

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Evaluating the Response of the Pool Level at Devils Hole to Earthquakes

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: University of Colorado Boulder
Effective Dates: 7/15/2013 - 7/31/2015
Funding Amount: \$16,583

Investigators and Agency Representative:

NPS Contact: Paul Christensen, Hydrologist, National Park Service, Water Rights Branch/Water Resources Division, 1201 Oakridge Drive, Suite 250, Fort Collins, CO 80525; 970 225-3527; paul_christensen@nps.gov

Investigator: Shemin Ge, Department of Geological Sciences, University of Colorado, Boulder, CO 80309; 303-492-8323; Ges@colorado.edu

Project Abstract: The NPS funded the creation of a catalog of earthquakes that have produced abrupt water-level changes at Devils Hole through a cooperative agreement with the University of Colorado in 2012. Preliminary results indicate that (1) Devils Hole (in Death Valley NP) appears to be three orders of magnitude more sensitive to volumetric strain than the global dataset; and (2) the collection of higher-frequency water-level data is necessary to verify these results and to submit them for publication in a peer-reviewed scientific journal. The Water Resource Division assisted in the installation of a temporary, high-frequency fluid pressure transducer in Devils Hole in September 2012. The plan is for additional data to be collected at this higher frequency over a period of about 6 months to confirm the preliminary results. This agreement supports the analysis of the additional data and to prepare these results for publication. In addition, a website will be created to allow the public to view the earthquake catalog.

Outcomes with Completion Dates: July 31, 2015

Keywords: University of Colorado Boulder, Devils Hole, Death Valley NP, earthquake, water level