AWIPS OB8.3 Final Release Notes. Section II, Discrepancy Report Fixes, 05 June 2008

Raytheon

AWIPS OB8.3 Final Release Notes

Section II – Discrepancy Report Fixes in OB8.3

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1.0 D2D/TEXT/OTHER APPLICATIONS

The following Discrepancy Reports (DR) have been fixed in AWIPS OB8.3.

1.1 Color Curve/Blinking/Image Combination

None.

1.2 Looping/Sampling/Swapping Panes/Zooming

Problem. IGC: Disable the capability of moving storm centroid with middle mouse button. (DR 18905)

While preparing the WarnGen SVS product on March 29, 2007, two users in GLD were unable to update the location of the storm. When they tried to drag the dot (storm centroid) to the storm's current locations, the dot would not hold; instead, the dot would go back to its previous location.

The problem was traced to user error. While preparing the SVS product in the heat of battle, the users mistakenly used the middle (instead of the left) mouse button instead of the left mouse button. However, Jim Ramer recommended that the software be fixed so as not to allow this error. This particular incident delayed the issuance of follow-up SVS statements for tornado warnings; the same error could also delay the issuance of other WarnGen follow-ups.

Workaround: None.

1.3 Climate

Problem. cli_asos_monthly table not getting populated with Monthly Summary Message (MSM). (DR 20196)

The cli_asos_monthly table is not getting populated with the Monthly Summary Messages (MSM). This issue is probably similar to the issue raised with DR 20142, with the DSMs not getting populated into the cli_asos_daily table.

This could result in missing information when the monthly climate report is run.

Problem. cli_asos_daily table not getting populated with Daily Summary Message (DSM). (DR 20142)

After installing OB8.3 the climate table (hmdb), cli_asos_daily no longer gets populated by the trigger set up to get the info from the DSM. Because of this, the am/im/pm climate does not use the DSM information, and instead uses METARs. Max/min temps can be slightly off; the time of max/min temp occurrence is missing. Wind info is also usually missing when populated with METAR data.

Problem. Sunrise time stamps incorrect in Climate on TBW4. (DR 19561)

The Climate reports from Alaska sites show that the sunrise is in AKDT and the sunset is in AKST. This occurred after the system time was set to December 4, 2007 (one month after the change to Standard Time). Both events from this date should display AKST.

Problem. Unable to open Sunrise/Sunset GUI on TBW4. (DR 19560)

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 is AKST. The fourth character "T" is unexpected.

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

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

Problem: Error in Daily QC freezing level script, ruc.tcl. (DR 19980)

A typo was preventing a tcl variable from being referenced correctly. An attempt was made to retrieve the value of a variable without preceding the variable with a '$'.

Problem. Incorrect Time Zone in Alaska Region as it applies to Climate (CI-CL). (DR 19422)

VRH indicated that the time zone is set at AST and should be AKST or AKDT depending on whether it is standard time or daylight time.

Problem. OB7.2: Snowdepth is -1 instead of T in Climate F6. (DR 18997)

The climate F6 program displays '-1' for the maximum snowdepth in the month, if the max snowdepth was a trace, instead of 'T'.

This bug was fixed with DR 17019 in OB7.2. However, after some investigation, it appears that the fix was overwritten in the code-set by code for another change to the F6 program.

The fix in DR 17019 needs to be put in c_build_f6.c again.

The operational impact is this: In the GREATEST DEPTH section of the PRECIPITATION DATA part of the F6 climate product, if the greatest depth of snow for the month was a trace, it will say -1 instead of T.

Workaround: Manually edit the product after it is produced.

Problem. Small Enhancement: F6 product does not have option to add remarks. (DR 18601)

Site ABR requested that an option be added to the climate F6 product to add remarks.

Problem. GFE: FWS 1 hourly sky cover table values are always CDY. (DR 18578)

To duplicate this problem, ensure the following in the FWS_???_Definition file.

1. Set the Sky entry of elementFormatDict to "alpha."
2. Ensure that tabularResolutionDict includes a 1 in the list for each period.

Now run the formatter.

In the second GUI, select Tabular Only for the type of forecast. Check all of the SKY/WEATHER boxes and all of the "1" Tab Hrs settings.

You should see "CDY" for all times in the sky cover row.

Solution: In the FWS_Overrides module, there is a subroutine called _sky_value. There is one "break" command in the subroutine. Move the break command over one indent to the left.

Problem. CL: Incorrect monthly average sunshine in F6 product. (DR 10682)

The F6 product summarizes the total number of minutes of sunshine, and should give the average number of minutes and average % possible sunshine, but the last two fields are missing from the final product.

1.4 Radar

Problem. Radar: OTR GUI does not support 24 hour DUA request. (DR 20167)

When reviewing Dual Pol products on NHDA, Mike Istok noticed that the OTR GUI does not support 24 Hour DUA request. The maximum time span is 23 hour 59 minutes.

Joanne Edwards (GSD) agreed that the time span should range from 0 to 24 hours. If hour 24 is selected, then the minutes will be set to 0 and will not be selectable.

Problem: TDWR high elevation base products not stored. (DR 20039)

The high-elevation TDWR base products (elevation greater than 45) cannot be stored. To reproduce the problem, make an OTR of Z (elev =60). Although the RADAR Status bar shows the product is received, no data are shown in the menu. The log messages of RadarStorage are:

13:58:29.023 RadarProdMsg.C PROBLEM: Bad WSR PDB elevation angle: 600

13:58:29.024 RadarStorageController.C EVENT: Product /data/fxa/radar/raw/Radial.20080311135829023008.180.TBWI was received via the RPG.

13:58:29.024 RadarProdMsg.C PROBLEM: Bad WSR PDB elevation angle: 600

13:58:29.024 RadarStorageController.C PROBLEM: Invalid product header for product 180 moving file to badRadar directory

Another minor problem is this: When requesting TDWR base products at elevation 40.4 (or other elevations), a message like "tbwi: Z 40.40 is not available, 40.40 is coming..." is shown on RADAR Status bar. **(DR 20039)**

Problem. Missing an entry for NAM-DNG5 data in Data Monitor window. (DR 20043)

An entry for the NAM-DNG5 operational data was missing in the Grid Data link under the Data Monitor from the Mozilla AWIPS system menu.

Problem. Incorrect color table for TDWR SW product. (DR 20010)

In D2D, the color table used for TDWR Spectrum Width products is not correct. The Range folded color (RF) is blue while it should be purple.

To reproduce the problem, use menu tbwi--> tbwi Spectrum Width to load a SW product.

The TDWR SW products should use the same color table as the legacy Nexrad SW products. To take a look at the correct color table, use menu klwx 4bit/Legacy Prods--> klwx 3bit Spectrum Width to load a SW product.

Fix: The legacy SW color table entries from radarImageStyleInfo.template (keys 12205-12320) were added to tdwrImageStyleInfo.template

Note: A -radar localization is needed to test the new color table.

Problem. Fix Dual Pol problems found during SWIT. (DR 19946)

This DR will address 3 problems found during SWIT testing of the dual pol functionality.

1. Cannot load all-tilts spectrum width. Need to add all-tilts to bottom of elevation angles menu.
2. Color bar needs to change for Correlation Coefficient. The current default color table has no definitive "break" at 1.0 and it has a smooth gradient from 0.98 to 1 that is almost identical in appearance to the color table gradient between 1 and 1.05.
3. Melting Layer needs to be added on top of the Correlation Coefficient for the 4-panel display.

Problem. style info for lowest elevation TDWR velocity is missing. (DR 20057)

Mike Istok noticed that the velocity products of some TDWR radars are displayed with different color tables. To reproduce the problem on NHDA, use menu Radars to load the lowest elevation velocity of radar TPBI, THOU or TMKE. The color table for TDWR velocity should display -100 to 100. But for TPBI, THOU and TMKE, -64 -- +64 or -200 -- +200 might be used for some products.

This problem is due to the missing color table of elevation angle 0.0 in tdwrImageStyleInfo.template. Because there is no color table specified for the lowest elevation (0.0), if a TDWR radar has elevation lower than 0.4, its velocity display might use different color table from other elevations.

The fix is easy and can be checked in quickly.

Problem. Can't display plan view radar from volume browser. (DR 19089)

8/1/07 (V.D.) - Update. The GridPVImageDepict errors are unrelated to the Volume Browser plan view problem. I retested on FSLD and the radar plan view displayed with no problem and the GridPVImageDepict errors still displayed in the terminal window.

6/11/07 (V.D.) - Update. Also saw the following error on the window where d2d launched on lx1-tbw4 while loading products from the volume browser.

> error creating MapDepictor in PVImageDepict

> (repeated 20 times)

Not sure what product produced the error. This may not be related to the original DR but I wanted to note it.

6/4/07 (V.D.) - Update. Additional testing by Sanford Garrard shows that this problem was present in the OB7.2.1 build. He found the problem occurred only on the State(s) and Regional scales.

Can't display plan view radar from the volume browser.

Problem. Fix radar data management issues. (DR 19967)

The following issues were fixed with respect to management of radar data:

1. Increase max range of the DV, product code 99, from 230 to 300 km.

2. Need to remove generic radar key 43440 from radarProductButtonInfo.template since it does not exist anywhere else.

3. The HHC (Hybrid Hydrometeor Classification) is an 8-bit product but the data key is assigned as if it were a 4-bit product.

Problem. The sub-menus for the "Dual Pol Base..." and the "Dual Pol HCA..." are switched. (DR 19907)

If you get on to D2D and make the following selections: "Kxxx" from top menu->"Kxxx Dual Pol Prods"->Kxxx Dual Pol Base 4 Panel. This shows the list of HCA Analysis product selections. If you then select ...->Kxxx Dual Pol HCA 4 Panel, you get the base data product selections. The submenus need to be switched.

Problem. Some Storm Products request menus should be shaded out for TDWR. (DR 19906)

SPG 3 products were added to AWIPS by DCS3411 in OB8.2. In the OTR menu and the RPS list editor menu, some Storm Products menus were shaded out for TDWR radar in OB8.2. But in OB8.3, all Storm Products menus are available to TDWR radar. Only VIL, ET, STI, HI, MD,

DMD and TVS should be enabled, others should be shaded out. For more information, please check DCS3411.

The source codes used to disable those storm product menus in script prod-mgmt.tcl are still there. They might be broken due to the SWIG change in OB8.3. This might be a similar problem as DR19682 (D2D clock incorrect) fixed by David Friedman.

Problem. Radar: Filter Size not displayed for HHC product. (DR 19815)

For dual Pol product Hybrid HyDRometeor Classification (HHC) and 4-bit HC product, a mode 9 filter is applied. Brian Klein noticed that the filter size is only shown on 4-bit HC display. The filter size should be displayed when displaying HHC on D2D in the same way as the 4-bit HC product.

Another problem that was noticed is the filter size for 4-bit HC product is displayed as 2304 while 9 is expected. It seems to be a byte-swap problem.

Problem. Radar: Map backgrounds missing from inventory displays. (DR 19759)

Display of data from Inventory displays product but removed map background.

Problem. Radar: Empty radials showing random data in Dual Pol base product. (DR 19758)

Dual Pol base products with less than 360 degrees of data display random colors at far ranges in the empty radials.

Problem. Radar: 4-bit and 8-bit HyDRometeor Classification differences. (DR 19757)

4-bit HyDRometeor Classification (HC) product classifications do not match 8-bit HC product classifications for bins that are Biological and Unknown in the 8-bit product.

Problem. Radar: 8-bit Correlation Coefficient product displayed, when 4-bit requested. (DR 19756)

When explicitly requesting display of a 4-bit Correlation Coefficient product through the Dual Pol 4-bit/Legacy menu, the 8-bit version is displayed, even when the 4-bit version is in the database.

Also, the product legend says "4 bit Corr Coeff 8 bit."

Problem. Load radar mosaic locks up D-2D when missing data. (DR 19567)

A bizarre problem was found 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, 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. If I currently go in and request 36 frames, I get the same problem because I overlapped the 1530Z data void time.

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

Workaround: Load a smaller number of frames.

It is not yet known if this problem existed before OB8.2.

Problem. OB8.3: RadarServer crashes on Product List product. (DR 19566)

When testing Dual Pol functionalities on GSD's OB8.3 test version, RadarServer crashes on Product List of VCP11 (product 8).

In Build 10 RPG, the product list includes dual pol products and the size is larger. Joanne found the buffer allocated for product list is 5000 bytes in the current source code while the test product list for VCP11 is about 6000 bytes.

1.5 Text Alarms/Warnings

No enhancements.

1.6 Satellite

Problem. Ingest Restart - SBN ingest HandleGenericMsg process failed to start. (DR 19891)

Problem was encountered while running the Ingest Restart test case on TBW3 running OB8.3.

After restarting SBN ingest from the AWIPS Monitor (AWIPS Data Ingest Restart GUI), it was noticed that the /awips/fxa/bin/HandleGenericMsg process was not running. The AWIPS Monitor log showed that it was not running before the test was conducted.

Problem. satDecoder decoded wrong polar imagery file. (DR 19565)

The TBDW machine was displaying the East CONUS Polar imagery. It was found that the satDecoder decoded the West CONUS files. It was 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.

Workaround: None.

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Problem. AF: Add Polar Vis/IR WMO headers to OCONUS specific config files. (DR 19563)

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

1.7 GFE

Problem. GFE - Remove some unnecessary comments from serverConfig.py Remove some unnecessary comments from serverConfig.py. (DR 20217)

During OB8.3, some development comments were added to the serverConfig.py file. These comments should be removed in the operational serverConfig.py file released with OB8.3.

Examples include:

> #if SID in ALASKA_SITES: - not sure if this needs to be like that

> # MOS Guide parameters - this is supposed to be a fix to the baseline error - we'll
> see
> #MOSGuidePARMS = [([Temp, Td, Wind, RH], TC3),
> #   ([MinT], MinTTC), ([MaxT], MaxTTC),
> #   ([PoP6, PoP12, TstmPrb3, TstmPrb6, TstmPrb12, Sky, WindGust,
> QPF6, QPF12], TC6NG)].

Problem. GFE ISC: Add IRT web access timeout and retry code to improve reliability. (DR 20140)

Based on the IRT stress test and irtTester results, there is a need to improve the reliability of the GFESuite access to the IRT Web service. This involves porting some of the irtTester code, specifically the timeout and retry algorithms, to the IrtAccess.py class currently in GFESuite's ifpServer.

Problem. GFE ISC: Performance Improvements for IRT web Service. (DR 20136)

NWS has stress-tested the IRT Web service from 90 WFOs. Results indicated that the transaction times were fairly long, and the CPU usage on the IRT central server were higher than expected. The long transaction times affected the reliability of the communications between the WFO and IRT service. Although this testing was done with simulations of the OB8.3 s/w

accesses to the Web service, it is expected that without any corrections we will see the same problems with the real OB8.3 sites.

Problem. GFE: Changes to Hazards causes Tropical ZFP to produce incorrect text (Ref. OB 8.2.1.1 DR 20088). (DR 20130)

Due to changes in 8.2.1 for the HLS, GFE treats the NHC hazards as different hazard type from the WFO-generated ones. This causes the logic in the getPeriod_# defs in Tropical Overrides to fall through without any condition being met. This makes the wording incorrect during a tropical event.

New variables are needed in the boolean phrase def and to the if conditions statements in getPeriod1 of Tropical Overrides.

This Topical_Override change is needed at all tropical sites prior to the start of tropical season. The file will be available by weeks' end from Pablo Santos (MFL). He is testing the fix locally and will provide the file. It should be in /tmp on nmtw on Friday, 3/28.

Problem. GFE: NSH and CWF formatters do not contain all necessary allowed Hazards. (DR 20129)

The MWW becomes operational on 8/5/2008. At that time, the CWF, CWF_Pacific and NSH formatters need to change along with the VTECMessageType file. A turnkey has already been developed but did not include the 3 text formatters.

If the formatters are not updated accordingly, this will cause many of the necessary headlines to not appear when the formatters are run. The CWF would be missing 9, the CWF_Pacific would be missing 11 and the NSH would be missing 5.

Note: Any questions on this issue should go to Bob Rood (SEC).

Problem. GFE - Backward compatibility problems with PFM text formatter. (DR 20161)

There are backward-compatibility problems with the PFM text formatter in GFE. This is a problem when OB8.3 sites are doing service backup with OB8.2.1 sites.

Here is what Dave Metze at PUB said:

> PFM(local override and Baseline_PFM): I ran the local override PFM … it failed "out-of-the-box after the install. The error message mentioned the missing elevation data. Given the GFESuite text formatter concept design, I ran the Baseline_PFM(BASE level text formatter code) and the Baseline_PFM text formatter failed. I discovered this needed code change at the field level, and was prepared based on my OB8.3 GFESuite pre-release software testing with our OB8.2.1 SITE level files. I found some documentation vaguely mentioning the addition of elevation data to the PFM segment headers, but there was no "News You Could Use" information about the change risk level. It is a "high" risk change, because "out-of-the-box" the field office's local PFM and Baseline_PFM

will fail until the field office changes the Definition["defaultEditAreas"] to the proper format in the PFM_site Definition module.

Problem. GFE: WFO HU/TR hazards being purged when NHC hazards also in effect. (DR 20231)

The WFO-issued TR and HU hazards are getting purged from the VTEC AT when there are NHC-issued hazards in effect for the coastal zones. Whenever the VTEC Decoder runs, the Marine zones tropical hazards are purged.

This issue does not occur when just marine zones contain hazards. The NHC tropical hazards must also be in effect.

This was tested at an 8.2.1.1 site and the issue did not exist in that build.

Problem. SmartScript.py type casting changes for new python version. (DR 20127)

A python update in OB8.3 caused problems with getGridCell() and getLatLon() in SmartScript.py because it's more picky about types. This has affected local smart tools such as matchObsAll, but could have affects on the baseline as well.

The following is from Mike Romberg:

> Mark mentioned that the new SWIG is more picky about types. This is what is throwing the exceptions. getLatLon() can throw one if x or y are not integers (when AFPS.CC2Dint(x,y) is called). getGridCell() can throw one when gridCell() is called with lat or lon not being floats.

> Probably the best way to fix this is to put the type conversions into SmartScript. This would make tools continue to work. Something like this:

```
def getLatLon(self, x, y):
    # Get the latitude/longitude values for the given grid point
    coords = AFPS.CC2Dint(int(x), int(y))
    cc2D =  self.__gridLoc.latLonCenter(coords)  ### THIS IS LINE 1990
    return cc2D.y, cc2D.x

def getGridCell(self, lat, lon):
    # Get the corresponding x,y values for the given lat/lon
    # Return None, None if the lat/lon is outside the grid domain
    cc2D = self.__gridLoc.gridCell(float(lat), float(lon))
    gridSize = self.__gridLoc.gridSize()
    if cc2D.x < 0 or cc2D.x >= gridSize.x or \
      cc2D.y < 0 or cc2D.y >= gridSize.y:
        return None, None
    else:
```

return cc2D.x, cc2D.y

Problem. Color table for GFE hazards is incorrect (Ref. OB8.2.1.1 DR 20116). (DR 20126)

The corrections necessary for the GFE color table for OB8.2.1 were handled by DR 20116. Because four new hazards were added to GFE in OB8.3, a separate DR has been created to handle the changes necessary for OB8.3. This is not a duplicate of 20116 - the files to be checked in are different revisions.

Problem. OB8.3: In GFE, TestVTECDecode needs to be turned off. (DR 20120)

Someone left the following line in /awips/data/textFiles/GFECONFIG/gfeConfig

TestVTECDecode = 1   ##### TEMPORARY FOR TESTING

This has the potential to cause several problems, including the outputFile for text formatters being hardcoded to a practice directory, among other things.

```
#####################################################################
# SET TO 0 for normal mode.
# When this is set to 1
#  Files are stored in /awips/GFESuite/products/PRACTICE
#####################################################################
TestVTECDecode = 1   ##### TEMPORARY FOR TESTING
```

/awips/GFESuite/primary/data/databases/BASE/TEXT/GFECONFIG/gfeConfig.GFECONFIG.

Problem. GFE ISC: REQUESTED_ISC_PARMS unable to be set (Ref. OB8.2.1.1 DR 20131). (DR 20105)

If REQUESTED_ISC_PARMS is configured in 8.2.1 or 8.3, the ifpServer will fail to start. This is due to an internal file referring to a variable as "requestedISCsparms" instead of "requestedISCparms".

The REQUESTED_ISC_PARMS is a critical variable as all 50 baseline parms will be sent otherwise which will likely lead to a WAN performance hit. Also, sites would be unable to send needed local parms for collaboration.

Workaround: None.

Problem. GFE crashes if grid spans don't match. (DR 20083)

If the time spans of virtual hazards (VTEC drivers) do not match those of other weather elements, the GFE will crash and dump core. Apparently, operations practices at WFOs don't expose this problem, but it could arise at any time. The problem was discovered through GSD's work with the Australian Bureau of Meteorology, and a fix is in hand.

Problem. GFE - AK Gridded MOS display problem. (DR 20047)

GFE Gridded MOS for Alaska does not display correctly. There are missing lines in the images/plots.

The problem was discovered running the GFE_3466_GriddedMOS DCS test case.

3/19: Additional information added by M. Porricelli: This display problem (display has lines through it) was also observed at BCQ alpha for the CONUS GriddedMOS and TT 325012 was opened. This DR closes that TT since this looks like the same problem.

For AK, the second scenario (a legend displayed but no plot) is covered in DR 17523 (contours do not appear until user has zoomed in; image plot appears even when not zoomed in).

Problem: GFE - NDFD_QPF_Check Tool requires non-baselined tool to run first. (DR 19973)

The NDFD_QPF_Check tool requires that the Collaborate_PoP_SnowAmt_QPF tool runs first to populate newly defined grids needed to run the NDFD_QPF_Check tool. The Collaborate_PoP_SnowAmt_QPF should have been baselined along with the DFD_QPF_Check tool to make the NDFD_QPF_Check tool useful.

Problem: left-shifted clipping grid image. (DR 19972)

Pablo Santos at MFL reported that the Storm Surge product does not cover the "purple" area in GFE.

It was found that the data clipped out from the raw message are more from the left than the right.

It's a problem that has existed for a while, but is only obvious to high-resolution products like Storm Surge (8577x5555 or 625meter).

Workaround: No.

Problem: GFE ISC - IRT Web Server - Cancel Registration from IRT GUI not working. (DR 19894)

The GFE IRT Web Service running on svc2-ancf has a web interface where the user can unregister sites. When the user tries to cancel registration, the following error is displayed:

> 500 Internal Server Error

The server encountered an unexpected condition which prevented it from fulfilling the request.

Traceback (most recent call last):

> File "/usr/local/python/lib/python2.5/site-packages/cherrypy/_cprequest.py", line 551, in respond
>
> cherrypy.response.body = self.handler()

File
"/usr/local/python/lib/python2.5/site-packages/cherrypy/_cpdispatch.py", line 24, in
__call__
return self.callable(*self.args, **self.kwargs)
File "/irt/IRT-test/server/RoutingTableSvc.py", line 266, in webUnregister
unregString = HTML_Utils.unregHtml(siteInfo, wfos)
File "/irt/IRT-test/server/HTML_Utils.py", line 127, in unregHtml
for var,val in [("%mhsid",regInfo.mhsid), ("%server",regInfo.server),
NameError: global name 'regInfo' is not defined

The fix will be in the GFE IRT Server code. A new GFE ISC build will need to be done and the NCF Central Server Admin will need to perform the install on svc2-ancf.

Problem: GFE ISC - Consistency->ISC Request/Reply returns all variables not just selected. (DR 19880)

From the GFE -> Consistency -> ISC Request/Reply dialog, the user can specify the weather elements to request. The ISC request should only return the selected variables. Instead, it requests and returns all variables.

Problem. OB8.2: Problem w/ VTEC coding cancelling and extending same product. (DR 19702)

Here is the e-mail sent by the site:

> *11/30/2007 12:48:46 RichardO*
>
> *Below is Ron's e-mail, site is 8.2*
>
> *Craig, Steve--*
>
> *For the record, we were contacted by Accuwx (John) this afternoon regarding a bad WSW product that we had issued earlier this morning (348am). Upon closer inspection by Ron and others, it appears there may be a bug in the GHG software. From the segment below, two distinct VTEC lines were coded (CAN and EXB event codes) for the same SN.Y (event tracking number 0021) on the 348am product. Those are obviously conflicting event codes-- hence the problem on the user end. I had mentioned that several of us received an automated email notification early this morning (see below), which seemed to surprise him a little bit as he wasn't aware that problems like this were being monitored at WSH. Anyway, I didn't dwell on the details.*

For more description, see attached ticket.

The following are the steps necessary to reproduce the problem:

1. Using MakeHazard, create a SN.Y, adding a 1 to the segment box, for a few zones for 1 hour, click Run

2. Create a SN.Y for adjacent zones for 6 hours, adding a 2 to the segment box, click Run and Dismiss
3. Merge Hazards
4. Save and Publish
5. Run WSW and Transmit
6. Separate Hazards
7. Delete SN.Y:1 grid
8. Split the SN.Y:2 grid so that the first hour is separate
9. Delete the first hour grid of SN.Y:2
10. Using MakeHazard, create a new SN.Y:1 grid starting at the next hour and going for 5 hours
11. Merge Hazards
12. Save and Publish
13. Run WSW. Not the CAN/EXB for the SN.Y:1 segment. Also note the invalid EXT for the SN.Y:2 segment as the valid times are still the same.

Problem: Problem with CWF formatter/VTEC. (DR 19853)

This is a dup DR for 19610.

For OB8.3 the HazardsTable.py v12 file needs to be merged with v11.

The VTECTableSqueeze.py file can be moved directly into OB8.3.

Problem: GFE: NAM DNG 5km CONUS: add 3-hour snowfall (RA8-137). (DR 19839)

Ingest new element for NAM 5km DNG per RA8-137 for OB8.3 3-hour snowfall

Note: Data must be received by 1/18/08 and data must be in snow depth format.

Problem: GFE: add NAM 5km DNG for Hawaii (RA8-137). (DR 19835)

Enable ingest of NAM 5km DNG for Hawaii sites for OB8.3 per RA8-137.

Problem. GFE - Problems running some of the DCS 3468 tools.

There are problems running some of the DCS 3468 tools. Problems listed below:

CopyFromModel_Tool - Tool worked once as written in the test case, then no longer worked. This error is in the log:

PROBLEM: getLocations died: Traceback (most recent call last):
  File "Stations", line 65, in getLocations
  File "Stations", line 87, in saveStationTable
 IOError: [Errno 2] No such file or directory:
'/awips/GFESuite/data/text/spool/stationTable.pic'

2/22/08: Retested after latest install and the tool worked but still had some problems. See DR 19977.

DiurnalFromMOS - Didn't work at all. I selected a T grid and make sure there is MOS (loaded the T from MOSGUIDE_1812 (BOX)) and then ran the tool. I get this error:

Traceback (innermost last):

    File "./gfe/ui/Tool.py", line 381, in __numeric
    File "./gfe/ui/ModuleAccessor.py", line 142, in callMethod
    File "DiurnalFromMOS", line 391, in execute
    File "SmartScript", line 1021, in abort
    TypeError: No MOS bulletins had readable temperature data.

Talked with Pete Cooner. He said that MatchGuidance and MatchGuidanceAll aren't working either.

MH: I talked to Pete Cooner too. He said that he talked with Vada and they included the problems with the Serp tool also in this DR. **(DR 19953)**

Problem. GFE: add NAM 5km DNG for Puerto Rico (RA8-137). (DR 19837)

Enable ingest of NAM 5km DNG for Puerto Rico sites for OB8.3 per RA8-137.

Problem. GFE: product editor giving errors upon loading product. (DR 19826)

Several offices have been prevented from issuing corrections to hazard products or updates where the product is being loaded from a draft. The product editor, which is used for both of these actions, is not loading the VTEC active table and therefore cannot run through some of the necessary code.

This issue has affected several sites including LWX, GYX, SLC, MLB.

Workaround: For most situations is to run the same PIL, then in the same tab load the draft.

Problem. GFE: The Automation Test Failed For GFE OB8.3. (DR 19822)

Problem: GFE: add RTMA ingest for Puerto Rico (RA8-137). (DR 19827)

Add RTMA ingest for Puerto Rico with following 10 elements per RA8-137 for OB8.3:

    Temperature
    Temperature analysis uncertainty
    Dewpoint Temperature
    Dewpoint analysis uncertainty
    u wind component
    v wind component
    Wind Direction
    Wind Direction analysis uncertainty

Wind Speed
Wind Speed analysis uncertainty

Note: Clean data must be received by 01/04/08.

Problem: GFE: add NAM 5km DNG for Alaska (RA8-137). (DR 19814)

Enable ingest of NAM 5km DNG for Alaska sites for OB8.3 per RA8-137.

Problem: GFE: add RTMA ingest for Hawaii (RA8-137). (DR 19813)

Add RTMA ingest for Hawaii with following 10 elements per RA8-137 for OB8.3:

Temperature
Temperature analysis uncertainty
Dewpoint Temperature
Dewpoint analysis uncertainty
u wind component
v wind component
Wind Direction
Wind Direction analysis uncertainty
Wind Speed
Wind Speed analysis uncertainty

Problem: GFE: NAM DNG 5km CONUS: add new element. (DR 19812)

(RA8-137) Ingest new element for NAM 5km DNG per RA8-137 for OB8.3

3 hr Precip probability

Problem: GFE: MergeHazards Procedure has several mistakes. (DR 19535)

The MergeHazards Procedure has numerous errors in it which either allows or disallows hazards to be merged which should not happen based on policy. This causes the forecaster to both waste time looking for inconsistencies and disregard error messages which may be real.

The corrected version can be found on tbw3 in /home/tester1/MergeHazards.Procedure.

Problem: GFE/GHG Monitor domain mapping cause problems for AJK. (DR 19449)

TT AJK 296352

GHG Monitor is including 2 zones AFZ191 and PKZ175 in AJK's GHG Monitor display which should not be present. These 'far away zones' cause GHG's display to be very lopsided. The problem originates in ShapeFile.py:domainClip(). There is a hack to work around a bug in arcexplorer under some conditions. Those conditions do not account for cases where the zone is defined with lon/lat on top of the 180 lon. line.

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The code fix has already been written, this problem is considered critical by the site and by Duane Carpenter. A work around is in place which does the equivalent via local configuration, but a proper fix to this is needed.

Problem: GFE Small enhancement request. (DR 18621)

Smart tool updates Small enhancement request:

The following was called in by Joe Palko at PBZ/Eastern Region:

> Update the baseline CheckTandTd Smart Tool to CheckTTdWind. The original tool was created and baselined by GSD to address an NWS requirement for the QC of Temperature and Dewpoint grids. A new requirement has been added to also QC Wind and WindGust grids.

To baseline this tool the developer simply needs to:

> Download the procedure at:

> **http://140.90.90.253/~applications/STR/generalappinfoout.php3?appnum=10** 72

Review code to assure it is compatible with current software. Place the file in /awips/GFESuite/primary/data/databases/BASE/TEXT/Procedure/

Estimated level of effort: 30 minutes.

Problem: GFE Small enhancement request. (DR 18620)

The following was called in by Joe Palko, PBZ/Eastern Region:

> Starting in OB7.1 the gridded MOS guidance is available, but it has a naming convention of PoP12. The baseline forecast grids have a naming convention called PoP. Therefore 12-hr PoPs from the MOSGuide database do not populate into the PoP weather element in GFE.

Matt Hirsch (MLB) has posted "MyMOSGuide" smartinit to add this capability. Check it out at:

> **http://www.mdl.nws.noaa.gov/~applications/STR/generalappinfoout.php3?ap**
> pnum=1110

This smartinit needs to be fixed/placed in the baseline for future builds.

Problem. GFE service backup: change needed to assist in testing. (DR 18510)

Service backup cannot be tested using just the testbeds.

It was proposed to modify the service backup and rsync scripts to allow either a 3-letter or 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.

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Problem. - GFE: Incorrectly Cancelling FL.A (Ref OB8.2.1 DR 19388). (DR 19935)

The FFA product can be issued by both GFE and RiverPro, but the VTEC phenomena codes issued by each are different. The problem lies with GFE reading the RiverPro-issued FL.A. It shows a CAN of the FL.A as the hazard is not part of the allowedHazards. GFE should be ignoring any other phen/sigs.

This issue prevents a site from having both a GFE- and RP-generated FFA valid concurrently.

Workaround: There is no acceptable workaround for this issue other than to pick one of the FFAs and mention the other in it. Both VTEC products cannot go out.

Problem. GFE:ISC - irtd stop not working for operational irtd server. (DR 19930)

The irtd stop command does not work for the operational irtd server. This problem was reported by Kim Hoang at the NCF. Kim maintains the GFE ISC web server software that runs on svc2-ancf. The irtd stop command does work for the test irtd server. Kim had to use kill -9 to kill the operational server. There is no error output displayed. **(DR 19930)**

Problem. GFE:HU, TY and TR hazards need to be removed from allowedHazards in CWF. (DR 19901)

With the implementation of VTEC in the HLS, the VTEC for tropical hazards should no longer be in the CWF. The allowed Hazards section needs to be modified to remove HU.A, HU.W, TR.A, TR.W, TY.A and TY.W.

Also, due to the implementation of 19230 in OB 8.2.1, the VTECTable.py and MergeHazards.py need to be adjusted so that HU.S is not upgradable and that it cannot coexist with any other tropical hazard in the grids.

The corrected versions of the 2 files can be found in /tmp on TYR. VTECTable was changed to remove HU.S from the UPG list for HU.A, HU.W, TR.A and TR.W. MergeHazards was changed to add an HU.S category which contains all other tropical hazards and to adjust it in other hazards.

Finally, the MakeHazard.py file needs to be updated to add HU.S to the Typhoon category. This will allow PR sites to create any necessary HU.S grids through their normal grid creation means. **(DR 19901)**

Problem. GFE: ISC - gfe_msg_send script has reference to ds rather than mhs. (DR 19876)

GFE ISC uses a script, gfe_msg_send to call msg_send for sending ISC grids. The gfe_msg_send script sets environment variables. One of the env variables is CO_MRQ_SERVER_HOST. This variable was set to "ds" rather than "mhs". This causes sending ISC grids to fail. When the variable is set to mhs, ISC send works.

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Problem. GFE: ISC - All weather elements sent whenever any weather element is saved. (DR 19811)
In GFE, when a user saves the Fcst grids the ISC grids are sent. When any weather element is saved, all are sent. Only the saved weather elements should be sent. When all weather elements are sent, the ISC traffic on the WAN will be much higher than if only what is saved is sent as it is previous to OB8.3.

Problem. GFE - Update serverConfig.py file with updated IRT web server address. (DR 19805)

Since the correct IP's for the GFE IRT web service is known, the GFE serverConfig.py file needs to be updated with the new IP's so that GFE can register with the web server and intersite coordination will work. Also, any sample localConfig.py files in the ../scripts/test directory that reference the server needs to be updated.

Problem. GFE VTEC: Multiple action codes in same segment for same ETN. (DR 18496)

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 the customers.

Problem. Preserve ETNs during drop of fxatext database. (DR 15799)

There needs to be a way to preserve the ETNs during the drop of the fxatext database at field sites. The dropping of the site's database usually occurs when the database gets full or the extents get blown out. The current procedure is to drop the database and re-create a clean fxatext database, but this cause problems with the ETN numbers for warning products. So a script needs to be provided to preserve this information.

Problem. GFE:ISC - Build IRT Central Server Part of DCS 3452 is the IRT Central Server. (DR 19806)

An initial build of this software needs to be done. Also, this software needs to be built by CM any time there is a change in the GFE-OB8.3:GFEISC software. The build and installation instructions are in GFE-OB8.3:GFEISC/doc/installationAndBuild.html. The output files are IRT-operational.tgz and IRT-test.tgz. The IRT Central Server will be installed on svc2-ancf by the NCF.

Problem. GFE: Problems with snow amount wording in ZFP (Ref OB8.2 DR_19676). (DR 19793)
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.

Problem. OB8.3 Small enhancement req: Addition to HLS in GFE (Ref OB8.2.1 DR_19230). (DR 19789)

The following is from Scott Kaiser at NWS Headquarters:

I missed providing a requirement for OSIP project #06-021, segmentation of the Hurricane Local Statement (HLS). 06-021 is slated for OB8.2.

The requirement I failed to include and am now asking to be fixed is to allow the use of (have the option of using) the VTEC significance code of "S" for "statement" when WFOs issue a HLS. Other significance codes are for example "W" for warning and "A" for watch. Use of the "S" code allows for the HLS to be issued when there are no tropical cyclone watches or warnings which is allowed by policy.

The VTEC string would look something like...

O/NEW.KBRO.HU.S.0001.050501T2045Z-050501T2345Z/

Problem. OB8.3 PIT: GFE: Heaving freezing fog should be dense, not heavy. (DR 19767)

Here is the message received from Dave clarifying the change he wants made to the GFE ZF+:

> Looking at the requirement it said to make "heavy freezing fog"(ZF+). Actually, I starting this small enhancement from the field level a while ago. Hopefully, I can make this even clearer.

> The intensity, "heavy"(+), in the GFE is associated with accumulating precipitation events(QPF 0.01 inches or more). Fog is, technically, _*not*_ an accumulating precipitation event. It has no QPF. Either it be liquid fog(temperatures greater than 32F) or freezing fog(temperatures 32F or lower), the intensity will be "_*dense*_," which in the GFE is also characterized by a "+". Look at just dense fog. It is F+ in the GFE. It's freezing counterpart, ZF+, should be _*dense freezing fog*_ not heavy freezing fog.

Problem. OB8.2: baseline GFE: smartinit for MOSGuide has QPF in mm, not in. (DR 19629)

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.

Problem. OB8.2: GFE: Headlines no longer unlocking. (DR 19628)

BCQ and GSP both reported that with the latest OB8.2 beta delta install GFE headlines can no longer be edited.

Problem. GFE logs out user in heavy use periods. (DR 18199)

This problem has been reported by sites HUN and BMX, Trouble Tickets 266816 and 267079. When GFE is being used to prepare new forecasts, when there's a lot open on the workstation and a lot of clicking and dragging has occurred recently, GFE often logs out the user and they lose unsaved work. The sites have learned to save their work frequently to minimize lost time.

Problem. OHD: HPE purge script does not completely remove some files. (DR 20178)

The script purge_hpe_files checks how old files created by the HPE field generator are and removes them if they're older than a certain number of minutes past creation time. Using the default product generation list, this script purges the files without incident. However, if the user selects the AVGERMOSAIC or MAXERMOSAIC instead of the default ERMOSAIC product and chooses to save these as grib files, then those files don't get deleted by the purge_hpe_files script as they're not accounted for. As only one of these can be displayed by AWIPS D2D at any given time, all grib files for any of these products are stored in the /awips/hydroapp/precip_proc/local/data/hpe/ermosaic/grib directory. However, only the grib files for the ERMOSAIC are purged via the script. Therefore, this has the potential of filling the disk partition should enough AVG or MAX products be generated. The script needs another couple of lines to check for these grib products as well and purge them accordingly as with the rest of the grib files in this directory.

Problem. Modify ohd-common/dependencies.xml file to allow the java subdirectories to build successfully. (DR 19627)

Modify the file 'ohd-common/dependencies.xml' to allow java subdirectories to build successfully.

Problem. OB8.2 Missing GFE grids during service backup. (DR 19593)

In OB8.X the site that sense 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 results in 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. This way, when the site uploads grids to the central server they have not been cropped and the grids will be saved correctly into GFE.

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

Related SPR - SPR 7347.

Problem. OB7.2: Progress bar doesn't appear in service backup. (DR 19859)

The progress bar does not come up during service backup at many sites because 'PYTHONHOME' is not listed as one of the environment variables in /awips/adapt/ifps/bin/hp/ifps-main.env.

Because of differences in configurations, some sites may get the progress bar even without having PYTHONHOME listed as an environment variable (this is the case at TBDW, the Raytheon test-beds).

The operational impact is that it is not clear during service backup what the progress is.

Workaround: Add 'PYTHONHOME' as an environment variable.

This DR is not based on a current trouble ticket.

Problem. OB 8.2: GFE - ifpnetCDF performance DR 19223 bug. (DR 19551)

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 ipfnetcdf 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.

Problem. GFE: HLS does not preserve NHC-issued ETN for coastal zones. (DR 19542)

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.

Workaround: 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.

Problem. GFE: remove unnecessary debug for headlineslock. (DR 19541)

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

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

Problem. GFE: WindGust tool shows up for all weather elements. (DR 19538)

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.

Problem. GFE: HLS does not allow multiple hazards in a segment. (DR 19537)

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 **.**

Problem. GFE: MakeHazard Procedure creates a blank grid with no edit area selected. (DR 19536)

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 phenomenon is selected.

The corrected version can be found on tbdw in /home/tester1/MakeHazard.Procedure.

Problem. GFE: HLS needs sub-headlines to be unlocked in the final product. (DR 19534)

In the new HLS formatter all of the sub-headlines 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 land-falling cyclone.

By unlocking the sub-headlines, the interface can be streamlined to remove the selections of sub-headlines as all will be placed in each segment and the forecaster will manually remove those which are unneeded.

Problem. GFE:Autotest failures related to DR 18496. (DR 19529)

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.

     STRING SEARCH FAILED: testEXTUPG_6
     STRING SEARCH FAILED: testSplitETN_1c
     STRING SEARCH FAILED: testSplitETN_1d
     STRING SEARCH FAILED: testETNReuse_2d
     STRING SEARCH FAILED: testETNReuse_2e
     STRING SEARCH FAILED: testETNReuse_2f

STRING SEARCH FAILED: testETNReuse_2g

STRING SEARCH FAILED: testETNReuse_2h.

Problem. WarnGen: Storm speed in third bullet does not match the storm speed in the TML. (DR 19526)

For some reason, the storm speed listed in the   main body of the warning does not agree with the speed shown in the time/motion/location (TML) line. The speed in the main body of the warning is being rounded down when it should be rounded up. See the attached example. If the speed is 25kts in the time/motion/location then the speed in the main body of the warning should be 30 mph, not 25 mph. We've seen this in other cases, including one where 17 kts was rounded down to 15 mph, instead of up to 20 mph.

Problem. An error message is displayed on GFE formatter launcher window. DCS3434 – TPCWindProb. (DR 19483)

An error message was displayed on GFE formatter launcher window when the formatter launcher is launched at TBW3 testbed. See below the 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)] "

Since 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.

Problem. GFE: Issue with the map order in MakeHazard procedure. (DR 19306)

HFO had a problem issuing a tsunami watch using the MakeHazard procedure. One of their land zones was missing when the interface appeared. This zone (Niihau) is a small island considered part of Kauai. The problem is the way the maps are loaded as part of the procedure. The surrounding Marine zone was essentially covering up Niihau.

The order the maps are loaded in MakeHazard needs to be changed so that the Offshore is first, followed by Marine, and then land (Zones or FIPS). This needs to be changed for Tropical Cyclone, Typhoon, and Marine groups in the procedure.

Problem. OB8.2: listed software version needs to be updated for GFE. (DR 19190)

The GFE pre-release needs to list the correct software version.

Chris Marshall at Raytheon wrote:

Edwin has shown interest in getting the GFE pre-release labeling discrepancy resolved. Can ASM write a DR to address the labeling problem for OB8.2? The problem was handled through a trouble ticket for OB8.1.

E-mail from Mike Buchanan at CRP:

I just installed the "latest" GFESuite pre-release software from the JBoss website. The software had a prefix which would seem to suggest that it is OB8.1. However, after installing the software, the actual GFE version is 7.2. Why is this software misnamed? I thought we were supposed to be getting access to pre-release GFESuite software.

1.8. Volume Browser/Grid Products

Problem. Unable to load DMD data from Volume Browser. (DR 20169)

While investigating a DR that requires using DMD data in the Volume Browser, the following was observed.

Since the radar-related changes to Volume Browser in OB8.3, the DMD data from Volume Browser could not be loaded. In "Time Series" mode, you can choose fields and layers, but nothing happens when you click the "Load" button. "Plan View" mode is worse -- nothing appears in the bottom pane of Volume Browser.

Response from Jim Ramer:

I have determined that the real problem is with inventories, and that this is a bug introduced as a side effect of my fixes for DR19751. I will give you a fix as soon as possible, hopefully later this afternoon.

In Plan View mode, nothing appears because that is by design. The only plan view DMD displays available are in the radar menus.

Problem: D2D Image created is not same as product loaded. (DR 19893)

Load a 1000mb Radar Reflectivity Plan View from the Volume Browser. Then click on the product legend in the main pane and select Load as Image. The resulting image is of 500mb Reflectivity not 1000mb.

Workaround: Load as an image directly from the Volume Browser by mid-clicking the product before clicking Load Button. This allows the correct image to be loaded to the main pane.

The issue most likely stems from DCS3450 which addresses the Dual Pol functionality.

Problem. OB8.3 D2D: VB crashes when selecting RaobOA in the Volume Browser. (DR 19884)

When "Sounding" is selected from Plan View Menu:

After you select RaobOA from the "Other" dropdown menu, and then select Sounding under the "Thermo" menu, as well as a point, the VB crashes before you can hit the load button.

This issue occurred on TBW3 (OB8.3). RaobOA is not an option in OB8.2.1 which is currently installed on TBDW and TBW4.

Problem. D2D - NAM DNG 5km CONUS: add 3-hour snowfall (RA8-137). (DR 19838)

Decoding and display new element for NAM DNG 5km for OB8.3 per RA8-137:

> 3-hour snowfall

Note: Data must be received by 1/18/08 and data must be in snow depth format.

Problem. NAM DNG 5km: add Puerto Rico grid to D2D (RA8-137). (DR 19836)

Decoding and display NAM DNG 5km Puerto Rico grid for OB8.3 (RA8-137)

Note: Clean data must be received by 01/18/08.

Problem: Incorrect formatting of legends for isentropic displays. (DR 20022)

If one loads, for example, "NAM80 320K Pressure", the resulting legend is "NAM80 320K 300K Pressure".

Jim Ramer wrote:

> *The bug was inadvertently introduced during DCS3450 (8.3 dual Pol) work. The problem was a couple of small typos in the module legendPlaneModify( ) in DM_DepictableInfo.C.*

Problem: Incorrect color table for TDWR SW product. (DR 20010)

In D2D, the color table used for TDWR Spectrum Width products is not correct. The Range folded color (RF) is blue while it should be purple.

To reproduce the problem, use menu tbwi--> tbwi Spectrum Width to load a SW product.

The TDWR SW products should use the same color table as the legacy Nexrad SW products. To take a look at the correct color table, use menu klwx 4bit/Legacy Prods--> klwx 3bit Spectrum Width to load a SW product.

Problem. NAM DNG 5km: add Hawaii grid to D2D (RA8-137). (DR 19834)

Decoding and display NAM DNG 5km Hawaii grid for OB8.3 (RA8-137)

Problem. AOR RTMA: add Puerto Rico grid to D2D (RA8-137). (DR 19828)

Decoding and display RTMA Puerto Rico grid with 10 elements for OB8.3 per RA8-137

Add Puerto Rico RTMA grid to D2D with following 10 elements:

Temperature

Temperature analysis uncertainty

Dewpoint Temperature

Dewpoint analysis uncertainty

u wind component

v wind component

Wind Direction

Wind Direction analysis uncertainty

Wind Speed

Wind Speed analysis uncertainty

Problem. NAM DNG 5km: add Alaska grid to D2D (RA8-137). (DR 19801)

Decoding and display NAM DNG 5km Alaska grid in OB8.3 per RA8-137.

Problem. AOR RTMA: add Hawaii grid to D2D (RA8-137). (DR 19800)

Decoding and display RTMA Hawaii grid with the following 10 elements for OB8.3 per RA8-137:

Temperature

Temperature analysis uncertainty

Dewpoint Temperature

Dewpoint analysis uncertainty

u wind component

v wind component

Wind Direction

Wind Direction analysis uncertainty

Wind Speed

Wind Speed analysis uncertainty.

Problem. D2D - NAM DNG 5km CONUS: add 3 hr Precip probability (RA8-137). (DR 19799)

Decoding and display new element for NAM DNG 5km in OB8.3 per RA8-137: 3 hr Precip probability

Problem. Bad Gridded Storm Surge Legend Labeling (DR 19765)

Problem. Time format error in RPS & RMR for DUA. (DR 19750)

When one selects DUA in RPS or RMR applications with a time span of xx:00 hours, the GUI echoes the time as xx:0. A second zero should be added. This is purely cosmetic, but the current display is non-standard and could cause confusion.

Problem. D-2D: sigwx and vaa displays do not work. (DR 19704)

The D-2D SIGWX display does not work. Attempting load SIGWX data results in "not loaded" messages in the legend.
The VAA display does not show ash clouds.

Problem. Change to 5km NAM DNG data ingest for CONUS (Ref OB8.2 DR_19671). (DR 19685)

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

Problem. D2D: Add 5 elements for NAM DNG 5km grids (Ref OB8.2 DR_19669). (DR 19684)

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 N/A.

Problem. OB8.3 PIT: D2D clock time incorrect. (DR 19682)

Since NHDA installed OB8.3 PIT, the D2D clock (located at the lower right corner) displays incorrect date and time.

Problem. OB8.2: XNAV - Legend text missing. (DR 19557)

The color legend is missing when the radar data is displayed.

Problem. OB8.2: XNAV - Locator option by county causes program to crash. (DR 19556)

If you select "Locater" 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.

Problem. Grid ID grid198 for AK-RTMA. (DR 19476)

This is the new entry for grib2Grids.txt

NCEP assigned grid# and specifications recently.

Problem. OB8.2 Gridded MOS has embedded errors. (DR 19412)

OB8.2 delta release on TBDW and TBW3:

When loading Gridded MOS data from the Volume Browser data is plotted but seems to contain repeating errors. Some background data seems to be valid but is partially covered by the invalid data. Problem noted with GriddedMOS Topography, surface pressure, and surface potential temperature. **(DR 19412)**

Problem: GriddedMOS option in Marine Scale. (DR 20003)

DCS3460 introduced AK_GriddedMOS data. The Volume Browser incorrectly shows AK_GriddedMOS as an option at the Marine Scale. This should not be the case. Only scales State and smaller should show the option. D2D will not allow you to load the data at the Marine scale, however.

Problem. International Skew-T Erroneous. (DR 19289)

While browsing through the upper air plots of international locations, noticed that many of the skew-T charts from Japan, Australia, and Russia (RAOBs) had random errors in the data. Some of the plots seemed to be accurate but many (~75%) were incorrect. Will L. and I compared the plots in D2D to plots from other internet sources and found large discrepancies.

This problem occurred in OB8.2, OB8.1, and OB7.2. All plots from North America and most other international locations seemed to be correct. In most cases the error consisted of the plots (T and Td) plotting off the screen to the left. Some similarities (pressure levels at which the errors) occurred were noted.

1.9 AVNFPS

Problem. AvnFPS: Fix formatting errors in TAFs updated with Guidance. (DR 20102)

Automated runs of formatter on development system in stand-alone mode reveal formatting errors. These errors arise under very specific conditions that are difficult to duplicate (test): requires the official TAF written in certain way, LAMP guidance output in a specific way and the affected routine to run at a specific time of day. Exhaustive automated testing is the only way to determine if problems are fixed.

Problem. AvnFPS: Unable to print the Ceiling/Vis Distribution on Color printer. (DR 19929)

During testing baseline test case "Baseline_AvnFPS_Ceiling VisDist" on TBW3 (s2) have encountered that the color printer does not work when printing an image. This feature used to work before for some reason it was lost in OB8.3 (SWIT) phase. Refer to test step #18 of the test case attached for more details.

Workaround: User still can print the image through black & white (gray radio button) printer.

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Problem: AvnFPS: Inconsistent alert levels with flight category monitoring. (DR 19173)

Alert color differs for flight category depending whether taf or observation is out of tolerance.

Problem. AvnFPS: TAF/LAMP guidance is intermittent in TAF Editor/Viewer. (DR 19923)

When clicking on the TAF/LAMP guidance tab, a TAF product does not always appear for forecaster's review.

Problem. Display of some grids overflows contour routine making pane unusable or hang. (DR 19571)

There are some Volume Browser fields like the RTMA Surface Divergence that are so dense they overflow the contour routine. This can hang the render the pane unusable (other contoured fields now display as broken with no labels) or hang the pane completely. See attached images.

Workaround: Use the Restart Dead Panes option.

Jim Ramer analyzed the problem and found the problem is in line 1182 of the D2D/src/depict/fortcon.f source code. The mp buffer needs to be increased. Jim suggests increasing the buffer to 10000.

```
1180
1181      Integer*4 mwi,mnc,mp
1182      Parameter (mwi=1100,mnc=500,mp=5000)
1183
```

1.10 Fog Monitor

Problem: Fog Monitor - Need better syncing between FM table and D2D display. (DR 19727)

The user will sometimes get a Time Mismatch message when selecting a zone in the Fog Monitor table. This problem occurs when new METARs come in before the top of the hour and D2D creates a new FM obs display pane with the new obs. The FM table still displays the previous hour, so there is a time mismatch between the display and table. The FM table is created from the hourly file in /data/fxa/point/metar/netcdf/. The table will go to the next hour once this new file is created. The user can select the Link to Frame option on the FM table to prevent this problem.

Problem: December 2007 testbed security scans detected vulnerabilities. (DR 19703)

Problem. March 2008 testbed security scans detected vulnerabilities. (DR 20004)

Security vulnerabilities identified in the 3/3/2008 Harris scans must be addressed in accordance with DOC (NOAA) security requirements and be addressed/resolved. Quarterly security scans were run from the NCF. Results are stored on CD.

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Problem. Fog Monitor - Threat image reports only N/D. (DR 19938)

The Fog Monitor Threat Level Image shows only UNKNOWN (grey). The monitor is monitoring the ALG and it reports the algorithms are at the GREEN threshold level. The FMprocessor log also indicates the image should show at least some green. The problem also occurs on TBW4, but not NHDA.

> Time Window (hours): 3.00|1|MONITOR|xxx|0
> 23:32:50.683 sendDataSourceMsg.C VERBOSE: Sending msg to CommsRouter.
> Target id = 0
> 23:32:50.684 FogMonitor.C EVENT: Sent message to Guardian: Fog/Vis
> Status Feb 12 08 23:32:50 GMT Lowest Vis : 0.25 mi. observed at:
> 20080212 2321Z
> Obscurations: -SNBR
> Monitored observations at RED threshold level.
> Fog Monitor algorithms at GREEN threshold level.
> Time Window (hours): 3.00
> The table reports N/D for every zone.

Problem. Fog Monitor: Rename Guardian Vis threshold GUI for clarity. (DR 19729)

Fog Monitor has an interface in the appLauncher menu called the "Configure Observed Visibility Thresholds for Guardian Monitoring GUI." This is descriptive, but the GUI is so small that the word "Guardian" -- key to understanding what the app is for -- is truncated. We need to get the word "Guardian" back into the GUI, either by renaming it or adding text inside the GUI.

Problem. Fog Monitor: Box in GUI should be non-editable. (DR 19728)

The top right hand corner box of the Fog Monitor's Area configuration GUI (above the station/zone boxes on the right) should not allow a cursor or typing to appear in it -- only the selected station or zone from the left should appear, in gray. SAFESEAS's and SNOW's equivalent boxes behave properly -- no text nor text cursor should be allowed to appear. It's harmless, but could confuse the user.

Problem. Fog Monitor: Localization not creating mesonet file. (DR 19555)

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.

Problem. Fog Monitor - Error message from Configure Monitor Area GUI. (DR 19554)

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:

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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.*

Problem. Fog Monitor: Vertical station table shrinks to little box. (DR 19549)

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.

Problem. Fog Monitor - Monitor Area Config delete a newly added station not working. (DR 19513

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.

Problem. Fog Monitor - Error message running the FMProcessor executable. (DR 19450)

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.

Problem. Fog Monitor - Clarify terminology for Fog Monitor Guardian Thrshold config GUI. (DR 19447)

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.

Problem. Fog Monitor - fogmon localization error. (DR 19446)

A localization error occurs when running the -fogmon localization:

Merging Fog Monitor MA setup files ...

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MA setup merge failed!

Customized file /data/fxa/workFiles/fog_monitor/monitor_thresholds/FM_pointMonitorThreshold s.txt.old does not exist. Exiting from merging monitor threshold.

fog monitor localization steps completed.

FOG_MONITOR files done.

The problem was found while running step 2 of the FM-Expanded_Localization_DCS_3268-OB8.2 test case.

Problem. Fog Monitor - Station choice not available in Monitoring Area Configuration GUI. (DR 19445)

The Station choice is grayed 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.

Problem. Fog Monitor: Crashes while filtering sea ice. (DR 19290)

On TBDW and TBW3, the FMprocessor on px1 was observed to crash intermittently (every couple of days, though at one point on 7/24, it crashed repeatedly upon startup, which probably rules out a slow memory leak, but not necessarily other memory problems). The log file indicates that the crash occurs as the process enters the sea ice filter algorithms. The operational significance of this problem is that the FMprocessor provides data for the D-2D's Fog Monitor displays, so the use of the Fog Monitor will not be possible if the problem grows from "intermittent" to "persistent".

Problem. Fog Monitor: Thresholds and trend graphs don't match. (DR 19207)

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.

1.11 NWRWAVES

Problem. NWRWAVES: Unable to perform words replacement with a slash "/". (DR 20226)

WFO PUB reported a words replacement problem with the HWOPUB product. The problem occurs when the phrase "1/2 INCH HAIL" is translated to "ONE, OR TWO INCH HAIL" which is clearly incorrect. The support team traced the problem to the changes in OB8.3's DR_19474 - remove the slash in dual time zones at noon or midnight. The one line of code added should be performed after the words replacement block but not before it. Because of the change, the "/" slash has been replaced by " ,OR " prematurely.

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Problem. NWRWAVES OB8.3 - CTA Markers change for Marine Weather Warning products. (DR 20071)

There is a change of requirement on the Call-To-Action BEGIN and END markers. The changes are from:

> </INSTRUCTION>
>
> CTA statements
>
> </END INSTRUCTION>
>
> to a new proposed markers of:
>
> (BLANK LINE)
> PRECAUTIONARY/PREPAREDNESS ACTIONS...
> (BLANK LINE)
> CTA statements
> (BLANK LINE)
> &&
> (BLANK LINE)

This requires NWRWAVES software to make a corresponding change to filter the CTA statements. **(DR 20071)**

Problem. NWRWAVES - 5 Indiana counties to return to Eastern Time Zone (Ref OB8.1.2 DR19504). (DR 19530)

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:

County	State	Responding WFO	Time Code (C = Central)	County/Zone Code
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

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Pike	IN	PAH	C	INZ082
Dubois	IN	LMK	C	INC037
Dubois	IN	LMK	C	INZ083

Problem. NWRWAVES: Remove the slash in dual time zones at noon or midnight. (DR 19474)

UNR reported that their NPW output product that covered two time zones and also two types of advisories (wind and frost) includes a slash. For example, the output has:

> blah blah FROM MIDNIGHT MOUNTAIN DAYLIGHT TIME /1AM CENTRAL DAYLIGHT TIME blah blah

The correct output should be:

> blah blah FROM MIDNIGHT MOUNTAIN DAYLIGHT TIME, OR 1AM CENTRAL DAYLIGHT TIME blah blah N/A.

Problem: NWRWAVES-processes only first segment of GLF product. (DR 19753) (DR 19576)

Effectively on October 2, 2007, the Great Lakes Open Lake Forecast (GLF) changes from a non-segmented to segmented format (from service change notice 07-39). Both Cleveland and Buffalo offices reported that the NWRWAVES for their GLF and all was fine until they went to this new segmented GLF. NWRWAVES is only processing the first group (segment) and ignoring the second or even third group.

Problem. NWRWAVES: Make product expiration time for cancellations configurable. (DR 19469)

The current design of NWRWAVES is to send over any type of cancellation message with a 15 minutes expiration assigned by default, thus ignoring the UGC coded time. Rather than hard-coded this default time in the source code which cannot satisfy all the WFOs' need, a configurable entry will be added in the NWRWAVES setup GUI to allow a flexible change.

Problem. Fog Monitor: Monitor Area Configuration GUI issues. (DR 19440)

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.

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Problem. NWRWAVES: creates a "space" in the filename when encounters 8 characters PILs. (DR 19328)

On 08/09/07 (ticket 301701), WFO LMK reported that the SDFRWSKY product did not make it to the NWRadio - causing /data/logs to fill up on DX1. In the log file "logStreamExpect", an error messages "PROBLEM: File not found (entire path of filename must be specified)" have been repeating over and over for at least 3 days. NCF found that all of the OUTPUT filenames for this PIL have the space in it. The OUTPUT files are being copied over to the /ready directory ok without problem. But these files are never making it out of the /ready directory and into the pending and sent directories. They have been getting stuck here since May 2nd. The space in the files' names explains why the logStreamExpect log is saying "File not found." At some point something is only looking for files called SDFRWSKY to send over to the radio, because it does not know how to handle the space in the names. NCF staff suspects that the space in the file names is caused by the fact that this particular product's PIL is only 8 letters instead of the more-common 9 letters. This is the only product that is experiencing this problem as there were no others stuck in the /ready directory above.

Problem: NWRWAVES: require update to UGClookup.table. (DR 19288)

Las Vegas (VEF) WFO has updated recent UGC/zone changes that they have made locally. NWRWAVES baseline UGClookup.table needs to be updated to reflect these changes. This is a normal routine update to the table since there are other WFOs also required similar updates. For example, there are several WFOs, e.g., GSP, LWX, CAR, GYX, and Others. For detail of changes, see the "UGClookup_changes.txt" in Dimensions tree. As an example, in the case of VEF office, the following are California zones changes that require update:

> Eastern Sierra Slopes Of Inyo County,CA,VEF,P,CAZ519
> Owens Valley,CA,VEF,P,CAZ520
> White Mountains Of Inyo County,CA,VEF,P,CAZ521
> Death Valley National Park,CA,VEF,P,CAZ522
> Western Mojave Desert,CA,VEF,P,CAZ523
> Morongo Basin,CA,VEF,P,CAZ525
> Cadiz Basin,CA,VEF,P,CAZ526
> San Bernardino County-Upper Colorado River Valley,CA,VEF,P,CAZ527
> Eastern Mojave Desert-Including the Mojave National Preserve,CA,VEF,P,CAZ524.

1.12 WarnGen

Problem. WarnGen: Template Error when creating FFWs. (DR 19902)

For FFWs: after clicking Create Text on the GW and then clicking Enter on the Text Workstation, the following error appears: "Template Warning Error H-VTEC ic : RS The template may be incorrect." This issue was found while testing DR_19782.

Problem. WarnGen: Counties being added to follow-ups by WarnGen. (DR 19580)

Several offices have reported counties being added to follow-ups that were not in the original warning. It seems to occur when the original warning is very close to an adjacent county. When

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WarnGen plots the lat/lon points for the follow-up, it clips the previously unwarned county(s) and adds it to the warning.

Some offices have noticed this and were able to correct the problem before the product was issued, but others have not. This is in violation of warning policy and causes the forecaster to spend time correcting the polygon prior to issuing the product.

WarnGen needs a check to compare the original UGC to the follow-up UGC to ensure no new counties are being added. **(DR 19580)**

Problem. OB8.2 WarnGen: reword WarnGen GUI content for dam break FFW. (DR 19505)

The content in WarnGen GUI for dam break FFW (wwa_dam_break.preWWA) should be reworded.

The content for dam break FFW follow-up (wwa_flflood_sta.preWWA) might need to be changed accordingly.

Problem. WG: Storm Track resets when selecting SVR, TOR, or FFW radial buttons in WG GUI. (DR 19695)

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. I was unable to replicate this issue with the warnings located in the "Other" menu.

Actions to replicate issue observed:

1. Set a track and polygon for any warning (do not create text)
2. Select a radial button for an FFW, SVR, or TOR.

Problem. OB8.2 Beta WarnGen: WarnGen crashes when double click an existing product on D2D. (DR 19677)

Workaround: Use WarnGen GUI instead of "right click" to issue follow-up. The impact of using a workaround for forecaster is not significant.

Problem. False QC Errors received in WarnGen Practice Mode. (DR 20099)

While using practice mode on lx2 and lx3 (nmtw) during 18:30 to 19:00Z Friday March 28, we tried to send SVRLWX and TORLWX products. The products were stored correctly in /data/fxa/flatText, however the following error appears in the text window when 'send' is used:

"an error occurred while saving product WFUS51 KLWX to the database. The error message was: child process exited abnormally"

No error was seen when using send in test mode on lx3. We did not try operational mode.

Problem. WarnGen: Template Error when issuing a CAN to a SMW. (DR 20092)

When issuing a CAN to a Special Marine Warning a UGC error shows up on the text workstation. Error also states that the Template may be incorrect.

Problem. WarnGen: Lat/Lon Discrepancy in text for non-conv Dam Break FFW. (DR 20091)

Under certain conditions the Lat/Lon listing at the bottom of the non-conv FFW text does not correlate with the polygon/text description of the counties affected.

To re-create the problem, do the following:

1. In the WarnGen GUI select non-conv FFW.

2. Under Primary cause select a non-dam scenario (glacial lake outburst, ice jam break, etc.)

3. Select a Dam Name on the bottom of the list (Do not click Dam Break Threat Area). This is not normally done on purpose, but if done by accident it creates a problem. It should be noted that as long as the Dam Break Threat Are button is not selected before Creating the Text from the WarnGen GUI, the text descriptions of the counties affected are indeed correct. The lat/lon given is from the Dam selected not the warning polygon the user created.

Problem. OB8.3: false alerts in Practice/Test mode for non-conv. FFW (OB8.2.1 DR 19991). (DR 19996

In practice/test mode, when create a non-convective FFW warning and select dam-failure - generic, levee failure, floodgate opening, ice jam break, or volcano induced snow melt as IC, one of the following three false alerts will be created by WarnGen: a) No first bullet line, b) Immediate cause in VTEC inconsistent with text, and c) Too many lines starting with '*'.

The false alerts stated above occurs only at practice/test mode. So, they will not impact operation.

When testing, make sure using practice/test mode.

Problem. OB8.3 WarnGen: false QC warning message (non-convective FFW) (OB8.2.1 DR19863). (DR 19870)

If select floodgate opening as IC while creating a non-convective FFW warning product, WarnGen QC will pop up a window with "Immediate cause in VTEC inconsistent with text..." on Text Workstation. This is a false alert due to the defects in code.

Workaround: None.

Problem. WarnGen: TimeZone Errors appear when in Backup Mode. (DR 20139)

While trying to backup OKX from BOX on TBW3, I received the Time Zone errors that were seen in DR_20035. It appears that there are additional code changes that are needed to completely fix the problem.

Problem: WarnGen:Vertices should be locked for CORs. (DR 19599)

WarnGen currently allows the vertices to be moved in a COR. This is not allowed in the polygon era. The vertices should be locked as they are for EXTs and CANs. This applies to all CORs for all warnings and follow-ups. CORs are for text mistakes only and not for adjustments in area.

This could potentially lead to new areas being included in a correction which goes against VTEC policy and Warning by polygon philosophy. Fortunately this has yet to happen operationally, but the issue should be resolved before next convective season to prevent an accidental occurrence. **(DR 19796)**

Problem. WarnGen OB8.3 textWindow.tcl is erroneously popping up QC time zone errors. (DR 20035)

This DR was originally written due to false QC errors related to four letter time zones. The first code change for this DR fixed the aforementioned issue, but caused false QC errors for three letter time zones. This DR was failed because of that. The second fix for this DR broke the text window application , was failed, and was backed out.

As of B1, the currently deployed textWindow.tcl code is revision 113, which is the revision that this DR was originally written against. That issue is explained below as it was originally stated.

> -CWL 07-APR-2008:
>
> While testing WarnGen on TBW4: Got an error that the MND time zone did not match the statement time zone for every product sent out in AKST/AKDT. With the help of Sean we were able to find the problem in line 4445 of textWindow.tcl. The time zone code is 4 letters and the software needs to be able to accommodate this.

Problem: WarnGen:small stream not HiLighted in ArealFldAdv follow-up. (DR 19796) (DR 19795)

If an areal flood advisory is created with Small stream selected as the type and any option in hydrological conditions/causes is selected, then that small steam option will NOT be auto highlighted 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.

Workaround: There is no workaround because the option cannot be altered (by design).

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. N/A SWIT OB8.3

Problem. WarnGen: Change to IC should not be allowed with EXT to FFW(OB8.2.1 DR 19578). (DR 19782)

When creating an extension for FFWs, convection or non-convective, WarnGen allows the user to change the immediate cause. This could result in incorrect VTEC. The IC should be locked for all subsequent issuances of hyDRo products.

The areal flood products work correctly.

Problem. OB8.3 PIT text QC check: WarnGen False Test Mode QC Message. (DR 19781)

In workstation test mode, the WarnGen Areal Flood Advisory (small stream, primary cause rain and snow melt, with automated list of Drainages) produces the following false QC message on the first text workstation QC check: "immediate cause in VTEC inconsistent with text." The false QC message does not appear in operational mode, therefore the test wording appears to confuse the QC checker. The problem likely exists in practice mode also.

Impact: False QC messages make forecasters more prone to ignore all QC messages, which may result in issuance of a badly formatted product. The problem slightly delays the issuance of the WarnGen Areal Flood Advisory in test and practice mode (not operational mode).

Workaround: Verify that there is no error in the WarnGen product and cancel the error message.

An example of WRK version of an FLSLWX that generated the false QC message follows: (full file in nhda:/data/local/mer121907/flslwx.txt)

```
WGUS81 KLWX DDHHMM
FLSLWX
TEST...FLOOD ADVISORY...TEST
NATIONAL WEATHER SERVICE BALTIMORE-WASHINGTON
1023 AM EST THU DEC 20 2007
...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
MDC031-201830-
/T.NEW.KLWX.FA.Y.0002.071220T1523Z-071220T1830Z/
/00000.N.RS.000000T0000Z.000000T0000Z.000000T0000Z.OO/
1023 AM EST THU DEC 20 2007
...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
THE NATIONAL WEATHER SERVICE IN STERLING VIRGINIA HAS ISSUED A
* THIS IS A TEST MESSAGE. SMALL STREAM FLOOD ADVISORY FOR RAIN AND
  MELTING SNOW IN...
  CENTRAL MONTGOMERY COUNTY IN CENTRAL MARYLAND...
```


Problem. OB8.2 Beta WarnGen: WarnGen crashes when double click an existing product on D2D. (DR 19677)

Workaround: Using WarnGen GUI instead of "right click" to issue follow-up. The impact to the forecaster of using this workaround is not significant.

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Problem. Update 9 template files in OB8.3 workset so they are released. (DR 19605)

WarnGen template files were modified in OB8.2 to list FFMP basin files (DCS 3431).

These changes were propagated to OB8.3. The shapefiles needed for this change were not available in OB8.2 (RA 8-102), so modifications were made prevent the listing of the basin files because they were not ready during that time frame (DR 19181). The changes for DR 19181 were intentionally not propagated to OB8.3. In OB8.3, the basin files should be listed. The following line was commented in OB8.2 in the 9 files listed at the end of the DR:

  //<AREA |file=wwa_basins |area=wwa_counties |output_field=1 |format=list>.

It should be uncommented in OB8.3:

   <AREA |file=wwa_basins |area=wwa_counties |output_field=1 |format=list>.

The 9 template files are currently correct in OB8.3 but since installs are done incrementally (delta releases), and since there are no change docs associated with these files for OB8.3, the OB8.2 template files will not get overwritten by the OB8.3 template files during the install. Hence, the capability to list the basin files will remain disabled in OB8.3. The OB8.3 versions, with the basin line uncommented, should be checked in again to the OB8.3 workset so they are released in the install.

> Convective Flash Flood Warning (wwa_ffw.preWWA)
> Convective Flash Flood Statement (wwa_flflood_sta_county.preWWA)
> Dam Break (Non convective) Flash Flood Warning (wwa_dam_break.preWWA)
> Dam Break Flash Flood Statement (wwa_flflood_sta.preWWA)
> Combined Flash Flood Warning/Severe Thunderstorm Warning (wwa_ffw_svr.preWWA)   Areal Flood Warning (wwa_flood_wrn.preWWA)
> Areal Flood Statement (wwa_flood_sta.preWWA)
> Areal Flood Advisory (wwa_flood_adv.preWWA)
> Areal Flood Advisory Statement (wwa_flood_adv_sta.preWWA)

DR 19181 was done by Mike Rega. This DR should probably go to Mike or ASM rather than GSD.

Problem. WarnGen: GUI resets after pressing "Update List". (DR 19553)

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: 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 D2D 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.

Problem. WarnGen: reword WarnGen GUI content for dam break FFW. (DR 19504)

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.

Problem. WarnGen: Dam Break template Call To Actions (CTA) out of place. (DR 19474)

LAT...LON and Call to Action are out of place. The CTA should be above the LAT..LON info.

Problem. WarnGen: New (Dam Break) functionality needs dam status split out. (DR 19489)

In the new dambreak interface, there are 2 new options under primary cause: Dam Failure Imminent and Dam Failure has occurred. These options do not belong under the primary cause list as the status of dam failure does NOT impact the VTEC.

A new category is needed (Status of Failure) after primary cause which gives the options of imminent failure and failure already occurred. Ideally these would only appear when either dam or levee failure is chosen as the primary cause.

The status of failure must be allowed to be changed in a follow-up to alert the public to a previously imminent failure that has now occurred.

Problem. OB8.2 Alpha WarnGen (Dam Break): Leading IN cause false QC error. (DR 19488)

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 to fix the problem -- easy to do and no risk.

TT 306429 has the same issue as 306283.

Problem. FFW (dam break): polygon not created for dam with an undefined dam area. (DR 19478)

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.

Problem. FFW (dam break): primary cause may be changed with extension. (DR 19477)

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, such as: volcano induces snow melt, etc.

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.

Problem. Warning expiration box appears after warning cancellation. (DR 19475)

When an active warning is set to expire in ten 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: 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.

Problem: WarnGen: Dam Break template should only allow flood severity selection for DM. (DR 19043)

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.

Problem. IGC: disable the capability of moving storm centroid with middle mouse button. (DR 18905)

While preparing the WarnGen SVS product in March 29, 2007, two users in GLD were unable to update the location of the storm when trying to DRag the dot (storm centroid) to where the storms current locations was, it wouldn't hold. The dot would just go right back to its previous location.

The fact is the users mistakenly used the middle (instead of the left) mouse button to move the storm centroid when preparing the SVS product in the heat of battle. Although the problem was user error, Jim Ramer's recommend to have fix to it so the software does not allow this error.

The error delayed the issuance of follow-up SVS statements for tornado warnings for that particular case, but can also delay the issuance of other WarnGen follow-ups.

Workaround: None.

Problem. WarnGen polygon vertices should be locked for corrections. (DR 18106)

The site in testing this reported that they had an existing Severe Thunderstorm Warning [SVR] (again, in practice mode) covering multiple counties. They then issued a Severe Weather Statement [SVS] on this SVR.

We then went to correct the SVS, which we can now do in OB6. However, we also decided to try and shrink the warning polygon and removed one of the counties at the same time.

The text created did have 2 segments, one for the county being cancelled, and one for the counties where the SVR continues. However, the VTEC action code for both segments came up COR, where the cancelled segment should have come up CAN.

I know the workaround is to not change the polygon during a correction, but this is possible to do and the VTEC logic does not deal with it properly. The WarnGen software probably should not allow the polygon to be changed for SVS corrections. Original Trouble Ticket is 255795.

Problem. WFOA OB4: WarnGen QC does not flag errors on certain time zone changes. (DR 14224)

Changing the time zone in the MND from "EDT" to "EST" did not raise any errors.

1.13 Guardian

Problem. Guardian: shotgun popup messages (log too big). (DR 19015)

Something is sending thousands of pop-up messages to Guardian. It was suggested that that source of the messages be fixed, but that does not seem to be happening, so guardian needs to insulate itself from such situations. The result is, a Guardian session that gets hung, hogs CPU, and has to be manually killed. The solution is to cap the number of messages that can be stored in the pop-up log. Other logs get capped, but the popup log was not. The down side to this is, there is the potential to lose popup messages from the log, but this is likely an acceptable price to pay. Hopefully, this will be accepted into OB8.2. Level of effort is expected to be <1 day. **(DR**

Problem. Fog Monitor – Guardian Fog Monitor button does not show FM algorithm. (DR 19424)

The Guardian Fog Monitor button does not reflect the choice to include the Fog Monitor algorithm in the Guardian icon color.

The selection to include the Fog Monitor algorithm's threat level when determining the Guardian icon color is made in the Fog Monitor Monitoring Area Configuration GUI, and there are red and yellow algorithm values in the Fog Monitor table, but the Guardian Fog Monitor button text says that the "Fog Monitor satellite algorithms configured not to provide Guardian info."

Next, I ran stopFMprocessor and startFMprocessor and the Guardian Fog Monitor button still was not red as I expected. The text indicated "No Fog Monitor algorithm threat levels available". See second attached image.

If the FMprocessor really needs to be restarted to include the FM alg, the user should be notified.

Problem. Fog Monitor - Image does not always respond to threshold GUI changes. (DR 19365)

The Fog Monitor image does not always update based on changes in the Fog Monitor Threshold GUI. The problem was discovered running the Baseline_FogMonitor test case, step 13.

I'm trying the threshold GUI and I'm getting a mismatch between the display and the table. I've loaded the churmatest.txt threshold file on TBW3. The display shows possible fog (yellow), but the table shows no yellow ALG. Then, I looked back at the D2D display and the display again updated and there were no longer possible fog areas. When I initially loaded the churmatest.txt thresholds, I did the Update from the threshold menu and waited till the display updated...that's when I first saw the yellow areas, so it's not that I didn't run the Update.

I also noticed that when I reloaded the display the FM table came up minimized to just the window title bar. I can expand the window, but it seems to reload back to just the window title bar.

Problem. Fog Monitor - Guardian FM button does not respond to FMprocessor state. (DR 19420)

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

Executed the FM-Incorporate_Obs-DCS_3265 test case:

> In step 2, the user stops the FMprocessor using the stopFMprocessor command. The expected result is for Guardian Fog Monitor button to 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.

1.14 SNOW

Problem. Reorder HCA color bar. (DR 19947)

GR(Graupel) needs to be moved higher on the color bar. DS(DRy Snow) and WS(Wet Snow) need to be switched.

Problem. SNOW: Snow Depths trend graph not appearing. (DR 19875)

While testing DRs, Shen Zhao found that the SNOW trend graph for the snow depth parameter would not display properly -- it would just pop up with a GUI and a close button -- no graphical information.

Problem. SNOW: Show worst-case freezing precip intensity in Guardian. (DR 19764)

SNOW's output to its Guardian button in OB8.3 includes a single listing of every detected type and intensity of freezing precip. For example, if 50 stations are reporting heavy freezing rain (+FZRA), 50 others are reporting moderate freezing rain (FZRA), and a single station is reporting light freezing rain (-FZRA), the Guardian output will report "+FZRA FZRA -FZRA". The PIT tester/forecaster proposal is: for a given frozen precip type, the greatest intensity identifier would be chosen to stand for that type. In the example above, only "+FZRA" would be reported to Guardian. This will be an easier format for forecasters to glance at quickly, Note that the VC vicinity prefix is not affected by this change, as it is not a intensity.

Problem. SNOW: Depths not appearing in table. (DR 19075)

Local testing and code inspection reveals that the "snow depth" parameter for METARS is being monitored correctly by SNOW, but is not being properly written to the NetCDF output files. This would leave the parameter as "missing" in the SNOW table. Overall impact to the application is estimated to be significant, but not crucial. It's an important parameter, but it's only ever available in METARS reports (mesonets are often more numerous in SNOW), and the complementary "Snow Increasing Rapidly" parameters (hourly and total) are still available.

Workaround: None.

1.15 FFMP

Problem. FFMP: Display zoom/scale mismatch. (DR 20194)

When the D2D performs a map transformation, it will create a helper file that will get re-used for subsequent transforms. The transforms used for FFMPA are based on a file that the -ffmp localization creates. If the -ffmp localization has changed this file, and the helper file already exists, the helper file will not get re-created and will likely cause a bad display that appears to show the FFMP colors at the wrong scale and zoom. The FFMP color image will not match the underlying state/county maps, etc. The work-around is to delete the files lx*:/awips/fxa/data/localizationDataSets/*/FFMP#*, which will delete the helper files and allow them to be re-created the next time FFMP gets displayed in the D2D. The file that the -ffmp localization creates is in turn based on the shapefile domain and CWAs chosen for inclusion. IF these do not change, then the resultant -ffmp output file SHOULD not change and the helper files SHOULD be good for use, thus this SHOULD be a rare occurrence. The fix would be to have the -ffmp localization delete the helper files when the -ffmp output file needs to be re-created (which is not all of the time).

Problem. FFMP: Downstream Basin Trace bug. (DR 20152)

When the FFMPA Basin Trace is in "Downstream" mode only, there is an apparent lag of 10-30 seconds before the Basin Trace gets drawn as expected. There is a work-around (use the "Up and Downstream" mode). It took some time to investigate and verify this. A fix has been defined and implemented, but not yet tested at the writing of this DR.

Problem: Guidance low-side extrapolation. (DR 19984)

When providing data values for guidance data sources that is for a time duration smaller than any of the available guidance time durations, FFMP is supposed to extrapolate (using an arbitrary formula) to zero on the low side. This does not seem to be happening for the Basin Table (at least). We need to re-evaluate the value of low-side extrapolation and ensure it works if we decide to keep it.

Problem: remove forced files during localization. (DR 19983)

Currently, the -ffmp localization does not remove any "flagged*" files from the ffmp data tree. We need to re-evaluate this decision, and possibly change it so that a -ffmp localization removes these flagged* files from the ffmp data tree (as it does for the other output data files). This will require WFOs to re-apply any Forced FFG after every -ffmp localization. If we do not remove these files, localization has a chance of changing things such that the persistent flagged* files will mismatch with the localization lookups, and possibly causing application crashes (IGC_Process, FFMPtableDispWish).

Problem. FFMP: Basin Trace refresh. (DR 20060)

After producing a Basin Trace in the D2D with FFMP, if you right-click and move the map around, the Basin Trace does not get re-drawn as it should, leaving empty areas that should not be empty. This was an issue years ago with the old FFMP, so perhaps it is just a small module that needs to be re-evaluated in order to get this fixed properly. Level of effort should be low.

Workaround: Manually re-call the Trace after moving the map.

Problem. FFMP: Basin Trend update for ratio/diff. (DR 20059)

For some reason, when color thresholds are changed in the FFMP Basin Table, if a Basin Trend is up, and the threshold changed was for ratio or diff and ratio or diff was used as the underlay in the Basin Trend, no update occurs. This does work for qpe and rate, but for some reason, not for ratio or diff. Even though this is a minor DR, I hope it gets accepted into OB8.3, since OB8.3 is the first release of FFMP Advanced and this issue should be low level of effort. Work-around is to close the basin Trend and re-create it if color thresholds for ratio or diff change, which is rather inconvenient for the user.

MORE INVESTIGATION yielded a more significant problem with this issue. The module that calculates interpolated values for the Basin Trend (for ratio and diff) is in error, which yields incorrect underlay colors in the Basin Trend when ratio/diff is used for coloring. This may or may not have contributed to the originally described situation, but I think it is sufficient to bump the priority of this DR.

Problem. FFMP - Additional guidance sources can't be displayed in the Basin Table. (DR 19961)

The FFMP basin table cannot display additional guidance sources. A second source is defined and available in the Attributes Inclusion GUI but when you select it, the new columns don't

display. Also, when there are two sources are available, you can select on or the other, but not both.

Problem. FFMP: Scale used for precip accumulation image isn't high enough for 24 hr qpe. (DR 20115)

In OB8.3 the FFMP can now display precipitation accumulation up to 24 hours. Previously the limit was around 8 hours. The scale on the precipitation image display goes from 0" - 5" which was sufficient for up to around 8 hours of precipitation accumulation. The upper end of the scale should be increased to accommodate up to 24 hours. See attached image for an example of the problem. A typical scale for 24 hour precip is 0" - 10".

Problem: FFMP: CWA filter not applied correctly for some rankings. (DR 19692)

The CWA filter in the Basin Table is supposed to exclude entities outside of the CWA filter toggles from display in the Basin Table. It does this by setting data values to the missing value. The missing value gets filtered out by the filter mechanism - except for when the Basin table gets ranked by name or by Guidance value. This CWA filter method needs to be revisited. This is considered minor because the excluded values are still 'missing', thus the user will not be distracted by various data values, which is the intent of the CWA filter in the first place.

Problem. FFMP DMS: Volume Browser grids issue. (DR 20080)

In the FFMP DMS (html data monitor), a method has been in place to use a data key to get a data directory. However, for Volume Browser grid keys, this method will not work. We need to implement an additional method in order for the FFMP DMS to be able to identify the correct data directory for data sources that are Volume Browser grids. This was considered to be minor, because the DMS is not operationally crucial - it is just to check the timeliness of data that FFMP uses as input. It is, however, the data source that the HPE uses, so, if this doe snot get fixed, the FFMP DMS will not work for HPE. This may be enough reason to bump the priority to major.

Problem. FFMP: grid nav: row-major vs column-major. (DR 20037)

FFMPs use of gridded data was intended to be flexible. As such, we wanted to allow both row-major and column-major transforms. The flexible method seems to be only half-complete in the code. The existing code is sort of hard-coded when it comes to certain data sources. The fully flexible method's implementation needs to be completed. Nothing is currently broken, but if users try to add some data sources, FFMP will be unable to read them, unless this gets fixed. Level of effort should be medium to low. No work-around.

Problem. FFMP: Further performance enhancements. (DR 20009)

Performance is of high concern for the FFMP Advanced application. We recently discovered a couple of methods that could potentially improve apparent performance.

1. Use a FAC method for communicating from the Basin Table to the color image in the D2D (telling the color image when it needs to redraw itself based on configuration

changed made in the Basin Table). This will avoid the use of the notificationServer, and any potential slow-downs related to its receipt of data update messages and its subsequent transmission of data receipt messages to its clients..

2. Force the FFMP multi-load to default to load one frame (instead if use the D2D default of 12 frames). We have always suggested users load FFMP into one frame to improve performance, but a lot of users still do not know to do this. Once loaded with the default of one frame, the user still has the opportunity to change the number of frames, if they desire.

Problem: FFMP: radar gage bias not applied. (DR 20005)

The gage bias was extracted form the DHR, but it was not applied to the data. It should be applied. This is critical, as it can produce very misleading radar-based information in FFMP. (However, perhaps this could also be considered Major instead.)

Problem: DRT cannot use HPE. (DR 19982)

FFMP DRT fails to make use of HPE data sources due to the substitution of the purge key for the data key. We need to change back to the use of the data key, and just add the extra code to obtain the data directory from the VB grid data key (which is different than regular data keys). This was discovered in WES and has a potentially significant impact for WES and DRT sessions. This would not impact operations directly - even when HPE was used as an operational data source in FFMPA.

Problem: FFMP - VGB not colored if QPF included in Basin Table. (DR 19950)

Normally the VGBs are colored purple in the FFMP Basin Table. If a QPF source is displayed in the table, the VGBs are no longer shown in purple. The VGB is also not colored purple if the Time Duration is set to 0.

Problem: Data Monitor System (DMS). (DR 19934)

The FFMP DMS was not ported into the new FFMP Advance Design, and it was determined via operational feedback, that this function should not be omitted, as it would be missed. The DMS is an html page listing most recent data for each pertinent source, and whether that data seems to be "recent enough" or "too old".

Problem: FFMP: float vs. double in localization. (DR 19852)

SGF (FFMP Advanced Alpha Test) may have exhibited symptoms of a 'float' mismatch. I believe this is when the number of digits a float maintains (6) moves the decimal point and yields a rounding difference and direct comparisons between floats may not be what they should. For example: $800.017 + 300 = 1100.02$. The solution is to use doubles. No work around. Effort should be low - possibly moderate.

AWIPS OB8.3 Final Release Notes. Section II, Discrepancy Report Fixes, 05 June 2008

Raytheon

Problem: FFMP: old-to-new config transition. (DR 19850)

Up to now, we had assumed we'd have to tell all FFMP users to remove all old display config files (default, working, personal), as a post-install step for OB8.3. This means all personal FFMP display config files would be lost. These display config files have a flexible accessor that allows for build updates, but it was believed the accessor was just not flexible enough for the new FFMP stuff. This may not be the case. We might be able to tweak the accessor so that it is able to accommodate all of the various legacy config files, and the new FFMP config files as well. This accessor is shared by SCAN (cell, meso, tvs), FFMP, DMD.

Problem: FFMP: Monitor 'missing value' catch. (DR 19736)

For the 'diff' type Monitor type, the FFMP Monitor is making use of the 'missing' value, when it should be ignored. The result is a red FF button in Guardian, when it should not be, which is very misleading to the forecaster. Work-around is - don't use diff type, but that really isn't much of a workaround. Level of effort should be low.

Problem: FFMP: shape file data sources. (DR 19724)

In FFMPA's requirements, it was declared that FFMPA will make use of shape file data sources. Such ingest has yet to be fully implemented, but needs to be. Level of effort is expected to be significant.

Problem. GELT entity limit: impact on FFMPA. (DR 19904)

Apparently, there is a cap to the number of shape file attributes that can be converted into a GELT. I am not certain if this limit is in the SFAccessor or the newGELTmaker. I believe the limit is either 30,000 or the maximum value of a short integer data type. For FFMPA, if this limit is breached by the small basin shape file, the GELT creation will fail and FFMP will fail to localize and be useless. We are exploring ways to trim the size of the small basin shape file (as a work-around), but various ideas will lead to some sort of degradation of value of FFMP, most likely in Service Backup. For example: if a site has too many small basins in the domain that encompasses their own CWA and their service Backup CWA(s), they may need to trim to only their own CWA. This bug is not in the FFMP software, but is in either the SFAccessor of newGELTmaker - these are what needs to be investigated.

Problem. FFMP display performance. (DR 19723)

FFMPs display performance (D2D color image) does not seem to be as good as it should. We need to explore ways of improving performance, including the identification of any bottlenecks, and seeing if there are any bugs getting in the way. Effort is expected to be significant. Although this is considered to be an enhancement, because it is related to performance, this should be considered a high priority.

Problem: FFMP: Gap handling. (DR 19719)

Currently, when there is a 'big enough' data gap in FFMP data, it is not necessarily clear to the user that the issue is a data gap. (The resulting error messages are too vague.) And sometimes,

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no error messages get generated at all (if the gap is fully enclosed by valid data). We need to handle gap handling better! No fix is yet known. No work around. Level of effort is expected to be moderate.

Problem: FFMP: FFTI Guidance durations. (DR 19718)

The FFTI GUI provides the user with a drop-down choice of Guidance source durations. This disallows any interpolation, which is used heavily by FFMP display. In order to allow interpolation in the FFTI GUI for Guidance sources, we need to change the widget from a drop-down menu to a scale (like the existing Time Frame slider). This is an enhancement, and should be from low to moderate effort. No work-around.

Problem: FFMP: independent displays should not use config file. (DR 19715)

For the FFMP displays not directly related to the multi-load of extension and depictable (i.e., the independent depictable displays), the display is not supposed to make use of the display config file at all, but the code currently does. This can yield an empty display, if the CWA filter parameter is undefined. The work-around is to re-define the CWA filter parameter in the default configuration. This should be a low effort fix, but the specific fix is not quite yet known.

Problem: FFMP: error catch for default_BasinAttribute.table. (DR 19693)

If the default_BasinAttribute.table file is missing (i.e., not delivered to the proper location), the FFMP display will crash - the error is not caught properly. This is considered minor, because a bad delivery would be nearly impossible for an AWIPS Release (this was seen on a test system).

Problem: FFMP use of SCAN QPF data. (DR 19690)

FFMP Advanced is required to use SCAN QPF data (if possible). It was discovered that the netCDF files for SCAN QPF were non-standard and would not work with the generalized design of FFMPA. The SCAN netCDF files need to be changed so that they are readable by a 'standard' awips read method, and FFMPA needs to be verified that it can indeed read the SCAN QPF data files.

Problem. FFMPA - Guidance -> RFCFFG menu entries need units. (DR 19940)

The FFMP RFCFFG menu entries need to include units as they did before the FFMPA redesign. The entries are in SCAN -> FFMP:kxxx -> Guidance -> RFCFFG -> FFMP kxxx RFCFFG 1 Display (and 3 and 6). The entry should include units, i.e., FFMP kbox RFCFFG 1 hr Display.

Problem. FFMPA - GUID column sorts incorrectly in Basin Table. (DR 19939)

The GUID column in the FMP Basin Table sorts incorrectly. The "M" values sort before other values.

The problem is easily reproduced on TBW3. Load FFMP for KBOX, then select GUID in the Basin Table.

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Problem. FFMP - Display rounds the time window to one place. (DR 19920)

In the FFMP table, the user can set a time window. The time window increment is in quarter hours. The FFMP display shows the time window, but it rounds the value to 1 place, so that something like 1.25 hours is shown as 1.2 hours and 1.75 hours is shown as 1.8 hours.

Problem. FFMP: erroneous rate calculations. (DR 19877)

Strange rate values were noted in the Basin Table at at least one FFMP Advance Alpha site (HFO), and were verified and replicated on the NHDW. They were also noted a while ago on dev systems, but the inconsistency of the problem (apparent inability to replicate) and the lack of confidence in the nhdw led to a feeling that this issue was not real. The resulting erroneous rate values can be very misleading to a Flash Flood forecaster, thus this is considered critical! A fix has already been determined.

Workaround: None.

Problem. FFMP: Radar rate image display. (DR 19886)

In FFMP Advanced for OB8.3 has been re-designed, which yielded a more generic and general FFMP. This led to the removal of the "Rate Display" menu option in the FFMP section of the SCAN menu in the D2D. Although this image display no longer fits into the FFMP design, it can still exist on its own, as a separate display selection in the SCAN menu. This needs to be done. N/A .

Problem. FFMP: default config after clear. (DR 19871)

If FFMP is loaded, then cleared, the running executable still exists. This is OK, but when FFMP is loaded again, a different start path is followed, one which does not seem to be reading the default config file - and it should. Symptoms of this are likely not to be much at all, but one symptom (when the link2frame config option is on) is a lack of a good data time, which means no data gets read for display. FURTHER INVESTIGATION yields a different conclusion. The default config file is being read properly, but there were additional problems with DR 19792 and DR19858 that were discovered and fixed, having to do with linkToFrame and a re-load, and with properly refreshing the D2D when the inclCWAs config parameter is empty.

Problem. FFMP: small basin map. (DR 19862)

The new FFMP Advanced has a different map than the old, but this has not yet been updated. The entries in the Maps menu in the D2D need to be edited.

Problem. FFMP: polar grid source, domain calculation error. (DR 19861)

One of the routines used for establishing the domain for a radar polar grid data source expects units of nautical miles, but was given km. This yields output that looks graphically 'expanded' when compared to the raw data source. This was evident in comparisons with HPE also.

Problem. FFMP: depictable CWA filter. (DR 19858)

When the CWA filter is empty (as it will be upon delivery), the FFMP extensions is supposed to pass along the default values to the depictable via the config file. The config file is being updated, but the signal telling the D2D to refresh has not been sent, thus the D2D color image for FFMPA can be blank (black) for these conditions.

Problem. FFMP: left-align Name column. (DR 19849)

The 'Name' column in the Basin Table should be left-aligned (not center). This would normally be an 'enhancement' DR, but the symptom can potentially be severe, like at PBZ for the FFMP Advanced Alpha Test. Many of PBZ's basin names are rather long, such that both the beginning and end of the name get clipped by the Basin Table, yielding convoluted names and no apparent naming scheme. There were concerns about performance degradation for this sort of function, but I think I have a way to do this with no performance hit and low effort.

Problem. FFMP - Guardian FF clarification needed. (DR 19831)

The Guardian FF output has changed significantly in OB8.3. There are some elements that are missing and some that need to be clarified. Some of the issues are

- CWA is missing
- Priority (warning color) for each monitor set is not labeled.
- First line showing application/date and time should be consistent with other Guardian buttons like it was in OB8.2.
- The current selections don't have labels or units, so it's not immediately clear what the values mean.

Problem. FFMP: ratio and diff D2D display types.

When the user chooses ratio or diff as the display type under the D2D menu in the Basin Table GUI, the D2D display will be blank until the user also chooses a guidance source (which is required for ratio or diff calculations). The fix here is to automatically choose the first guidance source on the list. (The user can always choose something different if desired.).

Problem. FFMP: Basin Table linkToFrame toggle does not work. (DR 19792)

Toggling 'linkToFrame' should force the data time in the Basin Table to either agree with the data time in the D2D frame, or not. This does not seem to be working. This is a significant piece of legacy functionality that should not be left behind.

Workaround: None.

Level of effort should be moderate.

Problem. FFMP: Use of option menu indicator. (DR 19791)

The FFMPA Basin Table GUI makes use of option menu indicators, but shouldn't. An option menu is a menu that uses a variable value for its label, thus the label changes depending on what

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is selected in the menu. The menus in the FFMPA Basin Table that use these do not use the variables values as labels, thus, it should not use the 'option' type of menu indicator.

Workaround: None.

Problem: FFMP: FFTI duplicate check. (DR 19716)

When the FFTI checks for duplicate entries, it also checks the threshold values - but it shouldn't. This should be somewhat rare. The work-around is to use the FFTI GUI to manually check and remove duplicates. This check is basically a safety check and this problem has a low probability of occurrence in operations. No fix is currently known and the level of effort is expected to be moderate.

Problem. FFMP: config summary in Basin Table. (DR 19734)

The Config Summary launcher in the Basin Table does not look like a clickable button, but it should.

Problem. FFMP: aggregate function: bad reset. (DR 19733)

The Basin Trend shows an occasional reset to zero for the accumulation plot. The accumulation plot should never do gown - it should only stay the same or increase. The root of this problem may also be having other impacts, like incorrect accumulation values in the Basin Table - and even possibly bad rate values as well. This is a critical issue: if this does not get fixed, FFMPA's value would be severely diminished. No work around. Level of effort is expected to be significant (investigation).

Problem. FFMP: name for precip attribute in Basin Table. (DR 19722)

Currently, the name for the accumulation element to the Basin Table is called "precip", but it is referred to in other places as "QPE". In order to reduce user confusion, we should change the label of "precip" to "qpe".

Workaround: None.

Problem. FFMP: Basin Trend underlay is misbehaving. (DR 19720)

The color underlay in the Basin Trend graph is not behaving. All underlays are being displayed at the same time. Only one should be displayed at a time. Not sure how this happened, as this code was certainly verified in the recent past.

Workaround: None.

Problem. FFMP: debug clean-up. (DR 19717)

The 'vlfag' debug utility (FFMP-specific) was taken out of FFMP when it was redesigned, but we always had the intention of putting it back in, but it was always a low priority. This DR is intended to be pretty much a code clean-up task, which will benefit developers, debuggers, and testers, and should not have an operational impact. This also stemmed from code walkthroughs.

Problem. FFMP: VGB trend plot not working. (DR 19714)

The VGB plot in the Basin Trend graph is not getting plotted. I small software bug was identified (regarding string extraction). The fix is known and low effort.

Workaround: None known.

Problem. FFMP subsequent loads. (DR 19713)

When FFMPA is cleared from the D2D screen and re-loaded, it sometimes yields a blank color image. This seems to be related to the application of a blank default CWA filter. This was managed upon initial load, but it might have been missed for subsequent loads in the same D2D session. If this DR gets verified, it is crucial to have this fixed.

Workaround: Close the D2D and re-start it, and then re-load FFMPA. **(DR 19713)**

Problem. FFMP - Upstream Basin Trace not working. (DR 19540)

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. The problem can be demonstrated on TBDW, TBW3 and NMTW.

Problem. FFMP - FFMP table crashes after several basin traces. (DR 19511)

On TBW3 and NHDA, I tested the FFMP basin trace function. To do this, launch FFMP, then make the FFMP Table Display editable, and 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.

Problem. FFMP shapefile access. (DR 17357)

FFMP's shapefile accessor expects the DBF file to have a particular order of attributes. If this order changes, (for example, during shapefile customization), the reader might break. We want to make the DBF accessor more flexible such 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.

Workaround: Change the shapefile then re-localize for FFMP again.

1.16 SAFESEAS

Problem. SAFESEAS: Display and table not updating in sync.

With the alteration of the depictInfo.manual file on Jan. 14 (the METAR display updates every two minutes now, as opposed to every fifteen minutes -- DR 19751), the SAFESEAS table is not updating as rapidly as its corresponding D-2D map display. This will cause confusion for users of SAFESEAS (as well as SNOW and the Fog Monitor, which share common code). The table must be modified to stay in sync with its map display.

Problem. SAFEESAS: Guardian parameters reading "N/A". (DR 19711)

The SAFESEAS and SNOW processors are evaluating worst-case parameter values, and sending them to Guardian. Those values are being overwritten, by values of "N/A" and "gray" very quickly. Some parameters may be unavailable at any given time, but not all of them. See the text below, captured from the px1-nhda logs. Note that the first sentence properly states that monitored observations are at RED threshold level. At least one of the subsequent parameters should be available (i.e., not "N/A"), and have a color threshold of red.

Monitored observations at RED threshold level.

MONITORED VALUES   HIGHEST THREAT LEVELS

    Min Vis: N/A   gray

    Max Wind Speed: N/A   gray

    Max Wind Gust: N/A   gray

    Max Peak Wind: N/A   gray

    Max Wave Ht: N/A   gray

    Max Prim Swell Ht: N/A   gray

    Max Prim Swell Pd: N/A   gray

    Prim Swell Dir: NM   gray

    Max Sec Swell Ht: N/A   gray

    Max Sec Swell Pd: N/A   gray

    Sec Swell Dir: NM   gray

Here's a more accurate output, also taken from the px1-nhda logs, prior to the overwriting:

Monitored observations at RED threshold level.

MONITORED VALUES   HIGHEST THREAT LEVELS

    Min Vis: 0.19 mi   red

    Max Wind Speed: 9.0 kts   green

    Max Wind Gust: 11.0 kts   green

    Max Peak Wind: N/A   gray

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        Max Wave Ht: N/A   gray

        Max Prim Swell Ht: N/A   gray

        Max Prim Swell Pd: N/A   gray

        Prim Swell Dir: NM   green

        Max Sec Swell Ht: N/A   gray

        Max Sec Swell Pd: N/A   gray

        Sec Swell Dir: NM   green

Problem. SAFESEAS: Swell ranking thresholds flip-flopping. (DR 19710)

When a user sets up the swell periods to rank higher to lower, the threshold settings should stay that way until the user overtly changes back to lower-to-higher default settings. PIT testing reveals, though, that the monitoring thresholds are reverting back to their original "lower to higher" setting if you localize repeatedly under the "higher to lower" setup.

Problem. SAFESEAS: Add text to Guardian alert button. (DR 18954)

This is a development DR.

The purpose is to add a modicum of descriptive text to the SAFESEAS and SNOW alert buttons in Guardian. Currently the SAFESEAS anchor button and the SNOW snowflake button don't tell the user why they have been colored red, yellow, or green. This lack of information has drawn several field complaints. With an enhancement from this DR, the text would state something simple, such as "Lowest Vis: 0.25 mi". Users could look at the SAFESEAS/SNOW tables for more details. Note that the affected code is shared by SAFESEAS and SNOW; this is why only one DR has been written.

Problem. SAFESEAS : Reverse Parameter Rankings. (DR 16653)

This DR was originally intended as a minor fix for OB7.X, to reverse the sorting of the SAFESEAS swell period parameter to give emphasis for higher values instead of lower values. Several iterations of forecaster feedback (and higher development priorities) caused this DR to be delayed, and then transformed into a major small enhancement DR. Its expanded requirements now are:

1. To provide users of SAFESEAS with an ability, on a WFO by WFO basis, to choose whether a parameter should be ranked in the SAFESEAS table with higher or lower values emphasized. Parameters which don't have "linear" values (e.g. wind and swell azimuths, composite "product" parameters such as Small Craft Advisory) do not apply -- their ranking setup will not change.

2. To allow users to configure the display and monitor color thresholds with values that correspond to their ranking choices.

These changes are targeted primarily for SAFESEAS, but they will apply to Fog Monitor and SNOW as well, due to the code-sharing between the three applications.

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This DR is submitted as an OB8.3 small enhancement. It is on the June 7 SREC list for proposed OB8.3 additions.

1.17 Aviation

Problem. Aviation - AIRMET Icing and Turbulence Polygons not being connected. (DR 20185)

While testing graphical aviation product test case, have noticed that the polygons appear in D-2D for AIRMET Icing and Turbulence were not connected (refer to screen prints attached). Also for C-SIGMET OUTLOOK product has a bad point of polygon stretch to the left corner of the map (refer to the screen print attached).

Problem: Aviation - AWIPS needs to decode CIP data with subcenter. (DR 19818)

During initial implementation of DCS3457 it was discovered that the CIP grib data was encoded without a subcenter. AWIPS was not able to decode it in that form. The data provider is adding the subcenter. Test data was received, and it was discovered that the model ID is going to be 252 rather than 255. Must change gridSourceTable.template to accommodate this ID for aviation.

Problem: Aviation - User interface updates for grids. (DR 19798)

Some parts of the user interface for the grid portion of the OB8.3 Aviation data project require updating based upon feedback.

These include:

1. Change aviation choices in the volume browser Fields menu to a submenu that comes off of the main menu. Rename 'Turbulence Hazard' to 'Turbulence Index'. Rename 'Supercooled Large Droplet' to 'Supercooled Large Droplet Probability'.

2. Change Volume Browser level choices to have 1000 to 17000 feet under ft MSL, and 18000 to 45000 under a flight level (FL) menu.

3. Change Icing Severity display so that sampling is either whole numbers or words (Trace, Light, Moderate, Heavy).

4. Change Turbulence Index display so that the color bar displays words (Light, Moderate, Severe, Extreme).

5. Change Supercooled Large Droplet Probability so that percentages below zero are filtered out.

Problem. OB8.3 PIT: D-2D Aviation menu is missing. (DR 19709)

The aviation menu is missing from D-2D. It appears that not all of the DR 19521 changes were merged into OB8.3.

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Problem. OB8.3: Move Aviation locationIDs file from baseline to NDM. (DR 19620)

The locationIDs file, containing reference points for aviation advisories, is expected to need changes independent of the AWIPS release schedule. Such a change is expected to be necessary on April 15, 2008 in response to TIN 07-83. This file therefore needs to be added to the NDM file set and removed from the AWIPS baseline in Dimensions. Note that the file (with appropriate instructions) must be added to the NDM first. Only when that is done can the file be removed from the baseline in Dimensions.

This file is located in the baseline in .../D-2D/src/dm/convSIGMET in Dimensions and in /awips/fxa/data operationally.

Problem. Aviation products user interface issues. A number of user interface issues regarding the new OB8.2 aviation products have been identified. (DR 19521)

- 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.

Problem. OB8.2: Aviation: Remove unused menu items. (DR 19339)

There are some entries on the Aviation D-2D menu that are related to products not implemented for the OB8.2 release, and should be removed. These entries 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)**

1.18 Other

Problem. Modifications to files needed to support ispan_table BUOY changes. (DR 20193)

NDBC's products changed to KWNB vice KWBC on April 30, 2008.

The ndm version of ispan_table.template has been updated to reflect the change to KWNB for the products listed in the DM message. (The ispan changes at present are all BOY products.)

However, other awips file changes are needed; some baseline files require changes. The previous list of KWNB products must also be preserved.

These products are:

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afos_lookup_table.dat
MaritimePatterns.txt
acq_patterns.template

Problem. update acq_patterns.template.OCONUS (Ref OB9 20236). (DR 20235)

The acq_patterns.template.OCONUS should change the IUS[TX] to IUS[YZ]. **(DR 20235)**

Problem. The follow-up severe products were being given date based on Zulu time. (DR 20233)

The follow-up severe warning products were being given dates based on Zulu time and not local time. The MND time/day line changed from the original time/date that was in the WRK file that came out of WarnGen.

Problem. Significant levels not plotting for site K1Y8. (DR 20151)

K1Y8 upper air plot is missing significant wind levels. Most other sites works find. It might be file missing.

Problem. Computed values on Skew-T incorrect. (DR 20150)

Beta testing of the skew-T revealed an issue with the calculation of the Bulk Richardson Number (BRN). The BRN is the ratio of buoyancy to vertical shear generated turbulence, with higher values indicating a better chance of convection.

The issue typically appears on the morning sounding when there is a low level (surface) inversion on the temperature curve. In OB8.3, the BRN calculation shows "NONE" whereas in OB8.2 there is a value.

Workaround: None.

Problem. VWP does not show up on OCONUS sites. (DR 20066)

When in OCONUS configuration (except for HFO which has been fixed) Upper Air--> VWP Perspective loads the VWP Perspective for the lower 48.

Problem. OB8.3 RAX: Unable to launch "display_rating table" GUI. (DR 20065)

During my executing 'Baseline_RFC_Archive_Database' test procedure. The "display_rating table" GUI does not appear.

Problem. Purge keys for WAVEWATCH III need to be implemented for AK. (DR 20063)

gridPurgeInfo.txt needs to be updated to include the keys for the AKwave10 and AKwave4 grids which were introduced in OB8.3 DCS 3454.

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These keys were not yet implemented because of the need to accurately match the keys to those generated during localization on a baseline AK platform (TBW4). Also the keys for EPwave10 (Pacific) need to be added.

Also, there are some typos in gridPurgeInfo.txt for GlobalWave, WCwave10, WCwave4, WNAwave10, WNAwave4, IcgTurb. These should be made to match keys in /awips/fxa/data/localizationDataSets/LWX/gridNetcdfKeys.txt.

Problem. OB8.3: Restore reverted changes from DR 17995. (DR 20055)

OB8.2 DR 19122 was intended to revert unwanted changes from DR 16752. The code attached to DR 19122 incorrectly reverted changes from another OB8.2 DR, DR 17995.

The DR 17995 fixes need to be restored in OB8.3.

Problem. OB8.3 PIT: DE: Some levels of Aviation grids do not decode. (DR 19769)

When attempting to display gridded Aviation data, some height levels do not have any inventory to display. This applies to Icing Severity, Icing Probability, and Supercooled Large Droplet for 29k feet and 30k feet; and to Icing Potential for 28k, 29k and 30k feet. The GribDecoder log shows the error "Status Code: 232 Problem creating GribRecord; Cannot find GRIB starting point; Problem with unpacking GRIB".

There are also aviation product decoding errors in the log: "Dimension mismatch 151 113   301 225."

Problem: DE: Missing inventory indication for some Aviation grids. (DR 19768)

For some Aviation products, although the product loads and displays, the Volume Browser inventory box shows blanks (no inventory). This is as follows:

Turbulence Hazard

- Data inventory is blank for values at 25 and 30 kft

Icing Potential

- Data inventory is blank for values at 5, 10, 15, 20, 25 kft, but these worked

Icing Severity

- Data inventory is blank for values at 5, 10, 15, 20, 25 kft

Icing Probability

- Data inventory is blank for values at 5, 10, 15, 20, 25 kft

Supercooled Large Droplet

- Data inventory is blank for values at 5, 10, 15, 20, 25 kft

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Problem. HDB: Unable to launch the Historical Data Browser (HDB) GUI. (DR 19933)

While executing a baseline_rfc_hdb test procedure on lx1-tbDR (s2), when trying to launch the Historical Data Browser GUI received an error: "error while loading shared libraries: libecpg.so.4: cannot open shared object file: No such file or directory" (refer to the screenshot attached).

Problem. RFC: ICP Plot-TS did not work properly. (DR 19992)

ICP plot-TS did not work properly when time series values are negative (less than zero). The plotted data is not visible. It only happens when there are more than one Plot-TS used and the first Plot-TS contains negative time series values.

Problem: NMAP Version 5.11.2. (DR 20007)

This DR will be used to track the software update for NMAP (Version 5.11.2). Steve Schotz will put the tar file on WNOR for Brian Graham.

The next version of NMAP will not be available until May. This will be too late for OB8.3 (SVR 5/30). OB9 will be the home for the next NMAP version update.

Problem. SAC Mod GUI Update GUI to disable Mod Value when toggle check box from on to off. (DR 19601)

Problem. TBW4 HWR Reports do not display AKST AN -- TBW4. (DR 19562)

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

Problem. OB7.2: IGC_Process crashes when swapping pane displaying local warnings. (DR 19348)

If a pane is loaded with "all regional warnings" is swapped out and swapped back in, it will crash (and restart.) The following message is seen in the log:

>   IGC_Process 20008 1186442518.791008 23:21:58.791 EVENT: Swap table
>
>   IGC_Process 20008 1186442964.866155 23:29:24.866 BUG: index [0] out of range in SeqOf.checkIndex, size=0
>
>   IGC_Process 20008 1186442964.866360 23:29:24.866 BUG: Stack tracing capability not implemented.
>
>   IGC_Process 20008 1186442964.866386 23:29:24.866 BUG: Signal 11 (Segmentation violation) received for dirty shutdown
>
>   IGC_Process 20008 1186442964.866463 23:29:24.866 EVENT: Removing process from set
>
>   -----

(D.F., 8/8/2007)

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The root cause of this problem is a logic error in the local warning info sampling code that was added in OB7.2. The conditions that trigger the error are not known, however. It only seems to occur with site MAF's customized localization. The crash does not occur with the baseline MAF localization (tested on nmtw). Nor does it seem to occur in OB8.2 (test on nhda). The logic error is still present in OB8.2, however, and could be triggered by some other condition.

(D.F., 8/13/2007)

Workarounds: Option 1) Do not swap out a pane that contains local warnings. Option 2: Revert to the baseline localization. **(DR 19348)**

Problem. PDC (Station Obs Viewer) does not display any data. (DR 19249)

The Station Obs Viewer (PDC) in the D2D does not display any data, though data does exist. This was traced to inventory troubles. DR 16638 was also traced to inventory troubles, thus this DR was not created back in January, however, it was decided recently to go ahead and create a separate DR for this issue, even though the fix for this will likely be the same as the fix for DR 16638.

After initial testing, this DR was failed, but it is not clear that the testing was valid. Did the tester know how to use the PDC GUI? It takes more than 'click the display button'. Someone who is familiar with HydroView's Station Obs Viewer should test this.

Problem: WFO Archiver Scripts Need A Change For AX Refresh. (DR 19916)

Due to system changes with the WFO Archive Server, the following line needs to be changed in all archive tcl scripts in /awips/archiver/arch_root/scripts/archiver/

        set dfcommand [exec df | grep $devdisk]

This needs to be changed to:

        set dfcommand [exec df -P | grep $devdisk]

Impact will be all the scripts will fail when run until this change is made. The initial scripts will be fixed during the WFO Archiver Installation, however subsequent builds will need to incorporate the change.

Problem: ESPADP is Labeling the Quartile Display incorrectly. (DR 19456)

ESPADP is labeling the quartile display incorrectly. The information in the text display does not match what is actually output to the screen. Specifically, neither the analysis period nor the interval reflect the interval for which the exceedance plot is computed.

This is a public product.

Problem. No PostgreSQL log file on RFC Archive Server. (DR 18949)

Currently, on the RFC Archive Server (RAX) the transaction log for PostgreSQL is written to the System Log File. With time this has made providing support for the RAX more tedious as the complexity of the database issues have increased. I would like to recommend that the PostgreSQL Transaction Log be written to its own file in a fashion similar to the set up for the IHFS PostgreSQL database.

Problem. RaxBase Counties Editor issues. (DR 20197)

The interactive RaxBase utility had 2 issues when trying to save changes to the RAX database's Counties table --

1. The user gets no notification if the GUI is unable to save an entry to the Counties table. It just doesn't save.

2. The text boxes for wfo, state & CountyFips should be option menus which are populated from the wfo_hsa and state tables. Otherwise the user does not know they are foreign keys and that they must match other tables.

Workaround: Make sure that you have at least 4 (County, State, County FIPS, and WFO) of the 5 (Country has a database default of 'US') 'Not Null' columns filled in to be able to save a record to the Counties table. Also, the State and Country FIPS, and WFO must satisfy the foreign key restraint.

Problem. RFC DailyQC Edit Temperature 6-hour times off by 12 hours. (DR 20219)

While doing DailyQC on Temperature, in the Edit Temperature Station window, the 6-hour times are off by 12 hours compared to the temperature values displayed on the map. Logic says that the high temp for the day in California should be near 5 pm (0z), not 5 am (12z).

Problem: RFC Archiver Shefdecoder Incorrectly Testing Data Limits. (DR 18798)

The RAX raw shefdecoder (shef_decode_raw) is performing limits tests on forecast data when IT SHOULD NOT. The code needs to be changed so that limits tests are only performed on data with SHEF Type code of 'R'.

Background: With the current version of the raw shefdecoder, forecast data is having limits tests performed on it and it is possible for the value of the shef qualifier code to be set to an incorrect value.

Problem: WNAWAVE: directions higher than 360 in grid. (DR 19742)

When viewing the WNAWAVE data in GFE using the D2D db type in the weather element browser, some of the directional elements show values above 360 degrees This is obviously incorrect. To compare, the same time and location of the parameter were viewed in D2D and the data was quite different

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I was not sure what app to associate this issue with, so I chose the graphics WS. I did not see a model display category.

Problem: HPE unable to create MAX and AVG mosaics. (DR 19730)

During PIT attempted to change the HPE 1-hr Storm Total Precipitation display from the normal mosaic to ones using an averaging and a maximum technique. Instead, the normal mosaic still appeared to be displayed. The tokens involved are the hpe_generate_list and hpe_base_radar_mosaic. Appears to be an issue in one routine which depends on these to match what the code is looking for.

Problem. LWD: Cancelled warnings remain in local warning display (Ref OB8.2.1 DR 19581)

Once a warning is cancelled, it should be removed from the local warning display. But the warning remains there until its original expiration time. Even if the LWD is restarted/reloaded, the warning will appear. **(DR 19987)**

This is most likely due to the fact the software is reading the lat/lon points from the cancellation statement, which are the last valid points for the warning. The software should also take the VTEC action into account and remove the warning accordingly.

Workaround: None.

Problem. Missing cwsuScaleInfo.txt

The cwsuScaleInfo.txt file is missing.

The cwsuCenterInfo.txt is also missing. **(DR 19964)**

Problem. DHM: System crashes when cancel button is clicked on the SAC Mod window. (DR 19943)

While testing DCS_3474 on LX2-TBDR (S2) - fail on page 22, step 3, when selected 'cancel' button to close the SAC MOD screen, the system crashes (Mods GUI disappears). As a result, unable to continue testing (refer to test procedure attached for more details).

Problem. OB8.3 RAX Processed SHEFdecoder fails to start. (DR 19941)

During executing Baseline Archive test procedure on LX2-TBDR (s2) have encountered that the shef_decode_pro was not running on AX server after executed "start_processed_decoder" script.

Problem. IVP: Incorrect Verification Group Manager GUI. (DR 19952)

While performing regression test of Baseline_RFC_Verify IVP GUI_Test 3 on lx1-tbDR (s2) by following the test procedure attached, have encountered that the "Verification Group Manager" GUI is different from the expected result (refer to screenshot files). On ob8.3 screenshot the GUI does not have "Create Display" button, instead it has "Load Pairs". As a result, I'll not be able to perform step 59 per instructed in the test procedure.

Problem. IVP software not properly constructing observation/forecast pairs. (DR 19874)

A bug in the Interactive Verification Program (IVP) OB8.2 software prevents it from properly constructing forecast / observation pairs. Only a subset of the forecast / observation pairs are properly paired and subsequently included in IVP statistical calculations. Forecasts in the pseudo-array table (peqfsep and pehfsep) with an hourly or longer duration time code are affected. The problem is related to the sorting algorithm not fully sorting the data. As a result, verification statistics computed within the IVP are compromised.

Problem. DCS3459 Warnings issued at 2359Z-0000Z have premature date change. OB8.3 DCS3459. (DR 19928)

A warning was created (ANCSVRAFC) at 2359Z and it didn't get send out until after 0000Z. The time on the issued warning was incorrect and the date advanced even though it was the same day local time (AKST).

Problem. Take out old raob WMO patterns. (DR 19927)

The new RAOB bufr message has started live on 2/11/08 (see attached email). It would be a conflict to have both old and new RAOB bufr message decoded and stored at the same time and same place. This DR will simply take out the IUST and IUSX patterns in acq_patterns.template, but the IUSZ and IUSY patterns.

Problem: OFSSHEF Program Mishandling Missing Data. (DR 18800)

If data is missing, the ofsshef program generates a shef message and uses the value -99.0 when it should be using -9999.0.

Problem: The RFC Archiver SHEF Ref Tables Need Updating. (DR 18797)

The RFC Archive DB tables shefdur, shefex, shefpe, shefpe1, shefpetrans, shefprob, shefqc and shefts need to be updated to include all the SHEF codes that are in the latest SHEF manual (NWS Directive 10-944).

Problem: Add station elevation to point forecast matrices (PFMs). (DR 18626)

The following is from Mike Dion, 13th floor at SSMC2:

Add Station Elevation to PFMs. By specifying elevation, users can better understand the forecast values within the PFM products. This is especially useful in areas of complex terrain where sites that are adjacent to each other may be located at significantly different heights.

Problem: Forecast matrices need to be in UTC instead of local time. (DR 18625)

The following is from Mike Dion:

> Site ID - I am on the 13th floor here in SSMC2, NWS Headquarters. This change would be made to all sites within AWIPS.

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Generation of Point Forecast Matrices (PFM) and Area Forecast Matrices (AFM) with respect to a UTC time label as opposed to a Local Time label.* This modification is important to properly align 12-hr Probability of Precipitation (PoP), Quantitative Precipitation Forecast (QPF) and Snow Amount grids with model guidance and the National Digital Forecast Database (NDFD), which both of which use Coordinated Universal Time (UTC). Satisfying this need will relieve the necessity for hourly grid population in order to ensure local time data is available on a standard UTC hour (i.e., 0,3,6,9,12,18,21).

Problem. Supplementary fix for DR 16836. (DR 17177)

During the unit test process of DR 16836, it is found that additional code changes are necessary to fix the DR 16836. Without the fix for DR 17177, climate report would not be able to report the maximum and minimum temperatures for daily climate report.

Test procedures:

1. Identified a WFO site where there are multiple metar reports during a nominal hour;

2. With the WFO site identified, choose a date where the maximum or minimum temperatures happen from metar reports other than the first metar in the nominal hour.

3. Run the climate report CLI, it should report the correct maximum and minimum temperatures with correct time (hours).

Problem. PDC stops programs from loading after clearing PDC. (DR 16638)

When PDC is loaded then cleared, any programs loaded after clearing PDC will not be able to be loaded (e.g. radar, satellite). Something interesting to note, though, is when loading something from the Volume Browser after clearing PDC, the model selected to be loaded from the Volume Browser will load, but when you clear the model loaded, and then load PDC again, then clear PDC again, then load a model from Volume Brower, the model will then not be loaded. While looking through the logs I found a BUG in the IGC_Process stating: BUG: unable to get composite inventory. There is also an Alert Message that pops and says "No data inventory for (e.g. water vapor, reflectivity 0.5).To sum it up, PDC crashes the pane. The only work around I found was restarting dead panes.

Initial testing failed - but it is not clear that the testing was valid. Was data verified in the hydro data base to begin with? Was it verified that the notificationServer was updated and re-started as expected?

Problem. CL: Revise calculation of 12Z snow depth. (DR 15866)

This is how the daily snow depth for the daily morning climate must work. Morning climate always summarizes yesterday's information:

1. Initialize snow depth to missing. Then,

2. Read the snow depth data from the DSM, if available. Continue if value is still missing..

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3. Read the 12Z snow depth from the METAR (the 4/sss group), if available. Continue if value is still missing.

4. Read the 12Z SCD, if available. Continue if value is still missing.

The same paradigm holds for the intermediate/evening climate products, except that you need to check to ensure that you're dealing with today's observations.

If there is no snow depth in either the SCD or metar, then the default is 0.0 else the default is M missing.

Problem: IRES RaobOA problem. (DR 19751)

The new IRES feature in OB8.3 can present data from any of several models or from an analysis of surrounding soundings. If one selects the RaobOA data package after 18Z or after 06Z before the next round of soundings comes in, the charts will not load, giving a time match error. It's possible to load the previous analysis by selecting Time Options and loose matching. However, if one then wants to see any of the overlays in a different form (e.g., image, streamlines), it cannot be done. Any attempt to load, even with Time Options selected, results in a time match error.

Problem. AF: Update acq_send_parms.sbn on CPSBNs for new IUSY and IUSZ products. (DR 19847)

See DRs 18909 and 19802 for details.

This DR only covers changes to acq_send_parms.sbn for site CPSBN processes in response to those two DRs.

Problem. Fix the RAOB BUFR Decoder to handle decoding of Winds related to original DR 18909. (DR 19803)

The RAOB BUFR decoder does not handle the 6-part RAOB collectives correctly.

Specifically, decoding any IUS??8 (PPDD, winds 100 hPa to term) erases or masks the netCDF's corresponding IUS??6 (PPBB, significant winds surface to 100 hPa – the ones visible on a Skew-T display). As a result, any sounding beyond 100 hPa will show no surface to 100 hPa significant winds in the netCDF or on the Skew-T. (The 12 winds from the TTAA mandatories may or may not be present.)

RaobBufrPattern.txt historically has only included IUST parts [1-2,6] and excluded the three above-100 parts, as an apparent workaround.

This anomaly became visible during 8.3 PIT, when the RaobBufrPattern.txt was modified to test all IUSY and IUSZ collectives for DR 18909, e.g. IUSZ[4-9][1-4,6,8]. The Sig Winds (surface to 100) were not in netCDF and not displayed for any sounding with part 8 winds (above-100).

DR 19802 currently restricts the IUSY and IUSZ input to [1-2,6] until the decoder is fixed.

So the Winds need fixing. Fix the Mandatories if there is a similar problem with masking.

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Problem. Update routing-configuration files for new IUSY and IUSZ collectives. (DR 19802)

Problem. The Volcano locations map appears to be incorrect. (DR 19786)

After looking at the volcanoes mapping issue a bit more, it became evident that the problem is that the first two columns of volcanoes.lpi are swapped. Each entry has longitude, latitude, goodness value, and name. The standard for these is latitude, longitude..., so they're all plotted in the wrong locations.

Problem. OB8.2: Inconsistencies in sunRiseSet utility. (DR 19619)

The sunRiseSet utility does not update it's 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.

Problem. Modify the MDL - ADAPT application routines to be compatible with the OB8.3 PostgreSQL version (8.2). (DR 19617)

Modify the MDL ADAPT application routines to be compatible with the approved OB8.3 PostgreSQL version (8.2).

Problem. Missing GRID130RUC13.html file. (DR 19523)

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**.**

Problem: VWP perspective is not show up for HFO. (DR 18931)

HFO reported the problem:

> Upper Air -> VWP Perspective not available for HFO (state scale don't get any map, just the bar/sticks for measurements on the screen.

When TBW4 localized for Alaska, we can reproduce the problem.

I tested the problem in lx1-napo (localized for AFC), when I start D2D -> Upper Air -> VWP Perspective not available for AFC. AFC has the same problem as Gloria reported for HFO.

Problem. OB7.x LAPS Installed In Wrong Directory. (DR 18883)

A site reported that they had two laps bin directories:

> /awips/laps/bin
> /awips/laps/bin/bin

The executables in /awips/laps/bin/bin were time-stamped more recently than those in /awips/laps/bin. It was found that OB7.1 and OB7.2 installed new LAPS executables into the incorrect directories. This has already been fixed in OB8.1.

Operational impact is none, as there were no DR fixes in OB7.1 or OB7.2 for LAPS. Sites have not reported any problems using LAPS.

Workaround: Copy all files frop /awips/laps/bin/bin to /awips/laps/bin on px1 and px2, then run a laps localization on each server.

Problem. LS: LAPS Localization doesn't start if different users execute it. (DR 15003)

When a user different from the one that previously ran the LAPS Tool domain relocalization clicks the "Localize Laps" button, a tcl error appears. It indicates that touch cannot create a lock file under /data/fxa_local/laps_domain. The /data/fxa_loca/laps_domain directory is owned by the user who previously ran localization and has 755 permissions. Therefore, no other user can change items under this directory. The directory doesn't appear to go away after localization completes.

Workaround: The only workaround appears to be to remove the directory and try again.

2.0 HYDROLOGY

Problem. Hydrologic IFP Scale Problems (8.3 Beta). (DR 20145)

IFP for the hydrology software is having problems trying an SACMOD Interface. The problem appears to occur when the segment's name has fewer than 8 characters.

Problem. OB8.3 OHD- Erroneous HPE 1-HR Precipitation Product Noticed at EHU Alpha site and on NMTR localized to WGRFC. (DR 20090)

The HPE STP product (1-Hour precipitation) was still reporting 1-hour rainfall totals for several hours after precipitation had passed. These totals were being reported primarily under the DYX radar umbrella. The HPE PR (Precip Rate) product was clear during the hours when this area of rainfall was being reported and time lapse of other radars confirmed that the STP product had a problem. Subsequent investigation by OHD/HSMB after examining the DYX DSP (Digital Storm Total Precipitation) products revealed that the problem is related to higher-scale factors used in the DSP product during the fairly large precipitation amount event that occurred over the area March 17-19. This could therefore be a significant problem during other such events, e.g., when tropical cyclones come ashore.

Problem. OHD- DailyQC disagg can cause MPE_Editor to crash. (DR 20077)

The MPE_Editor crashes and disappears when Save Level 2 Data is selected from the Gage menu under the following conditions:

The disagg function in DailyQC for Precipitation allocates buffers based on the initial value of the token mpe_dqc_num_days (usually set to 2). However, the user can dynamically change the mpe_dqc_num_days as high as 10. This could be causing it to write data outside the allocated buffer.

Problem. OB8.3: OHD: Raxbase utility - Sensok edits not displayed. (DR 20053)

Problem. OB8.3: OHD- MPE Editor split screen menu does not match. (DR 20050)

Problem. River Monitor location tree data problems. (DR 20033)

The River Monitor location tree does not update after modifying the location data (either by adding or removing locations from a group) until River Monitor is relaunched. They are supposed to end up in the appropriate default group (according to HSA). Also, changing the location ordinal has no effect on the location tree. The locations are supposed to be ordered according to their location ordinal, but the locations are in alphabetical order in the tree.

Problem. River Monitor crashes when launched. (DR 19954)

When the River Monitor hyDRoapp is launched, the application returns a NullPointerException and crashes. Although this was first discovered on TBW3, the problem has occurred on all of the other testbeds following the installation on OB8.3 (TBW4, TBDR and TBDW).

Problem. OHD raxbase: 2 menus disabled, Rating/Shift unresponsive. (DR 19948)

While testing the OHD raxbase utility on TBDR, the following items were found:

1. Two menus are grayed out and disabled (Reference and NWSRFS),

2. On the SyncDBs menu, Rating/Shift was unresponsive -- it gave no indication that it was processing, and no notification to the user of any positive or negative results.

3. When token 'pghost' was set to the wrong server, any attempt to use a selection from the SyncDBs menu caused the program to crash. A diagnostic warning would be more aesthetically pleasing.

Problem: HydroGen adds 1000 cfs when converting discharge data from cfs to kcfs. (DR 19740)

The HydroGen application retrieves observed and forecast river data from the hydro database and writes it to XML-formatted files for transfer to regional Web servers. Observed discharge data are stored in the hydro database in units of cubic feet per second (cfs). When the HydroGen application retrieves observed discharge data from the hydro database, it converts the units of the data to thousands of cubic feet per second (kcfs). So a data value in the database of 1000 cfs should be converted to 1 kcfs when written to the XML file. However, the HydroGen application is adding another1 kcfs to all observed discharge data when writing the data to the XML file. Therefore, the 1000 cfs value gets written to the XML file as 2 kcfs, not 1 kcfs.

This has negative impacts on the presentation of data to downstream users. The XML file is used by the Regional Web servers to construct hydrographs of observed and forecast river information. These hydrographs are then used by many outside users to understand the current and forecast river conditions. We are presenting incorrect information to our users.

Problem. OB7.2: HydroBase Flood Report Time Series missing Horizontal Scroll Bar. (DR 18790)

Within the HydroBase application, there is a function that displays flood event time series. The flood event time series is defined as the last observed value below flood stage (prior to the flood), all observed values above flood stage, and the first observed value below flood stage (after the flood). The flood event time series is presented in both a tabular format and a graphical time series format. If the flood event is a long-lasting flood event, the graphical time series should have a scroll bar which allows the user to scroll through the entire duration of the flood event. This scroll bar is missing. It was available in Build OB6 and before.

The flood report function assists Service Hydrologists in reviewing recent flooding and completing various monthly hydrologic reports. The user can view the data in tabular format.

Problem. PRODGEN can't find the existing files. (DR 18867)

All these files do exist in the /awips/hydroapps/lx/rfc/nwsrfs/ffg/files/oper/text/ DIRECTORY, but get ERROR Message:

ERROR: in fixopn - upopen status code -1 encountered opening file /awips/hydroapps/lx/rfc/nwsrfs/ffg/files/oper/affg/THTC2U. **(DR 18867)**

Problem. OB7.2: RiverMonitor displays old forecast data. (DR 18824)

The RiverMonitor application allows the user to display, in tabular form, a column of information which provided the maximum forecast value for a given location. Also, another column will display the Maximum of either the most recent observed value or the forecast value. However, there is not time filter on this column, so the application can display old forecast or observed data without presenting a visual cue to the user that the data is old (as is done with other columns of data in the application). Also, if this old data is greater than flood stage, the tabular cell displaying the data will be colored red, providing a false indication to the user that there is flooding occurring/forecast to occur.

These two columns of data--MaxFcstValue and ObsFcstMax--should allow the user to create time filters which consider both the valid time of the observed and forecast data, as well as the basis time of the forecast data. If the data is older than the user-defined time filter specifications, then the tabular cell displaying this data should either be colored gray, following the paradigm used by other data columns, or the data should not be displayed at all.

Problem. OB83 PIT: RiverPro VTEC graph doesn't update with text field time changes. See main description. (DR 19748)

Problem. OB83 PIT: RiverMonitor gives false alarms if thresholds not set   (DR 19747)

Problem. Increase hyDRoapps partition size for EMPE. (DR 19634)

A Request for Change was received to increase the /awips/hyDRoapps size for the Enhanced Multi-sensor Precipitation Estimator (EMPE). An increase of 1.5 GB at WFOs and 5 GB at RFCs is requested for additional data that this application will be storing.

Problem. OB7.2: HyDRobase crashes when writing saving flood report to a file. (DR 19271)

The HyDRobase application allows a user to view time series of flood events and if desired, save that information to an ascii text file. These flood event time series are constructed via background job that runs once a day and compares observed values to flood stage for a given location. If the observed data are equal to or greater than flood stage, the observed data values are copied to a separate table in the database. This table is called floodts.

If the flood stage for a river gage has been deleted from the database after flood events have been written to the floodts table, the flood events will still show up in the HyDRobase GUI. However, the flood stage will show up as being undefined. If the user attempts to write the flood events to a file, the HyDRobase application will crash.

Problem. Small Enhancement: Add ability for user to easily define VTEC Times in Riverpro. (DR 19034)

The Riverpro application derives the times which appear in the P-VTEC and H-VTEC lines of a product by analyzing observed and forecast river data to determine when the river rises above flood stage, crests, and falls below flood stage. Users would like the ability to have the option to change one or more of these times via a graphical user interface. Specifically:

Within Riverpro, the user will have the option to select individual forecast points and display a time series of observed and forecast data for those locations, as well as a graphical user interface which allows the user to manually define any one of the 5 VTEC times: 1) P-VTEC Event Begin Time, 2) P-VTEC Event End Time, 3) H-VTEC Rise Above Flood Stage Time, 4) H-VTEC Flood Crest Time, and 5) H-VTEC Fall Below Flood Stage Time. When the user manually defines any of the VTEC times via this interface, the Riverpro product creation software will implement these times in the VTEC coding of the product in place of the recommended times analytically derived by the application. Upon product issuance, these user-defined times will be written to the database as the appropriate VTEC times for that location.

Problem: River stage obs/forecast monitor program does not ignore missing val. (DR 19274)

Within the hydro software component is an application that compares forecast data to observed data. If the difference between observed and forecast data exceeds a user-defined threshold, the user is notified of this deviation.

Currently, if there is forecast data in the hydro database with data values of MISSING (i.e., -9999), the application still uses that data to compare against observed data. As a result, the users are notified of deviations when they should not be. The application currently checks the observed data values to see if they are MISSING, and if so, they are not used in the evaluation. The same check should be done for forecast data.

Problem. OB7.2: Observer Information Displayed improperly in HyDRoBase application. (DR 18796)

The HyDRoBase application allows the Service HyDRologist to record information about observers which support the HyDRology Program. One of the pieces of information is an address for the observer. The address field is broken into 3 distinct lines. Currently, the information in the 3rd address line is displayed in the first address line, as well as the 3rd address line. The proper information for the first address line is stored properly in the database, it is just not displayed.

This problem did not exist in earlier builds.

Workaround: None known.

Problem. OB7.2:HyDRoBase fails when accessing HyDRoGen window if hgstation table is empty. (DR 18791)

A new piece of functionality in OB7.2 allows the user to access the hgstation table in the hyDRo database from the HyDRoBase application. The hgstation table contains the list of all river locations for which the HyDRoGen application will generate XML files. These XML files are then passed to the regional web servers which display observed and forecast river data.

Problem. HyDRo/VTEC OT&E: WMO id incorrectly inserted into MND header upon SEND from textWS. (DR 16627)

During HyDRo/VTEC OT&E testing, while in TEST mode and issuing either an FLW or FLS product, the product looks ok when created but when you hit SEND and OK at the stop sign, you get an error because the WMO header info was inserted into the MND header. Closing and restarting D2D and the textWS stopped the problem.

Problem. HyDRo/VTEC OT&E: lx1-tbw3 experience a SLO. (DR 16621)

During HyDRo/VTEC OT&E testing, lx1-tbw3 experienced a spontaneous log out (SLO) while running WarnGen Areal Flood Warning Scenario for immediate cause (IC) set to ice (IC). All lx3 display logs have been saved to /data/local/lx1_SLO. This is the first reported SLO in a long, long time.

Problem. HyDR/VTEC OT&E: The product expiration time range is shorter than expected. (DR 16599)

During HyDRo/VTEC OT&E testing, discovered that the expiration (EXP) action is not available at the 10 minute mark but it was available at the 9 minute mark. The times are prior to the expiration time in the product. It appears that the EXP action is available at +9 mins to -9 mins rather than the expected +10 mins to -10 mins. (during testing of FLS on lx3-tbw3) .

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3.0 LDAD

Problem. LDAD Script Updates Updated scripts for LDAD install (DR 19701)

Problem. IND: LDAD trigger problems resulted data loss. (DR 19265)

Occasionally, multiple text products with same product ID can come in a split second, or the products can come in the same hour and the same second. The LDAD trigger uses yyyymmddHHSS time stamp to name the products for LDAD dissemination. This often results in multiple products with same product ID coming in the same second or the products coming in in the same hour and same second are left with the latest one and the rest of the products are written over

Problem: LDAD RSH to SSH conversion rsh commands converted to ssh commands. (DR 19700)

Problem. Time Duration label in Basin Table not rounding properly. (DR 19691)

The 'scale' tcl widget (part of the tcl library) does not round its label properly. We need to remove the scale label part of the widget and make our own, to ensure it is rounded properly. This only affects the label and only for certain values. For example: When the value is 2.75, the label is 2.8. When the value is 2.5, the label is 2.5. When the value is 2.25, the label is 2.3.

Problem. User ldad processes remain running after px2apps halt. (DR 18482)

User ldad processes remain running after px2apps halt

After the px2apps have been halted, some user ldad processes remain up on PX2. The following three processes are the culprits.

> /awips/ldad/bin/listener
>
> /awips/ldad/bin/watchDogInternal.sh
>
> /awips/ldad/bin/pollForData.pl

I have verified that this does not occur in OB7.1.

MK 3/23/07: Additional info from Sean Webb from canceled duplicate 18804: The listener executable is started via px2apps when it launches startLDAD.csh. However the stop portion of px2apps launches stopLdadIngest, which does not handle the listener, among other things. Looks like stopLDAD.sh should be run in the px2apps stop section. This script will handle the stopLdadIngest function as well as the other ldad processes started via startLDAD.csh.

4.0 SYSTEM

The following Discrepancy Reports (DR) have been fixed in AWIPS OB8.3.

4.1 Product/Process/System Monitoring

Problem. OB8.3: mkdirs.csh needs lines commented out. (DR 20119)

VUY noticed in their log output the following error:

> DR: Command not found.

This stems from lines 48 and 49 within /awips/fxa/bin/mkdirs.csh:

> DR 19834 OB8.3   02/13/08 Create HI-NamDNG5

> DR 19836 OB8.3   02/13/08 Create PR-NamDNG5

These lines should be commented out:

> #   DR 19834 OB8.3   02/13/08 Create HI-NamDNG5

> #   DR 19836 OB8.3   02/13/08 Create PR-NamDNG5

Problem. OB8.3: installNWRWAVES.sh has incorrect filenames. (DR 20118)

At the end of installNWRWAVES.sh, there are a couple of lines that need to be fixed:

```
chmod 664 UGClookup.table
chown fxa:fxalpha UGClookup.ini
chmod 664 VTECrank.table
chown fxa:fxalpha VTECrank.ini
This should instead read:
chmod 664 UGClookup.table
chown fxa:fxalpha UGClookup.table
chmod 664 VTECrank.ini
chown fxa:fxalpha VTECrank.ini
```

Problem. handleOUP.pl puts tab characters in header. (DR 20117)

Changes for DR 16540 introduced tab characters into the message header. This causes problems when issuing products.

Workaround: Remove tab characters from this line in handleOUP.pl:

> $awipsWanHeader = "\t\t$wmoHeader\t\t$NNNXXX\n";

Note: BOU also reports that changes in the log messages (also part of DR 16540) break their local applications that scan the logs. **(DR 20117)**

Problem. ssh to ls1 prompts for "yes/no". (DR 20210)

When VerifySshKeys.sh is run, the ls1 entry is not added to the known_hosts file. This prevents passwordless ssh to ls1 the first time it is attempted, because the user is prompted with a "yes/no" question to accept the key.

There is an error when VerifySshKeys.sh is run when attempting to rsh to ls1. This error occurs because of the firewall rules in place for communicating to ls1 does not allow rsh commands. So a workaround will need to be placed in VerifySshKeys.sh to put the ls1 key into place.

Also, if the key is missing, logic needs to be added so ls2/ls3's key is identical, so it doesn't matter to which device ls1 is pointing to.

Problem: VerifySSHKeys needs to be adjusted to take into account ls2/ls3 servers. (DR 19810)

The VerifySSHKeys.sh script does not acknowledge the addition of the new ls2/ls3 ldad servers. This causes a problem when a site that has installed the new servers and is running in mode B, runs VerifySSHKeys -- it will fail the cksum argument at the beginning and also attempt to update the incorrect path for root's ssh keys. For example, on HPUX root's keys are under /.ssh/ and in RHEL4 it is under /root/.ssh/

The impact to the problem would be that sites need to be in Mode A to run VerifySSHKeys and then employ a work around to update the keys on the ls2/ls3 servers. This workaround will need to be created and documented.

Problem. /data/logs/ is frequently filling up. (DR 19635)

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

Problem. OB8.2: Mozilla screen displays SNOW process status incorrectly. (DR 19509)

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

Problem. OB8.2: PX2's ingProcMon does not start on PX1 when failed over. (DR 19485)

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.

Problem. HyDRoGen Manager wont open through D2D TBDW. (DR 19484)

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

Problem. OB8.1 - AF: duptext uplink_send process crashing on dx1f. (DR 19443)

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.

Problem. OB7.2 - AF: Create program to monitor logs for ITO. (DR 19371)

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. Since 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.

Problem. OB 8.1 - AF: Create generic program to perform operations at all sites. (DR 19370)

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.

Problem. GYX: Mozilla Browser incorrectly reports SNOWprocessor dying every minute. (DR 19200)

AWIPS Process Monitor Browser log indicating the SNOWprocessor is dying every minute when it is in fact not. The log showed the 'DataController COMMS_ROUTER SNOWcontroller.co.' process died every minute. This error could happen to FogMonitor process too as 'DataController COMMS_ROUTER FMcontroller.conf' died every minute.

4.2 Radar System

Problem. Radar: Bad Model ENV data crashes RPG/SPG. (DR 20158)

Recently we noticed several RPG/SPG crashes after receiving a model ENV data from NHDA. The model ENV data uses more than 197 MB memory and causes the cm_tcp killed. The same problem (cm_tcp being killed due to the high memory utilization) was also reported at Denver (RPG connected to FSL) and KEAX (RPG connected to CRH AWIPS).

One case on NHDA is related to the disk fill-up. When /data/fxa is 100% full, the environment data file in /data/fxa/radar/environData might not be properly written. For example, the size of file 20080411_010004.klwx is 0. When ORPGCommsMgr reads this file, the msg length is decoded as -16777217.

The ORPGCommsMgr should be improved to handle the 0-sized file properly.

Problem. OB8.2/OB8.3: radar bias table sent to RPG from dx3. (DR 19985)

We have surveyed many OB8.2 and 8.3 systems at HQ and in the field and have discovered that the radar precip bias table is being sent twice an hour via cron from dx3. This is incorrect. It should only be sent via cron from dx2 (dx2apps). The problem is that ingest.crontab.dx3, which is used to build crons for dx3apps, contains a cron job (sendEnvData.pl) which should only exist in ingest.crontab.dx2. The effect of this is that the radar bias table is being sent to the site's RPG four times an hour (versus only twice an hour which is the baseline requirement). That cron entry (sendEnvData.pl) in ingest.crontab.dx3 must be removed.

Problem. OB7.2 RadarMsgHandler priority level messages sent to GUARDIAN reassessment. (DR 18767)

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.*

Problem. OB8.2: Radar - Problem with sendOTR.cfc.sh script. (DR 19680)

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.

Problem. OB8.3: RadarTextDecoder dies when failed over. (DR 19616)

Problem. Complete WSR-88D CFC Product Transition. (DR 18765)

The CFC product changed with the ORDA project. The difference is the elimination of channel and notch-width and the increase to five elevation segments. AWIPS currently supports the old and new versions of the CFC product and the product version number is used to distinguish between them. To complete the transition the following is required: a) Modify Request GUI to remove the selection of channel; b) Modify the Version 1 display to remove the annotation of "Channel" in the upper left corner; c) Modify the one-time-request cron job to request 5 types of CFC instead of 4 (i.e., each of the 5 segments instead of both channels of the 2 elevation segments). Also, suggest modifying the default setting for the OTR time request for CFC to "latest", and the display selection menu to be able to choose specific elevation segments (segment 1 through 5, segment is analogous to elevation angle).

Operational Impact: AWIPS users, external users, and NCDC archives will not have information on how the RDA is clutter filtering radar data at elevation angles above 1.6 degrees. Therefore, excessive clutter filtering could unknowingly be active during significant weather which can lead to severe underestimation of storm intensity and rainfall accumulation.

Operational Workaround: None.

Problem. Radar inventory is broken. (DR 19958)

Changes in DR 19255 broke the radar inventory parameter system. This makes it impossible to use the Time Options to loop through products with the same parameters. GSD reports that it also prevents DUA products from ingesting properly.

Problem. Improve Radar Watchdog (Ref OB8.2.1 DR 19675). (DR 19873)

The initial radar watchdog implementation did not consider the actual volume scan time and, thus often report failures when there were none. (DR 19550)

It is necessary to revise the requirements and design in order for the radar watchdog to be useful.

Problem. Disable Radar Watchdog (Ref OB8.2 DR_19672). (DR 19686)

The initial radar watchdog implementation did not consider the actual volume scan time and, thus often report failures when there were none. (DR 19550). It is 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**.**

Problem. Three parameters of the 5km NAM DNG data can not be displayed in D-2D. (DR 20144)

The following parameters of the 5km NAM DNG data can not be displayed in D-2D:

3-hr Maximum Temperature

3-hr Minimum Temperature

3-hr Total Precipitation.

Problem. Puerto Rico NAM DNG: change the grid designator of the wmoid to a "C". (DR 20068)

Need to change acq patterns in order to handle NCEP changes for WMO header of Puerto Rico NAM DNG data flow. **(DR 20068)**

Problem. Enhancement of sending environmental grid data to Radar ORPG. (DR 19492)

Environmental grid data have been sent to ORPG every hour as a cron job since OB7.2 (DCS3277 implemented by GSD). The hourly RUC model data are used for CONUS site. RUC40 is currently used and will be replaced by RUC13 when RUC13 is available on SBN.

For OCONUS sites, other model data must be used because no RUC model data are available for OCONUS. The candidate models for OCONUS sites are GFS model (6-hour interval) and NAM12 model (3-hour interval).

On NAPO, GFS212 (6 hour) and NAM12 (3 hour) have been tested. Both GFS212 and NAM12 are received 4 times a day (00Z, 06Z, 12Z and 18Z). When using GFS212, at 04Z-09Z, 00Z6H (6 hour forecast of 00Z) is sent to ORPG; at 10Z-15Z, 06Z6H is sent; at 16Z-21Z, 12Z6H is sent; at 22Z-23Z and 00Z-03Z, 18Z6H is sent. When using NAM12, at 02Z-07Z, 00Z3H is sent; at 08Z-13Z, 06Z3H is sent; at 14Z-19Z, 12Z3H is sent; at 20Z-23Z and 00Z-01Z, 18Z3H is sent.

Mike Istok thinks this scheme can be improved. When using NAM12, at 05Z-07Z, 00Z6H is better than 00Z3H; at 11Z-13Z, 06Z6H should be used; at 17Z-19Z; 12Z6H should be used; at 23Z, 00Z and 01Z, 18Z6H should be used.

It is found from the source code that the desired valid time is derived from the latest netCDF. If the forecast file arrives late for several hours due to network problems or power outages, the environmental grid data sent to ORPG might be even farther away from the ORPG desired time. A fix is ready to be tested and can improve the scheme no matter what model is used.

Note: When switching to NAM12 model from RUC40 on NAPO, the size of the environmental grid data increases a lot. Due to the high resolution, the clipping size is increased to 70 x 70 from 22 x 22. The storage specified in the RPG side can not hold the large environmental data and RPG crashed. This problem has been reported to ROC and a fix is ready in ORPG Build10. To avoid the RPG crash when testing this DR, be sure to install the RPG fix first or disconnect the RPG temporally.

Problem. Radar products can be lost without any alarm. (DR 19180)

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 these 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.

4.3 System Process/Log/Purging/Localization

Problem. localization file copies. (DR 19755)

In the new FFMP (OB8.3), the localization has been made independent of machine and even independent of CWA. This means, when a localization is done on one machine, some files should be copied to the rest. This issue has been known for a while, but it was debated whether to simply have this copy be a post-localization step, or to include the copies in the FFMP localization scripts. Independent Alpha testing at LOX indicates we should probably make this automated, as, on occasion, a relocalization could change these copied files in a way that makes FFMP not fully operational. Work around is to manually copy the files.

Problem. Add OHD ingest directories to localization script. (DR 19640)

Two new ingest directories need to be created for OB8.3. They are

> /data/fxa/ispan/hdhr
> /data/fxa/ispan/hdsp

These should be added to the mkdirs.csh script that gets run during a -dirs localization so these necessary directories are part of the ingest baseline.

Problem: FFMP:relocalization and directory cleanup. (DR 19905)

FFMP's localization script is supposed to delete directories for data sources that are no longer defined (i.e., they were defined in the past, but removed from FFMP). This deletion is not working for non-QPE data source directories in FFMP. There is no negative operational symptom of this bug, other than a minute amount of clutter in the ffmp data tree.

Problem. The .station localization will not pick up new changes to the usa_cities shape files. (DR 17997)

For certain applications (primarily MDL developed applications), the site run a .station localization. This localization is supposed to pick up any changes for the usa_cities shape file

and the resultant CitiesInfo.txt file. Therefore, certain MDL application (LSR, SCAN and maybe others) will not be picked these changes.

Problem. RF OB6 XNAV segmentation fault. (DR 17862)

After selecting Data, then Radar Precipitation from xmrg files the 1 Hour Radar, then "Since 12Z" and image is displayed on the screen. If you click the middle mouse button while the pointer is near the upper right-hand corner of the image, the program crashes with a segmentation fault. (r27-28).

Problem. IFPS log files not purging. (DR 17431)

Mark Mathewson and I were looking on tbw3 and noticed that it looked like some ifps logs are not getting purged. Maybe this is an artifact of moving processes around and these are orphaned, but it does look like some of the logs are as recent as yesterday. How many days of logs should be available? What should things look like normally? /awips/ifps/primary/bin/clean_up.sh is not running. It should be running from a cron job.

Problem. The category 1 (large cities) do not appear in the pathcast section (4th bullet) for line of storms. (DR 17358)

The category 1 (large cities) do not appear in the pathcast section (4th bullet) using the line of storm option. Only category 2 (mid-size cities) or 3 (small cities) appear. Category 1 cities do appear if using the single cell option. WFO BGM wrote Trouble Ticket 249997 on this problem, but Mike Rega confirmed the problem on one of the NMT systems.

4.4 Install

Problem. upgrade heartbeat to 2.0.8-2. (DR 19432)

As a result of the approved BCR 20, heartbeat will be upgraded in AWIPS to 2.0.8-2 to match the heartbeat needed and installed on the new LDAD servers.

Problem. GFE masterGFEInstall fails for AFC. (DR 19910)

The masterGFEInstall script fails when attempting to install as AFC. The traceback reveals a "KeyError: 'mhsid'" error. Took a look at the script, and found that the INSTALLCONFIG_AFC array definition, the first element of the array is missing a 'mhsid': '' key, like all the other elements have in that array. The default INSTALLCONFIG and INSTALLCONFIG_RFC both have mhsid in all elements, which is why we haven't seen the problem until install on TBW4 for AFC.

Problem. OB8.1: Heartbeat hangs when stopping dx4 apps during postinstall. (DR 19925)

Originally fixed in DR 17546, the problem has returned. During the postinstall script for any install, dx4apps are halted after dx3apps. The stopIngest.dx4 script incorrectly sshes to dx3f,

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instead of dx4f, to announce that the package is down (via call to fxaAnnounce). Because dx3f is inaccessible, the script hangs at this point.

Workaround: Manually kill the ssh processes that launch the announce process. But regardless, this problem is artificially increasing the installation times at all sites.

Problem. OB7.2: Simpact Freeway software not installed correctly on DXs. (DR 19383)

While trying to get radar dial-out to work at SJU, a number of problems were found that appear to affect most sites:

1. The DXs do not have "simpact1" and "simpact2" in /etc/hosts (SJU only?)
2. /opt/freeway/bin is not writable by user fxa. This is needed because dialConfig.sh and the like change to this directory to run x25_manager scripts. x25_manager needs to create two log files, tsilog and tsitrace. If it can't do that it will fail without saying why.
3. Simpact files in dx1:/awips/fxa/bin are broken symlinks. This will be a problem during failover.

Workaround: Manually correct the problems.

Note that radar dial-out still does not work at SJU. The root cause is still being investigated.

(D.F., 9/14/2007)

SJU corrected a wiring problem at the site and they are now able to use dial connections. This DR only needs to correct the three issues listed above.

4.5 Text and Graphic Workstation

4.6 General

Problem. Scatterometer monitor update. (DR 19754)

When monitoring was added for the new ASCAT scatterometer winds, the Description field was inadvertently set to SSM/I. This duplication results in no monitoring of SSM/I data and mis-tagged ASCAT monitoring. Other scatterometer-related items that should be addressed are 1) the generic Scatterometer Winds name for QuikSCAT should be changed to QuikSCAT Winds, 2) timeouts for these two datasets should be reduced, since the data arrive typically every 90 minutes or so - 2h and 4h are probably reasonable choices.

Problem. gray out ASCAT entries. (DR 20123)

Task of this should gray out these two entries in D-2D

> obs-->Other Maritime Plots-->Scatterometer Winds-->ASCAT Winds 25km

> Satellite-->Derived Products Plots-->Scatterometer Winds-->ASCAT winds 25km.

Problem: aqc_wmo_parms.sto file discarding necessary data. (DR 20017)

In OB8.3, a site-specific acq_wmo_parms file was created for STO, so that it would ingest data specific to HFO for backup purposes. However, this was implemented by copying the HFO file as the STO file. STO needs its original full suite of products, but the sto override file replaced the baseline, and only added hfo specific products. Presumably this was done via a "CLEAR ALL" command in the file. This needs to be remedied so that STO not only has its baseline products, but also adds in the products needed to backup HFO.

Removed STO, MLB, MFL, and MTR acq_wmo_parms files from build. The only effect of this DR should be the inclusion of code 20,30,50,70,90 products, which includes Polar Vis/IR.

The fix should be easy: Get the legacy SW color table entries from radarImageStyleInfo.template (keys 12205-12320) and add them to tdwrImageStyleInfo.template

A -radar localization is needed to test the new color table.

Problem: fxa environment errors cause mail file to fill /var on AX. (DR 19937)

OB8.2 WFO sites have experienced a problem with the /var directory on the AX (archive servers) filling. OB8.1.x sites do not exhibit this problem.

The root causes are error messages when you switch to the user fxa (su - fxa from root on the AX). The messages are as follows:

>   grep: No match.

>   PROBLEM: ifps-main.env not found

The errors are e-mailed to the fxa mail account every time a cron kicks off for user fxa on the archive server. Eventually, the /var directory will grow, and has the potential to fill to 100% and cause system problems should the problem not be recognized.

The cause of the issue sits in the /awips/fxa/readenv.[c]sh scripts.

Workaround: Null out the /var/spool/mail/fxa file when the free space in the directory is at a minimum. Warning: This workaround will erase all valid e-mails to the user fxa.

Problem: AF:Change the utility to compress log files both at NCF and sites. (DR 19639)

Currently the compression utility being used to reduce the size of the log files at sites and NCF is compress. The compression ratio of compress utility is lesser than gzip (utility for compression). Gzip is more effective and popular than compress. So removeArchives script will be modified to include gzip rather than compress utility to compress log files.

Problem. GFE stores checksums in build tree. (DR 19752)

The correct functioning of the GFE release process depends upon checksum files in the build tree. A process is needed for generating when they do not exist for a new release.

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Problem. GFE: MergeHazards has typo which prevents it from appearing in the Hazard menu. (DR 19741)

A comma is missing from the end of the SE.A entry in the file which prevents this necessary procedure from appearing in the Hazards menu. Therefore MergeHazards is unavailable to forecasters.

Problem: GFE: No baseline smartInit for WW3 model. (DR 19739)

No smartInit exists in /awips/GFESuite/primary/etc/BASE/smartInit/ for the WNAwave4. This causes the test case OB8.3-3473 to fail.

Problem. PIT Testing:Raxbase Rating Curve Editor Not Saving Changes. (DR 19731)

The following failure occurred during PIT Testing on the NHDA system.

When testing the "start_raxbase" script the Rating Curve Editor FAILED to save the changes made to the test rating curve.

Problem. OB8.2.1 - AF: Add Polar Vis/IR WMO headers to OCONUS specific config files. (DR 19726)

Modify src/co/acq/acq_scripts/acqparms. and acq_wmo_parms., where 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 sites get the East entries; West sites get West entries.
OCONUS sites (and their backups) have individual versions of the files acqparms. and acq_wmo_parms. that are needed to be modified to allow the Polar Vis/IR products to be processed by the site CP SBN servers.

DR Classification:

> Assigned Analyst: Sathya Sankarasubbu
> Development Completion Date:31-OCT-2007 00:00:00

Code Changes:

> Corrective Action/Testing Instructions for Approved Baseline Release:

Check for the appropriate GOES products (EAST & WEST) by executing grep command for the pattern matching WMO headers (as specified in detailed description) in the log files on downlink CP.Log files are located under /data/co/logs/Products/cpsbn<1or2>-/sbn_proc1/mcProduct.log

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GOES EAST products are received only by the testbeds that are localized for sites like mfl,mlb,sju. GOES WEST products are received by the testbeds localized for western region sites (like Alaska and Hawaii).

Add acq_wmo_parms for mlb, mfl, mtr, and sto to the acq_scripts Imakefile.

Problem. NCEP/HyDRo Menu has too many items (Ref OB8.2 DR_19646). (DR 19683)

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.

---- (D.F., 11/28/2007)

Received additional comments: Item #2 in the above description is no longer needed.

---- (D.F., 11/29/2007)

Initial check-in had incorrect indentation for #include statements so some of the submenus disappeared. The crash-on-empty-menu seems to be an existing bug in D-2D, but this should not be a critical problem because there are no empty menus in the baseline.

Problem. OFSDE: Incorrect values output to file VL2V5.BUF. (DR 19681)

Randy Rieman confirmed this problem is a pre-OB8.2 issue.

OFSDE processes real-time data from the postgres database and outputs a file 'vl2v5.buf' which is read by the OFS BATCHPST process.

But NCRFC found that when processing FcstHeight table records, OFSDE reads the correct records from the database, but writes wrong values to output file 'vl2v5.buf'.

Such as:

The ofsde log '/awips/hyDROapps/lx/rfc/nwsrfs/ofsde/logs/ofsde.112620071440'

processing FcstHeight table records

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record = GRFI2 HG 0 FZ Z -1.0000 2007-11-27 12:00:00 2007-11-26 12:00:00 16.100000 Z 1879048191

WRITING DATA TO VL2V5.BUF --- GRFI2 200711271200 STG 15.83

record = GRFI2 HG 0 FZ Z -1.0000 2007-11-28 12:00:00 2007-11-26 12:00:00 16.100000 Z 1879048191

WRITING DATA TO VL2V5.BUF --- GRFI2 200711281200 STG 15.82

record = GRFI2 HG 0 FZ Z -1.0000 2007-11-29 12:00:00 2007-11-26 12:00:00 16.100000 Z 1879048191

WRITING DATA TO VL2V5.BUF --- GRFI2 200711291200 STG 15.80

Problem. OB8.3 PIT: hpe_use_locbias token should be set to OFF. (DR 19678)

In the /awips/hyDRoapps/.Apps_defaults file, this token should be set to OFF by default so HPE will use the mean field bias values rather than local bias to the radar outputs.

Problem. ob8.3 DHM grid editor program data path and run script. (DR 19674)

Need to update run script to use correct package name and update code to use correct sac state data path.

Problem. OB8.3 PIT: Changes required to gridPurgeInfo.txt for OB8.3. (DR 19643)

gridPurgeInfo.txt can't adequately be updated by multiple dev orgs until a new release is installed on a test platform. This is due to the creation of any new data keys for grids occur then and gridPurgeInfo.txt uses those keys to purge the appropriate files. Now that the release has been installed for testing, the data keys can be entered into the file so correct purging of the grids can be done.

Problem. Remove routing table creation from service backup. (DR 19637)

Some (very little) of the service backup code existing in OB8.2 will need to be changed/removed for OB8.3. The code currently creates isc routing files. These routing files will no longer be needed. Failure to remove the code won't cause harm since the routing files will be ignored.

Problem. AF: Modify NCF-COMMS make files to not build X.400 binaries and scripts. (DR 19506)

Identify all executables and scripts that are unique to X.400 and remove the lines that create them from the IMake files. This is not a change to functionality, but an attempt to remove obsolete code from the build process to not waste time and effort building and distributing files that are no longer used. Forecasters are not impacted by this change. No changes to the ENV installation scripts are required since they do not perform any tasks on the site DSes for OB8.3 (per Brian Graham).

CM no longer builds the HP-UX version of the NCF-COMMS work set. The X.400 processes are only built as part of the HP-UX version of the NCF-COMMS work set, so no files need to be modified.

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Problem. OB7.2 - AF: msg_stats not displaying data volumes correctly. (DR 19111)

msg_stats is a command line utility invoked mostly by the NCF to troubleshoot problems with MHS.

No trouble ticket as this was noticed by the developers, not by the field or the NCF.

There is no impact to the forecasters or the end users since they generally do not use this utility. The impact is that the missing information can make troubleshooting MHS problems more difficult and time consuming.

Workaround: None.

Problem. OB7.2: XSETS "make forecast" Results Causing Confusion. (DR 19078)

Over the past few weeks, minor to record flooding has occurred in the Missouri Basin. During that time, the RFC forecast generation program XSETS was not able to correctly identify the river crests in the forecast time series. This problem caused considerable delays in the issuance of RFC and consequently WFO products. This was due to the fact that each forecast product had to carefully reviewed and manually edited to ensure that the crest statement was accurate. Here are the 4 basic types of problems connected with the .A crest line that occurred, although there were many variations of some of these that occurred.

1. No .A crest line generated when there definitely should have been one.

2. Has a .A crest line but it is not the crest.

3. Multiple .A crest lines ... some of these crest lines were outside the time constants of the forecast time series contained in the RFC product.

4. Has a .A crest line when the forecast time series clearly indicates it is falling.

Problem: XSETS does not perform quality control on data. (DR 19229)

Julie Meyer reported that when using XSETS to generate the forecast message, it retrieves the latest observed value from the database, but does not do a quality check on the data. So, data that has already been flagged as bad gets into the message.

Impact is possible incorrect data being released in an official product.

Workaround: Manually edit the product if you can decipher that bad data has been input. **(DR**

Problem: XSETS Forecast Progression Problems. (DR 19088)

When the "fcst progression" button in XSETS is selected, the program is designed to display the observed stages and all the forecasts that fit the time window for a selected location. For flood only sites, this feature works very nicely. However, for daily forecast sites there can be more than one extended forecast time series but the user can only examine the observed time series and one of the extended forecast series (xsets-ex1.jpeg and xsets-ex2.jpeg). A third problems

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occasionally occurs when one of the forecasts plots as a vertical line when it should not(xsets-ex3.jpeg).

Problem: Time Series application not displaying Flood Categories. (DR 18821)

The Time Series application allows the user to display flood categories on the time series graphs of river stages. The user can configure the application to always display the flood categories--even if the data is significantly below the categorical thresholds--via the implementation of an .Apps_defaults token called timeseries_showcat. This token has 3 values:

1. Scale the graph to the data and only display the data
2. Scale the graph to the data and display the data and also the categories if the categories are within the scale of the data
3. Scale the graph to the categories and always display both the data and the categories

The behavior associated with token values 2 and 3 will work properly for the first graph which is displayed during a given time series session. Subsequent time series plots displayed during that session will only scale the graph to the data and will not display the categories.

This problem was first identified in OB6. It was thought that it was fixed for OB7.1. However, examination of the behavior in OB7.2 shows that the problem still exists.

Workaround: Manually alter the graph scaling to display the flood categories. This takes a couple extra user actions to accomplish.

Problem. AF: MHS Outgoing byte counts never increment in msg_stats. (DR 19503)

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.

Problem. Relate 45 files checked in against DCS3399 after OB8.3 workset cut. (DR 19502)

DCS 3366 had 45 files related to it after the OB8.3 workset was cut. Since 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 09/27/0

Problem. OB8.2 - AF: Remove X.400 processes from dsswap for RFCs. (DR 19500)

Note that this is only applicable to RFCs, but there is no selection available in the drop-down for RFCs only.

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Conditionally remove the code that starts the X.400 processes and the uplink_send processes from dsswap for RFCs only.

Problem. routerStoreNetcdf fails to store data. (DR 19498)

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.

Workaround: Add the missing stations, but it may not be feasible to account for all possible stations.

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 show 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 diagnosing real problems more difficult.

Problem. HWR NWWS and NWR products blank. (DR 19431)

On TBW4 OB8.2 delta -- AN -- 9/6/07

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 occurred, and the following was 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.

Problem. Time Zone in Alaska Region as it applies to HWR. (DR 19425)

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.

Problem. OTR to a failed dedicated radar connection does not return a status message to the operator. (DR 16570)

SyAT Test Procedure 4.2.3

If a dedicated radar connection is down (connection refused, for example) and you submit a one-time-request to that connection, nothing is returned to the operator as to the status of that one-time-request. I submitted several in a row, with nothing returned to me in the Radar Status window.

I had received, earlier, a 'kdax: Connection down' message, but as that message was quickly replaced by some 'kdax: Grid Grp Velocity....' alarms, it is easy to see how an operator would fail to see the 'connection down'.

Problem. WF OB6: handleOUP.pl should use textdb and not textdbRemote. (DR 16540)

Currently handleOUP.pl is using textdbRemote in order to access the database. There are problems with textdbRemote in OB6, and it should be using textdb instead.

Problem. processSummary.pl does not die during PX failover. (DR 16398)

processSummary.pl does not die during PX swaps, so it reports incorrectly to Netscape.

4.7 Text Workstation

Problem. OB8.3: AWIPS and WMO ID lookup fails in Text Workstation. (DR 20160)

The error happens when entering a wmo heading (TTAAii CCCC) to the wmo browser and/or a picking an AWIPSID(NNNXXX) entry in the AWIPS ID browser.

　　　invalid command name "changeFullProcID"

　　　while executing "changeFullProcID $fullID"

Problem. Text WS: Times in corrected warning products should not be changed. (DR 19738)

When a correction is done to a warning product, the times in the VTEC line, MND and WMO should remain the same as the original issuance of the product being corrected. So if it an original warning, then it would be the times of that issuance. If it is a follow-up statement being corrected, then the times from the follow-up would be maintained.

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Problem. Text WS: Times in segmented warning products are not updated upon transmit. (DR 19737)

Some warning products have a segmented format. In a segmented format, each segment has an issuance time after the UGC and VTEC line. These times need to match the time in the WMO, VTEC and MND.

The affected products are:

> SVS
> FLW
> FLS
> FFS
> MWS

The maximum number of segments in a given warning product is 2.

Problem. Text WS: Auto change to MND warning issuance fails on change over from AM to PM. (DR 19735)

When doing test case 3 for DCS3459, a warning was created at 1157 AM and allowed to sit in the text window for 4 minutes. At 1201 PM when the warning was transmitted, the time in the MND line was changed to 001 PM instead of 1201 PM. The VTEC and WMO times were correct.

Problem. TextWS: Header of outgoing product can be changed unexpectedly. (DR 19357)

When using text workstation, it is possible to change the header of an outgoing product without noticing it.

The only known way this can happen is if the history menu is open when a WarnGen scratch product is sent to the text editor. The history menu is disabled when editing a product, but if the menu is already open when editing start, it is still possible to select an item. Doing so changes the header in Text Workstation internally, but the display does not immediately reflect the change.

One of search fields (normally blank during editing) will be set when this happens and the header change is visible in the "stop sign" dialog, but it is easy to overlook these things.

Workaround: Be aware this problem can occur. If the above scenario occurs, the user can cancel out of editor and then edit the product again.

This error is extremely rare, but changing the header of a short-fused warning is a serious problem.

MK 8/23/07: Removed OB6 references; although this problem is likely at least that old. (DR 19357)

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4.8 QPE/MPE

Problem. MPE Polygon fails for large areas. (DR 20190)

MPE Polygon fails for large areas.

Problem. RFC QPE mosaicked incorrectly in MPE.

Beginning with OB8.2, the RFC-generated hourly QPE estimates have been transmitted to the WFOs for display in both MPE and D2D. If a WFO is serviced by multiple RFCs, a process at the WFO will mosaic the multiple RFC QPE estimates into one "product" for display in MPE and D2D.

In certain cases, the process that mosaics the multiple RFC estimates into one product fails to adjust the precipitation values properly to account for metric-to-English unit conversion. As a result, the precipitation values for one of the RFC estimates in the mosaic are incorrectly displayed.

Problem. OB8.3: Incorrect formatting of legends for isentropic displays. (DR 20022)

If one loads, for example, "NAM80 320K Pressure", the resulting legend is "NAM80 320K 300K Pressure".

Jim Ramer wrote:

> The bug was inadvertently introduced during DCS3450 (8.3 dual Pol) work.
>
> I already know the fix, the problem was a couple of small typos in the module legendPlaneModify() in DM_DepictableInfo.C.

Problem. OB8.3: aqc_wmo_parms.sto file discarding necessary data. (DR 20017)

In OB8.3, a site-specific acq_wmo_parms file was created for STO, so that they would ingest data specific to HFO for backup purposes. However, this was implemented by copying the hfo file as the sto file. STO needs its original full suite of products, but the sto override file replaced the baseline, and only added hfo specific products. Presumably this was done via a "CLEAR ALL" command in the file. This needs to be remedied so that STO not only has its baseline products, but also adds in the products needed to backup HFO.

Removed STO, MLB, MFL, and MTR acq_wmo_parms files from build. The only effect of this DR should be the inclusion of code 20,30,50,70,90 products, which includes Polar Vis/IR.

Problem. OB8.3: MPE Editor Regenerate_Hour_Fields button doesn't send to WFO. (DR 20013)

There are 3 ways to send an RFC bias to a WFO from the MPEcontrol menu in MPE Editor: select 1) Transmit RFC Bias, 2) Save Best Estimate Top, or 3) Regenerate Hour Fields. Choice 3 does regenerate the hour fields, but does not send the recalculated RFC bias to the WFO.

(This worked in OB8.2, so it may be due to a change made for 8.3 DCS 3476.)

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Problem. MPE polygon edit not correcting derived grids. (DR 19613)

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.

Problem. Run_mpe_whfs has memory fault if NUM_HOURS=5 or greater. (DR 19558)

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 two consecutive hours, a $MPE_LOG_DIR/error.ccyymmddhhZ file was generated containing two 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) and the cron process has since been running without fatal errors, and the mpe fields have been successfully generated.

Problem: MPE Disaggregation producing incorrect results. (DR 19749)

Problem. Beta:MPE-Using Polygon option causes program to crash. (DR 19543)

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.

Workaround: Generate all of the products. No RFC or WFO intentionally generates all of the MPE products. **(DR 19543)**

4.9 NWSRFS

4.10 IFPS

Problem. IFPS: Unable to export the grids to the failed site. (DR 20026)

Used 3-letter siteID

Unable to export the grids to the Failed Site (backup site= TBDW-ALY and Failed site = NMTW-OKX). No files were transfer to the Failed site.

(/awips/GFESuite/primary/data/databases/BASE/GRID/Restore).

Problem. OB7.2: Progress bar doesn't appear in service backup. (DR 18959)

The progress bar does not come up during service backup at many sites because 'PYTHONHOME' is not listed as one of the environment variables in /awips/adapt/ifps/bin/hp/ifps-main.env.

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Because of differences in configurations, some sites may get the progress bar even without having PYTHONHOME listed as an environment variable (this is the case at TBDW, the Raytheon testbeds).

Operational Impact: It is not clear during service backup what the progress is.

Workaround (and Fix): Add 'PYTHONHOME' as an environment variable.

Problem. OB8.3 IFPS Svc Bkup - localMapFiles.py file deleted (Ref. OB8.2.1.1 DR_20172). (DR 20128)

Upon exit and cleanup from IFPS service backup, the /awips/GFESuite/scvbu/etc/SITE directory gets deleted, thus deleting the locaMapFiles.py file. If an office needs to reenter backup mode, the /awips/GFESuite/scvbu/etc/SITE/localMapFiles.py file will need to be re-created. The site will get shapefile errors upon startup of the backup ifpServer if they do not recreate the localMapFiles.py file.

The deletion of the localMapFiles.py file is also a problem for installations. Each install, the localMapFiles.py file needs to exist so installation does not fail.

The current way this is working is by design, but the current design causes problems. The solution should take into account the design of service backup where sites may need to back up the same site one time or another site the next. It should also account for the possibility of the ifpServer failure during backup and also take into account installation requirements. A possible design is to save off everything in etc/SITE to a special place when entering service backup, and then deleting the contents of etc/SITE followed by restoring the saved stuff when exiting service backup.

This DR should be seriously considered for OB7.2 because of the impact to the NCF during installs.

3/6: Modified the update to copy localMapFiles.py from BASE if it is not in SITE.

Problem. IFPSOB8.3 Service Backup Needs update to work with old Postgres (Ref. OB8.2.1.1 DR 20121). (DR 20122)

When an 8.2.1 site backs up an 8.3 site, import configuration fails to load the database file due to pg_restore commands being incompatible between 8.2.1 and 8.3 (8.3 was upgraded). The import_dtbase script needs to change to account for this and use the psql command instead to load the data file.

A corresponding change is needed at 8.3 sites to remove the -F t (tar file) qualifier from pg_dump in export_dtbase script. This will allow successful backups between 8.2.1 and 8.3 sites.

Any 8.3 site will have to export their configuration to the central server as part of the 8.3 upgrade to prevent service backup problems with neighboring sites.

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Problem. IFPS: Export a Failed Site's Grids to CS Failed. (DR 20073)

The export grids from backup site to the central server failed. See test case# 8 step# 7 and 14 for more details. The .netcdf file never get created on the /awips/GFESuite/exportgrids directory.

Problem. IFPS: IFPS test case# 3 failed Used 4 letter siteID. (DR 20072)

The import configuration files from the central server to the backup site and then start GFE in one step from the backup site is not working properly (See the test case# 3 step 6 for more details).

Problem. Unable to export the grids to the failed site. Used 3 letters siteID. (DR 20026)

Unable to export the grids to the Failed Site (backup site= TBDW-ALY and Failed site = NMTW-OKX). No files were transfer to the Failed site.

(/awips/GFESuite/primary/data/databases/BASE/GRID/Restore).

Here are the 2 logs files that related to this test.

    1. svcbuGFE_2156 log.

    wfo=okx
    Sourcing /awips/adapt/ifps/localbin/okx/ifps-okx.env
    D_DEV_STATUS=0
    Starting runGFE
    Calling getTestMode()
    getTestMode() returned OPERATIONAL
    EVENT: Establishing connection to server on dx4f:98000000 ver=20070723
    EVENT: Connection complete to server on dx4f
    PROBLEM: getLocations died: Traceback (most recent call last):
      File "Stations", line 65, in getLocations
      File "Stations", line 87, in saveStationTable
    IOError: [Errno 2] No such file or directory:
            '/awips/GFESuite/data/text/spool/stationTable.pic'

    EVENT: Using MatchGuidance auto-generated MOS Marine Locations
    EVENT: Using MatchGuidance auto-generated MOS Locations
    EVENT: Establishing connection to server on dx4f:98000000 ver=20070723
    EVENT: Connection complete to server on dx4f
    PROBLEM: getLocations died: Traceback (most recent call last):
      File "Stations", line 65, in getLocations
      File "Stations", line 87, in saveStationTable
    IOError: [Errno 2] No such file or directory:
            '/awips/GFESuite/data/text/spool/stationTable.pic'

    EVENT: UAM: R Model: GFS40_0618 (OKX) 6-42h #Grids=204
     SMARTINIT
    EVENT: UAM: R Model: RTMA (OKX) #Grids=11

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  SMARTINIT
USE: Click1-2: GridClick. ID=[P=T_SFC:OKX_GRID__Fcst_00000000_0000,t=Feb 13 08 08:12:11 GMT]
USE: Click1-2: GridClick. ID=[P=Td_SFC:OKX_GRID__Fcst_00000000_0000,t=Feb 13 08 09:38:51 GMT]
USE: SaveFcst
USE: Products->Publish to Official...

2. svcbu_expbksiteGrd_2158 log.
Running ifpnetCDF...(May take awhile)
The subject line of msg_send is okxGrd
Sending the gridded data to OKX...
TBDW-594547

All done. Export Gridded data has completed

Problem. IFPS: Export BOX's Digital Forecast to the CS Failed. Used 4 letters siteID. (DR 20025)

Unable to export backup site digital forecast data to the central server. Here is the error message on the status bar window "ifpnetCDF failed. Export exits". No error message found on the log. No tbw3Grd.netcdf file were created on ../exportgrids directory.

See below the svcbu_expGrd_2015 log.

Script was not invoked from dx4f.

Running it from dx4f...

    %PM%　　Version: %PR%

    D_DEV_STATUS=0.

Problem. ifps afc crontabs are incorrect on dx3. (DR 20023)

The /awips/ifps/primary/crontab/ifps-* files are incorrect on dx3. They are correct on dx1 and dx4, so I just think the install logic is incorrect. The correct ID for AFC crons on dx3/dx4 should be "aer," but on dx3 it is "afc." This is breaking failover; we can't run the IFPS/GFE on dx3 if dx4 fails over.

Problem. IFPS: GHG function is not working properly. (DR 20074)

GHG function is not working properly when executed. Here are the errors messages from the test.

    - /awips/adapt/localbin/ifps-.env does not exist.

Press OK and another error message displays as below.

    import_config_and_grids.bat returned an error.

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Problem. IFPS: The GHG function on the Service Backup is not working properly. (DR 20021)

The IFPS test case# 12 step#4 failed: The import configuration file is completed, but the GFE GUI never shows up, and instead the error message popup window appears.

"/awips/adapt/ifps/localbin/ifps.-env does not exist."

when click okay another error message popup window appears.

"import_config_and_grids.bat retrun an error"

See logs file svcbu_doall_1839

```
-----------------------------
Import_svc_backup_data.bat tbdw localhost:0.0
%PM%    Version: %PR%
Invoking retrieve_svc_backup_date so all scripts run as user ifps\n
D_DEV_STATUS=0
%PM%    Version: %PR%

Retrieving IFPS configuration data from the central server\n
TBW3-363405
x=1
/awips/GFESuite/svcbu/data/databases/ifpServer.PID
/awips/GFESuite/svcbu/data/databases/ifpServer.PID
```

Import tbdw's grids was not selected

ERROR: Could not find /awips/adapt/ifps/localbin//ifps-.env

Problem. IFPS/SB Test Case# 3 step# 6 failed (../localbin/ifps.env does not exist) Used 4 letters siteID. (DR 20020)

The IFPS/SB test case# 3 step#6 failed: The import configuration is completed, the GFE GUI did not appear. The error message from the popup window is displays.

"/awips/adapt/ifps/localbin/ifps-.env does not exist".

then click okay, another error message from popup window is displays.

"import_config_and_grids.bat returned an error"

then click okay again.

See below the logs (svcbu_doall_1740)

```
--------------------------------------
import_svc_backup_data.bat tbdw localhost:0.0
%PM%    Version: %PR%
Invoking retrieve_svc_backup_date so all scripts run as user ifps\n
```

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D_DEV_STATUS=0
%PM%   Version: %PR%
Retrieving IFPS configuration data from the central server\n
TBW3-362458
x=1
/awips/GFESuite/svcbu/data/databases/ifpServer.PID
/awips/GFESuite/svcbu/data/databases/ifpServer.PID
Import tbdw's grids was not selected

Problem. IFPS: The IFPS/SB Test Case # 1 Step# 6 failed (using 4 letters siteID). Used 4 letters siteID. (DR 20019)

The IFPS/SB test case# 1 step#5 :"The message should appears as " You cannot import your own" instead of saying" You cannot import your ow". The letter "n" is missing from the error message.

The IFPS/SB test case# 1 step#6 failed: After you press OK on the above error message, the error message should be disappeared and another popup window for failed site GUI will appear asking for a failed site's ID.

Problem. IFPS: Import configuration files and grids failed (4 siteID). (DR 19922)

The Import configuration files and grids failed using four letters siteID. See below the errors message from the log and the log for the SVCBU_import_Config_1958 is attached.

" /awips/ifps/primary/bin/import_GFEconfig_for_svcbkup: line 92: syntax error near unexpected token `<<<'

/awips/ifps/primary/bin/import_GFEconfig_for_svcbkup: line 92: `<<<<<<< variant A'

ERROR: import_GFEconfig_for_svcbkup failed.

import_files_for_svcbkup returned with errors... " **.**

Problem. IFPS: Prepare_grib2 failed. (DR 19921)

The Prepare_grib2 failed during the SWIT test. See IFPS/SB test case#8 step# 7 for more details. The IFPS/SB test case #8 step#7 executed and failed (See the errors message from the attached files).

Note: Used baseline code (3 SiteID).

Problem: Export Grids to the FAILED site is not working properly. (DR 19914)

After imported the Configuration data and the grids from the central server, I exported the grids to the FAILED site, but the failed site did not received any files from the backup site (The Restore database did not get populated on the failed site). I don't see any error message on the log. The message handling is working fine and also no errors message were found on message handling. See attached logs.

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> Backup site TBW3-BOX (used baseline codes)
>
> Failed site NMTW-OKK
>
> Restore database directory:
>
> dx4-nmtw Restore]# /awips/GFESuite/primary/data/databases/BASE/GRID/Restore

See the IFPS test case# 7 for more details.

Problem. IFPS: The Import Config fle failed for OB8.3. (DR 19823)

The import config file for IFPS/SB (OB8.3) failed during checkout test on TBW3 testbed. See the following errors message and attachment file for more details.

> " SET SESSION AUTHORIZATION 'postgres';
>
> --
>
> -- TOC entry 3 (OID 2200)
>
> -- Name: SCHEMA public; Type: COMMENT; Schema: -; Owner: postgres
>
> --

COMMENT ON SCHEMA public IS 'Standard public schema';

ERROR: Importing database has failed. Duplicate database found. Please manually drop ifps_ first.

Problem. OB8.2: IFPS install script checks DX hosts incorrectly. (DR 19570)

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.

4.11 Crons, Scripts and Purge

Problem. Grass libraries not found. (DR 20177)

When running GRASS on the system, running certain commands yields "library not found" error messages. The problem is the software was not built with these libraries built in (even after a rebuild with the specific option turned on) and they are not in the system library cache.

To fix, I added a grass.conf file to /etc/ld.so.conf.d and put in the contents:

> /usr/local/gdal/lib
>
> /usr/local/proj/lib
>
> /usr/local/geos/lib

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And then ran an ldconfig, and this solved the problem. So this grass.conf file should be checked into /home/awipsadm/install, and also copied to every devices /etc/ld.so.conf.d directory, and ldconfig run on each device.

Problem. heartbeat cron config picks up wrong dx3 file. (DR 20149)

The heartbeat cron configuration template currently expects ingest.crontab.dx3 and ingest.crontab.dx4 to be installed in /awips/fxa/data. However, any updates are now being installed into /awips/fxa/bin, so the template needs to change and look for those files in /awips/fxa/bin. The template file is /awips/ops/data/mc/hb_cron_template-tx.

Problem. Purger recursive function does not work. (DR 19611)

When the recursive option ("r") is used in a purge key, the purger is supposed to use the key's settings recursively, from the defined parent directory, and down through all of the sub-directories. This behavior is not happening as it should. This was found during FFMP Advanced Alpha Testing preparation on NHOW and is required for a fully functioning FFMP Advanced, thus we should target OB8.3. The issue has been briefly explored by GSD and a fix has been identified, but because this is important for FFMP Advanced, this DR should be assigned to Tom Filiaggi, FFMP Task Lead. If this does not get fixed, inOB8.3 users will define FFMP Advanced to retain a certain amount of data via the FFMPA purge key (i.e., 24 hours) but they would get significantly less (i.e., 4-5 hours).

Workaround: No tested workaround.

Problem. OB8.3: Startup script for FSI does not work on px2. (DR 20052)

The startup script for FSI does not work on px2, only on px1. Thus FSI will never start up after px1 fails over to px2.

Problem: AF: Include script as part of dx1apps to clean stale messages. (DR 19895)

Script is to be developed to purge all stale messages under /var/spool/mqueue at dx[12]-<site>. These old messages, if not deleted, generate ITO alarms at NCF and hence needs to be deleted manually by NCF. So appropriate script will be developed to remove these messages and the script will be included as part of dx1apps package at the site dx[12]-<site>.

Problem. OB8.3: Create script to manage CRS keys. (DR 19986)

As a result of DR 19442, AWIPS user ssh keys need to be place on the sites CRS system (0MP and 5MP). Also, the CRS id_rsa.pub contents need to be in the AWIPS machines known_hosts file to prevent a "yes/no" prompt causing NWR message transmissions to hang.

A convenience script should be created to capture the ssh key from each user (out of /awips/.ssh/<user>/authorized_keys2 file) and append it to the CRS machines ~crs/.ssh/authorized_keys file. This script should also modify /etc/ssh/ssh_known_hosts files on each device with the CRS machine's id_rsa.pub contents. The script can either get the password from /data/fxa/workFiles/nwr/nwr.cfg file if it exists, or prompt the user for the crs password.

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Problem. OB8.3 - AF: Change to CPSBN config files for new RAOB sounding WMO headers. (DR 19625)

Add patterns for WMO headers like IUSZ* and IUSY* to all configuration files needed to allow processing on the CPSBNs. See DR 18909 for more details.

Problem. OB8.1 - 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 impact 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. Update ifps install scripts to reference the correct build number. (DR 19624)

Update two variables - OLD_OB_VER and NEW_OB_VER to say 8.2 and 8.3 respectively. **(DR 19624)**

Problem. Change SAC State Multiplier mod to be non-cumulative. (DR 19622)

Change SAC state multiplier mod to perform as percent full mod. The last mod wins. **(DR 19622)**

Problem. OB8.2: MSAS autorej.txt on px1 link overwrite. (DR 19569)

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
```

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```
        ./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
```

Problem. MSAS adjustable pressure contour depictable is not labeled properly. (DR 19402)

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
> -CWL 29-AUG-2007

Problem. MSAS: No observations will be processed from the maritime files. (DR 19512)

Mike Barth says:

> 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.

Problem. Failed site's database does not populate during service backup. (DR 19533)

The import_dtbase 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 past, import_dtbase is solely responsible for doing all the database operations.

Problem. New postgresql package causes WFOA build to fail for PDC (FFMP). (DR 19531)

OB8.3 uses a new version of postgresql (8.2.5) which has some deprecated functions (ECPGis_informix_null and ECPGset_informix_null). These functions are trying to be used by PDC (FFMP) code. The functions have been replaced by ECPGis_noind_null and ECPGset_noind_null in postgresql-8.2.5.

The PDC code will need to up-dated to use the new functions.

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Problem. New LDM package causes build to fail. (DR 19520)

OB8.3 uses a new version of LDM which has a different set of header files. The WFOA tree is trying to include the header file "dmclnt.h" which no longer exists.

Problem. ADAPT install script clean up. (DR 19495)

The ADAPT_install_sh file has echo statements that need to be updated to reflect current release levels and ADAPPT needs to be changed to ADAPT.

The script is delivered in the ADAPT tar file (example below):

> ADAPTOB8.1.1-CM-S0.tar.gz

The script file is within the tar file:

> /install/ADAPT_install_sh

Examples of the problem from an OB8.1.1 install:

> rmdir: `upgrade_OB-6': No such file or directory^M
> ^M
> Starting the ADAPPT Install/Upgrade/Deinstall . . . Wed Aug 29 14:38:50 GMT 2007^M
> ^M
> Starting hmdb database install/update . . . Wed Aug 29 14:38:50 GMT 2007^M
> ^M
> No hmdb updates for Release OB7.2 . . . Wed Aug 29 14:38:50 GMT 2007^M

Problem. CM requires updated OHD files for OB8.3 builds. (DR 19493)

OHD has changed several build files for OB8.3 builds. CM is required to begin building OHD-OB3.2 files by 11/1/2007.

4.12 Documentation

Problem. Update documentation links. (DR 20076)

Links to the User and System Manager Manuals need to be updated for OB8.3. **(DR 20076)**

4.13 FSI

Problem. FSI tarball updates. (DR 19959)

Revolving DR to handle FSI tarball checks in separately to other FSI DRs because these tarballs go into a different workset (INSTALL) and will not be released correctly otherwise.

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Problem. FSI tarball: Velocity & Spectrum Width colors are not being properly converted. (DR 19896)

Velocity and Spectrum Width colors are not being properly converted for English units when FSI is drawing PPI images using the default "triangle" method (note: the conversion is correct using "textures").

Problem. FSI: Shadow readout cursor in 3D window mistakenly "jumps" up in 3D space. (DR 19866)

Shadow readout cursor in 3D window "jumps" up in 3D space when elevation scan updates, when it shouldn't.

Problem. Create FSI colormaps that match AWIPS defaults for the 4 DP products. (DR 19665)

FSI tarball: Create FSI colormaps that match AWIPS defaults for the 4 DP products.

Problem. FSI: Fix texture drawing accuracy or triangle drawing method. (DR 19865)

Fix texture Drawing accuracy so that we don't need to use the triangles Drawing method. Or speed up triangle Drawing method. It is slow to draw using SR data.

Problem. FSI tarball: Readout values don't line up with edges of range bins. (DR 19780)

FSI tarball: Readout values don't line up with edges of range bins.

Problem. FSI tarball: Re-organize Preferences menu tree - move certain items under Advan DCS 3440 3441 3442. (DR 19779)

FSI tarball: Re-organize Preferences menu tree - move certain items under Advanced Settings.

Problem. FSI tarball: Dual-pol KDP values are all set to the "missing value". (DR 19778)

 FSI tarball: Dual-pol KDP values are all set to the "missing value".

Problem. FSI tarball: Dual-pol hotkeys not selecting the products. (DR 19777)

 FSI tarball: Dual-pol hotkeys not selecting the products.

Problem. FSI tarball: Dual-pol HCA product not being included in Radar LB. FSI tarball. (DR 19776)

Dual-pol HCA product not being included in Radar LB.

Problem: Problems with the DUA dual pol product. (DR 19931)

If the period of the DUA product is other than 1, 2, 3, 6, 12 and 24 hours, then the elevation angle not defined. It should be set to 0.

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1. For those special periods, 1, 2, 3, 6, 12 and 24 hours, the offset time is set to 59, which is a bad offset.

Problem. FSI tarball: Radial set accuracy off; azimuthal spacing not constant. (DR 19775)

FSI tarball: Radial set accuracy off; azimuthal spacing not constant.

Problem. FSI tarball: Change mouse-over pop-up on spyglass to "Data Sampling (Readout)". (DR 19773)

FSI tarball: Change mouse-over pop-up on spyglass to "Data Sampling (Readout)".

Problem. Popup SkewT crashes when you get outside the model domain. (DR 19993)

BCQ reported D2D crashed when sampling satellite imagery SkewT outside of the domain. See attachment for more information.

Test on NHDA and NAPO system, but didn't crash. It might be site specific or happen arbitrarily.

Problem. FSI tarball: New w2auth file needed to allow FSI binary authorization for workstation. (DR 19772)

FSI tarball: New w2auth file needed to allow FSI binary authorization for NWS workstations.

Problem. FSI tarball: Minor changes to readout format. (DR 19667)

FSI tarball: Minor changes to readout format.

Problem. FSI tarball: Add "PPI" and "3D" labels to those panels. (DR 19666)

FSI tarball: Add "PPI" and "3D" labels to those panels.

Problem. FSI tarball: Fix CAPPI readout bug on 3D panel. (DR 19664)

FSI tarball: Fix CAPPI readout bug on 3D panel.

Problem. Products (e.g., velocity) at 250m resolution incorrectly plotted at 240m FSI: Any product with 250m range spacing is being plotted with 240m range spacing. (DR 19657)

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. This should be considered a critical DR.

Site that discovered the problem is MDL.

NSSL has already fixed the problem. Only one w2config file needs to be changed, but will require a new lx tarball.

It also affects 250m range spaced data in FSI8.3 for the super-res products (same config file).

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Problem. FSI: Add readout configuration settings to FSI Preferences. (DR 19663)

FSI tarball: Add readout configuration settings to FSI Preferences.

Problem. Create FSI colormaps that match AWIPS defaults for 8-bit SW/SDW. (DR 19662)

FSI tarball: Create FSI colormaps that match AWIPS defaults for 8-bit SW/SDW.

Problem. FSI: Decoded values for V, SDV, and SDW don't match those in D2D. (DR 19661)

FSI tarball: Decoded values for V, SDV, and SDW don't match those in D2D.

Problem. FSI:super-res data is not being properly. (DR 19660)

Drawn in VSlice and CAPPI panels FSI tarball: super-res data is not being properly drawn in VSlice and CAPPI panels.

Problem. FSIprocessor: Handle cases when the SR products are defined in FSIproducts.txt FSIprocessor. (DR 19659)

Handle cases when the SR products are defined in FSIproducts.txt, but a ORPG is not sending SR products to AWIPS (either due to RPS list, or ORPG9 radar). The low-res records are not being written to the Radar LB for the low elevation scans.

Problem. FSI: Looping vs. Last Frame buttons. (DR 19469)
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 similar to D2D.

Problem. FSI start check. (DR 19300)

If the radar LB contains entries that are "too old" or if the LB does not exist at all, when FSI starts it may start poorly, or crash (uncertain).

In any case, the FSI extension should check for a healthy LB before pinging the FSI to start. This issue was found during FSI Alpha Testing (not AWIPS Alpha) thus the Release Discovered does not correspond to the actual AWIPS release that MLB has at this time.

4.14 Decoders

Problem. StoreHyDRoGrids decoder error. (DR 19490)

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.

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OHD has coordinated with GSD, which is able to provide the software fix.

Problem. SynopticDecoder does not correctly decode present weather types. (DR 19266)

A correction needs to be made in the synoptic obs decoder.

"The AWIPS Synoptic Ob decoder does not correctly decode weather types from the 7 (present weather) group of the synoptic ob. It will correctly decode some weather types (especially the low numbers, i.e. fog, haze, smoke, distant lightning), but the higher numbers (such as the ones for rain, showers, snow, thunderstorms, etc.) do not plot any symbol on the map! This minor problem has existed for a long time, likely ever since the Synoptic Decoder was introduced into AWIPS.

Problem. DE: GRIB2 decoder fails to move undecoded data to 'badGrib2' directory. (DR 19248)

When the Grib2Decoder fails to decode an incoming data file, that file should be moved to the /data/fxa/Grid/SBN/badGrib2 directory. This appears to be happening only on a sporadic basis, with many files apparently being deleted instead of temporarily stored.

This affects the ability to troubleshoot bad data or decoding problems.

Workaround: None known.

4.15 AVNFPS

Problem. AvnFPS: Install script does not create required symbolic links. (DR 19844)

Installation script does not create the required symbolic link, "data" in /awips/adapt/avnfps/OB8.3 directory tree. As a result, AvnFPS servers do not run correctly.

Problem: AvnFPS: AvnWatch GUI is not Section-508 compliant. (DR 19841)

AvnWatch GUI does not allow for individual selection of alert colors. Red and green colored indicators are problematic for color-blind individuals.

The AvnFPS already has a software fix for this and is ready to be reviewed and tested.

Problem. OB8.3 AvnFPS: Data Ingest Server fails to start after install. (DR 20062)

Data Ingest Server fails to start after install of build (A5) on TBW3 and TBDW.

Problem: AvnFPS: Error Message Displays When Viewing NGM-MOS guidance. (DR 19897)

While conducting a baseline test during a SWIT phase, occasionally received an error message as described below:

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When generating TAFs from NGM-MOS guidance--depending on the time of day--an error can be generated when attempting to create a 'routine' TAF (this is due to insufficient data contained within the NGM-MOS bulletin). If the user then closes the TAF Editor/Viewer in this situation, he/she will not be able to restore TAF Editor/Viewer as it "remembers" the settings and attempts to create NGM-MOS based TAFs again.

Workaround: Avoid closing the TAF Editor/Viewer when attempting to display NGM-MOS based TAFs, or, if it occurs, restart AvnWatch GUI.

Problem: improve WarnGen svc backup documentation. (DR 19944)

During an exchange with some field folks, it became clear that the documentation of the WarnGen service backup customization process is not well understood. We need to update the documentation in warngenBackup.html and directives.html to allow field focal points to efficiently manage their service backup settings for WarnGen. (This ideally would have been done for OB8.2, since that's when the Partial Backup option was removed from WarnGen, but OB8.3 is better than never.)

Problem: AvnFPS: When Transmit time is entered manually it does not reflect. (DR 19915)

During executing baseline test case on SWIT phase has encountered that the date & time does not work probably, when entered manually. Below are the steps:

- Launched AvnWatch GUI
- Selected Amd button for a KBDL site
- Applied the Adjust time and clicked on Syntax button
- Clicked on Send button
- Manually entered the transmit time (future time) by key in the time in the text box of the AvnFPS Send dialog
- Clicked on OK

Workaround: Modify/enter the time by using the arrow keys instead of key in.

Problem. AvnFPS: TAF amendment at 0000 UTC has invalid issue time. (DR 19840)

A forecaster issued an amendment at 0000z. When it was issued the date did not roll up to the next day as it should in the time/issuance section.

For example:

      KGFK 080000Z 090024 15010KT P6SM BKN100
        TEMPO 0610 5SM BR BKN005
        FM1500 15005KT 4SM -SN BR BKN015

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Problem. AvnFPS: Remove dependency on shared library, climmodule.so climmodule.so not created on new CM build machine. (DR 19645)

Problem. AvnFPS: LLWS not using aircraft-based winds correctly. (DR 19407)

AvnFPS is not using aircraft-based wind information correctly when calculating vertical wind shears.

Problem: AvnFPS: Rule Editor improperly writes out configuration file. (DR 19994)

When changing monitoring rules in AvnFPS, it was discovered that the Rule Editor does not properly write out the attributes of the rule to the file. This causes AvnFPS to fail to read in the rule and apply it.

Specifically, a 'tuple' is being written instead of a character string. For example:

method = ('WxMetar',)

instead of

method = 'WxMetar'

AvnWatch is expecting a character string to read in.

Problem. AvnFPS: AvnWatch monitoring gives false alerts. (DR 19995)

AvnWatch monitoring should not use variability information in the METAR remarks when TAF itself has no variability. Doing so, causes false positive messages. Also CCFP monitoring gives false alerts as well.

Problem. AvnFPS: Restore count feature when All Metar selected. (DR 19405)

Showing metars in the TAF Viewer/Editor the number of observations for a site can be selected by forecaster. When toggle 'All' is selected, the same number is used which is often what the forecaster does not want. Prior to OB8.1, this was implemented differently and this feature was lost with OB8.1.

Problem. AvnFPS: Restore 'Print Stats' function to the monthly climate Distribution. (DR 18922)

While executing Baseline_AvnFPS_CeilingVisDist test case have encountered that on the Ceiling & Visibility Distribution GUI, the 'Save Stats' option under the File pull down menu was removed. This feature allows the user to be able to save statistics to a text file. However, the user is able to save statistics as a graphic (image) file by using the 'Save Image' function.

Problem. AvnFPS: (OB8.1 PIT) Option to limit search in climate archive. (DR 18367)

Forecaster wishes to restrict the number of years to search in climate database before returning results.

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4.16 Other

Problem. Storm surge exceeded 10 percent meter to feet conversion. (DR 20173)

The storm surge's 10% exceedance probability was coming in meters. Must convert to feet. Test data made for MFL. Test localization should be MFL.

Problem. OB8.3: mis-spelling of the word clutters. (DR 20192)

Greg Jackson called. Frank Lucadamo (MDL) told him to call. There is a misspelling of the word "clutters". /data/fxa/nationalData/radarDataMenus.template.

[root@dx1-maf nationalData]# grep -i clut radarDataMenus.template

  title: "*** Cluter Filter Control (CFC) ***"   <<<<
  Correction needs to be made here to Clutter

  submenu: "@@@@ Refl Clut Prob"

  submenu: "@@@@ Vel Clut Prob"

Problem. OB8.3: Fix Nvidia drivers after xorg security patch. (DR 20184)

The security patches installed in OB8.3 included xorg, which overwrote the Nvidia driver links supplied in OB8.2 - no new files need supplied, but a few need deleted and a symlink recreated as well as the X server restarted on the LX workstations.

Problem. Restore DR 19567. (DR 20221)

Changes DCS 3450 overwrote the changes related to DR 19567 in the OB8.3 workset.

This DR will merge the changes back in.

Problem. OB 8.3 Beta - ESPADP shows version OB7.2. (DR 20148)

The version ESPADP indicates version 7.2 it should be ob8.3.

Problem. Grib2 Decoder Log NCF Failures On CONUS testbeds (TBW3 and TBDW), there were NCF FAIL records found in the Grib2 Decoder log files. (DR 20147)

The products generating the NCF FAIL records are all OCONUS products. Ideally it would be better if the WMO headers involved were only in acq_patterns.template.OCONUS and not acq_patterns.template so that the acqserver would throw them out at CONUS sites before they get to the Grib2Decoder.

The Puerto Rico patterns can be removed from acq_patterns.template and put only in acq_patterns.template.OCONUS. The Alaska ones, possibly not, since these patterns are already present in acq_patterns.template and the line that covers them can not easily be broken up without causing risk to other products.

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Problem. Grib2Decoder problem with Sig. Wave Height variable. (DR 20067)

opcWave and HPCqpfNDFD grids are stored by Grib2Decoder, but there is a strange entry in the log "HTSGW SFC (0 4294967295) stored..." The "4294967295" should not be present and should actually be zero instead. It seems to be only with the HTSGW parameter so far. There does not appear to be any difference in the display at this time, but it warrants further analysis.

Problem. OB8.3: Grib2Decoder dropping data. (DR 20056)

The OB8.3 Grib2Decoder log displays many instances of "NCF_FAIL Bad file size of 0 bytes" and the related files are deleted. OB8.2 Grib2Decoder does not display these errors and is able to store the same files that the OB8.3 version apparently throws out. This problem results in data loss.

Problem. Changes to MWW necessary to accommodate '&&' CTA end tag Please assign this DR to Greg Mann for OB8.3. (DR 20086)

It is for the changes needed to the MWW to accommodate the '&&' CTA tag.

Problem. ANCF/BNCF for GFE ISC grids. (DR 20084)

With the introduction of the central server ISC routing concept, a couple of key questions need to be answered at the time grids are to be sent. 1) To which NCF is my site pointing? 2) How do I ensure that the ANCF's and BNCF's ISC Routing Table are in sync?.

Problem. Grid virtual field indexing requires adjustment virtualFieldTable.txt needs to be modified to move POP3hr to the bottom of the file. (DR 20082)

During OB8.3 development, it was inserted into the middle, which can cause 2 (or more) problems:

1. Procedures in the field can become messed up because of shifted indexing.

2. Having this variable before the 235 index marker in virtualFieldTable pushes total indexing beyond the 1023 limit and may push into field-reserved indices or cause one-off menu indexing.

Problem. OB8.3 RAX: Column 'oid' does not exist in location table. (DR 20081)

During executed Baseline_RFC_Archive_Database test procedure on LX1-TBDR (A5), I received an error message indicates that "column oid does not exist" when I executed the query below:

    Select *,OID from location order by 1

See test procedure page 21, section 17 (steps 102 - 106) .Screenshot for error message is attached as well.

I also executed the run_vacuumdb script & checked the vdbLog.out per Loubna instructed.

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Problem. Bias Messages can not be sent to TDWR-SPGs. (DR 20078)

sendEnvData.pl script restricts the length of the bias message file name to 19 characters. The file name includes the 3 digit ID# of the target RPG. Soon to be deployed TDWR-Supplemental Product Generators (SPGs) have 4 digit IDs which will make the bias message file name 20 characters. As a result, the bias messages will be discarded and not sent.

This problem was found during the OB8.3 Alpha Testing phase.

Problem. OB8.3: /data/fxa volume size increase needed. (DR 20036)

Additional data are being ingested into OB8.3, about 10GB worth alone in DCSs 3454 and 3457, which is causing /data/fxa to fill up on the testbeds and a few OB8.3 sites. An analysis in the field shows about 25% of sites could not handle an additional 10GB of data stored in /data/fxa, as their usage would go over 90% of the available space. This would cause NCF alarms and potential data ingest issues if it were to fill up.

Problem. OB8.3: Incorrect formatting of legends for isentropic displays. (DR 20022)

If one loads, for example, "NAM80 320K Pressure", the resulting legend is "NAM80 320K 300K Pressure".

Jim Ramer wrote:

> *The bug was inadvertently introduced during DCS3450 (8.3 dual Pol) work.*

Problem. OB8.3: aqc_wmo_parms.sto file discarding necessary data. (DR 20017)

In OB8.3, a site-specific acq_wmo_parms file was created for STO, so that they would ingest data specific to HFO for backup purposes. However, this was implemented by copying the hfo file as the sto file. STO needs its original full suite of products, but the sto override file replaced the baseline, and only added hfo specific products. Presumably this was done via a "CLEAR ALL" command in the file. This needs to be remedied so that STO not only has its baseline products, but also adds in the products needed to backup HFO.

Removed STO, MLB, MFL, and MTR acq_wmo_parms files from build. The only effect of this DR should be the inclusion of code 20,30,50,70,90 products, which includes Polar Vis/IR.

Problem. AF - OB8.2 - Add MHS handler for new hydro app to rcv_handler.tbl. (DR 18759)

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/hydroapps/precip_proc/bin/process_rfc_bias %ENCLOSE(1)
    "%SUBJECT" "%MSGTYPE"

where 27 is the message code number that will be used.

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There are no Trouble Tickets associated with this DR; it is a new requirement.

The impact to forecasters and end users of not doing this is that they will not receive any of the products associated this or whatever the new hydro application does will not be performed. This question should be addressed by OHD.

Workaround: None. This is not an existing problem; it is a new requirement.

Problem. Precip contour bullseye value shows "xxxx" for values above assigned range. (DR 18788)

This is a very minor issue. When a precipitation accumulation value is more than assigned scale, the bullseye value is shown as "xxxx".

Problem. ARX custom localization exposes a contouring routine bug. (DR 16899)

A custom localization at ARX produced a contouring problem with the 12km Eta and RUC40 grids. A screen shot and a tar of an ARX localizationDataSets directory is available.

Problem. OB8.3 Removing DR 19388 fix (Ref OB8.2.1 DR_19899). (DR 19898)

DR19388 fix caused a problem in a number of other systems. So this was removed.

Problem. OB8.3 Removing DR 19388 fix (Ref OB8.2.1 DR_19899). (DR 19898)

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Problem. DHM: The check failed to detect the value that has mix number & characters. (DR 20165)

While performing ad hoc testing of DHM system has encountered that system has accepted the invalid value (e.g., 5adb) in the DSACST Mod GUI.

Workaround: User can go back and enter the valid numbers (e.g., 0.0 - 100.0).

Problem. Missing data in raobBufrDecoder. (DR 20164)

The RAOB BufrDecoder decode/store the raob data incorrectly. Symptoms found are 1)when plot the skewT, some significant wind level data are missing (example: KNKX,KTWC,KDRA). Also see TT328392. And 2) the UA raob Plots at 500MB are missing all data at Canada sites.

Problem. SkewT--missing data and low level Dewpts are dropping out Title: D2D SkewT - missing data. (DR 20031)

Problem. OB8.3: Grib2Decoder dropping data. (DR 20056)

The OB8.3 Grib2Decoder log displays many instances of "NCF_FAIL Bad file size of 0 bytes" and the related files are deleted. OB8.2 Grib2Decoder does not display these errors and is able to

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store the same files that the OB8.3 version apparently throws out. This problem results in data loss.

Problem: Update startNotifyTextProd for DCS 3468. (DR 19999)

GFE DCS 3468 requires a modification to the NotifyTextProduct start procedure to allow GFE to receive notification from the textdb server.

These changes are critical for DCS 3468 without which MatchGuidance, MatchGuidanceAll, and DiurnalFromMOS SmartScripts will not function.

Problem: False alerts in Practice/Test mode for non-conv. (DR 19996) (DR 19991)

In practice/test mode, when creating a non-convective FFW warning and select dam-failure (generic, levee failure, floodgate opening, ice jam break, or volcano-induced snow melt as IC), one of the following three false alerts will be created by WarnGen: a) No first bullet line; b) Immediate cause in VTEC inconsistent with text; or c) Too many lines starting with '*'.

The false alerts stated above occur only at practice/test mode. They will not affect operation.

When testing, make sure using practice/test mode.

Problem: SWAPS does not work when there is a mix of LACs from different states. (DR 19981)

The SWAPS option does not work when the UGC line contains a mix of Listening Area Codes (LACs) from different states.

Example: UGC contains the following LACs will not work:

CTZ002-CTZ003-CTZ004-MAZ002-MAZ003-MAZ004-RIZ001-RIZ002

Problem: GFEISC - IRT Website Cancel Registration not working. (DR 19979)

Cancel Registration from the IRT Website is not working. A page is displayed that confirms the cancelled registration, but when you look at the sites registered, the cancelled site is still registered.

Problem: Fix RaobBufrDecoder to handle decoding of the Mandatory Pressures to netCDF. (DR 19974)

The RaobBufrDecoder still does not handle the 6-part RAOB collectives correctly.

Specifically:

1. The Mandatory Pressures are missing on 30-70% of the sites' netCDF files and Skew-T displays.
2. The Pressures, Temperatures, and Winds are entirely missing on 10% of the sites, leaving only their site metadata in the netCDF and only an empty-grid Skew-T display.

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The earlier DR trail (18909, 19803, etc) seems to have fixed the problem with the Winds, but not the Mandatories. Preliminary testing by the SST indicates that the RAOB BUFR collectives from the NWSTG are reaching the NHDA RaobBufrDecoder. The RaobBufrDecoder log shows the sites' decoded metadata and the 12 Mandatory pressures, yet these are not stored in the netCDF output file or displayed for a large percentage of the sites. Note: they are present on the OB8.2 Skew-T, using the old limited-size collectives and the old RAOB decoder, for the same sites, same time.

A possible pattern for the missing "part TTAA" pressures is: for a given TTAA collective file (the 41s, 51s, etc headers), the first site in the collective is successfully decoded and output to the netCDF, but subsequent sites in that collective often are not --- they are decoded but not output.

Both problems (1) and (2) needs to be fixed.

Problem: Service Backup grids should be staged both manually and by cron. (DR 19952)

Service Backup grids are staged at the WFO for rsync to pull back to the IFPS Service Backup Central Server. Those grids are staged either by a manual method (e.g., forecaster launching a GFE script) or by the cron. The software will not allow both in order to prevent two instances from running at once and writing files on top of each other.

The export_grid_data script should be modified to allow both to run simultaneously. This can be accomplished by directing the manual and cron methods to create the grids in separate temporary directories before staging the data in the rsync staging area.

This is important because many WFOs use the cron to stage their Service Backup grids once each hour. When NDFD begins using these Service Backup grids, it is unacceptable for there to be a delay of up to 59 minutes. Additionally, with many WFOs using the cron (at :10 past the hour), the rsync scripts on the IFPS Service Backup Central Server will take longer to cycle through the WFOs, further introducing delays.

Problem: Polling frequency increase (Katrina Item #8). (DR 19951)

Katrina Assessment Item #8 mandates that failed WFOs' grids should automatically be fed to NDFD by the backup WFO. This is being accomplished by NDFD using the IFPS Service Backup grids as its data source.

In order to make this change possible, the frequency with which the IFPS Service Backup Central Server polls each WFO must be increased. Currently, rsync polls each WFO approximately every 30 minutes. NDFD requires that grid updates be available within approximately 1 minute 90% of the time.

This goal should be met by changing the amount of time the rsync scripts sleep between WFO polls from 3 minutes to 5 seconds.

ATAN913 is currently addressing this issue.

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Problem: New ls2/ls3 ldad sendIPCmessage error in CO_serv. (DR 19699)

The problem appears in the CO_serv log in the form of an error when "V data" has arrived:

co_serv_main.c EVENT: V message Received by CO_serv.....

sendIPCmessage.c PROBLEM: sendIPCmessage: connect FAILED: Connection reset by peer.

However, the listener process is notified of the event, and successfully transfers the data over for processing. Also, there are no error messages logged on the px2/px1 servers.

The problem only seems to occur when "V message" is received.

The impact seems low as the data still is processed.

Workaround: None known.

----- offending code in co_serv.c -----
```
else if (dataTransferMessage == 'V')
{
ipcMessage = (struct ipcMsg*) &line[0];
ipcMessage->msgContents[sizeof(ipcMessage->msgContents)-1] = '\0';
sscanf(ipcMessage->msgContents,"%hu %s",
&clientPort, clientName);
ipcMessage->msgContents[0] = 0;
msgSize = sizeof(IPC_MSG);
sendIPCmessage((char*) ipcMessage, msgSize,
clientPort, clientName);
exit(0);
}
```

----- offending code in sendIPCmessage.c -----
```
/* Connect to the server */
if (connect(sockfd, (struct sockaddr *) &serv_addr, sizeof(serv_addr)) == -1)
{
logProblem << "sendIPCmessage: connect FAILED: "
<< strerror(errno) << std::endl;
for (i=0; i < MAXPORTS; i++)    /* add specifics about port to error msg */
{
if ( hostPort == portinfo[i].portnum )
{
logProblem << "Host port is: " << hostPort << ", "
<< portinfo[i].portmsg << std::endl;
```

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```
        }
    }
    return;
}
```

Problem. OB7.2: Incorrect MAT Computations Generated by NWSRFS Module NDFD2RFS. (DR 18846)

When the ndfd2rfs module encounters a forecast segment where there are two MAT areas, and one of the zones is non-contiguous, the program computes erroneous forecasts.

For example, at NERFC, the SNE (Southern New England) group is in the southern most portion of their HSA where the areas are not subdivide. In this group, the temperature drop across the group as expected. The module then attempts to compute the temperature forecast for the Connecticut group. The computation appears to work for the first few segments . The program then issues a warning when it encounters the first non-contiguous zone and from that point the temperatures do not vary as expected in the Connecticut group or forecast segments in other basins.

Problem: xinetd errors on px2 / ls2 / ls3. (DR 19698)

During communications between the ls2/ls3 and px2 during normal mode-b operations, the messages log on ls2 report the following error:

xinetd[12345]: read: Connection reset by peer (errno = 104)

The px2 has a corresponding error message:

xinetd[54321]: libwrap refused connection to auth (libwrap=in.authd) from 192.168.1.10

The impact of the problem seems minimal, as products seemingly flowed without problem from px2 <--> ls2/ls3. However, further testing is most likely needed.

Workaround: Add the following into the /etc/hosts.allow file on px1/px2:

in.authd: 192.168.1.

Problem: Modify IFPS export configuration data to both ANCF and BNCF. (DR 19668)

Now that we have a BNCF, we want to also send the site configuration there any time that site configuration goes out to ANCF to keep things in sync.

Problem: HPE data gathering scripts require directory checks. (DR 19644)

The DHRgather and DSPgather scripts need a check for the temporary radar data holding directories so the HPE field generator doesn't start inadvertently. It was noticed in the first PIT install on NHDA that the field generator started even though there would not have been data directories for the decoders. An additional check for the directories is needed so that the field generator doesn't start up needlessly.

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Problem: Smartinit definition MosGuide.py incorrect. (DR 19586)

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.

Problem: incorrect purge setting for HRAP/QPE. (DR 19546)

Accommodation was made for handling RFC-generated QPE grids under DCS 3285 (OB7.2), and additional work was done under DR 17547. Included in the latter was a purge setting for these grids (Grid/SBN/netCDF/HRAP/QPE), in gridPurgeInfo.txt. The syntax of the entry (| ,,,w | | 78) is not what was intended. This will keep the most recent 78 files, regardless of issuing RFC, while the intention is to keep six from each of the 13 RFC, which is accomplished with "|,w,,| | 6".

Problem: Installation scripts. (DR 19532)

This DR is to check in all installation scripts and files for OB8.3.

Problem: FFW (dam break): rule of thumb text created when dam break scenario is not. (DR 19481)

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.

Problem: GW: AIRMET polygon display needs improved sampling. (DR 19390)

The AIRMET and non-convective SIGMET aviation products are displayed as polygons in D-2D. In order to see the associated text product while sampling the poygons, the user must align the cursor with one of the vertices of the polygon. This is not very easy or user-friendly and it is preferable that the polygon interior can be sampled in order to display the text.

Problem: Small Enhancement. (DR 18810)

Inclusion of Tide Data into the Archive DB and Verification Description of Problem: Data with a time interval of less than 15 minutes does not always fit cleanly in the 15-minute interval format of the RFC Archive DB pecrsep table format. In particular, tidal gage data with a 6-minute interval is affected at NWRFC (and SERFC in the near future). The fact that the data are not stored with its best fit into the pecrsep table makes verification of forecasts extremely difficult.

Solution: A new database table, one new apps_defaults token and some code changes to the shef_decode_raw and IVP (verification) applications.

- New table would be a single value per row format.
- New apps_defaults token for shef_decode_raw apps this token would control if shef_decode_raw posts data to just the pecrsep table or to both the pecrsep table and the new table.

- Shef_decode_raw, the software would be modified so that if the token is set to say "ON" the decoder would post all data that would go into the pecrsep table, to it and the new table as well.

This means that the same piece of data would be stored in both tables. In the pseudo array table, pecrsep data with the smaller time interval is shoved into the best fit time slot while in the single value per table, i.e., the new table, it would be stored with it true observation time. RFCs that do wish/need to post in parallel to this new table would set the token to "OFF," which should be the default setting.

- IVP (verification), the software would be modified to allow observed data during the paring process to be retrieved from this new table.

Problem. AF: MHS message formatting error causing dropped messages. (DR 19890)

Incorrect pointer math when calculating string length produces intermittent malformed SMTP messages. This causes the receiving MHS software to DRop the message unconditionally. This happens infrequently and can only occur when messages are addressed to more than two sites. The biggest risk is that occasional WWAs sent via MHS from the NCF to all sites may get dropped, though MHS is a backup to the SBN for these message types. This would only affect sites that do not get the SBN version. Other types of messages, such as intersite coordination storm warnings, will be affected in rare instances.

Problem. ECMWF Hi-Res Displays on AWIPS Displaced 50 Miles to East (Ref. DR 19626). (DR 19872)

The purpose of this DR is to merge OB8.2.1 DR 19626 into the OB8.3 baseline.

DR 19626 states:

> As noted by site LOT: It appears that all the surface data (maybe upper air too, but too difficult to tell) is being displaced too far to the east by about 50 miles when displayed in AWIPS. The problem is most noticeable over the Great Lakes since there is usually such a clear difference between weather over water and land. Further, now that we are getting the hi-res data.

It's conceivable that it could be used in forecasting winter storms. If so, you should be wary that the MSLP (and maybe even the QPF) is actually being plotted about 50 miles too far east.

From the CRH IT Chat room.

> (1:12:23 PM) joanna.green: AWIPS Question- SST called wants us to call around and see if other sites have the same problem- Hi Res ECMWF seems to be offset about 50 miles to the east. If someone would be so kind and check the following. Volume Browser-->Conus-->Hi Res ECMWF-->Temp--Sfc--> Image of temp. Look at 14.00 Thurs 12z and Fri 00z. Look a the 37.5 isotherm. Is it offset to the east? It should go right through the middle of Lake Michigan.
>
> (1:14:36 PM) matt.w.davis: Based on that JoAnna, mine is east, too
>
> (1:15:18 PM) joanna.green: Great. Thanks for checking. Anyone else see it?

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(1:15:20 PM) eric.zimmerman: JoAnna - just checked here. My 37.5 isotherm is along the eastern shore of LM. The 35 isotherm is about down the middle of the lake at those times.

(1:15:47 PM) joanna.green: Wonderful.... well in a manner of speaking. I'll let SST know. Thanks again!

(1:15:54 PM) jeffrey.zeltwanger (CR_ABR_ITO): ours is also running across far E Lake Michigan

This problem appears to affect all sites. N/A OB8.3 OB8.3

Problem. Add an E-O-F indicator in NCF-COMMS OB8.3 file to support installation process. (DR 19797)

Update NCF-COMMS file "build\OB8.3\dev\develop\src\mc\cron\root.dx.cron" to add an E-O-F indicator to support installation process.

Problem. Pireps do not display in the correct location. (DR 19771)

Note: This DR is being written against a TT, but the problem has been already been identified. It was to be fixed in OB8.3 in relation to DCS 3457 -- This DR should be assigned to OB8.3.

Pireps do not always display in the correct location. The problem seems to be that the bearing and distance suffix on fixes is not handled.

Workaround: None known that will make the display correct.

Problem. update dhm to reflect new input grid file name changes. (DR 19655)

Update to reflect new input file name change.

Problem. CNRFC FFG image skewed to the West. (DR 19651)

The CNRFC FFG image is skewed to the West. See attached image. The NWRFC problem is addressed in DR 19464.

Site has workaround for FFG issue.

Problem. OB8.1: FFG image does not display correctly. (DR 19464)

FFG products do not display correctly at PTR. This can be fixed by updating a line in makeDataSups.csh:

    $makesuparg 1 90 -105 0 HrapNWRFCffg.sup \

     g 60 -105 37.975 -124.194 4.762 4.762 400 378

Only HrapNWRFCffg.sup should be changed.

PTR has already done this, but the fix should be baselined so it is not overwritten every release.

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Also see DRs 13591, 15072, and 16321.

Problem: AWIPS to CRS Interface Protocol Change to SSH (sftp). (DR 19442)

The current text weather product transport protocol between AWIPS and CRS is ftp. This allows several security deficiencies to exist on both the CRS and AWIPS networks. One such deficiency is the usage of cleartext passwords. To alleviate this and other issues the AWIPS application responsible for sending products to the CRS system should move to the SSH protocol (via sftp) and leverage the protocols ability to use key authentication. The CRS system has the ability to handle SSH traffic from AWIPS.

Problem. OB8.1 Beta: MAT Preprocessor fails when attempting to define a new location (Ref OB8.1.1 DR 19206). (DR 19603)

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. OB8.2 OB8.1 OB8.3

DR19601 SAC Mod GUI Update GUI to disable Mod Value when toggle check box from on to off N/A.

Problem. RTMA Model could not store ws, wd fields. (DR 19594)

> 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.

Problem. OB8.1 - AF: MHS does not send retrans requests correctly following switch. (DR 19467)

This is a long standing bug that was just identified. When switching between ANCF and BNCF, the current scripts for the retransmission process do not repoint 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. Since one file must be changed to fix

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both of these bugs, 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.

Problem. OB8.1 - AF: Create NCF MHS availability monitoring application. (DR 19466)

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. There is no impact to the forecasters for this new application.

Problem. OB8.1 - AF: Create NCF WAN availability monitoring application. (DR 19465)

The NCF has a need to report WAN availability information 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 network availability as a percentage. This application will only run at the NCF. No software will be installed at sites. There is no impact to forecasters.

Problem. TPCWindProb localConfig.py entries should be baselined (DCS 3434). (DR 19409)

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)
PWSDTC = 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], PWSDTC),
```

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AWIPS OB8.3 Final Release Notes. Section II, Discrepancy Report Fixes, 05 June 2008

Raytheon

```
([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
```

Problem. RCS Storage Bug. (DR 19255)

Kristen Delack/NCF worked with Todd Shobe (ITO-ILN)to determine that the storage logic for Radar RCS products can present a problem if used heavily enough within a volume scan. If several cross sections are created during the same volume scan, only the most recent one will display. This occurs because each new RCS in the same volume scan overwrites the previous one due to the current naming convention of the Cross Section (both RCS and VCS) products. The problem seems to occur when you issue a request for an RCS for a particular baseline, and then move that baseline and request another RCS for the moved baseline, it increments the number. This incremental counter is not being reset properly after each volume scan. Eventually it reaches 55 and continues to store overtop of the last RCS because the incremental number no longer goes up.

Problem. /var/log/messages and others are not rotating on PX machines. (DR 19212)

Problem. OB8.2: Correct D-2D displays of RAOB soundings to accommodate up to 150 levels. (DR 18909)

The D-2D Skew-T display uses RAOB sounding data from MicroART and RRS (the Radiosonde Replacement System), via the TUABUFR encoder and the RAOB BUFR decoder. RRS has higher data resolution and produces additional "significant" levels in the BUFR encoding. In particular, the TTBB or TempB product now includes up to 135 levels.

Both the RAOB BUFR decoder and the Skew-T display are apparently limited to 75 significant levels. Both need to be upgraded to handle 135 levels in TempB. Note: the Skew-T program merges the TempA plus TempB products for display, so the Skew-T upgrade needs to enable displaying a merged total of up to 150 levels.

Other AWIPS products that may be affected or may need similar RAOB upgrades are:

- Interactive Skew-T extension,
- Plan View Plots,
- IGC to display data in Volume Browser, and

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- the model sounding displays.

Problem. OB7.2: ofsshef Not Correctly Calculating Flow in CMS ofsshef does not properly format flow data in CMS. (DR 18921)

ofsshef is being used to support data transfer for the CHPS/FEWS pilot project with Delft. Extensive editing of a new shef product by a forecaster, is required to input the correct values. This workaround is very tedious and time consuming.

Upon examining the source code, it was found that at line 600, flows are being divided by 1000 for both CFS and CMS units. The SHEF format for flow time series is in KCFS or CMS units (not KCMS). CMS and CMSD should not be divided by 1000, and it would be desirable to have output to 3 decimal places for flow data in CMS.

Problem. DatView Will Not Display More Than Fours Years of Stage Data. (DR 18870)

When attempting to display more then 4 yrs worth of stage data in the DatView plot window, the plot will only display the first 4 years and then leaves the rest of the time period blank. Further testing has shown that it seems to be only data coming from the pecrsep DB table that has this problem.

Workaround: Never request more than 4 years' worth of data from the pecrsep. [*Note:* This is considered to be an unacceptable as a long-term solution.]

Problem. FWS formatter crashes in specific case. (DR 18622)

The following is from Virgil Middendorf at BYZ, who was able to replicate the problem that occurred at MAF (POC Greg Jackson) and suggest a solution:

This was in the code that we put in to fix the single and double quote crash. Attached is the fix. Search maf.py for "if not findAgencyFlag:" You will find this in three places. It is the last two places where I added this condition before the single quote and double quote filtering is done on this varDict entry.

How to test....

1. Note the REQUESTING AGENCY in the STQ product. It was "PECOS VALLEY DISPATCH" for MAF.
2. In the FWS_ccc_Definition file, add an entry for "PECOS VALLEY DISPATCH" in the agencyList definition.
3. Run the FWS formatter. In the Agency: section on the second GUI, "PECOS VALLEY DISPATCH" should already be selected. There should not be an entry box for "Name of Agency if not listed..." in the second GUI.

Problem. OB7.1: Increase Number of Stations within NWSRFS. (DR 18608)

KRF has reached the upper limit on the number stations that can be used within the forecasting element (ofs) of the National Weather Service River Forecast System (NWSRFS). The current limit is 5,000 and the RFC is requesting that that limit be raised to 10,000. This request for an

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increase will allow KRF to include additional gages that are already in place and planned expansion of gaging networks within their service area. This will improve both the accuracy of the forecasts and verification statistics.

Problem. Fatal DatView Editor Error. (DR 18795)

When editing data in a processed SHEF data value table, for ex. pehpsep, after entering the data and clicking the editor "Submit" button, all associated GUI windows close out and a memory fault is reported in the terminal window.

Problem. OB7.1 - AF: Make start_comms_upl_send detect operational NCF site. (DR 18086)

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 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 work around 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. There are no trouble tickets associated with this problem.

Problem. Archiver Duplicate Files backup issue. (DR 17329)

The Archiver software(AX cron software) is not checking the dates on files before archiving them. This results in the Archiver backing up the same day's model data twice. This results in the /data partition becoming 90+% full.

This problem was noticed at OUN because they have 3 dedicated radars and receive more model data than other sites.

Problem. Sound not working after new user logs in on some workstations. (DR 17138)

The artsd is locking /dev/dsp. /dev/dsp remains owned by previous user. A f was crated to edit /home/<user>/.kde/share/config/kcmartsrc. A timeout of five seconds was added in the arguments line. The kcmartsrc file was pushed around to all users who had not done the workaround, and so now they just need to log out and back in for it to work.

Problem. Remove TDWR configuration files from AWIPS baseline. (DR 16814)

tdwrElevations.txt contains the elevation cut angles for every TDWR radar for both Hazardous and Monitor mode VCPs. Unlike the WSR-88D, the elevation angles of the TDWR VCPs vary

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from site to site in order to provide optimal coverage over the primary airport that the TDWR is protecting. The angles in tdwrElevations.txt are used during AWIPS localization to set site specific VCP 80 and 90 elevation angles which are subsequently used by AWIPS to provide product request and display functionality. These elevations could change in order to correct errors and/or to improve TDWR capabilities. For example, the file was updated in OB6.0 to incorporate errors discovered in the FAA database. This file should be made a National Dataset File so that future changes can be quickly and efficiently fielded. Updates to this file should be centrally maintained since corresponding changes to the NWS Supplemental Product Generator (SPG) system may also be necessary. The OB6.0 version of this file will be needed at VEF (Las Vegas) to support the SPG installation in December 2005.

Another configuration file, tdwrRadars.txt, which contains all the TDWR radar IDs, is used in localization. This file should be maintained in the same location as tdwrElevations.txt.

RC-10812 approved on August 1, 2007 requires that both tdwrElevations.txt and tdwrRadars.txt are maintained under NDM and removed from AWIPS baseline.

4.17   SCAN

None.

4.18   LSR

Problem. OB7.2: In LSR, incorrect hail size shown as default. (DR 18880)

In the LSR GUI, it is possible to set a default value for the fields (ex. trained spotter), event type (ex. hail) and hail magnitude (ex. 1/4" pea, 1/2" penny) by right clicking on the desired type in the DRop-down menu.

If defaults are set by right-clicking, when an event report is saved, the new blank event report will have the selected default values already set. The problem is that for hail magnitude, no matter which default is set, the printed report will list 1/4" pea.

Workaround: Go to the dropdown menu and select the desired hail magnitude by left-clicking.

A major issue is that reports for pea size hail can be issued unknowingly - it will say penny size hail in the DRop-down menu of the GUI if that has been defaulted earlier, but the report will be issued for pea size hail if the size is not explicitly chosen by left-clicking in the drop-down.

Eric Lenning at LSX says that this problem has caused quite a few incorrect LSRs to go out that had to be corrected.

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