

**S1 Table. Environmental variables measured during nutrient diffusing substrate experiments at Little Beaver Creek, CO.** Multiple measurements are recorded as mean  $\pm$  standard deviation. Several nutrient measurements were below detection. pH was not measured during experiment 3 because of an instrument malfunction.

Expt	Dates	Temp (°C)	pH	Cond ( $\mu\text{S cm}^{-1}$ )	SRP-P ( $\mu\text{g L}^{-1}$ )	NO <sub>3</sub> -N ( $\mu\text{g L}^{-1}$ )	Discharge ( $\text{m}^3 \text{sec}^{-1}$ )	Velocity ( $\text{cm sec}^{-1}$ )
1	July 29 – Aug 14, 2016	11.55 $\pm$ 1.91	7.79	43.52 $\pm$ 2.05	<1	<10	0.13	45.12 $\pm$ 15.33
2	Aug 24 – Sept 7, 2016	10.05 $\pm$ 1.77	8.1 $\pm$ 0.28	46.22 $\pm$ 2.47	1.67 $\pm$ 0.97	<10	0.07	49.07 $\pm$ 8.54
3	July 17 – Aug 5, 2017	11.7	--	30.51	2.27 $\pm$ 2.11	<10	0.4	49.31 $\pm$ 13.3