

Parameters						
	Description	Units	Initial sampling distribution	Feasible range	s^2	Max allowable daily rate of change (m_{\max})
b	Pareto-distributed soil storage shape parameter	()	$N(0.37, 10^{-4})$	0–0.3	0.004	3×10^{-4}
c_{\max}	Maximum point soil storage depth	(mm)	$N(651, 10)$	300–1500	0.004	0.3
k_q	Quick flow routing coefficient	()	$N(0.6, 5 \times 10^{-4})$	0.55–0.99	0.018	3×10^{-4}
k_s	Slow flow routing coefficient	()	$N(0.04, 5 \times 10^{-4})$	0.001–0.54	0.018	4×10^{-5}
α	Excess runoff Splitting parameter	()	$N(0.47, 5 \times 10^{-4})$	0.001–0.99	0.018	4×10^{-4}
States						
S	Soil store	(mm)	$N(180, 0.1 \times 180)$	$(0, S_{\max} = \frac{bc_{\min} + c_{\max}}{b+1})$		
$S_{q1,2,3}$	Quick flow store	(mm)	$N(0,1)$	$(0, \infty)$		
S_s	Slow flow store	(mm)	$N(0,1)$	$(0, \infty)$		