

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Southeast Coast Network Database Program

**Discipline:** Interdisciplinary  
**Type of Project:** Technical Assistance and Education  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** August 1, 2009 - September 30, 2011  
**Funding Amount:** \$113,468

**Investigators and Agency Representative:**

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**Project Abstract:** This task will provide research support for the NPS Inventory and Monitoring Program, Southeast Coast Network (SECN) in the development and implementation of relational databases. Database development will occur primarily in SQL server, following the general design guidelines developed by the National Park Service Inventory and Monitoring program and working within the Network's conceptual object model framework. Database development includes:

- Designing tables, queries, forms and reports in SQL Server, SQL Server Reporting Services and Microsoft InfoPath
- Developing custom queries and applications using Visual Basic/VBA and/or SQL to assist in data querying, analysis and dissemination
- Developing "front-end" applications to facilitate the rapid entry and quality assurance / quality control of monitoring data and to facilitate data querying and reporting for different end-user groups
- Utilizing the Network's SharePoint site (through a combination of SQL Server, SQL Server Reporting Services, and Microsoft Office SharePoint Services) to provide an information portal that assembles and links existing and planned services and provides for most of the Network's data and information distribution requirements.

Ensuring the security of all databases and assisting in the development of quality assurance and quality control procedures will be a significant part of this work but will require substantial input and interaction with NPS personnel. Database security and quality assurance procedures will follow Southeast Coast Network and National Park Service guidance and policies.

Database testing, debugging and documentation will be a significant part of this work but will require substantial input and interaction with NPS personnel (e.g. workflow requirements analysis and end-user input to analysis tools and user-interfaces). This work will include the documentation of all fields and code created, contribution to the development of user manuals and other guidance documents, and the testing and debugging of each database to ensure overall functionality and ease of use. Data that are housed in these relational databases will be managed and analyzed in support of Southeast Coast Network, long-term monitoring protocols.

A separate component of this task is to provide technical support and training in the use of databases developed (please refer to 1 above). Assistance with this project will include database installation support, providing database updates to ensure compatibility with current software versions, the development of training materials in support of database deployment and the review of database upgrade requests to improve overall functionality (post-deployment). In addition, extensive help documentation will be incorporated within each database front-end to facilitate correct and accurate

data entry by SECN and cooperating personnel. Close working relationships with and substantial involvement of Federal staff will be required to successfully complete this task.

The final primary component of this task is the development of detailed user manuals and help files to support users of the SECN database program, including all data entry forms, applications, analysis routines, reports and web services.

**Keywords:** database development, NPS Inventory and Monitoring Program, Southeast Coast Network (SECN), Colorado State University