Table S1 Average wr^2 for all watersheds obtained using LEM with different c values

c values	Q	pdf$Q$	pdfHQ	pdfLQ
c=2	0.048	0.310	0.583	0.004
c=1	0.064	0.400	0.700	0.050
c=0.5	0.093	0.424	0.729	0.064

Table S2 Total ranks based on NSE, logNSE, RMSE and R^2 for the four recession analysis methods for synthetic data

Method	Total ranks based on NSE							
	Total ranks (level 1 noise)				Total ranks (level 2 noise)			
	Q	pdf$Q$	pdfHQ	pdfLQ	Q	pdf$Q$	pdfHQ	pdfLQ
LEM	159	160	153	165	147	151	151	154
CTM	144	147	150	136	157	153	153	142
IBM	74	74	68	78	70	76	77	75
EBM	73	69	79	71	76	70	69	79

Method	Total ranks based on logNSE							
	Total ranks (level 1 noise)				Total ranks (level 2 noise)			
	Q	pdf$Q$	pdfHQ	pdfLQ	Q	pdf$Q$	pdfHQ	pdfLQ
LEM	155	153	145	158	147	151	155	152
CTM	143	138	151	135	143	147	148	141
IBM	82	80	77	83	84	79	73	78
EBM	70	79	77	74	76	73	74	79

Method	Total ranks based on RMSE							
	Total ranks (level 1 noise)				Total ranks (level 2 noise)			
	Q	pdf$Q$	pdfHQ	pdfLQ	Q	pdf$Q$	pdfHQ	pdfLQ
LEM	159	160	153	165	147	151	151	154
CTM	144	147	150	136	157	153	153	142
IBM	74	74	68	78	70	76	77	75
EBM	73	69	79	71	76	70	69	79

Method	Total ranks based on R^2							
	Total ranks (level 1 noise)				Total ranks (level 2 noise)			
	Q	pdf$Q$	pdfHQ	pdfLQ	Q	pdf$Q$	pdfHQ	pdfLQ
LEM	162	136	144	156	151	139	152	150
CTM	138	137	147	137	149	151	152	149
IBM	77	84	80	85	73	84	72	77
EBM	73	93	79	72	77	76	74	74
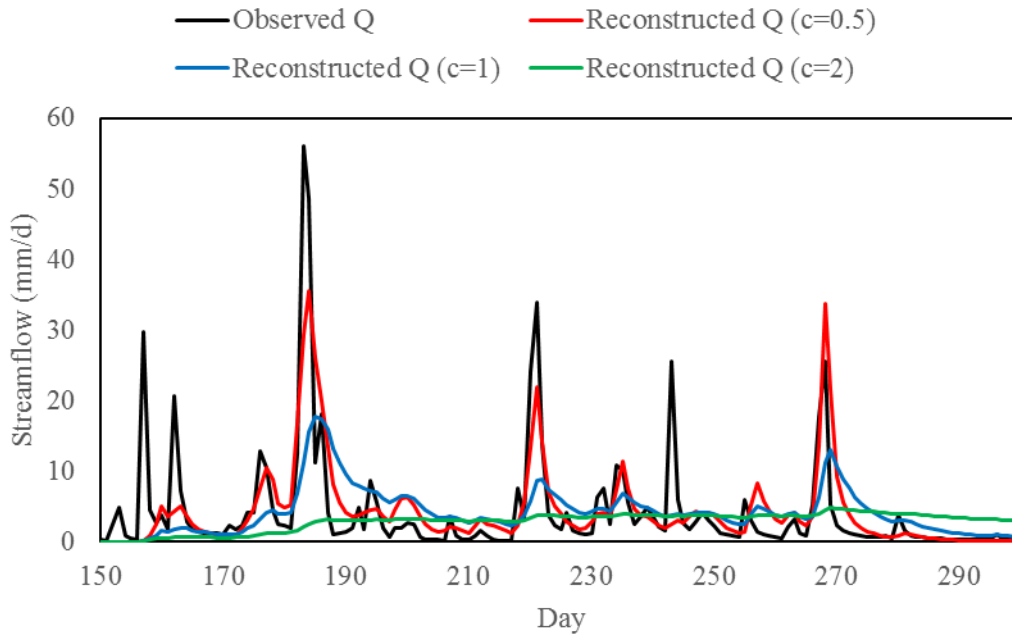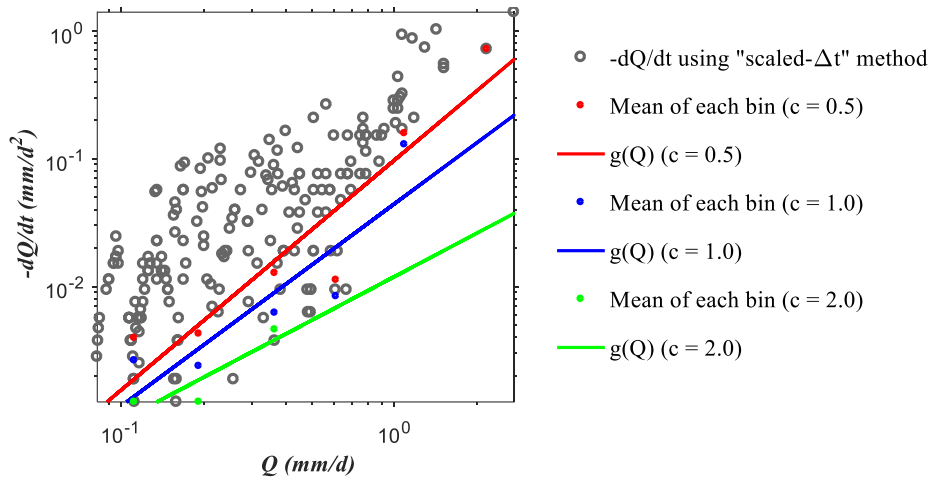
***Figure S1 g(Q) and the corresponding reconstructed streamflow obtained using different c values in LEM
method***