### Table S3: UCYN-A sublineages qPCR abundances at SCMW, other locations along the Monterey Bay and central California coast (Monterey Harbor, Monterey Municipal Wharf II and northern Half Moon Bay Harbor) and Japan (Haruno Harbor, off Kesen).

| Location | Biological replicate | Date (year.month.day) | UCYN-A2 nifH copies/L | UCYN-A1 nifH copies/L | technical standard deviation | technical standard deviation |
|----------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------------|
| Half Moon Bay | A | 2018.9.18 | 2.08E+03 | 3.25E+03 | DNQ | ns |
| Half Moon Bay | B | 2018.9.18 | 9.63E+02 | 9.12E+02 | DNQ | ns |
| Moss Landing | A | 2018.9.18 | 5.87E+04 | 1.69E+04 | UD | ns |
| Moss Landing | B | 2018.9.18 | 3.97E+04 | 1.79E+03 | UD | ns |
| Monterey | A | 2018.9.18 | 1.03E+03 | 1.54E+04 | UD | ns |
| Monterey | B | 2018.9.18 | 3.39E+04 | 4.08E+03 | UD | ns |

*Note: UCYN-A2 and UCYN-A1 are two sublineages of the UCYN-A group. UCYN-A1 is the dominant sublineage in most locations, while UCYN-A2 is less abundant.*