

## MAJOR ISSUES

Participants in this study identified the following issues that need to be addressed in developing a sound and well-considered Federal policy toward landscape preservation. Technology concerns permeate these issues. Because most of these issues are interrelated, they are not necessarily listed in rank order.

**ISSUE A: The lack of consistent landscape terminology and guidelines for applying preservation standards have impeded the identification and preservation of significant historic landscapes.**

One of the difficult, but important, tasks facing landscape preservationists is to arrive at standard definitions that can be used in a common vocabulary. Among other things, a set of standard definitions would enhance the ability of local individuals and groups to develop nominations to State historic registers and to the National Register. It would facilitate interdisciplinary approaches to their location, study, and evaluation.

The English term "landscape" was originally introduced as a technical term of painters and referred to the representation of "natural inland scenery."<sup>17</sup> Later, it acquired a much broader set of meanings, and came to be understood primarily as "shaped land, land modified for permanent human occupation, for dwelling, agriculture, manufacturing, government, worship, and for pleasure."<sup>18</sup> Table 2 presents a list of categories of historic landscapes.

Although different landscapes exhibit distinct characteristics, because landscapes may lack clear boundaries and include structures and sites as well as natural components, landscape values may appear elusive, making precise and common, or standard, definitions difficult to achieve in practice. In general parlance, we often use landscape in the broadest sense to mean environment (including both natural forms and those achieved by art). However, landscapes are often considered simply the ambiances of structures,

as when we speak of "landscaping a building." In that sense, landscapes are then thought of as equivalent to nature, in spite of the fact that in order to achieve such a landscape, the natural forms must be molded to a plan. In the eyes of many observers, President Jefferson's home, Monticello, is a historic landscape of which the central building is the most important part. Others consider only the form and structure of the house and ignore its setting. Adding to the difficulty is the fact that specialists in different disciplines tend to impart different meanings to the term "landscape," according to the established practices of their disciplines and the context of the landscape. For example, as noted below, the landscape architect might see the landscape as a design statement,<sup>19</sup> while the folklorist might experience the same landscape in terms of what it conveys about the folk practices of the landscape's inhabitants.<sup>20</sup>

<sup>19</sup>Robert W. Leech, "The First Dilemma," *Landscape Architecture* 77, 1977, pp. 62-65.

<sup>20</sup>For example, see the treatment of landscape in Mary Hufford, *One Space, Many Places: Folklife and Land Use in New Jersey's Pinelands National Reserve* (Washington, DC: American Folklife Center, Library of Congress 1986); or Rita Zorn Moonsammy, David Steven Cohen, and Lorraine E. Williams (eds.), *Pinelands Folklife* (New Brunswick, NJ: Rutgers University Press, 1987); or M. Jane Young, *Signs From the Ancestors: Zuni Perceptions of Rock Art* (Albuquerque, NM: University of New Mexico Press, in press).

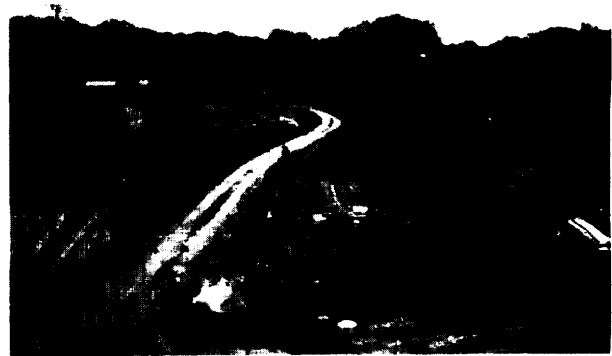


Photo credit: National Park Service, Historic American Buildings Survey, Jet Lowe, Photographer, April 1984

Overall view of planned communal gardens looking east, Locke, California. Locke is a small, rural Chinese community on the Sacramento River. It was developed in the early 20th century to serve Chungshan Chinese laborers who worked in the fruit orchards and vegetable fields in California's Delta region. It is the only extant rural Chinese community still occupied by Chinese people.

<sup>17</sup>The Compact Edition of the Oxford English Dictionary (Oxford, England: Oxford University Press, 1971), p. 1566.

<sup>18</sup>John R. Stilgoe, *Common Landscape of America, 1580 to 1845* (New Haven, CT: Yale University Press, 1982).

**Table 2.—Categories of Historic Landscapes**

	Treatment					Typical landscape preservation projects
	Restoration	Rehabilitation	Reconstruction	Interpretation	Conservation	
Residential grounds . . . . .	✓		✓	✓		Mary Washington House, Fredericksburg, VA GWSM, Inc. The Garden Club of Virginia
Monument grounds . . . . .	✓	✓		✓		Statue of Liberty, New York, NY Norman T. Newton National Park Service
Public building grounds . . . . .	✓	✓				Original Governor's Mansion, Helena, MT Richard E. Mayer Montana State Parks Division
Garden. . . . .						Stratford Garden Restoration, Potomac River, VA GWSM, Inc. The Garden Club of Virginia
Minor public grounds (e.g., town square, parklet, traffic circle).. . .						Pioneer Square, Seattle, WA Jones & Jones City of Seattle
Botanical garden . . . . .						Sannonburg Gardens, Canandaigua, NY Noredo A. Rotunno Sannonburg Gardens Committee
Fort . . . . .						Fort Stanwix National Monument, Rome, NY Dureya & Wilhelmi, P.C. National Park Service
Battlefield . . . . .						Rosebud Battlefield, Montana Richard E. Mayer Montana State Parks Division
Cemetery . . . . .						Cemeteries, New Harmony, IN Kane & Carruth, P.C.
Streetscape. . . . .		✓		✓		Main Street Project, Hot Springs, SD Preseation/Urban/Design, Inc. National Trust Chicago Mid-West Office
Estate . . . . .						Gamble Plantation, Manatee County, FL Lane L. Marshall & Associates, Inc. State of Florida
Park . . . . .						Cherokee Park Restoration, Louisville, KY Johnson, Johnson & Roy, Inc. Louisville Metropolitan Park & Recreation Board
Working farm . . . . .						Old World Wisconsin, Eagle, WI William H. Tishler State Historical Society of Wisconsin
Museum village . . . . .						Williamsburg, VA Shurcliff, Hopkins, Parker, Barton & Belden— Staff Landscape Architects Colonial Williamsburg Foundation
District. . . . .						Heritage Square, Los Angeles, CA Merrill W. Winans Cultural Heritage Foundation
Town . . . . .						Town of New Harmony, New Harmony, IN Kane & Carruth, P.C.
Prehistoric site. . . . .					I	Cahokia Mounds, near East St. Louis, IL Edward J. Keating Illinois Department of Conservation
Park system . . . . .						Survey Olmsted Parks System, Buffalo, NY Patricia M. O'Donnell Highways, Parks & Recreation Historical Preservation Division & Landmark Society of the Niagara Frontier

SOURCE *Landscape Architecture*, January 1981

Establishing a progression of types of landscapes based on the degree and scale of intentional human intervention can assist in developing common definitions. At one end of such a scale is the wilderness, where natural processes predominate. In a wilderness, *or natural, landscape*, human activities certainly exist, but they do not appreciably modify the landscape.<sup>21</sup> Even if unmodified by human activities, natural landscapes may be invested with cultural significance and may therefore be worthy of protection because of their significance in American history. For example, Cumberland Gap in Tennessee was a major passageway through the Appalachians for settlers moving west in the 19th century and is celebrated in song and story.

Certain natural landscape features even have sacred significance for some cultural groups. For example, though they actually live many miles to the east, the Hopi Indians of Arizona regard the San Francisco peaks as the sacred home of the *kachina*, the rain-giving spirits of the Hopi religion. The Peaks figure strongly in their origin legends and other traditional stories. Certain Plains Indian groups built stone structures, often called medicine wheels, that reflected their awareness of and reverence for landscape features. \* Traditional Hawaiians consider the Waikane Valley in Windward Oahu as sacred.<sup>22</sup> It plays an important part in the native history of the island.

We might call the next stage in the progression *settlement patterns*, as human manipulation of the environment becomes more obvious but there is little or no conscious planning. As people manipulate the land for particular purposes,

reflective of the cultural values of a group, such settlement patterns merge into *cultural landscapes*.<sup>23</sup> Characteristically, the *cultural landscape* is the product of many groups or individuals working interdependently within a broad cultural context. The cultural landscape may reflect rural values, as reflected in rural historic districts,<sup>24</sup> or urban values, as found in the manufacturing towns of the Northeastern United States.<sup>25</sup> The *vernacular landscape*, which derives from the common style of a period or place, is one important form of a cultural landscape.

Finally, the *designed or planned landscape*,<sup>26</sup> in which the scale of manipulation of the earth is high, may be considered a subset of the cultural landscape, but one that reflects the conceptual model of a single individual or small group of individuals. Examples of designed landscapes range from small gardens to large-scale public or private parks (table 3).

The National Park Service (NPS) has established clear guidelines to distinguish between designed and vernacular landscapes. Nevertheless, because designed landscapes are generally thought of as deriving from a high art tradition, certain important historical vernacular landscapes might be overlooked or considered of less historical importance than, for example, formal gardens. However, folk traditions incorporate design traditions that may involve master builders and sophisticated learning and wisdom. It is therefore extremely difficult, perhaps impossible, to separate vernacular landscapes from design intention and from planning.

NPS has recently attempted to establish definitions for various types of landscapes, to guide

<sup>21</sup>In most cases, it is not correct to talk about an untouched natural landscape. For example, Native Americans, and later European settlers, regularly burned the Big Meadow of Shenandoah National Park, VA, to keep it open. Even hunter/gatherer societies may have deliberately burned the grasses, and otherwise altered the landscape over time. For example, see Clive Gamble, "The Artificial Wilderness," *New Scientist*, Apr. 10, 1986, pp. 50-54.

\*Robert L. Hall, "Medicine Wheels, Sun Circles, and the Magic of World Center Shrines," *Plains Anthropologist* 30, 1985, pp. 181-194.

<sup>22</sup>John Chariot, "Historic Report on Waikane Valley," Testimony presented to the Feb. 9, 1977, Hearing of the Land Use Commission, Honolulu, HI.

<sup>23</sup>Melody Webb, "Cultural Landscapes in the National Park Service," *The Public Historian*, 9, 1987, pp. 77-89. "Cultural landscapes represent a continuum of land-use that spans many generations . . . [They] exhibit, either conspicuously or subtly, long-held values of their area or culture." Robert Z. Melnick, "Capturing the Cultural Landscape," *Landscape Architecture*, January 1981, p. 56.

<sup>24</sup>Robert Z. Melnick, *Cultural Landscapes: Rural Historic Districts in the National Park System* (Washington, DC: U.S. Department of the Interior, National Park Service, Park Historic Architecture Division, 1984).

<sup>25</sup>Mary P. Matuszeski and Bill Matuszeski, *Gritty Cities* (Philadelphia, PA: Temple University Press, 1978).

<sup>26</sup>See also Melnick, *op. cit.*, 1984, p. 40.

**Table 3.—Historic Designed Landscapes**


---

Small residential grounds
Estate or plantation grounds (including a farm where the primary significance is as a landscape design and not as historic agriculture)
Arboreta, botanical, and display gardens
Church yards and cemeteries
Monuments and surrounding grounds
Plaza/square/green/mall or other public spaces
Campus and institutional grounds
City planning or civic design
Subdivisions and planned communities/resorts
Commercial and industrial properties and parks
Parks (local, state, and national) and campgrounds
Battlefield parks and other commemorative parks
Ground designed or developed for outdoor recreation and/or sports activities such as country clubs, golf courses, tennis courts, bowling greens, bridle trails, stadiums, ball parks, and race tracks that are not part of a unit listed above
Fair and exhibition grounds
Parkways, drives and trails
Bodies of water and fountains (considered as an independent component and not as part of a larger design scheme).

---

SOURCE: National Park Service, "How to Evaluate and Nominate Designed Historic Landscapes," 1987.

the nomination of landscapes to the National Register. For the purposes of the National Register, a historic designed landscape is "a work that has significance as a design or work of art; was consciously designed and laid out by a master gardener, landscape architect, architect, or horticulturalist to a design principle, or an owner or other amateur using a recognized style or tradition in response to a recognized style or tradition; has a historical association with a significant person, trend, event, etc. in landscape gardening or landscape architecture; or a significant relationship to the theory or practice of landscape architecture." 27

In addition to defining historic designed landscapes, and setting guidelines for evaluating them, NPS has focused attention on the category

---

zTKeller and Keller, *op. cit.*, p. 2.



Photo credit: Ray A. Williamson

William Paca House and Garden, Annapolis, MD: After being buried under a 200-room hotel, a parking lot, and bus station, this 18th century garden was restored in the 1970s based on the results of a careful research by archaeologists, architects, landscape architects, and historians.

of cultural landscape it refers to as the *rural historic district*. This subcategory of important cultural landscapes includes ethnic rural communities or rural farmsteads. The NPS publication, "Cultural Landscapes: Rural Historic Districts in the National Park System," defines the rural historic district as "a geographically definable [rural] area, possessing a significant concentration, linkage, or continuity of landscape components which are united by human use and past events or aesthetically by plan or physical development."<sup>28</sup>

However, earlier, this same publication calls rural historic districts "complex human ecological systems existing within equally complex natural ecological contexts. people modify those ecological contexts, and in turn the cultural patterns of the people are altered to fit the natural environment."<sup>29</sup> This latter definition illustrates the difficulty of finding the right wording to distinguish among the many different categories of landscapes. It does not seem to be restrictive enough, as it could also encompass other subcategories of cultural landscapes, including the historic urban vernacular historic landscape as well as certain designed historic landscapes. indeed, the emphasis placed on the significance of designed historic landscapes in relation to other cultural landscapes appears to be a product of traditional high-culture patterns of thought in the United States. Yet, certain landscapes, such as those created by residents of the pinelands area of New Jersey, are highly structured according to the aesthetic and other values of the local residents.<sup>30</sup>

All of these landscape types, whether wilderness, cultural, or designed landscapes, reflect values of the people who care for them. Within these broad categories exist many subcategories of landscapes; certain landscapes are of historic significance and are appropriate targets of preservation efforts. An essential first step in determining historic significance is the identification of the type of landscape under consideration.

<sup>28</sup>Melnick, *op. cit.*, 1984, pp. 7-8.

<sup>29</sup>Melnick, *op. cit.*, 1984, p. 4.

<sup>30</sup>*One Space, Many Places*, *op. cit.*, ch. 5: "Aesthetic Resources and Sense of Place."

**ISSUE B: *Because they are so susceptible to damage by human and natural causes, the greatest threat to historic landscapes is destruction, by intent or ignorance, before they have been identified as significant.***

Participants in the OTA assessment urged that preservation policy explicitly acknowledge the importance of historic landscapes and specify that they be protected to the same degree as historic structures and non-landscape archaeological sites. Such a policy should be publicly disseminated so that planning and design professionals, cultural and natural resource managers, and the public recognize the value of preserving and restoring historic landscapes. Establishing these values will assist in protecting landscapes from a wide variety of natural and human threats. The section, *Federal Policy Toward Landscape Preservation*, discusses options for strengthening landscapes preservation policy.

Tables 4 and 5 list many of the human and natural threats to which landscapes are susceptible. Because the nationwide perception of landscapes is not well developed, historic vistas may be destroyed casually, through intent, or by ignorance. For example, urban parks, which contain both natural elements and structures, are subject to increased visitation, vandalism, and arson. increased development in urban, suburban, and even rural areas, has exerted enormous pressures on historic landscapes. Economic pressures that have altered the structure of American farming are also reshaping the countryside. Rural landscapes are now beginning to suffer from vandalism and arson.<sup>31</sup>

Inadequate identification and registry,<sup>32</sup> overuse, inadequate or inappropriate managerial/maintenance policies, and malicious destruction are the greatest threats to most historic landscapes. Yet, natural agents such as erosion, ex-

<sup>31</sup>For example, in some areas of West Virginia, wooden bridges, often a significant part of the historic rural landscape, are the target of arsonists. Barbara Howe, West Virginia University, personal communication. 1986.

<sup>32</sup>For example, many large earthworks in Ohio are known to professional and amateur archaeologists, and even to the public, but because they are on private land, many of them suffer from modern land use practices that erode and destroy them.

**Table 4.—Human-Generated Threats to Cultural Resources**


---

Agriculture
Beautification
Construction
Demolition
Drilling:
seismic disturbances
Energy generation:
coal, gas, and oil exploration and extraction
powerlines
dams
powerplants
Fencing
Fire:
firefighting
fire rehabilitation
Grazing
Land abandonment and neglect
Mining
Overuse
Pollution:
air and water
Preservation activities
Recreational technologies:
metal detectors
off-road vehicles
Rehabilitation or retrofitting
Sand and gravel quarrying
Slash burning
Site compaction
Timber cutting
Theft
Urban sprawl
Vandalism

---

<sup>a</sup>Not listed in priority order.

SOURCE: Office of Technology Assessment, 1987.

**Table 5.—Natural Threats to Cultural Resources**


---

Acid precipitation
Air pollution
Disease
Drought
Erosion (wind and water)
Earthquakes
Fire
Floods
Freeze/thaw cycles
Invasive vegetation
Moisture
Pests
Salt air in coastal environments
Subsidence
Violent storms:
hurricane
tornado

---

SOURCE: Office of Technology Assessment, 1987.

cess moisture, drought, and severe storms can also significantly damage certain landscape elements.<sup>33</sup> Even normal plant growth can substantially alter the intended plan of a designed landscape in a few years unless the trees, shrubs, and undergrowth are properly maintained. Some plants must be kept in scale by pruning; others can be ruined if pruned. All of these threats can be significantly reduced by the appropriate application of planning and design principles and technology.

Most public land is subject to a variety of uses, some of which are more destructive than others. In order to make informed decisions concerning the cultural resources under their care, managers need to have an increased awareness of the value of historic landscapes and the necessary skills to identify, evaluate, preserve, and manage them. In short, managers need better access to landscape information. They also need to evaluate their component parts and develop maintenance recommendations that incorporate appropriate technologies and research. Use of such information will enable managers to justify requests for increased funding and personnel and, where appropriate, to preserve, protect, and interpret historic landscapes. However, considerably more research and development will be required to enable managers to put technology to better use in landscape management.

**ISSUE C: *One of the major impediments to preserving significant landscapes is the poor state of knowledge of the Nation's historic landscapes.***

Because a historic landscape cannot be preserved until it is identified, inventory or survey is a crucial first step to preserving landscapes. However, not all historic landscapes can be preserved, for not all are historically significant. After being identified, the landscape's historic signifi-

<sup>33</sup>For example, Monk's Mound in Illinois, the largest prehistoric earthen mound north of Mexico, and part of the Cahokia Mounds Historic Site, has recently suffered significant damage as a result of rising internal moisture. Portions of the mound have slumped, or fallen away.

### **Box A.—Evaluating Significance of the Historic Landscape Using National Register Criteria**

To be eligible for the National Register of Historic Places a historic landscape must possess the quality of significance in American history, architecture, archaeology, engineering and culture and integrity of location, design, setting, materials, workmanship, feeling, and association and

- a. be associated with events that have made a significant contribution to the broad patterns of our history; or
- b. be associated with the lives of persons significant in our past; or
- c. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. have yielded, or may be likely to yield, information important in prehistory or history.

In addition to possessing significance according to such historical themes established by the National Register as social history, agriculture, or transportation and meet criteria a. to d. above on that basis, a property nominated because it is a designed historic landscape should meet these criteria primarily on the basis of associations with landscape gardening or landscape architecture under criterion c.

**SOURCE:** Timothy Keller and Genevieve P. Keller, "How To Evaluate and Nominate Designed Historic Landscapes," *National Register of Historic Places Bulletin 18*, U.S. Department of the Interior, National Park Service, 1987, p. 6.

cance must be evaluated against criteria designed to ascertain its place in national, regional, or local history. Significance may involve such elements as art, commerce, exploration/settlement, landscape architecture, or prehistoric culture (see box A). Most nominations to the National Register are made by interested parties at the State or local level. On the national level, the National Register staff in the National Park Service decide the question of significance on the basis of National Register nominations.

Until recently, the Federal Government has expended little effort to identify and document na-

tionally significant landscapes; no comprehensive, centralized listing of significant American landscapes exists. Even the National Register of Historic Places can provide only a crude list of National Register properties that are related to landscape architecture. Significant landscapes are either not on the National Register or are classified under other categories, such as districts or sites. Because they are split into several categories, it is extremely difficult to determine the total number of landscapes actually listed. Indeed, to be included on the National Register, landscapes must be nominated as districts, sites, or some other category. Some people feel that though this may cause some confusion to those seeking to nominate landscapes to the Register, adding new categories would cause greater problems. Others argue that preservation thinking has evolved and that including landscapes as a National Register category would accurately and appropriately reflect such a change in thinking.

A comprehensive national historic landscape survey would draw together the information we now have on significant landscapes and identify landscapes missed in previous, haphazard efforts. A national survey of designed historic landscapes could be an especially important first step, because greater agreement exists among professionals on what constitutes a designed landscape. A survey of designed historic landscapes might serve as a model for a much more comprehensive survey that includes other historic landscape types.

Such a survey was initiated by the Historic Preservation Committee of the American Society of Landscape Architects (ASLA) in 1984. The National Park Service has endorsed the survey and disseminated the survey form to State Historic Preservation Officers (SHPOs). In order for the survey to be consistent and carried out in a timely manner, it will be necessary to apply such standards and models uniformly on a nationwide basis at all levels of public and private preservation efforts. The resultant information should be made available through a central clearinghouse on a uniform database.

A survey of designed landscapes presents a logical place to start, but no significant progress is

likely to occur unless funding is dedicated to the project. State Historic Preservation Offices will have no ready means to tackle a survey of this importance without new funding. In the meantime, the ASLA form provides a format to use, and its volunteer effort increases public and professional awareness of historic landscapes.

**ISSUE D: There a critical need for a federally supported facility for landscape preservation technologies.**

Most participants in OTA's assessment cited the need for a new institution (or expansion of an existing institution's mandate) or center to foster the research and development of advanced technologies, the training of professionals in their use, and the centralization and dissemination of accurate technical information. Several museums maintain first-rate analytical facilities for conserving artifacts, but no comparable facility exists for conserving sites, structures, and landscapes. Most workshop participants agreed that a center for preservation technology should be federally supported, primarily because of the large stake the Federal Government has in fostering and guiding excellence in preservation, but also to ensure that standards, guidelines, and technologies are uniformly understood and applied.

As elaborated in chapter 7 of *Technologies for Prehistoric and Historic Preservation*, three structures are possible:

1. **Federal Center for Preservation Technology:** Congress could mandate the establishment of such a center within the Department of the Interior or some other Federal agency. The Center would assist the transfer of technology from other areas into prehistoric and historic preservation by developing new applications of existing technology, providing training for preservation professionals, and serving as a clearinghouse for disseminating information on preservation technologies. A Center should have a highly trained staff. It should also have the facilities for developing technologies relevant to all phases of the preservation process for prehistoric and historic sites, structures, and landscapes. In addition to serving as the focal point for

technology-related preservation information within the Federal Government, such an institution would provide needed assistance to State and local governments and to the private sector. All agencies and private individuals and groups with preservation problems would therefore have a central place within the Federal Government to look for technical help. Conversely, techniques used in these projects could then be centrally documented and available for application to similar projects throughout the country, whether they are funded by public or private sources.

2. **National Center for Preservation Technology:** Alternatively, Congress could create a National Center for Preservation Technology, managed by a consortium of universities and preservation organizations. Such an institution would be able to draw on a multitude of different skills in several universities, and in many university departments. Like the Federal Center, it would develop and test new applications of technologies, conduct training, and distribute information. However, it would be free to contract with agencies and with States and the private sector to develop technologies of specific interest to them. Because it would also otherwise be free of constraints imposed by being housed within the Federal structure, such an organization might be more innovative than a Federal laboratory. Though it would serve as a resource for the Federal Government, like the Federal Center outlined above, it would also serve State and local needs.
3. **Preservation Technology Board:** Additionally, Congress might wish to consider supporting a Preservation Technology Board. Even if one of the two options for creating a Center for Preservation Technology were adopted, a Board composed of professionals from all parts of the preservation community would be needed to provide guidance for a center, determine current needs for technology in prehistoric and historic preservation, develop standards for the application of new technologies, and assist in disseminating information. The professional societies concerned with archaeology, his-

tory, historic structures, and historic landscapes are likely to be highly supportive of such a Board.

In December 1986, representatives from several national preservation organizations, including the Society for American Archaeology, the Society for Archaeological Sciences, the National Trust for Historic Preservation, the National Coordinating Committee for the Promotion of History, and the National Council on Public History, met informally to discuss the need for a center for preservation technology and the potential for achieving it. They formed the Coalition for Applied Preservation Technology (CAPT), which is devoted to exploring the potential of such an institution and "to develop an organizational framework to facilitate the development, application and transfer of advanced technology in preservation." 34 CAPT held its first organizational meeting in Washington, DC on February 27, 1987 at the National Trust for Historic Preservation. It has formed committees to investigate different aspects of a center (table 6).

If a Center for Preservation Technology were established, landscape preservation concerns would constitute part of the center's workload. The section, *Federal Policy Toward Landscape Preservation*, discusses several landscape preservation problems such a center might pursue.

**ISSUE E: *Systematic and long-term maintenance is one of the most effective methods of slowing deterioration from human and natural agencies.***

Systematic preventive maintenance and upkeep can prevent minor problems from becoming major worries. It is absolutely crucial to the

Jq\_c\_liti\_o\_n for Advanced Preservation Technology "Dear Colleague" letter, Jan. 19, 1987.

**Table 6.—Working Groups of the Coalition for Applied Preservation Technology**

Working Group on Research and Development
Working Group on Applications Issues
Working Group on Public Education and Involvement
Working Group on Technology Transfer Issues
Working Group on Technology Clearinghouse

SOURCE: Coalition for Applied Preservation Technology.

conservation of a landscape, particularly because landscapes change so rapidly as a result of plant growth or deterioration. Managing the maintenance of a landscape requires continuous attention to its specific needs. Quality and appropriateness of maintenance is as important as its regularity .35 A variety of technologies, including microcomputer-based maintenance management systems, are available to improve such practices and make them more cost-effective.

The designers and builders of many historic landscapes, such as parks, and gardens of historic houses, expected that these landscapes would be maintained by adequate numbers of skilled personnel. Today, especially when so many historic properties are owned and maintained by public agencies, gardeners and other maintenance personnel may not have adequate experience or training. Likewise, contracting stipulations that limit governmental agencies without in-house expertise to accepting the services of lowest bid competitors often result in substandard grounds-keeping and maintenance practices.

Because maintenance tends to be labor-intensive, it is important to find ways to reduce the amount of labor required. For example, Sleepy Hollow Restorations, in New York State, has reduced its total labor force by developing a program of maintenance that employs two levels of skills. For the basic grounds, the organization uses grounds maintenance employees with only moderate training and skills. It employs college graduates for maintaining the historic gardens. Although the latter command higher salaries, their higher skill and professional interest in historic gardens more than repays the extra investment. In the winter, when maintenance needs are less demanding, these workers carry out research projects that they can apply to improving the historic gardens (e.g., searching out the original garden plantings and determining modern sources). Because such workers generally possess higher

<sup>35</sup>*Cyclical Maintenance for Historic Buildings*, J. Henry Chambers, AIA, Interagency Historic Architectural Services Program, Office of Archaeology and Historic Preservation, National Park Service, U.S. Department of the Interior, 1976. Although this reference is directed toward historic buildings, many of its general recommendations are appropriate for landscapes.

communications skills, they are also more effective in articulating required maintenance tasks to outside contractors who trim the large trees and do other specialized work.

Maintenance standards and plans must be developed and carried out by managers professionally trained in tending historic properties. The increased use of personal computers and specially designed software could be extremely helpful in improving the quality and quantity of landscape maintenance. For example, a computerized management plan for a landscape would allow landscape managers to factor in a number of tasks on a cyclical basis. Such a plan could allow for the fact that each species of tree, shrub, and plant requires different treatments on different schedules. Structures such as bridges, pavilions, and interpretive centers require yet a different set of maintenance strategies. Maintenance management systems allow computation of needed labor resources based on assumptions about maintenance standards and landscape systems, and provide the capacity to match up such needs with available labor. They also enable managers to develop a schedule for maintenance that takes into account the level of education and skills of the maintenance personnel. A detailed maintenance plan could also assist in justifying training in skills that are needed but not available from current staff.

Expert systems,<sup>36</sup> which have been developed to aid decisionmaking in practical tasks in other fields, such as diagnosing diseases, repairing mechanical systems, or analyzing molecular structure, could also be developed for landscape management. Such systems might be especially effective in developing information and decision-making for certain maintenance tasks, especially those that call for highly specific, readily describable techniques, but they should not be considered a substitute for training in the application of the technologies.

**ISSUE F: *Greater public understanding of reasons to preserve historic landscapes is needed to build popular support for the identification and preservation of historic landscapes.***

Public officials and other citizens are often unaware of the value and significance of historic landscapes. Traditionally, historic preservationists have worked from the grassroots by building local constituencies that have identified the value of a given structure or archaeological site and sought State or National help in preserving it. However, in landscapes, the local groups who might identify landscape value often do not exist, in part because they lack adequate information about why certain landscapes might be important to our cultural history. Often those who are most familiar with a landscape are least aware of its value.

In the case of designed historic landscapes, most people are unaware that they were designed, or what goes into a design, and why it may be important to maintain the design's integrity. Although this is true for such areas as Central Park, prehistoric designed landscapes may be even more subtle to the modern eye. For example, it may not be immediately obvious to the casual observer that the prehistoric designers and builders of the Serpent Mound in south central Ohio chose a particularly dramatic site for the placement of their design.<sup>37</sup> The serpent effigy is located on a northerly slope between the junction of two local creeks. The setting not only displays the design skill of the artisans and builders, it allows the spectator to view the construct in its entirety from several different vantage points. Although we can only speculate about their reasons for choosing this particular site, it was well selected for the particular design its ancient builders wished to execute there (see p. 7).

Historic vernacular landscapes may be appreciated the least by the local people who live and work in it. For example, farmers within a rural

<sup>36</sup>See U.S. Congress, Office of Technology Assessment, *Information Technology: R&D Critical Trends and Issues*, OTA-CIT-268 (Washington, DC: U.S. Government Printing Office, February 1985); also *Technologies for Prehistoric and Historic Preservation*, "Ch. 5: Preservation Information."

<sup>37</sup>"In 1846, the snake's body was more than 1.5 meters high and 9 meters wide, but erosion and cultivation have reduced these dimensions to about 1.2 by 6 meters." William N. Morgan, *Prehistoric Architecture in the Eastern United States* (Cambridge, MA: MIT Press, 1980), p. 23.

historic district may be so familiar with their surroundings that they fail to recognize their special characteristics. The distinctive urban historic landscapes represented by the northeastern mill towns are thought by some local residents merely to represent outmoded industry. Yet such areas played an important part in the industrialization of the United States and reflect late 19th century values and conditions. [In some cities these areas have served as a focal point for the revitalization of the city.]<sup>38</sup>

Where local support for preserving landscape values has developed, it has often acted to enlarge the scope of historic districts. For example, in one case in Jefferson County, Kentucky, the Tyler Settlement, a site consisting of a few farm houses and auxiliary buildings, was nominated to the National Register of Historic Places. How-

ever, the people of Jefferson County realized that the houses had little to do with the significance of the area. Instead, they recognized the agricultural patterns, the associations of the families, the stonework, the fences, and other components as significant, integral elements of the whole landscape. The local people, working through their certified local government<sup>39</sup> (CLG), did the research necessary to expand the scale of the nomination to the 600-acre Tyler Settlement Rural Historic District. This was the first fully documented rural historic landscape in Kentucky.

As citizens become more aware of the influence of historic landscapes in their lives and landscapes' importance to the history of the Nation, local nominations to the National Register of Historic Places are likely to increase in number and scope.

<sup>38</sup>Procter and Matuszeski, *Op. cit.*

<sup>39</sup>A certified local government is one that is certified to receive funding from the Historic Preservation Fund, administered on the State level by the State Historic Preservation Office.