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Incorporating natural variability in master recession curves

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Summary. This document contains results that are not included in the main body of the manuscript.

Table S1 Correlation coefficients squared among monthly rainfall sums for 1, 3, 5, 7 and 11 months

Northern Arthur

		monthly sums			
		3	5	7	11
	1	0.99(5)	0.99(7)	0.99(5)	0.98
	3		0.99(8)	0.99	0.99
monthly sums	5			0.99(7)	0.99
	7				0.99

Myall

		monthly sums			
		3	5	7	11
	1	0.99	0.97	0.98	0.97
	3		0.99	0.99	0.97
monthly sums	5			0.99(6)	0.99
	7				0.98

Gibbo

		monthly sums			
		3	5	7	11
	1	0.99(8)	0.99	0.98	0.998
	3		0.99	0.98	0.996
monthly sums	5			0.99	0.99
	7				0.99

South Johnstone

		monthly sums			
		3	5	7	11
	1	0.99(8)	0.98	0.94	0.96
	3		0.98	0.95	0.96
monthly sums	5			0.99	0.98
	7				0.96

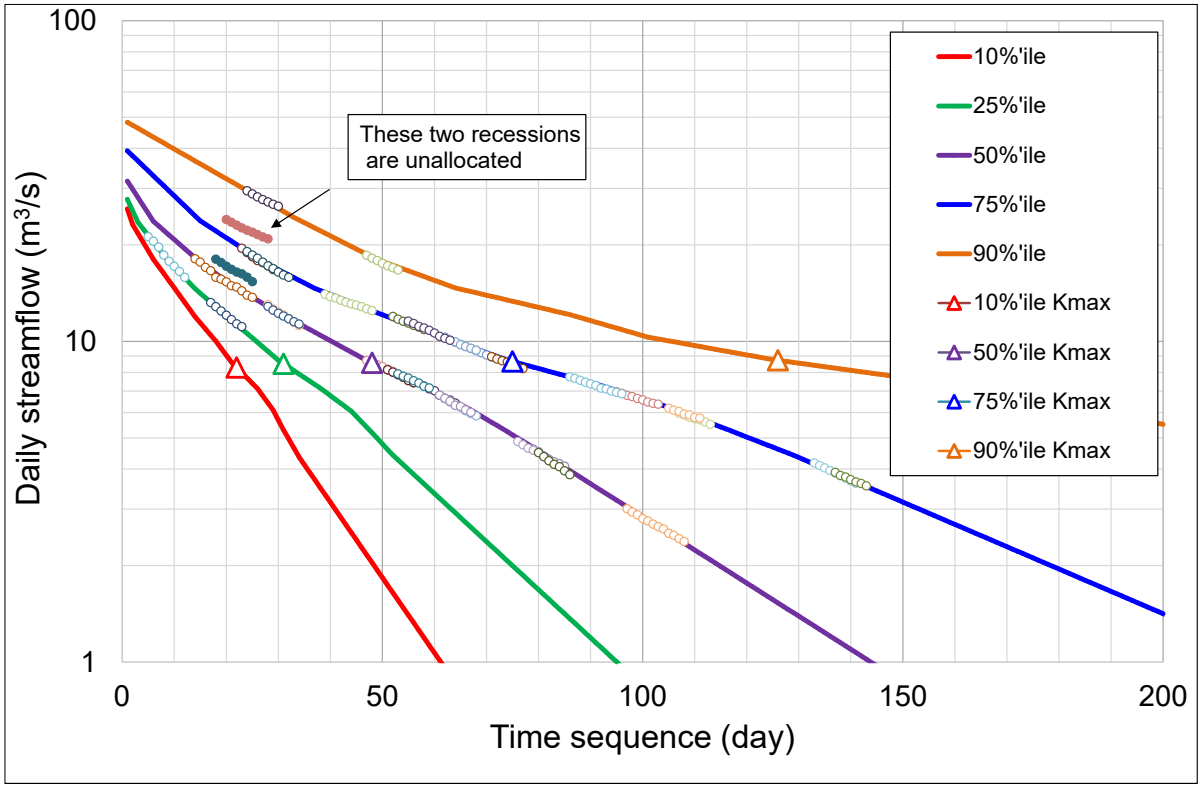

Figure S1 Comparison of daily Master Recession Curves computed using a constant bin correlation method, with observed recessions during rainless periods for South Johnstone River at Upstream Central Mill (112101B). Three rainless days were required before data were acceptable in the analysis. The computed recessions are for five percentile values: 10%, 25%, 50%, 75% and 90%. Maximum recession constants are shown in the figure. Two acceptable recessions were not allocated to one of the five MRCs.

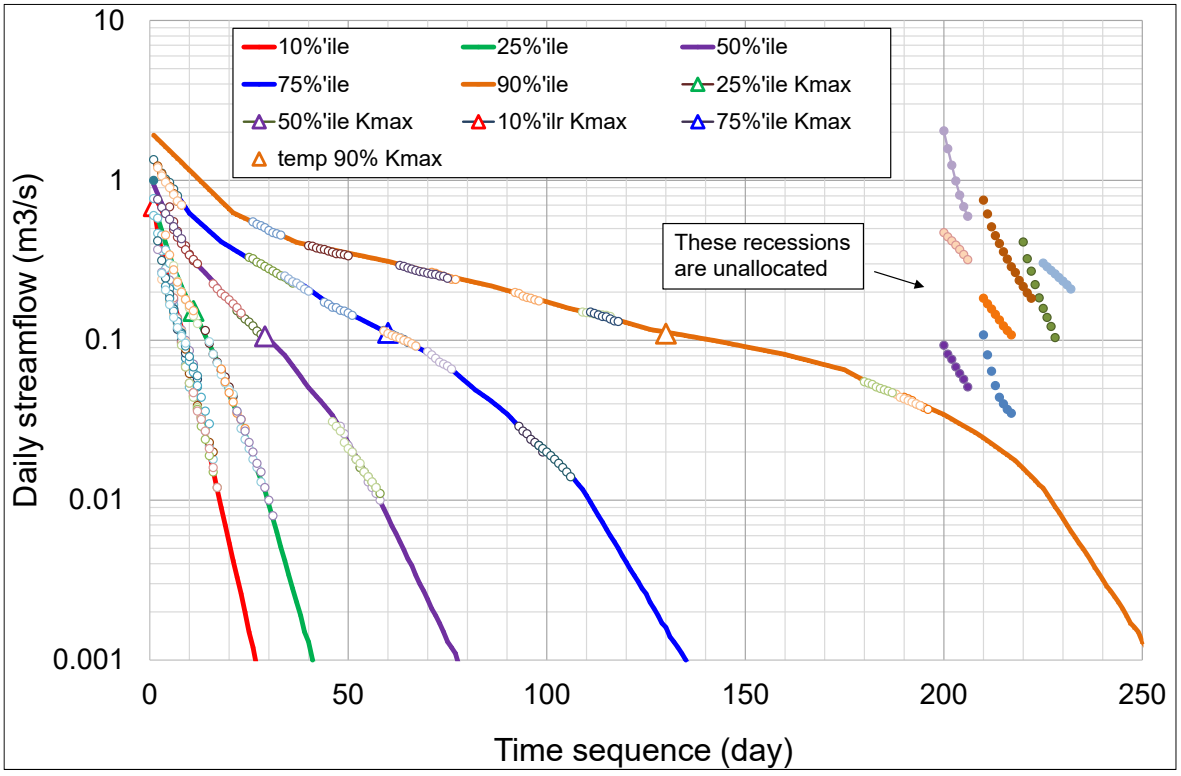

Figure S2 Comparison of daily Master Recession Curves computed using a constant bin correlation method, with observed recessions during rainless periods for Myall Creek at Molroy (418017). Four rainless days were required before data were acceptable in the analysis. The computed recessions are for five percentile values: 10%, 25%, 50%, 75% and 90%. Maximum recession constants are shown in the figure. Eight acceptable recessions were not allocated to one of the five MRCs.

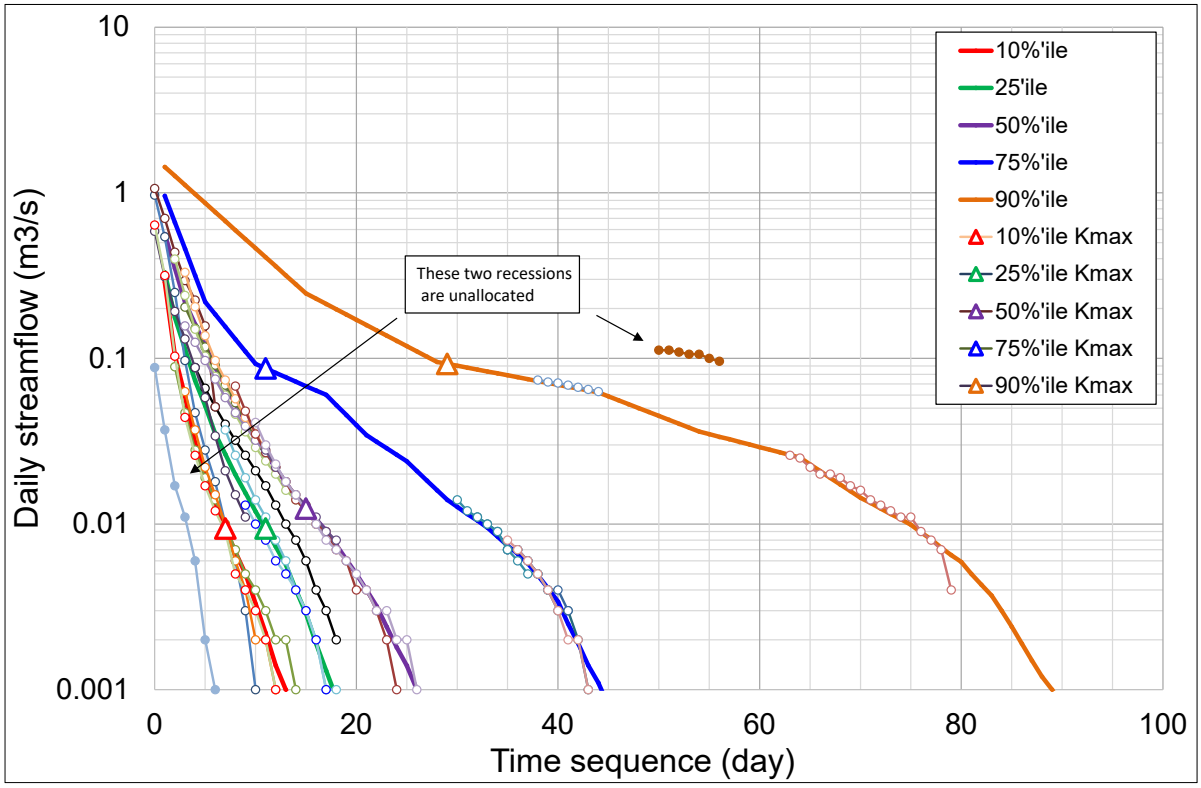

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Figure S3 Comparison of daily Master Recession Curves computed using a constant bin correlation method, with observed recessions during rainless periods for Northern Arthur River at Lake Toolibin Inflow (609010). Three rainless days were required before data were acceptable in the 35 **analysis. The computed recessions are for five percentile values: 10%, 25%, 50%, 75% and 90%. Maximum recession constants are shown in the figure. Two acceptable recessions were not allocated to one of the five MRCs.**

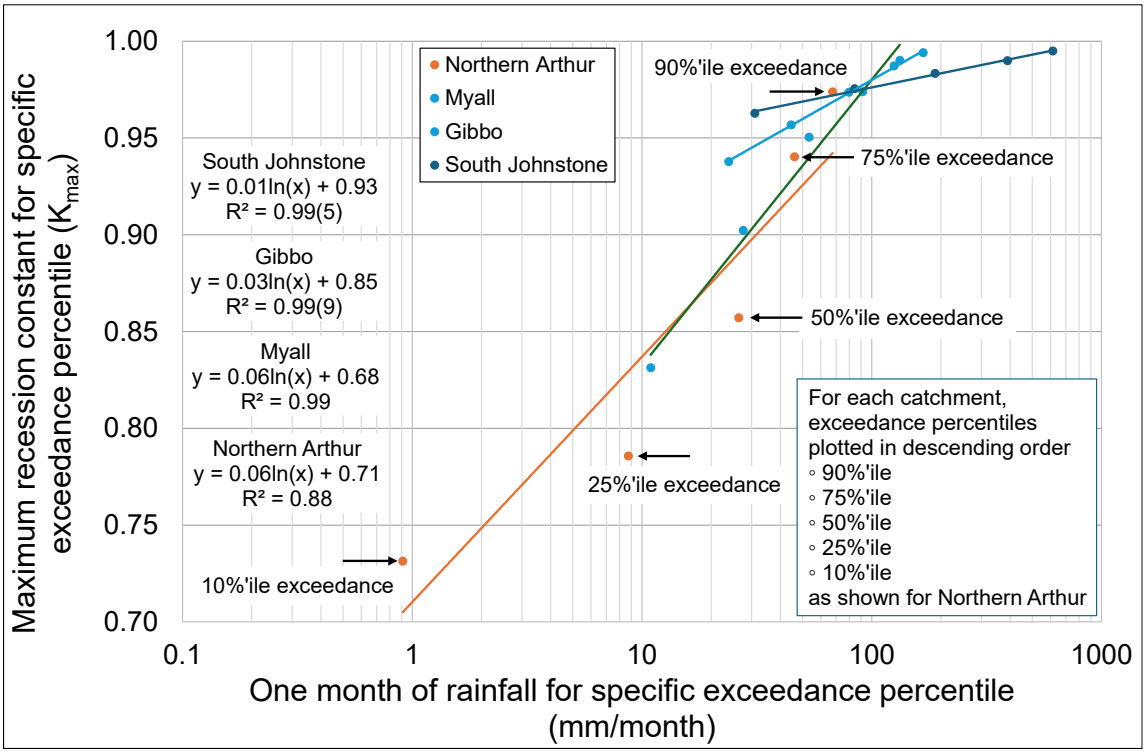

Figure S4a Maximum recession constant plotted against monthly rainfall for specific exceedance percentiles: 10%, 25%, 50%, 75% and 90%. Results are provided for four catchments: Northern Arthur, Myall, Gibbo and South Johnstone.

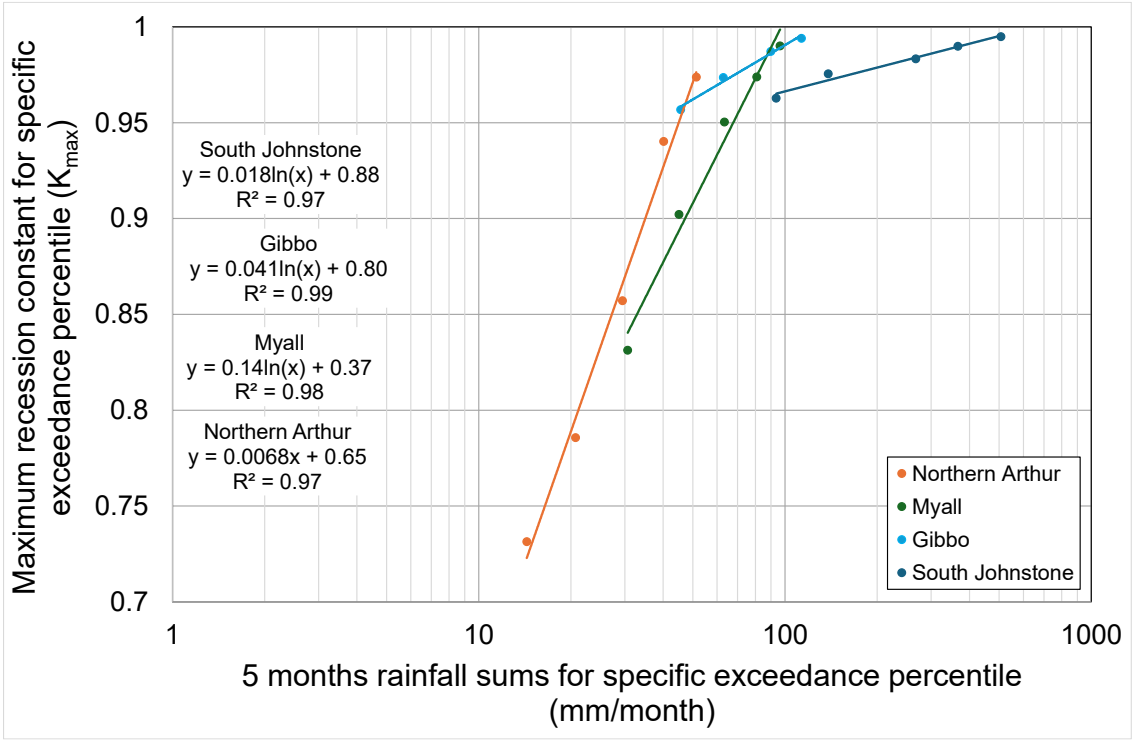

Figure S4b Maximum recession constant plotted against 5 months rainfall sums for specific exceedance percentiles: 10%, 25%, 50%, 75% and 90%. Results are provided for four catchments: Northern Arthur, Myall, Gibbo and South Johnstone. See Figure S5a for explanation of location of exceedance values.

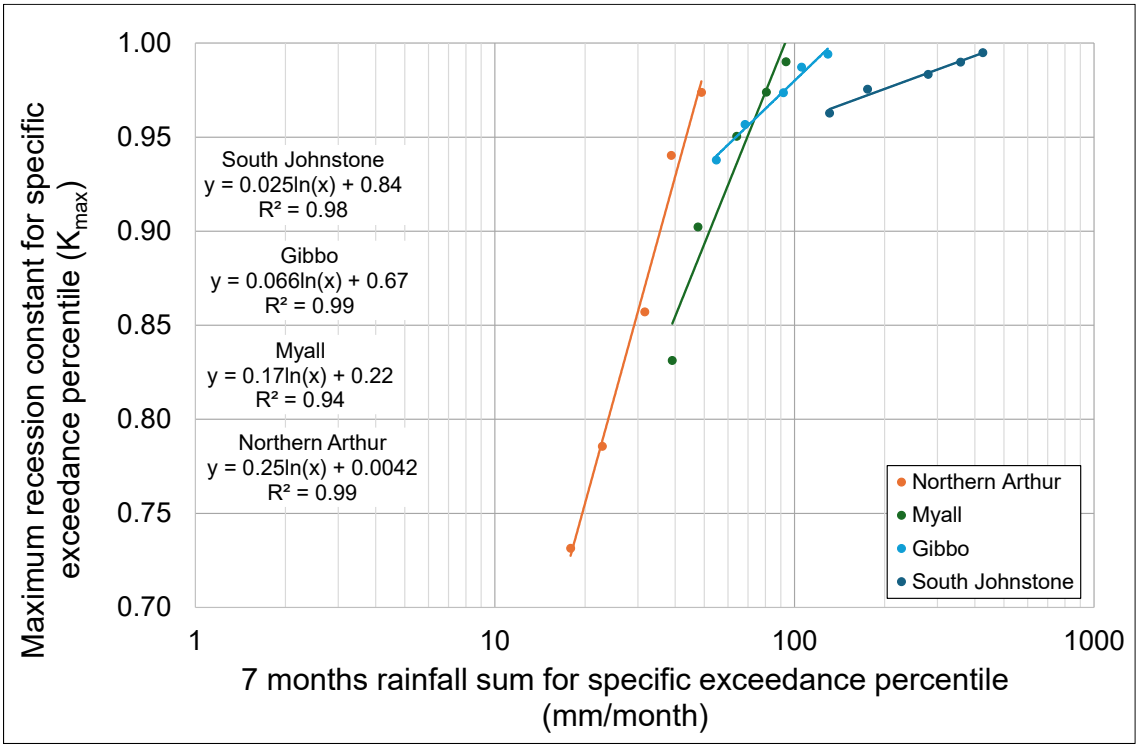

Figure S4c Maximum recession constant plotted against 7 months rainfall sums for specific exceedance percentiles: 10%, 25%, 50%, 75% and 90%. Results are provided for four catchments: Northern Arthur, Myall, Gibbo and South Johnstone. See Figure S5a for explanation of location of exceedance values.

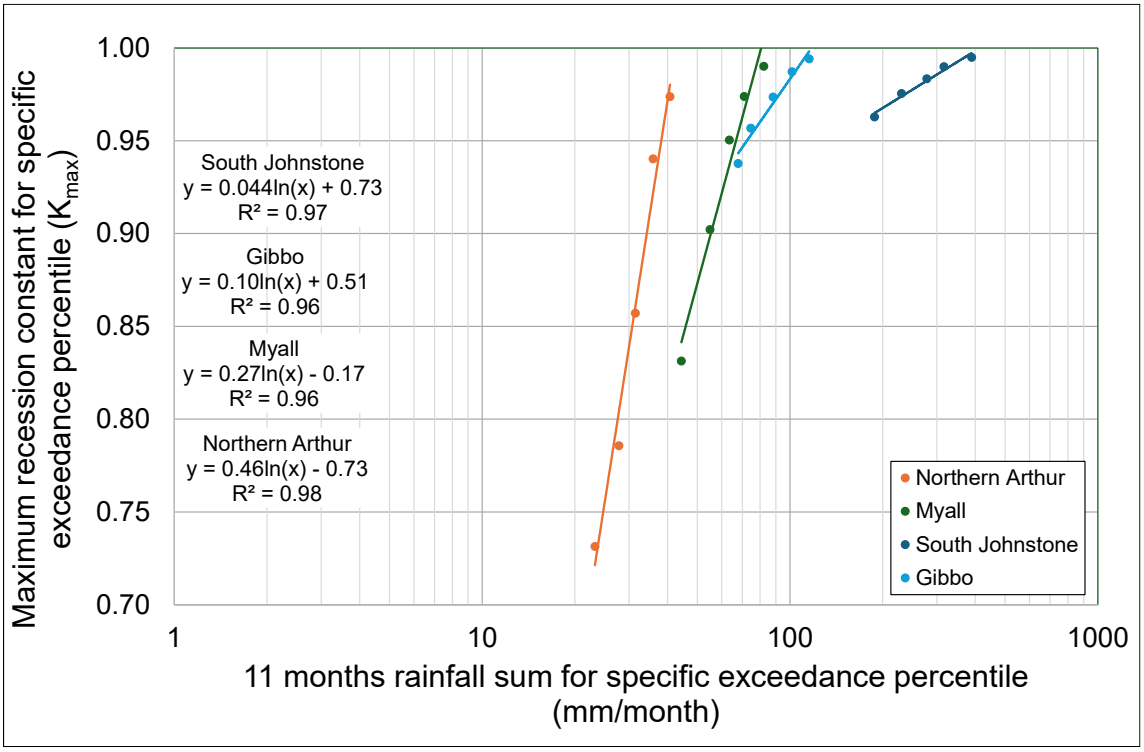

Figure S4d Maximum recession constant plotted against 11 months rainfall sums for specific exceedance percentiles: 10%, 25%, 50%, 75% and 90%. Results are provided for four catchments: Northern Arthur, Myall, Gibbo and South Johnstone. See Figure S5a for explanation of location of exceedance values.

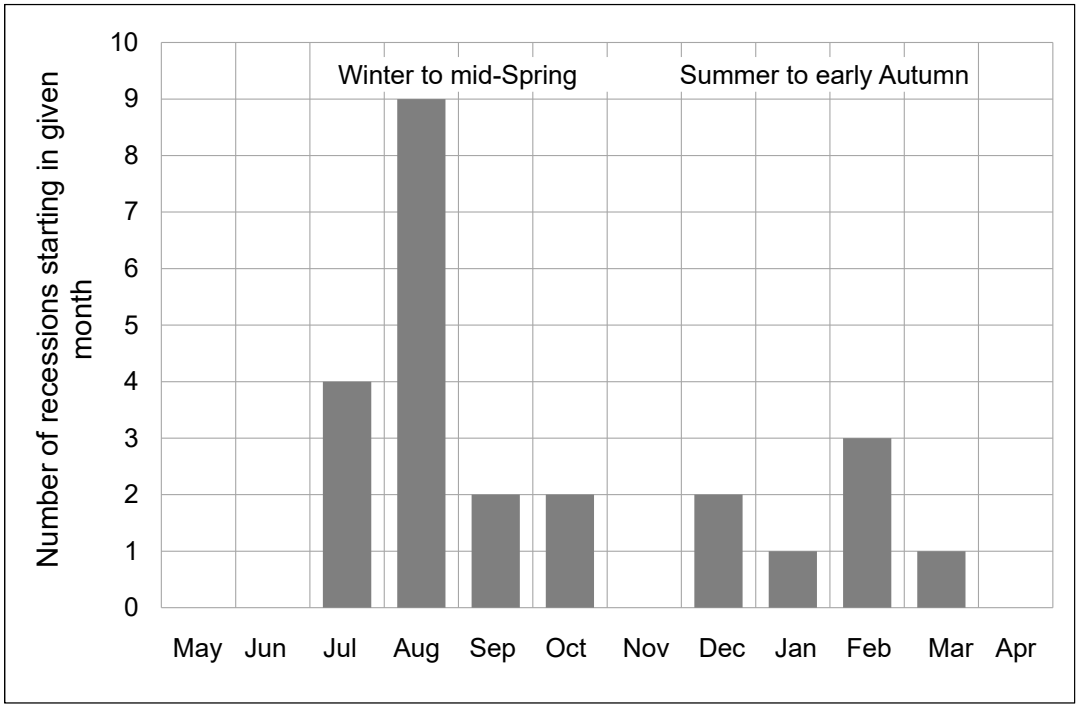

Figure S5 Histogram showing the number of recessions analysed per month for Northern Arthur River at Lake Toolibin Inflow (609010).

Plate S1 The western tributary of the Northern Arthur River catchment, approximately 10 km north-west of the streamflow gauging station (Lake Toolibin Inflow, 609010). This mid-catchment location has little relief, there is no defined stream, and the area is heavily salinized. (Photograph provided by Richard George.)

Plate S2 Image shows weir (culverts and rated roadway section) at the Lake Toolibin stream gauging station (609010). (Photograph provided by Richard George.)