

*Scirpus cyperinus* tissue elemental nutrient concentrations and growth of saplings  
within created wetlands of Virginia

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Abstract

Nutrient (C, N, and P) concentrations within created wetlands can be lower than those in naturally occurring wetlands and may reduce tree growth in wetland mitigation sites. The purpose of this study was to determine the relationship between plant tissue nutrient concentrations in (*Scirpus cyperinus* (L.) Kunth) and annual tree morphometric change among seven species and three planting types. Beside each planted tree, and for 0.25-m<sup>2</sup> clip plots in which *S. cyperinus* was dominant, tissues were collected, dried, and analyzed for %C, TKN and P. Average tissue nutrient content for %C ( $43.26 \pm 1.40$ ), % TKN ( $5.07 \pm 0.88$ ), and %P ( $0.202 \pm 0.026$ ) were generally lower than/similar to/ and-or higher than reported elsewhere, respectively. While P was positively related to herbaceous plant biomass production in sampled plots, none of the tissue nutrient patterns were correlated with tree growth parameters.