RESOURCE MANAGEMENT PLAN

SARATOGA NATIONAL HISTORICAL

PARK

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* These are not included as part of the Resources Management Plan but are referenced in the Plan. Copies of these documents are available at the Park.

1. INTRODUCTION

The Resource Management Plan for Saratoga National Historical Park, Stillwater, New York describes the resources preserved within the Park as well as the active or potential activities for managing those resources. Research initiatives, baseline studies, and manipulative and protective techniques are integrated into a comprehensive resources management program.

This Park represents a particularly rich blend of significant cultural and natural resources. The landscape of Saratoga was a unique setting for an 18th century battlefield and may be the only one of its kind in Europe or North America preserved within a Park boundary (Snow 1977).

Both Park legislation and planning documents establish the basic principles and objectives for management of the Park resources. The Park's enabling legislation, the Act of June 1, 1938, states that the Park "is hereby, established, dedicated, and set apart as a public Park for the benefit and inspiration of the people..."

The Statement for Management for Saratoga National Historical Park (October 1988) describes the Park's significance as derived from the decisive role the area played in the American Revolutionary War and, more specifically, the British Campaign of 1777. In describing the resources within the Park, the Statement emphasizes the management of the cultural resource as paramount. Natural resources, in some situations, must be managed in the overall context of the cultural Park.

Significant cultural resources include the Freeman Farm and the Barber Farm fields where the two battles occurred as well as several other 18th century, 19th century, and 20th century sites. The restored John Neilson House and the restored Philip Schuyler House and the Saratoga Monument are the most prominent structures. Portions of the Champlain Canal remain nearly intact. Many other smaller commemorative monuments remain to mark significant points. Important objects now in the museum collection include nine original cannons surrendered by General John Burgoyne as well as representative pieces of equipment excavated during several archaeological studies over the years. The relatively unspoiled landscape now being managed for historic accuracy allows the story to be portrayed as well or better than any other Revolutionary War site in the National Park System.

A background of the natural resources include the bedrock geology of the Saratoga Region; composed of primarily limestones, shales, slates, and sandstones, with quartzites and anorhtositic rocks to the north. The Park occurs within the transition zone between the Oak-Chestnut region and the Hemlock-White Pine-Northern Hardwoods Region of the eastern deciduous forest. The sequence of the Park's land acquisition has produced a mosaic of old field, shrubland, and

forest communities. Animal species present are typical for the region and include the white-tailed deer, eastern coyote, eastern wild turkey, eastern meadowlark, northern harrier, snapping turtle, american toad, short-tailed shrew, and meadow vole. Air quality can be categorized as good, with little direct influence from any industrial pollution (aside from acid rain); and ozone levels fall for the most part within Federal Standards. Surrounding land is primarily rural/agricultural, and provides an aesthetically pleasing viewshed from most overlooks and bluffs in the Park.

The preservation of the Park's cultural resources and the cultural landscape are the two primary resource management objectives. The natural resources management objectives are directed to biodiversity, restoration of mature forests, and the conservation of plant and wildlife populations. Where manipulation is required to fulfill cultural resource objectives, natural resource objectives may become ancillary. For example, the findings of the research project on white-tailed deer and vegetation interactions show that there is no ecological conflict between deer and vegetation at Saratoga. Deer are, however, impacting the Park's vegetation, slowing succession, and may be slowing the restoration of the historic scene.

II. PRESENT RESOURCE STATUS

A. NATURAL RESOURCE BASELINE INFORMATION

This overview describes present baseline information for the important natural resources. Levels of completeness of baseline data are based upon the draft Standards for Natural Resources Inventory and Monitoring for Level of Effort #1.

A potential tool for storing and analyzing baseline information on these resources is the Park Geographic Information System (GIS).

1. Vegetation

Basic inventories for vascular plants (including rare taxa) have been completed at the Park and representative plants are stored in the Park's herbarium. A floristic inventory conducted from 1987-90 revealed a diverse array of over 500 species, including three New York State rare plants.

Maps delineating Park vegetation types are stored in the Park GIS. Source information is old (1981) and needs to be updated. Further information on community structure, frequency, density, and land cover history needs to be researched. These baseline data do not meet Level I efforts.

In summary, the Park will soon have adequate information to be able to develop a Cultural Landscape Management Plan and deer management recommendations. Individual investigations for rare plants and understanding the ecology of gray dogwood (Cornus racemosa) in the Park may still be inadequate. Such data do not meet Level I efforts.

Fire

The Park has collected enough baseline data to create management burn prescriptions and develop an approved Fire Management Plan (revised annually since 1988). The Fire Management Program is designed to restore and preserve the historic landscape by burning historic fields and vistas. Due to the dynamic nature of the effects of fire on the vegetative resource, data gathering and analysis will continue to be an integral part of fire management. To summarize, the Park meets Level I data baseline for fire management (burns and suppression). Most of these data have been collected through quantitative vegetation sampling both before and after a burn.

Threatened, Endangered, and Rare Plant Species

The Park has located and identified three NY State rare plants (*Lycopodium complanatum*, *Agrimonia rostellata*, and *Sisyrinchium mucronatum*). The Park also has at least two other plants that are state and or global heritage ranked plants that need further study. These plants are: *Panicum oligosanthes* and *Elocharis obtusa*. The Park must have complete species distribution maps and management plans to protect these species. In summary, more work is needed to ensure the preservation of these special resources, as current information does not meet Level I standards.

Exotic Plant Species

An exotic plant inventory of the historic fields was initiated in FY88. Data gathered confirmed that most of historic fields are infested with non-native plants. Spotted knapweed and other non-native species outcompete native species, disrupt the accurate presentation of the historic scene, and should be eradicated according to NPS Policies (National Park Service 1988).

To summarize, baseline data for exotic plants are almost complete, but information does not yet meet Level I of completeness.

2. Animal Species

Species occurrence lists for mammals, birds, and some aquatic invertebrates have been established that (for the majority) meet Level I parameters. Unusual or extraordinary event records for animals in this historical Park are limited. There are wildlife occurrence cards but these have not been organized and recorded. A fish inventory has not been completed. Baseline data on most vertebrate species (other than presence/absence data) do not meet Level 1 criteria at this time.

The white-tailed deer population was studied from 1985-1989. The baseline data for this species exceeds Level 1 requirements.

Habitat and habitat association maps have not been developed for existing natural resource data but are scheduled for development in a GIS format.

The Resource Protection division has complete case incident reports on hunting (deer) infractions in the Park. The Park has access to data from the white-tailed deer research that provide deer harvest data from adjacent lands.

In summary, the status of baseline animal inventory do not meet Level I efforts (ie fish, invertebrates, songbirds). Monitoring efforts and animal distribution data do not meet Level I. Storage and analysis of these data are also not assured without support for the Park's GIS.

a. Integrated Pest Management (IPM)

The Park staff monitors the gypsy moth population level annually in cooperation with the U.S. Forest Service. Enough data exists to be analyzed for trends.

Another IPM project is very site specific for the insect infestations at the Philip Schuyler House. Data and monitoring schemes have been expertly developed for this historic structure. In summary, IPM baseline data meet Level I efforts.

b. Public Health and Safety

A major concern in this area has centered around the potential infestation of deer ticks and Lyme disease in the upper Hudson River Valley area. Small and large mammal studies (which included checking for ticks) as well as field surveys for ticks with Dr. Howard Ginsberg of Rutgers CPSU, did not find any deer ticks (as of 1987-88). No ticks have been found to this date. According to recent New York State reports, the spread of Lyme disease (and the deer tick) has been progressing up the Hudson Valley toward the Park. A follow-up field survey is in order. Data do not meet Level I efforts.

3. Aquatic Resources

Basic water quality measurements for some streams (and canal) of the battlefield have been recorded since 1987. These measurements (collected with in-Park equipment) include pH, conductivity, dissolved oxygen, temperature, and salinity. Other chemical and bacterial analyses (fecal coliform, nitrate, total phosphorous, lead, and Polychlorinated Biphenyls (PCB)) were completed by an EPA-certified lab in the Albany, NY in 1987-88 for Park stream samples. Some stream bio-assessment has been completed, but not extensively throughout the Park. Water quality (chemical) data meet Level I efforts, but the biological baseline data do not.

Wetland inventories have not been systematically conducted. Most wetland plant and animal species have been identified, but wetland surveys are lacking. General floodplain delineations are recorded from aerial photos and data are stored in the GIS.

All streams have been classified according to order, however, watershed maps still need to be developed. Basic weather data is recorded daily as part of the fire weather system and these data contain events that may assist in water resource monitoring.

In summary, baseline data for the water resource does not meet Level I efforts.

4. Air Resources

Weather variables (max-mins of temp, RH, precipitation, wind, and fire-related variables) are monitored and recorded daily by Park staff. Ozone levels are monitored and recorded daily in the Park by the NY State Environmental Conservation Office through a cooperative agreement. Ozone levels have exceeded the federal acceptable range four times since this station was established during the summer of 1988. All of these unacceptable day ranges occurred during hot, stagnant periods of summer.

The Park has collected photo point data for the past 14 years which depicts visual quality for those particular days. The Park also has had research completed as part of a bi-regional study on the impact of ozone on quaking aspen MILKWEED!!! and also the impacts of necrosis on white pine species. These data suggest that air quality may be causing some problems with vegetation.

In summary, the Park does not meet baseline standards for Level I efforts. There are still many questions to be answered on this regional (if not global) topic.

5. Geologic Resources

The generalized bedrock geology of the Park is primarily composed of sedimentary rock dating from 440 to 505 million years ago. Ordovician-age material such as limestones, sandstones, shales, and slates predominate Saratoga and surrounding areas. No sensitive or significant geologic features have been identified in the Park.

One feature at Saratoga unique to this area is a deeply eroded shale gorge in the southern portion of the Park named "Devil's Hollow". Depths of the gorge range from 5 to approximately 80 feet, where an intermittent stream cascades over occasional waterfalls. No research has been conducted on the geology of this feature.

Baseline geologic data meet Level I standards.

6. Aesthetic Resources

The Park's three units provide scenic settings for passive and recreational pursuits such as hiking, biking, bird-watching, and picnicking. The battlefield located on the high bluffs above the Hudson River provides views of the valley with its farmlands and forests reaching off to the Green Mountains of Vermont. The carefully landscaped grounds of the Schuyler House draw many users even when the site is closed. The grounds of the Saratoga Monument provide the nearby residents with another Park-like setting in Schuylerville.

No data exist on Park aesthetic resources (does not meet Level I standards).

B. NATURAL RESOURCES

The topography and vegetation played an important role in the battles of Saratoga. The interaction of the cultural with the natural resources becomes particularly apparent here at Saratoga and has implications for both programs.

This section is an overview of the significant natural resources and gives an assessment of the general condition of these resources. The framework for this section is based on the generic resource categories from the draft NPS-77, Natural Resource Management Guideline. Any internal or external threats are also mentioned as part of the assessment of resource condition.

Additional information on specific natural resources and natural resource management programs in the Park can be found either in:

- specific Action Plans (see list in Table of Contents),

- Park-specific research reports (see Natural Resource Bibliography).

1. Vegetation

The vegetation of the historic/cultural landscape is the Park's primary natural feature.

Historic Landscape Vegetation

The configuration of fields and forest at Saratoga is modelled after the Park Historic Base Map (Snell 1951). This Map was reviewed in 1989 and found to be lacking information and accuracy. Plans are being made to have the Map re-drawn. Areas of the current Base Map interpreted to be accurate will incorporated in the upcoming management planning process. GIS viewshed analysis will be used to prioritize these areas of Saratoga's Landscape for future management implementation. Landscape/Vegetation management will coincide with research efforts to determine effects of management on the resource.

Interaction of Deer with Historic Landscape Vegetation

The State University of New York (SUNY) at Syracuse submitted a Final Report entitled "Deer and Vegetation Interactions on Saratoga National Historical Park" on October 1989. Research has found no ecological conflict between deer and vegetation at SNHP. Deer are, however, impacting old field and understory vegetation in those areas which were forest in 1777. Browsing is slowing the succession of woody plant species. Until the Park clearly defines a time schedule to obtain the desired "approximate configuration of fields, woodland, ...and other elements existing just prior to the battle of Oct. 7, 1777" (Gray 1988), at this time, deer are not directly conflicting with Historic Landscape Vegetation objectives.

Threatened, Endangered, and Rare Plant Species

The condition of known special status plant species and their habitat is currently adequate. However, there is a need for more extensive research and species zone delineation to protect these plants.

Exotic Species

Due to the exotic plant species dominance in historic fields, the condition of the native natural resource does not meet acceptable conditions set forth by NPS policy regarding exotics.

There are periodic infestations of the gypsy moth which threaten woody species. In the early 1980's large infestations occurred and defoliated several trees (in some locations). An outbreak was projected for 1990, but the population apparently collapsed (most likely succumbed to a fungus). To date, moth populations have not caused direct (or indirect) mortality, but may have affected the condition of some individual trees. Overall, the condition of the

vegetation has not been adversely affected by the gypsy moth.

Dutch Elm Disease has affected many elm (Ulmus sp.) in the Park. A majority of the mature elms are stressed or dead . Often trees do not live to maturity.

2. Animal Species

The white-tailed deer herd currently dominates the management considerations for wildlife resources. Animal-vehicle collisions and damage complaints are management's main concerns. Physical condition of adult deer in the Park are similar to deer in eastern New York, while fawns and yearlings are smaller on the average (Underwood et al. 1989). This and other data typify a deer population nearing ecological carrying capacity. With the frequent, severe winters that occur in this region, the deer population is not predicted to erupt or overshoot ecological carrying capacity (Underwood et al. 1989)

Hunting and trapping of wildlife are not permitted in the Park. Due to the surrounding habitat similarities, there is seasonal migration and dispersal of wildlife (especially deer) into and out of the Park. This relates to the occasional encroachment by hunters and illegally shooting deer. The extent of this activity is largely unknown. The Park does attempt to enforce present NPS policies and regulations which prohibit hunting and trapping.

Lyme disease has not been isolated in the Saratoga Region or the Park (as of 1987-88). Other wildlife related diseases such as raccoon nematode and canine distemper have been isolated in some larger mammals. Only a few individual animals have been affected, demonstrating no threat of epidemic proportions.

At the present time, the Park does not know of any rare, endangered, or threatened animal species that live in or near the Park boundary.
A noted increase in the observations of wild turkey, eastern coyote, and beaver may indicate local populations to be growing. Turkey monitoring data (gobble count) have not been analyzed to project population trends.

Overall, the animal resources (as populations) are currently under no serious threat (with the possible exception of vertebrates and invertebrates associated with the PCB-laden Hudson River bed along the Park Boundary). The condition of the animal resource is similar to the Park's surrounding lands and of this region

3. Aquatic Resources

A potentially major impact to Park aquatic resources is posed by the PCB-laden Hudson River which borders the northeastern boundary of the Park. State of New York research has shown that overall water quality of this stretch of river would be acceptable for contact recreation and fishing if not for the PCB's that are attached to river sediment. Contaminated sediment is often disturbed by seasonal flooding, where water levels exceed the banks and flow onto the floodplain. Impacts of such action to the food chain of aquatic and terrestrial communities of the Park are unknown. Ongoing investigations of fish in the river by the state show that PCB's accumulate in the fatty tissues of most fish species, reptiles, and in vascular tissues of some aquatic plants. The state has closed this stretch of river to all recreational activities except boating.
Recent state-proposed dredging of the river was met with local opposition. State plans for further research or cleanup are unknown.

The Park sampled the sediment of the streams that empty into the Hudson River for PCB's in 1987. The first and second order streams have only traces of PCB's (which is normal). The remaining stretches of Park streams have been consistently monitored by staff since 1987, and surface water quality for the basic parameters (mentioned above) are well within the acceptable state range for these type classifications of surface water. This type of monitoring will continue; data gathered will be compiled and statistically analyzed with the assistance of NPS Water Resources Division-Denver.

Because of the small streams in the Park, recreation is limited to fishing. Limits, sizes, and seasons are regulated by the State Department of Environmental Conservation.

4. Air Resources

The current condition of Park air quality is listed as acceptable. Saratoga is a Class 2 air quality area defined by the Clean Air Act, as amended, 1977. The impact of pollutants from sources in the neighboring Saratoga Springs area, or other distant sources, on cultural or natural resources is unknown. Although acid deposition research being conducted in the nearby Adirondack Mountains suggests that natural resources may be affected by highly acidic precipitation, it is not felt that results obtained there are directly transferrable to the Saratoga N.H.P. Therefore, the effect of any acidic deposition on Park monuments and statues or on the Park's streams and waterways is unknown at this time.

5. Geologic Resources

No human-caused geologic disturbance has occurred in the Park since the late 1940's, when surface sand mining was active on what is now Park land. Vegetation occupies the abandoned site today, demonstrating no apparent threat to the site from mining.

Small land-slides (up to 1/4 acre) have taken place in water drainages throughout the Park. Clayey-based soils retain large amounts of water in the spring and occasionally shift 5-10 feet down the hillside. Such slides appear inherent in the nature of the soil and should not be considered a threat.

6. Aesthetic Resources

The preservation of the historic scene is a primary natural resource objective. Viewshed protection for lands outside the Park boundary has also been identified in the Statement for Management as an important facet of historic scene preservation. Development from nearby cites and communities is a genuine threat to the rural viewshed that the Park now enjoys. The stately grove of Black Locust trees that surround the Schuyler House are reaching the end of their life span and a decision needs to be made as to whether the trees are replaced in kind.

The condition of this resource is currently listed as "Good."

C. CULTURAL RESOURCE BASELINE INFORMATION

The status of the planning documents is that they are all current and approved except two. The Interpretive Prospectus while approved is not current and requires major revision. The General Management Plan has been scheduled but has been moved back in priority repeatedly.

Servicewide inventories, lists, catalogs, and registers status is that Cultural Resources Bibliography is current; Cultural Sites Inventory needs to be set up in authorized format; List Of Classified Structures is nearly current with two numbers needing to be assigned; National Catalog submissions are made on schedule; and National Register nomination needs to be completed in updated format.

Basic cultural resource documents status is that not all categories are needed. Those that are needed are at least begun in some format. The Battlefield Unit historic base map needs to be updated. A draft Schuyler House landscape plan needs to be edited and published. Scope Of Collections statement is reviewed and revised each year as required.

Special resource studies and plans status is that Collections Management Plan is to be initiated in FY 90. Historic Structures Report for Saratoga Monument is initiated in fy 90 and in progress. HSRs for both historic houses are current. Historic Furnishings Reports for both historic houses are current. Visitor Center exhibit plan is current.

D. CULTURAL RESOURCES

1. Sites

The current status is that the Archeological Overview is not completed, but the draft lists 20 Amerind sites, 14 Revolutionary War period sites, and 42 nineteenth and twentieth century domestic sites. Most of those listed are within the authorized boundary. Many sites have never been identified and surveyed. None of them have undergone what might be called exhaustive research. Those that have been studied have site reports or at least test reports on file at the Park office. Those that have been excavated have not all been backfilled and stabilized. A few are interpreted in some manner for the public. Significance levels, whether contributing or non-contributing, have not been formally assigned to any sites. Overall condition and status of impacts has not been formally assessed.

Amerind sites have never been a priority for any management action. Limited information suggests that some may exhibit Woodland period characteristics. The condition of each one individually is not fully known. As a group there is no reason to believe that there are crisis problems with them. All of them must be assumed to have been disturbed more or less severely. If Amerind artifacts are found in a particular historic field, agricultural use of that field is restricted to activities that do not disturb the sub-surface.

Revolutionary War sites have been the focus and the priority for management actions in the past. As a group their existence represents the main resource and reason for the creation of the Park. As a group, they have undergone the most professional study. There are both domestic and military sites included. As many as 25 sites are associated with the Philip Schuyler business operation at Schuylerville. Their condition in general is disturbed with no above ground features available to interpret.

The British Army camp and fortified lines in Victory Mills have suffered major vandalism. The Taylor site has been excavated twice, and is interpreted with a wayside exhibit. The Great Redoubt area sites, including the hospital and ordinance park, have been disturbed, vandalized over the years, tested for evidence, and are now interpreted with wayside exhibits. The Fraser burial site has been disturbed and studied at least twice without yielding significant information.

The Burgoyne headquarters area has been severely disturbed by agricultural activity and sand mining. It is interpreted with wayside exhibits. The British 21st Regiment campsite and fortified line was relatively undisturbed. When it was studied, it yielded significant evidence after which the site was stabilized pending further action. The Breymann Redoubt had been disturbed by

agricultural activity and has been the subject of research. It is now interpreted with exhibits. The Canadian cabin sites were disturbed by agricultural activity. One was studied with minimal evidence recovered, while the location of the other is uncertain.

The McBride farm site has probably been disturbed by agricultural activity and the precise location is undetermined. The Freeman farm - Balcarres Redoubt site - has been disturbed by agricultural activity. It has undergone several studies with enough evidence recovered to establish the outline of the fortification even though the house site was not precisely located. The area is now a main interpretive point.

The Barber (or probably Waiser) farm site has been severely disturbed by agricultural activity and may be lost. The Chatfield farm site is another that was severely damaged by agricultural activity and may never be located. The American fortified line at Bemis Heights has been disturbed by agricultural activity, but several specific site studies at the north redan, the south redan, at gun emplacements, and other sites have recovered enough information to approximately define the line and allow it to be interpreted.

The Gates Headquarters site had been disturbed by agricultural activity. It was recently located, excavated, and then backfilled. The Bemis Tavern site has not been precisely located, nor studied but has no doubt been disturbed. The American water battery sites have doubtless been severely disturbed by agriculture and floods. No professional studies have been done to determine precise location and recover evidence.

Nineteenth and twentieth century sites are in the same status as the prehistoric sites: they have never been a priority for management actions. Significance level as contributing or non-contributing has not been assigned. Field identification and survey has not been carried out. The individual condition of and impacts on these sites is undocumented and unknown. It may be assumed, however that as a group their condition is disturbed and damaged.

2. Structures

The status is that all 28 structures are inventoried, listed on the List of Classified Structures, and actively monitored and managed in some manner. No formal assessment of significance contributing or non contributing has been provided by any office. No formal condition or impact assessment has been done on the smaller monuments. Historic structures reports have been completed for the two houses and the Saratoga Monument. One structure, a mid-19th century farm house, burned since NPS assumed management of the property. Scheduled maintenance is performed routinely on the major structures. Major exterior work was done on the largest monument a few years ago. LCS numbers appear in parentheses.

The restored John Neilson House (01289) built in 1775, is a one story, one room, wood frame farm house building on a stone foundation. The exterior walls are clapboard. The roof is wood shingled gable style. The six foot wide fieldstone fireplace is on the east wall. The roof shingles were replaced recently. Painting is done periodically. Minor repairs are performed as needed. The burglar and fire alarm system was upgraded in 1990 but there is no fire suppression system, a significant failure since the structure is isolated and could be inaccessible in the winter.

The restored Philip Schuyler House (01290) was erected in November, 1777 by General Schuyler following the surrender of Burgoyne's army nearby. It stands on or near the site of his former ca. 1765 home that Burgoyne had burned. The roof was replaced a few years ago. Painting is done as needed. Minor repairs are performed routinely. Major problems exist with moisture at the kitchen wall, the foundations, and in the basement. These conditions are being monitored. Extensive documented correspondence and site visits by professional staff has continued for years about these problems. Discussions are in progress to take further action and repair.

The British Woods fortification (06554) is a below ground 260 foot section of the main fortified line behind which the 21st Regiment made camp in 1777. The feature was discovered during archeological research in 1974 and stabilized at that time pending future development. It may represent the only good example of this fortification type in the Park. The evidence included disturbed earth patterns, wooden fragments, and other artifacts. The structure had been stabilized with sand when the research and excavation was done more than 15 years ago. Routine surface monitoring is performed. No visible changes are apparent or have been observed for some time.

The Saratoga Monument (23055), begun in 1877 and completed in 1883, was erected to commemorate the American victory of 1777. Architect Jared Markham combined Gothic and Egyptian elements of design in the 155 foot stone structure. Exterior features include three bronze statues of American generals Gates, Morgan, and Schuyler.

The famous vacant niche would have included Arnold had he not dishonored himself. Interior features include 16 mounted bronze plaques on two levels depicting scenes from the campaign of 1777 and stained glass window panes on the first floor windows. The central iron staircase ascends through the structure to the top with 199 steps. Five landings above the first floor include mosaic floor designs. The staircase continues to the observation deck at the pinnacle. Four windows there permit a view in each direction. The structure is now closed to the public because of unsafe conditions. Exterior rehab repointing was done a few years ago. Interior moisture problems have been monitored and found to be a major problem causing rusting metal and spalling masonry. A comprehensive engineering survey is underway in 1990 to assess the condition of the monument. An historic structure report is also being prepared. The engineering study will lead to a recommended rehabilitation report.

The Champlain Canal (23056) built in the early 1820's extends along and through the eastern section of the Park. Some of the canal has been obliterated by more recent structures. Several dressed stone retaining walls and overpass abutments remain. The canal prism measures an average 42' wide by 5.6' deep. Some sections retain water. Brush clearing along the towpath has been done. The ditch leaks at times when beaver dam the water. Documentation available is less than satisfactory. Significance as to contributing or non contributing status has not been formally assigned. Stone work and ditch condition has not been formally assessed. Major impacts assessment is also not formally documented.

The Gannon House (06555) built in the mid to late 19th century, was a Colonial two-story frame and clapboard country farm house that included a later two-story addition totalling 11 rooms. It had a full basement, 4 chimneys and 1 fireplace. It was occupied as staff housing for part of the time between 1938 when the Federal Park was authorized and when burned in 1979. Damage to the structure was so severe that it was razed in 1980.

The restored Schuyler House privy (23054) was erected at an unknown date and is believed to have been one of several serving the home at different times. It is a one story frame clapboard construction building 8' x 8' with wood shingle roof and two rooms, each with its own exterior door. Documentation is very poor for the structure. Major rehab was performed in 1987-1988 including foundation, siding, and interior work.

There are 21 relatively small field monuments. These are stone, usually granite, with incised inscriptions or with bronze plaques. They are in good condition, but the impact of acid rain and other air-borne pollutants on them is not known.

3. Museum Collections

The status is that the collection objects are in standard specimen cabinets in the Visitor Center basement, the Park Ranger office, in the library, and at the RPI lab in Troy. No assessment of significance has been conducted by any office as to contributing or non-contributing status. The Scope of Collections Statement restricts collection objects to those having a direct bearing on the Burgoyne Campaign of 1777 and closely associated themes. The Accession book lists 250 accessions dating from Park authorization in 1938. The collection includes 3772 registered objects in the accession book with an estimated half not fully cataloged. An estimated 51,000 objects have not been accessioned to even basic registration status.

A Collection Management Study is underway in 1990. The Automated National Catalog System is being implemented. The accession book only has been entered to date. Many objects should never have been accepted, and the transfer and clearinghouse process has not been used to transfer non-relevant objects. Much of the cataloging done to date is substandard without enough information provided to know much about the object. Until quite recently, formal accession folders were nonexistent. Many accession folders hold little or no documentation. There is no curator on the staff and only a seasonal museum technician. Collections management has been on hold. In general the whole collection process has been neglected or let slide for other priorities for a long time. Current professional condition assessment and impact assessment of the collection is not available. The immense backlog of record keeping is distressing.

The archeological collection is by far the largest and includes the largest backlog of registration and cataloging for an estimated 50,000 objects. Most of these are from recent field studies at the Woodworth site, the Old Woods site, the Taylor site, and the Schuyler House complex. Object condition has not been formally assessed. Some objects at the RPI lab have not yet been cleaned and processed. All of those above have not been accessioned or registered yet. Human remains issues have only recently been dealt with and resolved with a reburial vault at the Visitor Center. The rate of acquisition has far outdistanced the rate of cataloging over the last three years. In fact formal accessioning has not yet been done.

The history collection numbers about 700 objects and includes a good variety of representative material, much extraneous material outside the Scope of Collections that should be transferred, and several reproduction pieces. Nine original surrendered trophy cannons are included. No formal condition or impact assessment is available. Some textiles need more effective storage. All objects have been at least registered, but many are not satisfactorily cataloged. The rate of cataloging has not kept pace with the rate

of accessioning over the last three years. Registration is current, but cataloging is not. Storage space in the collection room has reached a limit with room for no more specimen cabinets. Additional space will become available when the Park Headquarters office is relocated in the fall of 1990.

The archives collection includes the Neilson collection of a few letters and many receipts; the Schuyler collection of receipts, and a few ledgers, the Slingerland collection of correspondence, and other letters, documents, maps, engravings, prints, plans, photographs, books, pamphlets, films, and memorabilia for about 1000 total objects. About half of the material has never been accessioned. Of the other half, all have been registered, but less than half have been fully cataloged. Condition and impact assessments are not available. All objects are available for research use in the library. The rate of cataloging has kept up with what has been accessioned over the last three years. Collections acquired earlier have never been accessioned, registered, or cataloged.

The biology collection is newly collected within the last few years with the addition of a staff biologist. About 500 specimens of Park flora and fauna are now included. Collecting and processing of these objects is generally to a high standard having been done recently by a trained professional. Storage is done in appropriate specimen cabinets at the Park Ranger office. Objects are readily available for and have been used effectively for exhibit. All objects are inventoried, but none have been formally accessioned, registered, cataloged, or entered on ANCS. Condition and impact assessment documentation is not available. The rate of cataloging has not at all kept pace with the rate of collection over the last three years.

4. Cultural Landscapes

The status of the landscape is that no formal assessment of landscape significance has been conducted. Formal assessment of condition and impacts has not been done. A documented historical base map of the Battlefield Unit is available but needs to be evaluated because of new research into German records. No cultural landscape plan is available. The landscape of the unit approximates the scene of October, 1777 the date to which the scene is being restored. Vegetation types and field sizes are similar. Internally the scene is less than an accurately presentation of the historical story. Externally, the scene is threatened on every horizon with developments and pollutants.

A proposed development on Willard Mountain to the east is the most recent example of a viewscape threat. At the Schuyler House Unit landscape management is only recently being dealt with seriously. No historical base map or cultural landscape plan is available. At the Saratoga Monument Unit historic landscape is not the goal. At the Victory Woods tract historic landscape may not be the goal. No landscape significance, condition, or impacts documentation assessments or documentation is available for these units.

E. CULTURAL CONTEXT/THEME

The importance of the Battle of Saratoga was understood by historians long before the National Park Service began managing the Battlefield, Since assuming responsibility for the site, the Service has prepared more than 100 cultural resource studies to document and evaluate the Park's resources. The few deficiencies in the Park's knowledge base are represented in this plan's project statements.

National Register documentation for Saratoga NHP needs revision into current format. List of Classified Structures lists 26 structures and monuments.

The Park represents the following themes as listed in History and Prehistory in the National Park System and the National Historic Landmarks Program - 1987:

Theme I - Cultural Developments: Indigenous American Populations
- B. Post-Archaic and Pre-Contact Developments
  - 14. Hunters and Gatherers of the Eastern Woodland - contains scattered, small sites.

Theme IV - American Revolution
- C. War in the North - contains two battlefields, earthworks, roads, structures, and a collection of late 18th century domestic and military artifacts.

Theme XIV - Transportation
- C. Canals - contains several sections of canal.

III. NATURAL RESOURCE MANAGEMENT PROGRAM

A. OVERVIEW OF CURRENT PROGRAMS AND NEEDS

As gathered from the Introduction, some natural and cultural resource objectives are inextricably linked. For example, a cultural landscape is portrayed by existing natural resource conditions. Therefore both natural and cultural resource management need to cooperatively work toward such crucial objectives.

Cultural landscapes and the use of GIS should go hand in hand. GIS has been demonstrated to be an invaluable tool not just for monitoring, but analysis and management as well. Current information is outdated and **much more** development is needed for the system to be useful. Lack of basic data exists for all resource types listed below, not to mention the gaps in cultural resource data as well.

One of the major threats to natural resource management is gross lack of data. This is driven by limited capabilities arising from personnel and funding constraints. As listed in Table 1, only 1.2 FTE is allocated to natural resources, with the remaining personnel devoted to primarily cultural resources. Very little is devoted to monitoring 3000 acres of natural resources (see Table 2). The Park's GIS also is solely administered by the resource management specialist. To utilize the potential of GIS is of within itself a full FTE. Surprisingly, **less than one percent** of the Park's FTE is allocated to natural resources management. Funding constraints are similar. With such constraints, only a fraction of what is needed can be accomplished. Without an increase in personnel and funding, the threat continues.

1. Vegetation

Historical data suggest some present-day fields were forested in 1777, thus depicting flaws in the portrayal (or loss) of the cultural landscape. In 1984, the Park was concerned that the deer population was impacting the revegetation of historic forest areas. Results from recent research demonstrate no current ecological conflict between deer and vegetation. Yet deer browsing is found to be slowing the succession of most woody species in some old fields. The Park needs to begin a long-term planning process for future deer and vegetation management (see N-002 and Table #2 and Programming Sheet #1 for additional information on this project).

Preserving the cultural landscape through research and vegetation management is the common factor for Project Statements N-003, N-004, N-009, N-010, and N-012. As an overview, these statements range from the gathering of baseline data for GIS use to the implementation of prescribed fire maintenance for historic fields and vistas (N-003) (see also Saratoga Fire Management Plan 1990),

to the investigation of gray dogwood (Cornus racemosa) ecology in the succession of old fields (N-004). Project Statements N-009 and N-010 call for the inventory and monitoring of rare plants and the development of a management program for exotic flora. All of the these management actions support primary Park resource objectives. As mentioned above, results of the latest research with the Park's Historic Base Map demonstrated that further research is needed to have the map redrawn.

2. Animal Species

As stated above, the white-tailed deer is the vertebrate species of primary concern. A great deal of information has been disseminated, yet no polices or plans have been initiated. Long-term monitoring of browsing impacts and deer population trends are essential to keep basic information up to date. Plan development is the means through which much of this can be implemented. The deer management plan needs to be integrated with a vegetation (landscape) management plan, due to the interaction between the resources.

Lack of basic data on other vertebrates and invertebrates is pronounced. Information on fish, most birds and mammals, and insects is scarce or non-existent.

For example, several sparrows listed by the state as "Species of Special Concern" occupy fields in the Park. Mowing these fields, as a Cultural Landscape maintenance tool, may have a severe impact on these birds. Timing of such management implementation may be crucial to Park biodiversity. Research and inventory and monitoring projects for many animal species are crucial to meet Park natural resource objectives.

As discussed in Section II, Lyme disease is a major safety concern in this region. A field survey is essential to update the information on the progress of the deer tick, to determine if it is present in the Park and, if so, are they carriers of Lyme. Such a survey is essential to provide information to the staff and general public.

3. Aquatic Resources

Biological inventories of aquatic invertebrates and fish species are needed. Wetland and floodplain inventories (and delineation) are also lacking. Both of these lack the baseline data needed to understand the system in which they occur. Ongoing water monitoring of streams will continue, and data gathered will be analyzed and included in a report.

4. Air Resources

Cooperation with the state-run ozone monitoring station should be

continued, as it is the sole source of data for monitoring air quality. In an effort to understand acid precipitation in this area, the Park will initiate a precipitation monitoring program. Along with weather variables that are currently monitored, Ph of the precipitation will be included.

5. Geologic Resources

Research is needed to determine if a protection plan is needed for the gorge in Devil's Hollow. If the feature is determined to be sensitive or in need of protection, then such a plan can be implemented.

6. Aesthetic Resources

A landscape plan for the Schuyler House needs to be done so that a decision may be made on tree replacement as the Black Locust grove dies out.

Overall, personnel and funding constraints often present a threat against meeting natural resource objectives. Park base funding cannot provide what is needed. Funding from fee revenues have been used in the past, and hopefully can be used in the future. Yet many activities listed continue to go unfunded.

B. NATURAL RESOURCE PROJECT STATEMENTS

SARA N-001 PROVIDE ADDITIONAL SUPPORT STAFF

SARA N-002 DEVELOP WHITE-TAILED DEER MANAGEMENT PLAN

SARA N-003 DETERMINE EFFECTIVE MANAGEMENT REGIME OF HISTORIC FIELDS AND VISTAS

SARA N-004 INVESTIGATE GRAY DOGWOOD (Cornus racemosa) ECOLOGY

SARA N-005 AUTOMATED METEOROLOGICAL MONITORING IN SUPPORT OF NATURAL AND CULTURAL RESOURCES MANAGEMENT AT SARATOGA NATIONAL HISTORICAL PARK

SARA N-006 INVENTORY AND MONITOR PARK WETLANDS

SARA N-007 INVENTORY AND MONITOR NATIVE FAUNA/FLORA

SARA N-007.1 INVENTORY STATE AND FEDERALLY-LISTED GRASSLAND BIRDS

SARA N-007.2 VEGETATION MONITORING AT SARATOGA NATIONAL HISTORICAL PARK.

SARA N-007.3 WHITE-TAILED DEER POPULATION MONITORING AT SARATOGA NATIONAL HISTORICAL PARK.

SARA N-007.4 INVENTORY AND MONITOR STATE RARE PLANTS

SARA N-008 INVESTIGATE FREQUENCY AND PERCENT COVER FOR THE EXOTIC FLORA IN HISTORIC FIELDS

SARA N-009 SURVEY PARK FOR THE DEER TICK (Ixodes dammini)

SARA N-010 UPDATE GIS DATABASE AND CORRECT DATA DEFICIENCIES

SARA N-011 DEVELOP PARK GIS REGIONAL TECHNICAL SUPPORT CENTER

SARA N-012 MAINTAIN HISTORIC FIELDS

SARA N-013 PROTECT NATURAL RESOURCES THROUGH LAW ENFORCEMENT

SARA N-001 **PROVIDE ADDITIONAL SUPPORT STAFF**

SERVICEWIDE ISSUE:
N24 - INSUFFICIENT PROFESSIONAL STAFF
N20 - LACK OF BASIC DATA
N08 - LOSS OF CULTURAL LANDSCAPE

PROBLEM STATEMENT:

In 1986, the park gained it's first biologist position. The duties of the Resource Management Specialist (RMS) included responsibility of **all** natural resource matters and some cultural matters when the two overlapped. One seasonal position was hired in 1988 for the duration of the summer. Little work was accomplished because the administrative demands of the natural resource management program consumed staff time.

Since 1989, additional responsibilities were added to the RMS position, with no gain in the Division budget or FTE allotment. New technology allowed the park to purchase a Geographic Information System (GIS), an invaluable tool to any land management agency. Secondly, the new prescribed fire management program demanded a monitoring protocol to determine if fire effects are indeed meeting program objectives. A unfortunate drawback, however, was the incursion of two major responsibilities without the needed money and FTE. This, in combination with the growing administrative demand of NPS standards and guidelines (reports, plans, compliance, etc.) placed an incredible burden on the sole RMS.

A park Natural Resource Management Needs Assessment was conducted by NARO in 1991. Analysis found that only 4 percent of the park's base and 2.5% of the park's FTE was spent for natural resource monitoring/management. The primary recommendation of the assessment was to increase park the natural resource management allotment to 2 FTE, and hire additional seasonal support as demand dictates. Other recommendations include the specific allocation of base funds for supplies, travel, training, etc. to the natural resource program.

Although park management fully supports the assessment's recommendations, current park resources (park base $, FTE) cannot support NARO recommendations.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The recommended action is simple. Increase the park base and FTE allotment to implement the SARA Natural Resource Management Needs Assessment recommendations. A new position description has been completed to incorporate an additional FTE. The new GS-5/7 position includes program responsibilities (IPM, Agricultural Leasing) and inventory and monitoring programs to rectify noted

deficiencies and reduce the current RMS workload. Monies would provide for the salary of the new biologist and a seasonal technician, and fund recurring natural resource program activities (ie. monitoring).

FTE: 1.5 Cost: 35.0

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS: This project statement affects all RMP project statements; directly or indirectly.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA N-002 **DEVELOP WHITE-TAILED DEER MANAGEMENT PLAN**

SERVICEWIDE ISSUE: N08 - LOSS OF CULTURAL LANDSCAPE
N01 - DEGRADATION OF RESOURCES DUE TO SPECIES OVERPOPULATION

PROBLEM STATEMENT:

The ecosystem which encompasses the Saratoga Battlefield supports a large population of white-tailed deer (Odocoileus virginianus). Research completed by investigators from the State University of New York in 1990 evaluated deer and vegetation interactions. The major management issues include:

1. Deer browsing is slowing the successional development of forest vegetation, thereby affecting implementation of long-term objectives of cultural landscape management.

2. Crop damage complaints from farmers and landowners adjacent to the Park.

3. Animal-vehicle collisions.

Field investigations of the interaction of white-tailed deer and vegetation are completed. A revision of the final report is due in the fall of 1990.

The Park has not actively managed the herd to date. Limited impact on the migratory portion of the population may result from hunting on adjacent lands. Saratoga needs to develop a long-term deer management plan that includes a monitoring program of browsing impacts. The planning process must take into consideration all factors relating to the deer population on and off Park lands. Such an all-encompassing plan is essential for Parks with deer management concerns in the eastern United States.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

It is recommended that a meeting be convened in the spring of 1991 to discuss the range of deer management options, the risks involved with each option, and the ramifications that can be expected to arise from the individual options. This discussion must follow a clear presentation of management objectives relating to Park vegetation and cultural landscape. Monitoring and long-term management should be discussed. Priority areas for management should be defined.

Attendees would include Park management staff, research personnel, and NARO Science, Cultural Landscapes, and Planning offices. The attendees at this meeting would also decide if a mediation effort would be needed to present the deer management decision to the public and other interested groups (NY State DEC, Park neighbors).

Potential meeting funding sources include NRPP funding as well as regional science and resource management monitoring funds and the Park entrance fee fund.

Pertinent literature collection and distribution for panel participants would be gathered by the Park resource management staff. Costs associated with this task would be absorbed through ONPS.

FTE: 0 Cost: 6.0

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact

RELATIONSHIPS:

This project statement is related to the following other project statements;
"N-004 "Investigate gray dogwood (Cornus racemosa) ecology,"
N-007.2, "Vegetation monitoring at Saratoga National Historical Park".

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA N-003 **DETERMINE EFFECTIVE MANAGEMENT REGIME OF HISTORIC FIELDS AND VISTAS**

SERVICEWIDE ISSUE: N05 - NON-NATIVE PLANTS
N08 - LOSS OF CULTURAL LANDSCAPE

PROBLEM STATEMENT:

Saratoga's Statement for Management cites cultural landscape restoration and preservation as a primary resource management objective. Investigations of the 1777 landscape have determined that the park was a mosaic of fields and forests. To maintain landscape objectives, cyclic mowing of fields is a major park management operation and the primary field maintenance management procedure. Prescribed fire as a maintenance tool remains the secondary management technique.

Little is known about the effects of fire or mowing on field flora and fauna species in the Northeastern U.S. While data for field-related fauna is limited, the park has been sampling field vegetation since 1988.

With the assistance of a botanist, park staff have conducted an inventory of vegetation in park fields. Results indicate that most fields are dominated by non-native (exotic) plants. Some fields are nearly 100% exotic cover. The dominant exotic is common knapweed (Centuria maculosa). Knapweed inhibits mowing practices, developing a thatch layer that provides a poor cut.
Field maintenance also involves the cutting and reduction of woody stems. Pioneer woody species such as sumac (Rhus), poplar (Populus), and gray dogwood (Cornus racemosa) quickly dominate old fields if not maintained. In some fields, annual mowing may not reduce the dominance of woody stems for several years (or even a decade), due to root/stump sprouting. Prescribed fire may reduce woody stems over a shorter period of time. On the other hand, park fields in different locations have remained open for 8 - 10 years with no management and little to no encroachment of woody stems.

To preserve the cultural landscape of the park and restore native species (NPS Management Policies) with the least environmental impact, the park needs to ascertain the best management regime. Funding and FTE is needed to determine what schedule of fire and/or mowing is best suited to meet park and NPS objectives, and what impacts may result from these activities. An experimental monitoring program is essential to effectively determine the best management implementation for field maintenance.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The park recommends the implementation of a long-term (10 year) monitoring program. A permanent vegetation monitoring grid would be established. A 3 X 2 grid would include two mowed sections, two

burned, and two control sections. Mowing would occur annually, while fire would be used every two years. Sections would be at least one hectare in size and sampled annually for floral (and faunal) response. Plant species frequency and percent cover will be determined by transects within each section.

Songbird and small mammal sampling will occur annually within each section, as well as other burned, mowed, and unmanaged fields to determine fire and mowing effects on these species.

Collected data will be statistically analyzed to determine short and long-term effects on flora (including exotics) and fauna. Results will be compared with current scientific literature to ascertain the most effective field management regime for Saratoga National Historical Park.

Funding will be used primarily for start-up costs (i.e. sampling supplies, equipment use/wear) and to contract the services of a systematic botanist for flora sampling. FTE is needed to assist in the fauna sampling and treatment implementation. Outyear costs and FTE decrease as start-up costs are removed and sampling efficiency improves, but services continue. The park will assume the costs and FTE after Outyear 2 to carry the project to completion.

FTE:	Cost:	
0.75	15.0	
0.3	5.0	Outyear 1
0.3	5.0	Outyear 2

COMPLIANCE:

An environmental assessment has been completed for prescribed fire. This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to the following other project statements:
N-002, N-004, N-007.2, N-007, N-012, N-013, C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of recommended format.

SARA N-004 **INVESTIGATE GRAY DOGWOOD (Cornus racemosa) ECOLOGY**

SERVICEWIDE ISSUE: N20 - LACK OF BASIC DATA

PROBLEM STATEMENT:

Gray dogwood is one of several shrub species that can form large thickets or clones, often outcompeting tree seedlings. Clone growth may inhibit regeneration by forest tree species in areas of the Park where forest development is desired. At some of these sites, dogwood shrub communities have been dominant for decades. As stated in the Park's Statement for Management, the restoration of the Park's landscape to approximate natural resource conditions just prior to the battle on October 7, 1777 is paramount.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The Park recommends the continuation of research on the dogwood started in FY88. The objectives of this research are:

1. Determine if clonal growth of gray dogwood influences tree regeneration in old fields.

2. Determine growth responses of gray dogwood to deer browsing.

3. Evaluate mechanisms by which gray dogwood persists.

Funding in the amount of $5,000 for this research was obtained from the regional science account in FY88. Additional funds are needed to complete analysis and draft a final report. The investigation is conducted through a Cooperative Agreement between NPS and the State University of New York at Syracuse.

FTE: 0 Cost: 7.0

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:
This project is related to N-002 ,N-003, and N-004 of this plan. Also, cultural resource project statement C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completion upon approval of a recommended format.

SARA N-005 **AUTOMATED METEOROLOGICAL MONITORING IN SUPPORT OF NATURAL AND CULTURAL RESOURCES MANAGEMENT AT SARATOGA NATIONAL HISTORICAL PARK**

SERVICEWIDE ISSUE: N07 - DISRUPTION OF NATURAL FIRE REGIMES
N20 - LACK OF BASIC DATA
C17 - CONTROL OF ENVIRONMENTAL IMPACTS

PROBLEM STATEMENT:

The staff of the division of Natural Resources and Visitor Protection are now fully engaged in the maintenance of historic fields through the use of prescribed fire. The success of the type of management is predicated upon the quality of the data used in the fire prescription and suppression calculations. Currently, the routine collection of standard meteorological data in support of this activity is conducted daily during the fire seasons (March-May and September-November) by division staff. Data are collected during the other months as time and other commitments to division staff allows. The current meteorological station represents dated technology, needs daily attendance by division staff for routine data collection, and requires frequent maintenance which creates extended periods where no data are collected. Not only does this place severe demands on an already taxed division staff, it also jeopardizes several other significant resource management activities conducted in the park which rely heavily on this data source (i.e., deer and vegetation monitoring.)

DESCRIPTION OF THE RECOMMENDED PROJECT OR ACTIVITY:

This project will install, calibrate, and test a fully automated meteorological station capable of supporting all aspects of fire management at SARA as well as many other resource management programs. The testing period will be of one year's duration and will include a complete analysis and documentation of all functions of the data-logger, software support, portability to AFFIRMS and technical "friendliness". It is anticipated that the project will require the support of one division staff person for one day per month (after the installation of the basic unit) to retrieve data from the data-logger. Additional time will be required to analyze the data stream and write the report. It is anticipated that one year of continuous monitoring is necessary to evaluate the scope of the station's capabilities. Currently, several vendors offer comparable units. It is anticipated that the unit will have a minimum these capabilities:

1. Will record, temperature, relative humidity, windspeed and direction, precipitation, snow accumulation and barometric pressure at any user-specified interval.

2. Will store up to 30 days of continuous data collection "on-sight" before retrieval from the date-logger (or storage modules) is necessary.

3. Will support current implementation of AFFIRMS and other natural resources management programs (e.g., deer and vegetation monitoring) in the park.

The estimated price of such a unit and additional supporting materials (e.g. hardware and software) is approximately $10,000.00 depending upon the number and type of sensors installed.

FTE: 0 Cost: $10,000.00

ALTERNATIVE ACTIONS/SOLUTIONS AND THEIR PROBABLE IMPACTS:

The alternative is no action, which under current division staffing, will not allow sufficient resources to be directed toward other natural resource management programs in the park.

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

The project statement is related to No.SARA N-003, I-002, and I-003.

SARA N-006 **INVENTORY AND MONITOR PARK WETLANDS**

SERVICEWIDE ISSUE: N20 - LACK OF BASIC DATA
N12 - ALTERATION OF NATURAL FLOW REGIMES

PROBLEM STATEMENT:

Information on park ponds and wetlands is poor. Park wetlands have never been delineated. The Hudson River Floodplain and the Champlain Canal area comprise about 225 acres of undelineated forested, shrub stage, and open wetlands. Wet meadows, swamps, and ponds occur throughout the Park. A recently completed Park floristic inventory revealed that Carex (sedges) is the largest (most numerous) genus on the Park (out of over 500 vascular plants), with Cyperaceae being the third largest family. Juncus and other wetland plants abound. This dominance of wetland indicator species suggests that wet areas (wetlands) are prevalent at Saratoga.

Park management is concerned over the status of park ponds and wetlands and the impacts of the New York State Department of Transportation activities in draining and redirecting water flow on Park lands and adjacent areas. Polychlorinated Biphenyls (PCB) and other pollutants exist from the Hudson River and may negatively impact water resources. Park maintenance activities (mowing, filling) may also pose a threat to these sensitive areas. If delineated and monitored, such threats could be avoided or mitigated.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Wetlands and floodplains need to be delineated, inventoried, and monitored according to NPS Floodplain Management and Wetlands Protection Guidelines. The NPS WRD or NAR expertise should provide technical assistance and fieldwork in the delineation, inventory, and mapping of Park wetlands. Methods would include the gathering of existing data, aerial photo interpretation, field reconnaissance, and soil and vegetation analysis. A wetland monitoring protocol should also be devised by the WRD. When accumulated, such data should be entered and made available in digital form to be used by Park staff (GIS database).

FTE: 0.2 Cost: 18.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to N-007 and N-012.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA N-007 **INVENTORY AND MONITOR NATIVE FAUNA/FLORA**

Park management does not have sufficient baseline data on flora and fauna to implement management programs. Level 1 information is absent for nearly all fauna. Current vegetation management rests on determining the effects of implementation on park resources. Effects cannot be fully understood until a complete baseline inventory demonstrates the condition and status of flora and fauna.

Four project statements (N-007.1, N-007.2, N-007.3, N-007.4) address some noted data deficiencies.

SARA-N-007.1: **INVENTORY STATE AND FEDERALLY-LISTED GRASSLAND BIRDS**

SERVICEWIDE ISSUE:
N02 - IMPACTS ON T&E AND SENSITIVE ANIMALS
N20 - LACK OF BASIC DATA
N01 - DEGRADATION OF RESOURCES
N08 - LOSS OF CULTURAL LANDSCAPE
C19 - INADEQUATE CULTURAL RESOURCES MONITORING

PROBLEM STATEMENT:

In 1985, the Park participated in New York's Breeding Bird Atlas project to determine bird[redacted] species known to inhabit the Saratoga region. Findings documented the presence of several species of grassland birds that are state or federally protected[1] (see below). Although local birding groups annually confirm the presence of these birds, little information is known about the biology (particularly breeding/nesting status) of these birds.

The status of each particular species varies. Some are known to frequent only in winter, while others have been documented as nesting on the park. The Henslow's sparrow is of particular concern. According to local birders, the park is the only Henslow's nesting site in Northeastern New York.

Alteration of habitat may be detrimental to these protected birds. Park grasslands are maintained in a non-systematic method: some fields are mowed annually, while others were mowed more than 8 years ago. The majority of bird observations occur in the less frequently mowed fields. The use of prescribed fire (spring season) to maintain grasslands is recently becoming the norm. The frequency and timing of field maintenance activities is suspected to play a crucial role in the perpetuation these bird species, yet no information exists to assist in park management implementation. Current routines may be adversely affecting the ecology of nesting/feeding birds.

As winter habitat destruction continues in the tropics, nesting range and habitat on park lands becomes much more vital. Without the study, park management will not be able to make the management decisions to promote [redacted] survival [redacted].

bird

DESCRIPTION OF THE RECOMMENDED PROJECT OR ACTIVITY:

Research is needed to investigate bird life histories, nesting success, and population ecology. Field study would include breeding birds surveys, call counts, and mark-recapture techniques. Seasonality would be determined (how long/often they frequent park lands) for all species. In species found to nest on the park, territories would be mapped, nesting success would be assessed, and habitats evaluated.

After the completion of two seasons of data collection and analysis, scientists would document findings in a final report. The report would include a long-term monitoring protocol to be conducted by park staff and management recommendations to ensure the perpetuation of this valued genetic resource.

FTE:	0.3	Cost:	30.0
	0.3		25.0

COMPLIANCE: This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS: This project statement is related to SARA N-007, N013, N-012 and I-003.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon receiving a recommended format.

[1] Henslow's sparrow, grasshopper sparrow, upland sandpiper, eastern bluebird, Tennessee warbler, northern harrier, short-eared owl.

SARA N-007.2 **VEGETATION MONITORING AT SARATOGA NATIONAL HISTORICAL PARK.**

SERVICEWIDE ISSUE: N01 - DEGRADATION OF RESOURCES
N08 - LOSS OF CULTURAL LANDSCAPE
N20 - LACK OF BASIC DATA
C19 - INADEQUATE CULTURAL RESOURCES MONITORING

PROBLEM STATEMENT:

Increased white-tailed deer populations over the last two decades have prompted park staff to look more closely at the configuration of historically significant vegetation types and the role that deer play in the long-term maintenance of those types. Because the vegetation of this 18th century battlefield is considered both a cultural and natural resource, a solid monitoring program in the division of Visitor Protection and Resources Management is essential. A five year study demonstrated a large-scale vegetation monitoring protocol which is simple to implement, and has the capability to be married directly to the park's GIS capabilities. The vegetation of the park was last surveyed five years ago. To systematically survey the entire battlefield, this method requires two (2) field technicians for approximately three months duration. Presently, constraints on staff time are many, and therefore additional support is needed to complete this project.

DESCRIPTION OF THE RECOMMENDED PROJECT OR ACTIVITY:

Protocols for vegetation monitoring are described in detail in Underwood et al. (1991). Park vegetation is sampled from parallel transects which are located systematically across the park. This sampling scheme forms a "grid" whereby data are collected at each grid intersection through the use of Point Centered Quarter method (PCQM) of sampling. Computer programs have already been written to analyze the data collected, and to produce output amenable to importation into the park's GIS system. This method is multi-functional and produces density and stature information at each point as well as the vegetation composition in four strata (i.e.,seedlings, shrubs, saplings, trees). As many strata can be sampled as time allows. Also, at each location, physiographic characteristics of the site (e.g., slope, aspect, canopy closure, etc.) and ecological impacts of deer browsing on individual plants are recorded, The software provided utilizes the data to the fullest extent possible for maximum information extraction.

Deliverables will include a revised User's Manual, software, and a report comparing (using GIS technology) current vegetation characteristics with those of five years ago. Funding is requested for technical assistance in the form of two technicians (GS-5) for three months, and miscellaneous equipment purchases.

FTE: 0.5 Cost: $9,000.00

ALTERNATIVE ACTIONS/SOLUTIONS AND THEIR PROBABLE IMPACT:

The alternative is no action, which under current division staffing, will not allow the collection of this much needed data.

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact

RELATIONSHIPS:

This project statement is related to SARA N-007, N013, N-012 and I-003.

SARA N-007.3 **WHITE-TAILED DEER POPULATION MONITORING AT SARATOGA NATIONAL HISTORICAL PARK.**

SERVICEWIDE ISSUE: N01 - DEGRADATION OF RESOURCES
N20 - LACK OF BASIC DATA
C17 - CONTROL OF ENVIRONMENTAL IMPACTS

PROBLEM STATEMENT:

In several National Park areas including Saratoga National Historical Park, great increases in white-tailed deer populations have been witnessed over the last two decades. Although deer densities are higher than previously experienced, it is not known if they are resultant of human influences or rather natural fluctuations in the populations. Where data exist on the configuration of historical scenes, management decisions requiring direct intervention of native animal populations can be justified. However, a decision to intervene and control populations of native species must be based on solid, long-term baseline monitoring. Currently, resource management staff, in collaboration with Regional personnel, are finalizing studies on the historical configuration of Park vegetation and white-tailed deer ecology. A five year study has detailed various methods by which the deer population can be monitored, and the Park is now poised to adopt and implement one or several methods.

At the suggestion of the Regional Wildlife Biologist, routine night-spotlighting conducted along the Tour Road and continuation of the annual Walk and Count Census should be continued. However, funding to conduct such activities, which in the past has been provided by the cooperating university, is no longer available.

DESCRIPTION OF THE RECOMMENDED PROJECT OR ACTIVITY:

This project will proceed where the deer study left off with a central goal; to streamline the night-spotlighting effort by calibrating counts to the annual and seasonal activity of deer. In this manner, certain months (or even shorter periods) may be targeted for monitoring activities. Not only will this reduce time constraints imposed by the existing method, but also elucidate the specific nature of deer usage of open areas in the Park's interior and on its boundaries. This project will be accomplished through the use of active infrared trail counters placed systematically in the cardinal directions such that interior park areas (controls) and boundaries (treatments) can be compared directly with each other and to weekly spotlighting counts. The trail counters are low maintenance devices that can store up to 1 month's data, and are supported by additional hardware and software.

This project is for 1 year's duration, and will deliver an efficient and economical means of monitoring trends in the white-tailed deer population over time with minimal effort by division

staff. Deliverables will be in the form of a brief report explaining the methodology and results of the 1 year's implementation, recommendations for further improvement, and software to analyze deer population trends.

Funding is requested for the purchase of the infrared trail counters and supporting materials, and the support of a part-time technician to monitor the counters and conduct the weekly surveys.

FTE: 0.3

Cost:	
Infrared Trail Counters (10):	$ 2,500.00
Supporting Materials	500.00
Technical support (seasonal).	3,000.00
Total	$ 6.000.00

ALTERNATIVE ACTIONS/SOLUTIONS AND THEIR PROBABLE IMPACTS:

The alternative is no action which will waste a valuable opportunity for the park to finally address an important and potentially controversial management issue.

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to SARA N-007, N-007.2, I-002 and I-003.

SARA N-007.4 **INVENTORY AND MONITOR STATE RARE PLANTS**

SERVICEWIDE ISSUE: N03 - IMPACTS ON THREATENED, ENDANGERED AND OTHER SENSITIVE PLANTS

PROBLEM STATEMENT:

Since 1988, Park resource management staff have contracted the services of a systematic botanist to develop a floristic inventory. Included in this list has been a first attempt at identifying and managing for state listed rare plants.

Saratoga lacks a full identification of all possible state listed rare plants. Secondly, the Park lacks range and distribution data for the known rare plants and does not yet have a protection management plan which would include a systematic monitoring protocol.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The Park recommends obtaining resource management funds in the amount of $4,000 to assist Park resource management staff in the completion of the field investigation for rare plant range and distribution. Funds would be allocated to pay for the services of a botanist and assist Park staff in the development of a management and monitoring plan for these rare plants.

Additionally, these data would be accessioned into the Park's GIS for spatial analysis, management/monitoring/planning and long-term data storage.

FTE: 0 Cost: $4.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to project statements N-002, N-003, N-004, N-012, and Cultural Resource Statements C-003, C-009, and C-010.

SARA N-008 **INVESTIGATE FREQUENCY AND PERCENT COVER FOR THE EXOTIC FLORA IN HISTORIC FIELDS**

SERVICEWIDE ISSUE: N05 - NON-NATIVE PLANTS

PROBLEM STATEMENT:

As mentioned previously in the Park's Statement for Management, the cultural landscape is the one of the primary natural resource management objective. To meet this objective, the Park must also comply with NPS Management Policies (1988) in regards to the restoration of this landscape. Management policies state that exotic vegetation that interferes with faithful representation of the historic scene is unacceptable and must be addressed.

To comply with these objectives and policies, the Park initiated an exotic plant inventory program in the field season of FY88. This particular investigation was funded at $2500 from the regional science office for a plant biologist to assist in the implementation of this action plan (see Addendum #4 for details of the action plan).

To date, almost all of the exotic flora has been identified in the historic fields but the frequency and percent cover data has not been totally accumulated, analyzed, and used for an approved management plan.

Saratoga has no set procedure for the future monitoring and analysis of this data (by Park staff) in the future.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The Park recommends the completion of the exotic flora inventory in the historic fields and its analysis for input into the GIS. The gathering of data and creation of a such a theme would not only meet existing needs for this problem provide a long-term monitoring program in digital form. Future resource management staff could replicate sampling methods used by researchers and have the means to input, analyze, and create graphic display of distributions of exotic flora in historic fields and predict trends for future exotic management.

This final gathering of data and GIS data entry would be accomplished in FY91 and would require an additional $3000 from the regional science office to complete this work.

This effort would fund a plant biologist for the field investigations. GIS data entry and analysis could be accomplished by resource management staff.

FTE: 0 Cost: $3.0
0 3.0 Outyear 1

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to the following other natural resource project statements: N-003, N-012, and cultural resource project statement C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA N-009 **SURVEY PARK FOR THE DEER TICK (Ixodes dammini)**

SERVICEWIDE ISSUE:

N04- NON-NATIVE ANIMALS
N20- LACK OF BASIC DATA
N24- VISITOR SAFETY

PROBLEM STATEMENT:

The spread of the deer tick (Ixodes dammini) is a major concern for many in eastern New York. The tick is the host for Lyme disease, a potentially fatal disease that has been documented nationwide. Saratoga surveyed for the presence of the tick in 1987 with negative results. According to current research, the geographical range of the tick is spreading up the Hudson Valley from the southern tier. A follow up survey is essential to document the presence or absence of this health-threatening species.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A drag-type survey of the Park vegetation (along trails, etc.) similar to that conducted in 1987 by Dr. Howard Ginsburg of URI CPSU can provide a sufficient sample to determine the presence or absence of the deer tick. If results prove positive, then an adequate sample of ticks must be collected to determine the frequency of Lyme carrying ticks in the population. If Lyme is found, then recommendations should be provided (by the investigator) as to what measures must be taken (planning, information dissemination, etc.) by the Park, now and in the future.

FTE: 0 Cost: $5.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to the following other natural resource project statements: N-002, N-004.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA N-010 **UPDATE GIS DATABASE AND CORRECT DATA DEFICIENCIES**

SERVICEWIDE ISSUE: N20- LACK OF BASIC DATA
N08- LOSS OF CULTURAL LANDSCAPES
N16- VISUAL AND BIOLOGICAL IMPACTS OF URBANIZATION AND OTHER NEAR-PARK DEVELOPMENT ON PARK RESOURCES

PROBLEM STATEMENT:

Insufficient and outdated data exist in Saratoga's GIS database. Much of the current digital data was developed in 1981 and digitized in SAGIS (NPS GIS-supported software of that era). Problems exist for several reasons.

1) Information depicted the vegetation, roads, trails, etc. of that time. Such data is over a decade old. A great deal has changed in that decade that includes: significant new land acquisition, establishment of a new trails system, clearing of land, etc.

A specific example is Saratoga's GIS vegetation database. This information was digitized in SAGIS (in 1980-81) and later converted to GRASS for use at Saratoga. Since 1981, much of the vegetational landscape (about 1/4) has changed (cleared areas, grown-up areas, etc.). Secondly, the Park expanded it's boundary by about 300 acres (an additional 1/10 of park size) in 1983. Additionally, the 1981 interpreted buffer around the Park was very narrow and does not include current park lands. The final inaccuracy in the current database may exist in the differences of digitizing technology (accuracy) between 1980 and the present.

2) Current data provide land cover data with limited or no coverage of off-park areas. Management demand for GIS analysis is on the rise. External park planning is becoming crucial in park management decisions. Park applications range from viewshed modeling (external threats, internal development) to planning cultural landscapes research, to simple overlay analysis (determine acreages, locations, vegetation types, etc.) of the historical and current landscape.

The best results available from most GIS tasks are based on information over ten years old. A manager questions the utility of GIS when results are riddled with disclaimers due to data inadequacies. Management decisions must be based on the best information available or legal repercussions may result.

The primary constraint to the acquisition of data is funding Park Natural Resource Management/GIS base funding is negligible. Funding sources provide for the basic continuance of GIS at Saratoga, but project monies are essential for <u>any</u> forward program development.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Saratoga is slated to become one of four "Regional Technical Support Centers" in Phase 1 of the North Atlantic Region GIS Plan (1991). The centers "are chosen to represent the diversity of needs in the region and build on existing strengths". Significant equipment upgrades and staffing increases are part of Phase 1. The Regional GIS Coordinator and other contributors fully support the plan's implementation. This project, although not directly stated in the Plan, is essential to the creation of such a center's database and has Regional support.

The Park recommends the creation and purchase of several data themes and updating existing (outdated) information. Park vegetation data could be updated by using 1991 B&W aerial photos (1:12000) in combination with the 1981 CIR photos (1:12000) used to develop a 1991 vegetation layer. The 1991 flight encompassed a larger area (4X4 mile coverage) than the 1981, and would provide a sufficient area for a new vegetation layer. The photo interpretation, categorizing, ground truthing, and digitizing would be contracted out.

The remaining data deficiencies could be rectified by purchasing the data commercially through government or private industry:
1) USGS DLG data (1:250,000 or 1:24000 if available) for roads, hydrography, political boundaries for at least the six 7.5 minute quads that encompass the Park area. (Schuylerville, Quaker Springs, Schaghticoke, Mechanicville, and Round Lake, Saratoga Springs)

2) USGS DEM data (1:24000) for Round Lake, Saratoga Springs quads.

3) Recent SPOT or EOSAT data to produce (analog or preferably digital) a landcover classification for the same quad coverage.

3) USFWS National Wetland Inventory or New York State Wetlands Inventory data (analog or preferably digital) for the same coverage.

Such purchases and updates would help insure the proper inventory, monitoring, and planning processes for both cultural and natural resources.

FTE: 0.5 Cost: $15,000

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to N-002, N-003, N-004, N-007.2, I-002, N-007, N-008, N-009, N-011, N-013, N-014, and C-003, C-009, and C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completed upon approval of a recommended format.

SARA N-011 **DEVELOP PARK GIS REGIONAL TECHNICAL SUPPORT CENTER**

SERVICEWIDE ISSUE: N20 - LACK OF BASIC DATA
N08 - LOSS OF CULTURAL LANDSCAPE

PROBLEM STATEMENT:

The use and demand for Geographic Information Systems (GIS) in the NAR is growing. To accommodate and plan for regional needs, a Regional GIS Implementation Plan was completed in 1991. The approach of the plan was to focus on parks previously committed to GIS to represent the diversity of needs in the region and build on existing strengths. Saratoga is slated to become one of four "Regional Technical Support Centers (RTSC)" in Phase 1 of the North Atlantic Region Plan. RTSC's will provide GIS information, guidance, technical assistance/support to all other sites in the region.

Significant headway has been made toward the completion of Phase 1. Computer hardware was purchased in 1992 to address some of the RTSC demands. However, proposed RTSC's (i.e. SARA) are still in the development stage. Primarily, lack of staff prevents Saratoga from fully meeting it's own GIS needs, let alone function as a RTSC.

The Regional GIS Coordinator and Regional GIS Steering Committee fully support the implementation of Phase 1. Park management concurs that without additional staff and supplies, Saratoga will never fill it's RTSC niche.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A February 1992 memo from the Regional GIS Coordinator to GISD-WASO summarized the needs for the development of NAR RTSC's as part of the Strategic Plan and 1994 Budget Initiative. Saratoga was accurately described as needing the following as a park operating base increase/FTE allotment to meet recurring RTSC needs:

	COST
GS-9/11 GIS Specialist	42K
0.5 FTE GS-7 GIS Technician	15
Data Development	5
Equipment	10
Travel & Training	4
Equip. Maintenance Contracts	3
Materials & Supplies	1
TOTAL	80K

FTE: 1.5 Cost: 80.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to N-002, N-003, N-004, N-007B, I-002, N-007, N-008, N-009, N-011, N-013, N-014, and C-003, C-009, and C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completed upon approval of a recommended format.

SARA N-012 **MAINTAIN HISTORIC FIELDS**

SERVICEWIDE ISSUE: NO8 - LOSS OF CULTURAL LANDSCAPE

PROBLEM STATEMENT:

The historic fields in the Park are maintained either by mowing or prescribed burning. Park maintenance staff are directly involved in this natural/cultural resource activity. At present, the 41 fields at Saratoga are bush-hogged on a cycle of once every one-three years as time, staff and money permit.

The issue then is an operational mandate. The fields of the Park must be maintained to conform with Park resource goals and objectives.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The Park recommends the drafting of a new vegetation treatment plan. This plan should be based on priority areas of interactive mowing and prescribed burning on a cyclic basis. This task can be accomplished by present Park resource management staff and the use of the GIS workstation. The project would include:

1. Comparisons of current versus historical vegetation data
2. Viewshed analysis to establish priority management areas
3. Modelling of deer movements to determine impacts on deer and/or vegetation from management implementation
4. Planning of the maintenance (burning or mowing) of current and newly-created fields
5. Long-term modelling of the vegetation if new fields are created-how it will look.

Adequate funding is lacking to enter and store such large amounts of long-term data in the GIS. Additional storage space and supplies are needed to store this data and provide graphic output for managers to use as a guide to field maintenance.

FTE: 0.4 Cost: 8.0

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact. The environmental assessment has been approved for the prescribed burning of the Park fields and historic overlooks and this can be referenced in the specific project statement SARA N-003.

RELATIONSHIPS:

This work is primary to the mission of the Park as spelled out in the Park's approved Statement for Management. See also project statements N-003, N-004 and N-010.

SARA N-013 **PROTECT NATURAL RESOURCES THROUGH LAW ENFORCEMENT**

SERVICEWIDE ISSUE: N19 - LOSS OF PARK RESOURCES DUE TO CONSUMPTIVE PRACTICES (HUNTING).

PROBLEM STATEMENT:

Investigation has found that white-tailed deer are hunted intensively along the Park boundary. Hunting offenses have been cited by law enforcement rangers to hunters that have harvested deer from the Park. This is an illegal activity that requires much planning effort as well as patrol during the hunting season.

The magnitude and impact of illegal deer kills is undetermined at this time, and requires extensive investigation.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The Park recommends the continuation of this program at present staff and funding levels.

FTE: .5 Cost: 12.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to the following other project statements:
N-004, N-007.2, N-002 and N-014.

B. INTEGRATED RESOURCES PROJECT STATEMENTS

SARA I-001 RESTORE CULTURAL LANDSCAPE VEGETATION

SARA I-001.1 RESEARCH CULTURAL LANDSCAPE

SARA I-001.2 PREPARE CULTURAL LANDSCAPE REPORT: SCHUYLER ESTATE

SARA I-002 PROTECT PARK FROM EXTERNAL THREATS

SARA I-003 SOCIAL SCIENCE RESEARCH AT SARATOGA NATIONAL HISTORICAL PARK

SARA I-003.1 SURVEY CHARACTERISTICS, MOTIVATIONS, EXPECTATIONS, PREFERENCES, SATISFACTION, AND ATTITUDES TOWARD MANAGEMENT

SARA I-003.2 INVESTIGATION AND MITIGATION OF VISITOR USE CONFLICTS

SARA I-003.3 INVENTORY AND MITIGATION OF ENVIRONMENTAL/CULTURAL RESOURCE IMPACTS OF VISITOR USE

SARA I-003.4 EVALUATION OF VISITOR USE MEASUREMENT METHODOLOGY AND PROCEDURES

SARA I-001 **RESEARCH CULTURAL LANDSCAPE HISTORIES**

The research, implementation, and evaluation of cultural landscapes management is the primary resource management objective at Saratoga. In the past several years, investigations have shed light on what is feasible/not feasible in the management of cultural landscapes given the current knowledge base. Research is needed to gather the best factual information upon which to base upcoming cultural resource management.

SARA I-001.1 **RESEARCH CULTURAL LANDSCAPE**

SERVICEWIDE ISSUE: N08 - LOSS OF CULTURAL LANDSCAPE
C11 - NEED FOR CULTURAL LANDSCAPE REPORT
C13 - NEED FOR REHAB/RESTORE CULTURAL LANDSCAPES

PROBLEM STATEMENT:

The Statement for Management (1991) states that the development, implementation, and evaluation of the cultural landscape (historic fields/forests, etc.) management options is the primary resource management objective. At present, historical information depicts that up to 1/3 of park lands may not be in alignment with Historic Base Map (HBM) information. The primary resource objective cannot be completed until we have a clear picture of what land-use occurred on park lands for the last 200 years.

Research on the HBM in 1989 led to the conclusion that areas portrayed on the map are inaccurate and, due to lack of detail on the HBM and poor map documentation, additional research was needed. Investigations funded by NARO-Cultural Resources in 1991 focused intensive historical land use research on 3 small parcels (approximately 1/4 of the park). The research report was well received by park and NARO staff alike. Report and reviewer recommendations state that "Phase II": A Parkwide Investigation of Cultural Landscapes be implemented. A parkwide scope would provide needed information to revise the HBM and lead to the development of a cultural landscape plan.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The park and NARO-Cultural Resources recommends the spatial expansion of cultural landscape research. Land-use history should be traced in a similar manner as 1991 research. Land patents, wills, deeds, etc. are a few of the sources to be used to document the remainder of the park and produce a composite picture of changing land-use. This would provide the basis for a more complete and accurate interpretation of the landscape, from 1777 to present, as well as establishing a solid basis for the cultural landscape management plan.

Outyear 1 encompasses the development of a revised HBM based on

research conclusions. The new HBM would be based on a chronological scale, ensuing 1991 land use research. Periods include 1777, 1850, 1927, 1948 and 1991-2. Each period would be built on existing GIS layers produced by the 1991 research.

FTE: 0.5 Cost 30.0
0.5 Cost 20.0 Outyear 1

ALTERNATIVE ACTIONS/SOLUTIONS AND THEIR PROBABLE IMPACTS:

The alternative is no action which will prohibit the park from fulfilling the primary resource management objective or allow management to proceed based on inaccurate information.

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is the basis for action plans. Please refer to SARA N-002 "Develop White-tailed Deer Management Plan," N-003 "Develop and Implement Vegetation Management of Historic Fields and Vistas," N-004 "Gray Dogwood (Cornus racemosa) Ecology in the Park". Also, Cultural resource project statements for C-003 and C-010.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA I-001.2 **PREPARE CULTURAL LANDSCAPE REPORT: SCHUYLER ESTATE**

SERVICEWIDE ISSUE: N08 - LOSS OF CULTURAL LANDSCAPE
C13 - NEED FOR REHAB/RESTORE CULTURAL LANDSCAPES

PROBLEM STATEMENT:

Twenty-five acres of land and a historic structure make up the detached historic district of the General Phillip Schuyler estate. A major feature of this estate is the landscape which includes more than 40 large black locust (Robinia pseudoacacia) and honey locust (Gleditsia triacanthos) trees which are all 100 (100-150 yrs. avg.) years of age or older. These **trees are senescent, falling, and are hazardous to visitors and staff.** The townspeople have a sincere interest in the Estate and become very involved in the care of the Estate grounds. To date, the Park has no management plan for this cultural landscape.

The Park has little baseline information with which to make management decisions or to develop management strategies for the care and maintenance of the trees. In addition, the historic importance of this prominent stand of locust trees is also not known.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

The resolution of this problem takes on a multi-disciplinary approach. There is a need to develop a Cultural Landscape Report that documents any historical importance of the locust trees to assist management in developing strategies. However, there is an immediate natural resource need to develop an interim tree replacement plan or hazard tree plan to meet minimum safety requirements.

Until a landscape report is completed, the Park needs to have the physical condition and hazard possibilities of the trees evaluated. This can be accomplished through the allocation of regional resource management/monitoring funds to secure the expertise of an arborist. This person would report the baseline condition of the estate trees and recommend mitigation/propagation procedures (cabling, fertilizing and cutting).

This task could be accomplished within one fiscal year and Park resource management staff would be available for logistical support.

FTE: 0 Cost: 8.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

This project statement is related to N-013, N-006, and C-010.

SARA I-002: **PROTECT PARK FROM EXTERNAL THREATS**

SERVICEWIDE ISSUE: C22 - THREATS TO CULTURAL LANDSCAPES/VIEWSHEDS
C13 - NEED FOR REHAB/RESTORE CULTURAL LANDSCAPES

PROBLEM STATEMENT:

Saratoga County is one of the fastest growing counties in New York State. Residential and Industrial development greatly threaten not only the renowned historical viewshed, but all natural resources as well. All signs point toward the same trends that Gettysburg National Military Park experienced years ago. Individuals then did not have the insight to foresee the external development that destroyed the integrity of Gettysburg's surroundings.

Because of the small staff, the park Resource Management Specialist has responsibilities ranging from recycling/waste coordinator to park planning/external threats. Therefore, time allocated to external threats management allows for only a reactive response to problems. As local development increases, external threats to the park follow the same trends as Gettysburg.

The park is currently petitioning for funds to develop the park's first General Management Plan (GMP). An external threats inventory is needed to proactively approach the GMP planning process. An inventory would provide GMP planners with information (local development and housing trends, local zoning and ordinances, projected visitor statistics, etc.) to approach long-term external planning.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Professional research services would be contracted to investigate government planning documents at all levels. Trends in town, county, and state development and housing need to be assessed and compared to restrictions and regulations (i.e. zoning, environmental regs, etc.) to forecast future trends. Deliverables would include a report depicting historical development patterns and future patterns under different projection scenarios (given current rates of increase, higher rates, lower rates, etc.). Recommendations to management (to meet management goals and objectives) should incorporate the same scenarios.

FTE: 0 Cost: 15.0

COMPLIANCE:

This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:
This project statement is related to N-013, N-006, and C-010.

SARA I-003 **SOCIAL SCIENCE RESEARCH AT SARATOGA NATIONAL HISTORICAL PARK**

An assessment of the North Atlantic Region social science research needs found four distinct deficiencies at Saratoga. The four phases are integrated to occur over a five-year period. Although written separately (I003.1-.4), the projects are interrelated and should be funded entirely.

SARA I-003.1 **SURVEY CHARACTERISTICS, MOTIVATIONS, EXPECTATIONS, PREFERENCES, SATISFACTION AND ATTITUDES TOWARD MANAGEMENT**

SERVICEWIDE ISSUE:
N20 - LACK OF BASIC DATA
C23 - CONFLICTING MANAGEMENT AND DEVELOPMENT ACTIVITIES

PROBLEM STATEMENT:

According to the 1990 census, Saratoga County is one of the fastest growing counties in New York. Park visitation statistics for 1990-91 demonstrated a marked increase (20-30%) in hikers, bikers, horse riders, and general visitation.

With such visitation, no solid approach is in place to accept visitor feedback or local perceptions of park activities. The park often operates in a vacuum, not considering widespread local or visitor opinions. Most feedback occurs through verbal contacts to staff, often with negative undertones. Since the NPS occupied this park 1938, there has been a local level of animosity as to how the state battlefield park was altered to meet "new" NPS management objectives.

An extensive survey is needed to determine how the park's clientele perceive Saratoga National Historical Park. A NARO social science assessment found that such a survey is an essential first step in defining social science needs at Saratoga. Results from research would be directly applicable in the development of the park's first GMP, which is slated to funded within the next few years.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A social scientist's services would be contracted through a two-year cooperative agreement or similar means. Researchers would sample visitor and local community populations throughout the two visitation years. Survey methods would obtain unbiased data on public perceptions, attitudes, etc. toward general park functions, appearance, and programs (e.g. prescribed fire). Information would be analyzed for trends and significant responses. Research will concur with visitor use and visitor measurement studies projected for Outyear 1. Results would be summarized in a final report along with recommendations to alleviate current and future public relations problems.

FTE: 0.2 Cost 30.0
0.2 Cost 40.0 Outyear 1

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completion upon approval of a recommended format.

SARA I-003.2 **INVESTIGATION AND MITIGATION OF VISITOR USE CONFLICTS**

SERVICEWIDE ISSUE:
N20 - LACK OF BASIC DATA
C23 - CONFLICTING MANAGEMENT AND DEVELOPMENT ACTIVITIES

PROBLEM STATEMENT:

According to the 1990 census, Saratoga County is one of the fastest growing counties in New York. As local development increases, the demand for recreational greenspace grows as well. Park visitation statistics for 1990-91 demonstrated a marked increase (20-30%) in hikers, bikers, horse riders, and general visitation. Annual visitation since 1990 has been in excess of 500,000.

More recent demands for park recreation include horseback riding, tour and mountain bicycling, rollerblading, skateboarding, hikers, picnicking, pet walking, jogging, etc. Some uses are currently prohibited and many visitors are questioning (and challenging) park and federal regulations. Sections of park trails are closed to some uses (ie horses), while the entire system is closed to bicycling and other wheeled devices.

Additional conflicts arise when multiple uses occur simultaneously on a one lane one-way nine-mile tour road. Many walkers and bikers only complete a short stretch and decide to turn back against the flow of traffic.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Park designers (approximately 30 years ago) did not consider the potential for over 500,000 visitors per year when developing the park for recreational use. Research is needed to examine visitor use and conflicts and determine those conflicts which can resolved/ mitigated.

A social scientist's services would be contracted through a two-year cooperative agreement or similar means. Researchers would sample visitor and local community populations throughout the two visitation years. On-site assessments will be used to verify alleged conflicts. Survey methods would obtain unbiased data on uses, apparent conflicts and use trends to predict future conflicts given existing conditions. Information would be analyzed for trends and significant responses. Research will concur and overlap with all social science studies (I-003.x). Results would be summarized in a final report in conjunction with findings from concurrent research. The final report would include recommendations for park management to effectively deal with visitor use and conflicts.

FTE:	0.0	Cost 0.0
	0.0	Cost 20.0 Outyear 1
	0.0	Cost 35.0 Outyear 2

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completion upon approval of a recommended format.

SARA I-003.3 **INVENTORY AND MITIGATION OF ENVIRONMENTAL/CULTURAL RESOURCE IMPACTS OF VISITOR USE**

SERVICEWIDE ISSUE:
N20 - LACK OF BASIC DATA
C23 - CONFLICTING MANAGEMENT AND DEVELOPMENT ACTIVITIES

PROBLEM STATEMENT:

Park designers (approximately 30 years ago) did not consider the potential for over 500,000 visitors per year when developing the park for recreational use. Prior to 1986, visitor corridors included the park tour road and a few spur trails. In 1986, the Wilkenson trail was dedicated as a 4.2 mile National Recreation Trail throughout the northern section of the park. Although it connected sections of the tour road and spur trails, planners did not design the trail in terms of use (increased visitation). Park soils are primarily clay loams and retain water throughout the year. Sections of trail become sloppy, muddy and nearly impassable for several months. Other trails ford streams and wetlands with no footbridge or means to cross with limited impact.

Three picnic areas are receiving similar impacts. Although in wooded locations, the mature shade trees are dying from root compaction and vandalism. No understory or ground cover exists on these sites. Trends are that these picnic areas will be in much greater demand in the near future.

Violations are on the rise for the taking of plant (and animal) materials from the park. Craftmakers use the park as a source of material for wreaths and basketmaking.

As tighter restrictions occur for local refuse removal, the costs inhibit individuals to dispose of household waste properly. Park lands have recently become the dumping grounds for automotive debris, paint cans, television sets and general trash.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Research is needed to determine the park's current visitor carrying capacity, and what management options Saratoga has to mitigate or accommodate future visitation.

A social scientist's services would be contracted through a three-year cooperative agreement. Researchers would determine visitor impacts throughout the park's trail and road system and picnic areas. Intensive field surveys would provide site specific impact data. Information would be analyzed to ascertain impacts and how management may mitigate/remove these impacts. All visitor corridor areas would be examined for the likelihood of future impact. Research will concur with visitor use and visitor measurement studies slated for Outyear 1. Results would be summarized in a

final report along with recommendations to alleviate visitor impacts. Recommendations in the final report would incorporate findings from concurrent research.

FTE: 0.0	Cost 0.0
0.0	Cost 0.0 Outyear 1
0.0	Cost 30.0 Outyear 2
0.0	Cost 40.0 Outyear 3
0.0	Cost 30.0 Outyear 4

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completion upon approval of a recommended format.

SARA I-003.4 **EVALUATION OF VISITOR USE MEASUREMENT METHODOLOGY AND PROCEDURES**

SERVICEWIDE ISSUE:
N20 - LACK OF BASIC DATA
C23 - CONFLICTING MANAGEMENT AND DEVELOPMENT ACTIVITIES

PROBLEM STATEMENT:

Visitor statistics are an important index used in park management. Facility maintenance, visitor protection, and interpretation need to know visitation trends and resources needed to meet demands. Current counts follow procedures designed in the mid-1970's. Methods do not follow a systematic sampling design and are quite prone to human error and bias. Management questions the validity of current tallies based on traffic counters. As more emphasis is placed on use statistics, park management needs to be able to rely on visitation numbers as accurate and use them for benefit to the park.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A social scientist's services would be contracted through a two-year cooperative agreement or similar means. The evaluator would determine if current methods are statistically sound, and recommend changes that meet NPS and park requirements. Evaluations would include traffic counts, hiker/biker counts, horse counts, and visitor center/facility counts. Investigator would need to define the term "park visitor" and ascertain sound methodology to differentiate recreation vs. non-recreation visits. Most importantly, the investigator's recommendations should clearly define the limits to the use of the data.

FTE: 0.0	Cost 0.0
0.0	Cost 10.0 Outyear 1
0.0	Cost 15.0 Outyear 2

COMPLIANCE:
This program/project is categorically excludable under NEPA because it has no potential for significant impact.

RELATIONSHIPS:

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:
This section will be completion upon approval of a recommended format.

IV. CULTURAL RESOURCES MANAGEMENT PROGRAM

A. OVERVIEW OF CURRENT PROGRAM AND NEEDS

1. Sites

The current program is that the NARO Archaeologist is nearing completion of the Archaeological Overview. The document needs final typing and editing, and approvals. The Cultural Site Inventory should be implemented.

The principal investigator is nearing completion of the summary report on recent field survey and analysis at four sites, and the document needs to be published in the NARO cultural resources series with Park funding.

Backfill at four recently excavated 18th century sites is completed. Site surveys are needed at three additional sites. Formal assessment of significance, condition, and impacts, and scheduled monitoring is needed as well for all sites. Advisory Council and State Historic Preservation Office coordinator is required and should be sought in all actions affecting all cultural sites.

2. Structures

The current program is that a Preservation Center historical architect is directing an architectural and engineering contract that includes an historic structures report at the Saratoga Monument. The project is funded through a special appropriation pursuant to site specific legislation. No funding is yet available for the actual rehab work.

Schuyler House moisture and fire/burglar alarm issues are being addressed. Heating is handled with space-heaters in most rooms. Formal assessment of significance, condition, and impacts, and scheduled monitoring is needed as well for all structures.

3. Museum Collections

The current program is that the principal investigator is analyzing recently excavated objects material preparatory to a final summary report on four sites. Artifacts are stored at the Visitor Center. The Park staff has located some photos of the Saratoga Monument to include as documentation in the historic structures report. The Museum Technician is accessioning and cataloging collections and implementing housekeeping work under supervision of permanent staff. A Collections Management Study is in preparation.

Needed is formal significance assessment on all collection objects as well as condition and impact assessment and formal scheduled monitoring. Needed also is continued ANCS catalog data entry for a

large backlog, transferral of selected objects to the clearing house, and formal survey of excess objects. A new computer, printer, and additional data entry time to accomplish the data storage and generate the required reports is essential to operate the program to standard.

4. Cultural Landscapes

The current program involves scheduled mowing and burning maintenance based upon the historic base map. The NARO Cultural Resources office is investigating the map based upon recent review report findings. The NARO Historian is reviewing and editing the draft Schuyler House Landscape Report so that implementing work may be initiated at that unit.

Needed is formal significance, condition, and impact assessments for all landscape units. Scheduled formal monitoring should also be accomplished. Also an operating plan for the Schuyler House unit based upon a completed landscape plan will be needed.

5. NHPA Compliance Actions

The park remains in observance of the National Historic Preservation Act with amendments to locate, inventory, and nominate properties within park ownership eligible for the National Register of Historic Places. Consultation procedures with the State Historic Preservation Officer and the Advisory Council on Historic Preservation are observed for any proposed actions involving those eligible properties. Appropriate impact assessment documentation is provided for all proposed actions affecting historic properties prior to undertaking the project.

B. LIST OF CULTURAL RESOURCES PROJECT STATEMENTS

SITES:

SARA C-002 PRESERVE BRITISH FORTIFICATION

SARA C-003 CONDUCT SITE STUDY, BARBER FARM

SARA C-007 CONDUCT REMOTE SENSING SURVEY

SARA C-008 CONDUCT SITE STUDY, MCBRIDE FARM

SARA C-009 CONDUCT SITE STUDY, BEMIS FARM

SARA C-019 PROVIDE CULTURAL SITES INVENTORY (CSI)

STRUCTURES:

SARA C-001 REHAB SARATOGA MONUMENT INTERIOR

SARA C-006 PRESERVE PHILIP SCHUYLER HOUSE

SARA C-012 PROVIDE PROFESSIONAL ASSESSMENT, STRUCTURES

MUSEUM COLLECTIONS:

SARA C-005 PREPARE COLLECTION MANAGEMENT PLAN

SARA C-011 PROVIDE MUSEUM COLLECTION STORAGE

SARA C-013 PROVIDE PROFESSIONAL ASSESSMENT, COLLECTIONS

SARA C-015 CATALOG ARCHAEOLOGICAL COLLECTION

SARA C-016 CATALOG HISTORY COLLECTION

SARA C-017 CATALOG NATURAL HISTORY COLLECTION

HISTORIC LANDSCAPES:

SARA C-010 PREPARE HISTORIC BASE MAP, SCHUYLER HOUSE UNIT (See also I-002)

SARA C-018 PREPARE CULTURAL LANDSCAPE PRESERVATION GUIDE

RESEARCH:

SARA C-004 PREPARE ADMINISTRATIVE HISTORY

SARA C-014 MONITOR CULTURAL RESOURCES

C. PROJECT STATEMENTS

SARA C 001 **REHAB SARATOGA MONUMENT**

SERVICEWIDE ISSUE: C13- NEED FOR REHABILITATION OF HISTORIC STRUCTURES.

PROBLEM STATEMENT:

The Monument was acquired from New York State in 1980 in a less than acceptable condition. NPS repointed and sealed the exterior. Major interior problems remain. Moisture condensation has been identified as the major problem. Masonry is cracking and dropping to the floor. Metal fixtures are rusting badly. The bronze tablets are dirty and are shifting in position. Some floor tiles and many stained glass window tiles are missing altogether. All floor supports may need to be replaced. An historic structure report is being prepared in 1990.

NPS 28 standards and Statement for Management objectives require the preservation and interpretation of Park structures. The present condition is so unsafe that the Superintendent closed the structure to public visitation and severely limited staff access in 1987 to that necessary for monitoring. The community is quite concerned about the condition, not at all pleased with the closure, and the visitor is receiving substandard service.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A historic structure report is being prepared and a conditions assessment is being carried out by an A&E firm. Their report will lead to the preparation of construction drawings and specifications for complete rehab of the monument. Net construction is estimated at $1,500,000.

FTE: 0 Cost: $1,500.00.

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to general site interpretation and especially to community relations and agency credibility.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 002 **PRESERVE BRITISH FORTIFICATIONS**

SERVICEWIDE ISSUE: C05- NEED FOR HISTORIC STRUCTURES REPORTS, ASSESSMENTS OF CONDITION.

PROJECT STATEMENT:

An original log section of the fortified line discovered during a professional survey in 1974 was photographed and stabilized pending permanent preservation and interpretation. NPS 28 standards and Statement for Management objectives require the preservation and interpretation of significant, theme related, Park structures. Present management action has been to monitor what is visible above ground of the feature periodically for condition and to accept thoughts and comments on alternative plans for preservation and interpretation. Impacts of present management action are that the feature may be deteriorating from natural environmental processes. No close analysis has been done. The visiting public is being denied access to this key interpretive feature.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

As this feature may be the only extant evidence of a fortified wall in the Park, during the first programming year an historic structures report should be prepared that includes recommendations for long range preservation treatment and interpretation. During the second programming year a plan detailing procedures for implementing preservation should be prepared. The third programming year should accomplish the work.

FTE: .5 Cost: 30.

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to general site preservation and interpretation.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 003 **CONDUCT ARCHEOLOGICAL SITE STUDY, BARBER FARM**

SERVICEWIDE ISSUE: C02- INADEQUATE SURVEY AND INVENTORY.

PROBLEM STATEMENT:

The location of the house and barn shown on the William Wilkinson map has not been resolved. The site is significant as having been a focal point around which the second battle occurred on October 7, 1777. Without any structural evidence or even a close approximation of the location of the structures, locating other features like roads or field edges is difficult. Landscape restoration in the vicinity is conjectural. The condition is that the staff has analyzed the available evidence and attempted field ground testing of the area. Present monitoring and study action has been inconclusive and disappointing. The community is anticipating more substantial and conclusive answers to this problem of accurate visible portrayal of the site.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY.

Because of the highly significant nature of the site to the interpretive story, an intense site survey with the most sophisticated techniques seems merited. With a thorough literature search, remote sensing, and standard field survey techniques should be undertaken in the first program year by professional staff. Evidence should be presented in an accompanying site report. Once defined, structure locations should be plainly marked.

FTE: .2 Cost: 20

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to data base information for sites, structures, objects, and landscapes.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 004 **PREPARE ADMINISTRATIVE HISTORY**

SERVICEWIDE ISSUE: C08- NEED FOR HISTORIC RESOURCES STUDIES AND ADMINISTRATIVE HISTORIES.

PROBLEM STATEMENT:

No single administrative document is available that summarizes and synthesizes the some 50 years of NPS management experience at Saratoga National Historical Park. NPS 28 recommends an administrative history for each area and agency management has identified the deficiency at Saratoga NHP. The present condition is that to find information about various phases of site development, the site manager must read other less comprehensive reports and past correspondence and administrative files containing the data needed to make wise decisions. The impact is that this process is time consuming and costly as staff move to and from the site. A less than acceptable feel for the site may be one resultant problem for new staff members. The community is thereby denied a fully informed staff person who knows the background. It is also denied a local history source book for area libraries that could benefit many public and private efforts.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY.

A professionally researched and written administrative history should be undertaken. The first programming year should include salary and expenses for suitable staff or contract person to survey the sources, research these to a sufficient depth which may not be exhaustive, and write the draft for editing and approval at the appropriate level. Some oral interviews are still possible at the present time, however, the longer the project goes unfunded the less effective the study would be with the interviews.

FTE: .5 Cost: 30.

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

RELATIONSHIPS:

Work is related to all division activities and public understanding of these policies and activities.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 005 **PREPARE COLLECTION MANAGEMENT PLAN**

SERVICEWIDE ISSUE: C09- NEED FOR COLLECTIONS MANAGEMENT PLANS.

PROBLEM STATEMENT:

No plan is available to guide and advise staff in day to day management of the collection of natural and cultural objects. Management actions for collection objects required to be preserved do not have the benefit of prior documented planning and approval. NPS 28 standards and Statement for Management guidelines are not being fully met. The present condition is that a need to present this information has been identified as a Park management priority, but no positive movement toward the solution has been approved. The impact is that while an effort is being made to improve the condition, the collection continues to be managed with less than optimum effectiveness. The community is receiving less than full benefit from these objects from their heritage.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A professionally researched and written collection management plan should be undertaken at once. A qualified curator should be located and engaged for the work at the earliest opportunity to complete all sections of an authorized plan.

FTE: .2 Cost: 10

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

RELATIONSHIPS:

Work is related to prime administrative mandates for preservation and use of Park resources.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENT:

This section will be completed upon approval of a recommended format.

SARA C 006 **PRESERVE PHILIP SCHUYLER HOUSE**

SERVICEWIDE ISSUE: C12- INADEQUATE PRESERVATION MAINTENANCE PROGRAM.

PROBLEM STATEMENT:

With continued monitoring, recent investigations have renewed attention to water damage to the south wall of the kitchen and insect infestations at various places in the structure. The kitchen wall bows outward and has become discolored. At every inspection, ample evidence of insect activity has been observed like live larvae in direct association and contact with historic clothing. NPS 28 cultural resources preservation standards are not being met.

Present management action has been to provide hygrothermograph monitoring as well as visual inspection for some time. Much NARO correspondence and many site visit reports are on file in documentation of concern about the present conditions. The impacts of present management action is that through monitoring and analysis procedures much more is now known about the actual problem conditions first observed many years ago. The community has traditionally shown strong interest in the welfare of the structure and the site in part because of the high visibility of the resources on the main street of the village and the high regard it has for a founding father who lived there.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

To correct the resource deterioration in the first program year install gutters at the kitchen roof line to divert the water away from the wall. Then set up a monitoring program to evaluate present drainage problems. Then if needed install drains along the foundation to carry away the water that is now collecting there or provide some alternative to correct the problem. Also, institute pest management procedures to remove the insects identified as the fabric destroying agents at various locations. Work is underway to set up a professional monitoring system.

FTE:1 Cost: 30.

COMPLIANCE:

Categorical exclusion would be in effect for NEPA. Region should determine what Section 106 responsibilities will be, especially for gutter installations.

RELATIONSHIPS:

Work is related to general site preservation and interpretation.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 007 **CONDUCT REMOTE SENSING SURVEY**

SERVICEWIDE ISSUE: CO2- INADEQUATE SURVEY AND INVENTORY.

PROBLEM STATEMENT:

Many Park cultural sites have not been accurately located and surveyed. The nineteenth and twentieth century sites have virtually no useful documentation available. NPS 28 and Statement for Management standards require identification of all cultural sites in order to provide effective management. The condition in general is one of non-compliance with these standards. Some sites may have sustained damage similar to the major vandalism that has occurred recently at the Victory Mills British campsite. While present management practice has caused no known impacts on sites, information is simply not available to make accurate assessment.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Sites should be located with infra red photography, magnetometer, radar, resistivity, and other developing techniques. Combined with surface investigation and literature search, remote sensing surveys would help to document features Parkwide for further study. Work would involve paid, contracted or donated professional staff time. Film and equipment would be provided through normal purchasing procedures. Analysis would be done by Regional Archaeologist or his representative. Work would have applicability to other management divisions as information gained would be used by all staff.

FTE: .2 Cost: 10.

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

RELATIONSHIPS:

Work is related to overall natural as well as cultural history compilation and analysis of base line data in progress in both areas.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 008 **CONDUCT ARCHEOLOGICAL SITE STUDY McBRIDE FARM**

SERVICEWIDE ISSUE: C02- INADEQUATE SURVEY AND INVENTORY.

PROBLEM STATEMENT:

The site has not been professionally researched, located, documented, or tested. It is historically significant as having been at or near the German Breymann Redoubt of 1777. NPS 28 and Statement for Management standards require identification and documentation of all cultural sites. The conditions, although not formally assessed appears to be stable with no evident surface disturbance. Present management has caused no known impact to the site. The community is entitled to full disclosure and interpretation of the site.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A professional report should be produced by cultural resources staff or contractor detailing information of a level II intensity that would be published and placed on file at the Park. Evidence from a thorough literature search, including interviews, photographs, maps, and ground testing should be presented, reviewed, and published.

FTE: .2 Cost: 20.

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to ongoing data base information for sites, structures, objects, and landscapes.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 009 **CONDUCT ARCHEOLOGICAL SITE STUDY BEMIS FARM**

SERVICEWIDE ISSUE: C02- INADEQUATE SURVEY AND INVENTORY.

PROBLEM STATEMENT:

The site has not been professionally researched, located, documented, or tested. It is historically significant as having served as a focal point for social activity at Bemis Heights and as a landmark during the American Army occupation in the fall of 1777. NPS 28 and Statement for Management standards require identification and documentation of all cultural sites. The condition, although not formally assessed appears to be stable with no evident surface disturbance. However, site proximity the to Park boundary and domestic activity in the area serve to place the site at risk. Present management has caused no known impact to the site. The community is entitled to full disclosure and interpretation of the site.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A professional investigation should be programmed and a report produced to provide information of a level II intensity that would be published and placed on file at the Park for management use and public information. Evidence from a thorough literature search and from ground testing should be presented, reviewed, and published.

FTE: .2 Cost: 20.

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to ongoing data base information for sites, structures, objects, and landscapes.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 010 **PREPARE HISTORICAL BASE MAP, SCHUYLER HOUSE UNIT**

SERVICEWIDE ISSUE: C11- NEED FOR CULTURAL LANDSCAPE REPORT.

PROBLEM STATEMENT:

No historical base map is available to guide the management of the site. Statement for Management standards, to be implemented, require decisions be made on appropriate historic management of the site. In the present condition the scene is not managed for historical accuracy. Identification and location of a presumed 25 historic structures is needed. The present restored house is the only feature that can be said to approximate a part of the historic scene. Vegetation information is needed as well. Specific locations of lawns, gardens, trees, shrubs and other vegetation are undetermined. The overall impact is that effective management action is stalled. The community is concerned about site appearance in a high visibility location particularly as the Black Locust grove dies out.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

A historic base map should be programmed to research and portray the historic scene. Using available sources and a draft report already prepared, a qualified professional historian should survey, review, and research all sources to document the historic scene appearance. The final report and maps should undergo sufficient review and be approved and published as an official planning document for intelligent decision making.

FTE: .5 Cost: 30

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

RELATIONSHIPS:

Work is related to Park interpretation, natural science vegetation manipulation programs, and compliance with SFM.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 011 **PROVIDE MUSEUM COLLECTION STORAGE**

SERVICEWIDE ISSUE: C05- INSUFFICIENT STORAGE AND ENVIRONMENTAL CONTROLS FOR MUSEUM COLLECTION.

PROBLEM STATEMENT:

Recent archaeological surveys at several sites have produced a large registration, cataloging, and storage backlog for an estimated 50,000 objects. Funding and staffing have not been provided to provide appropriated care for these objects. NPS 28 standards and SFM standards require the correct accountability process be completed, and appropriate long term storage be provided. The condition is that accountability and storage procedures are not in compliance. A large impact will be experienced when the cooperative agreement with the university under which this work has been accomplished is terminated within the coming year. The collection will be moved to the Park. The community expects that all due care is taken with these objects for use and enjoyment in perpetuity.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Sufficient funding and staffing must be provided to carry out accountability. Temporary museum technicians should be employed to eliminated the backlog. Planning expertise and funding must be secured to achieve additional state of the art storage space.

FTE: .5 Each Year Cost: 10 Each Year.

COMPLIANCE:

Environmental and cultural clearances would be accomplished during preparation of the action plan.

RELATIONSHIPS:

Work is related to SFM implementation, NPS 28 preservation policy, and Park interpretation.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 012 **PROVIDE PROFESSIONAL ASSESSMENT, STRUCTURES**

SERVICEWIDE ISSUE: CO5- NEED FOR HSR AND ASSESSMENT.

PROBLEM STATEMENT:

Twenty-eight structures require formal significance, condition, and impact assessment for full compliance with standards. The HSR for Saratoga Monument is in progress. The Neilson House and Schuyler House, Champlain Canal, and smaller monuments require full assessment. No formal documented professional assessments are available to guide future planning and program formulation.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide NARO professional staff service to evaluate and assess structures with formal documentation. Park should bear the time and travel cost. Accurate and current archeological data sections to be included.

FTE .02 Cost 2.

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon approval of a recommended format.

SARA C 013 **PROVIDE PROFESSIONAL ASSESSMENT, COLLECTIONS**

SERVICEWIDE ISSUE: CO9- NEED FOR COLLECTION CONDITION SURVEYS.

PROBLEM STATEMENT:

Museum collection of approximately 50,000 specimens and objects requires formal significance, condition, and impact assessment for full compliance with standards. All collections, that is archaeological, historical, archival, and biological require documented assessment. No formal documented professional assessments are available to guide future planning and program formulation.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide NARO professional staff service to evaluate and assess collections with formal documentation. Provide Collection Condition Survey documentation. Park should bear the time and travel cost.

Estimated FTE .02 Cost 2.

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENTS:

This section will be completed upon the approval of a recommended format.

SARA C 014 **MONITOR CULTURAL RESOURCES**

SERVICEWIDE ISSUE: C19- INADEQUATE CULTURAL RESOURCES MONITORING PROGRAM.

PROBLEM STATEMENT:

Seventy six Park sites have no systematic documented monitoring. Daily monitoring for potential violator and environmental damage is required for effective operation. Routine Ranger patrols never reach many sites. Knowledge of site condition, rate of deterioration, or other data is not available. Twenty eight Park structures have no systematic documented monitoring. Daily monitoring for potential violator and environmental damage is required for effective operation. Routine Ranger patrols reach most superficially, but data from trained, systematic observation is not available. The some 50,000 object collection has no systematic documented monitoring program. Daily monitoring data for light levels, temperature, humidity, and insect damage is not available for furnished houses, exhibit areas, and storage areas. Full compliance with standards remains unachieved.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide trained staff service and supplies to implement a formal, documented, scheduled monitoring program to achieve compliance. Base operating funding should be available to implement a formal program to achieve compliance.

Estimated FTE .2 Cost 4.5 each year.

COMPLIANCE:

Categorical exclusions would be in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENT:

This section will be completed upon the approval of a recommended format.

SARA C 015 **CATALOG ARCHAEOLOGICAL COLLECTION**

SERVICEWIDE ISSUE: C03- INCOMPLETE CATALOGING OF MUSEUM COLLECTIONS.

PROBLEM STATEMENT:

An estimated 30,000 field excavated objects are accessioned but not registered or cataloged creating a large backlog. Catalog card and ANCS entry is required to achieve full accountability and compliance with resources management standards.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide trained staff services to catalog and enter data on ANCS to achieve compliance.

Estimated FTE 1. Cost 30.

COMPLIANCE:

Categorical exclusion in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENT:

This section will be completed upon the approval of a recommended format.

SARA C 016 **CATALOG HISTORY COLLECTION**

SERVICEWIDE ISSUE: C03- INCOMPLETE CATALOGING OF MUSEUM COLLECTIONS.

PROBLEM STATEMENT:

An estimated 1700 objects are partially accessioned and partially cataloged. Catalog card updating and/or revision and ANCS entry is required to achieve full accountability and compliance with resources management standards.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide trained staff services to catalog and enter data on ANCS to achieve compliance.

FTE .5 Cost 20.

COMPLIANCE:

Categorical exclusion would be in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENT:

This section will be completed upon approval of a recommended format.

SARA C 017 **CATALOG NATURAL HISTORY COLLECTION**

SERVICEWIDE ISSUE: C03- INCOMPLETE CATALOGING OF MUSEUM COLLECTIONS.

PROBLEM STATEMENT:

Specimen collection during the past few years has increased the collection substantially. An estimated 500 objects are not accessioned nor cataloged. Accessioning completion and catalog card and ANCS entry is required to achieve full accountability and compliance with resources management standards.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide trained staff services to accession, catalog, and enter data on ANCS to achieve compliance.

FTE .2 Cost 10.

COMPLIANCE:

Categorical exclusion would be in effect for NEPA.

ANNUAL PROJECT STATUS AND ACCOMPLISHMENT:

This section will be completed upon the approval of a recommended format.

SARA C 018 **PREPARE CULTURAL LANDSCAPE PRESERVATION GUIDE.**

SERVICEWIDE ISSUE: C12- INADEQUATE PRESERVATION MAINTENANCE PROGRAM.

PROBLEM STATEMENT:

No formal professionally prepared guide is available for the maintenance and management of the Schuyler House grounds vegetation. Specimen trees, shrubs, and other plants need correct care on a regular routine basis to preserve site integrity. The community expects a cared for appearance. Statement for Management standards are not being implemented in a planned manner.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

This preservation guide should be programmed and written by competent professionals to appropriate standards to guide the landscape maintenance program at the site.

FTE: .3 Cost: 8

COMPLIANCE:

Categorical exclusion would be in effect for NEPA.

RELATIONSHIPS:

Work is related to site base map implementation and to site interpretation.

SARA C 019 **PROVIDE CULTURAL SITES INVENTORY.**

SERVICEWIDE ISSUE: CO2- INADEQUATE SURVEY AND INVENTORY.

PROBLEM STATEMENT:

An archaeological overview has been nearly completed, however, a more formal cultural sites inventory (CSI) in an approved database format is required. Full integrity and condition assessment is not available for each site. Compliance with NPS 28 standards is not yet accomplished.

DESCRIPTION OF A RECOMMENDED PROJECT OR ACTIVITY:

Provide data entries in standard authorized database (CSI). Information is available but requires incorporation in correct format.

FTE: .1 Cost: 3

COMPLIANCE:

Categorical exclusion would be in effect for NEPA.

RELATIONSHIPS:

Work is related to park wide general protection and interpretation.

CULTURAL RESOURCE DOCUMENTATION CHECKLIST

Place an X in the appropriate column. Leave columns blank if document is not required for the park. Remember that items in the first section, PLANNING DOCUMENTS, may also apply to natural resources. See NPS-28, Chapter 2 for description of each inventory or study.

TITLE	CURRENT AND APPROVED	INCOMPLETE; NEEDS REVISION OR UPDATING	NEEDED
PLANNING DOCUMENTS			
Preauthorization and Authorization			
Statement for Management (SFM)		Updating (1992)	
Outline of Planning Requirements (OPR)	X		
General Management Plan (GMP)			X
Development Concept Plan (DCP)			X
Resources Management Plan (RMP)	X		
Interpretive Prospectus (IP)		X	
SERVICEWIDE INVENTORIES, LISTS, CATALOGS, AND REGISTERS			
Cultural Resources Bibliography (CRBIB)	X		
Cultural Sites Inventory (CSI)			X
List of Classified Structures (LCS)	X		
National Catalog of Museum Objects	X		
National Register of Historic Places		X	
BASIC CULTURAL RESOURCE DOCUMENTS			
Archeological Overview and Assessment			X
Archeological Identification Studies			
Archeological Evaluation Studies			

ATTACHMENT

CULTURAL RESOURCE DOCUMENTATION CHECKLIST

TITLE	CURRENT AND APPROVED	INCOMPLETE; NEEDS REVISION OR UPDATING	NE
BASIC CULTURAL RESOURCE DOCUMENTS (cont.)			
Ethnographic Overview & Assessment			
Ethnographic Oral Histories & Life Histories			
Ethnographic Program			
Historical Base Map		11/50	
Historic Resource Study (HRS)			
Park Administrative History			
Scope of Collection Statement	2/86		
SPECIAL RESOURCE STUDIES AND PLANS			
Archeological & Ethno. Collections Studies			
Archeological Data Recovery Studies			
Collection Management Plan			X
Collection Storage Plan			
Collection Condition Survey			
Cultural Landscape Report (CLR)			X
Ethnohistory			
Exhibit Plan			
Historic Furnishings Report	X		
Historic Structure Preservation Guide (HSPG)			
Historic Structure Report	X		
Social Impact Study			
Special [illegible]			

SUMMARY CHART FOR ARCHEOLOGICAL SITES

Significance		Condition					Impacts				Documentation		
		Good	Fair	Poor	Destroyed	Unknown	Severe	Moderate	Low	Unknown	Good	Fair	Poor
ıtional													
ate & gional													
cal													
d aluated	76	12		2		62		2	12	62		14	62
TALS	76	12		2		62		2	12	62		14	62

SUMMARY CHART FOR STRUCTURES

Significance		Condition				Impacts				Documentation		
		Good	Fair	Poor	Unknown	Severe	Moderate	Low	Unknown	Good	Fair	Poor
National												
State & Regional												
Local												
Not Evaluated	28	26	1	1		1	2		25		3	25
TOTALS	28	26	1	1		1	2		25		3	25

SUMMARY CHART FOR OBJECTS

DOCUMENTATION Form 10 254 Submitted to National Catalog at Harpers Ferry	Archeology	Ethnology	History	Archives	Biology	Paleontology	Geology	TOTALS
Registration Data Only	1572		400	400				2372
Registration & Catalog Data	1000		300	100				1400
Total Items Cataloged	2572		700	500				3772
Backlog to be Cataloged	(50,000)		—	500		500		(51,000)
Total Collection Summary	(52,572)		(700)	(1000)		(500)		(54,772)

CONDITION The percentage of collection in the following categories	Archeology	Ethnology	History	Archives	Biology	Paleontology	Geology
Excellent					(70)		
Good	(90)		(90)	(90)	(30)		
Fair	(10)		(10)	(10)			
Poor							
Unknown							

SUMMARY CHART FOR CULTURAL LANDSCAPES

Significance		Condition				Impacts				Documentation		
		Good	Fair	Poor	Unknown	Severe	Moderate	Low	Unknown	Good	Fair	Poor
National												
State & Regional												
Local												
Not Evaluated	5		5				5				5	
TOTALS	5		5				5				5	

Appendix C

List of Related Action Plans
Saratoga NHP: 1990

1) Fire Management Plan (1990)

2) Visitor Center Vista Management Plan (1990)

3) Gypsy Moth Action Plan (1990)

02/26/93 TABLE 1 FY: 93

15:54:41 NPS RESOURCE PERSONNEL PARK: SARA

(current year only) REGION: NARO

TYPE OF NPS EMPLOYEE	FTEs OF RESOURCES WORK		
	Natural	Cultural	Total
Research Scientists	0.0	0.0	0.0
Resources Specialists	1.0	1.0	2.0
025 Park Rangers Res Mgmt	0.2	0.0	0.2
025 Park Rangers Res Prot	0.4	1.3	1.7
025 Park Rangers Res Interp	0.0	3.5	3.5
Maintenance Personnel	0.0	3.0	3.0
Total of RES Personnel	1.6	8.8	10.4
TOTAL PARK FTE: 22.7			
PERCENT	7.0%	38.8%	45.8%

End of data

TABLE 2
NATURAL AND CULTURAL
CURRENT YEAR FUNDING
($ in thousands - by activity type)

FUNDING SOURCE	TOTAL	RES	MIT	MON	PRO	INT	ADM
RNRM	15.0	0.0	0.0	15.0	0.0	0.0	0.0
TOTAL	15.0	0.0	0.0	15.0	0.0	0.0	0.0

PK PRI	PROJECT NUMBER	PROJECT TITL	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	STARTING YEAR $$	STARTING YEAR FTE	OUTYEAR 1 $$	OUTYEAR 1 FTE	OUTYEAR 2 $$	OUTYEAR 2 FTE	OUTYEAR 3 $$	OUTYEAR 3 FTE	TOTAL $$	TOTAL FTE
1	001.000	PROVIDE ADDITIONAL SUPPORT STAFF	N24	N20	PKBASE-NR	MON		55.00	1.5	55.00	1.5	55.00	1.5	55.00	1.5	220.00	6.0
2	007.110	ASSESS STATE AND FED-LISTED GRASSLAND BIRDS	N02	N20	RG-RM-NAT	MON		13.00	0.4	0.0	0.0	0.0	0.0	0.0	0.0	13.00	0.4
3	007.100	INVENTORY AND MONITOR NATIVE FAUNA/FLORA THREATENED GRASSLAND BIRD	N02	N20	NRPP	RES		30.00	0.3	30.00	0.3	35.00	0.0	35.00	0.0	130.00	0.6
							Project Total	43.00	0.7	30.00	0.3	35.00	0.0	35.00	0.0	143.00	1.0
4	006.000	INVENTORY AND MONITOR PARK WETLANDS	N12	N20	NRPP	RES		25.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.00	0.0
5	011.000	DEVELOP PARK GIS REGIONAL TECHNICAL SUPPORT CENTER	N20	N24	GIS	ADM		80.00	1.5	80.00	1.5	80.00	1.5	80.00	1.5	320.00	6.0
6	003.000	DETERMINE MANAGEMENT REGIME OF HISTORIC FIELDS	N05	N08	RG-NS-RES	RES		25.00	0.5	25.00	0.3	25.00	0.3	10.00	0.0	85.00	1.1
7	005.000	METEOROLOGIC AL MONITORING IN SUPPORT OF MANAGEMENT	N07	N20	FIRE-$	MON		10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.00	0.0

continued...

PK PRI	PROJECT NUMBER	PROJECT TITL	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	STARTING YEAR $$	STARTING YEAR FTE	OUTYEAR 1 $$	OUTYEAR 1 FTE	OUTYEAR 2 $$	OUTYEAR 2 FTE	OUTYEAR 3 $$	OUTYEAR 3 FTE	TOTAL $$	TOTAL FTE
8	010.000	UPDATE GIS DATABASE AND CORRECT DATA DEFICIENCIES		N20	N08	GIS	MON	15.00	0.5	0.0	0.0	0.0	0.0	0.0	0.0	15.00	0.5
9	007.400	INVENTORY AND MONITOR NATIVE FAUNA/FLORA STATE RARE PLANTS		N03		RG-NS-RES	RES	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.00	0.0
10	009.000	SURVEY PARK FOR THE DEER TICK (IXODES DAMMINI)		N04	N20	RG-NS-RES	RES	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.00	0.0
11	008.000	INVESTIGATE FREQUENCY OF EXOTICS IN HISTORIC FIELDS		N05	N08	NRPP	RES	3.00	0.0	3.00	0.0	0.0	0.0	0.0	0.0	6.00	0.0
12	002.000	DEVELOP WHITE-TAILED DEER MANAGEMENT PLAN		N08	N01	RG-RM-NAT	ADM	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.00	0.0
12	012.000	MAINTAIN HISTORIC FIELDS		N08	N05	RG-REG-MT	MIT	8.00	0.4	0.0	0.0	0.0	0.0	0.0	0.0	8.00	0.4
13	013.000	PROTECT NATURAL RESOURCES THROUGH LAW ENFORCEMENT		N19		PKBASE-NR	PRO	12.00	0.5	12.00	0.5	12.00	0.5	12.00	0.5	48.00	2.0
14	007.300	INVENTORY AND MONITOR NATIVE FAUNA/FLORA WHITE-TAILED DEER		N01	N20	RG-RM-NAT	MON	6.00	0.3	0.0	0.0	0.0	0.0	0.0	0.0	6.00	0.3

continued...

PK PRI	PROJECT NUMBER	PROJECT TITL	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	STARTING YEAR $$	STARTING YEAR FTE	OUTYEAR 1 $$	OUTYEAR 1 FTE	OUTYEAR 2 $$	OUTYEAR 2 FTE	OUTYEAR 3 $$	OUTYEAR 3 FTE	TOTAL $$	TOTAL FTE
15	007.200	INVENTORY AND MONITOR NATIVE FAUNA/FLORA VEGETATION MONITORING		N01	N08	RG-RM-NAT MON		9.00	0.5	0.0	0.0	0.0	0.0	0.0	0.0	9.00	0.5
						Project Total		15.00	0.8	0.00	0.0	0.00	0.0	0.00	0.0	15.00	0.8
16	004.000	INVESTIGATE GRAY DOGWOOD (CORNUS RACEMOSA) ECOLOGY		N20		RG-NS-RES RES		7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.00	0.0
		17 projects printed															
						Grand Total		317.00	6.4	205.00	4.1	207.00	3.8	192.00	3.5	921.00	17.8

End of data

PK PRI	PROJECT NUMBER	PROJECT TITL	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	STARTING YEAR $$	STARTING YEAR FTE	OUTYEAR 1 $$	OUTYEAR 1 FTE	OUTYEAR 2 $$	OUTYEAR 2 FTE	OUTYEAR 3 $$	OUTYEAR 3 FTE	TOTAL $$	TOTAL FTE
0	001.000	RESEARCH CULTURAL LANDSCAPES		C11	N08	RG-CR-MTN	RES	38.00	0.5	0.0	0.0	0.0	0.0	0.0	0.0	38.00	0.5
						CRPP	RES	0.0	0.0	20.00	0.5	0.0	0.0	0.0	0.0	20.00	0.5
						Subtotal		38.00	0.5	20.00	0.5	0.00	0.0	0.00	0.0	58.00	1.0
0	003.000	SOCIAL SCIENCE RESEARCH AT SARA		C01	N19	RG-NS-RES	RES	30.00	0.2	70.00	0.2	80.00	0.0	70.00	0.0	250.00	0.4
1	002.000	PROTECT PARK FROM EXTERNAL THREATS		N08	C18	CRPP	RES	15.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.00	0.0
2	001.100	RESTORE CULTURAL LANDSCAPE VEGETATION RESEARCH CULT LANDSCAPE		N08	C11	RG-CR-MTN	RES	30.00	0.5	20.00	0.5	0.0	0.0	0.0	0.0	50.00	1.0
3	001.200	RESTORE CULTURAL LANDSCAPE VEGETATION PREPARE RPT: SCHUYLER HSE		N08	C11	CRPP	RES	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.00	0.0
						Project Total		38.00	0.5	20.00	0.5	0.00	0.0	0.00	0.0	58.00	1.0
4	003.100	SOCIAL SCIENCE RESEARCH AT SARA SURVEY ATTITUDES		C01	N19	RG-NS-RES	RES	30.00	0.2	40.00	0.2	0.0	0.0	0.0	0.0	70.00	0.4
5	003.200	SOCIAL SCIENCE RESEARCH AT SARA VISITOR USE CONFLICTS		N19	C01	RG-NS-RES	RES	0.0	0.0	20.00	0.0	35.00	0.0	0.0	0.0	55.00	0.0

continued...

PK PRI	PROJECT NUMBER	PROJECT TITL	PKG NUM	CULT RES TYPE	SYSTEM-WIDE ISSUE	FUNDING SOURCE	ACT TYP	STARTING YEAR $$	STARTING YEAR FTE	OUTYEAR 1 $$	OUTYEAR 1 FTE	OUTYEAR 2 $$	OUTYEAR 2 FTE	OUTYEAR 3 $$	OUTYEAR 3 FTE	TOTAL $$	TOTAL FTE
6	003.400	SOCIAL SCIENCE RESEARCH AT SARA EVALUATE METHODOLOGY		N19	C15	RG-NS-RES	RES	0.0	0.0	10.00	0.0	15.00	0.0	0.0	0.0	25.00	0.0
7	003.300	SOCIAL SCIENCE RESEARCH AT SARA IMPACTS OF VISITOR USE		N19	C15	RG-NS-RES	RES	0.0	0.0	0.0	0.0	30.00	0.0	70.00	0.0	100.00	0.0
						Project Total		30.00	0.2	70.00	0.2	80.00	0.0	70.00	0.0	250.00	0.4
	9 projects printed					Grand Total		151.00	1.4	180.00	1.4	160.00	0.0	140.00	0.0	631.00	2.8

End of data

CULTURAL RESOURCE DOCUMENTATION CHECKLIST

Place an X in the appropriate column. Leave columns blank if document is not required for the park. Remember that items in the first section, PLANNING DOCUMENTS, may also apply to natural resources. See NPS-28, Chapter 2 for description of each inventory or study.

TITLE	CURRENT AND APPROVED	INCOMPLETE; NEEDS REVISION OR UPDATING	NEEDED
PLANNING DOCUMENTS			
Preauthorization and Authorization			
Statement for Management (SFM)		Updating (1992)	
Outline of Planning Requirements (OPR)	X		
General Management Plan (GMP)			X
Development Concept Plan (DCP)			X
Resources Management Plan (RMP)	X		
Interpretive Prospectus (IP)		X	
SERVICEWIDE INVENTORIES, LISTS, CATALOGS, AND REGISTERS			
Cultural Resources Bibliography (CRBIB)	X		
Cultural Sites Inventory (CSI)			X
List of Classified Structures (LCS)	X		
National Catalog of Museum Objects	X		
National Register of Historic Places		X	
BASIC CULTURAL RESOURCE DOCUMENTS			
Archeological Overview and Assessment			X
Archeological Identification Studies			
Archeological Evaluation Studies			

ATTACHMENT

CULTURAL RESOURCE DOCUMENTATION CHECKLIST

TITLE	CURRENT AND APPROVED	INCOMPLETE; NEEDS REVISION OR UPDATING	N
BASIC CULTURAL RESOURCE DOCUMENTS (cont.)			
Ethnographic Overview & Assessment			N
Ethnographic Oral Histories & Life Histories			N
Ethnographic Program			N
Historical Base Map		11/50	
Historic Resource Study (HRS)			
Park Administrative History			
Scope of Collection Statement	2/86		
SPECIAL RESOURCE STUDIES AND PLANS			
Archeological & Ethno. Collections Studies			N
Archeological Data Recovery Studies			N
Collection Management Plan			X
Collection Storage Plan			N
Collection Condition Survey			X
Cultural Landscape Report (CLR)			X
Ethnohistory			P
Exhibit Plan			P
Historic Furnishings Report	X		
Historic Structure Preservation Guide (HSPG)			
Historic Structure Report	X		
Social Impact Study			
Special [illegible]			

SUMMARY CHART FOR STRUCTURES

Significance		Condition				Impacts				Documentation		
		Good	Fair	Poor	Unknown	Severe	Moderate	Low	Unknown	Good	Fair	Poor
National												
State & Regional												
Local												
Not Evaluated	28	26	1	1		1	2		25		3	25
TOTALS	28	26	1	1		1	2		25		3	25

SUMMARY CHART FOR CULTURAL LANDSCAPES

Significance		Condition				Impacts				Documentation		
		Good	Fair	Poor	Unknown	Severe	Moderate	Low	Unknown	Good	Fair	Poor
National												
State & Regional												
Local												
Not Evaluated	5		5				5				5	
TOTALS	5		5				5				5	

Appendix C

List of Related Action Plans
Saratoga NHP: 1990

1) Fire Management Plan (1990)

2) Visitor Center Vista Management Plan (1990)

3) Gypsy Moth Action Plan (1990)

03/14/94 TABLE 1 FY: 94

09:44:49 NPS RESOURCE PERSONNEL PARK: SARA

(current year only) REGION: NARO

TYPE OF NPS EMPLOYEE	FTEs OF RESOURCES WORK		
	Natural	Cultural	Total
Research Scientists	0.0	0.0	0.0
Resources Specialists	1.5	1.5	3.0
025 Park Rangers Res Mgmt	0.2	0.0	0.2
025 Park Rangers Res Prot	0.4	1.3	1.7
025 Park Rangers Res Interp	0.0	3.2	3.2
Maintenance Personnel	0.2	3.7	3.9
Total of RES Personnel	2.3	9.7	12.0
TOTAL PARK FTE: 22.0			
PERCENT	10.5%	44.1%	54.5%

End of data

FUNDING SOURCE	TOTAL	RES	MIT	MON	PRO	INT	ADM
PCR1	3.00	0.00	0.00	0.00	0.00	0.00	3.00
RMCM	40.00	0.00	40.00	0.00	0.00	0.00	0.00
PNR1	30.50	0.00	0.00	17.00	0.00	0.00	13.50
NFED	5.50	0.00	0.00	5.50	0.00	0.00	0.00
RNRM	27.70	0.00	0.00	27.70	0.00	0.00	0.00
TOTAL	106.70	0.00	40.00	50.20	0.00	0.00	16.50

End of data

Sorted by: Resource Type + Priority

03/14/94
09:45:59

PROJECT LIST

PRIORITY	PROJECT NUMBER	YEAR	PROJECT TITLE	SUB-TITLE	FUNDED	UNFUNDED
1	SARA-C-001.000	94	REHABILITATE SARATOGA MONUMENT		3.00	3135.00
2	SARA-C-006.000	94	PRESERVE PHILIP SCHUYLER HOUSE		50.00	130.00
3	SARA-C-011.000	94	PROVIDE MUSEUM COLLECTION STORAGE		0.00	30.00
4	SARA-C-004.000	94	PREPARE ADMINISTRATIVE HISTORY		0.00	40.00
5	SARA-C-010.000	94	PREPARE HISTORIC BASE MAP, SCHUYLER HOUSE UNIT		0.00	40.00
6	SARA-C-021.000	94	PREPARE FURNISHING PLAN PHILIP SCHUYLER HOUSE		0.00	20.00
7	SARA-C-022.000	94	PREPARE ARCHAEOLOGICAL OVERVIEW		0.00	20.00
8	SARA-C-007.000	94	CONDUCT REMOTE SENSING SURVEY		0.00	15.00
9	SARA-C-019.000	94	PROVIDE CULTURAL SITES INVENTORY (CSI)		0.00	15.00
10	SARA-C-002.000	94	PRESERVE BRITISH FORTIFICATION		0.00	30.00
11	SARA-C-013.000	94	ASSESS ARCHAEOLOGICAL RESOURCES:GARBER TRACT		0.00	90.00
12	SARA-C-016.000	94	CATALOG HISTORY COLLECTION		0.00	10.00
13	SARA-C-020.000	94	CATALOG ARCHIVAL COLLECTION		0.00	40.00
14	SARA-C-017.000	94	CATALOG NATURAL HISTORY COLLECTION		0.00	7.00
15	SARA-C-015.000	94	CATALOG ARCHAEOLOGICAL COLLECTION		0.00	40.00
16	SARA-C-003.000	94	CONDUCT ARCHAEOLOGICAL SITE STUDY, BARBER FARM		0.00	20.00
17	SARA-C-008.000	94	CONDUCT ARCHAEOLOGICAL SITE STUDY, MCBRIDE FARM		0.00	20.00
18	SARA-C-009.000	94	CONDUCT ARCHAEOLOGICAL SITE STUDY, BEMIS FARM		0.00	20.00
19	SARA-C-014.000	94	MONITOR CULTURAL RESOURCES		0.00	8.00
20	SARA-C-012.000	94	PROVIDE PROFESSIONAL ASSESSMENT, STRUCTURES		0.00	3.00
21	SARA-C-018.000	94	PREPARE CULTURAL LANDSCAPE PRESERVATION GUIDE		0.00	8.00
1	SARA-I-001.100	94	CONDUCT PHASE 3 CULTURAL LANDSCAPE INITIATIVE:	RESTORATION MAP DEVELOPMT	10.00	11.00
2	SARA-I-003.100	92	SOCIAL SCIENCE RESEARCH AT SARA	SURVEY ATTITUDES	0.00	70.00
3	SARA-I-001.300	94	MITIGATE VIEWSHED IMPACTS	VEGETATIVE SCREENING	0.00	18.00
4	SARA-I-002.000	92	PROTECT PARK FROM EXTERNAL THREATS		0.00	15.00
5	SARA-I-001.200	92	CONDUCT CULTURAL LANDSCAPE REPORT	GENERAL SCHUYLER HOUSE	0.00	8.00
6	SARA-I-003.200	92	SOCIAL SCIENCE RESEARCH AT SARA	VISITOR USE CONFLICTS	0.00	55.00
7	SARA-I-003.400	92	SOCIAL SCIENCE RESEARCH AT SARA	EVALUATE METHODOLOGY	0.00	25.00
8	SARA-I-003.300	92	SOCIAL SCIENCE RESEARCH AT SARA	IMPACTS OF VISITOR USE	0.00	100.00
999	SARA-I-001.000	92	EVALUATE CULTURAL LANDSCAPES		0.00	0.00
999	SARA-I-003.000	92	SOCIAL SCIENCE RESEARCH AT SARA		0.00	250.00
0	SARA-N-006.000	94	DELINEATE AND MAP WETLANDS: ENHANCED NWI		18.00	0.00
0	SARA-N-007.110	94	DEVELOP CONS. STRATEGY FOR STATE AND FED. PROTECTED	GRASSLAND BIRDS	40.40	0.00
1	SARA-N-001.000	94	FUND PROFESSIONAL STAFF:FY95 PROFESSIONALIZATION IN		60.00	80.00
2	SARA-N-015.000	94	INVENTORY HERPTILES AND AQUATIC INVERTEBRATES		0.00	60.00
3	SARA-N-003.000	92	DETERMINE MANAGEMENT REGIME OF HISTORIC FIELDS		0.00	85.00
4	SARA-N-007.400	89	INVENTORY AND MONITOR NATIVE FAUNA/FLORA	STATE RARE PLANTS	0.00	8.00
5	SARA-N-007.100	94	INVENTORY STATE/FEDERALLY-LISTED GRASSLAND BIRDS		0.00	140.00
6	SARA-N-011.000	92	DEVELOP PARK GIS FIELD TECHNICAL SUPPORT CENTER		0.00	320.00
7	SARA-N-014.000	94	COMPLETE VASCULAR PLANT COLLECTION HERBARIUM		0.00	8.00
8	SARA-N-005.000	92	METEOROLOGICAL MONITORING IN SUPPORT OF MANAGEMENT		0.00	10.00
9	SARA-N-010.000	92	UPDATE GIS DATABASE AND CORRECT DATA DEFICIENCIES		0.00	15.00
10	SARA-N-009.000	89	SURVEY PARK FOR THE DEER TICK (IXODES DAMMINI)		0.00	5.00
11	SARA-N-012.000	88	MAINTAIN HISTORIC FIELDS		0.00	8.00
12	SARA-N-002.000	89	DEVELOP WHITE-TAILED DEER MANAGEMENT PLAN		0.00	6.00
12	SARA-N-008.000	88	INVESTIGATE FREQUENCY OF EXOTICS IN HISTORIC FIELDS		0.00	6.00
13	SARA-N-013.000	90	PROTECT NATURAL RESOURCES THROUGH LAW ENFORCEMENT		0.00	48.00
14	SARA-N-007.300	92	INVENTORY AND MONITOR NATIVE FAUNA/FLORA	WHITE-TAILED DEER	0.00	6.00
15	SARA-N-007.200	92	INVENTORY AND MONITOR NATIVE FAUNA/FLORA	VEGETATION MONITORING	0.00	9.00

continued...

PRIORITY	PROJECT NUMBER	YEAR	PROJECT TITLE	SUB-TITLE	FUNDED	UNFUNDED
16	SARA-N-004.000	88	INVESTIGATE GRAY DOGWOOD (CORNUS RACEMOSA) ECOLOGY		0.00	7.00
999	SARA-N-007.000	92	INVENTORY AND MONITOR NATIVE FLORA/FAUNA		0.00	74.00
Grand Total					181.40	5188.00

51 projects printed