

Table S1. Sensor deployment details for the kelp and outside moorings

| Kelp Mooring | | | | | | |
|-----------------|--------------------------|------------------------|-----------------------------------|----------------------------------|-----------------------------------|------------------------------------|
| mab | Parameters | Instrument | Start | End | Instrument Maintenance | Sample Frequency |
| Surface | T DO, T | HOBO T MiniDOT* | 8-Jun-18 19-Jul-18 | 4-Oct-18 2-Aug-18 | 7/28 to 8/9 n/a | 1 minute 5 minutes |
| 6.1 | pH, DO, T, S, P | SeapHOx | 9-Jul-18 | 4-Oct-18 | 7/16 to 7/18 | 10 minutes |
| 5.2 | pH, T DO, T | mFET MiniDOT | 9-Jul-18 9-Jun-18 | 4-Oct-18 4-Oct-18 | 7/16 to 7/18 8/6 to 8/13 | 5 minutes 5 minutes |
| 4.4 | pH, T T, S, P T | mFET SBE37 SBE56 | 9-Jul-18 13-Aug-18 8-Jun-18 | 4-Oct-18 4-Oct-18 4-Oct-18 | 7/16 to 7/18 n/a 8/6 to 8/9 | 5 minutes 5 minutes 1 minute |
| 3.3 | pH, T DO, T | mFET MiniDOT | 9-Jul-18 9-Jun-18 | 4-Oct-18 4-Oct-18 | 7/16 to 7/18 8/6 to 8/13 | 5 minutes 5 minutes |
| 2.6 | pH, T T | mFET SBE56 | 9-Jul-18 8-Jun-18 | 4-Oct-18 4-Oct-18 | 7/16 to 7/18 8/6 to 8/9 | 5 minutes 1 minutes |
| 1.5 | pH, T | mFET | 9-Jul-18 | 4-Oct-18 | 7/16 to 7/18 | 5 minutes |
| 1.0 | pH, DO, T, S, P DO, T | SeapHOx MiniDOT | 9-Jul-18 9-Jun-18 | 4-Oct-18 4-Oct-18 | 7/16 to 7/18 8/6 to 8/13 | 10 minutes 5 minutes |
| 0.0 | PAR, T P, T | SME PAR HOBO P | 14-Jun-18 8-Jun-18 | 4-Oct-18 4-Oct-18 | 8/6 to 8/9 8/6 to 8/9 | 1 minute 1 minute |
| Outside Mooring | | | | | | |
| mab | Parameters | Instrument | Start | End | Instrument Maintenance | Sample Frequency |
| Surface | T | HOBO T | 7-Jun-18 | 4-Oct-18 | 7/28 to 8/9 | 1 minute |
| 15.5 | T | HOBO T | 7-Jun-18 | 4-Oct-18 | 7/28 to 8/9 | 1 minute |
| 14.6 | pH, T | mFET | 9-Jul-18 | 4-Oct-18 | 7/16 to 7/18 | 5 minutes |
| 13.5 | T, S, P DO, T | SBE37 MiniDOT | 13-Aug-18 8-Jun-18 | 26-Sep-18 4-Oct-18 | n/a 8/6 to 8/13 | 5 minutes 5 minutes |
| 10.2 | T | SBE56 | 8-Jun-18 | 4-Oct-18 | 8/6 to 8/9 | 1 minute |
| 9.0 | DO, T | MiniDOT | 8-Jun-18 | 4-Oct-18 | 8/6 to 8/13 | 5 minutes |
| 4.0 | T | SBE56 | 8-Jun-18 | 4-Oct-18 | 8/6 to 8/9 | 1 minute |
| 1.0 | DO, T | MiniDOT | 8-Jun-18 | 4-Oct-18 | 8/6 to 8/13 | 5 minutes |
| 0.0 | PAR, T P, T | SME PAR HOBO P | 14-Jun-18 7-Jun-18 | 4-Oct-18 4-Oct-18 | 8/6 to 8/9 8/3 to 8/9 | 1 minute 1 minute |

*deployed 50m away from the kelp mooring