

## Watersheds as Reactors

Terrestrial materials that enter drainage networks can either be exported to terminal basins or removed during transport. The relative balance of these has implications to regional and global biogeochemistry. Both the transfer of terrestrial materials off the landscape and the efficiency of removal during transport are impacted by hydrologic events. Here we will review recent advances in theory addressing the impact of hydrologic events on drainage network fluxes and transformations. We will provide results from both field data from large watersheds and modeling approaches aimed at understanding when watersheds are efficient exporters versus processors of terrestrial materials.