


Computer program errors have been discovered during a systematic testing process since the publicly-released DDMSW 1.5 and internally-released DDMSW 1.6, which were related to FCDMC's major hydrologic procedures (S-graph unit hydrograph methods, Clark unit hydrograph methods, 100-year 24-hr design storms). Those computer program errors have been corrected in DDMSW 1.8. The following is the list of the corrected errors.

List of Major Errors in DDMSW 1.5 and DDMSW 1.6

1. This error is related to a situation that multiple projects with the same project ID may be created without being noticed by the user. Suppose you already have EXAMPLE1 project open in DDMSW. Now go to File => Open, then you can view the list of projects. When you move your cursor across the projects, the project is highlighted as blue. Suppose your mouse cursor stops at EXAMPLE3. Instead of clicking on the highlighted EXAMPLE3, if you click on any gray area (move your mouse cursor out of the list box from the left or right side of the list box, and then click on the gray area), then close the form. Then, go to File => Open, and view the list of projects. You will find two EXAMPLE1's, and EXAMPLE3 will be gone. If you repeat the above process, you will have three EXAMPLE1's. If you delete one, all EXAMPLE1's will be gone. This is a very serious error if the user does not pay much attention. However, this error can be avoided if the user always makes selection in the project list box instead of moving away the cursor. This error has been corrected in DDMSW 1.8.
2. The error that RTIMP may exceed 100 percent has been corrected in DDMSW 1.8.
3. The error that the button of "Update Data" in "Develop Draft Model" incorrectly changed the UI card values for **all** S-graph unit hydrograph methods (HEC-1 => Develop Draft Model => Create Draft => Update Data) has been corrected in DDMSW 1.8.
4. The error that the button of "Update Data" incorrectly changed the values of UC card has been corrected in DDMSW 1.8.
5. In the draft model (HEC-1 => Develop Draft Model), UI cards values for Desert/Range land are not correct, that is, they are not the same as the UI cards values computed by using both hand calculations and MCUHP2, which have been cross-checked by two people. In the public-released version of DDMSW, the desert/rangeland unit hydrograph option did not work at all (program would stop or go into an infinite loop). This error has been corrected.
6. Consider an example with two sub-basins (basin 1 and basin 2) in which the Desert/Rangeland S-graph unit hydrograph is used. When the draft model is updated, the UI card values for each sub-basin are changed. The changed unit hydrographs are the same for basin 1 and basin 2. This error has been corrected.

7. If a project must be deleted, users should use File => Management => Delete Project. However, if users go to File => Edit => then click on the delete  button , then it appears that the project is deleted. For example, EXAMPLE1 appears to be deleted. However, if a new project named EXAMPLE1 is created again in the future, then the data associated with the old EXAMPLE1 are still there and will be assigned to the new project named EXAMPLE1 (such as the soil default data). This error has been corrected by removing the delete button.
8. When a user writes a custom soil type for soil type data (instead of choosing from the defaults), the program overwrites the soil type record in the default list and associates with it the characteristics (XKSAT, ROCKOUT, etc) of the old soil type. For instance, if a soil type of 68 is overwritten, say a soil type of 100, the properties of soil type 100 will be used for the newly entered soil type 68. It may be better to differentiate the two default soil types: one generated for the user and the other, which is the default soil data for the county. This error has been corrected.
9. If a user, by mistake, tries to update the first soil data without entering the corresponding area, a pop-up window appears with three options: Cancel, Ignore and Help. If Cancel is clicked, an “infinite loop” appears to form; the same pop-up window appears again. If Ignore is clicked, the program exits the DDMSW GUI and the user has to restart it. This error has been corrected.
10. If a draft model is exported (immediately after it has been created) and then the user tries to update the draft model, a pop-up window with the message “Record is out of range” appears. When this window is canceled, the program exits the DDMSW GUI and the user has to restart it. This error has been corrected.
11. Mcuhp1.exe has been improved by increasing the convergence tolerance from 1 minute to 3 minutes to reduce the chance of generating 90 min time of concentration (it defaults to 90 min when the computer does not converge). The older version of mcuhp1.exe (9/24/94) may easily generate 90 min time of concentration because 1 min convergence tolerance is sometimes hard to reach. The date for the improved mcuhp1.exe is 9/14/2000. The source code was modified by increasing the convergence tolerance from 1 minute to 3 minutes.
12. An error was discovered in mcuhp2.exe (1/26/1996). This error is related to the 100-year, 24-hour single storm PC cards (shifted one index for PC array in the FORTRAN source code). The date for the new mcuhp2.exe is 7/14/2000.
13. The "filter" function under Soil Data is removed to avoid several soil type uniqueness problems.