

Springs and Groundwater Monitoring and Modeling of Recent and Long-term Climate Change

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Springs are natural places to monitor the impacts of recent and long-term climate change on recharge and discharge relationships to aquifers. Extensive integrated, comprehensive inventories of the physical, biological, and cultural characteristics of springs ecosystems have only been conducted the past 10 years. Preliminary results of these inventories indicate that springs ecosystems support a rich and diverse assemblage of species across a wide assortment of microhabitats and spheres of discharge. Because so few springs have had continuous monitoring of their physical characteristics, frequently, either groundwater models, or species inventories are used as surrogates to assess the health of springs ecosystems relative to climate change. Models and species inventories/monitoring will continue to serve as cost-effective and practical predictive tools for the response of these ecosystems to climate change and will help guide management and restoration decisions.

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