On-going Activities Related to IWFM v2.3

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- Functionality to read from and write to HEC-DSS time series data files is being incorporated. The ability to use ASCII text files as time series data files is retained. The user will be able to use either or both of HEC-DSS and ASCII text files for time series data. Static data will still be represented in ASCII text files.
- Error checking in the data input routines is being improved. In the current version of IWFM, finding an error in an input file is very difficult and time-consuming. With the improved data input routines, the line number in a data file where the possible error might be will be printed.
- The functionality to keep track of the actual date and time in the simulation period is being implemented. This will allow the user to utilize a single version of a time series data even if the simulation period for a particular project changed (for instance, calibration period versus validation period). Furthermore, the simulation results will be interpreted easily since there will be a date-time stamp for each output. To be consistent with the HEC-DSS functionality, the user will need to choose from the following time steps when the date-time tracking feature is used:

– 1 MIN	– 20 MIN	– 8 HOUR
– 2 MIN	– 30 MIN	– 12 HOUR
– 3 MIN	– 1 HOUR	– 1 DAY
– 4 MIN	– 2 HOUR	– 1 WEEK
– 5 MIN	– 3 HOUR	– 1 MON
– 10 MIN	– 4 HOUR	– 1 YEAR
– 15 MIN	– 6 HOUR	

The current functionality of using any time step without tracking actual date and time in the simulation period is being retained to be used for theoretical problems (e.g. checking convergence characteristics of numerical methods used in IWFM).

- More water budget outputs are being developed: water budget for unsaturated zone; extension of Z-Budget to streams, root zone, unsaturated zone, and land and water use budgets. With the extensions of Z-Budget, the user will be able to print out water budgets for components of IWFM other than groundwater at zones that may or may not coincide with the subregions.
- Other output options are being included:
  i) print-out of the characteristics (rooting depth, ET_c, minimum soil moisture requirement, irrigation efficiency) of the "representative crop" at each subregion
  ii) print-out of the modified irrigation fractions when the automated supply adjustment is turned on
  iii) output of the groundwater heads in TECPLOT© format for animation purposes
- As a step towards the peer-review, our own efforts of verifying the methods used in IWFM are continuing. The verification of groundwater package in IWFM is completed. Verification of stream, tile drain and rainfall-runoff packages are currently being done. Our technical paper on the theory of the Z-Budget component of IWFM has recently been accepted for publication in the ASCE Journal of Hydraulic Engineering.

- An online, interactive version of the IWFM User's Manual is added to the IWFM web site. It can be found at the following address:

  http://modeling.water.ca.gov/hydro/model/iwfm/iwfm_guide/IWFM_Guide.htm