## **Supplementary Information**

Samples with the same Sample ID were collected 5-20 meters apart.

ND: Not Detected

FCM Bacteria: Bacterial abundance cell concentration determined by flow cytometry.

FCM Phytoplankton: Phytoplankton cell concentration determined by flow cytometry.

Station ID corresponding to amplicons sequencing: Sample for which amplicon have been sequenced and available in

NCBI Sequence Read Archive under the BioProject accession number PRJNA744875.