

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Developing a Wetland Restoration Plan for Death Valley National Park, CA

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/20/2007 - 10/1/2011
Funding Amount: \$106,639 (FY07-\$74,267; FY08-32,372)

Investigators and Agency Representative:

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Project Abstract: The National Park Service, Death Valley National Park, recently completed an Environmental Impact Statement to address the Furnace Creek water collection system. Within the wetland and floodplain statement of findings, alternative 3 is preferred, which calls for the release of water from Travertine Spring collection lines for riparian and wetland restoration purposes. This project addresses the need to analyze the hydrologic conditions of sites where restoration has been proposed, as well as reference areas, to help ensure that the wetland restoration projects designed have the highest possible chance of success. The proposed project would consist of four interrelated components, two of which (#1 and 2) would be completed during the present scope of work, and two of which (3 and 4) would be completed after flows are restored to the Travertine Springs beginning in 2009. Colorado State University's tasks are: (1) hydrologic, geochemical and vegetation analysis of potential restoration areas in the Travertine Springs area prior to the release of additional water, (2) hydrologic, geochemical and vegetation analysis of reference wetlands, (3) hydrologic analysis of potential restoration areas in the Travertine Springs area after release of water from the existing collection lines in 2009, (4) develop a planting and vegetation restoration plan based on a comparison of the hydrology/vegetation relationships in the reference areas, and hydrologic changes in the restoration areas at Travertine Springs in 2009. CSU will also work with NPS staff to configure the water release system to maximize wetland and riparian restoration potential. Parts 1 and 2 above would begin in fall 2007/winter 2008 followed by parts 3 and 4 once in the second phase of this research, once flows begin in 2009. A draft and revised final report would be prepared in December 2008.

The subcontract with Desert Research Institute, University of Nevada, Reno. will include work on the benthic invertebrates of the Travertine/Texas province of springs and wetlands. Surveys will be conducted on a representative set of reference springs that have not been affected by human use. In these springs, physical characteristics of the aquatic environment will be quantified and benthic macroinvertebrates (BMI) will be sampled to determine characteristics of reference communities. This information can be used to identify restoration targets for BMI communities in restoring springs.

Outcomes with Completion Dates:

Annual Report/ - [November 1, 2008]
Annual Report/ - [November 1, 2009]
Draft Report / - [October 1, 2010]
Final Report/Restoration Plan - [December 1, 2010]

Keywords: restoration, hydrology, benthic macroinvertebrates, Death Valley National Park, Colorado State University, Desert Research Institute.