

**VANISHING TREASURES: A LEGACY IN RUINS**  
**Ruins Preservation in the American Southwest**

**Ruins Preservation Guidelines**

**DRAFT**

*A ruins preservation program is essential to provide a last defense against the loss of these tangible symbols of America's heritage.  
An effective program can preserve the integrity, information and special meanings that these places hold for this and future generations.*

**National Park Service**  
November, 1997

# VANISHING TREASURES STRATEGIC PLAN

## SUMMARY

The video, "Vanishing Treasures: A Legacy in Ruins" and a Strategic Plan were developed and produced by park resource managers. The Plan states, "To address the ongoing loss of ruins in the American Southwest, the National Park Service needs a ruins preservation program...These resources hold special meanings for a number of traditional communities, and are an important part of our national heritage."

The goals of the "Vanishing Treasures" Strategic Plan are: a computerized management system for condition assessment information; the establishment of a career development program for ruins preservation specialists; the provision of consistent and adequate funding support; **and the need for fundamental ruins preservation standards, defining and recognizing the ruins preservation program.**

## MISSION

Unique and perishable masonry ruins important to our national heritage are deteriorating. The National Park Service can successfully fulfill its mandate to manage and preserve these resources for future generations through the development and implementation of a long-term ruins preservation program. A National Park Service ruins preservation program is essential to provide a last defense against the loss of these tangible symbols of America's heritage. An effective program can preserve the integrity, information and special meanings that these places hold for this and future generations.

Ultimately the mission is to provide a level of care for the ruins of the American Southwest that will insure their preservation, while meeting the recreational, educational, and scientific needs of all who may benefit from these unique resources.

## THE PLAN

Ruins are deteriorating at a rate which far exceeds our efforts to maintain them. Organizational deficiencies which impede their preservation include:

- A: Lack of a management system which includes an adequate inventory or database
- B: Inadequate career development for ruin preservation specialists
- C: Inadequate and inconsistent funding
- D: Lack of recognition and definition of the Ruins Preservation Program**

## STRATEGIC PLAN GOAL D

### D: Definition and Recognition of Ruins Preservation Program

At present, there are no fundamental standards to provide consistency in strategy and technical application in ruins preservation. The program has not been recognized as a distinctive and separate component of historic preservation and an element of cultural resource management. The ruins preservation program will developed to provide fundamental standards and insure application of an integrated multi-disciplinary approach to condition assessment, documentation, fabric modification, and the study of preservation techniques and materials.

#### Goal D: Establish a Definition and Create a Recognition of the Ruins Preservation Program

##### Strategy D1 - Develop Fundamental Standards to Provide Consistency in Strategy and Technical Application

- Action 1.1 - Form working group to define and develop standards for the ruins preservation program.  
Responsibility: Standards Work Group, Systems Support Offices, Centers, Ruins Preservation Advisory Committee
- Action 1.2 - Revise NPS-28 (and associated technical supplements and appendices) to reflect a recognition of the ruins preservation process and the technical and professional requirements (refer to Action B-1.3).  
Responsibility: Standards Work Group, National Park Service Washington Office, System Support Office, Centers, Ruins Preservation Advisory Committee
- Action 1.3 - Develop methods to establish a multi disciplinary approach to the ruins preservation process.  
Responsibility: Standards Work Group, System Support Office, Resource Centers, Ruins Preservation Advisory Committee

##### Strategy D2 - Establish Ruins Preservation as an Exclusively Funded Program

- Action 2.1 Determine method to establish separate Service funding from Cultural Cyclic and Cultural Resource Preservation Program.  
Responsibility: Park Managers, System Support Office Managers, Inter-Mountain Field Area Directorate

## **INTRODUCTION**

The Southwestern United States contains one of the nation's richest, best preserved, and most complete records of human history. The concentration and diversity of Southwestern and National Park Service archeological resources are unique.

These archeological resources, so remarkably well preserved, cannot be considered unchanged or unchanging. An archeological site is in a continuum of change, with erosional forces always effecting it. All "ruins" have been damaged or destroyed by natural forces and human impacts. Because the record of the past is finite and non-renewable, such losses diminish our chances to study, understand and interpret critical parts of American history.

Recently, there has been a significant increase in the federal government's commitment towards the care of the nation's archeological resources. This commitment has been stimulated by a growing awareness and concern that archeological resources are fragile, nonrenewable resources that are rapidly disappearing.

The purpose of this ruins preservation guideline is to provide an outline of the fundamental design and implementation standards of a ruins preservation program. This guideline defines a program that is proposed to be recognized as a unique component of cultural resource management and historic preservation.

### **DEFINITION OF THE “VANISHING TREASURES” INITIATIVE & “RUINS”**

The Vanishing Treasures initiative includes 41 National Park Service areas encompassing the entire distinctive range of building traditions developed by American Indians, Europeans and Americans in the Southwest. These traditions incorporated a variety of materials, technologies, designs, and symbolic expressions that represent a continuum of architectural experimentation in a unique and arid environment.

The distinctive focus of the Vanishing Treasures initiative is upon preserving earthen and stone masonry architecture commonly known as ruins. The Vanishing Treasures Strategic Plan defines "ruins" as, "Sites whose occupation and utilization has been interrupted or discontinued...for an extended period of time."

Park areas included in the Vanishing Treasures initiative are listed in the following table:

## VANISHING TREASURES INITIATIVE PARKS

PARKS	CLIFF DWELLINGS	EXPOSED RUINS	HISTORIC PERIOD RUINS		
			MISSION	FORT	OTHER
ARCHES	X	X			
AZTEC		X			
BANDELIER	X	X			
BIG BEND					X
CANYON DE CHELLY	X	X			
CANYONLANDS	X	X			
CAPITOL REEF	X	X			
CASA GRANDE		X			
CHACO CULTURE		X			
COLORADO NM		X			
CORONADO		X			
DINOSAUR	X				
EL MALPAIS		X			
EL MORRO		X			
FORT BOWIE				X	
FORT DAVIS				X	
FORT LARAMIE				X	
FORT UNION				X	
GILA	X				
GLEN CANYON	X	X			X
GOLDEN SPIKE					X
GRAND CANYON	X	X			
HOVENWEEP		X			
MESA VERDE	X	X			
MONTEZUMA CASTLE	X				
NATURAL BRIDGES	X	X			
NAVAJO	X	X			
ORGAN PIPE		X			
PECOS		X	X		
PETRIFIED FOREST		X			
SAN ANTONIO			X		
TONTO	X				
TUMACACORI			X		
TUZIGOOT		X			
WALNUT CANYON	X	X			
WUPATKI		X			
ZION	X	X			

## **RUINS PRESERVATION**

Ruins preservation is described as protecting and maintaining features and components of an archeological site, including architecture and artifacts. Preservation actions should reduce the rate of deterioration on an archeological site's architecture and contents. Successful preservation actions minimize the loss of important scientific information, preserve examples of past technologies and architecture for future generations, and enhance the interpretation and appreciation of American cultures.

The loss of ruins on both private and public lands is due to development, looting, impacts from activities of visitors, archeological researchers, managing agencies, and natural attrition. Recognition of these accelerating losses resulted in the development of numerous federal laws and regulations that established mandates for the preservation and conservation of archeological resources. Attrition of this resource base increases the importance of preserving the archeological resources contained within National Park Service areas in the American Southwest.

Goal D of the Vanishing Treasures Strategic Plan is to define a recognized ruins preservation program through production of fundamental standards. The program is intended to preserve the scientific and heritage values inherent in Southwestern archeological resources. Implementation of this program is designed to protect archeological resources from damage, treat architecture where necessary to deter further deterioration, and recover scientific and technical information.

## **RUINS PRESERVATION MANAGEMENT**

A program to preserve Southwestern archeological resources in the National Park Service, through protective and maintenance actions, should be a recognized component of cultural resource management. The parameters of a program must be consistent with historic preservation laws, standards and guidelines, which are specifically concerned with the physical preservation of historic properties, including ruins and archeological resources.

The federal government is responsible for providing leadership in preserving the nation's archeological resources. The Secretary of the Interior and the Advisory Council on Historic Preservation have the primary responsibility of overseeing and providing guidance for all federal preservation efforts (U.S. Congress 1986:10). Federal agencies, in the spirit of stewardship and trusteeship for future generations and in keeping with their missions, have the responsibility of protecting and preserving archeological resources that are under their control or jurisdiction (Executive Order 11593). State Historic Preservation Offices are responsible for insuring that state and local preservation projects are carried out in compliance with state regulation and according to nationally mandated standards (U.S. Congress 1986:11).

There are a number of existing historic preservation standards and guidelines (see Appendix III). The Secretary of Interior's Standards (U.S. Department of the Interior 1982, 1983 and 1985) and Advisory Council's Handbook for the Treatment of Archaeological Properties (Advisory Council on Historic Preservation 1986) are primary sources for providing technical

guidance on archeological resource preservation. Various federal agencies including the National Park Service have developed policies and guidelines that expand and clarify the Secretary of the Interior's Standards. These guidelines do not specifically address the unique architectural traditions and conditions involved in ruins preservation in the American Southwest.

Vanishing Treasures Plan Goal D Strategy 1 is to “Develop fundamental standards to provide consistency in strategy and technical application.” Action 1.2 is to “Revise National Park Service Cultural Resource Management Guidelines (NPS-28), and associated technical supplements and appendices to reflect a recognition of the ruins preservation process and the technical and professional requirements.” Action 1.3 is to “Develop methods to establish a multi-disciplinary approach to the ruins preservation process.”

This Vanishing Treasures Ruins Preservation Guideline can be used to determine:

(1) whether structural repairs are actually warranted or whether an alternative preservation approach can be considered, (2) what level of archeological documentation or data recovery is appropriate, (3) what materials should or should not be used in the repair process, (4) how the repairs should be performed, and (5) the appropriate forms for documenting the treatment process.

## **TYPES OF SITES INCLUDED IN THE VANISHING TREASURES INITIATIVE**

Two distinguishable types of archeological resources with standing architecture are found in National Park Service areas and are appropriately included in the Vanishing Treasures initiative:

(1) “front country” sites are those interpreted to the public, which have received preservation interventions and continue to receive regular preservation maintenance treatment and  
(2) “back country” sites are those not actively interpreted, have not received preservation treatment or may not have been adequately documented.

By legal mandates, it is critical that parks complete archeological surveys. The Vanishing Treasures initiative does not encompass archeological surveys. However, when archeological sites are added to a park inventory, appropriate sites requiring preservation treatment should be added to the Vanishing Treasures prioritized list (see Supplement I).

The decision to implement treatment at a site assumes that adequate documentation has been collected to enable prioritization of sites to be treated. A recommendation by resource managers to park managers to intervene at a site must be based on sufficient information that suggests that the site is threatened and requires treatment, has significance and integrity, contains interpretive and scientific information, and is potentially eligible for or is listed on the National Register of Historic Places.

## **PREPARING A PRIORITIZED LIST OF SITES THAT REQUIRE TREATMENT FOR THE VANISHING TREASURES INITIATIVE**

Ranking treatment projects: It is critical that each Vanishing Treasures park area develop a prioritized list of sites requiring preservation treatment. Each park area should structure its preservation program and this "short list" of sites to meet its unique mandates, and specific resource preservation and management requirements. Different park areas will approach this initiative and program differently, but each should apply the program criteria to guide prioritization, documentation and implementation.

Types of sites addressed by the Vanishing Treasures initiative include one or more of the following defining characteristics:

- sites that are interpreted or may be interpreted in the future
- sites that contain standing architecture
- sites that contain unstable or threatened cultural deposits
- sites that constitute management challenges
- sites that contain significant scientific information used to further archeological investigation and enhance Interpretive programs.

Most park areas currently have three types of archeological sites with corresponding information that should be addressed in establishing a "short list" of those sites which require preservation treatment:

- existing sites inventory that have preservation management information
- existing site inventory that does not have adequate preservation management information
- unsurveyed or additional site inventory.

Future surveys or additional site inventories should include architectural and condition documentation to enable consideration for inclusion on the list of sites requiring treatment.

Steps in developing the "short list" of sites requiring preservation treatment:

1. Criteria - establish criteria to be used in prioritizing sites using a multi-disciplinary approach and input from park area divisional programs;
2. Records Research - evaluate the existing data, to determine site data needed to establish a list of sites for treatment; acquire and evaluate existing data on inventory of all sites;
3. Documentation - collect information essential to identify sites requiring treatment- "focused field studies" to provide architectural and condition information needed for prioritizing sites requiring treatment;
4. Analysis of Documentation - analyze resulting information in a format enabling prioritization of identified sites requiring treatment;
5. Evaluation - evaluate site specific information with the criteria to develop a priority list of sites requiring treatment.

## **SUMMARY OF RUINS STABILIZATION & PRESERVATION TODAY**

The purpose of this summary is to provide a brief outline of the tradition of ruins stabilization in the Southwest and in the National Park Service, and to identify changes in the direction of the practice and its evolution into a practice of ruins preservation.

The history of ruins stabilization treatment began in 1891 at Casa Grande in southern Arizona, where the first documented work was performed with the appropriation of federal funds. For most of the first half of this century, the practice concentrated on reinforcement of the remains of standing architecture with modern materials, most notably cements. The purpose of ruins stabilization was to repair excavated original architectural remains threatened with structural collapse, by replacement and reinforcement of missing and deteriorated materials.

In the 1930's major stabilization projects were initiated, due to the large number of nationally significant sites excavated and developed as National Monuments and other public reserves. The original architecture of many archeological resources were overlaid using modern construction techniques and rigid materials. Practical and expeditious methods were applied to overcome logistics and to achieve permanent stability in the ruins, including partial restoration and reconstruction.

Standardization of the practice of ruins stabilization occurred in many of its technical applications through the 1970's. Stabilization actions were often conducted without sufficient regard for the preservation of the masonry styles, features, components and artifacts that make an archeological site unique. In an attempt to enhance stability, wall abutments were altered, beam sockets filled, doorways closed and opened, and chinking patterns were altered, causing some of these sites to become extensively and irreversibly effected. The character and appearance of the original architecture, and evidence of the original construction styles was often altered, obscured or lost. While these practices have preserved the basic form and outline of many historic structures, they often reduced their research and interpretive value through the loss of character, features and styles.

The extensive and repeated use of cements as a replacement material was intended to provide more durability and structural stability to the ruins. The hard replacement cements have deflected rather than dispersed erosional elements to the adjacent, original materials, accelerating their deterioration. The strength of the cement mortars has also caused accelerated deterioration through differing expansion-contraction and porosity coefficients. The porosity of cement mortars is less than that of the soft sandstones and the original mud mortar, forcing moisture through the stones. The rigid cement mortars also expand at a lesser rate than the encased, soft sandstones, literally crushing them.

The traditions of excavation and stabilization were long lived and resulted in an overwhelming number of sites within the National Parks requiring maintenance. By the 1970's, many resource managers and archeologists recognized that ruins stabilization and stabilization maintenance were technical processes that did not adequately address archeological research or architectural conservation values. Stabilization, initially to preserve significant archeological resources, had become a cyclical process that negatively impacts the original character and features of those

resources, incrementally leading to the creation of facsimiles. To compound this recognition, few archeologists had documented the architectural attributes and condition of a site during excavations or the repairs that followed. These practices have often left little information concerning the original construction of the excavated and stabilized architecture.

The first recording formats for documenting the stabilization process were developed by the National Park Service in the late 1930's, and the first stabilization manual was developed in the late 1940's. A revised National Park Service stabilization manual, "Ruins Stabilization in the Southwestern United States," was produced in 1974. The 1974 manual has long been obsolete. The 1974 manual states that "attempts should be made to keep the structure in the same condition as it was when acquired, or when the responsibility for its maintenance was assumed following stabilization." In many cases this condition no longer exists. The manual sought to resolve conflicting objectives of appearance and permanence.

Now, concerned resource managers, archeologists and preservation specialists are evolving a ruins preservation practice involving minimal structural intervention and an emphasis on protection. The practice of ruins preservation is becoming a unique component of cultural resource management and historic preservation, incorporating perspectives of both conservation and archeology. The goal now is to preserve the scientific and heritage values in the original construction materials by using compatible materials and techniques duplicate the original architecture. The results of achieving this goal can be the perpetuation of unimpaired architectural resources, which will continue to provide the opportunity for future visitors and researchers to explore questions yet to be defined.

The goal of deterring further loss of existing remains is now also approached through data retrieval before treatment, and through documentation of the repairs. Documentation addresses the potential loss of archeological information as a result of proposed treatment actions, preserving its future research potential.

Ruins preservation today focuses on (1) significant features, components, and attributes of a site to be preserved intact, without significant alterations, (2) techniques and materials that are compatible with and duplicate the original construction methods and existing structural fabric, (3) ground-disturbing activities that are minimized to reduce the likelihood of impacting buried cultural remains, and (4) adequate data retrieval from the areas affected by the treatment process.

The reasons to collect data from an archeological resource can be scientific or managerial. A scientific orientation collects information to be used, analyzed and interpreted in contributing to the knowledge of a site and area, and the people who inhabited it. A managerial orientation collects information to be used in the task of conserving, managing, protecting and interpreting a site. Ruins preservation documentation should address or integrate both the scientific and managerial data collection orientations.

Archeology and architectural conservation are disciplines that contribute to a ruins preservation program. Each discipline brings a different perspective to ruins preservation and its documentation process. It is the integration of both disciplines' perspectives that can provide a

balanced and relevant documentation and preservation action approach. Documentation should address or integrate both the archeological and architectural perspectives. Architectural and overall site documentation must be conducted before, during and after implementation of any direct action or treatment on any archeological resource. The documentation process must be planned, funded, scheduled, implemented and archived, according to appropriate standards.

## **OUTLINE FOR A GUIDELINE:**

### **A RUINS PRESERVATION TREATMENT PROGRAM**

The focus of preservation treatment is on individual sites. Intense analysis is required for each individual site, including condition assessment, investigative studies, specialized analyses, and archeological and architectural documentation. Preservation treatment often requires the skills of a variety of specialists in a multidisciplinary team (see Appendix). Inclusion of appropriate American Indian and local communities in the preservation treatment program is essential.

Preservation treatment can be applied in a process consisting of 6 umbrella steps:

- A. Records Research**
- B. Development of Alternatives**
- C. Recommendations and Decision**
- D. Design of Actions**
- E. Preservation Treatment**
- F. Management.**

#### **A. Records Research**

Records research is compiling and evaluating all available existing records pertaining to a site. These include archeological records, preservation records (which may document reuse of building materials and previous areas of deterioration and repair), management records (goals and objectives and previous decisions), previous specialized analyses, and oral histories. Records research may involve archivist and historical archeologists to investigate records appropriate to their disciplines. Ground truthing or physically verifying the results of records research should follow compilation of the existing information.

Develop a site history through records research and documentation.

Components of a site history include:

- previous preservation actions and specialized analyses
- previous archeological investigations
- oral histories by individuals with previous involvement at the site
- construction history of the structure
- management use.

The products of this activity are:

- a provenience or structure identification system for subsequent use
- compiled existing archival and materials collection, and curated materials

- record of all previous work as baseline for subsequent studies and treatment
- annotated inventory of data.

Evaluate the site history.

Components of this activity are:

- preparing a chronological listing of site interventions including archeological and stabilization activities
- evaluating the effectiveness of previous actions and techniques through the use of technical specialists
- ground truthing the results of the records research
- correlating previous interventions with a current condition description
- evaluating construction materials in collections.

The products of this activity are:

- documented understanding of site history and effectiveness of previous preservation activities
- determined areas needing subsequent research and evaluation

## **B. Development of Alternatives**

Condition assessment involves documenting a site, analyzing existing conditions, and investigating options for preservation treatment. Investigating options for treatment applies the essential background records research and documentation of the architecture and its condition, and produces evaluations of the conditions, technical analyses by specialists, and correlation of existing condition with previous descriptions and actions.

Evaluating conditions utilizing a multi-disciplinary team approach and a range of technical specialists results in identifying conservation requirements and determining causes and effects of deterioration, as well as the effectiveness of previous and proposed preservation actions.

Describing the resource includes site maps, elevations, detailed architectural and archeological descriptions with structure specific preservation treatment requirements, correlating previous documentation with the current description; and integrating data into the interpretive program.

Components of site documentation and analysis are:

- documenting the site focusing on its structure, as opposed to archeological context
- evaluating deteriorating areas and determining causes of deterioration, including the use of technical specialists as appropriate
- soliciting input from American Indian and local communities on site-specific concerns
- technically analyzing materials: stone, mortar, plaster, pigments, wood (including dendrochronology)
- updating Vanishing Treasures Working Group A site information management data
- investigating and evaluating options/alternatives.

The products of site documentation and analysis are:

- documented current conditions of the site

- understanding of site preservation and specialized requirements
- site base maps, photographs and other illustrations of current conditions
- developed comparative collection of construction materials and curation of materials
- recommendation package, including consideration of American Indian and local community concerns, and the presentation of range of options, alternatives and recommendations.
- added data into Vanishing Treasures Working Group A information management data base.

### **C. Select Appropriate Preservation Actions**

The activities associated with this decision making stage are evaluating the recommendation package through a multi-disciplinary team and park management and staff. Consultation can be conducted with the State Historic Preservation Office and should continue with common interest groups, such as American Indian governments and local communities. These groups collaborate on evaluating the recommendation package, including proposals of “no action,” with archeological and architectural documentation as the only treatment. The “benign neglect” determination may be applicable to sites that possess research or interpretive values, but is applied only if a specific management decision is made not to pursue preservation actions. A “benign neglect” determination should be accompanied by archeological investigation to recover pertinent scientific data.

Other components of this activity are:

- evaluating the relationship between the selected preservation action and the Compatibility Guidelines for Historic Properties found in NPS-28 (pg. 43, release 4) and Archeology and Historic Preservation; Secretary of the Interior's, "Standards"
- considering the relationship between the selected preservation action and other specific laws, policy and directives, such as the American Indian Graves Protection and Repatriation Act (NAGPRA), curatorial archives and records management issues and Special Directives 94-6 and 87-3
- considering the relationship between the selected preservation action and the National Historic Preservation Act (NHPA 106/110 Compliance) and the National Environmental Policy Act (NEPA), if appropriate.

### **D. Design Preservation Actions**

With the multi-disciplinary approach, designing preservation actions should again involve appropriate technical specialists including building conservators, historical architects, archeologists, structural engineers, geologists, soil scientists, and preservation technicians.

Individuals involved in the design process may include those involved in the development of recommendations and selection of preservation actions, additional technical specialists may also be necessary.

Components of project design include:

- designing specific preservation action(s), including additional documentation and specialized analyses, involving technical specialist as appropriate; and considering Design Compatibility Guidelines for Historic Properties
- creating a "construction document" package based upon design and specialized analyses, as appropriate for a specific project

- including a design and scope-of-work specific policy and directives requirements, specifically the American Indian Graves Protection and Repatriation Act, and considering curatorial issues: illustrations, photographs, and artifactual materials
- completing compliance with Section 106 of the National Historic Preservation Act and with the National Environmental Policy Act, if appropriate.

The products of this project design are:

- construction document package; design drawings and specifications; architectural documentation; scope-of-work; mortar, plaster, pigment specifications
- all necessary design specifications and documents, including incorporation of technical specialists (multi-disciplinary preservation team)
- consultation and consideration of American Indian concerns
- inclusion of curatorial issues into project design documents
- documentation of "no action" decision, if appropriate
- sound cost estimates (Class A estimate) for funding and staffing requirements
- completed compliance with the National Historic Preservation Act and the National Environmental Policy Act
- documented preservation action(s)
- architectural documentation package.

**E. Treatment** (Implementation of preservation actions.)

Prior to implementing preservation treatments or actions, the initial components of this activity should include executing the site architectural and condition documentation, as outlined above.

Components of this activity are:

- organizing all existing archeological, stabilization, and other relevant preservation data into retrievable formats,
- collecting additional current data concerning the structure and its condition to fill information gaps, as necessary, including: photography, materials sampling, wood inventory and encoding selected data in compatible formats, and creating a record of the structure's condition at the outset of treatment
- standardizing the terminology and provenience characteristics of the structure
- implementing the preservation action, involving all appropriate technical specialists
- executing repairs using precise techniques and methods material selection and preparation (These techniques and practices should be specified in the scope of services or task directive)
- documenting all actions and activities that are undertaken
- recording changes to the structure resulting from the action, including photography, pertinent line drawings, and professional and technical description of the action in progress (The level of reporting and product development should be identified during the project design phase.)
- documenting the workpower used during each step of the repair
- incorporating updated information into Vanishing Treasures Work Group A data base and appropriate preservation and architectural research databases
- preparing final reports in appropriate formats, including project documentation and discipline-specific professional reports

- developing monitoring and maintenance guides
- integrating results into interpretive and maintenance programs.

The products of this activity include:

- comprehensively compiled and curated records of all materials recovered from the structure
- adequately curated materials, artifacts, and records
- Historic Structures Report and Structure Preservation Guide or other appropriate preservation plan, such as a professional monograph that meets the needs of associated professions
- discipline- specific reports
- site monitoring and maintenance information packet and maintenance guide to facilitate long-term management
- recommendation package for long-term management
- new interpretive and educational information to address visitor education.

## **F. Management**

Subsequent to preservation intervention, management activities consist of actions taken on a routine basis to protect and preserve the resource.

Components of this activity are:

- routine monitoring and inspection of the structures
- general housekeeping maintenance
- routine preservation maintenance work
- decisions to facilitate long-range preservation, such as changing visitation patterns, closing sites to visitation, and increasing Archeological Resource Protection Act patrols
- update "living" park priority list of sites requiring preservation treatment as data is acquired (see Supplement I).

The products of this activity are:

- easily available, current priority list for sites with preservation requirements
- maintenance of resources in good condition.

## **SUPPLEMENT I: PREPARING A PRESERVATION PORTFOLIO FOR SUMMARIZING SITE HISTORY, DOCUMENTATION & CONDITION ASSESSMENTS**

The information compiled during a comprehensive Records Research (Step A) and Development of Preservation Alternatives and Recommendations (Step B) should be organized into two parallel but different types of products.

The first, comprehensive product is the Preservation Technical Report, which is for the technical and scientific community. It includes the nature of the investigation; the complete range of findings, evaluations and analyses of existing data; and supporting documentation for the range of proposed preservation actions. In short, this report provides the background for understanding the dynamics of a given archeological resource. These investigations will

generate voluminous information that will have potential applicability beyond the specific concerns of site preservation. The Preservation Technical Report is an initial part of an overall preservation process that outlines rationale for selection of preservation treatment, implementation of that treatment, and long range management activities (Step F). The preparation of this type of document requires considerable time, and is a product that is completed subsequent to treatment.

In contrast to the Preservation Technical Report, second the product should be designed to communicate essential information to park managers quickly, as a Preservation Portfolio. Characterized by a consistent design with standardized lettering, symbols, and drawings, portfolios are flexible. They may incorporate site plans, elevations, photographs, tables, and narrative text, in a concise, thematic format. These portfolios are easily modified, easily understood, and correspond in format to construction or architectural treatment drawings, on large sheets of paper.

The following list reflects what may be considered a basic set of portfolio drawings:

**Sheet A. Site Context and Description.**

This sheet illustrates the location and basic characteristics of a site including environmental and physiographic relationships, and includes registration information such as coordinates, site numbers, names, logistics, and access.

**Sheet B. Site Construction History.**

This sheet outlines the evolution of the architecture and associated features of a site temporally and spatially. It discusses structural components, materials, construction techniques, and the sequences of construction, noting areas of modification. It provides synoptic text describing the role of the site in settlement and cultural systems. This information assists in defining the significance of the archeological resource.

**Sheet C. Evolution of Site Condition and Integrity.**

This sheet illustrates the evolution of a site's condition from the initial documented assessment to the most recent. Sources of information may include field notes or published descriptions, oral histories, photographs, drawings, maps, and recent assessments. This sheet is intended to provide managers with an understanding of the rate and magnitude of deterioration of a particular archeological site.

**Sheet D. History of Archeological Research.**

This sheet illustrates all previous archeological research including casual descriptions, survey documentation, architectural studies, collections, evaluation of designations (room or structure numbers) and excavations. This information also relates to past and present site condition. From this review, a determination can be made regarding the adequacy of site documentation.

**Sheet E. History of Preservation Treatment.**

This sheet illustrates all previous preservation treatments and evaluates their effectiveness, and is base line data for identifying alternatives for future preservation treatments.

**Sheet F. History of Site Management Strategies.**

This sheet illustrates previous management uses, strategies and actions, from site protection to interpretation. It outlines how a resource has been managed through existing park documents. An example is a site that was actively interpreted in the past, but is now closed to visitation. This sheet may also document or illustrate why changes in site management strategy were made, and may also incorporate information regarding American Indian consultation.

**Sheet G. Evaluation of Additional Studies.**

This sheet illustrates all previous specialized studies, including architectural conservation assessments, structural engineering studies, materials analyses, and environmental or contextual studies. Some archeological resources have had specific studies conducted to assess ongoing preservation problems. Compiling this information is necessary to properly evaluate proposed alternative treatments.

**Sheet H. Integrity of Archeological Resource.**

This sheet identifies and evaluates the components of a site that have poor, fair, good, or excellent integrity, and so identifies those components of the resource that are most valuable.

**Sheet I. Condition Assessment and Analysis of Adverse Impacts.** This sheet summarizes the present assessment of site condition and identifies specific problems requiring prioritized attention. This information requires field work by a multi-disciplinary team to determine the causes and potential treatments of preservation problems.

**Sheet J. Presentation of Proposed Alternative Preservation Actions (multiple sheets).**

These sheet(s) summarize each proposed action, including no action, and include a synopsis of time and cost estimates and implications for the future management of resource. These sheets are not detailed construction or treatment drawings, but summarize proposed alternative actions.

**SUPPLEMENT II: PREPARING A SCOPE OF WORK**

Preparing a Scope-of-Work specifically consists of assessing and evaluating the existing conditions, developing the work plan, and identifying the requirements to implement the plan.

**A. Assessing and Evaluating the Existing Conditions.**

This includes on-site investigations, reviewing collected data and collection of additional data regarding existing conditions, identifying structural deficiencies, analyzing site setting and conditions such as drainage, erosion, vibrations, and visitor impacts.

Specific analysis must be implemented to insure site integrity during the preservation process:

- analysis and evaluation of construction materials, including type and suitability of stone, wood, mortar, plaster
- analysis and evaluation of construction techniques, including identification of character defining design elements such as patterns in the stone masonry, and identification and evaluation of previous treatment actions and materials
- structural analysis and evaluation, when warranted, of capability of materials, foundations,

connections between walls and supporting members, settlement, wall cracking and wall movement, and identification of potential solutions

- analysis and evaluation of documentation including written records, line drawings, and photography.

### **B. Development of the Work Plan.**

This utilizes the information collected during the documentation and assessment of existing conditions to develop a range of alternatives from which a preservation treatment is selected.

The following is a list of items related to the scope of repair work and techniques:

- identifying and selecting a multi-disciplinary team to develop plan and implement work
- synthesizing the collected documentation
- identifying a range of solutions and potential effects
- selecting a treatment or determination of no treatment
- developing a plan based on the selected treatment which may lead to the following determinations:
  1. based on architectural documentation and current condition assessment, no further treatment is required.
  2. scope of work and compliance documents are required.
  3. construction documents and structural calculations are required to specify the treatment.This document package also includes specifications for specific material requirements, including mortar and plaster types and mixes, and appropriate structural stabilization requirements and techniques.
- identifying phased projects, which may be required due to funding constraints or the size of the project.

### **C. Identification of Needs to Implement the Plan.**

These include sound, Class A estimates for funding; materials and personnel costs required to implement the documentation and design packages, including publications and records management.

The products of completing the compliance process include:

- documentation of a "no action" decision, if appropriate
- prepared Assessment of Effect Form and completed package that demonstrates compliance with National Historic Preservation Act and National Environmental Protection Act, if appropriate
- completed American Indian consultation.

## **APPENDIX I: A MULTI-DISCIPLINARY TEAM APPROACH TO RUINS PRESERVATION**

The challenge of preserving ruins is complex. Each site, structure, and individual room is unique. Historic construction techniques and materials vary, site and geological conditions differ and each structure's exposure to weather is different. Resource Managers and preservation specialists are challenged with identifying and interpreting these combined effects in determining preservation actions.

The accurate identification of specific problems and the formulation of appropriate solutions is critical to the success of a project. Each resource should be examined individually in order to identify its unique properties, characteristics and preservation requirements. Once the specific requirements are determined, the appropriate disciplines can be identified.

Various types of structural deficiencies, such as wall movement, may require assistance from a number of trained professionals. Depending on the structure and its condition, a team might include archeologists, historical architects, structural engineers, ruins preservation specialists and/or appropriate contractors. Each specific problem should be looked at individually and the appropriate team of professionals selected to best address it.

### **LIST OF SPECIAL SERVICES**

A range of professionals, chosen for their skills to meet specific preservation needs, is the cornerstone of the "multi-disciplinary" approach to ruins preservation.

The following is a list of special services that resource managers should consider in a "multi-disciplinary" team approach to designing and implementing specific preservation actions:

- Documentation of previous interventions and existing structure conditions, including collection of existing documentation related to a site, evaluation and synthesis of previous work, and archeological documentation.
- Identification, assessment and analysis of conditions affecting the structure including ground water patterns and sources; rock types, characteristics and properties and load bearing ability; exposure to the elements and the resulting effects; and unique site features affecting the structure or site environment.
- Analysis of mortar, plaster, woods and paints, including overall condition and treatment methods; and material composition and recipe for reproduction.
- Analysis of structural stability, settlement, cracking and structural movement; sometimes requiring consultation with a structural engineer and structural calculations to assess actual conditions, which may address adequacy of supporting foundations and materials, connections between walls and supporting members, and previous treatments.
- Conducting vibration studies and analyzing data, when appropriate.
- Designing stabilization actions: developing and selecting alternatives and the appropriate intervention level.
- Design/Construction Documents/Construction Estimates (drawings & specifications)
- Compliance including NHPA 106/110 (assessing proposed treatments) and NAGPRA and American Indian consultation
- Construction Supervision

## LIST OF TECHNICAL SPECIALISTS

The following is a list of specialists and services they provide which might be required for a "multi-disciplinary" approach. Depending on the individual project requirements any of these specialists may be necessary:

- Cultural Resource Managers evaluate project requirements and identify multi-disciplinary team members through a working knowledge of park management documents and practices
- Preservation Specialists implement actions, with knowledge of resources, practices, techniques and materials, previous treatments, and hands on experience
- Archeologists assist in preparation of a Historic Structures Report, evaluate significance, write stabilization histories and compile architectural and condition assessment documentation, evaluate project requirements and identify multi-disciplinary team members
- Historical Architects analyze and evaluate existing site and structure conditions, assist with evaluation of project requirements and identify multi-disciplinary team members, assist in preparation of a Historic Structures Report, and provide design and technical assistance, assemble construction documents, and provide construction supervision, if applicable
- Structural Engineers/Civil Engineers, to analyze and evaluate structural conditions, develop preservation designs, provide construction supervision, if applicable, and provide technical assistance
- Historians/Archivists research site documentation, write stabilization histories, assist in preparation of Historic Structures Report
- Curators provide handling and transportation of objects, and cataloging of collections and records
- Material Conservators analyze and assess treatments for materials
- Geologists and Soils Scientists analyze mortars and stone, and investigate rock fall and roof fall hazards, analyze and evaluate geological circumstances and site conditions
- Hydrologists analyze water patterns
- Hazard/Safety Specialists can evaluate OSHA requirements, provide solutions for hazardous materials, and prepare a Health and Safety Plan.

Universities, Laboratories and Contractors can provide specialized services, equipment, and working knowledge and experience in various professional specialities, including: analyzing soils, mortars, plasters, wood, and paint, conduct materials conservation and structural analysis studies, radiocarbon and archeomagnetic dating, dendrochronology, and mapping.

## APPENDIX II: HISTORIC PRESERVATION POLICY, STANDARDS & GUIDELINES

General historic preservation actions within the National Park Service are supported by existing policy, standards and guidelines. These provide overarching instruction but in many ways do not specifically or directly address the resources involved in ruins preservation. The Vanishing Treasures resources are included under a combination of archeological, historic structure, and preservation policy statements, standards, and guidelines. The Cultural Resource Management Guideline includes guidance appropriate for management of these resources. It does not, however, provide specific procedures useful in developing and implementing a Vanishing Treasures project. That is the purpose of these ruins preservation guidelines.

The following section provides information about existing direction for treatment and related historic preservation activities.

### Policy

Policy originates in law, sets the framework and provides direction for management decisions. Direction may be general or specific and may prescribe the process by which decisions are made, how an action is to be accomplished, or the results to be achieved (National Park Service 1988). Cultural resource management policy is specified in Chapter 5 of the National Park Service's Management Policies (National Park Service 1988). This includes general discussion of treatment of archeological fabric, historic structures and ruins, and focuses upon the policy that these resources are to be preserved in a stable condition. The complete discussion for ruins is:

The stabilization of ruins will be preceded by studies to recover any data that would be affected by stabilization work. Ruins and related features on unexcavated archeological sites will be stabilized only to the extent necessary to preserve research values or to arrest structural deterioration. Archeological ruins to be exhibited will not be excavated until adequate provisions are made for data recovery and stabilization. Structures will not be deliberately reduced to ruins, nor will missing structures be reconstructed to simulate ruins (National Park Service 1988:5:8).

Within the Federal government, the authority for interpreting and implementing policy is delegated to appropriate levels. Within the National Park Service, Servicewide policy is articulated by the Director (Management Policies, 1988). Instructions, guidance, and directives of regional or limited application that are supplementary to and in conformance with applicable NPS policies may be issued by field directors or deputy directors. Park-Specific instructions, procedures, directives, and guidance supplementary to and in conformance with applicable NPS policies may be issued by superintendents.

### Standards

Standards define the quality expected to be achieved and maintained in both implementing policy and following appropriate guidelines. They are gauges of satisfactory accomplishment, guiding principles for archeological and historic preservation activities and methods (NPS-28:4).

Existing historic preservation standards and guidelines, Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines, are intended to provide technical advice about archeological historic preservation activities and methods (Federal Register 48 [190]:44716).

The purposes of the Standards are (Federal Register 48[190]:44716):

- To organize the information gathered about preservation activities
- To describe results to be achieved by Federal agencies, States, and others when planning for the identification, evaluation, registration and treatment of historic properties
- To integrate the diverse efforts of many entities performing historic preservation into a systematic effort to preserve our nation's cultural heritage.

There are a number of existing Standards, each with associated Guidelines, which cover aspects of historic preservation. Each of these documents, enumerated below, includes a number of distinct standards that may or may not be directly applicable to ruins and structure preservation. But they do support background resource identification, evaluation, and registration - all necessary prior to implementation of historic preservation treatment actions. These Standards can be found in Appendix C, Cultural Resource Management Guideline (Release 4) [National Park Service 1994].

A. Standards for Preservation Planning. Preservation Planning is a process that organizes preservation activities (identification, evaluation, registration and treatment) in a logical sequence. The Standards for Preservation Planning discuss the relationship among these activities.

**Applicability:** Standard II specifies that preservation planners use historic contexts to develop goals and priorities for resource treatment actions, which includes Vanishing Treasures resources.

B. Standards for Identification. Identification activities are undertaken to gather information about historic properties in an area. The scope of these activities will depend on existing knowledge, goals developed through the planning process, and current management needs.

**Applicability:** The three standards enumerated for Identification of historic properties begin to lay the foundation for documentation of Vanishing Treasure resources.

C. Standards for Evaluation. Evaluation is the process of determining whether identified resources meet defined criteria of significance that focus on values, rather than on treatments. These criteria are not only those defined for listing a property in the National Register of Historic Places, but can be criteria established for different management purposes.

**Applicability:** Standard III within the Standards for Evaluation notes that evaluation results in a list or inventory of significant properties that is used in assigning treatment priorities.

D. Standards for Registration. Registration is the formal recognition of properties evaluated as significant.

**Applicability:** Standard II within the Standards for Registration notes that registration information justifies the significance and physical integrity of an Historic Property, which is important for Vanishing Treasures resources.

E. Standards for Historical Documentation. These standards describe specific historical techniques for treating properties and documenting or preserving information about their historical values.

**Applicability:** Several standards describe historical documentation as a data gathering technique to provide information, in a structured format, about a resources; or as a treatment that can be applied in several ways - it may be applied in conjunction with other treatment activities or as a final treatment to preserve information.

F. Standards for Architectural and Engineering Documentation. These standards concern the development of documentation, which usually consists of measured drawings, photographs and written data. They provide information on a property's significance for use in preserving that property. Documentation enables accurate repair or preservation of a resource or preserves information as a final treatment. These standards also specifically relate to the Historic American Building survey (HABS) and the Historic American Engineering Record (HAER) programs.

**Applicability:** These standards are directly applicable to preservation of Vanishing Treasures resources. They should be applied to the Vanishing Treasures program.

G. Standards for Archeological Documentation. Archeological documentation may occur at any or all levels of planning, identification, evaluation or treatment with the nature and extent of documentation being determined by each specific set of circumstances. Documentation may be undertaken as an aid to preservation treatment activities, including research, interpretation, and data recovery.

**Applicability:** These standards are directly applicable to preservation of Vanishing Treasures resources. This outline for Ruins Preservation Guidelines is developed as a strategy to amend the Cultural Resource Management Guidelines (NPS-28), and to define fundamental standards of ruins preservation documentation and treatment. Archeological documentation must occur at all levels of planning, evaluation and treatment of Vanishing Treasures resources.

H. Standards for Treatment of Historic Properties. These standards can be applied to a wide variety of resource types, including buildings, sites, ruins, structures, objects, and districts. They address the four distinct approaches to the treatment of historic properties - preservation, rehabilitation, restoration and reconstruction.

**Applicability:** Preservation treatment standards are applicable to Vanishing Treasures resources and focus on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. These standards describe preservation as the act or process of applying measures to sustain the existing form, integrity, and materials of an historic property. This outline for Vanishing Treasures Ruins Preservation Guidelines are intended to establish fundamental standards for ruins preservation.

## **Guidelines**

Guidelines are management tools. They are instructions or determining procedures for implementing policy and/or insuring that policy requirements and standards are met. General procedures for implementing servicewide cultural resources management policy are described

in the NPS guideline series - Cultural Resource Management Guideline (NPS-28, Release 4, 1994). NPS-28 elaborates on the National Park Service Management Policies and standards and offers guidance in applying them to park cultural resources. These guidelines also are in conformance with the more general guidelines contained in Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. While the servicewide guidelines generally allow for management discretion, they are mandatory where the language so indicates (National Park Service, 1988).

Chapter 6, Management of Archeological Resources (p. 71), and Chapter 8, Management of Historic and Prehistoric Structures (p. 119) in Cultural Resource Management Guideline (NPS-28, Release 4, 1994) provide guidance for treating Vanishing Treasure resources. Both chapters contain Stewardship sections that cover resource Treatment and Use and specify activities that fall under Preservation, such as stabilization, housekeeping, routine maintenance, and cyclic maintenance.

## REFERENCES

- National Park Service  
1983 Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. Federal Register, 48[190]:44716-44742.
- 1988 Management Policies. National Park Service, U.S. Department of the Interior.
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