

**Table S11:** Significant linear correlations of local and setting variables to relative abundance of functional groups.  
 $p$  0.05→0.001 plain text,  $p$  0.001→0.0001 underlined,  $p$  ≤0.0001 bold (unadjusted).

Feature	Variable	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8	FG9
pH	pH	-	-	-	-	-0.21	0.18	-	-	-
total ions	EC	-	0.16	-	-	-0.15	0.17	-	-0.19	-
cations	Na	-	-	-	-		0.15	-	-	-
	K	-0.17	-	-	-	-0.15	0.16	-	-	-
	Ca	-	0.17	-	-	-0.24	0.17	-	-0.23	-
	Mg	-	0.17	-	-	-0.16	0.18	-	-0.21	-
	Al	-	-	-	-0.16	0.14	-0.19	0.16	-	-
anions	Fe	-	-	-	-	-	0.16	-	-	<u>0.26</u>
	Cl	-	-	-	-	-0.16	0.16	-	-	-
	SO <sub>4</sub>	-	-	-	-	-	-	-	-	-
phosphorus	ortho-P	-	-	-	-	-	<u>0.25</u>	-	-0.24	-
	ortho-Pmax.	-	-	-	-	-	0.23	-	-0.21	-
	TP	-	-	-	-	-	0.23	-	<u>-0.26</u>	-
	TPmax.	-	-	-	-	-	0.22	-	<u>-0.25</u>	-
nitrogen	NO <sub>3</sub> max.	-	-	-	-	-	-	-	-	-
	NO <sub>2</sub>	-	0.16	0.16	-	-	-	-	-	-
	NO <sub>2</sub> max.	-	0.23	-	-	-	-	-	-	-
	NH <sub>4</sub>	-	-	-	-	-	-	-	-	-
	NH <sub>4</sub> max.	-	-	-	-	-	-	-	-	-
	KjN	-	0.17	-	-	-	-	-	-0.19	-
	KjNmax.	-	-	-	-	-	-	-	-0.17	-
	TON	-	0.22	-	-	-	-	-	-0.21	-
	TONmax.	-	0.16	-	-	-	-	-	-0.20	-
	TN	-	<u>0.25</u>	-	-	-	-	-	-0.19	-
silica	SiO <sub>2</sub>	-	0.14	-	-	-	0.21	-	<b>-0.29</b>	-
organics	COD	-	-	-	-	-	0.20	-	-	-
	CODf	-	-	-	-	-	0.24	-	-	-
	CODp	-	<u>0.25</u>	-	-	-	-	-	<u>-0.27</u>	-
	a <sub>254</sub>	-	-	-	-	-	<b>0.37</b>	-	-	-
	a <sub>440</sub>	-	0.22	-	-	-	-	-	-0.19	-
phytoplankton	chl <i>a</i>	-	<b>0.32</b>	-	-	-	-0.17	-	-0.23	-
	chl <i>a</i> max.	-	0.24	-	-	-	-	-	-0.21	-

