

ENSC 275 SEMINAR SERIES

CLIMATE CHANGE AND SHIFTING WILDFIRE REGIMES: CONSEQUENCES FOR BIOGEOCHEMICAL CYCLING, HYDROLOGICAL FLUXES, AND WATER QUALITY IN WESTERN NORTH AMERICAN WATERSHEDS



Abstract: Over the last few decades, we have witnessed how climate change and human activities have transformed wildfire behavior—but how are these drivers playing out in the landscapes where we reside? This talk will focus on the changing nature of wildfire and its consequences for ecosystems and watersheds and will be organized around 3 important questions. (1) How have climate change and human activities influenced wildfire regimes in the west? (2) How do changing wildfire regimes influences processes like nutrient cycling, streamflow, and drinking water quality? (3) What does the future hold as fire regimes continue to change; how can research help guide decision-making and planning efforts?



Dr. Erin Hanan

Dr. Erin Hanan is an Associate Professor at the University of Nevada, Reno where she leads the Fire and Dryland Ecosystems Lab. She completed her Ph.D. at UCSB in Ecology, Evolution, and Marine Biology, and was a postdoctoral scholar in Civil and Environmental Engineering at Washington State University.

Her research examines how climate change and land management practices contribute to fire hazard. Equally important, she strives to understand how wildfires influence the ecosystem and watershed processes driving water security. Her research employs a range of tools and techniques, from examining microbial processes in individual soil cores to modeling watersheds and ecoregions. Through this research, she aims to develop cross-scale, integrative approaches for understanding and responding to emerging challenges in fire science.



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