Supplement

Oxygen concentrations were measured on two sets of samples, September 3, 2015, and September 24, 2015 (5 sites each). Plots of O₂ concentrations with respect to their associated CO₂ concentrations are shown in Figure 1. Note that the slope of the correlation, -1.36, corresponds to a respiratory ratio (moles CO₂ per mole O₂ consumed) of 0.74. The 1:1 replacement of O₂ with CO₂ is indicated by the dashed line.

Supplement Figure 1. Correlation between vadose zone O₂ concentrations and CO₂ concentrations. The dashed line represents ideal 1:1 replacement of O₂ with CO₂ through aerobic respiration.