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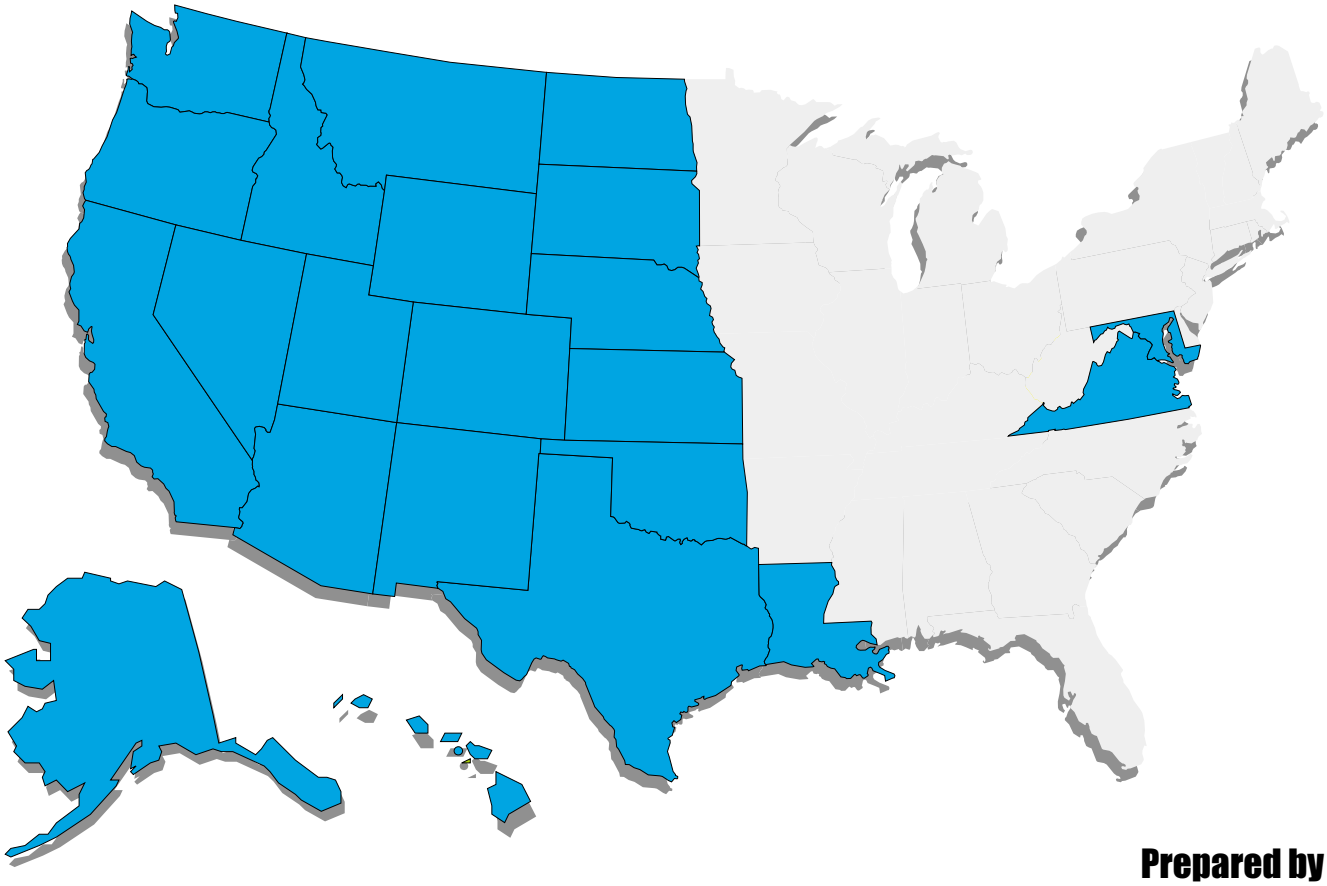
Department of Defense and U.S. Army Corps of Engineers Curation Options Project, Western and Mid-Atlantic States



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At the request of the Deputy Under Secretary of Defense (Environmental Quality) and the Headquarters, U.S. Army Corps of Engineers, the Corps' St. Louis District performed a study of curation institutions in 20 western and two mid-Atlantic states. The goal of the project, called the Curation Options project, was to identify one institution in each state that has the capability and the interest to potentially partner with the federal government for the purpose of curating archaeological materials and associated documentation recovered from lands managed by the Army, Navy and Marines, Air Force, and Corps. For the project, between July 1996 and October 1997, the St. Louis District contacted 311 institutions and visited 50 to perform on-site evaluations. A standardized evaluation process was used to determine which institutions to visit, and to collect information during the on-site visit. Twenty-five of the 50 institutions are considered to be potential partners. Twenty-four institutions constitute the Individual State Option, which is comprised of one partner in each state and two each in California and Texas. Two additional curation options are presented for consideration: the Mixed State Option and the Regional Option, consisting of 18 and 10 partner institutions, respectively.

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Executive Summary

Background

The Department of Defense (DoD), through its major land-managing agencies, U.S. Army, U.S. Army Corps of Engineers (USACE), U.S. Navy and Marine Corps, and U.S. Air Force, is required by federal laws and regulations to curate archaeological materials and associated documentation recovered from federally-owned or managed property. As a result of over 50 years of archaeological fieldwork required under statute, large quantities of archaeological collections from DoD and USACE lands have been generated. Unfortunately, the proper curation of these materials has not been integrated into cultural resources programs and their funding. Thus, long-term collections care has in most cases been inadequate. Federal laws require that these materials be curated so that they do not deteriorate, and that they are readily available for study and exhibit. The most pertinent regulation is 36 CFR Part 79—*Curation of Federally-Owned and Administered Archeological Collections*, which took effect in October 1990. The lack of overall funding, lack of the integration of curation into existing yearly funding cycles, and the unequal weight between curation and fieldwork and report preparation have all worked against the proper curation of archaeological collections throughout the federal government, including DoD and USACE.

In response to this inequity, the Deputy Under Secretary of Defense (Environmental Security), the Assistant Secretary of the Army (Civil Works), and the U.S. Army Corps of Engineers' Director of Civil Works requested that the U.S. Army Corps of Engineers Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (MCX-CMAC), located in the St. Louis District, undertake a nationwide technical study of potential partners that might be interested in serving as long-term repositories for DoD and USACE archaeological collections. The mission was to identify potential partners, evaluate their capabilities to manage the archaeological collections, and to collect baseline financial information associated with such an endeavor. At the direction of DoD, some baseline financial information collected for this project has not been included in this report.

As an initial step in finding a solution to the long-term care of DoD archaeological collections through the Curation Options Project, St. Louis District began a process to identify potential partners. The process consists of the creation of a master list of institutions to contact by telephone, and a secondary screening to determine which institutions warrant a visit after reviewing a preliminary questionnaire returned by those institutions that were interested in providing information. The final, and most important step, is an on-site visit to collect more fine-grained information on an institution's curation capabilities.

Potential partners consist of institutions that either currently curate archaeological collections, or have an interest in curating archaeological collections. Military installations or other DoD/USACE facilities were not included on the list of potential partners since these institutions' primary mission is not the long-term curation of archaeological collections; their primary function is not archaeological collections

management, staff are not always available to care for the collections, and public education and use of the collections cannot always be assured. Private, for profit archaeological contracting companies were also not contacted because they are considered temporary curators, not permanent repositories.

Summary of Methods

To conduct the project, St. Louis District divided the U.S. into two parts: east and west. The western part, or Phase I, of the Curation Options Project encompasses the western U.S. and Maryland and Virginia. The project area was in part defined by the project area of a concurrent national inventory of DoD Archaeological collections, also conducted by the St. Louis District. Staff from the St. Louis District visited 50 potential partners out of the 311 that were contacted in 22 states (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Louisiana, Maryland, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Virginia, Washington, and Wyoming) during 1996 and 1997. Phase II continued with the on-site visits, beginning in March of 1998, and is concentrating on the remaining 28 states in the eastern and central portions of the U.S., the District of Columbia, and Puerto Rico.

During a visit to each institution, St. Louis District assessment teams collected information on; 1) the architecture and building systems, 2) collections management practices and policies, and 3) administrative structure of each institution. Chapters for each state (Chapters 4 to 25), present a summary of each potential partner visited in that state.

Editor's Note:
As previously mentioned, fieldwork for this project was conducted during 1996 and 1997. Information presented in this report includes institutional facility improvement plans, if they existed, as they were described to the St. Louis District during the fieldwork phase in 1996 and 1997. During Summer 1999 St. Louis District staff contacted each of 16 institutions that had indicated some form of near-future improvement activities. This updated facilities information is presented at the end of each applicable institution summary.

Curation Options

The original guidance for the project required that all states in the Phase I project area be visited so that at least one potential partner could be identified. Based on this guidance, St. Louis District assessment teams performed field visits to individual institutions between July 1996 and October 1997. Of the 50 institutions visited, a total of 25 are suggested to potentially serve as partners. Some of these institutions would require modifications to their existing facilities, collection management practices, or staff. Twenty-four institutions constitute St. Louis District's "Individual State Option" recommendation. The "Individual State Option," in addition to identifying one

repository per state, also suggests two potential partnering institutions each for California and Texas (a total of 24 institutions), because of the volume of DoD/USACE archaeological material within those states and the states' size and diversity. Arizona has two institutions that have good potential for partnership – either could be chosen and both are suggested as a potential partner. A "Northern" California partner option is not provided since the only institution that was visited there, the Phoebe Hearst Museum, later withdrew from the project after the on-site visit.

In addition to the "Individual State Option," St. Louis District also suggests that two additional options be considered: (1) Mixed Option and (2) Regional Option. Both scenarios are based on the assumption that one partner in each state, and potentially multiple partners in California and Texas, is willing and capable of entering into a long-term agreement with the federal government, and that negotiations for such an agreement result in the successful formation of a partnership. The Mixed Option, as presented in this report, is composed of both individual state and regional partners and includes 18 suggested institutions. The Regional Option, as presented in this report, is composed of potential regional partners and consists of 10 suggested institutions. For both the Mixed Option and the Regional Option, a number of scenarios are possible, although only one scenario for each option is presented in this report. Implementation decisions may require consideration of a number of variables, including some outside the scope of this project. Proposed state partners in the Individual State Option are as follows.

Individual State Option

Alaska.....University of Alaska Museum, Fairbanks

Arizona .....Museum of Northern Arizona, Flagstaff
or ...Arizona State Museum, University of Arizona, Tucson

California
Northern.....Not Determined
Central .....Bowers Museum of Cultural Art, Santa Ana
Southern .....San Diego Archaeological Center

Colorado .....University of Colorado Museum, Boulder

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Idaho .....Idaho Museum of Natural History, Idaho State University, Pocatello

Kansas.....Museum of Anthropology, University of Kansas, Lawrence

Louisiana.....Louisiana Division of Archaeology, Baton Rouge

Maryland.....Maryland Archaeological Conservation Facility, Jefferson

Patterson Park, St. Leonard

Montana .....Museum of the Rockies, Montana State University, Bozeman

Nebraska .....University of Nebraska State Museum, Lincoln

Nevada .....Desert Research Institute, Las Vegas

New Mexico.....The Museum of Indian Arts and Culture, Santa Fe

North Dakota .....North Dakota Heritage Center, Bismarck

Oklahoma .....Museum of the Great Plains, Lawton

Oregon.....Oregon Museum of Natural History, University of Oregon, Eugene

South Dakota .....South Dakota State Archaeological Research Center, Rapid City

Texas

Western.....Museum of Texas Tech University, Lubbock

Eastern .....Texas Archaeological Research Laboratory, University of Texas, Austin

Utah .....Utah Museum of Natural History, University of Utah, Salt Lake City

Virginia.....Virginia Department of Historic Resources, Richmond

Washington.....Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

Wyoming.....Department of Anthropology, University of Wyoming, Laramie

Mixed Option

The first alternative to designating at least one partner in each of the 22 states visited by St. Louis District is the Mixed Option. The Mixed Option would designate 18 institutions to serve the 22 states evaluated. Institutions presented as potential partners in this option have been suggested based on several considerations. These considerations include volume of DoD/USACE collections recovered in each state, and the suitability of potential partners in each state, as compared with neighboring states. Proposed regional partners in Montana and Washington would provide curation services for DoD/USACE archaeological collections from one or more nearby states in addition to DoD/USACE archaeological collections from Montana and Washington, respectively. All other proposed partners would provide curation services for DoD/USACE archaeological

collections only from the state in which the partner is located. Proposed partners in the Mixed Option are as follows.

Alaska.....University of Alaska Museum, Fairbanks

Arizona/Utah.....Museum of Northern Arizona, Flagstaff
or...Arizona State Museum, University of Arizona, Tucson

California
Northern.....Not Determined
Central .....Bowers Museum of Cultural Art, Santa Ana
Southern .....San Diego Archaeological Center

Colorado .....University of Colorado Museum, Boulder

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Idaho .....Idaho Museum of Natural History, Idaho State University, Pocatello

Kansas.....Museum of Anthropology, University of Kansas, Lawrence

Louisiana.....Louisiana Division of Archaeology, Baton Rouge

Maryland .....Maryland Archaeological Conservation Facility, Jefferson Patterson Park, St. Leonard

Montana/Nebraska/North Dakota/South Dakota/Wyoming
Museum of the Rockies, Montana State University, Bozeman

Nevada .....Desert Research Institute, Las Vegas
New Mexico.....The Museum of Indian Arts and Culture, Santa Fe

Oklahoma.....Museum of the Great Plains, Lawton

Texas
Western.....Museum of Texas Tech University, Lubbock
Eastern .....Texas Archaeological Research Laboratory, University of Texas, Austin

Virginia.....Virginia Department of Historic Resources, Richmond

Washington/Oregon....Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

Regional Option

The second alternative to designating at least one partner in each of the 22 states visited by St. Louis District is the Regional Option. The Regional Option would designate 10 institutions to serve the 22 states in Phase I. Again, institutions presented as potential partners in this option have been suggested based on several considerations. These considerations include volume of DoD/USACE collections recovered in each state, suitability of potential partners in each state, as compared with neighboring states, and economy of scale achieved by consolidation. The proposed partners in Arizona, California, Kansas, Maryland, Montana, Texas, Utah, and Washington would provide curation services for DoD/USACE archaeological collections from one or more nearby states in addition to DoD/USACE archaeological collections from the state within which the partner is located. Only Alaska and Hawaii would provide curation services for DoD/USACE archaeological collections from a single state. Proposed partners in the Regional Option are as follows.

Alaska.....University of Alaska Museum, Fairbanks

Arizona/New Mexico ..Museum of Northern Arizona, Flagstaff
or ...Arizona State Museum, University of Arizona, Tucson

California/Nevada San Diego Archaeological Center

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Kansas/Oklahoma .....Museum of Anthropology, University of Kansas, Lawrence

Maryland/Virginia .....Maryland Archaeological Conservation Facility, Jefferson Patterson Park, St. Leonard

Montana/Nebraska/North Dakota/South Dakota/Wyoming
Museum of the Rockies, Montana State University, Bozeman

Texas/Louisiana .....Texas Archaeological Research Laboratory, University of Texas, Austin

Utah/Colorado .....Utah Museum of Natural History, University of Utah, Salt Lake City

Washington/Idaho/Oregon
Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

The central reason for proposing two additional curation scenarios is the economy of scale, primarily in cost savings, to be realized in long-term collections management. Although the Mixed Option and the Regional Option may not appear to provide much short-term savings, the funds saved in annual maintenance should be considerable over the long-term. All three scenarios and the associated proposed institutions are summarized in Chapter 26 Summary and Options, Table 26.1.

The St. Louis District suggests that these potential partners would provide high-quality professional collections management services to DoD and USACE, pending modifications to their existing curation programs and/or facilities. All partners have the capability to manage the collections for DoD/USACE and ensure their safety. In addition, DoD/USACE would increase or in some cases create administrative control over their archaeological collections. Finally, adopting any of the options presented would not only ensure long-term curation, but provide access for Native Americans, national education programs, interpretive programs, and the general public who have invested considerably in these national heritage collections.

Acknowledgments

St. Louis District thanks the many individuals and departments that participated in this project. Most particularly we are grateful to the many institutions that we visited, and the time and effort they took in answering our many questions. St. Louis District thanks the Deputy Under Secretary of Defense, Environmental Security, Ms. Sherri W. Goodman and the U.S. Army Corps of Engineers-Civil Works, willingness to support this data-gathering effort for solving the problem of curating the Department of Defense's large and diverse archaeological collections. In addition, Mr. Charles R. Smith (Assistant for Environment and Regulatory Affairs in the Office of the Assistant Secretary of the Army [Civil Works]), and Mr. Paul Rubenstein (Historic Preservation Officer for the U.S. Army Corps of Engineers) were instrumental in establishing the Corps of Engineers as a partner with the Department of Defense, in this endeavor to preserve a portion of this nation's cultural heritage. Finally, we would like to thank Mr. Bruce DeGrazia, Mr. Peter Boice, Mr. Curtis Bowling, Ms. Toni Patton-Williams, Ms. Mary Bandziukas, Ms. Paula Massouh, and Ms. Marie Bourassa of DUSD(ES)'s staff for their guidance, assistance, and long-term support of the project and its goals. Mr. Chuck Wright, Dr. David Guldenzopf and Mr. Stan Bond (U.S. Army), Ms. Kathleen McLaughlin, Mr. Bernard Murphy, and Ms. Annie Griffen (U.S. Navy), Ms. Lynn Engelman, Ms. Stephanie Stevenson, and Mr. Doug Ripley (U.S. Air Force), Ms. Nancy Niedernhofer (National Guard Bureau), and Mr. Bob Hobson (Industrial Affairs and Installations) also provided much needed guidance and support.

1

Introduction

Initiative

The long-term care and use of archaeological collections, archaeological resources and associated records, have often been neglected obligations of archaeological fieldwork since academic archaeology began assisting federal agencies as far back as the beginning of the 20th century. Throughout the century, federal agencies sponsored regulatory archaeological projects that generated massive amounts of materials and records. Although there are laws and regulations directing the government to care for these national heritage assets, the practical fact is that most are not well-cared for. Today many of these materials and records are at risk of disintegration in repositories across the U.S. due to a lack of funding and staff to care for the collections.

In a singular department-wide effort to gather information on the available options for addressing the problem of the long-term curation of their archaeological collections, the Department of Defense (DoD) and the U.S. Army Corps of Engineers (USACE) have joined together to fund a multi-year, nationwide, data-gathering project to identify potential curation partners in each state. The Deputy Under Secretary of Defense, Environmental Security, the Assistant Secretary of the Army, Civil Works, and the U.S. Army Corps of Engineers, Director of Civil Works requested that the U.S. Army Corps of Engineers, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (MCX-CMAC), St. Louis District, create a program to identify these potential partners. With this support, the Curation Options Project was begun. St. Louis District was directed by DoD and USACE to proceed with the project to identify at least one partner in each state. They also encouraged the St. Louis District to suggest other ways to address the long-term curation of DoD and USACE archaeological collections. St. Louis District then devised a multi-step process to select institutions to visit, to assess those institutions during a field visit, and finally, to generate recommendations on potential partners in each state.

Evaluation Process to Address the Problem

Phase I of the Curation Options program and fieldwork is the first part of an effort to identify suitable institutions who possess professional capabilities to house the DoD's archaeological collections. This work was conducted between July 1996 and October 1997 and includes assessments of partners in the following states: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Louisiana, Maryland, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Virginia, Washington, and Wyoming (Figure 1.1).

At the beginning of the project St. Louis District created an evaluation process that was consistently applied to evaluate institutions in each state. The evaluation process consists of three steps (1) primary screening; (2) secondary screening; and (3) on-site visits. Primary screening focused on compiling a master list of institutions that currently curate archaeological collections or have expressed an interest in being considered a potential partner. Institutions on the list included public and private museums or universities, and other state or federal agencies. The initial screening list was compiled from institutions listed in directories published by the American Association of Museums, the American Anthropological Association, the Society for American Archaeology, and other repository information contained in St. Louis District's files. The initial list of potential Phase I partners to house DoD/USACE archaeological collections contained 311 institutions.

For the secondary screening, St. Louis District contacted each of the 311 institutions by telephone to determine if they were interested in participating in the project. If they expressed an interest, St. Louis District sent them a preliminary questionnaire (Appendix 1). The questionnaire addresses issues such as the mission of the museum or repository, the scope of collections, what kinds of archaeological holdings, if any, were present, composition of staff, and any outreach programs. For those institutions that returned the questionnaire, the answers were scored (Appendix 1). Institutions that were not interested, did not return the preliminary questionnaire, or had returned a questionnaire but had limited resources compared to other institutions in that state, were eliminated from further consideration. Through this process, St. Louis District identified 50 institutions from the original 311 institutions that appeared to be strong candidates for curating DoD/USACE collections (see Chapter 3 for a list).

For the remaining 50 institutions, St. Louis District scheduled a field visit to collect information through staff interviews and personal observation. Prior to the fieldwork, St. Louis District staff intended to visit four institutions per state. However, once the project began, St. Louis District staff realized that few states had four institutions that were interested, much less qualified under existing federal curation regulations such as 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections). The number of institutions actually visited per state varied from one to eight, with an average of two. During the project, the technical team collected the same information for each institution so that meaningful and consistent comparisons between institutions could be made.

The field team consists of experts in three areas, architecture, collections management, and administration. These three critical subject areas provide a concise and pointed overview of an institution necessary to determine the acceptability and suitability of that institution to provide long-term curation services to DoD and USACE. The architect assessed the building as a whole structure, and its support systems including the fire detection, fire suppression, security, plumbing, heating, ventilation, and air-conditioning (HVAC).

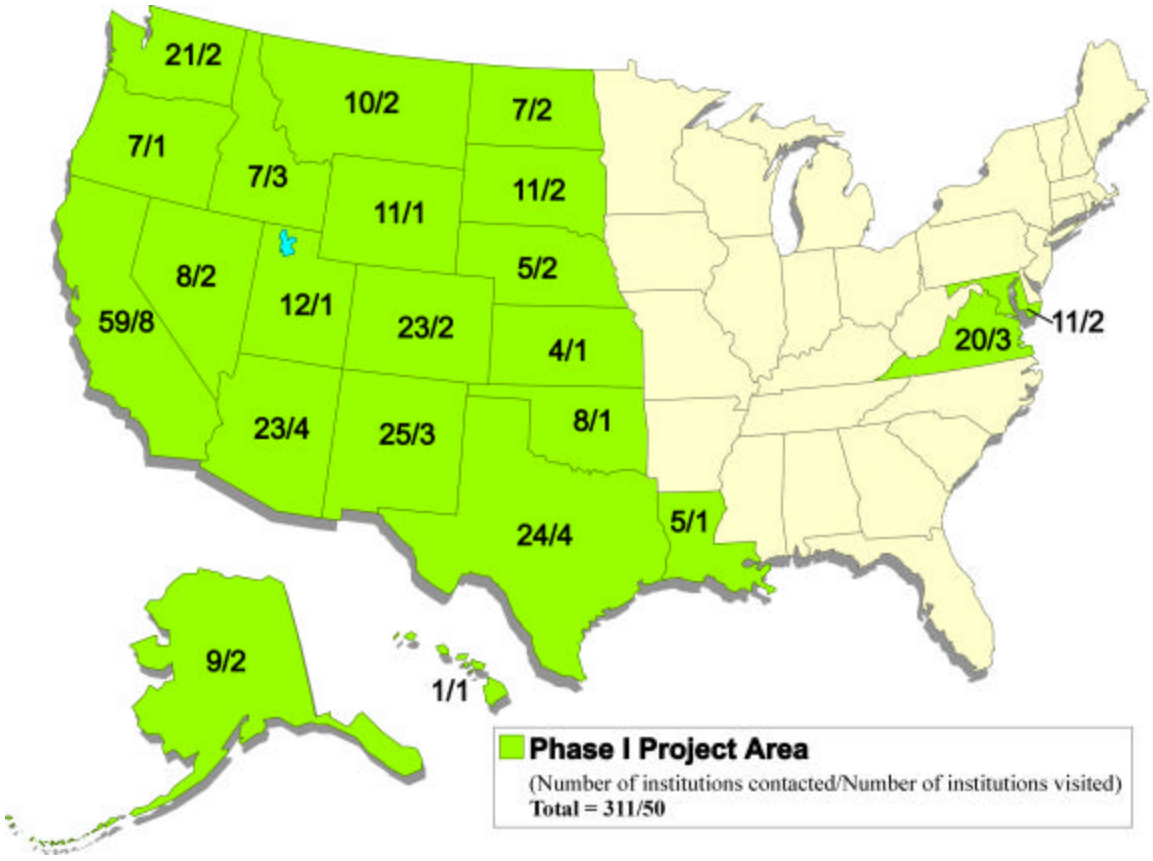


Figure 1.1. Phase I Project Area

The collections management specialist collected information on an institution's staff, collections management policies and practices, and support services. The administrative specialist collected information on bureaucratic infrastructure including outreach/education programs, whether the institution conducted fund raising, whether any restrictions to expansion existed, and what scope and kinds of contributions an institution was willing to contribute to a partnership.

The architectural and collections management evaluation was performed to determine if the institution met the minimum requirements of 36 CFR Part 79. The goal of the administrative questions was to determine what each institution expected from DoD and USACE in a partnership to curate archaeological collections, and what we could expect from them.

St. Louis District scored each of the three critical subject areas. The answers to these questions were then entered into a Decision Support Model (DSM) created by the St. Louis District and its computer modeling and database design contractor, TASC. Reports generated by the DSM provide composite quantitative scores of each institution based on the three areas previously mentioned. The scores also permit comparisons among institutions on each variable in the model, although these are not straightforward and must be extracted from the DSM output. The most appropriate use of the DSM scores is as gross composite quantitative measures of each institution. Thus, the DSM serves best as a

supplemental tool to assist in determining the best potential partner in a state. For a more detailed explanation of how DSM scores were calculated, see Appendix 2, Decision Support Model Workshop Documentation.

Three types of data collected for this project thus form the basis for determining the best potential partner in each state. These data types include (1) descriptive data, which is presented as the text of this report, (2) intangible factors, e.g., relative location, professionalism, potential for community support, atmosphere, and (3) DSM scores. We thus emphasize that DSM scores are marginally important to the overall determination, but descriptive data far outweighs any other form of data. Intangible factors and DSM scores were consulted as supplements.

Long-Term Benefits

By choosing a partner in each state that can properly provide long-term care for their archaeological collections, DoD and USACE will benefit from program uniformity and high quality care. The level of care can be standardized through use of federal standards that are enforced through binding agreements that include annual inspections and stress accountability from both the repository, DoD, and USACE. By reducing the total number of repositories that currently curate DoD and USACE archaeological collections, the management of these collections will be streamlined and the overall funding should be reduced. Once the collections are rehabilitated, processed into the repository's catalog and accession systems, and annually maintained, scientific and public access to the collections will be possible, in many cases for the first time. Access not only includes use of the physical objects and records, but the creation of education programs that reach out to the public in their own local community through internet web sites or exhibits that are available to visitors at museums, or a range of venues (e.g., public schools, visitor centers, etc.). The collections could be used to create programs for the public to understand why DoD and USACE have archaeological collections, what kinds of information we can derive from these collections, and what we can learn about both history and prehistory using archaeological materials and records. Equally, and perhaps more importantly, the collections are a national heritage asset that can be used in primary and middle school educational programs to foster creative thinking, a major cornerstone of all learning.

Report Organization

The following Methods section details how St. Louis District determined which institutions to contact for the project, and which ones were selected to visit. The computer-based decision support model is also explained. It was constructed to provide a quantitative method, supplemental to the textual information, to potentially compare each of the repositories that were visited.

State-by-state summaries of each repository visited are then presented that briefly describe potential partners in that state. The state-by-state analyses are based on the original goal of the project, that is, to find at least one potential partner in each state.

2

Methods

With hundreds of potential partners in the 22 states in the Phase I project area, the St. Louis District needed an evaluation process to identify and assess potential partners. A three-step process was created that moved sequentially from preliminary screening to secondary screening to on-site repository evaluation. During each step some potential partners were eliminated.

A potential partner is defined as an institution whose mission statement includes long-term curation of archaeological, ethnographic or anthropological collections. Thus, potential partners that do not curate archaeological collections as part of their mission were not considered. One of the most important factors considered was whether the institution embraced archaeological collections as a core part of their mission, thus intimately linking the institution's continued existence with those collections. This factor weighed far more heavily when considering an institution that only secondarily curated archaeological collections.

Preliminary Screening

The preliminary screening began by compiling a master list of institutions that might be interested in being considered potential partners. The master list also included those institutions that had directly expressed an interest to the St. Louis District in being considered a potential partner. Institutions were eliminated that did not have archaeological curation as a part of their mission, that were extremely small, and/or did not have regular hours of operation. These types of institutions would be unable to provide high-quality professional care, access to the collections, and would probably limit the use of collections by the public, educators, researchers, and DoD and USACE. Additionally, the St. Louis District staff believe that the public good is better served by an institution that can meet DoD and USACE curation and access needs all year round through regular hours. Many of the institutions that were screened could not successfully carry out the needed rehabilitation and annual maintenance tasks required to provide long-term curation services; these institutions were eliminated.

Directories published by the American Association of Museums, the American Anthropological Association, and the Society for American Archaeology were reviewed to identify institutions that curate archaeological, anthropological, or ethnographic collections. Other existing St. Louis District repository information generated by numerous other curation-related projects was also consulted. Eventually a total of 311 institutions were identified to be contacted; these institutions constituted the initial list. The institutions consist of public and private museums, public and private universities, and state or federally operated archaeological curation facilities.

The 311 institutions were contacted by telephone, state-by-state, to determine their interest in possibly being considered a potential partner. Institutions that expressed an interest were sent a preliminary questionnaire that was then used to further narrow the list of institutions that could be visited within budgetary and time constraints (Figure 2.1).

Secondary Screening

On the preliminary questionnaire, information was requested on the institution's mission statement, scope of collections, archaeological holdings, support facilities, staff, and outreach programs. The questionnaire was developed to assess a potential partner's general capabilities and strengths (see Appendix 1). The completed questionnaires were evaluated using a grading sheet and a standard set of criteria that reflected general policies and practices that each potential partner was expected to possess. The criteria were drawn from the self-assessment forms developed by the American Association of Museums and the National Park Service's Museum Handbook. Each criterion was individually scored using the information the institution provided, and then totalled. Institutions with the highest scores were visited.

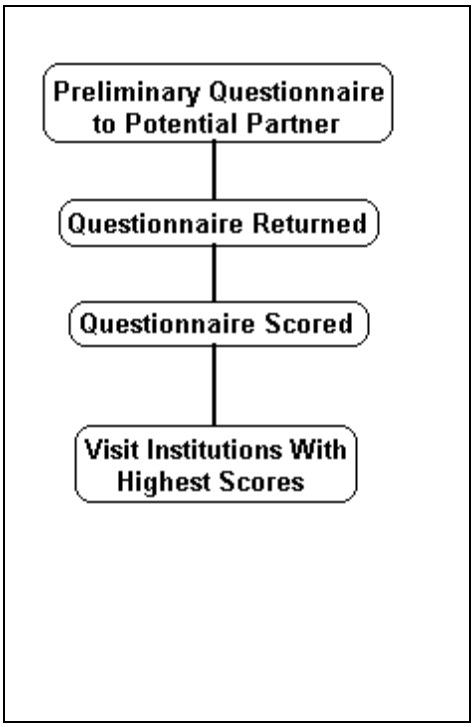


Figure 2.1. Screening Process

An absolute minimum total score was not used below which an institution was eliminated from further consideration and above which an institution was selected to visit. Doing so would be too rigid a standard given the variability of institutions that might be interested in being considered a potential partner. A minimum of one institution per state (Kansas, Oklahoma, Louisiana, Wyoming, Oregon, and Utah,), and a maximum of eight (California) in each state that expressed an interest in the project were then contacted and physically evaluated by the St. Louis District. For those states where only one institution was visited, that institution was either the only one that was interested in participating in the project or had a significantly better score when compared to other institutions that returned a questionnaire from the same state.

After all the preliminary questionnaires in a state were scored, the project budget and schedule directly influenced how many institutions in a state could be visited. At the conclusion of the secondary screening, 50 repositories in 22 states were identified for on-site evaluation in Phase I. St. Louis District staff felt that these institutions, given federal curation standards and the capabilities they possessed, could be reliable professional partners in a curation program.

On-Site Repository Evaluation

For the 50 institutions that were visited, the capabilities of each potential partner were assessed. An integrated tripartite facility evaluation procedure was developed consisting of (1) a review of the existing architecture and its building systems, (2) a review of the collections management staff, their capabilities and training, and written collections management policies and practices, and (3) a review of the administrative structure of the institution with respect to curation. The architectural and collections management evaluation was performed to determine if the institution met the minimum requirements of 36 CFR Part 79.

The architect performed a building evaluation through observation and interviews with the institution's staff. The building evaluation focused on the general adequacy of the fire suppression system, fire detection, HVAC systems, security, building construction and structural adequacy, plumbing, building egress, handicap accessibility, regulatory and site issues, and space use. The information was recorded on a building evaluation form developed by the St. Louis District (see Appendix 1). The goal of the building evaluation was to determine the suitability of the internal systems and external structure to provide a physical environment that would ensure the proper long-term care of the DoD and USACE archaeological collections.

The collections management specialist collected information on the scope of collections, environmental controls, archaeological collections storage, mission statement, composition of staff, record keeping, collections support services, and collections management policies. Again, interviews with the staff and personal observation were used to collect data. The data was recorded on an evaluation form developed by St. Louis District. The lengthy form addresses the broadest range of topics of the three critical subject areas of interest (see Appendix 1). The review of the policies and practices provided information on the institution's internal administrative structure related to archaeological collections management.

The administrative specialist collected information through interviews with the administrative and technical staff. Data were collected on administrative capability, fund raising, outreach programs, possible contributions to a partnership, cooperative agreements, and budget and real estate issues. The goal of the administrative questions was to determine what each institution could contribute to such a archaeology/curation partnership, and what might be expected from DoD and USACE in a partnership to curate archaeological collections. The answers permitted St. Louis District to determine what DoD and USACE might expect from the institution with respect to shared costs, fees, and use of collections. The data was recorded on a administrative questionnaire developed by the St. Louis District (Appendix 1).

All project data gathered during the facility evaluations were numerically scored by each of the subject matter specialists in their area of expertise (Appendix 1) for entry into a computerized Decision Support Model (DSM) used to assist in comparing the repositories. The DSM provides a mechanism to quantify the information collected and then compare the institutions against each other regardless of state, or by state, or other grouping.

Three types of data collected for this project form the basis for determining the best potential partner in each state. These data types, in order of significance, include descriptive data, intangible factors, and DSM scores. We emphasize that DSM scores are important to the overall determination, but descriptive data – the text of this report – far outweighs any other form of data. Intangible factors and DSM scores were consulted as supplements.

Decision Support Model

To assist the St. Louis District in analyzing the large amount of information gathered during the Phase I fieldwork, a software-based decision support model (DSM), *Expert's Choice*, was used. The DSM summary reports were generated by the St. Louis District computer modeling and database design contractor, TASC. Recommendations in this report are the St. Louis District's interpretations of the data collected during the project, with little weight placed on the DSM values. The most appropriate use of the DSM scores is as gross composite quantitative measures of each institution. Thus, the DSM serves best as a *supplemental* tool to assist in determining the best potential partner in a state.

The model's output scores each institution and is based on data from the architectural, collections management, and administrative forms (Appendix 1). These values can be grouped by state or aggregated into regions. The total DSM score for each institution ranges from 0.000 to 1.000: all things being equal, the higher the DSM value, the greater potential for a partnership advantageous to the federal government. However, while important for an overall evaluation of an institution, the DSM values do not, in and of themselves, constitute enough information to base a decision on, nor are they flawless in their presentation, and the reader's interpretation, of the score. Hence, DSM scores are important, but did not receive the most weight in the recommendations presented by the St. Louis District. For more detailed information on how DSM scores were derived, refer to Appendix 2, Decision Support Model Workshop Documentation.

The sections *Architecture*, *Collections Management*, and *Administration*, represent 20%,

30%, and 50% of the overall model, respectively (Table 2.1). This partitioning evenly allocates 50% of the model to technical considerations and 50% to administrative information. Once the theoretical model was finished, a series of hypothetical case studies were entered into the DSM. The theoretical model appeared to work well in these hypothetical cases. Institution DSM scores are listed in each of the state summary chapters, and a summary table for all institutions is located in Chapter 3 (Table 3.2).

Table 2.1. Decision Support Model

Architectural (20%)	*Collections Management* (30%)	*Administration* (50%)
Systems (14.7%)	Archaeological Collections (14.2%)	Administrative Capability (32.3%)
Fire suppression	Scope of collections**	Staff authority to contribute to partnership
Fire detection and alarm system	Environmental controls	Staff to write/track grant proposals
Building HVAC system	Collections storage	Staff for fund-raising
Security system guidelines		% staff administrative
		% staff archaeological collections management
Structure (4.1%)	Administrative (14.2%)	Participated in similar state, federal, DoD projects
Fire safety and building Construction	Mission statement**	Current agreements for federal archaeological collections
Hazardous building components	Composition of staff	Willingness to contribute to partnership**
Building structural adequacy	Administrative record keeping	
Plumbing/drainage/waterproofing		Budget Issues (1.8%)
		% budget toward administration
Other (1.2%)	Collections Management (1.6%)	% budget toward collections management
Building egress	Range of support facilities	Budget deficit in last 5 years
Handicap accessibility	Collections management policies	
Regulatory and site problems	Associated archaeological documentation	Programs (12.8%)
	Administrative records and archaeological document storage	Current types of outreach programs
		Experience working with Native Americans
		Programs for primary/secondary schools
		Institution Details (3.1%)
		Institution type (local, state, federal)
		Property ownership
		Property use restrictions

** Showstopper – if this criterion was not met, institution was not considered.

3

State Collections Totals and Decision Support Model Summaries

The total extent of project area DoD/USACE archaeological collections is presented in Table 3.1. This information was compiled from data collected by the St. Louis District in (1) a national inventory of DoD archaeological collections, and (2) a national survey of USACE archaeological collections. The St. Louis District reports from which this information was derived are listed in Appendix 3, DoD and USACE Archaeological Curation-Needs Assessment Reports.

In the following chapters, each institution is presented in alphabetical order, organized by state. Decision Support Model (DSM) values for each institution are presented in a summary at the end of each chapter. These DSM scores are summarized in Table 3.2, in this chapter. For one institution only administrative data were collected (South Dakota School of Mines and Technology), because it did not have a repository nor archaeological collections at the time of the visit.

Since St. Louis District's visit to the San Diego Repository Corporation, the institution has changed its name to the San Diego Archaeological Center (SDAC), has moved into a temporary repository, and has begun to accept collections. Based on information provided by the SDAC on their repository, St. Louis District has included a brief description of that facility in the California state summary chapter. Without complete information for each of the three sections of the Decision Support Model, however, the DSM value for this institution could not be provided.

Table 3.1. Amounts of Artifacts (Cubic Feet) and Records (Linear Feet) in the Department of Defense and U.S. Army Corps of Engineers Archaeological Collections for Phase I States

State	Army		Navy/Marines		Air Force		USACE		Total DoD and USACE	
	ft^3	linear ft.	ft^3	linear ft.	ft^3	linear ft.	ft^3	linear ft.	ft^3	linear ft.
Alaska	55	5	1	0	7	5	43	3	**106**	**13**
Arizona	264	21	22	3	122	4	30	5	**438**	**33**
California	1,036	131	2,957	332	411	293	1,711	148	**6,115**	**904**
Colorado	408	92	0	0	7	8	234	48	**649**	**148**
Hawaii	154	14	1,058	23	100	10	0	0	**1,312**	**47**
Idaho	0	0	0	0	1	2	269	23	**270**	**25**
Kansas	348	7	0	0	0	0	1,203	119	**1,551**	**126**
Louisiana	427	144	0	0	4	2	3,212	74	**3,643**	**220**
Maryland	74	11	237	17	1	1	53	1	**365**	**30**
Montana	0	0	0	0	1	3	392	73	**393**	**76**
Nebraska	2	1	0	0	1	1	1,388	55	**1,391**	**57**
Nevada	15	5	7	7	27	13	0	0	**49**	**25**
New Mexico	290	132	0	0	73	21	1,191	115	**1,554**	**268**
North Dakota	0	0	0	0	1	1	131	9	**132**	**10**
Oklahoma	442	87	0	0	0	0	2,572	93	**3,014**	**180**
Oregon	0	0	0	0	5	1	964	17	**969**	**18**
South Dakota	0	0	0	0	1	1	3,116	131	**3,117**	**132**
Texas	1,922	347	2	3	179	14	2,399	337	**4,502**	**701**
Utah	24	20	0	0	37	4	0	0	**61**	**24**
Virginia	455	31	151	19	5	1	395	19	**1,006**	**70**
Washington	68	13	212	8	0	1	6,860	395	**7,140**	**417**
Wyoming	0	0	0	0	156	61	0	0	**156**	**61**
Total	**5,984**	**1,061**	**4,647**	**412**	**1,139**	**447**	**26,163**	**1,665**	**37,933**	**3,585**

Note: The figures for the Army, Navy/Marines and Air Force are based on research funded through the Legacy Resource Management Program, and conducted by the St. Louis District. Figures for USACE archaeological materials and associated documentation are based on a St. Louis District national survey of USACE collections.

Table 3.2 Summary of Composite and Category Decision Support Model Scores for Assessed Phase I Institutions

State	Institution	Composite DSM Scores	Category Scores		
			Architecture	Collections Management	Administration
		(Max = 1.00)	(Max = 0.20)	(Max = 0.30)	(Max = 0.50)
Alaska	Alaska State Museum	0.7323	0.19464	0.26925	0.26845
	University of Alaska Museum	0.8526	0.19811	0.27348	0.38103
Arizona	Arizona State Museum, University of Arizona	0.7989	0.19839	0.29702	0.30352
	Arizona State University Archaeological Research Institute	0.6727	0.06907	0.22263	0.38098
	Museum of Northern Arizona	0.6838	0.09748	0.25697	0.32935
	Western Archaeological and Conservation Center, National Park Service	0.6714	0.19688	0.28319	0.19129
California	Bowers Museum of Cultural Art	0.9106	0.19839	0.29057	0.42166
	Fowler Museum of Cultural History, University of California, Los Angeles	0.6482	0.00758	0.26985	0.37081
	Joshua Tree National Park, National Park Service	0.8607	0.19846	0.29907	0.36316
	San Diego Archaeological Center	0.1881	not eval.	not eval.	0.18807
	Santa Barbara Museum of Natural History	0.8010	0.19658	0.29189	0.31254
	University of California, Riverside Department of Anthropology	0.4928	0.10673	0.19961	0.18649
	University of California, Santa Barbara	0.7350	0.19213	0.25697	0.28588
Colorado	Anasazi Heritage Center	0.6910	0.19617	0.24119	0.25360
	University of Colorado Museum	0.6656	0.06613	0.25406	0.34538
Hawaii	Bernice P. Bishop Museum	0.7013	0.08674	0.27276	0.34182
Idaho	Idaho Archaeological Survey	0.7111	0.19501	0.21670	0.29942
	Idaho Museum of Natural History	0.5507	0.06884	0.28438	0.19752
	University of Idaho Alfred W. Bowers Laboratory of Anthropology	0.5946	0.01590	0.21972	0.35899
Kansas	Museum of Anthropology, University of Kansas	0.7282	0.10724	0.28132	0.33962

Table 3.2 Summary of Composite and Category Decision Support Model Scores for Assessed Phase I Institutions, con't.

State	Institution	Composite DSM Scores (Max = 1.00)	Category Scores: Architecture (Max = 0.20)	Collections Management (Max = 0.30)	Administration (Max = 0.50)
Louisiana	Louisiana Division of Archaeology	0.5587	0.10077	0.15007	0.30787
Maryland	Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park and Museum	0.8784	0.19811	0.25770	0.42254
	Museum Resource Center, National Park Service	0.7462	0.19577	0.29189	0.25852
Montana	Montana Historical Society	0.6532	0.15385	0.28147	0.21791
	Museum of the Rockies, Montana State University	0.7639	0.19998	0.27027	0.29362
Nebraska	Nebraska State Historical Society	0.7514	0.14156	0.28271	0.32711
	University of Nebraska State Museum	0.7657	0.07564	0.26124	0.42881
Nevada	Desert Research Institute	0.7280	0.14386	0.25004	0.33411
	Nevada State Museum	0.7343	0.14067	0.26463	0.32886
New Mexico	Maxwell Museum of Anthropology, University of New Mexico	0.7688	0.16207	0.26187	0.34482
	Museum of Indian Arts and Culture	0.8152	0.19804	0.26187	0.35529
North Dakota	North Dakota Heritage Center, North Dakota Historical Society	0.7890	0.19846	0.29156	0.29895
Oklahoma	Museum of the Great Plains	0.7410	0.15573	0.26712	0.31814
Oregon	Oregon Museum of Natural History/Museum of Anthropology, University of Oregon	0.7285	0.15420	0.25406	0.32023
South Dakota	South Dakota School of Mines and Technology	0.2188	not eval.	not eval.	0.21880
	State Archaeological Research Center	0.5808	0.06181	0.21972	0.29926

Table 3.2 Summary of Composite and Category Decision Support Model Scores for Assessed Phase I Institutions, con't.

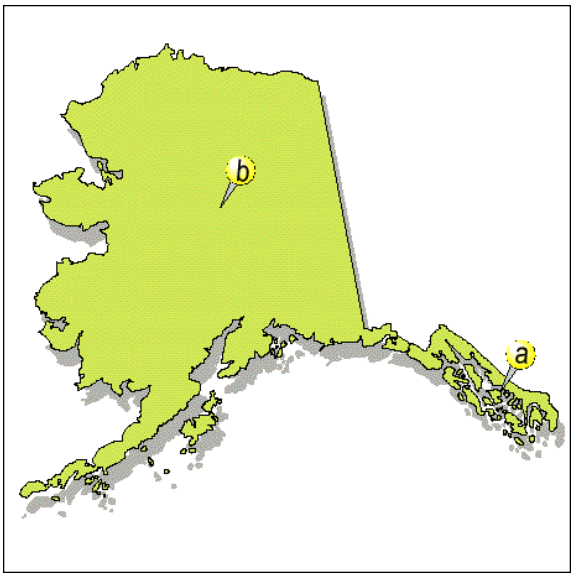
State	Institution	Composite DSM Scores	Category Scores		
			Architecture	Collections Management	Administration
		(Max = 1.00)	(Max = 0.20)	(Max = 0.30)	(Max = 0.50)
Texas	Corpus Christi Museum of Science and History	0.7078	0.15608	0.27072	0.28096
	Museum of Texas Tech University	0.7558	0.14619	0.29907	0.31058
	Southern Methodist Unversity Department of Anthropology	0.5390	0.09473	0.10185	0.34238
	Texas Archaeological Research Laboratory, University of Texas	0.6304	0.10318	0.19961	0.32761
Utah	Utah Museum of Natural History, University of Utah	0.6807	0.09802	0.25697	0.32575
Virginia	Archaeological Research Unit, Virginia Commonwealth University	0.5547	0.08098	0.19961	0.27411
	Virginia Department of Historic Resources	0.7460	0.19998	0.19976	0.34627
	Virginia Museum of Natural History	0.7181	0.14309	0.24579	0.32918
Washington	Thomas Burke Memorial Washington State Museum	0.9024	0.19804	0.28256	0.42176
	Washington State University Museum of Anthropology	0.5782	0.05107	0.25406	0.27302
Wyoming	Department of Anthropology, University of Wyoming	0.3999	0.04877	0.11894	0.23220

4

Alaska

Archaeological Materials (in cubic feet)

Department of Defense	**63**
USACE	**43**
TOTAL VOLUME	**106 ft^3**



Number of Institutions Contacted **9**

Institutions Assessed

a. Alaska State Museum, Juneau

b. University of Alaska Museum, Fairbanks

Background

The state of Alaska presents a unique circumstance for the curation of DoD/USACE archaeological collections. The state is both culturally and geographically diverse. Alaska's diverse cultural heritage demands delicate managerial decisions. Also, the state's rugged climate and geography make travel difficult, which greatly affects the accessibility of DoD/USACE collections. The facilities contacted by St. Louis District in Alaska are listed in Table 4.1, along with the reason(s) some were not selected for an on-site visit.

Table 4.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Alaska State Museum, Juneau				
Alaska Indian Arts Inc., Haines	X			
Alutiiq Musueum and Archaeological Repository, Kodiak Island			X	
Anchorage Museum of History and Art, Anchorage			X	
Baranov Museum, Erskine House, Kodiak	X			
Kotzebue Museum, Inc., Kotzebue	X			
Pratt Museum, Homer			X	

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
South Central Alaska Museum of Natural History, Eagle River			X	
University of Alaska Museum, Fairbanks				

Note: Locations visited indicated in **Bold**

Comments

Both institutions visited are part of Alaska's state government. The University of Alaska Museum is affiliated with the University of Alaska, Fairbanks. The Alaska State Museum is part of the Division of State Libraries, Archives, and Museums. Table 4.2 encapsulates data from the DSM. Important points to consider for each facility are presented in the following discussion.

Alaska State Museum, Juneau

Architectural Summary

Site Conditions

The Alaska State Museum (ASM) is located in a near downtown area of Juneau, Alaska. A pedestrian garden area leads visitors from the street to the museum entry. The parking lot has 25-30 visitor parking spaces. A loading area to the basement level is located on the south side of the building. A "temporary" trailer building is located at the rear of the property. The site is well maintained.

The existing museum property has little room for expansion. Adjacent property to the west, or rear, of the ASM grounds could be purchased as part of an expansion plan.

Building Condition/Structural Adequacy

The original museum building was constructed in 1967. An addition was built in 1994. The expansion was part of an HVAC improvement project. After a boiler explosion, the museum's HVAC equipment was replaced and relocated in the new addition. Additional storage was created in the expansion. The existing boiler room was abandoned and is now used as storage. No remaining damage was observed from the accident.

The two story structure is supported by an interior steel frame and tilt-up concrete panels on the perimeter. The exterior concrete panels have relief designs on their surface. Only a few windows were added in the 1994 addition. The roof is a flat built-up system with tin flashing and interior downspouts. The exterior of the building is in good condition.

The ASM building appeared to be in good structural condition. The first and second floor exhibit spaces are well kept. The front desk, entry area has been renovated over the last year. The collections storage area occupies approximately 3,000 ft^2 of the 30,000 ft^2 museum.

Code Requirements/Egress/Accessibility

The building appears to meet the appropriate building, life-safety, and accessibility requirements (type II, mixed use B, S-1). A single fire stair provides for emergency egress. Recent improvements include twin exterior wheelchair ramps, power assisted entry door openers, and renovated first floor restrooms to comply with the Americans with Disabilities Act (ADA) standards. A passenger elevator provides ADA access between floors. A ramp descends from the second floor exhibit space to the first floor foyer. While the ramp is not ADA compliant, it does provide an additional means of access between floors.

HVAC Systems

The entire HVAC system was replaced and relocated to the 1994 addition. The system includes oil fired steam boilers and electric chilled water air conditioning. The modern system is computer controlled, filtered, and uses a separated boiler unit for relative humidity control. These new systems are connected to the original ductwork throughout the ASM building. The HVAC improvements at the ASM represent one sensible model for systems improvements of existing museum and curation facilities.

Fire Suppression and Detection

ASM is equipped with smoke and heat sensors as well as manual alarms. The alarm system is wired to central in house location, local security company, and to the local fire department. The collections storage area is equipped with both dry-pipe sprinkler and halon fire suppression systems. Both systems are active. Fire extinguishers are located throughout the building.

Security System

ASM is protected by motion detectors and intrusion alarms. The exhibit areas are monitored by video cameras. Sensitive areas of the facility are restricted by keypads and key access. The collections storage area is separated from the public area, locked, and secured by an additional security gate. All of ASM's security systems are wired to a central in house location, local security company, and the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The Alaska State Museum curates ethnographic, anthropological, archaeological, historic, fine art, and natural history collections. The museum curates only a limited amount of archaeological collections, most of which were gifts from private donors. The strength of the Alaska State Museum is its collection of ethnographic objects.

Archaeological Collections Storage

The museum is currently using two storage areas for its collections. One is located in an Annex building, where oversized collections are stored. This area is primarily used for natural history collections and contains only one archaeological object. The museum's archaeological collections consist of approximately 1,000 items, most of which are from private donations. The museum's main collections storage area is located in the basement of the museum building. Collections are arranged by material type and culture group, and are stored in metal cabinets and on open wooden shelving units.

Environmental Controls

The museum's collections are stored and exhibited in areas with adequate environmental controls including heat, air conditioning, and humidification systems. The staff monitors relative humidity and temperature on a regular basis. Relative humidity is monitored using hygrothermographs, which are calibrated monthly.

Range of Support Facilities for Archaeological Collections

The museum does not have a laboratory or processing area that could be used to process new archaeological collections. Since the museum does not curate sizable archaeological collections, this has not been an issue in the past. However, if the museum needed to process a large amount of new archaeological material, this would pose a problem. The museum does have a designated collections storage area and a small conservation lab.

Composition of Staff

Staff members include a Curator, a Registrar, and a Conservator. The museum does not have a Collections Manager. The museum has many volunteers, one of which is an archaeologist. The museum staff were unable to estimate what percentage of their time was devoted to archaeological collections management. The museum does not have a Director on-site. Officially, the Director of the State Libraries, Archives, and Museums, also serves as the Director of the Alaska State Museum.

Administrative Record Keeping and Storage

The museum maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative record keeping is the responsibility of the Registrar. Administrative records are kept in the collections storage area inside metal file cabinets. Original accession ledgers are placed in a fire-proof safe located in the collections storage area. Collections information is also maintained in an ARGUS database. Duplicate copies have been made of accession records, catalog information, and the ARGUS database. Administrative records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

ASM does not have large collections of associated archaeological documentation. Most of the museum's archaeological collections were gifts from private donors. Therefore, the documentation accompanying these collections has consisted mainly of correspondence and collector notes. These materials are stored with the accession files, in metal file cabinets, and are protected from fire, theft, damage, and destruction.

Collections Management Policies

The museum has adequate collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

ASM was founded in 1900 as a territorial museum and opened to the public in 1922-23. The current building was constructed in 1967. Although the museum curates Tongass National Forest archaeological collections, there is no agreement between the museum and the forest for curation of these collections. Therefore the museum has never participated in a project similar to the Curation Options project.

Real Estate

ASM is part of the State Libraries, Archives, and Museums Division of the State of Alaska. The building and museum are owned by the state of Alaska. ASM is considering purchasing two vacant lots behind the museum for future expansion.

Administration

The Director of State Libraries, Archives, and Museums could financially commit the museum to a partnership with the Department of Defense (DoD) and the USACE. The Director of State Libraries, Archives, and Museums could also sign a cooperative agreement. The museum staff spend part of their time writing grants. The Chief Curator spends part of his time fund raising.

Outreach and Education Programs

Many school groups visit the museum's exhibits throughout the school year. Museum programs are geared towards 3-8 graders including those created for Alaska Archaeology Week. Through the *Potlatch* program in the Juneau schools, five teachers speak on what goes on in a potlatch, a social competition/feast between Native groups. A visit to the museum follows, supplementing these presentations. Third graders then host the second graders, serve native foods, and invite a Native elder to attend the potlatch.

ASM has consulted with Native groups as part of its Native American Graves Protections and Repatriation Act compliance activities. Native interpreters are used in the museum's galleries. ASM is a co-owner with clans in southeast Alaska of clan objects and provides storage space for these objects. Native people and students from the University of Alaska, Southeast, use the collections in their research.

Contributions

ASM could contribute local expertise, collections management skills, and existing relationships with Native groups to a partnership.

Notes

ASM lacks the storage capability to process and properly curate sizable amounts of new archaeological collections. While property could be acquired for expansion, another addition to the existing building seems unlikely at this time. The improved HVAC system is an advantage for the museum's programs and collections.

The strength of ASM is in ethnographic collections. The museum has excellent exhibits and creative outreach programs that serve a wide public. It should be recognized as a source of expertise in conservation, collections management, and exhibit development. These are all services that would help effectively maximize the use of DoD/USACE collections in Alaska.

University of Alaska Museum, Fairbanks

Architectural Summary

Site Conditions

The University of Alaska Museum (UAM) is prominently located on the University of Alaska's Fairbanks campus. A wooded area with a nature trail shields the north side of the building, a large open lawn extends to the east, and the south side provides a spectacular view of the Tanana Valley and the Alaskan Range. The museum parking lot is located across the street bordering the west edge of the site. The parking lot provides approximately 70 automobile spaces as well as area for bus and RV parking. A small staff parking lot and loading dock are located on the northwest portion of the property.

The museum is currently raising funds for a building expansion. The preliminary plans call for nearly doubling the existing museum building's space to the lawn area to the east. The new building will provide additional exhibit and collections storage areas.

Building Condition/Structural Adequacy

The existing building was constructed in 1980, as a 37,266 ft^2 all purpose-built museum facility. The lower level contains staff offices, laboratories, and the 7,610 ft^2 collections storage area. The main level contains administrative offices, museum gift shop, exhibit preparation areas, and the 10,000 ft^2 exhibit space.

The lower level provides the concrete foundation and frame for the upper level steel structure. The building envelope is constructed of prefinished aluminum panels and triple pane tinted glazing. The roof is a flat, built-up system with interior downspouts. The southern exposure of the building is susceptible to undesirable solar heat gain. The harsh Arctic climate presents uncommon challenges to the building.

The collections storage area in the lower level uses large compact storage units driven by electric motors. The seventeen year old structure appeared to be in good condition. However, heating/cooling, and plumbing piping are routed through the collections area. The museum staff have installed water detection devises under the storage cabinets to combat leakage problems.

Code Requirements/Egress/Accessibility

UAM was constructed to meet applicable building codes (Type II construction, mixed-use B, S-1, A-2.4). Two fire stairs provide for emergency egress. A passenger elevator provides access between the two levels. While the elevator allows for access to each level, its location in the service area of the building does not necessarily comply with the standards of the Americans with Disability Act. All public areas of the museum are easily accessible for the disabled. A disabled ramp provides access from the parking areas to the entry level of the museum.

HVAC Systems

The original 1980 HVAC system proved to be inadequate for the proper climate control of the museum and its collections storage area. An entirely new HVAC system was installed in 1994 and used the existing ductwork. Since completion, the new systems have dramatically improved the museum's staff ability to regulate the internal climate.

The university provides hot water for the museum's steam heat system. Electric chillers provide air conditioning for the building. The existing ducting is adequate, with filters used within the air handling system.

Fire Suppression and Detection

A manual and automatic fire detection system are present. Heat and smoke sensors are located throughout the museum and the collections storage area. The system is wired to the university's fire department.

A wet-pipe fire sprinkler system and fire extinguishers are installed throughout the building. The collections storage area is also separated by fire-rated partitions and doors. A halon fire suppression system in the fine arts collection area has been disengaged and replaced.

Security System

The museum is protected by monitors, motion sensors, keypads, and intrusion alarms. The security system is wired to the university's police service. Within the collections storage area, the storage cabinets are lockable and access is restricted. The security measures of the museum are adequate.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of UAM is "to acquire, conserve, investigate, and interpret specimens and collections relating to the natural, artistic, and cultural heritage of Alaska and the Circumpolar North." The museum's scope of collections includes botanical, natural history, zoological, ethnographic, and archaeological collections. UAM has large archaeological collections, approximately 66% of which are from federal lands.

Archaeological Collections Storage

UAM's collections storage area is located in the basement of the museum. A large motorized compact storage unit is used to house archaeological and ethnographic collections. Collections are stored on open shelving and inside metal drawers built into the compact storage unit. The compact storage unit itself was installed in 1980 when the museum was first opened.

Bulk collections, large objects, and uncataloged collections are stored on stationary shelf storage units around the perimeter of the compact storage unit. Water, sewer, and, heating and cooling pipes are located over the collections. The museum has installed water detectors below the compact storage unit. Collections are provided with adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect. However, water damage has been a problem in the past and could occur again.

Environmental Controls

UAM has adequate environmental controls as a result of recent upgrades. Conditions in the collections storage area are maintained at 70° F and approximately 40% relative humidity. Relative humidity is monitored using hygrometers and hygrothermographs. UAM is about to begin a conservation study to monitor environmental conditions and identify problems.

Range of Support Facilities for Archaeological Collections

UAM has adequate support facilities for archaeological collections including designated storage areas, an archaeology laboratory, research areas, and general work and office areas. The museum also has exhibits and facilities for interpretive programs. UAM does not have a conservation lab.

Composition of Staff

UAM has 24 full-time and 30 part-time staff members. The museum has an Archaeology Collections Manager, a Curator of Archaeology, and a Special Projects Manager that is responsible for compliance with the Native American Graves Protection and Repatriation Act. UAM also uses volunteers to work on collections-based projects.

Administrative Record Keeping

Each department has developed its own registration and administrative procedures. The Archaeology Department maintains extensive administrative records including accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are stored inside metal file cabinets located in the archaeology lab. Collections information is also maintained in a computer database. Administrative records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

UAM has large collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Some associated documentation is stored in the university Archives. Additional associated documentation is stored in metal file cabinets located in the archaeology lab. Associated documentation is protected from fire, theft, damage, and destruction.

Collections Management Policies

UAM and the Archaeology Department have many collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management Plan, and a deaccession/disposal policy.

Administration Summary

Background

UAM was established as a natural history museum in 1926 as part of the precursor institution to the University of Alaska. In 1935 the museum became part of the University of Alaska. UAM is located on the campus of the University of Alaska, Fairbanks. UAM currently curates Army, Navy, and Air Force archaeological collections. UAM has collections generated by projects that required a USACE permit. The museum has a signed agreement with the National Park Service for collections management. A draft agreement with the U.S. Fish and Wildlife Service and a separate agreement with the Bureau of Land Management are currently being prepared.

Real Estate

The museum is located on the University of Alaska, Fairbanks. Except for a U.S. Geological Survey building that is owned by the federal government including the land, the rest of campus is owned by the State of Alaska. No restrictions exist for expansion. The museum is planning an addition to the existing building. Where DoD/USACE collections would be located would have to be mutually determined if the museum is chosen as a partner.

Administration

The university's Vice Chancellor of Administrative Services could financially commit UAM to a partnership with DoD and USACE. The Vice Chancellor could also sign a cooperative agreement. The museum staff spend part of their time writing grants. The Director spends part of her time fund raising. One staff member raises funds full time.

Outreach and Education Programs

The museum has a small exhibition space that includes archaeological exhibits. UAM has consulted with Native Alaskans as part of its Native American Graves Protection and Repatriation Act compliance activities. As part of the University's Museum Studies Program, Native Alaskans participate in workshops about museum management, collections management, and conservation. The workshops are taught through teleconference. Native students are brought into the museum for a week of hands-on training once a year. Graduate students visit primary and secondary classes and present lectures on archaeology. Docents and volunteers in the museum are an integral part of involving the local community in archaeology.

Contributions

UAM could contribute its staff expertise, research opportunities on existing collections, outreach/education programs and relationships with Native communities, and publication of research results. The collections would be insured by the university. The museum is in the process of raising funds for an addition and have an estimated $5 million of the $20 million needed.

Notes

UAM brings many assets to a potential partnership, including well-established relationships with the Alaska Native communities. In addition, collections could be used for research and education, in association with the university.

Facilities Update

UAM was contacted again in August 1999 to update information on planned renovations. The museum is still in the fund-raising stages, but does have an architect and schematics for the work. Plans call for an expansion and renovation of the existing building. The 10,000 ft^2 structure will feature curation and office space, movable shelving units, and a new HVAC system with appropriate humidity control.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the

potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

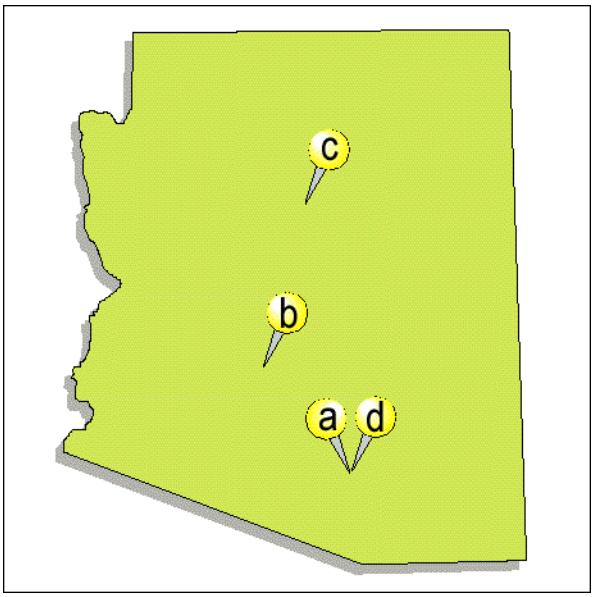
The overall DSM score for the Alaska State Museum was 0.7323, and the overall DSM score for the University of Alaska Museum was 0.8526 (Table 4.2). Table 4.2 lists these composite scores and the architecture, collections management, and administration scores for each Alaska institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 4.2 Summary of Decision Support Model Scoring - Alaska

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Alaska State Museum	**0.7323**	0.19464	0.26925	0.26845
University of Alaska Museum	**0.8526**	0.19811	0.27348	0.38103

5

Arizona



Archaeological Materials (in cubic feet)

Department of Defense	**408**
USACE	**30**
TOTAL VOLUME	**438 ft^3**

Number of Institutions Contacted **23**

Institutions Assessed

a. Arizona State Museum, University of Arizona, Tuscon

b. Arizona State University, Archaeological Research Institute, Dept. of Anthropology, Tempe

c. Museum of Northern Arizona, Flagstaff

d. Western Archaeological and Conservation Center, Tuscon

Background

The institutions visited in Arizona were particularly strong potential partners. The Museum of Northern Arizona is the only institution of the four we visited that is privately operated. The other three institutions are either state or federal. Three of the institutions, Archaeological Research Institute, Arizona State Museum, and Museum of Northern Arizona, are planning major fund raising programs for construction of new curation facilities or modifications to existing facilities. With three institutions competing for at least portions of the same funding base, the eventual success of each campaign may be affected by how generous the overlapping donors are in supporting expansion plans throughout the state. A list of the facilities contacted in Arizona is presented in Table 5.1, including the reason(s) some were not selected for an on-site evaluation.

Table 5.1 List of Institutions Contacted

Institution	No Response	Preliminary Questionnaire Reasons not Visited		
		Not Interested	Questionnaire Not Returned	Limited Resources
The Amerind Foundation			X	
Arizona State Museum				

Institution	No Response	Preliminary Questionnaire Reasons not Visited		
		Not Interested	Questionnaire Not Returned	Limited Resources
Arizona State University, Archaeology Research Institute				
Canyon de Chelly National Monument, Chinle				X
Glen Canyon National Recreation Area, Carl Hayden Visitor Center			X	
Casa Grande Ruins National Monument				X
Colorado River Indian Tribes Museum			X	
Eastern Arizona Museum and Historical Society, Inc.				X
Eastern Arizona College, Museum of Anthropology		X		
Grand Canyon National Park Museum Collection				X
The Heard Museum		X	X	
Hubbell Trading Post National Historic Site			X	
Mesa Southwest Museum				X
Museum of Northern Arizona				
Navajo National Monument		X		
Petrified Forest National Park			X	
Primeria Alta Historical Society			X	
Pueblo Grande Museum and Cultural Park			X	
Sharlot Hall Museum			X	
Tonto National Monument		X		
Tumacacori National Historic Park				X
Western Archaeological and Conservation Center, National Park Service				
Wupatki National Monument			X	

Note: Locations visited indicated in **Bold**

Comments

A summary of the Decision Support Model scores is presented in Table 5.2, showing strengths of each institution. Pertinent information on each of the four facilities visited in Arizona is presented in the following discussion.

Arizona State Museum

Architectural Summary

Site Conditions

The Arizona State Museum (ASM) is located on a historic portion of the University of Arizona (UA) campus. The museum occupies two buildings. The South building has exhibit space on

the first floor with offices and several collections storage rooms in the lower level of the building. Attached to the South building is a structure that is home to the Anthropology Department. The South building has no loading dock or area. The attached Anthropology building has a small loading area to the south of the two structures.

Directly north across University Boulevard is ASM's North building. This structure originally was built as the university library. Several additions have been made since the building's completion in 1924. The North building also has no loading dock, but is served by a large loading area to the east.

Both buildings and sites are listed on the National Register of Historic Places. The landscape surrounding the buildings is unique with its palm trees, olive tree grove, and irrigation berms and was listed on the National Register in 1979 as the Campus Historic District. The site is wonderfully maintained. The historic significance of the grounds as well as its National Register status prevent any further expansion on the site.

ASM is currently raising funds for a significant renovation to the North building. The plan calls for the demolition of the later additions to the library building. The original 1924 library structure would remain and a new comprehensive addition would be added to the rear in place of the razed additions. The purpose-built expansion would include underground collections storage space as well as additional office, exhibit, and laboratory space. The new addition would allow the museum to remove its operations from the South building and consolidate its programs into a single facility.

Building Condition/Structural Adequacy

North Building

The North building has been used by ASM since the library's relocation to a new campus facility. The large three story building has a concrete frame with a brick exterior veneer. The later additions are similar in construction. The large, original windows have been renovated as needed and have all received integrated shades to control the sunshine penetrating the building. The roof is a combination of flat built-up systems and the original ceramic tiles. The built-up roof was replaced in 1995.

A six level stacks area currently houses the majority of the museum's archaeological collections. The stacks have concrete floor slabs supported by the steel shelving columns. An additional room on the first floor is allocated for the curation of ASM's extensive pottery collection. While not as ideal as the planned new facility, the stacks area has been reasonably adapted to collections storage. The entire North building is in good condition, especially considering its age and the degree of renovation and adaptation it has undergone. The most significant shortcoming of the North building is the lack of available space for additional collections. During Summer 1997 the North building is scheduled for life safety improvements. These upgrades include fire sprinkler additions and air handling changes.

South Building

The South building is similar in construction to the former library building. The 1930 two story structure was originally built for ASM and is still used by the museum. The building also has a concrete frame with a brick exterior and original windows with shades. The load bearing walls

on the lower level are brick. The roof is also a combination of a flat built-up roof and pitched ceramic roofing tiles. The building is decorated with ornate brickwork. The large Anthropology building is also a brick structure and is attached to the rear of the South building. The museum has collections stored in several smaller rooms on the lower level. Flooding occurs outside the lower level doors during monsoon season. The South building is also in good condition especially considering its age. Unfortunately the building's size limits ASM's use of the building. The museum plans to vacate the facility after the addition and renovation of the North building are complete.

Code Requirements/Egress/Accessibility

The renovation work during the summer of 1997 will address those portions of the North building that are not up to code requirements. The smaller South building appears to meet all of the immediately required code standards. Both buildings (UBC type II, mixed use group, A-3, B, S-2) are also regulated by university Facilities Management Services and their National Register status.

North Building

The North building is served by an elevator in compliance with the Americans with Disabilities Act (ADA). None of the restrooms have been updated for ADA compliance. The facility is accessible by a side door and ramp in the loading area on the east side of the building.

A grand central stair is open to all three floors. A fire stair is located in the northwest corner of the facility. Additional stairways are found in the northeast portion of the building as well as the stacks areas.

South Building

The lower level of the South building is accessible through an entry at the front of the facility, located underneath the ornate entry stair leading to the main entrance at the first level. The first level is accessible through the Anthropology building to the south. The balcony level is not accessible to the disabled.

HVAC Systems

Both buildings are served by the university wide heating and cooling system. Underground services provide steam for heating and a condenser system provides cool air. Each building has its own air handling system with fan rooms to circulate both hot and cool air through the building.

North Building

Through the fire and life safety renovations, the North building will be served by several updated air handlers including new air filters throughout. A total of nine air handlers serve the North building and its additions. The stacks collections storage areas are served by its own air handling units. The HVAC systems provide simple yet acceptable service to the facility and collections.

South Building

The entire South building is served by a single air handling unit. The HVAC systems of the South building lack control zones, filtration, and distribution.

Fire Suppression and Detection

North Building

The North building has an existing wet-pipe fire sprinkler system in nearly all portions of the building. The stacks collections areas are protected by the existing sprinkler system. The remaining areas of the building will be equipped with additional sprinklers, providing the North building with complete fire suppression protection. The fire sprinkler improvements are part of the planned Summer 1997 renovation work.

The suppression system is triggered by both manual and automatic alarm systems. Heat sensors and smoke detectors are located throughout, again as part of the Summer 1997 renovation. These systems are wired to the local fire department. Fire extinguishers have been inspected within the last year and are located throughout the facility.

South Building

The South building lacks a fire sprinkler system. Fire extinguishers provide the only form of fire suppression in the building. The alarm system is triggered by manual alarms, heat sensors, and smoke detectors. The fire alarm system in the South building is wired to the local fire department.

Security System

Both buildings have intrusion alarms at major openings that are wired to the UA police department. The buildings are also equipped with motion sensors, key-pad access, and TV monitoring in exhibit areas. ASM has good security equipment and protocols.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of ASM is to "enhance public understanding and appreciation of the culture history of Arizona and the surrounding region by collecting, preserving, researching and interpreting objects and information with a special focus on indigenous peoples. . . .". ASM's scope of collections includes materials from Arizona and culturally related parts of adjacent states in the United States and Mexico. Collections from additional regions are considered if they enhance the educational resources of the University of Arizona. The museum curates approximately 22,000 ft^3 of archaeological collections.

Archaeological Collections Storage

ASM curates collections in two buildings on the UA campus. ASM is working on a plan and fundraising campaign to upgrade the main museum building and its collections storage facilities (see building evaluation). Archaeological collections in both buildings are stored in a manner that protects them from ultraviolet radiation, particulates, biological pests, and general neglect.

North Building

The majority of ASM's archaeological collections are stored in the larger of the two buildings, the North building. This building was once the campus library. Archaeological collections are currently stored in the former stacks area. The stacks area consists of five tiers, and a portion of the sixth level, which is used to store human skeletal remains. Archaeological collections are stored in a variety of cardboard boxes and placed on metal shelving units. Additional rooms in the North building are used for ceramic vessel storage, processing labs, temporary storage, library and archives, and exhibits.

South Building

The basement of the South building is also used for collections storage. Perishable archaeological collections (organic materials) are kept in lockable metal cabinets. Additional collections of ceramic vessels, fine arts, and ethnographic objects are stored on open shelving units in a series of locked rooms. The first floor of the South building is used as exhibit space.

Environmental Controls

Collections at ASM are stored in areas where temperature and relative humidity are regularly monitored. Heating and cooling systems are in place in both buildings, with significant improvements planned for the future. The staff use portable dehumidifiers during the rainy seasons. The registrar is responsible for the museum's environmental monitoring program, which is quite extensive. Relative humidity is monitored throughout both buildings using data loggers. Environmental data are downloaded into a laptop computer and are regularly analyzed.

Range of Support Facilities for Archaeological Collections

ASM has adequate support facilities for archaeological collections including designated collections storage areas, processing labs, a conservation lab, research facilities, library and archives, and general office areas. In addition, ASM has exhibits located in the North and South buildings.

Composition of Staff

ASM has a large staff, including a Conservator, a Registrar, a Collections Manager, and several Curators. Adequate staff is available for the care and administration of archaeological collections. ASM staff estimate that three full-time curatorial positions are devoted to archaeology. In addition, approximately 20% of the Registrar's, Conse

Collections staff time is spent working with archaeological collections.

Administrative Record Keeping and Storage

ASM processes gift and contract archaeology differently. Collections that are derived from private donors and accessioned as gifts are processed by the museum Registrar. Collections derived from contract archaeology projects are accessioned and processed by the archaeology staff. For both types of collections, ASM staff maintain extensive administrative records including accession records, catalog information, collection inventories, object location information, loan agreements/information, and deaccession/disposal records. Collections information is also maintained in a computer database. Administrative records are kept in locked fire-proof cabinets and are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

ASM has extensive collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. These collections are stored in several areas. Photographs are stored in the museum's photo archives. Documents such as field notes, artifact inventories, and reports are stored in the museum library. Currently, the ASM library does not have a sprinkler system. However, improvements to the fire safety systems in the library are scheduled to be completed by Summer 1997.

Collections Management Policies

ASM has many written collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

ASM was established in 1893. The museum curates archaeological collections from DoD (U.S. Air Force, U.S. Army, U.S. Navy, and U.S. Marine Corps) and USACE lands.

Real Estate

The North building is on the National Register of Historic Places and is situated in a historic district. The museum plans to renovate and rebuild portions of the structure, a former library, to increase their storage and work space. The historic status and location of the building may limit future expansion. The museum was originally housed in the South building that currently contains exhibits and laboratory spaces. Once the North building is renovated, the South building will be vacated.

Administration

The university Vice President for Research and Graduate Studies could financially commit ASM to a partnership with DoD and USACE and would sign a cooperative agreement. The ASM budget is derived from state appropriations, grants, donations, and internally generated revenues. Individual staff members must pursue their own grants since no one individual is assigned the responsibility for writing and tracking grants. The University of Arizona oversees grants and the budgetary process. Fund raising is handled through the University of Arizona Foundation. However, the Associate Director of ASM does expend a significant amount of time in fund raising and public relations.

Outreach and Education Programs

Three staff members are specifically involved in outreach/education programs. The museum and the Tucson Unified School District have a cooperative agreement to provide teaching materials and support to two elementary schools. The student population of these schools is primarily Native American and Hispanic. ASM in conjunction with Statistical Research, Inc., an archaeological consultant, is also conducting teacher training using the "Intrigue of the Past" modules developed by the National Park Service. The museum also has a Public Archaeology program to interact with the general public. The public is also involved in excavations through Earthwatch. The "Paths of Life" exhibit intimately involved Native Americans in the development and design of the exhibits.

Contributions

ASM would be able to provide access and security to DoD/USACE archaeological collections. In addition, the staff could conduct inventories of the collections once they were in place. The staff would provide expertise for a fee for services rendered. No significant cost sharing was offered during the assessment team's visit. Rather, the administration would defer such discussions until actual negotiations occurred.

Notes

ASM is optimistic about completing the planning and fund raising for the North building renovation within the next five years. The museum is apparently well represented within the higher levels of the university administration. ASM also has initiated an active public relations program to increase awareness and hopefully donations. The improved facility would alleviate the museum's current space problems and become a great asset to ASM.

In the meantime, partial improvements such as the Summer 1997 life-safety renovation will incrementally improve the facility's conditions. The problem of dwindling usable space will have to be addressed by the new addition. With the current initiative to raise funds for a new addition to the North building, the South building's lack of available space is unlikely to factor heavily in any future plans of the museum.

The museum has a well developed outreach program and a history of public involvement. ASM would accept collections from Arizona, New Mexico, southern Utah, southern Colorado, and Nevada. The museum provides a pool of expertise in a traditional museum setting.

Facilities Update

ASM was contacted in August 1999 to update information on the facilities. Recent upgrades include over $1 million in life-safety systems, including fire exits and fire-rated doors. Additionally, ASM plans renovations to the South building, requiring the addition of major structural support for a mezzanine in which archaeological lab space will be located. These South building renovations are planned to begin in April 2000. Plans to construct an addition to the North building are still viable, and a capital campaign is now in progress. ASM needs additional funding, and have hired a development officer in the past year to help.

Arizona State University, Archaeological Research Institute

Architectural Summary

Site Conditions

The Archaeological Research Institute (ARI) in the Department of Anthropology at Arizona State University (ASU) is temporarily located in a retail center in Tempe, Arizona. Tempe Center is owned by the university and is adjacent to the northwest corner of the campus. The ASU has plans to develop the property for additional educational and retail use.

ARI is preparing to relocate from the strip mall to the second floor of the Matthews Center by July 1, 1997. This two story structure is owned and administered by ASU and is located on the main campus at the southwest corner of the intersection of Cady Mall and Tyler Mall. Matthews Center is also conveniently located just south of the Anthropology Building. The site provides public and campus access to the repository.

Public parking is located on nearby ASU regulated lots. The building is only accessible by the campus pedestrian walkways as vehicular traffic is restricted near the building. Matthews Center has no loading dock, but the building is served by a loading area at the rear of the facility. The distant parking and limited truck/auto access is balanced by the well-kept ASU campus and its existing services and collections management.

An addition to the existing building would be very difficult within the dense university site. However, additional collections storage space is available within the existing building envelope.

Building Condition/Structural Adequacy

Matthews Center was built in 1930 as the university library. A seven level library stacks structure was added in 1949. The original building is a concrete framed structure with a brick veneer with classical proportions and ornamentation. ARI space includes about 10,000 ft^2 divided between four stack levels and an additional 6,000 ft^2 in office, exhibit, and laboratory space.

The 1930 building is a U-shaped in plan. The 1949 stacks addition is located between the two legs of the U-shape structure. The stacks levels are constructed of a concrete slab floor system supported by the structural columns of the steel shelving system. The exterior wall which

forms the rear elevation is a brick veneer with large steel framed windows which appear to be original to the addition. The windows in the collections area are not desirable for collections storage.

ARI is currently sharing Matthews Center with the Art Department. The Art Department occupies three stacks levels as well as office and exhibit space on the first and second floors. Additional stack levels could be allocated to the ARI if needed for additional collections storage.

Matthews Center has been adapted several times in recent years for a variety of uses. These renovations have left the building with a temporary quality. There were no major structural defects observed, although a significant number of the steel shelving columns had been removed in an Art Department space on the top stacks level. Hazardous building components are abated as they are encountered with funding through a university wide abatement program.

Matthews Center seems reasonably adaptable for ARI's needs. The stacks areas are one of only a few building types which can be safely and somewhat efficiently adapted to collections storage space.

Code Requirements/Egress/Accessibility

The 1930 building is served by a single elevator that allows for vertical circulation among the basement and two upper levels. The restrooms on the first floor are in compliance with the Americans with Disabilities Act (ADA). The second floor restrooms have not been updated for ADA compliance. Matthews Center itself is accessible through a side entry and wheelchair ramp.

Two characteristics of the stacks area of Matthews Center (UBC type II, mixed use, B, S-2) raise concern for the safety of the collections and any users in the collections storage area. First, egress from the stack levels is provided by a stair near the center elevator core of the building. An additional open stair is located in the opposite corner of the stack level. While ASU has enclosed the stair with drywall partitions and a rated door, not all of the stack levels have been similarly modified. It is unclear when or if such an upgrade will be completed at each of the seven levels. It is also uncertain whether these modifications provide for a fire-rated stair core. Also, some of the levels currently have materials stored in this rear stair area.

HVAC Systems

Matthews Center is served by the university wide heating and cooling system. Underground services provide steam for heating and a condenser system provides for cool air. The building then has its own air handling system with a series of fan rooms which circulate both hot and cool air through the building. The collections storage area in the stacks has separate control for temperature. The air handling system in the stacks is not filtered and there is no control for temperature zones between each level.

Fire Suppression and Detection

The collections storage area of Matthews Center has a fire sprinkler system on only the first level. The six levels above have no fire sprinkler system. ARI has requested funds for fire-sprinkler additions to the other levels. Fire extinguishers are located throughout the collections storage areas and the entire ARI space at Matthews Center.

Fire and smoke detectors are also planned for the stacks levels. These detection systems will be integrated into the security systems that are wired to ASU's Department of Public Safety (DPS) and the local fire department.

Security System

ARI is installing a new security system in Matthews Center. Access to the collections storage areas is restricted with keypad access and intrusion alarms at each entry to the stack levels. Motion detectors will be installed in the collections storage areas. "Panic alarms" are also part of the system. The entire system is wired to Arizona State University's DPS.

Collections Management Summary

Scope of Collections and Mission Statement

ARI's mission is "to undertake the preservation of archaeological materials and related data, to pursue research activities associated with the archaeological record, and to conduct education programs to disseminate knowledge of the past to Arizona's citizens." ARI curates approximately 12,000 ft^3 of archaeological collections, most of which belong to federal agencies. The Department of Anthropology at ASU curates approximately 25,000 ft^3 of archaeological collections as a result of department research projects. These collections are stored in the Anthropology Building and are not part of ARI's holdings.

Archaeological Collections Storage

ARI is currently in transition. ARI's main storage facility is located at Tempe Center, a strip mall owned by ASU. This space, while unconventional, has provided a stable and relatively secure environment for ARI's collections. Long term redevelopment plans call for the building to be razed. Therefore, ARI is moving to the Matthews Center, a former library building on the ASU campus in July 1997. A portion of ARI's collections have already been moved to the Matthews Center, which is currently occupied by the Art Department.

The Matthews Center building will provide ARI with much needed collections storage and work space. The majority of archaeological collections will be stored in the stacks area of the building. Metal book shelves, which form part of the structure of the stacks area, will be used to store boxes of collections. Since the uprights are structural, they cannot be moved. Part of the stacks are currently used for collections storage. The stacks area has windows and glass block wall sections in several areas. These pose a security and conservation hazard. Additional space in the Matthews Center will be used for secured collections storage, offices, computer labs, research and work spaces.

Environmental Controls

The current collections storage area at Tempe Center has heating and cooling systems in place. The new space in Matthews Center also has heating and cooling systems. At the time of our visit the cooling system in the stacks area was not functioning properly. Relative humidity is neither monitored or regulated. ARI staff indicated that they would like to monitor relative humidity in

the future. The staff monitor pests.

Range of Support Facilities for Archaeological Collections

ARI has adequate support facilities for the support of archaeological collections including designated collections storage areas, processing labs, research facilities, and general work and office areas. ARI staff has access to lab and processing facilities in the Anthropology Building. Additional research and collections processing areas will be set up in Matthews Center once ARI relocates there.

Composition of Staff

ARI has a Director, Curator, and Information Manager specifically devoted to ARI's collections. ARI does not have a Registrar or a Conservator. In addition, there is an Anthropology Department Collections Manager, a Physical Anthropology Research Specialist, and a Department of Anthropology Museum Exhibits/Curatorial Specialist. These three positions are responsible for the care of the Anthropology Department's collections. Research assistants support ARI staff with curatorial work.

Administrative Record Keeping and Storage

ARI maintains a variety of administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. ARI also maintains collections information on a computer database. Administrative records are presently stored in metal filing cabinets at the Tempe Center facility. These records will also be moved to ARI's new facility at Matthews Center. Administrative records are provided with adequate protection from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

Associated archaeological documentation is also kept in filing cabinets at the Tempe Center. Some associated documentation, such as reports, are stored on a metal book case. Associated documentation will also be moved to Matthews Center. Currently, associated documentation is protected from fire, theft, damage, and destruction.

Collections Management Policies

ARI has many written collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, and a deaccession/disposal policy.

Administration Summary

Background

ARI curates archaeological collections for the U.S. Forest Service, the Bureau of Reclamation,

Bureau of Land Management, USACE (Los Angeles District), and the U.S. Air Force (Williams Air Force Base). In addition, ARI operates the Deer Valley Rock Art Center in cooperation with the Los Angels District. For the purposes of a partnership, ARI is acting in coordination with the Department of Anthropology and the Museum of Anthropology. The Anthropology Department was established as a separate department in 1962, whereas ARI was created in 1995.

Real Estate

ARI offices are located in a strip mall known as Tempe Center which is owned by ASU. However, space in the Matthews Center is being renovated for ARI's use. This building is a former library with metal shelving serving as structural elements. Space is available for DoD/USACE collections. There are no restrictions to new construction or expansion.

Administration

The university's Director of Research and Creative Activities or the Vice Provost for Research can financially commit ARI to a partnership with the DoD and the USACE, and could sign a cooperative agreement. Three ASU staff members write and track grants with ASU providing oversight and administrative support. Fund raising is handled through the ASU Foundation, a private non-profit organization. A development officer is assigned to ARI and assists and acts as a liaison with the Foundation for fund raising.

Outreach and Education Programs

ARI has one staff member assigned to outreach/education efforts. In addition, two individuals with the Museum of Anthropology are devoted full-time to outreach/education and provide assistance in development of such programs. These programs include exhibits, preparation of teacher materials and workshops, and material accessible through the World Wide Web. The ARI has a cooperative agreement with the Los Angeles District to operate the interpretive center at the Deer Valley Rock Art Center that was built by the same district.

Outreach/education for Native Americans includes the Indian Heritage Program (IHP) and Native American involvement in excavations and research, as well as Native American Graves Protection and Repatriation Act consultation. The IHP, in the Department of Anthropology, has sponsored conferences for Native American participants to discuss issues relating to archaeological collections. ARI has involved Native Americans in excavations at the Phoenix Indian School and at Lyman State Park. ARI will also act as host to the Hopi Tribe while the tribe is conducting research for the National Park Service funded Salado Affiliation Study.

Contributions

ARI would be able to provide access and security to any DoD/USACE archaeological collections that were transferred to their care. ARI has established strong ties to other research facilities on campus and has an innovative approach to research. Finally, ARI has been very active in the use of the World Wide Web in providing information on collections for outside researchers and publishing research results.

Notes

ARI is scheduled to relocate to Matthews Center by July 1997. The renovated permanent home for ARI should increase the capabilities of the institution. The positive relationship between ASU and ARI as well as the ability to acquire additional stack space for collections storage are desirable traits in a potential partner.

ARI is part of cooperative and synergistic effort between the Department of Anthropology and Museum of Anthropology. The existing staff is highly motivated and innovative. The Department of Anthropology could provide analysis of existing collections. The capacity of ARI's storage facility is adequate for existing collections with additional space available for future collections. ARI would be willing to act as a regional repository for collections from the Greater Southwest (i.e., Arizona, New Mexico, southern Colorado and Utah, and Nevada).

Facilities Update

ARI was contacted in August 1999 to determine the status of the planned 1997 move. ARI did move to the Matthews Center in 1997, and have since completed some additional renovations of the Center. These include the installation of a security system with intruder alarms, the addition of a fire escape to the rear (west) part of the building, installation of security doors, addition of fire extinguishers, and the replacement of the cage-like walls with wall of drywall and steel studs, though stacks shelving still serves as building structural support. Long-term storage at the Matthews Center now occupies four of the seven floors of the building. Lab facilities are still at Tempe Center, though plans to build a new lab building or to move these facilities into Matthews are not finalized.

Museum of Northern Arizona

Architectural Summary

Site Conditions

The Museum of Northern Arizona (MNA) owns property on both sides of U.S. Highway 180 in Flagstaff, Arizona. The public and research facilities are divided by the highway. The majority of the property is to the east of the highway. The museum building and other public areas are located on the western portion of MNA property. A gravel road provides access throughout the site. Parking for the eastern research facilities is also gravel. Paved parking for nearly one hundred cars is provided at the main museum building. There is no pedestrian crosswalk across the highway. There are no loading docks at the collections storage areas, but large loading doors are accessible to trucks off the gravel road surface.

The MNA site is guided by a recent comprehensive master plan including mixed-use development for the eastern portion of the property. MNA has recently sold a large portion of its eastern property to a private developer with plans for a residential development called "Coyote Springs." The proceeds of the sale retired the museum's lingering debt.

Several structures on MNA property are listed on the National Register of Historic Places, including the original 1936 Museum building, the 1929 Colton residence, the 1920's Powell building, and the 1886 Homestead residence. The Colton residence has been beautifully restored and now serves as a small retreat center and visitor's quarters for the museum.

The MNA archaeological collections are located in several buildings in the research. The historic Powell Building is a basalt rock structure with wood framing. Two small rooms house collections with only gas heating units and no cooling system. The majority of the archaeological collections are stored in several rooms in the Anthropology building that is attached to the Administration building. A simple prefabricated Butler building also contains collections and is attached to the Anthropology building.

Building Condition/Structural Adequacy

The Anthropology Building is constructed of concrete masonry units with a wood rafters and steel tube column structure. The original portions of the building were completed in 1963 with a variety of later small additions and improvements. It is a simple single level structure with a concrete floor and slab on grade foundation. Small glass block windows allow natural light into the collections storage areas. The roof is constructed of cement tiles or three ply built-up roofing painted with a reflective silver color to reduce solar heat gain. Both roofing types are original to the buildings and are maintained by MNA facilities staff.

A recent prefabricated metal building is attached to the south end of the Anthropology-Butler building. The simple steel frame structure serves exclusively as a collections storage facility.

The entire Anthropology Building, including the Butler building, is approximately 12,400 ft^2 in size. About 8,000 ft^2 of the building area is devoted to collections storage. Office and lab spaces occupy the remainder of the building. The building appears to be structurally sound and shows no evidence of leaks or other deterioration. One of the most serious shortcomings is a lack of available storage space.

Code Requirements/Egress/Accessibility

The simple single level structure appears to meet all code requirements for construction types and emergency egress (UBC type III construction, B use group). Several exits provide egress throughout the additions in the Administration/Anthropology building complex.

Accessibility in accordance with the Americans with Disabilities Act (ADA) is possible by entering the Administration building from the northeast and circulating through the Administration area to the Anthropology building. Restrooms do not meet ADA requirements for accessibility. While the building has not been updated to comply with ADA standards, the original structure allows for general use and access.

HVAC Systems

The Anthropology building has a limited HVAC system. Independent natural gas heating units are scattered throughout the building. There is no central air delivery system or cooling. In order to properly curate archaeological material, the Anthropology building would need an entirely new HVAC system.

The collections management for future improvement or construction of a new facility is already in place on the MNA site. Water, electricity, natural gas, and sewer systems are sized and located for future development.

Fire Suppression and Detection

The Anthropology building is not protected with a fire sprinkler system. Smoke detectors are located in the collections storage areas and are wired to a local security company and fire department. The local fire department is located less than ¼ mile from MNA. Local fire officials have provided fire prevention advice to MNA facilities personnel. Inspected fire extinguishers are located throughout the building. Both fire suppression and detection need improvement to provide a fire-safe environment for the curation of archaeological collections.

Security System

Intrusion alarms are located at each major building opening. The collection storage rooms are locked and access is restricted to these areas. The intrusion alarms are wired to a local security company. On-site security staff supplement the building security systems. The existing security measures are adequate.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of MNA is "to provide leadership in advancing new and multidisciplinary knowledge through research; fostering social development, equality and change; protecting the heritage and environment of the Colorado Plateau; and providing a forum for the free exchange and exploration of multicultural and societal issues for all people." The museum's scope of collections includes anthropological, art, biological, and geological collections from the Colorado Plateau. MNA curates approximately 18,500 ft^3 of archaeological collections.

Archaeological Collections Storage

Archaeological collections are stored in several buildings on the MNA campus. These buildings include the following.

The Powell Building

The Powell building is used to store oversized ground stone objects and bulk collections from a Salt River archaeological project. The building does not provide adequate fire suppression or environmental controls.

The Butler Building/Anthropology Building

These attached buildings are used to curate the majority of MNA's archaeological collections. These collections are stored in several areas and are separated by material such as ceramic

vessels, pollen samples and faunal materials, physical anthropology collections, bulk collections (chipped stone, sherds), and individually cataloged objects.

Environmental Controls

Most of MNA's collections storage areas only have heat. Heating and air conditioning systems are located in MNA's exhibits building. The staff regularly monitor temperature and relative humidity. Relative humidity is monitored using hygrothermographs and psychrometers. All hygrothermographs are calibrated monthly. However, the collections storage areas do not have systems that regulate relative humidity.

Range of Support Facilities for Archaeological Collections

MNA has adequate support facilities for archaeological collections including designated collections storage areas, collections processing areas, general work and office areas, and a library. MNA does not have a conservation lab or an archaeology lab. However, additional work and lab areas are available for use by collections staff when needed.

Composition of Staff

MNA has a mid-sized staff, which does not include a Registrar or a Conservator. The following MNA staff are responsible for archaeological collections management: Senior Research Archaeologist (35%), Collections Manager (20%), Assistant Collections Manager (80%), and the Collections Contracts Supervisor (100%). In addition, part-time collections assistants and interns also help perform these duties.

Administrative Record Keeping and Storage

MNA has excellent record keeping practices. Accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records are maintained. Collections information is also maintained in ARGUS. Most administrative records are stored in lockable metal cabinets in an area that lacks a sprinkler system. Duplicate copies of administrative records, such as accession files and catalogs, are kept in a fire-proof vault in the library.

Associated Archaeological Documentation and Storage

MNA has a significant quantity of associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored with the original accession files in an area that lacks a sprinkler system. Copies of associated documentation are also stored in the fire-proof vault in the library.

Collections Management Policies

MNA has many written collections management policies including an accession policy, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal

policy. MNA does not have a disaster plan at present. However, a disaster/recovery plan committee has been formed and a draft is being written.

Administration Summary

Background

MNA was founded in 1928 by Harold and Mary Colton, and has been involved in conducting archaeological research in northern Arizona and elsewhere in the Southwest throughout its history. MNA is a privately run institution governed by a Board of Trustees. MNA is an official repository for Coconino National Forest, the Bureau of Land Management, the Navajo-Hopi Indian Relocation Commission, and for several national parks. Materials from the now-closed Williams Air Force Base are also curated at MNA.

Real Estate

The museum recently sold off a portion of land that it owned to a private developer. The proceeds from the sale eliminated a huge deficit. MNA now owns approximately 288 acres in Flagstaff including the original museum building and a research center located east of U.S. Highway 180. A master plan calls for development of areas within the research center property. Within the 288 acres, 43 acres must remain wilderness. Although there are local zoning ordinances, exemptions could be proposed by the museum if needed. The museum is also participating with the National Park Service, the U.S. Forest Service, and other agencies, in a proposed project called the *INSIGHT Center at the Grand Canyon*. The 100 acre site will provide the public with interpretive and educational facilities on archaeology and the natural environment.

Administration

The Director of the MNA could financially commit the museum to a partnership with DoD and USACE. The Director could also sign a cooperative agreement. The Director and the Director of Planning and Development spend part of their time writing grants. The Director, Deputy Director, and Manager of Development Services spend part of their time fund raising.

Outreach and Education Programs

The museum has finished construction of the Branigar/Chase Discovery Center. The center has exhibition space that includes archaeology and a multipurpose auditorium. The museum also has a Discovery Program that provides children and adults the opportunity to interact with Native Americans and directly experience archaeological resources in the field. MNA offers many programs to the local community including those on archaeology. For example, docents work with an elementary school to provide hands-on experiences in science including archaeology and the museum conducts live cable broadcasts of colloquia using staff and outside professionals.

The MNA staff archaeologist spends part of his time conducting outreach activities to both the public and other professionals using lectures and written materials. The museum offers specialized training to teachers. The exhibits in the museum are regularly used by school groups.

These groups also use the museum library and archaeological collections.

The museum has worked with Native Americans since its founding. In fact MNA is nationally known for its long-term commitment to working with Native Americans. As part of the Heritage Program, Native American artists come to the museum to demonstrate their artistry and participate in dances. The President of the Navajo Tribe and the Chair of the Hopi Tribe serve on the Board of Trustees. In conjunction with Northern Arizona University's College of Business Administration, MNA is developing a Native American Cultural Heritage Education and Preservation Training program that will provide Native Americans with the skills and knowledge to administer a cultural heritage program whether it is located in a museum, educational center, or other institution.

Contributions

Through part of its master plan, MNA could offer land for a new archaeological repository. The museum could also offer the expertise of the staff, the long-term relationships the museum has with various Native American groups, and the existing collections management of the organization.

Notes

Under the new master plan, MNA has allocated a site for the construction of a new federal repository on the research side of the highway. The proposed repository depends on support from federal or other outside agencies. The Branigar/Chase Discovery Center was an addition to the main museum building and was completed in the summer of 1995. The new addition as well as the existing historic public and exhibit areas of the museum suggest a high level of execution by MNA in its recent building initiatives. A new repository would likely be well-executed.

The long history of the museum, its focus on archaeological research and outreach, and its integration of Native Americans into many of its programs, make MNA a strong potential partner. The museum would be willing to serve as a regional repository for archaeological collections from Arizona, Utah, Colorado, New Mexico, and maybe Nevada.

Western Archaeological and Conservation Center, National Park Service

Architectural Summary

Site Conditions

The Western Archaeological and Conservation Center (WACC) is located on an entire square block in Tucson, Arizona. A sizable and gated staff parking lot is located on the northwestern portion of the site. Two uncovered loading areas are also accessed through this secure lot. Nine parking spaces at the southeast corner of the property allow public access to front of the building. Nearly the entire southwest quarter of the site is available for both parking or building expansion.

Building Condition/Structural Adequacy

The 41,000 ft^2 facility was purpose-built in 1978 for WACC and its operations. The building has a slab on grade foundation with a steel frame structure and a "dry-vit" exterior with a stucco finish. There were no signs of structural deficiencies. The twenty year old structure appeared to be efficiently designed and well maintained. The hollow metal windows and doors have tinted glazing to help reduce the effects of the intense southwest sun. The flat, vinyl roof has exterior gutters and showed no signs of damage or leaking. Any hazardous building materials in the facility are contained and do not seem to require abatement.

WACC has a large, well maintained collections storage area. Over 27,000 ft^2 of area is devoted to collections storage. The storage area could easily be reorganized to accommodate a significantly greater amount of collections. The 15'+ clear space could also accommodate a mezzanine level. The collections storage area is equipped with floor drains.

Code Requirements/Egress/Accessibility

The WACC facility appears to meet all of the applicable building, life-safety, and accessibility requirements (type II, non-combustible construction, mixed use group). Although the 1978 structure has not been significantly altered, the single level floor plan allows for accessibility in accordance with the Americans with Disabilities Act.

HVAC Systems

Three 35-ton condensers provide air conditioning. One of these condensers is exclusively dedicated to the collections storage area. WACC staff indicated that this main air conditioning system is original to the building and has become unreliable. Replacement cost has been estimated at $75,000 per unit. Additional heat pumps have been added to certain laboratory spaces. The WACC's archive room has its own independent air conditioning system in order to better protect the collection. WACC staff has a very positive relationship with both the building owner and the air conditioning contractor. As one measure against the unreliable systems, WACC monitors temperature throughout the building, with alarms tied to the facility's central monitoring station.

Fire Suppression and Detection

The entire WACC facility is protected with a wet-pipe fire sprinkler system. The sprinklers are triggered with manual pull-alarms, smoke sensors, and heat detectors. Fire extinguishers are also located throughout the building. The fire alarm system is wired to the central monitoring station as well as to the local fire department. The entire system is inspected quarterly, and flushed twice a year. The fire suppression and detection systems provide thorough protection at the WACC facility.

Security System

The WACC facility is secured with locking doors, intrusion alarms, and motion detectors. The collections storage area is restricted with keypad access. Infrared sensors also monitor the

collections area. The security systems are all wired to WACC's central monitoring station and to a local security company.

Collections Management Summary

Scope of Collection and Mission Statement

WACC curates collections for National Park Service units located in the intermountain region of the NPS. WACC's scope of collections focuses on materials from the arid Southwest, but includes collections from a much larger region as well. WACC curates a wide variety of materials including archaeological, ethnographic, archives, history, natural history, and fine arts collections. Archaeological materials comprise the majority of WACC's holdings. The staff estimate that WACC curates 2,300,000 archaeological objects.

Archaeological Collections Storage

Collections are stored in an expansive collections storage room providing about 20,000 ft^2. A portion of the collections storage area is used for collections processing. The collections area appears to be fairly full at this time. However, the 14 ft ceilings would permit the use of either taller shelving units or a mezzanine to maximize the available storage space. If the collections processing function was relocated to other areas of the building, the staff would gain a tremendous amount of storage space. With reconsolidation or the use of movable, collapsable shelving units in a portion of the room, WACC could easily accommodate a substantial amount of new material.

Archaeological collections are stored in cardboard boxes and placed on metal shelving units. Both acidic and acid-free cardboard boxes are used. Shelves are lined with Ethafoam, and plastic is draped over each shelving unit to protect the collections from dust. Additional archaeological collections are stored in lockable metal cabinets. As required by NPS standards, all shelving cabinets and shelving units are placed on risers several inches off the floor to permit cleaning and to protect the collections in the event of minor flooding.

Archaeological collections are provided with adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect. The collections storage area is well-maintained and organized.

Environmental Controls

Archaeological collections are stored in an area that has both heat and air conditioning. Due to the expansive size of the collections storage area, it is difficult to control environmental fluctuations. Since only one collections storage area is used, the staff cannot create special environmental conditions for objects that require stricter conditions. There is no humidity control. As a result, the collections storage area can experience large daily and annual fluctuations in relative humidity. Relative humidity is regularly monitored using hygrothermographs that are calibrated quarterly.

Range of Support Facilities for Archaeological Collections

WACC has adequate support facilities for the management of archaeological collections. These facilities include designated collections storage areas, conservation labs, research facilities, and general work and office areas. In addition, WACC has archives, and a library.

Composition of Staff

WACC has several staff members who are responsible for collections management. These positions include a Division Chief, a Curator, a Registrar, a Museum Technician, an Archivist, an Archives Technician, a Librarian, and two Conservators. No one on the staff is exclusively responsible for archaeological collections management. WACC does not have a Collections Manager.

Administrative Record Keeping and Storage

The staff at WACC maintain extensive administrative records, as required by NPS museum policies. These records include accession records, catalog information, collection inventories, object location information, loan agreements, and deaccession/disposal records. Administrative records are stored in the Registrar's office inside of fire-proof file cabinets. Administrative collections information is also entered into a computer database system. All administrative records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

WACC has large collections of associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in a special archives room, which features tighter environmental controls. WACC has a growing collection of cellulose nitrate negatives that are kept in a special freezer. The archives area is currently filled to capacity and the staff need more space to store original documentation. In most cases a duplicate copy of original documents has not been made. Associated documentation is protected from fire, theft, damage, and destruction.

Collections Management Policies

WACC has many written collections management policies including an accession/acquisition policy, a disaster plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

WACC was established in 1958 by the NPS and has curated collections from different organizational units within the NPS. At present WACC serves the Intermountain Region. The

collections at WACC are derived from 65 park units within their service area. In addition, some collections are being held for the Bureau of Indian Affairs.

Real Estate

WACC occupies a privately-owned building that is leased through the Government Services Administration. The current lease expires in 1999 and WACC is exploring two options. The first option is to renew the lease. As part of the lease renewal, WACC would require that the HVAC system be updated and that the building be expanded into the southwest corner of the lot. There are no legal impediments to such expansion and the landlord has already expressed a willingness to make the necessary changes. The second option being explored is to move the facility into a building to be constructed by the University of Arizona. These discussions have been on-going since 1995.

Administration

As a federal institution, WACC is limited in its fund-raising opportunities. The Director pursues grant funds and intra-governmental contracts to obtain additional funds. WACC was unable to provide complete information on the funding of administrative and collection management. Any interagency agreement over $25,000 would require the signature of the Chief of Contracting in the Santa Fe office of NPS.

Outreach and Education Programs

The primary mission of WACC is to provide archaeological technical assistance to NPS units. As such its outreach/education programs are limited. Training in conservation and curation is provided to staff members in the national parks served by WACC. In addition, the archivist may travel to the parks to provide on-site training. Specific outreach and educational programs related to the collections are the responsibility of each park unit. The center may provide technical support to the parks if called upon. The center provides educational opportunities through a cooperative agreement with the University of Arizona. The cooperative agreement includes work opportunities for students, including Native Americans, in archives management.

Contributions

The staff expertise in southwestern collections would enable WACC to provide quality research support. The consolidation of NPS and DoD/USACE collections would have a synergistic effect with respect to research opportunities. The center's expertise in curation training would also allow them to use the collections for hands-on training.

Notes

The Arizona State Museum (ASM) at the nearby University of Arizona has offered to lease both office and storage space to WACC in a new campus facility. This new building is apparently still in the preliminary planning stages and no firm timetable for completion or occupation has been presented.

Facilities Update

WACC was contacted in August 1999 to determine the status of the proposed new facility. WACC will not move into the new ASM campus facility, as propose. Rather, the Center is looking into the prospect of moving in January 2000 into a purpose-built curation facility with a 20-year lease. This facility will reportedly have an additional 8,000 square feet of storage, meet NARA standards for shelving and document containers, and will be equipped with movable shelving units. It is also possible, however, that the move might fall through and that WACC will be staying in the existing building.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

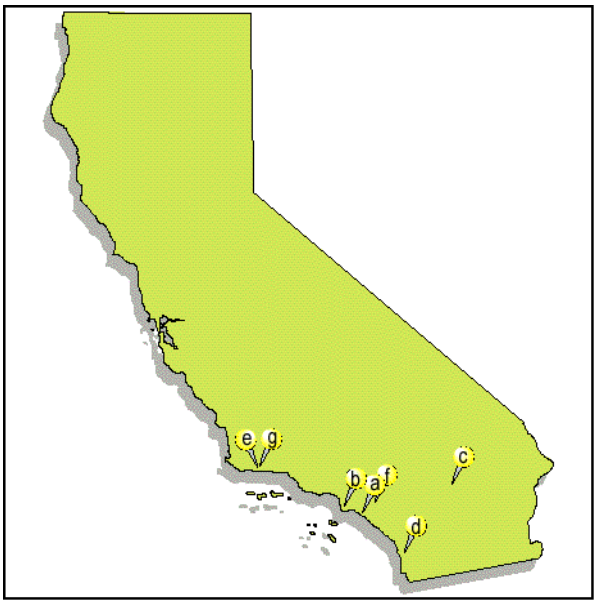
Table 5.2 lists the composite scores and the architecture, collections management, and administration scores for each Arizona institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 5.2 Summary of Decision Support Model Scoring - Arizona

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Arizona State Museum, University of Arizona	**0.7989**	0.19839	0.29702	0.30352
Arizona State University, Archaeological Research Institute	**0.6727**	0.06907	0.22263	0.38098
Museum of Northern Arizona	**0.6838**	0.09748	0.25697	0.32935
Western Archaeological and Conservation Center	**0.6714**	0.19688	0.28319	0.19129

6

California



Archaeological Materials (in cubic feet)

Department of Defense	**4,404**
USACE	**1,711**
TOTAL VOLUME	**6,115 ft^3**

Number of Institutions Contacted **57**

Institutions Assessed

a. Bowers Museum of Cultural Art
b. Fowler Museum of Cultural History, University of California, Los Angeles
c. Joshua Tree National Park
d. San Diego Archaeological Center
e. Santa Barbara Museum of Natural History
f. University of California Riverside Department of Anthropology
g. University of California, Santa Barbara

Background

California has one of the largest collections of DoD/USACE archaeological materials in the United States, representing a significant challenge for the proper curation of these materials. Since California has a greater percentage of facilities that curate archaeological collections, more institutions were contacted and visited in California than any other state. Because of the archaeological and geographical diversity within the state, and based on recognized collections use areas, the state could be divided into two or three regions, which may consist of north, central, and south. Because of the distinctiveness between regions, particularly between north and south, and the vast amount of material, two or three repositories could conceivably be selected to curate DoD/USACE archaeological collections from California. Repositories could be selected for each of the two or three regions. How DoD/USACE collections could potentially be divided among the two or three regions of California would have to be negotiated at a later date.

Table 6.1 lists the institutions contacted in California, and the reason(s) an on-site evaluation was not conducted for most. Unfortunately, the one institution visited in northern California (the Phoebe Apperson Hearst Museum of Anthropology, University of California, Berkeley) has since declined interest in the program. Although data for the Hearst Museum was collected, it is not presented in this chapter.

The other seven institutions visited are a mix of private (Bowers, Santa Barbara Museum) museums, a public corporation (San Diego Archaeological Center), a federal agency (Joshua Tree), and public universities (University of California campuses at Berkeley, Los Angeles, Riverside, and Santa Barbara). This represents the greatest diversity of institution types we encountered in any one state during the Phase I fieldwork.

A curation partner in the two or three California regions could balance the large volume of collections and diverse interests in the state. Although there is a dearth of potential curation facilities in northern California, the St. Louis District suggests an expanded search be conducted. A list of potential institutions in northern California to contact in the future has been generated should this option be pursued.

Table 6.1 List of Institutions Contacted in California

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Adan E. Trenganza Anthropology Museum, San Francisco State University			X	
Antelope Valley Indian Museum				X
Anza-Borrego Desert State Park				X
Bowers Museum of Cultural Art				
C. E. Smith Museum of Anthropology, California State University, Hayward		X		
Calaveras County Museum and Archives		X		
California State Indian Museum		X		
California State University, Bakersfield, Museum of Anthropology			X	
Carnegie Art Museum	X			
Catalina Island Museum Society, Inc.		X		
Community Memorial Museum of Sutter County			X	
Craft and Folk Art Museum	X			
Eastern California Museum			X	
El Pueblo de Los Angeles Historic Monument	X			
Fort Point and Presidio Historical Association	X			
Fowler Museum of Cultural History, University of California, Los Angeles				
Hi-Desert Nature Museum			X	
The Haggin Museum		X		
Jesse Peter Native American Art Museum, Santa Rosa Junior College	X			
Joshua Tree National Park				
Junipero Serra Museum			X	
La Purisima Mission State Historic Park			X	
Lompoc Museum			X	
Los Angeles County Museum of Natural History			X	

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Malki Museum, Morongo Indian Reservation		X		
Marin Museum of the American Indian	X			
Merritt Museum of Anthropology		X		
Mission San Diego de Alcala on Mission Basilica de Alcala		X		
Mission San Juan Capistrano Museum		X		
Modoc County Historical Museum		X		
Museum of Anthropology, California State University, Chico			X	
Museum of Anthropology, California State University, Fullerton			X	
Oakland Museum		X		
Palm Springs Desert Museum		X		
Phoebe Apperson Hearst Museum of Anthropology, University of California, Berkeley				
Point Reyes National Seashore			X	
Rancho Los Alamitos		X		
Rancho Los Cerritos Historic Site		X		
Redding Museum of Art and History			X	
Riverside Municipal Museum		X		
San Bernardino County Museum			X	
San Diego Archaeological Center				
San Diego Museum of Man		X		
San Francisco State University			X	
San Jacinto Valley Museum		X		
Sanchez Adobe Historic Site			X	
Santa Barbara Museum of Natural History				
Santa Cruz City Museum of Natural History			X	
Santa Monica Mountains National Recreation Area			X	
Sonoma County Museum		X		
Southwest Museum			X	
Stagecoach Inn Museum		X		
Stanford University Department of Anthropology	X			
Stanford University Museum and Art Gallery		X		
University of California, Riverside, Department of Anthropology				
University of California, Santa Barbara				
Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area		X		

Note: Locations visited indicated in **Bold**

Comments

A summary of the Decision Support Model scores for each potential partner in California is presented in Table 6.2. The San Diego Archaeological Center was not assigned a numerical DSM score, since they acquired a curation facility in February 1998, after scores were returned to the St. Louis District from TASC. The St. Louis District staff has visited the Center and it is an excellent facility with a highly dedicated professional staff. If so directed we can revisit and perform the DSM evaluation.

Bowers Museum of Cultural Art

Architectural Summary

Site Conditions

The Bowers Museum of Cultural Art (Bowers) is located in Orange County. The Bowers museum complex is composed of several structures located in the main commercial portion of downtown Santa Ana, designated as a "Museum District." The city hopes the district will be a prototype urban space and attraction.

There are 60 parking spaces including spaces for buses. An adjacent parking lot provides an additional 135 spaces. A truck loading area is located on the southern side of the main museum complex. The possibilities for expansion are quite good. Property to the west and north could be used for expansion. Additional properties within the district could be acquired for expanded collections storage space. The district is structured to encourage museum growth and use.

Building Condition/Structural Adequacy

The Bowers hosts over 100,000 visitors each year. The museum building is a two-story light steel frame structure with stucco exterior. The original 12,000 ft^2 portion of the museum was built in the 1930s and is finished with wood trim and coffered ceilings. A 57,000 ft^2 expansion was added in 1992. The roof is a combination of asphalt composite at newer areas and Spanish clay tiles at older areas.

The collections are stored in a 5,200 ft^2 area. An additional 6,050 ft^2 of off-site storage is also used for collections storage. The museum had no signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The 1992 addition brought the entire facility into compliance with all appropriate building, life-safety, and accessibility requirements (type V, 1-hour construction, 1930s portion; type I or II construction, 1992 addition; B use group). There are two designated disabled parking spaces at the museum. The entire facility appeared compliant with the Americans with Disabilities Act

requirements. Two passenger elevators provide disabled access between levels. Two fire-rated stairways provide emergency egress.

HVAC Systems

The museum is heated by a central natural gas fired forced air system with a chlorinated fluorocarbon free air conditioning system. The air handling system has filters that are changed every six months. A humidity control system and multi-zone control supplements the air handling system. The museum is in the process of converting the HVAC controls to a completely automatic energy management system.

Fire Suppression and Detection

The museum is protected with both manual and automatic fire detection systems. Smoke detectors and heat sensors are located throughout the building. The fire alarm system is wired to a central monitoring station and the local fire department. A wet-pipe fire sprinkler system and fire extinguishers are located throughout the building.

Security System

The Bowers is secured with deadbolt locks, keypad access, motion detectors, 28 TV monitors, and intrusion alarms. In addition, five security officers patrol the property. The museum's security system is wired to a central monitoring station and then to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The Bowers mission is "the collection, preservation, study, interpretation and exhibition of the cultural arts of the Americas, Pacific Rim, Africa, and the history of Orange County, California." The museum's scope of collections includes the cultural arts of the Americas, Pacific Rim, and Africa. The BMCA collections consist of 80,000 archaeological and ethnographic objects and are especially rich in Native American and Southeast Asian pieces.

Archaeological Collections Storage

BMCA's main collections storage areas consist of three adjoining rooms. Room A is 1,836 ft^2 in size and contains Asian, doll, and American historical collections that are housed on 22 banks of mobile storage shelving. Room B is 2,039 ft^2 in size and contains Pre-Columbian, Native American, African, and Oceanic collections that are housed on 22 banks of mobile storage shelving. Room C is 1,329 ft^2 in size and contains oversized storage for sculpture, paintings, textiles, and assorted oversized objects. A variety of metal shelving is used in this space. Shelves in Rooms A and B are fitted with plastic net covers to restrain objects in the event of vibration. Archaeological and ethnographic collections are stored with adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect.

Archaeological collections are also stored off-site in a 6,050 ft^2 building. The building is outfitted with security and fire detection/suppression systems. Due to time constraints, we were unable to evaluate this building during our site visit.

Environmental Controls

Archaeological and ethnographic collections are stored and exhibited in areas where temperature and relative humidity are monitored and regulated on a regular basis.

Range of Support Facilities for Archaeological Collections

The museum has adequate support facilities for archaeological collections including designated collections storage areas, a processing area, and general work and office areas. The Bowers does not have a conservation lab, as conservation treatment is not performed by the staff.

Composition of Staff

The staff are divided into the following departments: administration, exhibitions, museum services, operations, registration, collection management, curatorial, library, development, education, facility rentals, store, Kidseum, and membership. The Registrar, Collections Manager, and curatorial staff are responsible for the care and management of the collections. The Bowers has adequate staff for the care and management of archaeological collections.

Administrative Record Keeping and Storage

The museum maintains extensive administrative records including accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession records/disposal records. Duplicate copies have been made of administrative records, one of which is stored off-site. In addition, the museum uses the ARGUS for collections management. Computer records are backed-up daily, weekly, and monthly and a copy is stored off-site. Administrative records are stored in lockable metal file cabinets in a secured room and are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

The Bowers does not have an extensive collection of associated archaeological documentation. While the majority of the museum's collections are archaeological in nature, the entire collections from a site are not usually curated. Also many of the collections are donated, so much of this information about the collections is unavailable. The museum does have some field notes, maps, photographs, and reports. The museum has large collections of collector notes, ethnographic notes, field footage, donor notes, and correspondence, most of which will be entered into the museum's ARGUS system. Some of the associated documentation has not been duplicated. Associated documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

The Bowers has extensive collections management policies including an accession policy, a disaster/emergency plan, access/use of collections policy, an Integrated Pest Management Plan, and a deaccession/disposal policy. The museum has a formal collections policy that contains most of the aforementioned policies.

Administration Summary

Background

The Bowers was founded in 1936 and is a private/public partnership in transition. The museum plans to become a private institution. The museum is considered a publicly held privately operated corporation. The Bowers does not currently hold archaeological collections from federal agencies.

Real Estate

The City of Santa Ana owns the property on which the museum is located. According to the museum staff, there are no restrictions to the use of the property, requirements for open space, or covenants against construction. The museum completed a $12,000,000 renovation project in 1992. This project was funded through a Community Redevelopment grant with the goal of establishing a Museum District in Santa Ana.

Administration

The President of the museum has the authority to commit the Bowers financially to a partnership with DoD/USACE. He also would have the authority to sign a cooperative agreement with DoD/USACE. The museum has a development department that is responsible for grant writing and fund raising. Approximately 1/3 of the museum budget is derived from contributions, 1/3 from earned revenue, and the remainder is composed of grants and contributed income. The Bowers has not had a deficit in its operating budget within the last five years. The museum enjoys tremendous support from the community and has 4,000 members.

Outreach and Educational Programs

The Bowers has many types of educational and outreach programs. Outreach programs target all ages with films, lectures, and workshops. These programs focus on many topics including archaeology and culture. Many programs target school-age students, including tours and hands-on programs. The museum recently established the Kidseum, an interactive museum dedicated to education. The Kidseum features classrooms, storytelling, curriculum and resource areas for teachers, and audiovisual materials. In addition, the Bowers has developed a close working relationship with the Native American community through consultation and outreach.

Contributions

The Bowers suggested that if it accepted all California material they would require a mobile shelving system 8 ft. high and covering 2,500 ft^2 of floor space. Conventional shelving could be used, but the floor area would be greater although the shelving might cost less. This assumes the collection is not delivered all at once. More space would be needed for temporary storage.

Notes

The museum is strong financially and enjoys a tremendous amount of support from the community. In addition, the museum has indicated a strong interest and a willingness to work with the City of Santa Ana to examine new possibilities for storage space. The Bowers has efficient collections management procedures and considerable expertise that would ensure the proper care of incoming DoD/USACE archaeological collections. The museum has placed a heavy emphasis on research and has an active publications program could maximize the educational and research potential of DoD/USACE collections.

Fowler Museum of Cultural History, University of California, Los Angeles

Architectural Summary

Site Conditions

The Fowler Museum of Cultural History (Fowler) is located on the University of California, Los Angeles, campus. Parking for museum visitors is very limited and the nearest parking lot is far from the repository. A loading area is located at the rear of the museum building. The archaeological repository building has no loading facilities. The dense campus site is well maintained, without opportunities for expansion of the Fowler Museum facilities.

Building Condition/Structural Adequacy

The Fowler stores its archaeological collections in a sub-basement area in nearby Haines Hall. Haines Hall is a 1929 Romanesque style building with a concrete frame and brick veneer. The large 130,000 ft^2 building serves mainly as a classroom facility for the university. The building has not been significantly renovated and contains its original finishes, windows, and doors. However, the building has been condemned.

The building has observable signs of structural defects, hazardous building material, and leakage. A major leak from overhead pipes occurred in 1991. The building is scheduled for seismic, life-safety, and Americans with Disabilities Act retrofitting. The work was scheduled to begin in July 1997. Additional improvements to the building are also planned. Despite its condemned status, Haines Hall was still occupied during our visit. If the extensive renovation work is completed and Haines Hall is returned to official university use, the 3,550 ft^2 sub-basement storage area would still be difficult to expand.

Code Requirements/Egress/Accessibility

Haines Hall does not meet the appropriate building, life-safety, and accessibility requirements (type II construction, B use group). The 1929 structure has not been significantly renovated or otherwise updated in compliance with contemporary building codes. A ramp for ADA access has been added to the rear of the building. An older elevator is not ADA compliant but provides disabled access among floors. Restrooms also do not meet ADA requirements. A new freight elevator is planned as part of the scheduled renovation work. The building does not have fire-rated corridors. The building has open stairwells without fire separation.

HVAC Systems

A steam heat, hot/cold water system serves Haines Hall. Radiators provide climate control. A ventilation system is in place. The ventilation system has no humidity control and lacks filters. Dust and particulates are evident at the ventilation diffusers in the archaeology storage rooms. The HVAC systems are inefficient and provide poor climate control.

Fire Suppression and Detection

No smoke detectors or heat sensors are present. Manual pull alarms provide fire detection and are wired to the local fire department. A wet-pipe fire suppression system is in place in certain portions of the building, whereas other areas are not equipped with sprinklers.

Security System

Access to the collections areas is restricted, although there is little separation from public areas. Haines Hall is secured with deadbolt locks, keypad access, motion detectors, and intrusion alarms. The museum's security system is wired to a central monitoring station and then to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of the Fowler focuses on exhibitions, publications, and programs that celebrate the diverse cultures and rich visual arts from throughout the world. The museum's scope of collections includes archaeological and ethnographic objects from Africa, Asia, Oceania, and North and South America. The Fowler's archaeological collections consist of approximately 4,000 ft^3 and are especially strong in materials from California, the Southwest, Mexico, and Latin America.

Archaeological Collections Storage

The majority of the Fowler's archaeological collections are stored in Haines Hall, a 1920s building. The collections are stored in three rooms in the sub-basement of the building.

Collections have been rehabilitated on a project specific basis as funds as been provided. The majority of collections are stored in wooden drawers that are overloaded. Some shelving units appear to have been damaged. Collections do not have adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect. During our visit several types of insects were observed in sticky traps. Heating vents have been spewing black dust into the collections storage area and onto nearby collections.

Ethnographic collections and select archaeological collections are stored in the Fowler Museum itself, a brand new state-of the-art facility. The collections stored there are considered to be of exhibit quality. The archaeological program based in Haines Hall is essentially operating separately from the rest of the Fowler.

Environmental Controls

The storage area in Haines Hall does not have adequate environmental controls. The building has heat, but it does not work properly. The ethnographic and archaeological collections curated in the Fowler are stored in areas where relative humidity and temperature are monitored and regulated.

Range of Support Facilities for Archaeological Collections

The archaeological curation area in Haines Hall has few support facilities for archaeological collections. According to the Curator of Archaeology, support facilities are available through the Fowler Museum and the University of California Los Angeles. The Fowler Museum has conservation facilities, staff, registration facilities, a photography lab, and computer support. The university could provide additional support facilities through the Institute of Archaeology including staff, student labor, and access to the ethnobotany, zooarchaeology, obsidian hydration, chipped stone analysis, and ceramics analysis labs.

Composition of Staff

Officially, the museum has a mid-sized staff including a Curator of Archaeology, Collections Manager, Registrar, and Conservator. However, only the Curator of Archaeology and some assistants are directly responsible for the care of archaeological collections.

Administrative Record Keeping and Storage

The records for the Haines Hall archaeological collections are maintained separately from those of the ethnographic collections in the Fowler Museum. This has resulted in two separate sets of record keeping systems and protocols. Administrative record keeping is good. Records such as acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records are maintained for the archaeological collections. The Fowler uses the ARGUS computer database in addition to maintaining paper records. The Curator of Archaeology is using several different types of databases to maintain computerized catalog information for the archaeological collections.

Administrative records stored in Haines Hall are in need of better storage conditions. Administrative records are not provided with adequate protection from fire, theft, or damage.

Associated Archaeological Documentation and Storage

Associated archaeological documentation is maintained for the archaeological collections including artifact inventories, archaeological site files, burial records, field notes, maps, photographs, and reports. These materials are stored in a room adjacent to the collections storage area in Haines Hall. Some of the metal filing cabinets are rusted and most of the documents need to be rehoused in acid-free folders. Of concern is a large collection of cellulose nitrate negatives that are located in the collections storage area. According to the Curator of Archaeology, these negatives are rapidly deteriorating and pose a serious hazard. At the time of our visit he was trying to obtain funding to address the problem. The associated archaeological documentation is not provided with adequate protection from fire, theft, damage, or destruction.

Collections Management Policies

The Fowler Museum, including the archaeology program in Haines Hall, has many collections management policies including an accession policy, a disaster/emergency plan, access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy. The Curator of Archaeology is solely responsible for the registration, care, and management of archaeological collections.

Administration Summary

Background

The Fowler has curation agreements with the Navy, Bureau of Reclamation, and USACE.

Real Estate

The Fowler and the archaeological collections facility at Haines Hall are situated in the middle of the UCLA campus. The land is owned by the Regents of the University of California. Expansion of the existing facilities would be difficult because of site constrictions on the campus. In addition, Haines Hall is historic and the Fowler Museum cannot support additional floors.

Administration

The Director has the authority to commit the Fowler financially to a partnership with DoD/USACE. The Director would also have the authority to sign a cooperative agreement, if a university official approved and signed it as well. The Fowler receives the largest amount of its funding from the state. In addition the museum receives support from federal agencies, the National Endowment for the Arts, the National Endowment for the Humanities, as well as private sources. The Director of Development is responsible for fund raising and grant writing/tracking. According to its Assistant Director, the museum has not had a deficit in its operating budget in the last five years.

Outreach and Educational Programs

The Fowler has an education department that is responsible for programming. However, most of the actual outreach programs are conducted by volunteers. Archaeology outreach programs reach 40,000 students per year. The majority of the museum's interaction with Native Americans has been conducted as a result of the Native American Graves Protection and Repatriation Act. The staff recognizes the need for further development in this area and would like to increase outreach to this audience. In the past, tribal leaders have visited for consultation and there has been some Native American involvement in exhibit design and presentation.

Contributions

The Fowler would be willing to provide additional storage space for DoD/USACE collections in Haines Hall after the scheduled earthquake retrofitting is completed. After the retrofitting, the museum may gain use of the entire sub-basement floor of Haines Hall. The museum could contribute staff expertise, professional support staff through the University's Institute of Archaeology, use of their labs for collections processing and rehabilitation, volunteers and interns, and a portion of operation and maintenance costs. However, at present, the only staff member exclusively responsible for the care of archaeological collections is the Curator of Archaeology. In return, the Fowler Museum would require equipment and supplies for DoD/USACE collections such as storage racks, space-saver shelving, support collections management staff, supplies for maintenance or rehabilitation of collections, standard curation fees, rehabilitation fees, a prorated percentage of the operation and maintenance costs, and microcomputers for collections record keeping.

Notes

The Fowler Museum, as an institution, is not a strong potential partner. The focus of the museum is non-western ethnographic art. While archaeological materials remain part of the scope of the museum's collections, they are currently not being accepted. According to the Curator of Archaeology, this is a temporary policy that the museum hopes to reverse in the future. The archaeology program has in the past curated extensive federal archaeological collections. The current staff would be willing to process DoD/USACE archaeological collections as part of a partnership.

Joshua Tree National Park

Architectural Summary

Site Conditions

Joshua Tree National Park (JTNP) is located about 150 miles east of downtown Los Angeles near Twentynine Palms, California. An exhibition and visitor center is located near the repository building. There are 21 parking spaces in a paved parking lot with an additional 30-40 parking spaces in an adjacent dirt parking area. There is no designated loading area. New

collections and deliveries are brought through the front door. Most of the building complex is composed of temporary trailers that could be easily relocated in order to make way for future expansion. There is ample area available for building expansion.

Building Condition/Structural Adequacy

The 3,200-ft^2 repository was constructed in 1993. The small building has a concrete slab foundation with a wood frame structure and a standing seam metal roof system. The collections storage room is approximately 1,400 ft^2. There are plans for the installation of a compact shelving system in early 1997. The improvement will increase the building's storage capacity by more than 50%. The building is also used for library and office space. The simple and newly constructed repository had no signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The facility is constructed in compliance with all appropriate building, life-safety, and accessibility requirements (type V, non-combustible construction; B use group). The building appeared to be fully compliant with Americans with Disabilities Act requirements. Three emergency exits provide adequate emergency egress.

HVAC Systems

An on site natural gas forced air heating unit provides warm air to the repository. An exterior air conditioning condenser unit is located on the north side. The system is equipped with humidity control and standard filters that are changed regularly. The HVAC system provides adequate heating and cooling service.

Fire Suppression and Detection

The repository is protected with both manual and automatic fire detection systems including a wet-pipe fire sprinkler system and fire extinguishers. Smoke detectors and heat sensors are also located throughout the building. The fire alarm system control panel is located in the mechanical room and is wired to a central park monitoring station and the local fire department.

Security System

Deadbolt locks are used in restricted areas. There are motion detectors located throughout the building. The front entrance is secured with a keypad and access to the collections storage area is limited.

Collections Management Summary

Scope of Collections and Mission Statement

The curation facility at JTNP is dedicated to the preservation of the park's history and material culture. The park's scope of collections is limited to materials from the park itself. However,

the scope could be expanded with reasonable ease. The facility currently has about 2,898 ft^3 of archaeological collections and also curates ethnological, natural history, history, and fine art collections.

Archaeological Collections Storage

The building houses the collections storage area, which consists of about 1,400 ft^2 of space. The park closely follows the required National Park Service standards for collections management. All archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, biological pests, and general neglect. Collections are stored in a variety of metal lockable cabinets, and are housed in archival materials. The collections storage area has good security, environmental controls, and fire detection and suppression.

In the future, the park will install Space Saver brand storage systems. The staff anticipates using their existing cabinetry, which can be placed on the track system. It is estimated that the new system would quadruple storage capacity.

Environmental Controls

All collections were stored in an area with highly regulated environmental controls due to the harsh climate. Hygrothermographs are used to monitor relative humidity. Humidity is controlled in the repository.

Range of Support Facilities for Archaeological Collections

The JTNP facility has adequate support facilities for archaeological collections including a preparation area, a research library, a work room, designated collections storage areas, and general office areas. The park also has a small exhibit area located in the visitor's center.

Composition of Staff

The park currently has four staff members who work at the curation facility, including two Museum Technicians, a Registrar, and a Cultural Resources Management Specialist that also serves as the Curator. These positions are supplemented by a supply of volunteers and interns. In addition, the park has an education staff that is involved in interpretation and outreach programs.

Administrative Record Keeping and Storage

Administrative record keeping is excellent, closely following the NPS *Museum Handbook* requirements. Some of the types of records maintained include acquisition/accession records, catalog information, collection inventories, object location information, loan information, and deaccession/disposal records. In addition, the facility uses the NPS collections management database, Automated National Catalog System. All administrative records are stored in the collections storage area in fire-proof, locking cabinets.

Associated Archaeological Documentation and Storage

The facility has extensive collections of associated archaeological documentation. These are stored in the collections storage area, as the administrative records are. All documentation is housed in archival materials. All administrative records and associated archaeological documentation are stored in a manner that protects them from fire, theft, damage, and destruction.

Collections Management Policies

The facility follows the collections management policies outlined in the NPS *Museum Handbook*. Collection management policies include an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management Plan, and a deaccession/disposal policy. The park has a written collections management plan and a scope of collections.

Administration Summary

Background

JTNP was created in 1994 although it was originally established in 1936 as a national monument. The park is part of the Southern California Desert Sub-Cluster of the Pacific/Great Basin Cluster of the Pacific-West Field Area of the National Park Service. Archaeological materials from the park and the Marines Corps Air Ground Combat Center are curated in the park's new (1993) curation facility. The park does not have a formal agreement with the Marine Corps to curate its archaeological collections, but the Marine Corps is considering such an agreement.

Real Estate

The National Park Service owns the property. The curation facility could be expanded since there are no restrictions to adding new space.

Administration

The Field Area Director could financially commit the park to a partnership with DoD and USACE. The same individual could sign a cooperative agreement. Several staff members spend a portion of their time writing grants. No one on the staff conducts fund raising.

Outreach and Education Programs

The park has a well-developed interpretive program that includes archaeology, but is not exclusively oriented towards archaeology. The program provides general information on both cultural and natural resources to the visiting public and area school groups. Field trips to archaeological sites are common for local school groups. The park has worked closely with 28 bands of six tribes including consultation for the Native American Graves Protection and Repatriation Act.

Contributions

The park could contribute their current facilities, curation supplies, their technical expertise in their staff, and would cost share on new equipment that needed to be purchased.

Notes

The park has completed a General Management Plan for the expansion and renovation of the Visitor's Center complex. The goal seems to be greater exposure and an increase in public visitation of these facilities. Despite its small size, JTNP has a strong collections management, an adequate staff, and excellent collections management procedures. In addition, the staff has outreach programs, interpretation facilities, and experience working with Native Americans. The staff indicated that their current facility could accommodate about 1,000 ft^3 of new collections.

San Diego Archaeological Center (formerly the San Diego Repository Corp)

Architectural Summary

San Diego Archaeological Center (SDAC) is an independent nonprofit corporation which was created in order to establish an archaeological curation facility in San Diego County. SDAC had no curation facility at the time of the St. Louis District visit. SDAC has proposed using a large, three story 240,000-ft^2 structure for collections storage. The proposal called for an extensive renovation of the third floor including Americans with Disabilities Act compliance, building and life-safety updates, and new security systems. Hazardous building material abatement will likely be necessary for any large-scale renovation. A wet-pipe fire suppression system is located throughout the building.

The load bearing capacity of the proposed third floor collections storage areas is uncertain. It seems doubtful that the apparent capacity of the classroom/office building (40-60 psf) is sufficient for collections storage use (200-250 psf).

Collections Management Summary

While the status of SDAC's actual building was unclear at the time of the visit, much thought has been devoted to planning the facility's collections management. SDAC has developed an operations manual for the center and hopes to implement a series of collections management policies. These policies have been modeled after the requirements of 36 CFR Part 79. In addition, SDAC has developed a staffing plan. The center hopes to have a Board of Trustees and will be staffed by a Director, a Collections Manager, a Utilization Coordinator, Interns and Volunteers, an Office Manager, a Grants Specialist, a Conservator, a Volunteer Coordinator, a Research Director, and an Education Director.

SDAC plans to place a heavy emphasis on outreach and education, if the project is funded. SDAC hopes to involve Native American and other ethnic communities in as many

ways as possible. For example, Native Americans will serve on the Board. Outreach will be extended to the general public, the archaeological, and museum community.

Administration Summary

Background

SDAC is a privately owned and operated institution that was established in 1993. SDAC does not currently curate DoD or USACE archaeological collections. SDAC anticipates moving into its curation facility by Summer 1997.

Administration

The President of the Board of Trustees can commit SDAC to a partnership with DoD and USACE, and can sign a cooperative agreement. SDAC is fiscally solvent and plans to rely on an endowment to fund its operating expenses. Future funding will be acquired through the use of fees for services, a capital campaign, bequests and grants, memberships, school education program, in-kind donations, and retail sales.

Outreach and Education Programs

SDAC has assembled a very thorough and ambitious plan for a community outreach program that will be directed towards serving the community, to include Native Americans and other ethic groups, professional and avocational archaeologists, and educational groups.

Contributions

SDAC plans to, at a minimum, contribute its facility, provide for maintenance and operation, equipment, staff, and collections management, do rehabilitation work as necessary, perform Native American Graves Protection and Repatriation Act related activities, provide educational and research opportunities for the community. SDAC expects DoD/USACE to contribute their collections and technical expertise, provide training and networking opportunities, funding for staff and capital equipment, pay rent for the collections, and pay the proportional costs of operation and maintenance-type activities.

Notes

SDAC is an extremely energetic and dedicated group that has put into motion a comprehensive plan to establish a much-needed curation facility. Members have laid the groundwork for a very sound organization both financially and administratively.

Facilities Update

In 1998, SDAC sent facilities update information to the St. Louis District. In May 1998, SDAC opened a facility in downtown San Diego that will serve, at a minimum, as an interim repository for several years until a more permanent facility is obtained. The SDAC facility is part of the

rehabilitated historic Carnation building, which was previously a major dairy processing center. SDAC occupies 5,300 square feet on the ground floor of the 55,000 square foot building. Over 4,800 square feet of the 5,300 total have been devoted to collections processing and storage.

Rehabilitation of the Carnation building addressed facility systems currently in use by SDAC. The building is classified as S2, which does not require a fire suppression system. Fire extinguishers are nevertheless mounted in the office/research and storage areas. SDAC is equipped with standard dead-bolt locks, and an electronic security system that is wired to a security company. Additionally, the main 1,440 square foot storage area is enclosed in a 10-foot high chain link fence with locking gates. Access to the facility and to collections is limited by staff. SDAC does not have an HVAC system. If items are determined to require special environmental conditions, SDAC plans to implement microenvironments and oxygen-depleted storage.

Storage units in the Center include open baked-enamel steel shelves, locking steel cabinets, and locking file cabinets. The main storage area has an estimated total capacity of over 3,000 cubic feet of archaeological materials. The processing area has an estimated capacity of approximately 871 cubic feet. The documentation storage area has an estimated capacity of 150 linear feet of records. Archaeological collections and associated documentation are housed in a variety of types of primary containers, all considered archival.

Santa Barbara Museum of Natural History

Architectural Summary

Site Conditions

The Santa Barbara Museum of Natural History (SBMNH) is located on a seven acre site in a residential neighborhood. The city has regulatory oversight of proposed changes to the historically significant buildings of the SBMNH complex.

Over 125,000 people visit the museum each year. Parking is available in a 150 space public parking lot and a 18 space staff parking lot. The parking capacity is generally adequate. Additional parking is available at adjacent properties and on the street. Truck/delivery access is located at the southern staff parking lot. Expansion is possible with second story additions or new construction to the south or west, provided that the City of Santa Barbara also approves expansion plans.

Building Condition/Structural Adequacy

The entire museum building complex totals 76,000 ft^2 in area. The Anthropology Department is located in a 22,000--ft^2 building. The original structure was built in 1964 and was renovated during a 1992 addition. A seismic retrofit of the repository portion of the building was performed at that time. In general, the building is well maintained. The building has a concrete slab foundation with a concrete masonry unit load bearing structure. The 1992 classroom additions have been wood frame construction.

The Department of Anthropology shares the building with the Zoology Department and other research functions of SBMNH. Additional collections storage space for the Anthropology Department could be created with the addition of a second floor over the existing area used by the department. Along the ceiling of the existing 2,850 ft^2 collections storage area, the built-up asphalt roof has several pieces of HVAC equipment on it, as well as a skylight. The museum hopes to add additional roof drains to eliminate leakage. In general, the collections storage areas were well maintained. The museum had no other signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The original portion of the Anthropology/Zoology building (type III construction) was updated to meet the appropriate building, life-safety, and accessibility requirements during the 1992 addition (type V construction, mixed use groups, B, S-1) and renovation. Exterior ramps meet the Americans with Disabilities Act (ADA) requirements is ADA compliant. An elevator provides disabled access between levels. Two fire-rated stairs provide emergency egress from the second floor and fire-rated corridors for the entire building.

HVAC Systems

The entire HVAC system was upgraded during the 1992 addition/renovation. The central forced-air system is heated with a natural gas-fired system. In addition to standard air filters, the repository rooms have positive pressure to prevent dust infiltration. The HVAC appears to provide excellent service to the Zoology/Anthropology building.

Fire Suppression and Detection

The museum is protected with both manual and automatic fire detection systems. Smoke detectors and heat sensors are located throughout the building. The fire alarm system is wired to the local fire department. A wet-pipe fire sprinkler system and fire extinguishers is present.

Security System

SBMNH is secured with deadbolt locks, keypad access, motion detectors, and intrusion alarms. The museum's security system is wired to a private security company and to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The SBMNH mission is "to gain knowledge and promote understanding of nature and indigenous peoples, especially the natural environment and American Indian cultures of California's central coast." Collections and research are specifically cited as means of accomplishing this mission. The museum's scope of collections includes archaeological and ethnographic collections, with an emphasis on materials from the central coast region of

California. SBMNH's collections total approximately 5,000 ft^3.

Archaeological Collections Storage

Archaeological and ethnographic collections are kept in a secured storage room. Compact storage consists of 35 cabinets, of which 25 are currently filled. An additional 2,200 ft^3 of open shelving storage is also currently filled. Archaeological and ethnographic collections are stored with adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect.

Environmental Controls

Archaeological and ethnographic collections are stored and exhibited in areas where temperature and relative humidity are monitored and regulated on a regular basis.

Range of Support Facilities for Archaeological Collections

SBMNH has adequate support facilities for archaeological collections including designated collections storage areas, processing labs, general work and office areas. Specifically, the museum has a large work space for research and separate processing rooms for incoming collections. The museum has a logical traffic pattern for incoming collections.

Composition of Staff

SBMNH has a large staff that work in the following departments: administrative, buildings and grounds, development, public programs, education, exhibits, collections and research, invertebrate zoology, anthropology, library, and vertebrate zoology. Archaeological collections are cared for by the Curator of Anthropology, Senior Associate Curator of Anthropology, Assistant Curator of Anthropology, and a Curatorial Assistant. The museum does not have a Registrar or a Collections Manager. The museum Librarian is responsible for registration duties.

Administrative Record Keeping and Storage

SBMNH maintains a variety of administrative records including accession records, catalog information, collection inventories, object location information, loan information and record, and deaccession/disposal records. The staff currently use the ARGUS computer database program for collections management. Duplicate copies of administrative records have been made and the originals are stored in the archives. Administrative records are stored in a secured area with fire detection and suppression. All administrative records are stored in a manner that will protect them from fire, theft, damage and destruction.

Associated Archaeological Documentation and Storage

The museum maintains a variety of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. In addition, SBMNH has large archive collections of ethnographic records and writings. Some

original documentation has been photocopied and copies are stored in the archives. The originals are stored in the museum. All associated documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

SBMNH has numerous collections management policies, many of which are included in a general collections policy for the museum. These policies include an accession policy, a disaster/emergency plan, an access of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

SBMNH is a private institution that has been in existence for 80 years. Its mission is devoted to the understanding of nature and indigenous peoples from the central coast area of California. The museum receives a generous amount of support from the community and has 5,000 members. The museum has a large endowment which is used for operating budget costs.

Real Estate

SBMNH owns the museum property, and operates under a conditional use permit with the Santa Barbara Planning Department that permits the museum to function within the residentially zoned area. There are restrictions to a possible expansion of the facility, as the museum is considered a building of merit and is historic. Any changes to it must be approved by the City of Santa Barbara. The museum is surrounded by a good deal of undeveloped property, part of which belongs to the City of Santa Barbara.

Administration

The Director has the authority to commit the museum financially to a partnership with DoD/USACE. However, the Board of Trustees must also approve the partnership. The museum has solid financial resources to bring to a partnership, with an operating budget of $2,500,000 and a $20,000,000 endowment. The SBMNH has a staff member who pursues grants full-time. In addition, fund-raising is conducted by the Director of Development, the Plan-Giving Officer, the Membership Coordinator, and the Assistant Director of Development.

Outreach and Educational Programs

SBMNH has many outreach and education programs, most of which are conducted by the education department. Many of these programs focus on archaeology. The museum is the sponsor of the Santa Barbara Archaeological Society and serves as the center of many of its activities. In addition, tours are provided to school groups, programs are held for archaeology week, field trips are held, and lectures are given.

SBMNH has developed a close relationship with the Native Americans in the area and has worked with them on many projects. The museum has programs that are presented by Native Americans as well. Some of the museum's programs include the California Artways program, the Chumash Culture Circle program, and the California Indian Advisory Board. Members of the Santa Inez Reservation have served as advisors regarding collection policies, exhibits, and public programs. The museum's relationship with Native Americans has been strengthened by Native American Graves Protection and Repatriation Act consultation and they have begun a Native American internship program. In addition, many local Native Americans use the museum's document collections as a resource to research their genealogy.

Contributions

SBMNH would contribute staff, floor space, cabinet space, documentation storage supplies, general materials for processing and storage, and a percentage of operation and maintenance costs to a partnership with DoD/USACE. The staff indicated that they would expect DoD/USACE to contribute equipment, funding of support staff if needed to care for specific collections, a financial contribution if it was necessary to create a new facility to house the material, a portion of operation and management costs, curation fees per space required, and additional funds and staff if collections must be rehabilitated.

Notes

SBMNH appears to be a well-funded organization. Design guidelines mandate that each building maintain the Spanish-style setting of the complex. Depending on the size of a collection, SBMNH may be able to accommodate additional collections in its existing facility, since about 1/3 of its current cabinetry is empty. According to the Museum Director it is possible to add another floor above the research and collections building, which would be necessary to accommodate more collections.

The museum has many outreach programs and has considerable experience interacting with the Native American community. The museum also enjoys a tremendous amount of support from the public and has been successful in obtaining grants for curation studies and projects.

University of California, Riverside Department of Anthropology

Architectural Summary

Site Conditions

The Archaeological Curation Unit (ACU) at the University of California, Riverside (UCR) is located in Watkins Hall on the UCR campus. The ACU currently leases warehouse space for collections storage at a nearby facility located a few miles southwest of the UCR campus. The small property is located immediately adjacent to an interchange of the 91 Freeway. There are

21 parking spaces and ample room for truck access. Two loading docks serve the building. Future expansion or renovation is very unlikely. The entire facility is scheduled for demolition by 1999 for future highway construction.

Building Condition/Structural Adequacy

Watkins Hall was built in the late 1950s and houses the offices of the ACU, the Anthropology Department, and contract archaeology offices. The building also has laboratories and a processing area for incoming collections. The facility has poor temperature and humidity control and lacks an adequate security system.

The leased collections storage space is part of a North American Van Lines warehouse. The ACU leases about 1,200 ft^2 of the 25,000 ft^2 one story concrete tilt-up panel and laminated wood beam structure. The remainder of the building is used for furniture and miscellaneous storage. There is a three level mezzanine throughout the 30 ft clear height warehouse portion of the building. The building has a flat-built up roof system with gutters and downspouts. The warehouse facility had no major signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The 1986 warehouse facility appears to meet all appropriate building, life-safety, and accessibility requirements (type III construction, S-1 use group). There is a single disabled parking space. With the exception of the mezzanine areas, the entire building appears to be compliant with the Americans with Disabilities Act.

HVAC Systems

The warehouse has no heat, air conditioning, or humidity control. The office areas of the warehouse have electric heating and cooling systems.

Fire Suppression and Detection

The warehouse is equipped with manual fire detection systems. There are no smoke detectors nor heat sensors. The fire alarm system is wired to a private security company that contacts the local fire department when a fire is identified. A wet-pipe fire sprinkler system and fire extinguishers are located throughout the building.

Security System

The warehouse is secured with deadbolt locks, motion detectors, and intrusion alarms. There is restricted key access to the collections area. The facility's security system is wired to a private security company that then contacts the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The ACU has only been in existence since 1994. UCR's Department of Anthropology has generated collections over the past twenty years, but never officially established a museum or repository. The ACU now curates these collections and has begun to accept new collections on a contract basis. The ACU's mission statement includes archaeological materials only. Its scope of collections includes materials from California, the Great Basin, and adjacent regions of the Southwest. The ACU's archaeological holdings consist of approximately 600 ft^3 of collections.

Archaeological Collections Storage

Some archaeological collections are stored in a room in Watkins Hall, where the Department of Anthropology is located. These collections are considered to be in temporary storage and consist mainly of teaching collections. These collections are stored in lockable metal and wooden storage cabinets. The metal shelving units are bolted together by a system of steel support bars to reinforce the units in case of earthquakes. The temporary collections storage area does not have appropriate environmental controls, security, or fire suppression. Archaeological collections in this room are not adequately protected from ultraviolet radiation, particulates, or biological pests.

The majority of the ACU's collections are located in an off-site warehouse through an informal agreement with the owner. The collections area is surrounded by a chain link fence and is located in the rear of the warehouse's main storage room. Archaeological collections are stored in cardboard boxes that occupy two large banks of metal shelving.

Environmental Controls

The warehouse is routinely inspected for pests by a contractor and conditions are quite clean. The warehouse does not have a security system or a sprinkler system. The storage area of the warehouse does not have any environmental controls. The staff does not monitor relative humidity or temperature in either facility.

Range of Support Facilities for Archaeological Collections

The ACU has adequate support facilities for the management of archaeological collections including a designated collections storage area and general work and office spaces. However, these facilities are small. The ACU also has access to the physical anthropology lab in Watkins Hall, which has been used for processing incoming collections.

Composition of Staff

The ACU does not have any full-time paid staff. Currently, the Director of the ARU and his administrative assistant are also responsible for running the ACU. They are not paid for these extra duties. In order to enter into a partnership with the ACU, staff positions would have to be funded.

Administrative Record Keeping and Storage

The ACU does not have adequate administrative record keeping practices or storage facilities. The ACU maintains basic registration and catalog records. However, the ACU does not have an accession policy and does not officially use an accession process as part of a collection's registration. A computerized database created in *WordPerfect* contains basic catalog information. Administrative records are stored in the temporary collections storage area in Watkins Hall. They are kept in binders inside a locked metal locker.

Associated Archaeological Documentation and Storage

The ACU has a variety of associated archaeological documentation in its holdings. The ACU policies require that associated documentation accompany each new archaeological collection. Documentation such as site files, field notes, artifact inventories, reports, and photographs/slides are also stored at the ACU. Associated documentation is also stored in the temporary holding area in Watkins Hall. Associated documentation is not adequately protected from fire, theft, damage, or destruction.

Collections Management Policies

The ACU has completed a draft of its collections management policies. The ACU lacks an accession policy, a disaster/emergency plan, an Integrated Pest Management plan, and a deaccession policy. The staff indicated that the development of these procedures would be a top priority in the future.

Administration Summary

Background

The ACU was created in 1995, although the Department of Anthropology has curated archaeological collections since 1966. The ACU is separate from the university's Archaeological Research Unit (ARU), which functions as one of the state's archaeological information centers. However, the ARU staff is responsible for running the ACU. Archaeological materials owned by the Bureau of Land Management are the result of archaeological work performed by the Archaeological Research Unit and are not curated by the ACU. The ACU does not currently curate any DoD/USACE archaeological collections.

The only curation agreement the ACU has is with the California Department of Transportation. However, the agreement is not exclusively for curation and includes archaeological fieldwork.

Real Estate

The state of California owns the property. The ACU is located in Watkins Hall. An off-site storage area where the archaeological collections were stored was owned by a private firm (Burgess -North American Van Lines). The Campus Architect would have to be involved in any

changes to existing buildings.

The ACU is a participant in a plan to construct a museum/repository/living history museum, the Western Center for Archaeology and Paleontology, near or in the towns of Hemet and San Jacinto as part of a Metropolitan Water District (MWD) of Southern California reservoir project. Although members of the ACU, the Department of Anthropology, and private individuals are very enthusiastic about the proposed repository plans and suggest that the facility will eventually be constructed, no binding contract exists between the MWD and any other entity. The MWD, at the moment, is the sole funding source for the entire project. Cost estimates vary between $10,000,000 and $15,000,000.

Administration

The Vice Chancellor of Research Affairs could financially commit the ACU to a partnership with DoD and USACE. The same individual could sign a cooperative agreement. No one in the ACU writes grants or conducts fund raising.

Outreach and Education Programs

The Department of Anthropology, of which the ACU is a part, has several cultural anthropologists conducting local research and the ARU interacts with Native Americans on archaeological projects. Undergraduate and graduate students from the Department of Anthropology give lectures in local schools. The ARU has participated in Native American Graves Protection and Repatriation Act consultations. The UCR Chancellor has created an Advisory Committee on Native American Affairs. The university has Native American student programs and a Native American Student Association.

Contributions

Notes

The Department of Anthropology has a partnership with the Metropolitan Water District of Southern California to develop a large 100,000 ft^2 facility called the Western Center for Archaeology and Paleontology, near Hemet, California. Conceptual plans include 30,000 ft^2 of collections storage space at an estimated $15,000,000 cost. The project is envisioned to be a highly visible museum that is open to the public and researchers. The proposed site is near the Eastside Reservoir that is adjacent to camping and resort activities. The project has not yet received funding, but the Department of Anthropology staff hope that a first phase could be completed by 2000.

Facilities Update

ACU and St. Louis District staff met briefly in August 1999. As of the meeting, there has been no change in the status of either Watson Hall or the leased curation facility.

University of California, Santa Barbara

Architectural Summary

Site Conditions

The University of California, Santa Barbara (UCSB), Department of Anthropology's Curation Facility (CF) is located on the east edge of campus in the Humanities Building. There are approximately 500 parking spaces divided among several nearby area parking lots. There is a loading dock at the southern end of the building. Small scale expansion of the building would be possible to the east into an existing courtyard area and in a small open area to the west of the Humanities Building.

Building Condition/Structural Adequacy

The Humanities Building, completed in July 1996, is a large facility used for classroom, research, and other university uses. The arcade portion of the building is four stories high and the tower portion is six stories. The roof is a flat built-up system. The 2,500-ft^2 collections area is located in the basement of the concrete frame building. Additional room for collections storage could be created with compact storage units. An additional 700-ft^2 are unused in the basement that could also be renovated for collections storage. The new building had no signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The new Humanities Building appears to meet the appropriate building, life-safety, and accessibility requirements (type I construction, B use group). The building has fire-rated corridors. Two fire-rated stairs provide emergency egress. An elevator provides disabled access among levels. The new facility meets "Title-24" disabled accessibility requirements.

HVAC Systems

The university-wide heating and cooling system serves the Humanities Building. Underground services provide steam for heating and a condenser system provides for cool air. The building has five air handler units that circulate both hot and cool air. These units provide zoned climate control throughout the facility. There is a 24 hour energy management system for the HVAC system. The air handling system has both standard and HEPA filters.

Fire Suppression and Detection

The building is protected with both manual and automatic fire detection systems. Smoke detectors and heat sensors are located throughout the building. The fire alarm system is wired to the local fire department. A wet-pipe fire sprinkler system and fire extinguishers are also located throughout the building.

Security System

The Humanities Building is secured with deadbolt locks, keypad access, motion detectors, and intrusion alarms. The museum's security system is wired to a private security company and to the university's police department.

Collections Management Summary

Scope of Collections and Mission Statement

According to the CF mission statement, the curation facility maintains archaeological and ethnographic collections in order to foster research and enhance education. The CF's scope of collections includes materials collected from the mainland coast Santa Barbara Channel, Santa Barbara County, and adjacent portions of the neighboring counties. However, the curation facility has acquired collections from other regions as well. Its current holdings consist of 1,573 ft^3 of collections.

Archaeological Collections Storage

The CF houses collections in the basement of the new Humanities Building, which are stored in Space-Saver brand metal cabinets (61%) and in wooden shelving/drawers (31%). Human skeletal remains are stored in a separate room to which access is limited. In addition, collections which are awaiting deaccession fill a room down the hall from the main repository. An additional room is located next to the main repository and houses faculty's personal collections. This room is not climate controlled. Collections in the main room of the repository are stored in adequate conditions. However, collections which are stored in the additional storage areas need attention. The wooden shelving and drawers in these areas are overloaded and need to be replaced.

Environmental Controls

At the time of our visit the HVAC system was not functioning in the repository, and was slated to be repaired. In addition, the staff would like to begin a system of environmental monitoring using data loggers. However, at the time of our visit collections were stored in an area where temperature and relative humidity were not regularly controlled or monitored.

Range of Support Facilities for Archaeological Collections

The CF has adequate support facilities for the care of archaeological collections including designated collections storage areas, processing labs, and general work and office areas. Processing labs are not located in the repository itself, but are available in the on the first floor of the building.

Composition of Staff

The CF has no full-time staff. The current staff include a Faculty Supervisor and an Acting

Assistant Curator. They estimate that the Faculty Supervisor devotes 10% of his time to collections care and the Acting Assistant Curator devotes about 49% of their time to collections care. The Assistant Curator is a graduate student in the Anthropology Department.

Administrative Record Keeping and Storage

The CF maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Records are also maintained using the *Lab Assistant* computerized program for collections management. Administrative records are stored in the office area. Some metal file cabinets lock and records are stored in acid-free folders. Administrative records are stored in a manner that will protect them from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

Many types of associated archaeological documentation are curated at the CF including archaeological site files, field notes, artifact inventories, reports, and photographs and slides. Copies of original documentation have also been made on archival paper. Associated documentation is stored in the collections storage area and the office area. Associated documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

UCSB lacks an emergency/disaster plan, an Integrated Pest Management plan, and a deaccession policy. These policies should be developed in the future.

Administration Summary

Background

The CF is part of the Anthropology Department and is located in the basement of the new Humanities Building. The curation facility does not have a separate full-time staff from the Department of Anthropology.

Real Estate

The Humanities Building is located on the UCSB campus and is thus owned by the state of California. As part of the university, the facility falls under UCSB's long-range development plan. According to the Faculty Supervisor of the CF, the university would have to be contacted directly to determine if there are any restrictions to the use of the property such as covenants against construction. The campus and thus the Humanities Building are subject to the development restrictions of the California Coastal Commission.

Administration

The CF does not have a representative that can commit it financially to a partnership with DoD/USACE. A representative of UCSB could commit the university and the curation facility financially to a partnership. The CF's financial resources are quite limited. It receives most of its funding from the Anthropology Department. The income is supplemented from fees charged for curation services. At the time of our visit, it was unclear what the facility's operating budget was. No one staff member is involved exclusively in the writing and tracking of grant proposals. Grants are pursued by Anthropology Department staff as needed and no one is currently responsible for outside fund raising.

Outreach and Educational Programs

The CF does not have a full-time educational staff responsible for outreach programs. Outreach is performed by the Anthropology Department staff when possible and has included school visits, lectures, and talks on archaeology. Some of these programs have been conducted on the Santa Inez Reservation. The staff consider their outreach to Native Americans to be their strong point and have a cooperative agreement with the Santa Inez for the curation of mortuary collections. In addition, the CF has made permanent loans to the Oak Brook Park Interpretive Center.

Contributions

The CF would be willing to contribute maintenance costs, university-funded staff, student workers and interns, and possibly floor space (including an additional room if it is upgraded). Additional space might be available on campus as well. They would also be interested in processing and rehabilitating collections for a fee. Most of these contributions will depend on the willingness of the UCSB to support a partnership, since the curation facility alone cannot enter into a partnership by itself.

The CF would require additional space if DoD/USACE collections are substantial in volume. Additional space might be provided in extra rooms that are currently housing dead storage. These spaces will need rehabilitation, a cost that DoD/USACE would be expected to contribute in part. In addition, they would require curation fees, cabinetry, shelving, a one-time perpetual storage fee, and funding for support personnel as part of a partnership with DoD/USACE.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted

categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 6.2 lists these composite scores and the architecture, collections management, and administration scores for each California institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 6.2 Summary of Decision Support Model Scoring - California

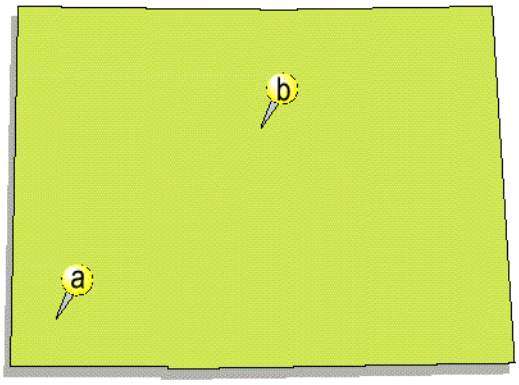
Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Bowers Museum of Cultural Art	**0.9106**	0.19839	0.29057	0.42166
Fowler Museum of Cultural History, University of California, Los Angeles	**0.6482**	0.00758	0.26985	0.37081
Joshua Tree National Park	**0.8607**	0.19846	0.29907	0.36316
San Diego Archaeological Center	**0.1881**	not evaluated	not evaluated	0.18807
Santa Barbara Museum of Natural History	**0.8010**	0.19658	0.29189	0.31254
University of California, Riverside Department of Anthropology	**0.4928**	0.10673	0.19961	0.18649
University of California, Santa Barbara	**0.7350**	0.19213	0.25697	0.28588

7

Colorado

Archaeological Materials (in cubic feet)

Department of Defense	**415**
USACE	**234**
TOTAL VOLUME	**649 ft^3**



Number of Institutions Contacted **23**

Institutions Assessed

a. Anasazi Heritage Center

b. University of Colorado Museum

Background

Despite contact with a number of institutions, few repositories in Colorado had sufficient interest in, or capabilities for, partnership. A list of the institutions contacted in Colorado is presented in Table 7.1, including the reasons some were not selected for an on-site visit.

Table 7.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Adams State College Museums			X	
Anasazi Heritage Center, Bureau of Land Management				
Colorado Historical Society		X		
Commanche Crossing Historical Society and Museum			X	
Denver Museum of Natural History		X		
Fort Collins Museum			X	
Fort Morgan Museum		X		
Koshare Indian Museum Inc.		X		
Lounden Henritze Archaeology Museum			X	
Mesa Verde National Park Museum		X		

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Montrose County Historical Museum		X		
Museum of Anthropology, University of Denver		X		
Museum of Western Colorado				X
Museum of Northwest Colorado			X	
Old Fort Garland		X		
Price Pioneer Museum		X		
Rimrock Historical Museum of West Monroe County	X			
Rocky Ford Historical Museum				X
Rocky Mountain National Park		X		
Saguache County Museum				X
Salida Museum				X
Southern Ute Indian Cultural Center		X		
University of Colorado, Boulder, Museum				

Note: Locations visited indicated in **Bold**

Comments

Two institutions were visited, the Anasazi Heritage Center (AHC) and the University of Colorado Museum (UCM). AHC is the only Bureau of Land Management (BLM) repository evaluated by St. Louis District for this project. A summary of the Decision Support Model scores is presented in Table 7.2.

Anasazi Heritage Center

Architectural Summary

Site Conditions

The Anasazi Heritage Center (AHC) is located near the southwestern Colorado town of Dolores, on State Highway 184. A large parking lot serves AHC and can accommodate over 50 cars and three buses. A fenced-in service area is located at the rear of the facility. Several nature trails are located on the property. A long sidewalk leads from the parking lot to the large semi-circular entry plaza in front of the building. During our visit, extensive site work was underway including renovations for disabled access. There is ample land available for expansion on the rural AHC site.

Building Condition/Structural Adequacy

The AHC building was constructed in 1986 in order to exhibit and curate archaeological collections generated from the Dolores Archaeological Project. AHC is over 37,000 ft^2 in area. The full basement is concrete with a concrete frame. The first floor is a combination of wood laminated beams, steel frame, and concrete masonry units faced with ashlar stone veneer. AHC is organized radially about a center point in the front entry plaza. These spaces contain exhibit, multi-purpose, lobby, and theater areas. Office, laboratory, and smaller exhibit areas are contained in a blocked shaped volume attached to the radial portion of the building. The building appeared to be in good condition. AHC had no signs of structural defects, hazardous building material, or leakage.

The collections storage areas are divided between four large collections storage rooms in the basement. These collections storage areas together are 15,432 ft^2 in area. Over half of the area is unused, although a large future accession is expected to fill much of the available storage area. Additional storage space could be created with the use of compactor storage units.

Code Requirements/Egress/Accessibility

The AHC building appears to meet the appropriate building, life-safety, and accessibility requirements (type II construction, B use group). Five exits provide emergency egress from the building. A freight elevator provides disabled access between the basement and main level. A fire-rated stair well provides separation between the basement and main level. A fire separation wall divided the office area from the public/exhibit spaces. The long sidewalk approach to the building was under renovation for compliance with the Americans with Disabilities Act (ADA) during our visit. The AHC facility appeared ADA compliant.

HVAC Systems

AHC is heated with a natural gas fired hot water system. The building is cooled with an electric air conditioning system. The conditioned air is delivered with a central air handler system. The HVAC system is filtered. A humidity control system was installed in 1996. The sophisticated system appeared to be serving AHC quite well.

Fire Suppression and Detection

AHC is protected with both manual and automatic fire detection systems. Smoke detectors and heat sensors are located throughout the building. The fire alarm system is wired to the local fire department. Except for the front lobby area, a wet-pipe fire sprinkler system is located throughout the building. Fire extinguishers are also located throughout the building.

Security System

AHC is secured with deadbolt locks, keypad access, motion detectors, TV monitoring, and intrusion alarms. The museum's security system is wired to a central monitoring station and then to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

AHC was developed as a result of the Bureau of Reclamation's Cultural Resource Mitigation Program for the Dolores River Project. As part of an agreement, the Bureau of Reclamation agreed to provide funding for the design and construction of the AHC. The Bureau of Land Management agreed to be responsible for the operation, maintenance, and staffing of the facility. Currently, the building and all collections are officially owned by the Bureau of Reclamation. In the future, both agencies plan to enter into an agreement that would transfer ownership of the AHC building and its archaeological collections to the Bureau of Land Management. The mission of AHC is "to preserve, manage, display, and interpret cultural remains of the Northern San Juan Anasazi". Geographically, AHC's scope of collections includes materials from the Four Corners area.

Archaeological Collections Storage

AHC curates approximately 9,800 ft^3 of archaeological material. Archaeological collections are stored in the basement of the building in of two large storage areas. The first storage area holds the majority of AHC's archaeological collections. Archaeological collections are stored inside of cardboard boxes and placed on metal shelving units. Ceramic vessels are stored on open metal shelving units that are lined with Ethafoam brand padding and draped with plastic shelving to protect from dust. Organic collections are stored in lockable, metal specimen cabinets.

The second collections storage room is currently empty, but will be filled in 1998 by new collections. Plumbing pipes run along the ceiling over the collections storage areas, which creates a risk of water damage. Archaeological collections at AHC are protected from ultraviolet radiation, particulates, biological pests, and general neglect. AHC's collections storage areas are currently approaching capacity. If compact storage units were installed, the staff suggested that they would be able to increase their available storage space substantially.

Currently, AHC has an empty room connected to the storage area. This room is being upgraded for collections storage space in the future. The room is scheduled to have a fire sprinkler system installed in 1998.

Environmental Controls

Archaeological collections are stored and exhibited in areas that have both heating and air conditioning systems. In the past two years a humidification system was installed in the building. However, it has never functioned properly. The staff mentioned that they are not satisfied with the building's current environmental controls. Portable dehumidifier units are used in the collections storage areas when necessary. The staff monitor relative humidity in the building using hygrothermographs that are calibrated quarterly.

Range of Support Facilities for Archaeological Collections

AHC has excellent support facilities for archaeological collections including designated

collections storage areas, processing labs, research and work spaces, and a conservation lab. In addition, AHC has a library which is available to the public as well as museum exhibits.

Composition of Staff

There is no Collections Manager, Conservator, or Registrar. At present two full-time positions (Curator and Museum Specialist) are devoted to archaeological collections management. These positions are supplemented by one contract position, four intern positions, and four to six volunteer positions.

Administrative Record Keeping and Storage

AHC maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records, such as accession records, are stored in the Curator's office inside of four fire-proof file cabinets. All administrative records are stored with adequate protection from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

AHC has a large collection of associated archaeological documentation including archaeological site files, field notes, artifact inventories, archaeological reports, and photographs/slides. These materials are stored in two areas, both of which provide adequate protection from fire, theft, damage, and destruction. AHC does not have a duplicate copy of all adminstrative records, but this information is also kept in a computer database that is backed up on tape. Collections of gray literature and copies of archaeological site files are also maintained. Reports are stored on a series of metal bookshelves. Copies of site files are stored in fire-proof file cabinets.

The majority of AHC's collection of associated archaeological documentation is stored in the basement archives room. Associated documentation in this room is stored in hanging file units on metal shelves inside of archival boxes and inside of acid-free boxes which are kept in metal cabinets. Associated documentation is adequately protected from fire, theft, damage, and destruction. However, the archives area should be monitored carefully for water leakage.

Collections Management Policies

The facility lacks a written disaster plan. AHC staff are addressing this in a draft collections management plan. Other collections management policies that AHC does have include an acquisition/accession policy, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

AHC is the repository for archaeological materials recovered during the Dolores Archaeological Project, the largest single archaeological project in U.S. history.

Real Estate

The center is located on land managed by BLM. The facility, although operated by BLM, was constructed by BOR which is still responsible for the building. The original intent was to transfer responsibility from BOR to the BLM once construction and furnishing was completed and all of the stipulations of the agreement were met. However, not all of the stipulations concerning completion of the building have been completed and BLM has not accepted financial responsibility for the physical plant.

Administration

The District Manager of the Montrose BLM District would sign a cooperative agreement. As a federal facility, AHC receives its funding through appropriations and does not conduct any fund raising activities. However, the Director of the center does write grant proposals.

Outreach and Education Programs

AHC offers numerous outreach and educational programs. "Project Archaeology" provides "Intrigue of the Past" teacher's activity guides and workshops for fourth through seventh grades. Two electronic titles are available on computer disks a for elementary students. AHC also provides nine traveling exhibits on a variety of topics. Finally, there are the museum exhibits maintained at AHC itself. These include a permanent exhibit and a temporary exhibit. The current temporary exhibit was developed by a Native American college student as part of an internship project. This internship is one of several offered to students at local colleges.

Contributions

In addition to having space available for the collections, AHC would be able to provide access and security to any DoD/USACE archaeological collections that were transferred. In addition, the staff could conduct inventories of the collections once they were in place.

Notes

AHC is a premier museum/curation facility. AHC was one of the best designed and equipped curation facilities encountered during Phase I of the project. It was created specifically to curate and use BOR/BLM collections from the Dolores River Project. Although AHC currently has space for additional collections, it has not yet received all of the collections from the Dolores Archaeological Project. The center has been underfunded with respect to its original mission and some staff positions have not been filled. The center has a good record of developing outreach materials.

University of Colorado Museum

Architectural Summary

Site Conditions

The University of Colorado Museum (UCM) is located in the Henderson Building on the western edge of the Boulder, Colorado, campus. Additional archaeological collections are stored in the Hunter Building. Visitor parking is available directly south of the building, but is limited. The dense campus site severely limits any parking or building expansion. The university is implementing a comprehensive master plan. The university also owns property in a local research park where any expansion would occur.

Building Condition/Structural Adequacy

Henderson Building

The Henderson building is a concrete frame and ashlar brick exterior structure that was constructed in 1935. It has a hipped roof structure with a steel frame and clay tile shingles. The original doors and windows are still present. The two story building's ivy covered exterior evokes a pleasant collegiate atmosphere. The basement and attic are also used by the museum. Exhibits are located on the first floor and basement level. Offices, classrooms, and laboratories are located on the second floor. Collections storage space is scattered in the basement, second floor, and attic areas. These spaces total approximately 3,000 ft^2 in area. The Cultural Resource Management Repository is located in the basement. This 650 ft^2 room was built in 1992 for special collections storage. The room has limited space available for additional collections. The basement level is susceptible to flooding after very heavy rains. The original floor tiles and roof panels in the attic potentially contain asbestos. The Henderson building had no other signs of structural defects, hazardous building material, or leakage.

Hunter Building

The Hunter building is also located on campus. It is scheduled for demolition in the near future to make way for a new communications program building. The 1940s structure is a simple brick warehouse building with a steel truss roof system. Over the years, the university has partitioned the open space to create classrooms and offices. The museum currently stores its less fragile and bulk collections in a mezzanine space, approximately 1,500 ft^2 in area. The attic/mezzanine area has signs of major leakage in the past. The load bearing capacity of the mezzanine level did not appear adequate for storage use. The university is reluctant to invest any further resources to update the building. Despite the charm and possibilities of the industrial/warehouse spaces of the Hunter building, the museum's relocation to the Old Geology Building will be an improvement.

Code Requirements/Egress/Accessibility

Henderson Building

The Henderson building appears to meet the appropriate building, life-safety, and accessibility requirements (type II construction, B use group). An open monumental stairwell from the basement to the attic level and two major exits provide the only emergency egress from the building. A new elevator was added in 1994 to provide disabled access between levels. An entrance ramp at the rear of the building provides access in compliance with the Americans with Disability Act.

Hunter Building

The Hunter building does not meet the appropriate building, life-safety, and accessibility requirements (type III construction, B use group). The mezzanine level is not accessible to the disabled. Stairways to the mezzanine level also do not meet contemporary building code requirements.

HVAC Systems

Henderson Building

The Henderson building is not air-conditioned. Even the mild summer Colorado climate makes the building uncomfortably warm during the summer. The university-wide heating system serves the building. Underground services provide hot water for heating. The building has its own air handling system with fan rooms to circulate hot air through the building. The university's central plant controls the heating output. Standard filters are located at each diffuser and are periodically changed.

Hunter Building

The Hunter Building is not air-conditioned. The university-wide heating system serves the building. Underground services provide hot water for heating. The building has individual radiator heating units that provide heat.

Fire Suppression and Detection

Henderson Building

The Henderson building is protected with manual pull alarms, smoke detectors, strobe and audible alarms, and emergency lighting. Fire extinguishers are located throughout the building. The facility is not equipped with an automatic fire suppression system.

Hunter Building

The Hunter building is also equipped with manual pull alarms, smoke detectors, strobe and audible alarms, and emergency lighting. Fire extinguishers are located throughout the building. The facility is not equipped with an automatic fire suppression system.

Security System

Henderson Building

An in-house security station uses TV monitors during building hours. Motion detectors and intrusion alarms secure the museum during off hours. The university police department, which also provides regular patrols of the campus, monitors these systems.

Hunter Building

The building is secured with deadbolt locks during off-hours. Access to the mezzanine level is through an anthropology laboratory that is also secured with a dead bolt lock. An additional dead bolt lock secures the mezzanine level collections storage area. The building has no intrusion alarms, motion detectors, or video surveillance.

Collections Management Summary

Scope of Collections/Mission Statement

The mission of UCM is "to provide a means by which the study of objects can contribute to knowledge in the natural sciences." The specific geographic scope of the museum's collections includes the Rocky Mountains, the Great Plains, and the Colorado Plateau. UCM has large collections of archaeological material, the majority of which are cared for within the museum's Department of Anthropology. The museum also serves as a state and federal repository for archaeological collections. These materials are curated separately in the museum's Cultural Resource Management (CRM) Repository.

Archaeological Collections Storage

Archaeological collections are stored in several areas at UCM. The museum has large collections of archaeological material that have been donated to the museum. These materials are cared for within UCM's Department of Anthropology. Collections being curated under contract for federal/state agencies are kept in the museum's CRM Repository. These collections are administered separately from the museum's Department of Anthropology collections.

Department of Anthropology collections are stored in several areas of the Henderson building. This is the museum's main building and also contains staff offices and exhibits. The majority of UCM's ethnographic collections are stored on the second floor. Former classrooms have been converted into collections storage areas. Each small classroom is locked. The windows are covered with a vapor barrier.

The third floor of the Henderson building is used to store archaeological ceramics. Whole ceramic vessels are stored on shelving units which are draped with plastic and lined with Ethafoam brand padding. This third floor is essentially the attic of the building, so collections are stored directly below the roof. Stairs in this area lead to a loft, directly below the roof, that is used to house more archaeological collections.

Additional collections are stored on the first floor of the museum. This room is located directly behind one of the false walls in the west gallery area. This room contains non-North American collections and additional non-ceramic archaeology collections. These collections are stored in locked metal specimen cabinets, the top of which are used for work space.

UCM's CRM Repository is located in the basement of Henderson, adjacent to the west basement gallery. This small storage area is currently filled to capacity. Collections are stored in acid-free boxes and placed on metal shelving units. Collections have been removed from the bottom shelves of these units due to problems with water seepage in the past. Some collections are stored in a series of small metal card-catalog type drawers.

UCM also uses part of the Hunter building for collections storage, which is slated to be demolished. The building also contains the University's Museum Studies and Film Studies Programs. An annex is used for bulk archaeological collections storage that are seldom accessed. Conditions in this building are inadequate and not suitable for collections storage. The roof of the building leaks.

Environmental Controls

Environmental controls in each of UCM's buildings vary. None of the buildings provide adequate environmental controls. The staff monitor relative humidity using hygrothermographs that are calibrated, when possible, once a year. This is not frequent enough to insure accurate readings. Relative humidity levels are not regulated in either the Henderson or Hunter buildings.

Range of Support Facilities for Archaeological Collections

UCM has adequate support facilities for archaeological collections including designated collections storage areas, processing areas, research and work areas, and general office space. The museum also has exhibits located in the Henderson building. The museum does not have a conservation lab and does not have a Conservator on staff.

Composition of Staff

UCM is critically understaffed. The museum does not have adequate full-time staff dedicated to archaeological collections management. At present, UCM employs a Curator of Anthropology full-time. An Assistant Curator of Anthropology is employed full-time, but only for nine months each year. The museum's CRM Repository is currently only allowed 0.25 FTE for 8-11 months.

Administrative Record Keeping and Storage

UCM maintains adequate administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan agreements, and deaccession/disposal records. The Anthropology Department keeps its administrative records in

the Henderson building inside of the collections processing area. The CRM Repository stores its records in the basement of the Henderson building. These records are stored on metal shelving units and in metal file cabinets. Administrative records for the CRM collections are also entered into a database. Neither the CRM administrative records or those belonging to the Anthropology Department are adequately protected from fire.

Associated Archaeological Documentation and Storage

UCM has large collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs. The Anthropology Department stores these materials in the Henderson building, some of which are kept in the library/archives. The CRM Repository stores associated documentation in acid-free boxes on metal shelving. UCM has few copies of associated documentation. These materials are stored in the Henderson building and are at risk from fire since the building lacks a sprinkler system.

Collections Management Policies

The museum has a set of general collections management policies, whereas departments have their own specific collections policies. Neither the museum or its Department of Anthropology has an Integrated Pest Management plan.

Administration Summary

Background

The Department of Anthropology is a unit of the University of Colorado Museum. The museum was established in 1902. The museum curates collections from DoD installations (Army and Air Force), Bureau of Reclamation, and Bureau of Land Management lands. In addition, it is a mandated repository for collections from state-owned land.

Real Estate

The museum facilities are owned by the state of Colorado through the University of Colorado. The museum occupies two buildings (see Architectural Summary). Any expansion or new construction on the main campus would require the review and approval of the Boulder Campus Planning Commission in accordance with the University of Colorado Master Plan. However, due to the congestion of the campus any new construction would take place in the off-campus research park and would not require any review by the planning commission. At present, the museum intends to renovate a geology classroom building and move the offices and collections in the Hunter building into the new space.

Administration

The university's Associate Vice Chancellor for Research would sign a cooperative agreement between the museum and DoD/USACE. No single staff member is responsible for grant writing. Each curator writes grant proposals that are reviewed by the museum which establishes priorities

for submission. The University Office of Contracts and Grants tracks grants. Fund raising is handled through the University of Colorado Foundation, a non-profit organization. The foundation assigns an individual to the museum to assist and coordinate fund raising efforts. Notably, only 12% of the museum's budget comes from appropriated funds. The remainder of the budget is obtained from research grants and tuition.

Outreach and Education Programs

The museum has an associate director for public education that oversees outreach activities. The educational coordinator develops tours and special programs, and manages the circulation of exhibit trunks. The tours include "The First Coloradans", a tour of the archaeology hall developed for Grades 3 to 8. Workshops and the "Digging Up the Past" discovery kit are available for teachers. The teacher workshops are based on the modules developed by the Bureau of Land Management's Anasazi Heritage Center. Two traveling exhibits on archaeology are currently being offered to interested parties. The museum co-sponsors a lecture series with the Archaeological Institute of America. The museum also publishes a newsletter for patrons and members of the museum association, occasional papers, and publications associated with exhibits.

Contributions

The museum is already arranging for increased storage area and has obtained over $1,000,000 from two donors for renovating a classroom building adjacent to the museum. The additional funds required to complete the renovation are expected to be appropriated by the state legislature in Fall 1997. How much room will be available for collections storage is unknown. An architect is slated to be hired in Spring 1998 to begin the design.

For the curation of DoD/USACE archaeological collections the museum would request funds to increase the collections manager time to full-time and support for two part-time graduate assistants. The museum would cost-share on new equipment including shelving and computers. The director also suggested the possibility of arranging a reduced overhead rate with the Office of Contracts and Grants.

Notes

As part of a larger entity, the department has access to services that it could not support on its own, such as a developed outreach/education staff and exhibits preparation staff. It needs more staff to oversee the collections, an issue addressed by the director in our discussions. For example, the CRM Repository is closed and collections are inaccessible from May 15-August 15 each year. Although collections space is limited, the offer to cost-share on equipment and the possibility of reduced overhead rates make the department a potentially attractive partner.

In the near future, the museum wants to renovate the university's nearby Old Geology Building and relocate its operations from Hunter into this remodeled facility. The museum staff indicated that the state and university administration support the plan and will use both state and donated funds for the project. A planning consultant has produced a facility program plan. Work on the relocation project may begin in 1998.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

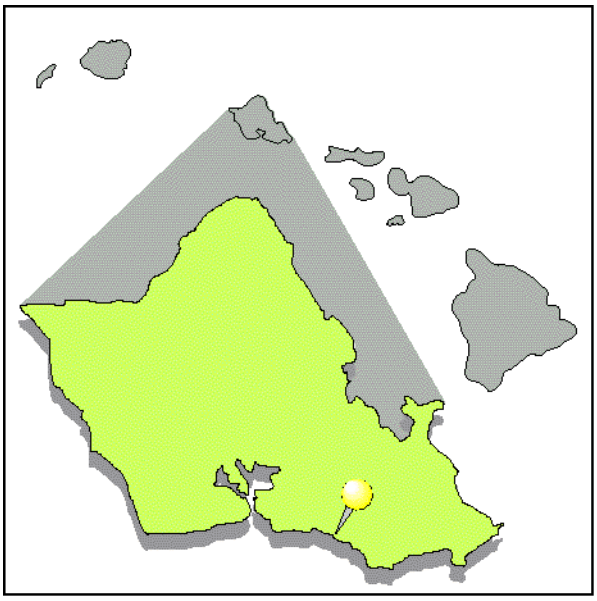
Table 7.2 lists these composite scores and the architecture, collections management, and administration scores for each Colorado institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 7.2 Summary of Decision Support Model Scoring - Colorado

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Anasazi Heritage Center	**0.6910**	0.19617	0.24119	0.25360
University of Colorado Museum	**0.6656**	0.06613	0.25406	0.34538

8

Hawai'i



Archaeological Materials (in cubic feet)

Department of Defense	**1,312**
USACE	**0**
TOTAL VOLUME	**1,312 ft^3**

Number of Institutions Contacted **1**

Institution Assessed

Bernice P. Bishop Museum

Background

The rich native cultural and the geographic isolation of Hawai'i presents another uniquely sensitive circumstance for the curation of DoD/USACE archaeological materials. The majority of DoD/USACE collections fall under the purview of the three armed services. Though DoD collections have already been inventoried and the St. Louis District has general estimates of most USACE collections, a complete inventory of USACE collections is in progress.

Only one institution in Hawai'i curates archaeological collections within the standards established for consideration in the DoD/USACE partnership program, the Bernice P. Bishop Museum. The Bishop Museum is the preeminent museum and repository in the state, and the only institution in Hawai'i the St. Louis District contacted and visited.

Comments

Bernice P. Bishop Museum

For the purposes of comparison to facilities in other states, a summary of the Bishop museum Decision Support Model analysis is presented in Table 8.1.

Architectural Summary

Site Conditions

The Bernice P. Bishop Museum (Bishop) is located on a large urban campus in Honolulu, Hawai'i. An eclectic mix of buildings are arranged on the site. The historic Bishop Hall (1891), Polynesian Hall, and Hawaiian Hall are the original museum facilities. Bishop Hall contains the archaeology laboratory and temporary collections storage. Polynesian and Hawaiian Hall still house the museum's permanent exhibits. Konia Hall (1925) contains the majority of the archaeological collections. Collections are located on the first and second floors, and Malacology is located on the third floor. Offices are scattered throughout each floor. Castle Hall (1990s) is accessible from Konia Hall through an elevated loading ramp and door on the second level. Castle Hall is home to the museum's temporary exhibits, conservation laboratories, and ethnographic collection rooms. The museum's library and archives as well as additional offices are located in Paki and Pauahi Halls.

The Bishop also has a Planetarium and gift shop, both of which are scheduled for demolition. The buildings are to be replaced by the museum's new Science Learning Center. The expansion is still in the preliminary development and fund raising stages, with no fixed date for completion. The new facility will provide space for the Malacology department to relocate from Konia Hall. The vacated space at Konia would provide additional storage area for the archaeological collections. The museum campus is spacious with opportunities for expansion even beyond the new Science Learning Center.

The site is near H-1, one of the three Hawaiian Island "interstates." Two perimeter parking lots serve the campus, each with approximately 60 parking spaces including four disabled spaces at each lot. The staff parking is scattered throughout the campus. The public buildings are accessible only for pedestrians from the perimeter parking lots. Several "temporary" trailers at the rear of the site provide additional office and storage space. This rear side of the museum property provides adequate area for loading.

Building Condition/Structural Adequacy

Konia Hall is the principle repository on the Bishop campus for the institution's archaeological collections. The 14,040 ft^2 three story building has a concrete frame structure. The building was built in 1925 with a concrete block exterior veneer covered with stucco finish. The single direction concrete slab and beams appear to allow a greater floor loading than a concrete frame typically used in standard office construction. Such a structural system seems well suited for collections storage. The windows of Konia Hall have metal frames at the openings. The roof is flat with a basic built-up roofing system and interior downspouts. The building is in good structural condition and showed no signs of major damage or leaks.

The collections storage rooms comprise over 3,000 ft^2 divided between the first and second floors. The main collections room is located on the second floor. It has concrete masonry unit partitions, and sealed concrete finish. The windows in the area are covered with plywood to provide UV protection. The collections room was clean, well organized, and appeared to be in good condition.

Code Requirements/Egress/Accessibility

Konia Hall does not meet all of the basic building code requirements (type I construction, Use groups S-1, B). An open unused elevator shaft presents a fire hazard. The open concrete stairway, while complying with current code standards, presents a similar hazard. The lack of a fire-rated stair core hinders safe emergency egress. Two exits provide egress from the first floor.

The building does not provide for basic disabled accessibility. A temporary plywood ramp leads to the first level entry. The elevator is not in service in the building, restricting access to the second floor and third floor. One could access the second floor of Konia Hall through the loading area adjacent to Castle Hall on the second level. Any renovation of the building would need to include a complete retrofit for Americans with Disabilities Act compliance.

HVAC Systems

Konia Hall has no HVAC system. Two electric window units provide air conditioning in the collections storage room.

Fire Suppression and Detection

The collections areas in Konia Hall have a wet-pipe fire suppression system. Heat sensors are located in the sprinkler head. No manual alarms or smoke sensors were observed. Fire extinguishers are located throughout the building.

Security System

Konia Hall has no intrusion detection system. Access to the building and each collections room is controlled with locks. Lockable collections storage cabinets are also in use. The Bishop Museum security staff patrols the campus 24 hours a day. The security staff also controls keys to each of the museum's facilities.

Collections Management Summary

Scope of Collections and Mission Statement

The Bishop's mission states that the "Bishop Museum collects, preserves, studies and disseminates information about the cultural and natural history of Hawai'i and the Pacific. The Museum seeks to document the past, understand the present and prepare for the future through research, conservation, publication, education and other public programs." The Bishop's scope of collections includes cultural and natural history materials from Hawai'i and the Pacific. The museum has extensive ethnographic and archaeological collections. Approximately 12,756 ft^3 of archaeological collections are curated at the museum. Of these holdings, approximately 850 ft^3 are federal.

Archaeological Collections Storage

Archaeological collections are currently located in several buildings on the Bishop Museum

campus. Many objects are on display in Hawaiian Hall where the museum's Anthropology exhibits are located. Archaeological storage areas are located in Bishop and Konia Halls. Storage conditions in the two building vary.

A portion of the first floor of Bishop Hall is currently occupied by archaeology staff offices. The second floor is no longer in use due to structural concerns (see Architectural Summary). An archaeology lab and temporary storage room are located on the first floor. This area is used to house new, or incoming collections, so they can be in proximity to the archaeology lab. The temporary storage area has several large windows in it. The room lacks a sprinkler system and is cooled using a window air conditioning unit.

Archaeological collections are also stored in Konia Hall. The first floor of the building is occupied by offices, labs, and special or research collection storage. Collections from foreign countries are stored in the hallway in locked cabinets. In addition, special research collections, such as palynology or zooarchaeology, are stored in staff laboratories. Additional archaeological collections, sacred objects, and rare ethnographic objects are kept in a storage room on the second floor. Archaeological collections are kept in cardboard boxes and stored on metal shelving units. Some collections are stored on open shelving composed of metal and particle board. Collections are protected from ultraviolet radiation, biological pests, and general neglect.

Environmental Controls

Environmental conditions in each building vary. The climate of Hawai'i presents special problems for collections management and conservation. Daily fluctuations in relative humidity can be extreme. The best environmental controls are provided in the Castle Building, which is used for ethnographic collections storage. Bishop Hall, which is used for archaeology collections storage, has air conditioning but no means of controlling relative humidity. Konia Hall has air conditioning, but has no controls for relative humidity. The staff monitor relative humidity in collections and exhibit areas using hygrothermographs. Collections technicians are responsible for environmental monitoring and calibrating hygrothermographs.

Range of Support Facilities for Archaeological Collections

The museum has adequate support facilities for archaeological collections including designated storage areas, lab and research areas, and general office and work spaces. In addition, the Bishop has a series of outstanding conservation labs, that are available for object conservation. The museum has an extensive archives, library, and comparative collections, which support collections-based research and exhibit and interpretative facilities.

Composition of Staff

The Bishop has a staff of 250 full-time employees and enjoys the support of approximately 450 museum volunteers. The museum has adequate staff for the support of archaeological collections including a conservator, registrar, curators, collections managers, and many additional staff members within the Department of Anthropology. In addition, the museum has a large Education Department that is responsible for programming and interpretation.

Administrative Record Keeping

The museum maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information/agreements, and deaccession/disposal records. Administrative records are stored in the Registrar's office. Duplicate copies of some administrative records are kept in the archaeology lab and in the office of the Collections Manager for Archaeology. In addition administrative information is entered into a computer database.

Associated Archaeological Documentation and Storage

The Bishop has large collections of associated documentation. Some of the associated documentation, such as photographs or field notes, are stored in the museum archives. In addition, some associated documentation is stored in a room located adjacent to the archaeological collections storage area in Konia Hall. These materials are stored in metal map cases and filing cabinets. Archaeological reports are stored on metal bookcases, some inside of archival document boxes. Duplicate copies of some associated documentation have been made and are stored in the archaeology lab and the Collection Manager's office. Associated documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

The museum has many collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy. The museum has additional policies, including a repatriation policy and a code of ethics.

Administration Summary

Background

The Bishop is a privately administered and operated institution that was founded in 1889. The Bishop has archaeological collections from Air Force, Army, Navy and Marines installations in Hawai'i. The Bishop has not participated in a similar project and does not have any existing agreements to provide curation and collections management services for DoD/USACE.

Real Estate

The museum campus is listed on the National Register of Historic Places and the Hawai'i Register of Historic Places. Two of the older buildings were originally used as a boys school. However, only the exteriors are listed on each register. Alterations of these exteriors may be problematic if any additions were proposed.

Administration

The President/Director could financially commit the Bishop to a partnership with DoD and

USACE. The President could also sign a cooperative agreement. The museum staff spend part of their time writing grants and are assisted by the contracting officer. The Senior Vice President for Community Relations spends part of the time fund raising, assisted by the development staff.

Outreach and Education Programs

The museum has an extensive education/outreach program that includes archaeology. Two staff members participate in exhibit development, manage interns, and provide expertise for Hawaiian language applications. The Bishop has Native Hawaiian internships, exhibits in the museum itself, educational tours of the archaeology collections, and classroom presentations. There are also "lending boxes" with archaeological themes. The Bishop has consulted with native Hawaiians for Native American Graves Protection and Repatriation Act compliance.

Contributions

The Bishop could contribute staff, access to collections, record keeping, floor space, security, use of existing storage equipment, land costs, data base input and maintenance, periodic assessment of the collections, their existing outreach programs. The staff suggest that DoD/USACE could contribute storage materials, additional equipment as required, and operation and maintenance costs.

Notes

Bishop Hall contains sizable amounts of "temporary" archaeological collections. These are materials which have not yet been processed or are otherwise not ready for permanent storage in Konia Hall. While Castle Hall only contains ethnographic collections, the storage rooms and conservation laboratories are among the finest we visited in Phase I. The success of Castle Hall suggests that new facilities at the Bishop are likely to be well planned and executed.

The museum has a large Anthropology staff, extensive collections management policies and practices, active outreach and education program, and established ties with the Hawaiian community. Like most institutions, the Bishop needs more space. In order to accommodate its collections, the museum is pursuing expansion plans. This long-term plan will eventually involve relocating the archaeological collections into more appropriate storage areas. This would provide an adequate environment for the curation of additional DoD collections which are being curated elsewhere in Hawai'i. The museum would also be interested in receiving collections from elsewhere in the Pacific such as Guam and American Samoa.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted

categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

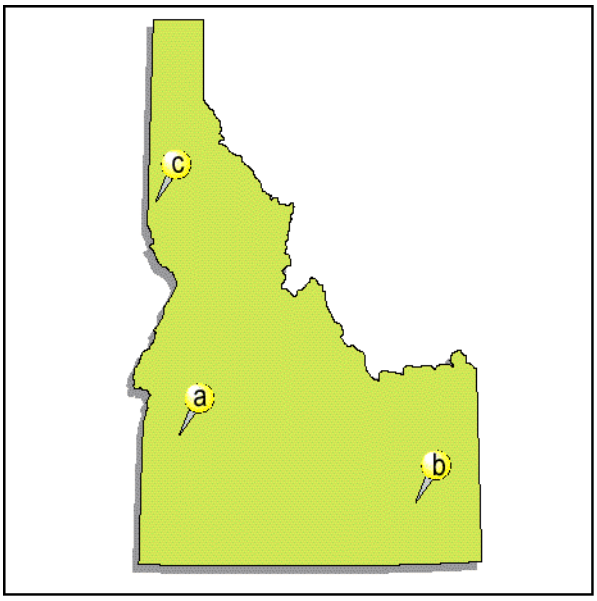
Table 8.1 lists the composite score and the architecture, collections management, and administration scores for the Bishop Museum. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 8.1 Summary of Decision Support Model Scoring - Hawaii

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Bernice P. Bishop Museum	**0.7013**	0.08674	0.27276	0.34182

9

Idaho



Archaeological Materials (in cubic feet)

Department of Defense	**1**
USACE	**269**
TOTAL VOLUME	**270 ft^3**

Number of Institutions Contacted **7**

Institutions Assessed

a. Idaho Archaeological Survey

b. Idaho Museum of Natural History

c. University of Idaho Alfred W. Bowers Laboratory of Anthropology

Background

The institutions that the St. Louis District contacted are presented in Table 9.1, which gives information on the reason(s) some institutions were not selected for an on-site visit.

Table 9.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Bonner County Historical Society and Museum			X	
Clearwater Historical Museum				X
Herrett Center for Arts and Science, College of Southern Idaho		X		
Idaho Archaeological Survey, Boise				
Idaho Museum of Natural History, Idaho State University				
Nez Perce National Historical Park				X
University of Idaho, Alfred W. Bowers Laboratory of Anthropology				

Note: Locations visited indicated in **Bold**

Comments

The three repositories visited in Idaho are part of a state-wide system for curating archaeological collections from the state. The system is administered as part of the Idaho Archaeological Survey (IAS). Each repository curates archaeological collections from specific counties within Idaho. A summary of Decision Support Model Scoring is presented in Table 9.2.

Idaho Archaeological Survey, Idaho Historical Society

Architectural Summary

Site Conditions

The administrative offices of the Idaho Archaeological Survey (IAS) are located in the Old Assay Building in downtown Boise, Idaho. The building was built in 1871 and is now listed on the National Register of Historic Places. The site is a small, single square block urban area with 18 parking spaces and a small storage building at the rear of the building. Artifact processing occurs in the basement. Artifacts then are stored in a warehouse building.

The main collections storage warehouse is located a few miles southeast of the Assay Building. The warehouse is owned by the Idaho Historical Society. There is no paved parking on the site. Residential property is opposite the warehouse. The facility could be easily expanded in three directions.

In addition to the warehouse, collections are also stored at the former Territorial Prison. Located on the eastern edge of Boise, the historic structure was last used as an operating state prison in 1973. Currently, the building is open for public tours as a museum. Approximately 150 ft^2 in an upper cell block is used for collections storage. The building has no temperature or humidity control, no insulation, and no protection against water leakage. The building is inappropriate as an archaeological collections storage facility.

Building Condition/Structural Adequacy

Constructed in 1968, the warehouse is about 21,000 ft^2 in area. It is a concrete block with steel columns structure with glue-lam beams and panelized roof system. The foundation is slab-on-grade. There is a single-ply roof with 4 in. insulation installed in 1993. No hazardous materials were observed. Collections storage includes about 1,200 ft^2. A mezzanine storage system covers about 6,000 ft^2. The building showed no signs of leaks and appeared to be well kept and in good condition.

Code Requirements/Egress/Accessibility

The warehouse building appears to meet all applicable building code requirements (type III UBC). There are no corridors in the building. The simple, single floor structure is easily accessible, although the unpaved parking area does not provide disabled parking spaces. The restroom was not fully compliant to the Americans with Disabilities Act. Two lighted emergency exits provide for necessary building egress.

HVAC Systems

The warehouse facility is not air conditioned. Humidity is monitored, but not controlled. Eight natural gas heat pumps are located throughout the building, but there is no duct system for the heating units. Air flows directly from the ceiling-hung units.

Fire Suppression and Detection

A manual fire alarm system is wired to the local fire department. Automatic smoke and heat sensors were added to the building in 1993. The dry-pipe sprinkler system is original to the 1968 building. Recently inspected fire extinguishers are present.

Security System

The warehouse is equipped with motion detectors and intrusion alarms. The alarm system is wired to a security company. Key control and access are an additional security measure. There is no security fence surrounding the property and no TV cameras are in use.

Collections Management Summary

Scope of Collections and Mission Statement

The IAS serves as the western archaeological repository for the state of Idaho. The IAS also houses the office of the State Archaeologist. The mission of the IAS includes the curation of archaeological collections and its scope of collections is limited to materials from the counties in the western part of Idaho.

Archaeological Collections Storage

Archaeological collections are stored in two places, Cellblock 3 and a warehouse. Cellblock 3 is a temporary storage area located at the Historic Territorial State Prison, which is owned by the Idaho State Historical Society. Collections, most of which are from federal agencies, are locked in former cellblocks.

The IAS's main collections storage facility is a warehouse shared with the Idaho State Historical Society. The majority of the warehouse space is occupied by historical collections and archives. The archives will be removed in the future once an archives building is constructed. If these collections are removed, approximately one half of the building will be vacant. The area might be used for additional archaeological collections, possibly including those which were stored in Cellblock 3. Archaeological collections are stored in standard plastic containers on metal shelves. These shelves are part of a larger steel mezzanine structure.

Environmental Controls

Cellblock 3 lacks environmental controls. Temperature and relative humidity are monitored in the warehouse storage facility. However, the warehouse has no cooling system and relative

humidity can not be controlled. While the staff assured us that environmental fluctuations were minimal, the facility did not meet the requirements of 36 CFR Part 79.

Range of Support Facilities for Archaeological Collections

IAS has adequate support facilities for archaeological collections including designated collections storage areas, a processing lab in the State Historic Preservation Office building, and general work and office areas. However, these facilities were small and could not accommodate large incoming collections that may need to be processed.

Composition of Staff

The current staff includes the State Archaeologist, Curator, and Collections Manager. The Collections Manager is only part-time. Additional support staff is hired for specific projects as funds are available.

Administrative Record Keeping and Storage

IAS maintains all of the following types of administrative records: accession records, catalog information, object location information, loan information/agreements, and deaccession/disposal information. Similar administrative information is also maintained in the computerized database program *Dbase*. IAS will be changing to the program *Access* for collections management in the future. Administrative records are kept in the basement of the Assay Building. The records are stored in metal file cabinets.

Associated Archaeological Documentation and Storage

IAS maintains all of the following types of associated archaeological documentation: archaeological site files, field notes, artifact inventories, reports, and photographs. This documentation is stored in metal file cabinets. Some of it is stored on the second floor of the Assay Building with the archaeological site files.

Collections Management Policies

IAS has several collections management policies including an accession policy, minimum standards of acceptance, a loan policy, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession policy. The staff have started writing a draft disaster/emergency plan. Most of these collections management policies are outlined in the *Curatorial Standards and Guidelines for the State of Idaho*.

Administration Summary

Background

IAS is a part of the Idaho Historical Society (IHS) that in turn was part of the Idaho Department of Education. The IAS was founded in 1991, whereas the IHS was founded in 1907. The IAS

curates archaeological collections from several federal agencies including the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the U.S. Army Engineer District, Walla Walla, and the Orchard Training Area of Mountain Home Air Force Base. The Survey only has formal agreements to curate archaeological collections with the BLM and the USFS (Boise National Forest).

Real Estate

The state of Idaho owns the property and the Assay Building on that property. The entire property is listed as a National Historic Landmark thus making additions or changes prohibitive and highly unlikely.

Administration

The Board of Trustees of the IHS through its Director could financially commit the Survey to a partnership with DoD and USACE. The Director of the IAS could sign a cooperative agreement. No one in the IAS writes grants or conducts fund raising. These activities may become part of the IAS's operations sometime in the future. IAS does not have a line item of its own in the state budget. IAS receives funds as part of the IHS budget and is attempting to secure a budget line item of its own.

Outreach and Education Programs

One person in the IAS spends a part of his time (33%) involved in archaeology/outreach, including programs at/for a middle school, lectures, an Archaeology Week, co-sponsorship of the Idaho Archaeological Society annual meeting, lectures, tours, and demonstrations. The IAS has consulted with Native Americans as required by the Native American Graves Protection and Repatriation Act.

Contributions

IAS would absorb administrative support costs and the costs for periodic inventories and collections access.

Notes

The State of Idaho has plans for a new archives building which would relocate records from the warehouse to the new building. Between 1/3 and 1/2 of the warehouse area would then be available for additional collections storage. Collections currently housed in the historic Territorial Prison are scheduled to be relocated to the warehouse after the new archives building is completed.

Idaho Museum of Natural History, Idaho State University

Architectural Summary

Site Conditions

The Idaho Museum of Natural History (IMNH) is housed in a building in the heart of the Idaho State University campus, in Pocatello, Idaho. Built in 1957 as a library, the structure is bounded on the south by a campus parking area, on the north by a landscaped campus quadrangle, and on the east and west sides by campus buildings. The campus location makes public access to the museum somewhat difficult. The building has limited potential for expansion. Small additions could be made to the southwest and southeast corners. Museum offices and exhibition spaces are located on the first/main level of the building. Archaeological collections storage areas are located in the basement.

Building Condition/Structural Adequacy

The library was relocated in 1992. The first floor was then renovated in 1993 for the museum. The concrete structure is covered by a brick veneer. The roof has a single-ply rubber membrane. The building's general maintenance is quite good, especially in the renovated areas. The older areas of the building show greater signs of wear, although no major defects were noted. Sump pumps exist in the collections storage areas. Pipes and walls appear not to leak, and there no hazardous materials were evident.

Code Requirements/Egress/Accessibility

The upper floors of the building do not conform to required building standards (type I construction). There are no restrooms on the main level. The museum areas of the building have been modified or upgraded including HVAC, electrical, fire safety. The building also complies with the Americans with Disabilities Act. Building occupants and visitors use restrooms located in the basement of the building, near the collections storage area. A single elevator is present, providing access to major areas of the building for the disabled. Three emergency exits are located on the upper floors. Two emergency exits are located in the basement. A freight elevator is absent.

HVAC Systems

The archaeological collections storage area that was renovated in 1993 has good climate control and air movement. The western unrenovated portion of the museum has an antiquated system that is inadequate. The HVAC system is a central steam type, delivering hot and chilled water to the building provided by the university.

Fire Suppression and Detection

Fire alarms are triggered both manually and automatically with heat sensors and smoke detectors. The fire alarm system is wired to the local fire department. The wet-pipe sprinkler system is only located in the renovated areas. The remaining areas have by fire extinguishers.

Security System

Security consists of an intrusion detection system that is wired to university security. The museum does not use motion sensors or video cameras. Nightly security sweeps are performed by campus security personnel that supplements the intrusion detection system.

Collections Management Summary

Scope of Collections and Mission Statement

IMNH is the state archaeological repository for materials from eastern Idaho. Its mission statement and scope of collections include archaeological, ethnographic, history, natural history, and paleontology collections. The museum's principal collections are archaeological and ethnographic. IMNH's archaeological collections consist of 250,000 objects.

Archaeological Collections Storage

The collections storage areas are located in the basement of the museum. Archaeological collections are stored on metal Space Saver brand shelving units and are placed in polyethylene bags and acid-free cardboard boxes. All archaeological collections are protected from ultraviolet radiation, particulates, biological pests, and general neglect. Ethnographic collections are stored in a separate room and are housed inside locking metal cabinets. Shelves are lined with Ethafoam and many objects have custom-made support mounts. At the time of our visit, the collections manager estimated that approximately 40% of the cabinets was empty. Both collections areas are very well maintained.

Environmental Controls

Archaeological collections are stored in an area where temperature and relative humidity are regularly monitored and controlled. The museum uses data loggers, recording hygrothermographs, and sling psychrometers to monitor relative humidity. Hygrothermographs are calibrated each time they are moved or at least once a month. The building has a central humidification system in place. Environmental controls are being added to the upper floors of the building, which are occupied by offices and the IMNH's herbarium.

Range of Support Facilities for Archaeological Collections

The museum has excellent support facilities for archaeological collections, including processing labs, a conservation lab, research facilities, and work and office areas. The museum also had exhibit areas and a small hands-on discovery room for children.

Composition of Staff

Both the Collections Manager and the Curator of Anthropology are part-time positions. The staff interviewed indicated that a full-time Collections Manager and two full-time assistants are needed to adequately care for the museum's archaeological and ethnographic collections.

Administrative Record Keeping and Storage

The museum maintains excellent administrative records including acquisition/accession records, catalog information, object location information, loan information/agreements, and deaccession/disposal records. IMNH staff also enter collections records into a *Regis* collections management computer system. All administrative records were rehoused in archival materials during a recent recataloging project. Administrative records are stored in locked metal file cabinets and are protected from fire, theft, damage and destruction.

Associated Archaeological Documentation and Storage

The museum has large collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. These are also stored in archival materials. Most associated archaeological documentation has been inventoried and cataloged by accession number. All documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

IMNH has many collections management policies, but does not currently have a written Integrated Pest Management plan. Most collections management policies are contained in the museum's collections management plan. The museum has received an Institute of Museum Services grant for a two year pest management study. The grant will be used to monitor pests throughout the museum. At the end of the study, the staff will complete a written Integrated Pest Management plan.

Administration Summary

Background

IMNH is part of Idaho State University. IMNH was founded in 1934. IMNH does not curate DoD/USACE archaeological collections, but does have curation agreements with other federal agencies such as the Bureau of Land Management, the U.S Forest Service, and the Department of Energy's Idaho National Engineering Laboratory.

Real Estate

The state of Idaho owns the property. Additions to the building are possible, but these additions may not intrude into the "Quad" plaza on campus.

Administration

The President of the university and the Chair of the State Board of Education could financially commit IMNH to a partnership with DoD/USACE. The President could sign an cooperative agreement. IMNH does not have an individual that is dedicated to writing grants or conducting fund raising full-time.

Outreach and Education Programs

Archaeology is a component of the traveling outreach boxes used in primary/secondary schools. Teaching collections are also used in the overall education program for school students. The IMNH staff were involved in the local archaeological society. IMNH participates in the Shoshone-Bannock Cultural Resources Survey Organization-National Pilot Program with the Shoshone-Bannock Tribes, the Department of Energy, and the National Aeronautics and Space Administration. The program trains Native Americans in cultural resource management and archaeological collections management. IMNH has also been involved in NAGPRA consultation. Native Americans participate in other programs including an annual art show and an archaeological field school.

Notes

IMNH has experience curating federal archaeological collections and has a facility that meets the requirements of 36 CFR Part 79. The museum has curation agreements with several federal agencies and has well-established curation fees and procedures. According to the staff, approximately 1/3 of the cabinets are empty and the ethnographic collections storage area could accommodate some additional shelving units. Participation of Native Americans in IMNH's programs is strong.

University of Idaho Alfred W. Bowers Laboratory of Anthropology

Architectural Summary

Site Conditions

The Alfred W. Bowers Laboratory of Anthropology (BLA) is located in Phinney Hall on the University of Idaho campus in Moscow. The building is situated in the middle of the campus, located on a pedestrian mall several hundred feet from the nearby parking lots. Phinney Hall is attached to an adjacent building (Brink Hall) to the south and east. A very limited area exists to the north of Phinney Hall. As a result, the building is not well suited for expansion.

Building Condition/Structural Adequacy

Phinney Hall is a well-proportioned traditional campus building built in 1938 as a residence hall. The structure is a poured-in-place concrete frame with a brick veneer and high pitched slate roof. The building appears to be in good structural condition. The slate roof and plumbing systems also appear to be in good repair. The original single-glazed double-hung wooden windows are in poor condition, and asbestos insulation on piping and asbestos floor tiles have been identified. The building's electrical system is also inadequate.

Code Requirements/Egress/Accessibility

The original 1938 structure (type I UBC) has not been significantly renovated. As a result, the building does not comply with current fire safety, building, and Americans with Disabilities Act (ADA) requirements. Phinney Hall does not have an elevator, and ADA access is through the adjacent Brink Hall. Restrooms are not ADA compliant and there is not adequate ADA signage. The building does provide for adequate emergency egress. Although the building's stairwells appear to be one hour fire rated with 20 minute fire rated doors, the corridors are not. Several dead-end corridors are present.

HVAC Systems

The university gas/wood fueled central steam plant supplies the building's heat through the original radiator system. Phinney Hall lacks air conditioning. The building is ventilated as needed with windows.

Fire Suppression and Detection

There is no fire sprinkler system in the building. The fire alarms are manually triggered and are wired to the local fire department. There are no heat sensors or smoke alarms. Phinney Hall is protected by inspected fire extinguishers located throughout the building.

Security System

The collections storage areas are secured by cypher locks. The building has no intrusion alarms or motion sensors. University of Idaho and City of Moscow police provide patrols of the area.

Collections Management Summary

Scope of Collections and Mission Statement

BLA is part of the Idaho state repository system. BLA is the northern repository for the state of Idaho. Its scope of collections is limited to collections from the counties in this region. Its mission statement is dedicated to archaeological collections.

Archaeological Collections Storage

Archaeological collections are stored in a portion of a building formerly used as a dormitory. Three collections storage areas are in use. The main collections storage room is located adjacent to the main work area. The collections room locks, but lacks environmental controls, fire detection, and suppression systems. Collections are stored in plastic containers on metal shelving units. BLA also has collections temporarily stored in two additional rooms. Collections in these two areas are stored in cardboard boxes on wooden shelving units. These two areas do not have appropriate environmental controls, fire detection, or fire suppression systems.

Environmental Controls

The building has heat and windows are opened for cooling and ventilation. Relative humidity is regularly monitored using hygrothermographs, but the building lacks the ability to regulate humidity.

Range of Support Facilities for Archaeological Collections

BLA has support facilities for archaeological collections that include designated collections storage areas, a processing lab, and general office areas. Additional support facilities might be available through the university.

Composition of Staff

BLA staff consists of the Curator, a Secretary, and the Director. All of these positions are part-time. A curator is the only staff member involved in collections care and management, and this person is also required to teach courses in the Department of Anthropology.

Administrative Record Keeping and Storage

BLA maintains all of the following types of administrative records: acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. BLA uses the computerized database *FoxPro* to maintain collections information. About 50% of their collections are cataloged to the item level, including records, photos, and documentation. Administrative records are stored in a separate records storage room inside lockable fire-proof file cabinets. All records are stored in acid-free folders. Computer media are stored in a fire-proof cabinet, inside a special fire-proof media box. However, there is no fire detection or suppression system in this area.

Associated Archaeological Documentation

BLA also maintains a large collection of associated archaeological documentation including site files, field notes, artifact inventories, reports, and photographs. This documentation is also curated in the records room, in the same type of containers as previously mentioned. The

repository does not have a duplicate copy of associated documentation. Associated documentation is not adequately protected from fire.

Collections Management Policies

BLA has many written collections management policies including a mission statement, accession policy, minimum standards of acceptance, loan policy, access/use of collections policy, an Integrated Pest Management plan, and a deaccession policy. BLA has a draft version of a disaster/emergency plan, but it has not been completed or implemented yet.

Administration Summary

Background

BLA is located on the campus of University of Idaho and was founded in 1967. The BLA curates archaeological collections from several federal agencies including the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the U.S. Army Engineers District, Walla Walla, and the Orchard Training Area of Mountain Home Air Force Base. BLA only has formal agreements to curate archaeological collections with the BLM and the USFS. The U.S. Army Engineers District, Walla Walla, collections are curated by individual project.

Real Estate

The state of Idaho owns the property. Additions to the former dormitory building where BLA is located are possible. This would require consultation with the planning office of the university. Modifications to the existing building for handicap access is planned in the future.

Administration

The Financial Vice-President of university could financially commit the BLA to a partnership with DoD and USACE. The Director of the Idaho Archaeological Survey, the Director of the BLA, and the Comptroller for the university could sign a cooperative agreement. The Curator of the BLA spends part of his time writing grants. No one conducts fund raising, although the University Gifts and Trust Administration and the Office of Development solicit contributions for use by the university as a whole. Funds may be targeted for the BLA from these sources.

Outreach and Education Programs

Two people in the BLA spend a part of their time involved in archaeology/outreach programs. Their involvement includes programs for local area schools, lectures, field trips, and teaching students at the university. BLA has been involved with Native Americans through the state burial relocation committee, the Anthropology Department degree programs, and Native American Graves Protection and Repatriation Act consultation.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

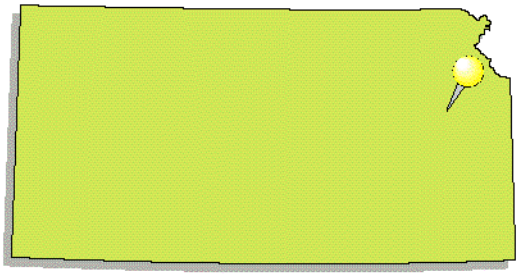
Table 9.2 lists these composite scores and the architecture, collections management, and administration scores for each Idaho institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 9.2 Summary of Decision Support Model Scoring - Idaho

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Idaho Archaeological Survey	**0.7111**	0.19501	0.21670	0.29942
Idaho Museum of Natural History	**0.5507**	0.06884	0.28438	0.19752
University of Idaho Alfred W. Bowers Laboratory of Anthropology	**0.5946**	0.01590	0.21972	0.35899

10

Kansas



Archaeological Materials (in cubic feet)

Department of Defense	**348**
USACE	**1,203**
TOTAL VOLUME	**1,551 ft^3**

Number of Institutions Contacted **4**

Institution Assessed

Museum of Anthropology, University of Kansas

Background

In Kansas, there are few institutions with the resources necessary to qualify for consideration in the partnership project. A summary of the institutions that the St. Louis District contacted is presented in Table 10.1, including the reason(s) that an on-site evaluation was not conducted for some. Only one repository was visited in Kansas, the Museum of Anthropology at the University of Kansas.

Table 10.1 List of Institutions Contacted

	Reason Not Visited			
		Preliminary Questionnaire		
Institution	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Kansas Museum of History, Kansas State Historical Society			X	
McPherson Museum		X		
Museum of Anthropology, University of Kansas				
Santa Fe Trail Center			X	

Note: Locations visited indicated in **Bold**

Comments

Museum of Anthropology, University of Kansas

Architectural Summary

Site Conditions

The Museum of Anthropology (MA) at the University of Kansas is located in Spooner Hall at the eastern edge of campus. Spooner Hall's dense, steep campus site offers little opportunity for expansion of the existing museum facility. University of Kansas planning officials noted the availability of a new 10,000 ft^2 footprint building site on the western edge of campus. This 460 acre area of university property has recently attracted new construction for research related operations and facilities. Also, the university could plausibly re-allocate existing space for museum use.

Building Condition/Structural Adequacy

The museum currently curates collections in three different campus buildings, Spooner Hall, Fraser Hall, and Caruth-O'Leary Hall. The volume of collections is nearly equally divided between the storage areas at Spooner and Fraser Halls. Human skeletal remains are stored in a single room in Caruth-O'Leary Hall.

Spooner Hall

Spooner Hall was constructed in 1894 as the first library building for the University of Kansas. It is listed on the National Register of Historic Places. The MA has occupied the building since the 1970s. The 27,000 ft^2 building has four levels with the lower two partially below grade on the sloping site. Ethnographic artifact storage is located on the second floor. The main building entrance, exhibition space, and gift shop are located on the first floor. Collections storage, document storage, laboratory space, and offices are located on the basement level. Collections processing, some temporary storage, and the loading area are located on the sub-basement level.

The exterior structure is limestone construction with sandstone accents. Portions of the sandstone accents are badly deteriorated and are in need of preservation and restoration. The clay tile roof requires continuous repair and maintenance by the university.

The interior structure is a combination of steel, cast-iron, stone and concrete structural systems that rest on the exterior limestone load bearing walls. The large numerous wood windows throughout the building have been replaced. New ultraviolet shades have been added to many windows, as well as wood frame storm windows that are complimentary to the historic interiors of Spooner Hall. The building is well maintained and remains in good condition despite its age.

Fraser Hall – Room 10

Fraser Hall is located just south of Spooner Hall on campus. This seven story structure serves the university as a major classroom building. The 1967 building has a limestone veneer with a concrete frame construction.

The museum stores approximately half of its archaeological collections in a 863 ft^2 basement room of Fraser Hall. The MA also uses the same space as a small laboratory/work space. The basement room has sealed concrete floors, walls and ceiling. The museum has maximized the available space in this room.

Caruth-O'Leary Hall

Caruth O'Leary Hall is located on the northwestern portion of campus. The building was constructed in 1960s as a dormitory. The five story building is a concrete frame structure with concrete masonry unit partitions, steel windows, and a brick veneer. Currently, the building is largely vacant with the exception of several miscellaneous university operations. The museum is currently storing its human skeletal collections in a single 188 ft^2 former dormitory room. Due to time constraints, we were unable to tour the room.

Code Requirements/Egress/Accessibility

Spooner Hall

The 1894 structure, despite various renovations, does not meet contemporary code requirements (type II construction, mixed-use group). The building has four exits for emergency egress. An additional exit and fire escape is needed on the east first floor exhibit gallery. Only the first floor and sub-basement of Spooner Hall are accessible for the disabled. The university plans to begin further renovations, including the addition of a passenger elevator, in order to improve Spooner Hall's code compliance.

Fraser Hall – Room 10

Fraser Hall appears to meet the appropriate building, life-safety, and accessibility requirements (type II, business use-group). Stairwells at each end of the building, and four major exits allow for emergency egress. Passenger elevators provide ADA access among floors.

HVAC Systems

Spooner Hall

A new heating, cooling, and ventilation system was installed in Spooner Hall in 1994. The university's central plant provides hot water for heating. On site air conditioning condensers provide cooling for the building. Heated and cooled air is delivered through the building by sophisticated computer controlled air handler units. Filters are located at each diffuser and are changed regularly. The HVAC system is monitored at a central university facility. The HVAC equipment at Spooner Hall is one of the best systems we have encountered in Phase I. This

system is the best HVAC example in an existing historic structure encountered during the Phase I of the project.

Fraser Hall – Room 10

The university wide heating and cooling system serves Fraser Hall. Underground services provide steam for heating and a condenser system provides cool air. The building has its own air handling system with fan rooms to circulate both hot and cool air through the building. Overhead ductwork is located in Room 10.

Fire Suppression and Detection

Spooner Hall

Spooner Hall is not equipped with an automatic sprinkler system. New fire detection systems were added to the building during the 1994 HVAC renovation. Fire extinguishers, smoke detectors, heat sensors, and new exiting alarms have been installed throughout the building.

Fraser Hall – Room 10

Fraser Hall is not equipped with an automatic sprinkler system. Fire extinguishers and fire hoses are located throughout the building. Manual alarms are located in the corridors. The building is also equipped with lighted exit signs and emergency lights. There is no fire alarm or fire extinguisher in Room 10. The collections storage room is not adequately protected from fire.

Security System

Spooner Hall

Spooner Hall is not protected with intrusion alarms, motion alarms, or keypad access. The building is accessible 24 hours a day to graduate students and faculty with keys. Sensitive areas of the building are restricted with deadbolts. The museum also uses lockable storage cabinets. The University of Kansas Police department patrols the building during off-hours. The building needs improved security systems and protocols

Fraser Hall

Fraser Hall is not protected with intrusion alarms, motion alarms, or keypad access. Room 10 is secured with a deadbolt lock. Designated graduate students and faculty have keys to the collections room. The entire building is secured during off-hours. The security at Room 10 needs to be improved.

Collections Management Summary

Scope of Collections and Mission Statement

The MA's mission statement states that the museum "is to foster an appreciation of the significance of the physical and cultural diversity of humanity through the creation, presentation, and dissemination of knowledge about people around the world. . . .". Its scope of collections includes prehistoric and historic archaeological materials and ethnographic objects. The museum curates approximately 2,968 ft^3 of archeological materials and 529 ft^3 of documentation.

Archaeological Collections Storage

Archeological materials are stored in three separate buildings on the University of Kansas campus including Spooner Hall where the museum itself is located, Fraser Hall, and Caruth-O'Leary Hall. In Spooner Hall, three rooms are used to store archaeological materials. One room each is used for storage in Fraser and Caruth-O'Leary Halls respectively. Because of time constraints, we were unable to visit the room in Caruth-O'Leary Hall.

Of the three rooms in Spooner Hall, one is located in the basement, two are located adjacent to one another in the sub-basement. The basement room serves as a archaeological material storage location and a processing laboratory. No hazardous chemicals are used in the lab. The archaeological materials are stored on metal shelving units or locking metal cabinets with wooden drawers. Adjacent to the archaeological materials storage room is a room where the associated documentation is stored. Windows in both rooms are sealed, but ultraviolet radiation is not filtered. Ultraviolet radiation blocking sleeves have been purchased for the overhead florescent lights, but are not yet installed. Although there are two lockable doors to the basement, the partition of one side of the archaeological materials storage room is composed of the backs of metal cabinets, the height of which does not reach to the ceiling. There is no motion alarm system in Spooner Hall. The sub-basement in Spooner Hall is almost exclusively occupied by archaeological faunal remains. There is a sink for processing.

The one room in the basement of Fraser Hall is the main archaeological material storage room for the museum. The room is full of material stored in boxes on metal shelving units. Artifacts were being labeled at one end of the room by several students. There is no fire suppression system inside the room. The same door serves as both the entrance and exit. There are no windows.

One room in Caruth-O'Leary Hall contains human skeletal remains. Caruth-O'Leary Hall was a dormitory and has been taken over for other uses including the storage of archaeological materials.

Environmental Controls

The collections stored in Spooner Hall have adequate environmental controls. The archaeological materials and associated documentation rooms are maintained at a targeted temperature range of 72° F and 50% relative humidity. University physical plant staff regularly remotely monitor relative temperature and humidity throughout Spooner Hall. The only means to monitor temperature and humidity in the basement of Spooner or Fraser Halls are temperature/relative humidity indicator cards placed on the walls by the museum staff. No cards

were present in the sub-basement of Spooner Hall or in the room in Caruth O'Leary Hall. No hygrothermographs are in place. The building's HVAC system is used to control temperature and humidity.

Range of Support Facilities for Archaeological Collections

The museum has adequate facilities for archaeological collections including designated storage areas although both are full to capacity, a processing lab, general work and office areas.

Composition of Staff

The museum does not currently have adequate staff. The Registrar also serves as the Conservator, the Ethnology Collections Manager, and Exhibits Designer and Preparator.

Administrative Record Keeping and Associated Documentation Storage

The museum staff maintain many types of administrative records including acquisition/accession records, catalog information, conservation information, artifact inventories, object location information, loan information/agreements, and deaccession/disposal records. Important records are not stored in fire-proof cabinets. Computer databases are used to administer collections. Newer collections have been entered into the system. Older collections are being entered as time permits.

The museum has associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in filing cabinets in a room adjacent to the archaeological materials in the basement of Spooner Hall. A sprinkler system is absent although there are fire detectors and heat sensors in the basement. A duplicate copy of the records does not exist off-site in a secure location.

Collections Management Policies

The museum has many of the policies for collections management. It does not have policies for the minimum standards of acceptance, field curation guidelines, an inventory policy, conservation treatment, security, or an Integrated Pest Management plan.

Administration Summary

Background

The MA was founded as a separate entity in 1976. Prior to that date the museum was part of the Natural History Museum. The museum has USACE collections from the Kansas City, Tulsa, and Omaha Districts, and from DoD, Fort Leavenworth and Sunflower Army Ammunition Plant. No current curation agreements are in place to care for any of the DoD/USACE collections.

Real Estate

The MA is located in Spooner Hall along Jayhawk Boulevard, the main street of the University of Kansas campus. The university owns the property and the building. Spooner Hall is listed on the National Register of Historic Places, making design changes to the exterior highly unlikely. Any changes would have to be approved by a newly created campus historic preservation board. There is no room for expansion on the existing lot. Space is available on the western side of campus for a new repository.

Administration

The university's Vice-Chancellor of Research and Public Service could financially commit the museum to a partnership and sign a cooperative agreement with DoD and USACE. The museum staff write and track their own grants. All the staff do a minimum amount of funding raising. Major fund raising activities are performed by the Endowment Association and a private foundation.

Outreach and Education Programs

No one is exclusively involved in archaeology outreach and education although there is an overall public education coordinator. The museum includes archaeology in workshops it sponsors and exhibits in the museum itself. Archaeology education is targeted at middle schools students. The collections are used in university classes and for student/faculty research. The museum has extensively consulted with Native Americans as part of their Native American Graves Protection and Repatriation Act compliance. The museum has a Native American Advisory Board, participants in the Indigenous Nations Studies Program, and staff members are on the Society for American Archaeology's subcommittee on Native American education.

Contributions

The museum could contribute its staff expertise, the assurance that the university administration fully supports the continuation of the museum, its existing high standards of curation care provided to collections, and access to the collections.

Notes

The MA is an institution facing an ever-increasing need for additional space. The museum staff and the university have made the most of the limited useful space in Fraser Hall and historic Spooner Hall. During the visit, the collections storage areas were orderly, well maintained, and suffering only from limited space. Additional space on the western part of campus is available, but there are no plans to construct such a new facility. During the visit, museum staff and university building officials expressed an eagerness and willingness to consider solutions to the growing space needs.

The museum actively uses the collections and has educational programs that incorporate archaeology including a university offered museum studies degree program. Native American involvement in the museum is high and further interactions between the museum and Haskell

Indian Nations campus, also located in Lawrence, are possible. There is strong support for the museum in the university's administration. The museum would be interested in being considered a regional partner with a region consisting of Kansas, Nebraska, Oklahoma, South Dakota, western Missouri, eastern Colorado, and northern New Mexico. The museum is an excellent potential partner.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

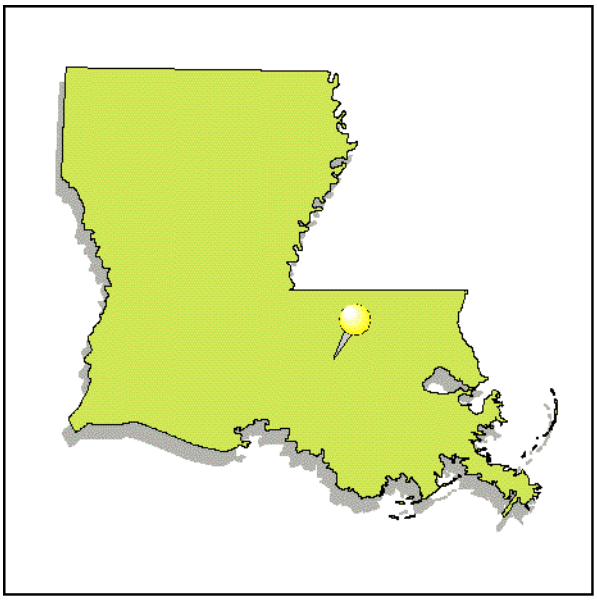
Table 10.2 lists the composite score and the architecture, collections management, and administration scores for the Museum of Anthropology, University of Kansas. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 10.2 Summary of Decision Support Model Scoring - Kansas

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Museum of Anthropology, University of Kansas	**0.7282**	0.10724	0.28132	0.33962

11

Louisiana



Archaeological Materials (in cubic feet)

Department of Defense	**431**
USACE	**3,212**
TOTAL VOLUME	**3,643 ft^3**

Number of Institutions Contacted **5**

Institution Assessed

Louisiana Division of Archaeology

Background

In Louisiana, there are few institutions with adequate resources to warrant consideration in the partnership project, and there is limited interest in the project from these institutions. A list of the institutions contacted is presented in Table 11.1, showing the reason(s) that all but one facility was not selected for an on-site visit.

Table 11.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Jean Lafitte National Park and Preserve				X
Louisiana State Exhibit Museum		X		
Louisiana Tech Museum, Louisiana Tech University				X
Louisiana Division of Archaeology				
Museum of Natural Science		X		

Note: Locations visited indicated in **Bold**.

Comments

An on-site evaluation was conducted at only one repository in Louisiana, the Louisiana Division of Archaeology. Table 11.2 presents the Decision Support Model scoring.

Louisiana Division of Archaeology, Baton Rouge

Architectural Summary

Site Conditions

The offices of the Louisiana Division of Archaeology (Division) are located in the Capitol Annex building, near the state capitol building in Baton Rouge, Louisiana. The division stores its collections in a leased building, called the Curation Facility, located several blocks north of its Capitol Annex Building offices. The division has occupied the building since May 1995 under a ten-year lease agreement, with a five-year renewable option. The surrounding area is a mildly blighted industrial area. The building has six parking spaces, including a single disabled space, as well as a loading dock and gravel loading area immediately east of the building.

Expansion at the existing site would be difficult and have limited benefit. The curation facility property is a candidate for state purchase under the Capitol complex master plan. However, the building owner mentioned that adjacent properties were available for renovation as additional collections storage space.

Building Condition/Structural Adequacy

The Division has occupied the curation facility since May 1995. The single-story building was renovated for the division's use at this time. The construction is concrete masonry units on a slab foundation with a wood truss roof system. The windows in the collections storage area were blacked-out, walls and ceiling refinished, and a new vinyl floor was added. The building is divided into two major rooms. A smaller room serves as a laboratory/processing area. A large adjacent space serves as the secured collections storage area. Current collections occupy approximately half of the room's storage capacity. Two small offices are located off of the collections storage area.

Code Requirements/Egress/Accessibility

The Division staff does not regularly visit the curation facility. The building's 1995 renovation brought the building into code compliance (type IV construction, use group B). Two exits provide egress from the building. The main entry is located in the processing room. A double door exit is located in the collections storage area. The building was formerly configured so that these double doors served as the main entrance to the building. Emergency lights were added in the 1995 renovation. The building has no lighted exit signs. Two Americans with Disabilities Act (ADA) compliant restrooms were added in the 1995 renovation. The entire building is ADA accessible.

HVAC Systems

The curation facility has a very basic heating, cooling, and ventilation system. The processing area is cooled with a single window air conditioning unit. The collections storage area is served

by an electric air conditioner and a natural gas furnace. The single air diffuser within the collections storage area is inadequate.

Fire Suppression and Detection

Smoke detectors were installed during the 1995 renovation. A fire alarm system is wired to a local security company and the local fire department. The curation facility has no fire sprinkler system. Fire extinguishers provide the only fire suppression in the building. These extinguishers were last inspected in May 1995.

Security System

The 1995 renovation included a new security system. The curation facility is equipped with deadbolt locks, intrusion alarms, motion detectors, and key-pad access to the collections room. The alarm system is wired to a local security company and to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The Division does not have a mission statement. Its scope of collections includes prehistoric and historic materials, both terrestrial and marine, from Louisiana. The division curates approximately 1,585 ft^3 of archeological materials, most of which are from terrestrial archaeological projects.

Archaeological Collections Storage

Archeological collections are stored in a leased building approximately one mile from the division's offices in the Capitol Annex building in downtown Baton Rouge. One room in the repository is dedicated to archaeological materials storage. An adjacent room serves as the processing lab. The materials are kept on metal shelving units. Several manual fire extinguishers are present throughout the small building. Adjacent to the main collections storage room is a room where the associated documentation is stored. Non-fire resistant file drawers are used to store the documentation. Smoke detectors are wired into the security system. However, the building is not continuously occupied. Thus, the materials and records are at risk from fire damage and/or destruction.

Environmental Controls

The collections are stored with adequate environmental controls. The archaeological materials and associated documentation rooms are maintained at a targeted temperature range of 68-70° F and a targeted 60% relative humidity. The staff regularly monitor relative humidity with a hygrothermograph. Hygrothermographs are calibrated every three months to insure the accuracy of the readings. The building's HVAC system is used to control temperature and humidity.

Range of Support Facilities for Archaeological Collections

The Division has adequate facilities for archaeological collections including a designated storage areas, a small processing lab, general work and office areas. The Division's offices are located in a separate building from the collections, the Capitol Annex building.

Composition of Staff

The Division does not currently have adequate staff. There is no Registrar or Curator. An archaeologist serves as the Collections Manager.

Administrative Record Keeping and Associated Documentation Storage

The division staff maintain many types of administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are stored in file cabinets in the division's offices. Computer databases are used to administer collections. Newer collections have been entered into the system. Older collections are slowly being entered.

The Division curates associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in filing cabinets in a room adjacent to the archaeological materials in the repository. All associated documentation is at risk of fire due to inadequate fire suppression. Copies of the documentation for newer projects are stored with the originals. A duplicate copy does not exist off-site in a secure location.

Collections Management Policies

Written policies include minimum standards of acceptance, field curation guidelines, a disaster/emergency plan, and a deaccession policy.

Administration Summary

Background

The Division's repository contains collections from the U.S. Army Engineers Districts, Vicksburg and New Orleans. The only agreement the division has with a federal agency is a 10 year long agreement with the Federal Bureau of Prisons to curate one box of material. The Division also oversees a state-wide deputy custodian program whereby six other Louisiana repositories curate the division's archaeological collections.

Real Estate

The Division is part of the Louisiana state government and was founded in 1972. The repository containing the archaeological materials and the associated documentation is leased. The lease is for 10 years. The Division is in the third year of the lease. One five year renewal option is possible after the original lease expires. The landlord would have to approve and consent to any

expansion or new construction. Changes to the building are unlikely since the state of Louisiana may purchase the property and demolish the building so that a new state building could be constructed in its place. The state has been acquiring land in the vicinity with the goal of eventually consolidating government offices in and around the Capitol. If that consolidation includes the repository, a new repository would have to be built elsewhere in the immediate area surrounding the Capitol.

Administration

The Louisiana State Archaeologist could financially commit the division to a partnership with DoD and USACE. The State Historic Preservation Officer and the State Archaeologist could sign a cooperative agreement. The Division staff write and track their own grants. No one on the staff conducts fund raising.

Outreach and Education Programs

One person is exclusively involved in archaeology outreach and education. Her duties include creating activity guides and workshops for teachers, preparing and distributing exhibits to schools and libraries, coordinating regional station archaeology programs, presenting slide/tape shows, and producing a booklet series on Louisiana archaeology. The Division regularly consults with Native Americans as part of the their responsibilities under the state's Unmarked Burial Sites Board and on sensitive Section 106 projects.

Contributions

The Division could contribute its staff expertise, but could likely not accommodate the Louisiana collections in the existing leased space in its repository. The repository already contains approximately 1,600 ft^3 of collections.

Notes

The State of Louisiana is currently acquiring property adjacent to the Capitol complex, as it implements a master plan to consolidate all state agency offices at the Capitol. The Division of Archaeology is hopeful that new facilities will be constructed as part of the master plan. However, these plans remain preliminary, without any definite timetable. With the state just now acquiring property, the division will likely remain in its existing facilities for the foreseeable future. The Division is unwilling to rehabilitate archaeological materials for DoD/USACE.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values

are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

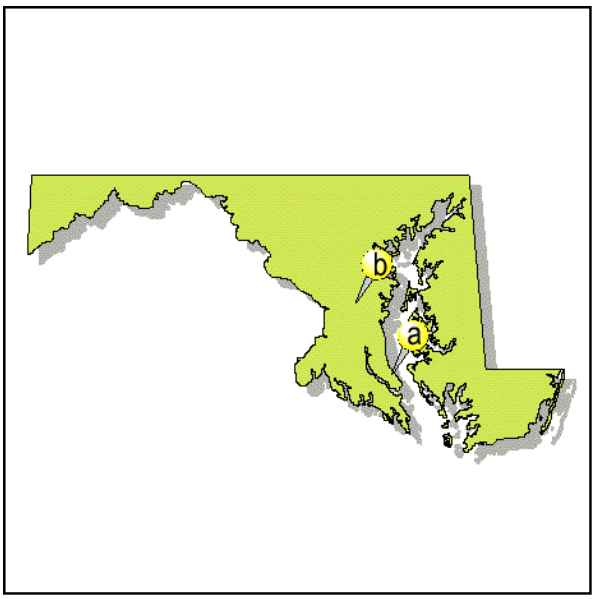
Table 11.2 lists the composite score and the architecture, collections management, and administration scores for the Louisiana Division of Archaeology. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 11.2 Summary of Decision Support Model Scoring - Louisiana

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Louisiana Division of Archaeology	**0.5587**	0.10077	0.15007	0.30787

12

Maryland



Archaeological Materials (in cubic feet)

Department of Defense	**312**
USACE	**53**
TOTAL VOLUME	**365 ft^3**

Number of Institutions Contacted **11**

Institutions Assessed

a. Jefferson Patterson Park and Museum and Maryland Archaeological Conservation Laboratory

b. Museum Resource Center, National Park Service

Background

A list of the institutions the St. Louis District contacted for potential partnership interest is presented in Table 12.1, including the reason(s) some were not contacted for an on-site visit.

Table 12.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Baltimore City Life Museums	X			
Baltimore Museum of Art			X	
Center for Urban Archaeology			X	
Chesapeake and Ohio Canal Tavern Museum	X			
Darnall's Chance			X	
Historic Annapolis Foundation			X	
Historic St. Mary's City		X		
Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park and Museum				
Maryland National Capital Park and Planning Commission History Division, Riverdale	X			

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Museum Resource Center, National Park Service				
St. Clemens Island, Potomac River Museum			X	

Note: Locations visited indicated in **Bold**

Comments

Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park and Museum

Architectural Summary

Site Conditions

At the time of the our visit to the Jefferson Patterson Park and Museum (JPPM), the institution was nearing completion of the Maryland Archaeological Conservation Laboratory (MAC). The new facility on the JPPM grounds will be home to the institution's conservation laboratories, artifact treatment and research facilities, and collections storage area. The MAC Lab is scheduled for completion in August 1997. The 38,000 ft^2 facility is estimated to cost $7,000,000, approximately $184 per ft^2 for the mixed-use building.

Currently, the archaeological collections of the JPPM are temporarily stored on the second floor of the Garrett Building, located on the Spring Grove State Mental Hospital campus in Catonsville, Maryland. The collections are being rehabilitated in preparation to move to the new facility. Relocation of the archaeological collections is scheduled to begin in September 1997 and continue through the Spring 1998.

Garrett Building, Spring Grove State Mental Hospital

The archaeological collections of JPPM have been stored at the Garrett Building since January 1995. The three story building is a brick load-bearing structure with a concrete floor system and stone veneer. The building, constructed in the 1920s, appears to be in fine condition. Office, laboratory, and processing functions are located in the office areas of the former hospital building. Collections are stored in the twin rear wings which were used as a dormitory or open ward areas. The Garret Building is not accessible to disabled persons. A freight elevator operates in the building. There is no passenger elevator.

The building is protected throughout with a wet-pipe fire suppression system as well as fire extinguishers. The fire sprinkler system is triggered by manual alarms, heat sensors, and smoke detectors.

The collections areas are heated and cooled with a with a hot water system and limited zoning. Window air conditioner units are used in the office areas. The building is secured with intrusion alarms and motion sensors wired to a local security firm.

Maryland Archaeological Conservation Laboratory

The new building will be divided into two separate wings, one for public and staff use, the other for laboratory space and collections processing. A specially designed collections storage room is part of the laboratory and processing wing. The room is windowless, with its own HVAC zone to control the storage environment. The 5,600 ft^2 collections storage room has compact shelving units, a large artifact storage area, and 2,300 ft^2 mezzanine level. An additional mezzanine level is planned for the collections storage facility. The building is organized according to the processing and treatment sequence for collections. The facility has been designed to capture the scale and character of the nearby farm buildings and rural setting of the JPPM.

Site Conditions

The JPPM site is located within the evacuation zone of a local nuclear power plant. Adequate parking is provided with existing and new surface parking. A large loading area and outdoor storage/work area are located at the rear of the building. The building site and its grading was preserved as much as possible. The rural landscape and open expanse of land surrounding the offices allow for future expansion.

Building Condition/Structural Adequacy

The building site and the areas of the building nearing completion along with the construction documents suggest that MAC will be well-executed. The single story facility is placed on grade, with a change in level to accommodate the gentle slope of the site. The building is of concrete masonry unit construction with a wood clapboard veneer and steel interior framing. The roof is a standing seam metal roofing system. The structural capacity of the collections storage area is designed to accommodate another mezzanine level.

Code Requirements/Egress/Accessibility

The building was designed and revised according to all current building and fire safety codes (mixed use groups, type 3B construction). The building is in compliance with the Americans with Disabilities Act. A wheel chair lift provides access among the different levels within the building.

HVAC Systems

A sophisticated HVAC system is designed for the facility and was being installed during the partnership team visit. Heating is supplied by an electric hot water system. The air chillers also use electricity. Air handling units are located in either of the building's mechanical rooms. The unit in the collections storage area automatically controls both temperature and humidity.

Fire Suppression and Detection

MAC is protected throughout with an automatic sprinkler system. The building also has ionization smoke detectors, duct smoke detectors, heat detectors, and manual fire alarms. In the collections storage area, there are smoke detectors and manual alarms. A wet-pipe sprinkler system is present in the storage area. The remainder of the building is protected by a dry-pipe system.

Security System

The building is secured by card readers, motion detectors, exiting personnel detectors, and intrusion alarms. The system is wired to a local security company. After hours, the office, laboratory, processing, and collections storage areas are separated and not accessible to the public.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of JPPM is "preserving, researching and interpreting the resources of the property while providing certain regional and statewide services and programs directly related to its museum and archaeological resources, capabilities and responsibilities." JPPM is a unit of the Maryland Historical Trust. As part of its mission, JPPM has established the Maryland Archaeological Conservation Laboratory (MAC). A highly specialized conservation and collections storage facility is currently under construction at JPPM. JPPM's scope of collections includes archaeological materials from the Patterson property itself and the state of Maryland.

Archaeological Collections Storage

The current curation facility for archaeological collections is located at the Spring Grove State Mental Hospital in Catonsville, Maryland. Collections are stored in a former hospital building on the second floor. This building also houses a small museum dedicated to the history of the Spring Grove Hospital. Archaeological collections are located in two wings of the second floor. Archaeological collections are stored in a variety of boxes. The staff are in the process of replacing all the boxes with standardized Coroplast brand plastic boxes. Boxes are stored on a series of metal shelving units. Additional high priority and "overflow collections" are located in an additional room inside locked metal cabinets.

Collections are provided with adequate protection from ultraviolet radiation, particulates, biological pests, and general neglect. The staff are in the process of packing collections for shipment to MAC, which will provide excellent conservation, laboratory, and collections storage facilities.

Environmental Controls

The temporary collections storage facility at the Spring Grove Hospital has both a heating and a cooling system. According to the staff, there is also a centralized system that can add humidity

to the air. The staff monitor relative humidity using hygrothermographs and have used dehumidifiers to help stabilize environmental conditions. MAC will provide greater environmental control than currently available at the Spring Grove Facility. The staff intend to use data loggers to monitor relative humidity in the new facility.

Range of Support Facilities for Archaeological Collections

The Spring Grove facility has adequate support facilities for archaeological collections including collections storage areas, processing areas, and general office areas. The MAC at JPPM will have extensive support facilities including processing labs, conservation labs, specialized analysis labs, facilities for visiting researchers, and collections storage areas. In addition, JPPM has an Exhibits Services Center that provides facilities for publications and exhibit design and construction. JPPM also has a Visitors Center that features exhibits and a hands-on discovery center.

Composition of Staff

The staff at JPPM are divided into three divisions: the park and museum, the MAC, and the Exhibits Services Program. Currently, JPPM does not have a Registrar or a Curator. Additional curatorial and conservation personnel are being sought to staff the MAC Lab.

Administrative Record Keeping and Storage

JPPM maintains extensive administrative records including acquisition/accession record, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are stored at both JPPM and the Spring Grove facility. Administrative records are stored in metal file cabinets and are protected from fire, theft, damage, and destruction. The curatorial staff currently use a simple database to maintain catalog, conservation, and location information for the collections. In the future, the staff plan to use the *Re:Discovery* program to maintain collections information.

Associated Archaeological Documentation and Storage

JPPM also curates associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, photographs and slides. Associated documentation is currently stored at the Spring Grove facility. It is housed in acid-free boxes that are stored on metal shelving units in the Archives room. Associated archaeological documentation is currently protected from fire, theft, damage, and destruction. The documentation will also be transferred to MAC, where better storage conditions will be available.

Collections Management Policies

JPPM has extensive written policies and procedures, most of which are included in its collections policy. JPPM's collections management policies include an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management Plan, and a deaccession/disposal policy.

Administration Summary

Background

JPPM is part of the Maryland Historical Trust. The Trust is part of the Maryland Department of Housing and Community Development. JPPM was founded in 1983. JPPM curates archaeological collections from the Patuxent River Naval Air Station and smaller collections from Aberdeen Proving Ground and Indian Head Division, U.S. Naval Surface Warfare Center. JPPM is the designated repository for archaeological collections for Maryland.

Real Estate

The State of Maryland owns the property that was originally donated to the state by Mrs. Jefferson Patterson in 1983. Mrs. Patterson retains use of a house on the property as part of the trust agreement. Although changes to the property and existing buildings are possible, these changes must first be approved by an Advisory Committee. JPPM is located in a critical habitat area and any changes may also have to be reviewed by the state.

Administration

The authority to financially commit JPPM to a partnership with DoD and USACE depends on the level and extent of the financial commitment to be made. The Director of the Maryland Historical Trust, the Secretary of the Department of Housing and Community Development (DHCD), or the Board of Public Works might be involved in making the financial commitment depending on the level of that commitment. The Director of the Maryland Historical Trust could sign a cooperative agreement. No one individual at JPPM is exclusively dedicated to writing and tracking grants. Individual staff members pursue their own grants. The DHCD has a full time development officer who administers grant proposals. No one at JPPM conducts fund raising, although the DHCD Development officer also performs fund raising.

Outreach and Education Programs

Many staff members are involved in archaeology outreach and education because the primary purpose of JPPM is an archaeological site and museum for the public. Two full-time staff positions are dedicated to education/outreach supplemented by two seasonal employees. JPPM has worked with the local Piscataway Indians. Education programs include archaeology mini-camps, courses on archaeology, volunteer programs for field and laboratory experience, teacher training, and a Discovery Room for grammar school students. The Visitor Center serves as the focus of the JPPM outreach program, but is only open for six months of the year due to lack of funding. Thus, the outreach programs are unavailable for half the year. Additional funds are being sought so that the Visitors Center can be open all year.

Contributions

JPPM could provide a new curation facility with processing facilities and storage areas for collections, staff expertise that will be expanded when the new facility opens, and extensive

educational programs.

Notes

The new MAC could provide excellent support facilities and storage for DoD/USACE collections derived from Maryland. The facility will contain processing and conservation areas, areas for analysis, staff offices, and collections storage. JPPM has excellent collections management, education/outreach, and conservation expertise to bring to a partnership.

Facilities Update

MAC was completed as planned in 1997.

Museum Resource Center, National Park Service

Architectural Summary

Site Conditions

The Museum Resource Center (MRCE) is located in Glenn Dale, Maryland, just outside Washington D.C. and leases 25,000 ft^2 of a 53,000 ft^2 warehouse owned by the General Services Administration (GSA). Records storage for the Federal Bureau of Investigation occupies the remainder of the building. MRCE has occupied the warehouse for 12 years.

The building is located near the Goddard Space Flight Center in an industrial park. It was originally used by the Goddard Space Flight Center for data tape storage. The site is accessible to the public, but appeared to have little community traffic. Adequate parking is provided to the west of the building. Truck circulation space and a covered loading dock are found on the north side of the building. A handicap ramp allows access to the loading dock area that also serves as the main entrance to MRCE.

Building Condition/Structural Adequacy

The age of the building is uncertain. The best estimate is that it was built around 1970. The building is a simple single story warehouse with a concrete masonry unit with brick veneer exterior and a steel frame and metal joist and deck structure. The interior clear height is over 20 feet. Clerestory windows permit limited natural light to enter the collections storage area. Most of the natural light has been controlled by MRCE with a simple blind/shade system. The building had no observable structural defects. While equipped with exterior gutters and interior downspouts in good repair, the building lacked floor drainage. No hazardous building materials were observed or thought to be present.

Code Requirements/Egress/Accessibility

The MRCE facility is a simple storage building (BOCA use group S-1 or S-2, type I construction). The building meets all fire and safety standards. Annual inspections insure

continued compliance with safety requirements. Fire exits are located at each of the corners of the building. The loading dock and entry are located in the northwest corner of the building.

The storage area is a wide-open space with well organized rows of shelving. Offices are located along the north wall, occupying between 2,500 ft^2 and 3,000 ft^2. Each area is handicap accessible. Three designated handicap parking spaces are found near the exterior handicap ramp in the parking area to the west.

HVAC Systems

The MRCE facility installed new electric rooftop HVAC units in 1993. New ductwork was also added during the 1993 improvement. The HVAC system is governed with local control in each zone throughout the large volume of the storage area. Temperature is maintained between 55^0F and 60^0F. Additional electric hot water heating is provided in the office areas. GSA regularly changes the HVAC filters.

Fire Suppression and Detection

The MRCE storage facility has sprinklers throughout the structure. The fire sprinkler pipes have recently been replaced and upgraded. The building is equipped with infra-red beam smoke sensors, manual pull alarms, heat sensors in the sprinkler heads, and flashing alarm signals.

Security System

Each of the four exit doors are wired for intrusion detection. The loading dock and main entry are monitored by a video camera. Motion detectors are located throughout the storage area. The security system is wired to the National Park Service police for internal emergencies and to the Federal Protective Service for external emergencies. Prince George's County emergency services also serve the area.

Collections Management Summary

Scope of Collections and Mission Statement

MRCE curates collections for the national parks located in the National Capital Region. MRCE curates a total of 3,500 ft^3 of archaeological collections. MRCE's collections include a wide variety of materials including decorative arts, natural history, archaeology, and ethnographic collections.

Archaeological Collections Storage

Archaeological materials are stored in polyethylene bags and placed in acid-free boxes. Boxes are placed on a series of Dexion brand metal shelving. The shelving can be constructed to meet specialized storage needs. Each bank of shelving can hold up to 1,000 ft^3 of collections. All archaeological materials are stored in a manner that protects them from ultraviolet radiation, particulates, biological pest, and general neglect. The MRCE facility could accommodate additional archaeological collections.

Environmental Controls

The archaeological materials at MRCE are stored in an area where temperature and relative humidity are regularly monitored. The staff use hygrothermographs to monitor relative humidity. Information about environmental conditions is entered into a computer database. The staff have created microclimates in storage cabinets in order to protect more sensitive organic collections.

Range of Support Facilities for Archaeological Collections

MRCE has adequate support facilities for archaeological collections including a designated collections storage area, a processing/work area, and general office areas.

Composition of Staff

MRCE does not have a Registrar or a Conservator. According to MRCE staff, they have access to conservation services. MRCE's Senior Staff Archeologist and the Archaeological Collections Manager are responsible for the care of archaeological collections.

Administrative Record Keeping and Storage

MRCE maintains detailed administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession records. MRCE stores all administrative records in fire-resistant cabinets. A duplicate copy of administrative records is also maintained.

MRCE currently uses the National Park Service Automated National Catalog System to maintain catalog information. Back-ups are made of this information at least twice a week. A copy of the information is stored at Harper's Ferry and the regional National Park Service office. The staff at MRCE indicated that there was no backlog of collections information to be entered into the system. All administrative records are stored in a manner that protects them from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

MRCE curates a variety of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated archaeological documentation is stored in fire-resistant cabinets and Hollinger boxes. It is inventoried and cataloged upon receipt at MRCE. Duplicate copies have been made of associated archaeological documentation. All original documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

MRCE has extensive collections management policies, many of which are contained in the *Archeology Laboratory Manual of The Regional Archeology Program, National Park Service,*

National Capital Region. These policies include an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management Plan, and a deaccession policy.

Administration Summary

Background

MRCE, formerly the Museum and Archaeological Research and Support Facility, was created in 1985. MRCE does not curate any DoD or USACE archaeological collections.

Real Estate

MRCE leases a former warehouse from the federal General Services Administration (GSA). Any major changes to the building would require the approval of GSA. MRCE and GSA have agreed to a continuous lease, without a specified expiration date.

Administration

The Associate Superintendent for Stewardship and Partnerships can financially commit the MRCE to a partnership with DoD and USACE and could sign a cooperative agreement. Individual staff members must pursue their own grants since no one is dedicated to writing and tracking grants. No one at MRCE conducts fund raising.

Outreach and Education Programs

Staff members are individually involved in archaeology outreach and education. The outreach takes the form of lectures, talks at schools, participation in archaeology weeks, and teaching training classes for NPS personnel.

Contributions

MRCE would be able to provide access and security to any DoD/USACE archaeological collections that were transferred. In addition, the staff could conduct inventories of the collections once they were in place.

Notes

MRCE could offer available space and considerable expertise to a partnership with DoD/USACE. MRCE has excellent record keeping and collections management practices, as well as a facility that meets the requirements of 36 CFR Part 79. A partnership with MRCE would probably require the funding of support staff for the collections.

MRCE has primarily served as a collections management resource for the parks in its region. Since MRCE's function has been primarily curatorial, it does not have extensive outreach programs. If DoD/USACE were to enter into a partnership with MRCE, outreach and exhibit programs would have to be conducted off-site.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

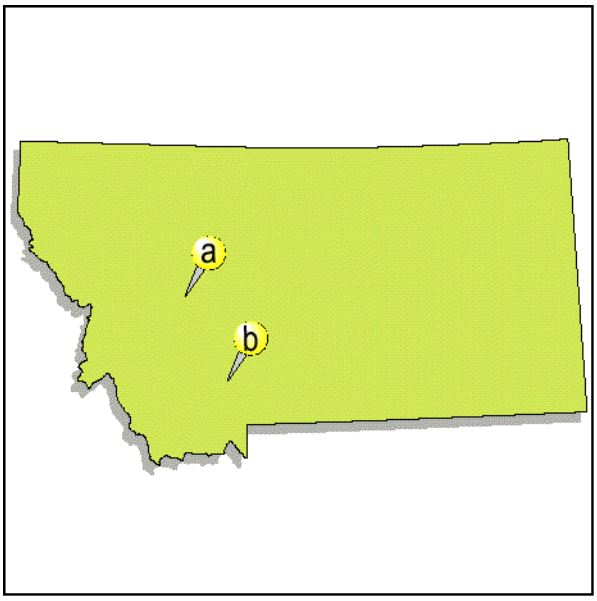
Table 12.2 lists these composite scores and the architecture, collections management, and administration scores for each Maryland institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 12.2 Summary of Decision Support Model Scoring - Maryland

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park and Museum	**0.8784**	0.19811	0.25770	0.42254
Museum Resource Center, National Park Service	**0.7462**	0.19577	0.29189	0.25852

13

Montana



Archaeological Materials (in cubic feet)

Department of Defense	**1**
USACE	**392**
TOTAL VOLUME	**393 ft^3**

Number of Institutions Contacted **10**

Institutions Assessed

a. Montana Historical Society

b. Museum of the Rockies, Montana State University

Background

In Montana, there are few institutions with adequate resources for consideration in the project, and there is limited interest from some institutions. Table 13.1 below shows the institutions initially contacted by the St. Louis District, and the reason(s) some were not selected for and on-site visit.

Table 13.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Beaverhead County Museum		X		
Big Hole National Battlefield		X		
Carter County Museum			X	
Chief Plenty Coups Museum			X	
H. Earl Clack Museum	X			
Liberty County Museum	X			
Montana Historical Society				
Museum of the Rockies, Montana State University				
Park County Museum, House of Memories	X			
Valley County Pioneer Museum			X	

Note: Locations visited indicated in **Bold**

Comments

On-site evaluations were conducted on only two repositories in Montana, the Montana Historical Society and the Museum of the Rockies at Montana State University. Values generated by the Decision Support Model are summarized in Table 13.2 for each of the two institutions visited by St. Louis District.

Montana Historical Society

Architectural Summary

Site Conditions

The Montana State Historical Society (MSHS) is located on a city block within the State Capitol complex, near downtown Helena. General parking for visitors and employees is very limited, as there are not many parking spaces allocated to the museum. Any expansion to the building would likely require the relocation of existing parking areas. In the basement are historical, archival, and ethnographic collections areas totaling approximately 25,000 ft^2.

Building Condition/Structural Adequacy

MSHS occupies a 91,000 ft^2 facility. The original 73,000 ft^2 structure was built in 1952. A steel frame addition of 18,000 ft^2 was constructed in 1986. Stone finished concrete panels provide the exterior cladding of the building. There were no observable structural defects. The building has a 1985 single ply ethylene propylene diene monomer flat roof system with internal drains and scuppers. Floor drains exist in collections storage areas and major leaks do not appear to be present. Asbestos or other hazardous materials did not appear to be present.

Code Requirements/Egress/Accessibility

The building consists of non-combustible construction, (type I UBC) with one hour rated corridors and fire-rated doors. Building construction meets all of the UBC's current standards, including the exits and corridors. There are adequate emergency exits, with at least six located on the main floor. The facility generally complies with the Americans with Disabilities Act. Additional parking spaces for the disabled are needed.

HVAC Systems

The HVAC system for the original portion of the building is an older split radiator heating and central air conditioning system and lacks accurate temperature and humidity control. The newer portion of the building has a newer central forced air system, with good temperature and humidity control. There are nine air handling zones within the building. Overall, the building is served by an HVAC system.

Fire Suppression and Detection

Only the 1986 addition has sprinklers, totaling about 30% of the entire building. Fire extinguishers protect the remainder of the facility. The sprinkler system is a dry-pipe system that is inspected and flushed yearly. The building has manual, heat sensor, and smoke detection alarms. The alarm system is wired to the local fire department.

Security System

Major building openings are wired for intrusion detection. There are also motion detectors and three video surveillance cameras within the facility. Security systems are wired to a central security/guard station and to local police. MSHS has a good security system.

Collections Management Summary

Scope of Collections and Mission Statement

The MSHS mission is "to preserve and interpret Montana and western American history." This mission does not explicitly mention archaeological collections, but they are implied in its language. MSHS has a broad scope of collections including art, archaeological, ethnographic, history, natural history, and paleontological collections. MSHS's archaeological collections are small, but it hopes to expand these collections in the future. MSHS has limited archaeological collections which fill only one small metal cabinet. Most of the archaeological collections are on display in the exhibit area.

Archaeological Collections Storage

Collections that are stored are located in the general collections area, which primarily houses history and ethnographic collections. Archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, biological pests, and general neglect.

Environmental Controls

Collections are stored in an area where temperature and relative humidity are regularly regulated and controlled. Hygrothermographs and hygrometers are used to monitor relative humidity. At the time of our visit, the HVAC system was being upgraded so that it will have humidification capabilities as well.

Range of Support Facilities for Archaeological Collections

MSHS has adequate facilities for the support of archaeological collections, including designated collections storage areas, a processing lab, conservation lab, research facilities, and general work and office areas. MSHS does not have a conservator on staff, but has a well-equipped conservation lab.

Composition of Staff

MSHS has about 40-50 employees. Few of them are directly involved in the care of archaeological and ethnographic collections. The museum does not have a collections manager and these duties are fulfilled by the Registrar. MSHS also has volunteers, three of which work on collections-related projects.

Administrative Record Keeping and Storage

MSHS maintains many types of administrative records including acquisition/accession records, catalog information, collection inventories, object location information, and loan information. MSHS has not deaccessioned many objects, so the staff were uncertain if deaccession records have been maintained. All administrative records are stored in metal file cabinets in the Registrar's office. Duplicate copies of gift/receipt and accession forms are kept in the administrative division. Administrative records are secure. MSHS does not use a computerized system for collections management or catalog information.

Associated Archaeological Documentation and Storage

The majority of the museum's archaeological collections have been donated by private collectors. As a result, the museum has collections of donor notes and correspondence, rather than archaeological field notes. Administrative records and associated documentation are stored in a manner that protects them from fire, theft, damage, and destruction.

Collections Management Policies

The museum does not have written collections management policies, or a disaster/emergency plan.

Administration Summary

Background

MSHS is a state agency that is divided into four units; the State Museum, the State Historic Preservation office, publications, and the library/archives. MSHS was founded in 1865 and the museum in 1891. MSHS does not currently curate DoD/USACE archaeological collections.

Real Estate

The museum portion of MSHS does not have any restrictions on expansion of the existing facility. However, the location of expansion areas with respect to the current building and lot may be constrained by the physical layout of the existing structure.

Administration

The Director and the Board of Trustees could commit MSHS financially to a partnership with DoD/USACE. The Director could sign a cooperative agreement. A separate grant and fund raising department does not exist which forces individual curators to write their own grants. The Montana legislature meets only every other year and thus creates two year budgets for each agency including MSHS.

Outreach and Education Programs

The museum uses footlocker exhibits to teach the history of the state. An archaeology foot locker was in development at the time of our visit. These lockers can be requested by schools throughout the state and have been very popular with the students. The museum also holds public lectures, an Archaeology Week, and hosts the annual Montana History Conference in order to disseminate information on the history and prehistory of the state to the general public. As part of the Peoples, Lands, and Cultural Environments (PEOPLE) study, Native Americans have been involved as consultants to the museum. The PEOPLE study is a multi-disciplinary, multicultural study of Montana prehistory and history. Native Americans have also worked as interns in the museum and have been consulted for the Native American Graves Protection and Repatriation Act.

Contributions

MSHS would contribute labor and indirect costs.

Notes

The building is in good general repair and is visited by 90,000 visitors each year. There is reasonable potential for expansion. Plans existed to upgrade the HVAC systems in 1997. The collections storage area is filled to capacity at present, and could not accommodate additional archaeological collections.

Museum of the Rockies, Montana State University

Architectural Summary

Site Conditions

The Museum of the Rockies (MOR) is located on the southern edge of the Montana State University campus, in Bozeman, Montana. There is a 200-car parking lot for visitors and an ample amount of room for both building and parking expansion. The potential to expand the facility is quite good, with plans already completed for a major addition to the facility.

Building Condition/Structural Adequacy

The existing MOR facility has a two story (type I construction) concrete and steel-framed building with a full basement. Total gross building area is near 95,000 ft^2. An original portion of the building was built in 1972 (22,000 ft^2) and a 63,000 ft^2 addition was completed in 1989. The main floor of the building is primarily composed of about 30,000 ft^2 and is used for exhibition space. The basement level consists of historical as well as paleontological and anthropological collections storage areas, with laboratory work areas. The structure is faced with concrete panels on the exterior walls. The roof is a single-ply rubber system with scuppers and external downspouts. There were no observed hazardous building materials, structural deficiencies nor evidence of leakage in the building.

Code Requirements/Egress/Accessibility

The building's construction follows standards for UBC and BOCA's construction types, corridors, and doors. Egress from the facility follows code requirements for emergency exits and signage. MOR appears to be in full compliance with the Americans with Disabilities Act.

HVAC Systems

The HVAC system is a campus central gas-fired heat-pump. The original 1972 museum HVAC system was entirely upgraded during the 1989 addition. The entire HVAC system is controlled by a 24 hour energy management system. Portable humidifier units inject humidity into the system. The system operates with a multitude of zones.

Fire Suppression and Detection

There is a Halon fire suppression system in the historical, photographic, and art collections storage areas. A wet pipe system protects the remaining areas of the building. Alarms are triggered manually along with heat sensors and smoke detectors. These are wired to the local fire department. The fire detection system is divided into 19 zones. Fire extinguishers are located throughout the building.

Security System

Evening security is provided by campus police located across the street. The MOR has intrusion alarms at each ground level opening. Internal access is both controlled and monitored by key card access. There are motion detectors throughout the building. Overall, security systems at MOR are excellent.

Collections Management Summary

Scope of Collections and Mission Statement

MOR does not have a mission statement that explicitly addresses archaeology and ethnology. However, its emphasis on the cultural history of the state of Montana includes these fields. The

museum's scope of collections includes archaeological, ethnographic, history, natural history, and paleontological materials from the state of Montana and five adjacent states. MOR also has an art collection, although art it is not considered an active field of collection. Archaeological and paleontological collections constitute the museum's largest collections.

Archaeological Collections Storage

MOR curates an estimated 100,000 archaeological objects. Archaeological collections occupy a portion of the paleontology collections storage area. In general, archaeological collections are bagged and stored in cardboard boxes. Boxes are stacked on top of metal cabinets in tall piles. Some archaeological collections are housed in lockable metal cabinets. The vast majority of the collections are not processed. The museum is trying to cope with a 20-year backlog of collections that were recently relocated from Montana State University's Anthropology Department. MOR currently lacks the resources to properly house or process these materials. The staff have entered collections into an ARGUS computerized database when possible, but a large backlog remains.

The museum does not have adequate storage space for its archaeological collections. Many of the archaeological collections are stacked high in boxes, making access very difficult. Archaeological collections are not protected from compression or general neglect due to a lack of storage space.

Environmental Controls

Collections are stored and exhibited in areas where temperature and relative humidity are regularly controlled and monitored. The Registrar is responsible for environmental monitoring and uses hygrothermographs, which are calibrated monthly. HVAC systems are operated 24-hours and humidification is provided through a centralized system. Portable humidifiers are also used when necessary.

Range of Support Facilities for Archaeological Collections

MOR has adequate support facilities for archaeological collections including lab and work areas. The museum's archaeology lab is very small and could not accommodate large incoming collections. MOR does not have a conservation lab.

Composition of Staff

MOR has a total of 96 staff members and approximately 200 volunteers. The staff are divided into a Research and Collections Division, an Education and Public Programs Division, and an Operations Division. The museum does not currently have a Collections Manager. In addition, few staff are available for the care of archaeological collections. These duties fall mainly on the Curator of Archaeology and Ethnology. The museum has a large Education Department and has several staff members involved in outreach and education programs.

Administrative Record Keeping and Storage

MOR maintains extensive administrative records including accession records, catalog information, collection inventories, object location information, loan information, and deaccession/disposal records. Most administrative records are stored in a small fire-proof room which protects them from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

The museum has a variety of associated archaeological documentation in its holdings, including field notes, artifact inventories, and reports. There is no inventory of associated archaeological documentation. Documentation is stored in a variety of places including the Curator of Archaeology and Ethnology's office and the collections storage areas. Much of the documentation remains in shipping boxes from Montana State University's Anthropology Department.

Collections Management Policies

MOR implements many collections management policies, most of which are outlined in its collections management plan. These policies include an accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management plan and a deaccession policy.

Administration Summary

Background

MOR is an independent division of Montana State University (MSU) and was founded in 1957. The museum presents information to the public on northern Plains prehistory and through paleontological exhibits. The museum currently does not curate DoD/USACE archaeological collections. Although a National Guard project was conducted by MOR, the archaeological materials and associated records may have been transferred to the Billings Curation Center in Billings, Montana, the designated regional Bureau of Land Management repository.

Real Estate

The state of Montana owns the property. There are no restrictions on to its use and thus expansion is possible.

Administration

The Regents of the university have the authority to financially commit MOR to a partnership for the curation of DoD/USACE archaeological collections. Grants are sent through the MSU Grants and Contracts office. MOR has an individual responsible for fund raising. In the most recent annual report, fiscal year 1995, the MOR had a total budget of over $4,600,000. The museum has had a deficit in the last five years, but not in FY95.

Outreach and Education Programs

MOR has an Education and Public Programs department. Outreach trunks are available for use in schools throughout the state. Topics for the trunks include homesteading, paleontology, and archaeology. The staff participate in outreach through teaching classes, supervising archaeological field projects, and working with teachers on curriculum development. The museum itself offers exhibits on archaeology and paleontology and has consulted for compliance with the Native American Graves Protection and Repatriation Act.

Contributions

MOR could contribute land for any addition to the existing facility, staff, and equipment.

Notes

The facility is in very good condition, meets all codes, and has excellent potential for expansion. Also, MOR enjoys a tremendous amount of support from its community and members nationwide. The museum has excellent exhibits and outreach programs serving a large audience. The staff of MOR is very active in research and publication. However, MOR does not have existing space for additional archaeological collections in its current facility and its existing archaeological collections need to be rehabilitated.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

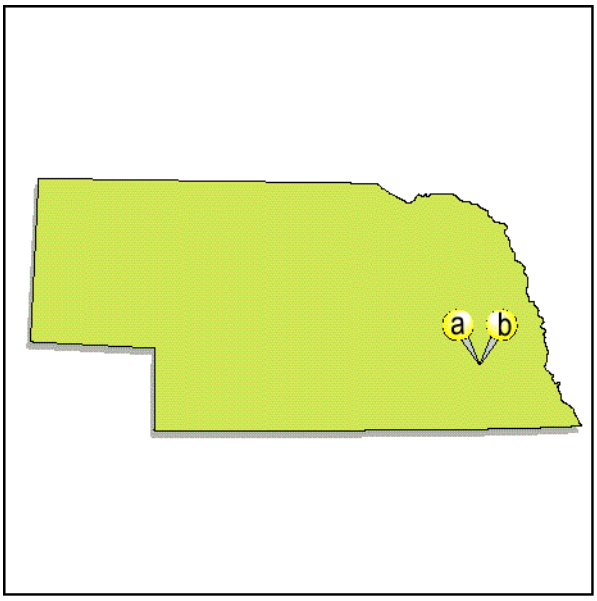
Table 13.2 lists these composite scores and the architecture, collections management, and administration scores for each Montana institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 13.2 Summary of Decision Support Model Scoring - Montana

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Montana Historical Society	**0.6532**	0.15385	0.28147	0.21791
Museum of the Rockies, Montana State University	**0.7639**	0.19998	0.27027	0.29362

14

Nebraska



Archaeological Materials (in cubic feet)

Department of Defense	**3**
USACE	**1,388**
TOTAL VOLUME	**1,391 ft^3**

Number of Institutions Contacted **5**

Institutions Assessed

a. Nebraska State Historical Society

b. University of Nebraska State Museum

Background

A list of the institutions the St. Louis District contacted is presented in Table 14.1, including the reason(s) some were not selected for an on-site visit. In Nebraska, there were few institutions with enough resources, and there was limited interest in the project from these institutions.

Table 14.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Ash Hollow State Historical Park		X		
Cambridge Museum	X			
Fort Kearney Museum	X			
Museum of Nebraska History, Nebraska State Historical Society				
University of Nebraska State Museum, University of Nebraska, Lincoln				

Note: Locations visited indicated in **Bold**

Comments

Only two repositories were visited in Nebraska, the University of Nebraska State Museum and the Nebraska State Historical Society. Although both institutions are located within walking distance of one another, each institution has a separate mission. These missions directly affect the kinds of collections that are accepted for their curatorial focus. Table 14.2 shows the scores generated by the Decision Support Model.

Nebraska State Historical Society

Architectural Summary

Site Conditions

The Nebraska State Historical Society (NSHS) owns two properties in downtown Lincoln, Nebraska. The headquarters building is located two blocks north of the museum building. Archaeological collections are stored in the basement of the museum building. The downtown site prohibits expansion of the existing museum building. However, it may be feasible to acquire adjacent or nearby properties in the downtown if expansion is needed. Parking is limited to metered street parking and public parking garages. There is a bus loading zone on the north side of the museum building, while an uncovered loading area is found in an alley on the southside.

Building Condition/Structural Adequacy

The museum building was built in 1967 and was originally used as a Kiwanis Club. NSHS purchased the building in 1981, renovated it in 1982, and occupied it in 1983. It is a 74,000 ft^2 three story structure with a full concrete basement. Concrete framing supports a structural concrete beam system with brick veneer/infill. Each of the three floors contain exhibit spaces, and office areas on each floor. There is an open stair leading from the first floor to the second floor exhibit space. The basement contains the collections and other storage areas as well as the building's mechanical equipment.

The collections storage area appears adequately maintained and structurally sound. No major or dangerous deficiencies in the concrete floor system were observed. Potential asbestos fireproofing was found on the underside of the same concrete floor system. The basement area has a history of flooding/seepage from the northern exterior wall. Drains were also observed in the collections storage area. However, there are no signs of past flooding or apparent problems with the floor drain system. A comprehensive facilities report from December 1995 contains a comprehensive analysis of the building's condition as well as proposed improvements.

Code Requirements/Egress/Accessibility

The building adequately meets building code and fire safety requirements (type I or II UBC). The need for minor improvements including Americans with Disability Act (ADA) signage and fire indicators in the building should be noted. Also, a fire-sprinkler system should be added to the unprotected areas of the building.

Three rated fire stairs are located within the building envelope. A service elevator was located near the loading area at the rear of the building. Twin elevators with Braille and ADA controls operate between the exhibit spaces on each floor. All public areas of the museum building are accessible to the disabled.

HVAC Systems

A basic multi-zone arrangement controls an electric air conditioner system and natural gas hot water heating system. The system is out-dated, but remains functional if somewhat inefficient. The facilities report recommends upgrades to the HVAC control systems to improve efficiency.

Fire Suppression and Detection

The collections storage area and office areas have an adequate sprinkler system. The remaining areas of the building are unprotected by sprinklers. The museum building has inspected fire extinguishers located throughout the structure. The fire sprinkler system is a wet pipe configuration triggered either manually or by smoke detectors located at the supply side of air handling units. Alarms are wired to the local fire department.

Security System

The museum building is alarmed for intrusion at each opening, whereas TV cameras monitor each entrance. Motion detectors are located throughout the building. Alarms are wired to a central location and local security entity. Key pads and key locks secure the building. The basement location further secures the collections storage area from public access.

Collections Management Summary

Scope of Collections and Mission Statement

NSHS's mission is "to safeguard Nebraska's past for the people." Its scope of collections includes archaeological and ethnographic materials in addition to history, art, and natural history collections. The museum's collections are limited to materials from Nebraska or those portions of other states that were part of the Nebraska Territory.

Archaeological Collections Storage

NSHS has approximately 1,500,000 objects in its archaeological collections. Archaeological collections are stored in several areas. A historic pottery collection from the Lincoln Pottery works is stored at an off-site Quonset hut. We did not evaluate this facility during our visit. The majority of archaeological materials are stored in the main collections storage area, located in the basement of the museum. This area is also used to store Euro-American collections. Archaeological collections are stored in acid-free boxes and placed on metal shelving units. A Space Saver brand shelving unit is also used in the main collections storage room.

An additional room is used for the storage of Native American Graves Protection and Repatriation Act (NAGPRA) -related materials and oversized collections such as pottery. These

collections are stored in acidic cardboard boxes on metal shelving units. Some oversized collections are stored on shelves that are lined with Ethafoam brand padding. Both of the collections storage areas appear to be full.

Environmental Controls

Archaeological collections are not stored in an area that has adequate environmental controls. Temperature is not regularly regulated, as the HVAC system is turned off at night. While relative humidity is monitored using a hygrothermograph, it also is not regularly regulated throughout the museum. Portable humidifiers were being used in the NAGPRA collections storage area at the time of our visit.

Range of Support Facilities for Archaeological Collections

NSHS has good support facilities for archaeological collections including designated collections storage areas, processing labs, research facilities, and general work and office areas. The museum itself does not have a conservation lab. However, NSHS is associated with the Ford Conservation Lab in Omaha which offers conservation services and expertise.

Composition of Staff

NSHS has adequate staff for the management of archaeological collections. NSHS's Archaeology Division includes four Archaeologists, an Archaeological Technician, an Archaeological Registrar, and an Administrative Assistant. Additional support is provided by the NAGPRA Coordinator, the Historic Preservation Division's Archaeologist, and the conservation staff at the Ford Center.

Administrative Record Keeping and Storage

NSHS maintains excellent administrative records including acquisition/accession records, catalog information, collection inventories, object location information, and deaccession/disposal records. All administrative records are stored in a manner that protects them from fire, theft, damage, and destruction. The museum also uses a computer database for maintaining catalog information. However, the majority of the archaeological collections information has not been entered into this system.

Associated Archaeological Documentation and Storage

Associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs are maintained by the museum. All original associated documentation is adequately protected from fire, theft, damage, and destruction.

Collections Management Policies

NSHS does not have adequate collections management policies, as it does not have an Integrated Pest Management plan. Pest management studies have been conducted with the help of students

from the University of Nebraska's Museum Studies program.

Administration Summary

Background

NSHS was founded in 1878. The NSHS curates archaeological collections from the Kansas City and possibly the Omaha Districts of the USACE. Although NSHS has not participated with any federal agency in a project similar to our project, it does have cooperative agreements with the Nebraska Game and Parks, and the Nebraska Department of Roads to perform archaeological field work and curate collections from these agencies.

Real Estate

The state of Nebraska owns the museum property. Additions to the building where the collections are stored are unlikely since the building is surrounded on two sides by public streets, an alley, and abuts another building on the remaining side. However, NSHS was about to undertake a feasibility study of a building across the street to determine if that building would be suitable for collections storage. Other properties would also be available if this building was not purchased. Private funds would be used for any purchase.

Administration

The Director or the Deputy Director of NSHS could financially commit the society to a partnership with DoD and USACE and could sign a cooperative agreement. No one at NSHS conducts fund raising. The Administration Division has one individual that serves as the grants coordinator.

Outreach and Education Programs

Legislation in the Nebraska legislature is pending that would establish a public archaeology program and officially create a State Archaeologist position. There are no positions at NSHS devoted entirely to public outreach. Staff participate in NSHS's Speaker's Bureau and have presented lectures to school groups. NSHS has an archaeology "trunk" that can be loaned to local schools. Tours of excavations and archaeological sites have also been conducted. NSHS has been involved with Native Americans through Native American Graves Protection and Repatriation Act consultation and has worked with the Iowa tribe during salvage excavations.

Notes

NSHS has initiated a feasibility study of a property to its north, across "P" street in downtown Lincoln. The building would be used to double collections storage and triple office space. NSHS has adequate staff, and access to conservation expertise at the Ford Conservation Center. In addition, the museum has popular exhibits. However, the museum currently lacks adequate storage space for additional archaeological collections. NSHS is currently pursuing additional space for collections storage.

University of Nebraska State Museum

Architectural Summary

Site Conditions

The University of Nebraska State Museum (UNSM) occupies several sites across the University of Nebraska, Lincoln, campus. Morrill Hall is in the heart of campus and houses the museum's main exhibit spaces. The fourth and fifth floor of Nebraska Hall are home to the Anthropology Departments laboratory, staff offices, as well as 3,700 ft^2 of collections storage. The University's Mail Distribution Services building provides another 3,000 ft^2 of collections storage in its basement. Both Nebraska Hall and the Mail Distribution Services building (1820 "R" Street) are located within a 100 year flood plain. This is an especially troubling since the collections are stored in the basement of the Mail Distribution Services building.

Nebraska Hall might be expanded in the future if collections space is needed. However, the overall university master plan provides more flexibility for the future assignment/improvement of collections storage space.

Building Condition/Structural Adequacy

In addition to laboratory and other uses, Nebraska Hall is a classroom building. It is a concrete framed structure with a brick veneer, dating from before World War II. During the War, the fourth and fifth floors were added to the building. The building appears to be in adequate structural condition. The roof and roof drains were replaced in 1996 after leaking occurred in the collections storage area on the fifth floor. The roof no longer leaks. Asbestos building materials are suspected to be present but inert and are appropriately removed as they are encountered during renovations and improvements.

The Mail Distribution Services building is a single story structure with the majority of the square footage dedicated to other storage uses. Asbestos has been detected in the floor tiles in the first floor office area. The collections storage area is located in the basement of the structure. The basement walls are brick with a concrete floor that shows signs of minor settling/cracking. Evidence of leakage and/or flooding is present. A sump-pump is present. The area is clean and well maintained.

Code Requirements/Egress/Accessibility

Nebraska Hall meets the university's enforced observance of the UBC (I-1 or I-2, type I or type II). The state of Nebraska regulates fire safety compliance. The building is readily accessible as a classroom facility for the university. Elevators are lacking adequate Americans with Disabilities Act signage/controls. Fire stair egress is adequate throughout the large building.

The Mail Distribution Services building has no elevator to access the collection storage areas in the basement of the structure. The collections storage area is not accessible to the disabled.

HVAC Systems

A hot water heating system and chilled water air conditioning that exist for the university as a whole also serve Nebraska Hall. The building enjoys the excellent benefits from the existing university infrastructure. The collections storage area has independent systems, controllable in each of the three storage rooms. Homemade air diffusers/particulate traps hang at the supply side of the HVAC system in the collections storage area.

At 1820 "R" Street, two heat pump gas furnaces were added when UNSM occupied the space in 1995. The two furnaces provide simple zoned control and each are new and well maintained. A small electric window air conditioning unit is used in the first floor office area. There is no air conditioning at the collections storage area.

Fire Suppression and Detection

Nebraska Hall lacks a sprinkler system, but does contain heat/smoke sensors in the collections storage area that are wired to the local fire department. Fire hoses are located in the hallways.

The Mail Distribution Services building has manual fire alarms that are wired to the local fire department. The UNSM space in the building has no fire suppression sprinklers or fire extinguishers.

Security System

There are intrusion alarms and key card access to the UNSM space on the fourth and fifth floors of Nebraska Hall. The storage area has lockable cabinets. The building's mixed uses and no exit control and entry into the building itself are security risks.

The Mail Distribution Services building has an intrusion alarm and deadbolt lock at the single entry door. The mixed use of the facility compromises the security of the UNSM's space.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of UNSM is "to preserve, increase, and disseminate knowledge of natural science and to enhance in individuals the knowledge of and delight in natural science." The museum's scope of collections includes natural history and cultural materials from Nebraska, the Great Plains, and additional areas deemed suitable.

Archaeological Collections Storage

UNSM has approximately 8,850 ft^3 of archaeological collections stored in several collections storage areas. The first is Nebraska Hall where UNSM occupies the fourth floor of the building. This storage area is mainly used for ethnographic collections, which are stored in three locked rooms. The majority of collections are stored in the main collections storage area inside of Delta brand locking metal cabinets. Collections in this area are protected from ultraviolet radiation, particulates, biological pests, and general neglect.

The majority of UNSM's collections are stored in the University's Mail Distribution Services building. Collections are stored in the basement in two areas. Collections are stored in cardboard boxes and placed on metal shelving units. The facility does not have a sprinkler system, or fire extinguishers. In addition, it located in a 100 year flood plain. While there is some available space, it should not be considered for the curation of DoD/USACE collections.

Environmental Controls

The collections storage facility in Nebraska Hall has heating and cooling systems in place. While relative humidity is monitored using a hygrothermograph, it is not regulated. The Mail Distribution Services building has only heat and lacks adequate environmental controls.

Range of Support Facilities for Archaeological Collections

UNSM has good support facilities for archaeological collections including collections storage areas, processing labs, general work and office areas. In addition, the museum has excellent exhibits located in Morrill Hall. The museum's main building, Morrill Hall, is occupied by exhibits, the education department, a planetarium, a gift shop, and administrative offices. Archaeological collections are stored in two buildings.

Composition of Staff

UNSM has adequate staff including a Curator, Collections Manager, and Registrar. The museum also has an Education Department responsible for outreach programs.

Administrative Record Keeping and Storage

UNSM has good record keeping and maintains records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Duplicate copies have been made of administrative records. Administrative records are stored in Nebraska Hall and Morrill Hall with adequate protection from fire, theft, damage, and destruction. In addition, the museum maintains catalog information in a *Paradox* computerized database.

Associated Archaeological Documentation and Storage

Associated archaeological documentation is stored in the "R" street facility. Since the building lacks a fire suppression system and is located in a 100 year flood plain, the associated documentation is not protected from fire nor water damage.

Collections Management Policies

UNSM does not have adequate written collections management policies. The museum does not have a disaster plan nor an Integrated Pest Management plan.

Administration Summary

Background

UNSM was founded in 1871 and curates archaeological collections from the Bureau of Reclamation and the USACE Kansas City District. It has a cooperative agreement with the Kansas City District and is negotiating an agreement for the curation of the BOR's archaeological collections. The museum is negotiating an agreement with the U.S. Forest Service to establish a new branch museum in northwestern Nebraska. The USFS has already allocated over $1,000,000, to the project. The state of Nebraska is considering matching the USFS contribution. The museum also curates archaeological materials for the Omaha tribe and curates sacred objects for the Ponca.

Real Estate

The state of Nebraska owns the property. UNSM is part of the University of Nebraska, Lincoln. Archaeological collections are stored in Nebraska Hall and 1820 "R" St. The 1820 "R" St. building has archaeological collections stored in the basement. Both buildings are located in the 100 year flood plain of Oak Creek. UNSM may acquire additional space in the Reunion Building across the street from Nebraska Hall. The university does not own the Reunion Building. Significant modifications would be necessary before this space would be acceptable for archaeological collections. The existing 5th floor collection storage space in Nebraska Hall is full. Although space exists in 1820 "R" St., placing DoD/USACE collections in the basement storage area of this building would be risky since it is in the floodplain. Alternative spaces are needed.

Administration

The Vice Chancellor for Business and Finance could financially commit the museum to a partnership with the DoD and the USACE and a university representative could sign a cooperative agreement.

Since no one conducts fund raising full time in the museum, staff members raise funds individually. The university's Office of Research Grants and Contracts provides support in identifying funding opportunities and writing grant proposals. No one on the staff of the museum thus spends all their time writing and tracking grant proposals.

Outreach and Education Programs

The museum has numerous exhibits available to the public including those related to archaeology. The museum's Division of Public Programs does not have staff that are devoted full time to archaeology outreach programs, but the museum's Education Department presents numerous educational programs on Native Americans and anthropological/archaeological topics. Many school groups visit the museum each year. Schools can borrow kits on the Winnebago and the Omaha tribes. The Ponca and Santee Sioux asked UNSM to work with them on developing similar kits for their group. Students can receive a master's degree in Anthropology. A separate master's degree in Museum Studies is also available to students. The museum has experience

consulting with various tribes on Native American Graves Protection and Repatriation Act requirements. Nebraska passed a law similar to NAGPRA in 1989, a year prior to the passage of NAGPRA.

Contributions

The UNSM could contribute funds to rehabilitation and annual maintenance.

Notes

UNSM and the university can provide a variety of facility development plans to better accommodate archaeological collections within the current Master Plan. For example, over 40,000 ft^2 of space could be made available at the Reunion Building just west of Nebraska Hall. It should be noted that the University of Nebraska State Museum and the Facilities Planners at the university expressed genuine interest in developing a new or improved facility. The museum has outstanding exhibits and education/outreach programs in place. The University of Nebraska has a masters program in Museum Studies which provides student labor and research.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

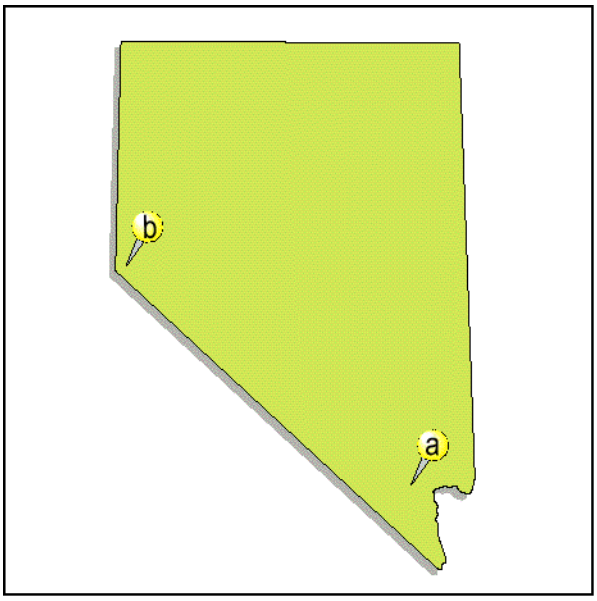
Table 14.2 lists these composite scores and the architecture, collections management, and administration scores for each Nebraska institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 14.2 Summary of Decision Support Model Scoring - Nebraska

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Nebraska State Historical Society	**0.7514**	0.14156	0.28271	0.32711
University of Nebraska State Museum	**0.7657**	0.07564	0.26124	0.42881

15

Nevada



Archaeological Materials (in cubic feet)

Department of Defense	**49**
USACE	**0**
TOTAL VOLUME	**49 ft^3**

Number of Institutions Contacted **8**

Institutions Assessed

a. Desert Research Institute

b. Nevada State Museum

Background

A list of the institutions contacted is presented in Table 15.1, including the reason(s) some were not contacted for an on-site visit. In Nevada, there were few institutions with enough resources, and there was limited interest in the project from these institutions.

Table 15.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Churchill County Museum and Archives				X
Clark County Heritage Museum		X		
Desert Research Institute, Las Vegas				
Lake Mead National Recreation Area Visitor Center			X	
Lost City Museum		X		
Nevada State Museum				
University of Nevada, Las Vegas, Barrick Museum			X	
University of Nevada-Reno, Anthropology Department Research Museum	X			

Note: Locations visited indicated in **Bold**.

Comments

Only two repositories were visited in Nevada, the Desert Research Institute in Las Vegas, and the Nevada State Museum. The Desert Research Institute (DRI) is part of the Nevada university and community college system. Although DRI has offices in Reno and Las Vegas, the assessment team visited only the office in Las Vegas. The Nevada State Museum (NSM) is a state run institution. Table 15.2 below shows the Decision Support Model scores for each facility.

Desert Research Institute, Las Vegas

Architectural Summary

Site Conditions

DRI is headquartered in a less than ten year old facility in Las Vegas, Nevada. The institute's archaeological collections are stored off-site in a leased facility within a nearby light industrial park. Parking is limited at the collections storage facility. Most importantly, the storage space cannot be expanded without leasing and improving additional space. The leased facility is a problematic situation.

Building Condition/Structural Adequacy

Despite being within a leased space, the collections storage space is a well maintained facility. The building's construction date is unknown. It is assumed to be between 10 to 15 years old. The structure is in excellent condition and is well adapted for use as a collections storage area. There is a slab on grade foundation with drywall tenant partitions and concrete masonry units construction with stucco finish at the building shell. Steel column system supports wood beam joists. Built-up roofing with parapets are drained with PVC interior roof drains. There is no evidence of hazardous building materials. However, the contents of adjacent or nearby leased spaces are unknown. Approximately 5,000 ft^2 in area, the storage facility is divided into three major spaces: an office/records area and two storage rooms. Each area is simple and well maintained.

Code Requirements/Egress/Accessibility

The building meets the requirements of the Uniform Building Code used in Las Vegas (type II). The simple single story space has adequate fire separation between tenants (drywall to deck, one hour). Accessibility is good and egress requirements are easily met. Improved emergency lighting/alarming and Americans with Disabilities Act signage should need to be added if public use increases.

HVAC Systems

The leased space has an HVAC system independent from the rest of the building. A direct expansion air conditioner and heat pump heating unit are located on the roof and are powered

electrically. Two zones control the system, one for the rear storage and the other zone controls both the office and other storage area.

Fire Suppression and Detection

The building has a wet pipe sprinkler system that is triggered by manual alarms and fusible links in the sprinkler heads. Alarms are wired to DRI security and the local fire department. A single fire extinguisher was observed in the office area.

Security System

The DRI collections facility uses a security system with motion detectors and intrusion alarms at each opening. Alarms are wired to a centrally located security company. At the lease property, the presence of other tenants and activities beyond the control of DRI could compromise the security of any collections stored at the facility.

Collections Management Summary

Scope of Collections and Mission Statement

The Quaternary Sciences Center (QSC) is part of DRI, and studies environmental changes and how humans adapt to these changes. QSC focuses on geology, geomorphology, climatology, botany, palynology, zoology, history, archaeology, and anthropology. As part of its mission, DRI conducts archaeological work and curates the collections. DRI has over 600,000 items in its archaeological holdings, all of which are federal.

Archaeological Collections Storage

Archaeological collections are stored in DRI's off-site curation facility. This facility includes a large processing and work area and two separate collections storage rooms. Archaeological collections are placed in polyethylene bags and stored in acid-free boxes. Boxes are stored on standard metal shelving units that have elastic cord in front to prevent them from falling if jostled. All archaeological collections are protected from ultraviolet radiation, particulates, biological pests, and general neglect. The staff estimates that the curation facility has room for an additional 1,000 ft^3 of collections.

Environmental Controls

The curation facility at DRI has adequate environmental controls. The building has heating and cooling systems in place. While relative humidity is regularly monitored with hygrometers, it is not controlled. DRI's collections are derived from the desert and require an arid climate.

Range of Support Facilities for Archaeological Collections

DRI has good support facilities for archaeological collections including an off-site curation facility and a well-equipped archaeological laboratory located at the southern Nevada Science

Center, DRI's headquarters. DRI also has a radiocarbon dating laboratory in this building.

Composition of Staff

While QSC has a total of 20 archaeologists and four support personnel, few of these staff members are directly involved in collections management. The Deputy Director, spends about 5% of her time supervising the curatorial operations. In addition, the Laboratory Supervisor/Curator spends about 25% of her time on collections management and the Collections Manager spends 100% of his time working with the collections. DRI does not have a Registrar or a Conservator.

Administrative Record Keeping and Storage

DRI has excellent administrative record keeping practices. Acquisition/accession records catalog information, collection inventories, object location information, and deaccession records are all maintained. Duplicate copies, including one on acid-free paper, are made for all administrative records. Desert Research Institute also maintains detailed records of its archaeological contracting activities. Administrative records are stored in the Nevada Science Center and are protected from fire, theft, damage, and destruction. A computer database of catalog information is also maintained and backed-up regularly.

Associated Archaeological Documentation and Storage

DRI has extensive collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs. Duplicate copies have been made of all associated archaeological documentation, including one copy on acid-free paper. The staff intend to move all original documents into fire proof file cabinets located at the off-site curation facility. All associated documentation is adequately protected from fire, theft, damage, and destruction.

Collections Management Policies

DRI does not have adequate written collections management policies. Specifically, DRI lacks a written accession policy and an Integrated Pest Management plan. The staff indicated that they are developing an accession policy.

Administration Summary

Background

DRI is a non-profit multi-disciplinary research institution that is part of the University and Community College System of Nevada. It has offices in Las Vegas and Reno, Nevada and was founded in 1959 in Reno. A Las Vegas office was later created and is known as the Southern Nevada Science Center. We visited only the SNSC. DRI only curates archaeological collections from the Department of Energy (DOE) facilities in Nevada including the Nevada Test Site and Yucca Mountain. A contract is in place between DRI and DOE for curation of the DOE's

archaeological collections.

Real Estate

The state of Nevada owns the property where DRI's offices are located. However, the warehouse where the collections are stored is leased from a private owner. Thus, any additions to the warehouse would have to be approved by the building's owner. DRI was planning a fund raising drive to obtain funds to construct two new buildings on the same property where its offices are now located. One of these buildings would be used for curation. The fund raising would be used to implement the site's master plan.

Administration

The Vice President for Finance and Administration of DRI could financially commit the institution to a partnership with DoD and USACE and could sign a cooperative agreement. Fund raising outside of the grants and contracts process is the responsibility of the Institutional Advancement staff. No one individual writes or tracks grants. Individual staff members write their own grants.

Outreach and Education Programs

No one individual is dedicated to archaeology education/outreach. However, there is a public outreach and education program that included a Distance Education and K-12 Outreach program. The staff participate in public lectures, tours of the DRI facility, programs that encourage students to choose careers in science, the development of archaeology lesson plans for Nevada teachers, and career days. DRI has consulted Native Americans as part of their Native American Graves Protection and Repatriation Act compliance activities.

Notes

A Master Plan is in place that calls for nearly 300,000 ft^2 of total development, 45,000 ft^2 of which exists as the present Phase 1 headquarters building. Fund raising for the 90,000 ft^2 of Phase 2 is underway. Part of Phase 2 includes building a curation/storage facility. The existing DRI headquarters has a sophisticated security system and building systems tailored to modern laboratory requirements. It stands as a favorable example of the probable quality of future DRI facilities.

DRI offers opportunities for interdisciplinary research that are not available at many institutions. DRI is a unique entity that is composed of a diverse, multidisciplinary staff. DRI would be interested in serving as a regional partner with the region being composed of areas in and around Las Vegas such as the Lower Colorado River.

Facilities Update

In August 1999, DRI was contacted to obtain an update on the facilities. The construction of the new building is still planned, and groundbreaking is expected within 1-2 years. The project is supported largely by the Department of Energy, for whom DRI holds collections, and also by the

state of Nevada. DRI has made additional, smaller improvements since the Curation Options visit. These include acquisition of fireproof file cabinets and acid-free file folders for collections-associated documentation.

Nevada State Museum

Architectural Summary

Site Conditions

The Nevada State Museum (NSM) stores archaeological collections in two facilities in Carson City, Nevada. The main museum building houses the administrative offices, exhibit space, and a storage area for archaeological collections. The museum building was originally constructed of stone in 1870 as a U.S. Mint. NSM now uses the structure for exhibit space. Several additions dating from 1957 have been added to the west or rear of the mint building. Archaeological collections storage is in the basement of the addition. The possibility of further expansion is unlikely. However, the NSM is seeking funding to acquire and renovate a former bank building across the street to the north of the original mint building. This renovated facility would also be used for storage of archaeological collections.

Several miles south of the museum building is the museum's Indian Hills Annex. Built in 1980 and added to in 1991, the annex mainly houses archaeological collections with appropriate office/support spaces. The somewhat remote site of the annex would easily allow for future expansions.

Building Condition/Structural Adequacy

The 1870 building and the mix of additions have been cobbled together over the years, but displayed no signs of major damage or defects. The collections storage area occupies nearly 2,000 ft^2 in the basement of the museum addition. The additions have a prefabricated concrete structural system with a partial brick veneer. The roof is a built-up gravel system with one inch insulation. The various improvements, including recent seismic and fire detection/suppression system upgrades, have helped in maintaining the facility. There were no observable signs of leaking or structural defects. Asbestos has been found in the building and was at least partly removed in May 1990.

The Indian Hills Annex is a simple one story structure built in 1980. The structure is a prefabricated wood truss system resting on a ridge beam supported by six inch diameter steel columns resting on a slab on grade foundation. The exterior is a window-less concrete masonry unit enclosure. The 1991 addition uses similar building systems. The entire annex occupies approximately 15,500 ft^2 with a 7,000 ft^2 archaeological collections storage area. The structure shows no signs of damage or leakage.

Code Requirements/Egress/Accessibility

Building codes classify the museum building as a mixed use facility (type V, 1 hour construction). Additions and upgrades have brought the building into code compliance. The

building adequately provides for emergency egress. Disabled accessibility is through a side entrance with parking spaces provided on site and at nearby public parking. Elevators are not equipped with appropriate ADA controls and signage.

The Indian Hills Annex meets the standards for building code construction types (B-2, type V, not rated, a sprinkler system thoughout, 1 hour construction). Exits along the perimeter of the simple structure provide for necessary egress. The single story structure is easily accessible for the disabled. However, the large steel shelving and palette storage system make collections very difficult to access.

HVAC Systems

The archaeological collections storage area in the basement of the main museum building is served by a single electric hot water heating unit. The storage area is not air conditioned. The single heating unit seems insufficient for the climate control needs of the storage area.

The Indian Hills annex also lacks air conditioning. Each storage area (the original 1980 area and the 2,640 ft^2 addition) uses a single natural gas forced air heating unit. This arrangement again seems insufficient for complete climate control of the archaeological collections storage areas.

Fire Suppression and Detection

A manual fire alarm system is used in addition to heat sensors in the wet pipe sprinkler system in the museum collections storage area. In other portions of the 1870 building and the various additions a sprinkler system does not exist throughout. Fire extinguishers that were inspected within the last year are also found throughout the building. The alarm system is wired to the local fire department. The 1987 fire system retrofit seems to have adequately updated the system.

The Indian Hills annex has a wet-pipe sprinkler system throughout the facility that was inspected recently, with manual alarms and heat sensors at the sprinkler heads. Fire extinguishers are also found at the annex. The alarm system is wired to the local fire department.

Security System

Both the museum building and the Indian Hills Annex use motion detectors and intrusion alarms as security measures. Each system is wired to a local security company. Door locks also limit access to collections.

The basement location of the main museum building restricts public access to collections. However, the remote Indian Hills site seems compromising despite a perimeter security fence and concrete masonry unit construction.

Collections Management Summary

Scope of Collections and Mission Statement

The NSM mission statement includes archaeological, anthropological, and ethnographic collections. The museum's scope of collections is limited to collections from Nevada. The

museum, however, will also accept collections that have some connection to the Great Basin region. Collections are primarily archaeological, and NSM has approximately 3,000 ft^3 of archaeological materials. Of these collections, approximately 2,337 ft^3 are federal.

Archaeological Collections Storage

The museum has two collections storage areas. The first is located in the basement of an annex addition to the former Carson City Mint Building. Archaeological collections are stored in wooden cabinets and drawers. A separate vault is used to store basketry. This collections storage area is filled to capacity.

The bulk of NSM's archaeological collections are stored at the Indian Hills Annex, an off-site storage facility. Collections are stored in two rooms in this building. In the first room collections are stored in cardboard boxes on metal shelving units, some of which are overloaded. Some of these boxes show evidence of water damage and compression. The second room contains a steel shelving frame and wooden palette system. Each palette holds a maximum of 12 boxes, each of which weighs as much as 60 lbs. A hydraulic lift must be used to remove an entire palette in order to access collections. While this system makes for efficient use of existing space, it is less than desirable. Accessing collections requires special training and is both time consuming and potentially dangerous. Approximately 1/2 to 1/3 of existing storage space in this area is available.

Environmental Controls

While heat is furnished, neither collections storage facility has a cooling system. The staff indicated that they monitor relative humidity by using hygrometers and a hygrothermograph. However, levels of relative humidity are not regulated since most of the collections originate from a desert environment. Baskets are stored in a special vault that provides more stable environmental conditions.

Range of Support Facilities for Archaeological Collections

NSM has adequate support facilities for archaeological collections including designated collections storage areas, a processing and work area, and general work and office areas. In addition, NSM serves as the repository for 14 counties in Nevada for archaeological site records and reports.

Composition of Staff

NSM has a total of 25 full-time staff members. The Anthropology Department has two full-time staff members (a Curator and an Anthropologist) who are responsible for archaeological collections management. In addition, a Curatorial Assistant and an Archaeological Site Records Manager are funded as ¾ time positions. NSM does not have adequate full-time staff to care for its archaeological collections.

Administrative Record Keeping and Storage

The museum maintains adequate administrative records including acquisition and accession information, catalog information, collection inventories, object location information, loan information, and deaccession/disposal information. Administrative records are stored in a manner that protects them from fire, theft, damage, and destruction. Catalog information is also maintained in a computer database. According to the staff, basic catalog information has been entered for all of NSM's archaeological collections.

Associated Archaeological Documentation and Storage

Associated archaeological documentation is also stored with adequate protection from fire, theft, damage, and destruction. NSM has collections of archaeological site files, field notes, artifact inventories, reports, and photographs/slides. However, these materials are not duplicated.

Collections Management Policies

NSM has adequate collections management policies including an accession policy, a disaster plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

NSM was founded in 1939. NSM curates archaeological collections from the Navy (Fallon Naval Air Station), Army (Hawthorne Army Ammunition Depot), the Bureau of Land Management, and the U.S. Forest Service. A cooperative agreement exists with the BLM and a similar agreement was being drafted with the Navy.

Real Estate

The State of Nevada owns the property where NSM's main building and the Indian Hills Annex are located. A former bank building across the street from the main building may be acquired in the future if funding is made available through the state legislature. Although the main building is listed on the National Register of Historic Places, it has been internally modified through several renovations. However, the archaeological collections area there is full. Additional space is available in the Indian Hills Annex.

Administration

The Administrative Services Officer of NSM could financially commit the museum to a partnership with DoD and USACE and could sign a cooperative agreement. No one individual writes and tracks grants. The two full time, permanent staff members of the Anthropology Division write their own grants. No one conducts fund raising.

Outreach and Education Programs

No one is dedicated to archaeology education/outreach. NSM has no separate Native American programs, although Native Americans have served as interns in the museum in the past. The Anthropology Division staff no longer gives lectures to public schools since too many requests were being received and not all of them could be met. A decision was made not to continue with any lectures. A program called the *Students to Careers* is targeted at high school students and includes archaeology.

NSM has consulted Native Americans as part of their Native American Graves Protection and Repatriation Act compliance activities. Docents provide tours of the Anthropology exhibits. Part of the existing museum education programs include archaeology. The Anthropology Division staff have assisted the Washoe in making an anti-tobacco video that included using portions of the NSM collections. The same staff helped write text for an exhibition hosted by the Pyramid Lake Indians.

Notes

The museum has some available storage space and good collections management policies. The museum's facilities, however, might require upgrading as neither collections storage area has adequate environmental controls.

Facilities Update

NSM was contacted in August 1999 to determine the status of acquisition of the former bank building. Indeed, NSM did acquire the building, but none of this additional space is slated for storage of anthropology collections. Additionally, anthropology collections were not expanded into any space occupied by other NSM departments that did receive space in the bank building.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

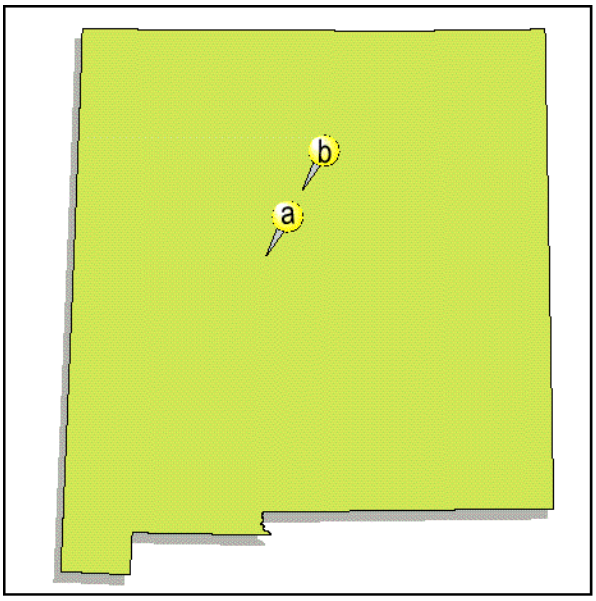
Table 15.2 lists these composite scores and the architecture, collections management, and administration scores for each Nevada institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 15.2 Summary of Decision Support Model Scoring - Nevada

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Desert Research Institute	**0.7280**	0.14386	0.25004	0.33411
Nevada State Museum	**0.7343**	0.14067	0.26463	0.32886

16

New Mexico



Archaeological Materials (in cubic feet)

Department of Defense	**363**
USACE	**1,191**
TOTAL VOLUME	**1,554 ft^3**

Number of Institutions Contacted **25**

Institutions Assessed

a. Maxwell Museum of Anthropology

b. Museum of Indian Arts and Culture

Background

In New Mexico, there is a significant number of institutions that curate archaeological materials. However, there was little interest in the partnership project from most of these institutions. The institutions contacted by the St. Louis District are listed in Table 16.1, including the reason(s) some were not contacted for an on-site visit. While three institutions were visited, the San Juan County Archaeological Research Center later withdrew from the project.

Table 16.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
A:Shiwi A:Wan Museum and Heritage Center		X		
Albuquerque Museum		X		
Artesia Historical Museum and Art Center			X	
Aztec Ruins National Monument		X		
Bandelier National Monument		X		
Blackwater Draw Museum			X	
Carlsbad Museum and Art Center		X		
Chaco Culture National Historic Park			X	
Deming Luna Mimbres Museum		X		

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Eastern New Mexico University	X			
Florence Hawley Ellis Museum of Anthropology, Ghost Ranch Conference Center		X		
Gila Visitor Center, Gila Cliff Dwelling National Monument		X		
Los Alamos County Historical Museum		X		
M. Tularosa Basin Historical Society		X		
Maxwell Museum of Anthropology, University of New Mexico				
Museum of Indian Arts and Culture/Laboratory of Anthropology, Museum of New Mexico				
Philmont Museum				X
Red Rock Museum		X		
Salinas Pueblo Missions National Monument		X		
San Juan County Archaeological Research Center and Library		X		
School of American Research		X		
Tucumcari Historical Research Institute		X		
The University Museum, New Mexico State University		X		
Western New Mexico State University Museum		X		
The Wheelwright Museum of the American Indian		X		

Note: Locations visited indicated in **Bold**.

Comments

Two of the three repositories visited in New Mexico, the Museum of Indian Arts and Culture in Santa Fe, and the Maxwell Museum of Anthropology at the University of New Mexico, are described detail in this section. Because the San Juan County Archaeological Research Center withdrew from consideration, it is only marginally addressed. Table 16.2 presents data from the Decision Support Model.

Maxwell Museum of Anthropology, University of New Mexico

Architectural Summary

Site Conditions

The Maxwell Museum of Anthropology (MMA) is located on the western edge of the University of New Mexico (UNM), Albuquerque, campus. A loading area, with limited maneuvering room, is located on the western edge of the building.

The site is well maintained and offers several possibilities for expansion. A new facility could be constructed to the south of the main building or a large addition could be attached to the western side of the existing building. Either scenario would eliminate the museum's limited parking area. Parking on the UNM campus is a chronic problem. Currently, MMA has been allocated 15-20 visitor parking spaces. One proposed solution to the parking shortage would be to use shuttle buses to transport visitors from off-campus parking areas. MMA staff expressed concern about any off-campus parking solution.

Building Condition/Structural Adequacy

MMA currently uses several different areas for collections storage. Nearly 7,000 ft^2 is dedicated to storage in the basement of the main museum building. Over 2,000 ft^2 of area is used at an off-site UNM warehouse facility. Recently, an additional 2,000 ft^2 in a former car wash was slightly renovated for collections storage.

Maxwell Museum

The original portions of the MMA building were built in 1931. Since then, several renovations and additions have been cobbled together, creating a sprawling, confusing floor plan. The museum and its programs suffer from the inefficiencies of the building. The collections storage area is located in the basement, separated into several secure rooms totaling 6,753 ft^2. There is little or no available space in these collection storage areas.

The 55,000 ft^2 building is constructed with clay masonry units covered with a stucco finish. The first floor structure is a concrete frame over a sealed concrete basement. A steel joist system is used in the newer portions of the facility. The finish and detail of MMA maintains a Southwestern look. The roof system is a mixture of vinyl treatments, with parapets and exterior gutters. There were no signs of major leakage or structural deficiencies.

Warehouse

The warehouse facility is located near the UNM campus. The simple 25 year old building has a concrete frame, with concrete masonry units (CMU), exterior partitions, and drywall partitions between tenants. MMA has occupied the 2,050 ft^2 area for nearly 20 years and the facility has just recently installed lighting and improved electrical systems to the space. The roof is drained through an interior downspout system. The facility appeared to be structurally sound. There was little or no available space in this storage area.

Car Wash Building

MMA has also taken over a former car wash, now owned by the university. The two bays cover nearly 2,000 ft^2. The structure is CMU walls with a new wood frame roof. The new roof has been recently added by UNM. The museum has yet to use all of the space. The open ends of each bay have been enclosed to create two linear spaces. Despite the new roof, the space lacks basic utilities and remains an inappropriate collections storage area. MMA staff recognize the deficiencies of the space and plans to use it only as temporary relief from the current space shortage at the main museum and warehouse.

Code Requirements/Egress/Accessibility

Maxwell Museum

The additive nature of the MMA raises questions about its overall code compliance (type II, non-combustible, mixed-use groups). Most notable is a lack of a public elevator in the public/exhibit space. The only elevator is located in the private office areas of the museum. Open stairwells and confusing corridors are fire and life-safety problems. The building is equipped with visual and audible alarms.

Warehouse

The simple warehouse facility appears to meet all construction type and use group requirements (type I, non-combustible, S-1 use group). An entry door and a single overhead loading door provide egress and access to the single level storage room.

HVAC Systems

The main MMA building is served by the UNM hot and cold water forced air systems. In the collections storage areas individual air handling units provide temperature control in each storage room. These systems provide adequate control for the museum's collections storage area. Neither the warehouse facility nor the car wash has any sort of heating or cooling system.

Fire Suppression and Detection

The upper levels of MMA do not have a sprinkler system. A halon type fire suppression system is in place in the basement collections storage area. The system is activated manually. A wet pipe sprinkler system also protects the basement study and office areas near the collections storage rooms. Fire extinguishers are located throughout the facility, but were not inspected within the last twelve months of the on-site visit. Smoke detectors are located throughout the building.

The alarm system is wired to the local fire department. The halon suppression system will need to be renovated or replaced in the near future. Automatic fire alarms should also be added to the manual alarms at the collections storage rooms. The warehouse facility is equipped with a fire extinguisher, but lacks a sprinkler system. The car wash building has no fire detection or suppression equipment.

Security System

MMA is equipped with motion detectors and intrusion alarms. Access to the collections storage area is restricted by keypad. The alarm system is wired to the university's police department. A service tunnel links the basement area of the museum building to the rest of the university underground system. This provides a potential security risk to the museum and its collections.

The warehouse building is protected with intrusion alarms, keypad access, and motion detectors. The car wash is secured only with deadbolt locks.

Collections Management Summary

Scope of Collections/Mission Statement

The mission of MMA is "to increase knowledge and understanding of the human cultural experience across space and time." The museum curates archaeological, ethnographic, human skeletal, photographic, and archival materials. The majority of the museum's holdings consist of archaeological collections, which total approximately 26,800 ft^3. MMA focuses on collections from the Southwestern United States, but also has collections from other geographic areas.

Archaeological Collections Storage

Collections are stored in several buildings at MMA. Conditions vary greatly in each of the facilities. The best conditions are provided in the Maxwell Museum itself. MMA and the University of New Mexico are beginning a campaign to construct a new facility dedicated to collections storage and research.

Maxwell Museum

Collections are stored in the basement of MMA in several locked rooms, each dedicated to a special type of material. These rooms provide storage for ethnographic materials, textiles, basketry, and ceramic vessels. Some archaeological collections, such as whole ceramic vessels, are stored here. Ceramic vessels are stored on wooden shelves that are lined with acid-free paper. The room has a sprinkler system and environmental controls. The staff use dehumidifiers in this room during the rainy season. No signs of leakage from overhead pipes were observed. Collections stored in this area are protected from ultraviolet radiation, particulates, biological pests, and general neglect.

Anthropology Building

Human skeletal remains are stored in the Physical Anthropology lab located in the university's Anthropology Building. The building is located next door to MMA. A former audiovisual control loft is used to house human skeletal collections. Access to the storage area is difficult; it is accessed by climbing a steep ladder. Collections are transported to the loft collections storage area using a dumb-waiter. Metal and plywood shelving units hold collections that are stored in acidic cardboard boxes. The area does not have appropriate environmental controls.

Warehouse

The majority of bulk archaeological collections are stored in a warehouse located on the UNM campus. This facility lacks environmental controls. Recently, the university installed light fixtures. While fire extinguishers are available, a sprinkler system is absent. The room has shelving units and collections boxes stacked nearly to the 16 ft clear ceiling height. Archaeological collections are stored on metal shelving units with wooden shelves. The shelving units are bolted together at the top to prevent them from tipping over. Collections at the top of

the shelves are difficult to access, as the shelves are very high. Some shelves are overloaded and beginning to warp. Archaeological collections are placed inside of polyethylene bags that are placed in acidic cardboard boxes.

Some perishable collections are stored in locking metal cabinets, that provide greater protection from environmental fluctuations. The warehouse facility appears to be filled to capacity and could not accommodate additional collections. Despite plans to build a new building, MMA plans on retaining use of the warehouse for collections storage.

Car Wash Building

A former car wash building is used to store bulk archaeological collections. Two rectangular rooms will be used for this purpose. The staff have begun to use the space for collections storage. Boxed collections are currently stored on wooden palettes on the floor. Although the building provides much needed space it lacks environmental controls, adequate security, and fire suppression.

Environmental Controls

Environmental controls vary in each of the buildings used by MMA. The warehouse, car wash, and anthropology building lack appropriate environmental controls for the storage of archaeological collections. Better conditions are provided in the museum itself. The collections storage area in this building has heat and air conditioning. Portable dehumidifiers are used during the rainy season. However, the majority of archaeological collections are not stored in this area. Relative humidity is monitored in collections and exhibits areas in MMA. The staff use hygrothermographs to monitor relative humidity in the museum, but relative humidity is not regularly monitored at the warehouse.

Range of Support Facilities for Archaeological Collections

MMA has appropriate support facilities for archaeological collections. These include designated collections storage areas, a processing lab, research facilities, a conservation lab, and general work and office areas. The museum also has exhibits, both in the museum building, and in a satellite gift shop located in down town Albuquerque.

Composition of Staff

The museum does not have a Conservator, a Collections Manager, or a Registrar. Curatorial staff are responsible for registration/object transaction and collections management duties. Current staff that are responsible for collections management include a full-time Curator of Archaeology, two temporary full-time Assistant Curators, and two half-time student employees. In addition, the museum uses several volunteers that assist with these duties. The museum also has a Senior Research Coordinator that is responsible for encouraging and coordinating museum collections research.

Administrative Record Keeping

The staff at MMA maintain extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan agreements, and deaccession/disposal records. Administrative records are stored in several areas of MMA. The museum also uses the computerized database ARGUS for collections information. Some original accession ledgers are stored in the basement of the Maxwell museum building. Accession records for the archaeological collections are maintained in the Curator of Archaeology's office. Administrative records, while scattered, are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation Storage

The museum has extensive collections of associated archaeological documentation including archaeological site records, field notes, artifact inventories, reports, and photographs/slides. The majority of the associated archaeological documentation is stored in a temporary archives room located in the basement of the museum. The staff expressed concern that the museum is currently without an Archivist.

Collections Management Policies

MMA has numerous collections management policies including an acquisition/accession policy, a disaster/emergency plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

MMA was established in 1931 as a unit of the Department of Anthropology at the University of New Mexico. Since 1991 the museum has functioned as a separate entity.

The museum has a long-standing relationship with the National Park Service (NPS) through the Chaco Center Project. The property of the Chaco Culture National Historic Park was formerly owned by the UNM. After the park was established, NPS maintained offices at the university and the two entities formed a cooperative research effort. Today, the partnership focuses on curation of collections. The Park staff continue to have offices on campus through a memorandum of understanding. The museum also curates collections from DoD, Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Reclamation, and USACE (Los Angeles and Albuquerque Districts).

Real Estate

The museum is located on the campus of the University of New Mexico. The museum property is owned by the state. The university places restrictions on the height and style of new construction to conform to the existing campus architecture. The congestion of the campus also places physical limits on the location and size of new construction. The museum is planning to

build a research center with dedicated curation spaces. Two options are being considered, an addition to the existing building or a new structure. An expansion of the existing museum building would likely be to the west because that facade has been determined by the Board of Regents to require beautification. Construction of a free-standing structure would likely be south of the museum.

Administration

The President or Provost of the university can commit the museum to a financial agreement and would sign a cooperative agreement. The museum has experience dealing with federal agencies through a variety of contractual arrangements including a memorandum of understanding and cooperative agreements.

The budget of the museum uses a formula based on university enrollment. Staff salaries are covered separately by the university and the budget is devoted solely to operating expenses. The museum has had one budgetary shortfall related to the development of a traveling exhibit. However, the exhibit now generates money and is expected to pay for itself.

The museum does not have a staff member dedicated to writing or tracking grants. The museum staff prepare their own grant applications. However, the museum is planning to restructure and would like to establish a position dedicated to grant writing/tracking. Fund raising is handled by the Maxwell Museum Association and the university's Public Programs division.

Recently, the museum received a $3,000,000 donation. This private donation was made for the purposes of constructing a new research center and curation facility. The museum and university are seeking additional funds and are discussing possible construction options. As noted above, two options are being considered: (1) an expansion of the current facility, or (2) a free-standing building. The final decision will be based on the funding available (see Architectural Summary for further discussion).

Outreach and Education Programs

The museum has an Education Division composed of two individuals (one is currently on medical leave). These individuals develop materials, supervise, and train approximately 30 volunteers. The programs are tailored to different audience levels. The staff suggested that the programs developed for Hispanic audiences are especially strong. The Education Division has developed numerous activity kits containing educational materials devoted to various topics. The kits are maintained and distributed through a grant provided by the Albuquerque School District. The primary audience is elementary/middle school students. In 1996, the program made 570 presentations reaching approximately 12,000 students.

The museum has developed ties to the Native American community through Native American Graves Protection and Repatriation Act consultation with over 50 tribes including sponsored on-site visits. The museum also sponsors native generated exhibits, demonstrations, and lectures and has encouraged the use of collections by Native Americans. The permanent exhibit, "People of the Southwest", was developed in consultation with Native American participants.

Contributions

MMA is planning to build new curation spaces. The museum would request capital support for construction. Maintenance of the physical plant would be contributed by the university with DoD/USACE contributing support for annual maintenance of the collections and some staffing support. The museum would prefer that a DoD/USACE curatorial presence be established on-site similar to that of the National Park Service. Some of the other contributions the museum would offer include the availability of volunteers, the support supplied by the university Collections management (such as legal staff), and the research focus of the museum. The museum has established the position of Senior Research Coordinator whose function is to encourage and facilitate research utilizing museum collections.

Notes

MMA has recently received a $3,000,000 donation for the construction of a new facility. The university is aggressively pursuing additional funding and is lobbying various government agencies for support. Depending on the success of these fund raising efforts, the museum seems poised to expand its facility in one of two ways. If additional funds are limited, the university would plan to expand to the west of the existing museum complex. If additional money becomes available (estimated between $7,000,000 and $10,000,000), a new building would be constructed to the south of the existing building. The museum staff have expressed the desire to have a new building constructed rather than an addition to the existing facility. The proposed expansion program would provide new space for collections along with new exhibit, laboratory, and office space. The warehouse space would still be used for storage by the museum.

Facilities Update

In August 1999, St. Louis District staff contacted the Maxwell Museum to update information on the planned museum upgrades. Plans for a building addition have been suspended, but have been refocused on the construction of a new building. The Maxwell has received funding from the National Park Service, the University of New Mexico, and private donors.

Museum of Indian Arts and Culture

Architectural Summary

Site Conditions

The Museum of Indian Arts and Culture (MIAC) is part of the Museum of New Mexico and is located on the Museum of New Mexico's campus in Santa Fe, New Mexico. MIAC currently occupies two buildings on the museum campus. The main museum building and the Laboratory of Anthropology (LA) define the northern and eastern boundaries of the Museum of New Mexico plaza.

Two new parking lots provide over 200 spaces for the entire museum campus. A new visitor center welcomes arriving visitors. The main museum building has a large loading area to

the north. The LA has a small loading dock adjacent to the new parking lot located south of the building. The Museum of New Mexico is currently operating under a comprehensive Master Plan.

The Museum of New Mexico Master Plan has designated the site to the rear, or east of the LA for a new archaeological curation facility. A portion of that site is located in the 500 year flood plain. Preliminary plans place the collections storage areas outside of the flood plain. The diverse topography of the site is a design challenge.

Building Condition/Structural Adequacy

MIAC stores its sizable archaeological collections in three separate facilities. The main museum building and the LA are located on the Museum of New Mexico campus. The La Villa Rivera building is located in downtown Santa Fe.

Main Museum Building

The 48,000 ft^2 MIAC main building was constructed in 1987. A 21,000 ft^2 addition has just been completed at a cost of $3,500,000 and is scheduled to open to the public in August 1997. The original portion of the building contains over 3,000 ft^2 of collections storage space in five similar basement rooms. The original structure is a concrete frame system. The large central exhibit space has a laminated wood beam and steel frame roof which steps down to the plaza entry. The temperature of this large space, with its eastern exposure and numerous clerestory windows, is difficult to control.

The single story addition uses a simple steel frame structural system with few windows or architectural contortions. The new wing will house MIAC's new exhibit hall on the first floor. The basement level has been connected to the original collections storage areas. This 9,000 ft^2 area remains unused with no immediate plans to occupy it. The museum staff have future plans to use the unfinished space for collections storage once funding for equipment and renovations becomes available.

The entire main museum and its addition has been resurfaced with a new stucco finish. Both the new wing and the original portions of the main museum building displayed no signs of structural deficiency or water damage.

Laboratory of Anthropology

The LA is a historic structure, designed by Southwest architect John Gaw Meem and constructed in 1931. The building is listed on the National Register of Historic Places. An addition was made in 1952 and again in 1965. Offices are located on both the upper and lower levels. Collections are stored in the basement of the original 1931 structure. Bulk archaeological collections are stored in the 1965 addition.

The building has a concrete frame internal structure with clay masonry units on the perimeter. The two additions, referred to by museum staff as the "Dungeon" and the "Prewitt House" are simple concrete masonry units structures with wood frame roofing systems. Compact storage units have recently been installed in the Prewitt House. Preliminary expansion plans call for each of these additions to be removed.

The original building was re-stuccoed during the 1952 renovation and again in 1975. Exterior doors were replaced with new metal doors. In 1988, the existing roof was replaced with an ethylene propylene diene monomer membrane. In 1993, an additional steel beam and columns was added in the basement collections area to carry the floor load of the above library compact storage units. The lower level of the 1952 addition under the archives area likely needs a similar repair.

La Villa Rivera Building

The state-owned La Villa Rivera Building is a concrete frame structure. The five to seven story building was previously used as a hospital and now is a nursing home. The collections storage area for the museum is located in the basement of the building. Two locked rooms, one of which was the hospital morgue, comprise the 4,800 ft^2 collection area. Access to the area is not restricted. A network of overhead pipes circulates through the basement. At numerous places, these pipes frequently leak on the collections. The frequent leaking has damaged the concrete frame. Various portions of the concrete frame and slab have been repaired. There is no temperature control in this area of the building. A full sprinkler system protects the space against fire.

Code Requirements/Egress/Accessibility

Main Museum Building

With the new addition, the main museum building appears to meet all of the applicable building, fire-safety, and accessibility requirements (type II combustible construction, mixed use groups). The building has an elevator that is in compliance with the Americans with Disabilities Act. A wheelchair ramp provides access to the sunken exhibit/gallery space. The original building has two open stairways to the basement area. The new wing has a single fire-rated stair to its basement space.

Laboratory of Anthropology

The historic LA building has two open stairwells providing access to the lower levels. The freight elevator located in the 1952 addition does not work. The historic building raises contemporary accessibility, fire, and life-safety concerns. Accommodating each of these requirements in the future renovation will present a real challenge to the expansion's design team.

HVAC Systems

Main Museum Building

The new wing has an independent HVAC system. The facility is served by a gas-fired hot water and electric air chillers. The majority of the original facility is heated and cooled by large air-handling units (AHU). Each of the basement storage rooms has an individual air handling unit.

While this configuration allows for separate temperature controls, the individual AHU's require overhead piping to deliver the cool and hot water to the unit.

The new wing has a similar system. One significant difference is the unused basement space. Currently, the room serves as the air return plenum to the boiler room. In order to use the space as a collections storage area, some sort of ductwork and suspended ceiling system would need to be installed.

Laboratory of Anthropology

The LA building has a steam system that delivers heat to the building through radiators. The boiler was replaced in 1971, but the original 1931 piping and radiators remain in place. The LA has no air conditioning system. The steam heating system is antiquated and is scheduled to be replaced in the future renovation. Many of the building's radiators are concealed in decorative wood cabinets, a significant historic feature that could be difficult to alter in the future renovation. Along with the absence of an air conditioner, this inadequacy makes these systems a top priority in any future renovation building program.

The Prewitt House has no heating or cooling systems. The Dungeon has a small heater, but no cooling system. MIAC staff hope to install compact storage units in this area.

Fire Suppression and Detection

Main Museum Building

Both portions of the main building are protected with a full dry-pipe fire sprinkler system. These systems are integrated in the original and new wings. There are manual alarms along with the smoke and heat sensors located throughout the building. The fire alarm systems are monitored at a central station and are wired to the local fire department. Fire extinguishers are also located throughout the building. The fire detection and suppression systems provides thorough protection for the building. Neither the Prewitt House nor the Dungeon are equipped with fire suppression systems. Fire extinguishers are located in each room.

Laboratory of Anthropology

The upper levels and other office areas have no fire sprinkler system. Fire extinguishers are located throughout the building. A halon fire suppression system has been added in two of the basement collection areas. Fire hoses and extinguishers are located throughout the Lab of Anthropology. Manual alarms and smoke detectors provide fire detection. The alarms are wired to the local fire department.

Security System

Main Museum Building

The main museum building restricts the private areas of the building with keypad access. In addition, each collections room is secured with a deadbolt lock. Motion detectors and intrusion

alarms provide general security throughout the facility. All of these security measures are wired to a central station as well as a private security company.

Laboratory of Anthropology

The LA restricts the private areas of the building with keypad access. In addition, each collections room is secured with a deadbolt lock. Motion detectors and intrusion alarms provide general security throughout the facility. All of these security measures are wired to a private security company. The security system is well adapted to the historic structure.

Collections Management Summary

Scope of Collections and Mission Statement

MIAC is part of the Museum of New Mexico (see Administration Summary). MIAC curates a variety of materials including archaeological, ethnographic, archives, and fine arts collections. Archaeological collections comprise the largest portion of MIAC's holdings. The staff estimate that approximately 19,000 ft^3 of bulk archaeological collections are curated by the museum. In addition, MIAC curates approximately 30,000 individually cataloged archaeological objects, such as whole ceramic vessels.

Archaeological Collections Storage

MIAC has divided its archaeological collections into Archaeological Research Collections and Individually Cataloged Collections. Each division has its own curator that is responsible for the registration and management of these collections. The Archaeological Research Collections, consisting of bulk archaeological materials, such as pottery sherds and soil samples, are cataloged at a box level. The majority of MIAC's federal archaeological collections are considered archaeological research collections. These collections are currently located in a storage facility with less adequate storage conditions, the La Villa Rivera building.

Individually Cataloged Collections, which include archaeological objects, consist of exhibit quality materials such as whole vessels. Individually Cataloged Collections are provided with better storage conditions, as many of these materials require tighter environmental controls. The majority of these materials have been donated to MIAC. Archaeological Research Collections are housed in the following buildings.

La Villa Rivera

Archaeological research collections are stored in the basement of the La Villa Rivera building in a north room, a south room, and a hallway. This joint-use building is only partially occupied by the museum's collections storage. The basement collections storage area lacks environmental controls and adequate security. Most collections are stored in old cardboard boxes and placed on shelves. Some collections have been placed in MIAC's standard sized boxes, so collections are usually transported off-site for use by researchers.

Prewitt House (Laboratory of Anthropology, Room 203)

The Prewitt House provides about 916 ft^2 for collections and supplies storage. Space Saver brand shelving units are used to house 4,000 ft^2 of archaeological collections. This room does not have environmental controls and lacks a sprinkler system. A fire extinguisher available, but it had not been inspected since 1995.

Dungeon (Laboratory of Anthropology, Room 202)

The Dungeon is used to store supply materials and unprocessed archaeological collections. This room provides about 779 ft^2 of space. The staff would like to install a movable shelving unit to maximize storage space. The Dungeon has heat, but no air conditioning.

Mera Room (Laboratory of Anthropology, Room, 201).

The Mera Room provides about 1,053 ft^2 for research and collections storage purposes. This room houses the museum's frequently used pottery sherd collection.

Basement of the Laboratory of Anthropology

A series of adjoining rooms are used to house individually cataloged collections, including some archaeological materials. This area is called the Annex. The collections are stored in one small room which uses metal shelves and cabinets. Collections such as kachina dolls are placed on shelving units that are protected with muslin curtains.

The main storage area for individually cataloged collections is located in a series of three adjoining rooms. The first has collections in locking metal cabinets. Collections are also stored in a spacesaver storage unit. Jewelry collections are stored in a vault. The third room is dedicated to rolled textile storage.

Basement of the Museum of Indian Arts and Culture

The main collections storage area for MIAC is located in the basement of the museum building. Some of the collections stored in these areas are archaeological. Whole ceramic vessels are stored in the basement in a ceramics room. This area has heating, cooling, and humidification systems. Temperature is kept at 66-70°F and relative humidity ranges from 20 to 40%. This room has a dry-pipe sprinkler fire suppression system. Ceramic vessels rest on ceramic collars made out of foam and are placed on metal shelves.

Additional collections storage, work, and processing areas are located in the museum basement. In addition, MIAC has a large, partially finished room that is currently unused.

Environmental Controls

Environmental controls vary in each of the storage facilities used by MIAC. The La Villa Rivera building lacks environmental controls. In addition, the collections storage areas in the basement of the Laboratory of Anthropology lack air conditioning. The basement of the museum building has heating and air conditioning. The Conservator for the Museum of New Mexico is in charge

of MIAC's environmental monitoring program. Relative humidity is monitored in collections and exhibits areas using hygrothermographs. Currently, hygrothermographs are calibrated every six months. The staff hope to use a data logger in the future. While environmental conditions are monitored, temperature and relative humidity cannot be controlled in many of MIAC's buildings. The only building with humidity control is the museum itself.

Range of Support Facilities for Archaeological Collections

MIAC has excellent support facilities for archaeological collections including designated collections storage areas, processing labs, research facilities, and general work and office areas. In addition, MIAC is supported by the Museum of New Mexico's conservation department. The Museum of New Mexico has a conservation laboratory located in the adjacent Museum of International Folk Art that serves MIAC.

Composition of Staff

MIAC has a large staff. The following positions are involved in the care of archaeological collections management: Chief Curator of Archaeology (75%), Curator Archaeological Research Collections (100%), two Assistant Curators of Archaeological Research Collections (100%), two Assistant Curators for Native American Graves Protection and Repatriation Act compliance work (75%), Curator of Collections (50%), Curator of Anthropology (30%), Curator of Ethnology (10%), Registrar (20%), and the Assistant Curator of Collections (25%). In addition, MIAC has access to the services of the Museum of New Mexico's Conservation staff. MIAC does not have a Collections Manager.

Administrative Record Keeping and Storage

MIAC maintains extensive administrative records. These include acquisition/accession records, catalog information, collection inventories, object location information, loan agreements, and deaccession/disposal records. Administrative records are stored in MIAC's Registrar's office. Copies of accession records are also sent to the Museum of New Mexico's Registrar, that is located in downtown Santa Fe. Copies of old accession ledgers are stored in MIAC's archives. Collections information is also entered into a computerized database.

Associated Archaeological Documentation and Storage

MIAC has an extensive collection of associated archaeological documentation. This documentation is managed by the Archaeological Records Management Service (ARMS), which is located in the basement of the Laboratory of Anthropology. Original documents are stored predominately inside of metal file cabinets. Archaeological reports are kept inside of a compact storage unit. Duplicate copies are not available for the associated documentation. Thus the records are at risk especially since the ARMS has such an extensive collection. Associated documentation is stored in an area that does not have adequate environmental controls and lacks a sprinkler system.

Collections Management Policies

MIAC has extensive collections management policies including an acquisition/accession policy, a disaster plan, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy. MIAC has an Integrated Pest Management program that is especially noteworthy.

Administration Summary

Background

MIAC and the Laboratory of Anthropology are a division of the Museum of New Mexico which is a subdivision of the state Office of Cultural Affairs. The conservation, education, and exhibit units are under the jurisdiction of the Museum of New Mexico. The Historic Preservation Division which manages archives known as the Archaeological Records Management Service (ARMS) is a sister organization of the museum of New Mexico rather than a subdivision of MIAC and the LA. Therefore, curation, archives management, conservation, outreach/education, and exhibit development and construction are under separate administrative offices.

The Museum of New Mexico was established by Edgar Hewitt in 1909 and has curated archaeological collections, including federal collections, since that time. These federal collections originated from lands managed by Bureau of Land Management, Bureau of Reclamation, U.S. Forest Service, Department of Energy, DoD, U.S. Fish and Wildlife Service, and the Albuquerque District of the USACE. The LA was funded by John D. Rockefeller and completed in 1931. The LA became part of the Museum of New Mexico in 1947.

Real Estate

The property occupied by MIAC is owned by the State of New Mexico. The MIAC occupies two buildings in a compound that includes the nearby Museum of International Folk Art building. The office, curation, and laboratory spaces of MIAC and ARMS are in a 1931 building designed by John Gaw Meem that is on the National Register of Historic Places. The exhibit space occupies a newer building completed in 1987. An addition was completed in 1997. Conservation laboratories and offices are located in the nearby Museum of International Folk Art building.

The property is large and there is ample room for expansion. The MIAC recently developed a Master Plan that includes the construction of an expansion to the Meem building to include additional curation, office, and laboratory space. At present, only a schematic study has been funded for the new archaeological facility. The only legal impediment to expansion is the necessity of mitigating the impact on the historic building occupied by MIAC. The impact has been considered and addressed in the architects' preliminary plans (see Architectural Summary for discussion of the Master Plan and expansion plans).

Administration

Only a portion of the MIAC budget is derived from the state. The majority of funds are generated internally. Most of the staff positions are funded from revenues generated by fees,

grants, and cooperative agreements with federal agencies. The separation of the Historic Preservation Division (ARMS) and the conservation unit, with separate funding sources, supposedly alleviates the need for direct, full time support of those functions. Because of the limited funds available, volunteers are used extensively when rehousing and rehabilitating collections.

A cooperative agreement would require the signature of either the Director of the Museum of New Mexico or the Officer of Cultural Affairs. Grants are administered by the Museum of New Mexico Foundation. Each curator is responsible for writing his/her grant applications. The Museum of New Mexico reviews and coordinates all grant applications to eliminate competition between its subdivisions. The MIAC was able to raise $3,000,000 to complete the expansion of the exhibits building. Fund-raising is handled by the foundation. Staff members of MIAC were only indirectly involved.

Outreach and Education Programs

The Curator of Education plans and coordinates the educational efforts of MIAC. These efforts include offering four-day workshops for 4th through 7th grade teachers based on activity guides developed by the Bureau of Land Management. A traveling, hands-on kit exposes students to the use of ceramics for dating archaeological sites. In conjunction with a recent exhibit, the Curator of Education prepared a traveling unit on Mimbres pottery. In association with Turquoise Trail Elementary School, MIAC prepared an extensive curriculum, presentation, and field trip program focusing on cultures of the Southwest that reached the entire school population. MIAC also participates in the New Mexico State Archaeology Fair. Their participation permits access to a wider audience.

MIAC has made extensive efforts to include Native Americans in its educational programs. Four staff members and three docents are Native American. MIAC has established a Native Advisory Panel composed of representatives from 28 pueblos and tribes that assist in the development of all public programs and participates in the design of collections storage and management systems. The permanent exhibit currently being installed includes the efforts of over 70 representatives of Native American groups. Educational programs that address Native Americans include collaborative efforts with the Native American Preparatory School, Navajo Preparatory School, Pueblo Day Schools, and the Santa Fe Indian School. Educational outreach includes both Native American and non-Native American docents.

Contributions

MIAC/LA would provide its extensive staff and expertise in collections management, conservation, archives, and educational outreach. The extensive DoD/USACE collections from New Mexico would require considerable space, either in the basement of the exhibits building expansion (presently empty) or in a new, planned addition to the Meems building.

Notes

Despite the recent completion of the new wing of the main museum building, the Museum of New Mexico has contracted for the schematic design of an addition and renovation to the LA. The detailed proposal would add over 17,000 ft^2 of laboratory, library, office and collections

storage areas to the historic 25,600 ft^2 facility. The systems and spaces of the original structure would also be restored and renovated. The difficult topography and the building's National Register status present the greatest challenges to the expansion efforts.

MIAC is a unique institution, made so by the availability of collections storage space within their existing facilities. First, the storage capacity of the basement collections areas in the original portion of the main museum building could easily be increased by installing compact storage units. Next, the 9,000 ft^2 unused basement space under the new wing could be easily renovated to curate archaeological collections. Compact storage units would increase the storage capacity of the space even further. Besides the quantity of the available space, the quality of the available spaces should also be noted.

MIAC is able to maintain a large staff with expertise in several areas vital to curation and collection management. It has been able to do so in spite of minimal state funding due to its role as a mandated curation repository and its consequent ability to generate funds from its clients. The organization of the Museum of New Mexico allows MIAC to draw upon expertise in other branches of the parent organization without having to directly support full-time staffing. The history and longevity of the museum has resulted in the accumulation of expertise and prestige that is attractive to potential donors and granting institutions.

Facilities Update

In August 1999, St. Louis District staff contacted MIAC to obtain information on facilities updates. MIAC has renovated an area known as "the Dungeon". This area now houses all federally-owned archaeological collections. Renovations include walls resealing and repainting, the addition of movable shelving units, and a new HVAC system.

MIAC recently received a grant for highway salvage materials, and as a result have located a number of old federally-owned collections not previously identified as such. Staffing changes include the addition of a collections manager, bringing the total to two – one for "bulk" materials (in boxes), and one for "individual" collections (exhibit-quality).

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

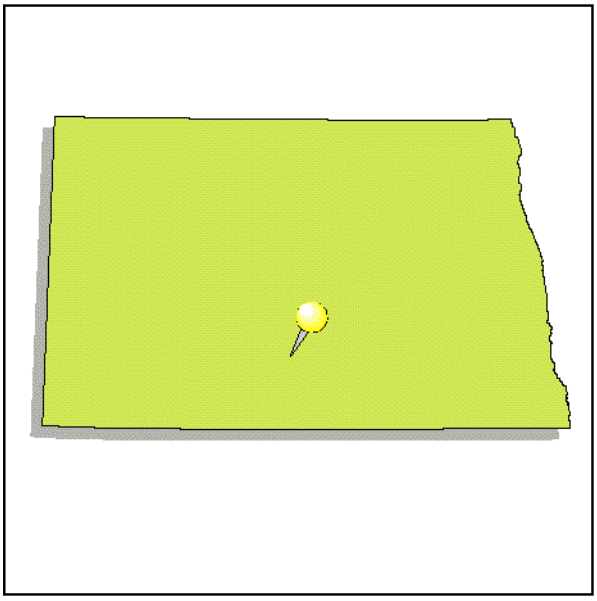
Table 16.2 lists these composite scores and the architecture, collections management, and administration scores for each New Mexico institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 16.2 Summary of Decision Support Model Scoring – New Mexico

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Maxwell Museum of Anthropology, University of New Mexico	**0.7688**	0.16207	0.26187	0.34482
Museum of Indian Arts and Culture	**0.8152**	0.19804	0.26187	0.35529

17

North Dakota



Archaeological Materials (in cubic feet)

Department of Defense	**1**
USACE	**131**
TOTAL VOLUME	**132 ft^3**

Number of Institutions Contacted **7**

Institution Assessed

North Dakota Heritage Center

Background

There are few institutions in North Dakota with enough resources or interest in the partnership project. A list of the institutions initially contacted by the St. Louis District is presented in Table 17.1, including the reason(s) some were not selected for an on-site visit.

Table 17.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Fort Union Trading Post National Historic Site		X		
Frontier Museum	X			
Knife River Indian Villages National Historic Site				
McLean County Historical Society Museum		X		
North Dakota Historical Society				
Red River and Northern Plains Regional Museum	X			
Theodore Roosevelt National Park Visitor Center	X			

Note: Locations visited indicated in **Bold**.

Comments

Only two repositories were visited in North Dakota, the North Dakota Heritage Center, North Dakota Historical Society, and the Knife River Indian Village National Historical Site. The Knife River Indian Village National Historical Site withdrew from the project after the St. Louis District on-site visit and discussions with the park superintendent and his staff. Although the superintendent was initially interested in the partnership project, interest waned after our summary of the project and the resources needed for a repository of DoD/USACE archaeological collections. The park has difficulty in securing funds for curation for its own collections. Facility, collections management, and financial/adminstrative data is available, but is not presented in this report. A summary of the Decision Support Model scores for the North Dakota Heritage Center is presented in Table 17.2.

North Dakota Heritage Center, North Dakota Historical Society

Architectural Summary

Site Conditions

The North Dakota Heritage Center (NDHC) is prominently located on the State Capitol Complex in Bismarck, North Dakota. The facility has been designed for future expansion. Two additional floors could be added. There is a large area around the building for expansion. There are 150 to 200 parking spaces available throughout the surrounding Capitol mall area. The NDHC site has sufficient area to permit easy access to its covered loading dock area. The loading dock is equipped with both lifts and levelers.

Building Condition/Structural Adequacy

NDHC has a 127,000 ft^2 three-level concrete and steel framed building constructed in 1981 at a reported cost of $8,700,000. The facility is a white limestone building. The rubber membrane roof with internal downspouts was replaced in 1992. The building has steel and aluminum windows and doors. The office and administration areas are nicely finished. The building is in excellent condition.

NDHC has numerous general and support spaces for the museum. The 1,450 ft^2 archaeological collections storage area is located on the basement level. Cracks in the concrete floor slab have been repaired. Racks in the concrete floor slab have also been repaired.

Code Requirements/Egress/Accessibility

NDHC appears to meet the applicable code, egress, and Americans with Disabilities Act requirements (type I construction). The building has several emergency exits on each level.

Two elevators serve the building. Designated parking for the disabled is located near the front entrance.

HVAC Systems

The building is served by gas fired furnaces installed in 1992. An additional electric furnace is used as a back-up system. The system has a good ductwork and is well maintained. There is no cooling system.

Fire Suppression and Detection

The NDHC building is equipped with an automatic fire detection system. Heat and smoke sensors are located throughout the facility and are wired to the local fire department. Fire extinguishers and a dry-pipe fire sprinkler system provides fire suppression capabilities throughout the building.

Security System

The building has TV monitors, motion detectors, intrusion alarms and key pad access. These systems are wired to a central security monitoring station as well as the local police department. The collections storage area is separated from the public areas of the building. NDHC has an outstanding security system.

Collections Management Summary

Scope of Collections and Mission Statement

NDHC curates archaeological, ethnographic, history, natural history, art, and paleontological collections. The mission statement of the NDHC does not explicitly address archaeological materials, but they are implied in its language.

Archaeological Collections Storage

NDHC's archaeological collections consists of 650,000 objects, or approximately 4,750 ft^3 of material. About 2,350 ft^3 of these materials are federal collections. Archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, biological pests and general neglect. All archaeological collections are housed in cardboard boxes and are stored on metal shelving units and drawers. The archaeology collections storage area is filled almost to capacity, without space for additional shelving units.

Environmental Controls

Collections are stored and exhibited in areas where temperature and relative humidity are regulated and monitored on a regular basis. NDHC staff uses hygrometers in the collections storage area and a data logger in the exhibits area to monitor relative humidity.

Range of Support Facilities for Archaeological Collections

NDHC has an excellent range of support facilities for archaeological collections including: several work and laboratory areas, an archaeology lab, a conservation lab, archaeological collections storage area, and large exhibit areas. The NDHC also has exhibit construction workshops, a first aid room, a main auditorium, a small theater, a reading and library room, a large archives storage room, numerous archival processing labs and work areas, a gift shop, classrooms, and public meeting spaces.

Composition of Staff

North Dakota Historical Society (NDHS) has a staff of 55 in six divisions, one of which is the NDHC. NDHC has adequate staff for the management and care of its archaeological collections. The museum is assisted by many volunteers from the local community.

Administrative Record Keeping and Storage

NDHC has excellent administrative record keeping. The staff maintains accession records, catalog information, conservation information, environmental records, inventory records, exhibit records, deaccession records, object location information, photos, and slides. During the accessioning and cataloging process, several collections worksheets are completed including an archeology collection data sheet, an archeology specimen catalog sheet, a gift agreement (for history division accessions), incoming loan agreements, and an artifact condition report worksheet. Catalog and accession information is computerized as well. Administrative records are stored in a separate room in the museum division. Administrative records are stored inside of binders, archival document boxes, and cardboard boxes. These records are placed in metal and wood file cabinets and on wooden shelving units. Administrative records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

NDHC's archaeology division serves as the State Historic Preservation Office and houses a wide variety of associated archaeological documentation including artifact inventories, archaeological site files, burial records, field notes, maps, photos, slides, and reports. NDHC also houses the state site files, reports, manuscripts, review and compliance information, and archives.

Archaeological site files are stored in hanging file units on metal shelving in a separate room. This room also houses map collections, the collections catalog, and computer for accessing manuscripts. Manuscript collections are stored in a separate room on shelving units. All manuscripts are stored in archival document boxes. Additional documentation is stored in the archeology lab/work areas including National Register files, state historic sites registry, and review and compliance files. The third and fourth floors contain additional documentation, including photos and recorded media, and the state archives/stacks. All associated documentation is stored in a manner that protects it from fire, theft, damage, and destruction.

Collections Management Policies

NDHC has many collections management policies and guidelines that are in use throughout the archaeology and museum divisions. Collections management policies include a mission statement, accession/acquisition policy, minimum standards of acceptance, loan and exhibition policies, an access/use of collections policy, consultation guidelines, and a deaccession policy. The staff are in the process of writing a disaster/emergency management plan.

Administration Summary

Background

NDHC is part of NDHS. The Society was established in 1891 and focuses on public interpretation of North Dakota history and prehistory. The NDHC curates collections from both the USACE and DoD.

Real Estate

No restrictions exist on expansion of the museum building. However, any plans to expand the present building must be approved by the Capitol Grounds Planning Commission.

Administration

NDHS is divided into six divisions, has 55 people on staff, and a budget of $5,000,000. One of the six divisions was the NDHC. The NDHC receives approximately 90% of its funds from the state and 10% from grants.

Outreach and Education Programs

NDHS has an active Education Department. The department is one of the six NDHS divisions and has seven full time staff members. Education suitcases, museum docents, traveling exhibits, and film and lecture series disseminate information to the public. NDHS makes great use of volunteers, which in 1995 contributed over 12,000 hours of their time. NDHC has consulted with Native Americans as part of its responsibilities under the Native American Graves Protection and Repatriation Act.

Contributions

NDHC could contribute space, professional expertise, time, some operating costs for collections storage, and provide access for research. DoD/USACE would be expected to contribute funding for staff, materials, some operating funding, and inventory/handling of the collections.

Notes

NDHC has excellent capabilities to bring to a partnership with DoD/USACE. It has a large staff, an excellent facility, popular exhibits, and well established outreach and education programs.

NDHC is well supported by the state and community. The North Dakota Heritage Center is a large institution and is accustomed to caring for large archaeological collections. In addition, the museum has recently acquired a new building that will be dedicated to collections storage. Once this building is refurbished, it will provide additional storage space for collections. NDHC has an extensive outreach/education program and is enthusiastically supported by the people of North Dakota and the state legislature.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 17.2 lists the composite score and the architecture, collections management, and administration scores for the North Dakota Heritage Center. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 17.2 Summary of Decision Support Model Scoring – North Dakota

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
North Dakota Heritage Center, North Dakota Historical Society	**0.7890**	0.19846	0.29156	0.29895

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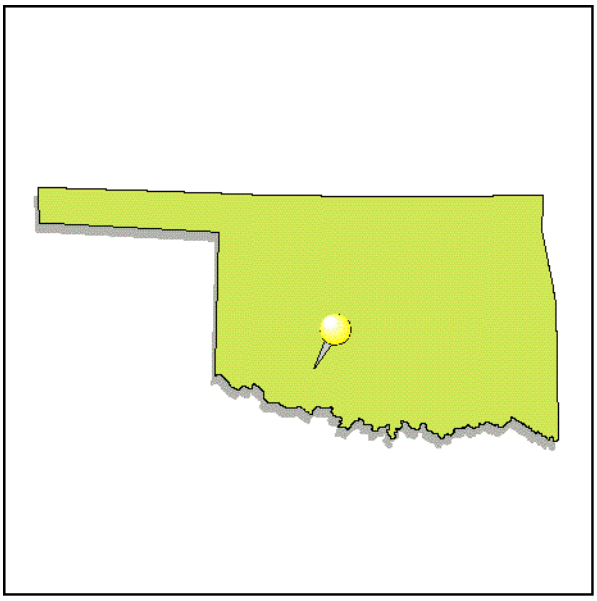
Oklahoma



Archaeological Materials (in cubic feet)

Department of Defense	**442**
USACE	**2,572**
TOTAL VOLUME	**3,014 ft^3**

Number of Institutions Contacted **8**

Institution Assessed

Museum of the Great Plains, Lawton

Background

The only institution visited to date is the Museum of the Great Plains. The Oklahoma Museum of Natural History in Norman is constructing a new facility which is expected to open in 1999. Unfortunately, at the time of initial contact, and throughout the project, the Museum's interest in the curation options project was marginal at best, and the institution declined to participate. A list of the institutions contacted in Oklahoma is presented in the Table 18.1, including the reason(s) some were not selected for an on-site visit.

Table 18.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Gilcrease Museum				X
Museum of the Great Plains				
Oklahoma Historical Society		X		
Oklahoma Museum of Natural History, University of Oklahoma		X		
The Philbrook Museum of Art, Inc.		X		
Plains Indians and Pioneers Museum			X	
Ponca City Cultural Center Museum			X	
Woolaroc Museum		X		

Note: Locations visited indicated in **Bold**

Comments

The strong Native American presence in Oklahoma makes decisions regarding the state's cultural heritage an especially sensitive and public issue. Nevertheless, there were few institutions in Oklahoma with interest in the project. A summary of the Decision Support Model scoring is provided in Table 18.2.

Museum of the Great Plains, Lawton

Architectural Summary

Site Conditions

The Museum of the Great Plains (MGP) is located within a large municipal park in Lawton, Oklahoma. In addition to the museum and its outdoor exhibit area, the city park offers many amenities, including exercise trails, playgrounds, and the city theater. As a result, over 60 parking spaces are immediately available for museum use. During the our visit, the museum was completing the addition of a new exhibition hall. Despite this recent addition, the building's site would allow for additional easy expansion. The museum staff even indicated that an entirely new building would be possible depending on the size of DoD/USACE collections.

Building Condition/Structural Adequacy

The 18,000 ft^2 original portion of the MGP was constructed in 1960. This part of the building is a concrete frame structure with a decorative concrete masonry unit veneer. Staff offices, archive storage, exhibit preparation areas, and the incoming collections storage areas are located in this portion of the original structure. The main collections storage area is also found in the 1960 building. The collections are stored in a 6,400 ft^2 area, including a complete second level steel frame mezzanine also used for storage. The existing collections storage area could potentially triple in size if planned expansion efforts occur. Approximately 6,000 ft^2 of space would become available for collections storage, with an additional 6,000 ft^2 possible with the addition of a similar mezzanine level to this space if the existing storage is expanded. Even greater storage capacity would be available with the use of compact storage shelving.

The new 27,000 ft^2 expansion was scheduled to open in late October 1997. The staff was preparing for the opening during our visit. The new addition is a combined concrete frame with massive steel trusses that span the entire exhibit gallery. Clerestory windows have been placed between each of these trusses. There is no basement beneath either portion of the museum. The new spaces include a large exhibit gallery and a small theater/assembly room with appropriate restroom and support spaces. Neither the original 1960 or the new addition contain any known hazardous building materials, or had any major observable structural defects or signs of leakage.

Code Requirements/Egress/Accessibility

MGP appears to meet the appropriate building, life-safety, and accessibility requirements (type II, mixed use-group B, A-2.1). Code compliance has been updated through the 1997 addition. Six major exits provide emergency egress from the entire building. A passenger elevator provides access to the mezzanine level according to the Americans with Disabilities Act.

HVAC Systems

The 1960 portion of the museum is heated with natural gas furnaces and cooled rooftop air conditioners. The heated and cooled air is circulated in a forced air system by four older air handler units located in the attic/upper level archives storage area. These systems serve the current collections storage area, as well as the space planned for expanding the collections storage. The 1997 addition is served by a more sophisticated computer controlled HVAC system. Both systems use standard air filters that are changed as needed.

Fire Suppression and Detection

The entire museum is equipped with manual and automatic fire alarm systems. Smoke sensors and heat detectors are located throughout the building. The 1997 addition has updated the fire detection systems throughout the entire facility. Fire extinguishers are also located throughout the building. A wet-pipe fire sprinkler system protects the new 1997 portions of the building.

Security System

The new addition has also provided an opportunity to upgrade the security systems. The facility is secured with deadbolt locks, keypad access, motion sensors, and intrusion alarms. Collections are further protected with locking storage cabinets. The museum's security alarm system is wired to a central in-house location as well as the Lawton Police Department.

Collections Management Summary

Scope of Collections and Mission Statement

MGP's mission "is to collect, preserve, and interpret the documents and artifices chronicling the human and natural history of the Great Plains." Its scope of collections includes archaeological materials, ethnographic objects, a small art collection, natural history collections, history collections, and paleontological collections. The museum curates an undetermined quantity of archeological materials and associated documentation.

Archaeological Collections Storage

Archeological materials are stored in a single room on the ground floor of the original museum building. A mezzanine in this room provides additional storage space. The archaeological materials are stored on plywood sheets on metal shelving units and in locking metal cabinets with metal drawers. The metal drawers in the cabinets have acid-free tissue paper in them.

There are no windows in the archaeological materials storage area, the photo archive, or the second floor archives.

Environmental Controls

The collections have adequate environmental controls. The HVAC system in the original part of the building is not zoned. Temperature and humidity are monitored with recessed, wall mounted and portable hygrothermographs. The wall units are checked monthly and the portable units are checked weekly. A quarterly report summaries all the hygrothermographs data that was recorded. The building's HVAC is used to control temperature and humidity.

Range of Support Facilities for Archaeological Collections

The museum has adequate facilities for archaeological collections including a designated storage area that is full to capacity, a dark room and photograph processing lab, and general work and office areas. A processing laboratory, the "dirty lab," is located down the hall from the storage room. New collections are first brought into the museum through the processing lab. Hazardous chemicals such as acetone and acids are stored in a yellow hazardous chemical locker in the dirty lab.

Composition of Staff

The Curator of Anthropology also serves as the Collections Manager. No other collections management staff are maintained.

Administrative Record Keeping and Associated Documentation Storage

The museum staff maintain many types of administrative records including acquisition/accession records, catalog information, conservation information, artifact inventories, object location information, loan information/agreements, and deaccession/disposal records. Important records located in staff offices are not stored in fire-proof cabinets. Computer databases are used to administer collections. Newer collections have been entered into the system. Older collections still need to be entered.

The museum has associated documentation including archaeological site files, field notes, artifact inventories, burial records, reports, and photographs/slides. Associated documentation is stored in metal file cabinets, metal map cases or wooden shelves in several locations including staff offices. Photographs are in a photo archives on the first floor, and on the second floor in the museum archives. A duplicate copy of the records does not exist off-site in a secure location.

Collections Management Policies

The museum has many of the policies for collections management including an accession/acquisition policy, loan policy, exhibition policy, and a disaster/emergency plan. MGP does not have a finalized, written Integrated Pest Management plan.

Administration Summary

Background

MGP, founded in 1961, is part of the City of Lawton, Oklahoma. The Commanche County Historical Society was its predecessor. The museum is about to reorganize administratively. A trust and trust board will be established in December 1997 to oversee the museum. The board will consist of three trust board members, three members of the Lawton City Council, and three members from the McMahon Foundation, a private foundation. The museum will receive an annual allowance from the Trust instead of competing for funds with other city agencies. The museum will remain a part of the Lawton city government. No current curation agreements are in place to care for any of the DoD/USACE collections. The museum is rehousing Bureau of Reclamation (Kansas, Texas, and Oklahoma) collections under a contract with BOR. The existing collections storage room may be expanded into a former exhibit hall that is about to be vacated. The expansion could triple the existing storage space.

Real Estate

The museum was about to open a new exhibition wing during our visit. The wing doubles the existing exhibition space. The City of Lawton owns the property. Expansion is possible on the existing property with no restrictions to future additions. However, expansion may require the removal of a prairie dog colony for their protection. Current expansion plans call for a new curation building if enough volume of material needs to be rehabilitated and curated, including DoD/USACE collections.

Administration

The Museum Director could financially commit the museum to a partnership and sign a cooperative agreement with DoD and USACE. The museum staff write and track their own grants. The current Museum Board has performed fund raising for specific projects in the past, but these activities did not take place regularly. No one on the staff conducts fund raising.

Outreach and Education Programs

No one is exclusively involved in archaeology outreach and education although there is an overall public education coordinator. The museum includes archaeology in its exhibits and uses students and the general public in volunteer archaeology programs that occur both in the field and in the museum. Students and public volunteers participate in archaeological fieldwork and students volunteer in the museum. The museum has consulted with Native Americans as part of their Native American Graves Protection and Repatriation Act compliance and its Native American volunteers. They consult with Native Americans on exhibits with Native American materials. The Commanche Tribe pays for tribal members to be trained at the museum. Several Native Americans are on the current Board of Directors.

Contributions

The museum could contribute its staff expertise, space, and land.

Notes

If a planned collections storage expansion occurs into the former exhibit area, MGP would be one of a handful of institutions with available collections storage space. However, the plans and timetable for these improvements remain uncertain.

The museum has exhibits on archaeology and includes archaeology in its educational programs. The museum has local community and support particularly the McMahon Foundation. Native American involvement in the museum includes volunteers, a training program for members of the Commanche Nation, and consultation for NAGPRA.

Facilities Update

Museum of the Great Plains sent St. Louis District staff a June 1999 letter updating the existing information on MGP facilities. Since 1997, a number of changes have occurred, primarily with the physical facilities.

Building capacity has doubled with a major structural renovation. Collections strorage area space has tripled, increasing by 12,200 square feet. MGP is constructing a second steel frame mezzanine, below which a contracted firm will install a large compactor unit for collections storage. These additions will be complete in Fall, 1999. New heavy duty shelving has also been added for collections storage.

MGP is currently in Phase III of a three-phase asbestos abatement program for the original museum building. Concurrently, MGP has completed upgrades of this original structure, including new electrical wiring and lighting, a new computerized HVAC environmental system, and a new security system including video cameras with tape backup. The museum has also procured secure off-site storage for duplicate copies of records.

Administratively, there have also been a few changes. The adninstrative structure of the museum has been enlarge, and the Board has been reorganized into two entities. New staff members include a Curator of Education and a living history interpreter. Museum outreach and education programs are expanding, including classes in the Commanche Indian language, Commanche Little Ponies meetings, a museum externs program with Cameron University, and a continuation of the Junior High School archaeological excavation and research program.

MGP, the town of Lawton, and a private support foundation are dedicated to providing, if necessary, a new separate but adjacent facility for the purpose of processing and curating DoD archaeological collections. The Museum is dedicated to becoming a cultural and research center for the region.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 18.2 lists the composite score and the architecture, collections management, and administration scores for the Museum of the Great Plains. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 18.2 Summary of Decision Support Model Scoring - Oklahoma

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Museum of the Great Plains	**0.7410**	0.15573	0.26712	0.31814

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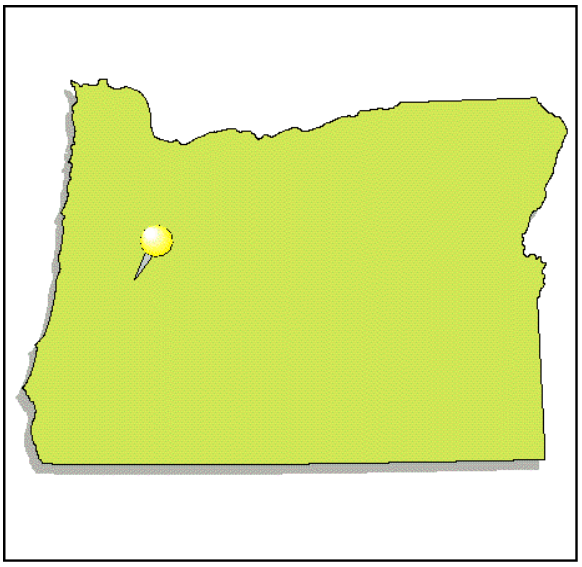
Oregon



Archaeological Materials (in cubic feet)

Department of Defense	**5**
USACE	**964**
TOTAL VOLUME	**969 ft^3**

Number of Institutions Contacted **7**

Institution Assessed

Oregon Museum of Natural History/Museum of Anthropology, University of Oregon, Eugene

Background

Few facilities in Oregon with experience in curating archaeological collections were interested in participation in the curation options project. A list of the institutions contacted in Oregon is presented in Table 19.1, including the reason(s) some were not selected for an on-site visit.

Table 19.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
A.R. Bowman Memorial Museum		X		
Douglas County Museum of History and Natural History				X
Favell Museum of Western Art and Indian Artifacts		X		
Harney County Historical Museum	X			
The High Desert Museum			X	
Klamath County Museum				X
Oregon State Museum of Anthropology, University of Oregon				

Note: Locations visited indicated in **Bold**

Comments

The strong Native American presence in Oregon makes decisions regarding the state's cultural heritage an especially sensitive public issue. Unfortunately, there were few institutions in

Oregon with capability and interest in the project. Only one repository was visited in the state, the Oregon Museum of Natural History/Museum of Anthropology at the University of Oregon. A summary of the Decision Support Model scoring is provided in Table 19.2.

Oregon Museum of Natural History/Museum of Anthropology, University of Oregon

Architectural Summary

Site Conditions

The University of Oregon's Museum of Natural History/Museum of Anthropology (MNHMA) is located on the eastern edge of the Eugene, Oregon, campus. A large visitor parking lot is located directly south and east of the museum building.

The University of Oregon is guided by a comprehensive master plan that the university architect described as flexible and responsive, however, there will be little available land for MNHMA expansion. Compact storage units could provide additional collections storage within the museum building. The university and the city of Eugene jointly own and operate a nearby research park where a new museum/curation facility could be built.

Building Condition/Structural Adequacy

MNHMA was constructed in 1987 as a 9,619 ft^2 museum facility. A small 2,311 ft^2 addition of offices and laboratory space was nearing completion. During our visit, the concrete floor in the addition had not yet cured, delaying the final interior finishes. The single level structure is a concrete slab with a combination of laminated wood beams and steel frame construction. The exterior of the entire building is wood shingle siding. The roof for the 1987 portion is sloped and is also finished in wood shingles with copper gutters and scuppers. The addition has a flat roof with a built-up roofing system. The museum building consists of exhibit, office, laboratory, and collections storage space. The collections 2,850 ft^2 storage room is a 20 foot clear space with drywall partitions and a sealed concrete floor. The room provides MNHMA with reasonably adequate collections storage space. The MNHMA building had no signs of structural defects, hazardous building material, or leakage.

In addition to the main museum building, MNHMA also stores archaeological collections in two off-campus university facilities. Building 115 is a prefabricated corrugated metal structure on a concrete slab that the museum uses to store field equipment, and bulk and sample materials. This 1,500 ft^2 building includes a 950 ft^2 collections storage room. The room has a deadbolt lock, a single hot water radiator for heat, and a fire extinguisher. Building 115 is not insulated and has no cooling and provides only basic shelter to the collections stored there.

A quonset hut building is also used for collections storage. This 1,050 ft^2 prefabricated corrugated metal structure is badly deteriorated. The building did not appear to be regularly used or maintained. The building did not have any heating or cooling equipment.

Code Requirements/Egress/Accessibility

The recent 1987 construction of the main portion and the 1997 addition meet the appropriate building, life-safety, and accessibility requirements (type II, mixed use B, S-1). The simple single level facility is in compliance with the Americans with Disabilities Act building standards.

HVAC Systems

The university wide heating system serves the MNHMA building. Underground services provide steam for heating and a rooftop condenser system provides for cool air. The building has its own air handling system with a series of air handler units that circulate both hot and cool air throughout the building. This forced air system also has standard filters and is equipped with humidifying equipment.

Fire Suppression and Detection

MNHMA is protected from fire with both a manual and automatic alarm system. Smoke detectors and heat sensors are located throughout the building. The alarm system is wired to a campus monitoring station and to the local fire department. The alarm system triggers flashing strobe and audible alarms within the building. The museum building has no automatic fire suppression system. Fire extinguishers are located throughout the building. In addition, the collections storage area is constructed with a two-hour fire rating.

Security System

The museum building is secured with dead bolt locks, keypad access, motion detectors, and intrusion alarms. The security system is wired to the university's police department.

Collections Management Summary

Scope of Collections/Mission Statement

The MNHMA mission statement is to "further the general mission of the university by enhancing public knowledge of the natural history and anthropology of Oregon and of the broader world." The museum curates archaeological, anthropological, and ethnographic collections from Oregon, Alaska, and other regions of the world. The museum curates a total of approximately 6,000 ft^3 of archaeological collections.

Archaeological Collections Storage

Archaeological collections are stored in several areas. The museum's main collections storage area is located in the main museum building. This large storage room is occupied by the majority of the museum's collections (anthropology, archaeology, ethnology, and natural history). Collections are stored in wooden shelves and cabinets. This collections storage area has heating and cooling systems, but lacks a fire sprinkler system. Fire extinguishers are located

on the wall. Collections requiring more precise environmental controls are stored in this area.

The majority of the museum's bulk archaeological collections are stored off-site. Two Butler buildings and a Quonset hut located in the university's Research Park are used for archaeological collections storage. An additional building is used as an archaeology lab. Conditions in each of these buildings are inappropriate for archaeological collections storage. None of the buildings has appropriate environmental controls, security systems, or fire suppression/detection systems. The collections stored in the Quonset hut are located in cardboard boxes and placed on wooden shelves. Ground stone is stored directly on the shelving.

Environmental Controls

The environmental controls in the museum's buildings vary. Conditions in the main museum building are the best, as heating and cooling are provided. The museum staff monitor relative humidity using a hygrometer. The Quonset hut lacks environmental controls. The museum does not currently have suitable available space to accommodate new archaeological collections.

Range of Support Facilities for Archaeological Collections

MNHMA has adequate support facilities for archaeological collections including designated collections storage areas, a processing lab, general work and office areas, and exhibits.

Composition of Staff

The museum is critically short of staff at this time. Currently, MNHMA does not have a Conservator or a Registrar. The museum has a Curator of Ethnology, but he is not paid. The museum also has a Collections Manager; however, the position is only half-time.

Administrative Record Keeping

The museum maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are kept in filing cabinets located in the museums collections processing room. Accession records are stored in a fire-proof cabinet. Currently the museum has no duplicates of administrative records.

Associated Archaeological Documentation and Storage

Associated documentation such as archaeological site files, maps, and reports are also maintained by the museum. These materials are stored in files cabinets and boxes that are located in the main collections storage area. The museum does not have duplicates of associated documentation at this time. Therefore, these materials are also at risk.

Collections Management Policies

MNHMA lacks a written accession policy, a disaster/emergency plan, an Integrated Pest Management plan, or a deaccession policy.

Administration Summary

Background

MNHMA was established by the state legislature in 1935. The museum operates a self-supporting archaeological research unit that conducts extensive field work for both state and federal agencies. The museum is a mandated repository for collections from state-owned lands and curates collections from the Walla Walla and Portland Districts of USACE.

Real Estate

The museum occupies a purpose-built facility on land owned by the University of Oregon. The facility was recently expanded to provide additional office and laboratory space. In addition to the main facility, the museum occupies buildings in a nearby research park. Two of these buildings are laboratory spaces. The remaining two contain bulk archaeological collections. The university maintains planning guidelines for new construction that are addressed during the design phase.

Administration

The Vice Provost for Research and Graduate Education would sign a cooperative agreement. Grant writing is the responsibility of individual staff members. They are assisted by the University Office of Research and Service that also tracks funds. Fund raising is handled by the University of Oregon Foundation and Public Affairs and Development. A Constituency Development Officer is assigned to the museum to assist in fund raising efforts. The archaeological research program is wholly self-supporting through contracts for cultural resource surveys and mitigation.

Outreach and Education Programs

The museum has two interns that are involved in outreach/education programs and exhibit development. At present, the museum does not have any specific programs for primary/secondary schools, but "Discovery Kits" are being developed. The museum does host a program consisting of tours and activities for school children. Other public programs include lectures by the research staff, tours of off-site locations (archaeological sites), a publishing program, and Oregon Archaeology Week. The museum is also seeking to develop sites on the World Wide Web.

The museum is involved with Native American tribes in several different ways. In addition to Native American Graves Protection and Repatriation Act consultations, the museum consults with tribes on cultural resource management (CRM) projects. The museum has participated in a successful joint grant application with the Klamath Tribe and provided training in CRM to the Klamath and Warm Springs tribes. In addition, Native Americans are represented on exhibit planning committees.

Contributions

The university, on behalf of the museum, has expressed willingness to build a new facility to house archaeological collections. In return, DoD/USACE would be expected to pay the true costs of curating the collections. The overhead/indirect costs collected from the curation agreement would be used to offset the cost of new construction in the anticipation that DoD/USACE would make a long-term commitment that would allow the university to recoup its investment.

Notes

The OMNHMA building is one of the few facilities we have visited that is designed for museum/curation use. While the current collections room is not necessarily ideal, the large existing room provides an excellent basis for future renovations and improvements. The museum is in the process of focusing more attention and effort on collections management, outreach, and education.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

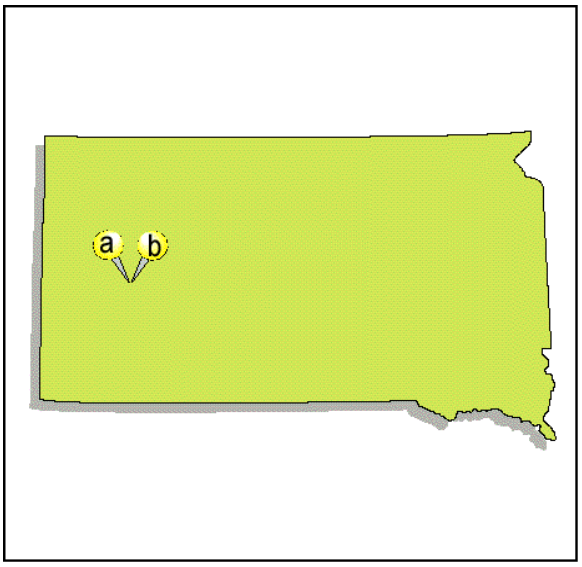
Table 19.2 lists the composite score and the architecture, collections management, and administration scores for the Oregon Museum of Natural History. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 19.2 Summary of Decision Support Model Scoring - Oregon

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Oregon Museum of Natural History/ Museum of Anthropology	**0.7285**	0.15420	0.25406	0.32023

20

South Dakota



Archaeological Materials (in cubic feet)

Department of Defense	**1**
USACE	**3,116**
TOTAL VOLUME	**3,117 ft^3**

Number of Institutions Contacted **11**

Institutions Assessed

a. Museum of Geology, South Dakota School of Mines and Technology, Rapid City

b. South Dakota State Archaeological Research Center, Rapid City

Background

A list of the institutions contacted in South Dakota is presented in Table 20.1 below, including the reason(s) some were not selected for an on-site visit.

Table 20.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
American Indian Culture Research Center				X
Bear Butte State Park Visitors Center	X			
The Center for Western Studies				X
Dakotaland Museum	X			
Friends of the Middle Border Museum of American Indian and Pioneer Life	X			
Indian Museum of North America				X
Klein Museum		X		
South Dakota Historical Society, Robinson State Museum		X		
South Dakota School of Mines and Technology, Museum of Geology				

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
State Archaeological Research Center				
W.H. Over State Museum				X

Note: Locations visited indicated in **Bold**.

Comments

Two repositories were visited in South Dakota, including the State Archaeological Research Center and the Musuem of Geology, South Dakota School of Mines and Technology (SDSMT). SDSMT does not currently curate archaeological materials and had future plans to build a new curation facility. Therefore, only administrative data was collected. A summary of the Decision Support Model results is presented in Table 20.2.

South Dakota School of Mines and Technology

The South Dakota School of Mines and Technology's Museum of Geology does not curate archaeological collections, but has plans for a new curation facility. We thus did not collect data on the curation facility's architecture and physical systems, or its collection management policies and practices. We did collect data on finance and administration.

Administration Summary

Background

SDSMT was founded in 1885. Although they have extensive paleontological collections, they currently do not curate any archaeological collections from any DoD or USACE lands. They curate some zooarchaeological collections, but that is the extent of its archaeological materials.

Real Estate

The State of South Dakota owns the property and the area where a proposed curation facility would be located. The "new" area did not have any restrictions to construction.

Administration

SDSMT plans a capital fund-raising project to finance the proposed curation facility. One third of the funds would come from the state, one third from private sources, and one third from federal agencies. Fund raising has not yet started. The President of the university and possibly representatives from the Board of Regents and the state legislature, might be involved in signing a cooperative agreement with DoD/USACE for a partnership project.

Outreach and Education Programs

SDSMT has a program to keep Native Americans students in school known as S.K.I.L.L. (Scientific Knowledge for Indian Learning and Leadership). The university plans on hiring an education/outreach coordinator. The other education programs are focused on geology/paleontology and include the Young Women in Science program, the Elderhostel program, continuing education, and the field paleontology program. The museum has worked with the Pine Ridge Indian Reservation on protecting their *in-situ* paleontological remains.

Contributions

SDSMT could contribute one person full time for a year and provide use of existing computers and microscopes.

Facilities Update

St. Louis District staff contacted SDSMT in August 1999 to update existing information on facilities. The university is currently conducting a feasibility study of the proposed curation facility, which will be completed this Fall. Plans are apparently still viable, and may be able to proceed with seed money from the Department of the Interior, which houses substantial collections, mostly geological, at the school.

State Archaeological Research Center

Architectural Summary

Site Conditions

The State Archaeological Research Center (SARC) facility is located in an industrial area of Rapid City, South Dakota, on the eastern edge of the city. The building is leased from a private company. The exterior parking and access to the building are not paved, adding to dirt and dust infiltration into the storage areas. The site has no apparent drainage system. The facility has a loading area on the southwest side of the building. Expansion is possible on the southern portion of the site, relocating the parking area to the northern side of the property.

Building Condition/Structural Adequacy

The building is an all metal pre-engineered structure, with numerous patches on the outside. The 16,200 ft^2 one story, steel framed facility was constructed in 1972 on a concrete slab foundation. The building has an original standing seam metal roof system. The windows have aluminum frames. The doors are hollow metal. The windows and doors are in good condition.

The building contains collection storage, office, and laboratory spaces. Inside the building, there was evidence of leakage in about 40% of the rooms. Ceiling tiles throughout the building are damaged. There are two collections storage areas totaling about 2,400 ft^2. There

are two windows in the collections storage areas. A high-density compact storage system was heavily overloaded. Dust and infiltration is a problem.

Code Requirements/Egress/Accessibility

The building (type V-N construction) has no one-hour rated corridors or rated doors. There is no Americans with Disability Act (ADA) compliance and no ADA access to any of the building's entrances. Four exits provide emergency egress.

HVAC Systems

Five gas-fired forced air units provide heating and cooling for the facility and appeared to be in good condition. However, there was poor air circulation in most of the ceiling supply grilles. The HVAC system is original to the 1972 structure. The building lacks humidity control.

Fire Suppression and Detection

Manual alarms and smoke detectors are located throughout the building and are wired to a local security company. There is no fire sprinkler system in the building. The fire extinguishers either had no inspection tags or indicated they were last inspected in 1991 or 1992.

Security System

The attic of the building is open, presenting a security and fire safety problem. The building is secured with keypads, deadbolts, and motion detectors. The security alarm system is wired to a local security company.

Collections Management Summary

Scope of Collections and Mission Statement

SARC curates approximately 9,000 ft^3 of archaeological collections. At least 50% of these collections are from federal agencies, including USACE, National Park Service, U.S. Forest Service, Bureau of Land Management, Bureau of Reclamation, and U.S. Fish and Wildlife Service. SARC's mission statement and scope of collections specifically addresses the curation of archaeological material from South Dakota.

Archaeological Collections Storage

Archaeological collections are stored in an open carpeted area that is not partitioned from the rest of the facility. Security of the collections is problematic since the collections storage area is not enclosed. Archaeological collections are stored in a high density storage unit that has provided more efficient use of the available space. However, it is overloaded and collections are stored on the top of the units. Adequate clearance is not provided between collections, the ceiling, overhead light fixtures, and venting systems. Collections are stored in both acidic cardboard and acid-free cardboard boxes and placed on untreated plywood shelves. At the time of our visit

additional collections were also being stored in the hallways. These collections had just arrived from the field and were waiting to be processed.

Environmental Controls

Because of budget constraints, the HVAC system is occasionally turned off. In addition, relative humidity is not monitored or regulated. The building lacks a fire suppression system and ultraviolet filters are not used on light fixtures. Collections are not stored in a manner that protects them from ultraviolet radiation, theft, particulates, biological pests, or destruction by fire.

Support Facilities for Archaeological Collections

SARC has adequate support facilities for archaeological collections including collections storage areas, laboratories, and general work spaces and offices. Collections are processed and cleaned in several areas of the building.

Composition of Staff

Current staff includes the State Archaeologist, a Curator, and a Registrar/Librarian. A total of 13 full-time positions are currently funded at SARC, including several archaeologists. However, the only staff member responsible for collections care is the Curator. Part time assistants and students work on the new collections created as part of SARC's archaeological contracting function.

Administrative Record Keeping and Storage

SARC maintains acquisition/accession files, catalog information, conservation information, inventory records, exhibit information, deaccession files, object location information, and loan information. A duplicate copy of administrative records has not been made.

Associated Archaeological Documentation and Storage

Associated archaeological documentation housed at SARC includes artifact inventories, archaeological site files, burial records, field notes, maps, photos, slides, and reports. SARC also maintains the state archaeological site files.

Collections Management Policies

Collections management policies include an accession policy, minimum standards of acceptance, field curation guidelines, loan policy, conservation treatment policy, packing/shipping procedures, and a deaccession policy. Policies require that specific requirements are met before a collection is accepted for curation. These requirements are listed in their 1994 *Requirements for Submitting A collection to the State Archaeological Research Center*. SARC does not have a written disaster/emergency plan or an Integrated Pest Management plan.

Administration Summary

Background

SARC is housed with the South Dakota State Archaeologist office and was created from the State Archaeological Society in 1972 or 1973. Collections from the USACE, Omaha District are curated at SARC, but no other DoD agencies have collections there. SARC curates the state's archaeological collections, conducts research, and provides exhibits for the public.

Real Estate

SARC has a five year lease for the building it occupies. The lease expires in December 1996. Although no restrictions exist for the expansion of the building, the building cannot be extended beyond the existing lot boundaries. However, the landlord would have to approve any changes to the building. The area is zoned light industrial. The state's Space Management Office and the Secretary of Education in Pierre would have to approve any lease arrangements that required more space than currently available.

Administration

The Secretary of the Department of Education and Cultural Affairs could commit SARC financially to a partnership with DoD/USACE. SARC receives the majority of its funding from the state legislature. Some funds are generated from curation fees.

Outreach and Education Programs

One staff member gave presentations to students in local area schools. Students also participated in archaeological excavations. SARC will have exhibit space in the new "Journey" facility that was to open Rapid City in May 1997. SARC has consulted with Native Americans on Native American Graves Protection and Repatriation Act related issues. The presentations given in local schools reach Native Americans that were students there, but no separate program existed for them.

Contributions

SARC could contribute labor and supplies for rehabilitation and maintenance. This would include rent, operations and maintenance, and a portion of staff salaries. SARC would expect DoD/USACE to contribute shelving, museum storage cases, and to upgrade the sprinkler system.

Notes

SARC and the South Dakota of School Mines and Technology's Museum of Geology are planning to construct a new curation facility for archaeological and paleontological collections. The strength and future of this intra-state partnership is uncertain, as is the status of the new curation facility. SARC has had its budget reduced over the years; however, the staff at SARC have done the best they can with little support.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 20.2 lists these composite scores and the architecture, collections management, and administration scores for each South Dakota institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 20.2 Summary of Decision Support Model Scoring – South Dakota

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
South Dakota School of Mines and Technology	**0.2188**	not evaluated	not evaluated	0.21880
State Archaeologial Research Center	**0.5808**	0.06181	0.21972	0.29926

21

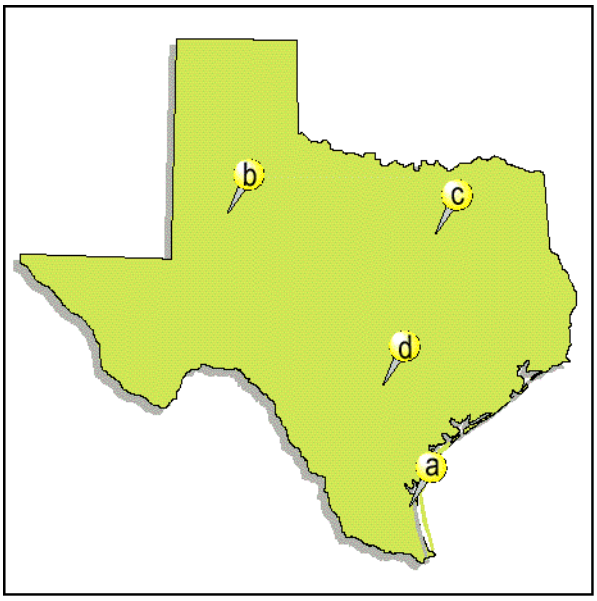
Texas

Archaeological Materials (in cubic feet)

Department of Defense	**2,103**
USACE	**2,399**
TOTAL VOLUME	**4,502 ft^3**

Number of Institutions Contacted **24**

Institutions Assessed



a. Corpus Christi Museum of Science and History

b. Museum of Texas Tech University, Lubbock

c. Southern Methodist University Department of Anthropology, Dallas

d. Texas Archaeological Research Laboratory, University of Texas, Austin

Background

In addition to California, Texas is another state where it may be useful to consider multiple partnerships, based on east-west diversity in geography and prehistoric cultures. In these respects, the state could potentially be divided into two regions, and a partner selected for both. Texas has a significant number of institutions with a curatorial background and interest in the project. Table 21.1 lists the institutions contacted in Texas, including the reason(s) some were not selected for an on-site visit.

Table 21.1 List of Institutions Contacted in Texas

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Annie Riggs Memorial Museum		X		
Archer County Museum		X		
Big Bend National Park		X		
Brazos Valley Museum of Natural History				X

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Caddoan Mounds State Historic Site			X	
Carson County Square House Museum		X		
The Centennial Museum at the University of Texas, El Paso			X	
Corpus Christi Museum of Science and History				
Crockett County Museum		X		
Crosby County Pioneer Memorial Museum		X		
Culberton County Historical Museum				X
Fort Belknap Museum and Archives, Inc.				X
Heritage Museum and Potton House			X	
Martin County Historical Museum			X	
Museum of the Big Bend		X		
Museum of Texas Tech University		X		
Panhandle-Plains Historical Museum, West Texas A and M University		X		
Southern Methodist University Department of Anthropology				
Strecker Museum Complex			X	
Texarkana Museums System				X
Texas Archaeological Research Laboratory, University of Texas				
Texas Memorial Museum		X		
Texas Parks and Wildlife Department		X		
Wilderness Park Museum				X

Note: Locations visited indicated in **Bold**.

Comments

Only one facility was visited in west Texas, the Museum of Texas Tech University in Lubbock. Three facilities in east Texas were visited, the Texas Archaeological Research Laboratory, the Department of Anthropology at Southern Methodist University, and the Corpus Christi Museum of Science and History. A summary of the Decision Support Model scoring is provided Table 21.2.

Corpus Christi Museum of Science and History

Architectural Summary

Site Conditions

The Corpus Christi Museum of Science and History (CCMSH) is located on a waterfront site adjacent to a local shipping channel. The property is near downtown Corpus Christi and is owned by the city. The surrounding area contains other city-owned museum/tourist destinations.

The main entrance and a public parking area of over 45 spaces is located on the north side of the building. A staff parking lot and bus loading/unloading entrance is located on the south side of the building. Recent expansions have been added on the northeast and southeastern portions. Future additions would most likely be placed on the eastern side of the property. Several plans are under consideration for the museum and its waterfront site. It should be noted that Corpus Christi, being located directly on the Gulf of Mexico, is in a hurricane zone.

Building Condition/Structural Adequacy

The original 1967 museum building has grown with additions in 1974, 1990, and 1995. The present configuration totals 83,000 ft^2 in area. The building is placed on a "friction" pier construction foundation. CCMSH has no basement and has a built-up flat roof system. The remainder of the building is a combination of steel frame, concrete masonry units, and concrete frame construction. The building is finished with a brick veneer and aluminum window frames. Recent additions include double-pane glass and hurricane shutters. The museum facility includes exhibit, office, laboratory, library, and collections storage spaces. The majority of CCMSH collections are stored on a second floor collections room; however, the archaeological collections are stored in a processing/temporary storage area. The CCMSH facility displayed no signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The various additions to the CCMSH building have kept the facility current with the appropriate building, life-safety, and accessibility requirements (type II construction, B, A-3 use groups). The building is served by six emergency exits. A new elevator provides disabled access to the upper levels, and recent additions appear to have brought the facility into compliance with the Americans with Disability Act.

HVAC Systems

A large 300 ton cooling capacity air conditioning system is supplied by a nearby city central plant and provides the museum's chilled water. On-site gas-fired boilers provide both heat and humidity control for the facility. Conditioned air is delivered by one of 14 air handler units. The system has been upgraded and expanded with each of the building's past additions. CCMSH's HVAC system seems adequate for the museum's needs.

Fire Suppression and Detection

The building is equipped with both manual and automatic fire detection equipment. Manual pull alarms, fire extinguishers, smoke detectors, heat sensors, and exiting alarms are installed throughout the addition. The fire alarm system is wired to a central city monitoring station and to the local fire department. There is no automatic fire suppression system.

Security System

CCMSH is secured with deadbolt locks, keypad access, motion detectors, TV monitoring, and intrusion alarms. The museum's security system is wired to a central city monitoring station and then to the local police department.

Collections Management Summary

Scope of Collections and Mission Statement

The CCMSH mission is to "preserve natural and cultural history objects with emphasis on South Texas and its place in the world." Its scope of collections includes natural and cultural history materials relating to South Texas. CCMSH curates approximately 6,742 ft^3 of archeological materials, most of which are from underwater archaeological projects.

Archaeological Collections Storage

Archeological collections are stored in two main areas at CCMSH. The first is the museum's main storage area, which is located on the second floor of the museum. All types of collections are stored in this room. Most of these collections are kept on metal shelving units. Adjacent to the main collections storage room is a holding area near the freight elevator. Cabinets in this area hold a large collection of cellulose nitrate negatives that pose a fire threat due to their inherent instability and the building's lack of automatic fire suppression.

Additional archaeological collections are kept on the first floor in the large collections storage room. The room contains a variety of oversized collections and equipment, such as boat motors. Galveston District archaeological collections are stored in this room on metal shelves draped with plastic. Collections in the room are also at risk of fire because of a lack of automatic fire suppression.

Environmental Controls

Most of the museum's archaeological holdings are historic maritime collections, many of which require special environmental conditions and treatment. The collections are stored and exhibited in areas with adequate environmental controls. Collections storage areas are maintained at 72° F +/-2° F and 50% relative humidity +/- 5%. The staff regularly monitor relative humidity using hygrothermographs and hygrometers. Hygrothermographs are not regularly calibrated to insure the accuracy of the readings.

Range of Support Facilities for Archaeological Collections

CCMSH has adequate facilities for archaeological collections including designated storage areas, processing labs, general work and office areas, and marine archaeology conservation lab facilities.

Composition of Staff

Currently, the Curator of Archaeology and the Assistant Registrar are responsible for most archaeological collections management duties. The museum does not have a Collections Manager.

Administrative Record Keeping and Associated Documentation Storage

CCMSH staff maintain many types of administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are stored in file cabinets in museum offices. Important museum records are stored in two fire-proof cabinets. Most administrative records are at risk from fire due to inadequate fire suppression. Computer databases are used to track collections and maintain some administrative records.

CCMSH has large collections of associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Archaeological collections that have been donated to the museum from private collections may not be as well documented. Associated documentation is also stored in filing cabinets in museum offices. All associated documentation is at risk of fire due to inadequate fire suppression. The museum generally does not have duplicate copies of these documents.

Collections Management Policies

CCMSH has extensive collections management policies including an accession policy, a disaster/emergency plan, an Integrated Pest Management plan, and a deaccession/disposal policy.

Administration Summary

Background

CCMSH was created as a non-profit museum that was founded in 1957. It was incorporated into the City of Corpus Christi administrative structure in 1967. The museum curates archaeological collections from the USACE, Galveston District, but does not have DoD collections. Two non-profit organizations are located at the museum, Ships of Discovery and the Columbus Fleet. Ships of Discovery performs maritime archaeological and conservation work and the Columbus Fleet has three full scale reproductions of the Nina, Pinta, and Santa Maria. The reproductions were built for the 500th anniversary of Columbus' landing in the New World.

Real Estate

The museum is a department of the City of Corpus Christi and the land is thus owned by the city. There are no restrictions to expansion. The museum plans to add an addition to accommodate the *La Belle* (a historic sailing ship) archaeological materials if the museum is designated as the repository for those materials. Other plans include a new pier and wharf for the Columbus Fleet.

Administration

The City Manager signs all contracts over $10,000 and could financially commit the museum to a partnership with DoD and USACE. The City Manager could sign a cooperative agreement. A development director and one assistant write and track grant proposals and perform fund raising.

Outreach and Education Programs

Although the museum has many exhibits, most are not related to archaeology. CCMSH does have a new and large marine archaeology exhibit. Two exhibit cases are devoted to terrestrial archaeology. Indian kits are available to schools and contain artifact reproductions. According to museum staff, interaction with Native Americans is limited since the Native American groups that inhabited the south Texas coast were decimated following European/American occupation. The museum has hosted a pow-wow and worked with the local inter-tribal council. The City of Corpus Christi has a multicultural center that interacts with local groups. The museum has an education coordinator, but archaeology is a small component of the overall education program.

Contributions

The museum is interested in curating terrestrial archaeological materials from south Texas and marine archaeological materials from the south Texas coast.

Notes

CCMSH is one of the few institutions visited during Phase I that was designed as a museum facility. However, the design emphasizes exhibits, not collections storage. Nevertheless, the CCMSH building could be easily and effectively expanded or renovated to accommodate DoD/USACE archaeological collections. CCMSH staff indicated that the museum's focus clearly was on underwater archaeology, and this institution should be considered if marine conservation expertise is needed.

Museum of Texas Tech University

Architectural Summary

Site Conditions

The Museum of Texas Tech University (MTTU) is located on the northern edge of the university's Lubbock, Texas, campus. Adjacent to the museum site is Texas Tech's Ranching

and Heritage Center and its outdoor exhibits, a popular university attraction. Over 80 spaces provide ample parking for the museum. The site at the corner of Indiana Avenue and 4th Street offers plenty of available land for future expansion.

Building Condition/Structural Adequacy

The original 1970 facilities are actually two separate structures. A 1994 addition connected the two buildings and created a single 158,000 ft^2 facility. The structure is a combination of concrete and steel frames with a brick veneer. The building had no observable structural defects. The roof is a flat, built-up system. Standing water was observed on portions of the flat roof. Portions of the 1970 building contain asbestos building materials, and an active abatement program is in place at TTU and the museum.

The facility has office, exhibition, large collections storage, and laboratory space. One area of the building is used for research on radioactive materials. Archaeological collections, records, processing, and staff offices, are located in the basement of the 1970 portion of the museum. Renovations of portions of the basement were almost complete at the time of the on-site visit. The floors and exposed concrete frame are sealed concrete. Metal doors and concrete masonry units partition the basement space.

Code Requirements/Egress/Accessibility

The 1970 portion of the facility does not appear to meet contemporary building, life-safety, and accessibility requirements (type II, mixed use-groups, B, S-1, A-2.1). These areas of the building have no fire alarm or detection system. Six major exits provide emergency egress from the entire building. Both a passenger and freight elevator serve the building. The entire museum appeared to be accessible for the disabled, although the 1970s construction does not appear compliant with the Americans with Disabilities Act. The 1994 addition to the museum appears to meet the appropriate building, life-safety, and accessibility requirements.

HVAC Systems

An on-site heating and cooling system is present. Natural gas boilers provide steam for heating and on-site electric chillers provide cold water for air conditioning. The building has its own air-handling system with fan rooms to circulate both hot and cool air through the building. This forced air system allows for heating and cooling zones to be managed by the museum. Relative humidity is controlled and monitored by the HVAC system. The system uses standard air filters that are changed as needed. The university's Facilities Department provides support and maintenance services for the HVAC system.

Overhead hot and cold water piping is currently being re-routed through the 1994 addition. The existing areas piping routes through the 1970 portion contain asbestos building materials, and asbestos in these areas is abated as it is encountered.

Fire Suppression and Detection

The entire basement level of the museum is equipped with a wet-pipe sprinkler system. No heat sensors, smoke detectors, or manual alarms were observed in the 1970 portion of the building.

The 1994 addition is equipped with an automatic wet-pipe sprinkler system. Fire extinguishers, smoke detectors, heat sensors, and exiting alarms are installed throughout the addition.

Security System

The museum security includes deadbolt locks, motion sensors, TV monitors, and intrusion alarms. Collections are further protected with lockable storage cabinets and restricted key access. Security guards patrol the museum during open hours. The electronic intrusion alarm is monitored by the TTU Police Department and the Facilities Department during off-hours.

Collections Management Summary

Scope of Collections and Mission Statement

The MTTU's mission "is to collect, preserve, interpret, and disseminate knowledge about natural and cultural materials from Texas, the Southwest, and other regions related by natural history, heritage, and climate." Its scope of collections includes prehistoric and historic archaeological materials, ethnographic objects, natural history and paleontological collections, and art. The museum curates approximately 1,500,000 specimens in the 18,445 ft^3 archaeological storage room.

Archaeological Collections Storage

Archeological materials are stored in the basement of the museum along with the associated documentation. Hazardous chemicals such as acryloid-B72 mixed in acetone, are used in the processing lab located down the hall from the archaeological storage room. The archaeological materials are stored on metal shelving units or locking metal cabinets with wooden drawers. The wooden drawers are currently being replaced with metal drawers. The two sets of doors to the collections storage room are locked, but not alarmed. The climate is controlled by the building HVAC, but the collections storage room is part of a smaller zone in the basement.

Environmental Controls

The collections stored in the museum have adequate environmental controls. The archaeological materials and associated documentation rooms are maintained at a targeted temperature range of 68 degrees ± 2EF and a target of 45-50 % relative humidity. Temperature and humidity are monitored with hygrothermographs located in the archaeological materials storage area and in the documentation area. The hygrothermographs are calibrated as needed, and they all are calibrated at least once a year by the Registrar. The building's HVAC is zoned for temperature and humidity control.

Range of Support Facilities for Archaeological Collections

The museum has adequate facilities for archaeological collections including a designated storage areas, although it is full, a photo studio and darkroom, a wet processing lab, a Registrar's office, and general work and office areas.

Composition of Staff

The museum has adequate staff supplemented by student assistants. An outside conservator is used as needed. If funding becomes available, the museum would like to hire a second collections manager.

Administrative Record Keeping and Associated Documentation Storage

The museum staff maintain many types of administrative records including acquisition/accession records, catalog information, conservation information, artifact inventories, object location information, loan information/agreements, and deaccession/disposal records. Computer databases are used to administer collections; however, all data entry has been postponed until a decision is made on which new software will be used for managing the collections.

The museum has associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in filing cabinets in a room adjacent to the archaeological materials in the basement of the museum. A duplicate copy of the records does not exist in a secure off-site location, and important records are not stored in fire-proof cabinets.

Collections Management Policies

The museum has all but one of the policies for collections management. The museum does not have a consultation policy.

Administration Summary

Background

MTTU was founded in 1929. The museum's only DoD collections are from Reese Air Force Base, an installation that was closed under base realignment and closure legislation. The museum has no agreements to curate any federal collections including those from Reese. Approximately 75% of the curated collections are from the Lubbock Lake site, an archaeological landmark located several miles north of campus, which MTTU has been excavating since 1972.

Real Estate

The museum is a unit of TTU. Expansion or new construction is possible adjacent to the existing building, although no preliminary plans exist.

Administration

The President of TTU could financially commit the museum to a partnership with DoD and USACE. The President or Vice-President for Research could sign a cooperative agreement. The staff write and track their own grants, but use the university's Research Services for research

grants. The Director of the museum is the most active fundraiser, whereas other staff members occasional participate in fund raising activities.

Outreach and Education Programs

The Lubbock Lake site has one full-time educator that oversees the public outreach efforts. These efforts include site programs for adults and children such as site tours, community outreach events, and school education programs such as traveling artifact trunks. Volunteers serve as docents, demonstrators, workshop facilitators, and outreach instructors at the site. The museum has archaeology exhibits, hands-on projects, and films.

The museum has consulted with Native Americans as part of its Native American Graves Protections and Repatriation Act compliance activities. Native Americans have taught workshops to staff and volunteers on native cultural lifeways.

Contributions

The museum could contribute its existing modern facility, staff expertise, student use of the collections, security, and pest management. The museum would absorb the costs for overhead, insurance, and operation and maintenance. The museum would expect DoD/USACE to contribute cabinets, funds for staff, and archival supplies.

Notes

MTTU is perhaps the oldest museum/curation facility visited in Phase I that was designed as a museum facility. The existing collections storage area is now nearly full. However, additional storage space could be created with the use of compactor shelving units.

The focus of the archaeology education program is on the Lubbock Lake site north of the Texas Tech campus and not on the collections generated by the excavations. The museum would be interested in being a regional partner for collections from the southern Plains including Kansas, western Oklahoma, eastern New Mexico, portions of Colorado and the non-Caddoan portions of Texas that are on the southern Plains.

Southern Methodist University Department of Anthropology

Architectural Summary

Site Conditions

The Department of Anthropology at Southern Methodist University (SMU) is located in the Heroy building on the university's Dallas, Texas, campus. Although SMU is easily accessible, visitor and public parking are very limited. Despite a campus parking lot directly west of the Heroy building, the best visitor parking is located in the adjacent residential neighborhood.

SMU is currently drafting a comprehensive master plan, including building sites available for a new DoD/USACE curation facility. Although expansion is planned for the Heroy building, two potential sites on the east side of campus are being considered for a new curation facility.

Building Condition/Structural Adequacy

The 83,000 ft^2 Heroy building is divided into two wings, western and eastern. The Sciences Department uses the entire eastern wing. The Department of Anthropology uses the western wing. The four story Heroy building is a concrete frame and brick veneer structure that was constructed in 1953. It has a hipped roof structure with a steel frame with asphalt shingles. Approximately one third of the department's archaeological collections are stored in the Heroy building. The department has several small storage rooms, processing areas, and laboratories in the basement. Additional collections are stored in the attic; however, the floor structure does not appear to have been designed for storage use. The multiple storage areas total approximately 8,000 ft^2 in area. Creating additional storage space in Heroy is unlikely. All of the floors have been rated at 85 psf, which is an insufficient load bearing capacity for collections storage. However, the Heroy building displayed no signs of structural defects, hazardous building material, or leakage.

The department stores the remainder of its archaeological collections in an off-campus warehouse building. The leased facility is located in Mesquite, Texas, and was not visited because its existence was unknown to St. Louis District staff prior to the on-site visit. Department staff described it as a simple pre-fabricated metal building without electrical service.

Code Requirements/Egress/Accessibility

The Heroy building appears to meet the appropriate building, life-safety, and accessibility requirements (type II construction, B use group). Three fire stairwells provide emergency egress from the building. Two elevators provide disabled access between levels. A recently added side entrance ramp provides access in compliance with the Americans with Disability Act (ADA). SMU is actively upgrading its buildings for ADA compliance.

HVAC Systems

A university-wide heating and cooling system serves the Heroy building. Underground services provide steam for heating and a condenser system provides cool air. The building has four air handling units located in the attic that circulate both hot and cool air through the building. Each floor of the building is divided into four HVAC zones. The basement is divided into two HVAC zones. The hot water heating system was removed from the exterior portions of the basement level. The attic is not air-conditioned. The HVAC system has standard filters and is operated 24 hours a day.

Fire Suppression and Detection

The Heroy building is equipped with both manual and automatic fire detection equipment. Manual pull alarms, fire extinguishers, fire hoses, smoke detectors, and exiting alarms are installed throughout the building. The fire alarm system is wired to a university monitoring station and to the local fire department. The attic area and the science wing of the Heroy building are equipped with a wet-pipe fire sprinkler system. There is no automatic fire

suppression system in the other areas of the building including the basement collections storage rooms.

Security System

The Heroy building is secured with dead bolt locks and collections storage areas are accessed with separate keys. The building is not equipped with intrusion alarms, motion detectors, or keypad access. A metal gate separates the science wing from the Department of Anthropology wing during off-hours. The SMU police department regularly patrols the campus and the Heroy building.

Collections Management Summary

Scope of Collections and Mission Statement

SMU curates approximately 8,000 ft^3 of archaeological materials. Approximately half of these collections are federal The remainder of SMU's collections have been generated by department faculty and are related to their research projects. SMU does not have a curatorial repository or museum that functions as an individual entity and does not have an official mission statement. Archaeological collections are curated by the department as a result of SMU-sponsored research.

Archaeological Collections Storage

The majority of SMU's archaeological collections are stored in an off-site leased warehouse in Mesquite, Texas, which was unable to be visited. The majority of SMU's USACE Fort Worth District collections are stored in the warehouse.

The remainder of the SMU's archaeological collections are stored in the Heroy building on campus. Several converted classrooms are used as small collections storage, processing, or work areas. This portion of the building is shared with SMU's Paleontology Department. As a result of some paleontological work, dust is a problem throughout the basement. Collections storage conditions in each room vary. This portion of the Heroy Building does not have fire suppression system.

Additional Fort Worth District collections are stored in the attic of the Heroy building. The attic is considered a mechanical area and fire codes state that no one should work in those areas. The attic is the only portion of the Heroy building that has a fire sprinkler system. SMU also uses the attic to store unused furniture. Collections are located in a rear portion of the attic and are stored in cardboard boxes and placed on metal shelves, some of which are leaning significantly.

Environmental Controls

Environmental controls vary in each of the collections storage areas used by SMU. The warehouse in Mesquite has no environmental controls. The Heroy building has heating and cooling systems, except in the attic, which can become extremely hot and humid. Relative humidity can not be regulated in any of the archaeological collections storage areas at SMU.

Range of Support Facilities for Archaeological Collections

SMU has adequate support facilities for archaeological collections including designated collections storage facilities, processing labs, and general office and work areas. SMU does not have a conservation lab, but has access to equipment and resources at the Dallas Museum of Natural History.

Composition of Staff

The Director of the Collections Division is responsible for most aspects of collections care. She is assisted by students and other faculty members when needed. The Department does not have a Registrar, Curator, or Conservator.

Administrative Record Keeping and Associated Documentation Storage

SMU maintains acquisition/accession records, catalog information, collection inventories, object location information, and loan information/agreements. SMU has not ever deaccessioned anything officially, therefore no deaccession records have been created.

Collections Management Policies

SMU staff completed a Draft Collections Management Plan in 1992. This plan has been adopted as a working draft, but has not been officially approved by the Department of Anthropology or the university. This plan contains draft acquisition/accession, deaccession, appraisal and authentication, and preparation of materials for submission policies. The Draft Collections Management Plan does not include an official mission statement, Integrated Pest Management plan, nor a disaster/emergency plan.

Administrative Summary

Background

SMU is a privately run and operated institution. Archaeological collections management is part of the Department of Anthropology. SMU curates archaeological collections from the Fort Worth, New Orleans, and Tulsa districts of USACE, but does not have any other DoD collections. The department has a cooperative agreement with the National Park Service for curation of Arkansas Post materials.

Real Estate

The campus is privately owned by SMU. Several areas on campus are being considered as possible locations for a new curation facility including one location that would be at a new entrance to the campus. Prior to any construction, the building must be part of the overall campus master plan so that it architecturally blends in with the existing building. In addition, the operation and maintenance costs for the building must be included in the construction budget.

Administrative

The President of SMU could financially commit to a partnership with DoD and USACE and would sign a cooperative agreement. The university has an Office and Research Administration and Office of Grant and Contract Accounting to track grant proposals. Individual faculty, staff, and graduate students also write their own grant proposals. Campus-wide fund raising is performed by the Development Office. The Department of Anthropology does not have an individual who performs fund raising.

Outreach and Education Programs

The Department of Anthropology includes courses in archaeology for both undergraduates and graduate students. Outreach activities include public talks to various groups including public schools, participation in the Odyssey of the Mind program, sponsorship of the Dallas Archaeological Society, internships and independent study for high school or college students, web pages, and volunteers working with the collections. The department has worked with various Native American groups including the Caddo Nation. It has consulted with the Caddo as part of their Native American Graves Protection and Repatriation Act compliance activities. However, there are no exhibits of any kind and regular activities for the general public are not scheduled.

Notes

SMU has no available space for additional collections. Department and university officials provided a detailed proposal for a new curation facility. The new facility also includes space for the university's special and rare collections library. The estimated cost of this proposed facility is $10,900,000. If a partnership with SMU was negotiated, DoD/USACE would be asked to provide most of the funds for a new facility. The portion of the building that would be assigned for DoD/USACE use includes artifact storage, laboratory, offices, exhibit, classroom, library, and multi-media laboratory spaces.

Texas Archaeological Research Laboratory, University of Texas

Architectural Summary

Site Conditions

The Texas Archaeological Research Laboratory (TARL) is located on the University of Texas' (UT) J. J. Pickle Research Campus in Austin, Texas. The campus has been adapted to serve a variety of UT operations. Officials from TARL and UT stated that building sites are available at the research campus for a new archaeological/curation facility.

Currently, TARL occupies portions of two buildings at the research campus. Building 5 is the main TARL curation facility. The building has over 20 parking spaces directly to the east.

Directly to the south it shares a parking lot with over 50 spaces. Building 33 is the second facility, which is a warehouse without any public use or parking spaces.

Building Condition/Structural Adequacy

Building 5

Building 5 was constructed in 1941 as a magnesium warehouse with a railroad loading dock along the entire length of the eastern and western sides of the facility. The 32,810 ft^2 (22,618 ft^2 footprint with 10,192 ft^2 mezzanine) building is a steel frame construction on a concrete slab. The facility is enclosed with traccite panels and large metal frame single pane windows that rest on a brick knee-wall. These corrugated traccite panels are original to the building and contain asbestos. The university has plans for abatement and replacement of the traccite panels and original windows sometime in the future. The roof was replaced in 1994.

TARL currently shares the building with the Aerospace Engineering Department. The large interior warehouse space is divided with concrete masonry units. A processing area, collections storage, archives, and offices are located on the first floor. A concrete and steel frame mezzanine level is used for office and collections storage space. A portion of the mezzanine was recently reinforced to improve its load bearing capacity that was dangerously low. Despite these improvements, the mezzanine level collections storage is susceptible to vibration damage and likely remains inadequate for contemporary building or storage use. This portion of the building has a load capacity of only 40 psf, which is inadequate for collections storage. A 1,472 ft^2 third floor room is used to store TARL's human skeletal collection.

Room 19 is a pre-fabricated structure located within Building 5. The 1,600 ft^2 room has a simple steel frame structure. Insulated aluminum panels are used as the room's roof and walls. Room 19 is equipped with compact storage shelving and was designed for easy expansion. Building 5 offers available floor space for additional or expanded pre-fabricated storage areas.

Building 33

TARL uses approximately 4,500 ft^2 of Building 33. The 1972 facility is a prefabricated metal building with large drive-thru doors at both ends that permit vehicular access through the interior. TARL shares the building with other UT operations. A new insulated roof was added in 1992.

Code Requirements/Egress/Accessibility

Building 5

The 1941 structure with its various additions and renovations do not appear to meet the appropriate building, life-safety, and accessibility requirements (type III construction, mixed use-group, including S-1, B). There is no access to the mezzanine level for disabled staff or visitors. The building is served by six disabled parking spaces and disabled ramps into the building. The building has seven exits for emergency egress. An advocate within the UT administration has expedited improvements to Building 5's life-safety performance.

Building 33

The single level and simple configuration of Building 33 meets the appropriate building, life-safety, and accessibility requirements (type III construction, S-1 use group). Building 33 appears to be in compliance with the Americans with Disability Act.

HVAC Systems

Building 5

Building 5 is heated with hot water radiator units throughout the facility. The research campus physical plant supplies hot water for heat. Portions of the office areas are cooled with a variety of package air conditioner units. None of the warehouse space, or collections storage areas are air conditioned, except for Room 19. Collections are susceptible to the humid and variable Texas climate. The university has budgeted funds for a Fall 1997 addition of a new comprehensive HVAC system.

Room 19 is cooled with chilled water from on-site condensers and heated with hot water from the research campus central plant. Conditioned air is delivered to the room through four small air handler units. The HVAC system is equipped with humidity control and is constantly monitored. This roof-mounted equipment provides excellent heating, cooling, and humidification service to Room 19.

Building 33

Building 33 is heated by individual natural gas heating units located throughout the warehouse areas of the facility. The building is not air conditioned. Collections in Building 33 are also susceptible to the humid and variable Texas climate.

Fire Suppression and Detection

Building 5

New manual and automatic alarm systems provide fire detection to Building 5. Manual pull alarms and heat detectors are located throughout the facility. The fire detection system is wired to the local fire department. Building 5 is not equipped with an automatic fire suppression system. Fire extinguishers are located throughout the building. The large warehouse space is not separated with rated firewalls. The size, volume, and mixed uses of Building 5 place it in danger of a fire.

Room 19 is equipped with its own fire suppression and detection systems. The room is alarmed with smoke detectors and heat sensors. A CO_2 system provides fire suppression. Although dangerous to occupants, this system is effective in extinguishing fires. While these sophisticated systems protect Room 19, and as a result all of Building 5 from fire originating in Room 19, they provide no protection to Room 19 if the rest of the building burns.

Building 33

Building 33 had no fire detection or fire suppression systems.

Security System

The research campus is not a highly used public area of UT. Building 5 and Building 33 are secured with deadbolt locks. Neither building is equipped with intrusion alarms, motion detectors, or keypad access.

Room 19 is equipped with deadbolt locks, intrusion alarms, keypad access, and lockable storage units. Security alarms are wired to the UT Police Department.

Collections Management Summary

Scope of Collections and Mission Statement

TARL curates approximately 50,000 ft^3 of archaeological materials. TARL's mission statement and scope of collections apply to the curation of archaeological collections. Other types of collections, such as harder-to-maintain ethnographic and historic materials, are curated at UT's Texas Memorial Museum.

Archaeological Collections Storage

Building 5

TARL's main collections storage facility is Building 5 which is jointly occupied with the UT's Aerospace Engineering Department. Unfortunately, the engineering department has used their portion of the building for storing old equipment, which has complicated TARL's efforts at maintaining good housekeeping standards. Building 5 has two floors, both of which are used for collections storage. Bulk collections are stored in this building in several areas. Collections are placed in metal framed wooden drawer units.

Room 19, within Building 5, is used to store environmentally sensitive collections and research collections. Room 19 has its own HVAC, humidistat, security, and CO_2 fire suppression systems. Collections are stored inside a compact storage cabinet system (a total of 63 cabinets in all). Room 19 contains only approximately 15-20% of TARL's total collections. Room 19 is the only storage space at TARL that provides adequate protection from particulates, environmental fluctuations, theft, and fire. Ceramic vessels are stored on metal shelving units. Each vessel has been fitted with a customized foam mount. The staff have difficulty keeping the area dust-free.

An additional room on the third floor is used to store human skeletal collections. This room, which has environmental controls, was partially constructed with a National Science Foundation grant. The collections are stored in acid-free cardboard boxes that are kept on metal shelves.

Building 33

The majority of TARL's bulk archaeological collections are stored in Building 33. Two large rolling doors are located on either side of the building and permit one to drive through the building. Access to the archaeological collections is difficult to control. At least one of the metal rolling doors is left open for most of the day. Collections are stored in cardboard boxes placed on metal shelving units. Some collections have been placed in boxes and stacked on the floor. Conditions in the building are not appropriate for collections storage, as the building lacks appropriate security, environmental controls, fire suppression, and housekeeping.

Environmental Controls

Room 19 has its own HVAC and humidistat. Conditions within the building are constantly monitored using a hygrothermograph located on its exterior. Conditions inside the human skeletal collections area are also more stable, as this area also has environmental controls.

Conditions in the remainder of Building 5 are poor. Huge fluctuations in temperature and relative humidity occur in the building and in Building 33 as well. The staff monitor relative humidity in these areas using a hygrothermograph or a digital hygrometer borrowed from the Texas Memorial Museum. Hygrothermographs are not calibrated on a regular basis to insure accuracy.

Range of Support Facilities for Archaeological Collections

TARL has adequate support facilities for archaeological collections including designated collections storage areas, collections and records processing rooms, and general work and office areas. While TARL does not have a conservation lab on-site, facilities are available for use at the Texas Memorial Museum.

Composition of Staff

The current staff includes the Director, the Head of Collections, a Collections Assistant, a Head of Records, a Records Assistant, and some Photographic staff. Of these staff members, few are solely involved in archaeological collections management. For example, the Head of Collections is a 50% time position and the Collections Assistant position is funded at 75% time.

Administrative Record Keeping and Associated Documentation Storage

The staff at TARL maintain a large variety of administrative records including accession files, catalog information, environmental records, object location information, and loan information. During tne on-site visit staff could not recall if deaccession records had ever been created, since they did not remember deaccessioning anything so far. Administrative records are stored in office areas inside file cabinets. TARL has enormous collections of associated documentation which are stored in the records division. Records and associated documentation are stored in several rooms throughout TARL's records division, which is located in Building 5. None of these areas have adequate fire suppression systems. Some administrative information is also maintained in a computer database.

At the time of the on-site visit several boxes of records were being stored inside Building 19 where conditions were much better due to its environmental controls, security, and fire suppression systems.

Collections Management Policies

TARL has many collections management policies including an accession policy, a disaster plan, and an access/use of collections policy. However, TARL does not currently have an official Integrated Pest Management plan or a deaccession policy. Although TARL does not have a written Integrated Pest Management plan, procedures are in place for trapping and monitoring pests. TARL has access to pesticide spraying, if needed.

Administrative Summary

Background

TARL was founded in 1961 and has archaeological collections from the Galveston, Fort Worth, and Tulsa districts of USACE, and several DoD installations including the former Bergstrom Air Force Base, which has been closed, Longhorn Army Ammunition Plant, Red River Army Ammunition Plant, Fort Sam Houston, and Camp Bullis.

Real Estate

TARL is a part of the University of Texas. The J.J. Pickle Research campus is owned by the university. Expansion or new construction is possible on the Pickle campus, although no definitive plans exist.

Administrative

The President of UT could financially commit TARL to a partnership with DoD and USACE. The Vice-President for Research could sign a cooperative agreement. For contracts and grants, TARL uses the UT's Office of Sponsored Projects for processing, although the work associated with each project is performed by TARL. The university has a fund raising office, but TARL itself does not. The UT will begin a capital fund raising campaign by the year 2000.

Outreach and Education Programs

Archaeology kits exist that are sent on request to local schools for use in their classes. TARL is involved in an archaeological curriculum for Austin's seventh graders and is very active in the local avocational societies. Tours of the collection storage are regularly given to school groups of all ages.

TARL has consulted with Native groups such as the Caddo, Commanche, and Kiowa as part of their Native American Graves Protections and Repatriation Act compliance activities. TARL has a long history of interaction with the Caddo.

Contributions

TARL could contribute its staff expertise and its existing relationships with USACE districts and Native groups. TARL has space on the Pickle Research campus for a new curation facility. TARL would expect DoD/USACE to contribute cabinets, funds for additional staff, and upgrades to its existing space.

Notes

TARL has a very organized system, in spite of the difficulties of dealing with enormous collections with very little staff. A partnership with TARL would require the addition of collections staff.

There is enthusiastic support for a curation partnership between TARL and DoD/USACE in the UT administration. The existing relationship that TARL has with the Caddo Nation is a benefit since historically Texas was inhabited by the Caddo. Only a minute portion of TARL's collections are exhibited. The emphasis of the existing education program includes lectures, public school appearances, and involvement in avocational societies.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 21.2 lists these composite scores and the architecture, collections management, and administration scores for each Texas institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 21.2 Summary of Decision Support Model Scoring - Texas

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Corpus Christi Museum of Science and History	**0.7078**	0.15608	0.27072	0.28096
Museum of Texas Tech University	**0.7558**	0.14619	0.29907	0.31058
Southern Methodist University Department of Anthropology	**0.5390**	0.09473	0.10185	0.34238
Texas Archaeological Research Laboratory, University of Texas	**0.6304**	0.10318	0.19961	0.32761

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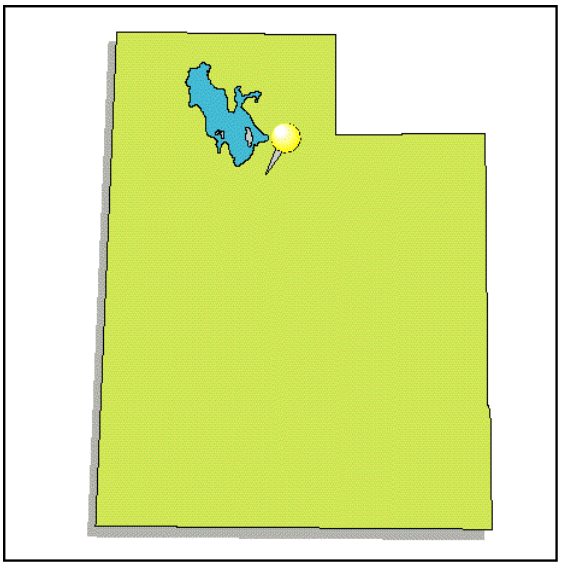
Utah



Archaeological Materials (in cubic feet)

Department of Defense	**61**
USACE	**0**
TOTAL VOLUME	**61 ft^3**

Number of Institutions Contacted **12**

Institution Assessed

Utah Museum of Natural History, University of Utah, Salt Lake City

Background

A list of the institutions contacted in Utah is presented in Table 22.1, including the reason(s) some were not selected for an on-site visit.

Table 22.1 List of Institutions Contacted

	Reason Not Visited			
		Preliminary Questionnaire		
Institution	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Anasazi State Park		X		
Arches National Park Visitor Center		X		
Bryce Canyon National Park Visitor Center				X
Canyonlands National Park Visitor Center				X
College of Eastern Utah Prehistoric Museum			X	
Edge of the Cedars State Park		X		
Fairview Museum of Natural History				X
Museum of Peoples and Cultures, Brigham Young University		X		
Utah Museum of Natural History, University of Utah				
Utah State Historical Society		X		
Ute Tribal Museum		X		
Zion National Park Museum, Zion Canyon Visitors Center				X

Note: Locations visited indicated in **Bold**

Comments

In Utah, there were few institutions with curatorial experience, and limited interest in the project from these institutions. The only repository visited there was the Utah Museum of Natural History at the University of Utah in Salt Lake City. A summary of the Decision Support Model scoring is provided in Table 22.2.

Utah Museum of Natural History, University of Utah

Architectural Summary

Site Conditions

The Utah Museum of Natural History (UMNH) at the University of Utah (UU) is located in the George Thomas Building (GTB). The GTB serves as the main museum facility and is located on a historic portion of the campus known as the President's Circle. The archaeology center and a collections storage room are located in the Stewart Building found directly south of the GTB. Other collections are stored in Building 430 located on nearby Fort Douglas.

Numerous spaces for visitor parking are available on the President's Circle drive in the front of the main museum facility. Neither the George Thomas or the Stewart buildings have a loading area. During the on-site visit, a large exhibit was being delivered through the front door and through a large window on the first floor where the glass and frame had been removed.

The President's Circle area of the campus is listed on the National Register of Historic Places. As a result of the National Register listing and historic commission oversight, exterior alterations or additions to either building likely would not be permitted.

A new facility for UMNH located nearby on university property is in the preliminary planning and fund raising stages.

Building Condition/Structural Adequacy

The GTB was built in 1935 as the university library. The original three story building is a concrete framed structure with a stone veneer. The large library windows and smaller office windows have been updated. The built up portions of the building's roof have been replaced within the last five years. A structure for library stacks was added at a later date between the legs of the original U-shaped structure. The stacks area is a series of concrete slabs supported by the framing of the steel shelving system. UMNH began to occupy the building in 1965 and has continued adapting the building to its specific requirements. The need to retain the structural shelving has left a peculiar and unadaptable space for the museum's laboratory needs. In general the entire GTB appears to be well maintained and structurally sound.

The Stewart Building was built in 1918. The two story building originally served as an elementary school, similar in design and construction to GTB. The building is home to the Department of Anthropology's Archaeological Center. The Stewart Building has a brick veneer and original windows.

UU has an active seismic initiative underway. The GTB is rated as very poor in its seismic performance capabilities. The Stewart Building received a poor rating. Despite the GTB's very poor rating, it is unlikely the necessary complete renovations will be undertaken in the foreseeable future. The shelving units in the collections storage area have been retrofitted with seismic protection. There is also the likelihood of inert asbestos in each building. Dangerous building materials are abated as they are encountered.

Archaeological collections are stored in a basement area of the GTB. Additional collections storage rooms are found on the second floor of the building near the archaeology laboratory. A total of 4,400 ft^2 divided among four rooms in the GTB is devoted to collections storage. The Stewart Building has a single 2,000 ft^2 collections storage room with seven large double-hung windows on the first floor.

Code Requirements/Egress/Accessibility

Each building meets construction type and egress code standards (UBC type II, mixed use group, B, S-2). The GTB has a handicap access ramp at the front of the building. An elevator in compliance with the Americans with Disabilities Act serves all three floors and the basement of the building. A large central stair leads from the first floor foyer to the second floor exhibit spaces. A fire stair core is located on both the east and west sides of the building. The structural shelving supports in the stacks area of the building are a serious accessibility obstacle.

The Stewart Building has two sets of exterior fire escapes located on the west and east elevations of the structure. An elevator serves both floors of the building.

HVAC Systems

Both the GTB and Stewart Building are served by the university-wide heating and cooling system. Underground services provide steam for heating and a condenser system provides cool air. Each building has its own air handling system. The GTB has a series of fan rooms that circulate both hot and cool air through the building. The collections storage areas on the second floor have separate systems for independent temperature control. The basement area has a rudimentary, yet effective filtering system at the supply ducts. Steam and water pipes are located over the basement collections area. Pressure sensors can alert the university's physical plant about catastrophic leaks in the basement collections storage areas. Overall, the HVAC systems in the GTB are adequate.

The Stewart Building has no effective air delivery or air conditioning system. The building is served only by a radiator heating system. The artifact storage room has two radiators that provide heat.

Fire Suppression and Detection

Neither building has a complete fire sprinkler system. A portion of the basement in the GTB is equipped with a fire sprinkler system. However, none of the collections storage areas are protected with a fire sprinkler system. Manual alarms and smoke detectors provide fire detection in the GTB. Heat sensors are located on the first and second floors. The Stewart Building lacks both heat sensors and smoke detectors. Fire hoses and extinguishers are located throughout each facility. While protected by adequate fire detection devices, the UMNH facilities lack complete

fire suppression systems.

Security System

UMNH is protected by effective security measures. Major building openings are wired for intrusion detection, except for the seven windows of the Stewart Building collections room. In addition, collections areas are restricted and monitored by another intrusion detection system. Key pads monitor access to restricted areas. Motion sensors are also part of the security measures. The entire security system is monitored by the UUPolice Department, who also patrol the area.

Collections Management Summary

Scope of Collections and Mission Statement

UMNH curates anthropological, biological, and geological collections. UMNH's scope of collections emphasizes collections from North America, especially the Intermountain West and Utah, and additional geographic regions when relevant. UMNH curates a total of 5,400 ft^3 of archaeological collections, approximately half of which are federal.

Archaeological Collections Storage

Archaeological collections are stored in two facilities at UMNH. The majority of the museum's collections are stored in the GTB. This building, formerly the campus library, is now UMNH's main facility. Archaeological collections are stored in the former stacks area and in a series of small locked rooms on the third floor. The stacks area is a difficult space to use for collections storage because the steel uprights are structural to the building. These supports cannot be moved, so wooden drawers, which currently hold ceramic vessels and other artifacts, have been constructed to fit in between them. Artifacts are difficult to access because the aisle spaces are extremely narrow.

Heating and cooling are provided, but relative humidity is not regulated. Additional storage space for fragile items is available on the third floor. There are a series of secured rooms that are used to house organic materials and human skeletal collections. These collections are stored in locking metal cabinets and are provided with better environmental controls. However, none of the collections storage areas in the GTB have adequate fire suppression systems.

Bulk collections are stored in the Stewart Building in a locked room. Collections are boxed and stored on a series of metal and plywood shelving. The area has steam heat but no cooling. This area lacks adequate fire suppression.

Environmental Controls

The Stewart Building bulk collections storage area has heat only. Summer temperatures can reach 100 degrees. The GTB has heat and air conditioning. Relative humidity is not regulated in either building. The staff monitor relative humidity using hygrothermographs. However, the staff were not sure how often the instruments were calibrated for accuracy.

Range of Support Facilities for Archaeological Collections

UMNH is located in two buildings on several floors and it has adequate support facilities for archaeological collections. These areas include designated collections storage areas, processing labs, and general work and office spaces. UMNH does not have a conservation lab and does not have a conservator on staff.

Composition of Staff

UMNH does not have a Registrar or a Conservator. Currently, the following staff are responsible for archaeological collections management: the North American Archaeologist (100%), the Collections Manager (100%), the Curator of Collections (25%), and a Technical Assistant (50%).

Administrative Record Keeping and Staff

UMNH maintains many types of administrative records including acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records. Administrative records are stored in filing cabinets in the museum. Additional copies are stored in the University Archives, in the Archaeological Research Center, and at the State History Department. Administrative records are protected from theft, but copies of records located in the museum are at risk from fire. However, additional copies are stored off-site. The staff also uses ARGUS to keep track of collections information.

Associated Archaeological Documentation and Storage

Some of UMNH's collections were excavated long ago and have limited associated documentation. More recent archaeological excavations have extensive associated documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Original documents are microfiched and three copies are made. The original document is placed in the University Archives. The copies are stored at the museum, the State History Department, and the Archaeological Research Center located on campus. Since copies are also stored off-site, associated documentation is protected from fire, theft, damage, and destruction.

Collections Management Policies

UMNH has many written collections management policies including an accession policy, an access/use of collections policy, an Integrated Pest Management plan, and a deaccession/disposal policy. However, the museum does not have a disaster/emergency plan. In addition, UMNH is located in an earthquake zone. Both buildings are not expected to survive an earthquake, which makes the existence of a disaster plan important.

Administration Summary

Background

UMNH was founded in its present form in 1973. The museum has archaeological collections from Hill Air Force Base, Dugway Proving Ground, and Fort Douglas. However, no written agreements are in place for the curation of these DoD collections. The museum does not have any USACE collections. The museum serves as a repository for archaeological collections from state institutional lands such as schools.

Real Estate

The State of Utah owns the property. The existing museum building is part of a National Historic Landmark created out of a core group of historic campus buildings known as the President's Circle. Thus, changes to the outside of the building would probably not be permitted. The university is beginning to create a plan to construct a new repository that would be part of a 14 acre development located elsewhere on the University of Utah campus. A conceptual model exists for the site and the buildings, one of which would be the new repository.

Administration

The Director of Sponsored Programs could financially commit the museum to partnership with DoD and USACE. Depending on the nature of the financial commitment, the Director of the Museum or the Director of Sponsored Programs could sign a cooperative agreement. The office of Sponsored Programs oversees contracts. The university's Development Office has a staff of two, with one of these individuals spending time searching for private funding sources. The Director of UMNH spends part of her time fund raising. Some of these funds would be used for the museum. Individual staff members seek their own grants.

Outreach and Education Programs

UMNH has an Education Department. Archaeology is included in the department's programs, although none of the five staff members spend all of their time on archaeology education. The museum is developing traveling exhibits, the first two of which will focus on archaeology. Teacher's in-service training is also conducted. The museum uses outreach kits to bring archaeology and other topics into local schools. Archaeology is part of the general science curriculum in local schools. Approximately 25,000 children visit the museum annually.

The museum established an Indian Advisory Committee in 1995 for Native American Graves Protection and Repatriation Act compliance. The committee consists of tribal members from all local area tribes. Native Americans were consulted in the development of the programs and exhibits sponsored by the museum for Utah's centennial celebration.

Contributions

UMNH could contribute its staff's expertise and experience, the commitment that the state is interested in the long-term curation of archaeological collections, the incorporation of other

museum experiences to enhance the quality of the UMNH visitor experience, and a new facility if and when it is constructed.

Notes

The likelihood that UMNH will construct a new facility is uncertain. The National Register status of the existing buildings and site prohibit simple expansion solutions. However, UMNH could accommodate modest fire suppression and HVAC upgrades in order to improve its partnership potential.

Facilities Update

St. Louis District staff contacted UMNH in August 1999 to update facilities information. A capital campaign to raise funds for a new facility is to commence soon. For the current facility, a complete upgrade of the HVAC system is scheduled to begin in Spring, 2000. According to UMNH staff, the upgrade will be done with no up-front fees to the University by a company that will simply receive the cost savings on utility charges. Additionally, UMNH staff has increased by approximately 20 people, three of whom are devoted to collections and research.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 22.2 lists the composite score and the architecture, collections management, and administration scores for the Utah Museum of Natural History. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 22.2 Summary of Decision Support Model Scoring - Utah

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Utah Museum of Natural History, University of Utah	**0.6807**	0.09802	0.25697	0.32575

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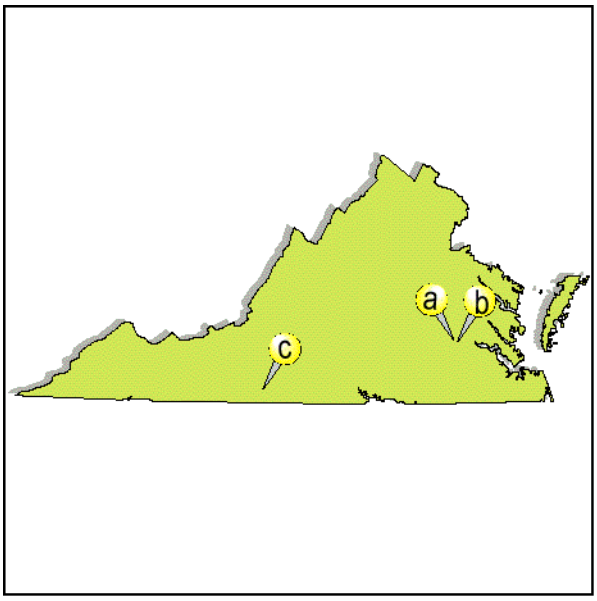
Virginia



Archaeological Materials (in cubic feet)

Department of Defense	**611**
USACE	**395**
TOTAL VOLUME	**1,006 ft^3**

Number of Institutions Contacted **20**

Institutions Assessed

a. Archaeological Research Center, Virginia Commonwealth University, Richmond

b. Virginia Department of Historic Resources, Richmond

c. Virginia Museum of Natural History, Martinsville

Background

A list of the institutions contacted in Virginia is presented in Table 23.1, including the reason(s) some were not selected for an on-site visit.

Table 23.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Alexandria Archaeology		X		
Archaeological Research Center, Virginia Commonwealth University,				
Association for the Preservation of Virginia Antiquities			X	
Carlyle House Historic Park		X		
Chesterfield County Museum			X	
College of William and Mary, Center for Archaeological Research			X	
Colonial Williamsburg Foundation			X	
Fairfax County Archaeological Services				X
Fairfax Museum and Visitors Center		X		

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Foundation for Historic Christ Church, Inc.	X			
Fredericksburg Area Museum and Cultural Center			X	
Historic Crab Orchard Museum and Pioneer Park, Inc.				X
Jamestown Museum		X		
Jamestown National Historic Site		X		
Loundon Museum Inc.	X			
Mary Bell Washington Museum and Library			X	
The Oyster and Maritime Museum of Chincoteague				X
The Salem Museum		X		
Virginia Department of Historic Resources				
Virginia Museum of Natural History				

Note: Locations visited indicated in **Bold**.

Comments

There are a significant number of institutions in Virginia with enough resources and interest in the project. Three institutions were visited that are part of the Commonwealth of Virginia, including the Virginia Department of Historic Resources, the Virginia Museum of Natural History, and the Archaeological Research Center at Virginia Commonwealth University. A summary of the Decision Support Model scoring is provided in Table 23.2.

Archaeological Research Center, Virginia Commonwealth University

Architectural Summary

Site Conditions

The Virginia Commonwealth University (VCU), Archaeological Research Center (ARC) is located near downtown Richmond, Virginia. ARC leases almost 14,000 ft^2 of warehouse/office space on the first floor of a three story 90,000 ft^2 building. The archaeological collections account for 2,500 ft^2 to 3,000 ft^2 of the 14,000 ft^2 lease space. Several parking spaces are located within the ARC area, whereas only parallel streetside parking is found on the remainder of the site. A narrow alley runs the length of the block to the rear of the structure.

VCU has recently acquired property and is building in the neighborhood. While the dense urban setting prohibits any feasible building expansion, the building ARC currently occupies has additional space available for expansion.

Building Condition/Structural Adequacy

Originally built in the 1920s, the building once was used as an automobile dealership as well as a sports venue. The current owner purchased the building in 1993 and has made improvements only when needed by a tenant. The warehouse building has a brick exterior with a fire separation wall dividing the building and its structural systems. The western portion of the building is a concrete frame structure, including an auto ramp to the second floor and floor loading able to accommodate an auto repair business on the second floor above the space leased by ARC. The eastern portion of the building has a steel frame structure that once supported a variety of manufacturing operations on the second and third floors. Floor loadings have been estimated between 150 psf and 300 psf with the larger capacities in the western concrete portion of the structure. The structure showed no signs of major defects.

The exterior brickwork was cracking near several window sills and lintels. The windows of the facility appear to be original to the building and will soon need to be replaced. The roof had several active leaks into areas of the third floor. The building may have asbestos piping insulation. No abatement measures have been taken during previous renovations. In the ARC collections storage area, a significant leak from a cast iron radiator unit was observed.

Code Requirements/Egress/Accessibility

The facility is classified in the building code for business use (B use group, type 3B construction). The building requires improvements to comply with the Americans with Disabilities Act (ADA) and current fire safety standards. Any significant future renovations will require the installation of a new fire stair and passenger elevator core. Currently, the building is only served by a freight elevator in the eastern portion of the building. Interior automobile ramps and the freight elevator make disabled accessibility possible, but with significant difficulty. ARC leased space has been updated to meet current egress and building code requirements. The first floor location makes it ADA accessible.

HVAC Systems

The building is heated by an oil fired, low-pressure steam system. The radiators and piping for the heating system are in poor repair and appear to be original to the building. There is no central air conditioning. Uses other than basic storage would require an updated system. New leased areas are cooled with an independent heat pump unit.

The ARC space is served by the building's steam heating system. The office area is cooled by a heat pump unit. The collections storage is also heated by the building's system, but is not cooled.

Fire Suppression and Detection

The entire facility is protected by a wet-pipe fire suppression system. The sprinkler system is divided by the fire wall into a west and east portion. The fire suppression system and fire extinguishers are annually inspected. The sprinkler system is triggered by heat sensors in the sprinkler heads. No manual alarms or smoke detectors were observed in the building.

Security System

The building has no comprehensive security system. The ARC space has no intrusion alarms, motion detectors, or video monitoring. Entries to the building are lockable as is the collections storage area. The VCU police department performs regular patrols of the area.

Collections Management Summary

Scope of Collections and Mission Statement

The ARC mission statement includes archaeology. ARC's scope of collections includes archaeological materials from the State of Virginia, the Mid-Atlantic region, the southeastern United States, and the Caribbean.

Archaeological Collections Storage

The collections storage area is separated from ARC's garage area by a chain link enclosure. Unshaded windows are located on the north wall of the collections storage area. Collections are stored on four large banks of metal shelving. All collections are stored in polyethylene bags and placed in acid-free cardboard boxes.

Environmental Controls

The building occupied by ARC does not have adequate environmental controls. The building has heat, but lacks a cooling system. Relative humidity is not monitored nor regulated. At the time of the on-site visit there was a large puddle of water on the floor from a leaking over-head radiator pipe. Pest risk is a recurrent problem.

Range of Support Facilities for Archaeological Collections

ARC has adequate support facilities for archaeological collections including a storage area, a wet-processing lab, a general processing lab, and office areas. ARC does not currently have a conservation lab. ARC staff mentioned that they have conservation equipment, but it is not used since they do not have a Conservator.

Composition of Staff

ARC does not have a Collections Manager, a Conservator, a Curator, nor a Registrar. The ARC Laboratory Director is responsible for collections management. However, only 20-50% of this position is devoted to collections care due to additional responsibilities. The majority of ARC staff are involved in administration, outreach, and archaeological contracting duties.

Administrative Record Keeping and Storage

Currently, the staff maintain catalog information, artifact condition information, inventory records, object location information, loan information, and photographs and slides of the collections. However, acquisition/accession records, environmental records, and deaccession files are not currently maintained. ARC does not complete a formal accession process and does not deaccession collections. The staff are beginning to use the *Re:Discovery* computer database system for catalog information. Currently, only larger collections have been entered into the database.

Associated Archaeological Documentation and Storage

ARC has large collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in acid-free boxes in the collections storage area. Duplicate copies have not been made of associated archaeological documentation. Since documentation is curated in the collections storage area, it is subject to the same environmental controls.

Collections Management Policies

ARC does not have a written accession policy, a disaster plan, nor a deaccession policy. ARC does not currently accession or deaccession collections.

Administration Summary

Background

ARC was founded in 1978. The ARC performs both research and contract related archaeological fieldwork. Archaeological collections from Fort Lee, Fort Belvoir, Vint Hill, and the Yorktown Naval Weapons Station are curated by ARC. However, no formal, signed written agreements are in place for the curation of these collections.

Real Estate

ARC currently leases space for its offices and collection storage. Although the landlord has been very amenable to making the changes that ARC has requested, the landlord would have to approve any additional changes. ARC has a two year lease with three one-year options. ARC is in the first option year.

Administration

The university Director of Sponsored Programs could financially commit ARC to a partnership with DoD and USACE and could sign a cooperative agreement. Individual staff members write their own grants as no one individual writes grants that are administered by Sponsored Programs.

The university has a Development Office that performs fundraising.

Outreach and Education Programs

ARC staff members spend part of their time on outreach/education. They have created exhibits, conducted programs for school groups, used volunteers in excavations, and have many opportunities for hands-on training in the field and lab to students/volunteers. ARC is an integral part of VCU's African-American Studies program and the staff have worked with a state recognized Native American tribe, the Mattaponi.

Contributions

ARC could offer floor space to store archaeological collections. It also has existing laboratory equipment such as sinks for artifact washing, flotation tanks, and conservation materials. Volunteers and interns would be available for processing of collections. Visiting scientists would also have access to study DoD/USACE archaeological collections.

Notes

Plans for the future of the building are uncertain. It appears that VCU may lease space for other university programs and uses. The owner is also willing to sell the building outright and is quite eager to lease additional space.

Virginia Department of Historic Resources

Architectural Summary

At the time of the on-site visit, the Virginia Department of Historic Resources (VDHR) was planning to move into a new facility being constructed by the Virginia Historical Society. The new building will provide the needed space to consolidate the offices and collections of VDHR into a single facility. The building is scheduled to be completed in March 1998.

Currently, the VDHR offices are located in a row of 1830s townhouses near capitol square in Richmond, Virginia. The collections are stored elsewhere in a former tobacco warehouse built in 1899 and located about 10 blocks southeast of the headquarters complex.

221 Governor Street

The headquarters of VDHR is currently located in a row of 1830s town homes, on a steep slope with the town houses stepping down the hill. The topography makes circulation among the homes difficult. These facilities are also inaccessible to the disabled. The VDHR library, archives, conservation lab, and general offices are located in three attached brick structures.

An experimental aluminum building is attached to the three story town homes. It is listed on the National Register of Historic Places as an early example of aluminum construction. The aluminum building houses VDHR's study collections, an artifact laboratory, as well as additional office space.

2000 East Cary Street

Long-term storage of archaeological collections is on the second floor of a four story brick warehouse built in 1899. The structure is a wood frame with 2x lumber construction with wood plank floorboards. Formerly a tobacco warehouse, the building was renovated in the late 1980s and is now owned by the Commonwealth of Virginia and used for storage of state records. The building's interior space is carved into smaller storage areas divided by corrugated metal partitions. The building has two interior loading docks as well as a freight elevator. The building is accessible to the disabled with significant difficulty through the loading area and freight elevator. VDHR has stored archaeological collections in this facility since 1991. VDHR space is approximately 10,000 ft^2.

A dry pipe sprinkler system protects the wood structure throughout. The fire suppression system is triggered by heat sensors in the sprinkler heads. No smoke detectors or manual alarms were observed.

In general, the facility was in good condition. A member of VDHR staff stated that there had been no flooding or leakage problems since the institution's use of the space. The brick load bearing walls did not show any significant signs of deterioration. Signage throughout the building indicated a 200 psf load capacity.

The building has no heating or air conditioning system. The temperature of the collection storage area has been known to vary between 40EF and 80EF.

Virginia Historical Society – Addition

Use of a new facility has been made possible by a partnership between VDHR and the Virginia Historical Society (VHS). VDHR resources offered to the partnership include an extensive archaeological collection. VHS provided an established record of education and outreach as well as a quality facility to which an addition could be added. The new addition to the VHS building will contain a collections storage and office area for VDHR as well as exhibition space for the VHS museum.

VDHR will occupy the first and third floors of the new facility. The first level will accommodate the collections storage area, conservation lab, and research and processing areas. The third floor will contain VDHR offices that are now scattered throughout the townhouse row on Governor Street. VHS will use the second floor for an expanded exhibition area. Each institution will have separate entrances and identities within the addition and will continue to operate independently. The result for both institutions should be improved programs and greater capacity for public outreach and accessibility.

Site Conditions – New Facility

The new facility is located in a historic area of Richmond, Virginia. The monumental building was originally built in 1912 as a Confederate soldier's memorial. An addition was made in the 1920s and further improvements were made in 1957 when the VHS began to occupy the building. A library and auditorium/assembly room were added to the rear of the building in a 1991 addition. The new 38,000 ft^2 addition is attached to the north side of the existing building. Future expansion is possible in the form of a twin wing attached to the south side of the existing

building.

The main parking area and entry into the existing building are accessed from the east. Additional parking is found in the rear of the building on the western edge of the property. The site has adequate parking with designated disabled parking. The west or rear of the new addition will provide a covered loading area and central security booth. The main entrance to VDHR portion of the new addition is found on the north side of the property.

Building Condition/Structural Adequacy – New Facility

The condition of the existing 1912 building and its additions, the portions of the new addition completed and the construction documents, indicates that the new VDHR wing of the VHS building will be highly finished and well executed. The lower level of the addition is partly below grade. This level has a concrete frame structure and will contain the archaeological collections. The upper two levels will have a steel frame structure with a stone veneer to match the exterior materials of the existing building.

Code Requirements/Egress/Accessibility – New Facility

The 1912 building and each addition have been designed according to all current building and fire safety codes (Virginia Statewide Building Code, mixed use groups A-3, S-1, B, type 2B construction). The building is in compliance with the Americans with Disabilities Act. Two elevators provide access throughout the entire facility.

HVAC Systems – New Facility

The HVAC system of the new addition is integrated into the existing VHS systems. Three new gas boilers were added to provide heated air for the new addition. During the 1991 addition, four rooftop chiller units were sized to meet the cool air needs of the new addition as well as a future expansion. New air handling units will circulate heated and cooled air in the new addition. Humidity control is also part of the entire VHS-VDHR facility. The new addition has temperature and humidity independently controlled within each of the three levels.

Fire Suppression and Detection – New Facility

The new addition will be protected by a wet pipe system with on/off controls at the sprinkler head. Heat sensors and manual alarms will trigger the fire suppression system. Fire extinguishers are also located throughout the VHS-VDHR facility. A security station will monitor the fire suppression and detection system, which is also wired to the local fire department.

Security System – New Facility

A central security station monitors the entire facility. A card key tracking system records access to sensitive areas. Intrusion alarms and motion detectors are located throughout the building. When the VHS exhibits are open, the VDHR portion of the new addition will be secured.

Collections Management Summary

Scope of Collections and Mission Statement

VDHR is the primary archaeological repository for the Commonwealth of Virginia. VDHR's scope of collections includes archaeological collections from Virginia. VDHR now curates approximately 7,200 ft^3 of archaeological collections.

Archaeological Collections Storage

VDHR is an institution in transition. Currently, VDHR occupies several buildings, but plans to move into a curation facility with VHS. Archaeological collections are now stored at the warehouse facility at 2000 East Cary Street. VDHR uses a portion of the second floor for collections storage in two large rooms that provide approximately 10,000 ft^2 of storage space. Oversized collections are stored in the first room on a series of metal shelving units that are draped with plastic sheeting. The majority of archaeological collections are stored in the second room on banks of metal shelving units. Archaeological collections are stored in polyethylene bags and placed in acid-free boxes. Some of the boxes are compressed. The temporary storage facility at 2000 East Cary Street has served VDHR well, but cannot provide an adequate environment for the curation of federal archaeological collections.

VDHR also maintains study collections at their headquarters at 221 Governor Street. prehistoric and historic study collections are stored in two rooms that also function as processing labs. Collections are stored in a series of locking metal cabinets. These areas lack adequate fire suppression and environmental controls.

Environmental Controls

The warehouse building at 2000 East Cary Street lacks heating and cooling and experiences temperature fluctuations of up to 40° F. The study collections areas at the 221 Governor Street also lack adequate environmental controls. While relative humidity is monitored using a hygrothermograph, it is not controlled. This problem will be alleviated when VDHR relocates their collections to the new wing at VHS.

Range of Support Facilities

VDHR has adequate facilities for the support of archaeological collections including collections storage areas, a conservation lab, processing areas, and general office areas. However, these areas are spread out in a series of buildings, which makes accessing them difficult. Luckily, VDHR will be able to consolidate their office, collections storage, and conservation lab into the new facility at VHS. VDHR will also be using a portion of the existing VHS museum for archaeology exhibit space.

While the new facility will provide much needed space for the VDHR staff, it will be at maximum capacity shortly after VDHR moves in. According to VDHR staff, the new collections storage area at VHS will accommodate only a few years growth.

Composition of Staff

VDHR has three staff members devoted to the care of the archaeological collections. These include the Chief Curator, an Associate Curator, and a Conservator. VDHR does not currently have a Registrar or a Collections Manager. VDHR has supplemented its staff by using work study students from Virginia Commonwealth University, most of whom have no background in archaeology.

Administrative Record Keeping and Storage

VDHR maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, and loan information/agreements. Administrative records are currently stored in the Chief Curator's office and will eventually be transferred to the new wing of VHS. A computer database system is also used to maintain catalog information. The staff indicate that information from approximately 75% of their collections has not been entered into this database. The information is backed-up as changes are made and a copy is stored off site.

Associated Archaeological Documentation and Storage

VDHR has large collections of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs/slides. Associated documentation is stored in a series of rooms in VDHR's headquarters at 221 Governor Street. At present, associated documentation is not adequately protected from fire, as several storage areas lack fire suppression systems. This problem also will be alleviated when VDHR relocates to the VHS facility.

Collections Management Policies

VDHR does not have adequate written collections management policies. Specifically, it does not have a disaster/emergency plan, an Integrated Pest Management plan, or a deaccession policy. The absence of a disaster/emergency plan is of concern, as the 2000 East Cary Street facility is located in the 100 year floodplain. VDHR has an official policy prohibiting deaccessioning.

Administration Summary

Background

VDHR has its roots in another state organization that existed since 1967, but was founded as the VDHR in 1989. VDHR curates archaeological collections from the Norfolk District of USACE, Fort Monroe, Fort Eustis, Fort Lee, Naval Surface Warfare Center Station, Dahlgren Division, and the Marine Corps Base at Quantico. VDHR and VHS have entered into a public/private partnership to construct a new wing to the existing VHS museum. VDHR will transfer the archaeological collections it now curates to the VHS facility when it is completed in 1998. VDHR will have offices and labs in the new wing.

Real Estate

The new wing will be owned by VHS and will be leased to VDHR for 20 years. VDHR collections are now stored in a warehouse constructed in 1899 and owned by the Commonwealth of Virginia. The warehouse is in a flood plain and is protected by a flood wall constructed along the James River by the Baltimore District. VDHR could seek additional space if the VHS space needs to be expanded.

Administration

The Director of VDHR could financially commit to a partnership with the DoD and the USACE and could sign a cooperative agreement. No one individual writes and tracks grants. Individual staff members pursue their own grants. Part of the Deputy Director's time is spent fund raising. Other staff members also spend part of their time fund raising.

Outreach and Education Programs

VDHR has many partnerships with other organizations in the state for public outreach and education. For example, partnerships that focus on archaeology and the public include those with Jefferson National Forest, the Association for the Preservation of Virginia Antiquities, the Virginia Historical Society, and the Archaeological Society of Virginia. A traveling case on archaeology is available to schools. A video was produced about Native Americans that actively sought their participation in the planning. VDHR has worked with African-American groups on historic preservation issues. The four VDHR regional offices provide a local presence for archaeology sponsored by the state of Virginia.

Contributions

VDHR could contribute space in the new curation facility, staff expertise that includes a Conservator, access to the many partnerships that would provide a greater visibility and thus potential use for DoD/USACE collections, and long-term care for the collections.

Notes

VDHR is currently in transition. The staff have been working in a cramped and difficult environment for several years. VDHR's partnership with the VHS will have many benefits, including a new and improved facility and location. Once VDHR has moved into the new wing of the VHS, they will be able to function more efficiently. The staff will also have an opportunity to use exhibit space in the existing VHS, which will greatly benefit each institution and the general public. However, the storage space at the new facility will be limited and is expected to fill up quickly. VDHR will need to pursue additional storage space in a few years.

Facilities Update

St. Louis District staff contacted VDHR in August 1999 to obtain updated information on the facilities. The VDHR/VHS plans previously presented did indeed result in a new collections

facility. According to VDHR staff, the facility meets the standards outlined in 36 CFR Part 79. Building aspects of notable mention include a conservation lab (and a conservator), climate and humidity control, movable shelving units, and a dry-pipe sprinkler system for fire detection and suppression.

Virginia Museum of Natural History

Architectural Summary

Site Conditions

The Virginia Museum of Natural History (VMNH) is located in a former elementary school building in Martinsville, Virginia. The campus consists of a main school building with additions and an annex building connected by a covered walkway. The site is directly accessible from a major city street and there are over 100 parking spaces available. An uncovered loading area is located in the rear of the building. The parking surface is in need of improvement and the site in general is in need of better maintenance. Local zoning ordinances would influence any renovations and additions on the property. An addition to the existing building is possible. VMNH is investigating a plan to purchase and renovate a local hospital for more space.

Building Condition/Structural Adequacy

The original elementary school building was constructed in 1927. Major additions were completed in 1947 and 1955. The annex structure was built in 1955. The school operated until 1980 and VMNH occupied the 35,000 ft^2 building by 1986.

The 1927 structure has brick exterior construction with wood interior structure throughout. The 1947 addition has a concrete floor structure with wood structural members at the roof. The 1955 addition is a concrete structure throughout. The structure and its additions are in fair condition. There were no signs of major structural defects. A neoprene roof system was installed in 1991. The ground level of the building contains the museum's exhibition space and offices. The basement has some collections storage, laboratory spaces, and the exhibition workshop. The annex building contains additional areas for laboratory, office, and collections storage spaces, including the limited archaeological collections.

Some asbestos abatement has been performed within the building, and additional asbestos will be abated as it is encountered. VMNH and its facility occupy limited space.

Code Requirements/Egress/Accessibility

The VMNH facility appears to meet all fire, safety, and building code requirements. There is no elevator in the building (according to the HVAC improvement plans, BOCA A-3, assembly use). Three fire exits provide egress from the building. The original school-use design of the building determines fire rated corridors and egress in the building. Handicap access from the five designated parking spaces is through the main entrance into the ground floor. Basement access for handicapped persons is through the rear of the building.

HVAC Systems

The VMNH facility is currently heated by twin oil-fired steam boilers in a single loop configuration. The building has no central air conditioning system. For cooling needs, the museum has added a number of electric heat pump units with ductwork to sensitive areas. Some offices are also served by window air conditioners. As early as summer 1997, VMNH plans to install an entirely new and updated HVAC system.

Fire Suppression and Detection

The building is protected by a wet-pipe type fire sprinkler system throughout the facility. Sensitive areas of the facility such as exhibition areas are protected by a dry-pipe sprinkler system. Heat sensors in the sprinkler head along with manual alarms trigger the fire suppression systems.

Security System

The building has intrusion alarms at each of the major building openings. The front entrance is monitored by a video camera. Motion detectors are located in the corridors and other sensitive areas. The alarm system is wired to a local security company.

Collections Management Summary

Scope of Collections and Mission Statement

The mission of VMNH is "to interpret Virginia's natural heritage within a global context, in ways that are relevant to all citizens of the Commonwealth." VMNH's Scope of Collections includes archaeology, geology, invertebrate biology, mammology, paleobotany, and vertebrate paleontology. The museum's geographic scope of collections includes materials from Virginia, specimens from the eastern United States and coastal waters, and specimens from other regions of the world when relevant. VMNH's archaeological collections consist of 60 ft^3 of material, and archaeology has not been an active field of collection. In 1996 the museum hired a Collections Manager that specializes in archaeology, and as a result, the museum is hoping to increase its archaeological holdings.

Archaeological Collections Storage

The museum has collections storage areas in the main museum building and its annex. The majority of their collections are stored in rooms that also function as labs for each division curator. The staff are in the process of putting their collections into new locking Delta Design brand cabinets. Currently, archaeological collections are stored in two metal storage cabinets in a lab area of the annex building. All collections are stored in archival materials. Archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, and biological pests.

Environmental Controls

VMNH collections storage areas have heating and cooling systems. Relative humidity is monitored by the Registrar using a hygrothermograph. The staff expressed concern over the building's current environmental controls, because it is difficult to alter relative humidity with the current system. VMNH has received a grant, which will be used to upgrade the building's HVAC system in the coming year.

Range of Support Facilities for Archaeological Collections

VMNH has adequate support facilities for archaeological collections including designated storage areas, work areas, and general office areas. The museum does not have a lab dedicated to archaeology, as an archaeologist has not been on staff for several years. However, lab space is available that could be used for archaeological collections. The museum does not have a conservation lab since a Conservator is not on staff.

Composition of Staff

VMNH has a total of 35 full-time staff members. Of these, four individuals are responsible for collections management (two full-time and two part-time). Time is devoted to archaeological collections as needed, but no staff members are devoted exclusively to the archaeological collections. The museum does not have a Curator of Archaeology or Anthropology or a Conservator.

Administrative Record Keeping and Storage

VMNH maintains extensive administrative records including acquisition/accession records, catalog information, collection inventories, object location information, and deaccession/disposal information. Copies have been made of administrative records, one of which is on acid-free paper, and are stored in a fire-proof cabinet. In addition, VMNH staff maintain catalog information in the computerized *Paradox* database program. A tape back-up is made of administrative records. All administrative records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

Most of VMNH's archaeological holdings were donated by private collectors. Therefore, many of the collections are not well-documented. Associated archaeological documentation has also been duplicated, one copy of which is on acid-free paper, and is stored in a fire-proof cabinet. All associated archaeological documentation is provided with adequate protection from fire, theft, damage, and destruction.

Collections Management Policies

VMNH has excellent collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, and a deaccession/disposal policy.

Most of these policies are contained in the museum's Collections Management Plan. A long-range Collections Management Plan is prepared every five to seven years and is revised as needed.

Administration Summary

Background

VMNH was founded by Dr. Neal Boaz as a private institution. Facing financial difficulties, Dr. Boaz approached the Speaker of the Virginia House about converting VMNH into a public institution since Virginia did not have its own natural history museum. The Speaker, who was from the local area, supported the idea and was able to find support for the conversion. VMNH then became a Commonwealth of Virginia institution in 1988. VMNH does not curate any federal collections.

Real Estate

VMNH owns the lot on which it is located. Although local set-back ordinances exist, an exemption can be obtained if expansion is proposed. The City of Martinsville has promised the donation of a new building sometime in the future.

Administration

The VMNH Executive Director could financially commit the institution to a partnership after approval of the State Attorney General and could sign a cooperative agreement. The Director of Marketing and a staff of four oversee grant writing. The Director of Marketing and the Executive Director also spend part of their time fund raising. The museum is also supported by a private foundation that performs its own fund raising.

Outreach and Education Programs

VMNH has a Public Outreach Department with three full time staff. School groups visit the museum and the exhibits. Kits that include archaeology are available to schools. The most significant part of the outreach and education programs is the ability of the museum to present material to teachers that can be used in the current standards of learning that are specific to the Commonwealth of Virginia. These materials include archaeology. VMNH sponsors an annual Native American festival and has outreach programs for Native Americans.

Contributions

VMNH could offer its existing staff expertise, provide training and research opportunities for the public and scientists. It would be unable to make a substantial financial commitment to curate DoD/USACE collections.

Notes

VMNH has a solid infrastructure, excellent collections management practices, and great potential for the future. Collections management expertise at VMNH is a valuable resource within the Commonwealth of Virginia.

Facilities Update

St. Louis District staff contacted VMNH in August 1999 to update facilities information. The City of Martinsville recently demolished the old hospital building mentioned earlier in this section as a potential expansion opportunity for VMNH. All debris has been removed, and the site has been returned to a "green" state. The site has been given to VMNH, for the purpose of building a new facility; the target move-in date is January 2003. Initial architecture plans call for approximately 30,000 square feet for research and collections. A conservator is also involved in the design phase, specifying specific building requirements for the collections. The new building will include an archaeology laboratory, and archaeology preparation/conservation laboratory, which will be located adjacent to the main exhibit hall, allowing public observation of basic collections processing and conservation activities.

The current VMNH building has also received some recent upgrades. In 1998 a new building-wide HVAC system was installed, which includes both temperature and humidity controls. The exhibit fabrication department was also moved off-site. This move had two advantages. First, it made a considerable amount of floor space available as additional collections storage space. Second, it removed the source of a considerable amount of dirt and dust from the general environment. VMNH has also added a full-time registrar to the staff.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 23.2 lists these composite scores and the architecture, collections management, and administration scores for each Virginia institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 23.2 Summary of Decision Support Model Scoring - Virginia

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Archaeological Research Unit, Virginia Commonwealth University	**0.5547**	0.08098	0.19961	0.27411
Virginia Department of Historic Resources	**0.7460**	0.19998	0.19976	0.34627
Virginia Museum of Natural History	**0.7181**	0.14309	0.24579	0.32918

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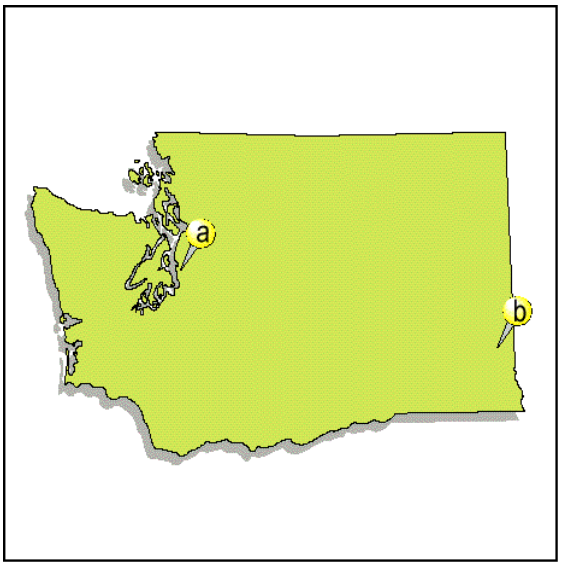
Washington



Archaeological Materials (in cubic feet)

Department of Defense	**280**
USACE	**6,860**
TOTAL VOLUME	**7,140 ft^3**

Number of Institutions Contacted **21**

Institutions Assessed

a. Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

b. Washington State University Museum of Anthropology, Pullman

Background

A list of the institutions contacted in Washington is presented in Table 24.1, including the reason(s) some were not selected for an on-site visit.

Table 24.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Adam East Museum Art Center				X
Alpowai Interpretive Center, Chief Timothy State Park			X	
Chelan County Historical Museum			X	
Cheney Cowles Memorial Museum, Eastern Washington State Historical Society			X	
Cowlitz County Historical Museum		X		
Central Washington University, Anthropology Museum, Department of Anthropology			X	
Dry Falls Interpretive Center, Sun Lakes State Park			X	
Fort Vancouver National Historical Site				X
Island County Historical Society				X
North Central Washington Museum			X	
Orcas Island Historical Museum				X

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Paul H. Karshner Memorial Museum			X	
Rocky Reach Dam	X			
Sacajawea Interpretative Center				X
Sunnyside Historical Museum			X	
Thomas Burke Memorial Washington State Museum, University of Washington				
Wanapum Dam Heritage Center	X			
Washington State Capital Museum			X	
Washington State University, Museum of Anthropology				
Western Washington University, Department of Anthropology		X		
Yakima Indian Nation, Cultural Heritage Center Museum		X		

Note: Locations visited indicated in **Bold**.

Comments

In Washington, there were many institutions with sufficient resources and interest in the project. Two repositories were visited, the Thomas Burke Memorial Washington State Museum at the University of Washington, and the Museum of Anthropology at Washington State University (WSUMA). A summary of the Decision Support Model scoring is provided in Table 24.2.

Thomas Burke Memorial Washington State Museum, University of Washington

Architectural Summary

Site Conditions

The Thomas Burke Memorial Washington State Museum (Burke) is located on the campus of the University of Washington (UW). The museum draws about 60,000 visitors each year. The museum is located near a heavily used 500 car parking lot.

The facility can be expanded in any direction. Additionally, another floor inside the museum could be added. Additions to the Burke are within UW's master planning initiatives.

Building Condition/Structural Adequacy

The building has 16,000 ft^2 of exhibition areas on two levels and about 7,000 ft^2 of combined storage for ethnographic and archaeological collections. The museum building was built in 1962 and has been renovated as recently as 1991. The building is a two story concrete structure (type

I UBC) with brick veneer over a full basement. High ceilings (22 ft +/-) allow for another mezzanine level if needed. The finishes at the upper level exhibition area includes terrazzo floor and hardwood floors. The roof is a tar membrane system covered by large concrete tiles and is original to the building. The building is maintained by the university, and is generally in good condition. There is no evidence of leakage. Asbestos has been identified in the steam pipe insulation, and an asbestos abatement program is in place in conjunction with future renovation work.

Code Requirements/Egress/Accessibility

The 1991 renovation included upgrades for fire safety, security, and Americans with Disabilities Act compliance (ADA). The building has adequate emergency exits and exit lighting. However, ADA accessibility is limited to the public areas of the building. Disabled individuals cannot travel between each floor of the building.

HVAC Systems

The building has an adequate HVAC system. The Burke is served by a hot/chilled water forced air system with appropriate zoning and temperature controls. Utilities for the museum are provided by the university. The 1991 renovation included an extensive HVAC system upgrade. Humidity is not controlled in the building. Despite the improvements to the HVAC system, museum staff expressed their concern about temperature fluctuations and environmental controls.

Fire Suppression and Detection

The museum has a wet-pipe sprinkler system throughout the facility. Manual alarms as well as heat sensors and smoke detectors are wired to the local fire department. The fire detection and suppression system was part of the 1991 upgrade. Fire extinguishers are also present.

Security System

The museum has intrusion alarms, motion detectors, and is wired to campus police. A keypad system controls each entrance to the building. The intrusion alarms are located at each window. Television cameras are used to monitor the museum during open hours.

Collections Management Summary

Scope of Collections and Mission Statement

The Burke's mission is "to encourage understanding and appreciation for the natural and cultural history of Washington, the Pacific Northwest, and the Pacific Rim." Its scope of collections encompasses both archaeological and anthropological materials from these regions. In addition, the museum houses substantial natural history collections. The museum holds approximately 4,000 ft^3 of archaeological collections.

Archaeological Collections Storage

Archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, and biological pests. These collections are stored in several areas. The main room provides storage in large metal cabinets and shelving units. In addition, collections are stored in Room 33 in additional metal cabinets. This room is also used to store human skeletal remains. Archaeological collections are also stored in metal lockers in the basement hallways. Some archaeological collections are stored in a joint-use area with the geological collections. There is no room for additional collections in the archaeological collections area. The Burke is exploring options for an off-site storage facility to accommodate these collections.

Environmental Controls

Archaeological and ethnographic collections are stored and exhibited in areas where environmental conditions are regularly monitored. The staff are unable to control fluctuations in temperature and relative humidity. The museum staff repeatedly expressed their concern for the lack of rigorous environmental controls in the collections storage and exhibit areas.

Range of Support Facilities for Archaeological Collections

The museum has adequate support facilities for archaeological collections including designated collections storage areas, a processing lab, and general work and office areas. The Burke does not have a conservation lab.

Composition of Staff

The Burke has adequate staff including several Curators, a Collections Manager, and a Registrar. The Burke does not have a Conservator on staff. The museum has a mid-sized administrative/development staff.

Administrative Record Keeping and Storage

The Burke has excellent administrative record keeping practices. The staff maintain extensive records including acquisition/accession records, catalog information, collection inventories, object location information, loan information, and deaccession/disposal records. They use the ARGUS system. Administrative records are housed in archival materials and stored in metal file cabinets. All records are protected from fire, theft, damage, and destruction.

Associated Archaeological Documentation and Storage

The Burke has an extensive collection of associated archaeological documentation including archaeological site files, field notes, artifact inventories, reports, and photographs. The original copies of associated documentation are stored in the archaeological collections storage area. Working copies of documents and reports are located on shelves in the archaeology work room/lab. Duplicate copies have not been made for all associated documentation. All associated archaeological documentation is protected from fire, theft, damage, and destruction.

Collections Management Policies

The Burke has written a collections management policy and plan and is in the process of developing a code of ethics. The museum implements many collections management policies including an accession policy, a disaster/emergency plan, an access/use of collections policy, and a deaccession policy. However, the Burke has not finalized an Integrated Pest Management plan.

Administration Summary

Background

The Burke was founded in 1885 and currently curates federal collections, including those from the USACE Walla Walla and Portland districts and the Navy. It is a designated repository for National Park Service (NPS) archaeological collections from the North Cascades Field Area. The Burke has been approached by the NPS to expand the geographic area it serves.

Real Estate

The State of Washington owns the property. Additions to the building are possible, but any additions would have to be approved by the campus architect and the City of Seattle. The Burke was planning a new repository that would be located off campus.

Administration

The Director of Grant and Contract Services of UW could financially commit the Burke to a partnership with DoD and USACE, and could sign a cooperative agreement. Each curator writes the scientific portions of grants and then one of the administrative staff prepares the budget. Both parts were then sent to the Grant and Contracts office for processing. Two individuals especially hired for fund raising for the exhibit renovations were on staff at the time of our visit. These individuals may stay on after the exhibit renovations fund raising is completed.

Outreach and Education Programs

Three people spend a portion of their time participating in archaeology/outreach programs such as lecturing in local schools and Archaeology Day. The Burke has been awarded grants by the NPS to bring Native Americans into the museum to examine collections and to have Burke staff visit tribes. Archaeologists on staff have directed excavations that have depended on volunteers drawn from the general public. Native Americans were involved in the State of Washington centennial exhibit in 1989 and have been on the Community Advisory Board.

Contributions

The Burke could absorb some administration costs associated with administering DoD/USACE collections.

Notes

Several additional facilities also have collections. Kane Hall on the UW campus is devoted to 1,000 ft^2 of botanical and sediment collections along with USACE archaeological collections in the basement. This building was not visited during the on-site visit. It is unknown how much collections storage space is available or how well the facility complies with 36 CFR Part 79. The other building is in downtown Seattle and was previously used as a storage facility by Sears Roebuck and Co. It is also unknown how much available space there is or how well this building conforms to federal archaeological standards.

The museum has a solid infrastructure and is exploring expansion possibilities. It currently lacks the space to curate additional DoD or USACE archaeological collections. Additional space would have to be obtained in order to enter into a partnership for the curation of these materials. The Burke has good record-keeping and a large staff, both qualities that are beneficial for this type of partnership. The museum also enjoys a close relationship with the University of Washington that could be beneficial when pursuing expansion possibilities. Participation of Native Americans in the Burke's programs is strong and these contacts would be useful for DoD/USACE to create and/or extend consultation requirements.

Washington State University Museum of Anthropology

Architectural Summary

Site Conditions

College Hall

The Washington State University, Museum of Anthropology (WSUMA), is located in College Hall in the historic area of the campus. The Department of Anthropology occupies all but 2,800 ft^2 of the 52,000 ft^2 three story building, using the facility for classroom, laboratory, and museum exhibition spaces. The 1909 building fronts a major campus pedestrian mall, with limited parking and truck/fire access to the rear. Additional distant parking areas are provided throughout campus. The constricted campus site prevents any effective expansion of the building. Ethnographic collections storage occupies a 480 ft^2 area on the first floor of College Hall.

Warehouse

The majority of collections are stored at a warehouse building on the southeastern edge of the campus. There is no paved parking at the facility. Museum and Department of Anthropology faculty and staff use a shuttle bus to access the building from the offices at College Hall. The 4,200 ft^2 warehouse can be expanded in two directions.

Building Condition/Structural Adequacy

College Hall

College Hall is in excellent condition. A major 1985 renovation brought fire safety, security, and electrical systems up to local codes and standards. However, there have been no seismic improvements of the concrete structure. The building's windows were improved in the 1985 renovation. The roof is a single-ply membrane system. There was no evidence of leaks or hazardous materials.

Warehouse

The warehouse is a pre-engineered structure. The metal building is insulated with a standing seam metal roof. Leaking was repaired several years ago. No other signs of leaking were observed. There are no windows in the building. The warehouse is in good condition.

Code Requirements/Egress/Accessibility

College Hall

The 1985 renovation brought College Hall into full compliance with fire/life-safety, and UBC requirements (Type I UBC). The building is also in full compliance with the Americans with Disabilities Act (ADA), including restrooms, elevator controls, and emergency exiting systems.

Warehouse

The warehouse also meets all code requirements. The building is divided by a drywall and stud constructed partition. There are two emergency exits, emergency lighting, and no dead end corridors. The storage facility is mostly ADA compliant, lacking only adequate signage.

HVAC Systems

College Hall

College Hall is served by the university utility system. Hot and chilled air provide heating and cooling for the building. However, portions of the building are not equipped with air conditioning service. Cooling and ventilation is controlled in the unserviced areas with the operable windows. The museum space and the "sensitive collections storage" area have an HVAC system.

Warehouse

The warehouse is heated by a natural gas fueled heat pump system, adequately ducted throughout the building. Temperature fluctuates widely and there is no humidity control.

Fire Suppression and Detection

College Hall

College Hall does not have a fire sprinkler system. A halon suppression system exists in the museum exhibition space as well as the "sensitive collections storage" area. Alarms are triggered manually by heat sensors and smoke detectors. The alarm system is directly wired to the local fire department. The building also has fire extinguishers throughout.

Warehouse

The warehouse building does not have sprinklers. A manual and heat-sensor alarm are also wired to the local fire department. The building also has fire extinguishers.

Security System

College Hall

There are motion detectors, but no intrusion alarms in College Hall. Security alarms are wired to campus police. Key access is limited.

Warehouse

The warehouse facility lacks intrusion alarms or motion detection system. Keys are restricted to a limited number of personnel.

Collections Management Summary

Scope of Collections and Mission Statement

The WSUMA mission statement includes archaeological and ethnographic collections. Its scope of collections encompasses materials from eastern Washington, and more specifically, the southern Columbia Plateau. WSUMA has approximately 5,000 ft^3 of archaeological collections. The warehouse contains approximately 3,000 ft^3 of collections from the Walla Walla District.

Archaeological Collections Storage

College Hall

The museum has two collections storage locations. One is located in College Hall, which is used for ethnographic collections and any objects that require more rigorous environmental controls.

Warehouse

Archaeological collections are housed off-site at a university warehouse. Collections are in storage containers stacked 9 to 10 high. The warehouse lacks adequate security and fire

suppression systems.

Environmental Controls

The museum staff regularly monitor temperature and relative humidity. However, relative humidity is not controlled.

Range of Support Facilities for Archaeological Collections

WSUMA has adequate support facilities for archaeological collections including designated collections storage areas, labs, and general work and office areas. The museum does not have a conservation lab. The museum also has access to the facilities and services of the WSU Anthropology Department and the WSU Center for Northwest Anthropology.

Composition of Staff

WSUMA recently established an Assistant Director position in order to facilitate the establishment of partnerships. The museum Director is unpaid and the museum does not have a Registrar or Curator. Currently, the only staff members are the Assistant Director and the Collections Manager.

Administrative Record Keeping and Storage

The museum has good administrative record keeping practices and maintains acquisition/accession records, catalog information, collection inventories, object location information, and deaccession/disposal records. In addition, a *Paradox* computerized database program contains collections information. Administrative records are stored in an area that does not have adequate fire suppression.

Associated Archaeological Documentation and Storage

WSUMA has archaeological site files, field notes, artifact inventories, reports, and photographs/slides. These documents are also stored in the records room in College Hall. The records room lacks an adequate fire suppression system.

Collections Management Policies

The museum does not have adequate collections management policies. It does not have a disaster/emergency plan or a written Integrated Pest Management plan. The staff monitor for pests.

Administration Summary

Background

WSUMA was organized in 1964, but did not have any staff until 1984. The museum curates federal collections including those from the Walla Walla District and the Navy. WSUMA holds 3,000 ft^3 of collections from the Walla Walla USACE District. This represents nearly all USACE archaeological materials believed to have been collected from the State of Washington. WSUMA has a memorandum of understanding with the Walla Walla District for the curation of their archaeological collections.

Real Estate

The state of Washington owns the property. Additions to historic College Hall, where WSUMA is located, are not possible. Any changes would have to be approved by the Historic Preservation Advisory Board. The Board consists of individuals from WSU and the Pullman community. Expansion is possible elsewhere on campus.

Administration

The WSU Vice President for Business Affairs could commit the WSUMA to a partnership with DoD and USACE. The same Vice President could sign a cooperative agreement after review by the State Attorney General's office on campus. A small portion (3%) of one staff member's time is spent in writing grants and seeking outside sources of funding. The university's Office of Grants and Research Development processes grants applications. The Department of Anthropology maintains a gift fund that is used for museum exhibits and to bring in speakers for lectures.

Outreach and Education Programs

No one in WSUMA is exclusively involved in archaeology outreach/education. One staff member spends part of her time (25%) in educational activities. These activities include giving tours to school groups, lectures, and assisting in classroom instruction at WSU and local area schools. The close proximity of several Native American reservations allows WSUMA to bring in Native American craftsmen for storytelling and demonstrations of craft manufacturing. WSUMA has consulted Native Americans on Native American Graves Protection and Repatriation Act issues.

Contributions

The building, existing furnishings and equipment, and staff would be brought to a partnership.

Notes

Participation of Native Americans in WSUMA's programs is good and these contacts would be useful for DoD/USACE to create and/or extend consultation requirements.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum, DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 24.2 lists these composite scores and the architecture, collections management, and administration scores for each Washington institution. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 24.2 Summary of Decision Support Model Scoring - Washington

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Thomas Burke Memorial Washington State Museum	**0.9024**	0.19804	0.28256	0.42176
Washington State University, Museum of Anthropology	**0.5782**	0.05107	0.25406	0.27302

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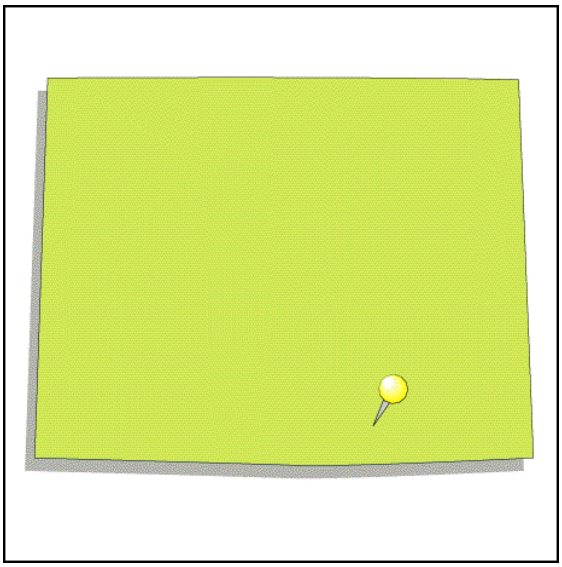
Wyoming



Archaeological Materials (in cubic feet)

Department of Defense	**156**
USACE	**0**
TOTAL VOLUME	**156 ft^3**

Number of Institutions Contacted **11**

Institution Assessed

University of Wyoming, Department of Anthropology, Laramie

Background

A list of the institutions contacted in Wyoming is presented in Table 25.1, including the reason(s) some were not selected for an on-site visit.

Table 25.1 List of Institutions Contacted

Institution	Reason Not Visited			
		Preliminary Questionnaire		
	No Response	Not Interested	Questionnaire Not Returned	Limited Resources
Buffalo Bill Historical Center				X
Fort Casper Museum				X
Fremont County Pioneer Museum				X
Greybull Museum	X			
Jackson Hole Historical Society and Museum				X
Riverton Museum	X			
South Pass City State Historical Site	X			
University of Wyoming, Department of Anthropology				
Wyoming Pioneer Museum	X			
Wyoming State Museum				X
Yellowstone National Park		X		

Note: Locations visited indicated in **Bold**.

Comments

In Wyoming, there were few institutions with enough resources, and there was limited interest in the project from these institutions. Only one repository was visited, the Department of Anthropology at the University of Wyoming in Laramie. A summary of the Decision Support Model scoring is provided in Table 25.2.

Department of Anthropology, University of Wyoming

Architectural Summary

Site Conditions

The main offices of University of Wyoming's Department of Anthropology (UWDA) are located in a building on the southern edge of the Laramie campus. The department curates its archaeological collections in the AG-A Building, a separate facility on the northern edge of campus. This building has a 13 space parking lot directly to the north and a large 100-plus parking space lot is located directly across the street.

The AG-A Building is located behind the main Agriculture, Education, and Engineering buildings that face the University of Wyoming's main quadrangle. This dense campus site prohibits any significant expansion of the AG-A Building.

Building Condition/Structural Adequacy

The single story AG-A Building was built in 1949 as the university's agricultural building. The 13,271 ft^2 building has a concrete slab with brick construction throughout. The roof is a steel truss system with dimensional lumber planking. Large metal windows provide natural light throughout the building. The facility and its large arena space have been dramatically adapted for the department's use.

The arena space is divided with a large movable partition. One side is used exclusively for archaeological collections storage. The arena floor is used for storage shelving. The metal bleacher risers have been adapted in order to accommodate storage-shelving. A single storage-shelving unit has been placed in each bleacher aisle. Office spaces have been created underneath the bleacher system. The department's solution to this unusual space is rather clever and seems reasonably effective. UWDA shares the other side of the partitioned arena with the Range Management Laboratory and other university operations. Additional space in this area of the facility has been recently allocated to UWMA for collections storage. The original floor tiles and roof insulation probably contain asbestos. The AG-A Building had no other signs of structural defects, hazardous building material, or leakage.

Code Requirements/Egress/Accessibility

The dramatic change in the AG-A Building's use creates confusion about its code compliance status (type III construction, mixed use groups including B, S-1, A-2.3). The arena spaces

cannot be accessed without using a flight of stairs, and they are not accessible to the disabled. The bleacher/collections storage areas are not at all accessible, and there is no has no elevator. A central corridor provides emergency egress from the building. This corridor also serves as the building's tornado refuge zone. A state mandated emergency evacuation plan includes the entire building.

HVAC Systems

The AG-A building has no central air conditioning system. A single packaged unit provides cooling for the faunal laboratory in the southwestern portion of the building. The university wide heating system serves the building via underground services. Individual radiator units provide heat.

Fire Suppression and Detection

The AG-A building is not equipped with an automatic fire suppression system. Fire extinguishers are located throughout the building. No automatic fire detection, smoke or heat/sensors, or manual pull alarms are present.

Security System

The AG-A building is not equipped with intrusion alarms, motion detectors or keypad access. Limited key access and dead bolt locks provide security for the collections. A small freezer has been adapted with an alarm for valuable collections storage.

Collections Management Summary

Scope of Collections and Mission Statement

UWDA operates an archaeological collections repository. The repository is administered under the State Office of Commerce and the University of Wyoming's guidelines. The repository itself does not have an official mission statement, and curates collections from Wyoming.

Archaeological Collections Storage

The repository is located in a building shared with the Office of the State Archaeologist. This building, a former agricultural arena, is also partially occupied by the university's Range Management Department. The repository curates approximately 1,000,000 artifacts that measure approximately 4,000 ft^3. Approximately 2,500 ft^3 of these collections are federal.

The staff have made effective use of a very unusual space. Archaeological collections are stored in the bleacher area of the arena. Metal shelving units have been installed on each of the risers. Additional metal shelving units have also been placed on the floor, which is also used as a work area. Archaeological collections are stored in cardboard boxes. In addition, a locking metal cabinet is used to store collections that require higher security.

A portion of a neighboring room is also used for archaeological collections storage. Boxes of collections are stacked on the risers because the staff has not been able to install

shelving units. Joint use of the arena is a security risk since access to the collections is difficult to restrict. Both collections areas lack a fire sprinkler system and adequate environmental controls.

Environmental Controls

The building has heat, but lacks a cooling system. The staff do not monitor temperature and relative humidity, but would like to start a program in the future. Relative humidity is not regulated.

Range of Support Facilities for Archaeological Collections

The repository has adequate support facilities for archaeological collections including designated collections storage areas, work areas, and general office areas. In addition, the State Archaeologist's Office and the state's archaeological site records are stored in the repository's building. A small museum with exhibits is located in the Anthropology building on campus.

Composition of Staff

The repository has a very small staff including a full-time Curator that is responsible for collections management and curation. The Office of the State Archaeologist has the State Archaeologist and an assistant archaeologist. The repository's curation agreements are billed through the Office of the State Archaeologist.

Administrative Record Keeping

The repository maintains adequate administrative records. Collections are tracked by a billing number and are assigned a catalog number by the contractor. The computerized database program *Access*, is used to maintain collections information. The staff have been working on a collections inventory and are about 15% finished. New collections are inventoried as soon as possible after they are received. Administrative records are stored in two locking metal cabinets, one of which is fire proof.

Associated Archaeological Documentation and Storage

The repository maintains adequate copies of associated documentation including archaeological site files and reports. Associated documentation is stored in locked file cabinets inside a vault and is at risk of fire, since he repository lacks an appropriate fire suppression system. Duplicate copies of the records are not available.

Collections Management Policies

At the time of the on-site visit, the Curator was in the process of revising a draft of the repository's collections management policy. The repository does not have an official written mission statement.

Administration Summary

Background

The UWDA repository shares office space with the Office of Cultural Records (archaeological site files), which is a sub-unit of the State Historic Preservation Office, also a division of the Department of Commerce.

Real Estate

UWDA occupies a building designed for animal sciences education that is owned by the university. In addition to UWDA, the Office of Cultural Records, the Office of the Wyoming Archaeological Survey, and the Range Management Department are located in the building. The staff at UWDA are unaware of any legal restrictions to expansion or new construction.

Administration

A cooperative agreement would require the signatures of multiple individuals within the University of Wyoming administration. Funds are generated through fees charged for curation. UWDA does not participate in any fund raising.

Outreach and Education Programs

Staff members are individually involved in archaeology outreach and education. The outreach takes the form of tours of the curation facility, lectures, schools talks, participation in archaeology weeks, and publications. The programs for primary and secondary schools consist of slide presentations and lectures. UWDA is currently developing a hands-on traveling kit for school use.

Contributions

UWDA sees its primary contributions as available space, a fully-funded curatorial position, a funded internship, and the support of the university.

Decision Support Model Summary

Decision Support Model (DSM) scores for institutions were used as supplements to the information presented in the text of this report, for the purpose of objectively evaluating the potential for partnership with the federal government. Additionally, these scores allow for quantitative comparisons of facilities on an individual basis, or over state or region. DSM values are weighted by category, and should be viewed as secondary, support information. Refer to Chapter 2 for an explanation of the DSM structure, and to Table 2.1 for a list of the weighted categories and associated ratios of those categories, as they comprise the DSM value. In sum,

DSM scores were produced for three areas -- architecture, collections management, and administration, which account for 20%, 30%, and 50%, respectively, of the total DSM score.

Table 25.2 lists the composite score and the architecture, collections management, and administration scores for the University of Wyoming. Table 3.2 lists the other institution composite DSM values by state for comparative purposes.

Table 25.2 Summary of Decision Support Model Scoring - Wyoming

Facility	*Composite Score (Max = 1.0)*	*Architecture (Max = 0.20)*	*Collections Management (Max = 0.30)*	*Administration (Max = 0.50)*
Department of Anthropology, University of Wyoming	**0.3999**	0.04877	0.11894	0.23220

26

Summary and Options

Introduction

The Curation Options Project was initiated by the Department of Defense (DoD) and the Army Corps of Engineers (USACE), as the first step in exploring the options associated with a department-wide solution to the National challenge of the long-term curation of DoD and USACE archaeological collections. During the course of Phase I of the project, 311 potential partners in 22 western and mid-Atlantic states were identified. However, 261 were eliminated after examining their capabilities and willingness to participate. During 1996 and 1997 field visits were performed at the remaining 50 institutions to gather information from potential partners that expressed a willingness to discuss, in detail, the implications of a curation partnership with DoD and USACE. Data were collected on building systems and architecture, collections management policies and practices, and administrative aspects of each institution. None of the potential university-based partners appears on the recent DoD "List of Institutions of Higher Learning Ineligible for Federal Funds" (*Federal Register*, January 28, 1998, Vol. 63, No. 18, Page 4226). All 50 institutions should therefore be eligible to receive funds for long-tem curation of DoD archaeological collections.

Options

The original guidance for the project requested that all states in the Phase I project area be visited so that at least one potential partner could be identified in each state. Based on this guidance, the St. Louis District performed field visits to 50 individual institutions in 22 states between July 1996 and October 1997. Twenty-five of these 50 institutions could serve as potential partners with modifications to their existing facilities, collection management practices, and/or staff. The remainder of the institutions may require more extensive measures to effectively implement a partnership for the curation of DoD and USACE archaeological collections.

If implementation of any of these studies is directed, consideration should be given to establishing more than one partner in the states of California and Texas because of the volume of DoD/USACE archaeological material within those states, and the states' geographical and cultural heterogenity. A potential northern California partner remains to be identified since the only institution that was visited there, the Phoebe Apperson Hearst Museum, later withdrew from the project after the on-site visit. In addition, two institutions in Arizona, the Museum of Northern Arizona and the Arizona State Museum, were so similar in almost all categories of the assessment that they are both presented as potential partners in the following options.

In addition to the Individual State Option, St. Louis District also suggests that two subsequent options be considered: (1) a Mixed Option, and (2) a Regional Option. These options draw from the same 25 institutions identified for the Individual State Option. The Mixed Option is composed of 18 institutions from both individual state and regional partners. The Regional Option is composed of 10 regional partners.

There are a number of considerations that may suggest implementation of either the Mixed Option or the Regional Option, over the Individual State Option. These considerations might include (1) cost effectiveness, (2) volume of collections, (3) regional collections similarities, or (4) accessibility of the partnering institution. Not all states will have an institution willing or capable of forming a partnership with DoD/USACE; such situations may not be discovered until well into the negotiation phase of implementation. Additionally, some states may not have a large enough volume of DoD/USACE collections to warrant implementation of a partnership in that state. In these cases it may be cost effective to consolidate that state's collections with another potential partner. DoD/USACE may also choose to keep collections of similar cultural groups together in a partnering institution within that culture area, as opposed to taking the collections outside that area. Lastly, DoD/USACE may wish to consider the utility of consolidating collections with a partner that is located in an area of the state to which it may be difficult for students, researchers, and Native Americans to travel.

Individual State Option

The following 25 institutions constitute the proposed potential partners for the Individual State Option (24 institutions total, Figure 26.1). These institutions are suggested as the most appropriate potential partners in each state for the purpose of curating DoD and USACE archaeological collections.

Alaska.....University of Alaska Museum, Fairbanks

Arizona .....Museum of Northern Arizona, Flagstaff
or ...Arizona State Museum, University of Arizona, Tucson

California
Northern Not Determined
Central .....Bowers Museum of Cultural Art, Santa Ana
Southern .....San Diego Archaeological Center, San Diego

Colorado .....University of Colorado Museum, Boulder

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Idaho .....Idaho Museum of Natural History, Idaho State University, Pocatello

Kansas..... Museum of Anthropology, University of Kansas, Lawrence

Louisiana.....Louisiana Division of Archaeology, Baton Rouge

Maryland.....Maryland Archaeological Conservation Facility, Jefferson Patterson Park, St. Leonard

Montana.....Museum of the Rockies, Montana State University, Bozeman

Nebraska.....University of Nebraska State Museum, Lincoln

Nevada.....Desert Research Institute, Las Vegas

New Mexico.....The Museum of Indian Arts and Culture, Santa Fe

North Dakota.....North Dakota Heritage Center, Bismarck

Oklahoma.....Museum of the Great Plains, Lawton

Oregon.....Department of Anthropology, University of Oregon, Eugene

South Dakota.....South Dakota State Archaeological Research Center, Rapid City

Texas

Western.....Museum of Texas Tech University, Lubbock

Eastern.....Texas Archaeological Research Laboratory, University of Texas, Austin

Utah……Utah Museum of Natural History, University of Utah, Salt Lake City

Virginia.....Virginia Department of Historic Resources, Richmond

Washington.....Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

Wyoming.....Department of Anthropology, University of Wyoming, Laramie

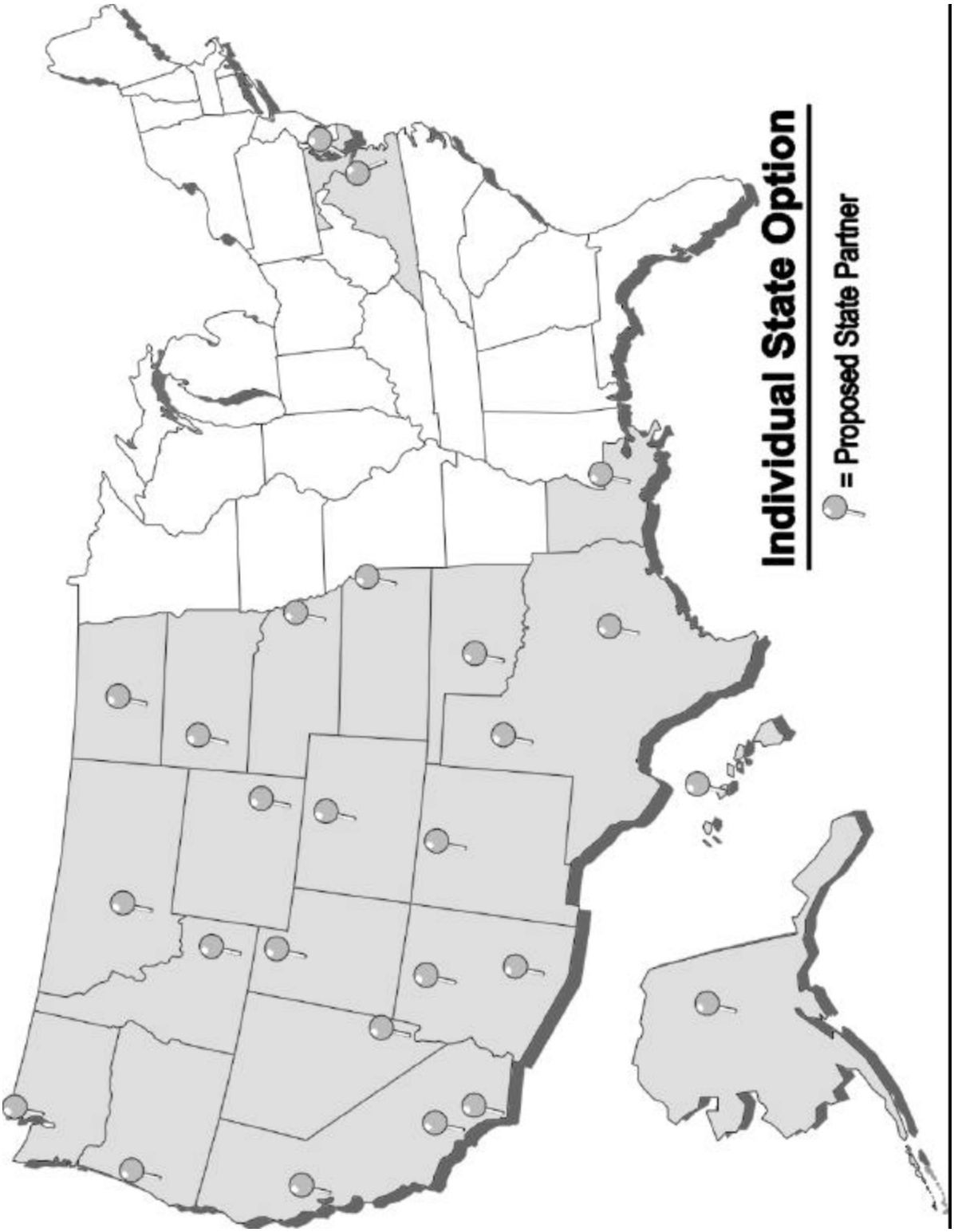


Figure 26.1. Individual State Option – Suggested Potential Partnering Institution Locations

Mixed Option

The first alternative to designating at least one partner in each state visited during Phase I is a Mixed Option, which as presented here identifies 18 institutions to serve the 22 states (Figure 26.2). The suggested regional partners are located in the states of Arizona, Montana, and Washington, and would provide curation services for DoD/USACE archaeological collections from one or more nearby states. All other potential partners would provide curation services for DoD/USACE archaeological collections only from the state in which the partner is located. The proposed partners in the Mixed Option are as follows.

Alaska.....University of Alaska Museum, Fairbanks

Arizona/Utah.....Museum of Northern Arizona, Flagstaff
or...Arizona State Museum, University of Arizona, Tucson

California
Northern.....Not Determined
Central .....Bowers Museum of Cultural Art, Santa Ana
Southern.....San Diego Archaeological Center, San Diego

Colorado .....University of Colorado Museum, Boulder

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Idaho .....Idaho State Museum, Idaho State University, Pocatello

Kansas.....Museum of Anthropology, University of Kansas, Lawrence

Louisiana.....Louisiana Division of Archaeology, Baton Rouge

Maryland.....Maryland Archaeological Conservation Facility, Jefferson
Patterson Park, St. Leonard

Montana/Nebraska/North Dakota/South Dakota/Wyoming
Museum of the Rockies, Montana State University, Bozeman

Nevada .....Desert Research Institute, Las Vegas
New Mexico.....The Museum of Indian Arts and Culture, Santa Fe

Oklahoma.....Museum of the Great Plains, Lawton

Texas

Western.....Museum of Texas Tech University, Lubbock

Eastern .....Texas Archaeological Research Laboratory, University of Texas, Austin

Virginia.....Virginia Department of Historic Resources, Richmond

Washington/Oregon....Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

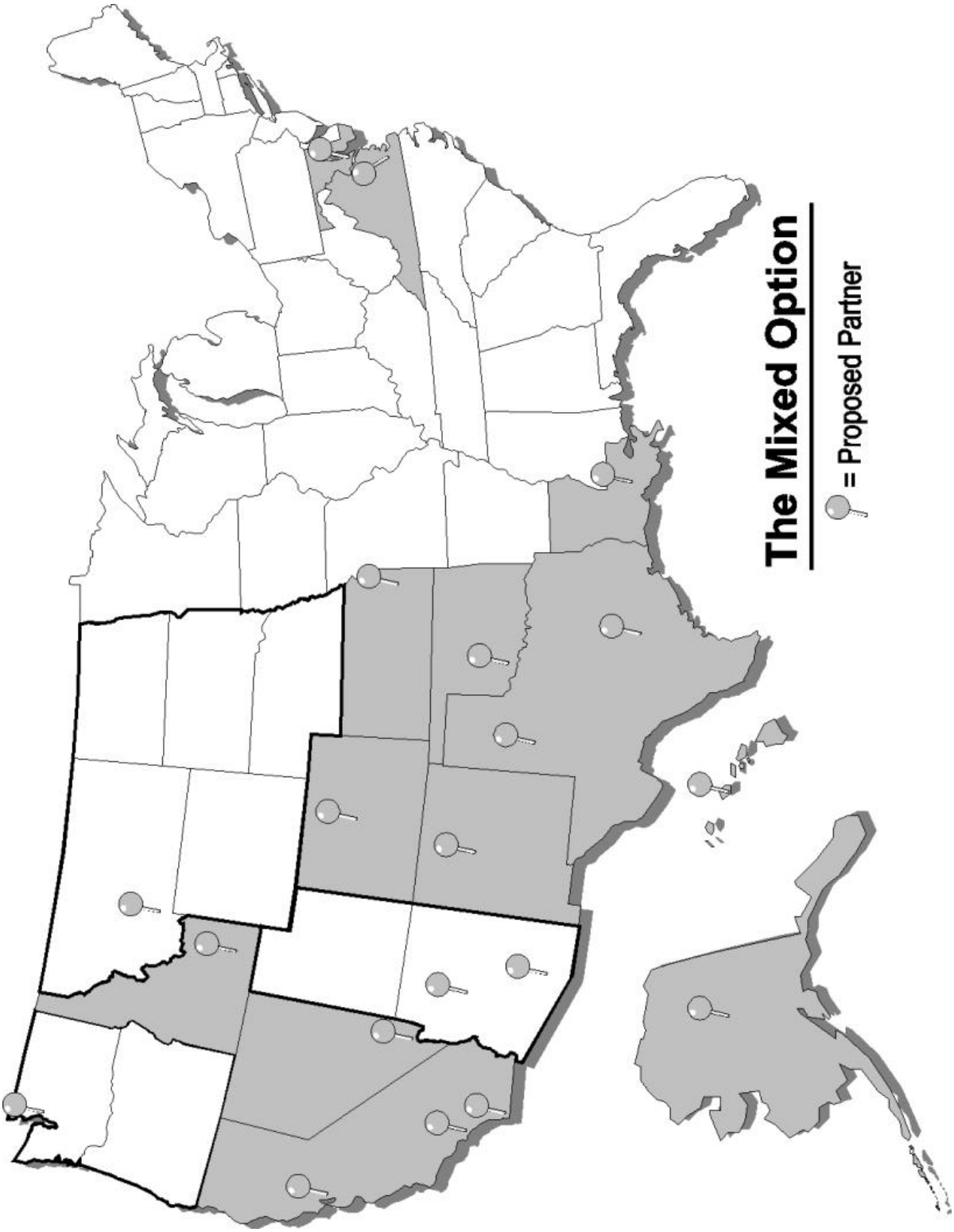


Figure 26.2. Mixed Option – Suggested Potential Partner Institution Locations

Regional Option

The second alternative to designating at least one partner in each of the 22 states is a Regional Option. In the Regional Option, 10 institutions are suggested to serve the 22 states (Figure 26.3). The suggested potential partners in Arizona, California, Kansas, Maryland, Montana, Texas, Utah, and Washington would provide curation services for DoD/USACE archaeological collections from one or more nearby states. Only Alaska and Hawaii would provide curation services for DoD/USACE archaeological collections from a single state. The suggested potential partners in the Regional Option are as follows.

Alaska…….University of Alaska Museum, Fairbanks

Arizona/New Mexico ..Museum of Northern Arizona, Flagstaff
or ...Arizona State Museum, University of Arizona, Tucson

California/Nevada.....San Diego Archaeological Center, San Diego

Hawai'i.....Bernice P. Bishop Museum, Honolulu

Kansas/Oklahoma .....Museum of Anthropology, University of Kansas, Lawrence

Maryland/Virginia .....Maryland Archaeological Conservation Facility, Jefferson Patterson Park, St. Leonard

Montana/Nebraska/North Dakota/South Dakota/Wyoming
Museum of the Rockies, Montana State University, Bozeman

Texas/Louisiana .....Texas Archaeological Research Laboratory, University of Texas, Austin

Utah/Colorado...…….Utah Museum of Natural History, University of Utah, Salt Lake City

Washington/Idaho/Oregon
Thomas Burke Memorial Washington State Museum, University of Washington, Seattle

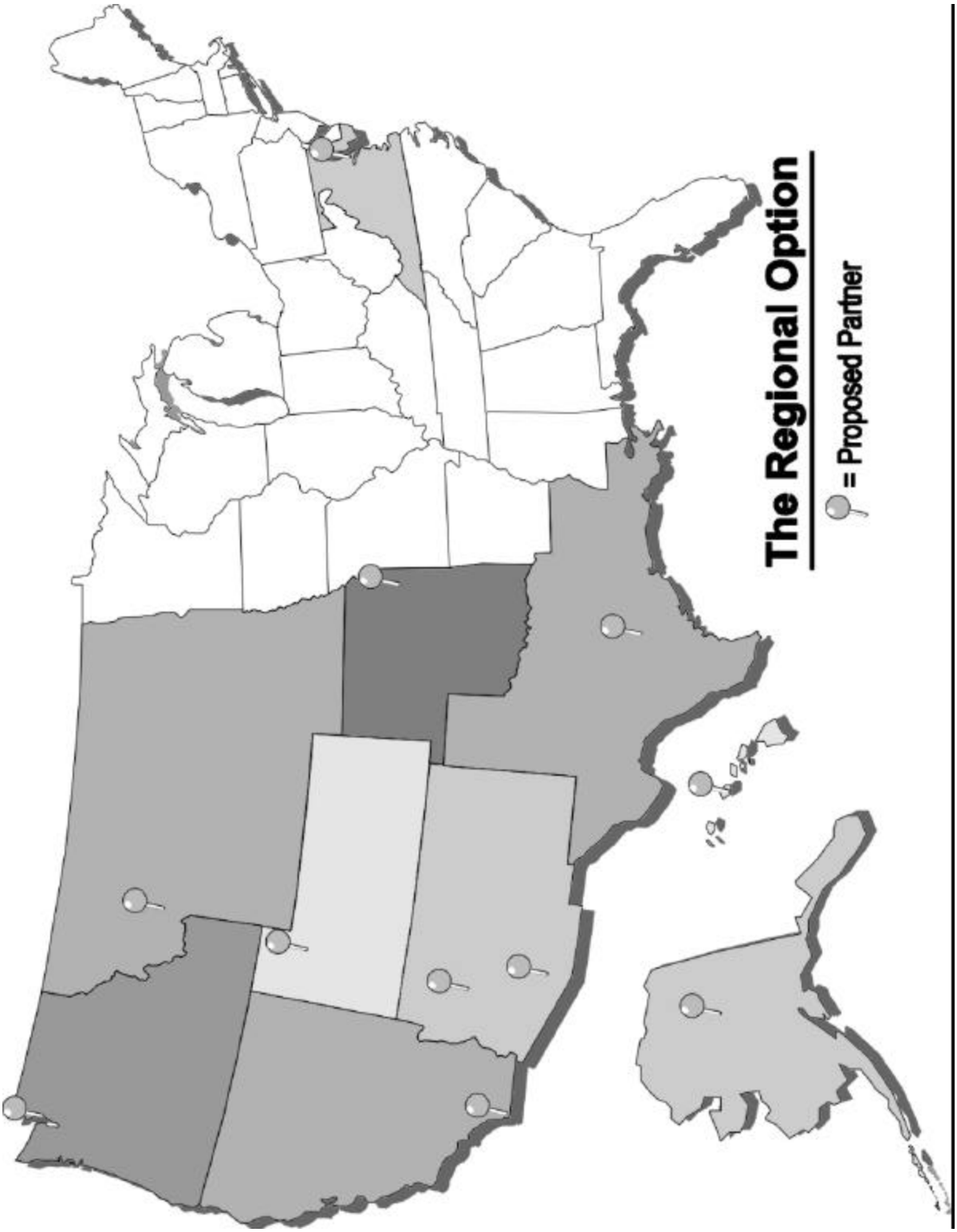


Figure 26.3. Regional Option – Suggested Potential Partner Institution Locations

Options Summary

The potential partners identified in any of the aforementioned options could provide high-quality professional collections management services to DoD and USACE pending modifications to their existing curation programs and/or facilities. These options and the associated recommended institutions are summarized in Table 26.1. DoD/USACE would increase their administrative control over their archaeological collections, including their ability to use these collections in interpretive programs for the public. Establishing partnerships with these capable institutions would ensure compliance with the standards of care outlined in 36 CFR Part 79. Access to the collections will also be possible, in most cases for the first time, because inventories will be created that describe the contents of these collections. These inventories will then allow the interpretive programs to be created and focused on specific audiences. In this way our national heritage assets will be preserved, properly cared for and made available to the public in a variety of formats be it for tribal access, interpretive displays, web sites, or educational programs.

Recommendations for Initial Implementation

Apart from identifying strong potential curation partners, the process of implementing such partnerships should be analyzed and refined. As funding is made available prior to full implementation of any partnership option, St. Louis District recommends that DoD/USACE initiate pilot studies for curation partnerships. As part of a fully implemented program, St. Louis District suggests that DoD/USACE issue an agency-wide directive that emphasizes the curation needs of existing and new archaeological collections.

Conduct a Partner Pilot Study

In order to gather information crucial to the implementation of any of these partnerships, three of the partners should be selected to serve in pilot studies that address the transferring of collections and the establishment of partnerships. Lessons learned from these pilot studies can be applied to a nationwide program, if and when one is created. St. Louis District suggests that the potential Maryland state partner, Maryland Archaeological Conservation Facility at Jefferson Patterson Park; the potential Montana state partner, the Museum of the Rockies; and the potential Washington partner, the Burke Museum, be the focus of pilot studies since there are sufficient quantities of DoD and/or USACE archaeological collections in those states/regions, and they are located in three distinct geographic areas, to determine the success or failure of each study. With archaeological collections in multiple repositories, DoD/USACE could test all aspects of a partnership including but not limited to, (1) determining if the institution meets federal curation guidelines (36 CFR Part 79); (2) how a partnership is established and implemented; and (3) how it would be annually funded.

Table 26.1 Summary of Curation Options and Associated Recommended Institutions

State	*Institution*	*Location*	*Option*					
			Individual State		Mixed		Regional	
Alaska	University of Alaska Museum	Fairbanks	✔		✔		✔	
Arizona	Arizona State Museum	Tucson	✔ *or*		✔ *or*		✔ *or*	
or	Museum of Northern Arizona	Flagstaff		✔		✔		✔
California								
Northern	to be determined							
Central	Bowers Museum of Cultural Art	Santa Ana	✔		✔			
Southern	San Diego Archaeological Center	San Diego	✔		✔		✔	
Colorado	University of Colorado Museum	Boulder	✔		✔			
Hawai'i	Bernice P. Bishop Museum	Honolulu	✔		✔		✔	
Idaho	Idaho Museum of Natural History, Idaho State University	Pocatello	✔		✔			
Kansas	Museum of Anthropology, University of Kansas	Lawrence	✔		✔		✔	
Louisiana	Louisiana Division of Archaeology	Baton Rouge	✔		✔			
Maryland	Maryland Archaeological Conservation Facility, Jefferson Patterson Park	St. Leonard	✔		✔		✔	
Montana	Museum of the Rockies, Montana State University	Bozeman		✔		✔		✔
Nebraska	University of Nebraska State Museum	Lincoln	✔					
Nevada	Desert Research Institute	Las Vegas	✔		✔			
New Mexico	Museum of Indian Arts and Culture	Santa Fe	✔		✔			
North Dakota	North Dakota Heritage Center	Bismarck	✔					
Oklahoma	Museum of the Great Plains	Lawton	✔		✔			
Oregon	Oregon Museum of Natural History, University of Oregon	Eugene	✔					
South Dakota	South Dakota State Archaeological Research Center	Rapid City	✔					
Texas								
Eastern	Texas Archaeological Research Laboratory, University of Texas	Austin	✔		✔		✔	
Western	Museum of Texas Tech University	Lubbock		✔		✔		
Utah	Utah Museum of Natural History, University of Utah	Salt Lake City	✔				✔	
Virginia	Virginia Department of Historic Resources	Richmond	✔		✔			
Washington	Thomas Burke Memorial Washington State Museum, University of Washington	Seattle	✔		✔		✔	
Wyoming	Department of Anthropology, University of Wyoming	Laramie	✔					

DoD/USACE Directive

Finally, DoD/USACE should consider issuing an agency-wide directive to their Major Commands (MACOM), Major Subordinate Commands (MSC), and Field Activities (FA), that emphasizes the need to properly curate both existing and new archaeological collections. Each MACOM, MCS, and FA should indicate to its respective installations which repository their new archaeological collections should be sent to, and that these collections should be prepared according to the standards for collection acceptance agreed to between the repository and DoD/USACE. If these standards are not met, the repository will not accept the collections.

Reference Cited

United States Government

1998 "List of Institutions of Higher Learning Ineligible for Federal Funds." *Federal Register*, Volume 63, Number 18 (January 28), page 4226.

Appendix 1
Project Forms

Preliminary Questionnaire

Name/address of institution:

Name/title of respondent:

Telephone/Fax number:

1. Does the institution curate archaeological, anthropological, or ethnographic collections?

2. If yes, how long has the institution curated archaeological collections?

3. Does the institution curate federal archaeological collections?

4. If yes, how long has the institution curated federal archaeological collections?

5. Does the institution's mission statement include archaeological, anthropological, or ethnographic collections?

6. Describe the staff and the percentage of their time devoted to archaeological collections.

7. What is the size of the institution's archaeological holdings (ft^3)?

8. What is the size of the institution's federal archaeological collections?

9. Describe the range of support facilities available for the archaeological collections.

10. Is the institution a state or federally mandated repository for archaeological collections?

11. How much space is devoted to collections management support services (ft^2)?

12. How old is/are the buildings?

13. Does the institution have any outreach programs for the Native American community? If yes, describe the range and focus of these outreach programs.

Grading Sheet for Preliminary Questionnaire

Name/address of institution:

POC:

Date:

1. Scope of Collections

   Acceptable__ Not Acceptable__

2. Experience in the Curation of Archaeological Collections

   Preferable__ Acceptable__ Not Acceptable__

3. Curation of Federal Archaeological Collections

   Preferable__ Acceptable__

4. Experience in the Curation of Federal Archaeological Collections

   Preferable__ Acceptable__ Not Acceptable __

5. Mission Statement

   Acceptable__ Not Acceptable__

6. Composition and Professional Qualifications of Staff

   Preferable__ Acceptable__ Not Acceptable__

7. Size of Archaeological Holdings

   Preferable__ Acceptable__ Not Acceptable__

8. Size of Federal Archaeological Holdings

Preferable__ Acceptable__ Not Acceptable__

9. Range of Support Facilities Available for the Archaeological Collections

Preferable__ Acceptable__ Not Acceptable__

10. State of Federal Mandated Repository

Preferable__ Acceptable__

11. Ft^2 of Space Devoted to Collections Management Support Services

Preferable__ Acceptable__ Not Acceptable__

12. Age of the Building

Preferable__ Acceptable__ Not Acceptable__

13. Range and Focus of Outreach Programs

Preferable__ Acceptable__ Not Acceptable__

Total_____
Rank_____

Grading Criteria for Preliminary Questionnaire

Responses to the Partnership Questionnaire will be evaluated using the following set of minimum standards potential partners are expected to meet.

These standards will be used to evaluate all questionnaires. Responses will be graded preferable, acceptable, or not acceptable. A point value (preferable=3, acceptable=2, not acceptable=1) will be assigned to each of these responses to determine a total score. A total of 39 points are possible. If an institution receives a score of 25 or lower, it will be eliminated from the list. The top four institutions in each state will be contacted to arrange a visit.

a. Scope of Collections

Acceptable: Institution curates archaeological, anthropological, or ethnographic collections.

Not Acceptable: Institution does not curate archaeological, anthropological, or ethnographic collections.

b. Experience in the Curation of Archaeological Collections

Preferable: Institution has at least 15 years experience in the curation of archaeological collections.

Acceptable: Institution has at least 10 years experience in the curation of archaeological collections.

Not Acceptable: Institution has less than 10 years experience in the curation of archaeological collections.

c. Curation of Federal Archaeological Collections

Preferable: Institution curates federal archaeological collections.

Acceptable: Institution does not currently curate federal archaeological collections.

d. Experience in the Curation of Federal Archaeological Collections

Preferable: Institution has at least 15 years experience in the curation of federal archaeological collections.

Acceptable: Institution has at least 10 years experience in the curation of federal archaeological collections.

Not Acceptable: Institution has less than 10 years experience in the curation of federal archaeological collections.

e. Mission Statement

Acceptable: Institution's mission statement includes archaeological, anthropological, or ethnographic collections.

Not Acceptable: Institution's mission statement does not include archaeological, anthropological, or ethnographic collections, or institution does not have a mission statement.

f. Composition and Professional Qualifications of Staff

Preferable: Institution has all of the following funded positions: curator, collections manager, registrar, and conservator.

Acceptable: Institution has at least two of the following funded positions: curator, collections manager, or registrar.

Not Acceptable: Institution has only one of the following funded positions: curator, collections manager, or registrar.

g. Size of Archaeological Holdings

Preferable: Institution has more than 1,000 ft^3 of archaeological collections.

Acceptable: Institution has at least 500 ft^3 of archaeological collections.

Not Acceptable: Institution has less than 500 ft^3 of archaeological collections.

h. Size of Federal Archaeological Holdings

Preferable: Institution has at least 500 ft^3 of federal archaeological collections in their holdings.

Acceptable: Institution has at least 200 ft^3 of federal archaeological collections in their holdings.

Not Acceptable: Institution has less than 200 ft^3 of federal archaeological collections in their holdings.

i. Range of Support Facilities Available for the Archaeological Collections

Preferable: Institution has all of the following: designated collections storage areas, processing labs, conservation labs, research facilities, general work and office areas.

Acceptable: Institution has at least three of the following: designated collections storage areas, processing labs, conservation labs, research facilities, general work and office areas.

Not Acceptable: Institution has two or less of the following: designated collections storage areas, processing labs, conservation labs, research facilities, general work and office areas.

j. State or federally Mandated Repository

Preferable: Institution already is a state or federally mandated repository for archaeological collections.

Acceptable: Institution is not a state or federally mandated repository for archaeological collections.

k. Ft^2 of Space Devoted to Collections Management Support Services

Preferable: Institution has at least 10,000 ft^2 of space devoted to collections management support services.

Acceptable: Institution has at least 5,000 ft^2 of space devoted to collections management support services.

Not Acceptable: Institution has less than 5,000 ft^2 of space devoted to collections management support services.

l. Age of the Building

Preferable: Building is less than 50 years old.

Acceptable: Building is between 50-75 years old.

Not Acceptable: Building is more than 76 years old.

m. Range and Focus of Outreach Programs

Preferable: Institution has outreach programs for the Native American community concerning cultural issues, repatriation, and exhibit design, if applicable.

Acceptable: Institution has outreach programs for the Native American community concerning cultural issues and repatriation.

Not Acceptable: Institution does not have outreach programs for the Native American community concerning cultural issues and repatriation.

Architectural Questionnaire

Date_____

Facility Name:_____

Address:_____
City/State/Zip:_____
Representative's Name:_____Phone_____
Building Age:_____Comments_____
_____
_____
_____

A. Pre-Visit

Telephone conversation - (if applicable, and if POC is available)

1. POC:_____2.Title_____
3. Phone No._____
4. Are Plans Available:_____5. Type:_____
6. Gen. Comments:_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

B. Site Inspection

1. Adequate Parking Now?_____
2. Comments_____
_____
3. Disabled Parking and Access to entrance?_____
4. Adequate Automobile Circulation?_____
5. Adequate Truck Circulation Space?_____
6. Is there a loading dock?_____Protected?_____
7. Space for expansion @ site
a.Building_____
b.Parking_____
8. Adequate exterior lighting?_____9. Comment_____
10.Site Maintenance: a.Pavement cracking Yes_____ No_____
b.Landscaping Maintained Yes_____ No_____
c.Overall cleanliness_____
11. Availability of utilities: Nat. Gas_____Water_____Electricity_____Telephone_____Fibre Optic_____
12. Are Electric and Telephone service underground?_____

13. Is trash area a. screened?_____b. Maintained?_____
14. Overall appearance of site:_____
15. Gen. Comments:_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

C. Site Diagram (sketch bldg, roads, parking)

D. Utilities

1. Sewer_____2.Septic____3.Water by a. well____b. City main____
4. Electric service____5.Underground?_____6.Nat Gas?_____7.Propane?_____8.Other?___
9. Comments:_____
_____
_____
(Excellent,Good,Fair,Poor)_____

E. Accessibility for ADA

1. No. parking spaces_____2. Van spaces_____3. Parking signage?_____
4. Path-of-travel to front entrance?_____Distance?_____

5. Access via front entrance?_____Ramps?_____
7. Adequate ADA signage?_____
8. Exiting devices for deaf/blind?_____
9. Elevator in compliance? (Braille, height of controls)_____
10. Comments:_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

F. Exterior Building Conditions

1. Are walls,windows,doors,roof maintained?_____
_____
2. Wall material:_____
3. Door material:_____
4. Window type, material:_____
5. Roof fascia, and soffit type:_____
6. Type of roof:_____7.Age of roof:_____
8. Gutters/downspouts:_____9.Skylights?_____
10.Equipment of roof?_____Type:_____
_____
_____
_____
_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

G. Architectural/Structural

1. General Condition_____2.Major use_____
3. Bldg. area (total)_____4. No. occupants_____
5. Bldg Type (structure, UBC type)_____
6. Foundation type_____7.Floor Framing type_____
8. Wall framing type_____9.Roof framing type_____
10. Appearance of any foundation settlement?_____
11. Appearance of structural integrity (Defects?)_____
12. Appearance of structural condition_____
13. Logical path of travel (artifacts)_____
14. Logical layout for people_____
15. Separation of public/artifact space_____
16. Ease of Bldg expansion_____
17. S.F. curation storage(archaeological/ethnographic)_____
_____
_____
18. S.F. "empty storage"_____
_____
_____
19. % Total bldg. area_____20.Clg. ht. @ storage_____21. Cu. ft. storage_____
22. Ease of storage expansion_____

23. Centralized storage, or dispersed to other sites?_____
_____
24. Door types:_____
25. Window types:_____
26. Total # windows @ storage area:_____
27. Dust control at vestibules?_____
28. Other functions of bldg:_____
29. Amount of public usage (heavy,moderate,light)_____
30. General maintenance/condition of storage rooms:_____
31. General maintenance/condition of non-stor.rooms:_____
32. Evidence of leaks (clgs,walls,floors,pipes):_____
_____
33. Rough estimate of bldg cost per s.f.:_____Rationale:_____
_____
34. Seismic up-grade?_____Date_____Describe_____
_____
35. Comments:_____
_____
_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

H. Environmental Concerns

1. Asbestos present?_____
2. Lead paint present?_____3. Other matls?_____
4. Hazardous material on site?_____5. Disposal Problems?_____
6. Comments:_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

J. H.V.A.C.

1. Type of system(stor. areas)_____
_____2.Year Installed:_____
3. Type of system(non-stor. areas)_____
_____4.Year installed:_____
5. Fuel used_____
6. Filters used? Changed?_____
7. Distribution of ducting adequate?_____
8. Temp. at storage areas_____9. Temp. at non-storage areas_____
10. Rel Hum. @ stor areas_____11.Rel Hum. @ non-stor areas_____
12. Venting for hoods at research areas?_____
13. General cleanliness/maintenance of system:_____
14. Comments:_____
_____
_____

_____
_____
(Excellent,Good,Fair,Poor)_____

K. Plumbing

1. Floor drains/backflow preventer at stor rooms?_____2.Other areas?_____
3. Water quality (Filters/treatment)_____
4. Pipe insulation @ unheated areas?_____
5. Pipe maintenance/condition_____
6. Evidence of leaks?_____
7. Comments:_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

L. Electrical Systems

1. Amount of power to bldg:_____
2. Cost per month (if available)_____
3. Grounding system (3-prong plug?)_____
4. Age of rehabs_____
5. U.V. Filters at fluor. lighting at storage rooms?_____
6. Are lights turned off most of time @ storage rooms?_____
7. Type of lamps used at storage rooms_____
8. General condition of electrical systems/lighting_____
9. Comments:_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

M. Site and Regulatory/Code Concerns

1. Ease of site location_____
_____
2. Close to major highway_____
3. Adjacent site use: Residential_____Commercial_ _____Industrial_____
Educational_____Other_____
4. Property ownership_____
5. Part of an Historic District?_____
6. Parking requirements_____
7. Problems with parking expansion?_____
8. Any known planning requirements in general?_____
9. Landscaping/Open space requirements?_____
10. Sewer/water/other moratoria?_____
11. Trash/landfill requirements?_____
12. Water usage problems?_____
13. Hillside/view blockage problems?_____
14. Lot coverage/allowable area problems?_____
15. Special Fire Dept. requirements?_____

16. Other requirements?_____
17. Comments (by responsible agencies/contacts):_____
_____
_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

N. Fire Safety/Life Safety Systems

1. Number of exits:_____
2. Alarm system type (manual, automatic)_____
3. Wired to Fire Dept?_____4.Smoke sensors?/Locations_____
5. Heat sensors?/Locations_____
6. Suppression system type (wet/dry mist)_____
7. Extinguishers_____8.Type/location_____
9. Fire extinguishers last checked: (date)_____
10. Sprinkler system last checked (date):_____
11. Non-combustible construction?_____Required?_____
12. One-hr corridors?_____Required?_____
13. Approved fire dampers in evidence?_____
14. Fire rated doors?_____Required?_____
15. Emergency lighting system?_____
16. Flashing strobe light?_____
17. Lighted exit signs?_____
18. Dead-end corridors longer than 20'?_____
19. Open stairwells to corridors/assembly spaces?_____
20. Open/unprotected elevator shafts to corridors?_____
21. Fire separation walls?_____Required?_____
22. General Comments:_____
_____
_____
_____
_____
_____
(Excellent,Good,Fair,Poor)_____

O. Security Systems

1. Building: Open attic or closed?_____
2. Open return plenum or closed_____
3. Hard/soft finish at exterior?_____4.TV cameras?_____
5. Dead Bolts?_____6.Key pads?_____
7. Lockable storage cabinets?_____
8. Motion detectors?_____
9. Intrusion alarms at most openings?_____
10. Alarms tied to central in-house location?_____11.To police?_____
12. Private security company?_____
13. Comments:_____
_____
(Excellent,Good,Fair,Poor)_____

Architectural Scoring Sheet for the Decision Support Model

INSTITUTION:_____

REGION: _____ STATE: _____

EVALUATOR: _____ DATE: _____

I. Architectural Criteria

A. Systems

1. *Fire Suppression System*

____ Adequate = Building has all of the following: adequate and fully operational sprinkler system and fire extinguishers that have been inspected within the last two years.

____ Poor = Building does not have all of the following: adequate and fully operational sprinkler system and fire extinguishers that have been inspected within the last two years.

Rationale: _____

_____

2. *Fire Detection and Alarm System*

____ Good = Building has all of the following: a series of manual pull alarms and automatic heat and smoke sensors that are wired to a local Fire Department.

____ Fair = Building has manual pull alarms and smoke sensors that are wired to a local Fire Department.

____ Poor = Building does not have all of the following: manual pull alarms and smoke sensors that are wired to a local Fire Department.

Rationale: _____

_____

3. *Building HVAC System*

____ Adequate = the building has an HVAC system that has all of the following: an adequate number of zones, good temperature control, air movement, filtration and distribution.

____ Fair = the building has an HVAC system that provides few zones and minimal temperature control.

____ Poor = the building does not have an HVAC system that provides zones and minimal temperature control. Or building has no HVAC system.

Rationale: _____

_____

4. *Security System Guidelines*

____ Good = Building has all of the following: operational intrusion alarms at major building openings that are wired to a local security company or Police Department and restricted access to collections storage areas.

____ Fair = Building has an operational intrusion detection system that is wired to a local security company or Police Department.

____ Poor = Building does not have the following: an operational intrusion detection system that is wired to a local security company or Police Department.

Rationale: _____

_____

B. Structure

5. *Fire Safety : Building Construction*

____ Adequate = The building's construction follows standards for UBC and BOCA=s construction types, corridors, and doors.

____ Poor = The building's construction does not follow standards for UBC and BOCA=s construction types, corridors, and doors.

Rationale: _____

_____

6. *Hazardous Building Components*

____ Adequate = Building does not contain any of the following materials: asbestos floor tiles, asbestos insulation, lead paint, lead piping, or PCBs (from transformers).

____ Poor = Building contains any of the following materials: asbestos floor tiles, asbestos insulation, lead paint, lead piping , or PCBs (from transformers).

Rationale: _____

_____

7. *Building Structural Adequacy*

____ Adequate = Building has no observable major structural defects

____ Poor = Building has one or more observable major structural defects

Rationale: _____

_____

8. *Plumbing/Drainage/Waterproofing*

____ Good = Building has all the following: operational roof and floor drainage systems, plumbing and exterior drainage systems that are in good repair, and no evidence of leakage.

____ Fair = Building has the following: an operational roof drainage system, plumbing and exterior drainage systems that are in good repair, and possible evidence of minor leakage.

____ Poor = Building does not have all of the following: an operational roof drainage system and plumbing and exterior drainage systems that are in good repair. Building shows evidence of substantial leakage.

Rationale: _____

_____

C. Other

9. *Building Egress*

____ Adequate = The building's egress follows the standards of UBC and BOCA

____ Poor = The building's egress does not follow the standards of UBC and BOCA

Rationale: _____

_____

10. *Handicap Accessibility*

____ Good = Most or all areas of the building are accessible to the disabled

____ Fair = Major areas of the building are accessible to the disabled

____ Poor = Building is not accessible to the disabled

Rationale: _____

_____

11. *Regulatory and Site Problems (for eventual expansion)*

____ Good = Site is suitable for building expansion with minimal difficulties

____ Fair = Site is suitable for building expansion with difficulty

____ Poor = Site is not suitable for building expansion

Rationale: _____

_____

Collections Management Questionnaire

Project:

Recorded by:

Repository Name:

Repository Address

Date of Visit:

Evaluation Team:

Personnel Contacted (name/title):

Environment

Describe the HVAC system.

Are HVAC systems operated on a 24 hour basis?

Are any special climate zones maintained? If yes, describe.

Is relative humidity monitored? If yes, describe procedures.

If hygrothermographs are used, where are they located?

Are hygrothermographs calibrated? If yes, how often?

Are charts from hygrothermographs analyzed? If yes, how often?

Comments:

Particulates

Are filters used in the HVAC system? If yes, what kind?

How often are filters changed?

Are storage and work areas dust-free? Yes/No. Describe.

Are devices used to protect artifacts on open shelving from dust? Yes/No. Describe.

Are doors and windows sealed? Yes/No. Describe.

If doors and windows are not sealed, are they ever opened? Under what circumstances?

Comments:

Fire Protection

Describe the fire detection/suppression systems and their locations.

Are any flammable liquids or materials kept in the collections storage area? Describe.

If so, in what kinds of containers are they stored?

Comments:

Health and Safety Issues

Are Materials Safety Data (MSD) sheets available for all chemicals used in the repository?

Describe how chemicals are stored.

Are hazardous chemicals clearly labeled? Yes/No. Describe

What safety protection measures are in use?

Are areas restricted for exclusive chemical use? Yes/No. Describe.

Are fume hoods located in laboratories where chemicals are used?

Are eyewash stations/emergency showers located in laboratories where chemicals are used?

If so, are they appropriate for the types of chemicals used? Yes/No. Describe.

Comments:

Security

Describe the security systems.

Is additional security provided for fragile or valuable items? Yes/No. Describe.

Comments:

Pest Management

Does the repository have an Integrated Pest Management (IPM) plan? Yes/No. Describe or attach if available.

Is food allowed in the repository? If yes, where?

Describe the maintenance schedule for cleaning.

What is the inspection schedule for collections?

How are infested objects treated?

Comments:

General Collections Information

Does the repository curate the following types of collections?

Check if present.

__Art
__Archaeological
__Botanical
__Ethnographic
__Human skeletal
__History
__Natural history
__Paleontological
__Other:

What are the principal collections in the repository's holdings?

Are any types of collections excluded from curation? Explain.

Estimate the number of archaeological collections in the repository's holdings.

Does the repository have off-site storage for oversized objects?

How is curation financed?

Comments:

Outreach Programs

Does the repository have any community outreach programs? If yes, describe.

Are any of these outreach programs focused on the Native American community? If yes, describe.

Archaeological Collections Storage

Collections storage area name_____Room number_____

Describe the layout of the collections storage area.

Describe the HVAC system.

What types of materials are stored in this room?

What types of shelving units are used?

What types of cabinets are used?

Are shelves and drawers padded? If yes, what materials are used?

What types of containers are used to house archaeological collections?
Primary Containers? Secondary Containers?

Does the repository have an established policy or procedure for labeling primary and secondary containers and artifacts? Describe or attach if available.

Comments:

General Collections Storage Comments:

Human Skeletal Material

Does the repository curate human skeletal material? If so, are any of the collections Native American?

What percentage of human skeletal remains are federal? Nonfederal?

Is the associated documentation curated by the repository?

If not, where is the associated documentation located?

Have human skeletal remains been inventoried in compliance with NAGPRA?

Comments:

Collections Management Policies and Procedures

Does the repository have any of the following written policies and procedures? Attach copy, if available.

__Mission Statement
__Accession/Acquisition policy
__Minimum standards of acceptance
__Field curation guidelines
__Inventory policy
__Loan policy
__Exhibition policy
__Conservation policy
__Packing/shipping procedures
__Disaster/emergency plan
__Access/use of collections policy
__Security guidelines
__Consultation policy
__Integrated Pest Management plan
__Deaccession/disposal policy
__Others:

Comments:

Describe what happens to a new collection once it arrives at the repository.

Is each collection assigned a unique accession number?

Are objects catalogued? If yes, describe the catalogue system.

Is the location of a collection or an object identified in the accession file or catalogue?

Is there a site-record administration system for archaeological collections?

__Smithsonian trinomials
__State, county, city numbers
__Multiple systems
__Other:

Comments:

Access/Use of Collections

Is access to the collections monitored and limited? Explain.

Are the collections accessible to researchers and scholars? Under what circumstances?

Are Native American collections accessible to Native Americans? Under what circumstances?

Comments:

Packing, Shipping, and Receiving

Does the repository have a loading dock?

Is the loading dock secure? Describe.

Describe the loading dock and the receiving area.

Does the building have a logical path of travel for deliveries?

Is there a holding area for collections in transit?

Are incoming collections isolated? Explain.

Comments:

Exhibition Space

Describe the exhibit space.

Is the exhibit area climate monitored? Describe.

Are archaeological materials displayed? Describe.

Comments:

Records and Associated Archaeological Documentation

Does the repository maintain the following types of records? Check if present.

__Acquisition/accession files
__Catalog information
__Conservation information
__Environmental records
__Inventory records
__Exhibit information
__Deaccession files
__Object location information
__Loan information
__Photographs, slides, etc.
__Other:

Does the repository maintain the following types of associated archaeological documentation? Check if present.

__Artifact inventories
__Archaeological site records
__Burial records
__Field notes
__Maps
__Photographs and slides
__Reports
__Others:

Comments:

Describe where records and associated archaeological documentation are stored.

How accessible are records and associated archaeological documentation?

How secure are records and associated archaeological documentation?

How are records and associated archaeological documentation stored?

If file cabinets are used, are they fire-resistant?

Has associated archaeological documentation been inventoried?

Has associated archaeological documentation been catalogued? If yes, describe.

Is there a duplicate copy of records and associated archaeological documentation? Describe.

Where is the duplicate copy stored?

Comments:

Computerized Data Management

Does the repository use automated data processing techniques to manage its collections? Describe.

What medium is used to store data?

Are back-ups made of records? How often?

Is a back-up copy stored off site? Where?

Is the computer on which collection records are stored attached to a network?

If yes, how many people have access to this information?

Is there a backlog of collections data to be entered into the computer? Describe.

Miscellaneous questions

What is the repository's highest priority concerning archaeological collections (e.g., recovery, curation, education, research, exhibition)?

Are there any future plans for renovations or expansion of existing facilities? Describe.

Staff

Describe the administrative or governing body of the institution. Obtain a diagram or flowchart if possible.

How large is the staff? Full time? Part time?

__Curator
__Curatorial Assistant
__Registrar
__Collections Manager
__Conservator
__Archivist
__Lab Assistant
__Security
__Operations/custodial

__Other:
Comments:

In your opinion, does the institution have adequate staff to manage and care for existing archaeological collections? Explain.

In your opinion, are adequate resources and equipment available to manage and care for existing archaeological collections? Explain.

Laboratory/Special Purpose Room

Describe the function of the room.

Describe the layout of the room.

What kinds of furniture and equipment are in use?

__Countertops
__Storage cabinets
__Shelving units
__Examining tables
__Sinks
__Eyewash station
__Emergency shower
__Deionized water unit
__Washer/Dryer
__Fumehoods
__Dust Collectors
__Freezer
__Computers
__Microscope
__Photographic supplies
__Others:

Does the staff feel that equipment/furniture is adequate? What is lacking?

Collections Management Scoring Sheet for the Decision Support Model

INSTITUTION:_____

REGION: _____ STATE: _____

EVALUATOR:_____ DATE: _____

II. Collections Management Criteria

A. Archaeological Collections

1. *Scope of Collections*:

____ Excellent = Institution curates the following: archaeological plus either anthropological or ethnographic collections.

____ Adequate = Institution curates archaeological collections.

____ Poor = Institution does not curate archaeological collections.

Rationale: _____

_____

2. *Environmental Controls*

____ Adequate: Collections are stored in an area where temperature and relative humidity are regulated and monitored on a regular basis.

____ Poor: Collections are stored in an area where temperature and relative humidity are not regulated and monitored on a regular basis.

Rationale: _____

_____

3. *Archaeological Collections Storage*

____ Adequate: Archaeological collections are stored in a manner that protects them from ultraviolet radiation, particulates, biological pests, and general neglect (including but not limited to breakage from compression, water damage, and infrequent housekeeping).

____ Poor: Archaeological collections are stored in a manner that does not protect them from ultraviolet radiation, particulates, biological pests, and general neglect (including but not limited to breakage from compression, water damage, and infrequent housekeeping).

Rationale: _____

_____

B. Administrative

4. *Mission Statement*:

____ Excellent = Institution has a mission statement that encompasses the following: archaeological collections plus either anthropological or ethnographic collections.

____ Adequate = Institution has a mission statement that encompasses archaeological collections

____ Poor = Institution does not have a mission statement that encompasses archaeological materials.

____ Not acceptable = Institution does not have a mission statement.

Rationale: _____

_____

5. *Composition of Staff*

____ Excellent = Institution has all of the following funded (full-time, permanent) positions: curator, collections manager, registrar, and conservator.

____ Adequate = Institution has all of the following funded (full-time, permanent) positions: curator, collections manager, and registrar.

____ Poor = Institution does not have all of the following funded positions (full-time, permanent) positions: curator, collections manager, and registrar.

____ Not acceptable = Any of the following positions are part-time, temporary, or not funded: curator, collections manager, or registrar.

Rationale: _____

_____

6. *Administrative Record Keeping*

____ Excellent = Institution maintains all of the following types of administrative records: acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements, and deaccession/disposal records.

____ Adequate = Institution maintains all of the following types of administrative records: acquisition/accession records, catalog information, object location information, and deaccession/disposal records.

____ Poor = Institution does not maintain all of the following types of administrative records: acquisition/accession records, catalog information, object location information, and deaccession/disposal records.

Rationale: _____

_____

C. Collections Management

7. *Range of Support Facilities for Archaeological Collections:*

____ Excellent = Institution has all of the following: designated collections storage areas, processing labs, conservation labs, research facilities, general work and office areas.

____ Adequate = Institution has all of the following: designated collections storage areas, processing labs, general work and office areas.

____ *Poor* = Institution does not have all of the following: designated collections storage areas, processing labs, general work and office areas.

Rationale: _____

_____

8. *Collections Management Policies*

____ Excellent = Institution has all of the following written collections management policies: accession policy, a disaster/emergency plan, access/use of collections policy, Integrated Pest Management Plan, and a deaccession/disposal policy.

____ Adequate = Institution has all of the following written collections management policies: accession policy, a disaster/emergency plan, Integrated Pest Management Plan, and a deaccession/disposal policy.

____ Poor = Institution does not have a written accession policy, disaster or emergency plan, and a deaccession policy/disposal policy.

____ Not acceptable = Institution has no written collections management policies.

Rationale: _____

_____

9. *Associated Archaeological Documentation*

____ Excellent = Institution maintains all of the following types of associated archaeological documentation: archaeological site files, field notes, artifact inventories, reports, and photographs/slides.

____ Adequate = Institution maintains all of the following types of associated archaeological documentation: field notes, artifact inventories, and reports.

____ Poor = Institution does not maintain all of the following types of associated archaeological documentation: field notes, artifact inventories, and reports.

Rationale: _____

_____

10. *Administrative Records and Associated Archaeological Documentation Storage*

____ Adequate: Institution stores all administrative records and associated archaeological documentation in a manner that will protect them from fire, theft, damage, and destruction.

____ Poor: Institution does not store all administrative records and associated archaeological documentation in a manner that will protect them from fire, theft, damage, and destruction.

Rationale: _____

_____

Administrative Questionnaire

Date:_____

Recorder:_____

Person(s) interviewed and title(s):_____

_____

Institution:_____

I. Background

1. *Have you participated in any similar projects with state, federal or DoD agencies including the Corps?*

_____

_____

_____

_____

2. *Are you a private, local/county, state, or federal institution?*

_____

_____

3. How long has the institution been in existence?

_____

_____

4. Do you currently curate Department of Defense or U.S. Army Corps of Engineers archaeological collections? If yes, from what agencies and/or districts?

_____

_____

II. Real Estate

1. *Who owns the property?*

_____

_____

_____

_____

2. *Are their any restrictions to the use of the property, e.g. requirements for open space, covenants against construction, etc.?*

_____

_____

_____

_____

III. Financial/Administrative

1. *Does a representative from your institution have the authority to commit the institution financially to a partnership with the DoD/Corps for a curation facility?*

_____

2. *Does your institution have one or more individuals whose function is to write and track grant proposals for outside sources of funding?*

_____

_____

3. *Does your institution have one or more individuals whose function is fund raising?*

_____

_____

4. *What percentage of the total budget of the Anthropology Division or if there is no separate Division, for the institution as a whole, would you estimate goes towards administration?*

_____

5. *What percentage of the total budget of the Anthropology Division or if there is no separate Division, for the institution as a whole, would you estimate goes towards archaeological collections management?*

_____

6. *What percentage of the permanent full time staff of the Anthropology Division or if there is no separate Division, for the institution as a whole, is classified as administrative?*

_____

7. *What percentage of the permanent full time staff of the Anthropology Division or if there is no separate Division, for the institution as a whole, is classified as archaeological collections management?*

_____

8. *Has your institution had a deficit in its operating budget in the last five years?*

_____

IV. Agreements

1. *What kind of agreements do you currently have for curation of federal archaeological collections? If the DoD/Corps requested that you sign a cooperative agreement, could a representative from your institution sign such an agreement?*

_____

_____

_____

_____

_____

V. Outreach

1. *Do you have an individual(s) that is (are) exclusively involved in archaeology outreach/education programs? How many and what are their duties?*

_____

_____

_____

_____

2. *What kinds of archaeology outreach/education programs currently exist? Describe.*

_____

_____

_____

_____

3. What would you consider the significant, specialized, or outstanding features of these archaeology outreach/education programs?

_____

_____

_____

_____

4. *Do you have experience working with Native Americans? Describe.*

_____

_____

_____

_____

5. *Do you have archaeology programs for primary and/or secondary schools. Describe*.

_____

_____

_____

_____

VI. Supporters

1. Who are your primary boosters/supporters?

_____

_____

_____

_____

VII. Contribution

1. What would you contribute to a curation facility and the maintenance of DoD/Corps collections? What do you expect the DoD/Corps to contribute? e.g. equipment, staff, floor space, operation and maintenance costs, etc.

_____

_____

_____

_____

_____

_____

2. *What are the costs of curating _____ cubic feet of archaeological materials from DoD/Corps lands if these materials require total rehabilitation, e.g. replacement of boxes, rebagging, repacking, and recataloging? The costs should include materials, labor, operation and maintenance of the repository, and long term maintenance of the materials. Of these total costs, what portion will the repository absorb and what portion would the DoD/Corps absorb?*

_____

_____

_____

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_____

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_____

_____

_____

_____

_____

_____

Additional Comments:

_____

_____

_____

_____

Information to Include For Estimating Rehabilitation and Maintenance Costs of Department of Defense and Army Corps of Engineers Archaeological Collections

When estimating the costs for curating Department of Defense and U.S. Army Corps of Engineers archaeological collections, two separate cost estimates should be calculated since the federal government cannot pay for curation services in a lump sum at the beginning of a curation agreement. The first estimate should include those costs associated with the rehabilitation of the collections. The second estimate should include the costs for maintenance of those collections after they are rehabilitated.

Institution: _____

Date:_____

Total Rehabilitation cost: _____

Total Maintenance cost: _____

Rehabilitation

The following list of items is not complete and serves only as a guide. Items should be eliminated or added as needed to fit a particular repository. The estimate should be based on _____ cubic feet of material to be rehabilitated. It may be useful to present the estimate using one cubic foot as the standard unit of measure multiplied by the total number of cubic feet to be rehabilitated.

1. Materials that hold the collections (archival boxes, plastic bags, folders, padding material) _____

2. Materials to catalog the collections (pens, ink, solvents, hoods, tables) _____

3. Staff time (hourly wage, fringe benefits) _____

4. Operation and maintenance of the facility (heating, air conditioning, utilities, security) _____

5. Overhead _____

6. Insurance (fire, theft) _____

7. Rental space _____

8. Computers (hardware and software) _____

9. Other (list) _____

Total Rehabilitation [ ]

Annual Collection Maintenance

The following list of items is not complete and serves only as a guide. Items should be eliminated or added as needed to fit a particular repository. The estimate should be based on _____ cubic feet of material to be maintained. It may be useful to present the estimate using one cubic foot as the standard unit of measure multiplied by the total number of cubic feet to be maintained.

1. Staff (hourly wage, fringe benefits) _____

2. Operation and maintenance of the facility (utilities, security) _____

3. Materials to store the collections (shelving, fire proof cabinets) _____

4. Overhead _____

5. Insurance (fire, theft) _____

6. Cataloging system (computers, local area network) _____

7. Other (list) _____

Total Maintenance [ ]

Grand Total (Rehabilitation and Maintenance Costs) [ ]

Administrative Scoring Sheet for the Decision Support Model

INSTITUTION:_____

REGION: _____ STATE: _____

EVALUATOR: _____ DATE: _____

I. Background

1. Have you participated in any similar projects with state, federal or DoD agencies including the Corps?

____ Excellent = The institution has participated in a similar project with another federal or DoD agency for the curation of archaeological collections.

____ Adequate = The institution has participated in a similar project with another state agency for the curation of archaeological collections.

____ Poor = The institution has not participated in a similar project with any state, federal or DoD agencies for the curation of archaeological collections.

Rationale: _____

_____

2. Are you a private, local/county, state, or federal institution?

____ Excellent = State or federal institution

____ Adequate = Private or local/county institution

Rationale: _____

_____

II. Real Estate

1. Who owns the property?

____ Excellent = State or federal

____ Adequate = Private or local/county

____ Poor = Not owned by the curating institution

Rationale: _____

_____

2. Are their any restrictions to the use of the property, e.g. requirements for open space, covenants against construction, etc.?

____ Adequate = No

____ Poor = Yes

Rationale: _____

_____

III. Financial/Administrative

1. Does a representative from your institution have the authority to commit the institution financially to a partnership with the DoD/Corps for a curation facility?

____ Excellent = An individual or group of individuals within the immediate bureaucratic structure of the institution such as the governing board and below, has the authority to financially commit the institution to an agreement with the DoD for a curation facility.

____ Adequate = An individual or group of individuals outside the immediate bureaucratic structure of the institution has the authority to financially commit the institution to an agreement with the DoD for a curation facility.

____ Poor = Two or more branches of government must be involved in committing the institution to any financial commitments.

Rationale: _____

_____

2. Does your institution have one or more individuals whose function is to write and track grant proposals for outside sources of funding?

____ Excellent = Two or more individuals are involved in grant writing/tracking.

____ Adequate = The institution has one individual whose job is to write/track grant proposals.

____ Poor = No one on staff is involved in grant writing.

Rationale: _____

_____

3. Does your institution have one or more individuals whose function is fund raising?

____ Excellent = Two or more individuals are involved in fund raising.

____ Adequate = The institution has one individual whose job is to raise outside funds.

____ Poor = No one on staff is involved in outside fund raising.

Rationale: _____

_____

4. What percentage of your total budget would you estimate goes towards administration?

____ Excellent = 15%-25%

____ Adequate = 26%-50%

____ Poor =0%-14%, or over 50%

Rationale: _____

_____

5. What percentage of your total budget would you estimate goes towards archaeological collections management?

____ Adequate = 25%-75%

____ Poor = 0-24% or 76-100%

Rationale: _____

_____

6. What percentage of your permanent full time staff is classified as administrative?

____ Excellent = 15%-25%

____ Adequate = 26%-50%

____ Poor = 0%-14%, or over 50%

Rationale: _____

_____

7. What percentage of your permanent full time staff is classified as collections management?

____ Adequate = 25%-75%

____ Poor = 0%-24% and 76%-100%

Rationale: _____

_____

8. Has your institution had a deficit in its operating budget in the last five years?

____ Adequate = No

____ Poor = Yes

Rationale: _____

_____

IV. Agreements

1. What kind of agreements do you currently have for curation of federal archaeological collections?

____ Excellent = The institution has one or more existing curation agreements with Department of Defense agencies including the Army Corps of Engineers.

____ Adequate = The institution has one or more existing curation agreements with non-DoD federal agencies.

____ Poor = The institution has no curation agreements with any federal agencies.

Rationale: _____

_____

V. Outreach

1. Do you have an individual(s) that is (are) exclusively involved in archaeology outreach/education programs? How many and what are their duties?

____ Excellent = One or more full time, permanent staff are devoted exclusively to outreach/education programs. These programs include Native Americans.

____ Adequate = One or more staff that devote less than full time to outreach/education programs. These programs may only ephemerally involve Native Americans.

____ Poor = No staff are involved in outreach/education programs.

Rationale: _____

_____

2. What kinds of archaeology outreach/education programs currently exist?

____ Excellent = Programs exist for the general public and separate programs exist for Native Americans.

____ Adequate = Programs exist only for the general public.

____ Poor = The institution has no outreach/education programs.

Rationale: _____

_____

4. Do you have experience working with Native Americans?

____ Excellent = Native American heritage programs, advisory board and consulted for NAGPRA.

____ Adequate = Limited interaction with Native Americans working with the institution's archaeological collections.

____ Poor = No experience with Native Americans.

Rationale: _____

_____

5. Do you have archaeology programs for primary and/or secondary schools?

____ Adequate = Yes

____ Poor = No

Rationale: _____

_____

VII. Contributions

2. What would you willing to contribute to a curation facility in partnership with the DoD?

____ Excellent = The institution could contribute staff, floor space, funds for an addition or new facility, and operations and management costs.

____ Adequate = The institution could contribute funds for an addition or new facility and operations and management costs.

____ Poor = The institution could only contribute funds for an addition or new facility.

____ Not Acceptable = Not willing to contribute anything.

Rationale: _____

_____

Appendix 2
Decision Support Model Documentation

Curation Center Partnership Program

Decision Workshop Documentation Addendum
August 14-15, 1996

Standard Development and Weights

During the August 14 and 15 workshop, members of the DoD Curation Center Partnership Program developed standards and assigned standard weights for each criterion in the decision model. The standards represent alternatives within a decision criteria that can be chosen to score or rate each institution. For example, choices or standards within the *Building HVAC Criteria* include:

(1) Adequate-Operational and in good repair
(2) Fair-Few zones and minimal temperature control
(3) *Poor-No or poor HVAC system*

The standards were developed to cover the total range of options for each criteria. Each institution could then be scored by selecting the appropriate standard without exception.

To assign a score or points for each standard, the group was asked to assign 0 points to the lowest or unacceptable standard and 100 points to the highest standard within each criterion. Intermediate standards were assigned points based on the group's judgment within the 100 point range. The Analytic Hierarchy Process (AHP) used to develop the model and import it into the RADSS software converts the points to a relative weight based upon their criterion weight. The highest standard is assigned the total relative weight and the lower standards a relative proportion based on the group's scoring. For the *Building HVAC Criteria*, with a weight of .00516, the highest standard *(1) Adequate-Operational and in good repair*, receives the total number of criterion points or .00516. The lowest standard *(3) Poor-No or poor HVAC system*, receives no points, and the intermediate standard receives 40% of the total points or .002064. Total possible score for each institution, assuming that the best standard is chosen for each criterion is 1.000.

The following table, Table 2A.1, provides detail for each criterion, listing the criteria and criteria definitions, standards and standard definitions, and appropriate weight.

Table 2A.2, at the end of Appendix 2, was compiled by the St. Louis District from the raw data presented by TASC. This information is divided into the three categories, architecture, collections management, and administration, and the various factors are listed according to weight within each category. Scores for each class of answers are also presented.

Table A2.1 Decision Support Model Evaluation Measures

Fire Suppression System Factors	0.04390	Fire Suppression System including sprinkler systems, fire extinguishers, and their inspections
Adequate-Operational and in good state	0.04390	Building has all of the following: adequate and fully operational sprinkler system and fire extinguishers that have been inspected within the last two years
Poor-Not Operational or in good state	0.00000	Building does not have all of the following: adequate and fully operational sprinkler system and fire extinguishers that have been inspected within the last two years
Fire Detection and Alarm System Factors	0.08388	Fire Detection and Alarm System which includes pull alarms, heat and smoke detectors, and wiring to local Fire Department
Fair-Manual pull alarm and smoke detectors	0.03355	Building has manual pull alarms, and smoke sensors wired to the local Fire Department
Poor-Doesn't have pull alarms/smoke sensor wired	0.00000	Building does not have all of the following: manual pull alarms and smoke sensors that are wired to a local Fire Department
Good- Wired pull alarms, heat and smoke detectors	0.08388	Building has all of the following: a series of manual pull alarms and automatic heat and smoke sensors that are wired to a local Fire Department
Building HVAC Factors	0.00516	Building Heating, Ventilation, and Air-conditioning Factors
Adequate-Operational and in good repair	0.00516	Building has an HVAC system that has all of the following: an adequate number of zones, good temperature control, air movement, filtration, and distribution
Poor-No or poor HVAC system	0.00000	Building does not have an HVAC system that provides zones and minimal temperature control, or building has no HVAC system
Fair-Few zones and minimal temp. control	0.00206	Building has an HVAC system that provides few zones and minimal temperature control
Security System Factors	0.01410	Security System Guidelines including intrusion alarms, and restricted access to collections and storage area.
Good-Wired intrusion alarms and restricted access	0.01410	Building has all of the following: operational intrusion alarms at major building openings that are wired to a local security company or Police Department and restricted access to collections storage areas
Poor-No intrusion alarms wired to local security	0.00000	Building does not have the following: an operational intrusion detection system that is wired to a local security company or Police Department
Fair-Wired intrusion alarms/no restricted access	0.00564	Building has an operational intrusion detection system that is wired to a local security company or Police Department
Fire Safety: Building Construction Factor	0.02313	Describes if building construction meets UBC and BOCA codes
Adequate-Follows UBC and BOCA Standards	0.02312	Building's construction follows standards for UBC and BOCA's construction types, corridors, and doors
Poor-Does not follow UBC and BOCA Standards	0.00000	Building's construction does not follow standards for UBC and BOCA's construction types, corridors, and doors

Hazardous Building Components Factors	0.00159	Hazardous Building Components including asbestos, lead paint, lead piping, PCBs, etc.
Adequate-No hazardous building components	0.00159	Building does not contain any of the following materials; asbestos floor tiles, asbestos insulation, lead paint, lead piping, or PCBs (from transformers)
Poor-Building contains hazardous components	0.00000	Building contains any of the following materials: asbestos floor tiles, asbestos insulation, lead paint, lead piping, or PCBs (from transformers)
Building Structural Adequacy Factors	0.01280	Building Structural Adequacy including major structural defects
Adequate-No major structural defects	0.01280	Building has no observable major structural defects
Poor-One or more major structural defects	0.00000	Building has one or more observable major structural defects
Plumbing/Drainage/Waterproofing Factor	0.00381	Plumbing/Drainage/Waterproofing factors including roof and floor drainage systems, plumbing and external drainage systems, and evidence of leakage throughout the building
Good-Operational systems and no signs of leakage	0.00381	Building has all the following: operational roof and floor drainage systems, plumbing and exterior drainage systems that are in good repair, and no evidence of leakage
Poor-No or non-operational systems and leakage	0.00000	Building does not have all of the following: an operational roof drainage system and plumbing and exterior drainage systems that are in good repair. Building shows evidence of substantial leakage.
Fair-Operational systems but signs of leakage	0.00229	Building has the following: an operational roof drainage system, plumbing and exterior drainage systems that are in good repair, and possible evidence of minor leakage
Egress Building Factors	0.00823	Describes if building egress follows UBC and BOCA standards
Adequate-Building Egress follows UBC & BOCA stds.	0.00823	Building's egress follows the standards of UBC and BOCA
Poor-Building Egress does not follow UBC and BOCA	0.00000	Building's egress does not follow standards of UBC and BOCA
Handicap Accessibility Factors	0.00070	Describes handicap accessibility of the building
Fair-Major areas are accessible to disabled	0.00035	Major areas of the building are accessible to the disabled
Poor-Building is not accessible	0.00000	Building is not accessible to the disabled
Good-Most or all areas accessible to disabled	0.00070	Most or all areas of the building are accessible to the disabled
Regulatory & Site Problems (for expansio	0.00269	Regulatory and site problems related to eventual expansion
Good-Minimal difficulties for building expansion	0.00269	Site is suitable for building expansion with minimal difficulty
Poor-Site is not suitable for building expansion	0.00000	Site is not suitable for building expansion
Fair-Suitable for expansion with difficulty	0.00081	Site is suitable for building expansion with difficulty
Scope Of Collections Factors	0.11485	Describes scope of collections including whether institution curates archaeological, anthropological, or ethnographic collections
Excellent- Curates arch., anthro., and ethno.	0.11485	Institution curates the following: archaeological plus either anthropological or ethnographic collections
Adequate- Curates archaeological collections	0.09762	Institution curates archaeological collections
Poor-Does not curate archaeological collections	0.00000	Institution does not curate archaeological collections

Environmental Controls Factors	0.00885	Describes institution's environmental controls and monitoring for temperature and humidity
Adequate-Regulated and monitored environment	0.00885	Collections are stored in an area where temperature and relative humidity are regulated and monitored on a regular basis
Poor-Temp. and Humidity not regulated or monitored	0.00000	Collections stored in an area where temperature and humidity aren't regulated and monitored on a regular basis
Archaeological Collections Storage Fact	0.01841	Describes how institution stores Archaeological Collections to protect them from UV radiation, particulates, biological pests and general neglect
Adequate-Collections are stored adequately	0.01841	Archaeological collections are stored in a manner that protects them form ultraviolet radiation, particulates, biological pests, and general neglect (including but not limited to breakage from compression, water damage, and infrequent housekeeping)
Poor-Collections are not stored adequately	0.00000	Archaeological collections are stored in a manner that does not protect them from ultraviolet radiation, particulates, biological pests, and general neglect including but not limited to breakage from compression, water damage, and infrequent housekeeping
Mission Statement Factors	0.11402	Describes institution's mission statement
Excellent-Mission S. for Arch., & Anthro or Ethno.	0.11402	Institution has a mission statement that encompasses the following: archaeological collections plus either anthropological or ethnographic collections
Adequate-Mission statement for archaeological col.	0.09691	Institution has a mission statement encompassing archaeological collections
Poor-No mission statement for archaeological col.	0.00000	Institution does not have a mission statement for archaeological materials
Composition Of Staff Factors	0.00798	Describes the type of staff funded by the institution
Excellent-Curator, collect mgr, registrar, conserve	0.00798	Institution has all of the following funded (full-time, permanent) positions: curator, collections manager, registrar, and conservator
Adequate-Curator, collect mgr, and registrar	0.00718	Institution has all of the following funded (full-time, permanent) positions: curator, collections manager, and registrar
Poor-No full time curator, collect mgr, & registr	0.00000	Institution does not have all of the following funded (full-time, permanent) positions: curator, collections manager, and registrar
Not Acceptable- Pt-time curator/collect mgr/regist	0.00000	Institution has any of the following positions part-time or not funded: curator, collections mgr., or registrar
Administrative Record Keeping Factors	0.02011	Describes administrative record keeping including: acquisition/accession records, catalog information, object location information, and deaccession/disposal records
Excellent-Maintains all types of admin records	0.02011	Institution maintains all of the following types of administrative records: acquisition/accession records, catalog information, collection inventories, object location information, loan information/agreements and deaccession/disposal records
Adequate-Maintains most types of admin records	0.01709	Institution maintains all of the following types of administrative records: acquisition/accession records, catalog information, and deaccession/disposal records
Poor-Does not maintain required admin. records	0.00000	Institution does not maintain all of the following types of administrative records: acquisition/accession records, catalog information, object location information, and deaccession/disposal records

Range of Support Facilities	0.00147	Range of Support Facilities for Archaeological Collections including storage areas, processing and conservation labs, research facilities, general and office areas
Excellent-Institution has all types of facilities	0.00147	Institution has all of the following: designated collections storage areas, processing labs, conservation labs, research facilities, general work and office areas.
Adequate-Institution has adeq. support facilities	0.00132	Institution has all of the following: designated collections storage areas, processing labs, general work and office areas
Poor-Intitution has limited support facilities	0.00000	Institution does not have all of the following: designated collections storage areas, processing labs, general work and office areas
Collections Management Policies	0.00851	Describes institution's collections management policy for accession policy, disaster/emergency plans, access/use of collections policy, integrated pest management plan, and deaccession/disposal policy
Excellent-Collections Management Policies	0.00851	Institution has all of the following written collections management policies: accession policy, a disaster/emergency plan, access/use of collections policy, integrated pest management plan, and deaccession/disposal policy
Adequate-Collections Management Policies	0.00681	Institution has all of the following written collections management policies: accession policy, a disaster/emergency plan, integrated pest management plan, and deaccession/disposal policy
Poor-Collections Management Policies	0.00085	Institution does not have the following written collections management policies: accession policy, a disaster/emergency plan, integrated pest management plan, and deaccession/disposal policy
Not Acceptable-No written Col. Mgmt. Policies	0.00000	Institution has no written collections management policies
Associated Archaeological Documentat	0.00291	Describes archaeological documentation including: site files, field notes, artifact inventories, reports, and photographs/slides
Excellent-Maintains all types of arch. documents	0.00291	Institution maintains all of the following types of associated archaeological documentation: archaeological site files, field notes, artifact inventories, reports, and photographs/slides
Adequate-Maintains some arch documentation	0.00261	Institution maintains all of the following types of associated archaeological documentation: field notes, artifact inventories, and reports
Poor-Does not maintain associated arch. documents	0.00000	Institution does not maintain all of the following types of associated archaeological documentation: field notes, artifact inventories, and reports
Administrative Records and Associated	0.00291	Administrative Records and Associated Archaeological Document Storage including protection from fire, theft, damage, and destruction
Adequate-Stores all adm. records and doc safely	0.00291	Institution stores all administrative records and associated archaeological documentation protected from fire, theft, damage, destruction
Poor-Does not store safely	0.00000	Institution does not store all administrative records and associated archaeological documentation protected from fire, theft, damage, destruction

Authority To Commit Institution to DoD	0.04192	Does a representative from your institution have the authority to commit the institution financially to a partnership with the DoD for a Curation facility?
Excellent-Person/group within can commit inst.	0.04192	An individual or group of individuals within the immediate bureaucratic structure of the institution such as the governing board and below, has the authority to financially commit the institution to an agreement with the DoD for a Curation facility
Adequate-Person/group outside can commit inst.	0.03144	An individual or group of individuals outside the immediate bureaucratic structure of the institution has the authority to financially commit the institution to an agreement with the DoD for a Curation facility
Poor-Two or More Branches of Govern. Required	0.01048	Two or more branches of government must be involved in committing the institution to any financial commitments
Grant Writing and Tracking For Outside	0.00944	Does your institution have one or more individuals whose function is to write and track grant proposals for outside sources of funding?
Excellent-Two or more individuals	0.00944	Two or more individuals are involved in grant writing/tracking
Adequate-One individual for grant writing/tracking	0.00708	One individual is involved in grant writing/tracking
Poor-No one on staff is involved with grant writing	0.00000	No one on staff is involved in grant writing
Fund Raising	0.01690	Does your institution have one or more individuals whose function is fund raising?
Excellent-Two or more individuals for fund raising	0.01690	Two or more individuals are involved in fund raising
Adequate-One individual for fund raising	0.01268	The institution has one individual whose job is to raise outside funds
Poor-No one is on staff for outside fund raising	0.00000	No one on staff is involved in outside fund raising
Administrative Staff Percentage	0.00591	What percentage (%) of Full-time Staff is classified as administrative
Excellent-15%-25%	0.00591	Excellent-15%-25%
Adequate-26% to 50%	0.00355	Adequate-26% to 50%
Poor-0%-14%, or Over 50%	0.00000	Poor-0%-14%, or Over 50%
Collections Management Staff Percentag	0.02159	What percentage (%) of your staff is classified as collections management?
Adequate-25% to 75%	0.02159	Adequate-25% to 75%
Poor-0% to 24% or 76% to 100%	0.00000	Poor-0% to 24% or 76% to 100%
Outreach/education Programs Adequately	0.06612	Do you have and individual(s) that is (are) exclusively involved in outreach/education programs? How many and what are their duties?
Excellent-1 or more full-time; Native Amer. Prog.	0.06612	One or more full-time, permanent staff that are devoted to outreach/education programs. These programs include Native Americans
Adquate-1 or more less than full-time; less N. Am.	0.03967	One or more staff that devote less than full time to outreach/education programs. These programs may only ephemerally involve Native Americans.
Poor-No staff involved with outreach/education	0.00000	No staff are involved in outreach/education programs

Similar Project Participation With State,	0.00459	Have you participated in similar projects with state, federal, or DoD agencies?
Excellent-Participated with Fed or DoD	0.00459	The institution has participated in a similar project with another federal or DoD agency for the Curation of archaeological collections
Adequate-Participated with state agency	0.00230	The institution has participated in a similar project with another state agency for the Curation of archaeological collections
Poor-Has not participated in similar project	0.00000	The institution has not participated in similar project with state, federal, or DoD agencies for the Curation of archaeological collections
Federal Archaeological Collections Agre	0.02472	What kind of agreements do you have for Curation of federal archaeological collections?
Excellent-1 or more agreemnts with DoD/Army Corps	0.02472	The institution has one or more existing Curation agreements with the Department of Defense agencies including the Army Corps of Engineers
Adequate-1 or more agreemnts with non-DoD fed.	0.02222	The institution has one or more existing Curation agreements with non-DoD federal agencies.
Poor-No Curation agreements with federal agencies	0.00000	The institution has no Curation agreements with any fed agencies
Partnership With DoD	0.13036	What would you be willing to contribute to a Curation facility in partnership with the DoD?
Excellent-Staff, floor space, new fac. funds, O&M	0.13036	The institution could contribute staff, floor space, new/additional facility funds, and operations and management costs
Adequate-Funds for add/new fac. and OandM costs	0.06518	The institution could contribute funds for an addition or new facility and operations and management costs.
Poor-Funds for addition or new facility only	0.01304	The institution could only contribute funds for an addition or new facility
Not Acceptable- Not willing to contribute anything	0.00000	Not willing to contribute anything
Administrative Budget Percentage	0.00318	What percentage (%) of total budget would you estimate goes towards administration?
Excellent-15%-25%	0.00318	Excellent-15%-25%
Adequate-26% to 50%	0.00159	Adequate-26% to 50%
Poor-0%-14%, or Over 50%	0.00000	Poor-0%-14%, or Over 50%
Collections Management Budget Percenta	0.01417	What percentage (%) of your total budget goes towards collections management?
Adequate-26% to 50%	0.01417	Adequate-26% to 50%
Poor-0% to 24% or 76% to 100%	0.00000	Poor-0% to 24% or 76% to 100%
Deficit In Last Five Years	0.00100	Has your institution had a deficit in its operating budget in the last five years?
Adequate-No	0.00100	No, the institution has not had a budget deficit in last 5 yrs
Poor-Yes	0.00000	Yes, the institution has had a budget deficit in last 5 years
Outreach/Education Programs	0.02797	What kinds of outreach/education programs currently exist?
Excellent-General public & separate for Native Am.	0.02797	Programs exist for the general public and separate programs for Native Americans
Adequate-General public only	0.00839	Programs exist only for the general public
Poor-No outreach/education programs	0.00000	The institution has no outreach/education programs

Native American Working Experience	0.09151	Do you have experience working with Native Americans?
Excellent-Exentsive experience working with N. Am.	0.09151	Yes - Extensive experience working with Native Americans
Adequate-Some experience working with N. Am.	0.05490	Some experience working with Native Americans
Poor-Little or no experience working with N. Amer.	0.00000	Poor-Little or no experience working with N. Amer.
Primary/Secondary Schools Programs	0.00855	Do you have programs for primary and/or secondary schools?
Adequate-Yes	0.00855	Yes - programs exist for primary and/or secondary schools
Poor-No	0.00000	No programs for primary and/or secondary schools exist
Institution Type Factor	0.02119	Are you a private, local/county, state, or federal institution
Excellent-State or federal institution	0.02119	State or federal institution
Adequate-Private or local/county institution	0.01059	Private or local/county institution
Property Ownership Factor	0.00667	Who owns the property?
Excellent-State or federal ownership	0.00667	State or federal ownership of the property
Adequate-Private or local/county ownership	0.00500	Private or local/county ownership of the property
Poor-Not owned by the curating institution	0.00000	Not owned by the curating institution
Property Use Restrictions Factors	0.00420	Are their any restrictions to the use of the property, eg. requirements for open space, covenants against construction, etc.?
Adequate-No restrictions	0.00420	No, there are no property use restrictions (open space, covenants)
Poor-Yes there are restrictions	0.00000	Yes, there are property use restrictions (open space, covenants)
Not Acceptable-No mission statement	0.00000	Institution does not have a mission statement

Table A2.2 DECISION SUPPORT MODEL CATEGORIES/ASSOCIATED SCORES

Administrative	Excellent	Adequate	Good	Fair	Poor	N/A	Best Possible
Partnership with DoD	0.13036	0.06518			0.01304	0	0.13036
Native American Working Experience	0.09151	0.05490			0		0.09151
Outreach/Edu. Programs Adequately Staffed	0.06612	0.03967			0		0.06612
Authority to Commit to DoD Partnership	0.04192	0.03144			0.01048		0.04192
Outreach/Education Programs	0.02797	0.00839			0		0.02797
Federal Arch. Collections Agreements	0.02472	0.02222			0		0.02472
Collections Management Staff %		0.02159			0		0.02159
Institution Type	0.02119	0.01059					0.02119
Fund Raising Staff	0.01690	0.01268			0		0.01690
Collections Management Budget %		0.01417			0		0.01417
Grant Writing and Tracking Staff	0.00944	0.00708			0		0.00944
Primary/Secondary Edu. Programs		0.00855			0		0.00855
Property Ownership	0.00667	0.00500			0		0.00667
Administrative Staff %	0.00591	0.00355			0		0.00591
Similar Project Particip. w/State, Fed., DoD	0.00459	0.00230			0		0.00459
Property Use Restrictions		0.00420			0	0	0.00420
Administrative Budget %	0.00318	0.00159			0		0.00318
Deficit in Last Five Years		0.00100			0		0.00100
					SUBTOTAL		0.49999
Collections Management							
Scope of Collections	0.11485	0.09762			0		0.11485
Mission Statement	0.11402	0.09691			0		0.11402
Administrative Record Keeping	0.02011	0.01709			0		0.02011
Archaeological Collections Storage		0.01841			0		0.01841
Environmental Controls		0.00885			0		0.00885
Collections Management Policies	0.00851	0.00681			0.00085		0.00851
Composition of Staff	0.00798	0.00718			0	0	0.00798
Associated Archaeological Documents	0.00291	0.00261			0		0.00291
Admin. Records and Assoc. Doc. Storage		0.00291			0		0.00291
Range of Support Facilities	0.00147	0.00132			0		0.00147
					SUBTOTAL		0.30002
Architectural							
Fire Detection and Alarm System	0.08388			0.03355	0		0.08388
Fire Suppression System		0.04390			0		0.04390
Fire Safety: Building Construction		0.02312			0		0.02312
Security System			0.01410		0		0.01410
Building Structural Adequacy		0.01280			0		0.01280
Egress Building		0.00823			0		0.00823
Building HVAC		0.00516		0.00206	0		0.00516
Plumbing/Drainage/Waterproofing			0.00381	0.00229	0		0.00381
Regulatory & Site Expansion			0.00269	0.00081	0		0.00269
Hazardous Building Components		0.00159			0		0.00159
Handicap Accessibility Factors			0.00070	0.00035	0		0.00070
					SUBTOTAL		0.19998
					TOTAL POSSIBLE		**0.99999**

Appendix 3
DoD and USACE Archaeological Curation-Needs Assessment Reports

Anderson, Lara, Karolyn Kinsey, Marc Kodack, Eugene Marino, Jennifer Riordan, Barbara Smoyer, and Kelly Wissehr

In press *An Archaeological Curation-Needs Assessment for the Legacy Resource Management Program*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: Armed Services installations in Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island,
South Carolina, Tennessee, Vermont, West Virginia, and Wisconsin.

Bade, Mary J. and Kenneth L. Shingleton, Jr.

1999 *An Archaeological Curation-Needs Assessment for the U.S. Navy, Atlantic Division, Naval Facilities, Engineering Command*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 14. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Navy, Atlantic Division installations in North Carolina, Puerto Rico, Virginia, and West Virginia.

Drew, Natalie M.

1995 *An Archaeological Curation-Needs Assessment for the U.S. Air Force, Air Mobility Command*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 6. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Air Force Air Mobility Command installations in California, Delaware, Illinois, Indiana, Maryland, Montana, North Dakota, New Jersey, New York, South Carolina, and Washington.

Drew, Natalie M., with Contributions by Rhonda Lueck, Eugene A. Marino, and Christopher B. Pulliam

1996 *An Archaeological Curation-Needs Assessment for Headquarters, Air Combat Command, Volume 1*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 10. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Air Force Air Combat Command installations in Arizona, California, Florida, Louisiana, New Mexico, South Carolina, Virginia, West Virginia, and Washington.

Felix, Susan S., Amy E. Halpin, Kelly L. Holland, Eugene A. Marino, Steve McSween, D. Lynn Murdoch, Julia A. Samerdyke, Kenneth L. Shingleton, Jr., and Sylvia Yu

In press *An Archaeological Curation-Needs Assessment for the Legacy Resource Management Program*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: Armed Services installations in Alaska, Arizona, Colorado, Hawaii, Kansas, Louisiana, Nevada, New Mexico, Oklahoma, Texas, and Utah.

Halpin, Amy E. and Kelly L. Holland

1997 *An Archaeological Curation-Needs Assessment for the U.S. Navy, Engineering Field Activities, West and Northwest, Naval Facilities Engineering Command*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 9. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Navy, EFA West and EFA Northwest installations in California, Nevada, Oregon, and Washington.

Marino, Eugene A. and D. Lynn Murdoch
In press *An Archaeological Curation-Needs Assessment for the U.S. Navy, Engineering Field Activity, Chesapeake Division*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 19. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Navy EFA Chesapeake installations in Maryland and Virginia.

Marino, Eugene A.
1997 *An Archaeological Curation-Needs Assessment for Headquarters, Air Combat Command, Volume 2*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 10. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Air Force, Air Combat Command installations in Arkansas, Georgia, Idaho, Missouri, Nebraska, Nevada, North Carolina, North Dakota, South Dakota, and Texas.

Meyers, Thomas B. and Michael K. Trimble
1993 *Archaeological Curation-Needs Assessments for Fort Sill, Oklahoma, Fort Gordon, Georgia, Vandenburg Air Force Base, California, Camp Pendleton Marine Corps Base, California, and Naval Air Weapons Station, China Lake, California*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 1. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Militello, Teresa M. and Natalie M. Drew
1996 *An Archaeological Curation-Needs Assessment of Cape Canaveral Air Force Station, Florida*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 7. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Slaymaker, Charles M. and Natalie M. Drew
1996 *An Archaeological Curation-Needs Assessment for Fort Riley, Kansas*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs

Assessment Technical Report No. 4. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

U.S. Army Corps of Engineers, St. Louis
1997 *An Archaeological Curation-Needs Assessment for Fort Irwin, Naval Air Station, North Island, Edwards Air Force Base, and Marine Corps Air-Ground Combat Center, Twentynine Palms.* U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 5. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

U.S. Army Corps of Engineers, St. Louis
1999 *An Archaeological Curation-Needs Assessment for the Legacy Resource Management Program*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 8. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: Armed Services installations in California, Oregon, and Washington.

U.S. Army Corps of Engineers, St. Louis
In press *U.S. Army Corps of Engineers Archaeological Collections Condition Assessment*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: U.S. Army Corps of Engineers, all 50 states.

Wissehr, Kelly H., Kenneth L. Shingleton, Jr., Jeremy L. Goldstein, Mary J. Bade, and Sylvia Yu
1999 *An Archaeological Curation-Needs Assessment for the Legacy Resource Management Program*. U.S. Army Corps of Engineers, St. Louis District Archaeological Curation-Needs Assessment Technical Report No. 15. Michael K. Trimble and Christopher B. Pulliam, Series Editors. U.S. Army Corps of Engineers, St. Louis District, St. Louis, Missouri.

Project Area: Armed Services installations in Idaho, Maryland, Montana, Virginia, and Wyoming.