

**APPALACHIAN NATIONAL SCENIC TRAIL
SURVEY OF VEGETATION COMMUNITIES AND FLORISTICS OF THE
APPALACHIAN TRAIL CORRIDOR - MASSACHUSETTS**

1. **BACKGROUND**

On Appalachian Trail Park Office (ATPO) lands, the corridor width will be determined by the extent of Trail ownership. On state lands and on those private lands that are permissible to survey, the corridor width will extend to a distance of 500 feet on either side of the footpath, unless the ownership limits are narrower than that range

2. **PURPOSE**

The primary purpose of this contract is to survey and describe the plant community types found within the Appalachian Trail (AT) corridor in Massachusetts. A secondary purpose shall be to list all vascular plant species encountered, document Global Positioning System (GPS) locations for rare, threatened, or endangered species or exemplary plant communities that were identified in the Biological and Ecological Features of the AT corridor in Massachusetts, published in 2000, and finally to document locations of widespread exotic species within the AT corridor in Massachusetts.

3. **SCOPE OF WORK**

Independently and not as an agent of the Government, the Contractor shall provide the National Park Service with all the labor, supplies, materials and facilities (except as provided herein) necessary for all work to survey the vegetation communities and floristics of the Appalachian Trail Corridor in the state of Massachusetts. Specifically the Contractor shall:

A. **Survey and sample all plant communities encountered along the 90-mile long Appalachian Trail corridor in Massachusetts**

- (1) Develop a sampling strategy and pre-select a minimum of 35 observation plots, based on the variety of vegetation types within the Appalachian Trail corridor in Massachusetts. The sampling strategy shall be reviewed by NatureServe. Selection of plots shall be informed by reviewing available information, such as aerial photography and Geographic Information System (GIS) cover data at the Massachusetts Natural Heritage and Endangered Species Program office in Westborough, MA, or at the Natural Resource Conservation Service office in Pittsfield, MA. Plot selection shall also be based on a review of information documented in the 2000 report titled Biological and Ecological Features of the Appalachian Trail Corridor in Massachusetts, prepared by the MA Natural Heritage and Endangered Species Program.

- (2) Sample the variety of plant communities or vegetation types within the Appalachian Trail corridor in Massachusetts, including spruce-fir forest, northern hardwood forest, hardwood-hemlock-white pine forest, rich mesic forest, oak-hickory/heath forest, dry calcareous forest, pitch pine woodland summit, old field, forested floodplain, hardwood-conifer swamp, shrub swamp, cattail marsh, wet meadow, sedge meadow, and forested fen.
- (3) Sample the vegetation within a minimum of 35 observation plots within the Appalachian Trail corridor of Massachusetts.
- (4) Record all vascular plant species that are located within each plot surveyed.
- (5) Sample plant communities observed in the field, as defined and described in the National Vegetation Classification System, which is the standard of the National Park Service vegetation mapping program. NatureServe has developed keys to plant communities that the Contractor shall utilize in the field. Vegetation plots shall be placed off the trail tread and in an area representative of the plant community that is not heavily impacted by exotic plants.
- (6) Use the modified plot form for surveying vegetation communities that was developed by Lesley Sneddon of NatureServe. These forms document information about community structure, such as dominant species, strata, cover percentages, and height class. Additional information documented on the form shall include observations on topography, slope, hydrology, soils, and geologic features. A plot form shall be completed for each plot sampled.
- (7) Sample plant communities according to the methodology of the NPS vegetation mapping program. Sample plots shall range from 20 meters (m) by 20m for forested communities, 10m by 10m for shrub communities, to 5m by 5m minimum for herbaceous/grassland communities. The shape of grassland vegetation community plots can change depending on the structure and density of the grassland vegetation, 25 square meters shall be the smallest size.

- (8) Complete a short GPS checklist on each field day before using the GPS unit, in order to provide consistency in readings. The checklist will be provided by the National Park Service. Sign and date the checklist that shall include recording settings like datum in order to verify that the settings have not changed or returned to default.
- (9) Take and record GPS points for all plots using a GeoExplorer 3 provided by the National Park Service. GPS readings shall be taken according to standards provided in the Product Specifications of the NPS Northeast Region Inventory and Monitoring Program. The NPS will set up the GPS unit and a computer for the Contractor. After taking the GPS readings the Contractor shall download the data from the unit.
- (10) Identify the general locations of the plant community plots on topographic maps.
- (11) Each plot shall be photographed using a digital camera according to standards found in the Product Specifications, prepared by the NPS Northeast Region Inventory and Monitoring Program. Each photo shall be labeled with the plot number.
- (12) Data collected on the plot forms for vegetation communities shall be entered by the Contractor into NatureServe's PLOTS database. The National Park Service will provide the Contractor with a computer that has the PLOTS database loaded onto it.
- (13) Contractor shall produce metadata for the plots data collected.
- (14) The Contractor shall error check a spatial data layer of plot locations and attributes produced by the National Park Service as an assessment of accuracy of the GPS data and attributes data. The data shall be error checked after one week of field sampling to allow for the correction of errors, as well as at the end of the project.

B. **Record all vascular plant species encountered in the Appalachian Trail corridor in Massachusetts**

- (1) Document all native and non-native vascular plant species (excluding cultivated plants) along the 90-mile AT corridor in Massachusetts that are observed within the plots identified in section A, as well as on a general survey within the AT corridor.
- (2) Prepare a floristic list to include all native and exotic (non-native) vascular plant species encountered during the survey. The list shall be supplemented by species information from the 2000 Massachusetts AT Inventory and by information provided by the Massachusetts Natural Heritage and Endangered Species Program, which shall be obtained by the Contractor.
- (3) Record the GPS locations for the most extensive (larger than ½ acre) and problematic exotic species encountered within the AT corridor in Massachusetts. GPS readings shall be taken according to standards provided in the Product Specifications of the NPS Northeast Region Inventory and Monitoring Program. The NPS will set up the GPS unit for the Contractor. After taking the GPS readings the Contractor shall download the data from the unit.
- (4) GPS locations for vascular plant species that are not rare, threatened, or endangered do not need to be provided. However, vascular plant species that the Contractor has not previously recorded within plots or between plots shall be noted.
- (5) A spreadsheet will be provided to the Contractor by the NPS to ensure all necessary information on floristics (both native and exotic) shall be recorded.
- (6) Contractor shall produce metadata for the data collected.
- (7) The Contractor shall error check a spatial data layer of locations and attributes produced by the NPS as an assessment of accuracy of the GPS data and attributes data. The data shall be error checked after one week of field sampling to allow for the correction of errors, as well as at the end of the project.

C. **Document the GPS locations of rare, threatened and endangered species and rare or exemplary communities that were identified in Biological and Ecological Features of the AT corridor in Massachusetts, prepared by the MA Natural Heritage and Endangered Species Program in 2000**

- (1) Record GPS readings according to standards provided in the Product Specifications of the National Park Service Northeast Region Inventory and Monitoring Program. The NPS will set up the GPS unit for the Contractor and will provide the Contractor with a computer so that the Contractor may download the data.
- (2) GPS readings shall be appropriately linked to the species, plant communities, and sites that were identified in Biological and Ecological Features of the Appalachian Trail Corridor in Massachusetts, 2000. When a GPS location is taken, an ID shall also be recorded. Link the data collected to each location in the 2000 report. The NPS will set up the GPS unit to assign an actual ID to each location that is transferred when the locations are downloaded. When the GPS is set up this way, the location ID shall be taken off the GPS unit and recorded onto a field form.
- (3) Contractor shall produce metadata for the data collected.
- (4) The Contractor shall error check a spatial data layer of locations and attributes produced by the National Park Service as an assessment of accuracy of the GPS data and attributes data.

D. **Prepare a Draft Final and Final Massachusetts Inventory Report**

The Draft Final and Final Reports shall consist of:

- (1) A detailed description of vegetation communities of the Appalachian Trail Corridor in Massachusetts and summary information regarding the flora of the Trail corridor.
- (2) Sections on methodology, analysis, results, and discussion.
- (3) Information about the most extensive and problematic exotic species found within the Appalachian Trail corridor in Massachusetts.
- (4) Topographic maps showing the locations of the vegetation plots surveyed.
- (5) The report shall be submitted electronically in MS Word and a paper copy shall be provided to the NPS Appalachian Trail Park Office.

- (6) The Draft Final Report shall be completed by December 15, 2005 and the Final Report shall be completed by February 28, 2006.
- (7) Paper and electronic copies of the Draft Final and Final Reports shall be provided to the NPS Appalachian Trail Park Office. A CD of the Final Report shall also be submitted.

E. **Deliverables**

- (1) A paper copy of each of the plot forms for the plant communities surveyed.
- (2) Data from each of the plots surveyed for vegetation entered into a PLOTS database.
- (3) Biological metadata for the information included in the PLOTS database, with assistance from the National Park Service.
- (4) A data dictionary for data included in the PLOTS database and in the Excel spreadsheet, with assistance from the National Park Service.
- (5) A digital photograph of each of the 35 or more survey plots, with the photo ID identified on the observation plot form or on the appropriate spreadsheet for invasives.
- (6) An Excel spreadsheet with a list of vascular plant species observed outside of the observation plots surveyed, including any extensive or problematic exotic vascular plant species observed with their GPS locations.
- (7) An Excel spreadsheet with GPS locations, location ID, and Element Occurrence Record Number for each of the rare, threatened, and endangered species and rare or exemplary natural communities identified in the Biological and Ecological Features in the Appalachian Trail Corridor in Massachusetts, completed in 2000.
- (8) A paper copy of all deliverables, except for digital photographs, which shall be submitted in electronic format.

F. Product Specifications

- (1) The product specifications mentioned in this contract are contained within the document: Product Specifications, NPS Northeast Region Inventory and Monitoring Program.
- (2) The product specifications previously mentioned in this contract shall be met by the Contractor, with assistance on metadata and the data dictionary provided by the COTR.
- (3) Portions of the Product Specifications that do not apply to this contract include the NPSpecies Database, Geographic Information Systems, voucher specimens, and progress reports. In addition, data prepared under this contract does not need to be submitted in an MS Access database.

4. CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE

The person named below is the Contracting Officer's Technical Representative (COTR):

Kent Schwarzkopf, Natural Resource Specialist
(304) 535-6767

The COTR is responsible for: 1) monitoring the Contractor's technical progress, including the surveillance and assessment of performance and recommending to the Contracting Officer changes in the requirements; 2) interpreting the Scope of Work, 3) performing technical evaluation as required, 4) performing technical inspections and acceptances required by this contract, and 5) assisting the Contracting Officer in the resolution of technical problems encountered during performance.

The Contracting Officer is responsible for and has the sole authority for directing and/or negotiating any changes in the terms, conditions, or amounts cited in the contract. Increases in the Scope of Work shall be approved only by the Contracting Officer.

For guidance from the COTR to the Contractor to be valid, it must: 1) be consistent with the description of work set forth in this contract, 2) not constitute new assignment of work or change to the expressed terms, conditions, or specifications incorporated into this contract, 3) not constitute a basis for an extension to the period of performance or contract delivery schedule, and 4) not constitute a basis for any increase in the total contract value.

5. **REVIEW AND APPROVAL**

The Contracting Officer's Technical Representative will notify the Contractor in writing of approval or rejection of the Final Report and Deliverables, citing any additions, corrections, or suggestions to the work within 20 calendar days. Any additions or corrections shall be completed and returned to the Government within 20 calendar days.

In the event that the Government delays comments beyond the period specified, the Contractor shall be entitled to a day-to-day extension in the final completion date.

6. **TIME FOR COMPLETION**

All field work shall be completed by October 31, 2005. A Draft Final Report and other Deliverables shall be completed by December 15, 2005. All Final Reports and Deliverables shall be submitted by February 28, 2006.

7. **GOVERNMENT-FURNISHED PROPERTY**

The Contractor shall be responsible for the security and protection of Government-Furnished-Property provided to the Contractor in connection with this contract. (See FAR 52.245-2) (DEC 1989). Specifically, the Government will supply:

- A. GPS Checklist
- B. GPS Unit already set up
- C. Laptop Computer

The Nature Conservancy will provide the following software program:

- D. PLOTS Database

8. **LOSS OR DAMAGE**

If due to fault, neglect, dishonesty of the Contractor, his agency or employees, loss or damage to Government property is incurred during the performance of this contract, the Contractor shall be responsible for the same. The Government, at its option, may in lieu of repayment, require the Contractor to replace at his own expenses, all property as directed by the Contracting Officer.

9. **TRAVEL**

The Contractor shall be responsible for any travel required in performing the work outlined in the Scope of Work.

10. **RIGHTS IN DATA**

All material first produced in the performance of this contract shall be the sole property of the Government. The Contractor shall not publish or produce such material in whole or in part, in any manner, or form, nor authorize others to do so, without the written consent of the Contracting Officer.

11. **GENERAL LIABILITY INSURANCE**

The Contractor shall be responsible for securing general liability insurance which will protect the Government from any claims, or litigation connected with any injury or damage resulting from his/her (and all subcontractors) actions while working under this contract, and further agrees to save and hold harmless the Government, its agents and employees, from any and all claims, damages, suits at law or equity of whatever kind of nature for damages to or loss of property or injury or death to persons resulting directly or indirectly from or attributable to the Contractor in connection with this contract.

12. **INVOICE REQUIREMENTS**

Invoices shall be submitted in an original to the National Park Service, Office of Programs and Budget, P.O. Box 50, 230 Zachary Taylor Street, Harpers Ferry, West Virginia 25425. To constitute a proper invoice, the invoice shall include the following information:

- A. Name and address of the Contractor;
- B. Taxpayer Identification Number;
- C. Invoice date;
- D. Contract Number or other authorization for supplies delivered or services performed (including order number and contract line item number);
- E. Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed;
- F. Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading; Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment);

- G. Name and address of Contractor Official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment);
- H. Name (where practicable), title, phone number, and mailing address of person to be notified in event of a defective invoice; and
- I. Any other information or documentation required by other requirements of the contract (such as evidence of shipment).

13. **PAYMENT DUE DATE**

Payments under this contract will be made by Electronic Transfer on the 30th calendar day after the latter of:

- A. The date of actual receipt of a proper invoice in the office designated to receive the invoice. **(NOTE: THE GOVERNMENT WILL NOT TAKE RESPONSIBILITY FOR INVOICES MAILED OR HAND-CARRIED TO ANY OTHER ADDRESS),** or,
- B. The date the supplies or services are accepted by the Government.

The National Park Service has entered into an agreement with the Treasury to make electronically paid remittance information available via the Internet to vendors through a system called Payment Advice Internet Delivery (PAID). PAID is available at NO cost.

You can register on-line at <http://fms.treas.gov/paid>. Three payment delivery options are available: (1) web access only; (2) web access and e-mail notification when you receive a payment; and (3) web access and e-mail delivery of remittance information. Once registered, vendors can access their remittance information by keying in a unique User ID and Password and querying the database. Banking information is not a part of PAID. Data should be available within 24 hours of the date of payment. It is retained for two months from the date of payment.

14. **PROMPT PAYMENT ACT**

A. The Prompt Payment Act, Public Law 97-177 (96 Stat. 85, 31 USC 1801), amended by Public Law 100-496, is applicable to payments under this contract and is hereby incorporated by reference. The full text, FAR 52.232-25 (MAR 1994), is available upon request.

NOTE: Paragraph a(6)(i) of the Prompt Payment Clause which states constructive acceptance will occur on the 7th day is hereby changed to read as follows:

"For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 30th day after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities."

B. Determination of interest due will be made in accordance with the provisions herein.

PURCHASE ORDER TERMS AND CONDITIONS
SUPPLY CLAUSES - OVER \$2,500.00
HFC-2005-004

CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (FEB 98)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address:

<http://www.arnet.gov>

<u>FAR CLAUSE</u>	<u>TITLE</u>	<u>DATE OF CLAUSE</u>
52.202-1	Definitions	JUL 04
52.203-3	Gratuities	APR 84
52.203-5	Covenant Against Contingent Fees	APR 84
52.203-6	Restrictions on Subcontractor Sales to the Government	JUL 95
52.203-7	Anti-Kickback Procedures	JUL 95
52.204-6	Data Universal Numbering System (DUNS) Number	OCT 03
52.204-7	Central Contractor Registration	OCT 03
52.213-4	Terms and Conditions - Simplified Acquisitions (Other Than Commercial Items)	OCT 04
52.219-6	Notice of Total Small Business Set-Aside	JUN 03
52.222-3	Convict Labor	JUN 03
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	SEP 00
52.222-20	Walsh-Healy Public Contracts Act	DEC 96
52.222-21	Prohibition of Segregated Facilities	FEB 99
52.222-25	Affirmative Action Compliance	APR 84
52.222-26	Equal Opportunity	APR 02
52.222-35	Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 01
52.222-36	Affirmative Action for Workers with Disabilities	JUN 98
52.222-37	Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 01
52.223-6	Drug-Free Workplace	MAY 01
52.225-1	Buy American Act - Supplies	JUN 03
52.232-1	Payments	APR 84
52.232-8	Discounts for Prompt Payment	FEB 02
52.232-11	Extras	APR 84
52.232-25	Prompt Payment	OCT 03
52.232-33	Payment by Electronic Funds Transfer - Central Contractor Registration	OCT 03

FAR CLAUSETITLEDATE OF CLAUSE

52.233-1	Disputes	JUL 02
52.233-3	Protest After Award	AUG 96
52.243-1	Changes - Fixed-Price	AUG 87
52.245-4	Government-Furnished Property (Short Form)	JUN 03
52.246-2	Inspection of Supplies - Fixed-Price	AUG 96
52.246-16	Responsibility for Supplies	APR 84
52.247-29	F.O.B. Origin	JUN 88
52.247-34	F.O.B. Destination	NOV 91
52.249-1	Termination For Convenience of the Government (Fixed-Price) (Short Form)	APR 84

01/04/2005