**CRSS: Modeling Assumptions**

April 2012

Updates to the January 2012 model include:

* December 31, 2012 initial conditions (from the April 2012 24-month study) for all modeled reservoirs
	+ Powell: 3628.08 ft
	+ Mead: 1118.66 ft
* Run duration 2012 – 2026
	+ Two assumptions for post 2026 operations
		- Interim guidelines are extended through 2060
		- Revert to the no-action alternative starting in 2027
* Future inflows are represented through 3 different hydrologic scenarios
	+ Index Sequential Method (ISM) used on observed historic period of record (1906-2008) – Direct Natural Flow
	+ ISM used on tree-ring reconstructed streamflow (762-2005) – Direct Paleo
	+ Nonparametric conditioning resampling technique that blends observed historic and tree-ring reconstructed streamflows – Nonparamteric Paleo Conditioned
		- Trace folder not yet provided
* Triennial Review 2011 Full Plan of Implementation salinity control levels
	+ 1,850,000 tons of control in 2030

Additionally, the following modifications were made to the model or rulesets:

* Nevada ICS.Drop2Maximum changed from 4,000,000 to 400,000 AF
* Fixed ‘Compute Arizona Available ICS Water’ rule:
	+ Arizona ICS.Drop2ActualMonthlyTake[] changed to Arizona ICS.Drop2ActualMonthlyTake[date]
	+ Allows the Drop 2 take to be correctly assigned to every month throughout the year rather than only January
* Fixed ‘Adjust SNWP for Nevada ICS Take and Other’ rule:
	+ The SNWPDiversion.Total Diversion Requested assignment was modified from:
	$$\left(If…Else…+VolumeToFlow\left(…\right)\right)\*\frac{Diversion}{Depletion}$$

to:
$$If…Else… +\left(VolumeToFlow(…)\*\frac{Diversion}{Depletion}\right)$$

* + This keeps the diversion to depletion ratio the same after the assignment. Before it was fixed, the Diversion was being increased beyond what it should have been
* Set California ICS.PVID Fallow Amount[@”Dec 2012”] = 50 KAF
	+ The fallowing in an odd year should equal the fallowing amount in the previous year based on logic in ‘Set PVID Fallow Amount’ rule
		- The 2012 fallow amount was based on Mead’s Dec. 2011 pool elevation
		- Dec 2011 Mead.Pool Elevation = 1132.83; so according to logic in rule, fallow 50 KAF in 2012