

Supplement to Causes and consequences of changing oxygen availability in lakes

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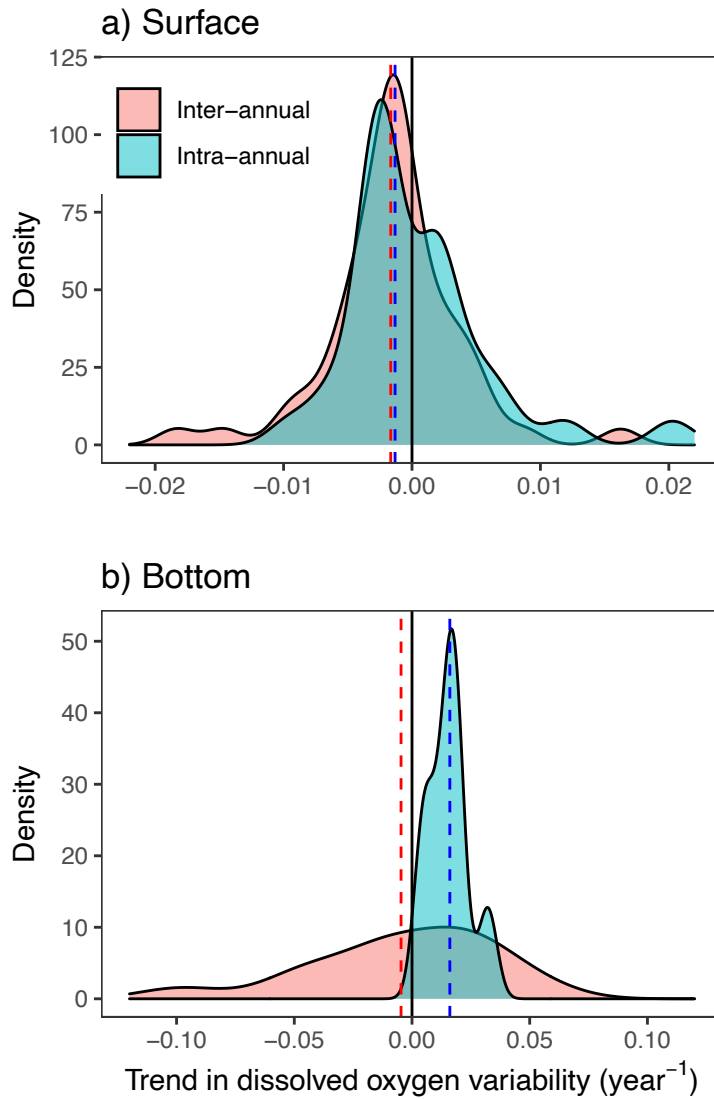
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Supplemental Figure 1. Inter-annual (red) and intra-annual (blue) variability in dissolved oxygen in the surface waters (a) and bottom waters (b), with results restricted to lakes with $n \geq 5$ observations within a year that exhibited significant changes over time (in comparison to Fig. 1 in the main manuscript, which includes lakes with $n \geq 3$ observations within a year). Inter-annual variability was calculated for each lake as the slope of the relationship between the coefficient of variation (CV) of median annual dissolved oxygen over a three-year rolling window vs. year ($n=55$ surface lakes; $n=15$ bottom lakes). Intra-annual variability was calculated as the slope of the relationship between the CV of dissolved oxygen measured within a year vs. year ($n=32$ surface lakes; $n=8$ bottom lakes). As CV is unitless, the resulting inter- and intra-annual variability metrics are presented in units of year^{-1} .



Supplemental Figure 2. Inter-annual (red) and intra-annual (blue) variability in dissolved oxygen in the surface waters (a) and bottom waters (b), with results extended to all lakes with $n \geq 3$ observations within a year (in comparison to Fig. 1 in the main manuscript, which focuses on lakes with $n \geq 3$ observations within a year that exhibited significant ($p < 0.05$) slopes of CV vs. year, following the methods of Jane et al. 2021). Inter-annual variability was calculated for each lake as the slope of the relationship between the coefficient of variation (CV) of median annual dissolved oxygen over a three-year rolling window vs. year ($n = 226$ surface lakes; $n = 76$ bottom lakes). Intra-annual variability was calculated as the slope of the relationship between the CV of dissolved oxygen measured within a year vs. year ($n = 247$ surface lakes; $n = 93$ bottom lakes). As CV is unitless, the resulting inter- and intra-annual variability metrics are presented in units of year^{-1} .

