

*[Water Resource Research]*

Supporting Information for

**Hydroclimate variability affects habitat-specific (open water and littoral) lake metabolism**

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Sections 1, 2 and 3.

## Supplemental materials

### Supplemental Material 1



### Figure Supplemental Material 1. Time series of data from Castle Lake (2019) showing the raw (black), outlier free (green), and hourly estimates (red) for dissolved oxygen (a), water temperature at the dissolved oxygen sensor depth (b).

### Gráfico  Descripción generada automáticamenteSupplemental Material 2

### Figure Supplemental Material 2. Daily rates of Gross Primary Production (GPP), Respiration (R), and Net Ecosystem Production (NEP) at the littoral (green) and open water (blue) habitats of Castle Lake for the months of August and September during years with dry (2015), average (2016), and wet (2019) hydroclimatic conditions. Bold lines represent posterior median values (use in this study as daily rates) and shadows represent the 95% of credible intervals for each estimate.

**Supplemental Material 3**

Wind intensity

Daily mean wind intensity differs between years (p > 0.02) (Fig. section 3A). Mean wind intensity in 2015 was 0.62 ± 0.05 m\*s-1, while in 2016 it was 0.42 ± 0.04 m s-1 and in 2019 it was 0.77 ± 0.06 m s-1.

Solar radiation (300-1000 nm)

 Daily mean solar radiation (300 to 1000 nm) was similar in the three years (p > 0.69) (Fig. section 3B). Mean daily solar radiation in 2015 was 1539 ± 35 μmol m-2 s-1, while in 2016 it was 1612 ± 29 μmol m-2 s-1 and in 2019 it was 1617 ± 40 μmol m-2 s-1.

Air Temperature

During the study period daily mean air temperature was similar in the three years (p > 0.33) (Fig. section 3C). Mean air temperature in 2015 was 16.4 ± 0.6°C, while in 2016 it was 16.9 ± 0.6°C and in 2019 it was 16.3 ± 06°C.

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**Figure Supplemental Material 3.** August to September, mean daily wind intensity (A), solar radiation (B), and air temperature (C) in 2015, 2016 and 2019.