2010 AGU Fall Meeting

ID# C14B-03
Location: 3010 (Moscone West)
Time of Presentation: Dec 13 4:30 PM - 4:45 PM

Response of seasonal snow cover to forest disturbance (*Invited*)

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Mountain hydrology is dominated by snow accumulation and ablation, processes which are strongly affected by topography, climate and vegetation cover. Climate change has affected mountain regions of western North America through both direct impacts on the timing and magnitude of snow accumulation and melt, and secondary effects such as increasing natural disturbance in the form of insect infestation and wildfire. Both disturbance types alter forest structure and subsequently affect mass and energy transfers between the atmosphere and the ground surface. These forest structure changes have led to the development of a highly heterogeneous mountain landscape characterized by a mosaic of healthy, disturbed, and regenerating stands. This presentation outlines snow accumulation and melt processes in disturbed (beetle-killed, burned) relative to healthy forest stands, and discusses the implications of increased forest cover heterogeneity following disturbance for watershed-scale snow processes and runoff generation.

Contact Information

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