**Colorado River Mid-Term Probabilistic Operations Model (MTOM)**

**April 2018 Model Run**

**Key Modeling Assumptions:**

* Model initialization:
  + Observed March 31, 2018 initial conditions for all modeled reservoirs
  + April 2018 Most Probable Final unregulated inflow forecast dated April 3, 2018 loaded into model
  + Consistent with the Interim Guidelines, the Most Probable April 2018 24-Month Study set an April adjustment to balancing releases at Glen Canyon Dam for the remainder of Water Year 2018. All 35 traces in the probabilistic MTOM run reflect the April adjustment to balancing releases.
* Unregulated Inflow Forecast Ensemble
  + Ensemble Inflow Spreadsheet includes 35 ESP traces plus the official April Most Probable, Maximum Probable, and Minimum Probable inflow scenarios dated April 3, 2018 used in the April 2018 24-Month Studies
  + For the Most Probable, Maximum Probable, and Minimum Probable inflow scenarios, the inflows from the second out-year are repeated for the third, fourth, and fifth out-year in order to provide a consistent model run duration.
    - The outputs viewable in the MTOM\_EnsembleOutput spreadsheet only provide visualizations for the first two years of outputs for the three official forecast scenarios
  + Five-year frequency analysis processed in the MTOM\_EnsembleOutput spreadsheet only considers outputs from the 35 ESP inflow traces
* Lower Basin water demand schedules:
  + 2018: match the April 2018 Most Probable 24-Month Study demand schedules
  + 2019-2020: default water schedules match the April 2018 Most Probable 24-Month Study demand schedules, but may be revised based on hydrology and water supply conditions projected for each trace
  + 2021-2023: default water schedules repeat the 2019 schedules except for Southern Nevada Water Authority (SNWA) and California water users affected by the Colorado River Water Delivery Agreement. Schedules may be revised based on hydrology and water supply conditions projected with each trace
* Run duration April 2018 through September 2023
* End of Calendar Year 2017 balances of Intentionally Created Surplus (ICS) and Mexican water deferred under Minute 323 are provisional estimates, pending completion of the 2017 Water Accounting Report
* Model file and rule set saved in RiverWare version 7.1.4**Addendum to MTOM Overview and Description: Changes to MTOM System Files Since the January 2018 MTOM Release**

**Inflow:**

* Ensemble Inflow Processing Spreadsheet
  + Revised the Full Data Update user form to provide additional clarity and simplicity for data connections
    - Removed “Exit” button in order to clarify that the user should click the “Done” button to complete the process of creating the pass-through file used in the model run
    - Changed the way Reclamation users enter database log-on information into the form and populate the spreadsheet with official 24-month study forecasts *(only impacts Reclamation users connected to internal network)*
    - Updated contact information

**Upper Basin:**

* Flaming Gorge
  + Modified release logic to prevent reservoir from exceeding maximum pool elevation
* Removed outdated and/or unused slots and functions
* Added Policy Group descriptions

**Lower Basin:**

* Removed unnecessary execution constraints from logic that adjusts lower basin diversions in November and December of the first year of the run.
* Added Policy Group descriptions