



Characterizing recovery of soil hydrological properties impacted by wildfire

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Accurate characterization of the post-burn recovery of soil properties over time is important for hydrological modeling applications. Yet, this recovery remains not characterized well enough for effective usage as hydrologic model simulation guidelines, for example, by organizations like the NOAA NWS National Water Center for streamflow modeling or like USDA for flash flood modeling. By calibrating a model's soil properties to soil moisture at different short periods of post-fire rain events for an example test case, we attempt to characterize the soil recovery from wildfires as a function of the burn severity, soil properties, hydrologic states like moisture and antecedent rain history post-burn, and ecosystem vegetation type and plant cover density. This work is in line with similar recent work but focuses more on improving predictability for operational hydrologic applications.