HEC-FDA
Version 1.4.1, March 2016
Release Notes

HEC-FDA version 1.4.1 is as a minor update to HEC-FDA version 1.4.0, which was released in August of 2015. This document describes these updates.

Description of Updates

The following is a list of updates to HEC-FDA version 1.4.0 software that are implemented in HEC-FDA version 1.4.1:

- Changes were made to ensure transform flow functions, paired with graphical frequency curves, are saved when they are entered or edited. This repairs a known 1.4.0 issue that was previously posted on the HEC website.

- Changes made to improve HEC-FDA's ability to consistently import studies from version 1.2.5a to version 1.4.1. This repairs a known 1.4.0 issues that was previously posted on the HEC website.

- HEC-FDA allows the user to define uncertainty about graphical flow or stage exceedance probability functions by entering normal, log-normal, or triangular uncertainty parameters for each of the function's ordinates. This bypasses the default uncertainty calculations that use the equivalent length of record to produce a normally distributed estimate of uncertainty about the flow or stage exceedance probability function.

- HEC-FDA now checks to make sure that the "without project" plan is defined. Occasionally, the pointer to the "without project" plan became undefined in version 1.4.0 preventing the computation of expected annual damages (EAD).

- EAD and annual exceedance probability (AEP) distributions outputs are now stored in a study file, outside of the user interface, to help National Flood Insurance Plan (NFIP) levee evaluation users comply with EC 1110-2-6067. This file is transient and is overwritten whenever HEC-FDA is restarted. The distributions are permanently stored in the database in the file EADDATA.DBF.

- Some messages produced by the program (e.g. some error messages, the date of last compute message, etc...) were improved to be more descriptive and specific.

- Minor changes to internal components of the codebase were made to ensure HEC-FDA 1.4.0 studies can be imported into HEC-FDA 1.4.1 (and maintain

backward and forward compatibility with HEC-FDA version 2.0, which is currently in development). These changes are not visible to users.

- Minor changes were made to the number of allowable characters in some text fields and the allowable precision in some numeric fields.

- A few unnecessary (e.g. unused) internal files and database fields were removed. These changes are not visible to users.

Using a Study Created in a Previous Version of HEC-FDA

HEC-FDA version 1.4.1 can directly import studies created in versions 1.2.4, 1.2.5, 1.2.5a and 1.4.0. However, once these studies are imported in to version 1.4.1, the study database will be converted to a new format and will no long be compatible with earlier versions of the program. Therefore, it is advisable that user's save a copy of their version 1.2.4, 1.2.5, 1.2.5a or 1.4.0 studies before importing them into version 1.4.1. To import a study into version 1.4.1 open the study in version 1.4.1. A notice will appear stating that "This study has a database for an older version of HEC-FDA and must be converted for use with this version of the program. You should make a backup of your database before proceeding. Do you want to update your database to the new version?" If the user clicks "Yes" the study will be converted into the version 1.4.1 format. Studies created in earlier (than 1.2.4) versions of the program will have to be converted to version 1.2.5a before they can be imported into version 1.4.1 (or version 1.4.0).

Notes about HEC-FDA versions 1.4.0 and 1.4.1

When running HEC-FDA version 1.4.0 or version 1.4.1 in the Windows 7 operating system a command prompt (DOS) window containing the Galaxy debug message opens. Galaxy is the commercial library that was used to create the HEC-FDA graphical user interface (GUI). This window can be minimized but not closed while running the program. This is described further in the version 1.4.0 release notes.
 The primary update implemented in version 1.4.0 (change to version 1.2.5a) is the computation methods used to define uncertainty distributions about graphical flow or stage frequency curves. These methods continue to be implemented in version 1.4.1. This update is described in detail in the version 1.4.0 release notes.