

Samuel Blanchard (BA '09/MA '10) Staff Research Associate II –
Sam is working in the Kelly Lab (a collection of graduate students working on projects, some linked some not) under Maggi Kelly in the College of Natural Resources, Department of Environmental Sciences, Policy, and Management. His tasks are to provide technical expertise to the lab in GIS, remote sensing, database development, web based GIS development in all fields of GIScience. Sam is currently the sole researcher on two projects funded by NSF / regional / and state grants. One is called: "Spatial-temporal Dynamics of Coupled Greenhouse Gas and Energy Fluxes in the California Delta" which involves using experimental and modeling approaches to determine the biophysical processes that control coupled fluxes of carbon dioxide, water and methane in a temperate peatland in the Sacramento Delta. The goal is to quantify the land-atmosphere exchange of carbon and water, and integrate these fluxes across a spectrum of time and space through field-based measurements, remote sensing and spatial modeling. Currently this is in the field data collection phase. He will be in charge of the data processing, database development, remote sensing and modeling. Sam's second project has to do with a CITRIS funded grant to develop a historical groundwater quality / quantity / use / location spatial database for the entire state using archival data (digitizing non-digital material) and putting it into a easy to query spatial database linked to a web based GIS application for public use. Currently this is in a pilot phase for a small area and Sam and his colleagues are working on assessing the data available in the archives to do this. He will be also working on smaller pieces of projects such as using Lidar to assess the effect of controlled burn techniques on forest health near Yosemite and also on the Oakmapper project a community web GIS based sudden oak death mapping project for tracking the spread of the disease in the state.