Hydrological and water chemistry data were collected at Second Creek, a riparian wetland study site near Aurora, MN, to understand sulfur and methane processes. Data were collected over the summer of 2016. Hydrological data were collected using temperature probes and pressure transducers installed in surface water gauges and shallow piezometers. Water chemistry was analyzed in surface water samples and porewater samples collected with “peepers” (passive diffusive samplers).