Walkthrough to Install and Operate the Hydrologic Evaluation of Landfill Performance (HELP) Model v3.07

HELP v3.07 is a DOS executable program, meaning it does not run in a Windows or iOS environment. The 16-bit program will not natively work with 64-bit systems (i.e., most Windows 7 and more recent systems). Therefore, a 3rd party emulator is required. This walkthrough will describe how to use a DOS emulator to install the HELP model. HELP v3.07 will run natively on 32-bit systems, through the Windows Command line. For 32-bit systems, unzip the program and double-click INSTALL.exe, following the walkthrough from Step 7. To check if your PC is 32 or 64-bit, navigate to the Start menu (may be a Windows icon), Click Computer, Click System Properties (or similar). A window with your Windows Edition and System Information will appear. System type will display either 32 or 64-bit Operating System.

If you have difficulties with installation of HELP, contact Thabet Tolaymat for troubleshooting: tolaymat.thabet@epa.gov
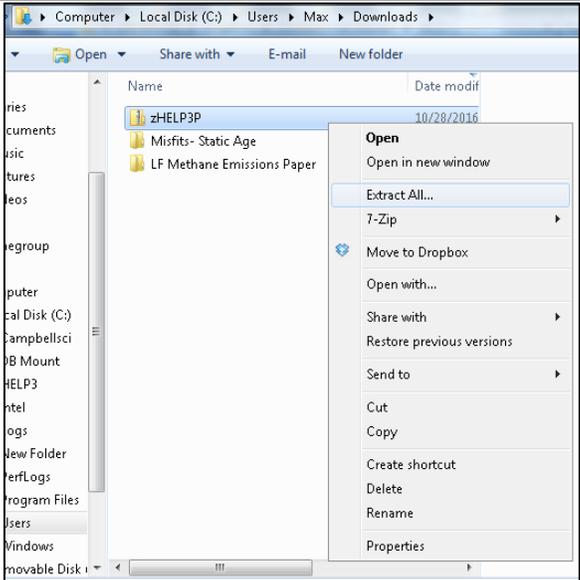
Updates will be posted to:

https://www.epa.gov/land-research/hydrologic-evaluation-landfill-performance-help-model

Instructions for software installation begin on the following page.

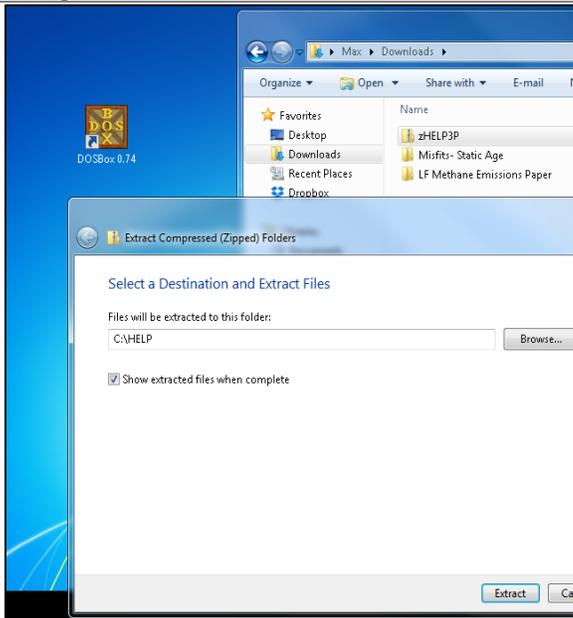Instructions to load HELP after a successful installation begin on page 10.

Last updated: June 16, 2017

Installing the HELP software

Step	Image	Comments
1	No image	Download a copy of HELP v3.07 from EPA's HELP model webpage. It is an executable (.exe) in the form of a zip folder (.zip).
2	No image	To operate HELP on a 64-bit system, you must first download and install a DOS emulator. Search "DOS emulator" in your preferred search engine and download the software of your choosing. EPA cannot recommend specific software. This walkthrough uses the DOS emulator DOSBox v0.74.
3		Navigate to your Downloads folder or wherever the zipped HELP folder is located. The file is called: zHELP3P.zip

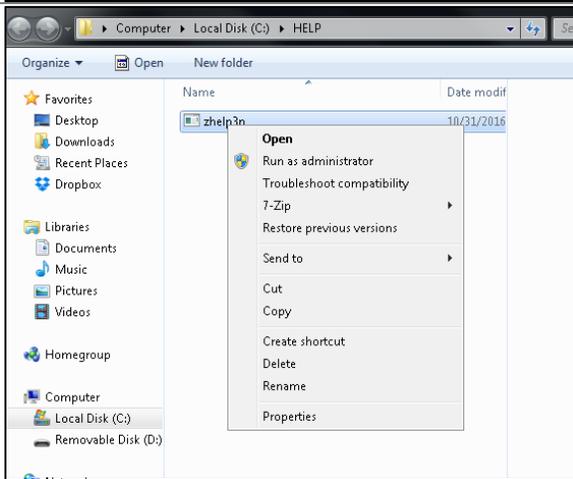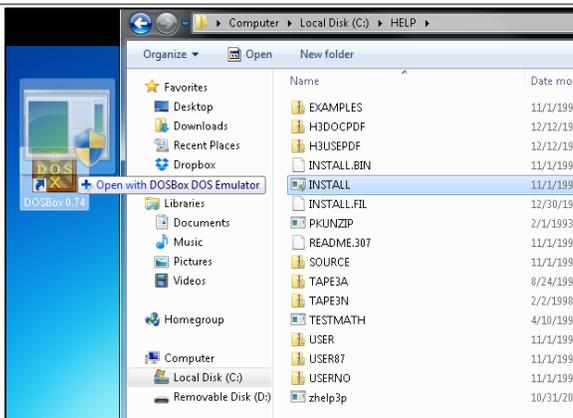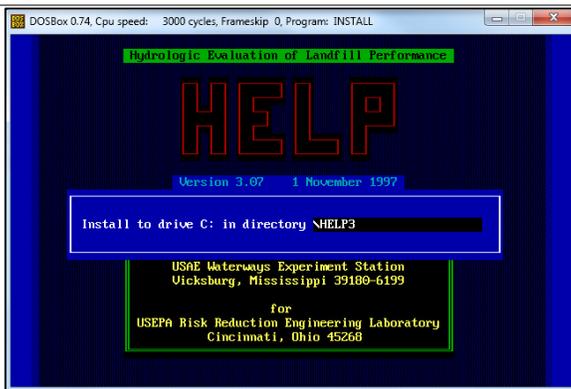| Step	Image	Comments
4		Right-click and **Extract All.** For convenience, we are saving to the C: drive in a new folder called "HELP". File path is C:\HELP\ NOTE: Some computers may have administrator privileges that prevent saving directly to the C: drive or other locations. Find a suitable location for these files. Click **Extract.**
5		Navigate to C:\HELP Right click on the Executable file zhelp3p. Right-click and **Extract** the files from the EXE**.** Clicking **Open** on the EXE in a 64-bit system will result in an error message. The HELP folder will populate with several executables, folders, and zipped folders.
6		Find the INSTALL executable. **Drag and drop** INSTALL to the DOS emulator desktop shortcut. The emulator will be used to install HELP files.

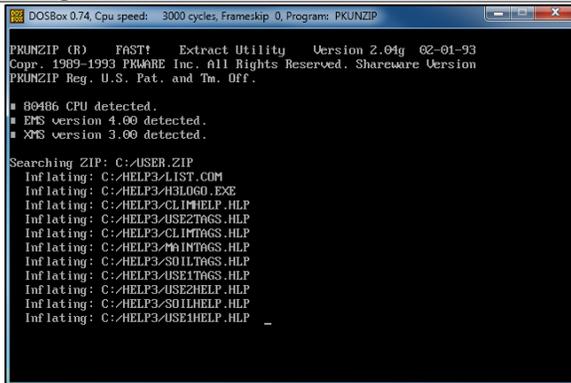| Step	Image	Comments
7		We will now go through the prompts to install HELP. There are many files which are required for proper operation. Pay careful attention to the prompts. Generally, you will want to Type "y" for yes. Starting with the first prompt: Do you want to continue installation? Type **y**
8		For convenience, use the suggested directory. NOTE: This does not install files or programs to C:\HELP3. It will install to wherever in the C: drive you have the INSTALL file. In our case it is: C:\HELP\HELP3 In your case it may be embedded within several folders. e.g., C:\...\...\HELP3 Another NOTE: It is important to keep track of where these files and folders are located. To run the software later, you will need to type the file path into the user interface. It will not let you browse for the folder (like most modern programs do). Press **Enter**

Step	Image	Comments
9		Type **y**
10		Type **y**
11		The test should be successful. If not, there may be an issue with the downloading process and the model may not operate properly. For installation troubleshooting, contact Thabet Tolaymat: tolaymat.thabet@epa.gov
12		If the test was successful, Type **y** If the test was not successful, Type **n**

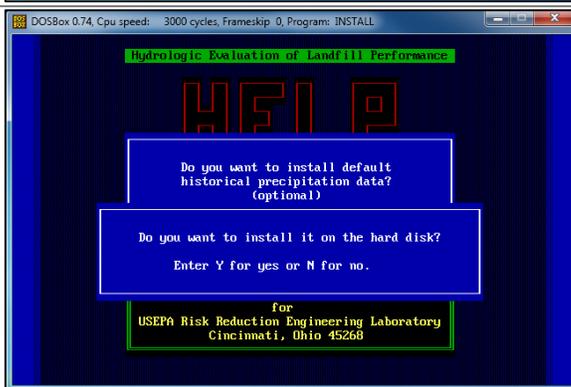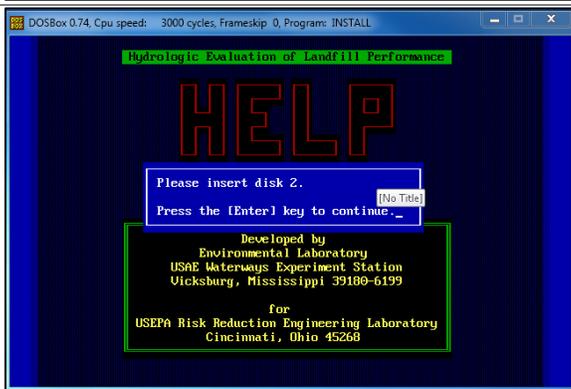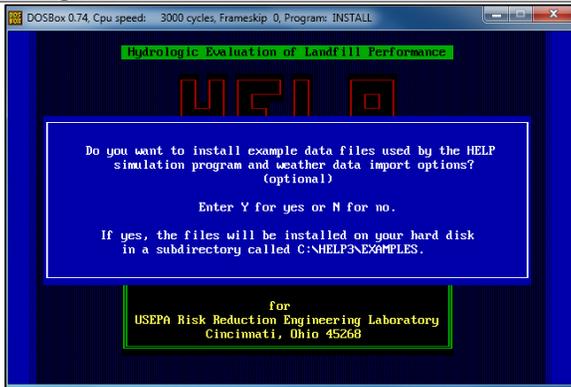| Step	Image	Comments
13		Several files will then be inflated/ unzipped. Press any key
14		Although this information is optional, we feel it is best to install default data. Type **y**
15		Generations ago, people did hard math by hand with pen and paper. Today, we can install vast quantities of data on hard drives. Type **y**
16		Decades ago, computers used multiple disks to perform computing tasks. Programs were measured in kilobytes. When was the last time you saw a floppy disk? All of the required files are contained within the zip file. Press **Enter**

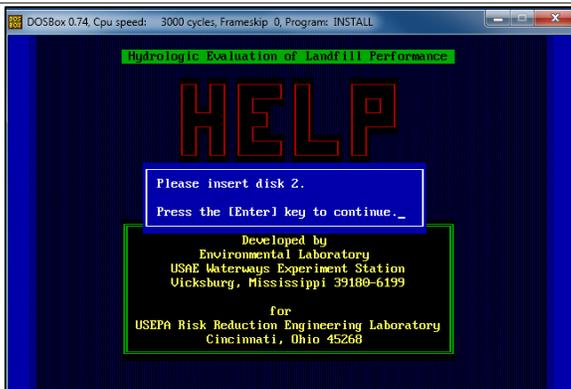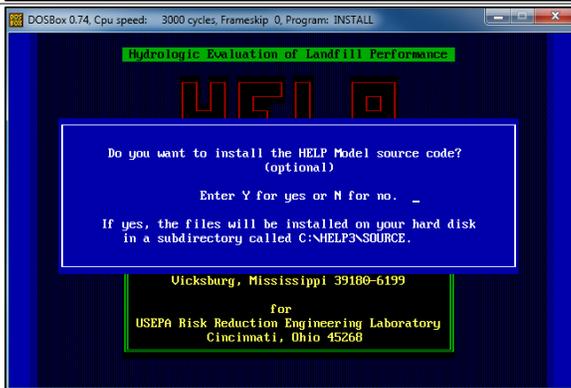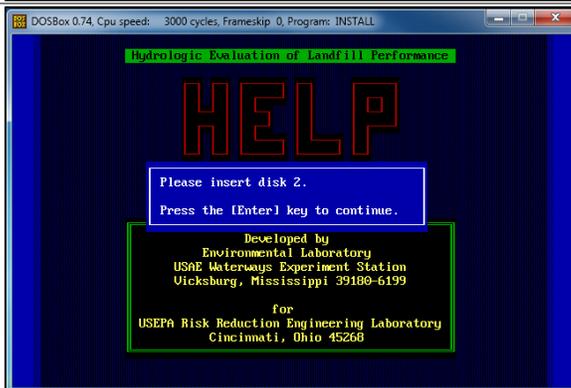| Step	Image	Comments
17		These will be necessary for the Example problem for operating HELP. Type **y** NOTE: Similar to Step 8, although it says the subdirectory is C:\HELP3\EXAMPLES, it is actually C:\...\HELP3\EXAMPLES In our case it is: C:\HELP\HELP3\EXAMPLES
18		Press **Enter** and let the credits roll…
19		Type **y**
20		Press **Enter**

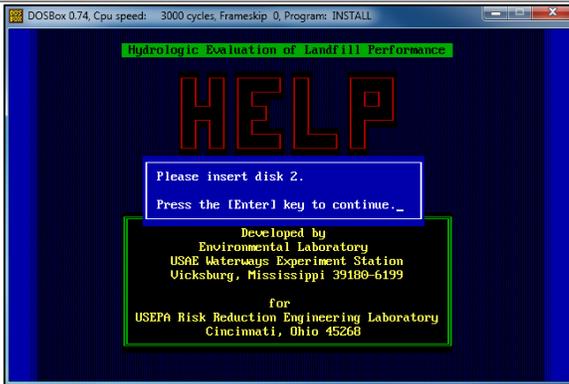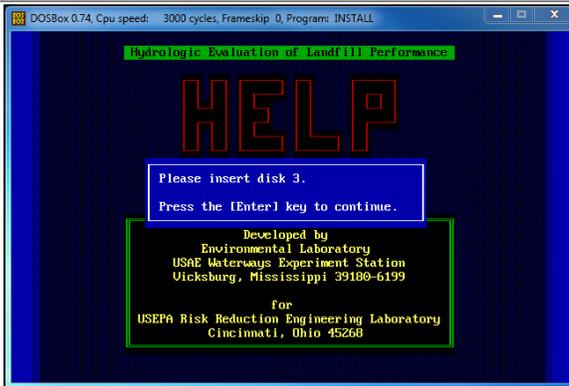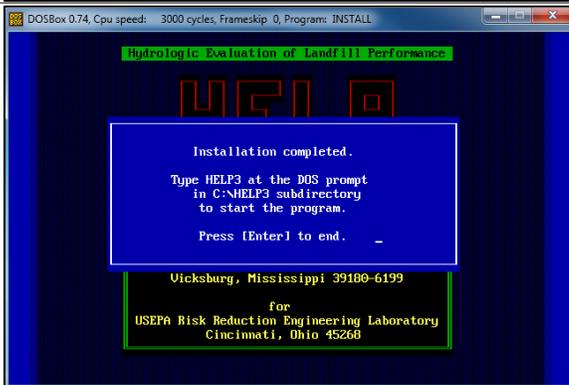| Step	Image	Comments
21		The User's Manual and Engineering Documentation are now available separately here: https://nepis.epa.gov The web documents are identical to the installed copies. Type **y** or **n**
22		Press **Enter**
23		Press **Enter**
24		Congratulations! You have mastered the latest in 1980s technology. We can now run HELP. Press **Enter** To operate HELP immediately: The emulator has the HELP directory already mounted. Type **HELP3** in the command line.

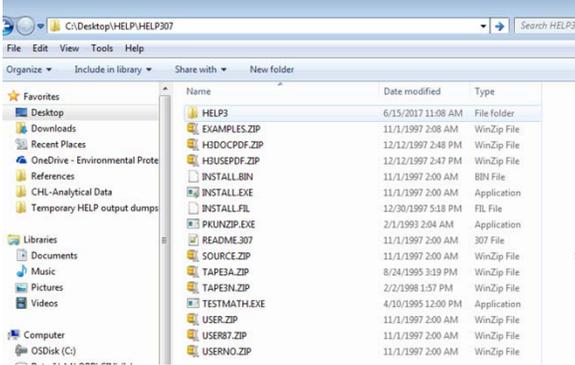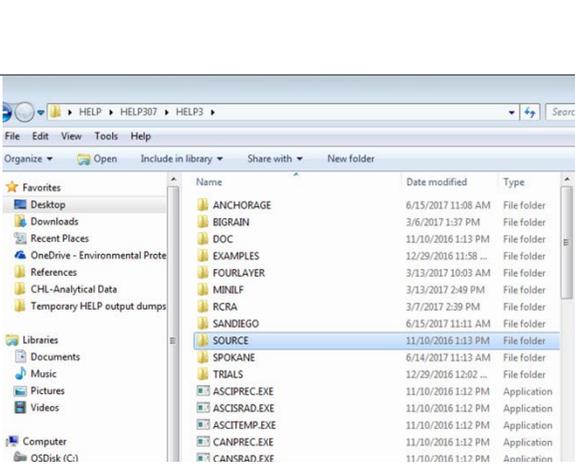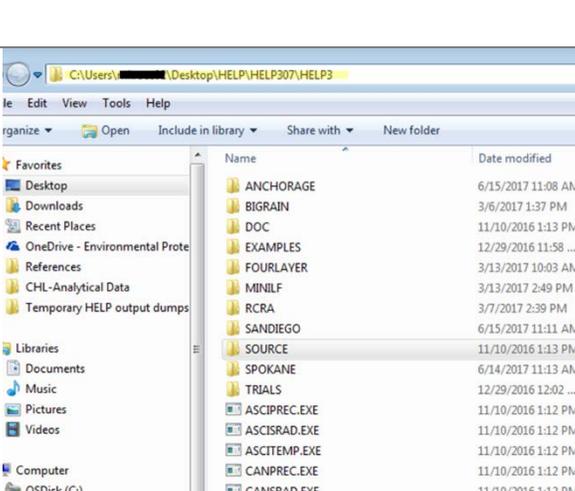| Step	Image	Comments
25		The image to the left should be displayed. Press any key to continue operation of the HELP model. If you close the emulator, your session will end and HELP will close. Follow the instructions on the following page to load HELP.

Once HELP is installed you will use a DOS emulator to start the program using the command line. We will mount the C: drive (or whichever drive your folder is located in). Then we will navigate to and run the program.

To run HELP after it is installed on your computer:

Step	Image	Comments
1		First, navigate in Windows Explorer (the folder system) to your HELP files. In this example, the directory is on the Desktop in a HELP parent folder > HELP307 > HELP3 subfolder Look to the left, if you see zip folders and a HELP3 folder, you need to go into that HELP3 folder. **Double-click** the HELP3 folder.
2		Look for a SOURCE folder. Now we are in the right location. This folder (HELP3) is the folder we will point to (mount) in the DOS emulator. Note: You will not see all the other folders. Those are created by the user. The EXAMPLE folder has the example files from the installation which may be helpful. DOC contains the user manual and engineering document.
3		Note the file path of this location by clicking in the Explorer bar (highlighted). You will want to write it down as there is not a simple way to copy/paste to the emulator. Note the EPA username has been censored for security purposes.

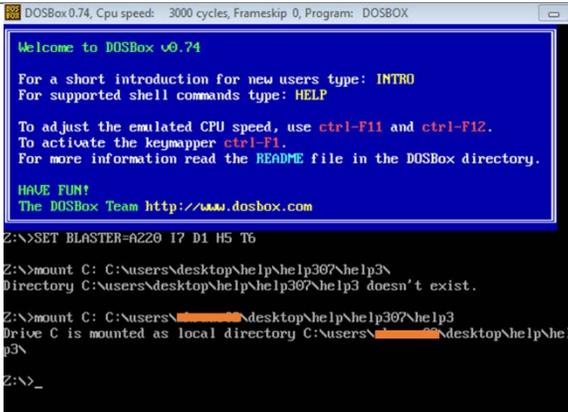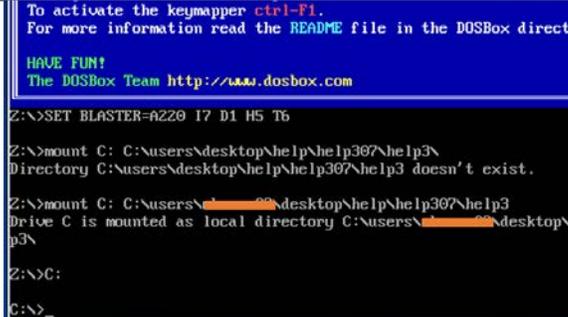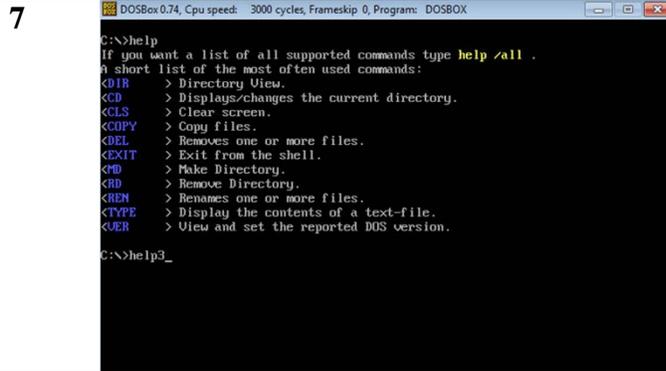| Step	Image	Comments
4		Open your preferred DOS emulator. The command line will read a virtual drive (Z:\> or similar). We will mount directly to the HELP folder where all the HELP working files are and where your data will be saved. In this example HELP is located on the C: drive so we will mount the C: drive.
5		Type: Mount C: C:\[enter your file path here] You cannot paste, so write carefully. Press **Enter**. If successful, the emulator will tell you the C: drive has been mounted. If the directory is incorrect, the emulator will notify you. Look to the left for an example.
6		We've mounted the C: drive directly to the HELP3 folder but the directory will still be pointing to the Z: drive Type: **C:** Press **Enter** The directory will now be pointing to the C: drive. **IMPORTANT:** The emulator displays C:\ but really the drive is directly pointing to the file path you specified. So whenever you see C:\ in later in the HELP program it is really to the HELP3 folder.

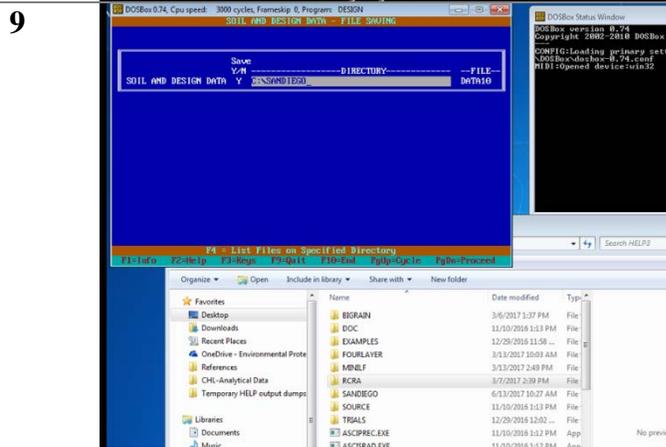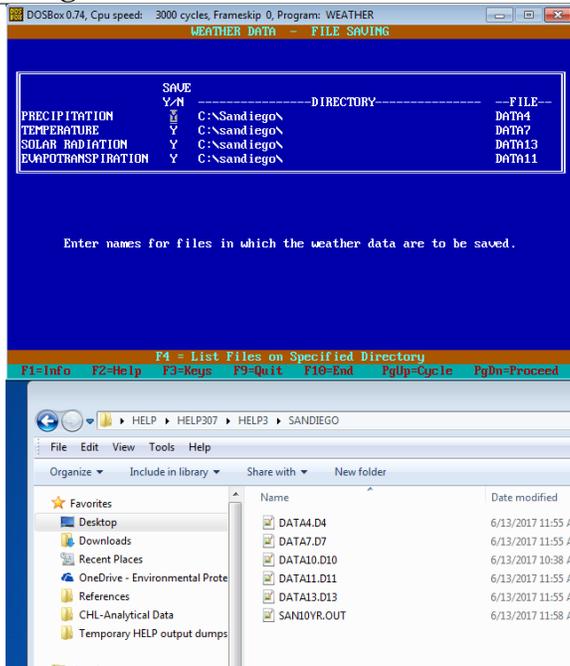| Step	Image	Comments
7		Let's load the program. You may be tempted to type HELP. But that will give you the help menu for the Emulator (of course). With the C:\> directory mounted Type: **HELP3** Press **Enter**
8		HELP is now loaded and ready for use!
9		One last quick note about functionality: We recommend creating a new folder for each HELP simulation in Windows Explorer before you create new files in HELP. When you go to save the files in HELP, because you mounted the C:\ drive directly to the HELP3 folder, you don't need to reenter the whole file path. Just the new folder name. C:\SANDIEGO in HELP is really C:\users\desktop\...\HELP\HELP307\HELP3\SANDIEGO on the computer

Step	Image	Comments
10		Also, the print functionality within HELP is not recommended for printing the output files. Locate the output file (*.OUT) and open with your preferred text editor for printing or saving as PDF. You may want to resize the text for it to display properly. Questions can be directed to: tolaymat.thabet@epa.gov Happy HELPing!