

**Supplementary Table S1.** Correlation (Spearman rank order,  $\rho$ ) between each of the three axes of the principle coordinate analysis (PC1, PC2, and PC3) and each of the measured environmental parameters or depth.

Parameter	$\rho$		
	PC1	PC2	PC3
Depth	-0.27	0.88	0.19
Temperature	-0.09	-0.74	-0.48
Salinity	-0.92	0.21	0.06
Photosynthetic light (PAR)	0.18	-0.78	-0.37
$\text{NO}_{23}$	-0.15	0.28	0.53
$\text{NO}_2^-$	0.11	0.25	0.49
$\text{NO}_3^-$	-0.22	0.31	0.50
$\text{PO}_4^{3-}$	-0.25	0.80	0.09
SI	0.00	0.75	-0.07
$\text{O}_2$	0.61	-0.57	0.18

**Supplementary Table S2.** Correlation (Spearman rank order,  $\rho$ ) between (absolute) differences in measured environmental parameters and bacterial community differences, calculated for all pairs of surface water samples.

Parameter	$\rho$
Temperature	0.51
Salinity	0.81
Photosynthetic light (PAR)	0.03
$\text{NO}_{23}$	0.27
$\text{NO}_2^-$	0.33
$\text{NO}_3^-$	0.31
$\text{PO}_4^{3-}$	0.01
SI	0.55
$\text{O}_2$	0.72