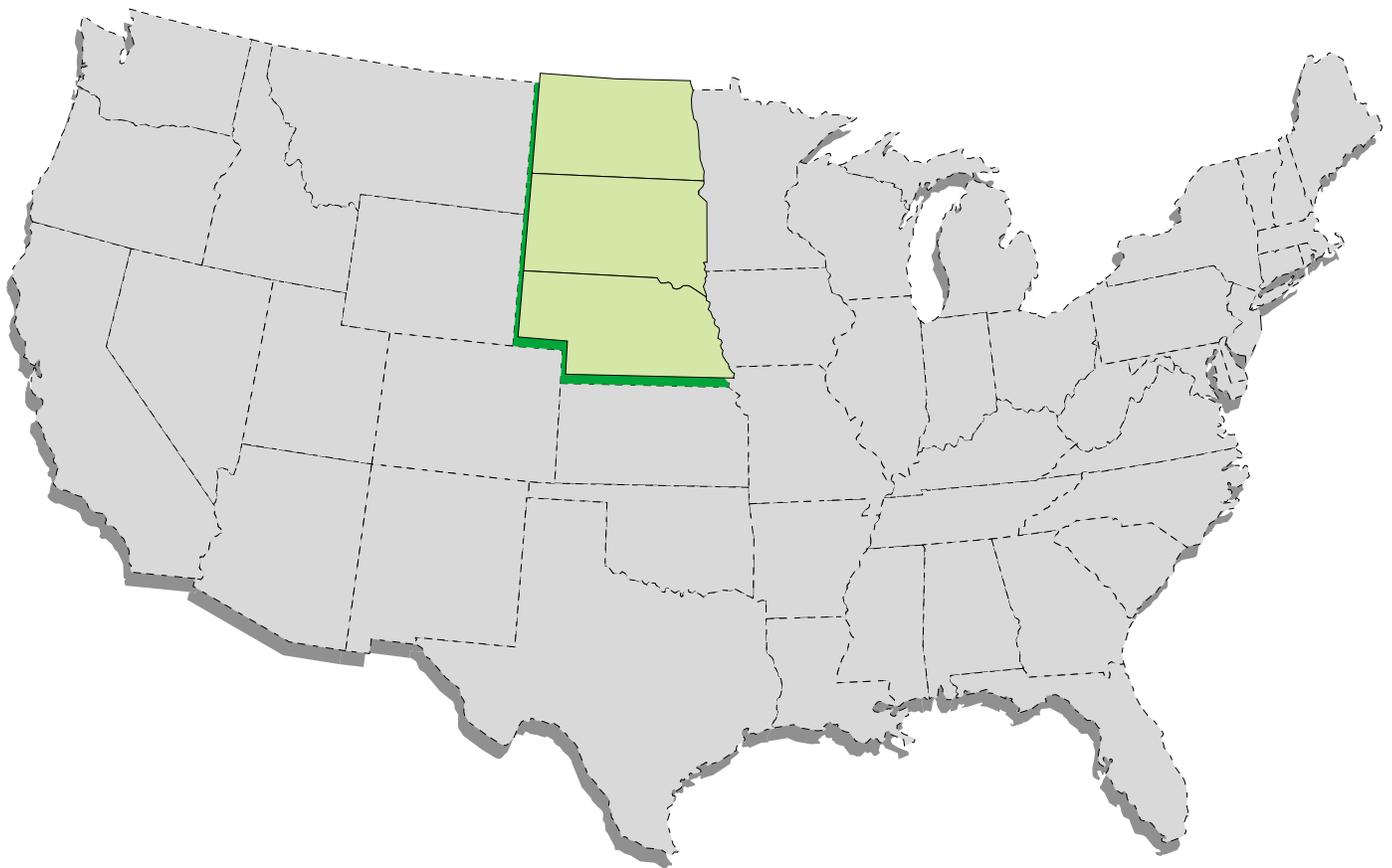


An Archaeological Curation-Needs Assessment for the Bureau of Indian Affairs, Phase II



**US Army Corps
of Engineers**
St. Louis District

**MANDATORY CENTER OF EXPERTISE
FOR THE CURATION AND MANAGEMENT OF
ARCHAEOLOGICAL COLLECTIONS**

**Technical Report No. 22
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by

Kenneth L. Shingleton, Jr.
and
Janet L. Wilzbach

With Contributions by
Eugene A. Marino and Cathy VanArsdale

Christopher B. Pulliam
and
Michael K. Trimble
Editors

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Archaeological Curation-Needs Assessments
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Executive Summary

Problem

Although Federal archaeological collections are a valuable and non-renewable national resource, curation of these materials has been insufficient and/or ignored for over fifty years. Many of these priceless collections of our nation's legacy were placed in the attics, basements, and storage closets of an indefinite number of storage facilities across the United States. Additionally, many objects were illegally transported to Europe, where they remain today. The result has been a steady deterioration of these treasures. The improper care and subsequent deterioration of many of these collections not only violates the laws under which they were recovered but also prevents educational and scientific use. Valuable portions of our irreplaceable national heritage have been lost, and the considerable financial investment by the American public in archaeological recovery has often been compromised.

Background

The Bureau of Indian Affairs (BIA) is responsible for the management of archaeological and historical resources recovered prior to October 31, 1979, from reservations under its administration. As will be explained in the project scope, BIA is not responsible for archaeological materials collected after this date or recovered since that time and relinquished to the BIA by Indian landowners. As mandated by federal law, agencies with responsibility are required to ensure that all recovered archaeological materials and associated records are adequately curated. Unfortunately, funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented compliance.

Collections under the jurisdiction of the Bureau of Indian Affairs are public property, the result of many years of archaeological research and the expenditure of millions of federal dollars. For those archaeological collections recovered prior to October 31, 1979, from reservation trust lands, the primary permit-granting agency was the National Park Service (NPS), under the authority of the Antiquities Act of 1906. BIA, as the landholding

agency, is the party responsible for the perpetual care of those resources. However, through the years most collections have been stored free of charge by universities, museums, and contracting offices. Inadequate funding and failing repositories now seriously hinder these institutions' ability to adequately care for collections.

In the Spring of 1994, Mr. Donald R. Sutherland, Bureau of Indian Affairs, Washington, D.C., requested the services of the U.S. Army Corps of Engineers, Technical Center of Expertise for the Curation and Management of Archaeological Collections (St. Louis District) to find and inspect all of the archaeological collections and associated documentation under the jurisdiction of the Billings and Portland Area Offices in the states of Idaho, Montana, Oregon, Washington, and Wyoming. These five states constitute the BIA Phase I curation assessment project area. Following the successful completion of Phase I, Ms. Marian Hansson, Bureau of Indian Affairs, Washington, D.C., requested the St. Louis District initiate a curation assessment of Indian reservations in three additional states (Phase II), including Nebraska, North Dakota, and South Dakota. Phase II fieldwork began in Spring 1997, and continued intermittently through Spring 1998. This report addresses the fieldwork conducted in Phase II for BIA.

Project Scope

The curation-needs assessment agreed upon in the Memorandum of Understanding between the St. Louis District and the Bureau of Indian Affairs established a well-defined number of Indian reservations, and a clear set of restrictions for the agency's responsibility to the collections. First, the project was to encompass reservations located in the states of Nebraska, North Dakota, and South Dakota. Reservations in these three states are all administered by the BIA's Aberdeen (South Dakota) Area Office.

BIA has no responsibility for archaeological collections recovered from Indian reservations after the enactment of the Archaeological Resources Protection Act of 1979 (ARPA; 16 U.S.C. 470). As ARPA states, all archaeological collections recovered from Indian reservations after the enactment of ARPA on October 31, 1979, are considered to be the responsibility of the Indian tribes, regardless of the repository in which they may be curated. This position is stated clearly in ARPA, in 25 CFR Part 262 Protection of Archaeological Resources, and in 43 CFR Part 7 Protection of Archaeological Resources. If recovered prior to ARPA, archaeological resources recovered from Indian reservations are considered to be the responsibility of BIA, with exceptions.

Although responsible for archaeological resources recovered from Indian reservations prior to ARPA, BIA is not responsible for materials collected from private property (either Indian or non-Indian) within the reservation. These resources are considered to be the responsibility of the landowner. Additionally, even if

archaeological resources were collected prior to ARPA and from Trust lands within the reservation, but are stored in a tribal facility, they are not considered to be the direct responsibility of BIA. At that point they are considered to be the responsibility of the tribe who has possession.

Essentially, the project scope has been limited to regional museums and universities that conducted early work on reservations, or that have been handed curation responsibility of the collections. No tribal facilities were called or visited during the project because of the project scope. In summary, criteria for collections to be evaluated included (1) recovery from Trust (not private) lands within Indian reservations in Nebraska, North Dakota, and South Dakota, (2) recovery prior to the enactment of ARPA on October 31, 1979, and (3) current curation at nontribal repositories.

The project scope covered a total of 17 present-day Indian reservations: five in Nebraska, three in North Dakota, seven in South Dakota, and two that share land with North and South Dakota (Table 1). No Indian reservations were visited for this project. Of

Table 1.
Indian Reservations Investigated in the Bureau of Indian Affairs
Phase II Curation Assessment Project*

Nebraska	North Dakota	South Dakota	North/South Dakota
<i>Iowa</i>	<i>Devils Lake</i>	<i>Cheyenne River</i>	<i>Lake Traverse</i>
<i>Omaha</i>	<i>Fort Berthold</i>	<i>Crow Creek</i>	<i>Standing Rock</i>
<i>Sac and Fox</i>	<i>Turtle Mountain</i>	<i>Flandreau</i>	
<i>Santee Sioux</i>		<i>Lower Brule</i>	
<i>Winnebago</i>		<i>Pine Ridge</i>	
		<i>Rosebud</i>	
		<i>Yankton</i>	

*Indian Reservations in *italics* have archaeological collections.

these 17 reservations, 13 were determined to have archaeological collections, consisting of either artifacts or associated documentation or both, that fall under the aforementioned criteria. Additionally, collections from one Indian school, the Pierre (South Dakota) Indian Learning School, were located and included in this report. Chapters in this report are organized according to the reservations listed in italics in Table 1, each of which has collections. Indian reservations without collections falling into the aforementioned criteria are not included as report chapters. A bibliography for these reservations is, however, included in the appendices, and was compiled primarily from site file searches in each state.

Lastly, the initial St. Louis District site file and literature search for the BIA project provided a list of potential repositories for BIA collections. Approximately 15 potential repositories for BIA

collections were subsequently contacted, resulting in the set of repositories covered in this technical report.

Findings

Status of Physical Facilities

1. Repository Adequacy: BIA collections examined in this study are presently stored in eight institutions encompassing nine separate repositories in four states (Table 2). These repository buildings can be separated into four distinct facility types (Table 3). Two (22%) of the nine repository buildings approach all of the standards mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections). These facilities are the Nebraska State Historical Society, Lincoln, and the State Historical Society of North Dakota, Bismarck. Additionally, four (44%) others approach varying levels of partial compliance with the major standards proper environmental controls, security, pest management, and fire safety.

Table 2.
Facilities and Number of Repositories Housing Phase II BIA Collections

Facility	# Repository Buildings	City/State Location
Midwest Archeological Center	1	Lincoln, Nebraska
Nebraska State Historical Society	1	Lincoln, Nebraska
South Dakota Archeological Research Center	1	Rapid City, South Dakota
State Historical Society of North Dakota	1	Bismarck, North Dakota
University of Kansas Museum of Anthropology	2	Lawrence, Kansas
University of Nebraska State Museum	1	Lincoln, Nebraska
University of North Dakota	1	Grand Forks, North Dakota
University of South Dakota	1	Vermillion, South Dakota
Total	9	

Table 3.
Types and Frequencies of Facilities Curating Phase II BIA Collections

Type of Facility	Number Present	Percent
Museum (private, state, university)	4	50.0
University Lab/Curation Facility	2	25.0
State Agency	1	12.5
Federal Agency	1	12.5
Total	8	100.0

Three (33%) do not approach any of these standards. All of the repositories have at least one full-time staff member responsible for

the management of archaeological collections. More detailed information on repository adequacy is presented in Chapter 11, Findings Summary.

2. Maintenance of Repositories: Seven (78%) of the nine repository buildings that were inspected receive regular maintenance. Two (22%) receive maintenance on an as-needed basis. Collections are often ignored resulting in degradation of the collections. None of the nine repositories store extraneous items such as field equipment, hazardous chemicals, and personal items in collections storage areas, an unacceptable practice in professional collections management facilities.

3. Environmental Controls: Environmental monitoring and adequate environmental control, which consists of stable temperature and humidity readings, are crucial for the long-term preservation of collections. Three (33%) of the repositories provide environmental controls (HVAC or air conditioning and heating, and humidity monitoring and control) that meet Federal standards. Although all repositories have heat, three (33%) are without air conditioning.

4. Security: Five (56%) repository buildings meet the federal standards for the security of archaeological collections. All of the repositories are secured with key and/or deadbolt locks, and all provide for limited access. However, a primary requirement is the presence of intrusion alarms. Although there were no documented cases of unauthorized entry linked with loss of BIA collections, the potential for this exists at several of the repositories examined.

5. Fire Detection/Suppression: Fire is a major hazard to any museum collection. Although seven (78%) repository buildings provide adequate fire detection, only four (44%) of these have both sufficient fire detection and suppression systems. Fire detection and/or suppression systems are minimal in two of the nine repositories. Adequate fire detection does no good without adequate fire suppression, and the opposite is also true. In addition, detection and suppression systems must be able to operate after business hours, which is not a capability of some fire systems such as manual fire alarms.

6. Pest Management: Six (67%) of the nine repository buildings control for pests on an as-needed basis by spraying and trap baiting. Three (33%) provide an integrated pest management program that includes both monitoring and controlling of pests on a regular basis. A professional pest management and control program is crucial to the long-term survival of many archaeological collections and associated records.

Status of Artifacts

BIA artifact collections consist of an estimated 519 ft³ of material recovered from 13 Indian reservations (Table 4). Most of the collections have not been properly cleaned, labeled, or packaged.

Overall, primary containers (boxes that house a group of artifacts) consist of acidic cardboard boxes of varying sizes (many in the 1 ft³ range), both with flap and telescoping lids. Many containers were overpacked and coated with dust. However, all boxes contain some sort of label, if only rudimentary.

Twelve percent of the collections by volume are stored loose in the primary containers, without secondary containers. For the remainder of the collections, the majority of the secondary containers (those included within the primary container) consist of paper bags (68%), non-archival plastic bags (9%), acidic cardboard boxes (5%), archival quality zip-lock plastic bags (3%), and tied nylon bags (1%). Other secondary container types total two percent, including newspaper wrap, plastic vials, tissue wrap, glass jars, paper tubs, cigar boxes, match boxes, metal tubs and tins, and bubble wrap. Almost all are unacceptable museum storage media. Only 3% by collections volume of the secondary containers observed were actual archival-quality polyethylene plastic zip-lock bags. Most secondary containers were labeled directly or with interior paper tags, although adhesive labels were also noted.

Major prehistoric material classes (by volume) encountered include ceramic artifacts (32%), fauna (23%), lithic artifacts (17%), worked bone (8%), flotation samples (3%), shell (1%), botanical remains (1%), C¹⁴ samples (1%), wood (1%), human skeletal remains (1%), and soil samples (1%). Other prehistoric material classes total one percent by volume and include prehistoric worked shell, clay, pigment samples, catlinite, ochre, beads, and mixed/indeterminate artifacts. Principal historic material classes examined include wood (5%), and metal artifacts (3%). Other historic material classes total two percent by volume, and include glass, ceramics, textiles, rubber, leather, asphalt, and basketry.

Status of Human Skeletal Remains

At present, all known human skeletal remains recovered from Indian reservations in the northern Plains are being curated at two repositories, the Nebraska State Historical Society and the University of Nebraska State Museum (Table 4). Complete rehabilitation (e.g. reboxing, rebagging, labeling) needs to be carried out in order to stabilize the remains, and a complete inventory needs to be generated in order to comply with the Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C. 3001).

Table 4.
Breakdown of Cubic Feet of Artifacts, Linear Inches of Records, and Minimum Number of
Individuals (Human Remains) Comprising Phase II BIA Collections

Indian Reservation	Repository	ft³ Artifacts	lin. in. Records	Minimum Number of Individuals (Human Remains)
Cheyenne River	UNSM	12.7	0.50	—
	SARC	0.7	2.50	—
	MWAC	0.0	0.50	—
Crow Creek	UNSM	2.3	1.50	—
	NSHS	0.7	0.50	—
	USD	0.1	0.00	—
	KUMA	101.8	58.25	—
	SARC	0.0	2.00	—
	MWAC	0.0	4.50	—
Devil's Lake	MWAC	0.0	0.50	—
Fort Berthold	UNSM	2.8	0.00	—
	UND	0.1	0.00	—
	SHSND	3.9	0.25	—
	MWAC	0.0	15.00	—
Iowa	UNSM	2.5	0.00	1
	NSHS	56.8	43.50	30
	KUMA	4.3	1.00	—
	MWAC	0.0	0.75	—
Lake Traverse	SARC	0.9	7.50	—
Lower Brule	UNSM	17.3	2.00	—
	NSHS	60.6	56.75	1
	KUMA	3.2	4.00	—
	SARC	0.0	1.50	—
	MWAC	0.0	4.00	—
Omaha	NSHS	4.6	9.00	—
Pierre Indian School	SARC	72.1	30.50	—
Pine Ridge	UNSM	0.5	0.00	—
	SARC	0.3	1.50	—
	MWAC	—	4.75	—
Santee Sioux	UNSM	0.2	1.75	1
	NSHS	0.1	3.50	—
Standing Rock	UNSM	2.9	1.00	—
	UND	0.4	0.00	—
	SARC	5.0	5.50	—
	SHSND	135.6	13.00	—
	NSHS	0.0	0.25	—
	MWAC	0.0	24.50	—
Winnebago	NSHS	19.8	8.50	—
Yankton	UNSM	2.0	0.00	—
	USD	4.9	6.50	—
	SARC	—	2.25	—
	MWAC	—	0.50	—
Total		519.1 ft³	320 (26.7 linear feet)	33 MNI

Note: MWAC = Midwest Archeological Center; NSHS = Nebraska State Historical Society; SARC = South Dakota Archaeological Research Center; SHSND = State Historical Society of North Dakota; KUMA = Kansas University Museum of Anthropology; UNSM = University of Nebraska State Museum; UND = University of North Dakota; USD = University of South Dakota.

Status of Documentation

BIA records encompass 26.7 linear feet (320 linear inches), and include maps, paper, photographic, and draft report records (Table 4). In addition, the assessment team located multiple project reports (most stored at state repositories) that document archaeological work at reservations and in regions around and including Indian lands.

Professional-quality archival practices were not noted at any of the repositories visited, although two institutions had taken extensive steps towards proper archival methods. In many cases, paper records have not been housed in acid-free folders, photographs have not been isolated and stored in chemically inert sleeves, and large-scale maps have not been stored flat in map flats.

In few instances did a set of project documentation appear to exist in its entirety at the repository with the collection. Project documentation is more often than not fragmentary or nonexistent. This could result from a number of factors. Collections managers and archaeologists in the past may not have considered associated documentation a part of their curatorial responsibilities. In many cases, records may have been produced but lost on the way to their final storage area, but it is also possible that records were never produced for some of the projects. Regardless, the result is that records for many of the collections can not be located.

Status of Repository Management Controls

The Midwest Archeological Center is not included in the following statistics on the status of repository management controls, because it is not a permanent repository for non-National Park Service collections. Five (71%) of the seven institutions keep accession records for the collections for which they are responsible. A written record of where collections are located within the buildings is available at six (86%) of the facilities. No facilities have fully inventoried the collections in their care, while all have partially inventoried the collections or are in the process of carrying out this task. Basic policy and procedure statements for artifact curation, loans, minimum standards of acceptance, and deaccessioning are present at four (57%) of the facilities. The assessment team noted that written policies addressing records management procedures were present at four (57%) of the facilities. One (14%) of the facilities has field guidelines for the curation of archaeological materials, while none has a published guide to the archaeological collections in their care. All of the facilities employ some form of computer database management for the collections in their care. Given the above, it is evident that the collections are at risk, and in some cases are not being cared for according to the guidelines of 36 CFR Part 79.

Corrective Actions

A number of corrective actions are necessary to bring the BIA collections, and those facilities housing them, into compliance with 36 CFR Part 79. Several general recommendations include the following.

1. Coalesce collections into one regionally based, federally owned or leased repository constructed specifically for the curation and long-term management of archaeological collections, or distribute collections into existing facilities in their state or territory of origin and spend requisite funds to upgrade them to meet Federal curation standards.
2. Develop cooperative agreements with other agencies to share costs in building construction and collections rehabilitation.
3. Rehabilitate existing collections by inventorying and cataloging all artifact collections to a standard consistent with those of a professional museum, and reboxing and rebagging collections in archival quality containers.
4. Develop and implement uniform inventory procedures.
5. Develop and implement a formal archives management program.

The corrective measures, if carried out, will permit BIA to meet minimum Federal requirements for the adequate long-term curation of archaeological collections. By adopting this approach, BIA has the opportunity to implement a curation program that will serve its needs well into the future.

Conclusions

It may not be possible to achieve each recommendation immediately because (1) the collections are deteriorating in their current storage environments and (2) there is no long-term, consistent management plan for the proper curation of archaeological collections and associated records. These Federal collections represent a non-renewable resource, and if not properly cared for soon, will forever lose their educational and research value and potential. Increased attention to these collections will more adequately preserve them for use by future generations.

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University of North Dakota
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1

Introduction

The Bureau of Indian Affairs (BIA) is responsible for archaeological artifact collections and accompanying documentation (herein referred to as archaeological collections) stored in eight institutions in four states. This responsibility is mandated through numerous legislative enactments, including the Antiquities Act of 1906 (16 U.S.C. 431, 432, 433), the Historic Sites Act of 1935 (49 U.S.C. 303), the Reservoir Salvage Act of 1960 (16 U.S.C. 469-469c), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Archeological and Historic Preservation Act of 1974 (16 U.S.C. 469-469c) and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470). Executive Order 11593 (U.S. Code 1971) and amendments to the National Historic Preservation Act in 1980 provide additional protection for these resources. The implementing regulation for securing the preservation of archaeological collections is 36 CFR Part 79, Curation of Federally-Owned and Administered Archaeological Collections. Additionally, the U.S. Army Corps of Engineers is the only Federal agency that possesses strict standards for Corps curation of archaeological materials. The Corps' ER 1130-2-433, which was implemented in April 1991, serves as one standard for long-term archaeological curation.

The Native American Graves Protection and Repatriation Act (P.L. 101-601, NAGPRA) was enacted in 1990 to identify Federal holdings of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. In addition, NAGPRA mandates that Federal agencies reach agreements with Native American Tribes and Native Hawaiian groups on the repatriation or disposition of these remains and objects. All Federal

agencies are required to meet mandated deadlines for compliance with P.L. 101-601. By November 16, 1993, a summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed. An inventory of human remains and associated funerary objects was to be completed by November 15, 1995.

As the first step in complying with 36 CFR Part 79 and NAGPRA, the BIA contacted the U.S. Army Corps of Engineers in the spring of 1994 to discuss a Memorandum of Understanding to address these requirements. After a series of consultations an approach was recommended that included evaluating the collections in order to satisfy the Federal curation requirements of 36 CFR Part 79. Additionally, the project would provide the BIA with information for NAGPRA compliance. The resulting agreement authorized the Technical Center of Expertise for Archaeological Curation and Collections Management to conduct a curation-needs assessment of BIA archaeological collections. The BIA would receive a general inventory of collections, providing a firm estimation of the magnitude of curation needs. In addition, collections managers at storage facilities would receive a plan addressing their specific curation needs.

In the Memorandum of Understanding, the St. Louis District was to provide the following services:

1. Provide professional and technical services to BIA for the inspection and inventory of archaeological collections in selected repositories.
2. Provide a final report detailing the results of the inspection and evaluation, and addressing the following items:

- a. Physical description of all repository facilities.
- b. Physical description of all recovered artifact collections.
- c. Physical description of all associated documentation collections.
- d. Recommendations for compliance with the requirements of 36 CFR Part 79.

3. Provide a master bibliography of reports associated with BIA collections.

Methods

Eight facilities encompassing nine separate repository buildings were evaluated in the course of the curation-needs assessment. Among the facilities were four museums (private, state, or university), two university laboratories/curation facilities, one state agency, and one federal agency. The following schedule outlines the facilities visited, and the order and dates of visit.

Facility	Visit
University of North Dakota	December 8, 1997
State Historical Society of North Dakota	December 10-12, 1997
Midwest Archeological Center, National Park Service	January 7, 1998
Nebraska State Historical Society	January 7-9, 1998
University of Nebraska State Museum	January 12, 1998
University of Kansas Museum of Anthropology	April 7, 1998
University of South Dakota	April 9, 1998
South Dakota Archaeological Research Center	April 27-May 1, 1998

Prior to visiting the aforementioned facilities, site file searches were conducted at the state historic preservation offices and/or site file facilities for Nebraska, North Dakota, and South Dakota. In addition to conducting fieldwork, much of the project was conducted in-house. This work consisted of pre-fieldwork and report generation. The following schedule outlines the course of activities.

Activity	Dates
Pre-Fieldwork	May 1-27, 1997; June 1 –July 31, 1997
State Site File Visits	May 27-30, 1997; August 18-22, 1997; September 16-24, 1997
Fieldwork Planning	November 1-30, 1997
Fieldwork	December 8-12, 1997; January 7-12, 1998; April 7-9, 1998; April 27 –May 1, 1998
Draft Report Generation	November 1-30, 1998; January 1-31, 1999; May 1-30, 1999

Pre-Fieldwork Investigation

Assessment of each facility's compliance with 36 CFR Part 79 included the following items.

1. Location information, comprised of topographic maps and township and range designations, were determined for each reservation. This information enabled site files research to be conducted in an organized, efficient manner.
2. Site files research was conducted at respective state archaeology and historic preservation offices to determine the sites located within reservation boundaries, and to determine where collections might be located.
3. During site file searches a database was compiled of all fieldwork reports deposited at the state repositories.
4. All institutions, and personnel likely to be knowledgeable about the collections were contacted by telephone.
5. A list was compiled of all agencies, firms, universities, and institutions associated with the recovery or curation of materials belonging to BIA.

6. Agencies, firms, universities, and institutions were contacted by telephone for information regarding the curation of BIA collections. From these phone conversations evolved the list of repositories visited for the project.

Determining BIA Responsibility for Collections

After beginning site files research in the project area states, it was evident that the overwhelming majority of archaeological research conducted prior to 1979 (the cut-off for BIA responsibility) in the project area consisted of major river drainage surveys and excavations. Archaeological research was conducted along these major river drainages beginning in 1944 as a part of the Smithsonian Institution's River Basin Surveys program (RBS) (Glenn 1994). The Missouri River, primarily in North and South Dakota, was a major focus of recovery efforts, as the U.S. Army Corps of Engineers began to construct dams in an effort to improve river navigation and flood control, and to provide recreational opportunities.

The multiple reservoirs eventually constructed by the Corps were done so with congressionally appropriated funds, although with little regard for environmental or cultural impact. The Smithsonian Institution, recognizing the value of the archaeological resources along the Missouri River and the fact that these would be inundated and effectively destroyed, formed the River Basin Survey program to attempt to recover as much information as possible. In 1969, administrative control was passed to the primary funding agency, the National Park Service, and the program became known as the Interagency Archeological and Paleontological Salvage Program, and in 1974, Interagency Archeological Services. After 1974, government agencies began hiring more archaeologists to implement the procedures outlined in Section 106 of the National Historic Preservation Act of 1966. The RBS program is credited with establishing the trinomial system of archaeological site identification in use in the United States today. Additionally, the RBS program extracted a wealth of information, as scientifically as was possible, about prehistoric and historic habitation of the major river drainages, resulting in rich, valuable archaeological collections.

In the project area, RBS work was conducted along the Missouri River on Nebraska's eastern border, although primarily conducted along the Nebraska-South Dakota border and north through central South Dakota and central North Dakota. Today, almost the entire Missouri River through South Dakota and North Dakota is dammed, forming a series of long lakes: Lake Francis Case, Lake Oahe, and Lake Sakakawea. Indian Reservations abut a considerable amount of the river—which is now largely a continuous lake. For example, in South Dakota, Lake Francis Case is bordered on the north by the Yankton Indian Reservation, and Lake Oahe is bordered on the west by the Cheyenne River Indian Reservation and the Standing Rock Indian Reservation. Lake Oahe extends into North Dakota, still bordered by Standing Rock on the west. In North Dakota, Lake Sakakawea is in part surrounded on both sides by the Fort Berthold Indian Reservation.

Nearly all archaeological research conducted prior to 1979 on Indian reservations in North Dakota and South Dakota was RBS-driven. As a result, most archaeological sites were surveyed and/or excavated with National Park Service and Corps of Engineers funds, even when the land was privately owned, although condemned through eminent domain. Most of these archaeological sites are today the management responsibility of the Corps of Engineers. The St. Louis District proceeded with site files research under the assumption that collections from sites located on Corps-owned or managed land today are the management responsibility of the Corps, even as they abut Indian trust lands. However, collections from sites located above predetermined elevations along the river, and that are not on Corps property, are assumed to be on Indian trust lands (if they fall within reservation boundaries) and are the management responsibility of the BIA.

Site files research was affected by this problem, but the St. Louis District attempted to adjust, in order to improve the accuracy of the information. The Corps of Engineers, Omaha District was contacted, and asked to provide a list of Corps-owned or managed archaeological sites along the Missouri River in the counties bordering and encompassing Indian reservations. The Omaha District was able to provide such a list for the area of the River within Fort Berthold Indian Reservation in North Dakota. St. Louis District personnel were able

to subtract out Corps archaeological sites from those recorded within reservation boundaries. Presumably, this would provide the most accurate list of sites on the Fort Berthold Indian Reservation for which BIA would have collections responsibility.

At the South Dakota Archaeological Research Center, topographic maps had archaeological sites and Corps land boundaries along the Missouri River plotted on them. St. Louis District personnel recorded sites outside these boundaries and within the reservations as being BIA responsibility. These reservations include Cheyenne River, Crow Creek, Lower Brule, and the South Dakota portion of Standing Rock. No list of Corps archaeological sites was available for the North Dakota portion of the Standing Rock Indian Reservation; consequently, St. Louis District personnel assumed that all archaeological sites within reservation boundaries were BIA responsibility, although this would certainly not be the case if more accurate Corps information were available.

For all archaeological sites where BIA was determined to be the responsible agency, it is also assumed that BIA is responsible for the archaeological collections. There are situations that this might not be the case, but a great deal of research, particularly legal research, would be necessary to determine exactly who had owned the land at the time the site was excavated. This detailed site location and real estate research is beyond the scope of this project. However, the collections presented in this report as BIA responsibility are a conservative listing. Future information may help to determine that BIA does not have responsibility for some of the archaeological collections outlined in this report.

Field Inspection and Assessments of Repositories and Collections

1. A survey questionnaire was completed for every facility involved with the curation of BIA archaeological collections. The questionnaires solicited information on repositories, artifact collections, and associated documentation.
2. A building evaluation facilitated the determination of whether or not the facility approached compliance

with the requirements for repositories specified in 36 CFR Part 79. Forms addressed topics such as structural adequacy, space utilization, environmental controls, security, fire detection and suppression, pest management, and utilities. Data was gathered both by observation and through discussion with collections and facilities managers.

3. An examination of all documentation was conducted to determine the presence of the different types, the amount present, and its condition. Types of documentation include project and site reports, administrative files, field records, curation records, and photographic records. For each type of document the total linear feet, physical condition of the containers and the records, and the overall condition of the storage environment was collected. The determination of whether or not the facility is in compliance with the archives management requirements specified in 36 CFR Part 79 is based on this information.

4. Artifact collections were examined and evaluated as to their condition and compliance with 36 CFR Part 79. Assessment included examination of (1) condition of primary and secondary containers, (2) the degree of container labeling, (3) the extent of laboratory processing, (4) the material classes included in each collection, and (5) the condition of and approximate minimum number of individuals of any human skeletal remains. Primary containers are generally acidic or acid-free cardboard boxes that contain artifacts. Secondary containers are those included within the primary container, and they are composed of a wider range of materials. Secondary containers may include, but are not limited to, acidic paper bags, plastic sandwich bags, archival or non-archival plastic zip-lock bags, glass jars, film vials, aluminum foil, newspaper, packing materials, or small acidic or acid-free cardboard boxes.

Report Preparation

1. This report details the results of the curation-needs assessment. General information included in the report includes estimates of the sizes of collections and their condition, and descriptions of the facilities.

2. Recommendations are provided for the rehabilitation of the facilities and/or the collections, according to the Federal standards established in 36 CFR Part 79.

NAGPRA-Compliance Assessment

To satisfy the requirements for NAGPRA, the following tasks must be performed at each repository holding BIA collections.

1. Conduct a records search of the collections to identify the accession and catalog numbers and the location of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
2. Perform a physical inspection of storage containers to identify human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
3. Conduct an analysis of human skeletal remains that includes (1) a detailed skeletal inventory listing elements present, their completeness and condition; (2) measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature and morphology of the skeletal remains; (3) estimates of age and gender; and (4) observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide evidence of cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each repository.

Chapter Synopsis

Chapter 1 is an executive summary of the project, and Chapter 11 outlines the overall findings of the project. Chapter 2 provides summaries of the archaeological collections identified for each Indian reservation in the project area. Final recommendations for the project are provided in Chapter 12. Chapters 3-10 provide a detailed examination of the state of archaeological collections under the jurisdiction of BIA. Each

chapter contains an executive summary for each reservation, a detailed examination of the repository(s) and the collections, and recommendations for the improved care of the collections. Appendix I is a bibliography of archaeological work conducted on Indian reservations in the project area.

A total of eight facilities (museums, universities, and government agencies) were visited for the project. Collections are stored in a total of nine repositories within the eight facilities (one facility had collections stored in two separate buildings). Two of the nine repositories approach all of the standards mandated by 36 CFR Part 79 for curating Federally-owned archaeological collections. Four of the nine repositories approach partial compliance with the standards mandated by 36 CFR Part 79. All of the repositories employ at least one full-time staff member with responsibility for the curation of archaeological collections.

Conditions of the facilities described in this report unfortunately typify the range of variation in archaeological collections care across the nation. Lack of funding and lack of consistent national policy, compounded with the sheer magnitude of collections across the country have prevented compliance with federal regulations. Without a national strategy and attention to the existing deficiencies, archaeological collections are in danger of continued deterioration. However, with a strong commitment, we can preserve our rich national heritage.

2

Indian Reservation Summaries

The following Native American cultural groups have representative tribes living on reservations in Nebraska, North Dakota, and South Dakota. These groups include the Iowa, Omaha, Sioux, Three Affiliated Tribes (Mandan, Hidatsa, and Arikara), and Winnebago. The following discussions briefly address a history of each of these groups, as it relates to their locations throughout recorded history in North America. These summaries are very brief, and are not derived from exhaustive sources.

Iowa

The Iowa were first encountered by the French in 1701 near the mouth of the Blue Earth River in Minnesota but their range extended south as far as present-day Des Moines, Iowa (Yenne 1986:79). When the Omaha lived near the Pipestone Quarry in Minnesota, they were accompanied by the Iowa, who afterward went with them to South Dakota and then south to Nebraska (Swanton 1969:285). In 1836, the Iowa were assigned a reservation on land that was subdivided between Kansas and Nebraska. In 1854 and again in 1861, this tract was reduced in size (Waldman 1988:103). The Iowa people were divided into two independent groups (northern and southern) soon after the Civil War (Foster 1994:276-277). By 1880 some of the Iowa (southern) were living on Sac and Fox lands in Indian Territory (Oklahoma) (Waldman 1988:103; Yenne 1986:79-80). Today, the Northern Iowa are located on a 1,500-acre reservation in the extreme northeast corner of Kansas and the

extreme southeastern corner of Nebraska in Richardson County (Foster 1994: 276-277).

Omaha

The principal historic home for the Omaha was in northeastern Nebraska, on the Missouri River (Swanton 1969:286). The Omaha were one of the tribes most closely associated with the state of Nebraska, where most tribal descendants live and whose largest city, Omaha, was named after them (Waldman 1988:168).

According to tradition, the Omaha and others belonging to the same language group (Ponca, Osage, Kansa, and Quapaw) lived on the Ohio and Wabash Rivers in Indiana and Kentucky (Ridington 1994:406; Swanton 1969:286). Before settling in Nebraska, the Omaha stayed for a time near the Pipestone Quarry, in what is now southern Minnesota, and then were forced west by the Dakota, into what is now the state of South Dakota (Swanton 1969:286; Waldman 1988:168). The Omaha later settled south, on Bow Creek in Nebraska. They stayed in this region, the west side of the Missouri River between the Platte and Niobrara Rivers, until their last major move in 1855 (Swanton 1969:286). In the treaties of 1830, 1836, and 1854, the Omaha ceded their lands to the U.S. Government and moved, along with the Winnebago, to a reservation in northeastern Nebraska (Ridington 1994:406; Swanton 1969:286; Yenne 1986:119). Since the signing of the 1854 treaty, the tribe has resided on the Omaha Reservation in northeastern Nebraska.

Three Affiliated Tribes (Mandan, Hidatsa, and Arikara)

The Arikara and Pawnee tribes have a shared history to the 1400s. The tribes were believed to have been one when they moved from Nebraska to the Missouri River south of Pierre in south central South Dakota sometime in the 1400s, but split later in the same century (Grobsmith 1990:183; Schwartz 1969:32; Swanton 1969:278; Waldman 1988:23). The Pawnee returned to Nebraska while the Arikara stayed in South Dakota. The Arikara now reside in North Dakota on the Fort Berthold Indian Reservation with the Mandans and Hidatsas, the three of which are collectively known as the Three Affiliated Tribes (The Confederation of American Indians 1986:207; Waldman 1988:24).

The Hidatsa have, throughout history, been known by many different names, thus making an identification of their origins difficult. The French at one time mistook the Hidatsa for the Gros Ventres, also known as the Atsina. A third name is the Minitaree, a name cited by early travelers along the Missouri River (Cash and Wolff 1974:16). The tribe split into the Crow, which moved westward, and the Hidatsa, which remained in North Dakota to ally with the Mandan. At the time of the Lewis and Clark expedition, the Hidatsa were living on the Missouri River near its confluence with the Knife River in North Dakota (Cash and Wolff 1974:18-19).

During the 1700s, the Mandan were found to occupy an area of central North Dakota on the Missouri River, near its confluence with the Heart River (Waldman 1988:123). This area is near present-day Bismarck. Prior to contact, the Mandan are believed to have settled briefly on the Missouri River in South Dakota in the 1400s, living in semisubterranean earth lodges before migrating to their territory in North Dakota (Swanton 1969:284). Their numbers were severely reduced when, in 1837, they suffered from a devastating smallpox epidemic. After the epidemic they joined the Hidatsa, and the two later joined with the Arikara (Waldman 1988:125).

Sioux

The first known location of the Sioux was on the Mississippi River in southern Minnesota, northwestern Wisconsin, and Iowa. By 1800, they had moved farther west to the eastern bank of the Missouri River (Swanton 1969:280-283; Grobsmith 1990:178), and by 1825 were occupying lands as far west as Wyoming and Montana (Swanton 1969:280-283). Swanton (1969:283) states that the Sioux may have been occupying the Black Hills as early as 1765, and certainly by the 1780s (Powers 1996:299). The Black Hills was the stage for the war with Euro-Americans because of the incursion of miners looking for gold and the subsequent battle with General Custer at Little Bighorn in 1876 (Swanton 1969:283).

There are three general groupings of Sioux branches based roughly on their location in relation to the other branches (Table 5). These groupings are listed below, with their constituent bands.

The Lakota migrated the farthest west, occupying the Black Hills in South Dakota, Wyoming, and Montana (Powers 1996:299; Waldman 1988:223). The Dakota remained in the general vicinity of the Minnesota River in Minnesota. The Nakota (Yankton and Yanktonai), settled mostly along the Missouri River: the Yankton in southeast South Dakota, and the Yanktonai along the border of eastern South and North Dakota; however, some Yankton and Yanktonai are on other reservations in other areas (Waldman 1988:223; Hoover 1996b:706). The Yankton may have hunted in the Black Hills area of South Dakota (Indian Claims Commission 1974a:410). The various Sioux bands have reservations in North and South Dakota, Minnesota, Montana, and Nebraska (Swanton 1969:283).

Winnebago

When first encountered by the French in 1634, the Winnebago were living in the Green Bay (Wisconsin) region (Smith 1994:694; Yenne 1986:183). During the eighteenth century they spread up the Fox River, and still later extended their villages to the Wisconsin and Rock Rivers (Swanton

Table 5.
Sioux Bands and Current Reservations in the BIA Phase II Project Area

Sioux Cultural Group	Location	Bands	Current Reservations
Dakota	Eastern	Mdewakanton Wahpekute Sisseton Wahpeton	Santee Sioux, Flandreau Santee Sioux, Flandreau Lake Traverse, Devils Lake Lake Traverse, Devils Lake
Nakota	Central	Yankton Cuthead Yanktonai Lower Yanktonai	Yankton Devils Lake Crow Creek
Lakota	Western	Oglala Sicangu Hunkpapa Mnikowoju Oohenunpa Sihhasapa Itapzico Miscellaneous Sioux	Pine Ridge Rosebud Standing Rock Cheyenne River Cheyenne River Cheyenne River Cheyenne River Crow Creek, Lower Brule

Adapted from Hoover 1996a:164, 1996b:600, 1996c:707; Powers 1996:302.

1969:258). After the Black Hawk War in 1832, the Winnebago were forced to relocate west of the Mississippi, first to Iowa in 1840, then to Minnesota, South Dakota, and finally, Nebraska by 1865 (Smith 1994:694; Waldman 1988:250). Part of the Winnebago settled close to the Omaha after they had been driven from Minnesota following the Dakota

outbreak of 1862. A reservation was later assigned them in northeast Nebraska and eventually they were allotted land (Swanton 1969:291). By the 1880s, half of the tribe returned to Wisconsin resulting in the two separate political and cultural groups that exist in Nebraska and Wisconsin today (Smith 1994:694).

Indian Reservations (with collections) in the BIA Phase II Project Area

Nebraska

Iowa Indian Reservation

Volume of Artifact Collections: 63.6 ft³

Linear Amount of Records: 45.25 linear inches

Human Skeletal Remains: 31 minimum individuals

Location of Collections: Midwest Archeological Center (National Park Service)

Nebraska State Historical Society

University of Kansas Museum of Anthropology

University of Nebraska State Museum

Collections Identified: 25RH1, 25RH6

Indian Reservations (with collections) in the BIA Phase II Project Area (Continued)

Omaha Indian Reservation

Volume of Artifact Collections: 4.6 ft³

Linear Amount of Records: 9.0 linear inches

Human Skeletal Remains: None

Location of Collections: Nebraska State Historical Society

Collections Identified: 25CM7-9, 25CM503, 25TS1, 25TS4, 25TS6-8, 25TS12-13,
25TS15-19, 25TS31-32, 25TS37

Santee Sioux Indian Reservation

Volume of Artifact Collections: 0.3 ft³

Linear Amount of Records: 5.25 linear inches

Human Skeletal Remains: one minimum individual

Location of Collections: Nebraska State Historical Society

University of Nebraska State Museum

Collections Identified: 25KX2-10, 25KX12-13, 25KX30, 25KX43-44, 25KX72,
25KX205-206

Winnebago Indian Reservation

Volume of Artifact Collections: 19.8 ft³

Linear Amount of Records: 8.5 linear inches

Human Skeletal Remains: None

Location of Collections: Nebraska State Historical Society

Collections Identified: 25TS2-3, 25TS9-11, 25TS14, 25TS20-24, 25TS26-29, 25TS33,
25TS35, 25TS38-42

North Dakota

Devil's Lake Indian Reservation

Volume of Artifact Collections: None

Linear Amount of Records: 0.5 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archeological Center (National Park Service)

Collections Identified: 32BE201

Indian Reservations (with collections) in the BIA Phase II Project Area (Continued)

Fort Berthold Indian Reservation

Volume of Artifact Collections: 6.8 ft³

Linear Amount of Records: 15.25 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archeological Center (National Park Service)
State Historical Society of North Dakota
University of Nebraska State Museum
University of North Dakota

Collections Identified: 32BE3, 32DU1, 32DU4, 32DU9, 32DU25, 32ME48, 32ME55, 32ME59, 32ME61-62, 32ME64, 32ME72, 32ML32, 32ML42, 32ML49, 32MN21, 32MN25-26, 32MN101, 32MN402, River Basin Surveys: Metcalf Field Notes (Copy 3); 1950 Metcalf Journal (Copies 1, 2, & 3); 1951 Metcalf Journal (Copies 1, 2, & 3); 1952 Metcalf Journal (Copy 2)

North and South Dakota

Lake Traverse Indian Reservation

Volume of Artifact Collections: 0.9 ft³

Linear Amount of Records: 7.5 linear inches

Human Skeletal Remains: None

Location of Collections: South Dakota Archaeological Research Center

Collections Identified: 39DA2, 39DA201, 39RO26, 39RO38

Standing Rock Indian Reservation

Volume of Artifact Collections: 143.9 ft³

Linear Amount of Records: 44.25 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archeological Center (National Park Service)
Nebraska State Historical Society
State Historical Society of North Dakota
South Dakota Archaeological Research Center
University of Nebraska State Museum
University of North Dakota

Collections Identified: 32SI2, 32SI4, 32SI6-9, 32SI76-77, 39CO00, 39CO1-4, 39CO7-9, 39CO11, 39CO13-15, 39CO17-22, 39CO24-26, 39CO29, 39CO31-34, 39CO37, 39CO39-44, 39CO46, 39CO48-49, 39CO52-56, 39CO202-208, 39CO210-211, River Basin Surveys: 1948 Cooper Journal and Fieldnotes (Copies 1, 2, & 3); 1949 Cooper Journal (Copies 1, 2, & 3)

Indian Reservations (with collections) in the BIA Phase II Project Area (Continued)

South Dakota

Cheyenne River Indian Reservation, South Dakota

Volume of Artifact Collections: 13.4 ft³

Linear Amount of Records: 3.5 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archaeological Center (National Park Service)

South Dakota Archaeological Research Center

University of Nebraska State Museum

Collections Identified: 39DW2, 39DW9-12, 39DW15, 39DW17-19, 39DW30-31, 39DW34, 39DW36, 39DW38, 39DW41, 39DW43-46, 39DW201-212, 39DW214, 39DW216, 39DW218-219, 39DW221-224, 39DW227, 39DW231-232, 39DW234, 39DW237-239, 39DW241-242, 39DW253-255, 39ZB4-5, 39ZB201-203

Crow Creek Indian Reservation

Volume of Artifact Collections: 104.9 ft³

Linear Amount of Records: 66.75 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archaeological Center (National Park Service)

Nebraska State Historical Society

South Dakota Archaeological Research Center

University of Kansas Museum of Anthropology

University of Nebraska State Museum

University of South Dakota

Collections Identified: 39BF3-4, 39BF10, 39BF14-17, 39BF19-20, 39BF22-23, 39BF208-209, 39BF212-213, 39BF224-227, 39BF230, 39BF234-236, 39BF240, 39BF242, 39BF301, 39HU232

Lower Brule Indian Reservation

Volume of Artifact Collections: 81.1 ft³

Linear Amount of Records: 68.25 linear inches

Human Skeletal Remains: one minimum individual

Location of Collections: Midwest Archaeological Center (National Park Service)

Nebraska State Historical Society

South Dakota Archaeological Research Center

University of Kansas Museum of Anthropology

University of Nebraska State Museum

Collections Identified: 39LM24-27, 39LM29, 39LM31-35, 39LM38-40, 39LM42, 39LM47, 39LM51-52, 39LM55-56, 39LM60, 39LM66-67, 39LM69, 39LM70-71, 39LM81, 39LM83-86, 39LM202, 39LM210-211

Indian Reservations (with collections) in the BIA Phase II Project Area (Continued)

Pierre Indian Learning School

Volume of Artifact Collections: 72.1 ft³

Linear Amount of Records: 30.5 linear inches

Human Skeletal Remains: None

Location of Collections: South Dakota Archaeological Research Center

Collections Identified: 39HU10

Pine Ridge Indian Reservation

Volume of Artifact Collections: 0.8 ft³

Linear Amount of Records: 6.25 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archeological Center (National Park Service)

South Dakota Archaeological Research Center

University of Nebraska State Museum

Collections Identified: 39SH00, 39SH1-4, 39SH7-32, 39JK51, River Basin Surveys: 1949
Wheeler Notes

Yankton Indian Reservation

Volume of Artifact Collections: 6.9 ft³

Linear Amount of Records: 9.25 linear inches

Human Skeletal Remains: None

Location of Collections: Midwest Archeological Center (National Park Service)

South Dakota Archaeological Research Center

University of Nebraska State Museum

University of South Dakota

Collections Identified: 39CH9-13, 39CH16-17, 39CH19, 39CH22, 39CH24, 39CH64-80,
39CH82, 39CH85-86, 39CH88-90, 39CH92-99

3

University of Kansas Museum of Anthropology, Lawrence

Collections Summary

Volume of Artifact Collections: 109.3 ft³

Compliance Status: Artifacts require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 5.3 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: None

Collections Identified: Crow Creek Indian Reservation, South Dakota 39BF3, 39BF301

Iowa Indian Reservation, Nebraska 25RH1

Lower Brule Indian Reservation, South Dakota 39LM33-34, 39LM39, 39LM47, 39LM55

Status of Curation Funding: Curation is financed by a per-box fee.

Date of Visit: 7 April 1998

Point of Contact: Dr. Mary Adair, Curator

Assessment

The museum is located on the university campus in Spooner Hall, originally built as the University's first library in 1894 (Figure 1). Currently, Spooner Hall houses exhibit space for the Museum of Anthropology, a gift shop, the collections storage areas, offices, an archaeology laboratory, and classrooms. In addition to Spooner Hall, the Museum occupies some space in the basement of Fraser Hall, a classroom building located just south of Spooner (Figure 2). A total of 109.3 ft³ of artifacts recovered from BIA trust lands is housed at the Museum, in



Figure 1. Exterior of the University of Kansas Museum of Anthropology, Spooner Hall.

addition to 5.3 linear feet of associated documentation.



Figure 2. Exterior of the University of Kansas Museum of Anthropology, Fraser Hall.

Structural Adequacy

Spooner Hall

The repository is a four-story structure, built into the side of a hill, with two floors above ground and two floors that are partially below ground. The building has a stone foundation, sandstone exterior walls, and a clay tile roof. The roof was partially replaced during the mid-1980s. The foundation, the exterior walls, and the roof are each considered to be structurally sound and without cracks or leaks. Many of the building's original wooden window frames have been replaced with steel frames, but there is some evidence of water leakage around those not yet replaced. All windows in the facility are thermal paned but only the windows in the exhibit gallery have ultraviolet (UV) filters.

The museum collections are stored in the archaeology laboratory that is located on the first sub-grade level of the repository. The laboratory/collections storage room is entered through a plywood sheet door after descending one of the dual staircases just inside Spooner Hall's main entrance. The floor in this room is cement covered with tile, the walls are painted dry wall, and the ceiling is suspended acoustical tile. There are four wood and steel framed windows on the north wall of the collections storage room. Three of these windows are shaded. None are filtered against UV radiation. There were no reported incidents or evidence of water or air leakage around these windows.

All project documentation is housed in Dr. Adair's office, which also serves as the archives

area. This office/archives area is entered through an interior doorway on the east wall of the collections storage room. The floor in the archives area is cement covered with linoleum tile, the walls are painted drywall, and the ceiling is unfinished cement. There are four unshaded windows on the north wall and three on the east wall. None are filtered against UV radiation. All window frames are constructed of wood and steel, and there was evidence of water and air leakage around them.

Fraser Hall

Fraser Hall was constructed in 1967 to serve as a major classroom building. The structure has seven floors, a concrete frame, and a limestone veneer on the exterior. The Museum stores approximately one-half of its archaeological collections in an 863 ft² basement room of Fraser Hall. A small portion of this space is available for laboratory or work use. The basement room has sealed concrete floors, walls and ceiling. Evidence of past leakage was observed in a corner of the room.

Environment

Spooner Hall

A heating, ventilation, and air conditioning system (HVAC) monitors and maintains the facility temperature and relative humidity. University staff in charge of operations check and set the relative humidity level approximately every six months. There are dust filters on the environmental controls. Lighting in both the collections storage and document archives rooms is provided by a combination of unfiltered fluorescent overhead tubes, desk lamps, and unfiltered natural lighting from the unshaded windows. There is no asbestos present within the building structure and there are no overhead pipes within the collections storage area.

Fraser Hall

A 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 a feature of the Museum's storage area in Fraser Hall.

Pest Management

No program of pest management currently exists, and no specific precautions are taken to monitor or protect collection materials from insect and rodent damage. During previous instances of insect infestation, affected archaeological materials have been removed from the collection storage areas for treatment. Dr. Adair indicated that roaches are a continuing problem, but that there is no current evidence of other insect pests or rodents. She also stated that the museum staff is currently researching methods for non-invasive pest management.

Security

Spooner Hall

Interior and exterior repository doors are equipped with both dead bolt locks and key locks, and access into the collection storage areas is controlled by museum staff. None of the windows can be opened, and additional security is provided by metal bars covering the exterior of all ground accessible windows. Campus police regularly patrol the area. In addition, the museum is in the process of acquiring a motion detection security system.

Fraser Hall

The collections storage area in Fraser Hall is secured with a deadbolt lock. Off-hours, the entire building is secured, and campus police patrol the area. Museum staff, including designated graduate students, have access to the storage area.

Fire Detection and Suppression Systems

Spooner Hall

Fire detection devices include manual fire alarms, heat sensors, and smoke detectors. Fire suppression devices consist of fire extinguishers.

Fraser Hall

Fire detection in Fraser Hall consists of manual fire alarms. Fire suppression consists of multiple fire extinguishers and fire hoses located throughout the building.

Archaeological Materials

Storage Units

Storage units for BIA archaeological materials located in Spooner Hall (Figure 3) consist of metal cabinets, each measuring 89 x 24 x 24 inches (h x d x w). Each metal cabinet is equipped with a key lock. In Fraser Hall, storage units consist of open baked enamel metal shelves (Figure 4) measuring 97 x 24 x 37 inches (h x d x w). For a breakdown of material classes see Table 6.



Figure 3. Artifact collections storage area, Fraser Hall.

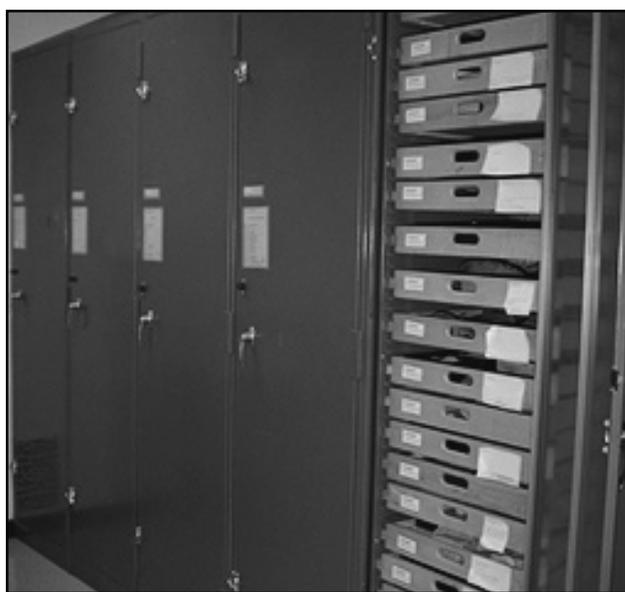


Figure 4. Artifact collections storage area, Spooner Hall.

Table 6.
Percentages (by Volume) of Material Classes in the BIA Archaeological Collections Housed at the University of Kansas Museum of Anthropology

Material Class	Percentage
<i>Prehistoric Materials</i>	
Ceramic Artifacts	46
Worked Bone	22
Lithic Artifacts	12
Fauna	7
Shell	2
Botanical Remains	1
Flotation Samples	1
<i>Historic Materials</i>	
Metal	5
Wood	3
Other ¹	1
Total	100

¹ "Other" consists of historic ceramics and glass .

Primary Containers

In Spooner Hall, primary containers for BIA archaeological materials consist mainly of wood drawers each measuring 3 x 22 x 20 inches (h x d x w) and located in metal cabinet storage units. Each drawer is identified by a paper label located in a plastic jacket secured to the drawer. Label information consists of state and site number.

Primary containers in Fraser Hall consist of acidic cardboard boxes (Figure 5) each measuring 7 x 24 x 12 inches (h x d x w). Boxes are identified with a typed adhesive label, with information



Figure 5. Artifact storage units and primary containers, Spooner Hall.

consisting of state, site number and name, contents, and shelf location.

Secondary Containers

Artifacts in wood drawer primary containers (Spooner Hall) are stored in open acidic cardboard box secondary containers (15%) of small, but varying sizes. Labels consist of paper inserts in clear plastic jackets. Label information consists of site number and drawer number. Artifacts in acidic cardboard box primary containers are stored in paper bags (85%) as secondary containers. In addition to paper bags, there are a small number of 2-mil plastic zip-lock bags and small acidic cardboard boxes. Secondary containers are labeled directly in marker with site number, provenience, and contents.

Laboratory Processing and Labeling

All of the BIA collections have been cleaned and sorted. However, approximately 15% of the BIA collections have been labeled; labels consist of site number and catalog number recorded directly on the artifacts in ink. Labeled artifacts consist exclusively of those housed at Spooner Hall.

Human Skeletal Remains

The Museum does not curate any human skeletal remains recovered from BIA trust lands.

Records Storage

Archaeological documentation is housed in Spooner Hall, in the basement. The museum director's office is located in the same storage room. Storage units for the documents consist of metal shelves (Figure 6) measuring 84 x 9 x 36 inches (h x d x w). BIA documentation housed at the Museum totals 5.3 linear feet (63.25 linear inches).

Paper Records

BIA paper records consist of administrative, background, survey, excavation, and analysis records, and catalog records and photographic logs. Paper records total 22.25 linear inches (1.8 linear feet). Records are stored in acidic cardboard boxes



Figure 6. Records storage units and primary containers, Spooner Hall.

with telescoping lids, most of which measure 11 x 4.5 x 13 inches (h x d x w). One box measures 13 x 5.25 x 17 inches (h x d x w). Primary containers are identified by a typed adhesive label. Identifying information consists of site number, year, and type of records. Secondary containers for paper records consist of acid-free envelopes. Envelopes are labeled directly in pen or pencil.

Reports, Maps, and Photographic Records

Draft reports and maps are stored with the paper records. Report records measure 8.25 linear inches, and maps total 0.25 linear inches. Photographic records include black and white prints, negatives, and slides, and total 32.5 linear inches (2.7 linear feet). These materials have been archivally processed and are stored in a standard-size metal file cabinet. Photographic records are labeled by project and/or site.

Collections Management Standards

Accession Files

Archaeological materials and documentation are accessioned upon receipt of the materials.

Location Identification

Location information for the archaeological collections is controlled by the collections manager. The accession files do not contain location information.

Cross-Indexed Files

The files are cross indexed by accession number and site number.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian Institution trinomial system is used.

Computerized Database Management

Automated data processing techniques are used to manage the collection. Disk back-ups of these records are made at least yearly. They are created primarily in the fall after new collections from the summer field school have arrived. The computer is attached to a network; however, the information is stored locally within the building, not on the server. These locally stored records are not part of the on-line records. At least one back-up copy is stored off-site at Dr. Adair's home. At present, access to this computerized information is limited to Dr. Adair and her assistant.

Written Policies and Procedures

The University of Kansas Museum of Anthropology maintains the following written policies and procedures: minimum standards of acceptance, curation procedures, records management, loans, and deaccessioning. There are no written field-curation guidelines, nor an inventory policy. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

The repository has two full-time curators, one of which is responsible for the archaeological

collections. In addition, there are five other staff members at the museum, including assistants and clerks. A number of graduate students also do work and/or research on a part-time basis.

Curation Financing

Curation is financed by a per box curation fee of \$200, which does not include long-term curation fees.

Access to Collections

Access to the collections is controlled by the museum staff. Interested researchers with proper credentials may gain access by making a pre-arranged appointment with the Director or Curator.

Future Plans

The museum plans to complete a written standard for the curation and accessioning of collection materials. There have been some preliminary discussions with federal agencies regarding the formation of cooperative agreements for curation. These discussions are expected to continue. Dr. Adair also plans to continue seeking grant money to finance upgrades to the archaeological collections. In addition, an elevator was expected to be completed by Fall 1998. This improvement would allow disabled persons' access to all floors of the museum.

Comments

1. Collections are stored in two buildings, Spooner Hall and Fraser Hall.
2. Both Spooner Hall and Fraser Hall have heating and air conditioning systems, but only Spooner Hall has the capability to monitor and control humidity.
3. No standard pest-management system has been implemented for either repository
4. Fire detection and suppression systems in Spooner Hall consist of manual fire alarms, heat sensors, smoke detectors, and fire extinguishers. Fraser Hall fire detection and suppression systems consist of manual fire alarms, fire extinguishers, and fire hoses.
5. In Spooner Hall, artifacts are stored in small acidic cardboard boxes as secondary containers. In Fraser Hall, primary containers are acidic cardboard boxes, and secondary containers consist of paper bags.
6. Associated documentation is stored in acid-free envelopes, which are stored in acidic cardboard boxes in Spooner Hall. There were no observed security copies of the documentation.

Recommendations

1. If possible, consolidate artifacts in Spooner Hall, which has proper environmental controls. Install a sprinkler system in Spooner Hall; if this is not possible, install an electronic fire detection system that is wired to the local fire department. Implement a professional pest-management system for the facility.
2. Replace acidic cardboard boxes with acid-free boxes. Apply adhesive polyethylene plastic label holders, with acid-free inserts, to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents changes, inserts are replaced, thus reducing the chance for conflicting and confusing information. Label all archaeological materials with indelible ink to prevent information loss if archaeological materials are separated from provenience data.
3. Place all acid-free envelopes (secondary containers) for records in acid-free cardboard boxes, and apply adhesive, polyethylene plastic label holders, with acid-free inserts, to the boxes. Make a duplicate copy on acid-free paper of all associated documentation, and store these materials in a separate, fire-safe, secure location.

4

Midwest Archeological Center (MWAC), National Park Service, Lincoln, Nebraska

Collections Summary

Volume of Artifact Collections: None

Linear Feet of Records: 4.6 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: None

Collections Identified: Midwest Archeological Center (MWAC) curates documentation associated with the Smithsonian Institution River Basin Survey (SI-RBS) program. Numerous sets of fieldnotes, journals, field site inventories, and photographic records are contained in MWAC files, organized primarily by researcher and year, and in some circumstances by site number. BIA records housed at MWAC are a subset of SI-RBS records, and include documentation of archaeological work conducted as part of the river basin surveys. As part of the RBS program, fieldnotes and journals were marked as an original copy, or photocopied and marked as copy 1, copy 2, or copy 3, for storage in different institutional locations. Original copies of fieldnotes are reportedly at the Smithsonian Institution, while photocopies are distributed throughout the states with the collections. The following collections were identified as relating to BIA.

Cheyenne River Indian Reservation, South Dakota 39DW242

Crow Creek Indian Reservation, South Dakota 39BF4, 39BF10, 39BF224-225

Devils Lake Indian Reservation, North Dakota 32BE201

Fort Berthold Indian Reservation, North Dakota 32DU9, 32DU25, 32ME59, 32ME61-62, 32ME64, 32ME72, 32ML42, 32ML49, 32MN21, 32MN25-26; River Basin Survey –Metcalf Field Notes (Copy 3); 1950 Metcalf Journal (Copy 1, 2, and 3); 1951 Metcalf Journal (Copy 1, 2, and 3); 1952 Metcalf Journal (Copy 2)

Iowa Indian Reservation, Nebraska 25RH1

Lower Brule Indian Reservation, South Dakota 39LM31, 39LM33, 39LM47, 39LM55, 39LM81, 39LM83-84

Pine Ridge Indian Reservation, South Dakota 39SH00, 39SH1-3; River Basin Survey –1949 Wheeler Notes

Standing Rock Indian Reservation, North Dakota/ South Dakota 32SI6-8, 39CO14, 39CO19; River Basin Survey –1948 Cooper Journal and Fieldnotes (Copy 1, 2, and 3); 1949 Cooper Journal (Copy 1, 2, and 3)

Yankton Indian Reservation, South Dakota 39CH9

Status of Curation Funding: The National Park Service has base money for yearly salaries. Long-term curation is funded through yearly project statements in competition with regional parks.

Date of Visit: 7 January 1998

Point of Contact: Jan Dial-Jones, Collections Manager, and Tom Thiessen, Archeologist

Assessment

MWAC is located in a large federal building in downtown Lincoln, Nebraska. The building was constructed in 1974, and is comprised mainly of offices and courtrooms located on five floors and a basement (Figure 7). MWAC curates a total of 55 linear inches (4.6 linear feet) of documentation associated with the River Basin Surveys, and thought to be associated with archaeological work conducted within the boundaries of Indian reservations in Nebraska, North Dakota, and South Dakota.



Figure 7. Exterior of the Midwest Archeological Center (Federal Building).

Structural Adequacy

The federal building has a concrete frame and foundation, with concrete block exterior walls. The roof is built-up asphalt. According to MWAC staff, the building is structurally solid with no cracks or leaks. The collections storage area for archaeological documentation is a small room, encompassing approximately 100 ft², located in the basement. Walls are composed of wallboard, the floor is concrete, and the ceiling is comprised of suspended acoustical tiles.

Environment

The federal building is equipped with central air conditioning and gas-forced air heating. Humidity is neither monitored nor controlled throughout the building, but some MWAC repository rooms have humidity controls. This does not include the records storage area, however. Maintenance and custodial functions are performed regularly in MWAC repository spaces by in-house staff.

Pest Management

MWAC employs an integrated pest management system in repository areas. This system includes both regular monitoring and regular control, conducted by staff.

Security

The federal building has ubiquitous security measures. Primary controls include an intrusion alarm wired to the local police department, and limited access through an x-ray machine, which is monitored by guards. The building interior is also monitored on television monitors by security guards. In addition, exterior doors are locked by key and by combination. Interior doors are all locked by key. MWAC repository space, including the records storage room, is secured with key locks. Building management has one key locked in a safe, and MWAC staff have all other keys.

Fire Detection and Suppression Systems

The federal building is equipped with manual alarms, heat sensors, and smoke detectors for fire detection, and fire extinguishers and a wet-pipe sprinkler system for fire suppression. The records storage area is covered by the sprinkler system, and is equipped with one dry chemical fire extinguisher.

Archaeological Materials

MWAC does not curate any River Basin Survey or other artifacts or human remains that are associated with archaeological work conducted within the boundaries of Indian reservations.

Human Skeletal Remains

MWAC does not curate any human skeletal remains associated with archaeological work conducted within the boundaries of Indian reservations.

Records Storage

A total of 55 linear inches (4.6 linear feet) of River Basin Survey records housed at MWAC are associated with archaeological work conducted within Indian reservation boundaries in Nebraska, North Dakota, and South Dakota. Storage units (Figures 8) consist of metal letter-size file cabinets measuring 59 x 29 x 15 inches (h x d x w). Four file cabinets house River Basin Survey records.



Figure 8. Storage units containing River Basin Survey records at the Midwest Archeological Center.

Paper records consist of administrative, background, survey, excavation, and analysis documents totaling 34.75 linear inches. Secondary containers for paper records consist of acidic manila folders with typed adhesive labels. Records are stored either by year and field director, or in some instances by state. The collection is in good condition.

Maps total 17.75 linear inches, and photographic records total 2.5 linear inches,

including negatives and black and white prints. Maps and photographic records are stored in the same storage units and secondary containers as the paper records.

Collections Management Standards

MWAC is not a long-term curation facility for materials or documentation outside of the National Park Service scope of work. Therefore, collections management standards for BIA collections do not apply and are not discussed in this report.

Curation Personnel

MWAC staff, mostly involved in active cultural resource management for the Midwest region of the National Park Service, totals 40 and includes an archaeological collections manager and a registrar. In any year there may also be a number of seasonal or temporary hires.

Curation Financing

Long-term curation funding is acquired by submitting yearly project statements and competing with regional parks for limited resources. There is a base for annual salaries.

Access to Collections

Six individuals within MWAC have access to the collections, in addition to the building manager, who has one key to the repository rooms locked in a safe. These are the only individuals who can be unsupervised in the collections rooms.

Future Plans

MWAC would like to transfer the River Basin Survey documents, presumably to the state repositories or the Smithsonian Institution, because the National Park Service archaeological mission no longer includes these materials. Potentially in the near future, MWAC may expand its collections beyond the National Park Service mission.

Comments

1. Although there are no humidity controls in the records storage area, this basement room is kept at a constant 65 degrees Fahrenheit.
2. Although the records storage room is not directly linked to an electronic security system, the federal building is equipped with tight security controls.
3. The federal building meets national fire code standards.
4. Although most records are photocopies, they are stored in acidic manila folders, within metal file cabinets.

Recommendations

1. Replace acidic manila folders with acid-free folders and archivally label in indelible ink or pencil.
2. Separate photocopies of identical sets of River Basin Survey records and store in separate secure locations.
3. Consider transferring BIA records collections to a permanent repository. Photocopy BIA records for this purpose, and leave several sets of records with the MWAC River Basin Survey collections for RBS project continuity.

5

Nebraska State Historical Society, Lincoln

Collections Summary

Volume of Artifact Collections: 142.6 ft³

Compliance Status: Artifacts require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 10.2 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: The Nebraska State Historical Society curates 8.2 ft³ of human remains, encompassing a minimum of 31 individuals. The human remains (7.2 ft³; MNI=30) were collected primarily from the Leary-Kelly site, 25RH1. However, there is one box of human skeletal remains, representing a minimum of one individual, from site 39LM26 in South Dakota.

Collections Identified:

Crow Creek Indian Reservation, South Dakota
39BF3-4

Iowa Indian Reservation, Nebraska 25RH1, 25RH6

Lower Brule Indian Reservation, South Dakota
39LM24, 39LM26-27, 39LM39, 39LM81

Omaha Indian Reservation, Nebraska 25CM7-9,
25CM503, 25TS1, 25TS4, 25TS6-8, 25TS12-13,
25TS15-19, 25TS31-32, 25TS37

Santee Sioux Indian Reservation, Nebraska 25KX7,
25KX30, 25KX43-44, 25KX72, 25KX205-206

Standing Rock Indian Reservation, North and South
Dakota 39CO1-2

Winnebago Indian Reservation, Nebraska 25TS2-3,
25TS9-11, 25TS14, 25TS20-24, 25TS26-29,
25TS33, 25TS35, 25TS38-42

Status of Curation Funding: The Nebraska State Historical Society receives funding for curation from a number of different sources. There is some direct funding from the state, and some funds are acquired through research projects. In addition, some curation agreements supply money for curation, and curation fees are assessed on newly accessioned materials.

Date of Visit: 7-9 January 1998

Point of Contact: Teresa Jacobs, Registrar

Assessment

The Nebraska State Historical Society (NSHS) museum building is located in downtown Lincoln. Originally built in 1967 and used as a Kiwanis Club, it was purchased by NSHS in 1981 and renovated one year later. The facility has multiple offices, extensive exhibit space, laboratory space, and basement storage space. BIA archaeological collections at NSHS total 142.6 ft³ of artifacts and 10.2 linear feet of associated documentation.

Structural Adequacy

The NSHS museum building is a three-story structure encompassing 74,000 ft² (Figure 9). It has a full concrete foundation and basement, with a concrete frame and brick exterior walls. The roof is built-up flat asphalt. Two collections storage areas for BIA artifacts are located in the basement, where the floor, ceiling, and walls are concrete. The records storage area is on the exhibits second floor, and walls are composed of wallboard and concrete. The floor is concrete, and the ceiling is suspended acoustical tile. None of



Figure 9. Exterior of the Nebraska State Historical Society.

the collections storage areas have exterior windows.

Environment

NSHS is equipped with air conditioning and a natural gas hot water heating system. At the time of the assessment, the human skeletal remains storage area did not appear to have heat; it was either not working, or the room is not equipped with this control. Humidity is monitored by hydrothermograph in the repository and the collections storage areas, and there is one commercial dehumidifier, which is currently located in the human skeletal remains storage area. Maintenance and custodial duties are conducted by NSHS staff on a regular basis. These activities are performed on request in the collections storage areas. Lighting in most areas of the repository is accomplished by nonultraviolet filtered fluorescent tubes, which are accompanied by incandescent bulbs in collections storage areas.

Pest Management

NSHS has an integrated pest management system, incorporating both monitoring and control. Monitoring is performed regularly by staff, and control is conducted every two months by professionals. Historical collections are emphasized more in the pest management program.

Security

The museum building is equipped with an intrusion alarm that is wired to a private security firm. Motion detectors are located throughout the building. Access is through use of electronic key pads. Interior doors are secured with key locks, and exterior doors have both key and dead-bolt locks. The basement collections storage areas are further secured, as access to this level is only available through a key-operated elevator.

Fire Detection and Suppression Systems

The collections storage areas and office areas are protected by a wet-pipe sprinkler system. However, remaining areas of the repository are not covered by this system. In addition, smoke detectors are wired

into the system, which is connected to the local fire department. Fire extinguishers are located throughout the building.

Archaeological Materials

Storage Units

In the primary collections storage area (Figure 10), located in the basement, storage units consist of metal shelf units measuring 121 x 24 x 42 (inches, h x d x w). There are nine shelves per unit, and 69 total shelf units. In the human remains storage area, also located in the basement, artifacts are stored on wood shelf units



Figure 10. Artifact storage area at Nebraska State Historical Society.

measuring 115 x 24 x 28 (inches, h x d x w). There are four shelves per unit, and 16 total shelf units. BIA artifacts housed at NSHS encompass 142.6 ft³. For a breakdown of material classes see Table 7.

Primary Containers

Primary containers consist primarily of acidic cardboard boxes (Figure 11) measuring 5 x 24 x 19 (inches, h x d x w). Boxes are identified with a paper insert in a small plastic clear pocket adhesive label. Paper inserts are labeled directly in marker with site

Table 7. Percentages (by Volume) of Material Classes in the BIA Archaeological Collections Housed at the Nebraska State Historical Society

Material Class	Percentage
<i>Prehistoric Materials</i>	
Ceramic Artifacts	38
Lithic Artifacts	22
Fauna	15
Human Skeletal Remains	5
Wood/Charred Wood	5
Worked Bone	4
C ¹⁴	2
Shell	1
Botanical Remains	1
Other ¹	3
<i>Historic Materials</i>	
Metal	3
Other ²	1
Total	100

¹ Prehistoric ‘Other’ includes clay samples, pigment, daub, burned earth, worked shell, and soil samples.

² Historic ‘Other’ includes glass, ceramics, leather, textile, and brick.



Figure 11. Primary container, showing the variety of secondary container types (Nebraska State Historical Society).

number. Whole and partially reconstructed ceramic pots are stored without primary or secondary containers, on the open metal shelving units in the human remains storage area (Figure 12).



Figure 12. Whole and reconstructed ceramic vessel storage (Nebraska State Historical Society).

Secondary Containers

The majority of secondary containers (58%) are paper bags. Bags are labeled directly in marker with site number, and sometimes with material class. Beyond paper bags, most artifacts are stored loose (26%) in the primary containers. Other types of secondary containers total 16% for the BIA collections and consist largely of non-archival plastic bags and small acidic cardboard boxes (Table 8).

**Table 8.
Percentages (by Volume) of Secondary Container Types Present in BIA Archaeological Collections Housed at Nebraska State Historical Society**

Secondary Container Type	Percentage
Paper Bags	58
Loose	26
Non-archival Plastic Bags	10
Small Acidic Cardboard Boxes	3
Other	3
Total	100

‘Other’ includes paper tubs, cigar boxes, match boxes, metal tubs and tins, and plastic vials.

Laboratory Processing and Labeling

Approximately one-half of BIA artifacts are directly labeled in ink with site number. Almost all collections have been washed and sorted by material class.

Human Skeletal Remains

NSHS curates 8.2 ft³ of human remains, encompassing a minimum of 31 individuals. The human remains (7.2 ft³; MNI=30) were collected primarily from the Leary-Kelly site, 25RH1. However, there is one box of human skeletal remains, representing a minimum of one individual, from site 39LM26 in South Dakota. Primary containers consist primarily of acidic cardboard boxes measuring 5 x 24 x 19 (inches, h x d x w).

Records Storage

Archaeological documentation is stored in the records storage room, which is located on the second floor of the NSHS (Figure 13). This storage area is accessed through the archaeology section, where



Figure 13. Storage units for associated documentation (Nebraska State Historical Society).

several staff members have office and laboratory space. A total of 10.2 linear feet (122 linear inches) of BIA records are stored at NSHS. Storage units consist of standard metal file cabinets measuring 59 x 29 x 15 (inches, h x d x w) and 52 x 26 x 19 (inches, h x d x w). In addition, there is a flat map case that measures 80 x 12 x 78 (inches, h x d x w).

Paper Records

Associated documentation is stored by site number, in the state site files. These documents consist of administrative, background, survey, and excavation records, and total 11 linear inches. Most paper records are associated with 25RH1, the Leary-Kelly Site. Secondary containers for paper records consist of manila folders with site number and folder contents recorded in pencil.

Report Records

Draft report records total only 0.5 linear inches, and are stored with the paper records in the state site files. Secondary containers for report records consist of manila folders with site number and folder contents recorded in pencil.

Photographic Records

Black and white prints, negatives, and slides comprise 109.5 linear inches. Prints and negatives are stored in small acid-free paper envelopes, organized by site number. Slides are stored in small acid-free cardboard boxes, just larger than the slides themselves. Slides are also organized by site number.

Maps and/or Oversized Documentation

Maps and drawings constitute one linear inch of records, and are stored in the flat metal map cases.

Collections Management Standards

Accession Files

Once acquired, archaeological materials and associated documentation are accessioned into the NSHS system. Primary records are kept on a computer database.

Location Identification

Collections locations are available through accessing the registrar's computer database. Collections are housed alphabetically by county, sequentially by site number. Multiple containers for sites are generally stored together.

Cross-Indexed Files

The computer database is searchable by several keys, including site number and accession number.

Published Guide to Collections

There is no published guide to NSHS collections.

Site-Record Administration

NSHS uses the Smithsonian trinomial system of site identification.

Computerized Database Management

NSHS uses a computer database to file and access accession records information. The database includes basic catalog data. The system is mainframe, and file backups are recorded three times per week on digital tape and stored off-site by the state.

Written Policies and Procedures

NSHS maintains the following written collections management and museum policies and procedures: accession/acquisition, minimum standards of acceptance, loans, exhibition, access and use of collections, and deaccessioning. NSHS does not have written field curation guidelines, an inventory policy, conservation treatment procedures, nor shipping/packing procedures. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

Full-time personnel in the NSHS archaeology division include a registrar, an archaeological technician, an administrative assistant, and four archaeologists. To some extent, the NSHS

conservation staff and the NAGPRA coordinator also work with the collections.

Curation Financing

Archaeological curation is financed primarily through curation fees. However, some funding is acquired from the Department of Roads, and some is acquired through research projects. In addition, NSHS provides some direct funding for curation.

Access to Collections

Researchers are required to sign-in and be supervised at all times by curatorial staff. Physical access to the collections storage areas on the basement level is only through the freight elevator, which is operated by key.

Future Plans

NSHS would like to expand to a building across the street.

Comments

1. NSHS is equipped with air conditioning and heating systems, and humidity is monitored. Although there is no heat in the human remains storage room, humidity is controlled through the use of a commercial dehumidifier.
2. There is an integrated pest management system, including both monitoring and control.
3. Security at NSHS consists of an intrusion alarm wired to a private security firm. Access to the collections storage areas is only by use of a key-operated freight elevator.

4. Collections storage areas and offices are covered by a wet-pipe sprinkler system for fire detection and suppression.

5. Primary containers for archaeological collections consist primarily of acidic cardboard boxes. Secondary containers are largely paper bags, or artifacts are stored loose.

6. Paper and report records are stored in manila folders with the state site files. Photographic records are stored in separate cabinets. Maps stored in flat metal map case.

Recommendations

1. Place a commercial dehumidifier in the main collections storage area, as necessary.
2. Place artifacts into archival quality 4- and 6-mil zip-lock plastic bags, and rebox into acid-free cardboard boxes. Label secondary and primary containers in archival ink with project and provenience information. Label artifacts according to accepted museum procedures.
3. Replace current manila folders housing associated documentation with acid-free folders. Remove all metal contaminants such as paper clips or staples. Photocopy the records and store in a separate, secure off-site and fire-safe location. Place photographs, negatives, and slides into archival quality plastic sleeves. Be careful not to lose provenience and subject information.

6

University of Nebraska State Museum, Lincoln

Collections Summary

Volume of Artifact Collections: 43.2 ft³

Compliance Status: Artifacts require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.6 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: The University of Nebraska State Museum curates human skeletal remains from two archaeological sites, 25RH1 and 25KX8, which are located on BIA trust lands. The Museum did not allow St. Louis District personnel to access the remains; the minimum number of individuals is thus not determined but must at least be two. The remains have been reported to the National Park Service as mandated by the Native American Graves Protection and Repatriation Act.

Collections Identified:

Cheyenne River Indian Reservation, South Dakota 39DW2, 39DW17-18, 39DW223-224, 39DW231, 39DW234, 39DW239, 39DW254-255

Crow Creek Indian Reservation, South Dakota 39BF3-4, 39BF15-17, 39BF19-20, 39BF22, 39BF209, 39BF212 39BF224

Devil's Lake Indian Reservation, North Dakota 32ED202

Fort Berthold Indian Reservation, North Dakota 32BE3, 32DU4, 32DU9, 32ME48, 32ME55, 32ME59, 32ML32

Iowa Indian Reservation, Nebraska 25RH1

Lower Brule Indian Reservation, South Dakota 39LM24, 39LM26-27, 39LM31-34, 39LM39-40, 39LM47, 39LM51-52, 39LM55-56, 39LM60, 39LM66, 39LM71, 39LM81, 39LM83-85

Pine Ridge Indian Reservation, South Dakota 39SH00, 39SH1

Santee Sioux Indian Reservation, Nebraska 25KX2-10, 25KX12-13

Standing Rock Indian Reservation, North Dakota/ South Dakota 39CO2, 39CO31-32, 32SI4, 32SI6

Yankton Indian Reservation, South Dakota 39CH9-10, 39CH16-17, 39CH19, 39CH22

Status of Curation Funding: The University of Nebraska owns the building where artifact and records collections are stored. Salaries for museum personnel are appropriated through the University of Nebraska State Museum, Division of Anthropology, and an assistant is also funded on soft money. The university provides a small budget for supplies.

Date of Visit: 12 January 1998

Point of Contact: Deborah Confer, Anthropology Collections Manager

Assessment

The University of Nebraska State Museum is located on the university campus in Lincoln. The museum exhibits anthropology materials and artifacts of natural history in its facilities in Morrill Hall. The Division of Anthropology maintains offices, laboratory space, study areas, and collections storage areas in the Mail and Distribution Services building, located on R street (Figure 14). The museum curates 43.2 ft³ of artifacts recovered from several BIA trust lands in Nebraska, North Dakota, and South Dakota. Additionally, there are 0.6 linear feet (6.75 linear inches) of associated documentation.



Figure 14. Exterior of R Street Building, University of Nebraska State Museum.

Structural Adequacy

The Mail and Distribution Services building (hereafter, R Street Building) is a 35,000 ft² structure. The Division of Anthropology occupies approximately 3,000 ft² of space within the building; other university offices occupy the remainder. The building exterior is composed of brick and wood siding. The foundation is brick, and the roof is built-up asphalt. According to museum staff, there have been foundation leaks in the past.

Interior walls in the R Street Building are plaster, and floors are composed of asbestos floor tiles covering poured concrete. The ceiling consists

of suspended acoustical tiles. The building is comprised of two floors, a ground floor and a basement level. The records storage area is located on the ground floor, within the office and laboratory space occupied by the museum. Artifacts are stored on the basement level, in one of two rooms. One room houses collections originating from the university's academic anthropology department, and the other houses collections originating from the museum. Museum staff have curation responsibility for both collections sources. At the basement level, interior walls are primarily brick, and the floor and ceiling are poured concrete. There are no windows in either collections storage area.

Environmental Controls

Heating for the R Street building consists of two gas-fired heat pump furnaces. There is no air conditioning, and no method of humidity monitoring or control. In the records storage area, lighting is provided by nonultraviolet filtered fluorescent tubes. In the artifact storage areas, lighting is accomplished by incandescent bulbs. Maintenance and cleaning are conducted regularly by campus staff.

Pest Management

There is no integrated pest management system that includes both regular monitoring and regular control. Monitoring for pests is conducted on an as-needed basis, and there is no regular control.

Security

Security for the R Street Building consists of dead-bolt locks on exterior doors and an intrusion alarm tied to the local police department. The collections storage areas are secured with key locks on wood panel doors. In addition, access to the collections storage areas is tightly controlled by the collections manager.

The anthropology collections storage area is linked to the museum collections storage area by a large doorway in the brick wall divider. The doorway is restricted by interior wood 2 x 4 inch beams and wire mesh. The wall is constructed in this way so air can circulate between the two collections storage areas. In addition, one wall of the museum

collections storage area is comprised of very thin wallboard with metal wire and wood 2 x 4 inch beams attached to the back side. Security is compromised by this construction in the basement. If someone breaks into either collections storage area, entry into the adjacent area promises to be even easier.

Fire Detection and Suppression

Fire detection in the R Street Building consists of a manual alarm wired to the local fire department. There is no form of fire suppression, including fire extinguishers, available. No manual alarms are located in the artifact storage areas.

Archaeological Materials

Storage Units

Storage units in the collections storage areas consist of open, painted metal uprights with $\frac{3}{4}$ -inch wood slat shelves. The uprights and shelves located in the museum collections storage area (Figure 15) measure 64 x 37 x 37 inches (h x d x w). The uprights and shelves located in the anthropology collections storage area (Figure 16) measure 82 x 48 x 98 inches (h x d x w). The University of Nebraska State Museum curates a total of 43.2 ft³ of artifacts recovered from BIA trust lands. Types and percentages of archaeological materials composing the BIA collections are identified in Table 9.



Figure 15. Museum artifacts collections storage area at the University of Nebraska State Museum.



Figure 16. Anthropology artifacts collections storage area at the University of Nebraska State Museum.

Table 9.
Percentages (by Volume) of Prehistoric Archaeological Materials in the BIA Collections Housed at the University of Nebraska State Museum

Material Class	Percent
Fauna	91
Ceramic Artifacts	6
Lithic Artifacts	2
Shell	1
Total	100

Primary Containers

Primary containers consist almost entirely of acidic cardboard boxes with volumes ranging from 0.5-2.4 ft³ (Figure 17). Most boxes have a volume ranging from 1.1-1.3 ft³, and all have telescoping lids. Two primary containers are acid-free cardboard, each having volumes of 1.3 ft³. Boxes are directly labeled in marker, with information consisting of the box number for identification within the repository, and site number.



Figure 17. Primary and secondary artifact containers at the University of Nebraska State Museum.

Secondary Containers

Secondary containers consist primarily of paper bags (64%), and nearly one-third (31%) of the artifacts are stored loose in the primary containers. Other secondary containers are archival plastic zip-lock bags (3%) and small acidic cardboard boxes (2%). Containers are directly labeled in marker with information consisting of site number and catalog number.

Laboratory Processing and Labeling

All artifacts have been cleaned and sorted by material class, but only approximately 5% have been labeled. Labels generally consist of site number and catalog number recorded in ink directly on the artifact.

Human Skeletal Remains

The University of Nebraska State Museum curates human skeletal remains from two archaeological sites located on BIA trust lands: 25RH1 and 25KX8. These materials are each located in one box, which

were not evaluated. The Museum did not allow St. Louis District personnel to access the remains; the assessment team was thus not able to determine the minimum number of individuals, although this figure must be two at a minimum. The remains have been reported to the National Park Service as mandated by the Native American Graves Protection and Repatriation Act.

Records Storage

There are 6.75 linear inches of documentation associated with archaeological research conducted on BIA trust lands. These documents are stored in letter-size metal file cabinets measuring 52 x 29 x 19 inches (h x d x w), located in the records storage area on the ground floor of the R Street Building (Figure 18). Records are arranged by site number, and to a lesser degree, by project.



Figure 18. Records storage units at the University of Nebraska State Museum.

Paper Records

Paper records total three linear inches and consist of administrative, background, survey, excavation, and analysis documentation. Secondary containers consist of manila folders, which are in fair condition. Folders are directly labeled or labeled on an adhesive, in pen or pencil; some are typed. Label information consists of site number and the contents of the folder.

Photographic Records

Photographic negatives and black and white prints comprise 3.75 linear inches. Secondary containers for negatives are small manila envelopes with site number labeled in marker. Black and white prints are glued to 5 x 8 in. index cards and filed without secondary containers. The index cards are yellowed, and in many cases the prints are beginning to detach. Descriptive data, including site number, year, and subject, is typed directly on the index cards.

Collections Management Standards

Accession Files

The museum does not maintain specific accession/acquisition files for collections. However, there is a database of collections organized by state and site number, which accounts for the numbers and types of artifacts stored in each box.

Location Identification

The collections database identifies each box by a shared location number. This number identifies the collections storage area (e.g., A –anthropology; M –museum), and the column of shelves and shelf the box is stored on (e.g., 012.1). There may be several boxes with the 012.1 identifier, and these may be further broken down by site number, which is recorded directly on the box. Each box is assigned a unique sequential number.

Cross-Indexed Files

Files are cross-indexed by site number and box number or box location in the collections database.

Published Guide to Collections

There is no guide to collections available for the museum.

Site-Record Administration

The museum uses the Smithsonian trinomial system for site identification.

Computerized Database Management

The museum uses Paradox for the collections database. Computers are attached to a password-protected network for the Anthropology Division of the museum.

Written Policies and Procedures

The University of Nebraska State Museum does not yet maintain written collections management policies and procedures. A curation policy is currently in development. The following types of written policies are generally utilized in curation institutions: (1) accession/acquisition, (2) minimum standards of acceptance, (3) curation policy, (4) records management policy, (5) field curation procedures, (6) loan policy, (7) deaccessioning policy, and (8) inventory policy. The museum informally addresses these issues, however. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

The museum Anthropology Division has a full-time curator, a collections manager, and a curatorial assistant. Graduate students are occasionally involved in working with the collections, in coordination between the museum and the anthropology department.

Curation Financing

Salaries for the curator and collections manager are appropriated through the University of Nebraska State Museum, Division of Anthropology, and a curatorial assistant is also funded on soft money. The university owns and maintains the R Street building, and provides a small budget for supplies.

Access to Collections

Three staff members, the curator, collections manager, and curatorial assistant, have access to the archaeological materials and associated documentation. Work in the collections storage areas is limited and monitored by curatorial staff.

Collections are available for loan purposes, subject to staff approval.

Future Plans

For a number of years collections have been scattered throughout the museum or the anthropology department, with little attention or care. Recently, the university's anthropology department consolidated collections with the museum. Current plans focus on the collections manager and curatorial assistant researching the history of the existing collections, accessioning them, and rehabilitating them. Many of the museum's archaeological materials were acquired as a result of the Smithsonian Institution River Basin Surveys, which were partly conducted along the Missouri River in North and South Dakota. Much coordinating museum work will be necessary with other institutions in the Plains, as collections from many archaeological sites have been split between multiple institutions.

Comments

1. Heating for the R Street Building consists of gas-fired heat pump furnaces. There is no air conditioning, and no humidity monitoring or control.
2. There is no integrated pest management system. Monitoring and control are conducted on an as-needed basis.
3. Security consists of dead-bolt locks on exterior doors, and key locks on doors to collections storage areas. The two basement artifact storage areas share a brick wall as a divider, which is open to increase air flow. This open area is secured with a 2-x-4-inch wood frame and wire covering. In the current state, if access into one artifact storage area is gained, entry to the other will be easy. Additionally, a portion of the wall of one of the artifact storage areas consists of very thin wallboard with some wood and wire support. Breaking through this wall would prove an easy task.

4. Fire detection consists of manual fire alarms wired to the local fire department. There is no sprinkler system for fire suppression, nor any fire extinguishers.

5. Artifacts are stored primarily in paper bags, and in acidic cardboard boxes. Many artifacts are stored loose in the acidic cardboard boxes. Although all artifacts appear to be cleaned and sorted, only a very small percentage has been labeled.

6. Paper records and photographic negatives are stored in manila envelopes. Black and white photographic prints are glued to acidic paper index cards. The glue holding prints to index cards is disintegrating, and the index cards are labeled with all provenience and subject information.

Recommendations

1. Acquire university space that can more adequately meet 36 CFR Part 79 standards. A collections storage area should, at a minimum, have air conditioning and heat. Humidity can be monitored through the use of a digital hygrometer, and controlled through the use of a commercial dehumidifier and/or commercial humidifier.
2. In addition to environmental controls, a collections storage area should be secure. Access should be limited by a minimum of specific, responsible staff. Other university staff, including cleaning and maintenance, should not be allowed entry without the supervision of curatorial staff. If possible, collections storage areas should be secured by dead-bolt locks and an electronic entry system that is wired to the local police department.
3. Any curation space should be in a building equipped with a sprinkler system for fire suppression, which is wired to the local fire department. Manual fire alarms and fire extinguishers should also be available. Arrange rows of storage units, if possible, parallel to sprinkler pipes to prevent serious collections damage if pipes break.

4. Begin an integrated pest management system that monitors for pests and provides regular control. Monitoring should be regular, and consist of sticky traps and other visual inspection methods, and control should be conducted by professional pest management staff.

5. Place artifacts into archival quality 4- and 6-mil zip-lock plastic bags, and rebox into acid-free cardboard boxes. Label secondary and primary containers in archival ink with project and provenience information. Label artifacts according to accepted museum procedures.

6. Replace current manila folders housing associated documentation with acid-free folders. Remove all metal contaminants such as paper clips or staples. Photocopy the records and store in a separate, secure and fire-safe location. Place photographic negatives into archival quality plastic sleeves. Under the supervision of an archivist, remove black and white prints from index cards and place in archival quality plastic sleeves. Be careful not to lose provenience and subject information that is currently recorded on the index cards.

7

State Historical Society of North Dakota, Bismarck

Collections Summary

Volume of Artifact Collections: 139.5 ft³

Compliance Status: Artifacts require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1.1 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: None

Collections Identified:

Fort Berthold Indian Reservation, North Dakota
32DU1, 32ME59, 32MN101

Lower Brule Indian Reservation, South Dakota
39LM26

Standing Rock Indian Reservation, North and South Dakota
32SI2, 32SI4, 32SI6-9, 32SI76-77, 39CO1, 39CO3-4, 39CO9, 39CO14, 39CO26

Status of Curation Funding: The State Historical Society of North Dakota receives funding from state and federal grants, and from curation agreements and curation fees.

Dates of Visit: 10-12 December 1997

Points of Contact: Fern Swenson, Chief Archaeologist, Archaeology & Historic Preservation Division, and Paul Picha, Archaeologist

Assessment

The State Historical Society of North Dakota (SHSND) operates a state-of-the-art building located on the capitol complex in Bismarck. The facility has large amounts of exhibit space, meeting rooms, an auditorium, offices and collections storage space.

Artifact collections recovered from BIA lands total 139.5 ft³, and there are 1.1 linear feet of associated documentation.

Structural Adequacy

The SHSND building was constructed in 1980 and encompasses more than 127,000 ft² (Figure 19). The building frame is steel and the foundation is concrete. Exterior walls are white limestone. The roof was upgraded in 1992, and consists of rubberized membrane. There are no known cracks or leaks in either the roof or the foundation. Collections storage areas are located in the lower, basement



Figure 19. Exterior of the State Historical Society of North Dakota.

level. Adjacent to the artifact storage area is a laboratory section, which includes offices, a washing, holding, processing, and temporary storage area, and study areas.

The artifact storage area and records storage area are separate from each other, though located within the same division of the building. The records storage area is also a small study area located in the offices section. In both collections storage areas, walls consist of concrete block and wallboard on some faces, the floor is concrete, and the ceiling is suspended acoustical tile.

Environment

SHSND operates an HVAC system that includes humidity control. Humidity monitoring is accomplished by hygrometer. The HVAC system consists of dust-filtered, gas forced-air movement, with an electric backup. Maintenance and janitorial functions are performed regularly by museum staff, except in collections storage areas where non-curatorial staff are supervised at all times. Custodial functions are conducted in collections storage areas by curatorial staff, as needed. Lighting throughout the building consists of UV-filtered fluorescent tubes.

Pest Management

SHSND monitors pest infestations with the use of insect sticky traps and live mouse traps. Traps are checked monthly. Control is conducted quarterly through use of a contracted exterminator. If collections are discovered to be infested with pests,

they are placed in an infestation chamber located near the exterior loading dock. Generally, pests have not been a problem, although mice have occasionally called the anthropology division home.

Security

Collections are tightly secured through several means. The building is secured by an intrusion alarm which is wired to the police department. Additionally, closed circuit cameras are used to monitor the building interior. In the basement area, electronic key cards are used for access to specific storage and work areas. Visiting researchers are issued passes, which allow limited access to artifact and records study areas. In collections storage areas, visitors are under close supervision at all times. The primary collections storage area can be accessed by only five SHSND employees.

Fire Detection and Suppression Systems

The museum building is equipped with a wet-pipe sprinkler system for fire detection and suppression. The system is wired to the local fire department. Additionally, the building is equipped with smoke detectors and heat sensors located throughout the building. Fire extinguishers are also located throughout the building.

Archaeological Materials

Storage Units

The artifact storage area encompasses 1,450 ft², and is located through the rear of the laboratory and offices space of the anthropology division of SHSND. Storage units for artifacts (Figure 20), at the time of assessment, consisted of 19 tall metal sliding drawer systems, each measuring 109 x 37 x 72 inches (h x d x w). Percentages of material classes present in the BIA collections are outlined in Table 10.

Primary Containers

Metal drawers within the storage units (Figure 21) measure either 8 x 36 x 21 inches (h x d x w) or



Figure 20. Artifact storage units at the State Historical Society of North Dakota.



Figure 21. Primary and secondary containers for artifacts at the State Historical Society of North Dakota.

Table 10.
Percentages (by Volume) of Material Classes in the BIA Archaeological Collections Housed at the State Historical Society of North Dakota

Material Class	Percentage
<i>Prehistoric Materials</i>	
Ceramic Artifacts	34
Lithic Artifacts	19
Fauna	14
Worked Bone	8
C ¹⁴	2
Other ¹	2
<i>Historic Materials</i>	
Wood	16
Metal	3
Other ²	2
Total	100

¹ Prehistoric Other includes: shell, botanical remains, worked shell, clay, pigment samples, and catlinite.

² Historic Other includes: ceramics, glass, textiles, rubber, leather, asphalt, and basketry.

4 x 36 x 21 inches (h x d x w). To be removed from the storage system, drawers must be slid out of a track in entirety. Because of the height of many of

the drawers, and because of weight of artifacts, removing whole collections can be exceedingly difficult. Additionally, all collections within a particular drawer can only be examined if the drawer is completely removed from the storage unit and a thin metal lid is slid to the rear and out of a groove in the drawer. The assessment team had considerable difficulty examining artifacts from some collections, particularly if they were located high in the storage unit and if they consisted of heavy lithic chipped stone or ground stone. Storage drawers are identified by an adhesive label with site number and catalog number recorded directly in marker. It should be noted that at the time of the assessment, SHSND staff were repackaging artifacts into acidic cardboard boxes each measuring 10 x 18 x 12 inches (h x d x w). These primary containers are folded, with the bottoms and tops taped. The boxes were to be placed on open, space-saver shelving not yet acquired. Secondary containers were not being replaced.

Secondary Containers

Secondary containers consist primarily (87%) of paper bags. Approximately 13% of the artifact collection is stored in a variety of other types of

secondary containers, including tied nylon bags (5%), 2- and 4-mil tied plastic bags (4%), 4- and 6-mil plastic zip-lock bags (2%), newspaper wrap (1%), and bubble wrap (1%). Paper bags are folded and secured with a piece of masking tape, and are labeled directly in marker. Nylon bags are secured with a pull string, and labeled directly in marker. Tied plastic bags and plastic zip-lock bags are also labeled directly in marker. Label information consists of site number, accession number, and site name.

Laboratory Processing and Labeling

All of the BIA archaeological materials have been sorted. Approximately 95% of the materials have been cleaned, but only approximately 25% of the materials have been labeled. Artifacts are identified by a direct label, in ink, consisting of the site number and catalog number.

Records Storage

Documentation associated with BIA archaeological materials encompasses 1.1 linear feet at SHSND. Records are stored in a small study room located adjacent to the entry door to the anthropology division in the basement. In the center of the room is a large table and chairs for study purposes. Storage units for records are open wood shelves measuring 84 x 10 x 29 inches (h x d x w). There are seven shelves/unit, and a total of six units.

Paper Records

Documentation consists primarily of background and excavation records, totaling nine linear inches. Primary containers consist of archival boxes measuring 10.5 x 12 x 5 inches (h x d x w). Each box is identified by an adhesive label with typed information consisting of inclusive manuscript numbers. The documents are organized by manuscript number; primary containers are organized in numerical order of manuscript number. To identify information such as subject, title, or author of particular manuscripts, a researcher must search the computerized database system. Secondary containers are acid-free folders identified by a typed

adhesive label. Identifying information consists of manuscript number and subject.

Photographic Records

BIA photographic records at SHSND total 4.25 linear inches, and consist entirely of black and white prints. Photographs are stored with the paper records.

Collections Management Standards

Accession Files

Archaeological materials and associated documentation are accessioned upon receipt.

Location Identification

The location of artifact collections is identified in the computerized accession records. Records are identified by a manuscript number in a computerized database system; the records are stored in numerical succession by manuscript number.

Cross-Indexed Files

Artifact accession files are cross-indexed by site number and ownership. The records database is cross-indexed and searchable by several means, including site number, author, subject, manuscript number, title, and research area (for North Dakota).

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

SHSND uses the Smithsonian Institution trinomial system.

Computerized Database Management

At least two databases are used for collections management. One database is used by SHSND staff. A second database is used by visiting researchers to search for manuscripts. Although searches can be conducted, this database is not modifiable, except by SHSND staff.

Written Policies and Procedures

SHSND maintains the following written policies and procedures for archaeological collections management: minimum standards for acceptance, curation methods and procedures, records management, loans, and deaccessioning. Field-curation guidelines and an inventory policy are not currently outlined. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

SHSND has a staff of 55, which are spread across six divisions. Several of these employees are directly relevant to the archaeological materials and associated documentation, including the Museum director, exhibits curator, collections research curator, collections management curator, preparator, and registrar. Volunteers from the surrounding community also participate in curation and collections management activities.

Curation Financing

State and federal curation agreements and curation fees are the primary methods of securing financing for curation and collections management.

Access to Collections

The primary collections storage area can be accessed by only five SHSND employees. Visiting researchers are issued passes, which allow limited access to artifact and records study areas. In collections storage areas, visitors are under close supervision at all times.

Future Plans

The archaeology division is currently phasing out the tall metal sliding drawer artifact storage system, and phasing in box storage on open shelving, which at the time of the assessment had not been acquired.

Comments

1. The SHSND facility was constructed in 1980, and provides considerable exhibit, collections storage, and research space. Environmental controls consist of an HVAC system with humidity control. Security to the building is multi-tiered, and includes an intrusion alarm and controlled access to collections storage areas. The facility is equipped with a sprinkler system for fire detection and suppression.
2. SHSND staff operate an integrated pest management system.
3. At the time of the assessment, storage units for artifacts consisted of tall metal sliding drawer storage systems, but the staff was busy transferring artifacts into acidic cardboard boxes, for eventual storage on open shelves. Secondary containers consist predominantly of paper bags.
4. Records are stored in acid-free folders in acid-free cardboard boxes.

Recommendations

1. Replace acidic cardboard boxes with acid-free cardboard boxes. Apply adhesive polyethylene plastic label holders, with acid-free inserts, to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents changes, inserts are replaced, thus reducing the chance for conflicting and confusing information. Label all archaeological materials with indelible ink to prevent information loss if artifacts are separated from provenience data.
2. Make a duplicate copy of all associated documentation on acid-free paper, and store these materials in a separate, fire-safe, secure location.

8

University of North Dakota, Grand Forks

Collections Summary

Volume of Artifact Collections: 0.5 ft³

Compliance Status: Artifacts will require complete rehabilitation to comply with existing Federal guidelines and standards for archaeological curation.

Linear Feet of Records: None

Human Skeletal Remains: None

Collections Identified:

Fort Berthold Indian Reservation, North Dakota
32MN402

Standing Rock Indian Reservation, North and South
Dakota 32SI4

Status of Curation Funding: Curation of collections is accomplished by writing monies for curation supplies into the fieldwork budgets and into research contracts.

Date of Visit: 8 December 1997

Point of Contact: Dr. Dennis Toom, Professor of Anthropology

Assessment

The University of North Dakota Anthropology Department has been active in conducting archaeological research on the northern Plains for many years, and is currently curating small collections recovered from the Fort Berthold and Standing Rock Indian Reservations. Artifacts total 0.5 ft³, and there is no associated documentation located at the university. Some collections are curated long-term at the university, but the goal is to

be only a temporary holding facility, with most collections going to the North Dakota State Historical Society for permanent curation.

The Department of Anthropology occupies repository storage space in Babcock Hall on the university's campus (Figure 22). Babcock Hall is between 80 and 90 years old, and currently houses classrooms and laboratories for ceramic and industrial technologies, and anthropology. The repository encompasses approximately 14,000 ft², and includes areas for artifact holding, washing, processing, storage, and study, as well as records study and storage, general and utilities storage, and offices. There are three floors above grade and one below.



Figure 22. Exterior of Babcock Hall, University of North Dakota.

Structural Adequacy

The exterior of Babcock Hall is constructed primarily of brick, which composes both the foundation and the exterior walls. The roof is constructed of built-up asphalt, with shingles. Parts of the roof have been renovated, with the last modifications occurring approximately five years ago. Although the building is solid, there are leaks through the foundation. There are multiple windows on the exterior, all having wood frames. Windows are generally equipped with shades. Through the years there have been multiple interior renovations of the building.

The collections storage area has a concrete floor, and plaster interior walls and ceiling. There are a small number of windows, each with wood frames and shades. There is one wood panel door to the interior of the repository, and one metal panel exterior door. The collections storage area encompasses 3,000 ft², and is filled to approximately 90% capacity with archaeological collections.

Environment

Babcock Hall is equipped with a heating system, but no air conditioning. There is, however, a filtered fresh air system. Humidity is neither monitored nor controlled. The building is maintained and cleaned weekly by university staff. Lighting is accomplished by fluorescent nonultraviolet filtered bulbs.

Pest Management

There is no integrated pest management system in operation. Cockroaches are a periodic problem, and are controlled as-needed and on a yearly basis by sprays and bombs deployed by a professional pest control company.

Security

Security for Babcock Hall consists of key locks and dead bolt locks on all exterior doors, and simple window locks on all exterior windows. In addition, the university campus police conduct patrols. There have been past episodes of unauthorized entry through the steam tunnels used for heating, but interior doors have since been padlocked. The doors to the collections storage area are equipped with both key and dead-bolt locks.

Fire Detection and Suppression Systems

Fire detection systems consist of smoke detectors, heat sensors, and manual fire alarms wired to the local fire department. Fire suppression consists of fire doors and fire extinguishers located throughout the repository. There are four fire extinguishers located in the collections storage area, one in every room.

Archaeological Materials

Storage Units

Storage units for artifacts consist of unsealed wood shelves (Figure 23) measuring 90 x 16 x 48 inches (h x d x w). There are seven shelves/unit, and 16 units in the collections storage area. BIA collections total approximately 0.5 ft³ in volume.

Primary Containers

Artifacts are stored in two acidic cardboard boxes with folding flaps (Figure 24), each box measuring 1.4 ft³ in volume. Neither box is completely full. Label information consists of site numbers and reservation name, written directly on the box in marker. Table 11 illustrates the percentages of material classes present by volume in the BIA collections.



Figure 23. Artifact storage units, Babcock Hall, University of North Dakota.

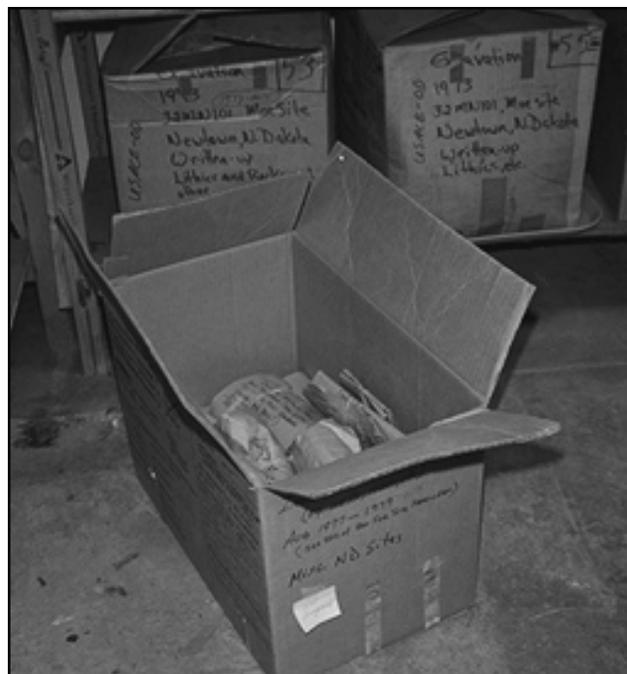


Figure 24. Primary and secondary artifact containers, University of North Dakota.

Table 11.
Percentages (by Volume) of Prehistoric Archaeological Materials in the BIA Collections at the University of North Dakota

Material Class	Percentage Present
Lithic Artifacts	99
Fauna	1
Total	100

Secondary Containers

Secondary containers consist of paper bags in one box and no secondary containers in the other box (loose). Secondary container label information consists site number written directly in pen or pencil on the bags. Date or contents are sometimes included in the label information.

Laboratory Processing and Labeling

All of the artifacts have been cleaned and sorted. Some artifacts have been labeled. Information is recorded directly in ink on the artifacts.

Human Skeletal Remains

The University of North Dakota is not currently curating any human skeletal remains recovered from Indian reservations in the project area.

Records Storage

There is no documentation associated with archaeology projects conducted on BIA trust lands curated at the University of North Dakota.

Collections Management Standards

Registration Procedures

Accession Files

When collections are acquired, an attempt is made to accession them.

Location Identification

Within the accession files, the location is identified by building and room number.

Cross-Indexed Files

Files are not cross-indexed. A database is in place, but the system is not completed.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian Institution trinomial system is utilized.

Computerized Database Management

A database system is currently being developed.

Written Policies and Procedures

UND does not maintain any of the following written policies and procedures: minimum standards for acceptance, curation guidelines, records management, field-curation guidelines, loans, deaccessioning, and inventory. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

Dr. Dennis Toom is the part-time collections manager. There is no full-time curator. Dr. Toom's responsibilities include organizing archaeological materials and storing them. In addition, there is a program director and a staff of eight full-time people.

Curation Financing

Curation is financed through budgeting for curation supplies in field projects. Curation is also financed through research contracts.

Access to Collections

Access to the collections is controlled by Dr. Toom. Students and staff of the university are generally the only users.

Future Plans

There are future plans for the curation of archaeological materials, but they rate as a lower priority than recovery, analysis, or teaching. Curation is still only viewed as a temporary duty of the university.

Comments

1. The foundation of Babcock Hall is aging, and occasionally leaks water.
2. There is no air conditioning system in Babcock Hall, but there is a fresh air system. There is no method of humidity monitoring or control.
3. There is no integrated pest management system.
4. Security consists of key and dead-bolt locks on all doors. There is no fire suppression system other than fire extinguishers.
5. Artifacts are stored in acidic cardboard boxes, and acidic paper bag secondary containers or loose in the boxes.

Recommendations

1. Remove artifacts from acidic paper bags and acidic cardboard boxes, and place in archival quality zip-lock plastic bags and acid-free cardboard boxes. Insert acid-free paper labels into individual secondary containers.
2. Locate documentation relating to archaeological work conducted on BIA trust lands and unite with the artifact collections. Documentation should be copied onto acid-free paper, stored in acid-free folders, and placed in acid-free cardboard boxes. In addition, make copies of documentation and store at a secure, off-site location.
3. Transfer BIA archaeological collections to the State Historical Society of North Dakota.

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South Dakota Archaeological Research Center, Rapid City

Collections Summary

Volume of Artifact Collections: 79 ft³

Compliance Status: Artifacts require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 4.4 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: None

Collections Identified:

Cheyenne River Indian Reservation, South Dakota
39DW9-12, 39DW15, 39DW17, 39DW19,
39DW30-31, 39DW34, 39DW36, 39DW38,
39DW41, 39DW43-46, 39DW201-212, 39DW214,
39DW216, 39DW218, 39DW219, 39DW221-222,
39DW227, 39DW232, 39DW237-239, 39DW241,
39DW253-255, 39ZB4-5, 39ZB201-203

Crow Creek Indian Reservation, South Dakota
39BF14-17, 39BF19-20, 39BF22-23, 39BF208-209,
39BF212-213, 39BF226-227, 39BF230, 39BF234-
236, 39BF240, 39BF242, 39HU232

Lake Traverse Indian Reservation, North and South
Dakota 39DA2, 39DA201, 39RO26, 39RO38

Lower Brule Indian Reservation, South Dakota
39LM25, 39LM29, 39LM32, 39LM35, 39LM38,
39LM40, 39LM42, 39LM52, 39LM56, 39LM60,
39LM66-67, 39LM69-71, 39LM85-86, 39LM202,
39LM210-211

Pierre Indian Learning School, South Dakota
39HU10

Pine Ridge Indian Reservation, South Dakota
39JK51, 39SH4, 39SH7-32

Standing Rock Indian Reservation, South Dakota
39CO00, 39CO2, 39CO4, 39CO7-8, 39CO11,
39CO13, 39CO15, 39CO17, 39CO18, 39CO20-22,
39CO24-26, 39CO29, 39CO32-34, 39CO37,
39CO39-44, 39CO46, 39CO48-49, 39CO52-56,
39CO202-208, 39CO210-211

Yankton Indian Reservation, South Dakota
39CH9-13, 39CH16, 39CH19, 39CH24, 39CH64-80,
39CH82, 39CH85-86, 39CH88-90, 39CH92-99

Status of Curation Funding: South Dakota
Archaeological Research Center is funded partly by
the state (building, electricity, supplies), but curation
funds are directly derived from cooperative
agreements with federal agencies, and grants.

Date of Visit: 27 April 1998 –1 May 1998

Point of Contact: Renee Boen, Curator, and Pat Hofer, Records Manager

Assessment

The South Dakota Archaeological Research Center (SARC) is located in Rapid City, adjacent to a vocational-technical school. SARC occupies a 16,200 ft² building that was constructed in 1972 (Figure 25).



Figure 25. Exterior of South Dakota Archaeological Research Center.

Structural Adequacy

The building foundation is concrete slab, and the frame is steel. Exterior walls and the roof are corrugated metal. The roof is approximately 27 years old and is reported to have leaks. Interior walls are comprised of wallboard, and the floor is poured concrete covered with carpet. The ceiling is composed of suspended acoustical tiles. Window frames throughout the repository are aluminum, and windows are equipped with locks and blinds.

SARC's facilities include a materials/supply storage area, offices, an artifact washing area, a holding area, temporary storage, a processing area, study rooms, and storage rooms. The assessment team observed BIA collections in nine collections storage areas, including one each for artifacts, NAGPRA collections, bulk collections, conservation storage, photographic slides storage, photographic storage, incoming collections, maps storage, and records and site files storage. The collections storage

areas together total approximately 3,400 ft². The NAGPRA, conservation, and photographic storage areas are all equipped with door locks. Windows are present in the NAGPRA storage area.

Environment

The SARC building is equipped with central air conditioning and gas-forced air heating. The air movement system is original to the building. The targeted temperature is between 65-70 degrees Fahrenheit. There is no humidity control for the building. SARC recently borrowed a hygrothermograph from a museum in Pierre, and observed that relative humidity stays consistently very low. Lighting in the building consists of nonultraviolet filtered fluorescent tubes. Custodial and maintenance duties are conducted as needed by SARC staff.

Pest Management

Monitoring for pest infestations is conducted by SARC staff, but there is no regular control. Sticky traps or other pest trapping devices are not used for monitoring.

Security

SARC is wired on an electronic security system to a security firm, who calls the police when an illegal entry is detected. The system is equipped with motion detectors placed throughout the building. Exterior doors all have locks, as do some interior doors. In addition, the large movable shelf system for artifacts has a key lock.

Fire Detection and Suppression Systems

An automatic fire detection system including heat sensors and smoke detectors is wired to the security firm, who then calls the fire department. There is a very quick response time for fire and police assistance. The building is not equipped with a sprinkler system for fire suppression. Eight fire extinguishers are located throughout the building. There are several manual-pull fire alarms in the hallways.

Archaeological Materials

Storage Units

Artifacts are housed primarily on an electronic movable metal frame shelf system (Figure 26). Shelves are pressboard covered by plastic wrap, set horizontally in the metal frame. The shelves have an added security feature, a key lock that turns the system on and off. Shelves measure 90 x 24 x 48 inches (h x d x w). Excess collections are stored on several sets of nonmovable metal shelving units (Figure 27), measuring 84 x 24 x 48 inches (h x d x w). Both the movable system and the nonmovable shelves are stored in large open sections of the repository, and not in closed rooms. Table 12 outlines the types of materials in the BIA collections at SARC.

Primary Containers

Artifacts are stored in acidic cardboard boxes of varying sizes and construction, ranging from 0.1 to 1.5 ft³ in volume. Primary container labels consist of paper inserts into plastic adhesive jackets.



Figure 27. Nonmovable artifact storage units at the South Dakota Archaeological Research Center.



Figure 26. Artifact storage on space saver movable shelving at the South Dakota Archaeological Research Center.

Table 12.
Percentages (by Volume) of Material Classes in the BIA Archaeological Collections Housed at the South Dakota Archaeological Research Center

Material Class	Percentage
<i>Prehistoric Materials</i>	
Fauna	43
Flotation Samples	17
Ceramic Artifacts	16
Lithic Artifacts	14
Soil Samples	3
Botanical Remains	2
Worked Bone	2
Other ¹	1
<i>Historic Materials</i>	
Metal	1
Other ²	1
Total	100

¹Prehistoric ‘Other’ includes shell, worked shell, and radiocarbon samples.

²Historic ‘Other’ includes ceramic artifacts, glass, and textiles.

Information is recorded directly in marker, pen, or pencil, and includes site number, accession number, site name, box number, and material classes.

Secondary Containers

Secondary containers consist largely of 2- and 4-mil plastic bags (32%) and paper bags (37%). Other types include plastic zip-lock bags (16%) and small cardboard boxes (6%). Approximately 8% of the artifacts are stored loose in the primary container, without secondary containers. One percent of the collection is stored in plastic pill bottles, tissue wrap, glass jars, and other types of containers. Labels consist of site number and accession number recorded directly on the secondary container.

Laboratory Processing and Labeling

All of the artifacts have been cleaned and sorted by material class and site number. Approximately one-half have been labeled with information directly recorded on the artifact, and consisting generally of site number.

Human Skeletal Remains

SARC does not currently curate human skeletal remains recovered from BIA trust lands in the northern Plains.

Records Storage

Associated documentation is stored primarily in standard metal file cabinets (Figure 28) each measuring approximately 58 x 28 x 14 inches (h x d x w). The primary collections storage area for records is the site files storage area, although two other rooms house paper records, and two further rooms have photographic records. In total, SARC curates 53.25 linear inches (4.4 linear feet) of documentation associated with BIA archaeological collections in the northern Plains.

Paper Records

Paper records consist of administrative, background, survey, excavation, analysis, and catalog documentation, and total 42.25 linear inches for BIA



Figure 28. Records storage units and primary containers at the South Dakota Archaeological Research Center.

collections. Records are stored with the site files, in manila folders organized by county and site number. Secondary container labels consist of both typed adhesive and direct marker information.

Report Records

There are 0.5 linear inches of report records stored at SARC. These are stored with and in the same manner as the paper records.

Photographic Records

Photographic records consist of black and white prints, negatives, and slides. These total 9.75 linear inches for BIA collections. There are two separate collections storage areas: one for prints and negatives, and the other for slides. Prints and negatives are stored in archival-quality polyethylene sleeves (labeled), which are encased by plastic vinyl binders (Figure 29). The photos are organized by county and site number. Slides are stored in small metal or plastic boxes, designed specifically for this use (Figure 30). These boxes measure 2 x 8 x 15 inches (h x d x w). Slides are individually labeled in marker with either the site number or the catalog number.



Figure 29. Photographic print storage in binders at the South Dakota Archaeological Research Center.



Figure 30. Photographic slides storage box at the South Dakota Archaeological Research Center.

Maps and/or Oversized Documentation

There is a total of 0.75 linear inches of maps associated with the BIA collections. These are stored in a large flat metal map case, in the map storage room.

Collections Management Standards

Accession Files

SARC does accession artifacts and associated documentation into its system.

Location Identification

The SARC computer database identifies the accession number of the collection, and boxes are stored on the shelves organized by accession number.

Cross-Indexed Files

The SARC computer database has two key fields, site number and accession number.

Published Guide to Collections

There is no published guide to collections at SARC.

Site-Record Administration

SARC uses the Smithsonian trinomial method of site identification.

Computerized Database Management

SARC uses the Microsoft Access database program. Files are stored on a network, and different staff members have differing access levels for edit functions. File backups are created daily, and there is one copy stored at the State Historical Preservation Office in Pierre.

Written Policies and Procedures

SARC maintains the following written collections management policies and procedures: loans, exhibition, conservation treatment, field curation guidelines, minimum standards of acceptance, packing/shipping, use/access of collections, and deaccessioning. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

The SARC staff numbers as many as 15 individuals, although most of these are not available for curation responsibilities. SARC has a curator, records manager, technician, and interns available for archaeological curation.

Curation Financing

The curator is full-time, financed one-half time by hard state funds, and one-half time through grants and contracts. Curation is financed partly through state support, for example, the building, electricity, and supplies, and through grants and contracts. In addition, SARC maintains cooperative agreements with federal agencies that involve federal funding of curation.

Access to Collections

All access to archaeological collections at SARC is through the curator. Researchers are required to sign in and be supervised at all times, and they must follow handling policies.

Future Plans

SARC would like to construct a new building, and has talked briefly with the South Dakota School of Mines and Technology in Rapid City about a cooperative effort.

Comments

1. The SARC building is constructed of corrugated metal on the exterior walls and roof. The foundation is concrete slab. The roof is 27 years old, and leaks in places.
2. SARC has air conditioning and heating, but no humidity control.
3. There is no integrated pest management system. Pests are controlled on an as-needed basis. SARC staff monitors for pest problems.

4. SARC has an electronic security system that is wired to a local security firm. A fire detection system is also wired to the same local security firm. Upon receiving indication of illegal entry or fire, the firm calls the appropriate public service –the police or the fire department.

5. SARC has a movable metal shelf system for artifacts. The system is equipped with a key lock.

6. Primary containers for artifacts consist of acidic cardboard boxes. Secondary containers consist mostly of 2- and 4-mil plastic bags, and paper bags.

7. Associated documentation is housed in manila folders in standard metal file cabinets. Photographic records are stored in separate collections storage areas.

Recommendations

1. Replace the roof of the building. If this is not possible, patch all leaks or potential leaks.
2. Continue to monitor humidity daily. If there is a need, employ commercial dehumidifiers to control humidity.
3. Implement an integrated pest management system that includes regular monitoring and control.
4. Replace acidic cardboard boxes with acid-free boxes. Replace all secondary containers with 4- and 6-mil polyethylene zip-lock bags. Insert acid-free paper labels into each bag, with provenience information recorded on them.
5. Replace manila folders housing paper records with acid-free folders. Produce copies of all documentation on acid-free paper and store in a separate, secure location.

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University of South Dakota, Vermillion

Collections Summary

Volume of Artifact Collections: 5.0 ft³

Compliance Status: Artifacts require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.5 linear feet

Compliance Status: Records require partial rehabilitation to comply with federal regulations and modern archival preservation standards.

Human Skeletal Remains: None

Collections Identified:

Yankton Indian Reservation, South Dakota 39CH64-78, 39CH82, 39CH85-86, 39CH88, 39CH92-93, 39CH96-99

Crow Creek Indian Reservation, South Dakota 39BF3

Status of Curation Funding: Curation is financed through funds (10-40%) budgeted into archaeological research contracts. The university does not provide any curation funding.

Date of Visit: 9 April 1998

Point of Contact: Dr. Brian Molyneaux, Professor of Anthropology

Assessment

The University of South Dakota is located in the town of Vermillion, in the extreme southeastern corner of the state. The Department of Anthropology operates a contract archaeology program, and employs some students and staff dependent on project needs. Approximately 5.0 ft³ of artifacts recovered from BIA trust lands are housed at the university, in addition to 0.5 linear feet of associated documentation.

Structural Adequacy

The Department of Anthropology is located in East Hall (Figure 31), which today is a large building housing classrooms, offices, and laboratories. The structure was built prior to 1900, and originally served as a dormitory. It has since been renovated to accommodate the current functions. Plumbing and heating systems in the building are quite old, but the electrical system has been updated recently.

East Hall consists of three floors and a basement, with a concrete foundation and Sioux Quartzite stone exterior walls. There are no known problems with the foundation, and the shingled roof was replaced recently, after 1995. Within the building, interior walls consist of painted brick and floors are concrete within linoleum covering.



Figure 31. Exterior of East Hall, University of South Dakota.

Ceilings are plaster. Within East Hall the anthropology department maintains a processing laboratory, and study and storage rooms for artifacts and records. The collections storage area for both the artifacts and records addressed in this report is located in the basement of the building, and encompasses approximately 450 ft². It is filled to approximately 75% capacity.

Environmental Controls

Heating in East Hall consists of gas-hot water. There is no central air conditioning system, although some offices have window units. Floor fans are utilized when needed. Humidity is neither monitored nor controlled. Custodial activities and maintenance are conducted as needed by university staff. Curation staff regularly clean the collections storage area. Lighting in the collections storage area is accomplished by fluorescent tubes, some of which have ultraviolet filters.

Pest Management

The anthropology department does not employ an integrated pest management system. Monitoring is accomplished by visual inspection of potential pest problems, and control is conducted as needed.

Security

East Hall exterior and interior doors are secured through a variety of types of key locks. In addition, the campus police patrol the area. The collections

storage area is secured by wood panel doors equipped with key locks, one of which leads to other recessed sections of the building frequented by maintenance staff. Department personnel and maintenance staff, a total of nine people, have access to the room.

Fire Detection and Suppression Systems

Fire detection in East Hall is accomplished by manual alarms, heat sensors, and smoke detectors, all located throughout the building. Fire suppression consists primarily of a wet-pipe sprinkler system. Multiple fire extinguishers are located in the hallways, and one is positioned outside the door to the collections storage area.

Artifact Storage

Storage Units

Storage units for artifacts consist of non-treated open plywood shelving units each measuring 78 x 18 x 32 (inches, h x d x w). Within the collections storage area (Figure 32), there are four shelves per unit and a total of 25 shelving units. BIA collections total 5.0 ft³. Material class percentages are outlined in Table 13.

Table 13.
Percentages (by Volume) of Material Classes in the BIA Archaeological Collections Housed at the University of South Dakota

Material Class	Percent
Prehistoric Materials	
Lithic Artifacts	76
Fauna	6
Ceramic Artifacts	4
Shell	2
Historic Materials	
Metal	6
Glass	2
Ceramic Artifacts	2
Plastic	2
Total	100



Figure 32. Collections storage area, including artifact and records primary containers, at the University of South Dakota.

Primary Containers

Artifacts are stored in 48 acidic cardboard boxes each with a volume of approximately 0.1 ft³. Boxes have telescoping lids with metal tabs securing the corners. Labels consist of information recorded in pen on an adhesive paper label. Label information consists of project number, site number, accession number, catalog number, recorder, contents, and date. Most box labels are partially peeling away from the container.

Secondary Containers

Most, approximately 80%, of the artifacts are stored loose in the primary containers. The remaining artifacts (20%) are contained in small plastic bottles placed inside the artifact boxes. Plastic bottles are directly labeled in ink with the site number, catalog number, and accession number.

Laboratory Processing and Labeling

All artifacts have been directly labeled in ink with site number and catalog number. All artifacts have been cleaned and sorted by material class.

Human Skeletal Remains

The University of South Dakota does not curate any human skeletal remains recovered from Indian reservations.

Records Storage

There are 6.5 linear inches of documentation associated with archaeological research conducted on BIA trust lands. These documents are stored in primary containers alongside the artifacts, and are located on the unfinished, open plywood shelves furnishing the collections storage area.

Paper records total 3.25 linear inches and consist of administrative, background, survey, excavation, and analysis documents. Records are stored in two archival boxes with flip-open lids, each with a volume of 0.4 ft³. The archival boxes are of folded construction, with metal reinforced corners. Secondary containers consist of manila folders and plastic vinyl binders in fair condition. Folders are labeled directly in pen with the contents (site numbers), and binders are labeled directly with a typed adhesive.

Other label types of records are present in addition to paper documents. Report records total 0.25 linear inches and maps total 0.5 linear inches, and there are 2.5 linear inches of photographic documentation, consisting of negatives, slides, and contact sheets. All report, map, and photographic records are stored with the paper records in the manila folders and plastic vinyl binders within the archival cardboard box primary containers.

Collections Management Standards

Accession Files

The department does not maintain specific accession/acquisition files for collections that are

submitted for curation. However, each artifact is assigned a catalog number. The structure of the number depends on the state of origin for the artifact or the agency/client for which the project was conducted.

Location Identification

There are no central files indicating the location of collections within the repository. Collections are identified by box labels and shelf labels within the collections storage area.

Cross-Indexed Files

Collections are not cross-indexed, but are stored by project.

Published Guide to Collections

There is no guide to collections available for the department.

Site-Record Administration

The department utilizes the Smithsonian trinomial system for site identification.

Computerized Database Management

The Department of Anthropology uses Microsoft Access for the management of archaeological collections. In the near future, the department will implement Artitrack, a relational database, for collections management. Other software used in the department includes ArcView (Geographic Information System), Photoshop, and Office '97. Information is stored on hard-drive, disks, tape backup, and zip drives. Computers are linked by a network, which is entered with a password.

Written Policies and Procedures

The Department of Anthropology does not maintain written collections management policies and procedures. The department informally addresses the issues. (1) accession/acquisition, (2) minimum standards of acceptance, (3) curation policy, (4) records management policy, (5) field curation procedures, (6) loan policy, (7) deaccessioning policy, and (8) inventory policy. For example, for the curation policy, the department generally follows

guidelines distributed by the state of origin for the collections. It should be noted that although most repositories have procedures for deaccessioning archaeological collections, there is no current procedure for government agencies to deaccession or dispose of collections for which they have responsibility.

Curation Personnel

The Department of Anthropology is staffed by several professors, one of which has additional duty as full-time curator and lab director (Dr. Molyneaux). Additionally, there is a lab supervisor and a collections manager.

Curation Financing

Funds for archaeological curation are acquired through money budgeted into research projects. Ten to forty percent of project budgets is allocated to laboratory processing and curation. The university does not assist the department with curation funds, but provides physical space and support.

Access to Collections

Approximately nine personnel within the department have access to the collections. Beyond this total, access is limited. Dr. Molyneaux controls access to the collections for research purposes. In addition, university maintenance staff has access to the collections storage area as they walk through to other recessed areas of East Hall on a regular basis.

Future Plans

A recent assistance program conducted by the university provided the department with a technological "boost" in the area of computer systems. The department would like to expand on this program. Additionally, the department would like a more "controlled" storage facility, resulting in secure storage space with upgraded security systems.

Comments

1. East Hall does not have air conditioning, and humidity is neither monitored nor controlled.

2. There is no integrated pest management system. Monitoring is conducted visually, and control is conducted as needed.

3. The collections storage area is secured by key lock. Maintenance staff have perpetual access, and use the collections storage area as a throughway to other recessed areas of the building.

4. Fire detection consists of manual alarms, heat sensors, and smoke detectors. Fire suppression consists of a wet-pipe sprinkler system and fire extinguishers.

5. Most artifacts are not stored in secondary containers, and are in direct contact with the acidic cardboard primary containers. Artifacts are thus exposed to chemical degradation and abrasion.

6. Most associated documentation is stored in manila folders within an archival cardboard box.

Recommendations

1. Acquire university space that can more adequately meet 36 CFR Part 79 standards. A collections storage area should, at a minimum, have air conditioning and heat. Humidity can be monitored through the use of a digital hygrometer, and controlled through the use of a commercial dehumidifier and/or commercial humidifier. In addition to environmental controls, a collections storage area should be secure.

2. Access should be limited to a minimum of specific, responsible staff. Other university staff,

including cleaning and maintenance personnel, should not be allowed entry without the supervision of curatorial staff. If possible, a collections storage area should be secured by an electronic entry system that is wired to the local police and fire departments.

3. Equip with a sprinkler system for fire suppression. Arrange rows of storage units, if possible, parallel to sprinkler pipes to prevent serious collections damage if overhead pipes break.

4. Begin an integrated pest management system that monitors for pests and provides regular control. Monitoring should be regular, and consist of sticky traps and other visual inspection methods, and control should be conducted by professional pest management staff.

5. Place artifacts into archival quality 4- and 6-mil zip-lock plastic bags, and rebox into acid-free cardboard boxes. Label secondary and primary containers in archival ink with project and provenience information.

6. Replace current manila folders housing associated documentation with acid-free folders. Secondary containers for records should consist of acid-free folders. Remove all metal contaminants such as paper clips or staples. Photocopy the records and store in a separate, secure and fire-safe location.

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Findings Summary

Nine separate repositories at eight institutions in four states are known to curate BIA archaeological collections recovered from trust lands in Nebraska, North Dakota, and South Dakota (Table 14). Each of these institutions and their satellite repositories were visited by the assessment team. Overall, the assessment teams examined collections recovered from 13 Indian Reservations. The assessment team performed complete (100%) examinations of all known BIA collections at each location. A building evaluation, survey questionnaire, and collections and documentation assessments were completed for most repositories. A survey questionnaire addressing collections management policies and procedures was not completed for the Midwest Archeological Center, which does not permanently curate non-National Park Service collections.

At base, the following can be concluded.

- Two of the nine repository buildings housing BIA collections meet the standards of 36 CFR Part 79. These include the Nebraska State Historical Society and the State Historical Society of North Dakota.
- To achieve proper care, collections should be coalesced into no more than three repositories distributed throughout Nebraska, North Dakota, and South Dakota.
- Eight institutions house BIA artifact collections. Artifact collections in all of these institutions require partial rehabilitation, at a minimum.
- Records care does not meet the standards for archival preservation in any of the institutions, and duplicate copies of the existing records should be produced and stored in a separate and secure location. Associated records at seven institutions require partial rehabilitation. One institution does

Table 14.
Facilities and Number of Repositories Housing Phase II BIA Collections

Facility	# Repository Buildings	City/State Location
Midwest Archeological Center	1	Lincoln, Nebraska
Nebraska State Historical Society	1	Lincoln, Nebraska
South Dakota Archaeological Research Center	1	Rapid City, South Dakota
State Historical Society of North Dakota	1	Bismarck, North Dakota
University of Kansas Museum of Anthropology	2	Lawrence, Kansas
University of Nebraska State Museum	1	Lincoln, Nebraska
University of North Dakota	1	Grand Forks, North Dakota
University of South Dakota	1	Vermillion, South Dakota
Total	9	

not currently curate documentation associated with the BIA collections stored there.

- Management controls and a master collection inventory and database for BIA collections are deficient to non-existent, and should be developed.

Repositories

Structures housing BIA collections can be divided into four general types (Table 15). Only one of the nine repositories appears to have been designed or adapted to the requirements of a modern curation center. Generally, universities and some museums are forced to use whatever space they can acquire from their governing bodies, while state and federal agencies, which are generally only temporary curation repositories, are not adequately equipped to act as long-term facilities.

Table 15.
Types and Frequencies of Facilities Curating Phase II BIA Collections

Type of Facility	Number	
	Present	Percent
Museum (private, state, university)	4	50.0
University Lab/Curation Facility	2	25.0
State Agency	1	12.5
Federal Agency	1	12.5
Total	8	100.0

Seven of the nine repositories receive maintenance on a regular basis. Two (22%) are cleaned and maintained on an as-needed basis, resulting in dust covered boxes and shelves. None of the repositories store extraneous items such as field equipment, hazardous chemicals, and personal items in collections storage areas, an unacceptable practice in professional collections management facilities.

Two (22%) of the nine repositories are in compliance with the standards of 36 CFR Part 79 for curating archaeological collections and associated records. Four (44%) others are in partial compliance with the major standards—proper environmental controls, security, pest management, and fire safety—but three (33%) repositories do not comply

with any of the standards. These controls, and how well they are met are discussed briefly and are summarized in Table 16.

A final measure of the care afforded collections can be ascertained by examining the professional staff devoted to collections management. All of the facilities employ at least one full-time staff member with responsibility for the management of archaeological collections.

Environmental Controls

Environmental monitoring and adequate environmental control are essential to long-term preservation of archaeological collections. Three (33%) of the facilities meet federal standards for environmental control, by providing air conditioning, heating, and humidity monitoring and control (Table 16). Additionally, three of the facilities are without air conditioning, although all facilities have central or radiated heat.

Pest Management

Six (67%) of the nine repositories control for pests on an as-needed basis by spraying and trap baiting. Three (33%) have a formal pest management program (Table 16) —one that both monitors and controls insects and small mammals. The types of chemicals used, their frequency of use, and the attendant hazard to personnel and collections are beyond the scope of this report but should be addressed at some point.

Security

Five (56%) of the repositories meet the Federal standards for the security of archaeological collections (Table 16). A primary requirement is the presence of intrusion alarms. All of the repositories are secured with key and/or dead bolt locks, all provide for limited access, and those with windows include simple window locks. Although there were no documented cases of unauthorized entry linked with loss of BIA collections, the potential for this still exists at several of the repositories examined.

Table 16.
Presence/Absence of Infrastructure Controls at Repositories
Housing Phase II Bureau of Indian Affairs Archaeological Collections

Repository	Fire Safety	Security	Environment Controls	HVAC Systems	Pest Mgt.	36CFR79 Standards
KUMA (Spooner Hall)	No	Yes	Yes	Yes	No ¹	No
(Fraser Hall)	No ³	No ⁴	No ⁶	No	No ¹	No
MWAC	Yes	Yes	No ⁶	No	Yes	No
NSHS	Yes	Yes	Yes	No	Yes	Yes
SARC	No	Yes	No ⁶	No	No ¹	No
SHSND	Yes	Yes	Yes	Yes	Yes	Yes
UND	No	No ⁴	No ⁵	No	No ¹	No
UNSM	No ²	No ⁴	No ⁵	No	No ¹	No
USD	Yes	No ⁴	No ⁵	No	No ¹	No

Note: KUMA = Kansas University Museum of Anthropology; MWAC = Midwest Archeological Center, National Park Service; NSHS = Nebraska State Historical Society; SARC = South Dakota Archaeological Research Center; SHSND = State Historical Society of North Dakota; UND = University of North Dakota; UNSM = University of Nebraska State Museum; USD = University of South Dakota

¹indicates repositories that do not have integrated pest management programs, but control for pests on an as-needed basis.

²the primary method of fire detection/suppression at this facility is a manual fire alarm wired to the local fire department.

³this facility is equipped with a fire hose, and fire extinguishers for fire suppression.

⁴security measures at these facilities consist only of door locks.

⁵these facilities do not have air conditioning or humidity monitoring/control.

⁶these facilities do not have humidity monitoring/control.

Fire Safety

Although seven (78%) repositories provide adequate to superb fire detection, only four (44%) have sufficient fire detection and suppression systems in the collections storage areas, including smoke detectors and heat sensors, fire extinguishers, and sprinkler systems (Table 16). Fire detection requires the complement of a fire suppression system, and the reverse is also true.

Artifact Curation

Seven institutions house BIA artifact collections. None of these has properly prepared them for long-term curation. Most collections have been properly cleaned and labeled, but need rehabilitation of packaging materials.

Overall, primary containers are slightly larger than one cubic foot acidic cardboard boxes, both with flap and telescoping lids. Many were overpacked and coated with dust. On a positive note, almost all boxes included some type of label, if only rudimentary.

Approximately 12 percent of the collections by volume are stored loose, without secondary containers. Sixty-eight (68%) of the collections by volume were stored in paper bags used as secondary containers. Only three percent of the secondary containers observed were actual archival polyethylene plastic zip-lock bags. Other types of secondary containers included nonarchival plastic bags (9%), small acidic cardboard boxes (5%), and tied nylon bags (1%). Approximately two percent of the collections is housed in some other type of secondary container, which are identified in Table 17. Most secondary containers were labeled directly or with interior tags, although adhesive labels were also noted. The wide variety of non-archival secondary containers, and the overall lack of any secondary containers together will contribute to the deterioration of these collections (Table 17).

Data were also collected regarding the major prehistoric and historic material classes by volume observed in each of the BIA collections (Table 18). Ceramic artifacts, lithic artifacts, and fauna are most abundant in the prehistoric collections. Principal historic materials include

Table 17.
Percentages of Secondary Containers
(by Volume) Housing Phase II Bureau of Indian
Affairs Archaeological Collections

Secondary Container Types	Percentage Present
Acidic Paper Bags	68
Artifacts Loose in Box	12
Nonarchival Plastic Bags	9
Small Acidic Cardboard Boxes	5
Archival Zip-lock Bags	3
Other	2
Tied Nylon Bags	1
Total	100%

Other: newspaper wrap, bubble wrap, plastic vials, glass jars, tissue paper, paper tubs, cigar and match boxes, and metal tubs and tins.

Table 18.
Percentages (by Volume) of Material Classes
Encountered in the Phase II Bureau of Indian
Affairs Archaeological Collections

Material Class	Percentage Present
<i>Prehistoric Materials</i>	
Ceramic Artifacts	32
Fauna	23
Lithic Artifacts	17
Worked Bone	8
Flotation Samples	3
Shell	1
Botanical Remains	1
C ¹⁴ Samples	1
Wood	1
Human Skeletal Remains	1
Soil Samples	1
Other ¹	1
<i>Historic Materials</i>	
Wood	5
Metal	3
Other ²	2
Total	100

¹ Prehistoric 'Other': worked shell, clay, pigment samples, catlinite, ochre, beads, and mixed/indeterminate.

² Historic 'Other': glass, ceramics, textiles, leather, rubber, asphalt, and basketry.

wood and metal but encompass very small portions of the total BIA collections.

Human Skeletal Remains

Human skeletal remains and associated burial goods comprise 1% by volume of the prehistoric material classes (Table 19). A minimum number of 33 individuals (based on anatomical singularity) is estimated for the BIA collections. Human remains are stored at two institutions: the Nebraska State Historical Society (31 MNI) and the University of Nebraska State Museum (2 MNI). Complete rehabilitation (e.g., reboxing, rebagging, labeling) should be carried out in order to stabilize the remains, and a complete inventory needs to be generated in order to comply with the Native American Graves Protection and Repatriation Act (P.L. 101-601).

Records Management

Records associated with archaeological work conducted on Indian reservations encompass 26.7 linear feet (320 linear inches) and include paper, photographic, maps, and draft report records.

Archival-quality protocols were not observed at any of the institutions. In many cases, paper records have not been housed in acid-free folders, photographs have not been isolated and stored in chemical inert sleeves, and large-scale maps have not been stored flat in map drawers. In few instances were collections accompanied by a complete set of documentation. Much documentation appears to have been misplaced over the years, or simply was not curated with the artifacts after fieldwork was completed.

Environmental controls for both temperature and humidity that meet the Federal standards in 36 CFR Part 79 exist at only three (33%) of the nine repositories. Although not a major problem yet, records housed in the remaining six repositories are subject to temperature and humidity fluctuations. Archive materials readily absorb and release moisture, leading to expansion and contraction, dimensional changes that accelerate deterioration and promote major visible damage such as cockling

paper, flaking ink, warped covers on books, and cracked emulsion on photographs.

Management Controls

Management controls were evaluated for seven institutions of the eight that house BIA archaeological collections. The Midwest Archeological Center is not a permanent repository for non-National Park Service collections. Basic policy and procedure statements for artifact curation, loans, records management, and deaccessioning are present at three institutions, are partially present at two institutions, and do not exist in any form at two. Therefore, most of the examined facilities entrusted with the care of the national heritage have no long-term plan for the management of these resources. This responsibility must be honored by the Federal managers as well, and must be corrected immediately. Failure to meet elementary curation needs and responsibilities has led to the substandard care of many of the BIA collections.

Prior to this collections assessment, the BIA was unfamiliar with the extent, location, or conditions of its archaeological collections. BIA personnel should be commended for recognizing this problem and addressing it, but now that specific deficiencies have been identified, action must be taken to protect these collections. At minimum, a plan of action for the long-term management of the BIA collections should implement the following four items.

1. Inventory all human skeletal remains to comply with NAGPRA.
2. Establish a priority for the collections and their rehabilitation.
3. Inventory and rehabilitate the collections.
4. Develop an Archives Management Plan.

Implementation of these minimal tasks will contribute greatly to our understanding of the culture history of not only the northern Plains United States, but also to North America.

12

Recommendations

The following general recommendations are submitted for bringing all BIA collections into compliance with the mandates of 36 CFR Part 79, Curation of Federally-owned and Administered Archeological Collections, and NAGPRA. To ensure maximum savings in cost to the BIA, compliance with 36 CFR Part 79 and NAGPRA should be undertaken together. A comprehensive plan for curation compliance includes the following points.

I. Develop a Plan of Action

A plan of action minimally must address four points: (1) long term housing of the collections and records, (2) rehabilitation of the artifact collections, (3) rehabilitation of the associated records, and (4) management of this data.

II. Develop a Formal Archives Management Program

A plan of action should immediately be developed to establish archives-deficiency priorities for BIA collections. Following this survey all records should be coalesced and rehabilitated to comply with federal guidelines and standards for modern archival

practices. Archives rehabilitation should precede collections rehabilitation, because the documentation is in more immediate danger of being lost. Archives rehabilitation includes eight steps.

1. Inventory and catalog all associated records to standards consistent with those of a professional museum.
2. Conduct a condition assessment of all records, and institute and carry out a long-term conservation program for appropriate records.
3. Conserve significant records that are currently at risk.
4. Transfer general records into acid-free folders and appropriate archival storage units.
5. Place photographs, negatives, and slides into archival polyethelene sleeves, acid-free envelopes, and appropriate storage units.
6. Catalog and curate large-scale maps in metal map cases.
7. Produce duplicate/back-up copies of associated records that will be stored in a separate location.
8. Develop an archives inventory management program that uses microcomputer technology.

III. Inventory and Rehabilitate Existing Artifact Collections

BIA collections should be assigned a priority based on physical condition, and the collections should be inventoried and rehabilitated to professional museum standards. Rehabilitation should include the following stages.

1. Inventory and catalog all artifact collections to a standard consistent with those of a professional museum.
2. Label and package artifacts to one consistent standard, and place them in archivally stable containers.
3. Conduct a condition assessment of all perishable artifacts and implement a long-term conservation program for appropriate materials.
4. Develop a collections manual to aid in the management of archaeological collections.

These steps will result in the stabilization and preservation of collections, and will ensure management of the collections in the most cost-efficient manner for the federal taxpayer. Proper management of these collections will ensure that scholars, students, and the public have access to and benefit from BIA archaeological collections, which presently do not approach their potential for use.

IV. Comply With NAGPRA

NAGPRA compliance includes an examination of the BIA collections for human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. When a general survey of NAGPRA-related issues is completed, a realistic cost estimate can be produced. To satisfy the requirements for NAGPRA, the following tasks need to be performed at the two known repositories holding BIA collections recovered from the Phase II project area.

1. Conduct a records search of the collections to identify the accession and catalog numbers and the location of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
2. Perform a physical inspection of storage containers to identify human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.
3. Conduct an analysis of human skeletal remains that includes (1) a detailed skeletal inventory listing elements present, their completeness and condition; (2) measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature and morphology of the skeletal remains; (3) estimates of age and gender; and (4) observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide evidence of cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each repository, which must be provided in order to comply with NAGPRA. The summary (from the National Park Service's NAGPRA guidelines) should include the following information.
 - a. Information concerning unassociated funerary objects, sacred objects, and objects of cultural patrimony.
 - b. An estimate of the number of objects in the collection.
 - c. A description of the kinds of objects in the collection with, where readily ascertainable, reference to the means and dates of acquisition and locations from which the collections came.
 - d. If available, information relevant to identifying lineal descendants and cultural affiliation.

The inventory (from the National Park Service's NAGPRA guidelines) should contain the following information.

- a. Information concerning human skeletal remains and associated funerary objects.
- b. An item-by-item list of all the human skeletal remains and associated funerary objects that are identified as being culturally affiliated with one or more present-day Native American tribes.
- c. A list of all the human skeletal remains and associated objects for which no present-day Native American tribe can be determined.
- d. Accession and catalog entries of the human remains with which funerary objects were associated.
- e. If known, information related to the acquisition of each object, including the name of the person and/or organization for whom the object was acquired, the means of acquisition, and the antiquity of the human remains and associated funerary objects.
- f. A description of each set of funerary remains and associated funerary objects, including dimensions, materials, and photographic documentation.

V. Coalesce Collections

A plan of action for the long-term care of collections and associated records must be adopted by BIA. St. Louis District recommends the most cost-effective solution—coalescing collections into existing facilities in their state of origin, or coalescing collections into one regionally based existing facility, then spending the requisite funds to upgrade these facilities (as necessary) to meet the federal curation standards and the regional differences in collections management needs. The current situation of BIA collections from Nebraska, North Dakota, and South Dakota—eight institutions in four states—is not easily managed, and BIA is thus not likely to achieve 36 CFR Part 79 compliance without coalescing them.

If BIA chooses to coalesce collections into existing facilities, information from this assessment should prove useful. Currently, only the Nebraska

State Historical Society and the State Historical Society of North Dakota appear to meet all federal guidelines outlined in 36 CFR Part 79. Should BIA decide to house collections in each state of origin, some improvement funding should be considered for the existing facilities in South Dakota

VI. Develop Cooperative Agreements

To defray costs, BIA is encouraged to develop cooperative agreements with other agencies to share improvement costs and collections rehabilitation costs. Cooperative agreements provide opportunities for joint ventures between and among federal agencies with similar curation requirements. St. Louis District has long-term experience in this area, and if needed could assist BIA.

VII. Dedicate Space for Storage of Collections

Following the adoption of a curation strategy, BIA must develop a plan of action that identifies how the curation facility will function. Space must be dedicated strictly for curating archaeological collections and associated records. Office, research and work areas must be separated from storage areas. Space that is used both as storage and work areas is not acceptable. Minimal curation standards must include the following points.

1. Storage space should be adequate environmentally to maintain stable temperature and humidity levels, in addition to maintaining environmental requirements for the types of objects being curated within.
2. Storage space should minimize the number of exterior walls, windows, and doors in order to (a) decrease the chance of condensation on walls and windows during seasonal temperature changes, (b) enhance security, and (c) increase energy efficiency.

3. Water lines associated with fire suppression systems are the only kind of overhead pipes to be allowed in the collections storage area. Water and sewer pipes should be removed.
4. Electric junction boxes and gas and electric meters should be outside the collections storage area in order to limit access by noncuratorial staff.
5. Storage areas should be large enough to accommodate existing collections as well as projected growth needs.

VIII. Security, Fire Protection, and Maintenance of Collections Storage Area

As part of any collections storage facility, a plan of action must include measures for security, fire protection, and maintenance of the collections storage area that minimally incorporate the following.

Security

Entrances to collections storage area should have metal or solid-core wood doors. Doors should have dead-bolt and key locks, and the storage area should be protected ultimately by an electronic intrusion detection system. Keys to the storage area must be restricted to repository personnel. All cabinets housing archaeological collections should be kept locked, unless items are being removed. Researchers and visitors should not be allowed access to the collections storage area unless accompanied by curatorial staff. When researchers and/or visitors request to work with objects, it is best that the objects be taken to an area separate and outside the collections storage area.

Fire Protection

Fire detection and fire suppression systems must be installed to safeguard collections and personnel. Smoke detectors must be placed in all parts of the

collections storage area. In addition, the appropriate types and number of fire extinguishers, in relation to the types of collections and the overall size of the collections storage area, must be properly maintained and placed in clearly marked positions within the collections storage area. Sprinkler systems should be installed throughout the facility and in the collections storage area.

Maintenance of Facility

A scheduled plan for maintenance must be established for the collections storage area. Maintenance activities should include routine sweeping, mopping, and dusting, performed by curatorial staff or contracted custodial service. In addition, an integrated pest management program should be implemented, including regular monitoring for signs of pest infestation. Smoking, eating, and drinking should not be allowed in the collections storage area.

IX. Full-time Manager for Archaeological Collections

It is imperative that a full-time collections manager be hired to care for the archaeological collections. This person should have professional qualifications and prior experience in collections management. Collections managers minimally are responsible for the following items.

1. Ensuring that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.
2. Ensuring that management records are kept up-to-date, are complete, are properly monitored, and are readily available to researchers.
3. Managing a computerized database.
4. Ensuring that artifacts can be located easily.
5. Ensuring that objects are properly labeled.

6. Ensuring that the artifacts and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.
7. Performing periodic inventories and inspections of collections and records to insure their long-term survival.

St. Louis District regards all the aforementioned recommendations as minimal tasks that must be addressed in order to bring BIA collections into compliance with federal standards for archaeological curation.

BIA has been entrusted with important collections of historic and prehistoric artifacts. Its trust lands today occupy areas of great importance in the history of this country. Our knowledge of Native American prehistory, American history, and of Anglo/Native interactions may benefit from BIA collections. The United States citizenry trusts that its national heritage will be preserved for future generations. Undoubtedly, BIA contributions to that heritage are important.

Appendix I

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