

Project Summary  
Rocky Mountains Cooperative Ecosystem Studies Unit

**Project Title:** Answering Ecological Management Questions for Aquatic Resources in National Parks Using GIS and Remote Sensing Tools

**Discipline:** Natural  
**Type of Project:** Technical Assistance/Education  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Student Involvement:** Yes  
**Effective Dates:** 6/30/2017 - 9/30/2022  
**Funding Amount:** \$97,852

**Investigators and Agency Representative:**

NPS Contact: Tracy A. Ziegler, Ocean and Coastal Resources Branch, National Park Service, 1201 Oakridge Dr. Fort Collin, CO 80525; tracy\_ziegler@nps.gov

Investigator: Daniel W. Baker, Faculty Instructor, Civil & Env Engineering, Colorado State University, 970-491-0261, Dan.baker@colostate.edu

**Project Abstract:** The Water Resources Division (WRD) is one of eight divisions that make up the Natural Resource Stewardship and Science (NRSS) Directorate of the NPS. WRD was established to provide service wide program management and specialized advice and assistance to parks in the protection and management of water resources. The Division is comprised of four branches: Aquatic Systems, Ocean and Coastal Resources, Planning & Information, and Water Rights.

The Ocean and Coastal Resources Branch of the National Park Service Water Resources Division is tasked to, "Discover, map and protect ocean parks" by the 2007 Ocean Park Stewardship Action Plan. The Branch provides technical assistance to coastal parks without access to the specialized skills that this position will provide. Technical assistance requests from ocean and Great Lakes parks typically focus on landscape level analyses of critical resources.

The interdisciplinary nature of this effort requires the programmatic integration of the knowledge of biological and physical resources, digital cartography, and geography for the development, analysis and use of geographic and relational databases that are pertinent to aquatic park resources and themes. GIS and remote sensing will be used to document, analyze and integrate the management of natural and cultural resources in their environmental context or to manage the environment in the context of the resources. Work products will be provided to the public and park staff on NPS Websites and other publications.

**Keywords:**

Colorado State University, National Park Service, aquatic resources, GIS, remote sensing