| Date | NH₄ (μM) | std | NOx (NO₃⁺NO₂) (μM) | std | Inorganic N (μM) | std | TN (μM) | std |
|------|----------|-----|-------------------|-----|-----------------|-----|----------|-----|
| S1   | na       | na  | na                | na  | na              | na  | na       | na  |
| S2   | 1.13     | ±0.002 | 1045           | ±0.02 | 1046           | na  | 1327     | na  |
| S3   | 1.44     | ±0.001 | 1090           | ±0.05 | 1091           | na  | 1308     | na  |
| S4   | 2.05     | ±0.012 | 1579           | ±0.005 | 1579           | na  | 1803     | na  |
| S5   | n.a.     | n.a.  | 1139           | ±0.01 | n.a.           | na  | 1947     | na  |
| S6   | 1.26     | ±0.004 | 1011           | ±0.05 | 1013           | na  | 1169     | na  |
| S7   | 0.95     | ±0.002 | 401            | ±0.05 | 402            | na  | 585      | na  |
| S8   | 1.03     | ±0.001 | 835            | ±0.07 | 836            | na  | 880      | na  |

| Date | PO₄ (μM) | std | TP (μM) | std | cDOM | std | TN:TP |
|------|----------|-----|---------|-----|------|-----|-------|
| S1   | na       | na  | na      | na  | na   | na  | na    |
| S2   | 0.10     | ±0.0007 | 0.53  | ±0  | 1.70 | ±0.011 | 2527:1 |
| S3   | 1.38     | ±0.0042 | 1.83  | ±0.02 | 2.29 | ±0.016 | 714:1 |
| S4   | 0.10     | ±0 | 0.66   | ±0.03 | 2.86 | ±0.006 | 2726:1 |
| S5   | 0.10     | ±0.0021 | 0.50  | ±0.01 | 1.74 | ±0.029 | 3868:1 |
| S6   | 0.12     | ±0.0007 | 0.47  | ±0.02 | 1.22 | ±0.017 | 2500:1 |
| S7   | 0.15     | ±0.0028 | 0.39  | ±0.03 | 1.03 | ±0.011 | 1505:1 |
| S8   | 0.11     | ±0.0007 | 0.40  | ±0.04 | 1.60 | ±0.009 | 2224:1 |

Supporting Information T1

Concentrations of ammonium (NH₄, μM), nitrate and nitrite (NO₃⁺NO₂, μM), Inorganic Nitrogen (μM), Total N (TN, μM), Phosphate (PO₄, μM), Total P (μM), Colored Dissolved Organic Matter (cDOM 440 nm absorbance), in the photobioreactor (PBR) water from each sampling date. S1 denoted by na as no measurements were made on that date. Measurements represent mean of duplicates or triplicates.