

## Project Summary

### Rocky Mountains Cooperative Ecosystem Studies Unit

**Project Title:** Clean Water Act Impairments and Use Designations for National Park System Water Resources; Establishing the Status and Trends of Impaired, Threatened, and Outstanding National/State Resource Waters in the National Park System

**Discipline:** Natural  
**Type of Project:** Technical Assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** 9/1/2004 - 9/30/2011  
**Funding Amount:** \$1,291,943 [\$164,600 added in FY08]

**Investigators and Agency Representative:**  
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#### Project Abstract:

This project will continue efforts originally initiated in 2001 by the National Park Service, Water Resources Division to compile several water-quality coverages in ArcGIS format and to summarize Clean Water Act designations and regulatory status for national park waterbodies. The products generated by this effort will include a website, bound reports, and GIS coverages with descriptive, graphical and tabular summaries of: (1) park waterbodies that are currently listed on state 303d water-quality impaired lists; (2) state-designated uses for waterbodies in parks with significant water resources; and (3) parks that have designated Outstanding National Resource Waters by state water quality regulations. To the extent feasible, this project will extract and reformat on a park-specific basis data from existing databases, including individual state Water Quality Standards (WQS) systems and several databases maintained or being developed by the Environmental Protection Agency and the U.S. Geological Survey (e.g. National Hydrography Dataset, STORET, 305b, and 303d). Syntheses of these data will be made to support Government Performance Results Act (GPRA), Vital Signs, and "Scorecard" efforts.

Another vital component needed to achieve this goal is an inventory, conducted with a consistent national protocol, to determine what water quality standards apply to individual parks. Difficulties in answering questions related to water quality standards arise because most of the development and enforcement of water quality standards is conducted by individual states. Common difficulties in assessing water quality monitoring data against standards include what the most current designated use is, what that use (e.g. fish and wildlife) really means, and what site-specific provisions might apply. Another difficulty is that standards, including uses, can and do change over time as states conduct their triennial reviews, or as site-specific issues develop. The completion of this project will enable the Water Resources Division and individual parks to quickly retrieve, through GIS technology, information on what the designated uses and Outstanding National Resource Water status are for park waters.

#### Outcomes with Completion Dates:

This cooperative project will produce a website, hard-copy reports for agency distribution, and digital GIS products

1. Hard-copy reports in final format that:
  - a. Identify and describes 303(d) waterbodies located within park boundaries.
  - b. Identify the cause(s) of impairment
  - c. Identify the schedule for the completion of the TMDL for the waterbodies.
2. ArcGIS coverages containing the water quality standards and impairment information for parks
3. Create and maintain a website with pertinent summary information and other products
4. Ongoing development of NPSTORET, the electronic data deliverable specifications, and other database structures (WQX) for parks, networks, universities, and other groups to enter their data in a STORET compatible format that complies with the "Data Elements for Reporting Water Quality Results of Chemical and Microbiological Analytes"
5. Baseline Water Quality Data Inventory and Analysis Reports documenting and describing water-quality status and trends at the national, network/regional, and/or park levels. These reports will be prepared by CSU staff and students, reviewed by WRD staff, and published in appropriate outlets for public use

**Keywords:** Clean Water Act, impairments, designations, Outstanding Natural Resource Waters, STORET, baseline water quality; NPS-Water Resources Division, Colorado State University