**Summer extreme precipitation events drive changes in soil moisture and growth traits in multiple southern Ontario wetland species**

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Forecasted precipitation regimes are characterized by changes in the magnitude and frequency of rainfall, which will impact plant-water interactions in wetland plant communities. While the response of wetland plants to changes in precipitation regimes are typically documented under static precipitation-water table conditions (constant water table), fewer studies have examined the impacts of transient precipitation-water table conditions (fluctuating water table). Here we seek to understand the response of wetland plants to transient conditions by answering two questions: i) Do transient conditions modify soil water availability? ii) Do wetland species exhibit varying growth rates induced by transient conditions? To do this, we established a greenhouse common garden using multiple species (four forbs, two rushes, one grass, and one sedge), applied three watering treatments (control, transient condition, and intense transient condition), and measured soil moisture and growth traits. We found repackaging precipitation into fewer, larger events caused an increase in soil moisture variability and plant growth for five of the eight species; however, this change depended on the magnitude of the event. Transient conditions reduced total biomass in one rush species by 51% and all forb species by 38-50% relative to the control, whereas intense transient conditions had no effect. This decrease was driven by changes in aboveground biomass, belowground biomass, and/or leaf production. Our study shows that summer extreme precipitation events of lower magnitude have negative impacts on plants, while plants grown in larger magnitude events perform similar to natural conditions.