

CHAPTER 8

Troubleshooting

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Error Messages

When the program cannot complete a specific task, an error message number will typically be displayed in a message window. An example is specification of a stage-discharge or stage-damage function where the stage, discharge, and/or damage values are not monotonically increasing. A list of error messages corresponding to error message numbers is included Table 8.1.

Table 8.1
HEC-FDA Error Messages

Number	Error Message
1	In searching a file, the program attempted to move to a nonexistent record.
2	An index value is bad. - SD code,
3	The base module cannot be changed or deleted.
4	The base plan cannot be changed or deleted.
5	The last module assignment for a given plan and year cannot be deleted.
6	The FORTRAN calculation routines have detected an error.
7	All damage functions used in a given calculation must have the same type.
8	A duplicate object name has been encountered.
9	An enumeration is out of range. - SD code,
10	While creating or opening a file, a field could not be mapped.
11	File locked.
12	A file could not be created.
13	File error,
14	Database integrity error - an object was referenced which does not exist.
15	A file could not be opened.
16	Filter violation. A file is positioned on a record which should be filtered out.
17	A frequency function was found which is not valid. Must be analytical or graphical, stage/discharge or stage/frequency.
18	Global error is being set for a stage/discharge function which uses coordinate errors.
19	Coordinate errors are being set for a stage/discharge function which uses global errors.
20	A file index is being set to a value which is not valid for the file type.
21	Unless this is a very long term study, there is a bad value in the year list.
22	The studies cannot be merged. The configuration files are not compatible.
23	The calculation cannot be performed. One of the input functions is incomplete or invalid.
24	This calculation cannot be performed. The input function set is not complete or a function is invalid.
25	A data record is not complete.

Number	Error Message
26	A code function has been called with an invalid argument.
27	Invalid probability distribution or distribution type,
28	WSP data must include the two-year, ten-year, and hundred-year values (.5, .1, and .01 exceedances).
29	A character string is too long for the field length.
30	Cannot get the record. File is empty or positioned after end of file.
31	Filter value does not exist (e.g. looking for reaches on a nonexistent stream).
32	A function was called for a data object for which it is not appropriate.
33	A reach index station was found which is not in the reach.
34	Invalid directory or pathname.
35	A file contains an invalid record.
36	Frequency function transform flow data is invalid.
37	An invalid water surface profile has been found.
38	Calculations have been marked invalid due to more recent data entry. Recalculation is required.
39	Not enough memory.
40	A calculation record is missing. Run the calculations again.
41	Cannot create analytical frequency function. There is no discharge data in the water surface profile.
42	Search failed. An object which is being searched for does not exist.
43	There is no study file open.
44	A damage category is being referenced which is not in the category list.
45	A damage function is being referenced which is not in the depth/damage function list.
46	A necessary file does not exist.
47	The function which is being assigned does not exist.
48	A structure inventory module is being referenced which is not in the module list.
49	A plan is being referenced which is not in the plan list.
50	A damage reach is being referenced which is not in the reach list.
51	A stream is being referenced which is not in the stream list.
52	There is no uncertainty specified for this function, so there are no error limit curves.
53	An object has not been initialized. - SD code,
54	The record is assigned to another plan/year/stream/etc. Use global replace, or change the name.
55	The record cannot be deleted - it is referenced from another file.
56	The index stack has become unbalanced. Please notify HEC.
57	A stage/frequency function must be graphical.
58	Reference has been made to a structure error distribution which does not exist.
59	Invalid function. Values not monotonically increasing or decreasing.

Number	Error Message
60	There is an existing record. Call replace.
61	Damage reduced reports require that the without condition be defined. Run calculations for without condition.
62	This version of the program does not recognize the database version named in the .sty file.

The analyst should make necessary corrections pursuant to the error message and repeat the task which failed.

Diagnosing Problems

There are two basic methods of diagnosing problems.

Missing or Out-of-date Computation Results

It is always important to check the Study Status Report as shown in Figure 8.2.

Plan Name	Plan Description	Base Year 1999	Most Likely Future Year 2020
Without	Without project condition	P S \$	P S \$
Plan 1	Detention + Channel Imp.	P S \$	P S \$
Plan 2	Floodwall Only	P S \$	P S \$
Plan 3	Detention, Channel Imp., and Floodwall	P S \$	P S \$

Legend

- P: All exceedance probability functions for this plan are completed.
- S: All stage-discharge functions for this plan are complete.
- \$: All stage-damage functions for this plan are complete.
- *Data is incomplete.

Figure 8.1 Study Status Report

The report indicates whether the functions required for the computation of expected annual damage are complete for all reaches in each plan. As indicated in the legend, a “*” means that the specific function or functions are missing or incomplete for one or more reaches. The function assignment report(s) should be checked to see which reach has a missing or incomplete function and the problem corrected. The function assignment reports are found under the View menu on each function definition screen. Stars “*****” appearing in the function name and description columns in the function assignment reports indicate that function is missing or incomplete for that reach.

When data have changed since the last time computations were made the results of that computation become out-of-date. The FDA program allows you to view previous results that are out-of-date but marks the results accordingly. Out-of-date results are indicated by a + in front of the reach, plan, or function name and may appear in a the function assignment report or in any of the result reports. An example of out-of-date computation results is when a reach exceedance probability function has been changed. In this case, the results for the reach will have a “+” in front of the reach name in all reports for the plans and reaches where the changed function is assigned.

Warning Message Log

A study warning message log text file is created and appended to each time a plan computation is made. This file is located under **Evaluation/Results/Damage by Analysis Year**. The file contains the time and date of the computation, the plan, year, stream, reach names and any warning messages for the computation.

An example of the contents of this file is shown below.

```
Thu Nov 6, 1997 8:16:35 AM Pacific Standard Time

Begin computing expected damage for plan Plan 3, year 2020, stream S Fork
Bear, reach SF-8
*** warning rating curve extended ***
    the rating curve did not extend to largest
    upper confidence limit flow value
    rating curve flow extended from      6873.000000 to      57971.130000
    rating curve stage extended from      474.980000 to      474.981000

Thu Nov 6, 1997 8:17:26 AM Pacific Standard Time

Begin computing expected damage for plan Plan 3, year 2020, stream S Fork
Bear, reach SF-9
*** warning rating curve extended ***
    the rating curve did not extend to largest
    upper confidence limit flow value
    rating curve flow extended from      4995.000000 to      34067.260000
    rating curve stage extended from      483.270000 to      483.271000
Calculation successful for Plan 3, 2020
```

These error messages are created when computation of expected or equivalent annual damage are made and refer to the data for the functions and associated uncertainties used during the computations for each reach. This file should be checked each time a computation of damages is made and corrections mad as appropriate. The LOG file size is not managed by the program so it is prudent to delete text from the file and/or save information to a new file and delete the LOG file, if you are concerned about disk space.