category monitoring functionality tested by AFG (Fairbanks, AK). TAF amendments shall be done according to flight category in the new NWSI 10-318.

This is an AWIPS Small Enhancement

Approved by regional and headquarters aviation meteorologists

Only affects AvnFPS software

Effort to implement and test <10 hours

All technical considerations met. **(DR 18618)**

**Problem. AvnFPS shall use CIGNO when appropriate in alerts.**

AvnFPS alert messages use 'SKC' ('Clear Sky') when in fact FEW or SCT cloud layers are present. It is more proper to alert forecasters of CIGNO ('No ceiling') conditions in such situations.

TAF amendments shall be based on flight category in new revision of NWSI 10-813. This DR is based on feedback from AFG who did the prototype testing.

This is a AWIPS Small Enhancement

Approved by regional and headquarter aviation meteorologists

Only AvnFPS software affected

Effort less than one-hour

All technical considerations met. **(DR 18617)**

**Problem. AvnFPS shall use SFC VIS when available for monitoring**

The WFO aviation forecasters are responsible for forecasting surface (runway) visibility and are judged according to that parameter. Current FMH-1 guidance allow observers while composing the METAR to use tower visibility as the 'prevailing' visibility if it is worse than the runway visibility. AvnFPS METAR decoder should use SFC VIS whenever its available in the observation.

Approved by regional and headquarter aviation meteorologists in Jan 2007 conference.

Satisfies upcoming requirement in updated NWSI 10-813 to be released later this year.

Only AvnFPS affected by change.

Small change requiring less than 1 hour to implement. **(DR 18616)**

**Problem. AvnFPS shall be able to transmit TAFs with alphanumeric IDs**

AvnFPS can correctly decode, monitor, and create TAFs with alphanumeric ID however its unable to transmit them. This is a bug related DR, not an enhancement DR. **(DR 18614)**

**Problem. AvnFPS decoder need to conform to new ICAO format for TAFs.**

The United States Aviation Authority, the Federal Aviation Administration (FAA), and the International Civil Aviation Organization (ICAO) have agreed that the United States shall adopt date and time specifiers in TAF code beginning at some unspecified date in 2008. This requires that AvnFPS properly accept, decode, and create TAFs in the new format. The exact day and time in 2008 of implementation of the TAF format change has not been decided yet by the FAA; however, AvnFPS software must be able to accept either format. It is unable to do this now. **(DR 18613)**

## 5.16 Other

**Problem. Enable ssh on Netapp device SSH needs to be enabled on the netapp devices, to support future disabling of r commands.**

To do this as root on the nas, run

```
secureadmin setup ssh
secureadmin enable ssh
```

The setup command is interactive, but the defaults can be used, so when scripting pass control returns to accept the defaults. The enable command should be run after a delay of a few seconds so the internal setup can be completed. **(DR 19404)**

**Problem. MAT Preprocessor fails when attempting to define a new location (Ref OB8.1.1 DR 19206).**

When increasing the number of forecast temperature sites, the MAT preprocessor fails with the following message:

```
**ERROR** ARRAY IARY TOO SMALL. 40000 WORDS AVAILABLE. 40871
WORDS NEEDED.
```

```
**NOTE** THE ABOVE ERROR OCCURRED IN ROUTINE TEMP .
```

The IARY Array is too small and needs to be increased in size. **(DR 19603)**

**Problem. Smartinit definition MosGuide.py incorrect.**

The MosGuide.py SmartInit has an incorrect definition. The definition name should be "CalcWindGust" and right now it is written as "CalcWindGusts" with the 's' at the end.

The code just needs to be checked in. The fix has already been tested on a testbed. **(DR 19586)**

**Problem. Time Zone in Alaska Region as it applies to HWR.**

Duane Carpentar called from VRH and said that the time zone is set at AST and should be AKST or AKDT depending on whether it is Standard Time or Daylight Time. He said that Ed Mandel wanted him to open a ticket. **(DR 19425)**

**Problem. Incorrect Time Zone in Alaska Region as it applies to Climate (CI-CL).**

Duane Carpentar called from VRH and said that the time zone is set at AST and should be AKST or AKDT depending on whether it is Standard Time or Daylight Time. He said that Ed Mandel wanted him to open a ticket. **(DR 19422)**

**Problem. Grid ID grid198 for AK-RTMA.**

This is the new entry for grib2Grids.txt NCEP assign grid# and specifications recently. (DR 19476)

**Problem. OB8.1 - AF: duptext uplink\_send process crashing on dx1f.**

The products in /data/fxa/mhs/products/duptext\_filter are duplicate products that have already been transmitted over the SBN, so this is a redundant data path. The impact is that sites that miss these products (which include warnings and watches) when they are transmitted over the SBN will not get them if the uplink\_send process has crashed. These products will also fill up the NAS file system, thereby affecting other areas of AWIPS. The NCF will set up an ITO alarm on this directory to provide proactive monitoring once the problem occurs. (DR 19443)

**Problem. AF: MHS does not send retrans requests correctly following switch.**

This is a longstanding bug that was just identified. When switching between ANCF and BNCF, the current scripts for the retransmission process do not replot the SBN channel floaters to the new active NCF. This is only an issue when sites don't receive the switch command from the NCF, or they swap dx1apps between dx1 and dx2 after the NCF has switched. The sites have a bug in that the switching script should update the symbolic link for /awips/ops/data/mhs/rcv\_handler.tbl on both dx1 and dx2 when a switch command is received instead of only updating it on the server running dx1apps. Because both bugs can be fixed by changing one file, they will both be addressed in this DR. The files that need to be modified are: start\_ncf\_mhs\_distrib, start\_retrans\_mhs, and mhs\_ncf\_switch (NCF and sites).

Also identified issues with switch\_comms\_ncf (still pointing to "ms" servers instead of "mh") and start\_comms\_mhs\_send (incorrectly assigns an environment variable). These are both NCF scripts that do not apply to sites. (DR 19467)

**Problem. AF: Create NCF MHS availability monitoring application.**

The NCF has a need to report MHS availability statistics to the AWIPS Program Manager. This DR is for the creation of the applications that will generate the data points and create a daily report by site of MHS availability as a percentage. This application will have a component that resides at each site to parse the MHS logs for test messages. The main application will reside at the NCF. This new application has no impact on the forecasters. (DR 19466)

**Problem. AF: MHS Outgoing byte counts never increment in msg\_stats.**

The global variable MQVctl.mqv\_byte\_cnt is never incremented as messages are queued and transmitted. To fix this, the single line:

```
MQVctl.mqv_byte_cnt += pMsgItem->total_bytes;
```

must be added right before queuing the message in the function msg\_request\_svc in the file msg\_request\_svc.c. (DR 19503)

**Problem. Relate 45 files checked in against DCS3399 after OB8.3 workset cut.**

DCS 3366 had 45 files related to it after the OB8.3 workset was cut. Because DCSs are not duplicated, this DR was created to ensure the 41 files get into OHD-OB8.3 after OHD-OB8.2 builds successfully.

Also, the DR will allow these changes to be tracked and tested. The DCS3399 test case(s) must be executed to ensure the OB8.2 files were migrated successfully.

The OB8.2 build failed - developer added 5 more files to DCS 3366. Rebuilding 09/27/07. **(DR 19502)**

**Problem. AF: Remove X.400 processes from dsswap for RFCs.**

*Note:* This is only applicable to RFCs, but there is no selection available in the drop-down for RFCs only.

Conditionally remove the code that starts the X.400 processes and the uplink\_send processes from dsswap for RFCs only. **(DR 19500)**

**Problem. routerStoreNetcdf fails to store data (D.F, 10/09/2007).**

Another ticket (308168) has revealed a related, but much more serious problem: If the first observation is for a station that is not in the station list, the entire product is dropped.

A *workaround* is to add the missing stations, but it may not be feasible to account for all possible stations.

DR upgraded to "Critical."

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Sites are reporting a problem in which routerStoreNetcdf logs a message like...

```
14:40:01.305 dmDataAccessFns.C Problem: Unreasonable time stamp
19700101_0000
```

The following is also seen in the logs:

```
00:27:51.118 LdadNetcdfStorage.C EVENT: NCF_STORED in
/data/fxa/LDAD/mesonet/netCDF/19700101_0000
```

Analysis shows three problems:

1. routerStoreNetcdf has bug in which it will create a file for 1970-01-01.
2. routerStoreNetcdf reports it is storing to a file named 19700101\_0000 when it is not actually storing anything.
3. The general data inventory routines treat "1970" in a file name as a bad year.

There is no indication that data is not being stored because of a software failure. It is the opposite: The above failures are being triggered by unstorable data (missing local station file entries, old observations, etc.)

This problem is classified as "minor" because there is no loss of functionality. However, the log messages will cause much confusion and make the diagnosis of real problems more difficult. **(DR 19498)**

**Problem. AF - OB8.2 - Add MHS handler for new hydro app to rcv\_handler.tbl.**

Determine an appropriate message code for hydro apps and add the following to /awips/ops/data/mhs/rcv\_handler.tbl on all DX and MH servers.

```
27 /data/x400/mhs/msg/hydro SYS /awips/hydropapps/precip_proc/bin/process_rfc_bias
%ENCLOSE(1) "%SUBJECT" "%MSGTYPE"
```

Where 27 is the message code number that will be used.

No TTs are associated with this DR; it is a new requirement.

Impact to forecasters and end users of not doing this is that they will not receive any of the products associated with this; or whatever the new hydro application does will not be performed. This question should be addressed by OHD.

There are no workarounds. This isn't an existing problem; it's a new requirement. **(DR 18759)**

**Problem. AF: Make start\_comms\_upl\_send detect operational NCF site.**

When start\_comms\_upl\_send starts the uplink\_send processes as part of the comm1 service on cs1 at the NCF, it assumes that the current site is actively uplinking SBN data. This is not necessarily true, however. In the case of HazCollect, it is possible for the BNCF to receive HazCollect messages while the ANCF is the active SBN site. The SBN uplink site can be determined from one of the MHS servers using the 'msg\_ctl -A' command. This can be called from start\_comms\_upl\_send to set the active uplink site. In addition to making this change, the procedure for switching the NCF operations between the ANCF and the BNCF must be changed to include calls to stop/start\_comms\_upl\_send after making the operational switch of MHS and SBN.

This only affects the NCF software. It is not run at any field sites. The *workaround* is a manually intensive fix run by the NCF that is error prone. If the NCF does not perform this task after an NCF switch operation, it is likely that some HazCollect messages will not get delivered over the SBN in a timely manner. No trouble tickets are associated with this problem. **(DR 18086)**

**Problem. OB8.2: DE: acq\_patterns aviation product typo.**

In acq\_patterns.template, the pattern ^W[CSV]USO[123456].\* erroneously contains the letter 'O' instead of the number zero. This will prevent acquisition of these products. **(DR 19462)**

**Problem. Remove code changes associated with AWIPS\_DR\_19286.**

un-do AWIPS\_DR\_19286. (DR 19389)

**Problem. restore\_pgdb table option not working (Ref OB8.1 DR 18272)**

The restore\_pgdb is used to restore the Postgres databases. You can use it to restore a single database or all the databases, and this work. The script also has an option to restore a single table and this is not working. When you restore the table it is being put in template1 and not the database it belongs to. (DR 19303)

**Problem. backup\_pgdb doesn't return non-zero exit code on pg\_dump errors.**

When /awips/ops/bin/backup\_pgdb kicks off for a pg\_dump, it uses the following command:

```
$PSQL_BIN_DIR/pg_dump -Fc -Z9 $DBNAME | split --bytes=1024m -  
$DUMP_DIR/$DBNAME.
```

```
RETURN=$?
```

The value of return will not be 0 (zero) even if pg\_dump has errors, because it will gather the exit code of the split command. This happened at site KRF, who did not have a good backup for 4 days, because the backup\_pgdb was failing, but the log shows EXIT\_CODE=0.

We ran the backup\_pgdb -d hb\_ob7krf by hand, it had errors, but the backup\_pgdb log still shows EXIT\_CODE=0.

This is a problem due to the fact the NCF will not get alarms if good backups are not being created. Sites stand the chance to lose data in the event of a hardware failure without good, recent database backups. (DR 18489)

**Problem. Request to reserve DEPICT\_TYPE entries for GSD ALPS.**

GSD requests that two values in the DEPICT\_TYPE enumerator be reserved for GSD's ALPS project. The enumerator entries would be:

```
PLUGIN_DEPICT = 198,  
STATIC_PLUGIN_DEPICT = 199,
```

These entries had to be change to these values today in our ALPS branch because their previous values are now used by new AWIPS depict types. We would like to avoid having to change them again in the future.

We propose that these entries be added to the OB8.2 DEPICT\_TYPE enumerator. They would not be used in any of the standard AWIPS code and would therefore have no effect on it. (DR 19303)

**Problem. Symbolic links for SSH missing.**

The symbolic links for SSH are missing. SSH files are located in /usr/bin/, but a few AWIPS apps look for SSH in /usr/local/bin/. The five SSH symbolic links in /usr/local/bin/ need to be recreated to point to the five SSH files in /usr/bin/. Issue the following command to find these files: `ls -l /usr/bin/ssh*`

This affects a few AWIPS apps. I know for sure it causes the Archiver GUIs not to launch and there may be many other problems that these missing links cause.

**Workaround.** Create these links with the `ln -s` command. (DR 19326)

**Problem. OB8.2: OB8.1 Beta: Program ts2oh Aborts During Run (Ref. OB8.1 DR 19007).**

The TS2OH program began normally, but encountered problems while processing MAPX files (ABVC2U.MAPX). The program halted and issued the following statement: "Error in rjulmdy\_1900 1 trying to make MMDDYYYY. Program aborted."

Investigating further, it was found that the problem with TS2OH is not within rjulmdy\_1900.c. This routine ONLY returns a negative value if the passed-in julian date is not positive. In order to get the above error message when running TS2OH, the passed-in julian date must not be positive. Looking into the TS2OH source code (ts2oh.c), the error message is generated at line 742. This implies that the parameter `jdateend`, which is passed into rjulmdy\_1900, must be less than 1.

Background: Program TS2OH reads a TSDATA output file and writes a DATACARD formatted file. The program TSDATA is used to read time series data from the fs5files to get data at a shorter data time interval than that available from the USGS. Program TS2OH can also read an existing DATACARD file, merge the data with a TSDATA output and write an updated DATACARD file. (DR 19065)

**Problem. Changes to HLS for compliance to NWS 10-6 01 (ref 19117)**

There were changes specified to HLS which were never updated for OB8.1. This was noticed by Matt Belk at BOX testing the 8.1 Beta. These parts are also relevant for the recent changes to 8.2. See also DR19117. (DR 19118)

1. Tropical cyclone type needs to include "SUBTROPICAL DEPRESSION"
2. AES Level needs to be "URGENT - IMMEDIATE BROADCAST REQUESTED"

**Problem. ORPGCommsMgr fails to close open files before deleting (OB8.1 DR 18916).**

This is an OB8.2 duplicate DR of OB8.1 DR 18916 and OB7.2 DR 18771.

The ORPGCommsMgr process which runs on dx2f at all AWIPS sites and is responsible for the ingest of radar data from the RDA is failing with error message: EMFILE (Too many open files) the culprits are temporary nfs transaction files in /data/fxa/radar/environData/.nfs\*

This failure is manifested at sites by the lack of storage of radar images and data. When the ORPGCommsMgr is in this state, no radar data from the site's local RDA will be ingested. This affects ALL sites ingesting via the ORPGCommsMgr process.

The *workaround* in place is to periodically restart the ORPGCommsMgr process that clears out the errors and open files.

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CONCLUSION::

The ORPGCommsMgr process is not closing the /data/fxa/radar/environData/YYYYMMDD\_HHMMSS.kxxx files before deleting them. This is what creates the .nfs, when a file is deleted on an nfs partition that a process is still reading. If the ORPGCommsMgr closes the file properly and then deletes the YYYYMMDD\_HHMMSS.kxxx file, the .nfs wouldn't even show up.

The error in the strace: EMFILE (Too many open files) is given when the calling process has too many open files in memory, and not the OS. (DR 18917)

**Problem. AF - OB7.2: msg\_stats modification for sendmail queue relocation.**

The msg\_stats utility references the /var/spool/mqueue for the sendmail queues when executed from the NCF when it should reference /var/spool/mqueue/mhs#. Need to make it display the sendmail queue information depending on whether it is running at the NCF (A/B/T) or a site. The version currently running in the field is correct for sites, but not for the NCF. The change will make msg\_stats run correctly at both locations. There is no impact to the sites for this change, only to the NCF. This utility is not used by forecasters. There is no workaround. Impact is minimal because the information is available elsewhere. (DR 18914)

**Problem. /usr/local/java added to default \$PATH**

Matt Foster / OUN has requested that /usr/local/java gets added to the default \$PATH for awips users' profiles. (DR 18582)

**Problem. Incorrect Time Zone in Alaska Region.**

Duane Carpenter from VRH said that the time zone is set at AST and should be AKST or AKDT depending on whether it is standard time or daylight time.

*Note:* Changes backed out of the installLinux script as of 2007.09.18; the shapefiles are already in place, so the changes here essentially kicks off the time zone change, it will have to be made a part of the push script for when Alaska is ready to change. (DR 18570)

**Problem. OB7.1: NWR Editor crashed.**

The site could not call up a product to edit through the NWR Editor. When an AFOS id was entered into NWR Identifier, nothing was brought up. When the site tried to bring up a product through the Text Identifier window, NWR Editor crashed.

**Workaround.** No.

**Impact:** The users can only call up the products buffered in the pending list for editing. They can not call up any product from the text database using AFOS id. **(DR 18564)**

**Problem. OB7.2: Provide an adequate AWIPS environment for BASH/KSH login shell users**

This is a small enhancement request DR from RHA.

RFCs have used /usr/bin/sh as the login shell for their users since the initial AWIPS build as RFC development and operations in the pre-AWIPS era was based on that shell (which typically translated into the Korn shell, ksh). Based on OB7.2 Pre-Integration Testing (PIT), MARFC discovered the environment provided for that login shell was incomplete (note that /usr/bin/sh links to the "bash" on OB7.2; also note the bash and ksh are very similar and proceed through similar sequences for login initiation). The symptoms were that the "get\_apps\_defaults" system failed and AWIPS applications did not fire off as exhibited by the inability to run D2D and other baseline applications accessed from the AWIPS appLauncher menu.

A statement previously inserted into the /etc/profile file for all AWIPS builds was missing. The line:

```
. /awips/hydroapps/lx/public/bin/awips.profile
```

has been used to establish the proper environment for RFC applications up to and including OB7.1. The addition of the above line of code to /etc/profile during OB7.2 PIT created the proper environment for RFC application execution.

The functionality provided by the script /awips/fxa/readenv.sh being executed in the login sequence for the /usr/bin/sh login shell is needed. This script is equivalent to the readenv.csh script in the same directory that is "sourced" within the "csh" login sequence for establishing an AWIPS-compatible environment. This sequence for the "csh" ensures the proper environment is established for executing baseline AWIPS applications while working in the "csh". Looking at the contents of the user "fxa" home directory, you can see readenv.csh is "sourced" via execution of the .cshrc file located there (sourcing of the .cshrc file in a user's home directory is part of the "csh" login sequence). The functional equivalent of ~fxa/.cshrc needs to be implemented in the /usr/bin/sh login sequence. **(DR 18547)**

**Problem. GFE: Unable to select intensity of freezing fog.**

The capability does not exist in GFE to select heavy freezing fog (ZF+). Right now only ZF (freezing fog) can be selected.

I talked to Andy Horvitz, and he says that this is an important change that needs to be made. Freezing fog can endanger lives and damage property, and sites need the capability to warn of heavy freezing fog and not just freezing fog. **(DR 18508)**

**Problem. GW: D-2D Re-Labeling of RTMA GOES Effective Cloud Amount Product.**

In AWIPS OB7.2, baseline site software was added in support of Real Time Mesoscale Analysis (RTMA) products. The site software for RTMA included ingest, decode, store and D-2D display capability. One of the RTMA products is a GOES Effective Cloud Amount grid that is generated by NESDIS and that will be sent to AWIPS via the NWSTG/NCF/SBN. Presently (in OB7.2) the product is labeled in D-2D as follows:

“RTMA Layer Cloud Cover (%) ”

This proposed Release Adjustment calls for the labels to be modified such that they appear as follows:

“RTMA Layer GOES Effective Cloud Amount (%)”. **(DR 18501)**

**Problem. OB7.2: setupAwipsUser.sh does not modify /etc/groups.**

When the NIS was on DS, useradd was run there to add a user to the system. The HP-UX version of useradd would add the user to /etc/group under the group id (fxalpha). VerifySSHKeys.sh will key off the group database to determine which users to create ssh keys for.

Now that the NIS is on the DX, the Linux version of useradd is used, and it does not modify the /etc/group file, so the new user information will not be in the group database. Therefore, VerifySSHKeys will actually delete the keys for the new user, and never recreate them. Either the setupAwipsUser script needs to be modified to add the user to the group file, or VerifySSHKeys (and anything else that might key off the user being in the group database) needs to be modified to retrieve its user list from a different source, like the passwd file.

As a workaround, the sites can manually change /etc/group on dx1 to add the user, and run /var/yp/ypmake to apply it to NIS. Or delete and read the user using the setupAwipsUser.sh script. **(DR 18375)**

**Problem. HWR sub-application idsdb can't be run (SPR7316)**

Trouble ticket # 262260 and 272713

There is a sub application called idsdb that comes with HWR. Currently, this application can not be run on any system because a module is missing (IdbCmd). At present time, there is no clear documentation on what the missing code should be doing. **(DR 18351)**

**Problem. OB8.1 - DE: Add WMO header patterns to acquisition files for ECMWF.**

The WMO headers for the ECMWF HiRes grids were undetermined at the check-in deadline for DCS 3377. Therefore, once the headers are provided by NCEP, acq\_patterns.txt, acq\_patterns.txt.OCONUS, acq\_categories.txt and Grib2Patterns.txt may need to be updated. **(DR 18322)**

**Problem. ECMWF-HiRes and HPC QPF grids not monitored by Data Monitor.**

ECMWF-HiRes and HPCqpfNDFD grids were introduced into AWIPS in OB8.1 for DCS3377 and DCS3380, respectively. Data Monitoring was not addressed as a requirement for these grids, but conventionally new grids are added to the Data Monitor web page. Therefore it would likely be useful if these appeared there as well. (DR 18712)

**Problem. Site Specific Model Ability to use alternate Unit Hydrograph.**

Currently, the Site Specific model limits the user to using one unit hydrograph per location being modeled. There is a need for the following:

1. An ability to define and store multiple unit hydrographs for a given location
2. An ability to select, for any location, any of the defined unit hydrographs for use in the current execution of the site specific hydrologic model. (DR 18319)

**Problem. PPINIT @DUMP ORDER caught in endless loop.**

When running a PPINIT input deck of @DUMP ORDER ppinit gets caught in an endless loop when trying to dump the order parameters. (DR 18315)

**Problem. logic error in makeStationFiles.csh restricts synoptic station coverage.**

This problem exists in all current builds.

localization/scripts/makeStationFiles.csh lines 206-210 read

```
206 set SYNOPTIC_SCALE = ` $configValue SYNOPTIC_SCALE mainConfig.txt 0`
207 if ( $SYNOPTIC_SCALE == NONE ) then
208     mv Wsynoptic.goodness synoptic.goodness
209 else
210     set areaSup = ` $scaleSup $SYNOPTIC_SCALE`
```

It's easy to see that SYNOPTIC\_SCALE will not likely equal NONE, so the else branch will be taken and synoptic display will clip to \$SYNOPTIC\_SCALE (probably 0). The line 206 should be moved to fall between lines 209 and 210.

This will affect only sites with southern hemisphere displays, but is a significant problem for them. (DR 18184)

**Problem. Unit Hydrograph Editor not Launching from HydroBase**

When attempting to launching the unit hydrograph editor from the rivergage menu in HydroBase, the editor crashes. (DR 18179)

**Problem. Inaccurate Verification Stats Generation.**

There seems to be a question regarding how the Pairs Building program is determining what gage type source to use for pairing. For every forecast point the RFC has defined, either RG, RP,

or RZ for the Sensor Preference using 'ivpruninfo'. But when the pairing script is run, there is quite a variety of data type sources that are incorrectly being gathered by the program (RB, RC, R2). At one forecast point, for example, the program should be collecting HGIRZ for observed data – the archive database holds a complete set of HGIRZ data, but the Pairs Building program fail says it is using HGIRC data. This results in the generation of inaccurate verification data.

In short, the verification program does not appear to be using the Sensor Preferences as defined in vfyrininfo. The result is the generation of inaccurate verification statistics. **(DR 18118)**

**Problem. Upgrade to ChartDirector 4.1 in AWIPS baseline.**

Per Baseline Change Request 04, and AWIPS\_DCS\_3396, we need to upgrade the charting package to ChartDirector 4.1 in the AWIPS baseline for the OB8.2 release. **(DR 18942)**

**Problem. Changes to dx1apps and mhs\_mta heartbeat scripts (dup for 18911)**

The sendmail queue directories at all sites are currently stored on the NAS in the /DS\_Shared file system that is NFS-mounted to dx1 and dx2. The directory /data/mhs is a symbolic link to /DS\_Shared. The sendmail queues are actually in /data/mhs/mqueue and /data/mhs/clientmqueue. These directories have symbolic links of /var/spool/mqueue and /var/spool/clientmqueue. Because NFS does not support native Linux file locking (flock and fcntl), which are required for sendmail, NFS-mounted directories cannot be used for the sendmail queues. The solution is to move the sendmail queues back to their default locations, which are /var/spool/mqueue and /var/spool/clientmqueue. Since those are currently symbolic links, all that needs to happen operationally is to delete the links create directories in their place. Some changes to the install scripts for dx1/2 may be required to deal with the change in the directory structure. The /var filesystem on dx1/2 is actually larger and has more free space than the /DS\_Shared file system on the NAS, so disk space isn't an issue. Another positive side effect is that locally mounted file systems are much faster than remote NFS file systems, so MHS performance would improve marginally, especially for large messages. However, moving the file systems locally would mean that dx1/2 no longer share the queues, so one node would not know about the other's queues after a failover (either automatic or manual). The solution to this is to copy the queues between the nodes during a start up operation (which would also encompass a swap since a swap is a stop + start).

This affects every site. The impact of not fixing this is that critical warnings could be generated but never distributed to the field under certain circumstances. Appropriate alarms would be generated and manual intervention would resolve this on a case-by-case basis, but in reality it would likely take a significant amount of time to occur. **(DR 18936)**

**Problem. The CitiesInfo.txt file is limited to approximately 25 characters by a localization error.**

The CitiesInfo.txt files produced from the usa\_cities shape file is limited to 25 characters by an error. The previous character limit was 39 characters. WarnGen, D2D and several MDL applications will be affected by this problem. **(DR 17996)**

**Problem. OB-6.1: RAOB T and Td Values Based on BUFR Off Relative to TTAA Text Values**

Melbourne reports that BUFR RAOB T and Td values plotted in the Skew-T do not match the values in the TTAA text. It is not known whether the values are being \*en\*coded wrong in the BUFR messages, or the values are being \*de\*coded wrong by the RAOB BUFR decoder, or the decoded BUFR values are being plotted wrong. (DR 17995)

**Problem. OB7.1: setupAwipsUser.sh has obsolete reference to openssh .**

When running setupAwipsUser.sh, an error appears on line 696. It cannot find the /usr/local/openssh/bin/ssh-keygen executable. This has moved in OB7.1 to /usr/bin/ssh-keygen. The net result is the user does not have passwordless ssh on the system. Running VerifySSHkeys.sh would be a workaround to fix the new user's account for passwordless ssh. (DR 17960)

**5.17 SCAN****Problem. SCAN doesn't recognize new VCP numbers. (Ref OB8.1 DR 18983).**

During testing of ORPG Build 9, ABQ discovered that SCAN was unable to interpret the new radar volumetric coverage patterns (VCP 221, 211, 212). As a result, SCAN would not work on their radar while it was using one of these new VCPs. The problem was traced to a SCAN configuration file. MDL was able to implement a *workaround* – appending the \${FXA\_HOME}/elevationList\_SCAN.txt file to include the new VCP information. The workaround was tested successfully at ABQ. This DR represents a serious SCAN problem, but it is ranked at "Major" instead of "Critical" because of the workaround. The DR should be in near-term build, though, to make the VCP change permanent in SCAN's config file. (DR 19352)

**Problem. Non-low-cored Mesocyclone won't show in MESO Table. (Ref OB8.1 DR 18984).**

The ORPG will add the implementation of associating storm ID and Mesocyclone features by using 20 km distance to remove high MESO false alarm in the ORPG Build 9 emergence release. Based on this change, some of the Mesocyclones (non-low-cored features but more than 20 km away from any storm identifiers which are labeled as "??" in the MD radar product) will be missing from our SCAN MESO Table display.

This DR is rated as "Critical" because some Mesocyclone-important information will be misrepresented to forecasters and thus may mislead them during severe weather events and affect their decision making. Although the percentage of the non-low-cored mesocyclones is low, we would like for this DR to be included ASAP to accommodate the changes caused by ORPG. (DR 19351)

**Problem. tcl error when saving All Configurations.**

Found a tcl error when executing Baseline\_Radar\_SCAN\_1.15.1.3 test case, step 20. The test case is attached. A tcl error (see attached image) was displayed when I modified the Configurations ->D2D Display... -> CELL IDENTIFIER CLUTTER CONTROL properties. I

modified the settings then selected Apply, then OK. Next I selected File -> Save All Configurations and the tcl error was displayed. I selected OK on the tcl error and then cleared the pane and reloaded to see if the changed configuration was saved anyway. It was not. (DR 19361)

**Problem. OB8.2 SCAN: DMD icon and Table display occasionally crashed for OB7.2.1 (Ref 19140).**

Kevin Johnson at NCF called saying the SRUprocessor continued to die at sites ABR and FGF because of an SEGV error. From the log file, it appears that something in the netcdf file triggers the processor to try and back out to a regional scale.

One day later, we received another Trouble Ticket (TT# 293507), saying SCAN's DMD icon and Table display were not loaded at site UNR. The log file indicates a SEGV error and the cause looks similar to what happened at ABR and FGF.

Some testings were performed at the three sites (through ATAN 885) to investigate the reason for the crash. We found the bug is in the conversion of the DMD radar products into AWIPS netCDF file in the GenericMsgHandler executable which was developed by GSD. One of the attributes -- "validFlag" in the DMD netCDF file was incorrectly set. Our SCAN uses that flag to process/display the DMD netCDF file. Because of the wrong value for "validFlag" processed by GSD's GenericMsgHandler, all of VALID mesocyclones will NOT be processed/displayed by our SCAN but all of INVALID meso will be processed as it should NOT be. Those INVALID mesocyclones would have one default missing latitude/longitude pairs as its geographical location. The usage of the bad lat/lon values into one of the methods in the AWIPS GeoEntityLookupTable class caused the crash that the sites experienced.

The GSD has been informed for the crash and they created DR 19130 to correct the incorrect setting of "validFlag". But we still like this DR created to avoid the crash in case DR 19130 does not corporate well.

The crash will affect the warning decision-making when severe weather events (mesocyclone/TVS) occur because forecasters could not display the icons and Table. We hope this DR to be included into the earliest build to the sites. (DR 19241)

**Problem. HandleGenericMsg incorrectly sets valid flag (Ref OB7.2.1.1 DR 19130)**

Tickets 293507 and 293070, reported at ABR, FGF and UNR.

SCAN DMD processor and display crashes. There is apparently a problem with the way the 'validFlag' is set for mesos by HandleGenericMsg. (DR 19281)

**Problem. Improve performance of DMD display on volume scan change (OB8.1 DR 18355).**

Sometimes the 0.5 degree elevation takes so long to be updated that it does not appear to display. When the scan cycles to the 0.5 elevation the DMD display is blank. The data is there, reloading the DMD will result in the 0.5 elevation. At play is an NFS or timing issue. The new netcdf file is not visible to the workstation by the time it receives the notification to refresh the display and load the next time's radar image. This does not happen all the time, but seems to happen

consistently on the same radar times, since we loop through the same data over and over on the test beds. It is most likely it is due to the size of the radar product/netcdf file that is being written to the NAS.

Theory number one is that there is a NFS lag of 0-3 seconds which causes the workstation not to "see" the new netcdf file by the time it receives the notification to refresh the display. Testing with a new kernel which has fixed NFS issues found in OH and GFE software which were seeing significant NFS delays and problems with caching did not fix this DMD issue. High traffic/usage will also cause a delay. **(DR 19319)**

## 5.18 LSR

### **Problem. LSRs sporadically updated in D2D.**

It was found that when an LSR was created it may or may not update in D-2D when the local storm report graphic was loaded. When an LSR was created, sometimes it would load on one D2D and not another. Something like this happened nearly every time an LSR was created. **(DR 19307)**

### **Problem. LSRs displayed in D2D with incorrect icon (ref: OB8.1 DR 18895).**

I issued seven LSRs and observed the display in D2D after. After the first LSR was sent, nothing was displayed in D2D. After the second LSR was sent, I observed that the first LSR was displayed, but it had the wrong icon. The second LSR was also not displayed. I have attached all the LSRs and the screen captures.

There are two issues:

1. The latest DR does not display
2. The LSRs are shown with the wrong icons. **(DR 19121)**

### **Problem. LSR: Spotter shows up as 1N instead of 1SE of a city.**

Site UNR reported that in LSR, a spotter showed up in the report as being 1N of Ladner even though they are actually 1 SE of Ladner. It was found that the lat/lon for Ladner looks correct, as does the lat/lon for the spotter that is 1SE of Ladner. This particular spotter is HR15.

There was a problem with the calculation or rounding of the direction when a spotter's distances are a couple miles or less from a city, although it could be something else that's causing it. The *workaround* is to manually change the spotter's direction the spotter is from the city when the report is generated. **(DR 18704)**