

HEC-FDA

Version 1.2.4, November 2008

Release Notes

Since the last release of the HEC-FDA software (Version 1.2, March 2000) we have fixed several bugs and added some capabilities.

Installation

The previous version of HEC-FDA installed to the root directory of a computer. With Version 1.2.4 HEC-FDA installs to the following directory: **C:\Program Files\HEC\HEC-FDA\1.2.4**. The sample data sets also get copied to this directory, sub-folder - **Example Studies**. When you open a study in HEC-FDA it does not default to this directory so to use the sample data set you will have to browse to the correct location. When you are creating your own studies, you will need to create the studies in a different directory since most users do not have permission to write in the **Program Files** area.

Modifications

1. Increased the number of maximum damage categories from nine to twenty.
2. Greater accuracy in the calculation of the median and mean annual exceedance probabilities for the project performance reports g.
3. A damage reach may contain both a geotechnical failure function as well an interior-exterior stage function; previously, a damage reach could contain either one but not both.
4. A change has been made in the calculation methodology for "average" probability functions; although these are not used in the calculation of expect annual damage (EAD), they do indicate an "average" curve based on those generated during the Monte Carlo simulations.
5. The algorithm for computing EAD and project performance when there is geotechnical failure has been changed. The calculations give greater accuracy in the results within the failure zone when the difference in elevation is small between the probability of failure (PFP) and probability of non-failure points (PNP). However, if the difference in elevation between the PFP and PNP points is large, the user must enter enough points in the geotechnical failure curve to adequately define the probability function in that range. Version 1.2.4 uses the points from the geotechnical failure curve in the geotechnical failure range as the calculation points rather than the possibly more detailed internal calculation points that otherwise would be used.
6. When computing stage-damage for structures that have a depth-direct dollar damage function, the price index is now applied to the dollar amounts; previously, the direct dollar values were not adjusted by the price index.
7. Graphical discharge-probability and stage-probability functions are stored both in binary fields and in a memo field in tab-delimited format. Likewise, the transform flow function

is stored in a memo field as tab-delimited data. The data in the tab-delimited memo field is used in calculations and can be edited using dBASE or MS Access.

8. The mean and median annual exceedance probabilities (AEPs) are stored in the database with five rather than three digits to the right of the decimal point.
9. For Log Pearson Type III discharge-probability functions, calculations are carried out to an exceedance probability of 0.0001 for greater accuracy in the project performance calculations.
10. When water surface profiles are imported as a delimited text file, you can now import a large number of cross-sections (constrained only by XBase memo field limits). Previously, you could correctly import a maximum of ~1,000 cross-sections from a delimited file. HEC-FDA has been tested for importing a stage-probability water surface profile set with 100,000 cross-sections. However, it is very slow to display the profile input dialog.
11. It is now allowable to have negative stages in input stage-probability functions.
12. For Log Pearson Type III discharge-probability functions, the confidence limits are now computed for the 25% and 75% limits. They previously computed at +1 and -1 standard deviations but were labeled as 25% and 75%.
13. The equivalent annual damage is calculated properly when the most likely future year is beyond the period of analysis.
14. A fix for the importing of water surface profiles and all water surface profiles assignments has been made.
15. For **stage-probability** functions which have a **steep slope** followed by a very flat slope for rare exceedance probabilities, HEC-FDA Version 1.2.4 will use the calculated uncertainty about the flat portion of the function in the expected annual damage (EAD) and project performance computations. **However, when viewing stage-probability functions from the HEC-FDA graphical user interface (GUI), either graphically or in a report, HEC-FDA will incorrectly display greater uncertainty about the flat portion of the function.**