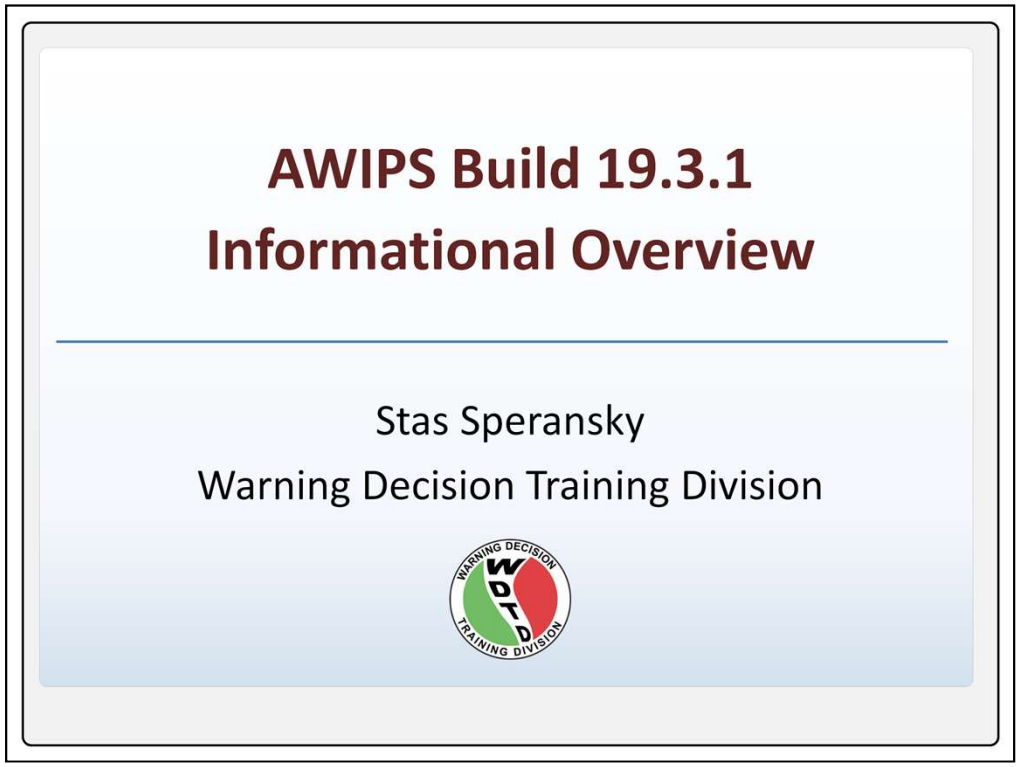
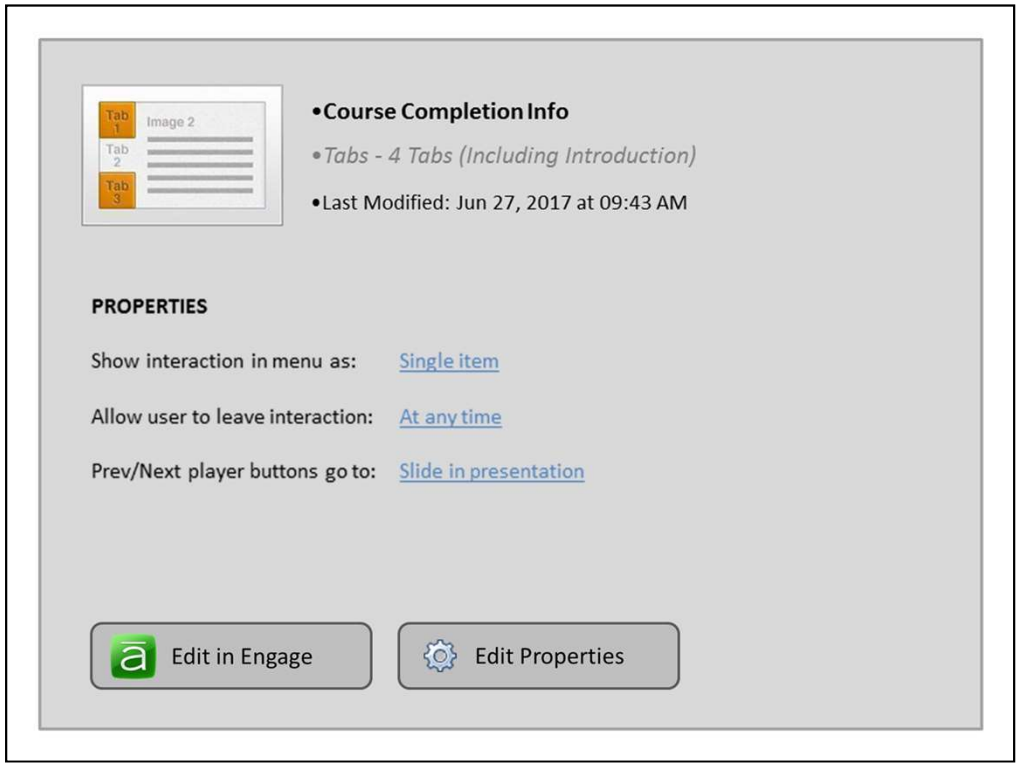
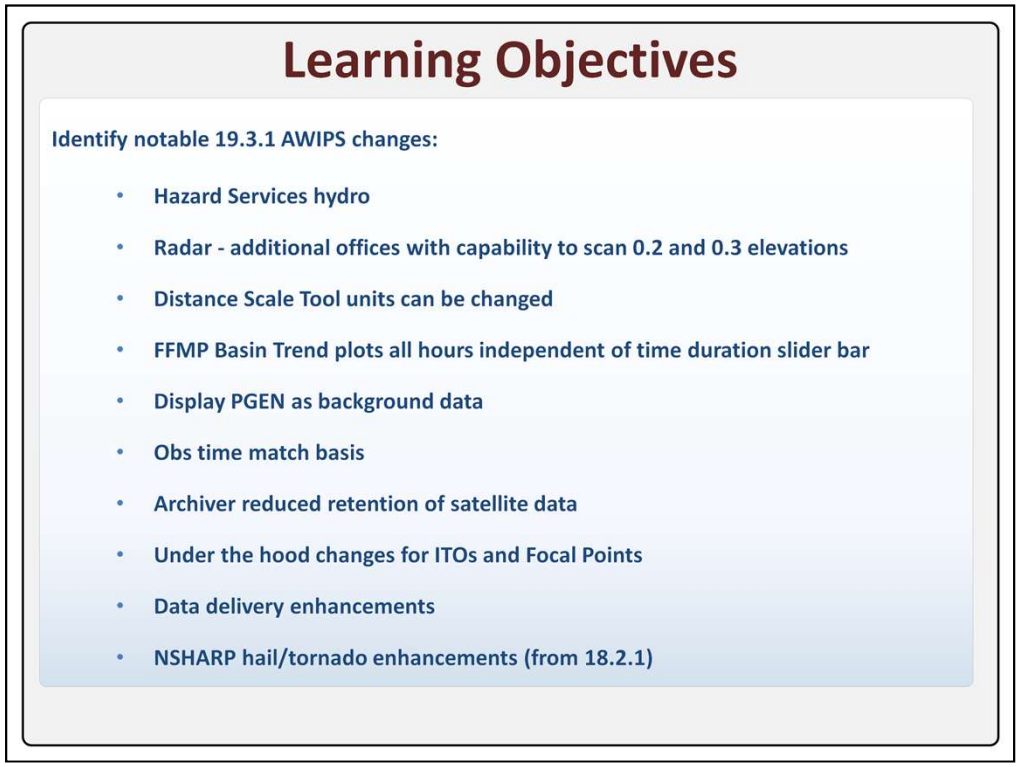


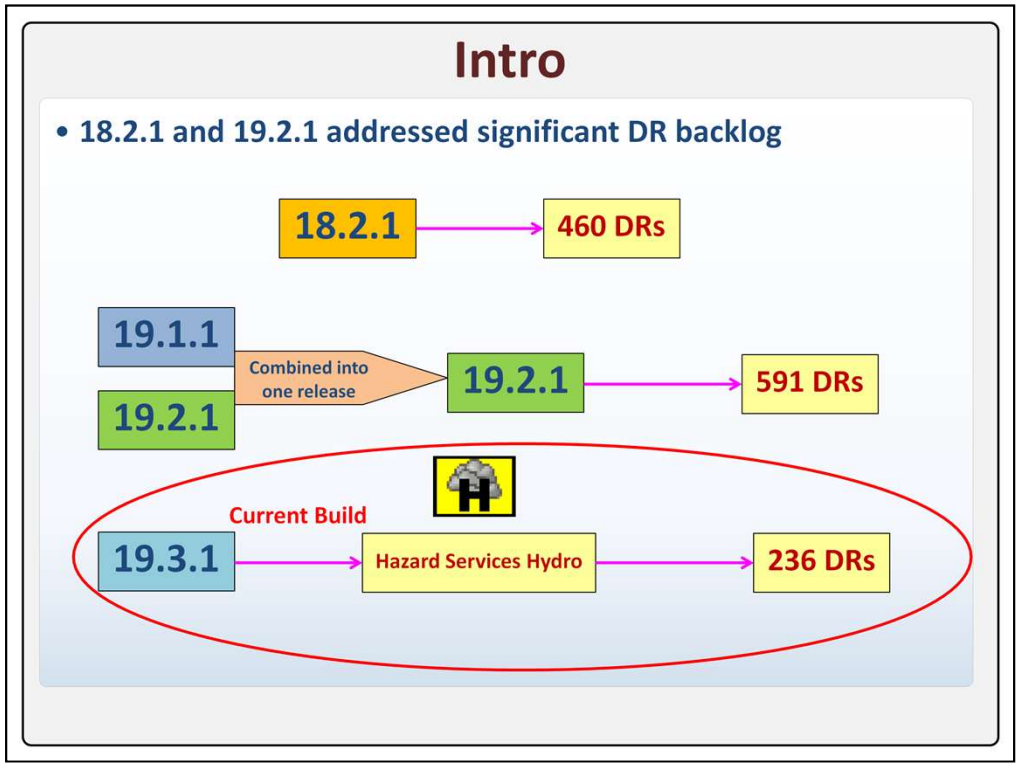
Welcome to the AWIPS Build 19.3.1 Informational Overview. I'm Stas Speransky from WDTD, and I will be introducing you to some of the significant changes in 19.3.1.



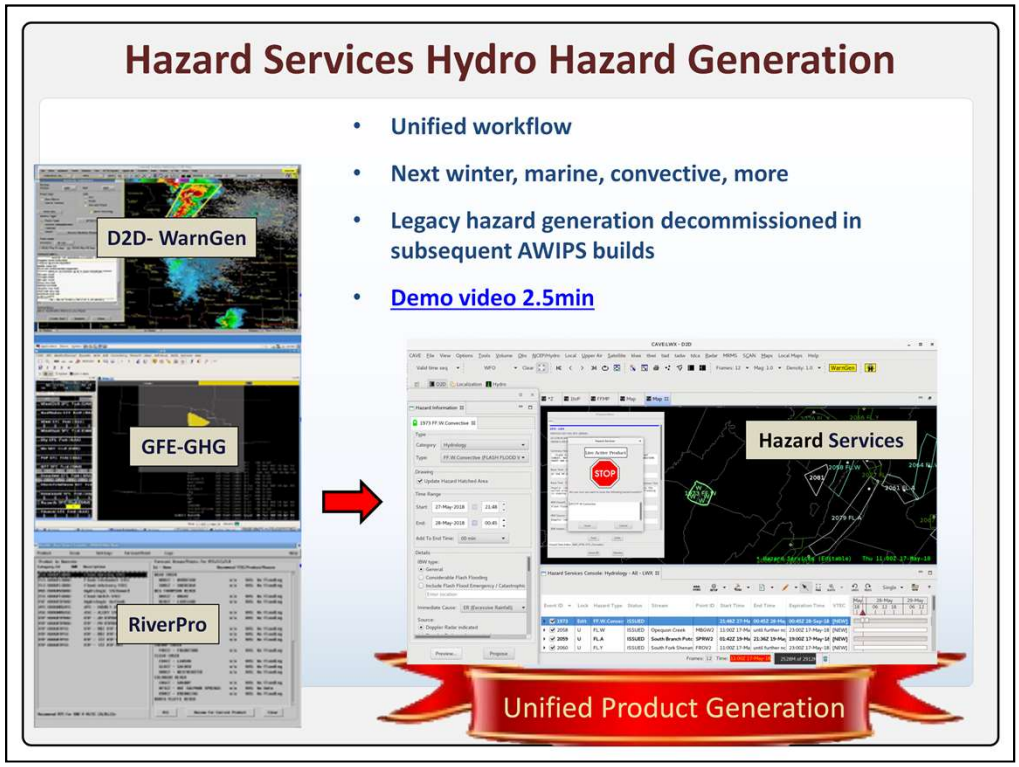
Go ahead and review the slides, and then access the references pages in the VLab from AWIPS LX workstations or the Internet. For a comprehensive list of all enhancements and bug fixes in 19.2.1, see the Resources tab in the upper-right part of the player.



The goal of this training is to provide a general awareness of the following new capabilities and recent changes in build 19.3.1 in around 10 minutes. I will also cover a recent 18.2.1 NSHARP change.

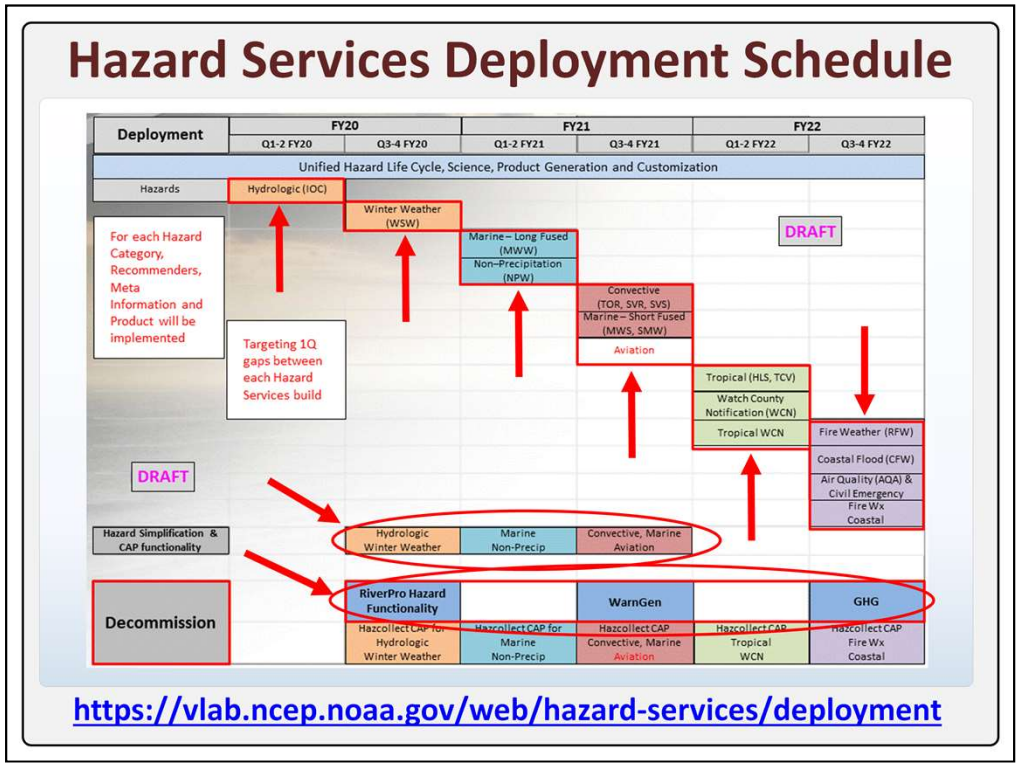


The previous 2 builds addressed a large portion of the significant DR backlog that has accumulated since AWIPS-2 was fielded in 2015. The big ticket item for build 19.3.1 is Hazard Services, a major enhancement that will provide new hydro product generation capability that will ultimately replace all watch, warning, and advisory generation software in AWIPS. There are some smaller enhancements in this build in addition to hazard services that will be addressed in this training but if you want to like to see a formatted list of the all the DRs, see the Resources tab for the 19.3.1 DR spreadsheet.



With build 19.3.1 comes Hazard Services, a major enhancement that will provide new hydro product generation capability that will ultimately replace all watch, warning, and advisory generation software in AWIPS. For now, Hazard Services only contains the hydro component, but subsequent AWIPS builds will include winter, marine, severe components and more. While the legacy hazard generation capability will initially continue, it will soon be decommissioned in subsequent AWIPS builds.

If you have not seen the short unified workflow video WDTD distributed in our 19.3.1 planning communication and you are interested in knowing how Hazard Services works, click on the video link for a short demo. When you are finished, click next to advance to the next slide.



On the current schedule, Hazard Services Hydro IOC will be deployed in the first half of 2020 followed by the winter weather and hazard simplification components during the second half of 2020. All the remaining hazard generation will be replaced over the following couple of years.

As you can see from this chart, there is an aggressive decommissioning schedule for the hazard generation capability of the legacy software. Some of the non-hazard generation capability of software like RiverPro, however, will continue after the hazard generation components are retired.

For more information on the deployment of hazard services, please visit this page in the Vlab.

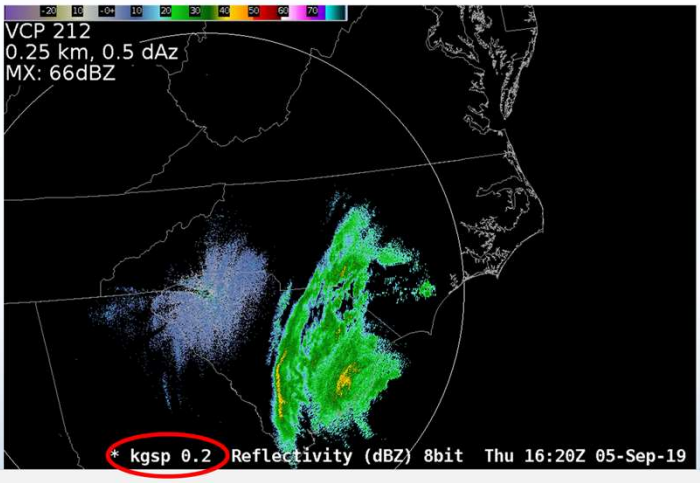
There is a lot of forecaster and focal point training to support initial deployment of Hazard Services in 19.3.1. The first step in a WFO preparing for Hazard Services is for a focal point to take the user training and focal point training. One focal point from each WFO who has not attended prior workshops during the test phase will attend a three-day workshop to begin configuring Hazard Services for local hydro operations. After 19.3.1 is installed and after the local focal points have Hazard Services ready, forecasters will take the training and applied jobsheets to develop fundamental proficiency with Hazard Services.

Because of a service backup problem where RiverPro cannot back up a site using Hazard Services, the primary and backup offices are going to need to complete the training and coordinate prior to operationally using Hazard Services. If you haven't seen the preparations video WDTD sent out in October, check it out by click on the link on this page.

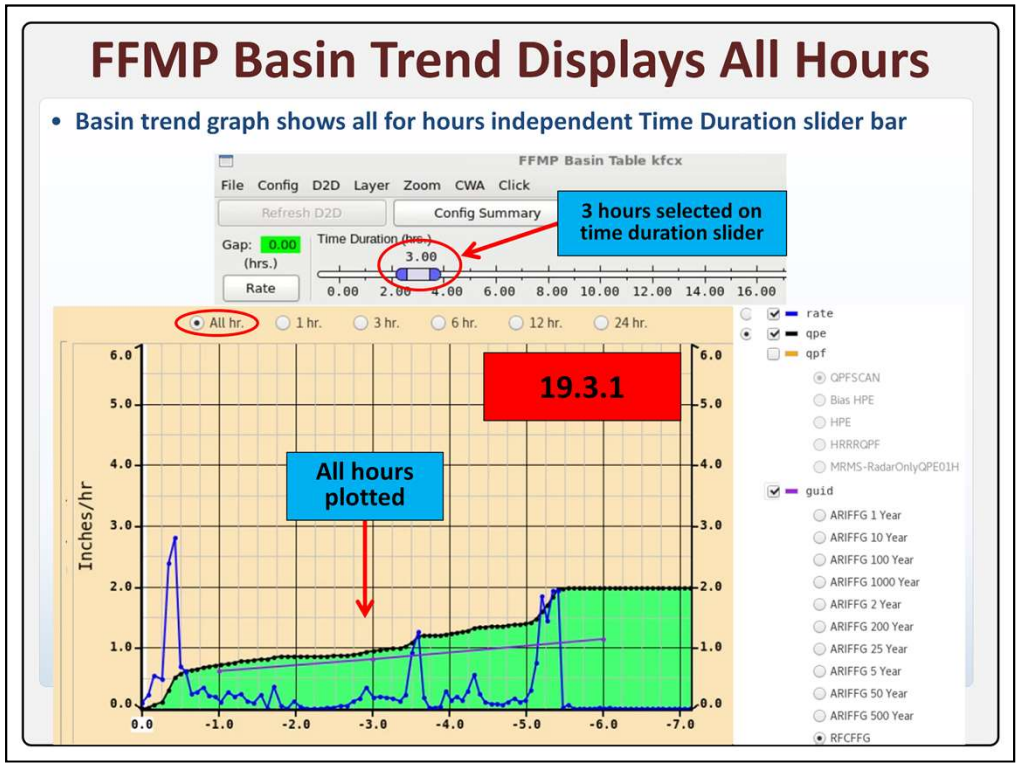
Contact Mike Magsig at WDTD if you have any Hazard Services training questions.

Radar

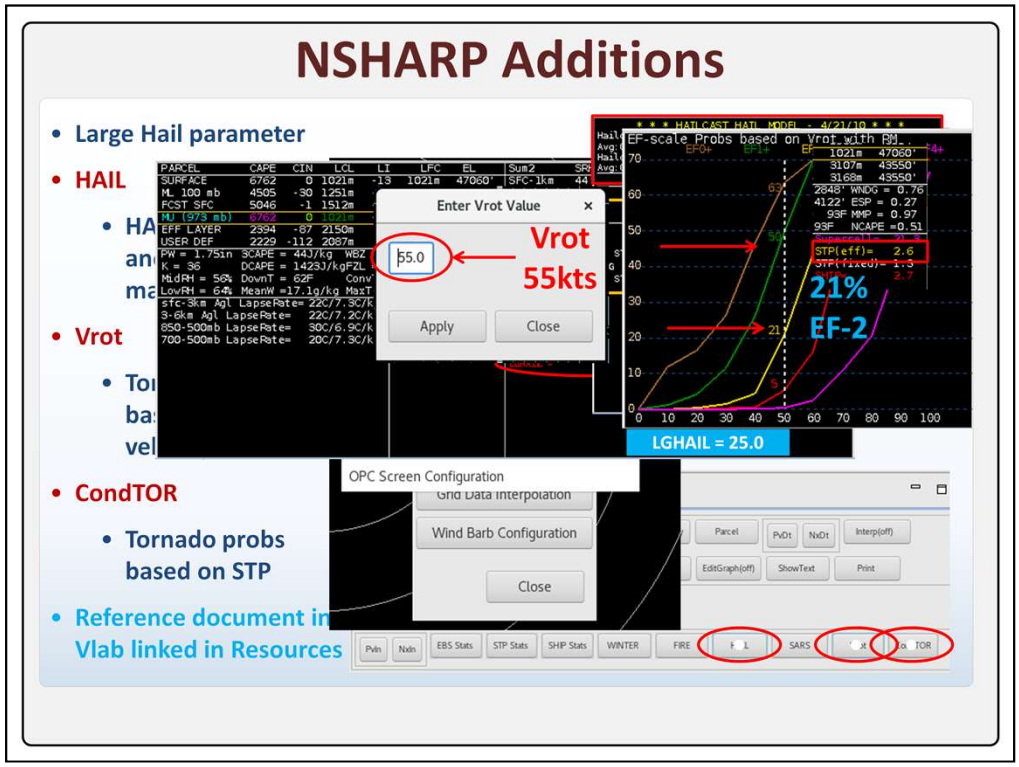
- 0.2 elevation at KGSP and KRAX
- 0.3 elevation at KMBX, KSHV, KDGX, and KCLX



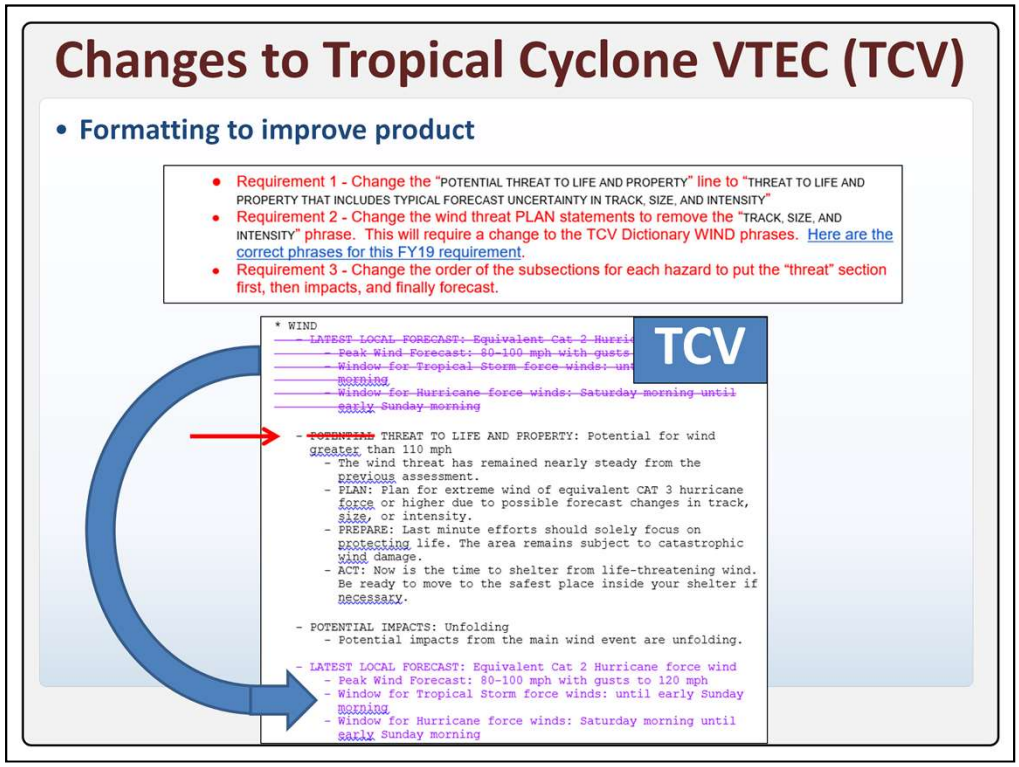
In 19.3.1, several more sites have added elevation scans below the standard 0.5 degrees.



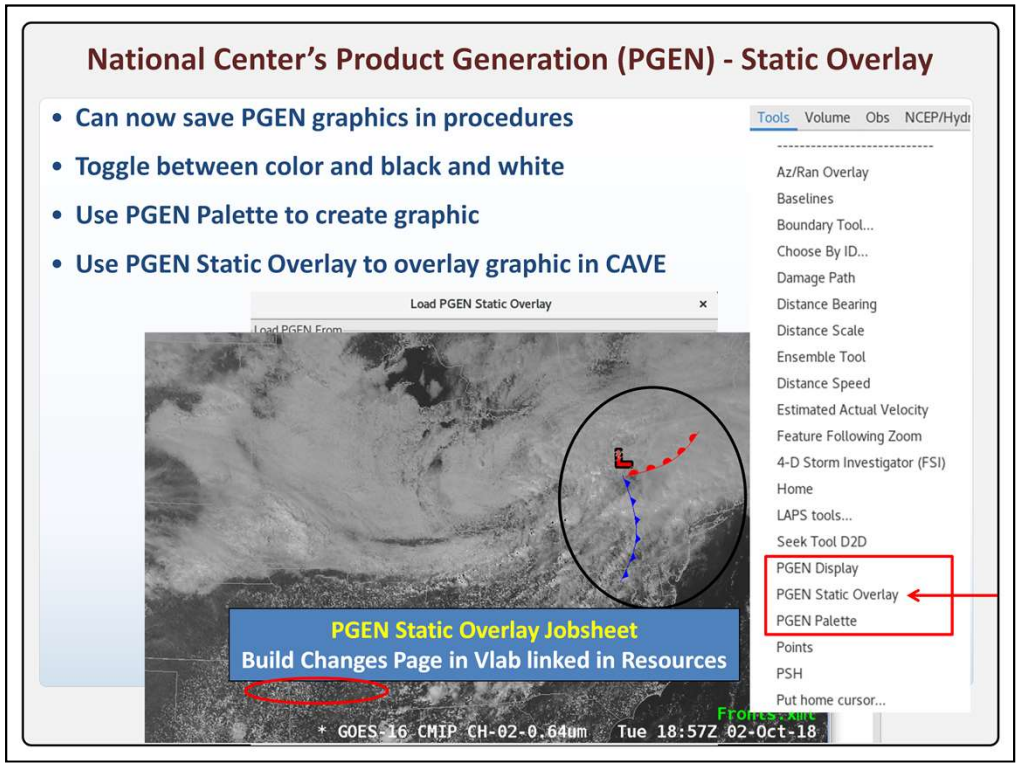
In prior builds, the time series of the FFMP Basin Trend's all hour plot was constrained by the time duration slider bar in the Basin Table. In 19.3.1, you are now able to see the time series across all hours independent of the slider bar.



There were some enhancements introduced in NSHARP in build 18.2.1 that we did not include in our previous overview. To see all of these new additions, you must select the SPC Wide Screen configuration. First, the large hail parameter is now displayed in the parameter section at the bottom of the NSHARP window. You can see detailed output in regards to expected hail size from the hail model available when you click on the HAIL button. You can also see the hail estimate based on the SARS best matches. There's also a Vrot button brings up a new window where you can input the radar derived Vrot value and use it to estimate tornado intensity. In this example, for a rotational velocity value of 55kts, there's a 22% chance of at least an EF-2 tornado. Finally, you can click on the CondTOR button to bring up a plot of tornado intensity estimates based on the Significant Tornado Parameter value, or STP, which in this case is the vertical line sliced through the image that uses the effective layer STP value from the parameter section. For a more detailed walkthrough on these enhancements, please refer to the NSHARP Hail and Tornado Parameters reference page in the Vlab linked in the resources tab.



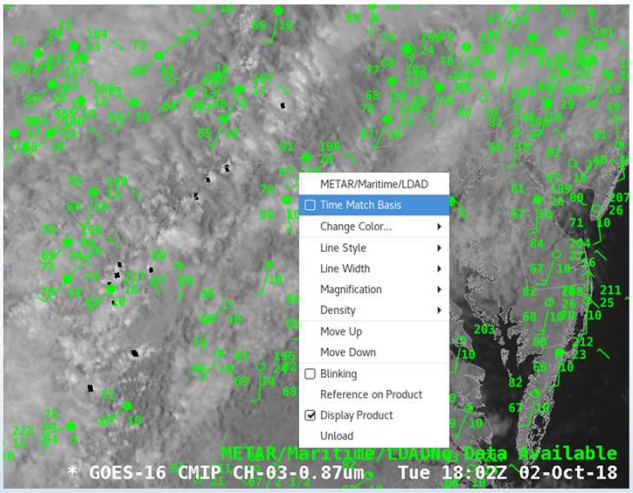
There is a change to the format and wording of the Tropical Cyclone VTEC in this build to improve the product. The "potential" wording is being removed along with the "track, size, and intensity" phrase. The latest local forecast is also being moved to the bottom.



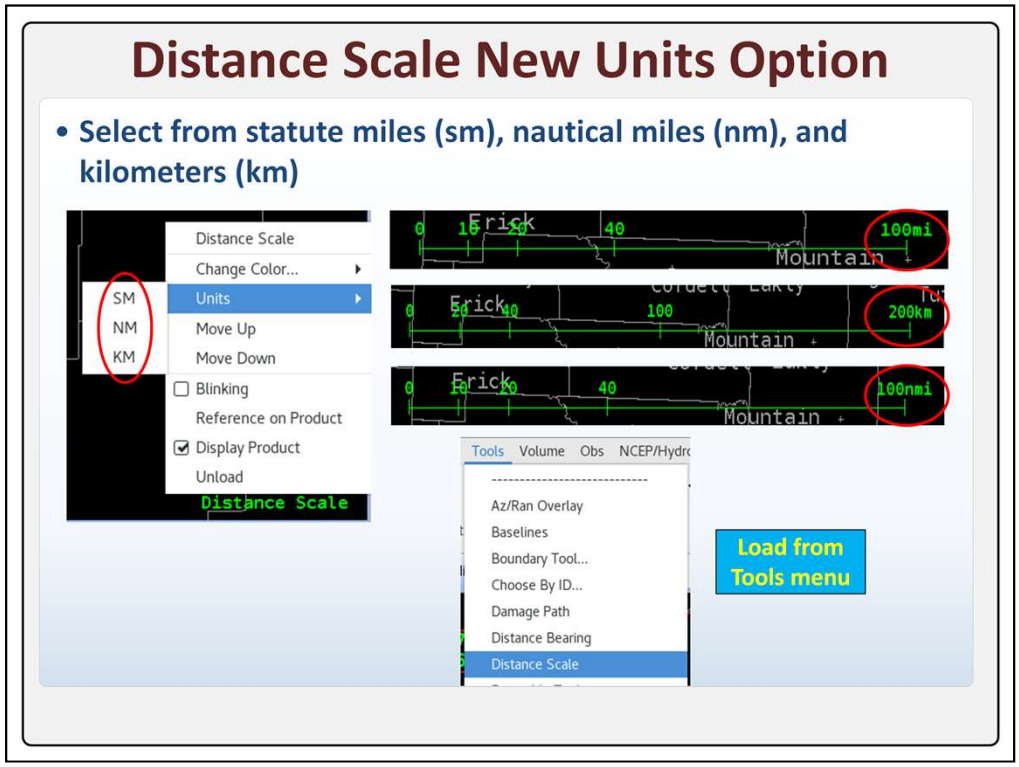
There's a new PGEN tool called the PGEN Static Overlay. It's similar to the PGEN Display except for 2 differences. The main one being that you can now save the PGEN graphic in a procedure using the Static Overlay. The second difference is that you can toggle between a black and white and a color graphic using with Static Overlay using the Mono Color button. Use the PGEN Palette Tool to create the graphic, save it, then use the PGEN Static Overlay to overlay that saved graphic in the map editor. Please see the jobsheet in the Vlab titled PGEN Static Overlay for more practice on this capability.

Obs Time Match Basis Re-instated

- Can now set time match basis to obs



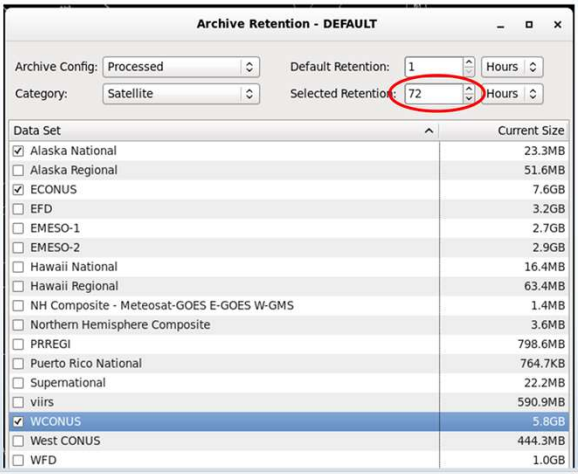
In prior builds, the capability to set time match basis to obs was lost. In 19.3.1, you can once again set obs data as your time match basis.



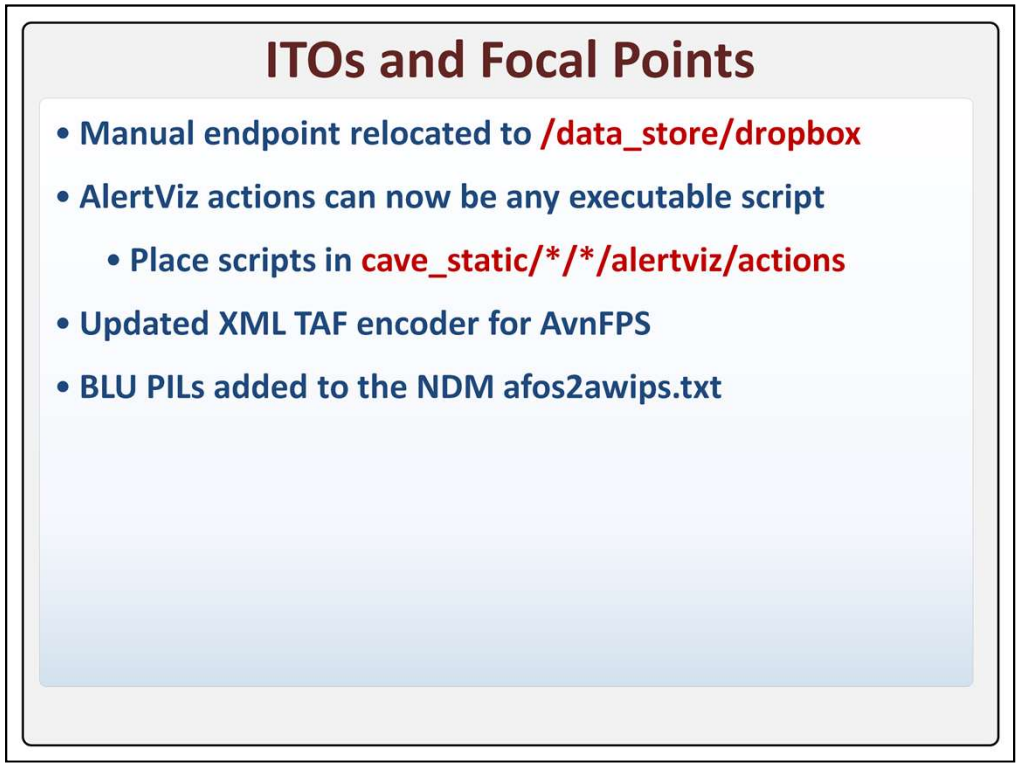
You are now able to select from 3 different units to use with the Distance Scale Tool. These are statute miles, nautical miles, and kilometers.

Archiver Reduced Retention

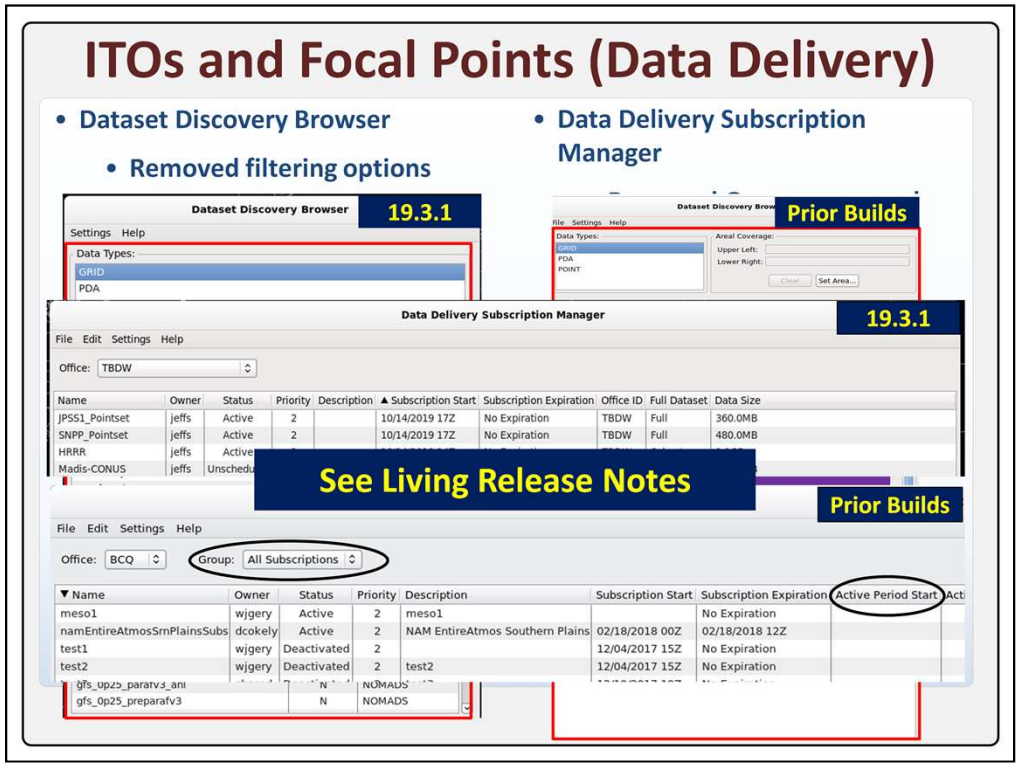
- Satellite data retention changed from 168 to 72 hours
- Most offices have site override to still keep 168 hours of data



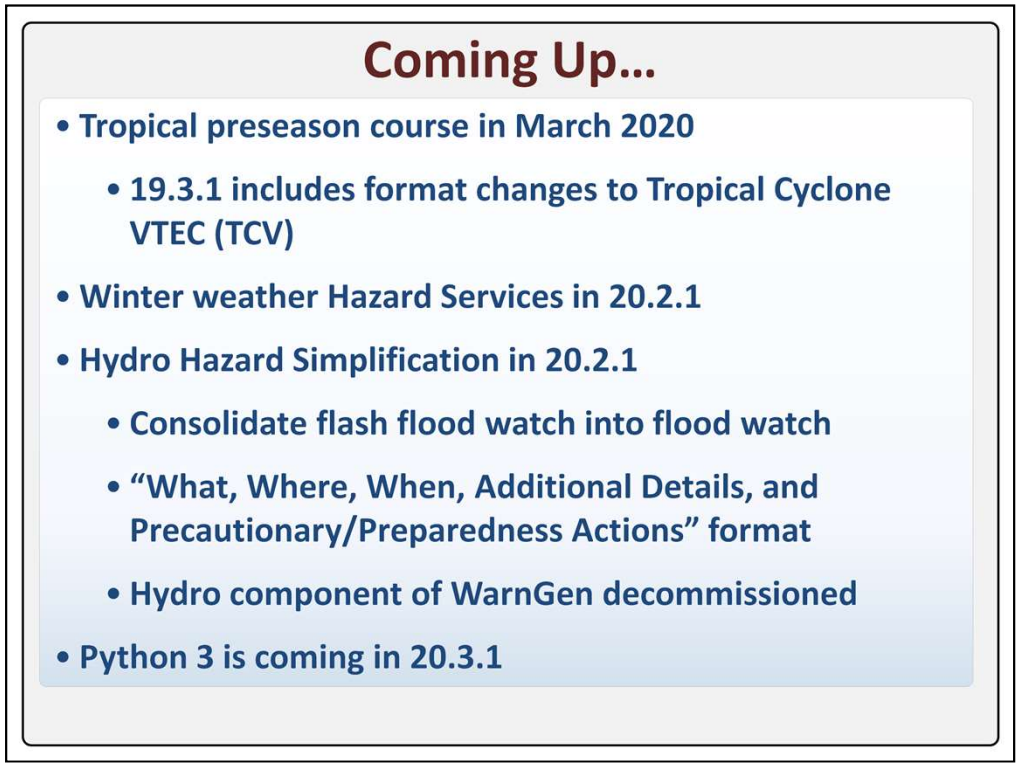
Satellite data retention in the archiver has been changed from 168 hours to 72 hours. However, the impact of this change should be minimal as most offices have a site override that will still allow them to keep satellite data for 168 hours. Have your focal point check to make sure you have a site override if you wish to retain satellite data for longer than 72 hours.



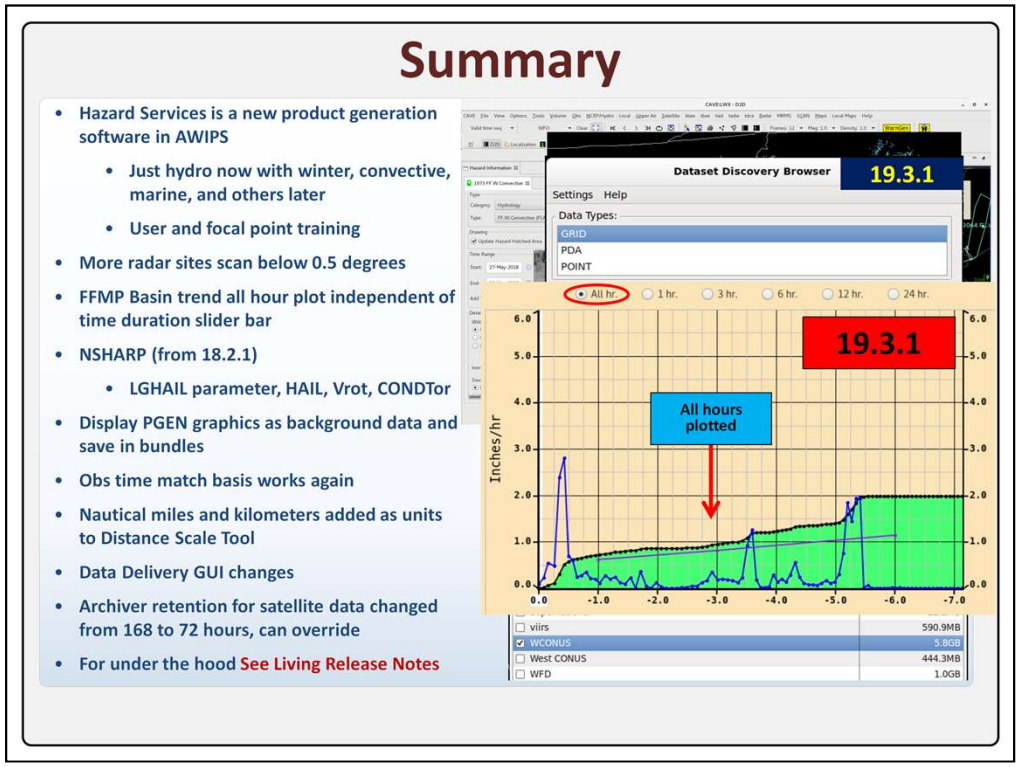
The following are some of the changes for ITOs and Focal Points to consider with 19.3.1. The manual endpoint location has been changed to data store slant dropbox. This was done to improve performance and organization. Alertviz actions can now be any executable script. There is an updated XML TAF encoder for AvnFPS. BLU PILs have been added to the National Dataset Maintenance server's afos2awips.txt file.



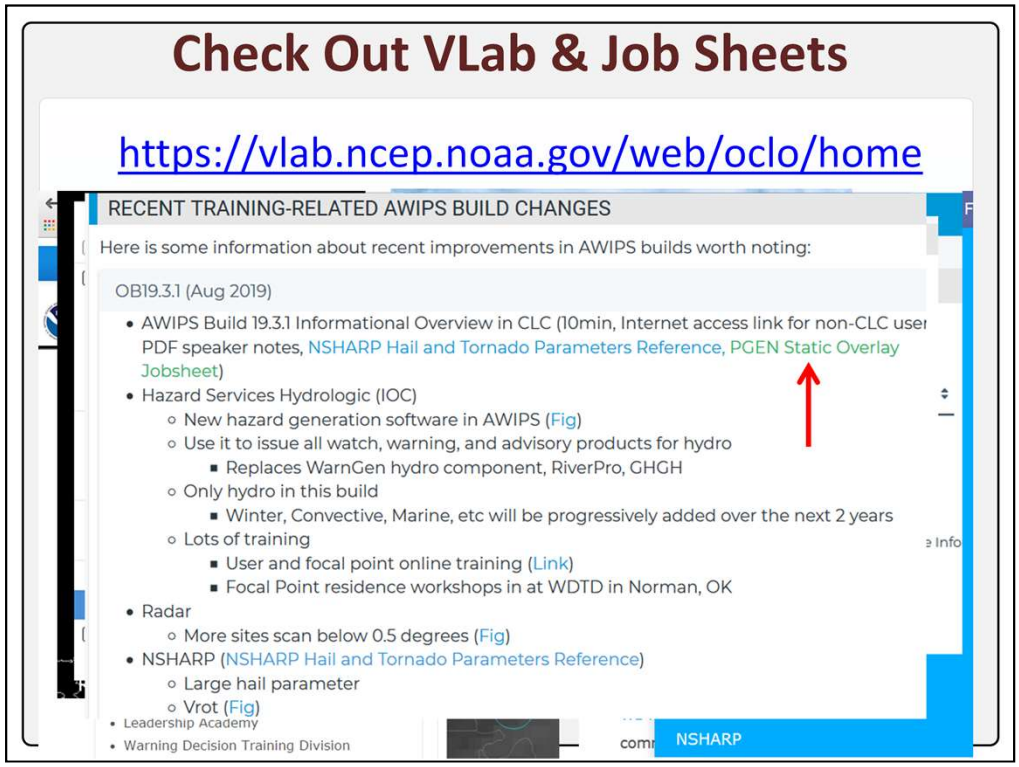
There are a couple GUI changes in Data Delivery worth noting. First, filtering options have been deemed unnecessary and confusing and therefore have been removed from the Dataset Discovery Browser GUI. Second, the ability to filter by group has been removed from the Data Delivery Subscription Manager. Your only option now is to filter by office. Finally, Active period handling has been removed from the Data Delivery Subscription Manager GUI. For more information on these as well as additional items, please see the Living Release Notes linked in the Resources Tab.



Here are a few items to keep in mind that will be coming in 2020. The tropical preseason course is currently planned to be released at the end of March. AWIPS Build 19.3.1 already has one of the enhancements. The "potential" wording is being removed along with the "track, size, and intensity" phrase. The latest local forecast is also being moved to the bottom. The Winter Weather component to Hazard Services is coming in 20.2.1. Hydro Hazard Simplification is also coming in 20.2.1. The Flash Flood Watch will be consolidated into a Flood Watch, so the Flash Flood Watch will no longer be issued. Additionally, all Flood products will be reformatted into a What, Where, When, Additional Details, and Precautionary/Preparedness Actions" format. Hydro Hazard Simplification is only being impimented for Hazard Services, so the hydro component of WarnGen will be decomissioned in 20.2.1 Finally, Python 3 will be coming in AWIPS build 20.3.1



To summarize, the star of the show in 19.3.1 is Hazard Services. It is the new product generation software in AWIPS that will eventually replace all current legacy software used to issue watches, warnings, and advisories. For now, Hazard Services only includes the hydro component. Other components such as winter, convective, and marine will be added progressively in future updates over the next couple of years. There is quite a bit of training associated with the rollout of Hazard Services. Forecasters need to plan on taking the online modules and jobsheets when 19.3.1 is installed and the focal point has configured Hazard Services for hydro use. Aside from Hazard Services, there are additional smaller enhancements to be aware of. More sites have been added to the list of radar locations that can scan below 0.5 degrees. NSHARP now includes the large hail parameter in the parameter section as well as new buttons such as HAIL, Vrot, and CONDTor that can aid in forecasting and diagnosing hail and tornadoes. The FFMP basin trend now plots for all hours independent of the time duration slider bar. You can now display PGEN as background data. Time match basis now works for obs again. More units have been added to the Distance Scale Tool. There are some GUI changes in Data Delivery. Archiver retention time for satellite data has been changed from 168 to 72 hour. Most offices should have a site override to retain data for 168 hours though so this change will have little impact on them. Finally, there are a number of changes and new tools that impact focal points that are covered in the living release notes.



You are now done with the AWIPS 19.3.1 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. From there, navigate to the 19.3.1 section, where you can check out the new PGEN Static Overlay jobsheet. You can also right click on a product in the Product Legend in CAVE and select Reference on Product. This will bring up the AWIPS Interactive Reference search page. Type AWIPS Build Changes in the Keywords search then click Update and you should see the Build Changes Page as the top hit. You can also search for NSHARP Hail and Tornado to bring up the reference page about the new hail and tornado additions to NSHARP.

Let me know if you have any further questions, and good luck with the new 19.3.1 capabilities.