

AMENDMENT #1
TO
COOPERATIVE AGREEMENT 4520-A-0020
BETWEEN THE
NATIONAL PARK SERVICE
AND
UNIVERSITY OF CONNECTICUT

Effective Date: Date of Execution

Thru: March 15, 2002

To provide funding under Cooperative Agreement Number: CA4520-A-0020

Cooperator: University of Connecticut

Project Title: Review of Plant Species Lists and Inventory Completeness

Fiscal Year: 2001

Funding Account: 4525-6661-NII-N-411C-01

Amount Not to Exceed: \$7,200

Proposal: The proposal is attached

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute this amendment the date indicated below:

UNIVERSITY OF CONNECTICUT

Name Joanne Zaneella-Litke

Date 7-24-01

Joanne Zaneella-Litke
Interim Executive Director, Office for Sponsored Programs
University of Connecticut
Office of Sponsored Programs
14 Dog Lane, U-133
Storrs, CT 06229-4133

NATIONAL PARK SERVICE
NORTHEAST REGION

Name Richard J. Armenia

Date 7/13/01

Richard J. Armenia
Contracting Officer
Boston Support Office
15 State Street
Boston, MA 02109

Proposal

REVIEW OF PLANT SPECIES LISTS AND INVENTORY COMPLETENESS (8 Northeast Temperate Parks and 3 Coastal and Barrier Parks)

Introduction

Since the establishment of the National Park Service, natural resource data has been collected by various sources; university scientists, scientists within the parks, state Natural Heritage Programs and organized groups such as state breeding bird atlases, state herpetological atlases and other similar watch groups. Although this biological information exists for many of the parks, much of it has never been compiled and reviewed by the Service. Over the past decade, the National Park Service, has been working to establish what is now called the Inventory and Monitoring Program (I&M program). The principal functions of this program are to gather existing as well as new information about the natural resources in the parks and to make that information easily available at different levels to park resource managers, the scientific community and the public. A basic component of this program has been to create databases that can store an enormous amount of information and at the same time be user friendly and accessible. As part of this program, three such databases have been created; NPSpecies to store information about the existing and historical records of species in each park, NRBIB a bibliographic database to house all existing natural resource publications for each park, and the Dataset Catalog which references park spatial and electronic datasets as well as other "non-literature" information.

Currently, the Northeast Region I&M Program is in the process of hiring qualified people to review the NPSpecies database for parks in the region's I&M Networks. This review will entail correcting any errors, typos, spelling and incorrect Latin or common names, as well as filling in blank fields such as abundance and nativity and possibly providing further documentation and references. The NPSpecies database currently contains data converted from hard copy documents and electronic files. Another part of this review will include determining inventory completeness for each of the parks. This will be done by calculating the percentage of species already documented in the parks based on the species lists now compiled in NPSpecies. A goal of the National Inventory and Monitoring Program is to document at least 90% of all the species existing in the parks.

The proposed scope of work consists of a review of the NPSpecies plant lists for all of the Northeast Temperate Network parks except Acadia and Boston Harbor Islands, as well as three parks from the Coastal and Barrier Network, Fire Island National Seashore, Sagamore Hill National Historic Site and Gateway National Recreation Area. The Northeast Temperate Network, part of the Northeast Region Inventory and Monitoring Program, consists of ten parks located from New Jersey to Maine; Acadia National Park, Morristown National Historical Park, Boston Harbor Islands, Saratoga National Historic Park, Minute Man National Historical Park, Marsh-Billings-Rockefeller National Historic Site, Weir Farm National Historic Site, Saugus Iron Works National Historic Site, Roosevelt-Vanderbilt National Historic Site and Saint-Gaudens National Historic Site. Some of these parks such as Acadia National Park have

had a considerable amount of botanical fieldwork done, and others such as Minute Man are lacking in complete flora lists. This review will include "cleaning up the database" as well as determining the completeness of vascular plant inventory in these parks.

Project Timeframe

Database work to begin by June 2001, and completed by Dec 2001. Final Report due by March 2002.

Objectives

1. Review and revise NPSpecies vascular plant lists for eight Northeast Temperate Parks (Excluding Acadia National Park and Boston Harbor Islands National Recreation Area) and three Coastal and Barrier Network parks.
 - Review vascular plant lists and correct database inaccuracies such as spelling errors, record duplications, common name duplications, negative TSN numbers and typos.
 - Fill in blank fields wherever possible such as park status, abundance, residency, nativity and invasiveness categories, references, and RTE status. (All fields are described in the NPSpecies data dictionary.)
2. Determine the percentage of vascular flora documented for each of the parks.
3. Make recommendations regarding further field investigations necessary to meet the goals of the National Inventory and Monitoring Program.

Description of Work

1. Flora for eight parks in the Northeast Temperate Network (excluding Acadia and Boston Harbor Islands) and three Coastal and Barrier Network parks will be evaluated. The table below lists the number of plant species currently in the NPSpecies database for these parks. Each of these records will be reviewed and revised, and new records added where possible.

Park Name	# Plant Species
Weir Farm NHS	487
Saugus Iron Works NHS	159
Saint-Gaudens NHS	616
Morristown NHP	550
Minute Man NHP	409
Marsh-Billings-Rockefeller NHP	512
Saratoga NHP	914
Roosevelt-Vanderbilt NHS	2106

Fire Island NS	693
Gateway NRA	818
Sagamore Hill NHS	244

2. Revision of the NPSpecies plant lists for the Northeast Temperate Network and Coastal and Barrier Network parks, will rely to a great extent on personal experience and a background in plant taxonomy and ecology. Inaccuracies will be corrected in Latin name, common name, park status, abundance, nativity, cultivation and invasiveness fields. Further data will be added where reference is available. Use will be made of the University of Connecticut's George Safford Torrey Herbarium, Harvard University's Gray Herbarium, BONAP county level data for the Northeast, state and regional floras and other publications and state herbaria as well as consultation with knowledgeable colleagues.
3. Inventory completeness (the Program goal of 90%) will be determined by comparing a "master species list" which will contain a list of vascular plant species expected to exist in a park, with the current list of plants that have actually been documented in that park. The "master species list" will be generated using local flora databases, range maps and expert opinion. The master species list will need to be reviewed carefully in order to eliminate those species that are endemic to specific habitats that do not occur in the park. This will require a familiarity with habitats existing in each park, i.e. wetland types, rock outcroppings, etc... These judgements will be based on expert botanical opinion and familiarity with the flora and habitats of the Northeast.
4. Data gaps and the need for further work will be identified based in part on inventory completeness determined as part of this project, and on analysis of past field methods used in previous botanical studies and accountability as well as expert opinion.
5. Prepare final report describing changes made to the database, including the number of new species records added, a list of documents, databases and collections used during the project to revise the lists. Describe the project's accomplishments and findings as well as description of inventory completeness for these parks, and recommendations for future work to accomplish inventory completeness.

Budget

Staff

Leslie J. Mehrhoff \$4500

15 days @ \$300/day

student assistant 800

Supplies

(telephone, copying, travel,

misc. supplies 700

Subtotal \$6000

Overhead (20%) \$1200

Total

\$7200

Budget justification

Leslie Mehrhoff will use materials available to him (including his personal library, state and regional herbaria, the botanical libraries of the University of Connecticut and Harvard University, the Biota of North America Plant Data Base and his knowledge of the regional flora) to evaluate the existing data bases, make corrections or modifications, to assess the current knowledge of the flora of the 11 Northeast Temperate Parks and Coastal and Barrier Parks and make recommendations for further field investigations. He will do this in consultation with NPS staff (regional and park-based) and other knowledgeable field botanists in the region.

A student will be hired to assist with this project and manage data bases that are being evaluated.

Supplies covers telephone costs, any copying charges incurred by this work, travel to and from meetings or parks to meet with NPS staff or conduct limited field work or observations, and any supplies necessary for this project.

The overhead, as negotiated between the National Park Service and the University of Connecticut Office of Sponsored Programs for our NPS cooperative agreement (FRS 522652) is 20%