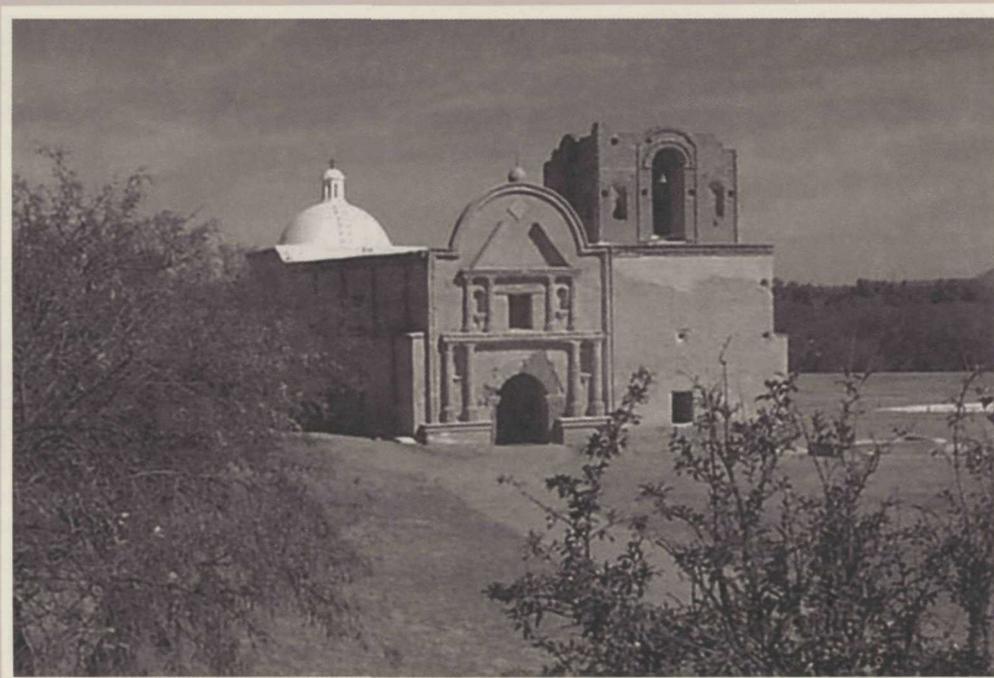


***VANISHING TREASURES: A
LEGACY IN RUINS
Ruins Preservation in the American
Southwest***

***YEAR END REPORT
FISCAL YEAR 1998***

December 1998



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

FORWARD

The following four reports provide a summary of the activities of the Vanishing Treasures Program in Fiscal Year 1998. The reports are:

1. The Management Summary which provides a brief overview of the Vanishing Treasures Program;
2. The Year End Report which provides an accounting of the fiscal expenditures of the Vanishing Treasures Program, updates on the FY 99 budget, future projections, and an update on the activities of our Work Groups;
3. The Personnel Report which provides information on the individuals that were hired in FY 98 utilizing Vanishing Treasures funds; and
4. The Project Completion Report which provides a summary of the Projects that were implemented and some of the accomplishments.

It is our hope that you will spend some time in reviewing these documents. We feel that they are an important set of reports, for they clearly show what we feel must be done to insure continued support for the Program so that we can continue to effectively deal with the "*crisis of care*" over the next decade.

Many individuals, including Park, Central Office and Washington Office staff, have worked together over the last few years to insure the success of the Program. Indeed, while there has been no single magic, our success to date has been built from the grassroots up and is the result of hard work and patient. Clearly, the strong support, input, and direction received over the last few years from the Director of the National Park Service, Robert G. Stanton, Deputy Directors Denis Galvin and Jackie Lowey, Associate Director for Stewardship and Partnerships, Kate Stevenson and her respective staff, and the Director of the Intermountain Region, John E. Cook and his respective staff, has contributed to this success. The parks benefiting from both the personnel and project funding also deserve a strong measure of credit, particularly for their willingness to show a high level of commitment to the ideals and sense of accountability that is so critical to the success of the Vanishing Treasures Program. Lastly, the interest and understanding expressed by all of the staff of the Congressional delegations represented by the 40 plus Vanishing Treasures parks, shows a remarkable awareness of the seriousness of the situation, and a willingness to find solutions, when clearly the needs of equally important and competing interests must be taken into consideration.

If you have questions or comments regarding our Year End Reports, please do not hesitate to contact me. For more information regarding the Vanishing Treasures Program, contact Todd R. Metzger, Chief, Division of Resources Management, National Park Service, Flagstaff Area National Monuments, 6400 N. Highway 89, Flagstaff, Arizona, 86004, 520-526-1157, ext. 222, email Todd_Metzger@nps.gov. Todd serves as the Coordinator for the Vanishing Treasures Program.

Glenn Fulfer, Chair
Vanishing Treasures Program
Salinas Pueblo Missions National Monument

Vanishing Treasures FY 1998 - Management Summary December 1998

Background to the Program

In 1993, the National Park Service identified and began acting upon a critical weakness that has become known as the Vanishing Treasures Initiative. After 20 years of inadequate funding, backlogged treatment needs, and a lack of information on condition, thousands of prehistoric and historic ruins at 40 plus National Park Service units in the arid west are threatened with severe deterioration and collapse. These architectural resources, some of which are World Heritage sites, are important to our national heritage, and hold significant meaning for a number of traditional communities as well. In addition, only a few highly skilled preservation craftspeople are employed in the National Park Service today, and many of these are retiring after 30 plus years in the service. The lack of funding has prevented their specialized knowledge from being passed on to a new generation of craftspeople.

Launching the Program

Vanishing Treasures is a grass-roots program designed to address both the devastating destruction of these irreplaceable historic and prehistoric structures as well as the impending loss of preservation expertise. The Vanishing Treasures Program got off the ground when a handful of park managers began comparing notes on the condition of their prehistoric and historic architecture. The consensus was very clear: unique and perishable

“ruins” important to our national heritage were rapidly deteriorating to a point where there was a “*crisis of care.*” Serious concern was expressed over the continued failure to prevent or even deter increasing destruction and loss of irreplaceable resources. This concern resulted in the production of the 1993 video, “*Vanishing Treasures: A Legacy in Ruins,*” by resource

Vanishing Treasures: A Legacy in Ruins

"Buildings made of the stuff of earth itself...as old as time and human labor, the containers of the experience of community, ours in trust..

Now there is an undeniable crisis of care. And we need your help."

Former National Park Service Director Roger Kennedy

managers from Salinas Pueblo Missions National Monument, Chaco Culture National Historic Park, and Aztec Ruins National Monument. The video prompted the development of the *Vanishing Treasures Strategic Plan* in 1995. The plan was put together by the same park resource managers and other interested resources managers from other Vanishing Treasures parks. It was developed in cooperation and with the full support of resource management professionals from the

Intermountain Region's Southwest and Colorado Plateau System Support Offices. Finally, the *Vanishing Treasures Long-Range Plan* was developed this year by the recently formed Vanishing Treasures Advisory Group and Leadership Committee with the expressed intent of presenting the National Park Service's strategy for dealing with this “*crisis of care*” over the next decade.

The Program has received strong support, input, and direction over the last few years from the Director of the National Park Service, Robert G. Stanton, Deputy Directors Denis Galvin and Jackie Lowey, Associate Director for Stewardship and Partnerships, Kate Stevenson

and her respective staff, and the Director of the Intermountain Region, John E. Cook and his respective staff.

Laying the Foundation for the Next 10-15 Years

Three primary thrusts define the Vanishing Treasures Program. First, the program seeks to eliminate resource loss by addressing emergency project needs where structures are in immediate, imminent danger from natural erosive factors or the cumulative pressures of visitation. Secondly, the Program focuses on replacement of an aging workforce that often has unique craft skills that will be lost without the addition of new, younger workers who have the opportunity to work with these aging mentors prior to their retirement. Third, throughout its lifespan, the Program strives to move from a posture of dealing with emergency projects and urgent personnel loss to a proactive preservation program. Structures would be evaluated, ranked, and the best preservation options selected. Skilled craftspeople and other professionals would have career status with benefits and career development options analogous to other segments of the Federal workforce in order to ensure work continuity in the area.

To achieve the long-range goals of the Program, four action items were identified: 1) develop a comprehensive computerized data management system, 2) enact a career development and training program, 3) establish adequate funding levels to achieve specific goals, and 4) establish clear guidelines for planning and accomplishing preservation actions.

Of course, none of these actions can be accomplished without money. The funding needs are two-fold: 1) funding for emergency preservation treatment projects, and 2) adequate funds to train and develop a preservation workforce. It is estimated that approximately \$67 million is required to address all of the needs of

the Vanishing Treasures Program. Of that total, approximately \$59 million is needed to address the emergency preservation needs. The remaining \$8 million is needed for developing the preservation workforce.

Estimates from the parks themselves indicate that the Vanishing Treasures personnel and related workload deficits could be eradicated if approximately 25-30 temporary and/or seasonal positions are maintained in a number of parks and approximately 65-70 technical craftspeople and 50-60 archeologists or other specialists are recruited using the intake program over the next decade. In the long run, the boundaries between these two aforementioned groups would become less pronounced, resulting in a new kind of employee: the preservation specialist. These employees will augment the existing workforce, although it should be remembered that many of the most skilled and experienced workers will be retiring before the next decade is completed.

Spread over 10-15 years, this roughly calculates out to approximately \$1 to \$1.5 million and 3-4 new staff for each of the known and potential Vanishing Treasures park units. Of course, the actual funding amount and the number of personnel that each park would need is dependent upon the size, number, and complexity of the Vanishing Treasures resources within each park.

In Fiscal Year 1998, the first fully funded year of the Program, \$1 million was appropriated. This included \$497,000 to address emergency preservation projects, \$493,000 to recruit and train craftspeople, and \$10,000 for management of the Program. Increases will be sought in subsequent years in an effort to satisfy the objectives of the Program's long-range goals in the next 10-15 years.

Management and Administration of the Program

Vanishing Treasures is comprised of four integrated components. Each component has specific role and functions as designed by the *Vanishing Treasures Strategic Plan* and more detailed workgroup statements, as summarized below. Fundamentally, the management team is responsible for guiding the direction of the Program, identifying fiscal and professional resources, setting priorities for project development, and communicating the results and achievements of the program to a wide and varied audience. Workgroups are brought together to address specific programmatic functions as outlined below.

Management Team

Leadership Committee

This committee is composed of seven individuals – Chairman (superintendent representing a VT park), Executive Officer (represents the Regional Directorate), and five additional members (superintendents representing VT parks). The Committee is responsible for definition of policy and articulation with park managers, as well as regional directorate.

Advisory Group

Originating from the four work groups of technical specialists, the Advisory Group is composed of seven individuals representing Vanishing Treasures parks. The Group serves in an advisory capacity to the Leadership Committee and is charged with the responsibility of ensuring program consistency, the existence of parity and representation among parks, high quality craftsmanship and professional competency, and program progress and accountability

Program Agent/Coordinator

This position provides overall program coordination and day to day management of the Vanishing Treasures program. The Program agent reports directly to the Chairman of the Leadership Committee and works in conjunction with the Advisory Group.

Work Groups

In order to achieve the goals of the Program as described above, four Work Groups were developed: Data Base Management, Career Development, Funding, and Program, Definitions and Guideline Development.

Data Base Work Group

This work group has four targeted goals: 1) develop a standardized system to measure inventory and condition assessment, accomplishment, materials and labor costs, and deferred workload, 2) develop an electronic method for submission of the resource data gathered in goal one and work toward interfacing related software systems, and interface related databases to provide more efficient utilization and improved data tracking, 3) develop a system to prioritize funding requests, 4) coordinate and/or develop a management system to aid in planning work and tracking accomplishments.

Career Development Work Group

This work group is charged with the responsibility of formulating a plan that will result in the augmentation and replacement of an aging workforce before those employees retire and the decades of experience that they have gained is lost. A subsidiary issue is the incorporation of a new package of skills into that workforce, such that new employees would learn from experienced workers and be introduced to advances in site preservation, especially in the area of documentation. Ultimately, the ideal worker will in many cases have hybrid abilities that link masonry repair with technical

documentation skills.

Funding Work Group

The purpose of this work group is to seek the appropriate avenues for providing adequate and consistent funding to insure the long-term success of the Program. This includes 1) identifying park base funding increase needs and determining the most appropriate method for communicating and presenting those needs, and 2) seeking a cultural resources funding source specifically dedicated to carrying out ruins preservation research and treatment projects.

This work group also has the responsibility for seeking active support and involvement of diverse partners: academia; other State, Federal, and Tribal agencies; preservation centers; national organizations (e.g. NPCA and National Trust for Historic Preservation); adjacent communities; friends groups; and private individuals). Incorporating partners at all stages of preservation planning, treatment, and monitoring will help accomplish the short and long-term objectives of the Program.

Guidelines and Definition Work Group

This work group was established to develop an understandable definition of ruins preservation, the ruins preservation process and the types of resources that would be affected or included in the Vanishing Treasures Program. This Work Group was also charged with the responsibility of developing guidelines to provide consistency in strategy and technical application in the ruins preservation process and provide the framework for development of a ruins preservation program.

Summary

Vanishing Treasures is an initiative designed to address the ongoing loss of architectural resources in the arid west. Currently, over 40 National Park Service units have identifiable Vanishing Treasures resources that range from a handful of structures to many multi-room pueblos. The common thread among each unit is the ongoing degradation of their architectural resources, the continuing and ever-increasing backlog of work required to bring the condition of these resources up to a stable and maintainable level, and a lack of or decline in the availability of qualified expertise to address current and future needs.

At this time, most parks are doing only emergency work to protect deteriorated infrastructures and dangerous conditions. The longer this work is put off, the more expensive the final costs are going to be.

Vanishing Treasures is intended to be programmatic in nature and adequate funding will allow resource personnel to meet the goals outlined in the Secretary of Interiors Standards and the National Park Service Strategic Plan. It will provide for the correction of the

current backlog of preservation needs as well as correct personnel inequities and loss of preservation skills. It will allow the development of a preservation program that is self-sustaining in that it meets National Park Service goals of ruins preservation and provides a means of fulfilling our legislative mandate to preserve and protect NPS resources. Finally, the Vanishing Treasures Program will provide for a proactive approach to ruins preservation that will cost less in the long run because maintaining a structure in good condition is cheaper than emergency stabilization of a degraded resource.

“A Ruins Preservations 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 meaning that these places hold for this and future generations.”

*- Glenn Fulfer, Superintendent,
Salinas Pueblo Missions
National Monument*

A Definition of Vanishing Treasures Resources

Vanishing Treasures Resources are defined as a structure or grouping of related structures that:

- Are in a "ruined" state.
- Have exposed intact fabric (earthen, stone, wood, etc.).
- Are not being used for their original function.
- Occupation and utilization have been interrupted or discontinued for an extended period of time.
- Are located in the arid west.
- Are the resources or part of the resources for which the park was created, or, National Historic Landmark, listed on, or eligible for listing on the National Register of Historic Places.

Examples of Vanishing Treasures Resources:

- Architectural remains that have intact historic fabric exposed at or above grade, including: wall alignments, upright slabs, foundations, bins, cists, constructed hearths.
- Sub-grade architecture exposed through excavation or erosion (i.e., pithouses, dugouts, cists, etc.).
- Native American architectural structures (i.e., pueblos, cliff dwellings, hogans, wickiups, ramadas, corrals, earthen architecture, etc.).
- EuroAmerican architectural structures (i.e., churches, convents, forts, ranch-farm structures/homesteads, mine buildings, acequias or related features, kilns, etc.).

Examples of Non-Vanishing Treasures Resources:

- Sites with no exposed architecture or structural remains, (i.e., collapsed, buried, mounded, or otherwise not evident).
- Archaeological or other sites with no architectural remains (i.e., lithic scatters, dumps, campsites, etc).
- Civilian Conservation Corp (CCC) and Civil Works Administration (CWA) buildings and features.
- Historic structures which are regularly maintained, and/or adaptively used, and fit within the Historic Structures/List of Classified Structures (LCS) definitions.
- Structures in use as National Park Service facilities (i.e., administrative buildings, trails, bridges, ditches, canals, etc).
- Mine shafts, caves, which do not have architectural/structural features.
- Pictographs, petroglyphs, rock art, etc., except if found in or on architectural structures.
- National Park Service or other reconstructed buildings or ruins (i.e., Aztec Great Kiva, Bents Old Fort).

Note: It is acknowledged that often times the traditionally associated communities to whom many of the involved Vanishing Treasures resources/archeological sites hold importance, do not consider them to be unoccupied, out of use, or abandoned. "Ruins" are considered by some groups to be spiritually inhabited and are considered to be "in use" by virtue of being invoked in prayers, songs, stories, etc. They are considered dynamic parts of active cultural systems. While we use the term "ruins" and the associated definition, it is recognize that some communities do not use the term "ruin" nor consider the places to be unoccupied or out of use.

Vanishing Treasures Personnel

Leadership Committee

Glenn Fulfer, Superintendent, Salinas Pueblo Missions National Monument – Chair
Jerry Rogers, Superintendent, Intermountain Support Office, Santa Fe – Executive Officer
Barry Cooper, Superintendent, Aztec Ruins National Monument
Sam Henderson, Superintendent, Flagstaff Area National Monuments
Roy Weaver, Superintendent, Bandelier, National Monument
Larry Wiese, Superintendent, Mesa Verde National Park
Butch Wilson, Superintendent, Chaco Cultural National Historic Park

Advisory Group

Todd R. Metzger, Chief, Division of Resources Management, Flagstaff Area National Monuments – Program Agent
Dabney Ford, Chief, Division of Resources Management, Chaco Culture National Historic Park
Mike Schneegas, Facility Manager, Salinas Pueblo Missions National Monument
Larry Nordby, Archeologist, Mesa Verde National Park
Jim Rancier, Archeologist, Lake Meredith National Recreational Area
Judy Reed, Chief, Division of Cultural Resources Management, Pecos National Historical Park
David Yubeta, Exhibit Specialist, Tumacacori National Historical Park
Chris Goetz, Archeologist, Glen Canyon National Recreation Area
Jill Edlund, Budget Analyst, Flagstaff Area National Monuments - Program Budget Analyst

Data Base Work Group

Mike Schneegas, Facility Manager, Salinas Pueblo Missions National Monument – Work Group Leader
Dabney Ford, Chief, Division of Resources Management, Chaco Culture National Historic Park
Sue Eininger, Archeologist, Intermountain Support Office, Santa Fe
Jim Rancier, Archeologist, Lake Meredith National Recreational Area
Al Remley, Archeologist, Flagstaff Area National Monuments
Elizabeth Mozillo, Archeologist, Bandelier, National Monument
Roy Weaver, Superintendent, Bandelier, National Monument
Bob Hartzler, Exhibit Specialist, Fort Union National Monument
Helen Fairley, Archeologist, Flagstaff Area National Monuments

Career Development Work Group

Larry Nordby, Archeologist, Mesa Verde National Park – Work Group Leader
John Crowley, Assistant Regional Director, Human Resources, Intermountain Region
Kaisa Barthuli, Archeologist, Intermountain Support Office, Santa Fe
Steve Gastellum, Facility Manager, Tumacacori National Historical Park
Chris Goetz, Archeologist, Glen Canyon National Recreation Area
Charles Masten, Facility Manager, Bents Old Fort National Historic Site
Nancy Stone, Superintendent, Hubbell Trading Post National Monument
Roger Waters, Administrative Officer, Carlsbad Caverns National Park

Funding Work Group

Dabney Ford, Chief, Division of Resources Management, Chaco Culture National Historic Park – Work Group Leader
Sue Eininger, Archeologist, Intermountain Support Office, Santa Fe
Elizabeth Mozillo, Archeologist, Bandelier, National Monument
Judy Reed, Chief, Division of Resources Management, Pecos National Historical Park
Kathy Fiero, Archeologist, Mesa Verde National Park
Jack Burns, Archeologist, Zion National Park
Regina Heiner, Facility Manager, Fort Davis National Historic Site

Guidelines and Definitions Work Group

Todd R. Metzger, Chief, Division of Resources Management, Flagstaff Area National Monuments – Work Group Leader
Adrienne Anderson, Archeologist, Intermountain Support Office, Santa Fe
Glen Henderson, Superintendent, Tuzigoot and Montezuma Castle National Monuments
Sayre Hutchison, Historical Architect, Intermountain Support Office, Santa Fe
Larry Nordby, Archeologist, Mesa Verde National Park
Scott Travis, Archeologist, Southern Arizona Group Office
David Yubeta, Exhibit Specialist, Tumacacori National Historical Park

Note: All or most of the effort devoted to the Vanishing Treasures Program is done by a number of individuals as a secondary or collateral duty. The Program Agent is the only exception and dedicates approximately 70% of his time to the Program.

Vanishing Treasures FY 1998 - Year End Report December 1998

Introduction

This document provides a report on the fiscal expenditures of the Vanishing Treasures Program in FY 1998. Specific project accomplishments, an accounting of project funding expenditures, and information regarding the personnel that were hired in FY 1998 are provided in the accompanying reports. This document also provides information regarding the proposed use of funds in FY 1999 and the requests that have recently been submitted for the FY 2000 budget.

FY 1998 Budget

The FY 1998 "appropriation" for the Vanishing Treasures Program provided \$1.0 million. Of that total, \$453,00 went to eight parks as base increases to hire eleven permanent individuals. Of the remaining "enacted" budget of \$547,000, \$40,000 was devoted to training expenses, \$10,000 for program management, and \$497,000 was used to address emergency preservation projects. Table 1 provides a detailed breakdown on the utilization of FY 1998 program funds.

FY 1999 Budget

The FY 1999 budget requested the enacted amount authorized for the Vanishing Treasures Program in FY 1998 (\$547,000). Of that amount, \$500,000 will be used to conduct emergency projects, \$37,000 to further recruit and train additional craft and preservation specialists, and \$10,000 for program oversight and accountability of fund use and expenditure.

An amendment to the FY 1999 budget by Congress provided an additional \$750,000 to the Vanishing Treasures Program. Of that amount, approximately \$124,400 will be used to conduct additional preservation projects. An estimated \$548,000 will be used to continue the hiring of personnel. Roughly, \$40,000 will be used to continue the training of the eleven permanent individuals hired in FY 1998. The remaining \$37,600 will be used for the development of effective program management.

To summarize, the FY 1999 "appropriated" budget of \$1,297,000 will be utilized as follows:

- \$40,000 will be used to continue the training of the eleven permanent individuals hired in FY 1998. These funds will be transferred to the benefiting parks as base increases.
- \$585,000 will be used to continue the recruitment and training component of the program (10 individuals). These funds will be transferred to the benefiting parks as base increases.
- \$624,400 will be used to conduct 9 preservation projects.
- The remaining \$47,600 will be used for program oversight and management.

More specific information regarding the distribution of funds in FY 1999 can be found in Table 2.

As a result of these actions, the enacted budget for the Vanishing Treasures Program in FY 1999 is \$672,000.

FY 2000 Budget Request

The FY 2000 budget proposal has requested an increase of approximately \$1.0 million over the FY 1999 enacted budget of \$672,000. If approved, this would bring the FY 2000 budget to over \$1.6 million.

Of that amount, approximately \$800,000 would be used to continue the recruitment and training component of the program [these costs will be identified as being transferred to the benefiting duty organization and as park base increases]. An estimated \$800,000 would be used to conduct preservation projects and for program oversight and management. This would increase the amount of funding available for projects by at least \$170,000 to \$180,000.

Table 3 identifies the parks that are targeted to receive base increases for personnel if we receive the increase in funding that has been requested. The project prioritization process for FY 2000 has yet to take place. Consequently, there is currently no active list of projects.

Projections for FY 2001 and Beyond

It can unequivocally be stated that significant progress has been made in getting the Vanishing Treasures Program up and running. To recapitulate, in FY 1998, \$453,000 was used to hire 11 individuals in 8 parks, and \$497,000 was devoted to completing 6 projects. In FY 1999, approximately \$585,000 is being devoted to hiring 10 individuals in 8 parks, and \$624,400 to complete 9 projects. In FY 2000, we hope to increase the Vanishing Treasures budget by at least \$1.0 million. If we are successful, this means that approximately \$800,000 will be devoted to hiring 13 individuals in 13 parks, and \$800,000 will be devote to completing projects. Notwithstanding, we are still significantly far below the estimates provided in the Long-Range Plan. According to the Plan, for the Vanishing

Treasures Program to achieve its goals in the next 10 to 15 years, approximately \$4.5 million is needed to address project needs and approximately \$1.0 million is needed to recruit and train 16 new staff, on a yearly basis. We will endeavor in the next few years to make the requests to increase the amount of funding to a level consistent with the needs, as they have been identified in the Long-Range Plan. It does, however, need to be recognized that the duration of the program is dependent upon the level of funding authorized by Congress each year. Operating at a reduced funding level, as we have in the last few years, will necessitate adding additional years to the duration of the Program.

With the recent request for input on the FY 2000 budget, we will be fairly close to the end of the existing personnel hiring priority list. The list was developed in March 1997 and was based on a call issued to all Vanishing Treasures parks on February 14, 1997 seeking proposals for participation in the Vanishing Treasures Intake and Conversion Program. It was only intended to address the hiring needs of the Vanishing Treasures parks for the first two years of the Initiative. But, due to funding short falls, the list will have an active life through FY 2001. All positions submitted by Vanishing Treasures parks were considered and made part of the personnel priority list that is being used today. Conversion positions were prioritized based on length of time the position had been established and functioned as a ruins preservation position. The Intake positions were prioritized based on the perceived Vanishing Treasures needs (nature and extent of Vanishing Treasures resources), and current staffing available to address the needs. The resultant priority list was distributed to all Vanishing Treasures parks in October 1997.

Since we are nearing the end of the initial list, and in order for us to be responsive to future budget requests, we will be issuing a new call in the next couple of months. Unlike the questionnaire that was used for the first call, we

will be requesting the submission of proposals/justifications based on established criteria. The request will focus on the needs of a park for the next 2-3 years to insure that what is being requested is the most current and up to date.

Brief Update on Other Vanishing Treasure Activities

The following provides a brief update on a number of activities and accomplishments completed in FY 1998 by the Vanishing Treasures Leadership Committee and the Advisory- and Work Groups. Please remember that all or most of the effort devoted to the Vanishing Treasures Program is done by a number of individuals as a secondary or collateral duty. The Program Agent is the only exception and dedicates approximately 70% of his time to the Program. Specific information regarding the management and administration of the Program can be found in Vanishing Treasures Long Range Plan (March 1998) and the accompanying Management Summary (1998).

Database Management Work Group

In September 1997, the database workgroup along with several other participants worked out the outline for the Vanishing Treasures database that replaced the original database worksheets used for the initial database call in 1996. The database included fields that identified and defined Vanishing Treasures classifications of Vanishing Treasures resources (i.e. Native American 1-10 rooms, Native American 11-100 rooms, Mission, Fort, etc.). In addition it was felt that other types of information were necessary which included predominate material type, overall condition, overall impact severity, square feet of vertical, floor, and ceiling area, and linear feet.

Beyond this initial inventory for Vanishing Treasures resources, information was collected

that identified and ranked the predominate impacts to the resource, and identified which forms of treatments were either needed, completed, or in progress on the resource.

Finally, at the September meeting, Valetta Canouts, Deputy Chief of the Archeology Program at WASO, agreed to incorporate the Vanishing Treasures database with and develop a new release of the Access version of ASMIS (Archeological Sites Management Information System), the nationwide database tracking program for all archeological resources in the National Park Service. In addition to the Vanishing Treasures database, ASMIS would be combined with the LCS (List of Classified Structures) database and the NRIS (National Register Information System) database to form one overall database management system for cultural resources in the National Park Service.

In February 1998, the database workgroup met to finalize the database developed from the September meeting (version 2) for inclusion with the pending ASMIS/LCS/NRIS database development. A one-page form was finalized as a result of this effort and sent to WASO for comment.

In April 1998, the database workgroup met with Valetta Canouts and Larry Karr, overall computer programmer for the ASMIS/LCS/NRIS effort, in Albuquerque to get a first hand glimpse as to how these databases would interface and where the Vanishing Treasures database would be integrated. Several issues were resolved regarding data sharing, data mapping, and report formatting. These changes were integrated with the first beta release of ASMIS in the summer of 1998. Finally, as a result of consulting with the WASO folks, the database workgroup further refined the database (now called version 3) and a manual was developed for its use. This information was forwarded to Washington for comment and assistance in program development.

In May 1998, Al Remley, Flagstaff Areas Archeologist and Vanishing Treasures Work Group member, reviewed the beta release of ASMIS for Access for the WASO region and provided comments on programming, form layout, and how well the Vanishing Treasures database interacted with the ASMIS, LCS, and NRIS. Comments were reviewed for inclusion into an additional beta release at the end of the summer.

In September 1998, another beta release of ASMIS (now called ASMIS 2.) was reviewed by Al Remley and provided additional comments to the continuing development of ASMIS 2.0. In addition, more database reports were developed specifically for the Vanishing Treasures database and incorporated into the program.

In October 1998, database workgroup members from Flagstaff Area National Monuments, Salinas Pueblo Missions National Monument, Chaco Cultural National Historical Park, and Bandelier National Monument met with Valetta Canounts, Larry Karr, and Terry Childs from WASO for one-to-one training in using ASMIS 2.0 and the incorporated Vanishing Treasures database. One and a half days were spent on hands on training with the new program. All ASMIS records that WASO had for these parks' archeological resources were incorporated into ASMIS 2.0 and were used as examples in learning how to operate the new software. In general, the database workgroup was impressed with the development of ASMIS 2.0 and how Vanishing Treasures was integrated with it.

Also in October, data element definitions were written for the Vanishing Treasures database for incorporation into the ASMIS data definition manual originally compiled in 1995. This provides the continuity and information for end users of ASMIS 2.0 to custom design program layout and reporting for those parks that wish to do so.

In summary, the database workgroup worked extremely hard to finalize the database design that captures information necessary to track program elements of the Vanishing Treasures Program. We successfully integrated our efforts, along with the WASO office, to meet another goal of the workgroup in providing an overall resource management database that a park can use to track critical cultural resources. Also for the first time, all National Park Service Units have one database system that tracks all archeological resources, LCS resources, and National Register resources in one system. It should be recognized that the current release of the updated ASMIS database was sparked by the Vanishing Treasures Program. In effect our efforts have led to increase data efficiency regarding cultural resource tracking for all National Park Service units, not just Vanishing Treasures parks.

Career Development Work Group

The efforts of this work group have been focused on the following:

1. Classification of specific Vanishing Treasures position descriptions by John Crowley, Assistant Regional Director, Human Resources, Intermountain Region. The series that were classified included the following: Archeologist, Exhibit Specialist, Maintenance Mechanic, and a Multi Series. The classified position descriptions were distributed to all of the Personnel Officers, Personnelists, and Administrative Officers in the Region twice in FY 1998.
2. Development of draft criteria that will be used to establish the priority for selecting the personnel to be hired.
3. Development of draft role and function statements for the Vanishing Treasures Advisory Committee and Work groups.

4. Coordination with a number of parks in the selection and hiring of new Vanishing Treasures personnel.

The following briefing statement was also prepared by this Work Group addressing the proposed training program for the Program.

The Vanishing Treasures Initiative has identified the need to augment and transform the workforce associated with the site preservation program. This goal will be accomplished using position *conversions* from less-than-permanent to permanent career status, as well as development of an *intake program* that will target individuals with raw capabilities to make a contribution in the area of site repairs and documentation. Since part of this program includes an improved standards/guidelines package for making the repairs in an effort to do a better job, a true training program will be necessary. This training program will have three thrusts:

1. On-the-job **apprenticeship training** and mentoring that link promising individuals with existing staff having recognized advanced skills;
2. Appropriate levels of **academic course work** that connect universities with NPS staff ; and
3. More formal **workshops** that develop the skills needed for emergency repairs and documentation.

These three strategies are combined in order to develop a highly qualified staff consisting of both preservation craftspersons- technicians and related documentation specialists. Since these two sets of individuals come from different backgrounds, training integration will be needed at a basic level to ensure a common understanding of program goals and objectives, as well as a working knowledge of baseline techniques. For example, selected academically qualified specialists must be involved with on-

the-job apprenticeship training, and selected technicians will be added to academic courses when appropriate. Each component of the workforce will attend the workshops.

On-the-Job Apprenticeship: This type of training is designed primarily for new Wage Grade technicians who are expected to focus on making repairs, but will also supply cross-over training for new and existing GS employees such as archeologists, architects, or engineers. Work will be carried out at those Vanishing Treasures parks with appropriate mentors and a workforce of enough size to supply logistical support. Preliminary assessments indicate that 20% of the Vanishing Treasures parks are so equipped and staffed. A long-range goal is the inclusion into this apprenticeship program of all GS employees who carry out repair and documentation work, but the initial focus is likely to be WG technicians.

Academic Course Work: This type of training is designed to reach talented and interested advanced students in those fields traditionally linked with preservation work, i.e. archeology and architecture. Unfortunately, very few institutions have in the past offered the applicable background dealing with Vanishing Treasures resources, even though they may have educated specialists in these fields. Northern Arizona University (Flagstaff, Arizona) is an exception, and prototype courses that articulate NPS staff members with their faculty have already occurred; NAU has committed to continued involvement. Future strategies include the use of qualified NPS staff, working within this academic framework. A long range goal would be the participation of all Vanishing Treasures staff in academic training, but it is likely that this will occur only when some of the elderly technical workforce retires, and is likely to be phased over the next decade.

Workshops: Workshops are the primary link between wage grade and general service workforces. Over the past 20 years, these have been carried out sporadically by individual NPS

staff workers, generally archeologists. Training at workshops has involved masonry repair techniques, assessing damage, wood preservation, controlling water movement, photography, and other documentation and recording techniques. These workshops are thus a hybrid between classroom and technical applications sessions, and were generally attended by both kinds of workers. Other agencies also sent attendees. As the last two decades have progressed, the original attendees have retired, instructors have moved into other areas and management positions, or funds have not been available to conduct the workshops. The workshop template, as used in the past, would be both resurrected and updated to include better technology such as computers, digital cameras, and potentially more durable mortar additives.

The ultimate goal of the conversion and intake program is to develop a cadre of ruins preservation specialists that are diversified, multi-skilled and can perform a variety of tasks. Through time this program will serve to graduate incumbents into a GS series Ruins Preservation Specialist, which combines these necessary professional elements into a professional specialty.

Funding Work Group

The efforts of this work group have been focused on the following:

- Development of the Vanishing Treasures Long-Range Plan distributed in March 1998.
- Coordination and production of a number of short articles for the "Common Ground" publication that were published in the summer of 1998.
- Development of SEPAS criteria for the FY 2000 project call.

- Production of this document and the accompanying personnel and project reports.
- Development of a Webpage for the Program. The Webpage should be up and running by the end of the calendar year. Notification of the Webpage address will occur as soon as things are up and running.
- Development of a Management Summary and Year-End report including the FY 1998 Personnel and Completion reports. Both hard- and electronic copies of these documents will be made available. The reports will also be posted on the Vanishing Treasures Webpage.

Probably the most significant achievement of this work group were the efforts devoted towards seeking a cultural resources funding source specifically dedicated to carrying out ruins preservation research and treatment projects, and developing that part of the program that is intended to replace the diminishing cadre of ruins preservation skills and expertise. Clearly, these efforts have raised the level of awareness of the Vanishing Treasures Program, and have worked to put into place the appropriate mechanisms to insure consistent and increasing levels of funding over the next 10-15 years.

Guidelines and Definition

To date, this Work Group has produced a preliminary draft of definitions and guidelines for developing and implementing a ruins preservation program for the National Park Service. A final draft document is currently in preparation and will be distributed within the next several months for internal NPS review. It is expected that partner and stakeholder review will occur during the summer of 1999. If this time-line can be maintained, it is expected that a final document will be available by the end of the Fiscal Year.

A copy of the draft document will be posted on the Vanishing Treasures Webpage.

The final task of this work group will be to develop an amendment to the National Park Service's Cultural Resources Management Guidelines. This amendment will probably take the form of a technical supplement.

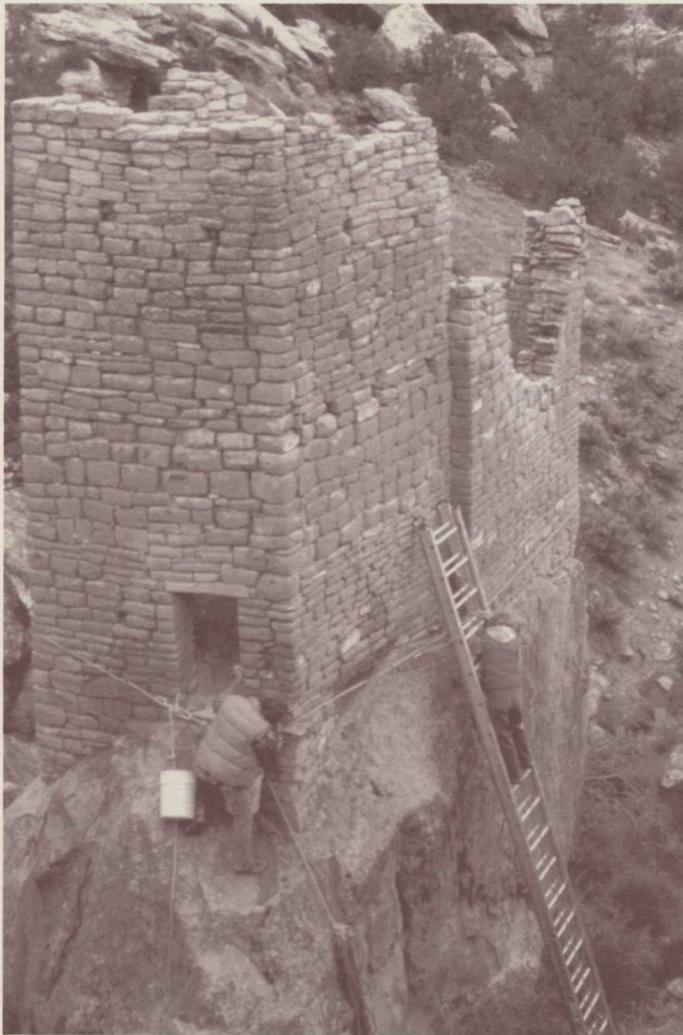


Table 1. Fiscal Year 1998 Budget

	Expenditure	Running Total
<u>Fiscal Year 1998 Appropriation</u>		\$1,000,000
PERSONNEL (Park Base Increases)		
Conversions		
Aztec - 2 Positions	\$ 84,000.00	\$ 916,000
Mesa Verde - 2 Positions	\$ 67,000.00	\$ 849,000
Salinas Pueblo Missions - 1 Position	\$ 33,000.00	\$ 816,000
Chiracahua/Fort Bowie - 1 Position	<u>\$ 34,000.00</u>	<u>\$ 782,000</u>
Subtotal	\$ 218,000.00	\$ 782,000
Intakes		
Navajo - 1 Position	\$ 33,000.00	\$ 749,000
Tonto - 1 Position	\$ 51,000.00	\$ 698,000
Tumacacori - 2 Positions	<u>\$ 91,000.00</u>	<u>\$ 607,000</u>
Subtotal	\$ 175,000.00	\$ 607,000
Program Coordinator		
Flagstaff Area - 1 Position	\$ 60,000.00	\$ 547,000
Total Personnel Costs/Enacted FY 98 Budget	\$ 453,000.00	\$ 547,000
TRAINING		
Training Funds - Conversion Positions	\$ 24,000.00	\$ 523,000
(One Year Funds) Used to cover travel and training costs for the conversion positions. Maintained by the Program Agent. Funds undedicated to training were used for program management.		
Training Funds - Intake Positions	\$ 16,000.00	\$ 507,000
(One year Funds) Used to cover travel and training costs for new employees. \$4,000 per position transferred to the benefiting park.		
Total Training Costs	\$ 40,000.00	\$ 507,000
PROJECTS (One years funds)		
Aztec	\$ 75,000.00	\$ 432,000
Chaco	\$ 125,000.00	\$ 307,000
Flagstaff Areas	\$ 125,000.00	\$ 182,000
Tonto	\$ 125,000.00	\$ 57,000
Tumacacori	\$ 22,000.00	\$ 35,000
Salinas Pueblo Missions	\$ 25,000.00	\$ 10,000
Total Project Costs	\$ 497,000.00	\$ 10,000
PROGRAM MANAGEMENT	\$ 10,000.00	\$ 00

Table 2. Fiscal Year 1999 Budget

	Expenditure	Running Total
<u>FISCAL YEAR 1999 Appropriation</u>		\$1,297,000
COVERAGE FOR FISCAL YEAR 1998 EXPENDITURES/OBLIGATIONS		
Base Increase to Cover Short Falls in Fiscal Year 1998 Personnel Costs		
Salinas Pueblo Missions	\$ 7,000	\$1,290,000
Tumacacori	<u>\$ 5,000</u>	<u>\$1,285,000</u>
Sub Total	\$ 12,000	\$1,285,000
Base Increase to Cover Training Costs for Fiscal Year 1998 Intake Positions		
Navajo	\$ 4,000	\$1,281,000
Tonto	\$ 4,000	\$1,277,000
Tumacacori	<u>\$ 8,000</u>	<u>\$1,269,000</u>
Sub Total	\$ 16,000	\$1,269,000
Base Increase to Cover Training Costs for Fiscal Year 1998 Conversion Positions		
Aztec	\$ 4,000	\$1,265,000
Mesa Verde	\$ 4,000	\$1,261,000
Salinas Pueblo Missions	\$ 2,000	\$1,259,000
Chiracahua/Fort Bowie	<u>\$ 2,000</u>	<u>\$1,257,000</u>
Sub Total	\$ 12,000	\$1,257,000
<u>Total Costs</u>	\$ 40,000	\$1,257,000
FISCAL YEAR 1999 EXPENDITURES/OBLIGATIONS		
PERSONNEL (Park Base Increases; Includes Training Costs)		
Conversions		
Montezuma Castle – 2 Positions	\$ 106,000	\$ 1,151,000
Chiracahua/Fort Bowie – 1 Position	\$ 53,000	\$ 1,098,000
Intakes		
El Malapasis – 1 Position	\$ 68,000	\$ 1,030,000
Bandelier – 2 Positions	\$ 113,000	\$ 917,000
Chaco – 1 Position	\$ 58,000	\$ 899,000
Salinas Pueblo Missions - 1 Position	\$ 58,000	\$ 801,000
San Antonio Mission – 1 Position	\$ 71,000	\$ 730,000
Flagstaff Areas – 1 Position	<u>\$ 58,000</u>	<u>\$ 672,000</u>
<u>Total Costs/Enacted FY 98 Budget</u>	\$ 585,000	\$ 672,000
PROJECTS (One Year Funds)		
Hovenweep	\$ 10,000	\$ 662,000
Glen Canyon	\$ 85,000	\$ 577,000
Chaco	\$ 125,000	\$ 452,000
Canyon de Chelly	\$ 75,000	\$ 377,000
Mesa Verde	\$ 175,000	\$ 202,000
Tonto	\$ 46,100	\$ 155,900
Tumacacori	\$ 25,300	\$ 130,600
Aztec	\$ 63,000	\$ 67,600
Navajo	<u>\$ 20,000</u>	<u>\$ 47,600</u>
Sub Total	\$ 624,400	\$ 47,600
PROGRAM MANAGEMENT	\$ 47,600	\$ 00

Table 3. Fiscal Year 2000 Personnel Priority Hiring List

Conversions

Mesa Verde – 1 Position

Tumacacori - 1 Position

Fort Davis - 1 Position

Intake Program – Craft Specialists

Flagstaff - 1 Position

Salinas Pueblo Missions – 1 Position

San Antonio Missions – 1 Position

Fort Davis – 1 Position

Mesa Verde – 1 Position

Intake Program – Preservation Specialists (Archeologists)

El Malpais – 1 Position

Grand Canyon – 1 Position

Navajo – 1 Position

Mesa Verde – 1 Position

Engineer/Architect/Conservator

Park Based – 1 Position

Vanishing Treasures FY 1998 Personnel Report December 1998

The Fiscal Year 1998 appropriation for the Vanishing Treasures Program provided eight parks with eleven FTE and salaries. \$453,000 of the \$1.0 million appropriated to the VT Program was dedicated to this purpose. The benefiting parks included Aztec Ruins National Monument, Chiricahua National Monument and Fort Bowie National Historic Site, Flagstaff Area National Monuments, Mesa Verde National Park, Navajo National Monument, Salinas Pueblo Missions National Monument, Tonto National Monument, and Tumacacori National Historical Park. The personnel costs associated with these positions were transferred to the benefiting parks as base increases.

The cultural attributes of the personnel hired this year included 4 American Indian males, 4 Hispanic males, 1 Hispanic female, 1 Anglo male, and 1 Anglo female. We can indeed say that we have hired the best and the brightest, and in many cases were able to take advantage of the pool of available and qualified individuals that reside near our National Park Service units. This has included being able to afford the opportunity to some of our seasonal and temporary staff that have been committed to the mission and purpose of the National Park Service, but have not been able to secure permanent positions due to FTE and funding constraints. More specific information regarding the individuals that have been hired is presented below.

AZTEC RUINS NATIONAL MONUMENT

Harry Etcitty and Raymond Torrivio

Harry began his career as a seasonal employee at Chaco Culture in the late 1940's and Raymond started working for the NPS in the 1970's. They are very highly qualified Navajo Indian masons who have been employed intermittently in the past only as project funding was available. As permanent employees they will be able to provide year-round care to the prehistoric resources of the monument and mitigate their deterioration from natural and manmade causes. (They will also have a reliable source of income from which to support their families).

Raymond and Harry worked on the following projects in FY98:

- **West Ruin**: Maintenance of the drainage system.
- **West Ruin**: Replacement of five protective roofs over prehistoric roofs.
- **West Ruin**: Stabilization of walls in three rooms.

Both employees attended the following workshops and training courses:

- Rock masonry techniques at Fort Union NM.
- Scaffolding safety training at Aztec Ruins NM.

- Maintenance for Navajo speakers, at the Flagstaff Area NMs.

CHIRICAHUA NATIONAL MONUMENT AND FORT BOWIE NATIONAL HISTORIC SITE

Fernando C. Nunez

Fernie began working as a laborer at Fort Bowie National Monument in June of 1976. In this capacity he performed a variety of duties in support of stabilization and restoration of the historic structures at the Fort. Fernie has also worked as a seasonal laborer at Coronado National Monument and Saguaro National Park. Throughout this time Fernie has worked without permanent status.

In January 1998, just days before his term appointment expired, Fernie was converted through a competitive process from his temporary status to permanent status. As a result of the Vanishing Treasures Program, Fernie now has a secure, permanent position specifically dedicated towards preserving and protecting the precious resources at Fort Bowie and Chiricahua. Had the Vanishing Treasures Program not happened, the National Park Service would have lost a seasoned veteran of over twenty years. His talents and knowledge of the past preservation techniques at these parks are invaluable and genuinely will insure the long-term preservation of some of the nations most significant resources.

Since accepting the VT appointment, Fernie's efforts have continued to be focused on the preservation of the adobe and stone masonry structures at Fort Bowie. Some of the other specific accomplishments included the following:

- Implementation of a new technique for Agency Building preservation. This includes placement of drainage features to help

control erosion.

- Participation in team working to update Historic Structure Preservation Guide.
- IPM work - vegetation management around ruins.

Assisting maintenance staff with construction of small building to replace old sheds, in support of stabilization program.

In addition to completing the preservation work identified above, Fernie attended the following workshops and training courses:

- Rock masonry techniques at Fort Union NM.
- Scaffolding safety training at Aztec Ruins NM
- Stone repointing of CCC features at Coronado NM.

FLAGSTAFF AREA NATIONAL MONUMENTS (Wupatki, Sunset Crater Volcano, and Walnut Canyon)

Al Remley

Al holds a B.A. in History from Texas Christian University and an M.A. in Anthropology from Northern Arizona University. His work history is a combination of public and private sector work in archeology. He has worked for a private cultural resources management firm specializing in excavation, archeological survey, and lithic analysis. Additional private sector work included a Southwest Parks and Monuments Association grant to write the Interpreter's Ranger Manual for Canyon de Chelly National Monument. Al has served as an archeologist for the National Park Service in seasonal, temporary, and permanent positions at Canyon de Chelly National Monument, Navajo National

has served as an archeologist for the National Park Service in seasonal, temporary, and permanent positions at Canyon de Chelly National Monument, Navajo National Monument, and the Flagstaff Area National Monuments. His job duties at Canyon de Chelly included conducting archeological inventory surveys, serving as the §106 compliance officer, conducting ruins preservation assessments, and designing and developing the Canyon de Chelly archeological database and Geographic Information System. Al has also served on a detail assignment to Navajo National Monument to perform a preservation assessment and draft a scope of work for the long-term preservation of Inscription House Ruin. Currently, he works for the Flagstaff Area National Monuments as an archeologist specializing in ruins preservation and documentation, information management, and database design.

Al began working as an archeologist hired under the Vanishing Treasures Program for the Flagstaff Area National Monuments in January 1998. Al's responsibilities included documenting prehistoric architecture and conducting ruins preservation maintenance activities at Wupatki and Walnut Canyon National Monuments. In addition, Al has been organizing and digitizing the Flagstaff Area National Monument's site files. He has taken part in local and regional ruins preservation training, specifically in ruins preservation maintenance and OSHA scaffold safety training. Al has also been active in Workgroup A (the database workgroup) of the Vanishing Treasures Initiative. He has helped develop the Vanishing Treasures database and its incorporation at the national level with the Access version of the Archeological Sites Management Information System (ASMIS).

MESA VERDE NATIONAL PARK

Willie Begay

Willie has 16 years experience working on the Mesa Verde Stabilization Crew, specializing in repointing Ancestral Puebloan architecture at Mesa Verde, Hovenweep, Chimney Rock, Montezuma Castle, and other agency sites in the Four Corner's area. He was trained by Raymond Begay, who has more than 40 years experience with prehistoric architecture.

Kee Charley Jones

Kee has 14 years experience with the Mesa Verde Stabilization Crew, with similar experience to Willie.

Both of these men typify the highly trained and experienced mason who has been a long-term but temporary employee working on the preservation of Ancestral Puebloan structures. These are the key people that Vanishing Treasures is designed to keep on board so that they may pass their skills on to new, younger trainees.

Willie and Key worked on the following projects in FY98:

Cliff Palace: Stabilization of retaining walls.

Long House, Stabilization of kiva walls.

Far View Ruins Group: General repointing.

Backcountry Sites 5MV1221 and 542: General preservation maintenance.

30 Front Country Sites: General preservation maintenance.

Holly Ruins Group: Repointing selected walls.

NAVAJO NATIONAL MONUMENT

Kathryn Sue Kramer

Kathryn is a native of the Southwest hailing from Santa Fe, New Mexico. She graduated from Santa Fe High School in 1983 and continued her higher learning at University of New Mexico where she received her B.A. in 1989. Kathryn is planning to receive her M.A. in Anthropology from Washington State University in December 1998.

Kathryn has worked within her profession in various national parks including Mesa Verde National Park and is currently employed at Bandelier National Monument. Her experience includes recordation, lithic identification, site mapping, general excavation, and analysis of historic glaze ware.

Since this position was not immediately filled, the park used the lapse salary funds to hire two seasonal employees to perform duties in the protection of the three major ruins within the park and to conduct research and monitoring. This included monitoring visits to determine if unauthorized access has occurred, assessing damage resulting from spalling action from the site alcove ceilings, and assessing climatic influence and visitor impacts.

SALINAS PUEBLO MISSIONS NATIONAL MONUMENT

Ramona Lopez

Ramona has worked in ruins preservation at Salinas for many years before she was hired into the Vanishing Treasures position earlier this year. In Ramona's ten plus years as a seasonal employee, she has gained considerable experience in documentation, specific stabilization procedures and techniques, and she is familiar with the tools of the trade.

Upon accepting the new position Ramona immediately began attending related classes at the University of New Mexico, Valencia campus, two days a week. In addition to attending school, she has completed erosion and vegetation control at the ruins. Last May, Ramona began working with the preservation crew completing treatment and documentation work. She has returned to school for the fall semester.

Additional training that Ramona received included the following:

- Scaffold safety training at Aztec Ruins National Monument.
- 40 hour detail training assignments to Chaco Culture National Historical Park and Tumacacori National Historical Park.
- One day training session on perspective photography.

TONTO NATIONAL MONUMENT

Miguel R. Estrada

Miguel comes to Tonto National Monument from Pecos National Historical Park where he held the position of Maintenance Mechanic WG-10 since July 1995. In this position he was involved in all facets of a maintenance operation to include HVAC, water/sewer systems, electrical, plumbing, carpentry, preservation of historic buildings, and Contracting Officers Representative for several large construction projects at the park. He has also been delegated the acting capacity for the Facility Manager on numerous occasions.

Prior to Pecos, he worked at Big Bend National Park starting back in 1978. He was primarily involved in the preservation and restoration of historic and adobe structures. He initiated and led preservation training programs in Mexico. He has immense experience in all aspects of

adobe, plastering, stonework, and masonry. He has also attended the Earthen Architecture (40 hours), Historic Preservation Maintenance Skills Workshop (80 hours), Rock Masonry Training (40 hours), Cultural Resource Management (40 hours), and IPM (40 hours).

Micky has also participated in numerous details through Williamsport Preservation Training Center, and the Southwest Preservation Crew.

Since this position was not filled immediately, the park used the lapse salary to cover the salary costs for Ruben Avalos to implement Vanishing Treasures projects. He also assisted the Western Archeological and Conservation Center crew conducting excavations, as emergency stabilization needs arose. Ruben is a Maintenance Worker and has 5 years of experience at the monument conducting ruins preservation work. He has also assisted the Southern Arizona Group archeologist with work at other National Park Service areas. With this funding, he provided preservation assistance to Montezuma Castle National Monument, Casa Grande Ruins National Monument, Coronado National Memorial, and Tumacacori National Historical Park before the end of the fiscal year. The funds were also used to hire three WG-3 laborers to assist with these projects.

TUMACACORI NATIONAL HISTORICAL PARK

David Yubeta

David served as Facility Manager/Historic Preservation Specialist and earlier as a Masonry Worker at Tumacacori National Historical Park since 1987. He is considered the "guru" of adobe preservation in Southern Arizona and is frequently called upon for advise on preservation projects with other federal and state agencies. He has made ground breaking contacts with our sister state of Sonora, Mexico

to start a binational preservation effort. He is duty stationed at Tumacacori but will be serving the Southern Arizona Group parks as advisor and project coordinator for Vanishing Treasures projects. He assumed his new duties February 1, 1998.

Ramon Madril

Ramon came on board February 15, 1998. He was born and raised in the area and has extensive experience in private industry in construction with native materials, including adobe. He will be the first Tumacacori employee in its 90 year history dedicated almost entirely to cultural resources preservation -thanks to the Vanishing Treasures Initiative.

Since coming on duty, David and Ramon were extraordinarily active in conducting and participating in training sessions, training workshops, performing ruins preservation projects, and providing advice and assistance at Tumacacori and through the region, both within the United States and Mexico. Because of his extensive preservation experience, David served as Ramon's primary instructor.

Training sessions included the following:

- Adobe stabilization and making of adobe bricks.
- Conservation of historic murals and paints and how to re-attach loose and flaking original plasters.
- Injecting cracks and filling voids using hypodermic needles to carry adhesive and alcohol (as vehicle) for reattachment of lime plaster.
- Use of the Japanese rice paper method for cleaning of murals and stenciling in sanctuary.
- Use of architectural eraser in cleaning stains from plasters.
- Documentation of preservation work including basic photography and instruction

on how to accomplish site inspections. This has included initial computer training that will continue for approximately one year.

- Lime plaster renderings for wall surfaces and plaster rendering for canales using an ancient method called *Cacho Pestolini* and its application as a hydraulic mortar.
- Various stabilization techniques and methodologies on repair of earthen materials including the use of hydraulic mortar, adobe and lime plaster stabilization techniques.
- David and Ramon attended a lime plaster workshop at Canoncito de Apache, New Mexico.
- Ramon attended scaffolding training at Aztec Ruins NM.
- Ramon attended a training workshop at Fort Union NM on rock masonry techniques.

Ruins Preservation projects have included the following:

- Stabilization of the west window area of Franciscan church at Tumacacori.
- Stabilization of Granary and Mortuary Chapel at Tumacacori.

David, with Ramon's assistance also conducted a number of consultations and advised a number of parks including the following:

- Conducted a workshop to address the preservation needs of mission *Nuestra Senora de Pilar y Santiago de Cocospera* working with INAH (Instituto Nacional de Antropologia e Historia) in Sonora Mexico.
- Consulted and advised on the repair and stabilization of mission *San Igancio de Caborica* also in Sonora.
- Conducted a training workshop at Swansea ghost town, located in the Lake Havasu field office area for the Bureau of Land Management.
- Provided advice to Fort Bowie National Historical Site on repairs needed to ruined walls.

- Provided advice on historic preservation plans and strategies for the care of Jesuit sites in Chihuahua, Mexico which date to the 1660s.
- Conducted a workshop on the stabilization/preservation of 1880's earthen ranch buildings in Walsenberg Colorado.
- Conducted a workshop to train personnel from BLM and Salinas NM on preservation and stabilization techniques at Tumacacori's Guevavi missions ruins.
- Conducted a workshop to repair CCC culverts at Corondo National Memorial.
- Provided advice to Organ Pipe Cactus National Monument and assessed damage caused by fire to Blankenship ranch. Planned a workshop in January 1999 to complete repairs to the structure.
- Provided advice to Montezuma Castle on the repair of wall and renderings to ca. 1930 adobe structures.

Vanishing Treasures FY 1998 Project Completion Report December 1998

The Fiscal Year 1998 appropriation for the Vanishing Treasures Program provided \$497,000 of one-year funds to be used to complete a number of ruins preservation projects. The parks that received project funding included Aztec Ruins National Monument, Chaco Cultural National Historical Park, the Flagstaff Area National Monuments (Wupatki and Walnut Canyon), Salinas Pueblo Mission National Monument, Tonto National Monument, and Tumacacori National Historical Park. In addition to the project funds, one-year funds totaling \$50,000 were made available to cover the training costs of the permanent personnel hired in FY 98 and as operating funds for the Vanishing Treasures Program.

Brief summaries are present below on how the Fiscal Year 1998 Project Funding was utilized:

PROGRAM MANAGEMENT

Contingency - \$10,000

These funds were used for the operations of the Vanishing Treasures Program. The majority of the funds were used to cover the travel expenses of the Program Coordinator, Leadership Committee, and Work Group members. Meetings and workshops that were supported using this fund source included: (1) a January, 1998 Leadership and Work Group meeting in Albuquerque, New Mexico; (2) travel to WASO by the Chair of the Vanishing Treasures Initiative and one member of the Leadership Committee to attend OMB hearings; (3) two separate Work Sessions held by members of Work Group A and C in Aztec National Monument and Albuquerque, New Mexico; (4) a Work Session held in Flagstaff, Arizona

by the Advisory Group to prioritize Vanishing Treasures SEPAS project submittals; and (5) attendance of the Program Coordinator in a work session in Denver to prioritize SEPAS project submittals for the Cultural Cyclic and CRPP funding sources. The remaining funds were used to purchase supplies and materials used by the Vanishing Treasures Program Coordinator and Budget Analyst to support day-to-day operations, and products developed by the various Work Groups.

Conversion Training - \$19,700¹

¹ The initial authorization for this account was \$24,000. This amount was increased to \$28,000 with the return of funds by Navajo National Monument. The park returned the \$4,000 that was given to them for the training of their new Intake Program (Preservation Specialist) position, because they were unable to fill the intake position by the end of the fiscal year. \$8,300 was transferred to Chaco to address their emergency need.

These funds were used primarily to cover the travel and training costs of the permanent "Conversion" personnel hired in FY 98. In addition, a portion of these funds was used for general operations of the Program. This consisted of providing travel funds for the Program Coordinator, Leadership Committee, and Work Group members. Meetings, workshops, and presentations that were supported using this fund source included: (1) travel to WASO by the Chair of the Vanishing Treasures Initiative, one member of the Leadership Committee, the Program Coordinator, and a member of the Database Work Group to provide information and an update to WASO staffers on the status and accomplishments of the program, to finalize the Vanishing Treasures database, and to begin the

development of a Vanishing Treasures Webpage; (2) travel to Aztec National Monument by contracted OSHA instructors for a scaffolding safety workshop; (3) a work session held by Work Group A in Cortez, Colorado to develop SEPAS criteria specifically for the Vanishing Treasures Program; (4) travel to Bandelier National Monument by the Chair and Program Coordinator to give a presentation on Vanishing Treasures to a Ruins Preservation workshop hosted by the park; and (5) attendance of the Pecos Conference by the Program Coordinator. The remaining funds were transferred to Chaco Culture National Historic Park to address an emergency that occurred as a result of severe weather conditions in late August, 1998.

AZTEC RUINS NATIONAL MONUMENT

Stabilize West Ruin - \$75,000

This project was devoted primarily to the stabilization treatment of a select number of rooms and walls in West Ruin, including pretreatment documentation, and the development of planning documents for future work. The following provides a summary of project accomplishments:

1. The architectural features of walls targeted for preservation treatment were documented and photographed.



2. Tree ring samples were collected from targeted areas in the east wing.

3. Protective roofs were replaced over 5 prehistoric roofs.

4. A select number of wall were subject to stabilization treatment including recapping, repointing, and replacing displaced and eroded basal course stone masonry.

5. A Scope of Work was prepared to backfill the south section of the east wing.

6. An integrated computer system was designed and installed at the park to better manage ruins preservation documentation.

7. A magnetometry survey was completed on a portion of the east wing.

CHACO CULTURE NATIONAL HISTORICAL PARK

Continue Partial Backfill and Drainage Repair at Selected Structures \$133,300²

² The initial authorization for this account was \$125,000. The amount was increased to 133,300 with a request by the park for emergency funds.

The following are the seven objectives proposed in the 10-577 submitted for this phase of the Backfill and Drainage Repair program, along with a summary of accomplishments and/or progress on each task:

1. ***Complete all remaining backfill and drainage repair work in Chetro Ketl and Talus Unit. Conduct minor backfilling and drainage repair in Pueblo Bonito.***

Approximately 40 rooms in the north central section of Chetro Ketl were identified as being in the poorest condition, primarily as a result of unequal fill levels and inadequate or no drainage. In FY98 the remaining 11 rooms in this section

were backfilled, and drainage features installed. This work continued the process and procedures established as part of the NPS/ Getty Conservation Institute (GCI) backfill testing project. Prior to fabric repair and backfilling, all walls and features in each room were photodocumented using a perspective corrective lens with black and white and color film. Elevation maps were made of all walls and features in each of the rooms, and a documentation form completed. All architectural wood was documented, and most elements sampled and submitted to the

Laboratory of Tree Ring Research for accurate species ID and dating. Once documentation was completed, permeable filter fabric was placed on the existing surface level and dry-laid stone were placed in open doorways and ents. Fill material, which closely matches the texture and chemical make

up of the original fill was placed in the rooms and hand tamped at 20-30cm levels. Drainage pipes, ranging from 4" to 6" diameters were laid in place at appropriate slopes and connected with inlets and outlets. Fill was added to cover the pipes and create the basic drainage slope for each room. Impermeable geotextile membrane was installed on this slope, sealed around the perimeter of the room and at the drain inlet. The final layer of fill was placed on top and contoured to facilitate maximum runoff to the drain inlet. Considerable customizing was necessary to this process to accommodate unique features in almost every room. Some rooms contain considerable wood, and slopes were modified to assure complete coverage of the majority of the wood. In order to preserve



Painted plaster and an intact roof in one room that must remain open for interpretive purposes, a revetment wall, shoring, and a variety of roofing repairs and drainage adaptations were made. In addition, minor backfilling, drainage repair, and surface contouring was done in a number of rooms adjoining the 11 target rooms.

The final detailed design and scope-of-work for backfilling and drainage repair in Talus Unit was completed, and work begun on the 29 rooms to be filled and drained. Documentation as described above and detailed in the Backfilling

and Drainage Repair Plan was completed on the entire structure. All architectural wood was documented, sampled, and submitted to the Lab of Tree-Ring Research. All fabric and capping repair was completed in the 29 rooms and backfilling completed in 19. In late July, August, and

early September, a series of severe rain storms caused major flood damage to a number of exposed structures in the park. Backfilling was suspended in order to repair some of the worst damage, primarily in Pueblo Bonito, the Bc sites, Casa Rinconada, Pueblo del Arroyo, and Chetro Ketl. In Pueblo Bonito, a large area of capping in the three story southeast section failed. After discussing the problem with Vanishing Treasures program agent, the park shifted efforts to these wall caps in order to complete emergency repair while temperatures allowed mortar work. Beginning in early November, the crew will go back to Talus Unit and complete backfilling and drainage repair in the 10 remaining rooms. Once completed, the staging area and access will be reclaimed.

2. Consult with a structural engineer/historic architect about stability and integrity of wooden, metal, and masonry supports in Kiva G, Chetro Kettle. Develop a detailed assessment and treatment plan.

Three consultants were contacted and a scope of work for this project was completed. The contract was not finalized in FY98, but is being obligated out of funds carried over in the cultural no-year account in November 1998.

3. Finalize and publish final treatment report on the 4-year backfilling project at Chetro Kettle and Talus Unit.

All mapping, photography and written documentation has been compiled and edited. The introduction and summary are in draft stage. The park is continuing to work with GCI to incorporate this documentation and data into the Backfill Testing Report.

4. Compile and analyze environmental and other moisture data collected as part of the collaborative research program with GCI on backfilling testing.

GCI staff, a GCI consultant, and park staff compiled and reviewed all moisture and other data collected during the ongoing tests in the Chetro Kettle backfilled rooms. These data are being analyzed, but final synthesis is not expected from GCI until 1999. Once these data are complete, they will be incorporated into the project report, which is scheduled to be finalized in late 1999.

5. Reclaim staging area and haul road to original grade and revegetate.

See number 1 above for schedule change.

6. Develop initial planning and design for Pueblo del Arroyo and/or Pueblo Bonito backfilling and drainage repair.

An initial scope of work for backfilling at approximately 12 kivas in Pueblo Bonito was completed. Judd's original field notes, maps, artifact data, etc. have been researched, and some mapping and architectural documentation have begun.

7. Explore and test new soil quarry sources.

Eight areas adjacent to the park were sampled and tested to determine if suitable fill materials are present. Because the land is owned in fee by the Navajo Nation, only areas with existing disturbance can be considered. These areas are primarily stock tanks, and although the surface soils have appropriate texture, deeper deposits contain a higher clay content than is desired. We will continue to test other areas, but to date, the existing quarry area, which requires a 45-mile round-trip, is the only good source of soil. This distance has slowed the backfilling progress and greatly increased the cost of backfilling.

FLAGSTAFF AREA NATIONAL MONUMENTS (Wupatki, Sunset Crater Volcano, and Walnut Canyon)

Conduct Ruins Preservation at Major Interpretive Sites - \$125,000

1. Architectural and Condition Documentation.

Architectural and condition documentation was initiated in FY96 and continued in FY97 and 98. The bulk of the summer field season was devoted to documentation efforts. Eight sites at Wupatki and 11 sites at Walnut Canyon have now been thoroughly documented, except for planimetric mapping. Documentation included completion of an 8-page field form, complete photographic coverage of all wall faces using black-and white and color photographs, and detailed annotation of scanned

5. Monitoring.

Past monitoring efforts have focused strictly on the front country interpretive sites and the effects of weather, rodents, vegetation and visitors upon those structures. Beginning in FY97, monitoring efforts were expanded to include a sample of sites in the backcountry of WUPA. During FY98, this monitoring effort was continued and expanded to include additional sites in the backcountry of both WUPA and WACA. Monitoring involved completion of a two-page field form documenting impacts from erosive agents, animals and visitors, plus threat factors and overall condition. Baseline black-and-white photographs and color slides were taken for the 140 sites monitored in FY98.

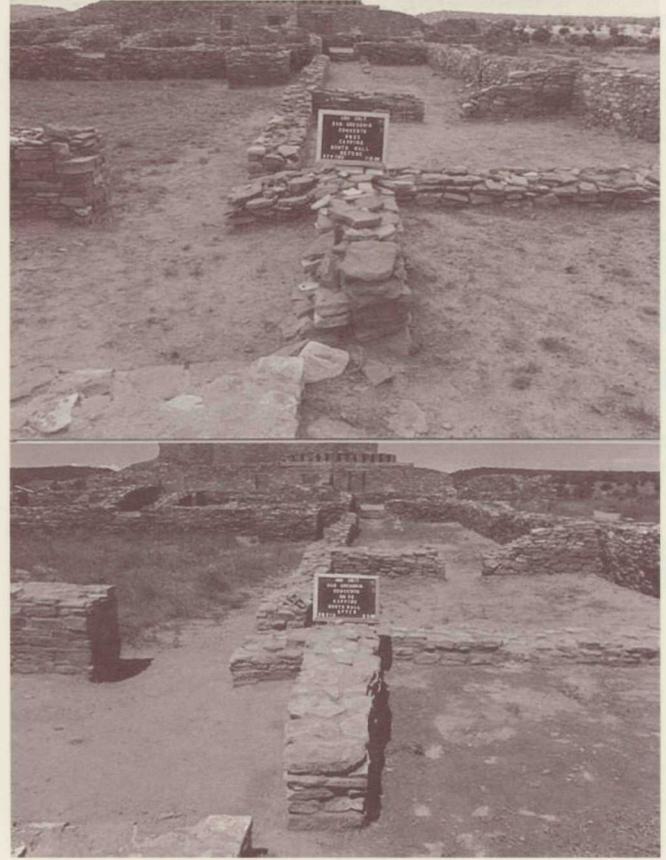
SALINAS PUEBLO MISSIONS NATIONAL MONUMENT

Ruins Preservation - \$25,000³

³The Vanishing Treasures Program was only capable of providing \$25,000 of the \$67,500 that the park had requested for completion of this project. The remaining funds were provided by the Cultural Cyclic funding sources.

During the FY98 work season approximately 3500 square feet of ruins wall and cap were stabilized. Other related work completed included: vegetation management, drainage maintenance, documentation and compliance. Work was completed at the Abo and the Quarai sites, no work was completed at the Gran Quivira site.

The proposed funding document indicated funding directed at converting poor condition areas of ruins to good condition. Specific work action plans were directed at areas of the ruins that pose the most urgent threat related to fabric loss, resource integrity, and visitor safety. The most significant percentage of this work is focused on stabilizing ruins walls and caps however, drainage, erosion control and vegetation management are also part of the funding statement and work plan.



Condition assessment reviews were completed for all sites identifying the high priority areas to be targeted for treatment during the upcoming work season. This review was completed at the Abo site, the Quarai site and the Gran Quivira site. Based on the condition assessment review, documentation work was completed for all proposed work. Photo documentation was completed before and after all work.

Specific work completed at the Abo site:

- Wall stabilization totaled 4341 square feet.
- Capping work totaled 1742 square feet.
- Vegetation work totaled 300 hours.
- Drainage and erosion control work totaled 42 hours.

Specific work completed at the Quarai site:

- Wall stabilization work totaled 2321 square feet.
- No capping was completed at Quarai.

- Vegetation work totaled 240 hours.
- Drainage and erosion control totaled 42 hours.

No work was completed at the Gran Quivira site.

Training and detail assignments:

- Sam Chavez and Ramona Lopez attended Scaffold Safety Training at Aztec Ruins National Monument.
- Ramona Lopez completed 40 hour detail training assignments to Chaco Culture National Historical Park and Tumacacori National Historical Park as part of her intake training program.
- Ramona Lopez attended the University of New Mexico, at the Valencia Campus during the spring and fall semesters.
- Debbie Chavez and Ramona Lopez completed a one day training session on perspective photography.

TONTO NATIONAL MONUMENT

Stabilization of Ruins for Structural Integrity - \$125,000

The objective of this project was to address the major structural problems at the Upper Cliff Dwelling at Tonto NM, including the removal of cultural deposits that were creating differential fill pressure and damage to standing original wall sections, and that were being impacted by extensive rodent activity and above average annual rain fall. A summary of the project accomplishments is presented below:

1. Compliance/Consultation.

Enter into consultation with affiliated Native American Tribes and Arizona State Historic Preservation Office. Utilized the research design, inadvertent discovery plan, and documentation plan to complete the process.

2. Plan Data Recovery.

Consulted with Western Archeological and Conservation Center on the research design and completed planning stages for excavation of two rooms in the Upper Cliff Dwelling.

3. Field Work.

The Western Archeological and Conservation Center, NPS, assisted by a University of Arizona employee, conducted salvage excavations in rooms 15 and 16 in the Upper Cliff Dwelling. In addition, ten park and WACC volunteers participated in the project. A total of 1059 person hours were expended during the fieldwork phase of the project, and a total of 37 excavation units were completed. All cultural deposits were archeologically removed from the two rooms. During the course of the project, excavated and screened backdirt from the rooms were used in project stabilization activities by the WACC crew. This fill was placed along the bases of walls in seven rooms to stabilize wall bases and improve drainage. Geotextiles were used in two rooms prone to high moisture retention in conjunction with this fill.

4. Analysis.

In June all field work was completed and laboratory processing commenced. Several artifact class descriptive analyses were completed in draft form and these include modified shell, modified bone, and ground stone tools. Initial classification of lithic debitage and tools was completed and the collected information awaits entry into a database. Scopes of work for contracted faunal analyses, botanical analyses, coprolite analyses, and charcoal identification and dendrochronology are complete and purchase orders awarded. Samples for radiocarbon assays and requested permission for destructive testing from park superintendent are completed and samples have been submitted for analyses. XRF studies of obsidian recovered from the excavations are completed and the letter report is

undergoing review. All initial processing and analyses of recovered textiles were completed by Lynn Teague, a volunteer expert analyst. To date, all preliminary processing is completed and artifact analysis is progressing according to schedule. Initial drafts of at least three chapters of the report are being written as of this date. The majority of artifact photographs that will be included in the report have been taken and processed. Identification and characterization of decorated sherds has been completed and plainware sherds continue to undergo identification and analysis. A specialized study of ceramic temper with a comparison to similar studies in the Tonto Basin has been contracted.

5. Reporting.

The analyses and reporting of this project will continue well into FY99. Several of the larger and more complex analyses of materials are not scheduled for completion until March of 1999. Report completion is dependent upon timely completion of those analyses. Report editing and production was contracted from FY 98 funds in order to lock in costs at current levels. Specialized studies continue such as identification, and analyses include botanical analyses, radiocarbon assays, X-ray diffraction studies, faunal analyses, pollen analyses, wood/charcoal species identification and assessment of dendrochronology potential, ceramic temper analyses, and shell identification.

Training Intake Vanishing Treasures position - \$4,000

Since this position was not immediately filled, these funds were used to train Rueben Avalos who assisted in the completion of the above project and who has been responsible for the ruins preservation work at the monument.

Training that was attended included the following:

- Respirator training--includes fit testing.
- Hanta Virus training.

- Scaffolding safety training.
- Stabilization (adobe) hands on training project outside of the group.
- Section 106 Compliance

In addition to the above, this funding was utilized to cover Rueben's travel in support of stabilization projects at Montezuma Castle, Casa Grande Ruins National Monument, Coronado National Memorial, and Tumacacori National Historical Park.

TUMACACORI NATIONAL HISTORICAL PARK

Preservation of Park's Primary Resources - \$22,000⁴

⁴The Vanishing Treasures Program was only capable of providing half of the \$45,000 that the park had requested for completion of this project. The remaining funds were provided by Cultural Cyclic funding sources.

Funding was utilized in the stabilization and preservation of Tumacacori's primary resources: Franciscan Church, Lime Kiln, Convento, Mortuary Chapel, Granary and associated mission period ruins. More specific detail regarding the expenditure of funds towards the completion of this project is presented below:

1. February-March.

Tumacacori NHP fills two Vanishing Treasures position at the park; training begins on Franciscan church exterior sanctuary window as approximately one ton of material fails due to moisture mitigation and weight load caused wall failure. Vanishing Treasures personnel effect extensive repairs to wall. Vanishing Treasures personnel assist in forming a workshop to preserve the ruins of *Nuestra Senora de Pilar y Santiago de Cocospera* located in Sonora Mexico and also assist the village of San Ignacio on the preservation of their village church of *San Ignacio de Caborica*. Vanishing Treasures personnel attend mission tour to visit Kino mission sites in Sonora Mexico with park VIPs.

2. April.

Work continues on exterior sanctuary window and new adobes are added and new lime plaster rendering is attached to wall.

Work commences on the Granary.

Preservation

Training continues.

Vanishing Treasures personnel perform emergency stabilization and preservation training at Swansea ruins for Bureau of Land Management (BLM).



3. May.

Vanishing Treasures personnel are involved in the Southern Arizona Research conference as Historic preservation chair. Vanishing Treasures personnel visit site of Fort Bowie to discuss preservation strategies and assist park on the update of Historic Structures Preservation Guideline. Field trip to Chihuahua to visit Jesuit missions in the Sierra Tarahumara with INAH/SICRAT (Instituto Nacional de Antropología e



Historia and Simposio/Comite internacional sobre la Conservacion y Restauracion de Arquitectura de Tierra).

4. June.

Vanishing Treasures personnel attend Lime plaster workshop in Canoncito de Apache, New Mexico and scaffolding training in Aztec Ruins NM. Preservation work continues on Granary and work is commenced on **Mortuary Chapel.**

5. July.

Vanishing Treasures personnel continue work on Mortuary Chapel and train BLM agency personnel on historic preservation techniques. Work completed on Granary.

6. August.

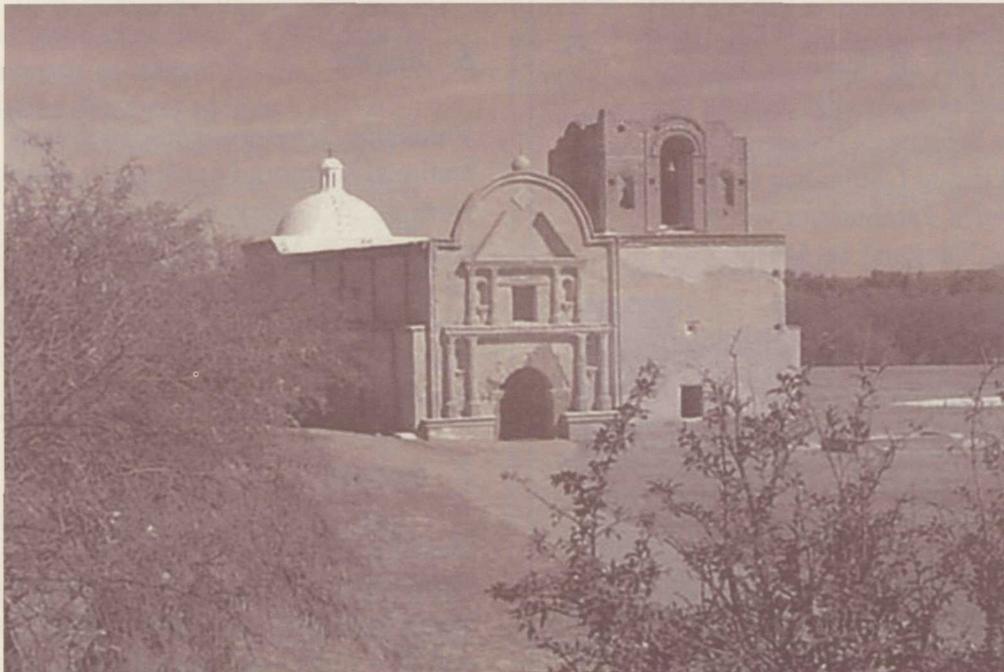
Vanishing Treasures personnel work at Coronado National Memorial performing stone masonry work on 28 historic CCC culverts. Work continues on Mortuary Chapel and commences on North exterior wall of church as failure occurs due to monsoon rain. Personnel from Salinas National Monument are trained in Lime plaster techniques.

7. September.

Vanishing Treasures personnel visit Organ Pipe Cactus National Monument to assist park on preservation issues regarding Blankenship ranch and how to best preserve these ruins after a fire destroyed one third of the structure. Vanishing Treasures assist in a training session at Fort Union NM., repairing and stabilizing the ruins.

***Training Intake Vanishing Treasures Positions
- \$8,000***

This funding was used to expose the new employees to Vanishing Treasures projects and related ruins preservation issues to ensure that they would be properly mentored and trained to perform their duties in the future. Funding was allocated for defraying expenses associated with training these individuals and exposing them to similar situations at other park areas. These *individuals* assisted and were trained at Swansea Ruins in Arizona, Canoncito de Apache, New Mexico, Coronado National Memorial, Arizona, Scaffolding Training, Aztec Ruins National Monument, New Mexico, Fort Bowie National Monument, Arizona, Fort Union National Monument, New Mexico, and Organ Pipe Cactus National Monument, Arizona.



A BRIEF HISTORY OF NATIONAL PARK SERVICE STABILIZATION WORK IN ARID LANDS

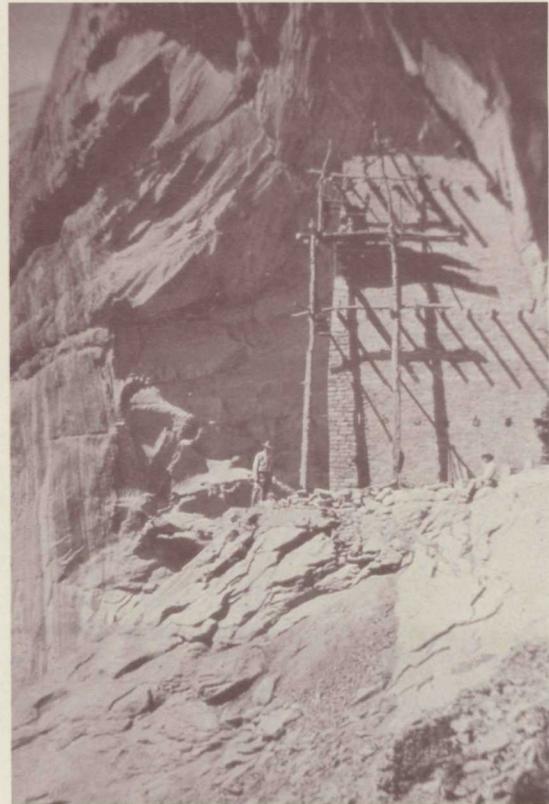
Throughout the 20th century, Southwestern parks and monuments have been increasingly used by the public. Even the earliest units of the National Park System were heavily stabilized in order to accommodate the initial visitors, a process that began between 1910 and about 1925. Portland cement mortars were the primary stabilizing materials, and remained so throughout most of the public works projects of the later 1930s and 1940s. Photography was the primary documentation technique. Coupled with daily supervision of a work force comprised primarily of local workers whose ancestors often were associated with the structures under repair, taking pictures and recording materials and work power expenses were the primary tasks of a small group of archeologists that chose to focus on indigenous and vernacular architecture.

Essentially, this situation of a few specialized archeologists supervising wage labor continued up throughout the 1960s and 1970s. The main embodiment of this philosophy was the Ruins Stabilization Unit, part of the Southwest Archeological Center in Globe, Arizona, which later was moved to Tucson as part of the Western Archeological and Conservation Center. An emerging issue was the discovery of new materials. Individual experimentation with chemicals that might be added to soil mortars was a consequence of observing the longer range results of hard mortar use: stone deterioration and consequent loss of original wall fabric. In addition, sites that had now been open to the public and exposed to the elements for 50 years or more were now showing a steeper entropy curve.

The use of softer but more visually and structurally compatible materials led to a more local and shorter cycle focus for preservation work. The allocation of park staff and resources to this kind of work was increased be-

tween 1975 and 1980, and ultimately, the Ruins Stabilization Unit was disbanded, with some of the functions being assumed by the Southwest Cultural Resources Center staff. Inflation, absorbing COLAs, and the retirement of an aged stabilization labor staff created vacancies at parks that could not be filled, and between 1980 and the present, less fabric work was done, and the level of documentation declined.

Current thrusts in preservation work seek to (1) continue the use of compatible but more durable materials; (2) improve training of the current labor force; (3) improve the level of documentation, especially harnessing technological advantages of the 1990s; (4) improve approaches to priority ranking and assessing sites for preservation activity; (5) select from a wider spectrum of preservation strategies, such as backfilling, stand-alone documentation, sheltering, fencing, etc. in order to supplement fabric repair costs, which are often more costly; and (6) utilize a fully multi disciplinary approach during projects.



ARIZONA

- 1 Canyon de Chelly National Monument
- 2 Casa Grande Ruins National Monument
- 3 Chiricahua National Monument
- 4 Coronado National Memorial
- 5 Fort Bowie National Historic Site
- 6 Glen Canyon National Recreation Area
- 7 Grand Canyon National Park
- 8 Montezuma Castle National Monument
- 9 Navajo National Monument
- 10 Organ Pipe Cactus National Monument
- 11 Petrified Forest National Park
- 12 Saguaro National Park
- 13 Tonto National Monument
- 14 Tumacacori National Historical Park
- 15 Tuzigoot National Monument
- 16 Walnut Canyon National Monument
- 17 Wupatki National Monument

Vanishing Treasures Parks

COLORADO

- 18 Colorado National Monument
- 19 Hovenweep National Monument
- 20 Mesa Verde National Park

NEW MEXICO

- 21 Aztec Ruins National Monument
- 22 Bandelier National Monument
- 23 Chaco Culture National Historical Park
- 24 El Malpais National Monument
- 25 El Morro National Monument
- 26 Fort Union National Monument
- 27 Gila Cliff Dwellings National Monument
- 28 Pecos National Historical Park
- 29 Salinas Pueblo Missions National Monument

TEXAS

- 30 Big Bend National Park
- 31 Fort Davis National Monument
- 32 Guadalupe Mountains National Park
- 33 Lake Meredith National Recreation Area
- 34 San Antonio Missions National Monument

UTAH

- 35 Arches National Park
- 36 Capital Reef National Park
- 37 Canyonlands National Park
- 38 Dinosaur National Monument
- 39 Golden Spike National Historic Site
- 40 Natural Bridges National Monument
- 41 Zion National Park

WYOMING

- 42 Ft. Laramie National Historic Site

