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Can the two-parameter recursive digital filter baseflow separation method really be calibrated by the conductivity mass balance method?

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Supplements

Table S1

Table S1. Basic information of the 26 US hydrological stations selected for this study.

Sit number	State	Area (km^2)	N (days)	Complete rate of conductivity data	Correlation (Streamflow & SC)	α	BFI_{max}	
							Eck.	Cali.
02298202	FL	966	1808	99%	-0.68	0.989	0.50	0.46
02303000	FL	570	728	99%	-0.77	0.995	0.36	0.58
02306774	FL	46	851	96%	-0.52	0.987	0.23	0.26
02297100	FL	342	2979	99%	-0.60	0.994	0.45	0.39
08068275	TX	482	2801	93%	-0.52	0.990	0.50	0.50
02160105	SC	1966	1363	98%	-0.61	0.989	0.51	0.39
02160700	SC	1150	1392	99%	-0.62	0.993	0.52	0.42
02207120	GA	417	1391	99%	-0.52	0.991	0.36	0.27
03007800	PA	642	3288	95%	-0.51	0.984	0.39	0.24
03044000	PA	3517	2923	96%	-0.66	0.997	0.22	0.40
03072655	PA	11500	2192	100%	-0.51	0.978	0.35	0.30
03106000	PA	922	3288	96%	-0.48	0.991	0.24	0.24
03201980	OH	258	2193	93%	-0.50	0.990	0.19	0.40
03321500	KY	23779	1017	96%	-0.74	0.984	0.28	0.38
06037500	MT	1127	1096	100%	-0.86	0.998	0.86	0.67
06296120	MT	110973	3288	93%	-0.66	0.997	0.44	0.49
06711565	CO	8782	4018	93%	-0.55	0.993	0.27	0.17
07079300	CO	129	1827	95%	-0.64	0.989	0.47	0.27
07086000	CO	1106	3288	97%	-0.61	0.994	0.40	0.26
07119700	CO	28234	3288	95%	-0.62	0.993	0.37	0.50
03036000	PA	891	3288	91%	-0.61	0.995	0.19	0.53
03067510	WV	156	3288	98%	-0.51	0.990	0.20	0.29
03374100	IN	29280	2558	90%	-0.70	0.989	0.45	0.36
06089000	MT	4595	3288	93%	-0.63	0.997	0.36	0.46
07081200	CO	257	1827	98%	-0.74	0.985	0.55	0.24
07097000	CO	10422	3288	94%	-0.74	0.996	0.45	0.54
Average						0.991	0.39	0.39
SD						0.005	0.15	0.12

Figure S1

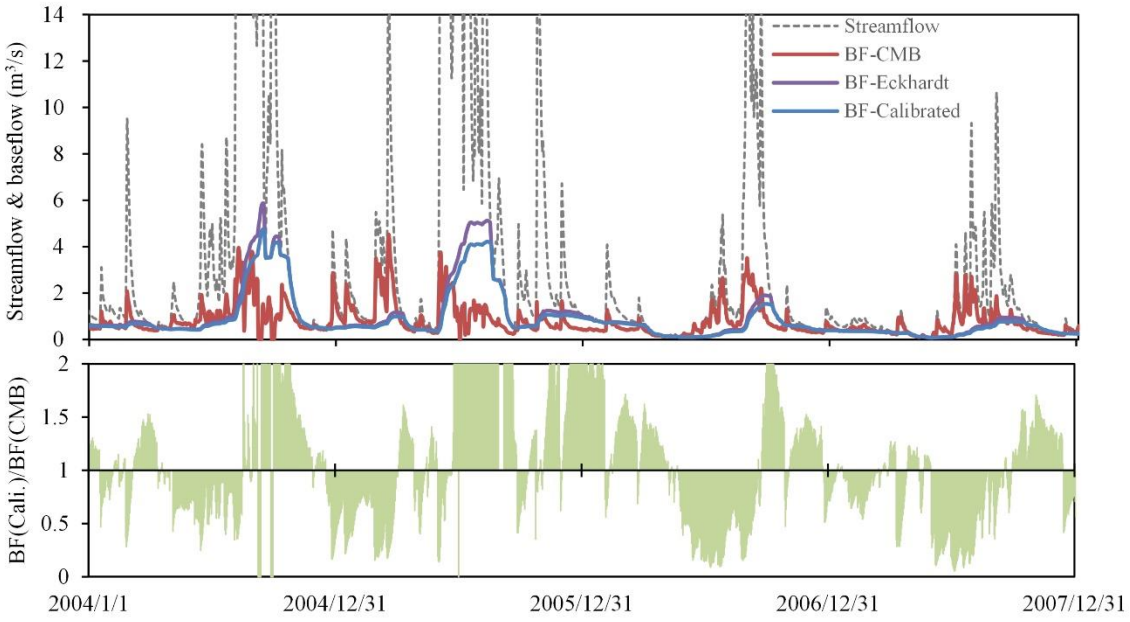

Figure S1. Bias between daily baseflow series generated by the conductivity mass balance (CMB) and Eckhardt methods after calibration for the United States Geological Survey (USGS) station 02297100. BF represents baseflow.

Figure S2

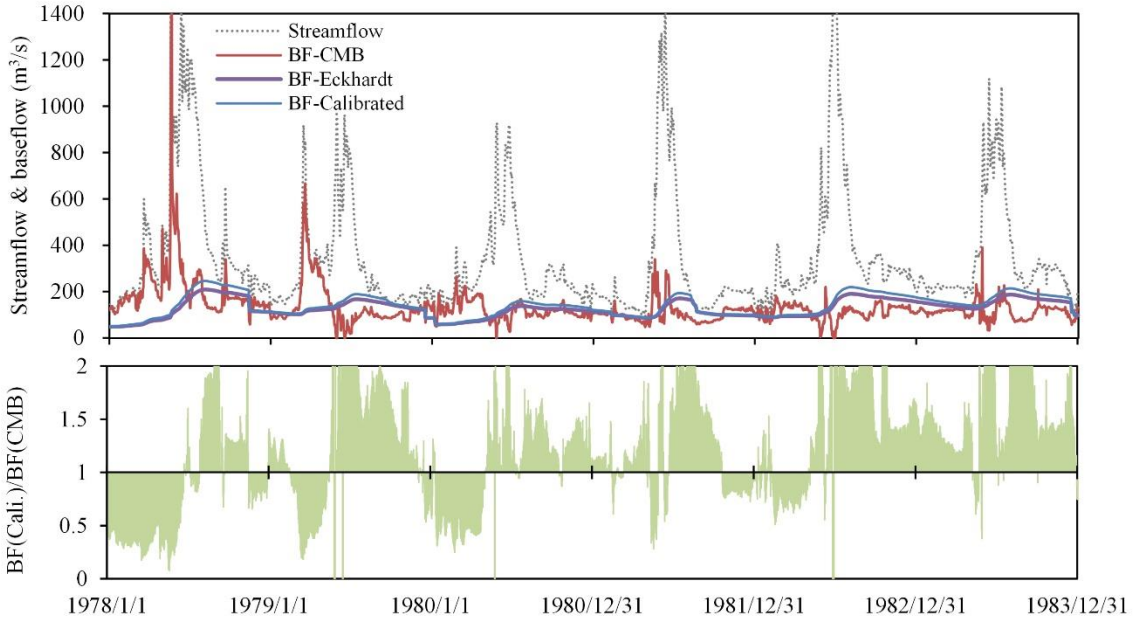

Figure S2. Bias between daily baseflow series generated by the conductivity mass balance (CMB) and Eckhardt methods after calibration for the United States Geological Survey (USGS) station 06296120. BF represents baseflow.

Figure S3

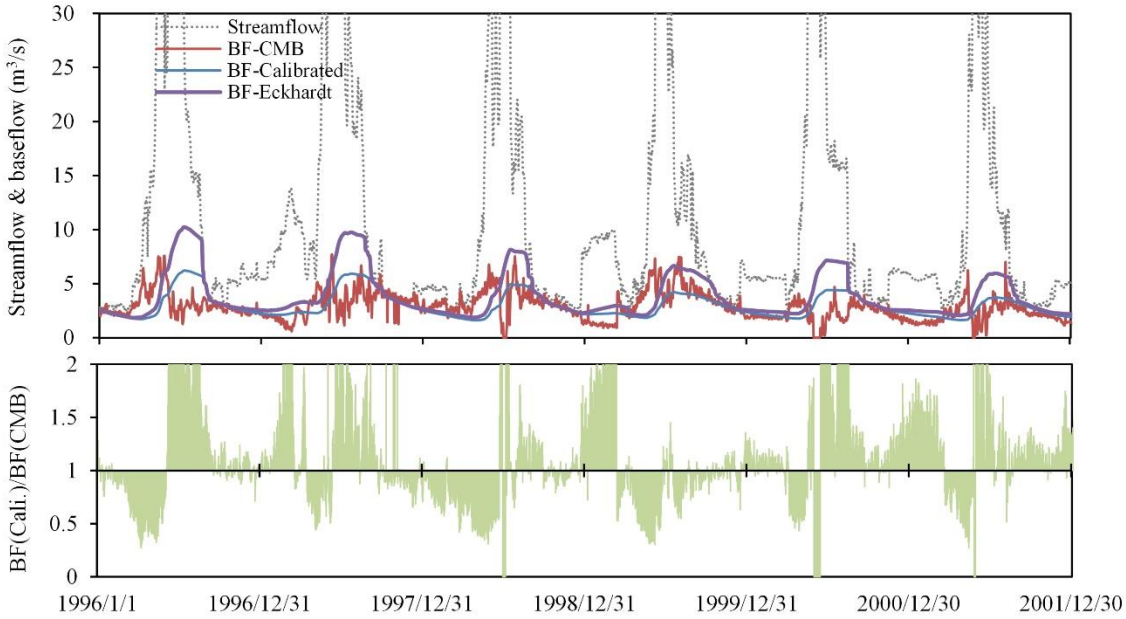

Figure S3. Bias between daily baseflow series generated by the conductivity mass balance (CMB) and Eckhardt methods after calibration for the United States Geological Survey (USGS) station 07086000. BF represents baseflow.

Figure S4

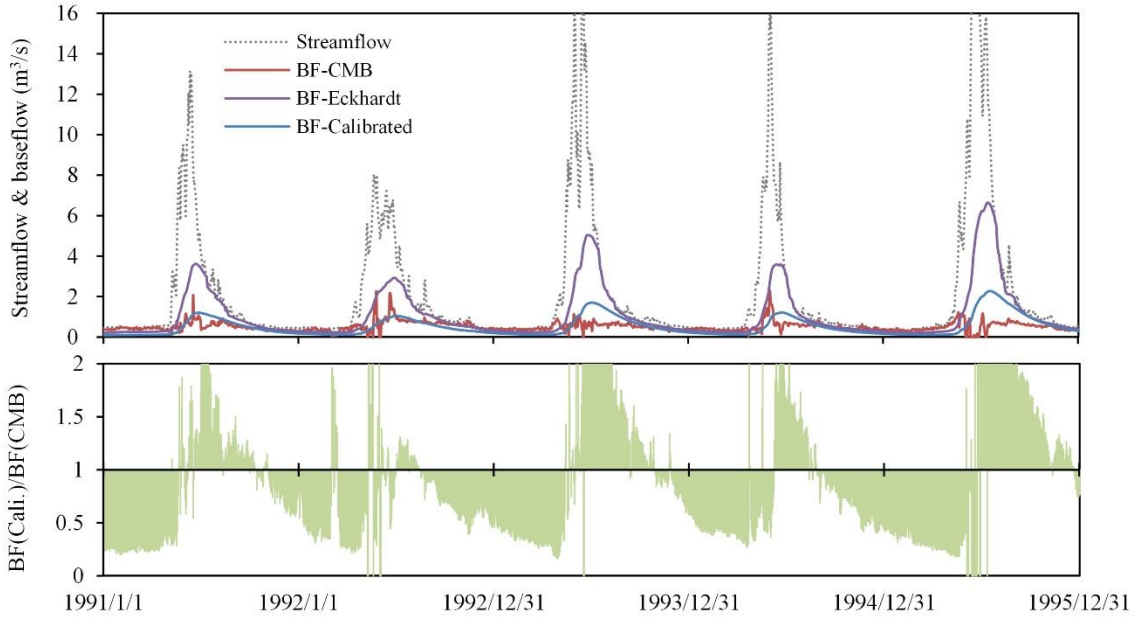

Figure S4. Bias between daily baseflow series generated by the conductivity mass balance (CMB) and Eckhardt methods after calibration for the United States Geological Survey (USGS) station 07081200. BF represents baseflow.

Figure S5

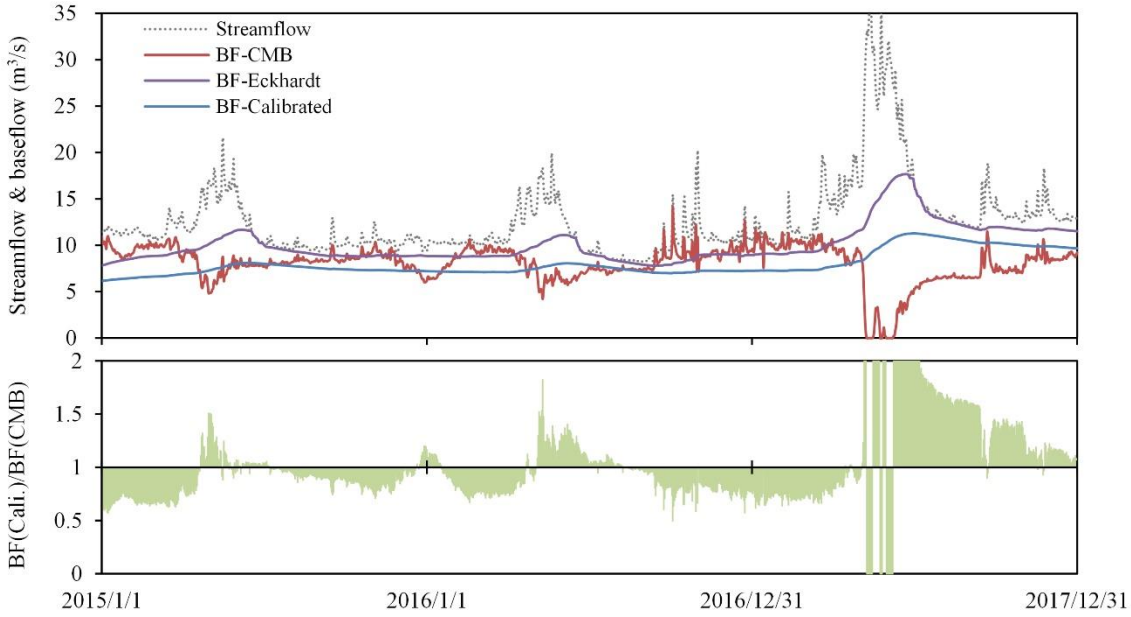

Figure S5. Bias between daily baseflow series generated by the conductivity mass balance (CMB) and Eckhardt methods after calibration for the United States Geological Survey (USGS) station 0603750. BF represents baseflow.