

Parameter	Description	File	Unit	Calibration inputs			Calibrated
				Initial value	Lower bound	Upper bound	value
DEPIMP_BSN	Depth to impervious layer for modeling perched water tables.	.bsn	mm	3000	0	6000	1356
EPCO	Plant uptake compensation factor.	.bsn	–	0.5	0.01	1	0.2306
SFTMP	Snowfall temperature.	.bsn	°C	0	–5	5	1.381
SMFMN	Minimum melt rate for snow during year.	.bsn	mm °C ⁻¹ day ⁻¹	5	0	10	2.078
SMFMX	Maximum melt rate for snow during year.	.bsn	mm °C ⁻¹ day ⁻¹	5	0	10	2.078
SMTMP	Snowmelt base temperature.	.bsn	°C	0	–5	5	–0.9346
SNO50COV	Snow water content that corresponds to 50 % snow cover.	.bsn	mm	0.5	0.01	0.99	0.3092
SNOCOVMX	Minimum snow water content that corresponds to 100 % snow cover.	.bsn	mm	1	1	650	152.1
SURLAG	Surface runoff lag time.	.bsn	day	4	1	24	12.5
TIMP	Snow pack temperature lag factor.	.bsn	–	0.5	0.01	1	0.5362
ADJ_PKR	Peak rate adjustment factor for sediment routing in the subbasin.	.bsn	–	1.25	0.5	2	1.052
PRF	Peak rate adjustment factor for sediment routing in the channel.	.bsn	–	1	0	2	1.803
ALPHA_BF	Baseflow alpha factor.	.gw	days	0.048	0	1	0.6387
GW_DELAY	Groundwater delay.	.gw	day	250	0	500	472.1
GW_REVAP	Groundwater “revap” coefficient.	.gw	–	0.1	0.02	0.2	0.04354
GW_SPYLD	Specific yield of the shallow aquifer.*	.gw	m ³ m ⁻³	0.25	–0.5	1	–0.08856
GWHT	Initial groundwater height.	.gw	m	12.5	0	25	1.101
GWQMN	Threshold depth of water in the shallow aquifer for return flow to occur.	.gw	mm	2500	0	5000	4442
RCHRG_DP	Deep aquifer percolation fraction.	.gw	–	0.05	0	1	0.2275
REVEP_MN	Threshold depth of water in the shallow aquifer for “revap” to occur.	.gw	mm	250	0	500	472.9
CANMX	Maximum canopy storage.	.hru	mm	0	0	10	3.057
ESCO	Soil evaporation compensation factor.	.hru	–	0.05	0.01	1	0.3678
OV_N	Manning’s “n” value for overland flow.	.hru	–	0.15	0.01	0.3	0.2764
SLOPE	The mean slope within the HRU.*	.hru	m m ⁻¹	0	–0.1	0.1	–0.09433
DEP_IMP	Depth to impervious layer in soil profile.	.hru	mm	2000	1500	2500	2304
SLSUBBSN	Average slope length.	.hru	m	50	10	150	90.45
DDRAIN	Depth to subsurface drain.	.mgt	mm	1000	500	1500	1173
TDRAIN	Time to drain soil to field capacity.	.mgt	hr	36	0	72	55.54
CH_KII	Effective hydraulic conductivity in main channel alluvium.	.rte	Mm h ⁻¹	256	–0.01	500	401.2
CH_NII	Manning’s “n” value for the main channel.	.rte	–	0.15	0.01	0.3	0.0255
CH_SII	Average slope of main channel*	.rte	m m ⁻¹	0	–0.05	0.05	0.02677
SOL_AWC	Available water capacity.*	.sol	mm mm ⁻¹	1	–0.1	2	0.9813
SOL_K	Saturated hydraulic conductivity.*	.sol	mm h ⁻¹	2	–0.5	5	–0.4585
SOL_ALB	Moist soil albedo.*	.sol	–	0.25	–0.5	1	–0.3694
SOL_Z	Depth from soil surface to bottom layer.*	.sol	mm	0.25	–0.5	1	–0.1593
CH_KI	Effective hydraulic conductivity in tributary channel alluvium.	.sub	mm h ⁻¹	150	0	300	244.2
CH_NI	Manning’s “n” value for the tributary channels.	.sub	–	0.15	0.008	0.3	0.2437
CH_SI	Average slope of tributary channels.*	.sub	m m ⁻¹	0	–0.05	0.05	–0.02402