

Appendix E: Relationships between Parameters

Appendix E

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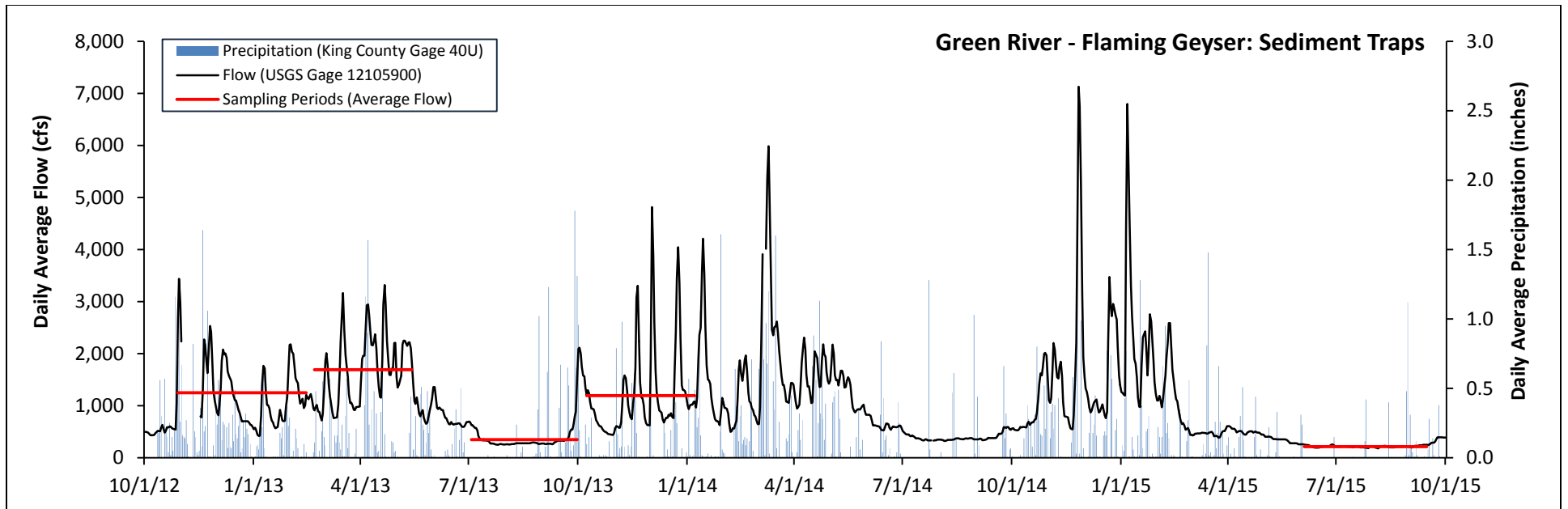


Figure E-1. Precipitation and Daily Average Flow during Sediment Trap Sample Collection at Green River – Flaming Geyser

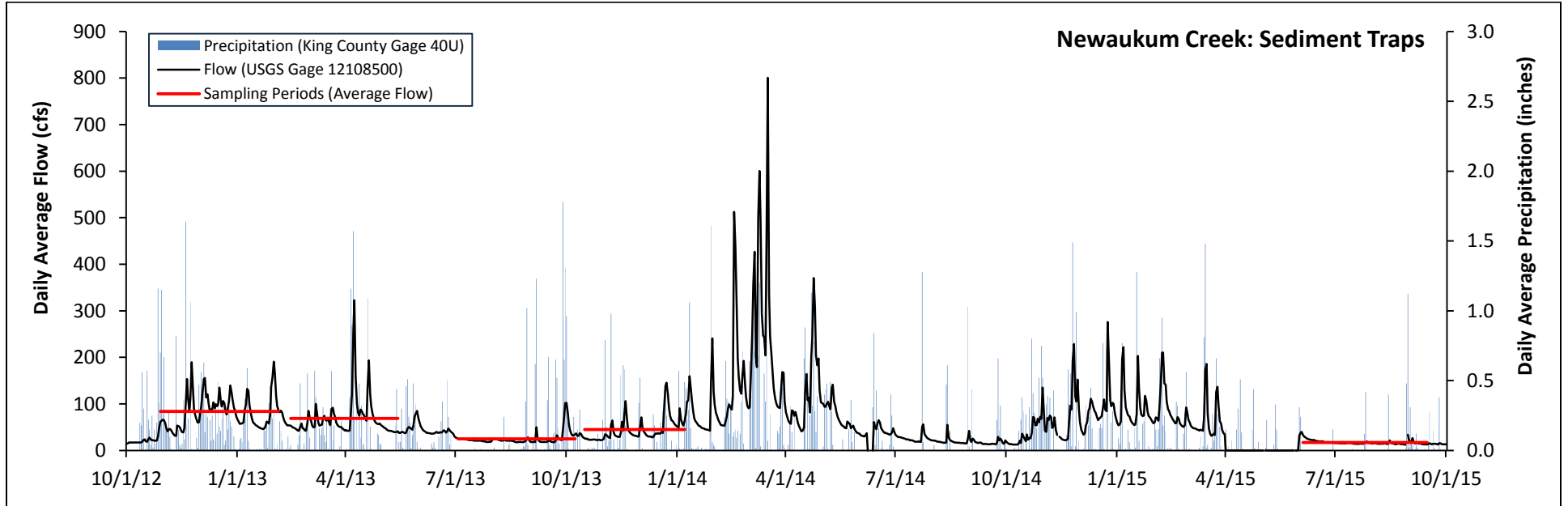


Figure E-2. Precipitation and Daily Average Flow during Sediment Trap Sample Collection at Newaukum Creek.

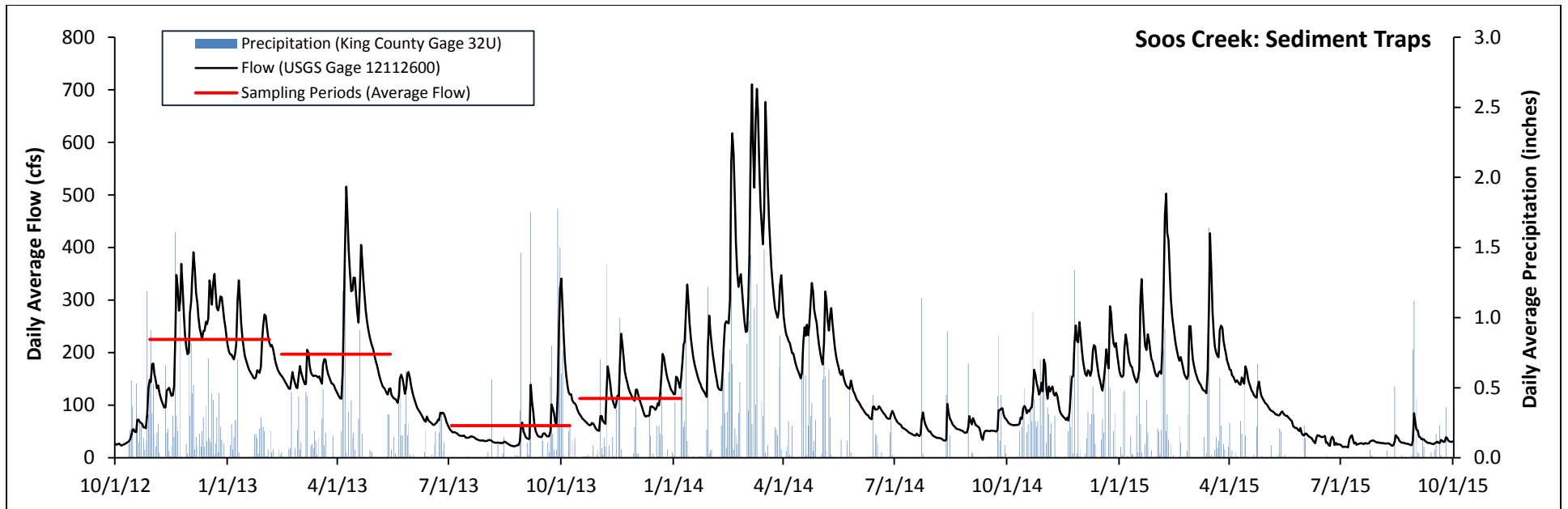


Figure E-3. Precipitation and Daily Average Flow during Sediment Trap Sample Collection at Soos Creek.

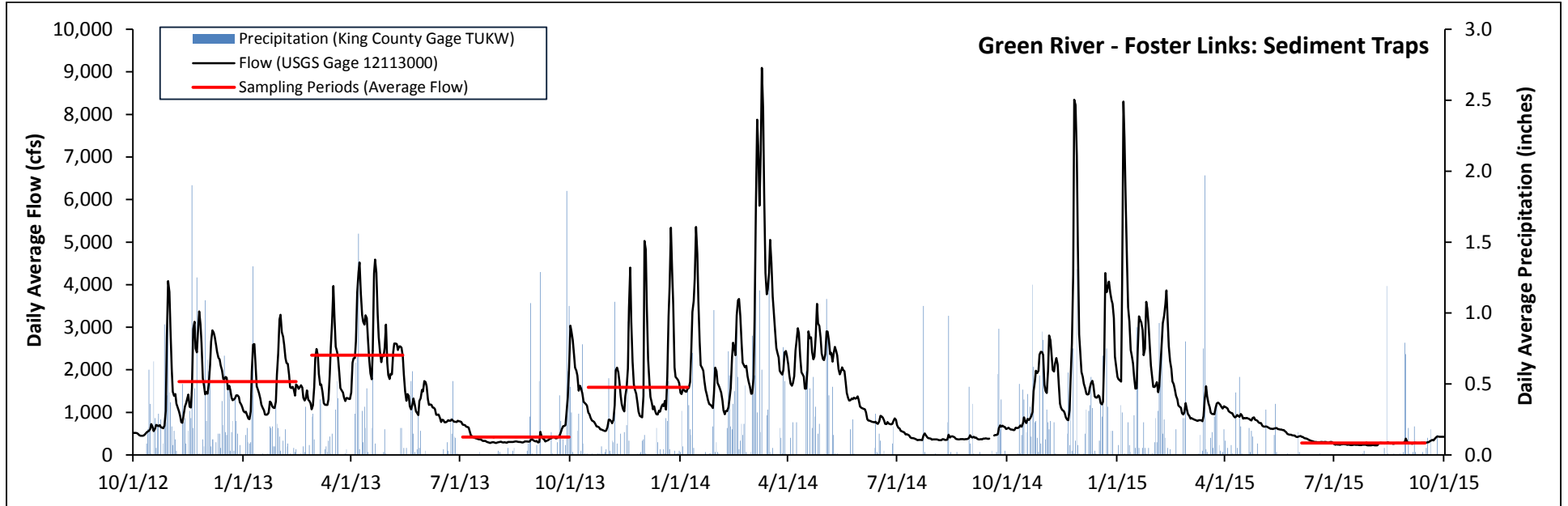


Figure E-4. Precipitation and Daily Average Flow during Sediment Trap Sample Collection at Green River – Foster Links.

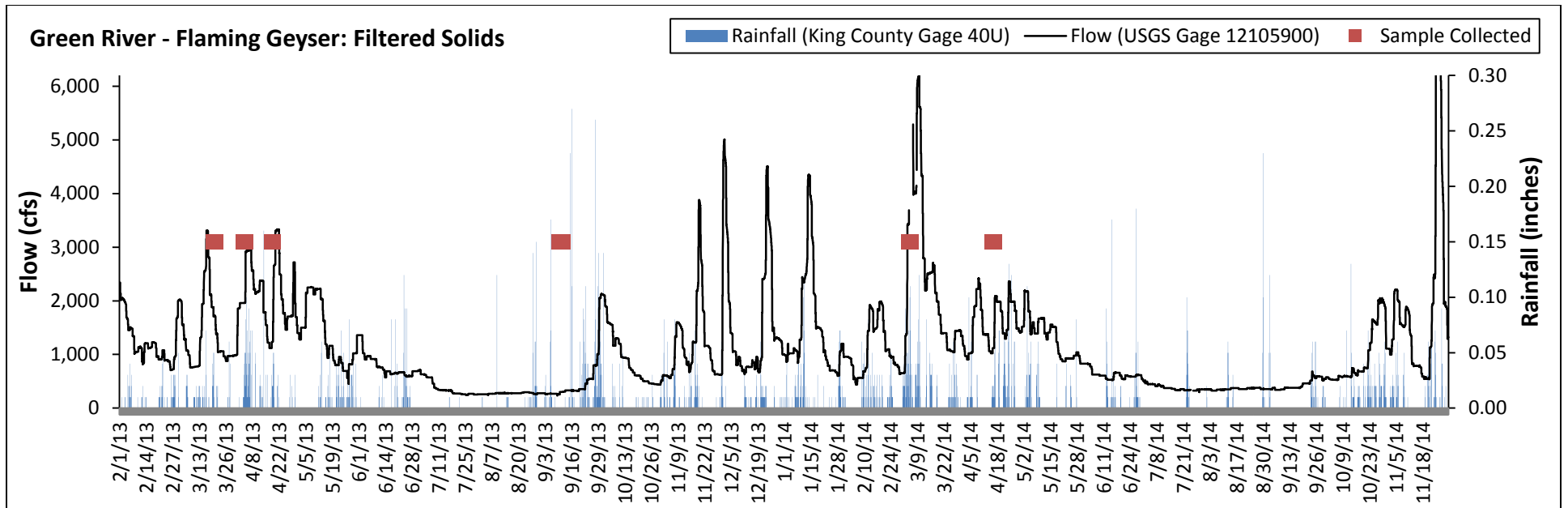


Figure E-5. Precipitation and Flow for Filtered Solids Sample Collection at Green River – Flaming Geyser.

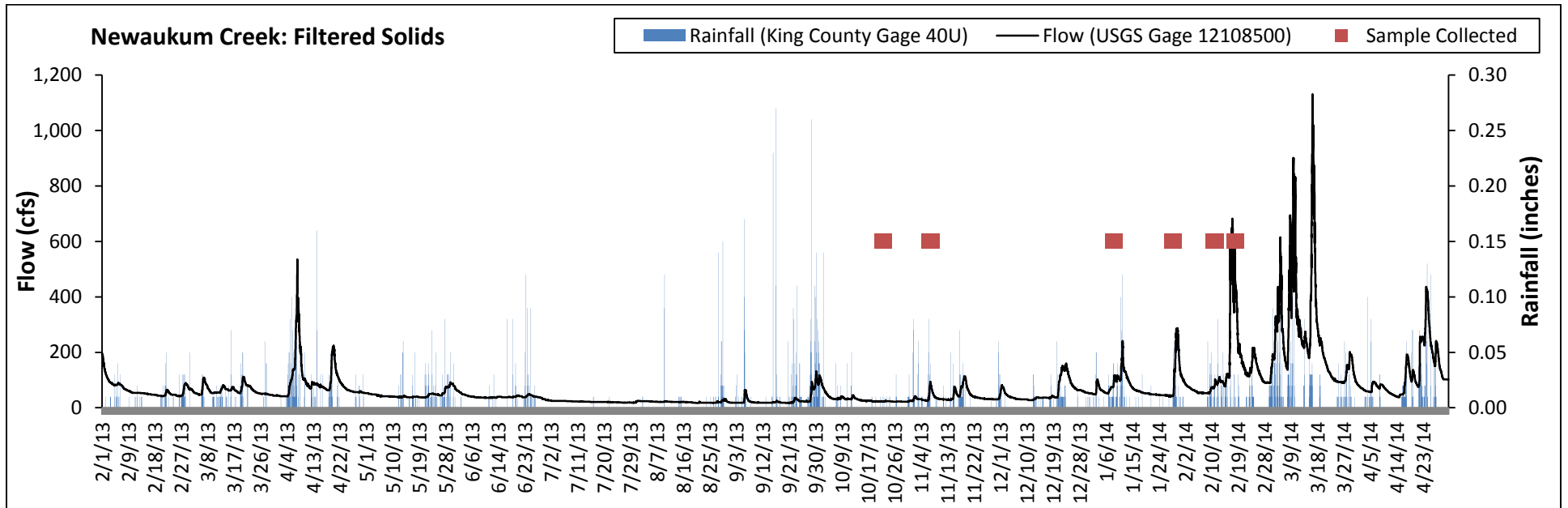


Figure E-6. Precipitation and Flow for Filtered Solids Sample Collection at Newaukum Creek.

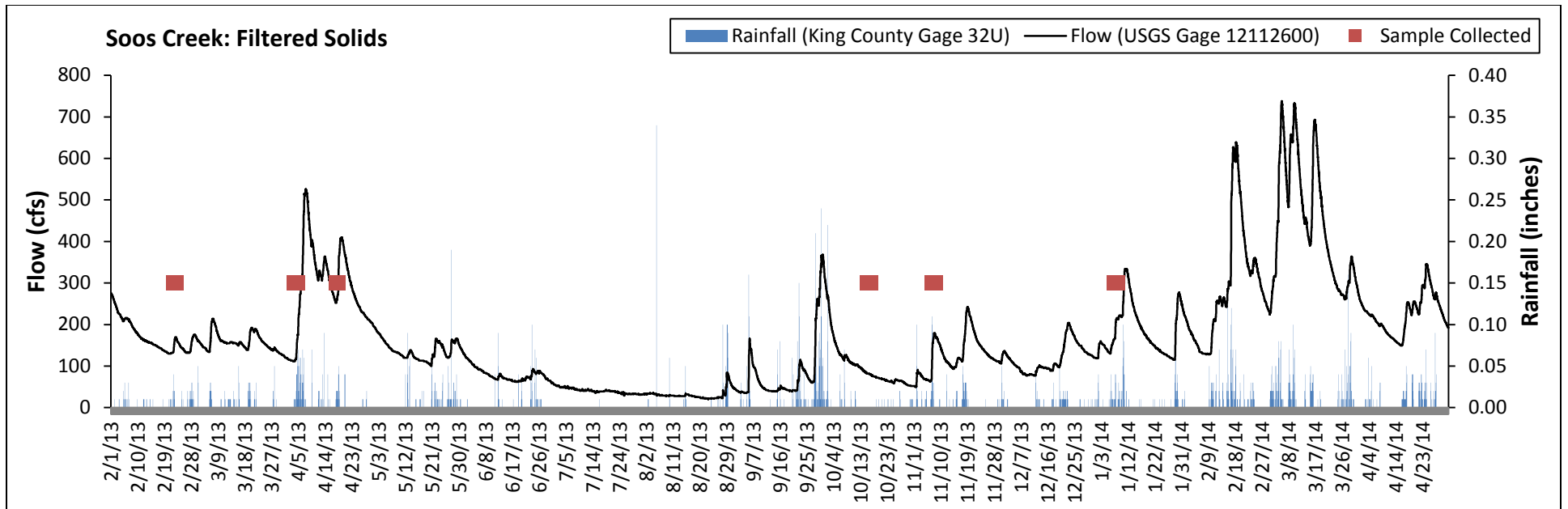


Figure E-7. Precipitation and Flow for Filtered Solids Sample Collection at Soos Creek.

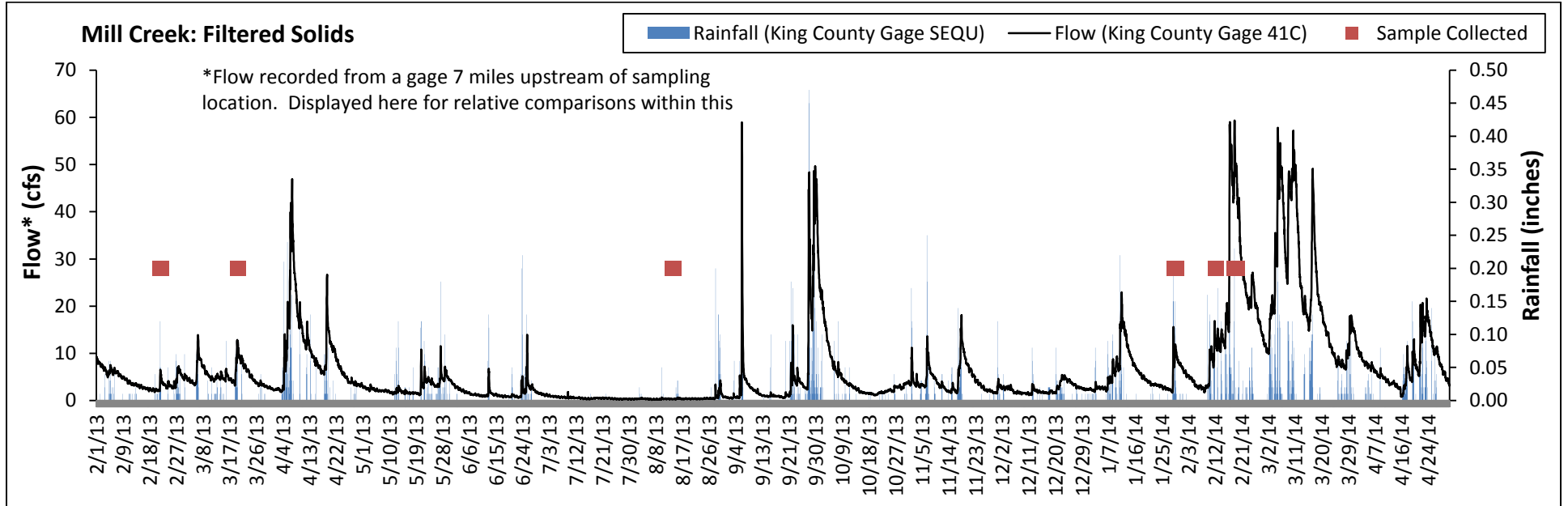


Figure E-8. Precipitation and Estimated Flow for Filtered Solids Sample Collection at Mill Creek.

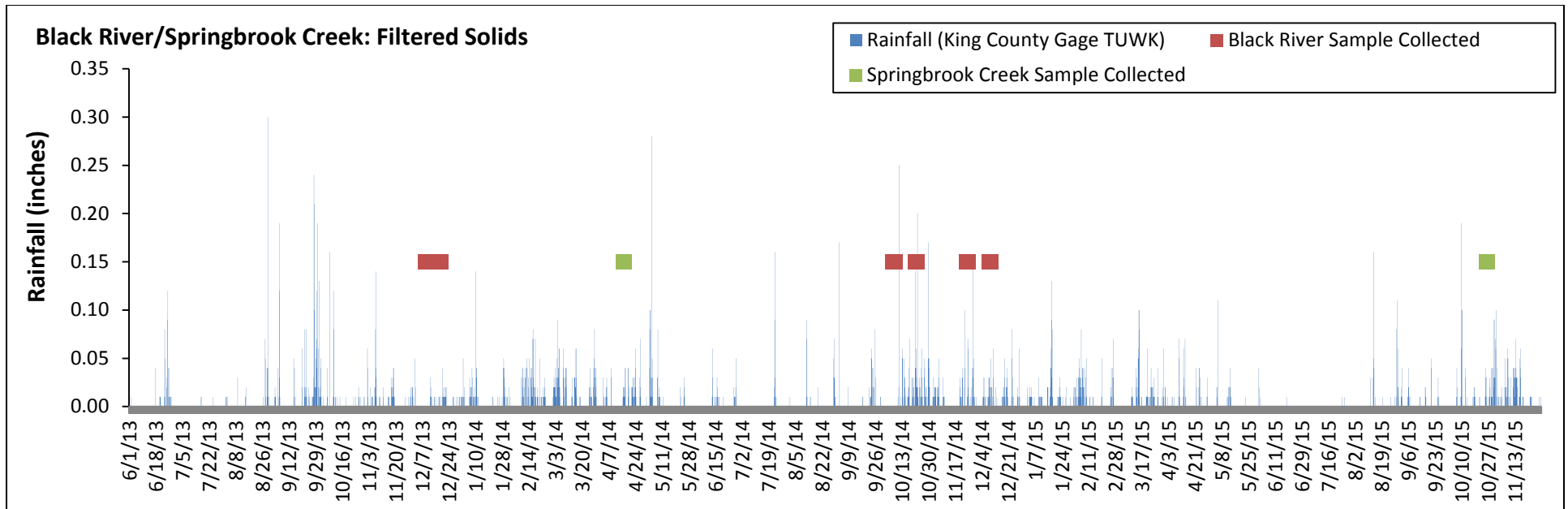


Figure E-9. Precipitation for Filtered Solids Sample Collection at Black River/Springbrook Creek.

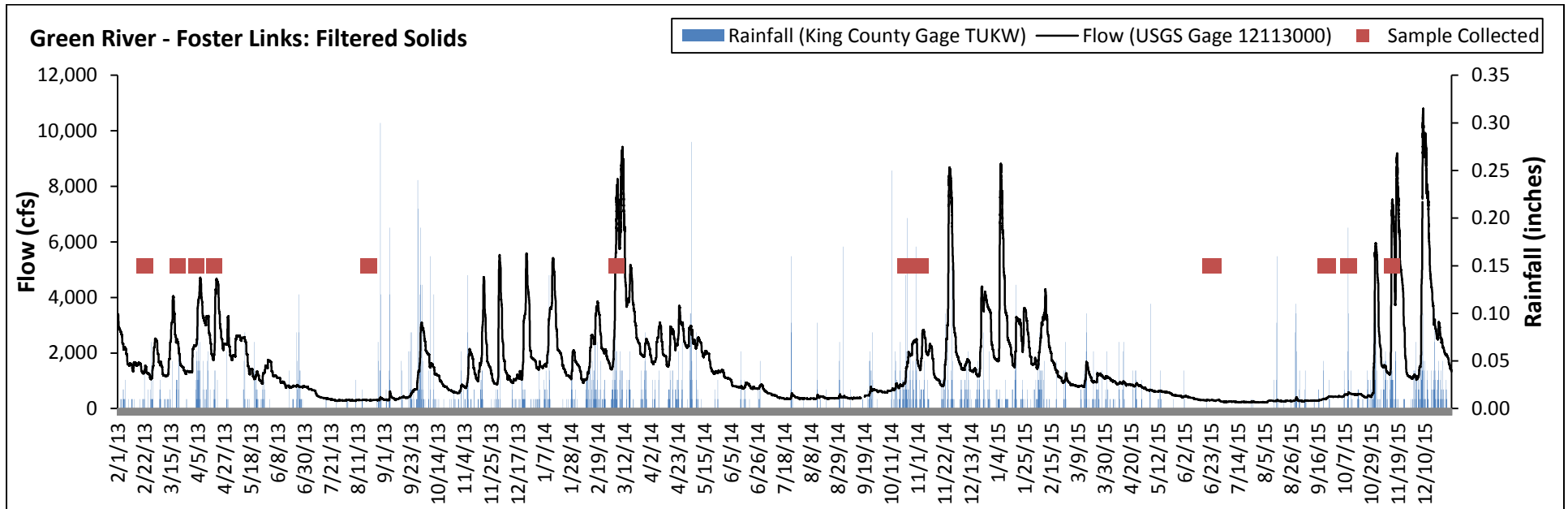


Figure E-10. Precipitation and Flow for Filtered Solids Sample Collection at Green River - Foster Links.

Table E-1. Spearman Correlation Results for Baffle Sediment Trap Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Flaming Geyser	Arsenic	Average Flow	-0.500	0.450	5
Green River - Flaming Geyser	Clay	Average Flow	0.600	0.350	5
Green River - Flaming Geyser	Fines	Average Flow	-0.300	0.683	5
Green River - Flaming Geyser	Fines-normalized Arsenic	Average Flow	-0.564	0.350	5
Green River - Flaming Geyser	OC-normalized PCBs	Average Flow	0.200	0.783	5
Green River - Flaming Geyser	Phenanthrene	Average Flow	-0.700	0.233	5
Green River - Flaming Geyser	TOC	Average Flow	-0.800	0.133	5
Green River - Flaming Geyser	Total PCBs	Average Flow	-0.700	0.233	5
Green River - Flaming Geyser	Arsenic	Clay	-0.300	0.683	5
Green River - Flaming Geyser	Fines-normalized Arsenic	Clay	-0.975	0.0167	5
Green River - Flaming Geyser	OC-normalized PCBs	Clay	0.600	0.350	5
Green River - Flaming Geyser	Phenanthrene	Clay	0.100	0.950	5
Green River - Flaming Geyser	TOC	Clay	-0.400	0.517	5
Green River - Flaming Geyser	Total PCBs	Clay	-0.100	0.950	5
Green River - Flaming Geyser	Arsenic	Fines	0.900	0.0833	5
Green River - Flaming Geyser	Clay	Fines	0.100	0.950	5
Green River - Flaming Geyser	Fines-normalized Arsenic	Fines	-0.205	0.683	5
Green River - Flaming Geyser	OC-normalized PCBs	Fines	0	1.00	5
Green River - Flaming Geyser	Phenanthrene	Fines	0.700	0.233	5
Green River - Flaming Geyser	TOC	Fines	0.800	0.133	5
Green River - Flaming Geyser	Total PCBs	Fines	0.500	0.450	5
Green River - Flaming Geyser	Arsenic	TOC	0.900	0.0833	5
Green River - Flaming Geyser	Fines-normalized Arsenic	TOC	0.308	0.517	5
Green River - Flaming Geyser	Phenanthrene	TOC	-0.300	0.683	5
Green River - Flaming Geyser	TOC-normalized PCBs	TOC	-0.200	0.783	5
Green River - Flaming Geyser	Total PCBs	TOC	0.700	0.233	5
Newaukum Creek	Arsenic	Average Flow	-0.800	0.133	5
Newaukum Creek	Clay	Average Flow	0.800	0.133	5
Newaukum Creek	Fines	Average Flow	0	1.00	5
Newaukum Creek	Fines-normalized Arsenic	Average Flow	0	1.00	5
Newaukum Creek	TOC	Average Flow	-0.100	0.950	5
Newaukum Creek	Arsenic	Clay	-0.300	0.683	5
Newaukum Creek	Fines-normalized Arsenic	Clay	-0.300	0.683	5
Newaukum Creek	TOC	Clay	0.400	0.517	5
Newaukum Creek	Arsenic	Fines	0.200	0.783	5
Newaukum Creek	Clay	Fines	0.300	0.683	5
Newaukum Creek	Fines-normalized Arsenic	Fines	-1.00	0.0167	5
Newaukum Creek	TOC	Fines	0.900	0.0833	5
Newaukum Creek	Arsenic	TOC	0.500	0.450	5
Newaukum Creek	Fines-normalized Arsenic	TOC	-0.900	0.0833	5
Soos Creek	Arsenic	Average Flow	-0.700	0.233	5
Soos Creek	Clay	Average Flow	0.205	0.683	5
Soos Creek	Fines	Average Flow	-0.900	0.0833	5
Soos Creek	Fines-normalized Arsenic	Average Flow	0.800	0.133	5
Soos Creek	Fluoranthene	Average Flow	-0.900	0.0833	5
Soos Creek	TOC	Average Flow	-0.700	0.233	5
Soos Creek	Arsenic	Clay	-0.564	0.350	5
Soos Creek	Fines-normalized Arsenic	Clay	0.616	0.233	5
Soos Creek	Fluoranthene	Clay	-0.462	0.450	5
Soos Creek	TOC	Clay	-0.564	0.350	5
Soos Creek	Arsenic	Fines	0.900	0.0833	5
Soos Creek	Clay	Fines	-0.462	0.450	5

Table E-1. Spearman Correlation Results for Baffle Sediment Trap Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Soos Creek	Fines-normalized Arsenic	Fines	-0.900	0.0833	5
Soos Creek	Fluoranthene	Fines	1.00	0.0167	5
Soos Creek	TOC	Fines	0.900	0.0833	5
Soos Creek	Arsenic	TOC	1.00	0.0167	5
Soos Creek	Fines-normalized Arsenic	TOC	-0.700	0.233	5
Soos Creek	Fluoranthene	TOC	0.718	0.133	5
Mill Creek	Arsenic	Average Flow	-0.975	0.0167	5
Mill Creek	Clay	Average Flow	0.395	0.517	5
Mill Creek	Fines	Average Flow	-0.410	0.450	5
Mill Creek	Fines-normalized Arsenic	Average Flow	-0.821	0.0833	5
Mill Creek	Fluoranthene	Average Flow	-0.821	0.0833	5
Mill Creek	Phenanthrene	Average Flow	-0.718	0.133	5
Mill Creek	TOC	Average Flow	-0.667	0.233	5
Mill Creek	Total cPAHs	Average Flow	-0.410	0.450	5
Mill Creek	Arsenic	Clay	-0.564	0.350	5
Mill Creek	Fines-normalized Arsenic	Clay	-0.667	0.233	5
Mill Creek	Fluoranthene	Clay	0.154	0.783	5
Mill Creek	Phenanthrene	Clay	-0.103	0.783	5
Mill Creek	TOC	Clay	-0.0513	0.950	5
Mill Creek	Total cPAHs	Clay	-0.359	0.517	5
Mill Creek	Arsenic	Fines	0.300	0.683	5
Mill Creek	Clay	Fines	0.359	0.517	5
Mill Creek	Fines-normalized Arsenic	Fines	-0.100	0.950	5
Mill Creek	Fluoranthene	Fines	0.800	0.133	5
Mill Creek	Phenanthrene	Fines	0.100	0.950	5
Mill Creek	TOC	Fines	-0.100	0.950	5
Mill Creek	Total cPAHs	Fines	0.600	0.350	5
Mill Creek	Arsenic	TOC	0.600	0.350	5
Mill Creek	Fines-normalized Arsenic	TOC	0.700	0.233	5
Mill Creek	Fluoranthene	TOC	0.300	0.683	5
Mill Creek	Phenanthrene	TOC	0.600	0.350	5
Mill Creek	Total cPAHs	TOC	-0.300	0.683	5
Green River - Foster Links	Arsenic	Average Flow	-1.00	0.0167	5
Green River - Foster Links	Clay	Average Flow	0.100	0.950	5
Green River - Foster Links	Fines	Average Flow	-0.700	0.233	5
Green River - Foster Links	Fines-normalized Arsenic	Average Flow	0	1.00	5
Green River - Foster Links	Fluoranthene	Average Flow	-0.800	0.333	4
Green River - Foster Links	OC-normalized PCBs	Average Flow	-0.900	0.0833	5
Green River - Foster Links	Phenanthrene	Average Flow	-0.800	0.333	4
Green River - Foster Links	TOC	Average Flow	-0.900	0.0833	5
Green River - Foster Links	Total cPAHs	Average Flow	-0.600	0.417	4
Green River - Foster Links	Total PCBs	Average Flow	-0.900	0.0833	5
Green River - Foster Links	Arsenic	Clay	-0.100	0.950	5
Green River - Foster Links	Fines-normalized Arsenic	Clay	-0.600	0.350	5
Green River - Foster Links	Fluoranthene	Clay	0.400	0.750	4
Green River - Foster Links	OC-normalized PCBs	Clay	0.300	0.683	5
Green River - Foster Links	Phenanthrene	Clay	0.400	0.750	4
Green River - Foster Links	TOC	Clay	0.300	0.683	5
Green River - Foster Links	Total cPAHs	Clay	0.200	0.917	4
Green River - Foster Links	Total PCBs	Clay	0.300	0.683	5
Green River - Foster Links	Arsenic	Fines	0.700	0.233	5
Green River - Foster Links	Clay	Fines	-0.100	0.950	5

Table E-1. Spearman Correlation Results for Baffle Sediment Trap Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Foster Links	Fines-normalized Arsenic	Fines	-0.300	0.683	5
Green River - Foster Links	Fluoranthene	Fines	0.800	0.333	4
Green River - Foster Links	OC-normalized PCBs	Fines	0.500	0.450	5
Green River - Foster Links	Phenanthrene	Fines	0.800	0.333	4
Green River - Foster Links	TOC	Fines	0.500	0.450	5
Green River - Foster Links	Total cPAHs	Fines	0.600	0.417	4
Green River - Foster Links	Total PCBs	Fines	0.500	0.450	5
Green River - Foster Links	Arsenic	TOC	0.900	0.0833	5
Green River - Foster Links	Fines-normalized Arsenic	TOC	-0.100	0.950	5
Green River - Foster Links	Fluoranthene	TOC	0.800	0.333	4
Green River - Foster Links	Phenanthrene	TOC	0.800	0.333	4
Green River - Foster Links	TOC-normalized PCBs	TOC	1.00	0.0167	5
Green River - Foster Links	Total cPAHs	TOC	0.800	0.333	4
Green River - Foster Links	Total PCBs	TOC	1.00	0.0167	5
Main stem Sites	Arsenic	Average Flow	-0.855	0.0000002	10
Main stem Sites	Clay	Average Flow	0.358	0.292	10
Main stem Sites	Fines	Average Flow	-0.345	0.309	10
Main stem Sites	Fines-normalized Arsenic	Average Flow	-0.518	0.116	10
Main stem Sites	Fluoranthene	Average Flow	-0.800	0.333	4
Main stem Sites	OC-normalized PCBs	Average Flow	0.0788	0.811	10
Main stem Sites	Phenanthrene	Average Flow	-0.783	0.00897	9
Main stem Sites	TOC	Average Flow	-0.855	0.0000002	10
Main stem Sites	Total cPAHs	Average Flow	-0.600	0.417	4
Main stem Sites	Total Dioxin TEQs	Average Flow	-0.543	0.297	6
Main stem Sites	Total PCBs	Average Flow	-0.103	0.759	10
Main stem Sites	Arsenic	Clay	-0.212	0.535	10
Main stem Sites	Fines-normalized Arsenic	Clay	-0.707	0.0186	10
Main stem Sites	Fluoranthene	Clay	0.400	0.750	4
Main stem Sites	OC-normalized PCBs	Clay	0.345	0.309	10
Main stem Sites	Phenanthrene	Clay	0.150	0.676	9
Main stem Sites	TOC	Clay	-0.152	0.656	10
Main stem Sites	Total cPAHs	Clay	0.200	0.917	4
Main stem Sites	Total Dioxin TEQs	Clay	-0.714	0.136	6
Main stem Sites	Total PCBs	Clay	0.152	0.656	10
Main stem Sites	Arsenic	Fines	0.576	0.0736	10
Main stem Sites	Clay	Fines	0.0788	0.811	10
Main stem Sites	Fines-normalized Arsenic	Fines	-0.293	0.384	10
Main stem Sites	Fluoranthene	Fines	0.800	0.333	4
Main stem Sites	OC-normalized PCBs	Fines	0.382	0.258	10
Main stem Sites	Phenanthrene	Fines	0.800	0.00625	9
Main stem Sites	TOC	Fines	0.321	0.346	10
Main stem Sites	Total cPAHs	Fines	0.600	0.417	4
Main stem Sites	Total Dioxin TEQs	Fines	0.886	0.0333	6
Main stem Sites	Total PCBs	Fines	0.455	0.172	10
Main stem Sites	Total Dioxin TEQs	TOC	0.657	0.175	6
Tributaries (New, Soos, Mill)	Arsenic	Average Flow	-0.803	0.0000002	15
Tributaries (New, Soos, Mill)	Clay	Average Flow	-0.504	0.0536	15
Tributaries (New, Soos, Mill)	Fines	Average Flow	-0.647	0.00882	15
Tributaries (New, Soos, Mill)	Fines-normalized Arsenic	Average Flow	0.453	0.0861	15
Tributaries (New, Soos, Mill)	Fluoranthene	Average Flow	-0.784	0.00523	10
Tributaries (New, Soos, Mill)	Phenanthrene	Average Flow	-0.718	0.133	5
Tributaries (New, Soos, Mill)	TOC	Average Flow	-0.563	0.0275	15

Table E-1. Spearman Correlation Results for Baffle Sediment Trap Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Tributaries (New, Soos, Mill)	Total cPAHs	Average Flow	-0.41	0.450	5
Tributaries (New, Soos, Mill)	Total Dioxin TEQs	Average Flow	-0.833	0.00199	9
Tributaries (New, Soos, Mill)	Total PCBs	Average Flow	-0.561	0.0988	9
Tributaries (New, Soos, Mill)	Arsenic	Clay	0.448	0.0917	15
Tributaries (New, Soos, Mill)	Fines-normalized Arsenic	Clay	-0.435	0.101	15
Tributaries (New, Soos, Mill)	Fluoranthene	Clay	0.299	0.384	10
Tributaries (New, Soos, Mill)	Phenanthrene	Clay	-0.103	0.783	5
Tributaries (New, Soos, Mill)	TOC	Clay	0.279	0.306	15
Tributaries (New, Soos, Mill)	Total cPAHs	Clay	-0.359	0.517	5
Tributaries (New, Soos, Mill)	Total Dioxin TEQs	Clay	0.300	0.407	9
Tributaries (New, Soos, Mill)	Total PCBs	Clay	0.661	0.0428	9
Tributaries (New, Soos, Mill)	Arsenic	Fines	0.843	0.0000002	15
Tributaries (New, Soos, Mill)	Clay	Fines	0.528	0.0413	15
Tributaries (New, Soos, Mill)	Fines-normalized Arsenic	Fines	-0.804	0.0000002	15
Tributaries (New, Soos, Mill)	Fluoranthene	Fines	0.964	0.0000002	10
Tributaries (New, Soos, Mill)	Phenanthrene	Fines	0.100	0.950	5
Tributaries (New, Soos, Mill)	TOC	Fines	0.868	0.0000002	15
Tributaries (New, Soos, Mill)	Total cPAHs	Fines	0.600	0.350	5
Tributaries (New, Soos, Mill)	Total Dioxin TEQs	Fines	0.967	0.0000002	9
Tributaries (New, Soos, Mill)	Total PCBs	Fines	0.933	0.0000002	9
Tributaries (New, Soos, Mill)	Arsenic	TOC	0.825	0.0000002	15
Tributaries (New, Soos, Mill)	Fluoranthene	TOC	0.614	0.0537	10
Tributaries (New, Soos, Mill)	Phenanthrene	TOC	0.600	0.350	5
Tributaries (New, Soos, Mill)	Total cPAHs	TOC	-0.300	0.683	5
Tributaries (New, Soos, Mill)	Total Dioxin TEQs	TOC	0.833	0.00199	9
Tributaries (New, Soos, Mill)	Total PCBs	TOC	0.717	0.0248	9

*Shaded cells indicate statistically significant correlations ($p < 0.05$).

Table E-2. Spearman Correlation Results for Filtered Solids Storm Event Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Flaming Geyser	Fines	Average Flow	0.600	0.350	5
Green River - Flaming Geyser	Clay	Average Flow	0.300	0.683	5
Green River - Flaming Geyser	Arsenic	Average Flow	0.100	0.950	5
Green River - Flaming Geyser	Total PCBs	Average Flow	-0.100	0.950	5
Green River - Flaming Geyser	Fines-normalized Arsenic	Average Flow	-0.400	0.517	5
Green River - Flaming Geyser	Fines-normalized PCBs	Average Flow	-0.100	0.950	5
Green River - Flaming Geyser	Total cPAHs	Average Flow	1.00	0.083	4
Green River - Flaming Geyser	Total LPAHs	Average Flow	0.400	0.750	4
Green River - Flaming Geyser	Phenanthrene	Average Flow	0.800	0.333	4
Green River - Flaming Geyser	Benzo(b,j,k)fluoranthene	Average Flow	0.200	0.917	4
Green River - Flaming Geyser	Fluoranthene	Average Flow	0.800	0.333	4
Green River - Flaming Geyser	Total Dioxin TEQs	Average Flow	-0.205	0.683	5
Green River - Flaming Geyser	Total Dioxin/Furans	Average Flow	-0.500	0.450	5
Green River - Flaming Geyser	Clay	Fines	0.900	0.083	5
Green River - Flaming Geyser	Arsenic	Fines	0.300	0.683	5
Green River - Flaming Geyser	Total PCBs	Fines	-0.300	0.683	5
Green River - Flaming Geyser	Total cPAHs	Fines	0.800	0.333	4
Green River - Flaming Geyser	Total LPAHs	Fines	-0.200	0.917	4
Green River - Flaming Geyser	Phenanthrene	Fines	0.400	0.750	4
Green River - Flaming Geyser	Benzo(b,j,k)fluoranthene	Fines	-0.400	0.750	4
Green River - Flaming Geyser	Fluoranthene	Fines	0.400	0.750	4
Green River - Flaming Geyser	Total Dioxin TEQs	Fines	-0.205	0.683	5
Green River - Flaming Geyser	Total Dioxin/Furans	Fines	-0.700	0.233	5
Green River - Flaming Geyser	Arsenic	Clay	0.100	0.950	5
Green River - Flaming Geyser	Total PCBs	Clay	-0.600	0.350	5
Green River - Flaming Geyser	Total cPAHs	Clay	0.400	0.750	4
Green River - Flaming Geyser	Total LPAHs	Clay	-0.400	0.750	4
Green River - Flaming Geyser	Phenanthrene	Clay	0.200	0.917	4
Green River - Flaming Geyser	Benzo(b,j,k)fluoranthene	Clay	-0.800	0.333	4
Green River - Flaming Geyser	Fluoranthene	Clay	0.200	0.917	4
Green River - Flaming Geyser	Total Dioxin TEQs	Clay	-0.462	0.450	5
Green River - Flaming Geyser	Total Dioxin/Furans	Clay	-0.600	0.350	5
Newaukum Creek	Fines	Average Flow	-0.900	0.083	5
Newaukum Creek	Clay	Average Flow	0.000	1.00	5
Newaukum Creek	Arsenic	Average Flow	-0.800	0.133	5
Newaukum Creek	Total PCBs	Average Flow	-0.500	0.450	5
Newaukum Creek	Fines-normalized Arsenic	Average Flow	-0.300	0.683	5
Newaukum Creek	Fines-normalized PCBs	Average Flow	-0.500	0.450	5
Newaukum Creek	Total cPAHs	Average Flow	-0.300	0.683	5
Newaukum Creek	Total LPAHs	Average Flow	-0.300	0.683	5
Newaukum Creek	Phenanthrene	Average Flow	-0.400	0.517	5
Newaukum Creek	Benzo(b,j,k)fluoranthene	Average Flow	-0.300	0.683	5
Newaukum Creek	Fluoranthene	Average Flow	-0.300	0.683	5
Newaukum Creek	Total Dioxin TEQs	Average Flow	-0.800	0.333	4
Newaukum Creek	Total Dioxin/Furans	Average Flow	-0.800	0.333	4
Newaukum Creek	Clay	Fines	0.300	0.683	5
Newaukum Creek	Arsenic	Fines	0.900	0.083	5
Newaukum Creek	Total PCBs	Fines	0.700	0.233	5
Newaukum Creek	Total cPAHs	Fines	0.100	0.950	5
Newaukum Creek	Total LPAHs	Fines	0.400	0.517	5
Newaukum Creek	Phenanthrene	Fines	0.300	0.683	5
Newaukum Creek	Benzo(b,j,k)fluoranthene	Fines	0.400	0.517	5

Table E-2. Spearman Correlation Results for Filtered Solids Storm Event Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Newaukum Creek	Fluoranthene	Fines	0.400	0.517	5
Newaukum Creek	Total Dioxin TEQs	Fines	1.00	0.0833	4
Newaukum Creek	Total Dioxin/Furans	Fines	1.00	0.0833	4
Newaukum Creek	Arsenic	Clay	0.100	0.950	5
Newaukum Creek	Total PCBs	Clay	0.000	1.00	5
Newaukum Creek	Total cPAHs	Clay	-0.900	0.0833	5
Newaukum Creek	Total LPAHs	Clay	-0.400	0.517	5
Newaukum Creek	Phenanthrene	Clay	-0.700	0.233	5
Newaukum Creek	Benzo(b,j,k)fluoranthene	Clay	-0.400	0.517	5
Newaukum Creek	Fluoranthene	Clay	-0.400	0.517	5
Newaukum Creek	Total Dioxin TEQs	Clay	0.200	0.971	4
Newaukum Creek	Total Dioxin/Furans	Clay	0.200	0.917	4
Soos Creek	Fines	Average Flow	-0.500	0.450	5
Soos Creek	Clay	Average Flow	0.300	0.683	5
Soos Creek	Arsenic	Average Flow	-0.900	0.0833	5
Soos Creek	Fines-normalized Arsenic	Average Flow	-1.00	0.0167	5
Soos Creek	Total cPAHs	Average Flow	-0.700	0.233	5
Soos Creek	Total LPAHs	Average Flow	-1.00	0.0167	5
Soos Creek	Phenanthrene	Average Flow	-0.975	0.0167	5
Soos Creek	Benzo(b,j,k)fluoranthene	Average Flow	-0.900	0.0833	5
Soos Creek	Fluoranthene	Average Flow	-0.900	0.0833	5
Soos Creek	Total Dioxin TEQs	Average Flow	-0.800	0.133	5
Soos Creek	Total Dioxin/Furans	Average Flow	-0.900	0.0833	5
Soos Creek	Clay	Fines	0.400	0.517	5
Soos Creek	Arsenic	Fines	0.800	0.133	5
Soos Creek	Total cPAHs	Fines	0.900	0.083	5
Soos Creek	Total LPAHs	Fines	0.500	0.450	5
Soos Creek	Phenanthrene	Fines	0.410	0.450	5
Soos Creek	Benzo(b,j,k)fluoranthene	Fines	0.800	0.133	5
Soos Creek	Fluoranthene	Fines	0.300	0.683	5
Soos Creek	Total Dioxin TEQs	Fines	0.100	0.950	5
Soos Creek	Total Dioxin/Furans	Fines	0.300	0.683	5
Soos Creek	Arsenic	Clay	-0.100	0.950	5
Soos Creek	Total cPAHs	Clay	0.000	1.00	5
Soos Creek	Total LPAHs	Clay	-0.300	0.683	5
Soos Creek	Phenanthrene	Clay	-0.205	0.683	5
Soos Creek	Benzo(b,j,k)fluoranthene	Clay	-0.100	0.950	5
Soos Creek	Fluoranthene	Clay	-0.400	0.517	5
Soos Creek	Total Dioxin TEQs	Clay	-0.200	0.783	5
Soos Creek	Total Dioxin/Furans	Clay	-0.100	0.950	5
Mill Creek	Clay	Fines	0.900	0.0833	5
Mill Creek	Arsenic	Fines	0.200	0.783	5
Mill Creek	Total cPAHs	Fines	-0.600	0.350	5
Mill Creek	Total LPAHs	Fines	-0.600	0.350	5
Mill Creek	Phenanthrene	Fines	-0.600	0.350	5
Mill Creek	Benzo(b,j,k)fluoranthene	Fines	-0.600	0.350	5
Mill Creek	Fluoranthene	Fines	-0.700	0.233	5
Mill Creek	Total Dioxin TEQs	Fines	0.400	0.517	5
Mill Creek	Total Dioxin/Furans	Fines	0.400	0.517	5
Mill Creek	Arsenic	Clay	-0.100	0.950	5
Mill Creek	Total cPAHs	Clay	-0.300	0.683	5
Mill Creek	Total LPAHs	Clay	-0.300	0.683	5

Table E-2. Spearman Correlation Results for Filtered Solids Storm Event Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Mill Creek	Phenanthrene	Clay	-0.300	0.683	5
Mill Creek	Benzo(b,j,k)fluoranthene	Clay	-0.300	0.683	5
Mill Creek	Fluoranthene	Clay	-0.400	0.517	5
Mill Creek	Total Dioxin TEQs	Clay	0.700	0.233	5
Mill Creek	Total Dioxin/Furans	Clay	0.700	0.233	5
Black River/Springbrook Creek	Clay	Fines	0.700	0.233	5
Black River/Springbrook Creek	Arsenic	Fines	0.200	0.917	4
Black River/Springbrook Creek	Total PCBs	Fines	0.300	0.683	5
Black River/Springbrook Creek	Total cPAHs	Fines	0.200	0.917	4
Black River/Springbrook Creek	Total LPAHs	Fines	0.200	0.917	4
Black River/Springbrook Creek	Phenanthrene	Fines	0.400	0.750	4
Black River/Springbrook Creek	Benzo(b,j,k)fluoranthene	Fines	0.400	0.750	4
Black River/Springbrook Creek	Fluoranthene	Fines	0.200	0.917	4
Black River/Springbrook Creek	Total Dioxin TEQs	Fines	NA	NA	3
Black River/Springbrook Creek	Total Dioxin/Furans	Fines	NA	NA	3
Black River/Springbrook Creek	Arsenic	Clay	-0.800	0.333	4
Black River/Springbrook Creek	Total PCBs	Clay	0.800	0.133	5
Black River/Springbrook Creek	Total cPAHs	Clay	0.800	0.333	4
Black River/Springbrook Creek	Total LPAHs	Clay	0.800	0.333	4
Black River/Springbrook Creek	Phenanthrene	Clay	1.00	0.0833	4
Black River/Springbrook Creek	Benzo(b,j,k)fluoranthene	Clay	1.00	0.0833	4
Black River/Springbrook Creek	Fluoranthene	Clay	0.800	0.333	4
Black River/Springbrook Creek	Total Dioxin TEQs	Clay	NA	NA	3
Black River/Springbrook Creek	Total Dioxin/Furans	Clay	NA	NA	3
Green River - Foster Links	Fines	Average Flow	-0.854	0.000392	9
Green River - Foster Links	Clay	Average Flow	-0.418	0.243	9
Green River - Foster Links	Arsenic	Average Flow	-0.893	0.0000002	7
Green River - Foster Links	Total PCBs	Average Flow	-0.883	0.0000002	9
Green River - Foster Links	Fines-normalized Arsenic	Average Flow	-0.571	0.150	7
Green River - Foster Links	Fines-normalized PCBs	Average Flow	-0.833	0.00199	9
Green River - Foster Links	Total cPAHs	Average Flow	-0.857	0.00609	7
Green River - Foster Links	Total LPAHs	Average Flow	-0.857	0.00609	7
Green River - Foster Links	Phenanthrene	Average Flow	-0.857	0.00609	7
Green River - Foster Links	Benzo(b,j,k)fluoranthene	Average Flow	-0.857	0.00609	7
Green River - Foster Links	Fluoranthene	Average Flow	-0.821	0.0145	7
Green River - Foster Links	Total Dioxin TEQs	Average Flow	-0.786	0.0251	7
Green River - Foster Links	Total Dioxin/Furans	Average Flow	-0.786	0.251	7
Green River - Foster Links	Clay	Fines	0.714	0.0248	9
Green River - Foster Links	Arsenic	Fines	0.541	0.181	7
Green River - Foster Links	Total PCBs	Fines	0.720	0.0248	9
Green River - Foster Links	Total cPAHs	Fines	0.775	0.0251	7
Green River - Foster Links	Total LPAHs	Fines	0.775	0.0251	7
Green River - Foster Links	Phenanthrene	Fines	0.775	0.0251	7
Green River - Foster Links	Benzo(b,j,k)fluoranthene	Fines	0.775	0.0251	7
Green River - Foster Links	Fluoranthene	Fines	0.649	0.0956	7
Green River - Foster Links	Total Dioxin TEQs	Fines	0.559	0.150	7
Green River - Foster Links	Total Dioxin/Furans	Fines	0.559	0.150	7
Green River - Foster Links	Arsenic	Clay	-0.0541	0.843	7
Green River - Foster Links	Total PCBs	Clay	0.360	0.308	9
Green River - Foster Links	Total cPAHs	Clay	0.342	0.388	7
Green River - Foster Links	Total LPAHs	Clay	0.342	0.388	7
Green River - Foster Links	Phenanthrene	Clay	0.342	0.388	7

Table E-2. Spearman Correlation Results for Filtered Solids Storm Event Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Foster Links	Benzo(b,j,k)fluoranthene	Clay	0.342	0.388	7
Green River - Foster Links	Fluoranthene	Clay	0.126	0.72	7
Green River - Foster Links	Total Dioxin TEQs	Clay	0.0360	0.905	7
Green River - Foster Links	Total Dioxin/Furans	Clay	0.0360	0.905	7
Tributary Sites (New, Soo, Mill)	Clay	Fines	0.682	0.00471	15
Tributary Sites (New, Soo, Mill)	Arsenic	Fines	0.939	0.0000002	15
Tributary Sites (New, Soo, Mill)	Total PCBs	Fines	0.867	0.0000002	10
Tributary Sites (New, Soo, Mill)	Total cPAHs	Fines	0.711	0.00256	15
Tributary Sites (New, Soo, Mill)	Total LPAHs	Fines	0.457	0.0834	15
Tributary Sites (New, Soo, Mill)	Phenanthrene	Fines	0.524	0.0429	15
Tributary Sites (New, Soo, Mill)	Benzo(b,j,k)fluoranthene	Fines	0.854	0.0000002	15
Tributary Sites (New, Soo, Mill)	Fluoranthene	Fines	0.657	0.00739	15
Tributary Sites (New, Soo, Mill)	Total Dioxin TEQs	Fines	0.854	0.0000002	18
Tributary Sites (New, Soo, Mill)	Total Dioxin/Furans	Fines	0.856	0.0000002	18
Tributary Sites (New, Soo, Mill)	Arsenic	Clay	0.579	0.0231	15
Tributary Sites (New, Soo, Mill)	Total PCBs	Clay	0.661	0.0332	10
Tributary Sites (New, Soo, Mill)	Total cPAHs	Clay	0.482	0.0662	15
Tributary Sites (New, Soo, Mill)	Total LPAHs	Clay	-0.0464	0.863	15
Tributary Sites (New, Soo, Mill)	Phenanthrene	Clay	0.025	0.923	15
Tributary Sites (New, Soo, Mill)	Benzo(b,j,k)fluoranthene	Clay	0.5	0.0556	15
Tributary Sites (New, Soo, Mill)	Fluoranthene	Clay	0.196	0.473	15
Tributary Sites (New, Soo, Mill)	Total Dioxin TEQs	Clay	0.807	0.0000002	18
Tributary Sites (New, Soo, Mill)	Total Dioxin/Furans	Clay	0.827	0.0000002	18
Main Stem Sites	Clay	Fines	0.804	0.0000002	14
Main Stem Sites	Arsenic	Fines	0.434	0.15	12
Main Stem Sites	Total PCBs	Fines	0.653	0.0108	14
Main Stem Sites	Total cPAHs	Fines	0.797	0.00145	11
Main Stem Sites	Total LPAHs	Fines	0.556	0.0706	11
Main Stem Sites	Phenanthrene	Fines	0.647	0.029	11
Main Stem Sites	Benzo(b,j,k)fluoranthene	Fines	0.588	0.051	11
Main Stem Sites	Fluoranthene	Fines	0.574	0.0602	11
Main Stem Sites	Total Dioxin TEQs	Fines	0.411	0.173	12
Main Stem Sites	Total Dioxin/Furans	Fines	0.466	0.117	12
Main Stem Sites	Arsenic	Clay	0.00704	0.974	12
Main Stem Sites	Total PCBs	Clay	0.245	0.39	14
Main Stem Sites	Total cPAHs	Clay	0.44	0.168	11
Main Stem Sites	Total LPAHs	Clay	0.11	0.734	11
Main Stem Sites	Phenanthrene	Clay	0.239	0.467	11
Main Stem Sites	Benzo(b,j,k)fluoranthene	Clay	0.165	0.614	11
Main Stem Sites	Fluoranthene	Clay	0.211	0.52	11
Main Stem Sites	Total Dioxin TEQs	Clay	-0.00353	0.974	12
Main Stem Sites	Total Dioxin/Furans	Clay	0.197	0.527	12
All Sites Combined	Clay	Fines	0.866	0.0000002	34
All Sites Combined	Arsenic	Fines	0.81	0.0000002	31
All Sites Combined	Total PCBs	Fines	0.794	0.0000002	29
All Sites Combined	Total cPAHs	Fines	0.678	0.000026	30
All Sites Combined	Total LPAHs	Fines	0.578	0.000885	30
All Sites Combined	Phenanthrene	Fines	0.659	0.0000665	30
All Sites Combined	Benzo(b,j,k)fluoranthene	Fines	0.707	8.64E-07	30
All Sites Combined	Fluoranthene	Fines	0.615	0.000307	30
All Sites Combined	Total Dioxin/Furans	Fines	0.628	0.000204	30
All Sites Combined	Total Dioxin TEQs	Fines	0.606	0.000411	30

Table E-2. Spearman Correlation Results for Filtered Solids Storm Event Samples

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
All Sites Combined	Arsenic	Clay	0.639	0.000108	31
All Sites Combined	Total PCBs	Clay	0.638	0.000196	29
All Sites Combined	Total cPAHs	Clay	0.496	0.00554	30
All Sites Combined	Total LPAHs	Clay	0.326	0.0787	30
All Sites Combined	Phenanthrene	Clay	0.412	0.0236	30
All Sites Combined	Benzo(b,j,k)fluoranthene	Clay	0.51	0.0042	30
All Sites Combined	Fluoranthene	Clay	0.391	0.0326	30
All Sites Combined	Total Dioxin/Furans	Clay	0.491	0.00609	30
All Sites Combined	Total Dioxin TEQs	Clay	0.425	0.0194	30

*Shaded cells indicate statistically significant correlations (p<0.05).

Table E-3. Spearman Correlation Results for Filtered Solids and Baffle-Style Sediment Trap Samples Combined

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Flaming Geyser	Arsenic	Fines	0.691	0.0165	11
Green River - Flaming Geyser	Total PCBs	Fines	0.609	0.0427	11
Green River - Flaming Geyser	Phenanthrene	Fines	0.733	0.0131	10
Green River - Flaming Geyser	Fluoranthene	Fines	0.806	0.00257	10
Green River - Flaming Geyser	Total Dioxin/Furans	Fines	0.567	0.0988	9
Green River - Flaming Geyser	Total Dioxin TEQs	Fines	0.385	0.285	9
Green River - Flaming Geyser	Arsenic	Clay	-0.136	0.673	11
Green River - Flaming Geyser	Total PCBs	Clay	0.173	0.595	11
Green River - Flaming Geyser	Phenanthrene	Clay	0.430	0.199	10
Green River - Flaming Geyser	Fluoranthene	Clay	0.394	0.243	10
Green River - Flaming Geyser	Total Dioxin/Furans	Clay	0.100	0.775	9
Green River - Flaming Geyser	Total Dioxin TEQs	Clay	-0.0586	0.844	9
Newaukum Creek	Arsenic	Fines	0.809	0.000876	11
Newaukum Creek	Total PCBs	Fines	0.771	0.103	6
Newaukum Creek	Phenanthrene	Fines	0.764	0.00461	11
Newaukum Creek	Fluoranthene	Fines	0.845	0.0000002	11
Newaukum Creek	Total Dioxin/Furans	Fines	0.929	0.0000002	8
Newaukum Creek	Total Dioxin TEQs	Fines	0.976	0.0000002	8
Newaukum Creek	Arsenic	Clay	0.536	0.0821	11
Newaukum Creek	Total PCBs	Clay	0.371	0.497	6
Newaukum Creek	Phenanthrene	Clay	0.536	0.0821	11
Newaukum Creek	Fluoranthene	Clay	0.6	0.0467	11
Newaukum Creek	Total Dioxin/Furans	Clay	0.714	0.0374	8
Newaukum Creek	Total Dioxin TEQs	Clay	0.81	0.0096	8
Soos Creek	Arsenic	Fines	0.882	0.0000002	11
Soos Creek	Total PCBs	Fines	0.5	1.00	3
Soos Creek	Phenanthrene	Fines	0.756	0.00565	11
Soos Creek	Fluoranthene	Fines	0.755	0.00565	11
Soos Creek	Total Dioxin/Furans	Fines	0.633	0.0583	9
Soos Creek	Total Dioxin TEQs	Fines	0.583	0.0874	9
Soos Creek	Arsenic	Clay	0.311	0.339	11
Soos Creek	Total PCBs	Clay	-0.5	1.00	3
Soos Creek	Phenanthrene	Clay	0.616	0.0389	11
Soos Creek	Fluoranthene	Clay	0.534	0.0821	11
Soos Creek	Total Dioxin/Furans	Clay	0.217	0.55	9
Soos Creek	Total Dioxin TEQs	Clay	0.2	0.58	9
Mill Creek	Arsenic	Fines	0.609	0.0427	11
Mill Creek	Total PCBs	Fines	-0.632	0.333	4
Mill Creek	Phenanthrene	Fines	0.236	0.467	11
Mill Creek	Fluoranthene	Fines	0.355	0.270	11
Mill Creek	Total Dioxin/Furans	Fines	0.367	0.308	9
Mill Creek	Total Dioxin TEQs	Fines	0.267	0.462	9
Mill Creek	Arsenic	Clay	-0.296	0.353	11
Mill Creek	Total PCBs	Clay	-0.632	0.333	4
Mill Creek	Phenanthrene	Clay	-0.62	0.0389	11
Mill Creek	Fluoranthene	Clay	-0.606	0.0427	11
Mill Creek	Total Dioxin/Furans	Clay	-0.367	0.308	9
Mill Creek	Total Dioxin TEQs	Clay	-0.5	0.153	9

Table E-3. Spearman Correlation Results for Filtered Solids and Baffle-Style Sediment Trap Samples Combined

Site	Dependent Parameter	Independent Parameter	Spearman Correlation Coefficient	P Value*	N
Green River - Foster Links	Arsenic	Fines	0.788	0.0000002	15
Green River - Foster Links	Total PCBs	Fines	0.422	0.0893	17
Green River - Foster Links	Phenanthrene	Fines	0.38	0.192	13
Green River - Foster Links	Fluoranthene	Fines	0.443	0.121	13
Green River - Foster Links	Total Dioxin/Furans	Fines	0.347	0.236	13
Green River - Foster Links	Total Dioxin TEQs	Fines	0.322	0.269	13
Green River - Foster Links	Arsenic	Clay	0.413	0.12	15
Green River - Foster Links	Total PCBs	Clay	0.459	0.0625	17
Green River - Foster Links	Phenanthrene	Clay	0.459	0.107	13
Green River - Foster Links	Fluoranthene	Clay	0.407	0.16	13
Green River - Foster Links	Total Dioxin/Furans	Clay	0.278	0.342	13
Green River - Foster Links	Total Dioxin TEQs	Clay	0.198	0.504	13

*Shaded cells indicate statistically significant correlations (p<0.05).