

Why Choose MODRET 6.12 vs MODRET 7.0

1. Any application that can be simulated in MODRET 6.12 can also be simulated in MODRET 7.0. However, many of the new simulation options included in MODRET 7.0 **cannot** be simulated in MODRET 6.12. Based largely on user feedback, the input format in MODRET 7.0 has been updated and a brief learning curve may be necessary to get accustomed to the new model. Refined model operation and greater versatility with model output contribute to a significantly improved model. Bottom line, MODRET 7.0 is better in every respect, and now includes options for more complex stormwater retention, infiltration and routing simulations. However, if one is familiar with the previous versions of MODRET and do not require complex modeling applications, MODRET 6.12 will be perfectly satisfactory.
2. In MODRET 7.0 several input parameters were eliminated or revised to reduce user entry error and to streamline the data input. The main input screens are similar in appearance to the previous versions, however, some entry fields will appear different and unfamiliar to those experienced with previous versions of MODRET. As well, some of the entry data units have changed and users need to carefully review of the new units, i.e., DCIA has changed from % to area in acres.
3. For those users that conduct simple pond retention and recovery analyses or manual volume input type analyses, then MODRET 6.12 might be simpler to use and avoids the learning curve associated with MODRET 7.0. So, anyone that has been using previous versions of MODRET and feels comfortable with the model for their specific applications, should probably continue to use the updated MODRET 6.12.
4. For those users that use the model for routing storm events, modeling pre and post development runoff and discharge rates, or more complex configurations of ponds with overflow weirs, orifices, back to back storm events, combining flow from upstream ponds, etc., will definitely benefit from the various new options available in MODRET 7.0. The following list of items in MODRET 7.0 are new and can be extremely helpful for those modeling more complex systems:
 - The Infiltration module has been changed to enter a stage-area table and allow the model to calculate the average pond area and effective pond volume based on selected design high and low water elevations. This minimizes erroneous entry of pond data. The stage-area table can be filled manually or cut and pasted from a spreadsheet.
 - All simulations in MODRET 7.0 are automatically routed through stage-storage of the pond using the specified time increment.
 - The runoff hydrograph can be routed with or without infiltration, allowing initial evaluation of pond performance, before any aquifer data is available. This

- option can be very useful for civil engineers developing initial plans and preliminarily sizing retention ponds.
- MODRET 7.0 can generate batch hydrographs for the FDOT storm series. These are a set of 8 rainfall distributions often used in Florida to evaluate the controlling rainfall distribution for a pond system. This allows for simultaneous creation of all 8 hydrographs, batch processing through the infiltration module and review the results of all 8 storm events without having to model each one individually.
 - An option was added in MODRET 7.0 to create a back to back runoff hydrograph with a user specified period between the storms. This option was added to create a hydrograph for storm events where recovery of the first storm cannot be achieved within the specified time. In such cases, back to back storms are used to assess if the second storm event can be retained within the pond after the specified recovery period.
 - Another option in MODRET 7.0 allows adding discharge hydrograph from an upstream pond to the runoff hydrograph of the pond to be modeled. This option allows modeling of multiple ponds in series by adding the discharge from one pond to the next.
5. One of the conveniences of MODRET 6.12 was the ability to model a slug load recovery or entering the runoff in the Infiltration Module using time versus volume. In MODRET 7.0 all runoff is entered in the Hydrograph Module as a runoff hydrograph. Entry of a slug load or non-conforming runoff in MODRET 7.0 requires manual input of time and volume in the Hydrograph Module, which is then converted to a hydrograph of equal time versus runoff rate in cfs. In the end, the simulation is equivalent, however may be a little more cumbersome to use. MODRET 6.12 is better suited for these types of applications.