

Sediment bacteria and archaea community analysis and nutrient fluxes in a sub-tropical polymictic reservoir

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Supplement. Additional data on sequenced bacterial and archeal clones as well as nutrient profiles in the water column of Lake Wivenhoe

Table S1. GenBank accession numbers and length (base pairs [bp]) of sequenced bacterial clones in the present study. The accession number of the closest match and identity is provided for each clone

Clone	Accession #	Nucleotide length (bp)	Closest match	Identity (%)	Match accession #
LB71	HQ330596	1390	Uncultured bacterium	98	AM086115
LB72	HQ330597	1311	Uncultured bacterium	97	AM086115
LB77	HQ330598	1361	Uncultured bacterium	95	EU662423
LB78	HQ330599	1391	Uncultured bacterium	94	FJ517022
LB85	HQ330600	1417	Uncultured <i>Deltaproteobacteria</i>	97	CU927575
LB87	HQ330601	1397	Uncultured bacterium	91	FJ710663
LT02	HQ330530	1351	Uncultured bacterium	83	AF419659
LT03	HQ330531	1333	Uncultured <i>Chloroflexi</i> bacterium	88	FJ484552
LT13	HQ330532	1385	Uncultured bacterium	93	GQ472797
LT24	HQ330533	1391	Uncultured bacterium	97	GQ402788
LT30	HQ330534	1369	Uncultured <i>Acidobacterium</i>	96	FJ484557
LT35	HQ330535	1418	Uncultured bacterium	91	GQ246298
LT37	HQ330602	1450	Uncultured bacterium	94	FJ810566
LT39	HQ330536	1362	Uncultured <i>Bacteroidetes</i>	96	DQ640709
LT44	HQ330537	1268	Uncultured <i>Alphaproteobacteria</i>	97	DQ811848
LT45	HQ330538	1400	Uncultured <i>Deltaproteobacteria</i>	94	FJ517016
LT47	HQ330539	1366	Uncultured <i>Desulfobacteraceae</i>	97	FJ517061
LT49	HQ330603	1421	Uncultured <i>Deltaproteobacteria</i>	97	FJ484471
LT56	HQ330540	1349	Uncultured bacterium	97	GU454944
LT69	HQ330541	1304	Uncultured bacterium	86	EU134935
LT70	HQ330542	1415	Uncultured <i>Syntrophorhabdaceae</i>	96	FJ538126
LT76	HQ330543	1338	Uncultured bacterium	90	DQ404853
LT77	HQ330604	1324	Uncultured bacterium	97	AB486715
LT79	HQ330544	1372	Uncultured bacterium	89	EU035874
LT82	HQ330545	1386	Uncultured bacterium	91	FJ710663
LT89	HQ330546	1409	Uncultured bacterium	98	GQ472413
PB05	HQ330547	1411	Uncultured bacterium	96	EF688191

Clone	Accession #	Nucleotide length (bp)	Closest match	Identity (%)	Match accession #
PB14	HQ330548	1406	Uncultured bacterium	92	AB530232
PB25	HQ330549	1364	Uncultured <i>Cytophagales</i>	97	FJ517020
PB34	HQ330550	1414	Uncultured <i>Acidobacterium</i>	96	AY921986
PB35	HQ330551	1359	Uncultured bacterium	93	AB240236
PB40	HQ330552	1384	Uncultured bacterium	93	GQ246427
PB41	HQ330553	1375	Uncultured bacterium	92	AM936568
PB44	HQ330554	1418	Uncultured <i>Deltaproteobacteria</i>	94	FJ484446
PB52	HQ330555	1421	Uncultured <i>Deltaproteobacteria</i>	91	FJ485056
PB58	HQ330556	1374	Uncultured bacterium	91	FJ203566
PB66	HQ330557	1403	Uncultured <i>Verrucomicrobia</i>	98	DQ676384
PB67	HQ330558	1415	Uncultured bacterium	97	EF602490
PB69	HQ330559	1396	Uncultured bacterium	94	GQ472449
PB74	HQ330560	1394	Uncultured <i>Acidobacterium</i>	97	FJ484528
PB79	HQ330561	1215	Uncultured <i>Planctomycetes</i>	86	DQ837238
PB80	HQ330562	1395	Uncultured bacterium	96	FJ437848
PB87	HQ330605	1332	Uncultured bacterium	81	EU542522
PT08	HQ330606	1390	Uncultured bacterium	95	GU208344
PT13	HQ330564	1357	Uncultured <i>Acidobacterium</i>	97	FJ713032
PT14	HQ330565	1358	<i>Methymicrobium</i> sp.	94	EF495157
PT15	HQ330566	1407	Uncultured <i>Deltaproteobacteria</i>	97	DQ676358
PT17	HQ330607	1392	Uncultured <i>Methylococcales</i>	94	FJ484543
PT18	HQ330567	1402	Uncultured <i>Deltaproteobacteria</i>	95	DQ811831
PT19	HQ330568	1329	Uncultured bacterium	89	FJ615148
PT22	HQ330569	1357	Uncultured <i>Cytophagales</i>	97	FJ516911
PT23	HQ330570	1415	Uncultured <i>Deltaproteobacteria</i>	95	FJ902092
PT25	HQ330608	1406	Uncultured <i>Clostridiales</i> bacterium	93	AB513436
PT30	HQ330571	1422	Uncultured bacterium	94	AB294931
PT33	HQ330609	1391	Uncultured bacterium	98	HM128980
PT41	HQ330572	1353	Uncultured <i>Chloroflexi</i> bacterium	95	EU266883
PT42	HQ330573	1396	Uncultured bacterium	97	AB426189
PT43	HQ330574	1381	Uncultured <i>Methylococcales</i>	95	FJ484543
PT45	HQ330575	1385	Uncultured bacterium	98	AB426231
PT47	HQ330576	1373	Uncultured bacterium	93	EU488313
PT48	HQ330577	1400	Uncultured bacterium	93	AY799901
PT49	HQ330578	1417	Uncultured <i>Deltaproteobacteria</i>	98	FJ484878
PT50	HQ330579	1405	Uncultured bacterium	93	AY799901
PT53	HQ330580	1344	Uncultured <i>Saprospiraceae</i>	97	EF523451
PT59	HQ330581	1377	Uncultured bacterium	97	GU208378
PT60	HQ330582	1410	Uncultured <i>Deltaproteobacteria</i>	98	DQ831538
PT66	HQ330583	1323	Uncultured <i>Acidobacterium</i>	85	FJ205219
PT67	HQ330584	1407	Uncultured <i>Planctomycetes</i>	89	EF032766
PT75	HQ330585	1348	Uncultured <i>Flammovirgaceae</i>	93	FJ517065
PT76	HQ330610	1391	Uncultured <i>Deltaproteobacteria</i>	97	FJ485074
PT81	HQ330586	1424	Uncultured <i>Desulfobacteraceae</i>	97	FJ516036
PT83	HQ330587	1367	Uncultured <i>Cytophagales</i>	97	FJ516910
PT84	HQ330588	1375	Uncultured bacterium	95	FJ901520
PT85	HQ330611	1375	Uncultured bacterium	91	GU455240
PT87	HQ330612	1420	Uncultured <i>Deltaproteobacteria</i>	98	FJ484878
PT89	HQ330589	1378	Uncultured <i>Bacteroidetes</i>	98	EU283366
PT90	HQ330590	1393	Uncultured <i>Deltaproteobacteria</i>	98	EF061951
PT92	HQ330591	1345	<i>Meiothermus cerbereus</i>	91	Y13595
PT95	HQ330592	1370	<i>Bacillus</i> sp.	98	AY289504

Clone	Accession #	Nucleotide length (bp)	Closest match	Identity (%)	Match accession #
rPB34	HQ330620	1201	<i>Vogesella</i> sp.	98	GQ246809
rPB35	HQ330621	1396	Uncultured bacterium	95	EU881241
rPB36	HQ330622	1393	Uncultured <i>Methylococcales</i>	96	FJ484543
rPB38	HQ330623	1308	Uncultured <i>Clostridium</i>	91	AY330125
rPB45	HQ330624	1408	Uncultured candidate division OP1	98	FJ484374
rPB46	HQ330625	1396	Uncultured bacterium	95	AY221615
rPB47	HQ330626	1413	Uncultured <i>Acidobacterium</i>	93	AY225649
rPB48	HQ330627	1335	<i>Cylindrospermopsis raciborskii</i>	99	EU552055
rPB52	HQ330628	1396	Uncultured bacterium	92	EU245608
rPB56	HQ330629	1415	Uncultured bacterium	92	FJ755753
rPB60	HQ330630	1351	Uncultured <i>Actinobacterium</i>	92	EU266847
rPB62	HQ330631	1377	<i>Pseudomonas putida</i>	99	FJ472861
rPB63	HQ330632	1390	Uncultured bacterium	99	AB426208
rPB71	HQ330633	1412	Uncultured candidate division OP1	97	FJ484374
rPB73	HQ330634	1291	Uncultured candidate division OP11	93	DQ676298
rPB75	HQ330635	1397	Uncultured bacterium	97	FJ748821
rPB79	HQ330636	1398	Uncultured bacterium	97	DQ499308
rPB84	HQ330637	1382	Uncultured bacterium	95	EF492955
rPB87	HQ330638	1344	Uncultured <i>Chloroflexi</i> bacterium	92	DQ811888
rPB89	HQ330639	1371	Uncultured bacterium	96	AB462406
rPB90	HQ330640	1343	Uncultured bacterium	96	DQ233076
rPT02	HQ330641	1375	Uncultured bacterium	93	GU455112
rPT06	HQ330642	1177	Uncultured bacterium	95	EU542497
rPT15	HQ330643	1385	Uncultured candidate division OP1	97	FJ484374
rPT17	HQ330644	1330	Uncultured <i>Chloroflexi</i> bacterium	97	FJ485587
rPT28	HQ330645	1347	Uncultured bacterium	94	GQ355041
rPT34	HQ330646	1412	Uncultured bacterium	97	GU180182
rPT38	HQ330647	1412	Uncultured bacterium	92	EU542439
rPT43	HQ330648	1374	Uncultured bacterium	91	AY328715
rPT46	HQ330649	1430	Uncultured bacterium	93	DQ404592
rPT55	HQ330650	1424	Uncultured bacterium	96	DQ404592
rPT56	HQ330651	1405	Uncultured bacterium	93	GU208377
rPT58	HQ330652	1372	Uncultured <i>Chloroflexi</i> bacterium	98	GU127002
rPT62	HQ330653	1346	Uncultured bacterium	97	GQ397066
rPT64	HQ330654	1395	Uncultured bacterium	96	AB426211
rPT69	HQ330655	1390	<i>Methylocaldum</i> sp.	95	AJ868426
rPT70	HQ330656	1411	Uncultured bacterium	92	FJ905663
rPT75	HQ330657	1423	Uncultured bacterium	96	FJ479285
rPT87	HQ330658	1345	Uncultured bacterium	91	GQ472324

Table S2. GenBank accession numbers and length (bp) of sequenced archaeal clones in the present study. The accession number of the closest match and identity is provided for each clone

Clone	GenBank accession #	Nucleotide length (bp)	Closest match	Identity (%)	Match accession #
LBA03	HQ330659	932	Uncultured archaeon	98	EU155980
LBA04	HQ330660	961	Uncultured archaeon	98	HM583599
LBA20	HQ330661	927	Uncultured <i>Methanolinea</i>	96	AB479395
LBA28	HQ330662	969	Uncultured archaeon	94	DQ310408
LBA29	HQ330701	883	Uncultured <i>Methanomicrobiales</i>	98	CU917177
LBA30	HQ330664	968	Uncultured <i>Methanomicrobiales</i>	100	CU917069
LBA31	HQ330702	885	Uncultured archaeon	99	DQ301906
LBA34	HQ330664	951	Uncultured <i>Euryarchaeota</i>	98	AJ937876
LBA36	HQ330665	968	Uncultured archaeon	87	FJ810531
LBA47	HQ330703	892	Uncultured archaeon	99	EU155903
LBA51	HQ330704	895	<i>Methanosaeta</i> sp.	98	AY780569
LBA66	HQ330705	842	Uncultured archaeon	99	DQ785304
LBA67	HQ330666	971	Uncultured archaeon	97	AB550818
LBA75	HQ330706	881	Uncultured archaeon	90	EU329784
LBA76	HQ330667	906	Uncultured archaeon	99	EU155935
LBA77	HQ330668	906	Uncultured archaeon	99	AB447863
LBA83	HQ330669	946	Uncultured <i>Methanomicrobiales</i>	99	CU917177
LTA04	HQ330670	962	Uncultured archaeon	98	FJ755719
LTA05	HQ330671	968	Uncultured archaeon	99	FJ755712
LTA06	HQ330707	894	Uncultured archaeon	96	FJ705116
LTA10	HQ330708	889	Uncultured archaeon	99	FJ755723
LTA11	HQ330672	984	Uncultured archaeon	93	FJ755713
LTA12	HQ330673	984	Uncultured archaeon	96	GU127495
LTA14	HQ330674	900	Uncultured archaeon	81	EF444621
LTA22	HQ330675	934	Uncultured archaeon	99	FJ755708
LTA23	HQ330676	971	Uncultured archaeon	99	DQ301912
LTA25	HQ330677	969	Uncultured archaeon	94	EU155984
LTA38	HQ330709	812	Uncultured archaeon	97	EF014531
LTA44	HQ330678	974	Uncultured archaeon	96	EU155917
LTA53	HQ330679	868	Uncultured archaeon	98	FJ822548
LTA60	HQ330680	973	Uncultured archaeon	97	AY175381
LTA61	HQ330710	831	Uncultured archaeon	99	FJ755727
LTA72	HQ330711	848	Uncultured archaeon	98	FJ755712
LTA82	HQ330681	819	Uncultured archaeon	98	EU155989
PBA05	HQ330712	750	Uncultured archaeon	99	FJ896260
PBA34	HQ330682	950	Uncultured archaeon	98	FJ755726
PBA38	HQ330683	945	Uncultured <i>Methanomicrobiales</i>	98	FJ755726
PBA39	HQ330684	969	Uncultured archaeon	98	FN432658
PBA50	HQ330685	891	Uncultured archaeon	95	HM583599
PBA66	HQ330686	970	Uncultured archaeon	97	EU155917
PBA68	HQ330713	867	Uncultured archaeon	98	AF481343
PBA69	HQ330687	912	Uncultured archaeon	99	GU591513
PTA10	HQ330714	882	Uncultured archaeon	98	AF481343
PTA12	HQ330715	888	Uncultured archaeon	94	FJ705116
PTA17	HQ330716	881	Uncultured archaeon	98	FJ755718
PTA20	HQ330717	835	Uncultured archaeon	96	EU155984
PTA21	HQ330718	855	Uncultured archaeon	93	DQ310413
PTA32	HQ330719	828	Uncultured archaeon	98	HM583599
PTA34	HQ330720	930	Uncultured archaeon	96	AJ631256
PTA39	HQ330721	816	Uncultured archaeon	97	EU155996

Clone	GenBank accession #	Nucleotide length (bp)	Closest match	Identity (%)	Match accession #
PTA54	HQ330722	809	Uncultured archaeon	97	EU490305
PTA55	HQ330723	850	Uncultured archaeon	98	Fj755705
PTA62	HQ330724	790	Uncultured <i>Methanomicrobiales</i>	98	GU135467
PTA63	HQ330725	860	Uncultured <i>Methanomicrobiales</i>	99	CU915960
PTA65	HQ330726	919	Uncultured archaeon	98	EU155950
PTA70	HQ330727	802	Uncultured <i>Methanosaeta</i> sp.	98	GU135459
PTA79	HQ330728	767	Uncultured archaeon	98	AF424766
PTA80	HQ330729	760	Uncultured archaeon	99	FJ755727
PTA91	HQ330730	886	Uncultured archaeon	99	AB550818
PTA92	HQ330731	971	Uncultured <i>Euryarchaeota</i>	89	DQ417477
rPBA05	HQ330688	651	Uncultured <i>Methanolinea</i>	96	AB479407
rPBA15	HQ330689	882	Uncultured archaeon	97	EU155954
rPBA16	HQ330690	973	Uncultured archaeon	97	FJ755710
rPBA17	HQ330691	797	Uncultured archaeon	85	AJ631256
rPBA20	HQ330692	777	Uncultured archaeon	99	FJ755723
rPBA52	HQ330693	831	Uncultured archaeon	92	EF444599
rPBA62	HQ330694	893	Uncultured archaeon	86	FJ810531
rPBA64	HQ330732	794	Uncultured archaeon	96	FJ755717
rPBA70	HQ330695	971	Uncultured <i>Euryarchaeota</i>	81	AB189394
rPTA01	HQ330733	802	Uncultured archaeon	98	FJ755711
rPTA07	HQ330734	830	Uncultured archaeon	99	EU155982
rPTA28	HQ330696	852	Uncultured archaeon	96	DQ301912
rPTA31	HQ330697	987	Uncultured archaeon	99	EF444638
rPTA33	HQ330735	870	Uncultured archaeon	97	GU127504
rPTA55	HQ330698	853	Uncultured archaeon	99	FJ604785
rPTA65	HQ330699	917	Uncultured archaeon	97	FJ755711
rPTA68	HQ330700	933	Uncultured archaeon	98	FJ755727
rPTA73	HQ330736	820	Uncultured <i>Euryarchaeota</i>	88	AY822001

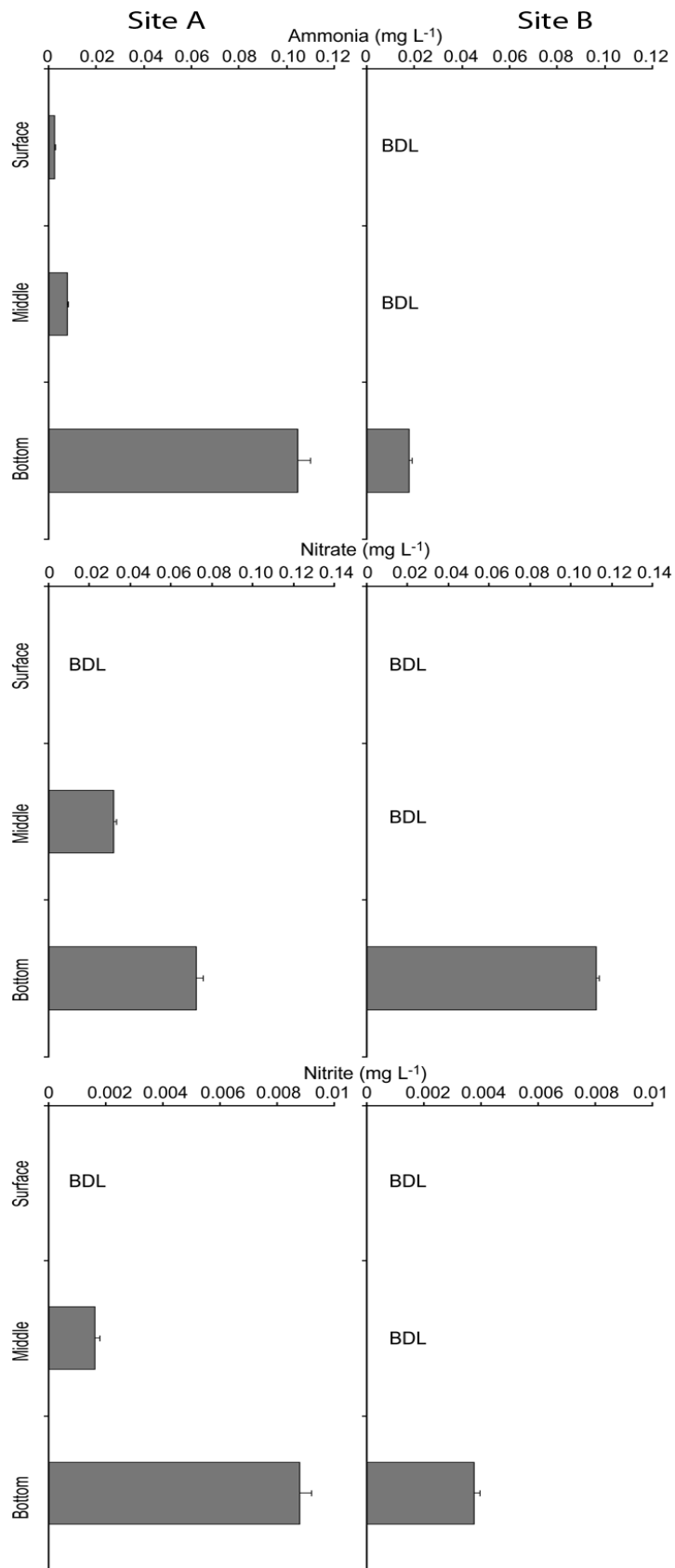


Fig. S1. Water column profile of dissolved inorganic nitrogen species (NH_3^+ , NO_2^- , NO_3^-) from Sites A and B. Water samples were collected immediately prior to sediment core collection. Means \pm SE. BDL: below detection limit

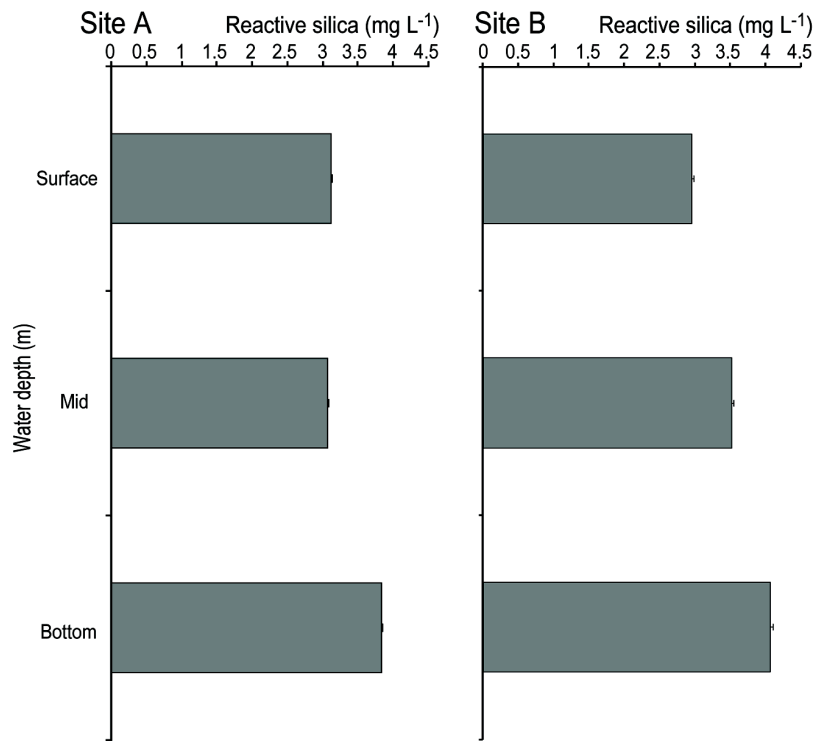


Fig. S2. Water column profile of reactive silica in surface, mid and bottom water samples from Sites A and B. Water samples were collected immediately prior to sediment core collection. Means \pm SE

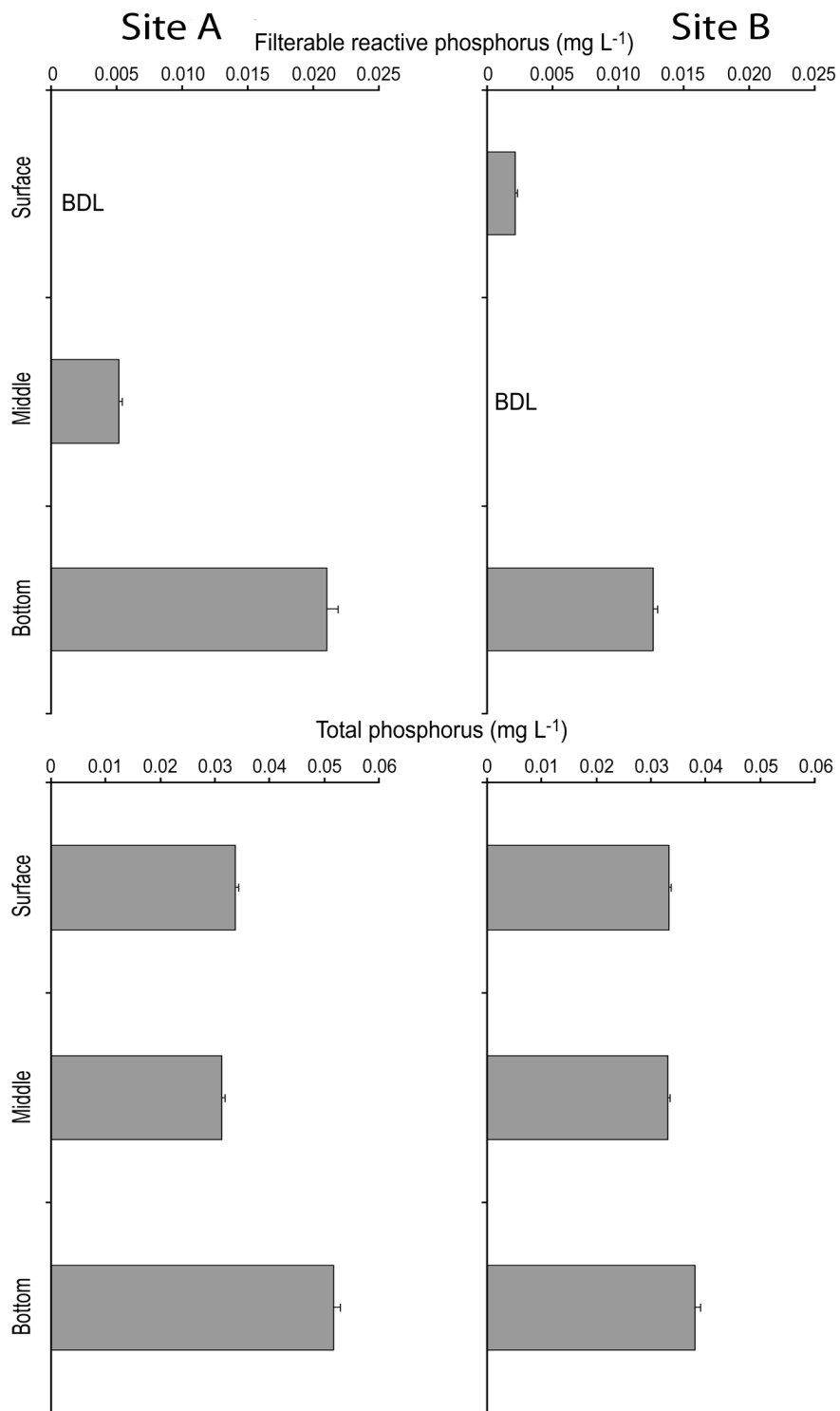


Fig. S3. Water column profile of filterable reactive phosphorus (FRP) and total phosphorus (TP) from Sites A and B. Water samples were collected immediately prior to sediment core collection. Means \pm SE. BDL: below detection limit.