

Release Notes for IWFM Version 4.0.226

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This version of IWFM includes a new soil moisture routing and demand calculation scheme at element level. Rice ponds and refuges are simulated explicitly. This new scheme is consistent with that used in IDC v4.0. Most of the input file structures have been modified to emphasize a data decomposition approach that is consistent with the newly adopted object-oriented programming paradigm. Additionally, a new approach to printing budget tables is adopted.

There are too many code and data file changes in this version of IWFM to list in this document. Below is a list of modifications that are most important to the end user.

1. **(5/1/2010)** Got rid of the Element Subgroup Budget.
2. **(5/14/2010)** Incorporated a new Budget post-processing approach. The new approach allows aggregating budget tables over multiple simulation time steps. It also allows multiple budget tables of the same kind with different output time intervals (e.g. annual and monthly stream budgets when simulation time step is one day)
3. **(5/14/2010)** Diversion details budget is completely revamped to make it easy to understand. The new budget is now printed for each diversion rather than for each subregion. The actual diversion and delivery, and diversion and delivery shortages are displayed in a more clear way.
4. **(5/19/2010)** Got rid of the rating table boundary condition for groundwater.

5. **(7/29/2010)** Stream budget at subregions are no longer available. Now only stream reach budget is displayed to avoid problems with having to assign a subregion number to each stream node.
6. **(8/6/2010)** Updated Z-Budget related code. Now, IWFM only stores flow terms that are present at each element, rather than storing a lot of zeros when a flow term does not apply to an element. This decreases the run-time and the size of the output binary file.
7. **(09/13/2010)** A new feature is added so that when an IWFM executable is run with “-about” flag versions of IWFM and its components are printed out to screen and the program stops.
8. **(09/15/2010)** The capability to print-out flow budget at selected stream nodes is added.
9. **(10/13/2010)** Now there is only one delivery associated with a diversion. This is done to streamline coding for all water supply types (well pumping, element pumping and diversions).
10. **(11/03/2010)** Diversions and pumping can now be delivered to individual elements.
11. **(11/03/2010)** The supply adjustment is now done at element level. First diversions, then well pumping and finally element pumping are adjusted. They are first adjusted for ag demand then for urban demand.
12. **(05/02/2011)** Added a new feature that allows changing the rooting depth of non-ponded crops during the simulation period.
13. **(11/04/2011)** A generic source of moisture is added as a new feature to be able to simulate the effects of lateral seepage (e.g. through levees) and fog on root zone dynamics.
14. **(03/22/2011)** Diversions and pumping can now be delivered to a group of elements specified by the user.