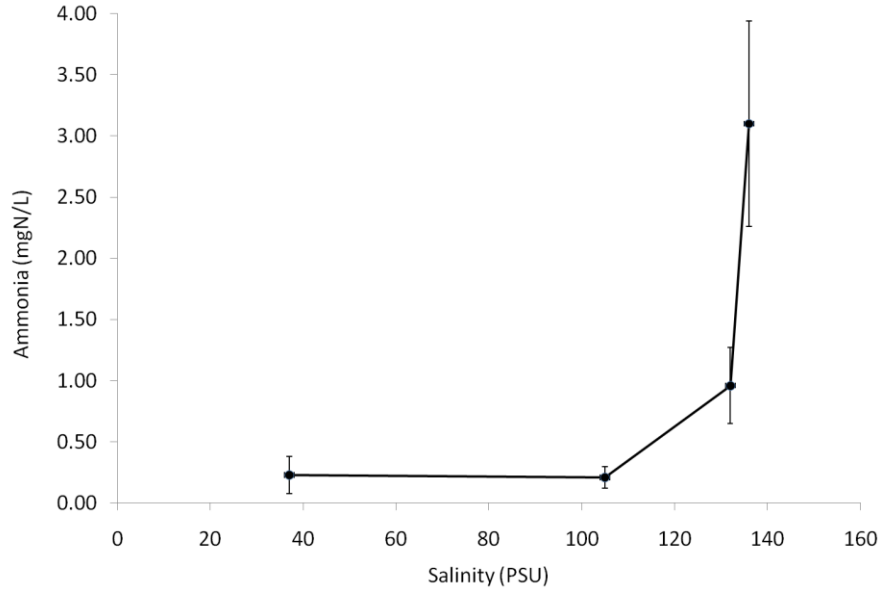


1 **Supplementary information**

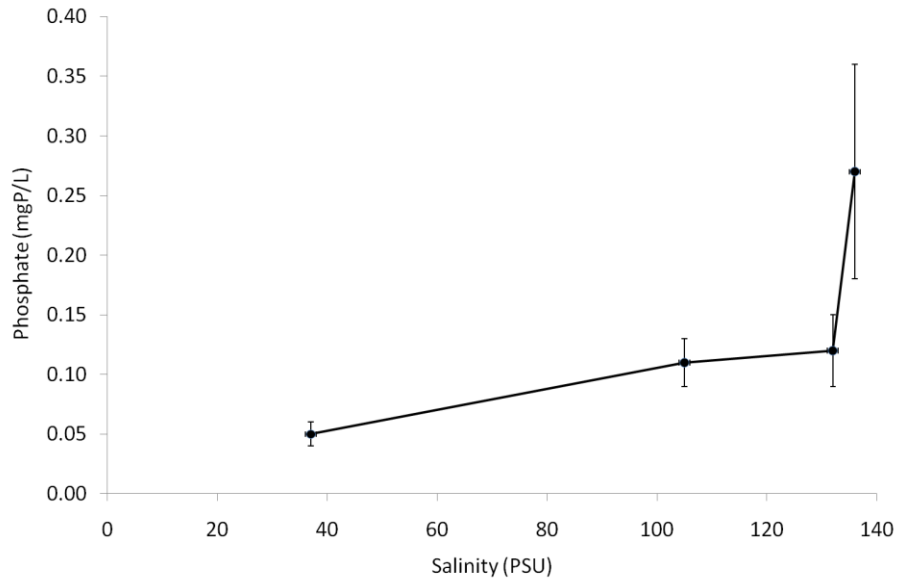
2 A)



3

4

5 B)

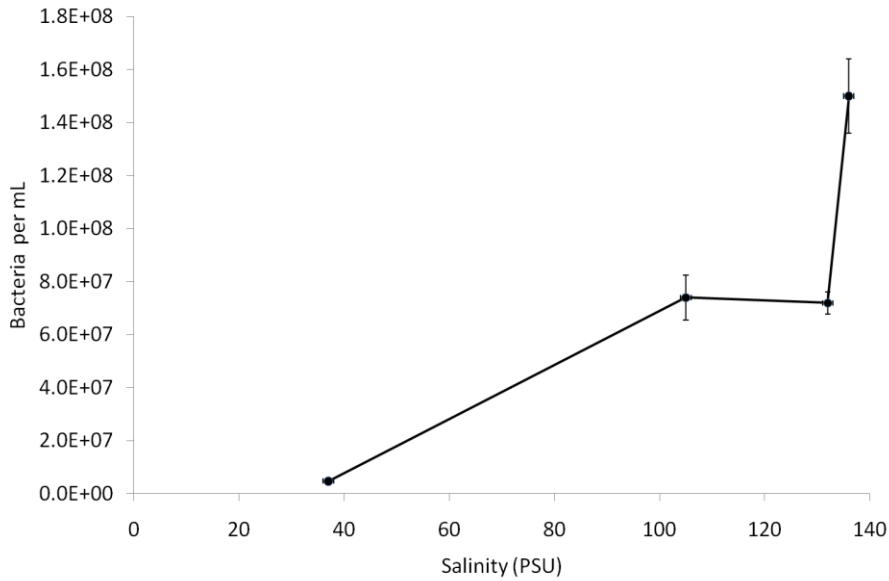


6

7

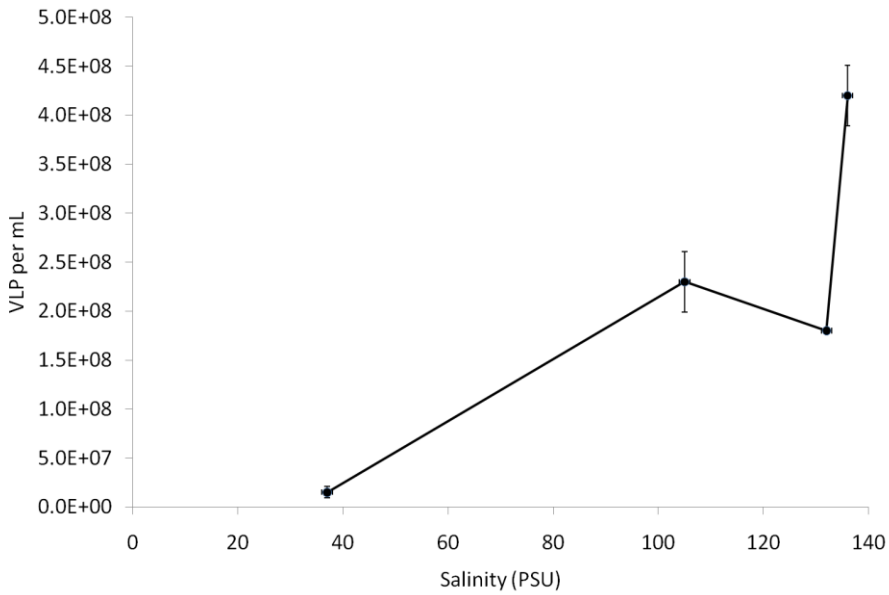
8

9 C)



10

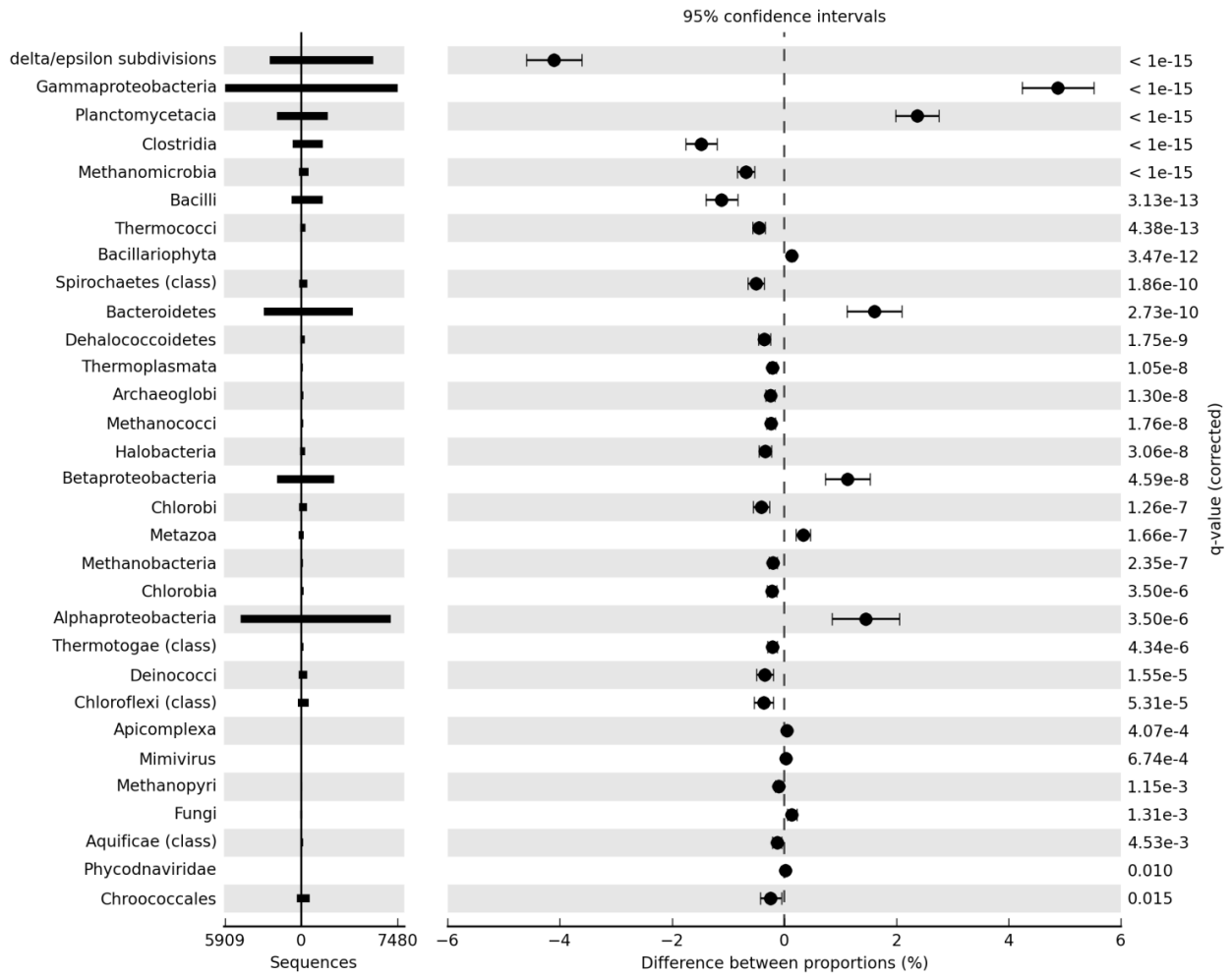
11 D)



12

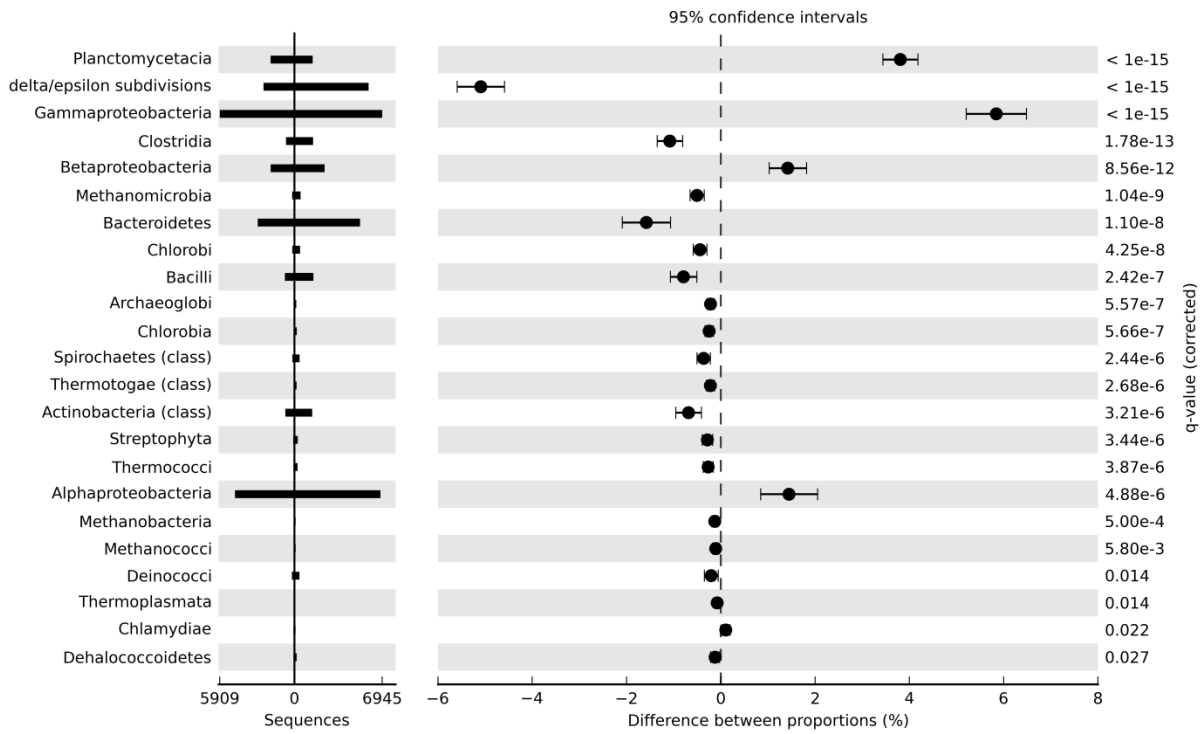
13 Figure S1 Environmental parameters of sampling sites A) ammonia concentration B) phosphate  
14 concentration C) heterotrophic bacteria abundance D) virus like particle (VLP) abundance. Error  
15 bars represent standard error of the mean. Nutrient levels in porewater and were determined  
16 using a Lachat QuikChem 8500 nutrient analyzer. Microbial counts were conducted using flow  
17 cytometry as referenced in the manuscript.

18 A)



19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31

32 B)



33

34 Figure S2 Taxa enriched or depleted in the 37 PSU and A) 109 PSU B) 132 PSU metagenomes.  
35 Corrected P-values were calculated using Storey's FDR approach. Taxa enriched in the marine  
36 (37 PSU) metagenomes have positive differences between proportions.

37

38

39

40

41

42

43

44