

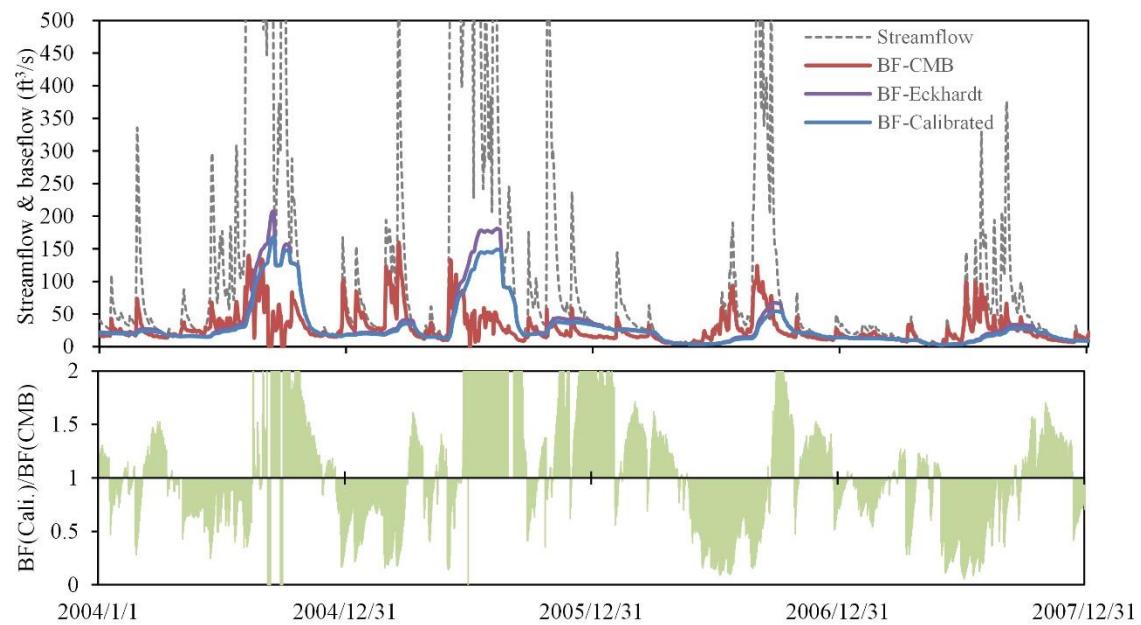
## Supplements

**Table S1**

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

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

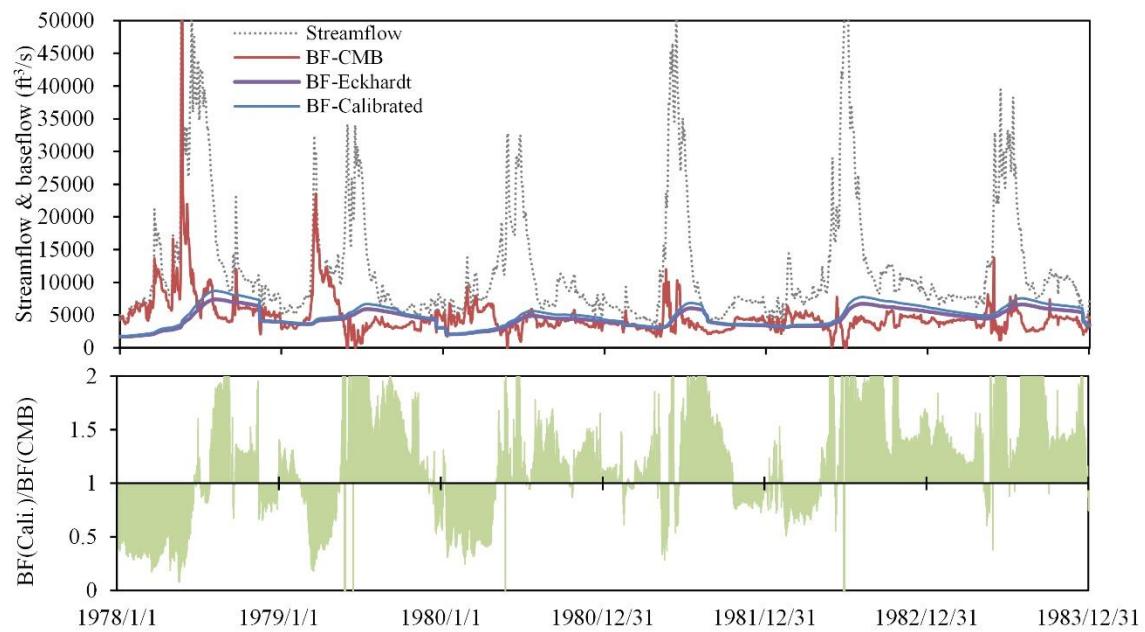
**Figure S1**



**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.

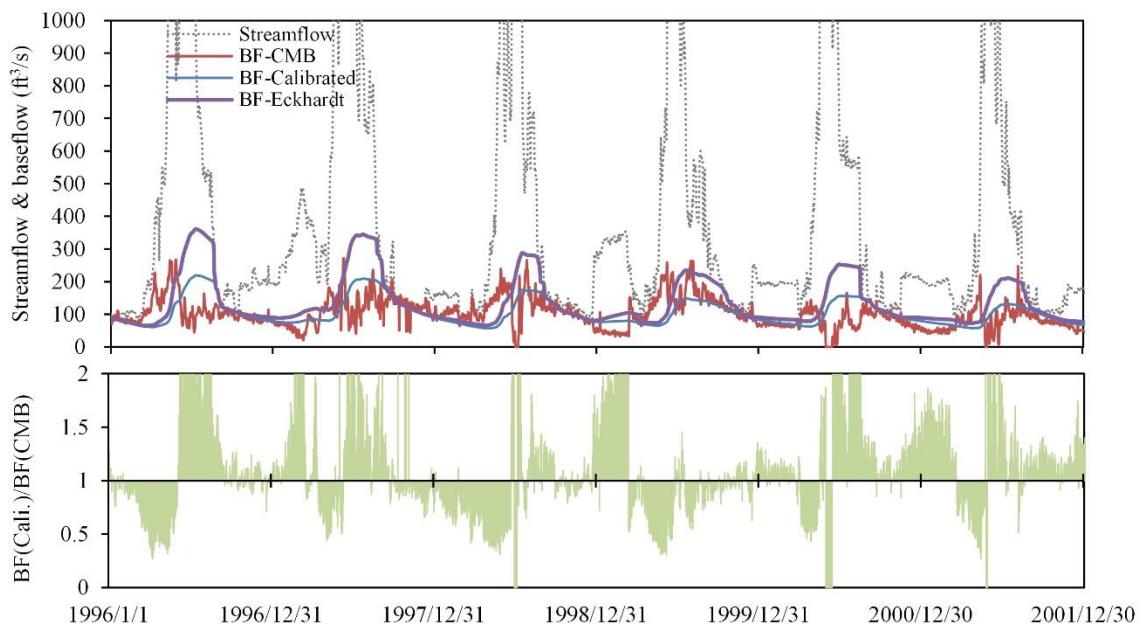
**Figure S2**



**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.

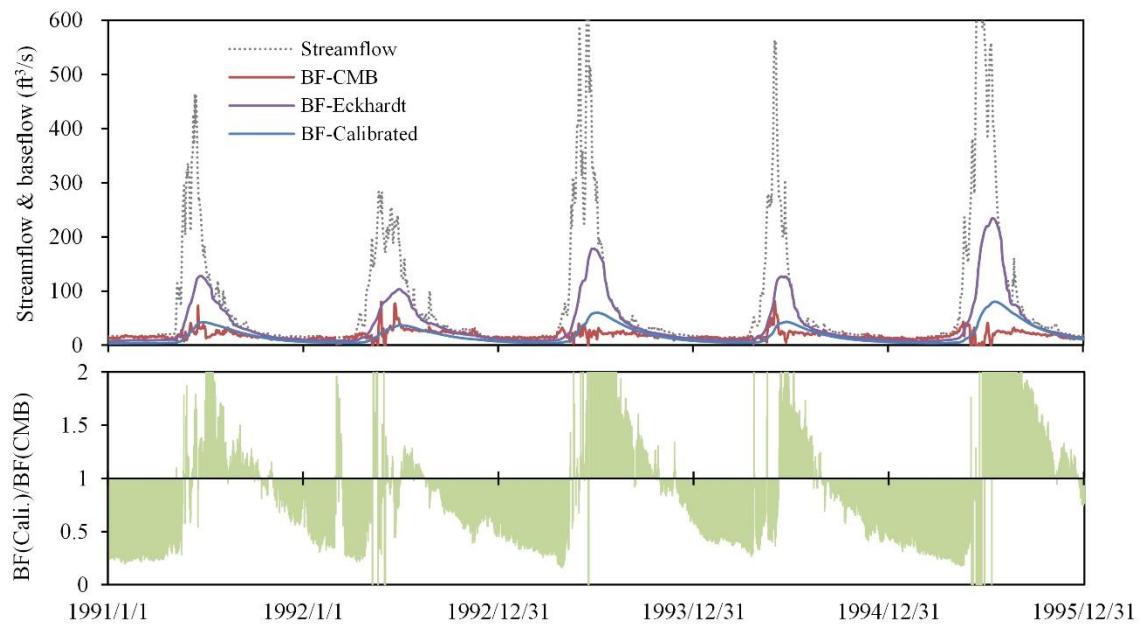
**Figure S3**



**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.

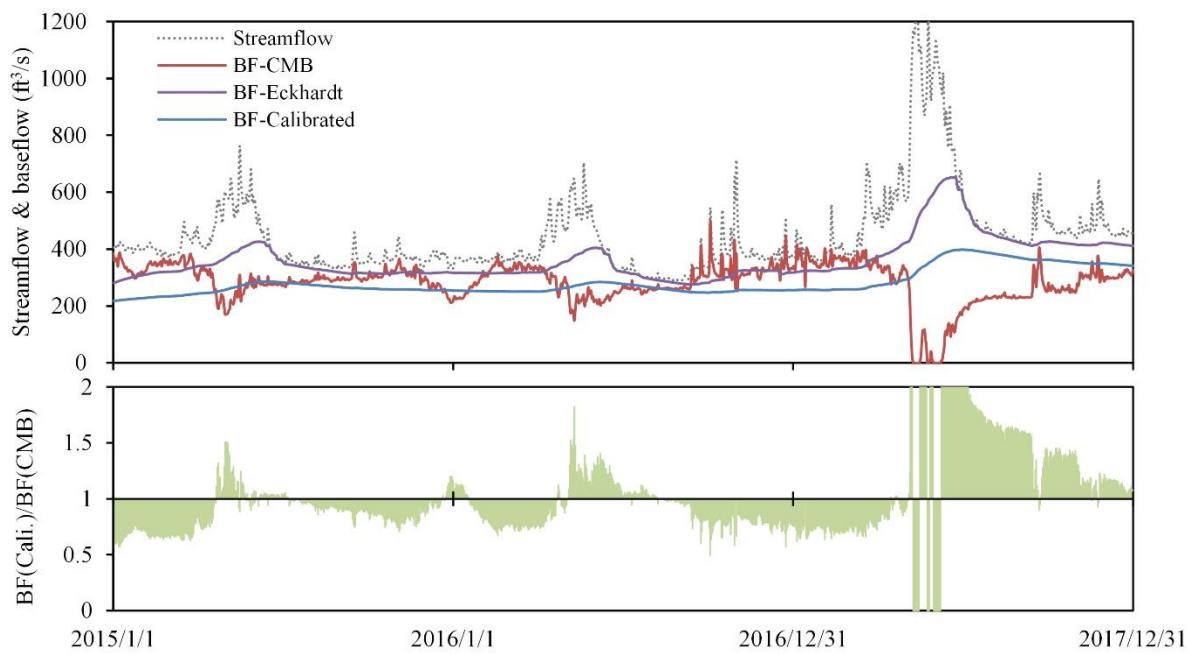
**Figure S4**



**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.