

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Tracking, Assessing, and Understanding National Park System Impaired Water Resources

Discipline: Natural
Type of Project: Technical Assistance/Education
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/30/2011 - 9/30/2014
Funding Amount: \$207,000

Investigators and Agency Representative:

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Project Abstract: This project seeks to enhance the public's understanding of the magnitude and distribution of impaired water resources in the National Park System. National park units are typically regarded as pristine areas generally unaffected by water pollution and other anthropogenic impacts. Previous work has revealed that more than one hundred national park units contain Clean Water Act 303(d)-listed impaired waters. This project builds upon a previous joint cooperative effort between Colorado State University (CSU) and the National Park Service Water Resources Division (WRD) that initiated compiling impairment information to begin to assess the frequency, spatial, and temporal distributions of water resource impairments across the National Park System in order to quantify the number of miles of streams/rivers and acres of lakes, reservoirs, and oceans that are impaired under section 303(d) of the Clean Water Act. The current project will continue that effort by updating the various databases with the latest park boundary, NHD, and impairment data, refining the website, and producing descriptive reports for the public. Additionally, project staff will assist in the deployment of new database systems and schemas to re-start the NPS' water quality data flow from EQuIS (once the NPS distributed STORET data have been migrated to EQuIS) to the EPA's STORET/WQX Data Warehouse.

A number of products will be generated, enhanced, or maintained by this effort including but not limited to an Internet website; publications, reports, and/or theses; GIS datasets; and water quality electronic data deliverable specifications. The latest park boundaries, National Hydrography Dataset updates, and state 2012 Clean Water Act 303(d) lists will be incorporated into extant databases. The website serving hydrographic and impairment statistics to the public will be enhanced with additional capabilities and GIS coverages depicting the spatial locations of impairments. Summary reports will be prepared documenting the magnitude and distribution of water quality impairments in one or more NPS regions. Electronic data deliverable specifications will be developed to help flow water quality data from providers to the NPS and thence to the EPA. Close interaction will be required between NPS and CSU staff during the project to ensure databases are obtained, quality controlled, manipulated, and summarized in published reports and on a website appropriately; and that the water quality electronic data deliverable specification works properly and captures all relevant information. It is anticipated that these will be iterative processes involving extensive consultation, testing, and revision.

Outcomes with Completion Dates: September 30, 2014

Keywords: NPS-Water Resources Division, Colorado State University, public education, impaired waters

