



## FORTRAN DATA EXTRACTION UTILITY GUIDE

GetEFDC is the utility developed by Dynamic Solutions International LLC (DSI) to extract the output from the binary files generated by EFDC\_DSI. The common binary files that are generated by EFDC\_DSI are as follows:

- a. EE\_WS.OUT
- b. EE\_VEL.OUT
- c. EE\_WC.OUT
- d. EE\_WQ.OUT

EE\_WQ.OUT is generated only if water quality is turned on.

The code for GetEFDC is provided in the download page of DSI website at <http://www.efdc-explorer.com/downloads/efdc-dsi-model.html> . The utility can be found on “Utilities” Tab in the “downloads” page. If the executable is not included in the downloaded folder, the user can simply compile and build the executable from the GetEFDC Fortran program by using “CTRL + SHIFT + B”.

GetEFDC Files:

The user should copy the executable “GetEFDC.exe” and “getefdc.inp” to run the utility. “Getefdc.inp” is the master file that stores all the information about the parameters of interest which user is trying to extract. Both the files “GetEFDC.exe” and “getefdc.inp” need to be included in the same folder where there are EE\_DSI binary outputs as shown in Figure 1.

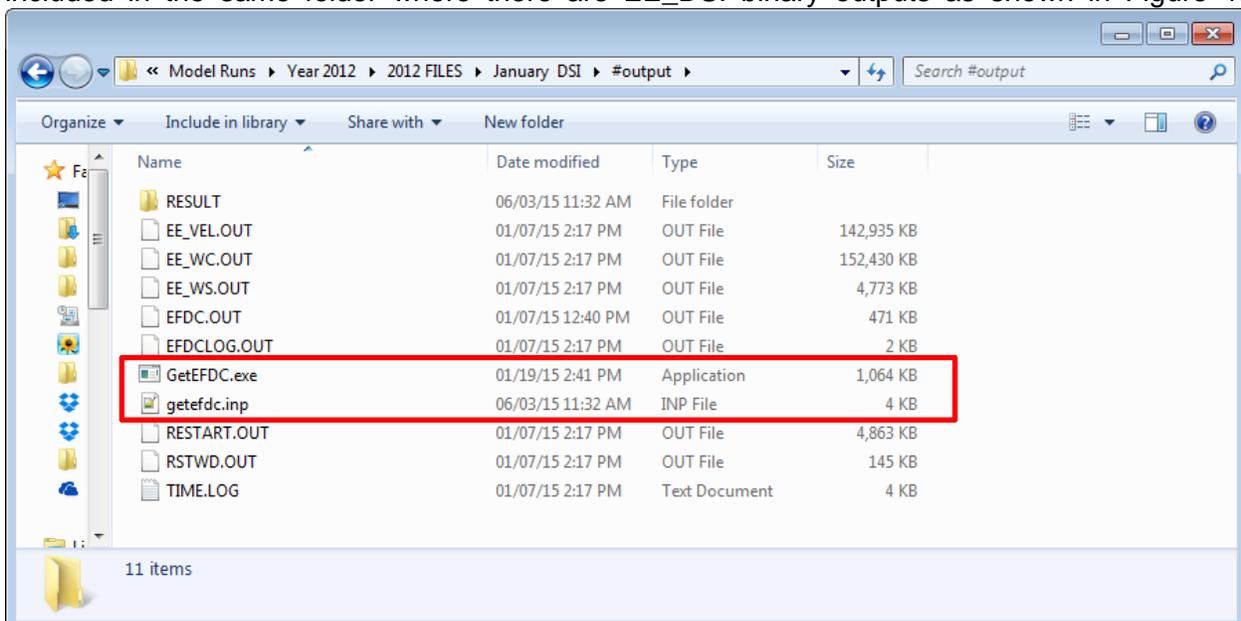


Figure 1 Folder structure showing EE generated output files and “getefdc.inp” and “GetEFDC.exe”.



In the program, the full path of the input files can be determined by the full path of “efdc.inp” in getefdc.inp file. The user can specify the full path as “E:\Projects\EFDC\_Testing\restart\caloo-[autorun\\_1\efdc.inp](#)”. Please note that the lines which start with “\*\*\*” in “getefdc.inp” file are comments and will be ignored.

## 1.1 Running the program:

It is little tricky to run the program. The program can be run two ways:

- a. **Creating a batch file:** The user can create a batch file and include the following code in the bat file as shown in Figure below. The file should be named as \*.bat.

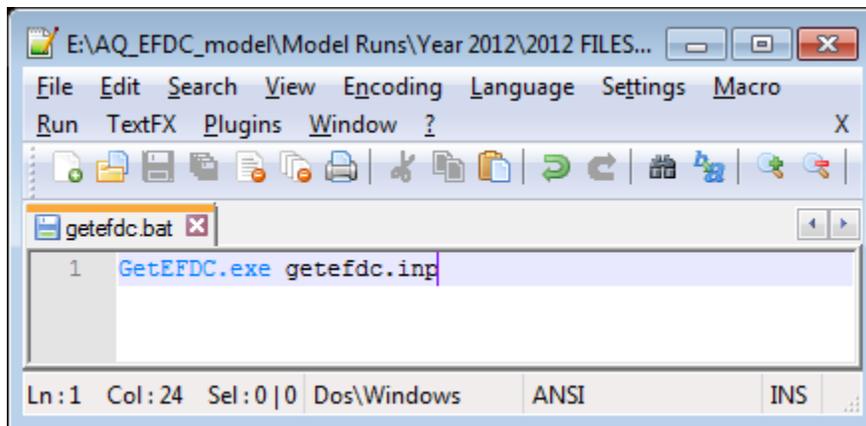


Figure 2 An example of getefdc.bat

The user should make sure the “GetEFDC.exe” file is in the same folder as the output file while using the above command in the bat file. Then the user can simply run the \*.bat file.

- b. **Running from the Command Prompt:** The user can run the program from “Command Prompt” instead of double clicking the program. If tried to run the program by just double clicking then the program will flash and disappear without any output. Make sure you navigate to the proper folder where all the output files are stored. Then when you are in the working folder i.e., the location where your output files and “getefdc.inp” and “GetEFDC.exe” are stored, use the syntax “GetEFDC.exe getefdc.inp” in the command prompt. Figure 3 shows the proper syntax that can be used to extract the data using getEFDC. You can notice that when the syntax “GetEFDC.exe” is used alone (Figure 3), the program throws an error “ERROR! GetEFDC.inp file not found”. However, when used “GetEFDC.exe getefdc.inp”, the program executes and shows the status of each sub tasks and print “OK” at the end of extraction process.

## 1.2 Parameters for extraction of binary data

It should be noted that when GetEFDC tool is used, all the parameters such as salinity, dye, temperature, water depth is extracted for all the cells specified.



For each parameter type, time series and plan view data is exported if vertical profile and tecplot exportation are not specified.

**JULTIME:** If JULTIME = 0 is specified, plan view data is exported for all the cells in the domain for all the time steps. If JULTIME = 5 or some other time, then plan data is exported at only that particular time. While specifying JULTIME you should remember that the only difference it will cause is in plan-view data. Regardless of JULTIME values, time series are extracted at all the specified locations for each parameter (eg., salinity, dye, temperature, water depth, velocity etc).

All the remaining fields in “getefdc.inp” are described in detailed in the file itself.

```
Administrator: C:\Windows\system32\cmd.exe
E:\AQ_EFDC_model\Model Runs\Year 2012\2012 FILES\January DSI\#output>GetEFDC.exe
*****
*** GetEFDC IS DEVELOPED BY DYNAMIC SOLUTIONS-INTERNATIONAL IN HANOI ***
*** IT IS USED TO: ***
*** EXTRACT EFDC OUTPUT FILES (BINARY) FOR LAYER/TIMESERIES DATA ***
*** GENERATE A NETCDF FILE FOR WATER LEVEL, VELOCITY AND SALINITY ***
*** THE OPTIONS FOR EXTRACTION DATA IS IN THE FILE GETEFDC.INP ***
*** THEREFORE PLEASE EDIT THIS FILE ACCORDING TO YOUR NEED FIRST ***
*** THEN RUN THIS PROGRAM BY ENTERING THE FOLLOWING COMMAND: ***
*** ./getefdc.x getefdc.inp ***
*****
ERROR: GETEFDC.INP IS NOT FOUND!
E:\AQ_EFDC_model\Model Runs\Year 2012\2012 FILES\January DSI\#output>./GetEFDC.exe getefdc.inp
'.' is not recognized as an internal or external command,
operable program or batch file.
E:\AQ_EFDC_model\Model Runs\Year 2012\2012 FILES\January DSI\#output>GetEFDC.exe getefdc.inp
*****
*** GetEFDC IS DEVELOPED BY DYNAMIC SOLUTIONS-INTERNATIONAL IN HANOI ***
*** IT IS USED TO: ***
*** EXTRACT EFDC OUTPUT FILES (BINARY) FOR LAYER/TIMESERIES DATA ***
*** GENERATE A NETCDF FILE FOR WATER LEVEL, VELOCITY AND SALINITY ***
*** THE OPTIONS FOR EXTRACTION DATA IS IN THE FILE GETEFDC.INP ***
*** THEREFORE PLEASE EDIT THIS FILE ACCORDING TO YOUR NEED FIRST ***
*** THEN RUN THIS PROGRAM BY ENTERING THE FOLLOWING COMMAND: ***
*** ./getefdc.x getefdc.inp ***
*****
*** BUFFER: getefdc.inp ***
*****
*** READING GETEFDC.INP FILE ***
*** READING THE EFDC INPUT FILES: ***
*** READING EFDC.INP ***
*** READING CELL.INP ***
*** READING DXDY.INP ***
*** READING LXLY.INP ***
*** READING CORNERS.INP ***
*** READING EE_WS.OUT AND EXPORTING DATA ***
*** READING EE_VEL.OUT AND EXPORTING DATA ***
*** READING EE_WC.OUT AND EXPORTING DATA ***
*** OK ./ ***
*****
E:\AQ_EFDC_model\Model Runs\Year 2012\2012 FILES\January DSI\#output>
```

Figure 3 Command prompt showing the proper extraction syntax