Vital Signs Conceptual Ecological Models for the Southeast Coast Network

Request for Pre-Proposals and Statement of Work
Summary and Request for Pre-Proposals

The Southeast Coast Network (SECN) must complete the identification and documentation of conceptual ecological models by September 1, 2004. These models will form the framework for the selection and monitoring of ecosystem vital signs (indicators) and must be based on sound ecological principles and experience as well as the resource management issues and ongoing monitoring efforts identified by Park unit resource staff and others. It is the scope of this project to assist the National Park Service Vital Signs team in the process of developing two conceptual models – one for coastal ecosystems, and one for “inland” ecosystems (Figure 1).

NPS and non-NPS expertise will be involved in producing the two models according to the attached timetable, with all park units involved to the greatest extent possible. The concept is to view, where appropriate, the park units in these models as a system in which vital signs monitoring will address regional- and local-scale ecological issues and resource manager needs. Resource manager needs from the different park units have been identified during scoping interviews which will be provided for consideration during ecological model development and documentation.

Overall, this project will involve the development of various synthesis documents and facilitate the input of appropriate specialists in the development of conceptual ecological models for vital signs monitoring in the region. Specific products will include:

- Summary of natural resource management issues based on initial scoping interview data and other information acquired during the performance period,
- Synthesis of resource management issues and preparation of pre-workshop, conceptual ecosystem model background material appropriate to the region and identified management issues,
- Coordination and facilitation of a workshop in which draft conceptual ecological models are reviewed and potential vital signs are identified for use in the SECN vital signs program, and
- Final report that incorporates revisions based on (a) workshop findings, and (b) NPS and non-NPS peer review.

The Southeast Coast Network hopes to develop one or more cooperative agreements to develop the conceptual models and supporting documents listed above. Interested cooperators should submit a Pre-Proposal by Friday, November 14, 2003 that includes the following: a concise description of methods and proposed work schedule for completing objectives above.

Funding decisions will be made in early December to allow cooperators to begin work before the new Calendar Year. Funding of this project is contingent upon receiving expected levels of funding in FY 2004.

All Pre-Proposals should be directed by email to Joe DeVivo at joe_devivo@nps.gov.

For more information contact Joe DeVivo by email or by phone at 404-562-3113 x739.
Inventory and Monitoring Program Background

The National Park Service mission to preserve, protect, and maintain the health of park ecosystems for the enjoyment of future generations, relies on scientific information about the status and trends of ecosystem health. Parks have a critical need to know the condition of natural resources to meet the basic goal of preservation. To address this need, the NPS created a Servicewide Inventory and Monitoring program to complete baseline resource inventories and monitor critical parameters (vital signs) on each park.

To accomplish this, the National Park Service grouped parks into 32 networks, each of which is comprised of parks having similar resources and management issues. The “network approach” provides an opportunity to reduce costs, ensure consistent products, and increase information exchange. The Southeast Coast Network is currently designing an integrated monitoring program to meet the five following goals:

- **Conduct baseline inventories** of natural resources, including geology, biology, water quality, and air quality.
- **Develop a coordinated long-term monitoring program** at the seventeen SECN parks to efficiently and effectively monitor ecosystem status and trends over time at various spatial scales;
- **Develop Decision Support Systems** (including GIS and other tools) to aid park managers in identifying, evaluating, and implementing management options.
- **Integrate inventory and monitoring** programs with park planning, operation and maintenance, visitor protection, and interpretation activities to establish natural resource preservation and protection as an integral part of park management.
- **Cooperate with other federal and state agencies** to share resources, achieve common goals, and avoid unnecessary duplication of effort and expense.

This project seeks to develop two conceptual models of Southeast Coast Network ecosystems upon which to base the selection of long-term monitoring parameters and the design of long-term monitoring protocols.

The Southeast Coast Network

The Southeast Coast Network contains twenty parks, seventeen of which contain significant and diverse natural resources. In total, SECN parks encompass more than 178,000 acres of federally-managed land across North Carolina, South Carolina, Georgia, Alabama, and Florida. The parks also span a wide diversity of cultural missions, including four National Seashores, two National Historic Sites, two National Memorials, seven National Monuments, two national Military Parks, as well as a National Recreation Area, National Battlefield, and Ecological and Historic Preserve. The parks range in size from slightly more than 20 to nearly 60,000 acres, and when considered with non-federal lands jointly managed with SECN parks the Network encompasses more than 242,000 acres.

For information on the Southeast Coast Network of Parks, please see: [http://www.nature.nps.gov/im/units/nw14/](http://www.nature.nps.gov/im/units/nw14/)

Conceptual Modeling Needs

In July 2003, the Network Technical Steering Committee decided to seek the development of two conceptual models for the Network based on similarity (or differences) in resources among the parks (Figure 1). At the same time, a preliminary list of issues that are of interest to the parks was developed.
Figure 1. Desired conceptual models and preliminary list of issues for the Southeast Coast Network.

The conceptual models developed during this project will serve in part as the basis for the selection and prioritization of Vital Signs to be monitored by the Network.

**Expected Milestones & Deadlines**

The Southeast Coast Network is required by Congress to develop its Phase I Vital Signs Monitoring Report by October 1, 2004. The conceptual models and accompanying report(s) will provide information that is critical to the development of this Phase I report. As such, a general timeline has been developed to allow time for National Park Service staff to synthesize findings from multiple Network projects by October 1 (Table 1).

<table>
<thead>
<tr>
<th>Date</th>
<th>Performance Milestone</th>
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<tbody>
<tr>
<td>November 15, 2003</td>
<td>Cooperative Agreement(s) awarded</td>
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<tr>
<td>January 15, 2003</td>
<td>NPS provides Cooperators with draft reports summarizing natural resource issues and potential monitoring questions from scoping interviews conducted with Park staff</td>
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<td>January – May 2004</td>
<td>Draft conceptual model development, planning for scoping workshops, development of attendee list.</td>
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<tr>
<td>May 15, 2004</td>
<td>NPS provides Cooperators with draft reports from other cooperative agreements (Natural Resource Research Summary and GIS Indicator Analysis) for use in preparing for Scoping workshops.</td>
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<tr>
<td>June 2004</td>
<td>Cooperator organizes and facilitates Conceptual Model Review &amp; Vital Sign Selection Workshops</td>
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<tr>
<td>July 2004</td>
<td>Conceptual models and supporting documentation revised and peer reviewed.</td>
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<tr>
<td>August 15, 2004 (firm date)</td>
<td>Final Report submitted to NPS</td>
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**Responsibilities of Cooperating Parties**

1. NPS contribution to the Project (justification of cooperative agreement):
a. Provide substantive input into the development of the project methodology, recognizing that mutual participation is essential to the future success of management recommendations developed pursuant to this research.

b. Provide findings from scoping interviews conducted with staff members at Network parks.

c. Provide draft copies of Natural Resource Summary Reports (being developed through a separate cooperative agreement) to the cooperator for use in developing conceptual models. Information on this separate project can be obtained at http://www.nature.nps.gov/im/units/nw14/Natural_Resource_Research_Summaries.htm.

d. Review, in a timely manner, drafts of deliverables at jointly-agreed upon milestones during the period of performance.

2. Cooperator (to be named) agrees to:

a. Together with the Vital Signs Team, identify and review a list of participants (approximately 25) for the conceptual ecological models workshop and define criteria for participant selection. Along with this, identify an extended list of reviewers who will be asked to examine results of the conceptual models workshop. After lists are approved by NPS, contacts and invitations will be initiated.

b. Synthesize findings to provide review materials for workshop(s) on conceptual models. Key information sources are to include:

   i. Scoping interviews conducted by Network staff.
   ii. Natural Resource Summary reports being developed through a separate cooperative agreement with Clemson University.
   iii. Site visits to SECN parks, where possible.
   iv. Other sources as available.

c. Develop draft conceptual models that incorporate and address key findings identified during scoping interviews and development of Natural Resource Summary reports.

d. Hold and facilitate one to two workshops to gather expert input in the development and refinement of identified conceptual ecological models for the Southeast Coast Network. Workshops will develop documentation to go with illustrated versions of these conceptual models.

e. Synthesize the results of the Concepts Workshop for review by a broader array of NPS and non-NPS individuals.

f. Gather review comments and revise the conceptual model diagrams and documentation.

g. Others as mutually agreed upon by the Southeast Coast Network and the cooperator.