

FIRE MANAGEMENT
and
CULTURAL RESOURCES

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When Rick Klukas asked me to come and describe the role of the historian in Fire Management, I wondered just what I would be able to say that would be pertinent to that subject and what would be considered impertinent. With these thoughts in mind I began to read and reflect on the subject and soon realized that there was a place for the individual concerned with cultural resources in the preparation of fire management plans. The following discussion is divided into three parts. First, a definition of terms so that we all will be speaking the same language and a brief comment on Park Service policies regarding cultural resources and their relation to preparation of a Fire Management Plan. Second, the need to consider the impact on cultural resources in preparing a Fire Management Plan. Finally, the role of an Archeologist, Historian*or Historical Architect in the accumulation of data for a Fire Management Plan.

The term "historic resources" and "cultural resources" are used interchangeably in the National Park Service and refer to the sites, structures, districts and objects associated with both prehistoric and historic periods. The term historic and its various forms is used in the anthropological concept of culture and the processes, events, places and objects related to the human past. Historic sites are a distinguishable location on which events occurred. They may be associated with an event, person, or culture, or have been subjected to sustained human activity. Battlefields, campgrounds, farms, trails, middens or other archeological sites, as well as the land on which a historic structure stands, are all considered sites.

Historic Structures are works of man consciously created to serve some form of human activity. Generally immovable, they include buildings, dams, canals, stockades, forts and earthworks, Indian mounds, gardens, and monuments or memorials. Bear in mind that you preserve not only a structure, but also, its environment. An historic district is a geographical definable area that contains a significant concentration or linkage, or continuity of historic resources unified by past events, aesthetics, plan or physical development, or similarity of human use. A district does not need to be contiguous but may be composed of elements that are separated geographically, but linked by association or history. Historic districts are also referred to as historic zones. In natural and recreational areas, an historic district is a sizeable area that qualifies for the National Register of Historic Places. In all but a few exceptional cases all land included within the boundary of a historical area of the National Park Service is considered to be historic district or zone. Finally, we have the historic scene or the overall appearance of all historic resources

and their surroundings as they existed in the historic period. It is the environment in which the historic place reposes and the appearance of that historic place in its environment. Thus, natural resources within historic zones are managed to maintain the general visual aspect of the historic period.

Implementation of a Fire Management Plan and the use of controlled burns in that plan can impact the historic resource. When the implementation does threaten historic resources, evaluations of the impact becomes part of the planning process. All of you are familiar with the Management Policies of the Service issued last fall. Since no one wants to hear dramatic readings from the Management Policies, you will be spared that. But please read them over, especially Chapter V, with the new understanding you take away from this conference.

In the discussion of Fire Management, the Management Policies clearly state that Management Fires that threaten Cultural Resources or physical facilities will be suppressed. These cultural resources should have been located, inventoried, and evaluated for significance in accordance with Executive Order 11593, "Protection and Enhancement of the Cultural Environment." All historic resources are evaluated as being of national, regional, or local significance. The historical areas of the system are considered of national significance though some of the structure within them are not nationally significant in and of themselves, but they do form part of a complex that is nationally significant. A good example is Carl Sandburg National Historic Site where the main house is clearly of national significance, but the barns, goat sheds, other residences and outbuildings are of only local significance. In most natural and recreational areas the historic resources are of local or regional significance. There are exceptions, of course, such as the masonry forts at Gulf Islands or some of the lighthouses at Cape Hatteras.

For a moment, however, let us assume that you are preparing a Fire Management Plan for a natural area that contains historic resources, mostly log or rock structures with a few archeological sites. One of the proposed burns will include a historic farm complex of five buildings and two archeological sites. Both the complex and the archeological sites have been nominated or are eligible for the National Register of Historic Places. The first alternative is to preserve the resources through the use of fire breaks, back fires, removal of combustible material, etc. If this cannot be done, you can either salvage the resource or move it to an environment similar to its existing environment. Again, I suggest that you consult the management policies for guidelines and details. I would

like to emphasize that salvage or transfer of a structure is only undertaken with the participation of qualified professional Historical Architects or Archeologists. In considering the historic resource, do not forget to assess what changes the fire will make in the environment or historic scene. All these decisions, discussions, and consultations to assure protection of the resource are part of a Fire Management Plan, and take time. By now, I am sure none of you still feel, if you ever did feel, that Fire Management or controlled burns are just a matter of lighting some matches.

Earlier, we defined the historic scene as the overall appearance of all historic resources and their surroundings as they existed in the historic period. The use of controlled burns may be a tool in restoring the historic scene by restoring a field or vista that during the historic period was open but has since been invaded by underbrush. Fire might also serve to remove some non-historic exotics and encourage the return of vegetation that existed during the historic period.

Thus, Fire Management can work both to endanger and enhance the historic resources of an area. But here also, there must be an assessment of short term adverse effects (the burned over appearance, the smell of smoke) and the long term positive effects of restoration of an historic scene. Again, I urge you to read the Management Policies and other guidelines in the light (firelight, if you want to be historically correct) of the discussions of the past few days.

A moment ago I used the term assessment, which brings us to the second section of this discourse--the legal requirements to assess the impact of a Fire Management Plan on the cultural resources within and adjacent to the proposed burn. As Dave Butts has indicated, the days of the National Park Service being the folks in the white hats who can do no wrong are past. Nearly every federal action involving cultural resources from something as simple as putting a new roof on a structure to complexity of a Master Plan is subject to review not only by Service professionals, but also by personnel at the state level in the offices of the State Historic Preservation Officer and at the national level by the Advisory Council on Historic Preservation. And review them they will. And stop the process they will unless we have the proof and the facts to back up our decisions.

If you have not looked at Part 800 of Title 36 of the "Code of Federal Regulations" recently, I suggest that you put that on your reading list also. It spells out quite clearly in Part 800.1 the purpose and authorities

which direct our actions. First, Section 106 of the Historic Preservation Act of 1966, requires that all federal, federally assisted, or federally licensed undertakings affecting properties included in the National Register of Historic Places be submitted to the Council for review and comment before beginning any such undertaking.

A second authority is Executive Order 11593, that requires that federal agencies must locate, inventory and nominate to the National Register of Historic Places all properties under their jurisdiction that appear to qualify for the National Register and until this process is complete to exercise caution to prevent any property that might qualify from being transferred, sold, demolished or substantially altered. The Executive Order also requires that we must be sensitive to the impact of federal actions on non-federally owned properties that are on the National Register or may qualify for the National Register under the criteria set out. Determination of eligibility under the National Register criteria are made by cultural resource professionals. You can find the criteria in 800.10 of CFR 36.

Let me review briefly what each section of CFR 36, Part 800, contains. Part 800.1 outlines purpose and authorities as already noted. Section 800.2 covers the requirements for cultural preservation set forth in NEPA. The third sub-section provides definitions of terms. Sections 800.4 to 800.6 outlines agency procedures; the consultation process when a difference of opinion occurs between the agency, the state and the advisory board on the impact of a certain project; and the procedures of the Advisory Council. Other powers of the Advisory Council are discussed in 800.7. Sections 800.8 and 800.9 discuss the Criteria of Effect and what constitutes an Adverse Effect. Adverse effects include destruction or alteration of all or part of a property or its environment, introduction of visible, audible, or atmospheric elements that are out of character with property or alter its environment, or demolition by neglect of a property that is eligible for the National Register. And finally, the National Register criteria are in 800.10.

So, if you have followed this very brief summary of the "Procedures for Protection of Historic and Cultural Properties" you will realize that in preparing your Fire Management Plan you must be concerned not only for the historic resources on your side of the valley in federal ownership but also the impact of the plan on properties on the other side of the valley in non-federal ownership.

What role does the Historian, Archeologist or Historical Architect play in assuring that the Fire Management Plan complies with preservation law.

First, the National Park Service has spent the past year completing a "List of Classified Structures." The LCS is a listing of all above ground structures that meet the criteria of the National Register or are elements of sites, districts or complexes that meet the criteria of the National Register. Each park should have a list of above ground historic resources they must consider in planning. For subsurface or archeological resources there are archeologists in Southeast Archeological Center here in Tallahassee, in other archeological centers, or in Regional Offices that can assist you in locating and evaluating your subsurface cultural resources. With an inventory of surface and subsurface cultural resources you have developed an important part of your park's Resources Basic Inventory and will have the data needed for planning, resource management, development, maintenance and other activities.

When you begin preparing your Fire Management Plan, this inventory of cultural resources will help you identify what resources will be affected by the plan and enable you to set out mitigating measures to lessen or remove the possibility of damage to these resources. And, of course, the Historian, Historical Architect, and Archeologist is also available to provide assistance in evaluation of newly discovered historic resources that become known during the development of the Fire Management Plan, as well as working with you to forecast effects of a controlled burn on the resource.

The role of the cultural resource professional goes beyond presenting you with a list of resources with the admonition "Don't mess these up." At this point, let this Historian focus on how the Historian can assist in the actual development of the plan beyond the inventory stage. One of the most useful research reports in preparing a Fire Management Plan is the Historic Base Map or Historic Ground Cover Map with narrative. This map shows not only the man-made features such as buildings, earthworks, etc., that existed in the historic period, but also depicts lines of battle, location of fields, or headquarter sites that are part of the historic resource. Either on the map or in the accompanying narrative, a description of the historic vegetation is provided. Let me share with you the description of the flora and fauna that existed near Andersonville Prison in 1864-1865. The source for this is Volume 8 in Series II of the "Official Records of the War of the Rebellion," as cited by Ed Bearss in his report on Andersonville.

Very little ground on Stockade Branch, east of the railroad, had been cleared. Growing on the slopes and higher ground were long leaf pine, yellow oak, persimmon, chinquapin, black walnut, wild plum, maple, sweet leaf, wild haw,

whortleberry, and other shrubs. Pines predominated. In the bottoms and swamps, sweetgum, tulip trees, black gum, tupelo, red flowering maple, linden, beech, small magnolia, sweet bay, red bay, myrtle, common cane, and shrubs and vines. (14)

Where the high ground had been cleared for cultivation, the absence of vegetable mold limited productivity. The area's one-crop economy soon burned out the soil, and fields were abandoned, as it was cheaper to clear new ground than employ large quantities of fertilizer. (15)

Opossums, raccoons, rabbits, and fox and cat squirrels were found in Sumter County, while deer grazed the forests and swamps. Gophers and pouched rats were common where soil was sandy. Sand fleas and mosquitoes swarmed "in untold myriads." Because of the large number of mosquitoes it was almost impossible to sleep, except under nets. During his first night at Andersonville, in August 1864, Dr. Joseph Jones' hands and face "were thoroughly peppered with the bites of these insects, and throughout his stay his face appeared as if covered with eruptive disease." (16)

There were cottonmouth moccasins in the swamps, and rattlesnakes, copperheads, and coral snakes, along with several harmless varieties on the higher ground.

Often historic basemaps with the accompanying narrative are a part of a Historic Resource Study of an area as was the case with the Andersonville study. The same principal that guides research and preparation of a historic basemap - use of contemporary sources to develop a written and graphic portrayal of the area - in the historic period - can also be employed if the goal is to develop a description of the region prior to European settlement. A description that would be your documentation for returning a given area to its pre-settlement condition. Travel narratives or survey reports can often highlight the changes that have occurred in the following decades or centuries. In the Southeast, John Russell Bartram, a naturalist who traversed much of the area prior to the Revolutionary War has given us excellent descriptions of terrain and vegetation. Below are some excerpts of his description of a trip from Savannah to Augusta, Georgia in 1773.

In our progress from the sea coast we rise gradually by several steps or ascents, in the following manner: First from the sea coast, 50 miles back is a level plain, generally of a loose sandy soil producing spacious high forests of *Pinus Taeda*, *Pinus Lutea*, *P. squarrosa*, *P. echinata*, several kinds of oak including Live Oak, Willow Leafed Oak, Great Black Oak, Swamp White Oak, White Oak, Spanish Oak and Red Oak. Nearly one-third of this vast plain is what the inhabitants call swamps.

The upper soild of these swamps is a perfectly soapy, rich earth or stiff mud 2 or 3 feet deep on a foundation of stratum of calcareous soil.

We find ourselves next on the entrance of vast plain, generally level, which extends west 60 or 70 miles. This plain is mostly a forest of great long leafed pine, the earth covered with grass interspersed with an infinite variety of plants and embellished with extensive savannahs, always green, sparkling with ponds of water, and ornamented with clumps of evergreen, and other trees and shrubs.

After the next ascent, we find ourselves on another extensive plain of pine forests mixed with other forest trees which continues west for 40 or 50 miles and exhibits much the same appearance with the great forest last mentioned.

Bartram was a trained naturalist and his narrative of travels is filled with the latin names of plants and animals as well as descriptions of the customs of Indians and of the towns that occupied the coastal area.

Government reports often yield excellent information on the conditions that existed before extensive settlement. Here is a description of the forests of Northern Arizona contained in the "US Geological Survey's Second Annual Report (1887)."

The trees are large and noble in aspect and stand widely apart, except in the highest parts of the plateau where the spruces predominate. Instead of dense thickets where we are shut in by impenetrable foliage, we can look far beyond and see the tree trunks vanishing away

Like an infinite colonnade. The ground is unobstructed, inviting. From June to September, there is a display of wild flowers which is quite beyond description. The valley sides and plateaus above are resplendent with dense masses of scarlet, white, purple, and yellow.

In 1850, Captain R. B. Marcy's report of a reconnaissance of a route from Fort Smith, Arkansas, to Santa Fe, New Mexico was published. Here is his description of a portion of West Texas and New Mexico that by the early 1960's was infested by brush over 73 percent of the area.

When we were upon the high table land, a view presented itself as boundless as the ocean. Not a tree, shrub, or any other object relieved the dreary monotony of the prospect; it was the vast illimitable expanse of desert prairie - the dreaded Staked Plains of New Mexico; or the great Sahara of North America. It is a region almost as vast and trackless as an ocean - a land where no man either savage or civilized, permanently abides; it spreads forth in a treeless, desolate, waste of permanent solitude, which has always been and must always continue to be uninhabited forever. The only herbage on the barren plains is the very short buffalo grass and on account of the scarcity of water, all animals appear to shun it.

There was no way for Captain Marcy to know what the introduction of cattle, tapping of underground water supplies and the excision of fire was to do in the next century to his "Great Sahara of North America."

I hope that these four examples provide some hint of the type and variety of material available to the researcher seeking documentary evidence on historic vegetation. Permit me to cite one more example - In the 1890's the United States and Mexico boundary was resurveyed and a large number of photographs included in the final report. Robert Humphrey used one of these photographs taken in 1893 and compared it with a photograph taken in 1963 from the same point to vividly show the changes in vegetation that had occurred over the past 60 years in southwestern Arizona. Those two photos are worth 10,000 words. His paper was published as part of the "Second Annual Proceedings of the Tall Timbers Fire Ecology Conference" held in 1963.

The historian can also assist in understanding the role of fire in nature by studying the use man has made of fire. This cultural history of a

people can provide insights into how often man-caused fires swept through an area. Many of us are aware of the burning undergrowth in the south to increase the yield of blackberries in an area. H. L. Stoddard in the "First Tall Timbers Fire Ecology Conference" discussed and defended the "much maligned pioneer cattlemen of the Florida flatwoods" who burned the piney woods for a variety of reasons - it produced better feed for their cattle, reduced brush, increased the yield of berries, discouraged varmints, and last but not least, was important in maintaining the stands of long leaf pine.

One of the earliest descriptions of man's use of fire in the Southeast was written about 1536 by Cabeza de Vaca who described how the Indians in Southeast Texas "go about with a fire brand, setting fire to the plains and timber so as to drive off the mosquitoes and also to get lizards and similar things which they eat. In the same manner, they kill deer encircling them with fire and they do it also to deprive the animals of pasture, compelling them to go for food where the Indians want."

It is generally accepted that fires were set by Indians for a variety of reasons, giving some people the feeling that our aboriginals suffered from pyromania. Because fire was important to them, the Indian transported fire with him and, not having Smoky the Bear to remind them, did often leave campfires banked and smoldering as an insurance against losing the slow match or hot coal they carried to kindle fire at the new camp. And these deserted fires did occasionally get away and burn vegetation. Fire to the Indian and to the early settler was both a tool and a necessity for life.

I will not bore you further with more examples of man and his relationship to fire and the impact that this use of fire had on the vegetation. There is an ample amount of material on the subject, some of it included in the proceedings of the dozen or more fire ecology conferences held here at "Tall Timbers."

I hope that in the past thirty or forty minutes, I have provided some insight to the role that the individual concerned with cultural resources can have in the preparation, documentation, and implementation of Fire Management Plans. Whether the role be one of inventory and assessment of resources to be preserved, assistance in determining impacts of the plan on the resource or in providing documentary materials to support a Fire Management Plan, there is a place for Archeologists, Historians, and Historical Architects in developing these plans. It is dependent on you as managers or potential managers to seek their assistance.

If you have any specific questions, I will try to answer them.