

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Monitoring water quality at Bighorn Canyon NRA

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Montana State University
Effective Dates: 1/15/2010 - 6/31/2011
Funding Amount: \$22,218

Investigators and Agency Representative:

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Project Abstract: GRYN parks began monitoring water quality at fixed monitoring sites as part of the vital-signs monitoring program. The objective for monitoring is to determine the status and long-term trends in water chemistry (major ions and nutrients), conductivity, dissolved oxygen, pH, water temperature and discharge in perennial rivers and streams at fixed stations in all GRYN parks and also in Yellowstone Lake. Water chemistry is critical for interpreting the biotic condition and ecological processes of aquatic resources. Chemical stressors can result in impaired functioning or loss of a sensitive species and a change in community structure. Water chemistry also affects the bioavailability of contaminants and the metabolism of aquatic species.

This project involves monitoring water quality and quantity at 6 river and stream locations 6 times per year, one river location 4 times per year, and 3 spring locations 2 times per year in Bighorn Canyon National Recreation Area following the Standard Operating Procedures approved for the water resource monitoring program.

Outcomes with Completion Dates: Final Report is due **March 31, 2011.**

Keywords: water quality monitoring, Vital Signs Monitoring Program, Bighorn Canyon NR, Montana State University, Greater Yellowstone Network I & M Program