

AWIPS Build 17.1.1 Informational Overview

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Welcome to the AWIPS Build 17.1.1 Informational Overview. I'm Stas Speransky from WDTD, and I will be introducing you to some of the significant changes in 17.1.1.

The screenshot displays a presentation player interface. On the left, there is a tabbed interface with three tabs labeled 'Tab 1', 'Tab 2', and 'Tab 3'. The 'Tab 2' content area shows a slide titled 'Image 2' with several horizontal lines representing text. To the right of the tabs, under the heading '• Course Completion Info', there are two bullet points: '• Tabs - 4 Tabs (Including Introduction)' and '• Last Modified: Mar 23, 2017 at 10:27 AM'. Below this is a section titled 'PROPERTIES' with three settings: 'Show interaction in menu as: [Single item](#)', 'Allow user to leave interaction: [At any time](#)', and 'Prev/Next player buttons go to: [Slide in presentation](#)'. At the bottom, there are two buttons: 'Edit in Engage' (with a green 'a' icon) and 'Edit Properties' (with a gear icon).

Go ahead and review the slides, and then access the references pages in the VLab from AWIPS LX workstations or the Internet. For a comprehensive list of all enhancements and bug fixes in 17.1.1, see the Resources tab in the upper-right part of the player.

Learning Objectives

After taking this training you will be able to identify some of the more notable AWIPS changes in 17.1.1:

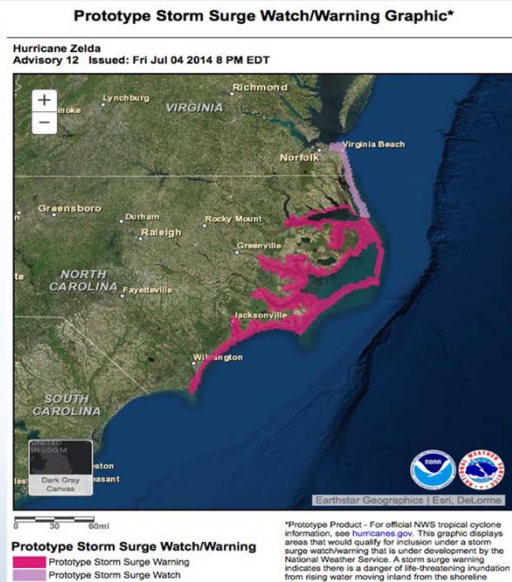
- Tropical Enhancements
- HRRR/RAP additional forecast hours
- Radar Applications menu removal
- HiRes Topo color change
- DMD RPG Build 18 Changes
- AWIPS Interactive Reference (AIR) improvements
- High-Resolution Precipitation Nowcaster available in Volume Browser
- The Multi-Sensor Precipitation Estimator conversion to JAVA
- Under the hood changes (core software, localization)

~ 10 min

The goal of this training is to provide a general awareness of the following new capabilities and recent changes in around 10 minutes.

Tropical Enhancements

- Storm Surge Watch/Warning Products are new
- See “Changes to the Tropical Program for 2017” training module in CLC



There are a number of enhancements to the Tropical Program in 17.1.1, including the implementation of Storm Surge Watches and Warnings. For more information, see the new training module in the CLC coming in April titled “Changes to the Tropical Program for 2017.”

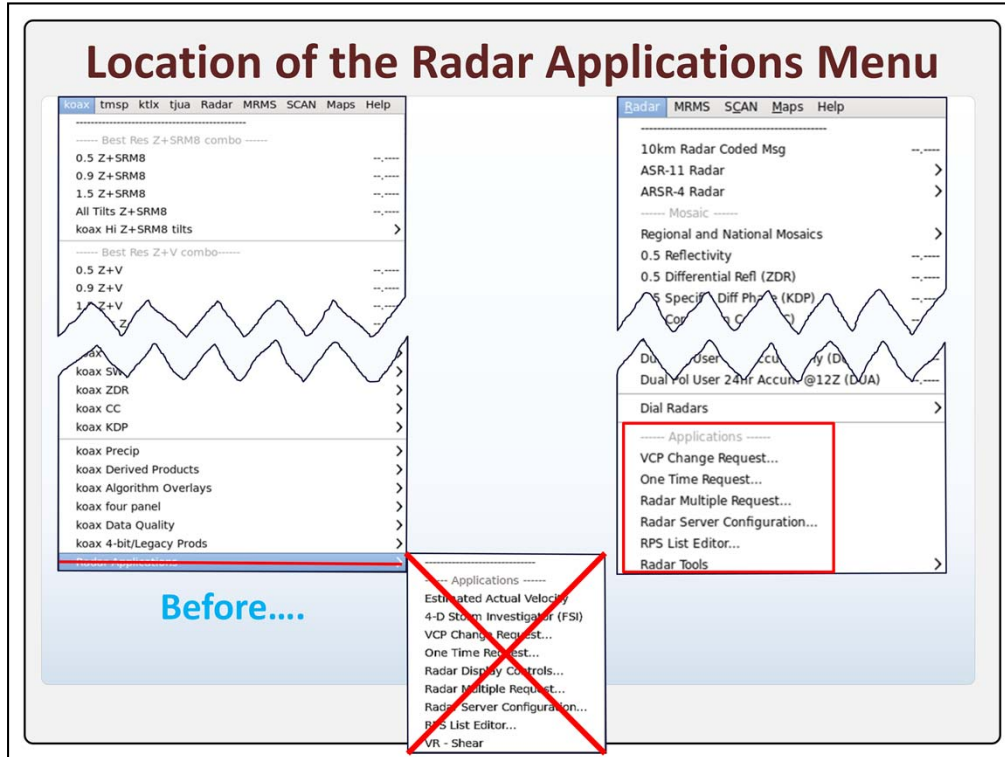
HRRR/RAP Additional Forecast Hours

- HRRR: 15 → 18 hours
- RAP: 18 → 21 hours



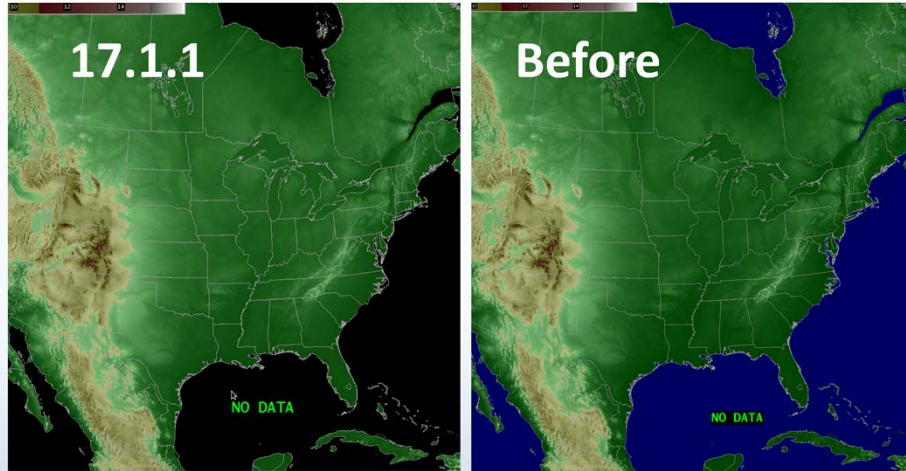
* HRRR Layer Comp Refl Img (dBZ) 01.00 18HR Wed 18:00Z 01-Feb-17

Some of the model changes in 17.1.1 worth noting include baseline support for the 3 additional forecast hours for the HRRR and RAP models. In AWIPS the HRRR now goes out to 18hrs and the RAP to 21hrs. Your site may have implemented a site override to support this when the data was turned on, but now the baseline supports the changes.

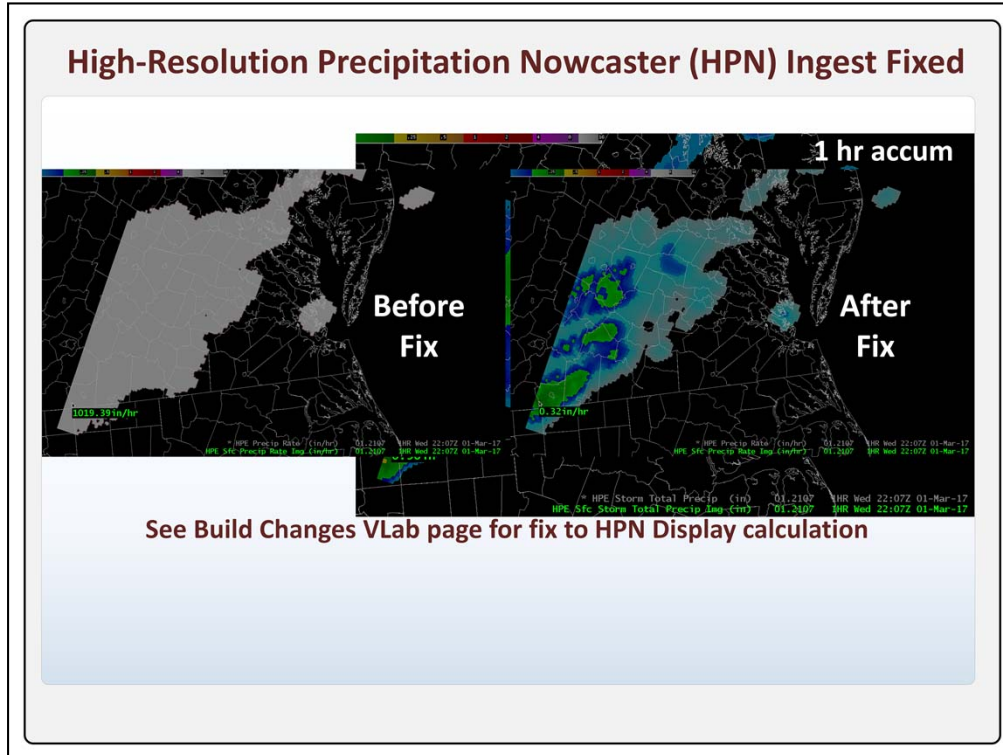


Before, Radar Applications could be accessed from 2 places, from each dedicated radar menu and also from the Radar menu. As of 17.1.1, the Radar applications submenu has been removed from the bottom of each dedicated radar menu and now only appears in the RADAR menu.

HiRes Topo Color Change



The HiRes Topo map overlay now shows bodies of water that outline continents in black instead of blue.



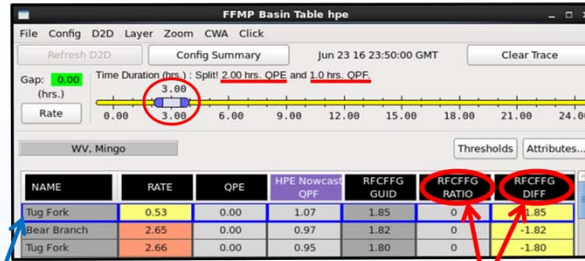
The High Resolution Precipitation Nowcaster ingest is now fixed for display in the volume browser. The HPN features a sophisticated precipitation tracking algorithm that extrapolates the High Resolution Precipitation Estimator (HPE) and Bias HPE precipitation mosaics out to 1hr in the future.

In the HPN Volume Browser displays, you can view instantaneous precip rates at 15 minute intervals out to 1 hour, and you can also display the resulting 1 hour accumulation. See the link in the Resources in the upper right to access the FFMP VLab page containing related HPN information, including job sheets for loading HPN in the Volume Browser.

The display has a bug in the calculation that severely overdoes precip rates. Please see the jobsheet titled “Adjusting Rates Calculation for HPN Display” in the Build Changes VLab page also linked in the Resources tab for directions on how to fix this issue.

HPN Does Not Use QPF Correctly In FFMP Table

- FFMP diff and ratio still do NOT use QPF
- Do NOT use HPN in FFMP



Both do NOT use QPF in calculation

Correct Calculation

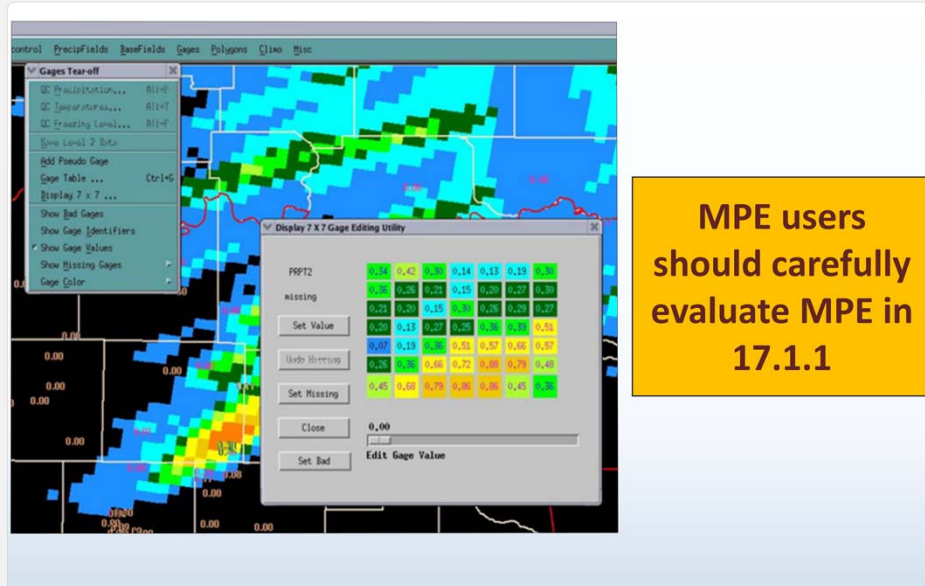
Tug Fork ratio = $0'' (2\text{hr QPE}) + 1.07'' (1\text{hr QPF}) / 1.85'' (3\text{hr FFG}) = 58\%$

Tug Fork diff = $0'' (2\text{hr QPE}) + 1.07'' (1\text{hr QPF}) - 1.85'' (3\text{hr FFG}) = -.78''$

HPE, Bias HPE, and the accompanying HPN 1hr QPFs were designed for use in the Flash Flood Monitoring and Prediction System (FFMP). When the user turns on QPF Attributes in the table, the “Split” window display is supposed to show the accumulations to flash flood guidance ratios and diffs valid 1hr in the future using both QPE and 1hr QPF. Unfortunately the ratios and diffs in the FFMP table still don’t use the 1hr QPF data like they are supposed to for HPN or any other QPF sources. This bug is supposed to be fixed in 17.3.1, due later in 2017.

WDTD recommends not using HPN in FFMP until the bug is fixed. For more information on the latest guidance on precip sources for use in FFMP, see the FFMP VLab page linked in the Resources tab.

MPE Improved AWIPS Integration

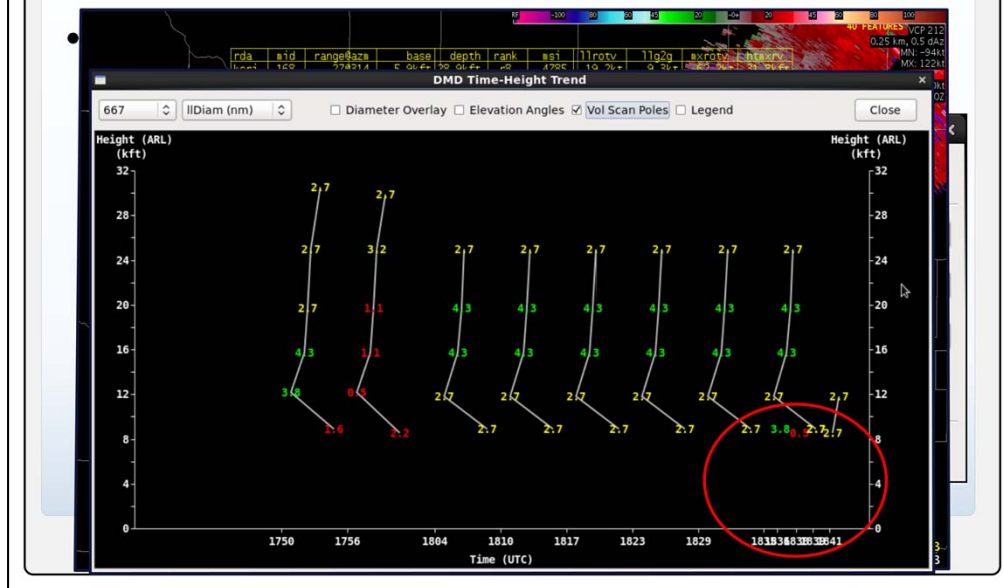


**MPE users
should carefully
evaluate MPE in
17.1.1**

The Multi-Sensor Precipitation Estimator, or MPE, software in AWIPS allows the hydro focal point to create improved precipitation estimates. When AWIPS-2 was deployed, the MPE AWIPS-1 code was wrapped into AWIPS-2 with little changes. In 17.1.1, the C libraries have been fully integrated into the AWIPS 2 architecture which should improve software performance. Any MPE users should carefully evaluate MPE in 17.1.1 for any changes with the new version.

DMD RPG Build 18 Changes

- DMD Build 18 as a reminder (Late 2017/Early 2018)



As a reminder from the 16.4.1 Informational Overview, RPG Build 18 will introduce the Radar Shift Change Checklist and the capability to make VCP and AVSET selections within AWIPS. Although these enhancements came as part of AWIPS 16.4.1, they will not be available until RPG Build 18 is released late 2017 or early 2018. Additionally, in Build 18, DMD will produce data for the extra 0.5 degree SAILS tilts displayable with the D2D DMD Algorithm Overlays and the SCAN DMD time height displays. Prior to 17.1.1 this enhancement will introduce some difficulties when viewing the SCAN DMD Time/Height plot. When DMD SAILS data is ingested by SCAN, the plot will go blank. After the completion of the SAILS ingest, the plot will re-populate but the time labels on the x-axis and mesocyclone strength value will overlap which will make viewing the plot difficult.

In 17.1.1 the DMD SAILS data will be filtered out completely from the SCAN displays, so the SCAN DMD Time-Height display will not have any artifacts.

AWIPS Interactive Reference (AIR) Update

VIRTUAL LAB
WHERE GREAT IDEAS BECOME OPERATIONAL REALITY

Welcome

NWS - AWIPS Interactive Reference

AWIPS Interactive Reference Search

Simple Search Criteria

Keywords: Tracking Meteogram

Site: WFO Omaha/Valley NE

Update

Tracking Meteogram
Tracking Meteogram quick-reference web page with job sheets and supplemental information that is an extension of the Tracking Meteogram training in the CLC.
Source: WOTD Author: Stanislav Speransky Approved: true

AWIPS Interactive Reference
This is the reference page for the AWIPS Interactive Reference.
Source: WOTD Author: Michael Magsig Approved: true

Sign In

- Login **NOT** required by default

In 17.1.1, you no longer need to add a site override file to prevent VLab from launching a log-in screen when you click on Reference on Product from the Product Legend in CAVE.

The VLab AIR Search page also recently changed to simplify the interface. The “Simple” view is the new default and there is now the option to toggle to the Advanced view to display more fields like the search scores. For more on the AWIPS Interactive Reference, see the 16.4.1 Informational Overview in the CLC.

Focal Points Check Living Release Notes

- Lots of Changes “Under the Hood”



- Python, Java, Postgres, PostGIS, Camel changes
- Postgres authentication (direct access removal)
 - ▶ SSL Postgres access enabled 17.1.1, enforced 17.2.1 (summer 2017)

- Localization files

- Some edex_static files migrating to common_static
- GFE in Localization perspective
- New WarnGen base files (re-implement)
- User roles (re-implement)

There are lots of “under the hood changes” in this build that may affect AWIPS focal points and are worth mentioning. Applications like Python, Java, Postgres, PostGIS, and Camel have been upgraded to newer versions. One bigger change is that Postgres authentication is being implemented in 17.1.1, but this will not be enforced until 17.2.1 in the summer of 2017. By then all local applications must use the new SSL Postgres access.

Additionally, a number of localization files have been moved from edex_static to common_static. Some GFE files now appear in the Localization perspective. There are also new WarnGen base files as well as user roles that need to be re-implemented on site, which requires identifying local changes and adding them to the newer base file as a site override. The bottom line is that in this build, it is particularly important for Focal Points to check the living release notes for these changes.

See the Resources tab in the top right of this presentation for a link to the living release notes. Once there click on the 17.1.1 tab.

Summary

- Tropical Enhancements
- HRRR/RAP additional forecast hours
- Radar Applications menu removed
- HiRes Topo color change
- DMD SAILS in RPG 18, SCAN DMD filters out
- HPN in Volume Browser
- AIR no login and Simple/Advanced interface
- MPE integration in AWIPS-2
- “Under the hood” changes for Focal Points

To summarize, there many small but significant changes to become familiar with in AWIPS 17.1.1.

There are a number of enhancements to the Tropical Program in 17.1.1, including the implementation of Storm Surge Watches and Warnings. For more information, see the new training module in the CLC coming in April titled “Changes to the Tropical Program for 2017.”

3 additional forecast hours have been added to the HRRR and RAP models.

The Radar Applications menu has been removed from the dedicated radar menus and can now be accessed only from the Radar menu itself.

The HiRes Topo map overlay now shows bodies of water that outline continents in black instead of blue.

The DMD SAILS data coming in RPG Build 18 will be displayable in D2D, but the SCAN DMD time-height display will filter it out.

HPN QPF data is displayable in the Volume Browser, but it is still broken in the FFMP ratio and diff displays.

In regards to the AWIPS Interactive Reference, you no longer need to log in to launch the VLab references from the Product Legend. Additionally, there is a new simple/advanced interface with the simple being the default.

The Multisensor Precipitation Estimator has been better integrated into the AWIPS-2 infrastructure.

There are lots of AWIPS infrastructure changes for the Focal Points to become familiar with, so focal points, please see the Living Release Notes to ensure a smooth build install.

Check Out VLab & Job Sheets

[Home](#) |
 [Forecaster References](#) |
 [AWIPS Fundamentals](#) |
 [OCLO VLAB Support](#)

OCLO / [Forecaster References](#) / [AWIPS Build Changes](#)

Recent Training-Related AWIPS Build Changes

Here is some information about recent improvements in AWIPS builds worth noting:

OB17.1.1 (Mar 2016)

- 17.1.1 Informational Overview speaker notes PDF, training in the CLC (Internet access only) - [Training Development in progress](#).
- [Tropical Enhancements](#)
 - new storm surge watch/warning
- [HRRR/RAP additional forecast hours](#)
 - HRRR to 18hrs, RAP to 21hrs
- Location of Radar Applications menu
 - removed from each radar's menu and now only in Radar menu
- [High-Resolution Precipitation Nowcaster \(HPN\)](#) Ingest Fixed
 - Forecaster Jobsheet: [Loading HPN from the Volume Browser](#)
 - Focal Point Jobsheet: [Adjusting Rates Calculation for HPN Display](#)
- [MPE](#) Integrated into AWIPS 2 infrastructure
- [DMD SAILS ingest](#)
- AWIPS Interactive Reference update
 - No login required by default
 - [New interface \(Simple/Advanced\)](#)
- Changes to infrastructure important to Focal Points (see 17.1.1 tab of [Living Release Notes](#))

Future Training-Related AWIPS Build Changes

Here is some information about upcoming improvements in AWIPS builds worth noting:

OB17.2.1 (July 2017)

- Redhat 7

OB17.3.1 (Fall 2017)

- Contents TBD

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You are now done with the AWIPS 17.1.1 Informational Overview.

Just enter this address in a browser on your LX workstation or on the Web and select the AWIPS Build Changes VLab page from the Forecaster References menu for access to the HPN job sheet associated with this training.

Let me know if you have any further questions, and good luck with the new 17.1.1 capabilities.