Supplementary Material
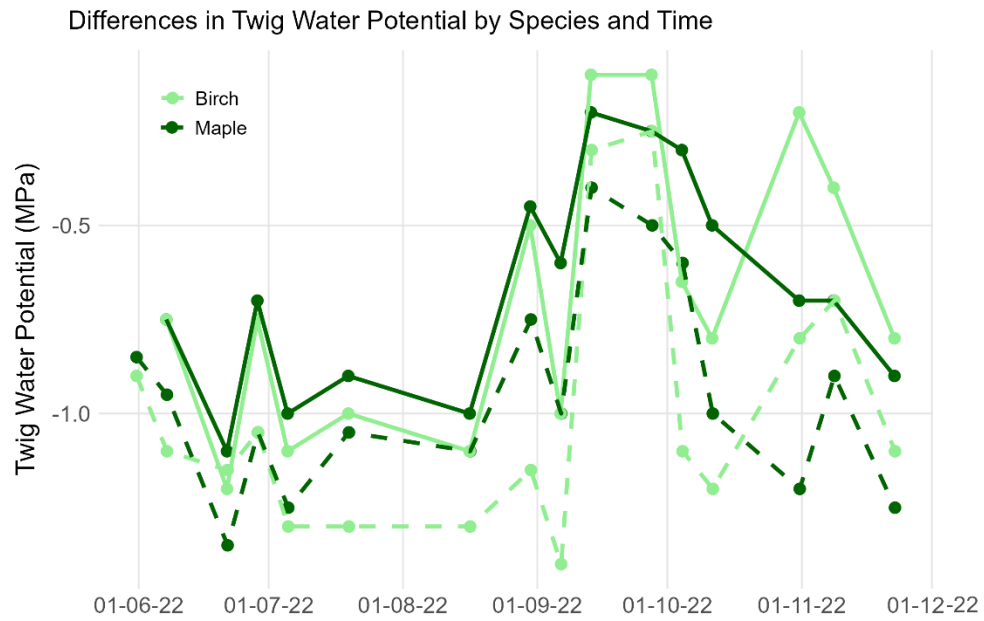
Figure S1: Timeseries of morning (~9:00 am, solid lines) and midday (~12:30 pm, dashed lines) twig water potential of Maple (dark green) and Birch (light green) measured weekly from 31.05.-22.11.2022.

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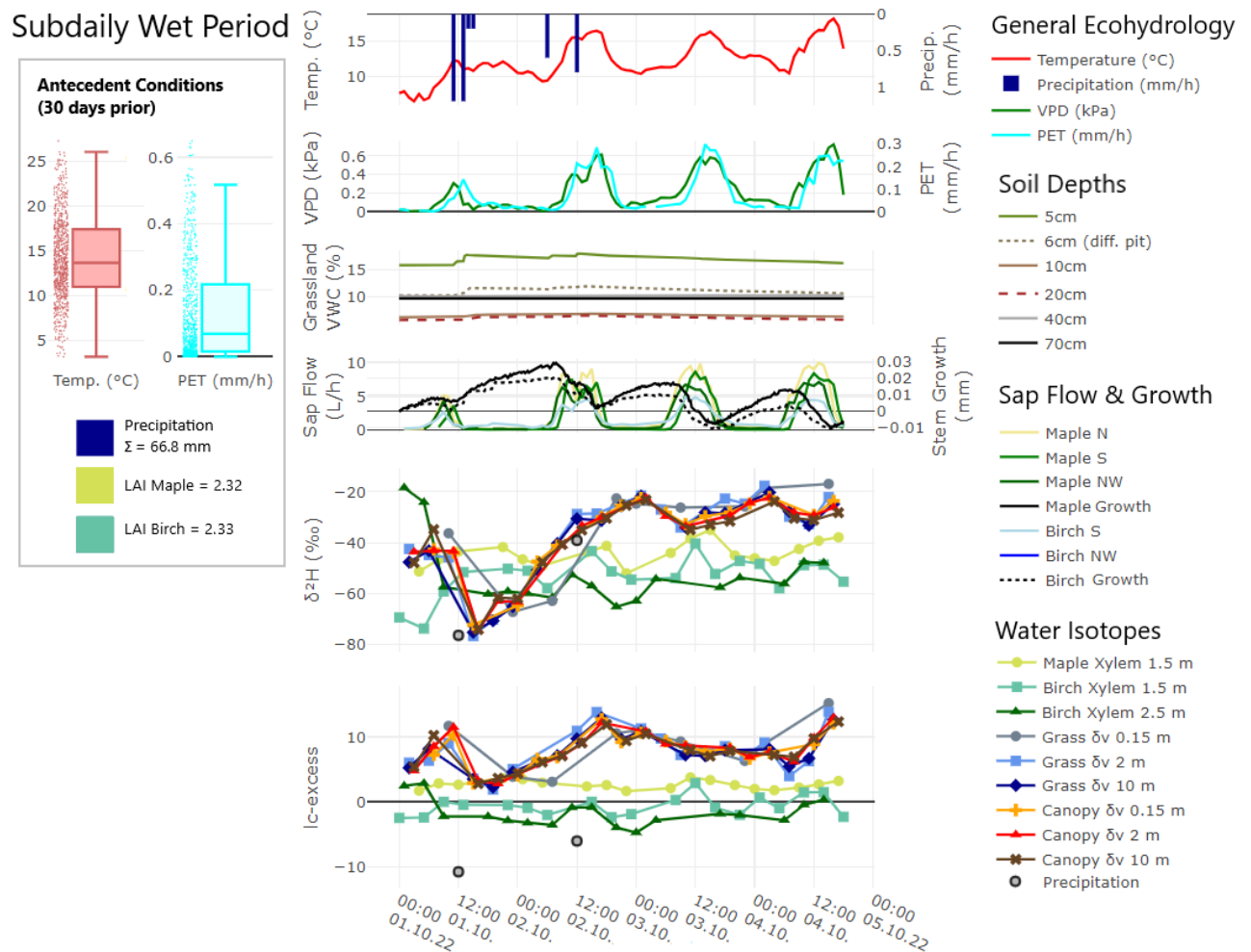
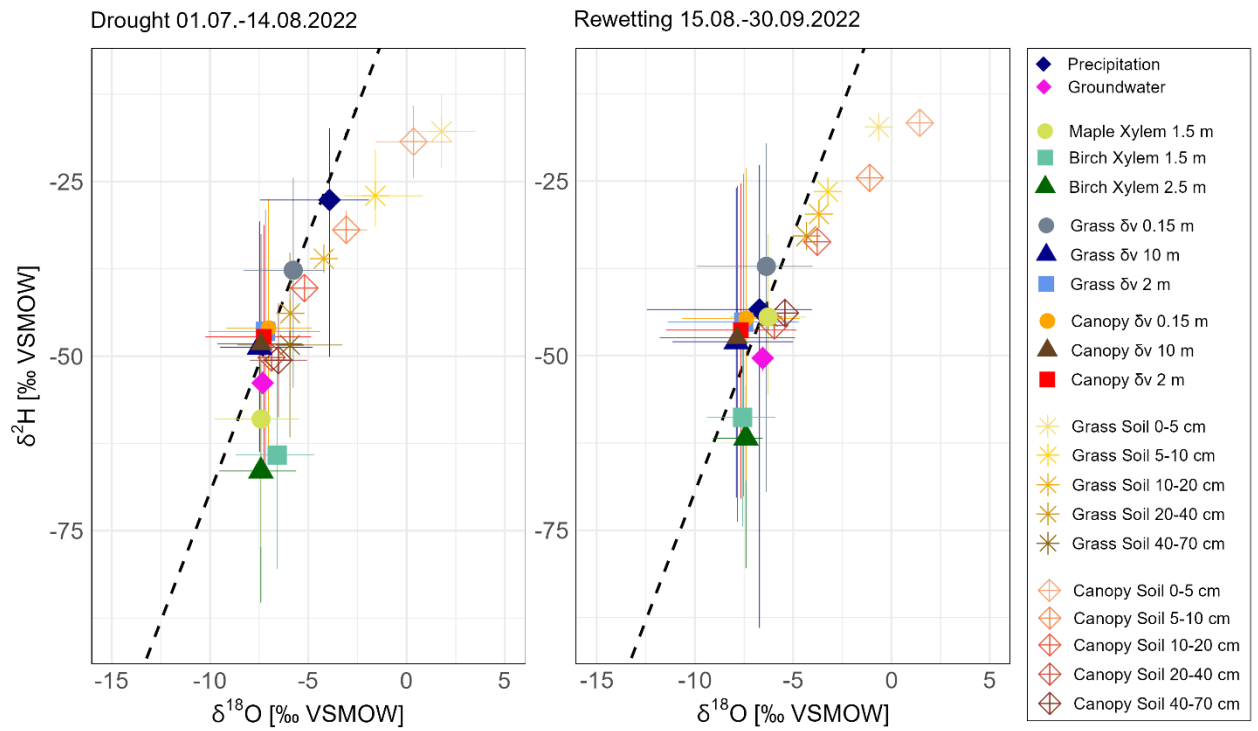

10   **Figure S2: Wet conditions, after completed rewetting: Exemplary sub-daily timeseries displaying diurnal variation of tree xylem water (δ_xyl), atmospheric vapour (δ_v), precipitation water isotopes and measured ecohydrological variables. The top-left box shows antecedent conditions 30 days prior the timeseries: hourly data of temperature and PET, precipitation as 30-day sum and mean LAI of each tree.**

15 **Figure S3: Dual isotope plot of all measured waters (mean with outliers) during drought 01.07.-14.08.2022 and rewetting period 15.08.-30.09.2022. LMWL derived from 2022 precipitation isotopes measured at the study site in Berlin-Friedrichshagen as dashed line.**