Mitta Mitta R Calibration Summary

For a fuller explanation of the calibration of the Upper Murray River URBS models, refer to *Upper Murray River URBS Model Enhancement*, August 2016.

Calibration Performance Upper Murray River Model at Dartmouth Dam Inflow

Event	Flow			Volume			Nash Sutcliffe
	Cal	Rated	PR	Cal	Rated	VR	
	m^3/s	m^3/s		ML	ML		
198107	636	338	1.88	241,752	224,861	1.08	0.11
198308	489	309	1.58	106,625	110,989	0.96	0.21
199210	299	225	1.33	92,001	113,631	0.81	0.15
199310	1,009	631	1.60	175,688	197,499	0.89	0.49
199607	316	238	1.33	235,519	217,967	1.08	0.76
199610	702	440	1.60	523,405	505,647	1.04	0.42
199809	1,220	779	1.57	187,452	189,708	0.99	0.62
201009	1,021	940	1.09	257,344	262,233	0.98	-0.56
201010	550	243	2.26	126,382	138,926	0.91	-0.17
201012	240	166	1.44	91,004	79,017	1.15	0.25
201102	357	168	2.12	150,345	153,147	0.98	-0.40
201109	127	65	1.97	31,770	32,590	0.97	-2.25
201203	404	1,278	0.32	149,921	479,200	0.31	-0.33

Recommended Model Parameters Mitta Mitta River

Percentile	IL (mm)	CL (mm/hr)	Alpha	Beta	m
5th	0	1.4	0.20	3.0	0.8
95th	68	7.3	0.43	5.3	0.8
Recommended	**To suit antecedent conditions**	**3.3**	**0.27**	**4.0**	**0.8**

Antecedent Conditions

Catchment state in the lead up to the onset of flood producing rainfall can give an indication of the initial that might be adopted.

Rainfall deciles for South East Australia in the month preceding each flood event investigated was determined from the Bureau of Meteorology Climate website with results shown in the table below.

Antecedent Rainfall

Event	Initial Loss (mm)		Rainfall in Preceding Month
	Mitta Mitta	Upper Murray	
197401		35	Above Average to Very Much Above Average
197410		10	Above Average
197510		15	Above Average to Very Much Above Average
198107	15	10	Above Average to Highest on Record
198308	10	10	Average to Above Average
199210	0	5	Very Much Above Average to Highest on Record
199310	35	0	Above Average to Very Much Above Average
199607	0	10	Average
199610	0	10	Above Average to Very Much Above Average
199809	10	0	Average
201009	25	10	Above Average to Very Much Above Average
201010	40	20	Average to Above Average
201012	35	30	Above Average to Very Much Above Average
201102	90	60	Average to Above Average
201109	5	15	Below Average to Average
201203	10	25	Above Average to Very Much Above Average

Initial Baseflow

In the Mitta Mitta River model, the initial baseflow into Dartmouth Dam can be assumed to be 135% of the flow at Hinnomunjie at the event start/date time to the nearest 5 m^3/s.