

Surface Flux Trends and Patterns in Western United States

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Abstract. Surface flux towers are located in many different biomes within the United States. These flux measurements provide data related to carbon cycle processes (*e.g.*, primary production, respiration), water vapor (*e.g.*, evapotranspiration), and energy fluxes (*e.g.*, sensible and latent heat fluxes). The data record length varies by location, but many of the flux measurement sites now have 10-15 years of continuous data. We have evaluated temporal and spatial trends in the datasets, focusing on locations within the western U.S. This information is also compared to other variables such as snowpack (timing and duration) and streamflow (annual volume) to determine if coincident trends exist. A physically based interpretation of the trends is also explored and the potential long-term impacts for surrounding environments.