

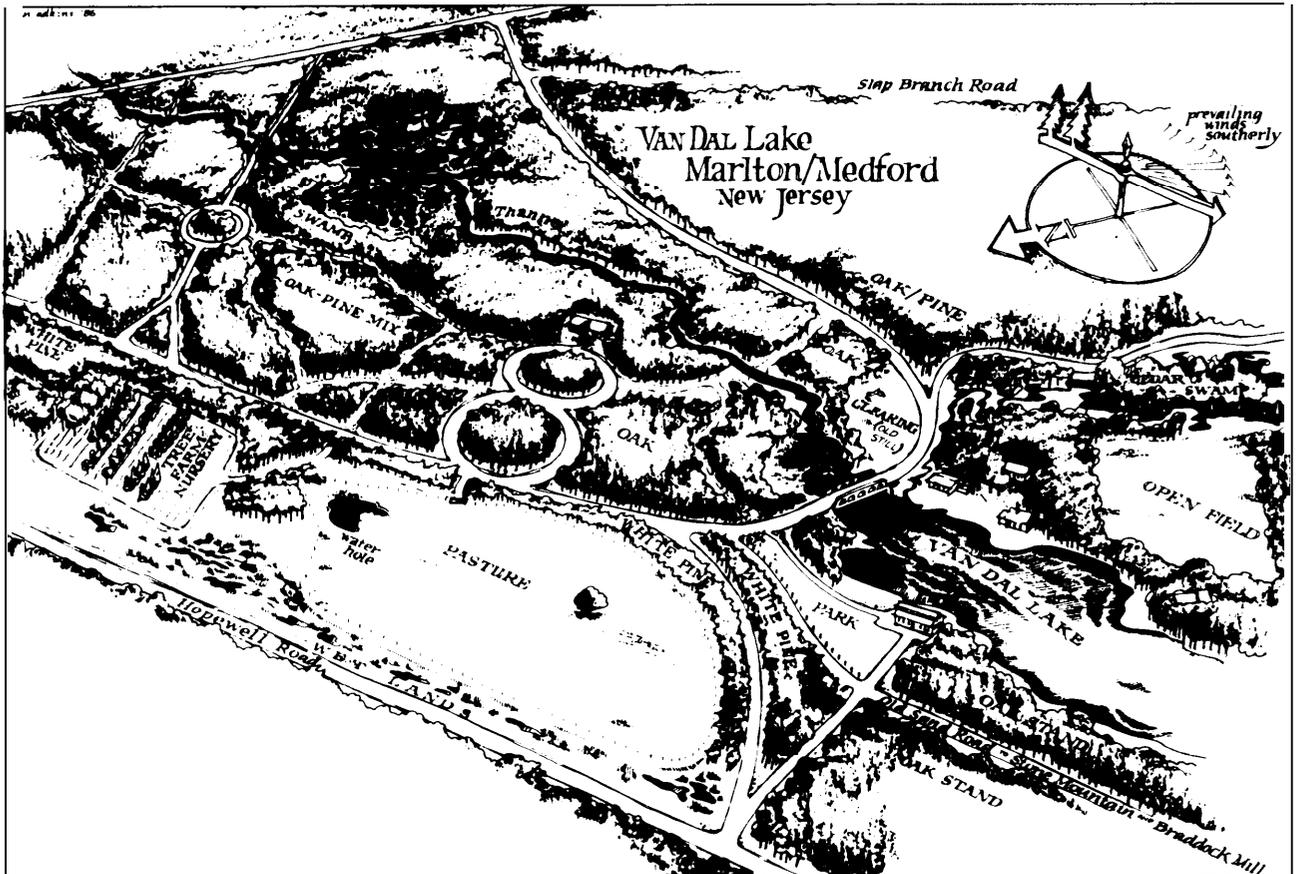
PRINCIPAL FINDINGS

The international preservation community focused its efforts on preserving and protecting historic landscapes only in relatively recent years. Yet historic landscapes play an important part in our understanding and appreciation of U.S. national heritage. Participants in the OTA assessment urged that U.S. preservation policy explicitly and publicly acknowledge the importance of U.S. historic landscapes so the value of preserving and restoring them becomes more widely appreciated. Establishing preservation values will assist in protecting landscapes from a wide variety of natural and human threats. However, implementing many of the policy options presented in this background paper would likely require increased funding, as the available resources for historic preservation at both the Federal and State levels are currently stretched and allow for little flexibility to add new tasks.

The management and preservation of landscapes is complicated by the fact that they contain a wide variety of elements, including plants and structures as well as landforms. However, a variety of technologies exist to assist in identifying, assessing, conserving, and protecting landscapes. These findings illuminate the technological and institutional issues related to the use of technology for preserving landscapes. They summarize issues and concerns discussed in detail in the remainder of this background paper.

More consistent landscape terminology, and guidelines for applying preservation standards, could strengthen the identification and preservation of significant historic landscapes.

In part because "landscape" is a general term, applied to many different landscape types, but also because it may imply a wide variety of mean-



Buildings and firebreaks (pasture, garden, roads, and streams) are positioned with respect to the prevailing wind, affording maximum protection against fires coming from the central woodlands during fire season.

ings, the identification of historic landscapes has been impeded by a lack of consistent terminology. Some landscapes are historically significant 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.

The National Park Services (NPS) has recently established definitions for various types of landscapes to guide the nomination of landscapes to the National Register. In addition to defining historic designed landscapes, and setting guidelines for evaluating them, NPS has focused attention on the category of cultural landscape it refers to as the ***rudid historic district***. Yet, other historic landscapes, such as components of the Pinelands of New Jersey, have their own distinctive characteristics and are an important component of cultural landscapes. They also need to be inventoried as landscapes, where appropriate, and their historic significance determined.

Passage of the Olmsted Heritage Landscapes Act of 1987 (H.R. 17) could materially aid the collection of information on all U.S.-designed historic landscapes.

By focusing attention on the many landscape projects designed by Frederick Law Olmsted and his professional successors, the Olmsted Act could increase awareness of the importance of historic landscapes to the Nation's history. Some private owners of Olmsted properties have expressed fear that passage of such an act would limit their ability to control disposition of these properties. However, H.R. 17 seeks primarily to inventory Olmsted properties designed by the Olmsted firms, and would not limit the property rights of private owners.

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

Inventory or survey of landscapes is a crucial first step in preserving them. However, not all historic landscapes can be preserved, for not all are historically significant. Until recently, the Federal government has expended little effort to identify and document nationally significant landscapes; no comprehensive, centralized listing of significant American landscapes exists.

A comprehensive national historic landscape survey would draw together the information we now have on historic landscapes and identify those missed in previous, haphazard efforts. The search might begin with a national survey of designed historic landscapes as an important first step, because greater agreement exists among professionals concerning what constitutes a designed landscape than on the broader definitions.

Another approach might utilize an intensive regional survey of all types of historic landscapes, which could assist the historic preservation community in developing techniques and methods to locate and evaluate significant historic landscapes. However, no substantial progress in identifying and preserving historic landscapes is likely to occur unless Congress appropriates additional funds for landscapes.

A variety of technologies are available for gathering and analyzing landscape information:

Archival and library information systems. A vast amount of primary and secondary information about designed landscapes and urban cultural landscapes is already available in the Nation's depositories. New information technologies can make access more efficient.

Computer aided-design (CAD). CAD software and hardware make it possible to draw and store a given landscape within the computer memory, and to manipulate and alter the drawing.

Computer-aided survey. Computers can increase survey accuracy and reduce overall labor, especially when inexpensive, portable computers are used in the field.

Geographic information systems (GIS). These computerized spatial database systems are designed to integrate, manipulate, and analyze statistical, demographic, cultural, and natural resources data. GIS are also capable of printing maps and reports encompassing a wide variety of spatial information.

Landscape databases. Computerized databases of various kinds are crucial to the efficient development and use of landscape information. As computers and software have become increasingly more capable, and cheaper to acquire, many users have begun to develop their own powerful databases.

Measured drawings have been borrowed from a heritage and used to document and appreciate the form and appearance of the building.

Photography and ideograms Photography and ideograms are powerful methods of documenting and appreciating the form and appearance of the building. They enable the architect to document the building in a way that is both accurate and expressive.

Remote sensing technologies Remote sensing technologies are used to document the building in a way that is both accurate and expressive.

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The greatest threat to historic landscapes is destruction by ignorant. The application of appropriate technologies could make a significant difference in improving the preservation of significant historic landscapes.

Human and natural heritage are the most valuable assets of a country. They are the result of a long and complex process of human and natural evolution. They are the result of a long and complex process of human and natural evolution.



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multitude of cultural resources under their care, managers need to have an increased awareness of the value of historic landscapes, and the skills needed to study, identify, evaluate, conserve, and manage them. Therefore, managers need better access to landscape information and training. However, considerably more effort will be required to enable managers to put technology to better use in landscape management.

A federally funded facility that would focus on the research and development of preservation technology could make a major contribution to the study and preservation of historic landscapes.

Participants in the OTA assessment, *Technologies for Prehistoric and Historic Preservation*, cited the critical need for a federally supported facility for preservation technologies. A center would foster the research and development of advanced technologies, train professionals in their use, develop technical standards, disseminate accurate technical information, and promote public education about historic preservation. Although the private sector has a significant role in developing and using preservation technologies, the Federal government has the lead responsibility for guiding preservation efforts throughout the United States.

In order to assist the Federal Government in transferring **useful technologies from natural sciences and engineering into preservation, and developing new cost-effective technologies, Congress may wish to establish** such a federally chartered center. Congress could mandate the establishment of a Federal Center for Preservation Technology within the Department of Interior or other Federal agency. 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. If a Center for Preservation Technology were established, landscape preservation concerns could constitute a significant portion of the center's workload.

Although a center for preservation technology would tackle a number of different technological areas, the following items are likely candidates for part of the center's agenda:

1. ***Intensive regional survey of landscapes:*** A center could fund and supervise the development of methods for conducting intensive local and regional surveys. They would have numerous benefits for historic preservation, as well as local and regional planning efforts.
2. ***Horticultural or Botanical Technologies:*** Authentic restoration and conservation of historic landscapes depends on the ability to identify, locate, and use historically appropriate plants. A center could contribute to research on historical plants.
3. ***Clearinghouse for landscape preservation information:*** The preservation of historic cultural resources, including landscapes, depends substantially on the use of a variety of historical records and technical information. One of the most important functions a center could have is to serve as a source, or clearinghouse of historical and technical preservation information, including information on landscape preservation.
4. ***Landscape management and maintenance techniques:*** Periodic maintenance is one of the most effective means of preserving a historic landscape. A center could conduct research on automated methods for improving maintenance management.
5. ***Public education:*** Public education is one of the keys to improved historic preservation. A center could translate research results into information the public can comprehend and use.

A Coalition for Applied Preservation Technology (CAPT) has recently been formed whose membership is composed of a variety of private preservation organizations. CAPT is devoted to establishing a multidisciplinary National Center for Applied Preservation Technology.

Technology can assist the development of methods for systematic and long-term maintenance of landscapes, which is one of the most effective means of slowing deterioration from human and natural agencies.

Systematic preventative maintenance and upkeep are essential to the conservation of a landscape, particularly because landscapes change so rapidly as a result of plant growth, or stresses to the landscape. Increased use of personal computers and specially designed software could be extremely helpful in improving the quality and quantity of landscape maintenance.

Improved identification and preservation of historic landscapes depend on achieving greater public understanding of the reasons to preserve historic landscapes. In order to enhance public appreciation of historic landscapes, Federal, State, and local governments, as well as the private sector, will have to reach a wider audience.

Citizens are often unaware of the value and significance of historic landscapes. Traditionally, historic preservationists have worked from the grassroots, first by building local constituencies and then through them identifying the value of a given structure or archaeological site and finally seeking State or National help in preserving it. However, 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 wider national value.

Federal agencies, especially NPS, could enhance the public's understanding of the historic importance of certain landscapes by including interpretive material on landscapes in the interpretative presentations park personnel give to the millions of visitors each year.

A national database of identified historic landscapes would substantially assist the identification of other, uncataloged historic landscapes.

At present, the United States has no national database of historic landscapes. State and local databases are also highly incomplete and lack information on location of records and landscapes.

The private effort of the American Garden History Program at Wave Hill, Bronx, NY, to develop a Catalog of Landscape Records in the United States will be an important first step in developing a national database. Private efforts such as this would benefit from the involvement of the National Park Service and other Federal agencies concerned with historic landscapes.

In order to improve the preservation of pre-historic and historic landscapes, it would be necessary for the National Park Service and other Federal agencies to focus more consistent attention on landscape preservation in their management of cultural resources.

Because the National Park Service (NPS) serves as the lead agency for technical preservation matters for the Federal Government, and for State and local efforts, NPS administrators and managers need to be more aware of the value of preserving prehistoric and historic landscapes. NPS could assist by developing uniform standards for landscape identification and preservation; expanding the subject matter of its publications to include recommendations on studying and preserving historic landscapes; enhancing its own landscape preservation effort; developing a self-study course on landscape preservation; and by upgrading and highlighting the importance of gardening and grounds maintenance jobs.

NPS, together with other Federal agencies, could aid in the identification and preservation of significant historic landscapes by clarifying landscape terminology in the National Register, improving interagency information flow concerning historic landscapes, and generally focusing more attention on landscape preservation.

NPS could also assume a stronger role in the effort, initiated by the American Society of Landscape Architects (ASLA), to complete a national survey of designed landscapes. Specifically, the ASLA needs assistance in completing the survey in a timely manner, acquiring consistent information, and standardizing the information collected.

NPS could also expand the training it provides to State and local preservation agencies and groups on landscapes. In particular, the States could benefit from access to information on carrying out landscapes surveys.

Although the *National Historic Preservation Act* contains no impediment to the identification and preservation of landscapes, neither does it specifically mention them. Most Federal agencies that hold and manage historic properties nonetheless also manage historic landscapes. Not expressly mandating in the law that historic landscapes are worthy of being identified and preserved may allow Federal agencies to overlook landscape concerns in their preservation programs.

Some observers have suggested that it may be appropriate to amend the *National Historic Preservation Act* to include explicit reference to historic landscapes. Others have expressed concern that including explicit reference to historic landscapes will open the act to inclusion of other, more specific historic categories, or will subject the *National Historic Preservation Act* to unnecessary and harmful experimentation. Congress may wish to address the need for greater attention to landscape concerns by designing additional legislation which recognizes the role historic landscapes play in the history of this country and specifically directs Federal agencies to include landscape concerns in their preservation programs. Alternatively, Congress may wish to use its oversight authority to encourage the inclusion of landscape concerns in the regulations and guidelines issued by Federal agencies that treat prehistoric and historic preservation.

Tax credits and incentives for the preservation of historic landscapes might be effective in enhancing the preservation of historic landscapes.

Tax incentives have provided an incalculable boost to the preservation of income producing, privately owned, historic structures. Yet, current legislation permits historic preservation tax credits for buildings only. Congress could institute a similar set of tax incentives for historic landscapes. Tax incentives would also increase public awareness of these threatened historic resources. Congress may wish to consider new legislation to address this need.

The States' approaches to landscape issues are very uneven; only a few States have made significant strides in identifying their historic landscapes.

State Historic Preservation Offices should be encouraged to inventory their historic landscapes and to maintain surveys on computer databases so they can be enlarged and corrected frequently and cost effectively. To be most effective for preservation purposes, such databases should be developed with standard formats. The State offices depend heavily on the Historic Preservation Fund to support their activities. Additional funding will be needed to support inventory of historic landscapes.