

Rocky Mountains Cooperative Ecosystem Studies Unit
Project Summary

Project Title: Evaluate NPS geohydrology and sustainable groundwater management, including a focus on the Cottonwood / Smoke Tree sub-basin in Joshua Tree National Park

Task Agreement #: P18AC00840 **Modification(s):** 2
Discipline: Interdisciplinary
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Student Participation: Yes
Effective Dates: 5/1/2018 – 9/30/2020
Funding Amount: \$150,000

Investigators and Agency Representative:

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Project Abstract:

Project Goals – Water, in sufficient quantity and quality, is needed to sustain NPS operations, including provision for personnel, visitors, and wild life. Results of the study will support Joshua Tree National Park in the sustainable management of groundwater resources within the Cottonwood developed area. The research approach and findings will be applicable to other basins in western units of the NPS. Assistance with geohydrologic/groundwater investigations at other park units will assist with ongoing projects and provide valuable guidance on the status and sustainability of groundwater resources from the perspectives of potable water supply and water-dependent ecosystems.

Project Objectives – The primary objectives of this project are: (1) Promote the application of physical hydrology and geohydrology information to the conservation, restoration, and management of NPS managed resources; (2) Characterize the geohydrology of the basin-fill aquifer supplying the Cottonwood developed area in Joshua Tree National Park; (3) Develop groundwater assessments and investigations for park units, as requested by NPS and accepted by CSU, to provide additional learning opportunities and resource management alternatives; (4) Provide NPS managers with geohydrologic interpretations in an understandable form that provides necessary information to make decisions regarding water supply for visitors, staff, and preservation of water dependent natural resources.