HEC-EFM Plotter 3.0
September 2020
Release Notes

HEC-EFM Plotter is designed to help users view, navigate, and interpret output generated by HEC-EFM. It is important to note that Plotter does not generate new output; Plotter only displays output from EFM.

Version 3.0 supersedes version 2.0, which was released in June 2018. Version 3.0 is available as an install package (.exe) and as an archive of files (.zip). Both are easy to use and have the same content. The install package guides the user through the install process and requires computer administrative rights for successful use. Please note that using the install package will replace any previously installed version located in the destination selected by the user during installation of EFM Plotter. Installing with the archive of files does not require administrative rights. Simply extract all contents of the archive to the desired computer location for EFM Plotter. The software will be ready for use after extraction.

Version 3.0 is backward compatible, which means that any project files created with previous versions of Plotter are fine and ready for use.

Version 3.0 includes new features, improved software behaviors, and bug fixes for issues that were not detected prior to release of version 2.0. The EFM Quick Start Guide has also been updated and is currently the most complete and comprehensive source of information about Plotter.

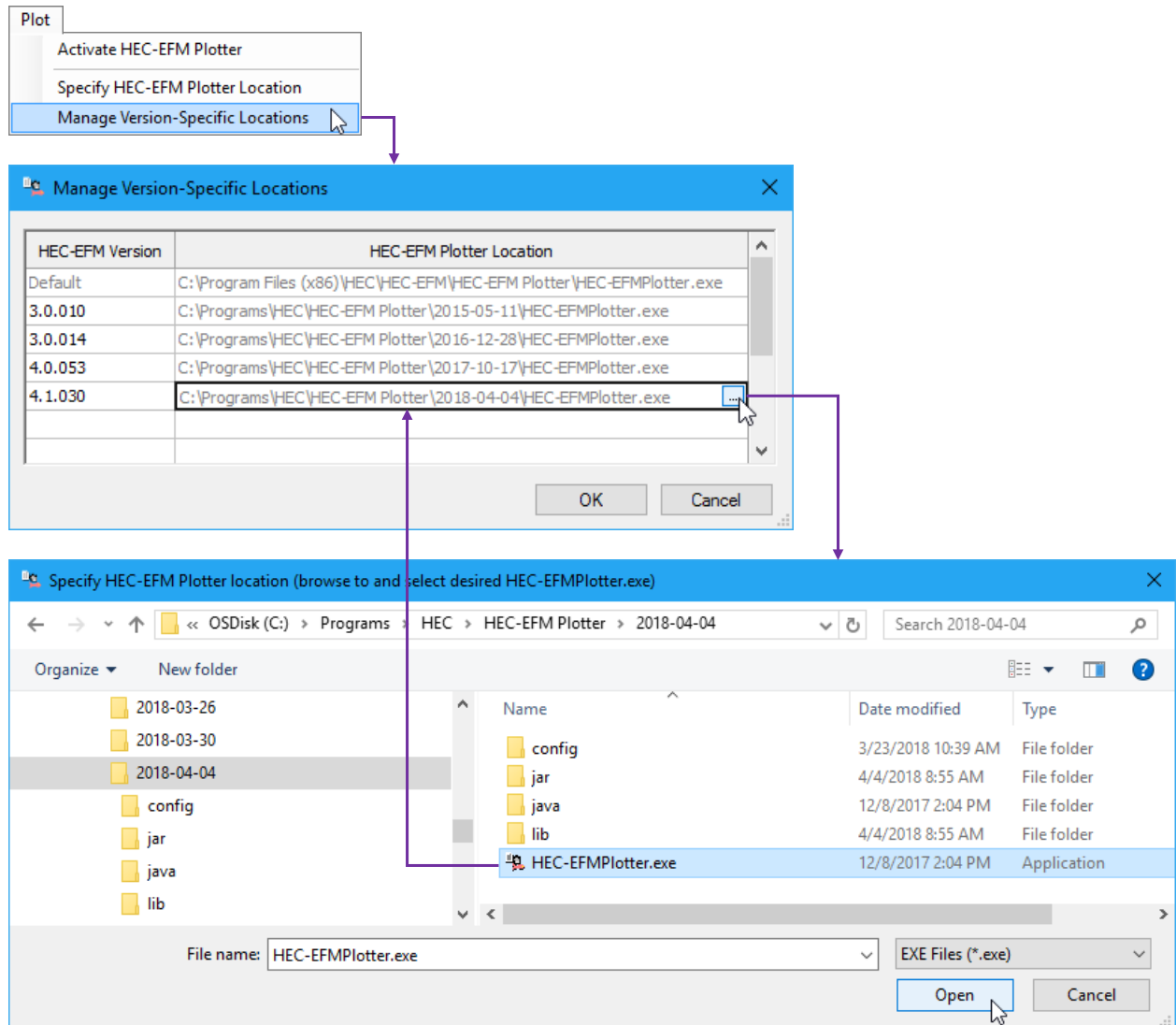**Connections between EFM and EFM Plotter**

Plotter is launched via the EFM *"Plot – Activate HEC-EFM Plotter"* menu option, which means EFM needs to know where Plotter is in order to open it successfully.

In past versions of Plotter, the only standard way to install the software was via the install package. Users were encouraged to install Plotter to a consistent install location (default or not). During subsequent installations to the same location, the existing version would be replaced by the new such that only one version of Plotter was available for use on a single computer. EFM would use information in the computer registry to locate Plotter thereby establishing the connection between EFM and Plotter.

Now and especially with the archive of files install option, it is more common to have multiple versions of Plotter available for use on a single computer. This created a different synchronization challenge for EFM and Plotter.

The most recent online versions of the software are EFM 5.0 and EFM Plotter 3.0. Connections between those versions of EFM and Plotter are managed via EFM's *"Plot – Manage Version-Specific Locations"* menu option. An interface will appear that allows
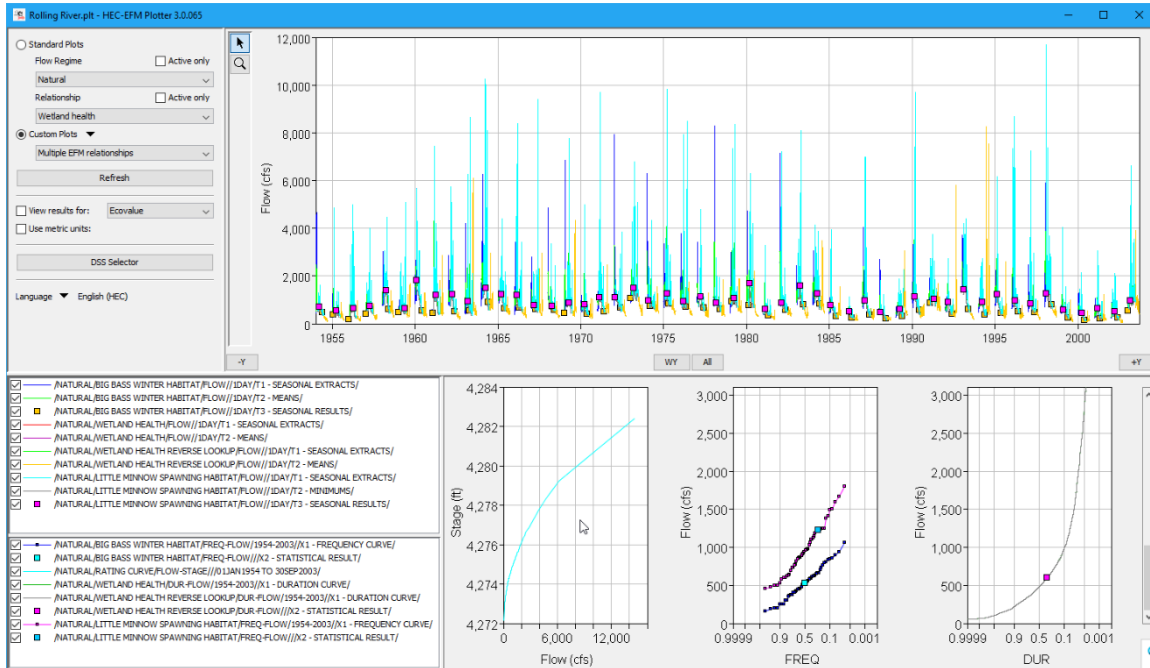
the user to enter the EFM version number and open a file browser to identify the associated version of Plotter. If Plotter is launched from an unlisted version of EFM, the default location of Plotter will be used. If Plotter is not available at the referenced location, a message will be returned to inform the user that EFM is unable to locate Plotter and ask the user to verify that Plotter is ready for use. The *"Plot – Specify HEC-EFM Plotter Location"* menu option is used to update the default location of Plotter.

Importantly, this change was made after release of EFM 4.0. EFM 4.0 users are encouraged to continue to install Plotter, whether 3.0 or earlier, to a consistent install location using the install package.

New Features

- *Paired data plots*. A third paired data plot was reviewed, coded, and tested to allow plotting of an additional paired data type. This is useful when comparing results for multiple EFM relationships.

- *Language support*. Since EFM and EFM Plotter were first publically released, several suggestions have been offered regarding how particular features might be better labeled and documented to make them more intuitive. While this is a wonderfully simple and constructive idea, creating one ideal set of terms and descriptions is challenging because different teams have different preferences and lexicons. In EFM Plotter 3.0, the software was modified to allow users to specify interface labels. For individual users, this enables interface text to be changed to whatever is deemed most communicative. For international users, this enables translation of interface text.
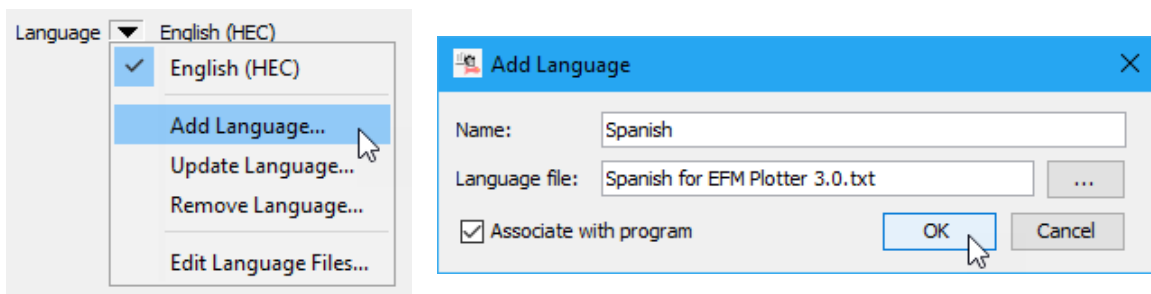
  In EFM Plotter, languages are comprised of: 1) name and 2) language file. EFM Plotter 3.0 has a default language named "English (HEC)" that uses labels from a version-specific default language file entitled "EFMPlotterLanguage_HEC.txt".
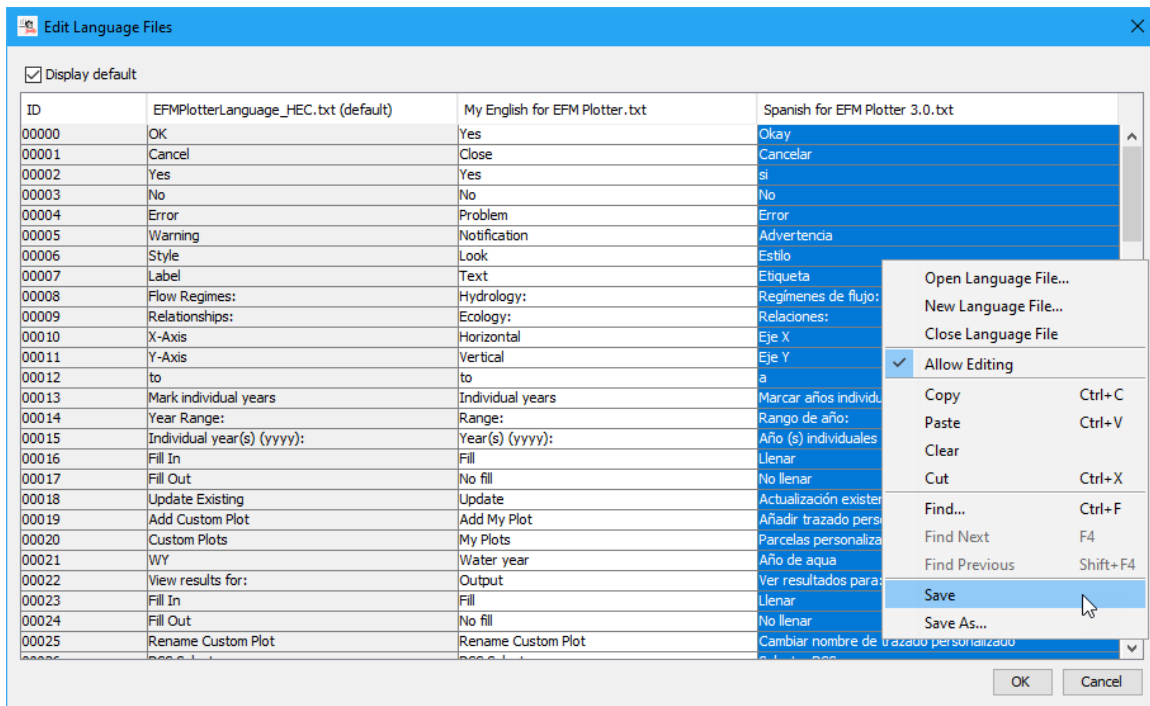
Languages can be added, updated, and removed. New languages will appear alphabetically in the languages list below the default language "English (HEC)". Language names must be unique. Selecting the *"Add Language…"* menu option opens an interface where the parts and type of language are specified. Changing the language parts or type of an existing language is done through the *"Update Language…"* interface. Obsolete languages may be deleted via the *"Remove Language…"* interface.
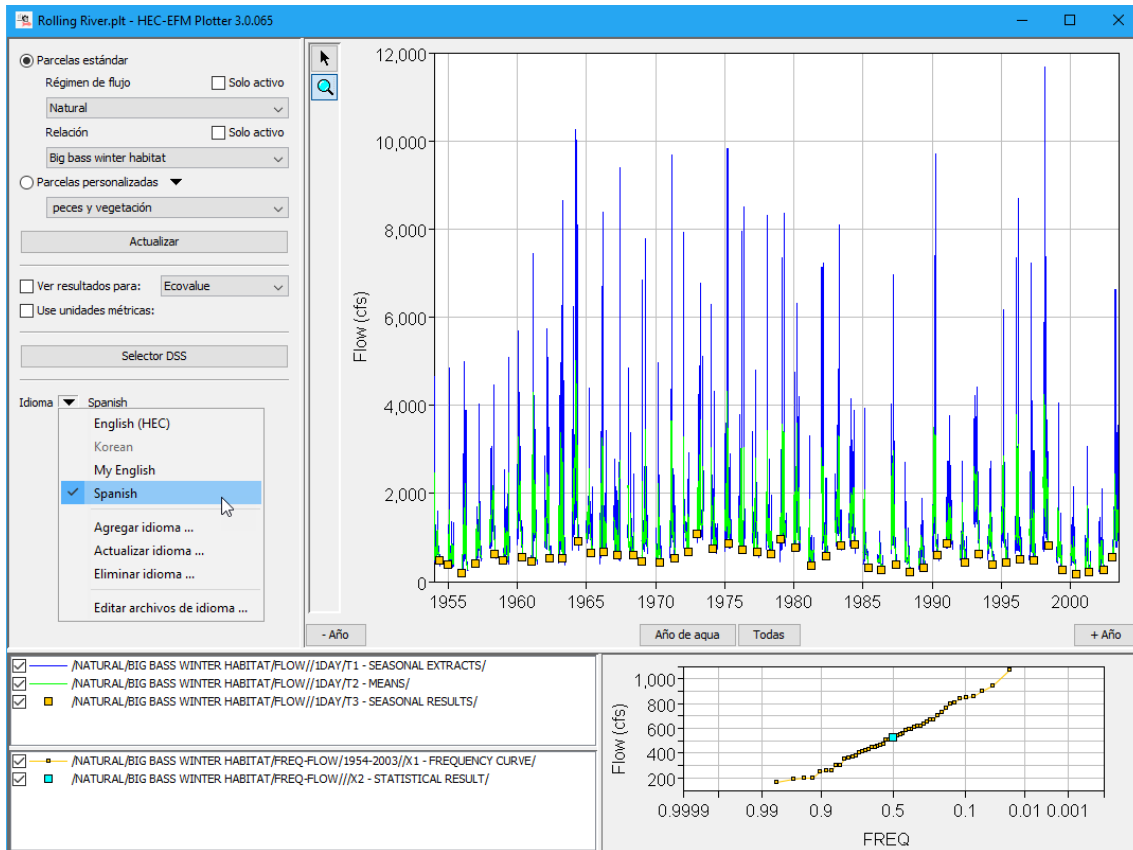

A language file editor is accessible via the *"Edit Language Files…"* menu option. Editor allows users to open, create, edit, and close language files. The *"Allow Editing"* menu option controls whether open language files can be edited. Changes made to the language file of the active language are shown in software interfaces when that language file is saved via the editor.

Edit Language Files

☑ Display default

ID	EFMPlotterLanguage_HEC.txt (default)	My English for EFM Plotter.txt	Spanish for EFM Plotter 3.0.txt
00000	OK	Yes	Okay
00001	Cancel	Close	Cancelar
00002	Yes	Yes	si
00003	No	No	No
00004	Error	Problem	Error
00005	Warning	Notification	Advertencia
00006	Style	Look	Estilo
00007	Label	Text	Etiqueta
00008	Flow Regimes:	Hydrology:	Regímenes de flujo:
00009	Relationships:	Ecology:	Relaciones:
00010	X-Axis	Horizontal	Eje X
00011	Y-Axis	Vertical	Eje Y
00012	to	to	a
00013	Mark individual years	Individual years	Marcar años individu
00014	Year Range:	Range:	Rango de año:
00015	Individual year(s) (yyyy):	Year(s) (yyyy):	Año (s) individuales
00016	Fill In	Fill	Llenar
00017	Fill Out	No fill	No llenar
00018	Update Existing	Update	Actualización exister
00019	Add Custom Plot	Add My Plot	Añadir trazado perso
00020	Custom Plots	My Plots	Parcelas personaliza
00021	WY	Water year	Año de aqua
00022	View results for:	Output	Ver resultados para:
00023	Fill In	Fill	Llenar
00024	Fill Out	No fill	No llenar
00025	Rename Custom Plot	Rename Custom Plot	Cambiar nombre de trazado personalizado

Menu:
- Open Language File...
- New Language File...
- Close Language File
- ✓ Allow Editing
- Copy   Ctrl+C
- Paste   Ctrl+V
- Clear
- Cut   Ctrl+X
- Find...   Ctrl+F
- Find Next   F4
- Find Previous   Shift+F4
- Save
- Save As...

[OK] [Cancel]

Users are not required to use the language editor in EFM Plotter. Language files are simple text files that are compatible with many different software. Customized labels or translations can be made in web translators, word processors, spreadsheets, and other software. New labels can be saved directly to language files or pasted into EFM Plotter editor and then saved. Users may switch between languages whenever desired.

Please note that EFM Plotter has been developed exclusively on computers that use English (United States) as the active windows language. International users have encountered problems with EFM Plotter performance on computers that use other languages as the active windows language. It would be very difficult to thoroughly test the software for a wide selection of active windows languages.

International users are encouraged to apply EFM Plotter on computers with English (United States) as the active windows language. The language support features detailed here will allow EFM Plotter labels to be translated to the user's language of choice to assist with application.

Improved Behaviors

- Enhancements to "upon demand" color management where colors are assigned to data upon first viewing in Plotter. This was done to make Plotter more responsive to user commands especially when viewing results for compound flow regimes, which can be comprised of ones, tens, or hundreds of thousands of parts.

- Reverse lookup range results were plotting oddly when results were out of range. Each case was different and problematic in the previous version, out of range at top, out of range at bottom, and out of range on both. These were all fixed.

- Numerous minor enhancements were completed such as handling of blank DSS records, fixes inconsistencies in intuitive interface responses to user actions such as initiating custom plots and saving current plot as custom plot, and interface resizing to maximize plot areas for better result viewing.

Documentation

- The description of EFM Plotter and how it is applied was updated in the HEC-EFM Quick Start Guide - Version 5.0. That document is available for download on HEC's website and is also included as part of the install package for EFM version 5.0.