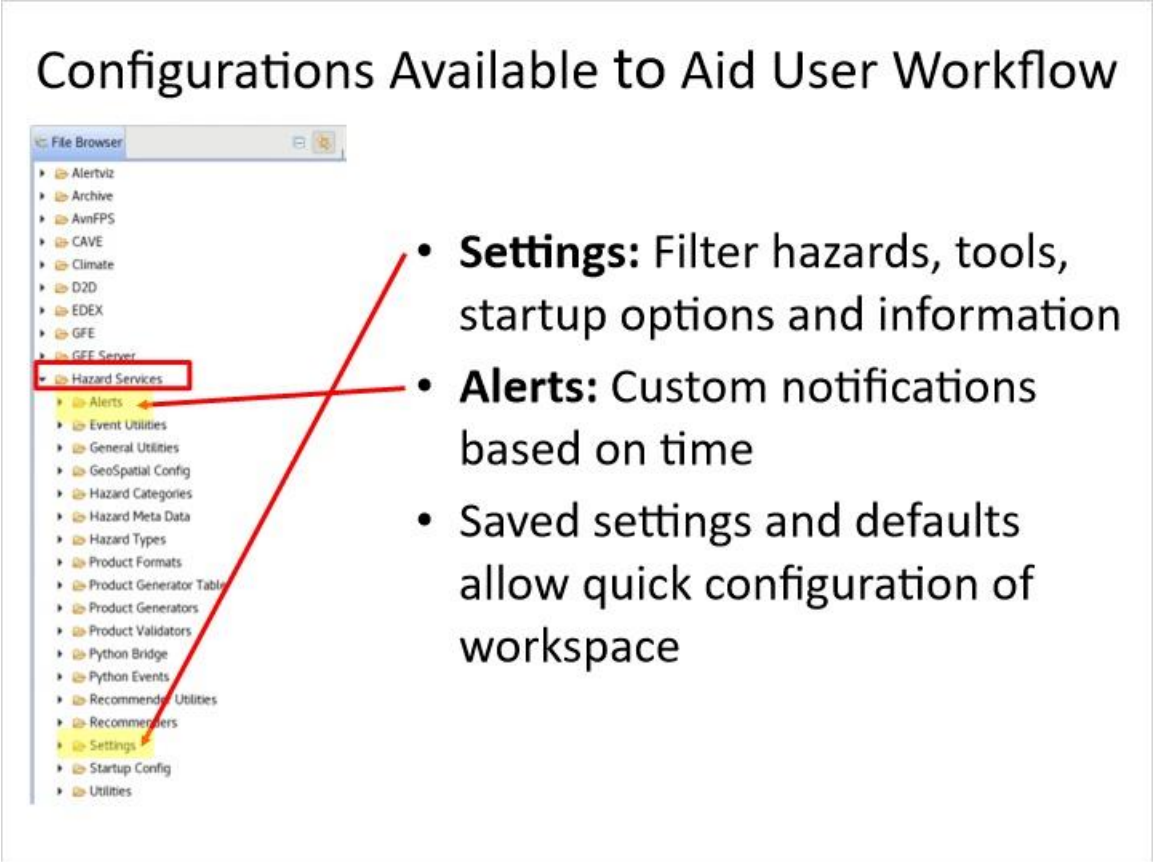
Welcome to the Settings and Alerts module, the last lesson in the Hazard Services Foundational training course for Focal Points. My name is Sarah Borg, with the Warning Decision Training Division.

Objectives

- Identify the two primary locations for **settings** and **alerts** files.
- Identify the recommended approach for changing the **default settings files** used to filter the console.
- Identify the **two types** of configurable alerts in Hazard Services.
- Interpret the **alerts configuration settings**.
- Identify the purpose and significance of **CommonSettings.py**.
- Identify the **document** containing the recommended settings configuration for 19.3.1.

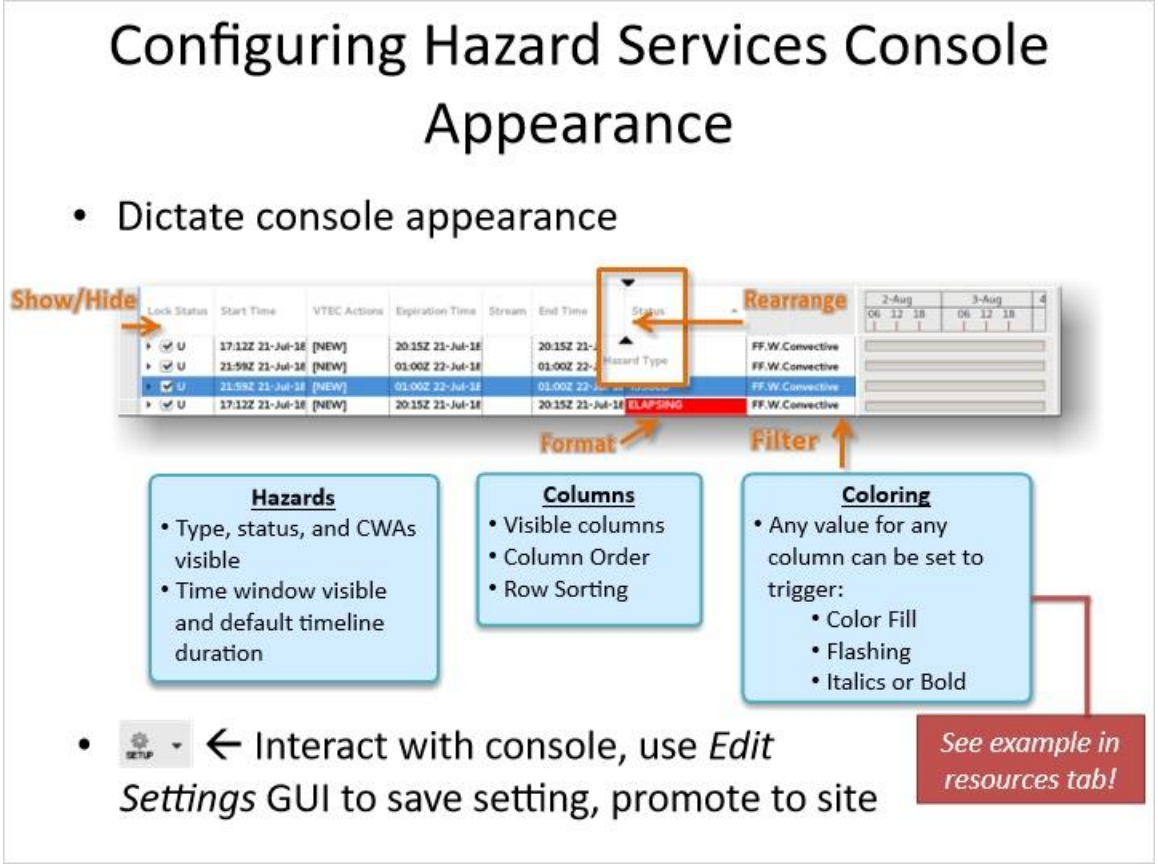
In this lesson we will review how settings and alerts are configured in Hazard Services. Click Next after reviewing the learning objectives.



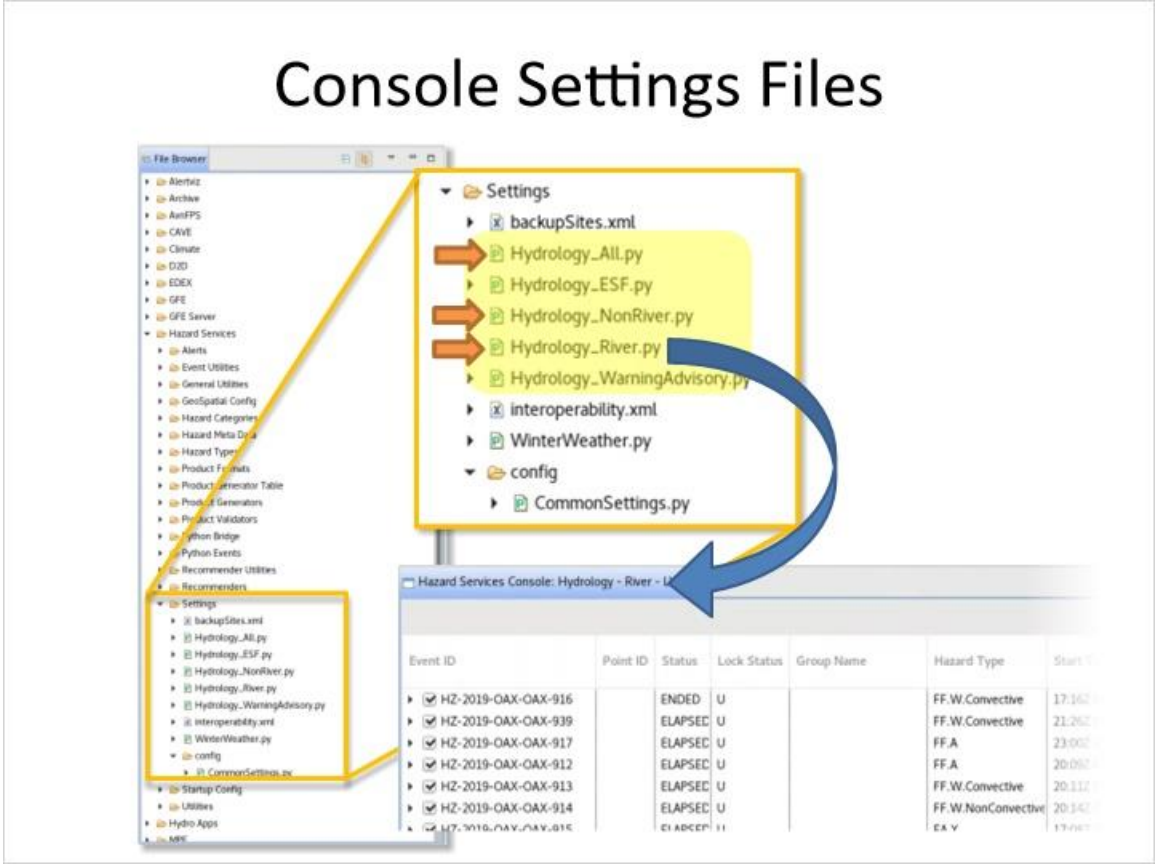
You may remember from user training that the purpose of configurable settings is to prevent the console and tools from getting overwhelming as more and more hazards are handled through Hazard Services. Two of the main configurable elements to aid user workflow include:

Settings, where you can filter hazards, tools, startup options, and information, and alerts, where you can customize notifications based on hazard status and timing.

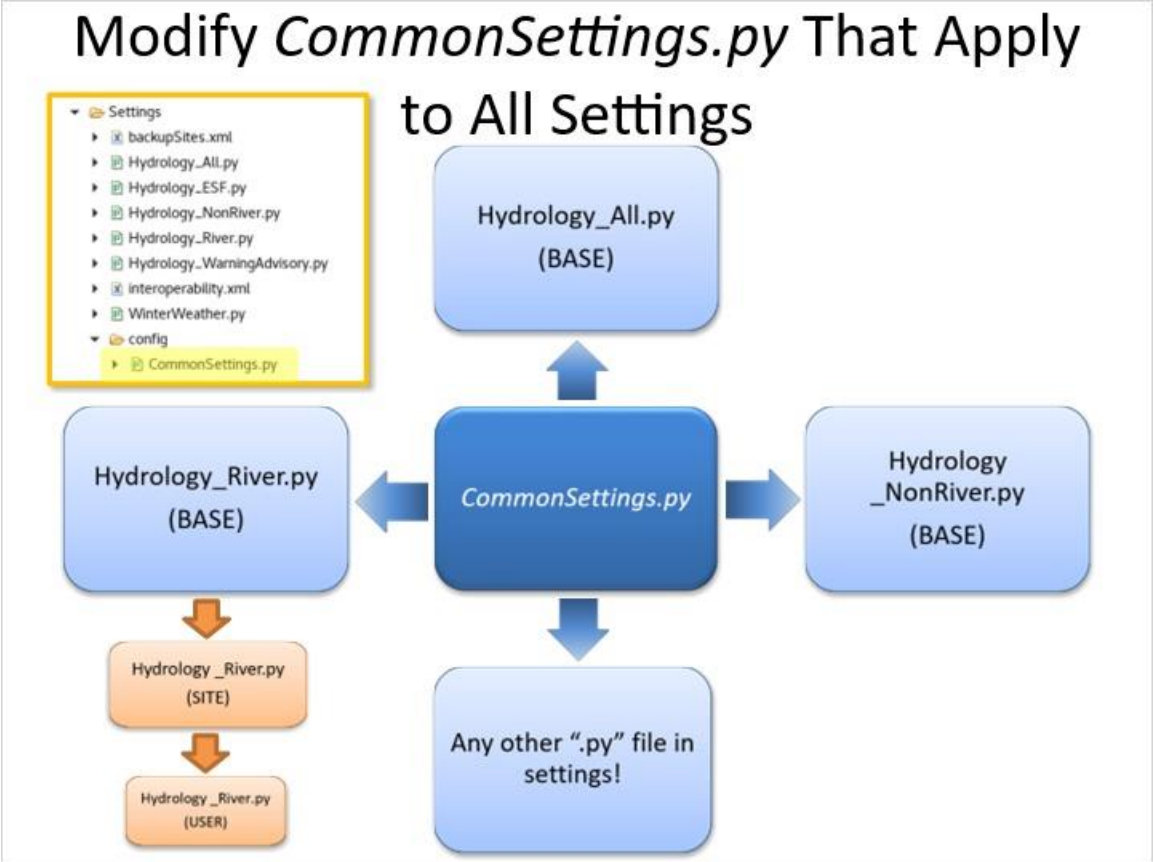
Both of these exist as folders in the Hazard Services folder of the localization perspective. By saving the customized settings and choosing default settings, users will be able to quickly configure their workspace for ease of operations with Hazard Services.



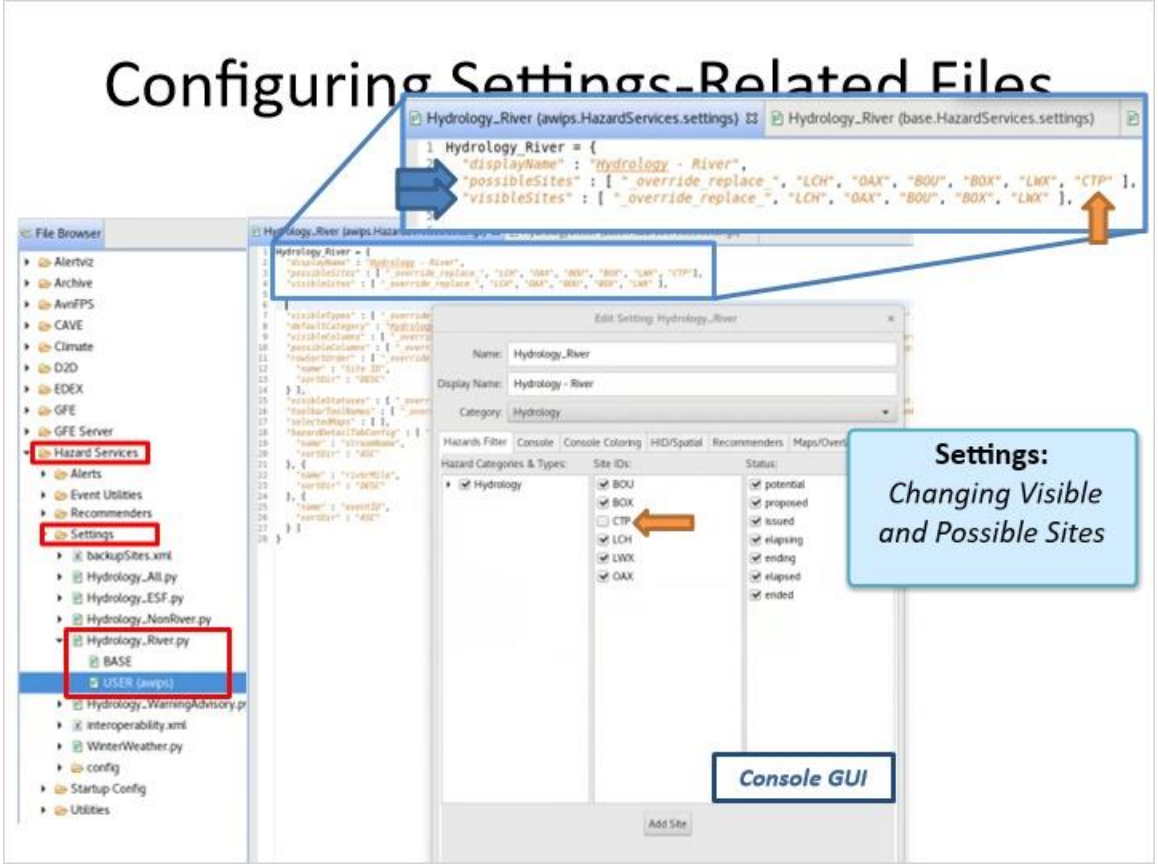
Settings dictate the Hazard Services console appearance for different workflows like river floods and flash floods. Once you start to use Hazard Services you will likely want to configure some settings for your unique local workflows. As discussed in the user training, you can show or hide columns, rearrange columns by simply dragging and dropping, sort or filter columns, and format cell colors, italics, and blinking based on defined criteria. Examples of helpful configurations include Hazard organization, such as by type, status, or CWA; column organization, such as which columns are visible and their order; and cell appearance, such as color fill, flashing, and italicizing or bolding text. The EASIEST way to make changes to settings is to interact with the console, save the setting, and promote it to a site override, but changes CAN be made directly in the settings file as well.



When you examine the settings folder you will see the familiar names of the default settings available from the SETUP icon like Hydrology_All for all hydro products, Hydrology_River for just the river products, and Hydrology_NonRiver for all hydro products not including river products. The console also allows the user to switch settings files for different uses or create their own NEW settings file and save changes to the default as user overrides.

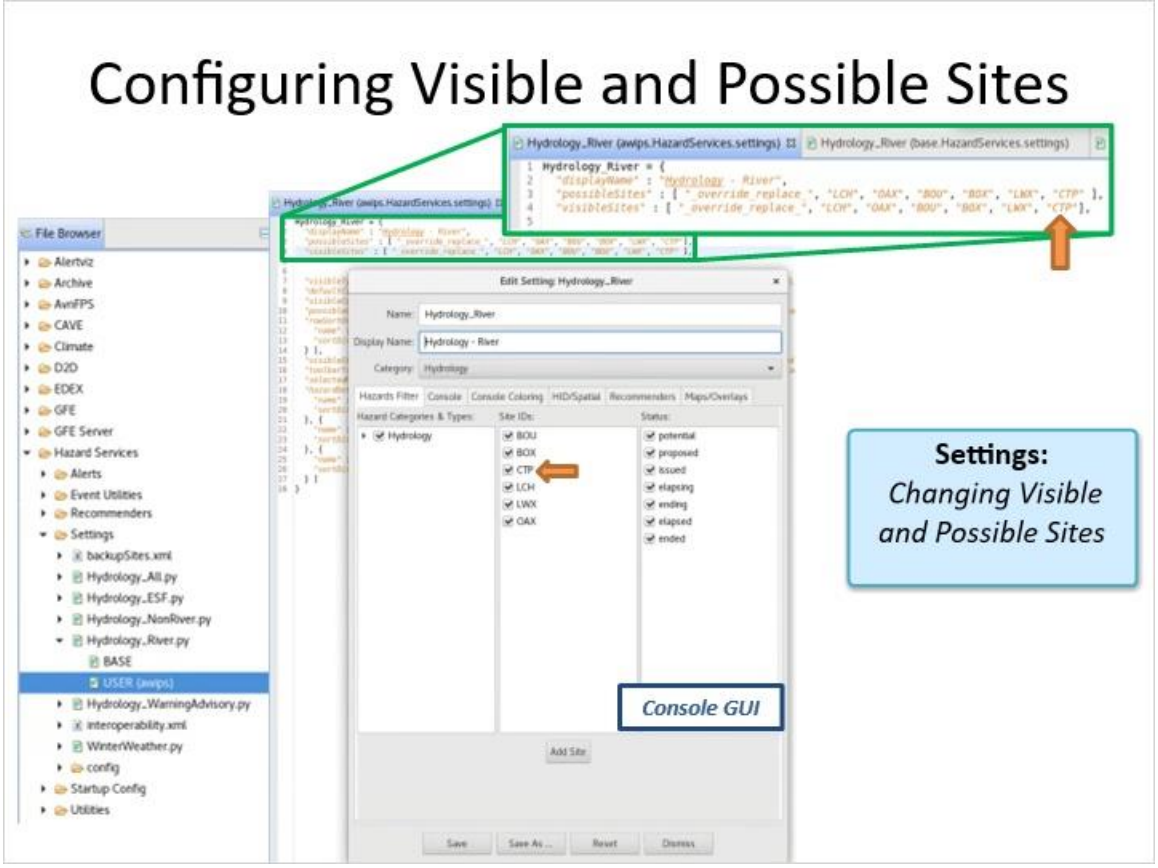


Along with the list of application-based settings files you will also notice a file called CommonSettings.py in the config folder of settings. The settings that are defined in CommonSettings.py are shared with all other files in the settings folder. In other words, the other application-based files in the "Settings" folder of Hazard Services such as Hydrology_All.py, Hydrology_NonRiver.py, etc., are like overrides of CommonSettings.py with changes specific to that settings configuration. These files initially take on all of the settings from CommonSettings.py, but can have incremental overrides that will supercede settings from those defined in CommonSettings.py. So modify settings-specific changes in the settings file, and modify settings valid for all settings files using CommonSettings.py.

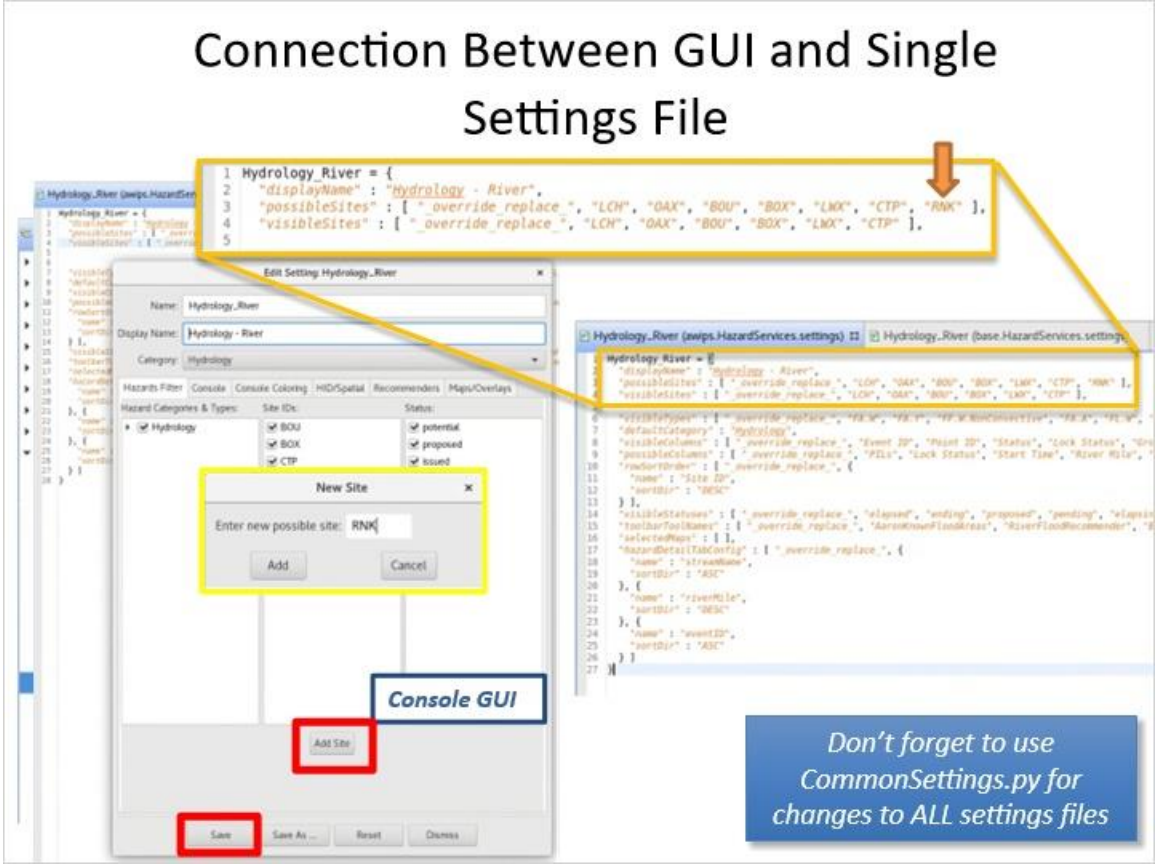


While console settings will help with efficient use of Hazard Services, there are a few **settings-related files** that are important for focal points to configure right away because they do not come with “out of the box” defaults applied, and they aren’t related simply to console appearance. Visible and possible sites are one such setting. “Visible sites” are those CWAs that will have their hazards visible to you. “Possible sites” are those that are AVAILABLE to select as visible sites, but sit in the background unless selected. These can be changed in CommonSettings.py or in an individual settings file, but remember that specific settings files will always OVERRIDE whatever is specified in CommonSettings.py.

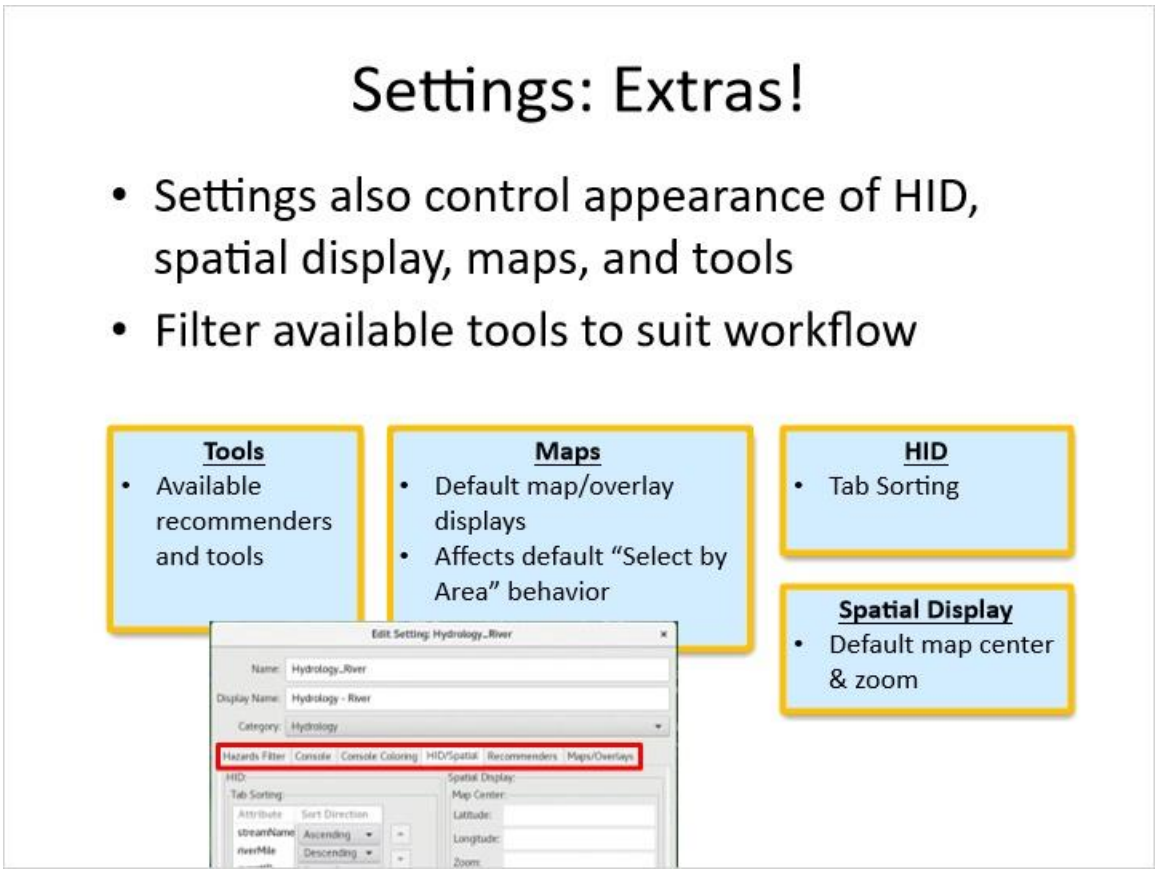
This example is an incremental user override for the Hydrology_River.py settings file, found in the settings folder of Hazard Services. We have a list of possible sites in this dictionary that includes CTP. In the settings GUI (accessed from the console) we can see CTP as an option in the sites list, but it is left unselected, as it has not been specified in the “visible sites” list.



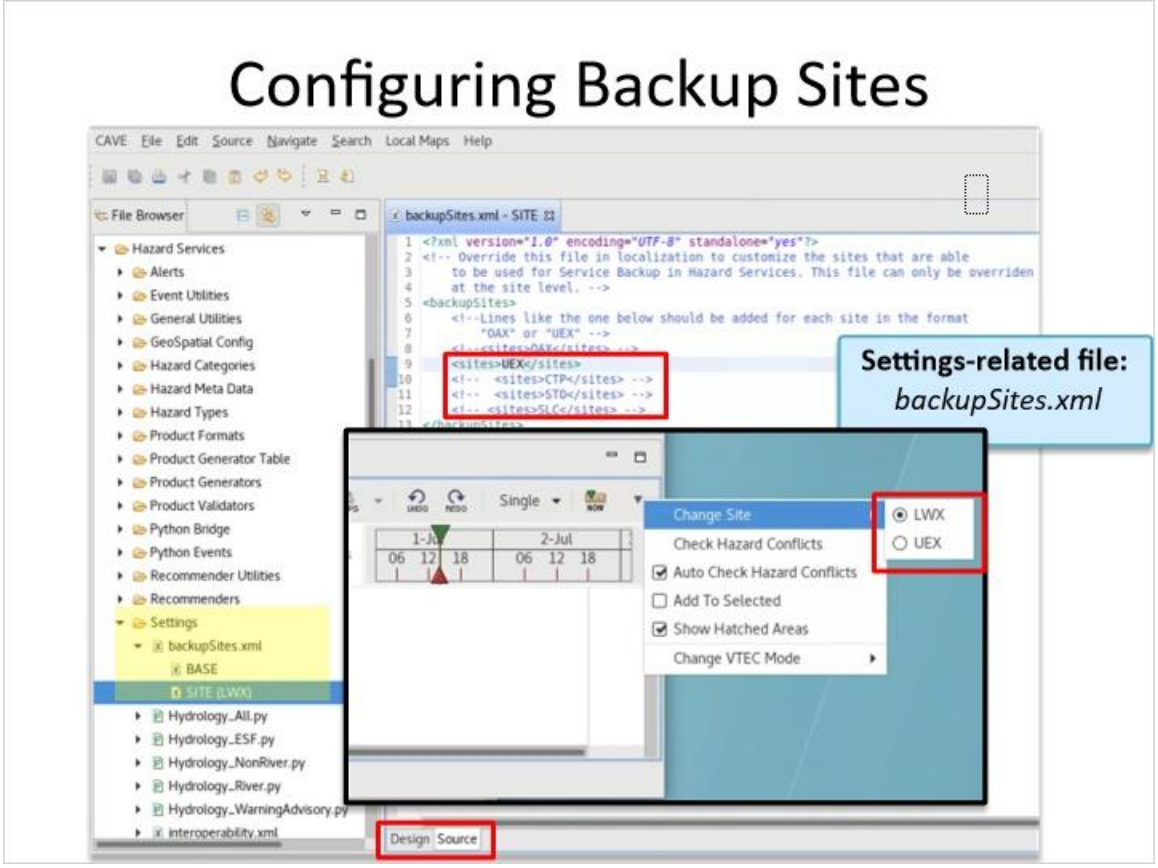
However, if we add CTP to the “visible sites” list in the Hydrology_River.py settings file, we now see that CTP ***IS*** selected as an option in the “edit settings” GUI. Note that visible sites MUST be a subset of possible sites, so any site existing in visible sites must also exist in possible sites. It’s pretty easy to add sites to both lists through the localization, but you can also add a site through the “Edit Setting” GUI and have that propagate through to the settings file. Let’s take a look at how that works.



By clicking on the "Add Site" button in the Edit Setting GUI, a new pop up will appear allowing you to enter a site name. Once you have added the site you would like, be sure to click "Save" at the bottom of the Edit Setting GUI before checking back in the localization. Now, you can see in the Hydrology_River.py user override settings file that "RNK" is listed as a new possible site. This is just one example of how interconnected the GUI and the localization are when making changes to SPECIFIC settings files. Be sure to keep in mind that if you want your visible and possible sites to be the same across ALL settings files, you are likely going to want to add these changes to CommonSettings.py. There is no way to edit CommonSettings.py through the GUI, as changes saved through the GUI only apply to the settings file that is currently in use.

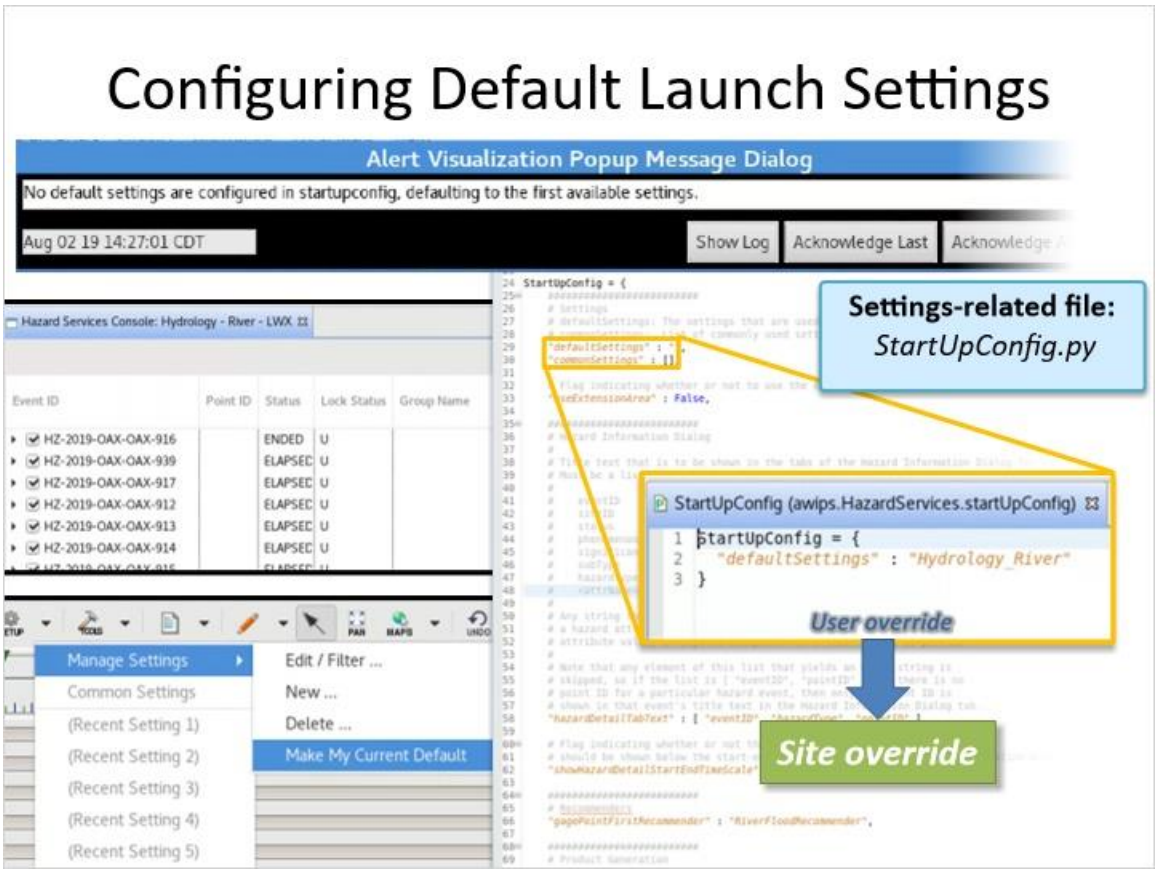


As you may have noticed, the options are limitless with configurable settings in Hazard Services! While not discussed, default tools, such as recommenders, are another configurable element in the console. In addition to console preferences, settings can also be used to control things such as default maps loaded, tab sorting in the HID, and default map center and zoom. The appearance of the HID, spatial display, and maps can also be edited and saved through the "Edit Settings" GUI just like the console settings. Once saved, changes made will propagate through to the respective file in the localization.

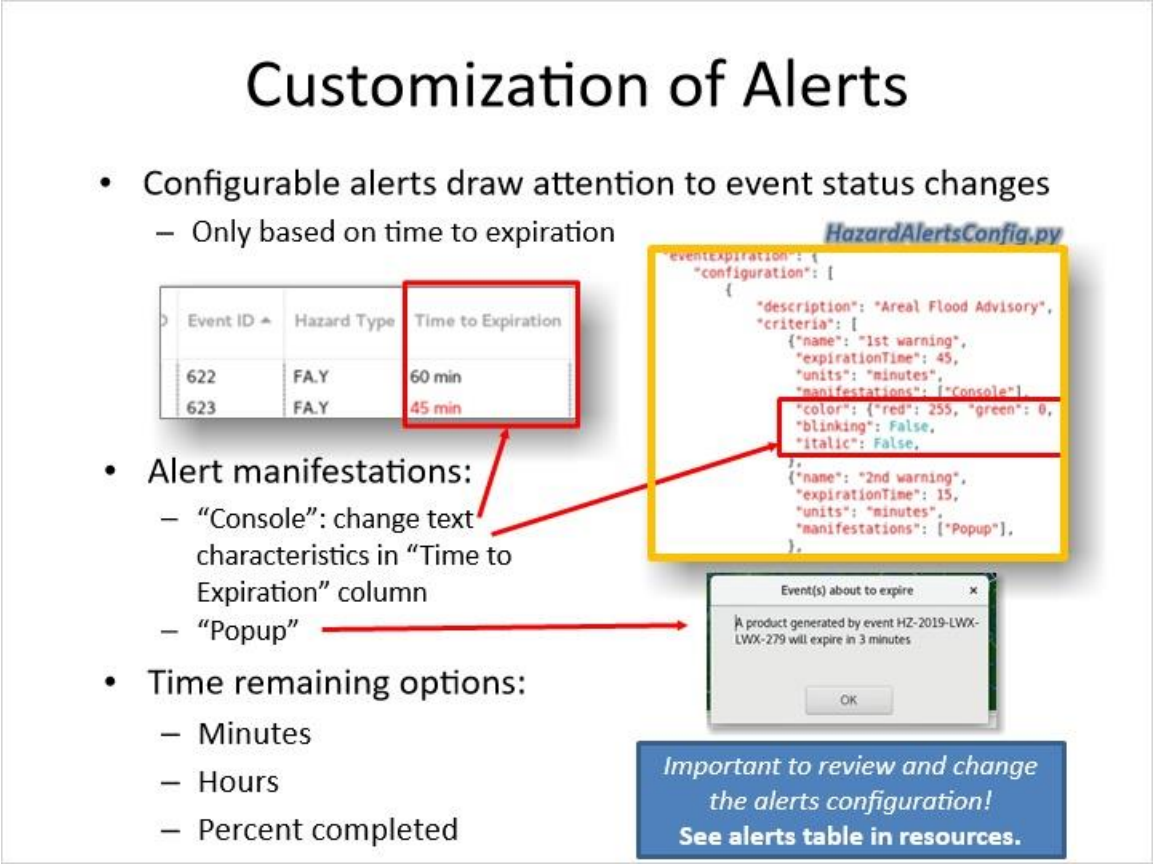


Another important settings-related file the focal point needs to configure is the BackupSites.xml file, used to define your backup sites. Most of the configuration files in Hazard Services will be python, and this is one of the few XML files you need to configure. Note the “Design” and “Source” tabs. Once you have configured your backup sites, you can see these changes in the console via the drop down menu on the far right. It is also good practice include any backup sites in your "possible" and "visible" sites settings, so that their hazards are visible to you in normal operations.

While this process will allow you to issue hydro products while in service backup, you will need to copy the site's localization files to fully issue products for the backup site. More information about service backup will be provided in the configuration step by step instructions once completed.



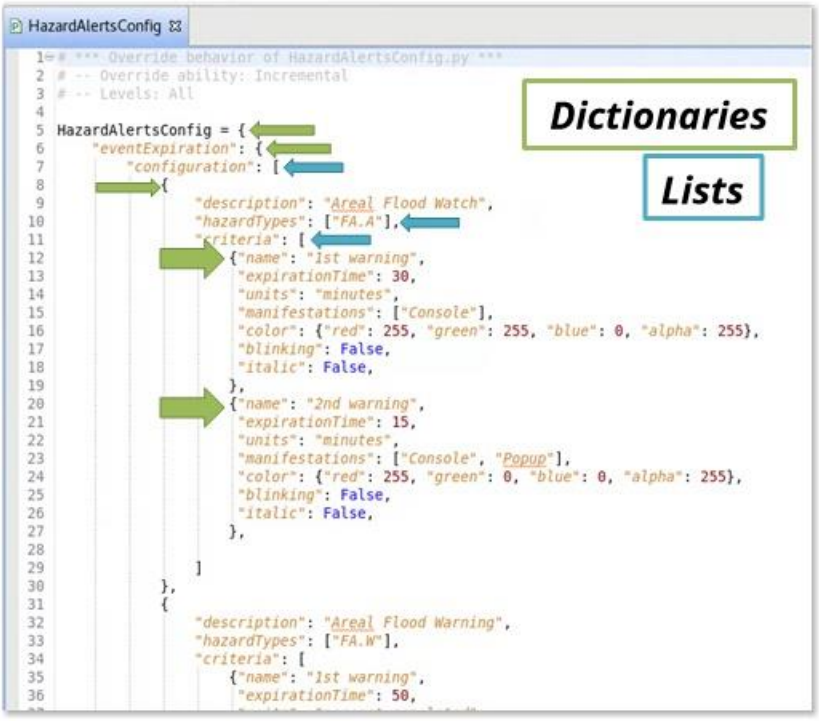
There is no default setting for Hazard Services, so you will see an AlertViz message to this effect each time it is loaded until you set up a default. The default can be set in the console by selecting “Make My Current Default” from the setup menu. This command will create a USER override in the StartUpConfig.py file with a change to the “default settings” key-value pair. While the console can save this setting for a single user, the focal point should consider making an override with a default setting for the SITE, so that all users can avoid seeing this AlertViz error the first time they start Hazard Services. StartUpConfig.py has many other editable options with detailed documentation in the base file, however these will not be discussed here. Browse the file for yourself to see what else you might want to change, but be sure to create an override if you do!



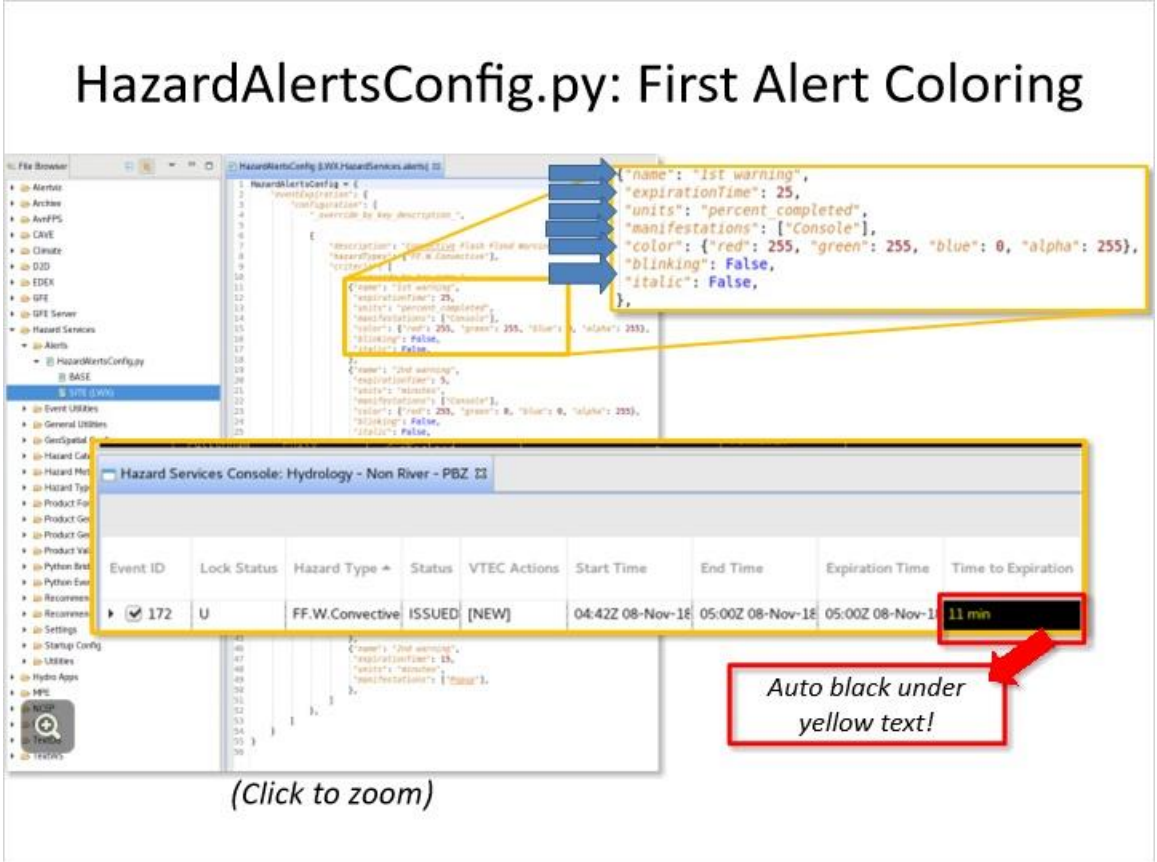
Hazard Services alerts are used to help draw attention to event status changes, and are only based on time to expiration. There are two types of configurable alerts in Hazard Services using the HazardAlertsConfig.py file, and the focal point is responsible for setting these up in coordination with the local hydro focal point. Alert manifestations include changing of the text characteristics in the "time to expiration" column of the console and also additional popup windows. These alert the forecaster that their product will expire or has been out for a significant amount of time and may require an update or a new product. Alert timing can be indicated in terms of time remaining in the hazard or percent of time completed.

Generally, the "out of the box" defaults for Hazard Services alerts are a pretty good start, but we recommend that the focal points review these defaults using the attached table in the resources menu in the upper right of the presentation to make changes that best suit the needs of the office.

HazardAlertsConfig.py: First Alert Coloring

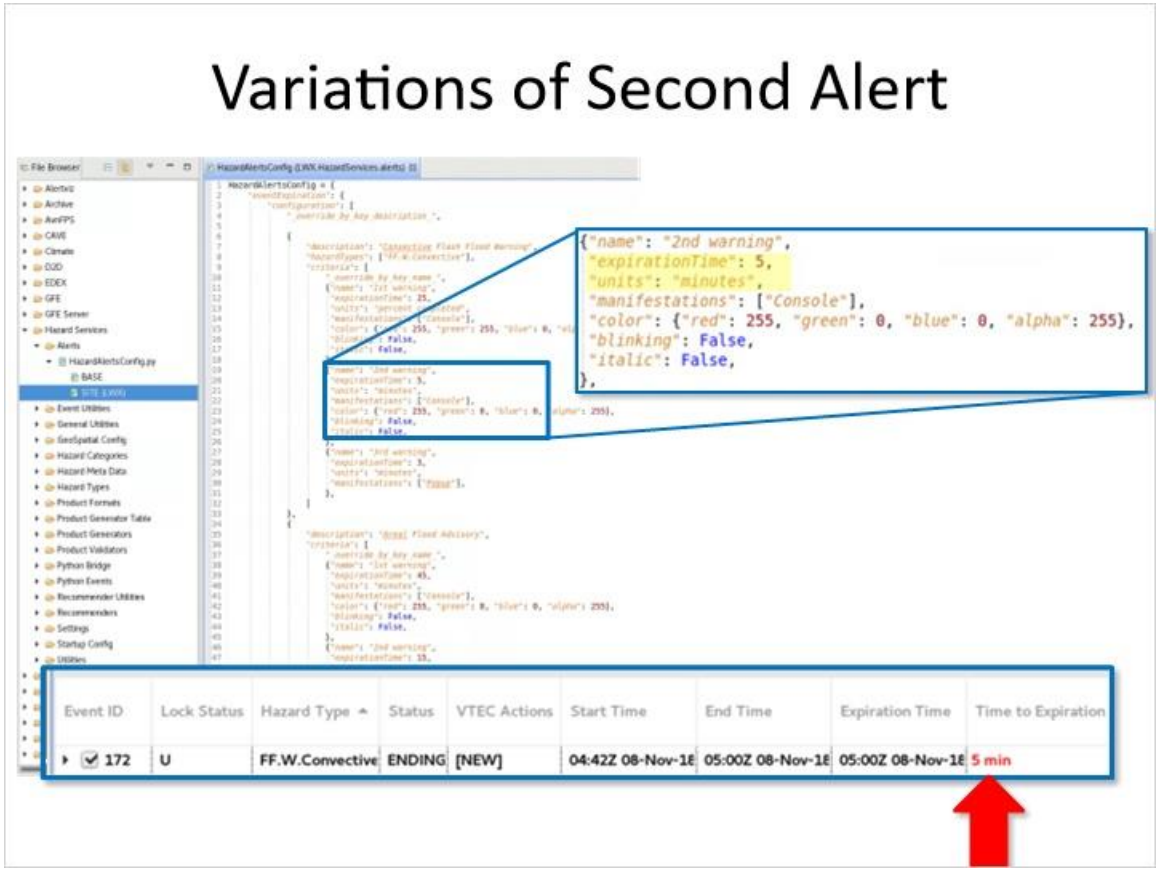


You will see that HazardAlertsConfig.py is built with a nested dictionary structure similar to many other Hazard Services files, however it is significantly more complex with many layers of nested sets of lists inside dictionaries. While this file does support incremental overrides, defining the namespace for the override may be a bit more challenging than most other overrides. This process will be walked through in the jobsheet for setting up alerts, and here we will discuss how the various alerts settings function.

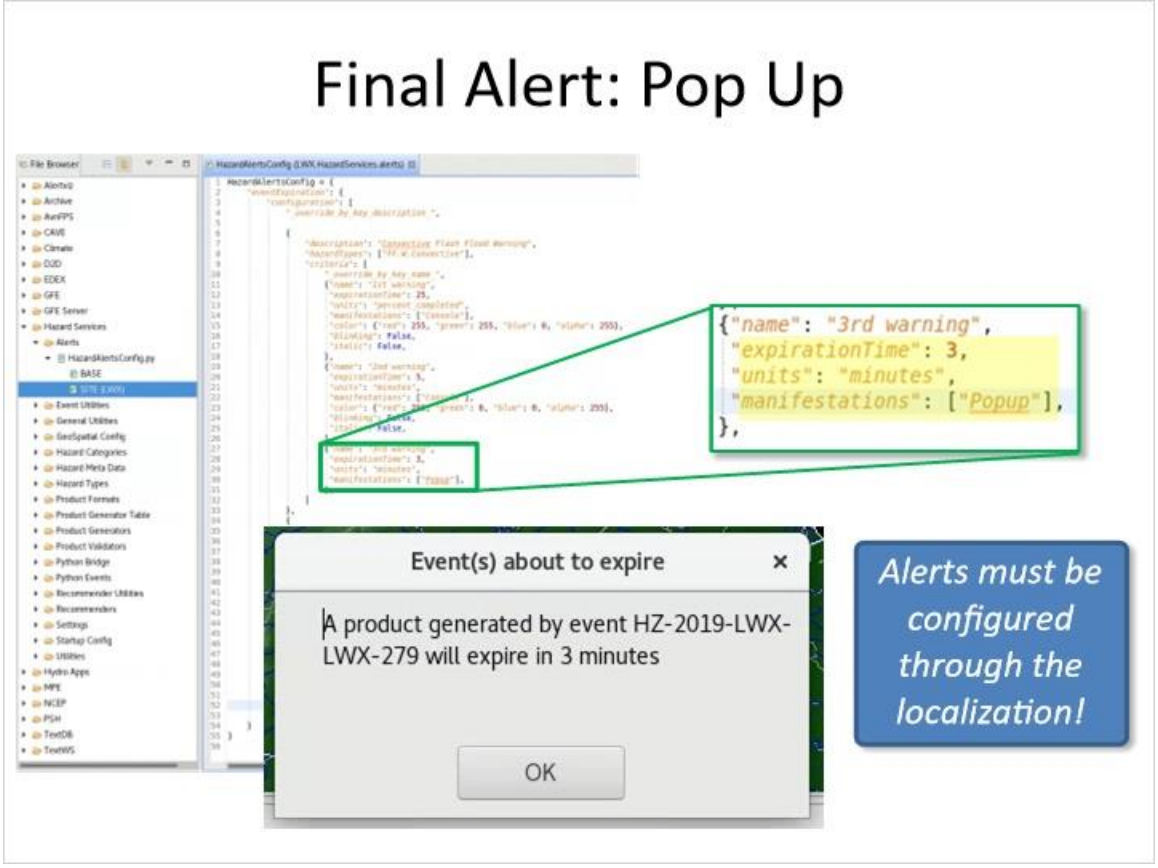


Here is an example of a site override for the 1st alert in a flash flood warning. The name tag, “1st warning”, is just for organization and is not explicitly reflected in any alert. The “expiration” is set to 25 with the “units” being “percent_completed” which says to trigger this alert when 25 percent of the flash flood warning has completed. The manifestation is “Console” rather than “Popup” and the RGB of the text has been set to yellow with 255,255,0 which indicates full red plus full green and no blue. The blinking and italics have been set to false, so the font doesn’t change.

Note that the black background occurs automatically under light-colored text such as yellow, which would be difficult to read on the standard white background. For alert configurations, only the TEXT color is editable by RGB values and not the background cell color. The background cell color will only change if necessary based on the defined text color.



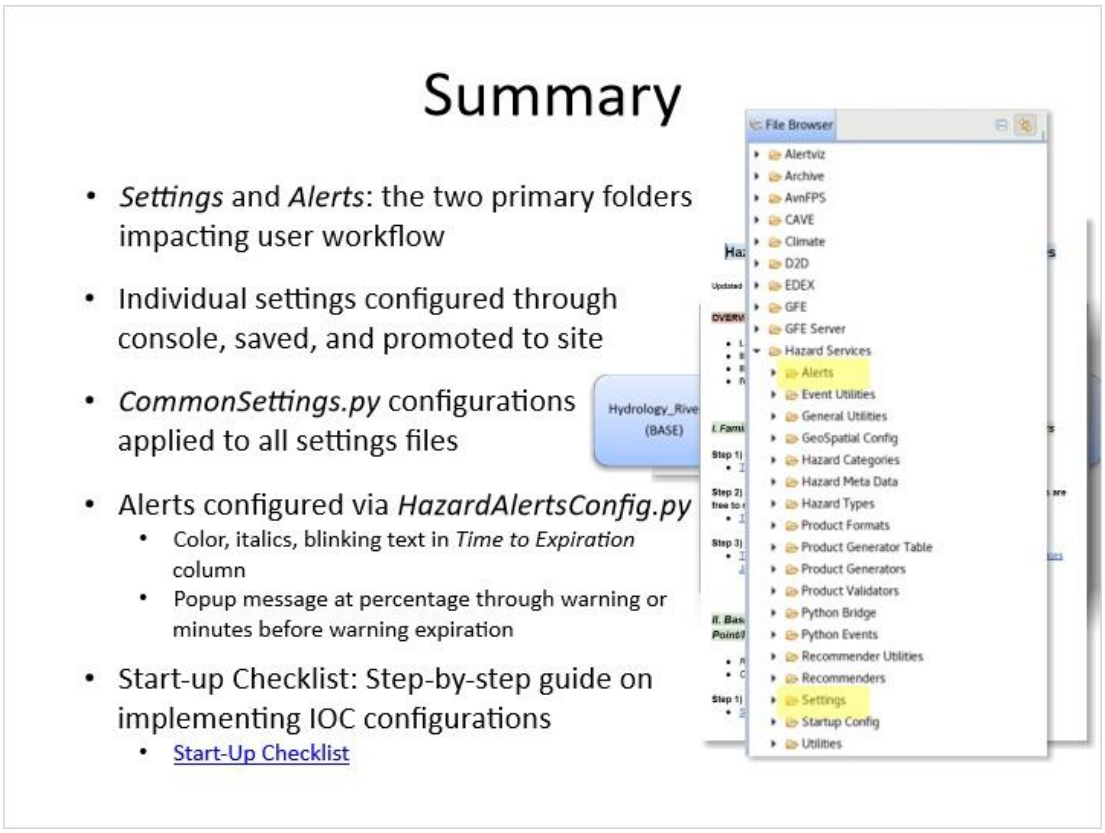
The second alert is similar to the first, manifesting as a text change in the console. Here, though, we have expiration set to 5 minutes and text changing to red in the Time to Expiration column, as specified by an RGB of 255, 0, 0.



The 3rd and final alert is set to appear as a popup message at 3 minutes to expiration. Note that unlike most settings, there is not an option to configure alerts through the console or through another GUI. Alerts MUST be configured through an override of the HazardAlertsConfig.py file.

This training has introduced you to some of the basic configuration for hydro IOC over settings and alerts that are covered in VLab jobsheets, which are available from the Jobsheets menu in the Hazard Services VLab community. All of the available jobsheets and other potential configurations are organized in an important document called the Hazard Services Start-up Checklist. This is a step-by-step guide on implementing recommended and optional configurations for Hazard Services hydro IOC. Click on the links here to check out the checklist and the available jobsheets.

In addition, Central Processing has funded one focal point from each WFO in 19.3.1 to attend a residence workshop at WDTD. During this workshop, the focal point will begin configuring Hazard Services for hydro IOC using the checklist and jobsheets. When the workshop participant returns to the office, they are expected to support other local focal points in stepping through the jobsheets and configuring Hazard Services. For questions about this training please contact me, and for questions about the workshop please contact Mike Magsig. Click next when you're ready to continue.



Let's review what we've discussed in this module. Settings and alerts are two of the most impactful elements that can benefit users when configured to their liking. You will see these two folders every time you open up the Hazard Services section of the utility tree in the localization perspective. While there are multiple ways to change settings, it's suggested to make changes through the console, save those settings, and then promote the settings to the site-level override. CommonSettings.py is an important file because settings that are changed here are applied to all other settings files in the settings folder, unless another override has been created. Alerts, like settings, are easy to configure with features like color, italic or blinking text, and popup messages to remind the forecaster about expiring hazards. And finally, the Start-up Checklist will be your roadmap for implementing IOC configurations using the VLab jobsheets that are an extension of this training. During deployment of 19.3.1 hydro IOC, one focal point per office will attend a configuration workshop in Norman where they will receive assistance with using the checklist and jobsheets. Here, focal points will make significant initial progress on the Hazard Services configuration required before Hazard Services can be used operationally.

Take the Quiz

You're almost finished!

*Click **"Next"** to take the quiz.*