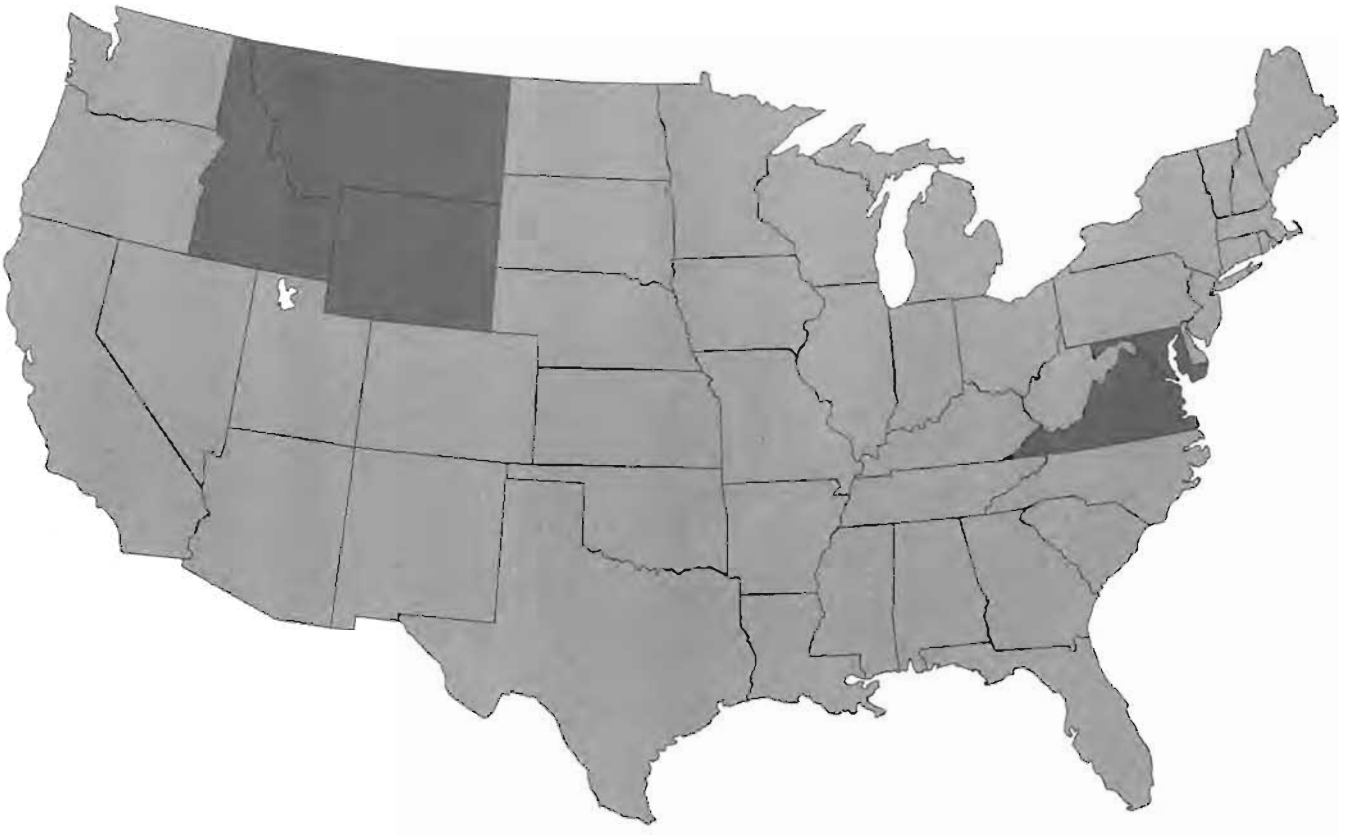
An Archaeological Curation-Needs Assessment for the Legacy Resource Management Program

Archaeological Curation-Needs Assessment
Technical Report No. 15



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St. Louis District
Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections

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At the request of the Legacy Resource Management Program, the U.S. Army Corps of Engineers Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (MCX-CMAC), located at the St. Louis District, conducted a survey of archaeological collections and associated documentation generated from archaeological investigations conducted within the boundaries of military installations located in the states of Idaho, Maryland, Montana, Virginia, and Wyoming, which is the scope of this report. Pre-fieldwork and state site-file research began in the spring of 1994. Repository visits were conducted between July 1994 and February 1996. MCX-CMAC identified collections from 18 installations, totaling 700.9 cubic feet of artifacts and approximately 88.6 linear feet of associated documentation. Most collections require at least partial rehabilitation to comply with federal regulation 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections.

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Contents

List of Figures

List of Tables

List of Acronyms and Abbreviations

Aderdeen Proving Ground	Aberdeen
Adelphi Laboratory Center	Adelphi Labs
Air Combat Command	ACC
Air Force Base	AFB
Bloodsworth Island Naval Reservation	Bloodsworth Island NR
Blossom Point Proving Ground	Blossom Point
Harry Diamond Laboratories	HDL
Department of Defense	DoD
Fairfax County Archaeological Survey	FCAS
Fort Loudoun State Historic Area	FLSHA
Foster Wheeler Environmental Corporation	Foster Wheeler
Fort George G. Meade	Fort Meade
Geo-Recon International	GRI
R. Christopher Goodwin & Associates	Goodwin
Gray & Pape	G&P
Harford County Archaeological Society	HCAS
Hunter Research Associates	HRA
James River Institute for Archaeology	JRIA
Maryland Historical Trust	MHS
Mid-Atlantic Archaeological Research	MAAR
John Milner and Associates	Milner
National Archeological Database	NADB
National Park Service	NPS
Naval Air Station	NAS
Naval Amphibious Base	NAB
Radford Army Ammunition Plant	Radford
State Historic Preservation Office	SHPO
Thunderbird Archaeological Associates	TAA
U.S. Army Corps of Engineers, Baltimore District	USACE Baltimore District
University of Delaware, Center for Archaeological Research	UDCAR

Vint Hill Communications and Electronics Support Activity	Vint Hill
Virginia Commonwealth University Archaeological Research Center	VCUARC
Virginia Department of Historic Resources	VDHR
F. E. Warren Air Force Base	Warren AFB
College of William & Mary Center for Archaeological Research	WMCAR
Woodbridge Research Facilities	Woodbridge

Executive Summary

Problem

Federal archaeological collections are a valuable and nonrenewable national cultural resource. Curation of these materials, however, has been largely substandard or ignored for more than 50 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 priceless objects. The improper care, and the 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 been compromised.

Background

Department of Defense (DoD) installations are responsible for the management of archaeological and historical resources located on and recovered from their properties. As mandated by federal law, installations are required to ensure that all recovered archaeological materials and associated records are adequately curated in perpetuity. Unfortunately, funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented full compliance.

Collections recovered from DoD installations are public property, the result of many years of archaeological research and the expenditure of millions of federal dollars. The DoD, as the landholding agency, is the party responsible for the perpetual care of these resources. Through the years, most collections have been stored free of charge by universities, museums, and contracted firms. Inadequate funding and failing facilities now seriously hinder these institutions' abilities to adequately care for collections.

In 1992, the Legacy Resource Management Program began funding the U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (St. Louis District) to conduct a national inventory and assessment of archaeological collections recovered from active DoD installations. Fiscal Year (FY) 1994 funds were allocated for the investigation of all military installations located in Idaho, Maryland, Montana, Virginia, and Wyoming, which is the scope of this report. Prefieldwork began in summer 1994, and fieldwork began in spring 1995. Repository site visits were conducted in February, May, November, and December 1995, and in January and February 1996.

The project area includes all military installations in the states of Idaho, Maryland, Montana, Virginia, and Wyoming. Those installations (and subinstallations) with archaeological collections include, by state:

Maryland
- Aberdeen Proving Ground (Aberdeen)
- Adelphi Laboratory Center (Adelphi Labs)
  - Blossom Point Proving Ground (Blossom Point)
  - Harry Diamond Laboratories (HDL)
  - Woodbridge Research Facilities (Woodbridge)
- Bloodsworth Island Naval Reservation (Bloodsworth Island NR)
- Fort Detrick
- Fort George G. Meade (Fort Meade)

Virginia
- Fort A. P. Hill
- Fort Belvoir
  - Belvoir Research, Development and Engineering Center
  - Davison Aviation Command
  - Humphreys Engineer Center
- Fort Eustis
- Fort Lee
- Fort Monroe
- Fort Myer
- Fort Story
- Radford Army Ammunition Plant (Radford)
- Vint Hill Communications and Electronics Support Activity (Vint Hill)

Wyoming
- F. E. Warren Air Force Base (Warren AFB)

Note that Bloodsworth Island NR is a subinstallation of Little Creek Naval Amphibious Base (NAB), which is included in the Atlantic Navy report (Table 1).

Those installations within the project area but without collections include:

Idaho
- Idaho Falls Naval Administrative Unit
- Wilder Air Force Station

Maryland
- Annapolis Naval Radio Transmitting Station
- Army Publications Distribution Center
- Fort Holabird
- Fort Ritchie
  - Alternate Joint Communications Center/Site R
- Hydrographic/Topographic Center, Defense Mapping Agency
- National Naval Medical Center, Bethesda

Montana
- 99th Electronic Combat Range Group, Detachment 18 (SAC)

Virginia
- Armed Forces Staff College
  - Army Criminal Investigation Command
- Army Materiel Command Headquarters
  - Defense General Supply Center
  - Defense Mapping Agency
  - Defense National Stockpile Center
  - Henderson Hall
  - Naval Facilities Engineering Command HQ
  - Naval Sea Systems Command
- Naval Supply Systems Command
- The Pentagon
- Space & Naval Warfare Systems Command

However, several other curation-needs assessment projects overlap with installations in these states, and the subject installations are not included in this report. The overlapping projects include assessments for the U.S. Air Force's Air Combat Command (ACC) and Air Mobility Command, and the U.S. Navy's Atlantic Division. The overlapped installations are listed in Table 1, with the technical reports in which they are included.

Findings

Status of Physical Facilities

Repository Adequacy

Military collections examined in this study are currently stored at 26 different installations and repositories located in eight states. Because a few of these facilities maintain multiple storage locations, and each

Table 1.
Military Installations Investigated in Other St. Louis District Curation-Needs Assessments Projects

Installation (Subinstallation)	Project
Idaho	
Mountain Home AFB (Saylor Creek Air Force Range)	Air Combat Command[a]
Maryland	
Andrews AFB (Brandywine Receiver Station; Davidsonville Transmitter Station)	Air Mobility Command[b]
Bainbridge Naval Training Center	Engineering Field Activity (EFA) Chesapeake[c]
Cheltenham Naval Communications Detachment	EFA Chesapeake
NAWC, Aircraft Division, Patuxent River (Solomons Island Navy Recreation Center; St. Inigoes NESEA)	EFA Chesapeake
NSWC, Carderock Division, Bethesda (Annapolis Detachment)	EFA Chesapeake
NSWC, Indian Head Division	EFA Chesapeake
U.S. Naval Academy (Annapolis Naval Station)	EFA Chesapeake
Montana	
Malmstrom AFB	Air Mobility Command
Virginia	
Atlantic Division, Naval Facilities Engineering Command	LANTDIV[d]
Camp Elmore	LANTDIV
Camp Peary	LANTDIV
Fentress Naval Auxiliary Landing Field	LANTDIV
Fleet Combat Training Center, Atlantic, Dam Neck	LANTDIV
Fleet & Industrial Supply Center	LANTDIV
Fleet & Industrial Supply Center, Cheatham Annex	LANTDIV
Fleet Antisubmarine Warfare Training Center, Atlantic	LANTDIV
Langley AFB	ACC[e]
Little Creek NAB	LANTDIV
NSWC, Dahlgren Division (NSWC, White Oak Detachment [MD]; Wallops Island AEGIS Missile Center)	EFA Chesapeake
Newport News Supervisor of Shipbuilding, Conversion, and Repair	LANTDIV
Norfolk Fleet Training Center	LANTDIV
Norfolk Naval Air Station (NAS)	LANTDIV
Norfolk Naval Aviation Depot	LANTDIV
Norfolk Naval Base Complex	LANTDIV
Norfolk Naval Shipyard	LANTDIV
Norfolk Naval Station	LANTDIV

continued on next page

Table 1 (continued).

Installation (Subinstallation)	Project
Norfolk Navy Public Works Center	LANTDIV
Northwest Naval Security Group Activity	LANTDIV
Oceana NAS	LANTDIV
Portsmouth Naval Hospital	LANTDIV
Portsmouth Supervisor of Shipbuilding, Conversion, and Repair	LANTDIV
Quantico Marine Corps Combat Development Command	EFA Chesapeake
Shore Intermediate Maintenance Activity	LANTDIV
Training Command, U.S. Atlantic Fleet	LANTDIV
Yorktown Naval Weapons Station	LANTDIV

[a] *An Archaeological Curation-Needs Assessment for Headquarters Air Combat Command.* Eugene A. Marino. Archaeological Curation-Needs Assessment, Technical Report No. 10, Volume 2. U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, 1997.

[b] *Air Mobility Command, Curation-Needs Assessment.* Natalie M. Drew. Archaeological Curation-Needs Assessment, Technical Report No. 6. U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, 1995.

[c] U.S. Navy EFA Chesapeake. Archaeological Curation-Needs Assessment, Technical Report No. 17. U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (report in progress).

[d] *An Archaeological Curation-Needs Assessment for U.S. Navy, Atlantic Division, Naval Facilities Engineering Command.* Mary J. Bade and Kenneth L. Shingleton, Jr. Archaeological Curation-Needs Assessment, Technical Report No. 14. U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, 1999.

[e] *An Archaeological Curation-Needs Assessment for Headquarters Air Combat Command.* Natalie M. Drew. Archaeological Curation-Needs Assessment, Technical Report No. 10, Volume 1. U.S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, 1996.

location was evaluated independently, the total number of storage locations visited by St. Louis District personnel was 34. These facilities can be separated into seven distinct types (see Chapter 36). Only two (6%) of the 34 storage locations approach all of the standards mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections), a 1991 federal regulation that established minimum professional standards for the management and care of all federal archaeological collections. Twenty others (59%) exhibit varying levels of partial compliance with the major standards—proper environmental controls, security, pest management, and fire safety. Twelve (35%) do not approach any of these standards. Only five (56%) of the nine long-term curation facilities have full-time staff for the management of archaeological collections (long-term facilities include Fort A. P. Hill, Fort Monroe, Warren AFB, Fairfax County

Archaeological Survey, Fort Loudoun State Historic Area, Maryland Historical Trust, University of Delaware Center for Archaeological Research, Virginia Commonwealth University Archaeological Research Center, the Virginia Department of Historic Resources).

Repository Maintenance

Twenty-two (65%) of the 34 storage locations that were inspected receive regular maintenance. Eleven (32%) receive maintenance as needed. Many 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.

Environmental Controls

Environmental monitoring and adequate environmental control—appropriate, stable temperatures and humidity, and adequate monitoring of both—are crucial for the long-term preservation of collections. Three (9%) of the 34 storage locations inspected contain heating, ventilating, and air conditioning (HVAC) systems that monitor and control both temperature and humidity. One facility is equipped with an HVAC system that does not monitor or control humidity. Six (18%) of the storage locations provide environmental controls (HVAC or air-conditioning and heating, and humidity monitoring and control) that meet federal standards. Twenty-six (76%) storage locations have air-conditioning, whereas 27 (79%) have heating. Six (18%), including three with HVAC systems, monitor and control humidity.

Security

A primary requirement for meeting federal standards is the presence of intrusion alarms. Thirteen (38%) storage locations are equipped with intrusion alarms wired to the local police department or a security company. All of the storage locations are secured with key or dead bolt locks or both; those with windows have window locks. Most facilities limit access to their collections. Although there were no documented cases of unauthorized entry linked with loss of military collections, the potential for this exists at several of the facilities examined.

Fire Detection and Suppression

Fire is a major hazard to any museum collection. Twenty-four storage locations (71%) provide adequate to superb fire detection. Of these 24, only 11 (46%) also have adequate fire-suppression systems; the

other 13 (54%) only have fire extinguishers, which are inadequate for fire suppression. Nine of the remaining storage locations have no detection measures, and fire extinguishers as their only suppression measure and one location has a smoke detector for fire detection, but no fire-suppression system in place. Adequate fire detection does no good without adequate fire suppression, with the reverse also true. In addition, fire-detection and -suppression systems must be able to operate after normal business hours, which some systems (e.g., manual fire alarms) cannot do.

Pest Management

A professional pest-management program is crucial to the long-term survival of many archaeological collections and associated records. Thirty (88%) out of 34 storage locations control pests as needed or on a regularly scheduled plan (i.e., annually). Only four of these 30 storage locations have implemented integrated pest management programs that include monitoring and control measures. Four (12%) of the 34 storage locations take no precautions against pests whatsoever.

Status of Artifacts

Military artifact collections from the installations discussed in this report consist of 700.9 ft^3 of materials recovered from 18 military installations. The collections include prehistoric and historical-period materials. 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 or acid-free-cardboard boxes of varying sizes (most approximately 1 ft^3), with flap or telescoping lids. Many containers are overpacked and coated with dust. However, all boxes bear some sort of label, if only rudimentary.

Within the primary containers, 55 percent of the collections (by volume) are stored in archival-quality, zip-lock polyethylene bags. Twenty-two percent are stored loose within their primary containers, without secondary containers. For the remainder of the collections, secondary containers (the largest receptacles within the primary containers) consist of acidic-paper bags (7%), nonarchival plastic bags (6%), acid-free-construction-paper dividers (4%), acidic-cardboard boxes (2%), glass mason jars (1%), plastic cases (1%), and wood cases (1%). Other secondary-container types total approximately 1 percent, and include glass vials, plastic film containers, newspaper, manila envelopes, and aluminum foil. Forty-five percent of the collections are stored in containers that are unacceptable for museum storage. 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 lithics (22%), ceramics (2%), faunal remains (3%), shell (2%), and soil samples (1%). Other material classes total 2 percent (by volume), and include human skeletal remains, worked bone and shell, botanical remains, flotation samples, and ^{14}C samples. Principal historical-period material classes examined include glass (29%), metal (17%), ceramics (13%), and brick (7%). Other historical-period material classes total 2 percent (by volume), and include leather, rubber, firearm flints, paper, charcoal, marble, coal, Styrofoam, wood, buttons, and plastic.

Status of Human Skeletal Remains

At present, all possibly human skeletal remains recovered from military installations in the study area are being curated at three facilities. Fort Loudoun State Historic Area (FLSHA), Tennessee, is curating human skeletal remains recovered from Radford that include a minimum of two individuals. Fort A. P. Hill archaeological collections include one possibly human bone fragment. Harford County Archaeological Society (HCAS), Maryland, is curating at least 1 ft^3 of human skeletal remains recovered from Aberdeen in the same containers as remains from non-Aberdeen lands. The minimum number of individuals for the Aberdeen human skeletal remains is unknown because of the mixed and unprovenienced storage of the bones. All three possibly human skeletal remains collections should be examined thoroughly by a qualified physical anthropologist. In addition, complete rehabilitation (i.e., reboxing, rebagging, and labeling) should be carried out to stabilize the human skeletal remains, and a complete inventory must be generated to comply with the Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601).

Status of Documentation

The military-collections records encompass 88.6 linear feet and include paper, photographic, map, and draft-report records. 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 noted at only one of the storage locations visited. 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 cases.

In only a few instances did a set of project documentation appear to exist in its entirety at the facility with the collection. Project documentation is more often than not fragmentary or nonexistent. This could be because collections managers and archaeologists in the past may not have considered associated documentation a part of their

curatorial responsibilities, or records may have been produced and then lost on the way to their final storage area. It is also possible that in some cases records were never produced for some of the projects. Regardless of the reasons, the result is that records for many of the collections cannot be located.

Status of Repository Management Controls

Seven (78%) of the nine long-term curation facilities have accession records for the collections in their care. A written record of where collections are located within the facility is available at six (67%) of the facilities. No facility has fully inventoried the collections in its care, but all have partially inventoried the collections or are in the process of carrying out this task. Basic policy and procedure statements for artifact curation, inventories, records management, and deaccessioning exist for four of the facilities. The St. Louis District assessment team noted that six (67%) of the long-term curation facilities have formal loan policies. Seven (78%) have minimum standards for the acceptance of collections. Five (56%) of the facilities have guidelines for field-curation procedures to be used for archaeological materials. No facility has a published guide to the archaeological collections in its care. Eight (89%) of the long-term facilities employ some form of computerized database management for the collections in their care, although some of these use word-processing programs or are still developing the database system. Given the above, it is evident that the collections are at risk, and in most cases are not being properly cared for under the guidelines of 36 CFR Part 79.

Corrective Actions

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

1. Bring together all 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 the costs of constructing structures and rehabilitating collections.

3. Rehabilitate existing collections by inventorying and cataloging all artifact collections to standards 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.

These corrective measures, if carried out, will permit military installations to meet minimum federal requirements for the adequate long-term curation of archaeological collections. By adopting this approach, the military 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. However, because the collections are deteriorating in their current storage environments and there is no long-term, consistent management plan for the proper curation of archaeological collections and associated records, action is necessary. These federal collections represent a nonrenewable resource, and if not properly cared for soon will forever lose their educational and research value and potential. Any progress will ensure that these collections will be more adequately preserved than is currently the case, and that they will be useful to future generations.

Acknowledgments

The entire staff of the St. Louis District contributed to the successful completion of this project for the Legacy Resource Management Program. Special thanks is extended to Mary J. Bade, now at Moundville, Alabama, for her efforts toward organizing the fieldwork and establishing standards early in the project. At the installations and repositories visited by St. Louis District staff, we found all staff members generous with their time and assistance. We wish to offer our gratitude to the following list of individuals, who were all very helpful.

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Fort Belvoir, Virginia

James Gregory
Art Miller

Fort Detrick, Maryland

Dr. Henry Erbes
John Bennett

Fort George G. Meade, Maryland

William Harmeyer

Fort Loudoun State Historic Area, Vonore, Tennessee

Dr. Joe Benthall

Fort Monroe, Virginia

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Gray & Pape, Richmond, Virginia

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1

Introduction

U.S. military installations located in Maryland, Virginia, and Wyoming are responsible for archaeological artifact collections and accompanying documentation (hereafter referred to as archaeological collections) stored in 26 facilities in eight different states. Military installations located in Idaho and Montana were investigated and reported on in separate curation-needs assessment reports, which are outlined in the executive summary. The responsibility for archaeological collections is mandated through numerous legislative enactments, including the Antiquities Act of 1906 (P.L. 59-209), the Historic Sites Act of 1935 (P.L. 74-292), the Reservoir Salvage Act of 1960 (P.L. 86-523), the National Historic Preservation Act of 1966 (P.L. 89-665), and the Archaeological Resources Protection Act of 1979 (P.L. 96-95). 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 Archeological Collections. Additionally, the U.S. Army Corps of Engineers (USACE) possesses strict standards for Corps curation of archaeological materials, the only federal agency to do so. ER 1130-2-433, which was implemented in April 1991, serves as a standard for long-term archaeological curation.

NAGPRA was enacted in 1991 to identify federal holdings of Native American human skeletal 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 organizations on the repatriation or disposition of these remains and objects. All federal agencies are required to meet mandated deadlines for compliance with NAGPRA. 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 skeletal 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 Legacy Resource Management Program began providing funds to the USACE in FY 1992 for the purpose of inventorying archaeological collections recovered from active DoD installations across the nation. Funding was provided in FYs 1992 and 1993 for the complete investigation of installations in California, Oregon, and Washington. Funding for FY 1994 called for the complete investigation of installations in Idaho, Maryland, Montana, Virginia, and Wyoming. The Legacy Resource Management Program was to receive a general inventory of collections, which would provide a firm estimation of the magnitude of curation needs. In addition, collections managers at storage facilities and cultural resource managers at installations would receive a plan addressing their specific curation needs.

The scope of work outlines the following services:

1. Provide professional and technical services to the Legacy Resource Management Program for the inspection and inventory of archaeological collections in selected repositories.

2. Provide a final report detailing the results of the inspections and evaluations, and addressing the following:

a. physical description of all repository facilities;

b. physical description of all recovered-artifact collections;

c. physical description of all associated documentation collections; and

d. recommendations for compliance with the requirements of 36 CFR Part 79.

3. Provide a master bibliography of reports associated with the military collections.

Methods

Twenty-six facilities were evaluated in the course of this curation-needs assessment. Among the facilities were one private museum, four university laboratories or curation facilities, four state or county curation facilities, seven military installations, one private archaeological society, one government agency, and 11 contract firms. The following schedule outlines the facilities visited, and the order and dates of the site visits.

- Aberdeen, Maryland: February 9, 1995
- Warren AFB, Wyoming: February 28–29, 1996
- Fort A. P. Hill, Virginia: May 11, 1995
- Fort Belvoir, Virginia: November 13, 1995
- Fort Detrick, Maryland: February 7, 1995
- Fort Meade, Maryland: December 8, 1995
- Fort Monroe, Virginia: May 2, 1995
- Fairfax County Archaeological Survey (FCAS), Virginia: November 7, 1995
- Fort Loudoun State Historic Area (FLSHA), Tennessee: November 15, 1995
- Foster Wheeler Environmental Corp. (Foster Wheeler), East Orange, New Jersey: December 5, 1995
- Geo-Recon International (GRI), Seattle, Washington: December 13, 1995
- Gray & Pape (G&P), Richmond, Virginia: May 4, 1995
- Harford County Archaeological Society (HCAS), Maryland: January 24, 1996
- Hunter Research Associates (HRA), Trenton, New Jersey: December 6, 1995
- James River Institute for Archaeology (JRIA), Williamsburg, Virginia: July 26, 1994
- John Milner & Associates (Milner), Alexandria, Virginia: November 9, 1995
- Maryland Historical Trust (MHT), Crownsville: February 16–17, 1995
- Mid-Atlantic Archaeological Research (MAAR), Williamsburg, Virginia: July 22, 1994
- R. Christopher Goodwin & Associates (Goodwin), Frederick, Maryland: February 7, 1995
- SouthArc, Gainesville, Florida: January 26, 1996
- Thunderbird Archaeological Associates (TAA), Woodstock, Virginia: December 13, 1995
- University of Delaware Center for Archaeological Research (UDCAR), Newark: January 23, 1996
- U.S. Army Corps of Engineers, Baltimore District (USACE Baltimore District), Maryland: February 8, 1995, and December 11, 1995
- Virginia Commonwealth University Archaeological Research Center (VCUARC), Richmond: May 8, 1995
- Virginia Department of Historic Resources (VDHR), Richmond: May 9–10, 1995
- College of William & Mary Center for Archaeological Research (WMCAR), Williamsburg, Virginia: May 3, 1995

Prior to these visits, site-file searches were conducted at the state historic preservation offices (SHPOs) and/or site-file facilities for Idaho, Maryland, Montana, Virginia, and Wyoming.

Except for fieldwork, much of the project was conducted in-house. This work consisted of prefieldwork, fieldwork planning, and report writing. The following schedule outlines the course of activities.

- April–May 1994: prefieldwork
- June 5–15, 1994: state site-file visits, Maryland and Virginia

- November 7–11, 1994: state site-file visits, Idaho and Montana
- February 27, 1996: state site-file visits, Wyoming
- June 1994: fieldwork planning
- July 1994–February 1996: fieldwork
- July 1994–February 1996: fieldwork planning and draft report preparation and writing
- February–May 1996: final draft report preparation and writing

Prefieldwork Investigation

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

1. National Park Service (NPS) National Archeological Database (NADB) and general records searches were performed for each installation.

2. Topographic maps of each installation were acquired for the purpose of establishing base boundaries and a listing of maps required for the site-file searches.

3. Site files at respective state archaeology and SHPOs were searched to determine the sites located within installation boundaries, and to determine where collections might be located.

4. During site-file searches, a database was compiled of all fieldwork reports filed at the state repositories.

5. All institutions and individuals likely to have knowledge about the collections were contacted by telephone.

6. A list was compiled of all agencies, firms, and institutions associated with the recovery or curation of materials belonging to the U.S. military in the project area.

7. Agencies, firms, and institutions were contacted by telephone for information regarding the curation of military collections. These telephone conversations led to development of the list of repositories visited during the project.

Field Inspection and Assessment of Repositories and Collections

Assessment of the archaeological collections and the repositories that house them included the following four major tasks.

1. A survey questionnaire soliciting information on repositories, artifact collections, and associated documentation was completed for every facility involved with the curation of military archaeological collections.

2. The structures were evaluated to determine whether or not the facility approached compliance with the requirements for repositories specified in 36 CFR Part 79. Forms address 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. All documentation was examined to determine what types of records were present and in what quantity and condition. Types of documentation include project and site reports, administrative files, field records, curation records, and photographic records. For each type of document, the amount (in linear inches), physical condition of the containers and the records, and the overall condition of the storage environment was noted. The determination of whether or not the facility is in compliance with the archives-management requirements specified in 36 CFR Part 79 was based on this research.

4. Artifact collections were examined and evaluated as to their condition and compliance with 36 CFR Part 79. Assessment included examination of (1) the condition of primary and secondary containers, (2) the extent 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 represented by any human skeletal remains. Primary containers—e.g., acidic- or acid-free-cardboard boxes—are the receptacles that house an individual

artifact or group of artifacts. Secondary containers—e.g., acidic-paper bags; plastic sandwich bags; archival or nonarchival, zip-lock plastic bags; glass jars; film vials; aluminum foil; newspaper; packing materials; or small acidic- or acid-free-cardboard boxes—are the largest receptacles for artifacts within the primary containers.

NAGPRA-Compliance Assessment

To satisfy the requirements of NAGPRA, the following four tasks must be performed at each repository holding military collections.

1. Search collections records to identify the accession and catalog numbers and the location of human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony.

2. Physically inspect 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:

a. a detailed skeletal inventory listing elements present, their completeness, and their condition;

b. measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature, and morphology of the human skeletal remains;

c. estimates of age and gender; and

d. observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide evidence of the cultural affiliation of the human skeletal remains or the context from which they were recovered.

4. Produce summary and inventory reports for each repository.

Report Preparation

A written report detailing the results of the curation-needs assessment is required. The report should include

1. estimates of the sizes of collections and their condition, and descriptions of the curation facilities; and

2. recommendations for the rehabilitation of the facilities and the collections, according to the federal standards established in 36 CFR Part 79.

Chapter Synopsis

Chapters 2–16 provide a detailed examination of the state of archaeological collections under the jurisdiction of individual military installations. Chapters 17–35 consist of non-military repository summaries, referenced in the relevant installation chapters. Chapter 36 outlines the overall findings of the project. Final recommendations for the project are provided in Chapter 37. Each chapter contains a summary for the repository discussed in that chapter, a detailed examination of collections storage areas and collections, and recommendations for improved care of the collections. Chapters 2–16 also contain bibliographies of archaeological work conducted on the installation. Installations and project reports for which no collections were located are listed in an appendix.

Twenty-six installations and repositories (museums, universities, state agencies, county agencies, federal agencies, private societies, and contract firms) were visited for this project. Collections are stored at a total of 34 storage locations associated with these 26 facilities. Two of the 34 storage locations (6%) fulfill all of the standards mandated by 36 CFR Part 79 for curating federally owned archaeological collections. Twenty (59%) approach approximately one-half or more of the standards. Five of the nine long-term curation facilities (56%) employ full-time personnel for the curation of archaeological collections.

Unfortunately, the conditions of the facilities described in this report reflect the standard of care for archaeological collections across the nation. Lack of funding and lack of consistent national policy, coupled with the sheer magnitude of collections across the country, have hindered compliance with federal regulations. Without a national strategy and attention to the existing deficiencies, archaeological collections are in danger of continuing deterioration. However, with some commitment, we can preserve our rich national heritage.

2

Aberdeen Proving Ground

Maryland

Installation Summary

Volume of Artifact Collections: 54.3 ft^3 (including 1 ft^3 of human skeletal remains)

On Base: 22.3 ft^3

Off Base: HCAS, 26 ft^3 (see Chapter 23); Goodwin, 4.8 ft^3 (see Chapter 21); MHT, 1.2 ft^3 (see Chapter 26)

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

Linear Feet of Records: 1.75 linear feet (21 linear inches)

On Base: 14.5 linear inches

Off Base: Goodwin, 3.5 linear inches (see Chapter 21); HCAS, 3 linear inches (see Chapter 23)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: 1 ft^3

On Base: None

Off Base: 1 ft^3 (HCAS; see Chapter 23)

Status of Curation Funding: Curation activities are not funded at this installation at this time.

Date of Visit: February 9, 1995

Point of Contact: Reed MacMillan

Aberdeen was established in 1917 as the home of the Army Ordnance Corps. In July 1971, the former Edgewood Arsenal merged with Aberdeen and that section of the installation is still referred to as the Edgewood area, while the remainder of the post is referred to as the Aberdeen area.

In June 1994, St. Louis District personnel performed background archaeological research at MHT that included a review of all pertinent archaeological site forms, reports, and manuscripts associated with Aberdeen. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations conducted by installation personnel and by Goodwin. Archaeological collections are currently housed in four Maryland facilities, including the installation.

Aberdeen is located northeast of Baltimore and is the headquarters of the Army's Test and Evaluation Command. The installation encompasses approximately 72,500 acres, including the former Edgewood Arsenal—a former testing center for chemical weapons—and a portion of Chesapeake Bay. Aberdeen is now the Army's primary research center for weapons and weapons systems.

Aberdeen is currently curating 22.3 ft^3 of artifacts and 1.2 linear feet of documentation resulting from archaeological work conducted on

Table 2. Summary, by Volume, of Material Classes Present in Aberdeen Collections at the Installation

Material Class	%
Prehistoric	
Lithics	36
Shell	6
Faunal remains	3
Other[a]	1
Historical-period	
Glass	19
Metal	15
Ceramics	13
Brick	7
Total	100

[a] "Other" includes soil and ^{14}C samples.

the installation. The artifact collection includes materials from both prehistoric and historical-period contexts (Table 2). Lithics is the most abundant prehistoric material class; glass the most abundant historical-period class. Aberdeen is not currently curating human skeletal remains associated with archaeological research projects.

The Aberdeen Cultural and Natural Resource Visitor/Learning Center (the center) houses environmental-protection staff and cultural and natural resources collections from the installation. The center is located in the Malcolm Mitchell House, a Victorian residence constructed in 1905 (Figure 1). The collections storage area is located in a room within the attic of the structure.

Assessment

Structural Adequacy

The Malcolm Mitchell House has been renovated to contain offices and exhibit areas managed by the Directorate of Safety, Health, and Environment. The foundation of the building is granite, the roof is imitation-slate tile, and exterior walls are Victorian-style wood clapboard. There are three floors aboveground and one belowground. Interior and exterior renovations are numerous. Walls and ceilings have been repaired and repainted. The gutter system, front porch ceiling, front porch pillars, and floor joints are all either additions or major modifications. The current roof is 15 years old. Overall, the structure is solid, with no cracks or leaks. There are multiple windows in the structure,

Figure 1. Exterior of the repository on Aberdeen.

Figure 2. The collections storage area is located in the attic of the Aberdeen Cultural and Natural Resource Visitor/Learning Center.

with window frames constructed of wood. There is no evidence of window leaks, and most windows appear to have been renovated. Windows are equipped with shades.

The center has almost 5,000 ft^2 of floor space, with approximately half devoted to administrative space. The center contains offices, exhibit areas, and temporary artifact storage areas. The floors, ceiling, and interior walls of the collections storage area are made of wood. There is one round window, with a diameter of 2 feet. The window has a wood frame and is not equipped with a shade. There is one wood-panel door leading to the remainder of the repository. The collections storage area measures approximately 250 ft^2, and is filled to approximately 80 percent capacity with archaeological materials and miscellaneous items (general storage) (Figure 2).

Environmental Controls

The center uses radiant heat, window air conditioners, and fans for environmental control. There is no humidity-monitoring or -control system, nor a dust-filtering system. Maintenance and cleaning are contracted through Aberdeen, and are conducted on a weekly basis. There are no specific environmental controls in the collections storage area. Lighting is provided by incandescent bulbs, without ultraviolet (UV) filters.

Pest Management

The center does not have an integrated pest-management system. Precautions against insects and rodents are taken on an as-needed basis. Many dead flies were noted within the collections storage area, on the floor near the window.

Security

The center has an intrusion alarm that is wired into the military police department. Motion detectors on the main doors, offices, and hallways are wired into this security system. In addition, there are key locks on doors and simple locks on windows. Currently, there is no evidence of unauthorized entry, but the house was broken into on Armed Forces Day, 1994, and computers and cameras were stolen. There are no special security measures for the collections storage room.

Fire Detection and Suppression

The center is not equipped with a fire-detection system. Fire-suppression equipment consists of

one fire extinguisher located on each floor. There is no fire extinguisher in the collections storage area.

Artifact Storage

Storage Units

Nine cardboard boxes containing a total of 12.6 ft^3 of artifacts are stored on top of metal file cabinets within the collections storage area. Boxes are stacked two and three high. In addition to these boxes, there are approximately three large file cabinet drawers housing 9.7 ft^3 of artifacts (Figure 3).

Primary Containers

A total volume of 22.3 ft^3 of artifacts is housed in primary containers consisting of acid-free Hollinger boxes with telescoping lids and file cabinet drawers. Each Hollinger box is equipped with a zip-lock plastic bag glued to the end of the box, in which is a preprinted, acid-free-paper tag. Recorded on the tag is the project name, site numbers, bag numbers, contents, and a box number.

Three of the drawers in a five-drawer file cabinet contain archaeological materials. These artifacts are those that have been recovered by individuals through the years at Aberdeen, not as part of any organized or funded project. Drawers are labeled in marker on a yellow, acidic-paper tag enclosed in a metal tag holder. Label information consists of "C," "D," and "D" for each of the drawers, respectively.

Secondary Containers

All secondary containers consist of zip-lock, 4- and 6-mil polyethylene bags. Labels are written directly on the bags in marker, and include site number, field site number, and provenience. Bags contained in the file cabinet drawers are labeled directly in marker with an installation-area number (e.g., C-16). Some of these bags have interior, acidic-paper tags with provenience information written on them. Secondary containers may also contain multiple tertiary containers of archival or nonarchival quality.

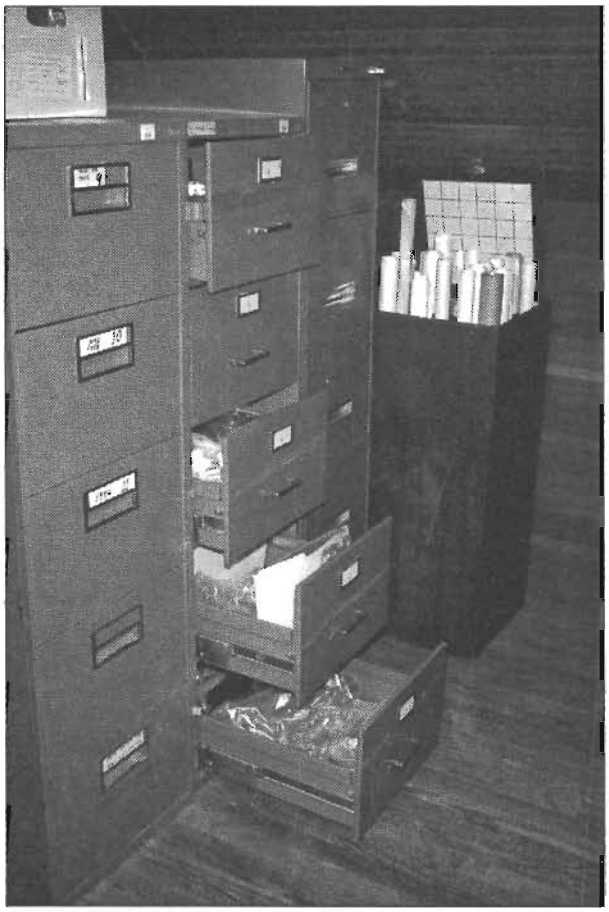

Figure 3. Some artifacts found on Aberdeen are stored in the drawers of metal file cabinets.

Laboratory Processing and Labeling

Approximately 30 percent of the artifacts are directly labeled, with site number or field site number. All artifacts have been cleaned, and approximately 95 percent have been sorted by material class.

Human Skeletal Remains

Aberdeen is not curating any human skeletal remains recovered from archaeological projects on the installation.

Records Storage

Records are stored in acid-free Hollinger boxes, in several cases within the same box as the artifacts.

These boxes are stored on top of metal file cabinets, with the artifacts. There is a total of 1.2 linear feet of documentation associated with archaeological investigations on Aberdeen.

Paper Records

There are 12.5 linear inches of paper records, including excavation records, field notes, and artifact inventories. Primary containers consist of acid-free Hollinger boxes, labeled directly in marker with project, site number, contents, and box number (Figure 4). Secondary containers consist of acid-free envelopes and vinyl three-ring binders. Some paper stacks not enclosed in secondary containers are bound by metal clips, but are not labeled. Acid-free envelopes are not labeled. Vinyl binders are labeled with rub-on letters, covered with tape. Label information consists of project, contents, and copy number. Records are arranged by document type.

Figure 4. Paper records are stored in cardboard boxes on Aberdeen.

Photographic Records

There are 2 linear inches of photographic records, all stored with the paper records. These include black-and-white prints, slides, and contact sheets. All are labeled in marker with installation name, roll number, and exposure number.

Collections-Management Standards

Registration Procedures

Accession Files

Materials are given a catalog number as they arrive at the center.

Location Identification

The location of the collections within the repository is not identified in the catalog files.

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is used.

Computerized Database Management

The dBASE III program is used to catalog artifact collections. Computer records are stored locally on floppy disks, and backups are made every six months. The computer system is not attached to a network.

Written Policies and Procedures

Minimum Standards for Acceptance

No formal minimum standards of acceptance for archaeological collections are in place.

Curation Policy

No formal curation policy has been established.

Records-Management Policy

No formal records-management policy has been established.

Field-Curation Procedures

The field-curation guidelines are established by a management overseer.

Loan Policy

There are no formal loan procedures in place.

Deaccessioning Policy

No formal deaccessioning policy has been established.

Inventory Policy

There is no inventory policy in place.

Latest Collection Inventory

The collections were last inventoried in 1994.

Curation Personnel

There is no full-time curator for archaeological materials. Reed MacMillan can devote only approximately 1 percent of his time to curation activities.

Curation Financing

Curation is not financed. If curation is to be continued at the center, substantial start-up costs for labor and materials would be required, as would salary for a full-time curator.

Access to Collections

Access to the collections is controlled by MacMillan. Outside researchers are allowed access to the collections under supervision, but they must first write to the commander.

Future Plans

For the short term, MacMillan is attempting to acquire a storage shed for all the nonarchaeological materials currently housed in the collections storage area. For the long term, he is attempting to transform all floors of the center into display areas, laboratories, and artifact-holding areas; only one floor is currently dedicated to these activities.

Comments

1. There are no humidity-monitoring or -control devices for the repository. There are no environmental controls in the collections storage area.

2. Internal access to the collections is not monitored; there are no locks on the door to the collections storage area. There is an alarm system wired to the military police.

3. There is no integrated pest-management program in place. The floor of the collections storage area near the window was covered with dead flies during the site visit.

4. There is no fire-detection system for the repository. The only type of fire-suppression equipment present is fire extinguishers, and none is located in the collections storage area.

5. Artifacts stored in Hollinger boxes have proper and labeled secondary containers, but very few artifacts are directly labeled. Artifacts stored in the file cabinet have been bagged in archival plastic, but have not been properly processed.

6. Associated documentation is sometimes stored with artifacts in the same primary containers.

Recommendations

1. Install an HVAC system. If not possible, purchase hygrothermographs or sling psychrometers to monitor humidity and commercial dehumidifiers to control humidity.

2. Remove artifacts and documentation and place them in a room with proper heating and air-conditioning, and proper security measures such as door locks and dead bolts.

3. Install a fire-detection system that is wired into the local fire department. Install a sprinkler system for fire suppression. Ensure that a fire extinguisher is located in the collections storage area.

4. Begin an integrated pest-management program that includes regular monitoring and control.

5. Remove artifacts from the file drawers and place them in acid-free Hollinger boxes. Label the boxes with as much provenience information as possible.

6. Remove documentation from the primary containers housing the artifacts, and place in separate acid-free Hollinger boxes. Produce duplicate copies of records and archivally store these in a separate, fireproof, secure location.

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3

Adelphi Laboratory Center

Adelphi, Maryland

Installation Summary

Volume of Artifact Collections: 22.2 ft^3

On Base: None

Off Base: USACE Baltimore District, 16.0 ft^3 (see Chapter 31); UDCAR, 3.6 ft^3 (see Chapter 32); Foster Wheeler, 1.4 ft^3 (see Chapter 19); MHT, 1.2 ft^3 (see Chapter 26)

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

Linear Feet of Records: 4.1 linear feet (49 linear inches)

On Base: None

Off Base: GRI, 15.75 linear inches (see Chapter 20); Foster Wheeler, 14 linear inches (see Chapter 19); HRA, 9 linear inches (see Chapter 24); TAA, 7.5 linear inches (see Chapter 30); USACE Baltimore District, 1.5 linear inches (see Chapter 31); UDCAR, 1.25 linear inches (see Chapter 32)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Officially established in 1989, Adelphi Labs is where the Harry Diamond Laboratories (HDL) shared facilities with the headquarters of the Electronics Research and Development Command (ERADCOM) from 1978 to 1985. In 1985, ERADCOM was deactivated and the Army Laboratory Command (LABCOM) was activated. In 1992, LABCOM was deactivated and the Army Research Laboratory (ARL) was activated. Adelphi Labs provides an identity for the site of ARL. The world's largest full-threat gamma-radiation simulator, Aurora, is operated by ARL under the Defense Nuclear Agency. ARL controls the test range in Blossom Point Proving Ground (Blossom Point) and the Woodbridge Research Facilities (Woodbridge).

In June 1994, St. Louis District personnel performed background archaeological research at MHT that included a review of all pertinent archaeological site forms, reports, and manuscripts for Adelphi Labs, including HDL, Blossom Point, and Woodbridge. Archaeological sites have been recorded at Adelphi Labs and its satellite facilities, and a number of reports have been generated as the result of archaeological investigations associated with Adelphi Labs. Archaeological collections are currently housed in seven repositories in five states. Because no Adelphi Labs archaeological collections are being curated at the installation, collections-management standards for the base will not be addressed.

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4

Bloodsworth Island Naval Reservation

Dorchester County, Maryland

Installation Summary

Volume of Artifact Collections: 4.8 ft^3
On Base: None
Off Base: MHT, 4.8 ft^3 (see Chapter 26)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1.1 linear feet (13.5 linear inches)
On Base: None
Off Base: GRI, 13.5 linear inches (see Chapter 20)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Bloodsworth Island NR is a satellite military installation under the command of Little Creek NAB, Norfolk, Virginia, and is used for weapons training. However, Bloodsworth Island NR was not included in the same report with Little Creek NAB (see Table 1). Several unsuccessful attempts were made to contact the facility.

In June 1994, St. Louis District personnel performed background archaeological research at MHT that included a review of all pertinent archaeological site forms, reports, and manuscripts for Bloodsworth Island NR. Archaeological sites have been recorded on the reservation and a few reports have been generated as the result of these archaeological investigations. Archaeological artifact and records collections are currently housed in two repositories in two states. Because no Bloodsworth Island NR archaeological collections are being curated at the installation, collections-management standards for the base will not be addressed.

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5

Fort Belvoir

Virginia

Installation Summary

Volume of Artifact Collections: 179.4 ft^3

On Base: None

Off Base: FCAS, 171 ft^3 (see Chapter 17); TAA, 4.4 ft^3 (see Chapter 30); Milner, 2.9 ft^3 (see Chapter 28); VCUARC, 1.1 ft^3 (see Chapter 33)

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

Linear Feet of Records: 14.4 linear feet (172.5 linear inches)

On Base: 55 linear inches

Off Base: FCAS, 79.25 linear inches (see Chapter 17); Milner, 5.0 linear inches (see Chapter 28); MAAR, 24.75 linear inches (see Chapter 27); TAA, 7.5 linear inches (see Chapter 30); VCUARC, 0.5 linear inch (see Chapter 33); VDHR, 0.5 linear inch (see Chapter 34)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: No funds are allocated for curation activities.

Date of Visit: November 13, 1995

Points of Contact: Art Miller, Facilities Manager, and James Gregory

The tract of land where Fort Belvoir is located was originally acquired for use by the District of Columbia. The land was transferred to the War Department in 1912 for the establishment of a rifle range and summer camp for engineering troops stationed at Washington Barracks, D.C. In 1917, Camp A. A. Humphreys opened to train Army engineers. In 1922, it became a permanent post and was later renamed Fort Humphreys. In 1935, Fort Humphreys became Fort Belvoir, named after a mansion built on the property by Colonel Fairfax in 1741. Fort Belvoir was the home of the Army Engineer School until 1988, when it became part of the Military District of Washington. In 1990, Fort Belvoir served as a mobilization station for Operations Desert Shield and Desert Storm.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Belvoir. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations on the installation. Fort Belvoir archaeological collections are currently housed in six repositories in Virginia, as well as on the installation.

Figure 5. View of the DPW building that houses associated records and reports from Fort Belvoir.

The Directorate of Public Works (DPW) on Fort Belvoir is located in an administrative office building on the Fort Belvoir military installation (Figure 5). Only associated records and reports are stored in the offices of the DPW.

Assessment

Structural Adequacy

The office building in which the DPW is located encompasses approximately 26,400 ft^2. The structure, which is approximately 30 years old, has a concrete foundation and brick exterior walls. The roof is built-up asphalt, with instances of leaks and cracking having been reported in the past. The repository has a total of two floors aboveground. The collections storage area is on the first floor. Windows were upgraded to aluminum frames in 1985, and there is some indication that air leaks into the building through these windows. The collections storage area is an unused office currently storing office furniture and associated documentation. The floor is carpeted concrete. The interior walls are plasterboard, and the ceiling is suspended acoustical tile. There are no windows in the collections storage room. The wood-panel door to the collections storage area is in two sections, so that the bottom half can stay closed while the upper half can remain open.

Environmental Controls

The repository possesses a gas-powered, hot-water HVAC system with timed heating and cooling, but there is no humidity monitoring or control. The environmental controls are not equipped with dust filters. Any cleaning or maintenance of the repository is done by a public works contractor for Fort Belvoir. The utility systems are original to the structure, but minor upgrades were performed during the 1980s and 1990s. Employees have observed leakage from the HVAC system.

Pest Management

The pest-management program at the DPW, which includes periodic fumigation, is performed by DYNACOR, a contracted private company. No evidence of insect or rodent infestation was observed during the site visit.

Security

Access to the structure is controlled by base security; they also conduct periodic checks on the structure and the intrusion alarm system that is wired into the base police monitoring system. The repository is fitted with dead bolt locks on all external doors. There was no evidence of unauthorized access through any of the windows or doors, although there was one past episode of theft in the building (a television was stolen).

Fire Detection and Suppression

All fire alarms are wired into a base fire-detection system monitored by the base fire department. Fire extinguishers are inspected on a yearly basis. Fire drills and fire-prevention briefings are used to keep employees informed of fire risks and emergency procedures.

Artifact Storage

No artifact collections from Fort Belvoir are stored at the installation.

Human Skeletal Remains

No human skeletal remains recovered on Fort Belvoir are curated by the DPW.

Records Storage

Approximately 4.6 linear feet of associated documentation from archaeological investigations conducted on Fort Belvoir are stored in an unused, approximately 10-x-10-foot (100-ft^2) office at the DPW (Figure 6). All environmental controls for this room are the same as those for the remainder of the structure. There are functioning overhead pipes in this collections storage area that have leaked in the past. This collections storage area has no fire-suppression systems.

Paper Records

The approximately 4.3 linear feet of paper records stored at the DPW include both Section 106 and historical-preservation correspondence, as well as a small amount of background records. Within this collection is also some historical-properties correspondence. The primary container is a baked-enamel, lateral, roll-out-drawer file cabinet that measures 30 × 19 × 63.5 inches (w × d × h) and is located adjacent to the entrance to the collections storage area (Figure 7). Site forms and reports are stored in an acidic-cardboard box measuring approximately 3 ft^3. Acidic-paper folders with adhesive labels are used as secondary containers. Overall, the paper records are in good condition, although many of them contain contaminants (e.g., paper clips and staples).

Figure 6. Associated documentation is stored in an extra office at the DPW.

Maps and Oversized Documents

Approximately 3.5 linear inches of large blueprints and installation maps are stored rolled up, standing on end, in an acidic-cardboard box. They are currently in poor condition because of

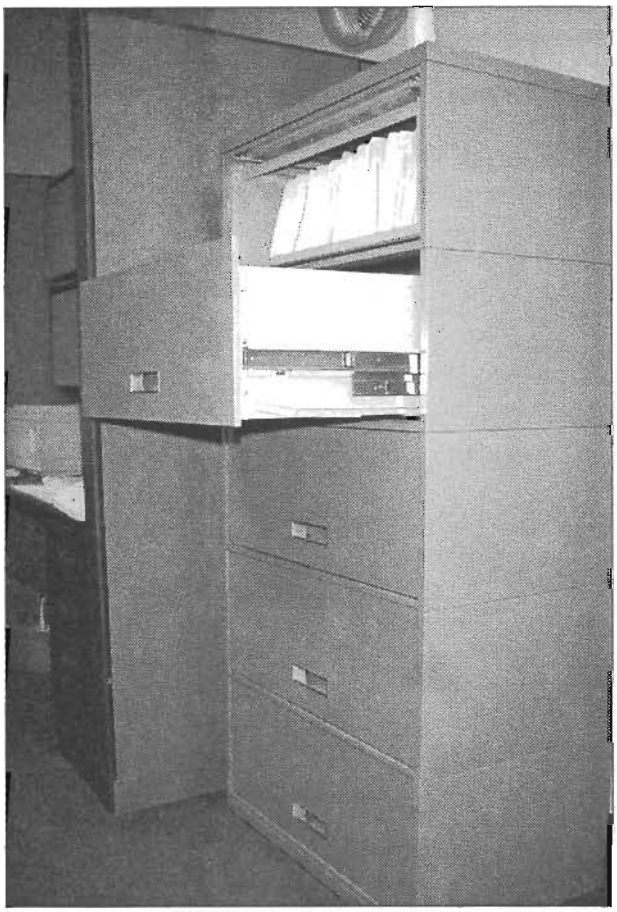

Figure 7. Active files are stored in hanging files in metal file cabinets at the DPW.

the storage method and lack of organization. Other than the titles on the maps, no labels are used on the cartographic records.

Collections-Management Standards

This facility is not a long-term repository; therefore, there are no formal procedures or standards of curation for this collection of associated records.

Curation Personnel

Fort Belvoir does not have a full-time curator or staff for its collection. James Gregory oversees any needed authorization and access to the collection.

Curation Financing

No funding is specifically allocated for a curation program.

Access to Collections

Outside researchers are granted access to the records only with authorization from the DPW.

Future Plans

Possible future plans include the creation of a cataloging system for records, if funding is available.

Comments

1. The current collections storage area is an unused office.

2. Overhead pipes pose a potential problem; leakage in the collections storage area has occurred in the past.

3. Fire-detection and -suppression systems in the collections storage area are inadequate.

4. No integrated computerized and paper reference system has been established for the collections.

5. Records are stored in nonarchival containers.

6. Duplicates of original documentation have not been produced.

7. Cartographic records are deteriorating.

8. Contaminants such as staples and paper clips are present in the original documents.

9. No formal policies or procedures for the curation of collections have been established.

Recommendations

1. Designate a collections storage area specifically for associated documentation.

2. Overhead pipes need to be protected and rendered more leak resistant.

3. Fire-detection and -suppression systems should be installed in the collections storage area including smoke detectors in combination with fire extinguishers.

4. An integrated computer and hard-copy reference system should be developed for easier access to the collection.

5. All original records need to be duplicated onto acid-free paper and stored in a separate, secure, and fire-safe location. Original and photocopied documentation must be stored in an archival, acid-free environment.

6. Cartographic records should be rehabilitated and stored flat in an archival environment.

7. Contaminants such as staples and paper clips should be removed from the original documents.

8. Develop and implement written policy for the curation of all associated archaeological documents.

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6

Fort Detrick

Frederick, Maryland

Installation Summary

Volume of Artifact Collections: 2.7 ft^3
On Base: 1 ft^3
Off Base: Goodwin, 1.7 ft^3 (see Chapter 21)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.2 linear foot (2.5 linear inches)
On Base: 1.0 linear inch
Off Base: Goodwin, 1.5 linear inches (see Chapter 21)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Date of Visit: February 7, 1995

Points of Contact: John Bennett, Master Planner, and Dr. Henry Erbes, Environmental Engineer

Fort Detrick is a multimission army installation that today is home to microbiological containment research, among other medical and communications functions. The Army Health Services Command is located at this installation, which traces its roots to Detrick Field, a small municipal airport that was constructed in the 1930s. The 104th Observation Squadron, part of the Maryland National Guard, set up a summer camp in this location and eventually the name changed to Fort Detrick, in honor of an army medical officer, Major Frederick L. Detrick.

In June 1994, St. Louis District personnel performed background archaeological research at MHT that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Detrick. Archaeological sites have been recorded and a number of reports have been generated as a result of archaeological investigations on the installation. Archaeological collections are currently housed in two repositories in Maryland, including Fort Detrick.

Fort Detrick is curating 1 ft^3 of artifacts and approximately 1 linear inch of documentation recovered during archaeological projects on the installation. The artifact collection consists primarily of items from historical-period contexts, but also contains materials from prehistoric contexts (Table 3). The most abundant prehistoric material class in the collection consists of lithics; the most abundant historical-period material class is glass.

The Fort Detrick environmental planning offices are located in Building 201, the DPW. The

Table 3. Summary, by Volume, of Material Classes Present in Fort Detrick Collections at the Installation

Material Class	%
Prehistoric	
Lithics	10
Faunal remains	5
Historical-period	
Glass	30
Ceramics	25
Metal	25
Brick	3
Rubber	2
Total	100

facility is a former airplane hangar that was converted to biological research laboratories, reaching its present form in the mid-1950s. Floor space totals approximately 50,000 ft^2.

Assessment

Structural Adequacy

Building 201 was originally constructed in the 1930s (Figure 8). The foundation is concrete, and the approximately 5-year-old roof is built-up asphalt. Exterior walls are corrugated metal over asbestos board. Clay structural tile inside the exterior walls is also covered. The roof and foundation are solid, with no cracks or leaks.

Building 201 has two aboveground floors. There are multiple exterior windows, with wood frames. Most of the windows are equipped with shades. The structure has been renovated, including the addition of a corrugated metal roof and interior plasterboard. Currently, the space is used for equipment and maintenance shops as well as offices.

The collections storage area, referred to as "the vault," measures approximately 600 ft^2. The floor is concrete, and the ceiling is concrete with metal support beams. The interior walls are concrete block. There are no windows, and only one metal-panel door to the repository. The collections storage area, filled to approximately 80 percent capacity, is used primarily for the storage of records and maps. For the most part, it contains metal file cabinets and metal map cabinets. Archaeological collections encompass less than 5 percent of the storage space.

Figure 8. Entrance to repository on Fort Detrick.

Environmental Controls

Building 201 is equipped with central air-conditioning and hot-water, wall-unit heating. There are dust filters on the air-conditioning and heating vents. Humidity is neither monitored nor controlled. The structure is regularly maintained

and cleaned by a private company contracted through Fort Detrick.

Pest Management

Fort Detrick has an integrated pest-management program. Monitoring is accomplished by the use of sticky traps and bait, and spraying is conducted twice a year by in-house personnel. Additional spraying is conducted as-needed.

Security

Security measures consist mainly of key locks on all exterior doors and window locks on all exterior windows. In addition, military police regularly patrol the area. The collections storage area door is secured by an electronic keypad-operated lock. No past episodes of unauthorized entry into the repository have been reported.

Fire Detection and Suppression

Fire-detection devices in the repository consist of manual fire alarms, heat sensors, smoke detectors, and fire alarms that are wired into the local fire department. Repository fire-suppression equipment consists only of fire extinguishers. Fire-detection devices within the collections storage area include smoke detectors and heat sensors. There are no fire extinguishers in the collections storage area.

Artifact Storage

Storage Units

Archaeological collections are stored in a cardboard box located on the top of several 7-foot-tall, metal file cabinets in the rear of the collections storage area (Figure 9).

Primary Containers

Artifacts are stored in one acidic-cardboard box with a volume of 1 ft^3. The box has folded flaps, and is directly labeled "archaeological survey" in marker.

Figure 9. Collections are stored in a box on top of the highest of the flat map cabinets.

Secondary Containers

Secondary containers consist of zip-lock, 4- and 6-mil polyethylene bags. Bags are labeled directly in marker; label information consists of installation, site number, and provenience (Figure 10). There are multiple tertiary containers, all of which are zip-lock, 4- and 6-mil polyethylene bags. Tertiary containers are labeled in an identical fashion to the secondary containers, except that some contain acid-free-paper tags labeled directly with marker. Label information is the same: installation, site number, and provenience.

Laboratory Processing and Labeling

All of the artifacts have been cleaned and sorted by material class. Approximately 75 percent of the artifacts have been labeled directly in ink with site number, field site number, or both.

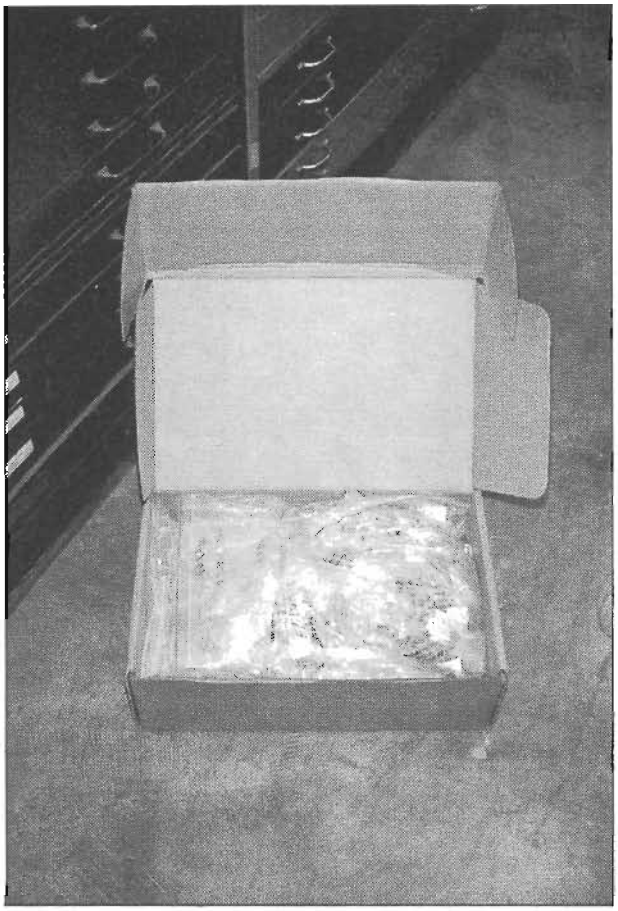

Figure 10. An open acidic-cardboard primary container reveals zip-lock plastic bags used as secondary containers on Fort Detrick.

Human Skeletal Remains

Fort Detrick is not currently curating any human skeletal remains recovered during archaeological projects on the installation.

Records Storage

Documentation (one final report) associated with the archaeological projects at Fort Detrick is located in a box stored on top of the stacked map cases, next to the box containing the artifacts.

Project Reports

Twenty-one copies of one archaeological survey report are stored in a 1.2-ft^3 acidic-cardboard box. The total documentation measured as part of the collection is one report (1 linear inch), because only a single copy is considered necessary for the storage of the collection. The extra copies of the report will likely be distributed among agencies, firms, and researchers. The report is stored in a vinyl binder with a title page slipped into the exterior, clear, plastic pocket.

Collections-Management Standards

Registration Procedures

Accession Files

Fort Detrick does not accession materials.

Location Identification

The location of archaeological collections within the repository is not identified in any document.

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is used.

Computerized Database Management

No computer database programs are used for management of Fort Detrick archaeological collections.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards for the acceptance for archaeological collections by Fort Detrick.

Curation Policy

No formal curation policy has been written.

Records-Management Policy

There is no formal records-management policy.

Field-Curation Procedures

There are no field-curation guidelines.

Loan Policy

No formal loan procedures have been written.

Deaccessioning Policy

Fort Detrick does not accessioned collections; therefore, it has no deaccessioning policy.

Inventory Policy

There is no inventory policy.

Latest Collection Inventory

Collections were last inventoried in 1993.

Curation Personnel

There is no full-time curator for the archaeological collections. Cultural resources management is only an ancillary duty of John Bennett, Master Planner, and Dr. Henry Erbes, Environmental Engineer.

Curation Financing

Curation activities are not financed at Fort Detrick.

Access to Collections

Staff members and other interested parties can arrange access to the collections through Bennett.

Future Plans

There are no future plans for the curation of archaeological collections at this installation.

Comments

1. The repository does not monitor or control humidity.

2. Although the collections storage area has a code lock on the door, security measures for the repository as a whole is limited to key locks on exterior doors.

3. An integrated pest-management program, which includes monitoring and control, is in place.

4. There are multiple forms of fire detection in place, but no adequate fire-suppression equipment, such as a sprinkler system, present.

5. Artifacts and associated documentation are stored in acidic-cardboard boxes.

6. Although the project report appears to be thorough, original field notes and other associated documentation are absent from the collection.

Recommendations

1. Install an HVAC system. If this is infeasible, purchase a hygrothermograph or sling psychrometer to monitor humidity and a dehumidifier to control humidity.

2. Install a security system in the repository, and wire the system into the local police or military police department.

3. Install a sprinkler system throughout the entire in the repository and place a dry-chemical fire extinguisher in the collections storage area.

4. Rebox artifacts and documentation using acid-free Hollinger cardboard boxes.

5. Locate original field notes and other associated documentation and store it with the collections in acid-free primary and secondary containers. Produce duplicates of original documentation on acid-free paper and store at a separate, secure, fireproof location.

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7

Fort Eustis

Newport News, Virginia

Installation Summary

Volume of Artifact Collections: 63.9 ft^3

On Base: None

Off Base: VDHR, 60.5 ft^3 (see Chapter 34); JRIA, 2 ft^3 (see Chapter 25); WMCAR, 1.4 ft^3 (see Chapter 35)

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

Linear Feet of Records: 3 linear feet (36 linear inches)

On Base: None

Off Base: MAAR, 29 linear inches (see Chapter 27); JRIA, 4.0 linear inches (see Chapter 25); WMCAR, 2.0 linear inches (see Chapter 35); VDHR, 1.0 linear inch (see Chapter 34)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Fort Eustis began as an artillery training camp in 1918 and was named in honor of Brigadier General Abraham Eustis, an artillery officer. In 1946, Fort Eustis became a principal training post for the Army Transportation Corps. Felker Army Airfield was the first military heliport and remains the Army's only heliport with at least one of every type of Army helicopter in active service. In addition, Fort Eustis is responsible for the environmental compliance of Fort Story (see Chapter 13).

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Eustis. Archaeological sites have been recorded on Fort Eustis, and a number of reports have been generated as the result of archaeological investigations on the installation.

No Fort Eustis archaeological collections are curated at the installation; they are currently housed in four repositories in Virginia. Because no Fort Eustis archaeological collections are being curated at the installation, collections-management standards for the base will not be discussed.

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8

Fort A. P. Hill

Virginia

Installation Summary

Volume of Artifact Collections: 49.9 ft^3
On Base: 44.2 ft^3
Off Base: G&P, 3.2 ft^3 (see Chapter 22); WMCAR, 1.4 ft^3 (see Chapter 35); VDHR, 1.1 ft^3 (see Chapter 34)
Compliance Status: Collections require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 3.1 linear feet (37.75 linear inches)
On Base: 13 linear inches
Off Base: G&P, 12 linear inches (see Chapter 22); MAAR, 9.75 linear inches (see Chapter 27); VDHR, 1.25 linear inches (see Chapter 34); WMCAR, 1.0 linear inch (see Chapter 35); VCUARC, 0.75 linear inch (see Chapter 33)
Compliance Status: Associated documentation requires complete rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: 1 possibly human bone fragment

Status of Curation Funding: Curation of archaeological collections is not financed.

Date of Visit: May 11, 1995

Points of Contact: Terry Banks, Environmental Coordinator, and Evelyn Peyton

Fort A. P. Hill was established as a U.S. Army installation during World War II (WW II), for the purpose of assembling and training thousands of soldiers. The installation is located in Caroline County, eastern Virginia. Numerous archaeological surveys and some testing have been conducted on the installation. Fort A. P. Hill was formerly a subpost of Fort Lee, Virginia, and is currently a training installation for Fort Meade, Maryland.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort A. P. Hill. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations on the installation. Fort A. P. Hill archaeological collections, currently housed in six Virginia repositories (including the installation), consist of items from both prehistoric and historical-period contexts (Table 4). The largest prehistoric material class in the collections is lithics; the largest historical-period material class is metal.

[*Editors' note:* In summer 1995, after the St. Louis District assessment team's visit, Cultural Resources, Inc., was contracted to rehabilitate the Fort A. P. Hill archaeological collections.

Table 4. Summary, by Volume, of Material Classes Present in Fort A. P. Hill Collections at the Installation

Material Class	%
Prehistoric	
Lithics	22
Ceramics	2
Faunal remains	2
Shell	1
Botanical	< 1
Soil	< 1
^{14}C samples	< 1
Historical-period	
Metal	30
Ceramics	20
Glass	14
Brick	7
Leather	< 1
Rubber	< 1
Total	100

Recent correspondence with environmental personnel at the installation indicates that the collections now occupy approximately 25 ft^3, and that they have been upgraded to meet the curation standards set forth in 36 CFR Part 79. This summary, however, reports on the conditions of the collections at the time of the St. Louis District site visit.]

Fort A. P. Hill stores archaeological collections in three separate storage locations. A large volume of artifacts is housed in a well house (Storage Location 1). Administrative project records are stored in a rented trailer (Storage Location 2) that is near the well house and houses primarily offices for the environmental staff. A small number of artifacts are displayed in the post museum (Storage Location 3).

Assessment of Storage Location 1: Well House

Structural Adequacy

Storage Location 1, the well house, is a small stand-alone structure (Figure 11) associated with a much larger building housing offices and meeting space. It is located within a compound that is enclosed by a fence with barbed wire on its top. Approximately 20 years old, the well house

Figure 11. Exterior of Storage Location 1, the well house, on Fort A. P. Hill.

was originally used as named, but in recent years has been used only for storage of miscellaneous items, including archaeological materials. The structure's foundation is concrete, the exterior walls are concrete block, and the roof is constructed of tar and gravel over a wood frame. Total floor space of the single-story well house is approximately 80 ft^2, with no interior divisions of space. There is one window and one solid, wood door to the exterior.

Environmental Controls

Storage Location 1 is not equipped with any environmental controls. The window is not shaded, and there is evidence (e.g., water-damaged boxes) that water leakage has been a problem. It is possible, however, that unchecked high humidity caused the box damage. Cans of paint and a large drum of solvent were noted in close proximity to the collections. The well house is not regularly maintained.

Pest Management

There is no integrated pest-management program for the well house, which exhibited extensive signs of pest infestation, including live and dead insects, rodent feces, and bird excrement on and within the archaeological collections storage containers.

Security

The well house's exterior door is secured by a padlock. The structure has the added security of being located within the environmental building compound.

Fire Detection and Suppression

The well house has no fire-detection or -suppression systems.

Assessment of Storage Location 2: Trailer

Structural Adequacy

Storage Location 2 is a standard trailer-house-sized structure made primarily of corrugated metal (Figure 12). It rests on concrete blocks. There is one floor, with a set of wood steps leading up to the two exterior doors. There are multiple

Figure 12. View of Storage Location 2, a rented trailer, where associated records are stored.

exterior windows and several interior partitions used to help delineate office spaces. Window frames are aluminum, and the windows are equipped with shades. The trailer is filled to capacity with offices and records storage. The interior floor is tiled and the walls are paneled. The ceiling is suspended acoustical tiles.

Environmental Controls

Storage Location 2 is equipped with heating and air-conditioning. Humidity, however, is neither monitored nor controlled. There are no dust filters on the environmental controls. The trailer is regularly cleaned and maintained by installation staff.

Pest Management

There is no integrated pest-management program for the rented trailer, but no visible signs of pest infestation were observed during the site visit.

Security

Storage Location 2 is located within the same environmental building compound in which the well house is situated. The exterior fence is equipped with a top ring of barbed wire, and the exterior gate has a dead bolt lock. The area is patrolled by installation military police. The trailer itself is equipped with key locks on both exterior doors.

Fire Detection and Suppression

There are no fire-detection systems located within the trailer and the only fire-suppression equipment is a nitrogen fire extinguisher.

Assessment of Storage Location 3: Fort A. P. Hill Museum

Structural Adequacy

The Fort A. P. Hill Museum, Storage Location 3, is a small, one-room facility located in the main cantonment area of the installation (Figure 13). Although originally used as a Class 6 (liquor) store, it was later converted into a museum. The foundation is poured concrete and concrete block. Exterior walls are constructed of aluminum siding over wood. The roof, composed of shingles, is original to the building.

Figure 13. View of Storage Location 3, the Fort A. P. Hill Museum.

Figure 14. Prehistoric and historical-period artifacts are on display in the Fort A. P. Hill Museum.

There is one floor and two exterior doors. There are four exterior windows, two on the north side of the structure and two on the south side. The museum has multiple exhibits and display cabinets, with one cabinet containing archaeological materials (Figure 14).

Environmental Controls

The museum is equipped with heating and air-conditioning. There is no monitoring or regulation of humidity, and the environmental systems are not equipped with dust filters. The museum is regularly cleaned and maintained by installation staff.

Pest Management

In the museum, pest control is done regularly and as needed. There is not, however, an integrated pest-control program that includes monitoring. No signs of pest infestation were observed in the museum during the site visit.

Security

All exterior doors are equipped with key locks and all exterior windows have metal bars. The museum also has an intrusion alarm wired into the military police, which includes motion detectors in the museum's interior.

Fire Detection and Suppression

Fire-detection devices in the museum consist of manual fire alarms and smoke detectors that are wired into the installation fire department. Fire-suppression equipment consists of one water fire extinguisher.

Assessment of Storage Locations 1–3

Artifact Storage

Storage Units

Boxes of artifacts are stacked on the concrete floor of Storage Location 1 (Figure 15). In Storage Location 3, artifacts are exhibited in a wood-and-glass storage case measuring 3.1 × 1.1 × 3.4 feet (w × d × h).

Figure 15. Damaged artifact boxes are stacked against the wall in Storage Location 1.

Figure 16. Example of an interior of a primary container used on Fort A. P. Hill. Note the broken artifacts loose in the bottom of the box.

Primary Containers

Primary containers for artifacts consist almost entirely of acidic-cardboard boxes (Figure 16). The exception is the museum case constructed of wood and glass. Cardboard boxes range in volume from 0.7 ft^3 to 2.1 ft^3. Most are not labeled, but a few are labeled inconsistently with site numbers or project names written directly on the box in marker.

Secondary Containers

Fort A. P. Hill collections are enclosed in a variety of secondary containers, the majority being zip-lock plastic bags and paper bags (Table 5). Secondary-container labels generally consist of the site number written directly on the container in marker. Provenience information is sometimes included. Paper bags are largely in very poor condition, most being damp and torn. There are often multiple tertiary containers—zip-lock plastic bags or paper bags—labeled in the same fashion with the same information and generally in the same condition as the secondary containers.

Laboratory Processing and Labeling

Most artifacts have been cleaned, but only 13 percent—mostly those housed in Storage Location 3—have been labeled. Labels consist of site number and provenience written directly on the surface of the artifact in ink or on a typed, adhesive label attached to the artifact. Only 35 percent of the artifacts are sorted by material class.

Table 5. Summary, by Volume, of Secondary Containers Used for Fort A. P. Hill Collections at the Installation

Container Type	%
Plastic bags	44
Paper bags	36
Cardboard boxes	11
Loose	8
Other[a]	1
Total	100

[a] "Other" includes plastic vials and plastic trash bags.

Human Skeletal Remains

There is one bone fragment that may be human skeletal remains, which should be examined by a physical anthropologist. It was recovered from site 44CE1. The bone was not labeled as human.

Records Storage

There are 11 linear inches of records stored in file cabinets in Storage Location 2; an additional 2 linear inches are housed in Storage Location 1. Storage units consist of letter-sized, metal, five-drawer file cabinets measuring 1.3 x 2.4 x 5 feet (w x d x h). The cabinets are equipped with key locks.

Paper Records

Administrative records measure 10 linear inches and are stored manila folders. Some folders are labeled directly with document type in marker, whereas others bear typed adhesive labels. Less than 1 linear inch (.75 linear inch) of maps are housed in Storage Location 2 with the paper records.

Project Reports

One box containing 2 linear inches of circulated reports is stored in Storage Location 1 with the artifacts. The less than 1 linear inch (.25 linear inch) of reports found in Storage Location 2 is stored with the rest of the paper records.

Collections-Management Standards

The Fort A. P. Hill environmental offices are not considered to be long-term curation facilities. Therefore, they do not operate under museum registration procedures or written curation policies and procedures.

Curation Personnel

Fort A. P. Hill does not employ a curator or archaeologist for the care of their collections. Terry Banks, Environmental Coordinator, and Evelyn Peyton are responsible for cultural resource management.

Curation Financing

Curation activities have not been financed.

Access to Collections

General access to the collections is limited to environmental staff. Researchers may access the collections with permission.

Future Plans

Future plans include rehabilitating and storing the collections, following the guidelines and standards of 36 CFR Part 79.

Comments

1. Storage Location 1 has no environmental controls, and Storage Locations 2 and 3 have no humidity-monitoring or -control systems.

2. Storage Location 3 is the only storage location equipped with a security system wired into the military police.

3. Storage Location 1 has no fire-detection or -suppression system, and Storage Location 2 has only a fire extinguisher for fire suppression. Storage Location 3 has modest fire-detection capabilities, including manual alarms and smoke detectors wired into the installation fire department. The museum is limited to a fire extinguisher for its fire-suppression method, however.

4. Artifacts are in very poor condition. Although most have been cleaned, very few are sorted or labeled. Primary containers are compressed, damp, and infested with pests or their feces. Secondary containers are not uniformly labeled, and most are torn and deteriorating.

5. Proper heating and cooling in Storage Location 2 has kept the associated documentation in good condition.

Recommendations

1. Remove artifacts from Storage Location 1. Rehabilitate and relocate artifacts to Storage Location 3 until more suitable conditions can be found. Produce duplicates of all records and store with the artifacts in Storage Location 3.

2. Install an HVAC system in Storage Location 3. If not feasible, monitor humidity with a hygrothermograph or sling psychrometer, and control it with a dehumidifier.

3. Implement an integrated pest-management program that includes monitoring and control.

4. Install a sprinkler system in Storage Location 3.

5. Remove artifacts from their current acidic-cardboard primary containers and acidic-paper-bag secondary containers, and place them acid-free Hollinger boxes and archival-quality, zip-lock, 4- and 6-mil bags. Label artifacts directly in indelible ink, and insert acid-free-paper tags made from spun-bonded polyethylene paper (e.g., Nalgene polypaper) into the secondary containers. Employ a physical anthropologist to examine the one bone that may be human skeletal remains, and follow NAGPRA procedures if necessary.

6. Remove records from their current acidic folders and place them in archival-quality containers. Duplicate associated documentation onto acid-free paper, and archivally store the copies in acid-free folders within acid-free-cardboard boxes or fireproof file cabinets in a separate, fireproof, secure location. Produce an additional copy of documentation and store it with the artifacts in Storage Location 3, the museum.

7. Search for a facility with adequate space and staff qualified to properly care for the collections in perpetuity. Produce a curation agreement with that facility and curate the collections there.

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9

Fort Lee

Petersburg, Virginia

Installation Summary

Volume of Artifact Collections: 31.3 ft^3

On Base: None

Off Base: G&P, 15.6 ft^3 (see Chapter 22); WMCAR, 1.4 ft^3 (see Chapter 35); VDHR, 14.3 ft^3 (see Chapter 34)

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

Linear Feet of Records: 3.3 linear feet (40 linear inches)

On Base: None

Off Base: G&P, 23.75 linear inches (see Chapter 22); MAAR, 11.25 linear inches (see Chapter 27); VDHR, 3.5 linear inches (see Chapter 34); WMCAR, 1.5 linear inches (see Chapter 35)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Camp Lee, established in 1917 and named in honor of Confederate Civil War commander General Robert E. Lee, was selected as a state mobilization camp and later became a division training camp. After World War I (WW I), Camp Lee was taken over by the state and designated a game preserve. Portions of the land were later incorporated into the National Military Park, Petersburg. In 1940, construction began on another Camp Lee on the same site as the earlier Camp Lee. In 1941, the Quartermaster Replacement Training Center (QMRTC) began operation. Quartermaster School was moved here, including Officer Candidate School. Camp Lee was renamed Fort Lee in 1950 and became a Class I military installation under the Second Army. In 1963, Camp Pickett and Camp Hill were established as subinstallations. Fort Lee became part of the Army Training and Doctrine Command in 1973.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Lee. Archaeological sites have been recorded on Fort Lee and a number of reports have been generated as the result of these archaeological investigations. Archaeological collections from Fort Lee are currently housed in four repositories in Virginia. Because no Fort Lee archaeological collections are being curated at the installation, collections-management standards for the base will not be discussed.

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10

Fort George G. Meade

Maryland

Installation Summary

Volume of Artifact Collections: 12.1 ft^3
On Base: 3.8 ft^3
Off Base: MHT, 5.8 ft^3 (see Chapter 26); USACE Baltimore District, 2.5 ft^3 (see Chapter 31)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 4.3 linear feet (51 linear inches)
On Base: 40.5 linear inches
Off Base: USACE Baltimore District, 9.75 linear inches (see Chapter 31); MHT, 0.75 linear inch (see Chapter 26)
Compliance Status: All associated documentation is in generally in very good condition. Original associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not financed at this time.

Date of Visit: December 8, 1995

Point of Contact: William Harmeyer

Fort George G. Meade was built in 1917 for troops that were drafted to serve in WW I. It was originally named Camp Meade in honor of Civil War Major General George G. Meade. It was renamed Fort Leonard Wood in 1928, but Pennsylvanians protested this so much that the name became Fort Meade. During World War II (WW II), Fort Meade served as a training center. In 1973, an Army reorganization provided for a transition from Active Army organization to Reserve Components.

In June 1994, St. Louis District personnel performed background archaeological research at MHT that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Meade and Fort Holabird, a subinstallation of Fort Meade located in Baltimore. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations on the installation. Archaeological collections are currently housed in three repositories in Maryland, including the installation.

The fort's environmental offices are located in Building 239. Approximately 3.8 ft^3 of materials recovered on Fort Meade—primarily from historical-period contexts but including items from prehistoric contexts—and 3.3 linear feet of associated documentation are housed in this facility. Lithics dominate the prehistoric artifact

Table 6. Summary, by Volume, of Material Classes Present in Fort Meade Collections at the Installation

Material Class	%
Prehistoric	
Lithics	4
Faunal remains	1
Worked bone & shell	1
Historical-period	
Ceramics	73
Glass	12
Metal	9
Total	100

collection; ceramics dominate the historical-period collection (Table 6).

Building 239, which encompasses approximately 2,125 ft^2, is not an official repository (Figure 17). Activity areas in the structure include offices, a reception area, a conference area, and rest rooms. Collections are currently being stored in the closet within one of the offices.

Assessment

Structural Adequacy

Building 239 was constructed in approximately 1945. It has reinforced-concrete piers, a wood frame, and aluminum siding. The shingled roof is approximately 15 years old; no leaks or cracks are apparent. The single-story structure has no history of major renovations. Windows are in 2-x-4-foot aluminum frames and are located on all sides of the structure. The windows are not original to the structure.

Environmental Controls

Building 239 is equipped with regulated temperature controls for heating and cooling, which are provided by a forced-hot-air and heating-oil system. The environmental-control system is equipped with dust filters. No humidity-monitoring or -control systems are present. The plumbing, electrical, and heating systems have recently been upgraded. Maintenance of the structure is the responsibility of the fort's Department of Public Works.

Figure 17. Exterior of Building 239, Fort Meade's environmental offices, where collections are stored.

Pest Management

No integrated pest-management program is in place for Building 239; however, no evidence of rodent or insect infestation was observed in the temporary collections storage area or the structure during the site visit. Fumigation and rodent-control measures take place on an as-needed basis.

Security

The structure has key and dead bolt locks on the front door. All windows are accessible from the exterior, and are secured with standard window locks. No evidence of unauthorized access through any of the windows or doors was observed during the site visit, and no past episodes of unauthorized entry into the structure have been reported. A base security patrol makes periodic visits to the structure.

Fire Detection and Suppression

Fire-detection and -suppression devices throughout the structure include manual fire alarms, a heat sensor, smoke detectors, and a fire extinguisher. A smoke alarm is the only fire-detection device in the collections storage area.

Figure 18. Office closet used for the storage of artifact and record collections on Fort Meade.

Artifact Storage

Artifacts and records are stored in a closet in William Harmeyer's office, in Building 239 (Figure 18). The 2-x-4-foot (8-ft^2) closet also contains personal items, office supplies, and field equipment.

Storage Units

Archaeological collections are stored in boxes stacked on the floor of Harmeyer's closet.

Primary Containers

Approximately 3.4 ft^3 of artifacts recovered on Fort Meade are stored in acid-free Hollinger cardboard boxes with telescoping lids (Figure 19). These boxes are labeled with contents, site number and provenience. Labels are acid-free-paper slips within adhesive, zip-lock, plastic covers. The remainder of the artifacts are stored in an acidic-cardboard box that has a volume of 0.4 ft^3. This acidic box is a mailed packing container from the Planning Division, USACE Baltimore District. None of the information on the outside of the box pertains to the artifacts inside. The box has opened flaps and it is in poor condition is (i.e., tears in the cardboard).

Secondary Containers

Secondary containers for the artifacts within the acid-free boxes are zip-lock, 4-and 6-mil plastic bags with labels written directly on the bags in black marker. There are ventilation holes through the bags. The collections in the acidic-cardboard box are stored in acidic-paper bags with labels written directly on the bags with pen

Figure 19. Cardboard boxes are used as primary containers for artifacts and associated documentation on Fort Meade.

and pencil. Paper slips that bear other pertinent site information are inside the bags. Two empty paper bags are also in this box.

Laboratory Processing and Labeling

The majority (97.5%) of the artifacts are clean. Approximately 80 percent are labeled. The artifacts in the acid-free boxes have a paper label inserted within their secondary container. Artifacts in the acidic box are labeled directly in ink.

Human Skeletal Remains

No human skeletal remains recovered on Fort Meade are included in the on-base collections.

Records Storage

The Fort Meade collections include approximately 3.4 linear feet (40.5 linear inches) of associated archaeological documentation and reports. These records are stored in three acid-free boxes with the artifact boxes. Some records are stored in three-ring binders that bear computer-generated, adhesive labels. In general, the associated documentation is in excellent condition. In addition to these records, computer-generated base aerial maps with site numbers are kept on file in the office.

Paper Records

There are approximately 2.6 linear feet of paper records associated with the collections stored at the installation. Of this total, 2 linear inches of records are artifact inventories and 29.5 linear inches are survey forms, and field records and notes (including site maps). All paper records are copies of original records that are located at Goodwin. Many of the paper records contain contaminants (e.g., paper clips, metal binder clips, and staples).

Photographic Records

Approximately 2.5 linear inches of photographic records, including contact sheets and negatives, color slides, photograph logs, and color prints, are stored in the environmental offices. The photographic records are stored in the boxes that contain the other documentation.

Maps and Oversized Documents

The installation currently holds about 0.5 linear inch of cartographic records, which consist of small, site-specific drawings.

Project Reports

Approximately 6 linear inches of final reports are stored in the same primary containers as the other records.

Collections-Management Standards

The environmental offices in Building 239 are not considered a long-term repository. No standards for the management of archaeological collections have been established.

Comments

1. No humidity-monitoring or -control equipment is in place.

2. An integrated pest-management program has not been implemented for Building 239.

3. Fire-detection and -suppression measures in the collections storage area are inadequate.

4. While most of the collection is properly stored in acid-free-cardboard boxes, acidic-cardboard boxes are used as primary containers for a portion of the collection. The primary containers are stored on the floor of a closet.

5. Associated documentation contains contaminants (e.g., paper clips and staples).

6. Photographic records are not stored in archival-quality sleeves.

Recommendations

1. Install an HVAC system with humidity controls.

2. Implement an integrated pest-management program for Building 239.

3. Place fire-detection and -suppression devices in or near the collections storage area.

4. Place the artifacts stored in the acidic box in a properly labeled, acid-free primary container.

5. Remove all contaminants from the associated documentation.

6. Store the photographic records in archival containers (e.g., sleeves for negatives and photographs).

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11

Fort Monroe

Virginia

Installation Summary

Volume of Artifact Collections: 100.2 ft^3
On Base: 98 ft^3
Off Base: VDHR, 2.2 ft^3 (see Chapter 34)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: None
Compliance Status: No associated documentation was available for assessment. Some associated records may be located at the USACE Norfolk District, but this was not confirmed during a telephone conversation with Corps personnel.

Human Skeletal Remains: None

Status of Curation Funding: Curation of archaeological collections is financed through funds appropriated by the U.S. Army.

Date of Visit: May 2, 1995

Points of Contact: Dennis Mrozkowski, Curator, and Kathy Rothrock, Museum Specialist

Fort Monroe was built in 1819, in the shape of an irregular polygon with seven fronts and seven bastions. It is the largest stone fort in the United States and has the nickname "Gibraltar of the Chesapeake." Fort Monroe is one of the few federal military installations in the south that did not fall to Confederate forces at the outbreak of the Civil War. During WW II, it was the headquarters for Harbor Defense, Chesapeake Bay, and later became the headquarters for U.S. ground forces. Fort Monroe is the third-oldest continuously operating fort in the United States.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Monroe. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations on the installation. Archaeological collections are currently housed in two repositories in Virginia, including the installation. Fort Monroe archaeological collections that are housed on base include 98 ft^3 of artifacts from historical-period contexts (Table 7).

Fortifications have been present at the current location of Fort Monroe since the 1600s. The current stone fort was constructed, beginning in 1818, as a coastal artillery defense battery. Today, the original stone structure is a major historic attraction located on the south end of what is now a much-larger military installation. Fort Monroe is home to the Army's Training and Doctrine Command (TRADOC).

Fort Monroe stores archaeological collections in the Casemate Museum, which is located

Table 7. Summary, by Volume, of Historical-Period Material Classes Present in Fort Monroe Collections at the Installation

Material Class	%
Glass	64
Ceramics	20
Metal	15
Brick	< 1
Faunal remains	< 1
Leather	< 1
Total	100

in a portion of the original fortification (Figure 20). The fort is polygonal, with multiple bastions jutting out to form corners. The exterior is surrounded by a stone-lined moat, and there are multiple structures within the fort. The fort's walls are formed by a series of adjacent rooms linked internally and connected with stone archways. These rooms within the fort's walls are termed "casemates"; a linked, linear series of these composes the Casemate Museum. The museum is technically located in Casemate 20, and includes office space, exhibit space, and storage space that total more than 14,000 ft^2. It should be noted that the cell of captured Confederate President Jefferson Davis is within the museum.

Assessment

Structural Adequacy

The original fortification dates to the period 1818–1834. The foundation and exterior walls are primarily composed of brick and stone. Bricks have been removed from several sections of the fortification roof and been replaced with poured concrete. On many original sections, however, roofing remains composed of bricks that are covered with earth. The museum has had multiple renovations and expansions since 1951, the latest during 1982–1983 when several rooms were added. There is only one floor for the entire fortification. Multiple windows are present in the inward-facing walls of the museum, and approximately one-third as many face outward to the fort's exterior. Windows and their frames were replaced approximately two years prior to the assessment team's site visit. The structure is solid, but there are multiple cracks in the brick walls and roofs. In addition, there is some water seepage from the brick roof, where it is overlain by earth.

Figure 20. Exterior of the Casemate Museum, Fort Monroe.

Figure 21. Collections storage area for arms within the Casemate Museum.

The collections storage area is a series of casemates separated from the offices and exhibit sections of the museum by a wood-panel door (Figure 21). Total space for collections storage measures 3,600 ft^2, and includes four casemates and one arms room. The arms room is separated from the collections storage area by a metal-panel door. The interior sections of the collections storage area are divided by brick archways. There are four wood-panel doors in the collections storage area that open to the exterior of the museum. The collections storage area is filled to approximately 90 percent capacity with archaeological and ethnographic collections, each composing approximately one-half of the materials.

Environmental Controls

The Casemate Museum operates a zoned central heating and air-conditioning system. Humidity is monitored twice daily with hygrometers and is regulated using fans and dehumidifiers. Temperature and humidity levels are maintained at 65–70° F and 55–60 percent, respectively. The environmental controls are not equipped with dust filters. The facility is regularly maintained by post engineers and cleaned weekly by curatorial staff. Lighting is by fluorescent tubes equipped with UV filters. Windows are covered by unbleached muslin cloth, and transoms over exterior doors are covered with UV-protectant sheets.

Pest Management

The Casemate Museum has an integrated pest-management program that includes monitoring and control (Figure 22). Sticky traps are the primary monitoring method. Pest control, usually in the form of sprays and "bombs," is conducted by the post entomologist. When needed, poisons are used in restricted areas. At the time of the site visit, the farmost casemate in the collections storage area had a serious problem, as birds had infiltrated the area, died, and were a health concern. An archway was covered and quarantined to protect against disease. It should be noted, however, that this was reportedly an isolated occurrence.

Security

Comprehensive measures are used to secure the museum. Access to the fort is restricted to four bridges crossing the moat—three for vehicles, one for foot traffic. The museum is secured by intrusion alarms wired into the military police. Additionally, police monitor sound and contact points on perimeter doors, and are quick to respond when contact points are broken. During business hours, a contracted security guard monitors closed-circuit television within the museum. Exterior doors are equipped with key and dead bolt locks, and exterior windows are nailed shut. The arms room located within the collections storage area has a padlock and a separate security system that is also monitored by the military police. Access to the collections storage area is controlled by staff, as the only entrance to the area through the museum is through the offices.

Figure 22. View of the fumigation chamber at the Casemate Museum.

Figure 23. Historical-period ceramic artifacts are protected in lined museum cabinets.

Fire Detection and Suppression

Fire-detections systems consist of smoke detectors and manual fire alarms wired into the installation fire station. There are multiple fire extinguishers; several are located in the collections storage area. The staff maintains that, as an exception to policy, Fort Monroe has the authority and approval to not be equipped with a sprinkler system because the brick-and-stone structure would be structurally damaged by water-based fire-suppression systems.

Artifact Storage

Storage Units

Archaeological materials recovered on Fort Monroe and housed at the installation total 98 ft^3. The 12.5 ft^3 of materials recovered from a survey conducted on-post were stored in primary containers on the floor of the arms room at the time of the assessment team's site visit. The remaining portions of the Fort Monroe collections (85.5 ft^3) consist of historical-period archaeological materials recovered from the moat in several dredging projects, and are stored in primary containers on various types of shelving in the collections storage area (Figure 23). Primary containers are on top of enameled-metal lockers, cabinets, map cases, and shelves, and painted-plywood shelves. Over half (54.9 ft^3) of the collections are stored loose on open, painted-plywood shelves. Material classes present in the collections are summarized in Table 7.

Primary Containers

Primary containers in the collections primarily consist of acid-free-cardboard boxes. In the survey collection stored in the arms room, however,

Figure 24. Cardboard boxes and zip-lock plastic bags are used to store artifacts on Fort Monroe.

four of the primary containers are acidic-cardboard boxes. The primary containers housing the survey collection, if labeled, are labeled directly with the installation name in marker. Primary containers housing the moat collections are labeled with acidic-paper tags taped on the side of the box. Information consists of inclusive Fort Monroe catalog numbers typed on the paper tag. Over half (54.9 ft^3) of the archaeological collections are stored loose on foam sheets laid on the bottom of painted-plywood shelves.

Secondary Containers

Within the moat collection, secondary containers are either not present or consist of acid-free-construction-paper dividers or Styrofoam "peanuts." Secondary containers for the survey collection are either not present or consist of zip-lock plastic bags (Figures 24 and 25). The zip-lock plastic bags generally have interior, acidic-paper tags with provenience recorded in pen. Table 8 outlines the percentages of secondary-container types in the on-base collections.

Laboratory Processing and Labeling

All of the artifacts have been cleaned, but none have been labeled. Ninety-five percent of the artifacts are sorted by material class.

Figure 25. Oversized metal artifacts are stored loose within a cardboard box.

Table 8. Summary, by Volume, of Secondary Containers Used for Fort Monroe Collections at the Installation

Container Type	%
Loose, on foam sheets	62
Acid-free-construction-paper dividers	27
Zip-lock plastic bags	7
Styrofoam "peanuts"	4
Total	100

Human Skeletal Remains

The Casemate Museum does not currently curate any human skeletal remains recovered on the installation.

Records Storage

Fort Monroe does not currently curate any documentation associated with archaeological collections recovered on the installation.

Collections-Management Standards

Registration Procedures

Accession Files

Archaeological and ethnographic materials are accessioned into the museum by regulation of the Army's Center for Military History.

Location Identification

The locations of artifacts within the repository are identified in the accession files.

Cross-Indexed Files

Files are cross-indexed by donor's name, catalog number, and subject matter (Figure 26).

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is not a suitable method of site-record administration for Fort Monroe, as most collections at the museum are unprovenienced donations.

Figure 26. Office area in the Casemate Museum where unassociated records are stored in metal file cabinets.

Computerized Database Management

The Universal Site Artifact Management System (USAMS) is used. In addition, MultiMate is used for word processing. The system is not attached to a network, but to individual machines. Records are stored on the hard drives and on disks. At the time of the evaluation, Fort Monroe staff procedure was to send collections data to the Center for Military History, Washington, D.C. However, this procedure will soon be done electronically when all military museums are linked to a central, mainframe computer located at the Center for Military History.

Written Policies and Procedures

Minimum Standards for Acceptance

There are formal standards for the transfer-of-title of collections; most accessions are donations.

Curation Policy

There is a formal curation policy that addresses the receipt, processing, and use of materials. The policy is specified in the standard operating procedures for the museum.

Records-Management Policy

There is a formal records-management policy addressing the guidelines and standards for curation of records. The policy is specified in the standard operating procedures for the museum.

Field-Curation Procedures

There are no formal field-curation guidelines.

Loan Policy

There are formal loan procedures specified in the standard operating procedures of the museum.

Deaccessioning Policy

There is a formal deaccessioning policy specified in the standard operating procedures of the museum and in Army Regulation 870-20.

Inventory Policy

Army Regulation 870-20 directs military museums to conduct inventories every two years.

Latest Collection Inventory

Collections were last inventoried in 1993.

Curation Personnel

In the Army museum system there is no title or position for museum director. Dennis Mrozkowski is the curator, and Kathy Rothrock is a museum specialist directly in charge of the collections.

Curation Financing

Curation is financed by directly appropriated Army funding.

Access to Collections

Access to the collections is limited to staff, and to researchers by permission.

Future Plans

Future plans include providing additional storage space for the collections.

Comments

1. The walls and roof sometimes leak water, as the brick-and-stone roof is directly overlain by earth.

2. The museum is not equipped with a sprinkler system for fire suppression, as installation engineers contend the activation of such a system would damage the interior of the brick-and-stone structure.

3. The museum has an integrated pest-management program; however, at the time of the assessment team's site visit, a dead bird problem had resulted in the quarantine of a casemate.

4. Several primary containers housing survey collections are acidic-cardboard boxes; all survey collections are stored on the floor of the arms room. Documentation associated with this survey may still be in the possession of the surveyor, the USACE Norfolk District.

Recommendations

1. Ensure that collections are stored off the floor and away from walls that have seepage problems. If necessary, cover collections with large sheets of plastic to prevent damage from water seepage through the roof.

2. Rebox and rebag artifacts needing rehabilitation into standard-sized, acid-free-cardboard boxes and archival-quality, zip-lock polyethylene bags. However, corrugated-plastic boxes are preferable for the storage of artifacts because of the casemate structure's seepage problem.

Bibliography of Fort Monroe Reports

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12

Fort Myer

Arlington, Virginia

Installation Summary

Volume of Artifact Collections: 0.9 ft^3
On Base: None
Off Base: UDCAR, 0.9 ft^3 (see Chapter 32)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.06 linear foot (0.75 linear inch)
On Base: None
Off Base: UDCAR, 0.75 linear inch (see Chapter 32)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Fort Myer is located on land that was once owned by Martha Custis Washington's son, John Parke Custis. The land was confiscated in 1861 by the federal government and a portion became what is now Arlington Cemetery. The remainder of the land became Fort Whipple. The Signal Corps took over Fort Whipple by the late 1860s. Brigadier General Albert J. Myer, after whom the fort was renamed, was the Army's first Chief Signal Officer and Commander at Fort Whipple. The first military test flight of an aircraft was made from the fort's parade grounds in September 1908 by Orville Wright. During WW II, Fort Myer served as an in- and out-processing station. Fort Myer falls under the command of the Military District of Washington, which is headquartered at Fort McNair. By September 1995, Fort Myer was scheduled to gain the Military District of Washington staff activities from Cameron Station, Virginia.

In June 1994, St. Louis District personnel performed background archaeological research VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Myer. At least one archaeological site has been recorded on Fort Myer. Fort Myer archaeological collections are currently housed in one repository in Delaware. Because no Fort Myer archaeological collections are being curated at the installation, collections-management standards for the base will not be discussed. Furthermore, no reports associated with archaeological investigations on Fort Myer were available for review.

13

Fort Story

Virginia

Installation Summary

Volume of Artifact Collections: 2.1 ft^3
On Base: None
Off Base: VDHR, 1.1 ft^3 (see Chapter 34); SouthArc, 1.0 ft^3 (see Chapter 29)
Compliance Status: Collections stored at SouthArc require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.04 linear foot
On Base: None
Off Base: VDHR, 0.5 linear inch (see Chapter 34)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

In 1914, the Commonwealth of Virginia gave land to the federal government to enable the construction of fortifications on the coast. The fort that was constructed was named in honor of General John Patton Story, a noted coastal-artillery officer. During WW I, Fort Story was integrated into the Coast Defense, Chesapeake Bay, which also included Fort Monroe and Fort Wool. In 1925, Fort Story was placed under the jurisdiction of the Harbor Defense Command. After several years of inactivity, Fort Story underwent extensive development in 1941. A transition occurred in 1944, when Fort Story went from being a heavily fortified coast-artillery garrison to a convalescent hospital for returning veterans. In 1946, the hospital closed and amphibious training began to take place on the installation. Fort Story was declared a permanent installation in 1961, and was redesignated as a Class I subinstallation of Fort Eustis in 1962.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Fort Story. Archaeological sites have been recorded on Fort Story lands, and a number of reports have been generated as the result of archaeological investigations on the installation. Archaeological collections are currently housed in two repositories, one in Virginia and one in Florida. Because no Fort Story archaeological collections are being curated at the installation, collections-management standards for the base will not be discussed.

Bibliography of Fort Story Reports

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Opperman, Antony F.
1989 *Phase I Archaeological Survey for Fort Eustis and Fort Story, Cities of Newport News and Virginia Beach*. Mid-Atlantic Archaeological Research Associates, Inc., Newark, Delaware. Submitted to the Preservation Planning Branch, Mid-Atlantic Region. National Park Service, Philadelphia, Pennsylvania.

14

Radford Army Ammunition Plant

Radford, Virginia

Installation Summary

Volume of Artifact Collections: 20 ft^3
On Base: None
Off Base: FLSHA, 14.5 ft^3 (see Chapter 18); WMCAR, 5.5 ft^3 (see Chapter 35)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.6 linear foot (7.0 linear inches)
On Base: None
Off Base: FLSHA, 2.0 linear inches (see Chapter 18); WMCAR, 5.0 linear inches (see Chapter 35)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

Construction began on the Radford Ordnance Works—a site where Bryan McDonald made gun powder for the Revolutionary War—in 1940. Radford Army Ammunition Plant (Radford) became the first government-owned, contractor-operated facility and was placed on standby status after WW II. The installation was reactivated during the Korean War, and has remained in operation since. Radford consists of two sites: the Radford Unit, which handles the manufacturing operations, producing explosives and propellants, and the New River Unit, a propellant-storage site.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Radford. Archaeological sites have been recorded and a number of reports have been generated as the result of archaeological investigations on the installation. Archaeological collections were assessed in two repositories, one in Virginia and one in Tennessee. Because no Radford archaeological collections are being curated at the installation, collections-management standards for the base will not be addressed.

Bibliography of Radford Reports

Smith, Gerald P., and Guy G. Weaver, Jr.
1984 *An Archaeological Overview and Management Plan for the Radford Army Ammunition Plant, Montgomery and Pulaski Counties, Virginia.* Woodward-Clyde Consultants, Walnut Creek, California.

Pullins, Stevan C., Gregory J. Brown, and C. Margaret Scarry

1994 *A Phase II Archaeological Evaluation of Site 44MY7 Radford Army Ammunition Plant, Montgomery and Pulaski Counties, Virginia.* Center for Archaeological Research, Department of Anthropology, College of William and Mary, Williamsburg, Virginia. Submitted to the U.S. Army Corps of Engineers, Norfolk District.

15

Vint Hill Communications and Electronics Support Activity

Warrenton, Virginia

Installation Summary

Volume of Artifact Collections: 1.1 ft^3
On Base: None
Off Base: VCUARC, 1.1 ft^3 (see Chapter 33)
Compliance Status: Collections require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 0.3 linear foot (4.0 linear inches)
On Base: None
Off Base: VCUARC, 4.0 linear inches (see Chapter 33)
Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at this installation.

In June 1942, the federal government purchased all or part of 11 separate farms."Vint Hill Farms" was named by a previous owner of the land. In 1942, troops arrived from Fort Monmouth and Fort Hancock, New Jersey, to garrison the post. During WW II, it served as a Signal School, Signal Training center, and Refitting Station for selected signal units returning from combat prior to further overseas deployment.

In June 1994, St. Louis District personnel performed background archaeological research at VDHR that included a review of all pertinent archaeological site forms, reports, and manuscripts for Vint Hill. No archaeological sites have been recorded on Vint Hill; however, artifact collections and at least one report have been generated as the result of archaeological investigations on the installation. Archaeological collections were assessed in one Virginia repository. Because no Vint Hill archaeological collections are being curated at the installation, collections-management standards for the base will not be discussed.

Bibliography of Vint Hill Reports

KFS Historic Preservation Group
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16

F. E. Warren Air Force Base

Cheyenne, Wyoming

Installation Summary

Volume of Artifact Collections: > 156.0 ft^3
On Base: 156 ft^3
Off Base: Wyoming State Museum [WSM], Cheyenne, unknown amount (see below)
Compliance Status: Collections stored at Warren AFB require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 52 linear feet (628 linear inches)
On Base: 628 linear inches
Off Base: WSM, unknown amount (see below)
Compliance Status: Associated documentation is generally in very good condition. Original documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: All curation activities are funded through the Warren AFB environmental-compliance budget and through funds granted through the DoD's Legacy Resource Management Program.

Dates of Visits: February 28–29, 1996

Point of Contact: Rick Bryant

Warren AFB is located in southeastern Wyoming, outside of Cheyenne, on land originally allocated to Fort D. E. Russell (Fort Russell) in 1867 as a calvary post. The name was changed in 1930, by presidential decree, to Fort Francis E. Warren (in honor of Senator and Governor Warren, who was a Congressional Medal of Honor winner during the Civil War). During WW II, Fort Warren was used as the Quartermaster Training Center, for the Women's Auxiliary Army Corps, the Transportation Corps, and as a prisoner-of-war camp. In 1947, the Army relinquished the fort to the Air Force and it became the 463rd AFB unit, Aviation Engineer School. In 1948, it was redesignated the Air Force Technical School, Air Training Command. The name changed in 1949 to F. E. Warren AFB, with aircraft stationed at the Cheyenne Municipal Airport. As a result, Warren AFB is the oldest continuously active Air Force base in the United States. In 1984, Peacekeeper support facilities were added; the base became part of the U.S. Strategic Triad in 1986. ACC was activated in 1992, and the following year the Air Force Space Command was activated with the Headquarters (HQ), 20th Air Force, as the host.

In January 1995, St. Louis District personnel performed background archaeological research at the Wyoming Cultural Records Office, Laramie, that included a review of all pertinent

archaeological site forms, reports, and manuscripts associated with Warren AFB. Archaeological sites have been recorded, and a number of reports have been generated as the result of archaeological investigations on the installation. Archaeological collections are currently housed in two repositories in Wyoming, one of these being the installation. An unknown amount of artifacts and associated documentation are currently in deep storage at WSM, Cheyenne. These artifacts and records are scheduled to be sent to the curation facility on Warren AFB.

Originally established as Fort Russell in 1867, the historical-period military district within Warren AFB has an inclusive site number of 48LA71. Individual, significant sites within this district are designated with letters that range from 48LA71a to 48LA71zzz. In addition, prehistoric and historical-period archaeological sites located outside the historical-period district, but within the boundaries of Warren AFB, have been assigned standard, state-designated, trinomial site numbers.

The Warren AFB curation facility, Building 261, houses approximately 156 ft^3 of archaeological artifacts and 51 linear feet of associated documentation from archaeological investigations on the installation. These collections have been brought together from the various repositories that formerly stored the artifacts. The Warren AFB artifact collections consist primarily of materials from historical-period contexts, but include some prehistoric materials (Table 9). These collections were not assessed at the time of the visit because all of the museum's collections were in storage while the museum underwent asbestos removal. The collections were to be returned to Warren AFB when the museum moved back into their structure and unpacked.

Building 261, the curation facility, was renovated in 1992 with a grant from the DoD's Legacy Resource Management Program. The curation facility is located within an earthen hill (Figure 27). Originally used as a root cellar at around the turn of the century, the structure was used until 1992 as a storage facility. Warren AFB also has a small archeology center on base (Figure 28) that displays archaeological dioramas and approximately 13 prehistoric lithics (flakes and other tools).

Table 9. Summary, by Volume, of Material Classes Present in Warren AFB Collections at the Installation

Material Class	%
Prehistoric	
Lithics	5
Soil	4
Faunal remains	3
Botanical	2
Ceramics	1
Historical-period	
Glass	52
Metal	24
Ceramics	6
Other[a]	3
Total	100

[a] "Other" includes wood, paper, Styrofoam, brick, faunal remains, leather, and a button.

Assessment

Structural Adequacy

Building 261, the curation facility, encompasses approximately 3,077 ft^2 and was completely renovated in 1992 to be used as a curation facility. The structure has a poured-concrete-slab foundation, exterior walls, and roof. The entire structure is covered with approximately 3 feet of dirt and is within an earthen mound (Figure 29).

There are four collections storage areas in the structure, which is also equipped with rest rooms, two storage rooms, and a mechanical-and-utility room. All of the rooms have concrete floors and exterior walls. Interior walls constructed of plasterboard and plaster were added in 1992. There are no windows in this structure. Collections Storage Area 1 is approximately 552 ft^2 and is used for office space, records storage, and research. Carpet covers the concrete floor. Three wood-panel doors lead to an exterior hall and Collections Storage Areas 2 and 4. Collections Storage Area 2 encompasses approximately 560 ft^2 and is used almost exclusively

Figure 27. The entrance to Building 261, the curation facility on Warren AFB, appears to lead into a hill. Approximately 3 feet of earth cover this facility.

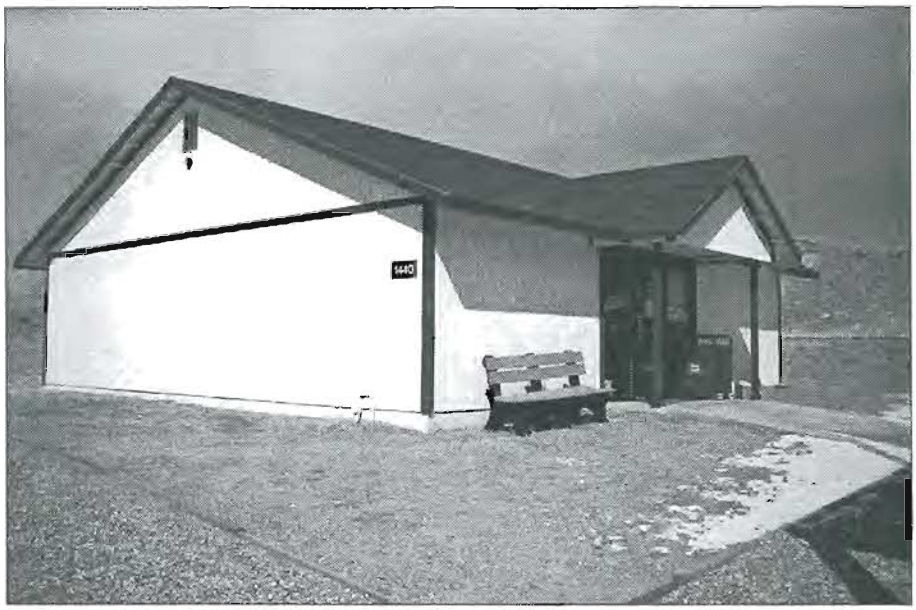

Figure 28. The exterior view of the archaeology center on Warren AFB, Building 1440.

for artifact storage. The concrete floor is painted and the two doors lead to Collections Storage Areas 1 and 3. Collections Storage Area 3 encompasses approximately 368 ft^2 and is used for archives and map storage. The only door is a hollow-core, metal vault door that has a dial combination lock. The concrete floor in this room is carpeted. Collections Storage Area 4 encompasses approximately 423 ft^2 and is used as the laboratory where artifacts are processed and photographed. Like Collections Storage Area 1, the concrete floor is covered with linoleum. The two storage rooms, mechanical-and-utility room, and rest rooms are located behind closed, locked doors and adjoin Collections Storage Area 4.

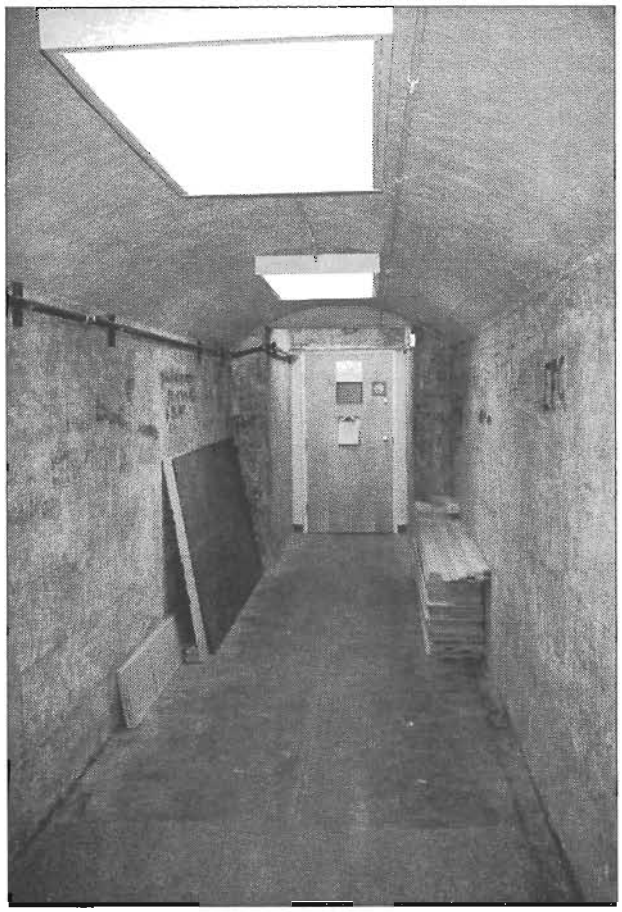

Figure 29. The exterior door of Building 261 leads into a concrete tunnel that has a second locked door securing entrance to the curation facility. The concrete walls have graffiti dating to 1907 that was discovered during the rehabilitation of the facility in 1992.

Environmental Controls

Building 261 has a gas-powered HVAC system that includes humidity monitoring and control and dust filtration. This system is located in the mechanical-and-utility room adjoining Collections Storage Area 4. Temperature and relative humidity levels in the building are kept at 65–68° F and 40–50-percent relative humidity. The base maintains the facility's systems, while Rick Bryant, the base's Historic Preservation Officer, keeps the facility clean. All of the utility systems were added in 1992. Fluorescent lights lack UV filters. Only Collections Storage Area 4 and the rest rooms have running water. The environmental controls are the same for all collections storage areas.

Pest Management

A pest management-program has been implemented at this facility. Rick Bryant inspects all of the collections storage areas monthly and notes his findings in a log book. He has never found any evidence of pest infestation.

Security

All personnel and visitors must pass through a security gate to get on base. Building 261 is wired with an intrusion alarm. The only exterior door has both a key lock and a dead bolt lock, and leads into a concrete hallway to a second locked door that also has both a key and a dead bolt lock. The base police station is located across the street from the facility.

Fire Detection and Suppression

Building 261 has a dry-pipe sprinkler system installed throughout all rooms of the facility. All sprinkler heads are equipped with heat sensors, and a manual fire alarm is located near the exit in Collections Storage Area 1. The two fire extinguishers are inspected on a yearly basis; they were last inspected in October 1995. Both are located in Collections Storage Area 1, near the two interior doors leading to Collections Storage Areas 2 and 4.

Artifact Storage

Approximately 156 ft^3 of artifacts are stored in Collections Storage Areas 2 and 4. Some collections are temporarily stored in Collections in Area 4 for processing, labeling, and rebagging. Refer to Table 9 for a summary of material classes present in the Warren AFB collections.

Storage Units

Collections are stored on baked-enamel, metal, adjustable shelving units, half of which are lined with inert ethafoam. The shelving units each have five shelves and measure 6 × 3 × 7 feet

(w x d x h). One of these units is located in Collections Storage Area 4, where boxes are temporarily placed while being processed. All of the shelving units are draped with heavy sheets of plastic that are taped together at the seams to protect the collections from dust (Figure 30). A glass case in Collections Storage Area 1 displays glass and ceramic bottles that were recovered from sites on base (Figure 31).

Primary Containers

Most (51%) of the artifact collections are stored in acidic-cardboard boxes of various sizes. A small percentage (5%) of the collections are stored in acid-free-cardboard boxes. All boxes are labeled directly with a marker or have adhesive paper labels. Approximately 28 percent of the collections are stored loose on the shelves without any primary or secondary containers, while 16 percent of the collections are on display either in the glass case in Collections Storage Area 1 or within a sealed exhibit at the base's archaeology center.

Secondary Containers

A variety of secondary containers house the artifact collections. Most (54%) of the collection is stored without any secondary containers. Approximately 33 percent of the collections are stored in various types of plastic bags—ranging from zip-lock, 4-mil bags to thin, white trash bags. Percentages of secondary-container types in the collection are given in Table 10. When labels are on secondary containers, they consist of stamped labels with information written directly in pen, tie-on tags, or acidic-paper inserts written in pencil.

Laboratory Processing and Labeling

Most (67%) of the artifacts have been cleaned and nearly all (99%) have been sorted by material class. Only 10 percent of the collection has been labeled directly with ink on the surface of the artifacts.

Human Skeletal Remains

There are no human skeletal remains associated with the Warren AFB archaeological collections.

Figure 30. Collections are stored in cardboard boxes on metal shelving units in Collections Storage Area 2. Note that some of the shelves are lined with sheets of ethafoam and covered with heavy sheets of plastic to protect against dust.

Records Storage

Approximately 52 linear feet of associated documentation is located in Collections Storage Areas 1, 2, and 3. A finding aid has not been produced for the records collections. The boxes and binders are labeled with contractor and project. Documentation is in fairly good condition, however, contaminants that are detrimental to the long-term preservation of the records are present (e.g., paper clips, staples, and rubber bands).

Paper Records

The 42 linear feet (508.5 linear inches) paper records in the collections include administrative, background, survey, excavation, and analysis

Figure 31. A display case in Collections Storage Area 1 houses historical-period glass and ceramic bottles.

records, and field notes. Paper records are stored in acid-free boxes in Collections Storage Area 2 (Figure 32) and on wood shelves in Collections Storage Area 1. Boxed records are generally stored in manila files labeled with adhesive tags written on in marker. Some of the records not in files are bound together with rubber bands. Records in Collections Storage Area 1 are kept in plastic-covered, three-ring binders (Figure 33). Different types of records are separated with tabbed, labeled pages. Binders stand upright and are labeled and arranged by project. Artifact catalogs are filed in a standard, four-drawer, metal file cabinet. The acid-free files are labeled directly in red pencil.

Photographic Records

Approximately 5.7 linear feet (68 linear inches) of black-and-white photographs, negatives, slides, contact sheets, and color photographs are stored in Collections Storage Areas 1, 2, and 3. Photographic records in Collections Storage Area 1 are stored in a cardboard box on the top shelf of one of the wood shelving units. The color photographs, negatives, and slides are in their original envelopes and, with a photograph log, are bound together by a rubber band. Photographic records stored in Collections Storage Area 2 are housed in acid-free boxes on the metal shelving units and have been placed in archival-quality, plastic sleeves. Some of the black-and-white prints are stored in acidic manila envelopes. A hanging file in a metal file cabinet in Collections Storage Area 3 is labeled "Misc. Archeology Photos." These records consist of color prints, black-and-white prints, negatives, and slides that are loose within the file.

Table 10. Summary, by Volume, of Secondary Containers Used for Warren AFB Collections at the Installation

Container Type	%
Loose	54
Archival & nonarchival plastic bags	33
Paper bags	9
Other[a]	4
Total	100

[a] "Other" includes cloth field bags, plastic vials, acidic-cardboard boxes, bubble wrap, manila envelopes, Styrofoam packages with rubber bands, and aluminum foil.

Maps and Oversized Documents

Approximately 5 linear inches of maps is stored in a flat map case in Collections Storage Area 3. The drawer has a paper insert in the label holder that reads, "Archeology Field Maps," written in orange and black marker. The edges of the maps are frayed, probably from previous inadequate storage conditions. Five inches of large and small maps associated with specific projects are stored with the paper and photographic records in Collections Storage Area 2.

Figure 32. Some of the associated records for Warren AFB have been placed in cardboard boxes and are stored on metal shelving units in Collections Storage Area 2.

Project Reports

Approximately 3.9 linear feet (46.5 linear inches) of reports are stored in Collections Storage Area 1 on the wood shelving units. Multiple copies exist of most of the reports, and include draft and final versions. Most reports are bound, while others are loose or are held together with rubber bands.

Collections-Management Standards

Registration Procedures

Accession Files

Accession files are currently being developed and used for the collections at this facility.

Location Identification

The location of each collection is identified in a computerized directory, a copy of which is printed for easy use.

Cross-Indexed Files

There has never been an apparent need to cross-index any files.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The State of Wyoming's trinomial site-numbering system is used and administered by the SHPO. The only exceptions are those sites that fall within the historical-period district designated 48LA71. Individual sites are lettered and handled by the base historic preservation officer.

Computerized Database Management

Computerized database management programs provided by the NPS are being implemented and used.

Written Policies and Procedures

Minimum Standards for Acceptance

Collections must have been recovered from Warren AFB.

Curation Policy

A formal curation policy, based on the policy adopted by the NPS, has been developed and implemented.

Figure 33. Associated documentation from projects conducted on Warren AFB is stored in plastic-covered three-ring binders on wood shelves in Collections Storage Area 1. Binders are numbered with white adhesive labels.

Records-Management Policy

All of the associated archaeological records are organized and maintained by Rick Bryant.

Field-Curation Procedures

Formal field-curation guidelines have been developed and are used for all fieldwork performed on Warren AFB.

Loan Policy

Formal loan procedures are in place.

Deaccessioning Policy

Collections or artifacts have never been deaccessioned; a deaccessioning policy has not been established.

Inventory Policy

No inventory policy has been established.

Latest Collection Inventory

The date of the latest collection inventory is unknown.

Curation Personnel

A full-time curator is not employed. Bryant, Warren AFB's Historic Preservation Officer, maintains all of the artifact and records collections, manages the archeology center, and spends most of his time reviewing historical-period compliance procedures.

Curation Financing

All curation activities are funded through the Warren AFB environmental-compliance budget and through funds granted through the DoD's Legacy Resource Management Program.

Access to Collections

Access to the collections is controlled and monitored by Bryant. A formal policy regarding access to the collections by researchers has not been created. Interested researchers with legitimate research topics are granted access upon request.

Future Plans

Bryant would like to finish cataloging and processing the collections and to perform a complete inventory of all collections to ensure that everything that is supposed to be present in the collections actually is.

Comments

1. The Warren AFB curation facility is in excellent condition.

2. The facility has an intrusion alarm.

3. The facility has a sprinkler system for fire detection and suppression.

4. An integrated pest-management program is used for pest monitoring and control.

5. The environment is controlled with an HVAC system that includes humidity monitoring and control.

6. Although the artifacts are currently being rehabilitated, 95 percent are not housed in acid-free containers and 90 percent of the artifacts are unlabeled.

7. Records are not curated in archival-quality containers.

Recommendations

1. Rebox and rebag artifacts into acid-free-cardboard boxes and archival-quality, polyethylene bags. Label individual artifacts in indelible ink, and insert acid-free-paper labels into secondary containers.

2. Copy all associated documentation onto acid-free paper and archivally process and store in acid-free boxes. Store an additional copy of documentation at a separate, fireproof, secure location.

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17

Fairfax County Archaeological Survey

Falls Church, Virginia

Repository Summary

Volume of Artifact Collections: 171 ft^3

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

Linear Feet of Records: 6.6 linear feet (79.25 linear inches)

Compliance Status: Associated documentation requires partial rehabilitation to comply with existing federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are financed through the Fairfax County budget.

Date of Visit: November 7, 1995

Point of Contact: Michael Johnson

FCAS is a division of the Fairfax County Heritage Resources branch of the Fairfax County government. Offices, as well as curation and research facilities, are located in an old elementary-school structure in Falls Church. The curation facility is located in what was formerly the cafeteria. Approximately 171 ft^3 of artifacts and 6.6 linear feet of associated documentation from Fort Belvoir are housed in this facility. The Fort Belvoir artifact collection consists of materials from both prehistoric and historical-period contexts. Of the total, the largest prehistoric material class in the collection is lithics; the largest historical-period material class consists of metal (Table 11).

Assessment

FCAS encompasses approximately 5,000 ft^2 of the 15,000-ft^2 structure (Figure 34). The FCAS research section consists of a receiving and loading area, an artifact-holding and -washing area, a processing lab, and a temporary artifact storage area. Archaeological artifacts and associated documentation are stored in three collections storage areas. Collections Storage Area 1 houses both artifacts and records. It is adjacent to the downstairs laboratory, which measures approximately 600 ft^2. Collections Storage Area 2, located within the archaeology laboratory, contains prehistoric-site records and measures approximately 300 ft^2. Collections Storage Area 3, located on the second floor within a historical-

Table 11. Summary, by Volume, of Material Classes Present in Fort Belvoir Collections at FCAS

Material Class	%
Prehistoric	
Lithics	45
Faunal remains	4
Other[a]	2
Historical-period	
Metal	15
Glass	13
Brick	12
Ceramics	8
Other[b]	1
Total	100

[a] "Other" includes prehistoric ceramics, shell, and ^{14}C samples.
[b] "Other" includes historical-period leather, charcoal, wood, and mixed/indeterminate.

archaeology laboratory, houses historical-period-site files and measures approximately 600 ft^2. A reports library is adjacent to the historical-period-records storage room.

Structural Adequacy

The structure that houses FCAS is approximately 50 years old. It has a reinforced-concrete foundation and brick exterior walls. The flat roof has leaked in the past, but the leaks have all been repaired. The roof was renovated two years ago. There is some evidence of water damage to the structure, but this too has been repaired. The floor is concrete, with peeling asbestos tiles. The ceiling is reinforced with steel and poured concrete. The repository has a total of two aboveground floors, with the archaeology labs and Collections Storage Areas 1 (Figure 35) and 2 on the first floor and Collections Storage Area 3 on the second floor. Windows are in their original metal frames and are located on all sides of the structure. There is some indication that air leaks into the building through the windows.

Collections Storage Area 1

There are two windows on the east wall, each of which measures approximately 9 × 6 feet. Venetian blinds are kept drawn. The interior door is constructed of wood panels. Plywood covers a preexisting window. Dust covering the floor, shelves, and boxes apparently originates from buckets of unwashed artifacts stored in this room.

Figure 34. Exterior view of FCAS, which is located in the left portion of this building.

Figure 35. Collections Storage Area 1 is crowded with boxed collections and field equipment. A significant amount of dust covers the peeling asbestos floor tiles. The back, exterior door is kept locked.

Collections Storage Area 2

Collections Storage Area 2 has two interior, wood doors, one of which leads to the hallway and the other into an archaeology laboratory area. Windows are in the same type of frames as the other areas, each measuring 5 × 6 feet. Included within this area are a processing lab and an artifact study area, as well as materials and supplies storage.

Collections Storage Area 3

Two interior doors provide access to the room from the hallway and other offices. Two large windows, each measuring approximately 10 × 8 feet, are the only exterior access points to the room. This room also serves as the historical-period-artifact study area and laboratory.

Environmental Controls

FCAS environmental controls are maintained by county facilities personnel. The structure is equipped with central air-conditioning and heating. The air-conditioning system was installed in 1990. A blower from the central system is located in each room, and staff members have noticed large fluctuations in temperature levels. Dust filters are present on the environmental controls, but humidity is not monitored or controlled. Lighting is provided by fluorescent fixtures that lack UV filters. Other lighting in the storage areas is provided by small desk lamps and natural light. The entire electrical system was renovated in around 1970. Cleaning and maintenance of the collections storage areas are performed by county janitorial staff and supervised volunteers.

Pest Management

No integrated pest-management program is in place for FCAS. The facility is sprayed and fumigated on a quarterly basis. Staff members indicated there are no insect or rodent problems; St. Louis District personnel, however, noted a significant insect infestation on the windowsills of Collections Storage Area 1.

Security

The repository is a public facility with key locks on all doors that are kept locked. Exterior doors are secured with cross-door bars and an electronic security system. There was no evidence of unauthorized access through the windows or doors; however, there have been past episodes of unauthorized entries into the structure, during which some exhibit materials were stolen. Additionally, two incidences of theft by employees have occurred: one of collection materials and one of photographic equipment. The collections located here are valued based upon the project recovery costs.

Fire Detection and Suppression

All fire-detection and -suppression systems are checked by county staff on a yearly basis. Manual fire alarms, smoke detectors, and a fire extinguisher are located in Collections Storage Area 1. The only fire-detection device in Collections Storage Areas 1–3 is a smoke detector.

Artifact Storage

FCAS curates artifact collections that include a wide variety of artifact types and material classes (Figure 36). Refer to Table 11 for a summary of material classes present in the Fort Belvoir collection.

Storage Units

Archaeological collections are stored on adjustable, metal shelving units that each measure 7.1 × 6.5 × 8 feet (w × d × h) and are arranged tightly in rows.

Primary Containers

Approximately 171 ft^3 of archaeological artifacts recovered from Fort Belvoir are stored in acid-free-cardboard boxes with telescoping lids. The boxes are arranged four to each shelf, making access to them somewhat difficult. Labels are written directly on the boxes in pencil; label information consist of box number and site number.

Secondary Containers

Nearly all secondary containers for the artifact collections (99%) are zip-lock, 4-and 6-mil plastic bags with labels written directly on them in black marker. Additional packaging materials, including foam and tissue paper, were used for some of the historical-period artifacts.

Laboratory Processing and Labeling

Approximately 96 percent of the artifacts in the Fort Belvoir collections have been cleaned, but only 13 percent have been labeled. Most of the artifacts (93%) have been sorted by material class. The processing of artifacts takes place in a room adjacent to Collections Storage Area 2, which allows for wet and dry processing. Unwashed artifacts are stored within open containers in Collections Storage Area 1.

Human Skeletal Remains

No human skeletal remains recovered on Fort Belvoir are curated at FCAS.

Figure 36. Historical-period metal keys, lock, and bayonet tip recovered on Fort Belvoir and stored at FCAS.

Records Storage

Approximately 6.6 linear feet of associated archaeological documentation and reports accompany the collections from Fort Belvoir. Artifact inventories and supplemental artifact information are stored with the archaeological collection in the same primary containers as the artifacts. Prehistoric and historical-period records are stored in Collections Storage Areas 2 and 3, respectively. Duplicate copies of the paper records have not been produced.

Prehistoric-site files are stored in a legal-sized, metal file cabinet. Historical-period files are in a letter-sized cabinet (Figure 37). Labels on the secondary containers range from being directly written on in marker to adhesive labels with information written in pencil. Manila folders are used to file paper and photographic records.

Paper Records

There are approximately 5.6 linear feet of Fort Belvoir paper records stored at FCAS. Primary containers include both acidic and acid-free-paper containers. Most records are stored in the same primary containers as the artifacts, which are generally acid-free-cardboard boxes. Many of the paper records collections contain contaminants (e.g., paper clips and staples).

Photographic Records

A total of 4.5 linear inches of photographic records are stored in the repository, including negatives, prints, and labeled slides. An archival storage system has not been used for organizing the photographic records. These records are mixed in with the paper records.

Maps and Oversized Documents

The repository currently holds less than 1 linear inch of cartographic records, which is stored in a manila folder. These are small site-specific maps associated with the site and artifacts with which they are stored.

Project Reports

Approximately 6.5 linear inches of reports are stored at FCAS in the reports library. Reports are bound, shelved, and cataloged.

Figure 37. Associated records for historical-period sites are stored in metal file cabinets located upstairs in an office and lab area (Collections Storage Area 3).

Collections-Management Standards

Registration Procedures

Accession Files

Computerized accession files are kept for the collections.

Location Identification

The location of the collection is identified in a book stored in Collections Storage Area 1. The book contains the county site-numbering system, outlined in a series of county maps.

Cross-Indexed Files

Files are cross-indexed.

Published Guide to Collections

No guide to the collections, other than project reports, has been published.

Site-Record Administration

The county has a system of site registration that is administered by FCAS. The Smithsonian River Basin Survey trinomial site-numbering system is also used.

Computerized Database Management

Computerized database-management programs are used to manage collections. Information is regularly backed up on both disk and hard copy.

Written Policies and Procedures

Minimum Standards for Acceptance

Minimum standards for the acceptance of collections are based on FCAS guidelines.

Curation Policy

There is currently no formal curation policy.

Records-Management Policy

No formal records-management policy is in place.

Field-Curation Procedures

No formal field-curation guidelines have been written. When possible, state guidelines are followed.

Loan Policy

A formal loan procedure is overseen by the registrar. Informal guidelines have been established and are managed by FCAS staff.

Deaccessioning Policy

A deaccessioning policy has not been established.

Inventory Policy

An inventory policy has not been established.

Latest Collection Inventory

The latest collection inventory was performed during September and December 1994. Records of the inventory are stored on paper and on computer disk.

Curation Personnel

Generally, the senior staff of FCAS oversees all curation activities. No full-time curator is present. The paid staff includes a collections manager, two archaeologists, an administrative assistant, and interns. Volunteers are relied upon heavily for all aspects of archaeological work.

Curation Financing

Curation is financed through the Fairfax County budget. Financing is considered adequate, but not ideal.

Access to Collections

Outside researchers are encouraged, but are required to have a legitimate research project concerning the collection. Some collections have been stolen by outside researchers in the past.

Future Plans

Future plans include improving the environmental-control system and acquiring more supplies for efficient curation. A formal curation policy is being developed for the coming year.

Comments

1. The repository contains a large quantity of asbestos floor tiles that could be a health hazard to staff and outside researchers.

2. The staff has noticed large temperature fluctuations in the collections storage areas.

3. No UV filters are present on any of the light sources.

4. The accumulation of dead insects on windowsills is indicative of a possibly inadequate pest-management program.

5. Fire-detection and -protection systems in the collections storage areas are inadequate.

6. Artifact collections at FCAS, although stored in an orderly manner, require more space than is

currently available. Aisles between shelving are not wide enough for easy access and inventory.

7. The primary labels written on the boxes in pencil are fading.

8. Associated records are not stored or organized according to modern archival practices.

9. Many of the formal policies and procedures recommended for the curation of artifacts and associated documentation have not been established.

Recommendations

1. Remove and replace asbestos tiles immediately.

2. Install an HVAC system with an advanced dust-filtration system.

3. Equip all light fixtures in and near collections storage areas with UV filters.

4. Implement a pest-management program that includes regular monitoring and control.

5. Install a dry-chemical fire extinguisher in or near Collections Storage Areas 2 and 3.

6. To create more space for artifact storage, consider different sites for repositories.

7. Replace primary-container labeling with plastic sleeves that contain acid-free inserts.

8. Complete all current artifact processing before accepting new collections or archaeological projects.

9. Remove all contaminants from original records and store the records in an acid-free environment.

10. Establish a clearer, formal curation policy that can be easily put into practice and followed by staff and outside researchers.

18

Fort Loudoun State Historic Area

Vonore, Tennessee

Repository Summary

Volume of Artifact Collections: 14.5 ft^3

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

Linear Feet of Records: 0.2 linear foot (2.0 linear inches)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: Human skeletal remains of at least two individuals possibly recovered on Radford lands are housed at FLSHA.

Status of Curation Funding: All FLSHA activities, including curation, are funded through the state budget.

Date of Visit: November 15, 1995

Point of Contact: Dr. Joe Benthall

FLSHA is a designated state historic site. Dr. Benthall, the regional archaeologist, works out of an office in the visitors' center. Approximately 14.5 ft^3 of archaeological artifacts recovered by Dr. Benthall on Radford in 1968 are stored with FLSHA artifacts in his office and in a maintenance building. The Radford artifact collections are from prehistoric contexts; refer to Table 12 for a summary of material classes.

Radford artifacts are stored in two FLSHA storage locations. Storage Location 1 is the William C. Watson Visitors' Center and Museum, which displays artifacts recovered from FLSHA. Dr. Benthall has a desk in the kitchen in the rear of the structure. Less than 1 linear foot of records and approximately 0.5 ft^3 of artifacts are stored in this area. Storage Location 2 is the maintenance building, within which the majority of the collection is stored. Artifacts are stored in a portion of a loft in this structure.

Table 12. Summary, by Volume, of Prehistoric Material Classes Present in the Radford Collections at FLSHA

Material Class	%
Faunal remains	42
Ceramics	29
Lithics	15
Shell	5
Worked faunal bone	4
Human remains	3
^{14}C samples	1
Charcoal	1
Total	100

Figure 38. View of FLSHA's visitors' center and museum, that houses artifacts and documentation associated with Radford.

Assessment of Storage Location 1: William C. Watson Vistors' Center and Museum

Structural Adequacy

Storage Location 1, William C. Watson Vistors' Center and Museum, is a single-story, above-ground structure that encompasses approximately 2,200 ft^2 and was built in 1980 (Figure 38). This structure has a poured concrete slab foundation and steel frame with wood-siding exterior walls. The flat roof is a combination of copper and vinyl. The roof was repaired in 1990 to correct a problem with water leaking into the building; evidence of this water damage can still be seen on some of the ceiling tiles.

The collections storage area is approximately 33 ft^2 and has a concrete floor with linoleum tiles, and a suspended acoustical ceiling. There are no windows in this room. One wood-panel door leads to an administrative office area and the remainder of the visitors' center.

Environmental Controls

Storage Location 1 has an electrical heating and air-conditioning system that is equipped with a built-in dehumidifier. This system was originally in a loft, but has since been moved into a room in the museum. The utility systems are all original to the structure, with minor rewiring performed during the move of the heating system. The fluorescent lights lack UV filters.

The room that functions as a laboratory and kitchen is also used for processing artifacts and storing collections (Figure 39). Small amounts of acetone and hydrochloric acid are used without any means of ventilation. The only window in the facility is in the park manager's office. The window has a metal frame and does not have a shade. Park personnel clean the structure daily.

Pest Management

A contracted pest-management company sprays the structure on a regular basis---approximately two or three times per year. There has never been an insect or rodent infestation reported in the structure.

Figure 39. Office and collections storage area in Storage Location 1 at FLSHA.

Security

The facility has an intrusion alarm that is wired directly into the local police and fire departments. The structure is equipped with motion detectors and doors with both key and dead bolt locks. In addition, a park ranger patrols the grounds throughout the night. In the past, the exterior door was forced open by an intruder; motion detectors alerted the police.

Fire Detection and Suppression

Smoke detectors and dry-chemical fire extinguishers are located throughout the facility.

Artifact Storage

Storage Units

Although normally stored in Storage Location 2, some Radford artifacts were temporarily housed at the museum, in Dr. Benthall's office. The artifacts had been removed from the storage containers in Storage Location 2 and brought to Storage Location 1 for our inspection. The artifacts were on a plastic cafeteria tray (Figure 40) and a cardboard, telescoping box lid that were temporarily placed on Dr. Benthall's desk and a countertop.

Primary Containers

The cafeteria tray and box lid were both temporary containers for what Dr. Benthall considered to be some interesting artifacts that we would like to see.

Secondary Containers

Approximately half of the artifacts in Storage Location 1 lack secondary containers. The remainder of the artifacts are in acidic-paper bags labeled directly in black marker. The paper bags are folded and secured with rubber bands (Table 13).

Laboratory Processing and Labeling

All of the artifacts in Storage Location 1 have been cleaned and approximately 85 percent of the artifacts have been labeled directly in ink. Half of the materials has been sorted by material class.

Human Skeletal Remains

No human skeletal remains recovered on Radford are curated in Storage Location 1.

Figure 40. Artifacts recovered from Radford laid out on a cafeteria tray in Storage Location 1.

Table 13. Summary, by Volume, of Secondary Containers Used for Radford Collections at FLSHA

Container Type	%
Zip-lock plastic bags	94
Paper bags	2
Plastic film containers	2
Loose	2
Total	100

Records Storage

All of the associated documentation regarding the archaeological collections recovered on Radford is kept in a single, closed, acidic-paper envelope (Figure 41), which is stored in Dr. Benthall's file cabinet near his desk in Storage Location 1. The envelope is labeled in black marker "Stroubles Creek Site (44MY7), Radford Army Ammunition Plant 1968." All of the records are in relatively good condition.

Paper Records

Paper records present, all of which are acidic paper, include about .75 linear inch of administrative and excavation records. The presence of contaminants (e.g., staples and paper clips) was noted.

Photographic Records

Approximately 1 linear inch of black-and-white photographs, negatives, and slides is included in the associated documentation. These photographic records are stored in the acidic-paper envelope that contains the paper records.

Maps and Oversized Documents

About .25 linear inch of maps regarding site 44MY7 is stored in the acidic-paper envelope that contains the paper and photographic records.

Assessment of Storage Location 2: Maintenance Building

Structural Adequacy

Storage Location 2, the maintenance building, was built in 1985 and encompasses approximately 2,500 ft^2 (Figure 42). The foundation is

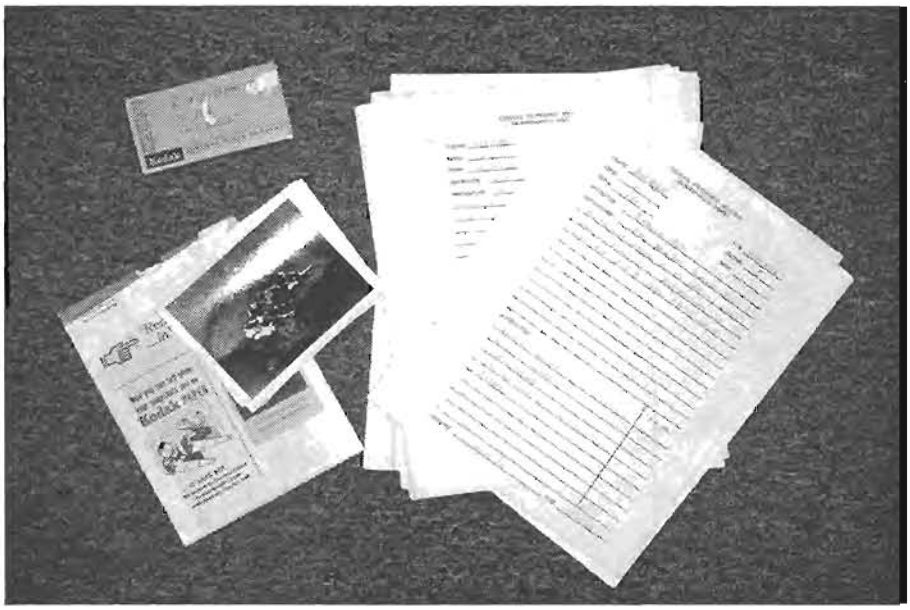

Figure 41. Associated documentation is kept in an acidic envelope that is stored in a file cabinet at FLSHA.

Figure 42. Exterior view of Storage Location 2, the maintenance building, at FLSHA.

concrete block; the exterior walls are cinder block with wood siding. The shingled roof is original to the structure. No problems with water leakage through the roof have been reported.

The single-story structure has a metal, caged-in loft that contains the collections storage area. The floor of the 125-ft^2 loft consists of steel beams with poured concrete. The ceiling is

Figure 43. Artifact collections are stored on shelves in the loft of Storage Location 2.

exposed insulation. Approximately 40 ft^2 of the loft is used for collections storage; the remainder of the loft is used for the storage of field equipment.

Environmental Controls

Environmental controls in Storage Location 2 consist of an electric heat pump and a wood-burning stove. A small office in the corner has the structure's only air conditioner, a window-mounted unit. A wall fan is used to circulate air in the structure. All of the utilities are original to the structure. The only window in the structure is in the park manager's office. Fluorescent lights, without UV filters, are present. The storage location is cleaned as-needed.

Pest Management

A contracted pest-management company sprays the structure on a regular basis, approximately two to three times per year. No insect or rodent infestations of this storage location have ever been reported.

Security

Security measures for Storage Location 2 consist of key locks and controlled access to the structure. A chain-link fence topped with barbed wire surrounds the entire complex and is padlocked every evening. The compound is kept lit throughout the night and park rangers patrol the area. The compound is on a dead-end road that is also locked every night with a gate. In addition, the park manager lives next to the structure and watches the compound. Car batteries were stolen from the site before Storage Location 2 was constructed, resulting in the installation of the fence and gate.

Fire Detection and Suppression

The only fire-safety device in Storage Location 2 is a fire extinguisher.

Artifact Storage

Storage Units

Enameled-metal shelving units are used to store the archaeological collections in the loft of Storage Location 2 (Figure 43).

Figure 44. Collections storage area in Storage Location 2.

Figure 45. Cardboard boxes and paper bags are the primary and secondary containers used to store the artifact collections recovered from Radford.

Primary Containers

Acidic-cardboard boxes that are stapled, folded, and have removable, telescoping lids are used as primary containers (Figure 44). Labels are written directly on the boxes in marker. Boxes are very dusty; spider webs and insects were observed in the boxes. Water stains and tape are also on the boxes.

Secondary Containers

Most secondary containers in Storage Location 2 are zip-lock plastic bags with labels written directly on them in marker and pen (Figure 45). A few plastic film canisters are also used. Acidic tissue paper is used as padding. Some of the plastic bags are torn and should be replaced (see Table 13).

Laboratory Processing and Labeling

Artifacts in Storage Location 2 are not labeled or sorted by material class. Approximately 75 percent of the materials have been cleaned.

Human Skeletal Remains

Fragmentary human skeletal remains from at least two individuals were mixed with faunal remains in the collections at Storage Location 2. This material was given to Dr. Benthall by someone at Radford who said they found it on Radford property. Dr. Benthall does not have any further provenience information.

Records Storage

No documentation associated with collections recovered on Radford is housed at Storage Location 2. Refer to assessment of Storage Location 1 for a discussion of records storage at FLSHA.

Assessment of Both Storage Locations

Collections-Management Standards

Registration Procedures

Accession Files

Collections are not formally accessioned at this facility.

Location Identification

The location of the collections is not identified in any museum records.

Cross-Indexed Files

Files are cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Tennessee computerized site-numbering system is used.

Computerized Database Management

Computerized database-management programs are not currently used.

Written Policies and Procedures

Minimum Standards for Acceptance

Collections must have been recovered on FLSHA or be associated with Dr. Benthall's work to be stored at FLSHA.

Curation Policy

State guidelines for the processing and curation of collections and records are followed.

Records-Management Policy

All associated archaeological records are organized and maintained by Dr. Benthall.

Field-Curation Procedures

Permits are issued that contain guidelines for researchers collecting and depositing artifacts.

Loan Policy

An established loan policy is used.

Deaccessioning Policy

No collections or artifacts have ever been deaccessioned. A deaccessioning policy has never been established.

Inventory Policy

An inventory policy has never been established.

Latest Collection Inventory

The date of the last collection inventory is unknown.

Curation Personnel

Dr. Joe Benthall is the state regional archaeologist and curator of archaeological collections at FLSHA. He has extensive education and training at state and federal levels and performs many functions as the regional archaeologist. There is no full-time curator for the archaeological collections stored at FLSHA.

Curation Financing

Curation is financed through budgeted funds from the state. Dr. Benthall considers the financing inadequate for the proper curation of the collections.

Access to Collections

Staff members have access to the collections. However, a formal policy regarding access to the collections by researchers does not exist. Interested, legitimate researchers are granted access upon request.

Future Plans

Dr. Benthall would like to move into a larger facility with better storage conditions. He is aware of a state parks structure that is being destroyed

because of road construction. The state will be building a new facility for the Parks Department and Dr. Benthall is pursuing the possibility of moving into the new building.

Comments

1. There is a significant lack of dedicated work, laboratory, and storage space for the archaeological artifact collections and associated records.

2. The environmental controls in Storage Location 2 are inadequate.

3. There is no integrated pest-management program in either storage location that includes both monitoring and control.

4. Adequate measures have been taken for the security from theft of the artifact and records collections.

5. No fire extinguishers are present in the artifact and records collections storage areas.

6. Primary and secondary containers are not stable, archival-quality products.

7. Human skeletal remains are present in the artifact collections in Storage Location 2.

8. Many of the registration procedures and written policies and procedures needed for the management of the collections have not been established, formalized, or both.

9. All of the associated paper records are on acidic paper. Duplicate copies of the records have not been produced.

Recommendations

1. Dedicate space necessary for work, laboratory, and collections storage areas.

2. Install an HVAC system and humidity controls in Storage Location 2 if archaeological collections are to continue being housed there.

3. Implement a pest-management program that includes regular monitoring and controlling of pests.

4. Install dry-chemical fire extinguishers in or near all collections storage areas.

5. Rebag and rebox artifact collections in zip-lock, 4- or 6-mil polyethylene bags and acid-free boxes, respectively. Tags made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

6. Perform further research to determine the provenience of the human skeletal remains in the artifact collection. Complete a summary and inventory to comply with the requirements of NAGPRA.

7. Photocopy all documentation on acid-free paper and store in a separate, fireproof, secure location.

8. Develop and implement the necessary registration and management policies and procedures recommended for the proper use and protection of the artifact and records collections.

19

Foster Wheeler Environmental Corporation

Lyndhurst, New Jersey

Repository Summary

Volume of Artifact Collections: 1.4 ft^3

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

Linear Feet of Records: 1.2 linear feet (14 linear inches)

Compliance Status: Associated documentation requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are financed through contracted projects' budgets.

Date of Visit: December 5, 1995

Points of Contact: Sydne Marshall and Joel Klein

Foster Wheeler is a firm that has subsumed the now defunct EBASCO company that had performed an archaeological survey for Adelphi Labs. Four boxes of artifacts (1.4 ft^3) were recovered during the survey, and 14 linear inches of associated records were generated. This material is temporarily being stored in the offices of Foster Wheeler. The artifact collection consists of objects from historical-period contexts, with glass being the most abundant material class (Table 14). Of the four boxes of artifacts, only one box was available for inspection. The other three boxes were missing. Since our visit another box has been located; however, two are still missing.

Artifacts recovered on Adelphi Labs are housed in Storage Location 2, a temporary storage facility located in a different structure in the same complex of offices.

All of the Adelphi Labs associated documentation is kept in an extra office cubicle in Storage Location 1, with other boxes of records.

Assessment of Storage Location 1: Main Office Building

Structural Adequacy

Storage Location 1, built in 1983, is a large office building encompassing 106,806 ft^2 (Figure 46). Foster Wheeler occupies approximately

Table 14. Summary, by Volume, of Historical-Period Material Classes Present in the Adelphi Labs Collection at Foster Wheeler

Material Class	%
Glass	70
Ceramics	25
Metal	5
Total	100

58,000 ft^2 on the third, fourth, and fifth floors. The building has a poured concrete foundation, concrete block walls, and a flat roof that is original to the building's construction. The building is structurally solid, with no signs of cracks or leaks. There is a total of five floors, all aboveground, with bands windows on all four sides of the building.

Environmental Controls

The building has an HVAC system with temperature and humidity monitoring and controls that are maintained by a facilities manager who works for the office park developer. Fluorescent light fixtures, without UV filters, are mounted in the ceiling. The offices are cleaned and maintained through a contracted company hired by the office park developer.

Pest Management

Precautions are taken against insects and rodents on an as-needed basis by a contracted pest-management company. Storage Location 2 has had more problems with the insects because of its ground floor location and its exterior door.

Security

Storage Location 1 has an intrusion alarm and controlled access throughout the building. Every door is kept locked electronically. Employee badges have a small computer chip that must be swiped across the door's electronic control panel for access to the offices. Security guards patrol the office park 24 hours a day. All windows are sealed shut. There have never been any reported incidents of unauthorized access into the building.

Fire Detection and Suppression

Fire-detection and -suppression systems in Storage Location 1 include manual fire alarms,

Figure 46. View of the office building where Foster Wheeler is located.

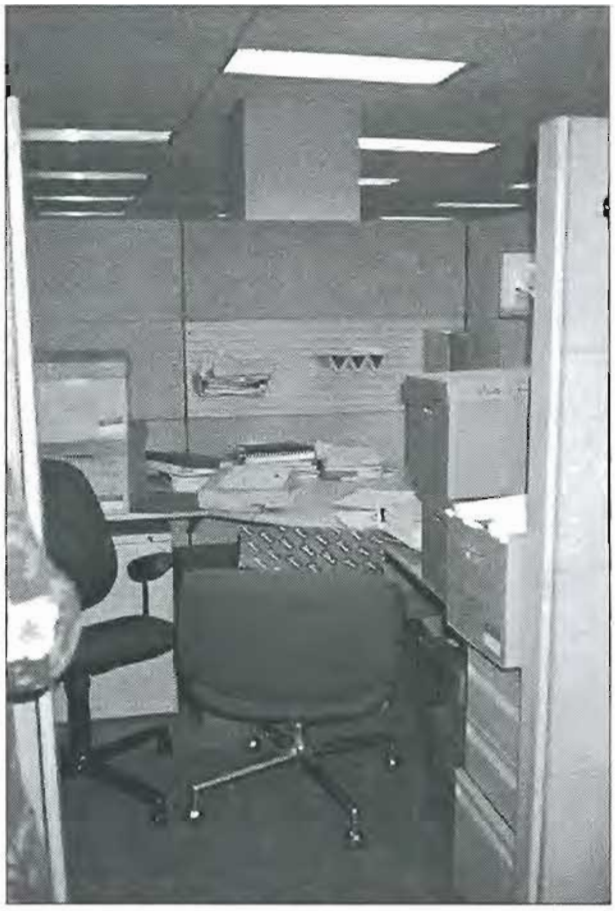

Figure 47. Associated records are boxed and stored in an extra office cubicle in Storage Location 1.

Figure 48. Associated documentation is filed and stored in a cardboard box in Storage Location 1.

smoke detectors, a sprinkler system, and fire extinguishers located throughout the building. All are inspected annually.

Artifact Storage

No artifacts associated with military installations in the project area are stored in Storage Location 1. Refer to assessment of Storage Location 2 for a discussion of artifact storage at Foster Wheeler.

Human Skeletal Remains

There are no human skeletal remains in this collection.

Records Storage

Records are stored by project. Associated records for the Adelphi Labs survey are stored in an acidic-cardboard box similar to the one used for artifact storage (Figure 47). The label is written directly on the box in marker (Figure 48). Records are filed in acidic, hanging files within the box. All of the records are in generally good condition; however, duplicate copies have not been produced. Some of the field notes still have dirt and dust on them, and contaminants (e.g., staples, paper clips, and rubber bands) are present on the original documentation.

Paper Records

Paper records present include approximately 1 linear foot of administrative records, background records, survey records, and excavation

Figure 49. Artifact collections are temporarily stored in Storage Location 2. This office building is in the same office complex as Storage Location 1. The single door on the right is the only entrance to the Foster Wheeler collections storage area.

records. A Phase I report also is included with the associated documentation.

Photographic Records

Approximately 1 linear inch of color photographs and negatives are included in the associated documentation. These are stored in the same acidic box as the paper records.

Maps and Oversized Documents

Less than 1 linear inch of small maps of the survey area to be included in the Phase I report are stored with the other associated documentation.

Assessment of Storage Location 2: Temporary Storage Facility

Structural Adequacy

Storage Location 2 encompasses 151,705 ft^2, and also has a poured-concrete foundation with concrete exterior walls and a flat roof that was recently replaced (Figure 49). Foster Wheeler occupies approximately 402 ft^2 on the ground floor.

Environmental Controls

A thermostat that controls air-conditioning and heat is present in the room that is used for storage of field equipment and temporary artifact storage. There are no windows in the room. Fluorescent lights, without UV filters, are used.

Pest Management

Precautions are taken against insects and rodents on an as-needed basis by a contracted pest-management company. Storage Location 2 has had more problems with insects than Storage Location 1 because of its ground floor location and exterior door.

Security

The collections storage room in Storage Location 2 has metal exterior and interior doors that are kept locked with dead bolts. There are no windows in this room. The building is patrolled 24 hours a day.

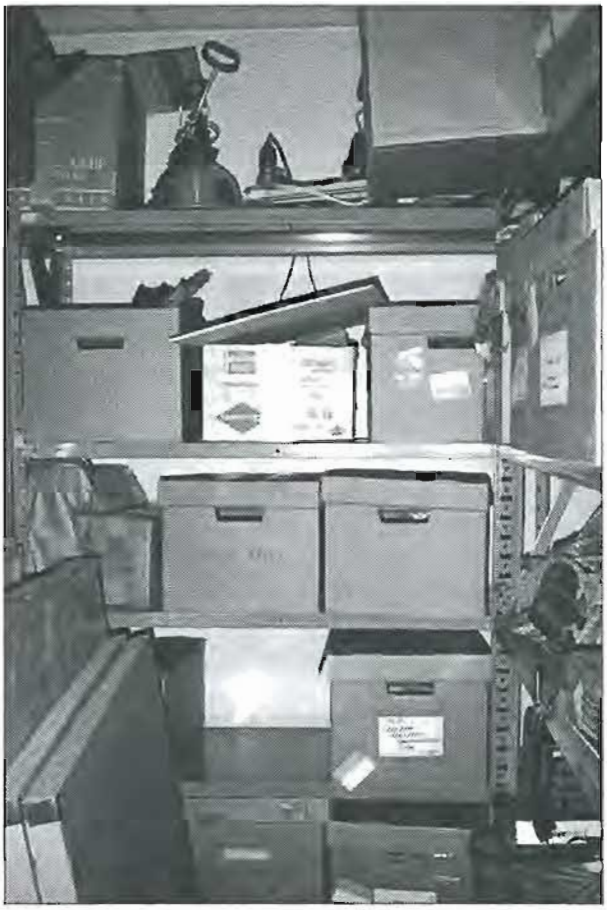

Figure 50. Metal shelving unit where artifact collections are temporarily stored in Storage Location 2.

Fire Detection and Suppression

The only fire-safety device present in the storage room of Storage Location 2 is a sprinkler system.

Artifact Storage

Storage Units

Boxes of artifacts are stored on metal shelving units in a small room designed to be a temporary storage space in Storage Location 2 (Figure 50). During our site visit, however, three of the four boxes of artifacts—representing about 4.2 ft^3 of materials—recovered from Adelphi Labs were missing.

Refer to Table 14 for the percentages of artifact material classes present in the single-box collection.

Primary Containers

The primary container is an acidic-cardboard box with a telescoping lid (Figure 51). The box label was written directly on the box in marker. The box is slightly damaged and torn. One end of the box lid is held on with clear packing tape.

Secondary Containers

Acidic-paper bags are used for secondary containers. The bags are labeled directly in black marking pen. Some of the bags are crumpled and torn.

Laboratory Processing and Labeling

Artifacts have not been cleaned, labeled, or sorted by material class.

Human Skeletal Remains

There are no human skeletal remains in this collection.

Records Storage

No records associated with archaeological collections from military installations in the project area are stored in Storage Location 2. Refer to assessment of Storage Location 1 for a discussion of records storage at Foster Wheeler.

Assessment of Both Storage Locations

Collections-Management Standards

Foster Wheeler is not a long-term curation facility, and does not have many of the recommended written guidelines and procedures.

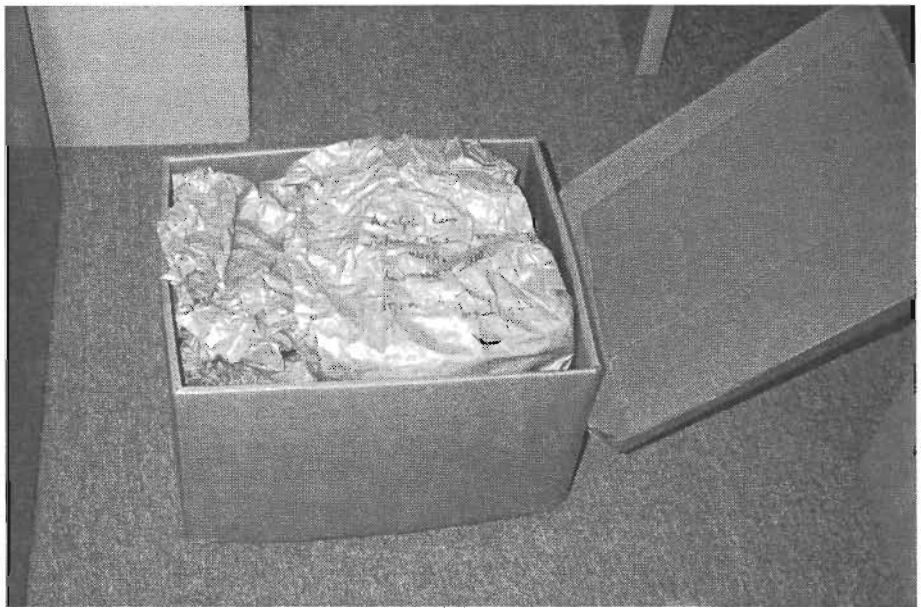

Figure 51. Artifacts from Adelphi Labs are stored in cardboard boxes and paper bags in Storage Location 2.

Registration Procedures

Accession Files

Accession records are not used at this facility.

Location Identification

The location of the collection is not identified in an accession file.

Cross-Indexed Files

Project files are not cross-indexed.

Published Guide to Collections

No published guide to the collections has been produced.

Site-Record Administration

No system of site-record administration is in place.

Computerized Database Management

Computerized database-management programs are used for report preparation.

Written Policies and Procedures

Minimum Standards for Acceptance

No minimum standards for the acceptance of archeological collections are in place, but only collections associated with work Foster Wheeler has performed are temporarily curated.

Curation Policy

Foster Wheeler does not have a comprehensive plan for the curation of records or artifacts. Guidelines detailed in the project's scope of work are followed.

Records-Management Policy

All the associated archaeological records are organized and maintained by the project director.

Field-Curation Procedures

Foster Wheeler employees follow the state's guidelines for field curation and the guidelines of the long-term curation facilities to which the collections will be sent.

Loan Policy

Loan policies have been established.

Deaccessioning Policy

A deaccessioning policy has not been established.

Inventory Policy

An inventory policy is in place for those materials going into deep storage.

Latest Collection Inventory

The date of the last collection inventory is unknown.

Curation Personnel

Foster Wheeler does not employ a full-time curator for archaeological collections, as they are not a long-term curation repository. The project's director is responsible for the artifact and records collections until they are turned over to the sponsoring agency or a long-term curation facility.

Curation Financing

Curation financing consists of funds budgeted from the project. Dr. Sydne Marshall considers the financing to be adequate for curation of the collections.

Access to Collections

Staff members have access to the collections. A formal policy regarding access to the collections by researchers does not exist.

Future Plans

Future plans for the storage of artifact and records collections temporarily located at the Foster Wheeler offices include a new policy to transfer collections from Foster Wheeler to a professional archival facility.

Comments

1. A functional HVAC system is present in Storage Location 1, but not in Storage Location 2.

2. The fluorescent lights in both storage locations do not have UV filters to protect against damaging UV rays.

3. No fire extinguishers are present in the collections storage areas of either Storage Location 1 or 2.

4. Two of the four boxes of artifacts recovered from Adelphi Labs are missing.

5. Primary and secondary containers are not stable, archival-quality products.

6. Contaminants are present on the original records, and duplicate copies of all records have not been produced.

7. Many of the registration procedures, written policies, and procedures needed for the management of collections have not been established and/or formalized.

Recommendations

1. Install and maintain a functional HVAC system to regulate and monitor the temperature and humidity levels in Storage Location 2.

2. Protect artifact and records collections from UV exposure with UV sleeves that cover the fluorescent bulbs.

3. Install a dry-chemical fire extinguisher in or near each of the collections storage areas.

4. Recover missing boxes of artifacts and ensure their safety from future loss.

5. Artifact collections must be rebagged and reboxed in zip-lock, 4-mil polyethylene bags and acid-free boxes. Additionally, interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

6. Photocopy all documentation on acid-free paper, and store in a separate, fire-safe, secure location.

7. Develop and implement the necessary registration and management policies and procedures recommended for the proper use and protection of the artifact and records collections.

20

Geo-Recon International

Seattle, Washington

Repository Summary

Volume of Artifacts Collections: None

Linear Feet of Records: 2.4 linear feet (29.25 linear inches)

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

Human Skeletal Remains: None

Status of Curation Funding: Funding for curation activities does not exist.

Date of Visit: December 13, 1995

Points of Contact: Clyde Ringstad and John Musser

GRI is a contracting firm that—as of 1983–1984—no longer deals actively in archaeology. However, they still maintain 2.4 linear feet of documentation associated with archaeological work performed on Bloodsworth Island NR and Blossom Point.

GRI is located in a one-story office complex (Figure 52). The archaeological records storage area is currently located in a room at the rear of the GRI office.

Assessment

Structural Adequacy

The GRI office occupies an estimated 2,700 ft^2 (plus an additional warehouse site) within the office building. The office building was reportedly built in the 1940s or 1950s. The entire building foundation consists of concrete, with exterior walls of gravel composite. The roof is composed of wood shingles.

The building has one aboveground floor. The GRI office has two large external windows facing south, both of which are equipped with blinds. The aluminum window frames are original to the building and do not leak air or water. The front door to the office is set between the two windows, and consists of two panes of opaque glass.

Archaeological documentation associated with the Legacy project is being stored temporarily in an approximately 40-ft^2 room located in the rear of the office. This records storage area measures. The floor is carpeted, the ceiling is plaster, and the interior walls are plasterboard covered with plaster. The interior door is wood panel. In addition to the archaeological record files, which are stored in four cardboard file drawers, the room currently houses tables and desks. The room is filled to approximately 90 percent capacity.

Figure 52. Front view of GRI, where Bloodsworth Island NR and Blossom Point associated documentation is housed.

Environmental Controls

The main building housing the GRI offices has central heating, which is operated by a gas furnace. There is no air-conditioning, and humidity is neither regulated nor monitored. No environmental controls exist in the records storage room. Maintenance and cleaning are performed by GRI staff as-needed; dust was observed during the site visit. The overhead fluorescent lights are not equipped with UV filters.

Pest Management

Pest control is conducted on an as-needed basis.

Security

The only security measure currently in place for the GRI office is a key lock on the front door. The interior door to the records storage room is not equipped with a lock.

Fire Detection and Suppression

There are no fire-detection systems installed at the facility, but the office is equipped with fire extinguishers.

Artifact Storage

GRI is not currently curating any artifact collections recovered from military installations in the project area.

Human Skeletal Remains

GRI is not currently curating any human skeletal remains recovered from military installations in the project area.

Records Storage

The archaeological documentation associated with Bloodsworth Island NR and Blossom Point is stored in acidic-paper file folders and envelopes, which in turn are filed in stacked cardboard storage units that are sitting directly on the carpeted floor of the small storage room (Figure 53). Documentation totals 29.25 linear inches, of which 13.5 linear inches are associated with Bloodsworth Island NR, and 15.75 linear inches are associated with Blossom Point.

Paper Records

Paper records consist of a variety of administrative, background, survey (including field notes),

Figure 53. Cardboard storage units are used to house associated documentation at GRI.

Figure 54. Field notebooks and audiocassettes are examples of the different types of associated documentation located at GRI.

excavation, and analysis records (Figure 54). There are approximately 5.75 linear inches of paper records associated with Bloodsworth Island NR, and 8.5 linear inches associated with Blossom Point.

Photographic Records

Photographic records include unlabeled black-and-white prints, negatives (labeled and contained in archival sleeves), and contact sheets

(labeled on their backs). There are approximately 1.5 linear inches of photographic records associated with Bloodsworth Island NR, and 1.5 linear inches of associated with Blossom Point.

Maps and Oversized Documents

Cartographic records include both large and small maps (folded and rolled), drawings, and blueprints. Cartographic records comprise 4.25 linear inches associated with Bloodsworth Island NR and 0.75 linear inches associated with Blossom Point.

Project Reports

There are 2 linear inches of project reports associated with Bloodsworth Island NR, and 5 linear inches of reports associated with Blossom Point. Reports are stored with the other records.

Audiovisual Records

Two microcassette audiotapes are included in the documentation collection (see Figure 54).

Collections-Management Standards

GRI is a private consulting firm, and is not considered a long-term curation facility; therefore, collections-management standards were not evaluated.

Curation Personnel

Clyde Ringstad was the only GRI staff present for the assessment. Steven Wilke was the primary archaeologist at GRI, but has left the firm and is now living outside the country. He was responsible for generating all of the archaeological documentation that pertains to these installations.

Curation Financing

There is no funding for archaeological curation.

Access to Collections

Staff members have access to the collections. Researchers are granted access upon request.

Future Plans

GRI is not a long-term curation repository. Therefore, staff members have no plans for future curation.

Comments

1. The current records storage area, albeit considered to be temporary, is wholly inadequate. It is equipped with neither environmental controls nor fire-detection or -suppression equipment. Security and pest control measures are also inadequate.

2. The archaeological records are stored in acidic-paper folders and envelopes inside acidic-cardboard primary containers that are stacked directly on the floor.

3. The records being stored at GRI are valuable original documents, but have been rendered virtually useless by being separated from the associated collections.

Recommendations

1. Remove the records from their current storage location and temporarily store them in fire-proof file cabinets.

2. Transfer all the archaeological documentation into archival-quality folders. Make duplicate copies, where possible, and store in a separate, safe location.

3. Begin official proceedings to have all the archaeological documentation pertaining to the Legacy project transferred to an appropriate curation facility in Maryland (i.e., MHT) so as to be reunited with their collections.

21

R. Christopher Goodwin & Associates

Frederick, Maryland

Repository Summary

Volume of Artifact Collections: 6.5 ft^3

Compliance Status: Collections are boxed according to federal guidelines and standards for curation.

Linear Feet of Records: 0.4 linear foot (5 linear inches)

Compliance Status: Associated documentation requires partial rehabilitation to comply with existing federal guidelines and standards for archival preservation. Records should be removed from the artifact containers in which they are currently housed, and placed in acid-free cardboard boxes.

Human Skeletal Remains: None

Status of Curation Funding: Curation of collections is accomplished by writing funds into the consulting contracts. The staff feels that funding is adequate for the firm's goals.

Date of Visit: February 7, 1995

Point of Contact: Christopher Goodwin and Terry Reimer

Goodwin is an archaeological consulting firm with offices in Frederick, Maryland; New Orleans, Louisiana; and Tallahassee, Florida. The Frederick office has directed work at Aberdeen and Fort Detrick. The firm currently holds approximately 6.5 ft^3 of artifacts (Table 15) and 0.4 linear foot (5 linear inches) of records from these installations. The firm does not view itself as a long-term curation facility, but merely as a temporary curation facility while artifacts await acceptance to the respective state repositories.

Table 15. Summary of Military Collections, by Installation, at Goodwin

Installation	Volume of Artifacts (ft^3)
Aberdeen	4.8
Fort Detrick	1.7
Total	6.5

Table 16 illustrates artifact material classes observed by the assessment team. Goodwin was first visited on July 19, 1994, for the Atlantic Navy project (see Table 1), and general repository information was collected during that visit.

Table 16. Summary, by Volume, of Material Classes Present in Military Collections at Goodwin

Material Class	%
Prehistoric	
Lithics	73
Faunal remains	3
Historical-period	
Ceramics	9
Glass	8
Metal	6
Brick	1
Total	100

Assessment

The Frederick office is located in a renovated house that has a recent addition containing the collections storage area (Figure 55). The house has over 6,000 ft^2 of floor space, and consists mostly of offices, but also contains an artifact holding area, washing area, processing lab, and temporary storage area.

Structural Adequacy

Originally built in 1920 as a residence, the facility was renovated about five years ago. The newest portion, an addition to the rear of the house (Figure 56), was completed at about the same time as the renovation. The foundation of the facility is composed of concrete block, and the roof is tin. Exterior walls for the older portion are asbestos shingle; the newer addition's walls consist of corrugated metal. The older portion of the house was reroofed in the past 10 years, while the newer addition was reroofed approximately three years ago. Both the foundation and the roof appear to be structurally sound and free of cracks and leaks.

The facility contains a number of floors. In the older portion, there are three above grade, one below grade. In the addition, there are two above grade. There are multiple doors to the exterior, the closest to the collections storage area being made of glass. There are multiple interior doors, with two doors separating the collections storage area from the remainder of the facility.

There are a number of windows in the facility, all having shades and having either wood or aluminum frames. All windows appear to be sound and free of cracks or leaks. Windows were replaced during the renovation.

The collections storage room contains approximately 280 ft^2 of floor space and is located in the newer addition to the repository. The area has a carpeted concrete floor, wallboard and Sheetrock walls, and a suspended acoustical tile ceiling. The room contains two windows, neither equipped with shades. Window frames are aluminum, with no evidence of leaks or cracks.

Environmental Controls

The Goodwin facility maintains different temperature controls for the older house and the recent addition. The front, older house uses window air-conditioning units and central oil heating. The addition containing the collections storage area uses an electric heat pump for cooling and heating, with a backup electric heat system. Humidity is neither monitored nor regulated. Dust filters are present on the furnace, and a professional service cleans the facility weekly.

The targeted temperature in the collections storage area is 68° F. Lighting in the room consists entirely of fluorescent lights with plastic shields, but no UV filters.

Pest Management

The facility does not maintain an integrated pest-management system, but there were no signs of insect or rodent problems at the time of the visit. Generally, if a problem develops, it is addressed at that time. The most recent extermination work was to eradicate a problem with ants.

Security

Security measures at Goodwin include key locks, dead bolt locks, and window locks, as well as an intrusion alarm system with ubiquitous interior motion detectors. A private security

Figure 55. The Goodwin offices are located in this renovated house.

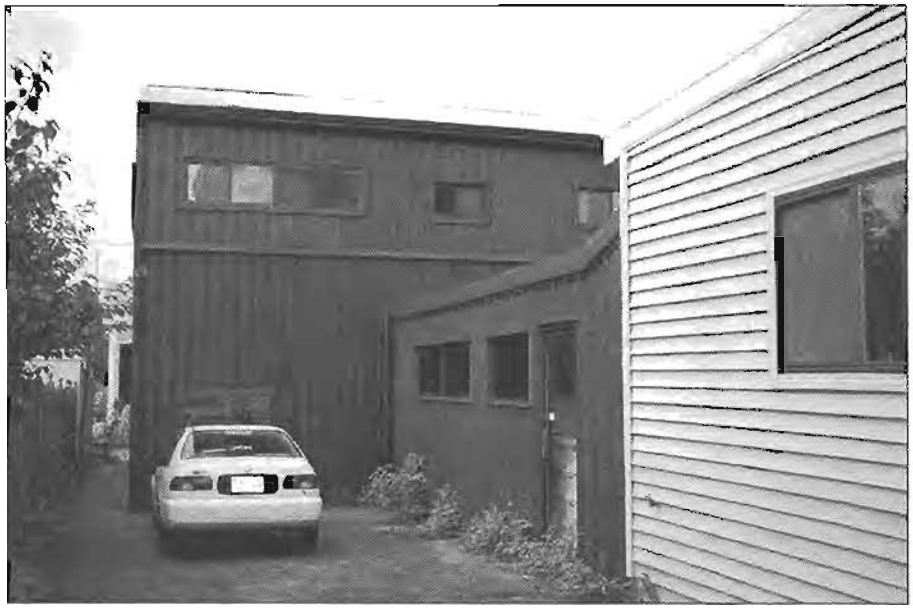

Figure 56. The recent addition to the rear of the offices of Goodwin is used as the collections storage area.

company continually monitors the system. Locks and intrusion alarms are located on all exterior doors. Security risks compromising the collections' security do exist, however. Windows are numerous and are protected by only simple window locks; there are two such windows in the collections storage area. One door in the causeway between the older house and the most recent addition to the repository is glass. In addition, the two hollow core wood doors separating

the collections storage area from the rest of the repository have no locks. There have not been any episodes of unauthorized access in the past.

Fire Detection and Suppression

The facility maintains a total security and fire-detection system. The fire-detection system is composed of zone detection systems that the fire department monitors 24 hours a day. One zone covers the collections storage area; all fire-detection zones are connected to the central alarm. There are a number of smoke detectors throughout the building, too. Fire suppression for the facility, however, consists of two fire extinguishers. There is no sprinkler system.

Artifact Storage

Storage Units

Archaeological collections and associated documentation are stored on standard enameled-metal shelving units (Figure 57) measuring approximately 3 × 1.3 × 5.8 feet (w × d × h). Each unit is five shelves high, and boxes are stacked one to two high.

Primary Containers

Except for one, primary containers are acid-free Hollinger boxes, with telescoping lids, and a capacity of 1.2 ft^3 each (Figure 58). They are constructed by folding and glueing. None of the boxes appears damaged. Each box is labeled with a preprinted, acid-free-paper tag placed in a zip-lock bag adhered to the front of the box (Figure 59). Pertinent information is written legibly on the label in black marker. Label information generally includes project name, contents of the box, bag numbers, site numbers, and remarks. The single non-Hollinger container is an acid-free envelope folder with a folding lid and a capacity of 0.5 ft^3; labels and accompanying information is the same as for the Hollinger boxes. Collections are arranged by project on the storage units (e.g., Aberdeen, Fort Detrick).

Secondary Containers

Secondary containers consist entirely of zip-lock, 2- and 4-mil bags. Containers are directly labeled in black marker, generally with site number, project, and provenience. Artifacts from the same provenience are further sorted by artifact class, with each class separately bagged in tertiary zip-lock container. Secondary containers are

Figure 57. View of the collections storage area and laboratory at Goodwin. Boxed collections are stored temporarily on metal shelving units until they are sent to a permanent repository.

Figure 58. Acid-free primary containers are used to house artifacts recovered from an emergency project on Fort Detrick.

arranged neatly, laying vertically in the Hollinger boxes.

Laboratory Processing and Labeling

All of the artifacts have been cleaned, and approximately 90 percent have been labeled. Artifacts are labeled directly with india ink, with information consisting of site number and artifact number. Provenience and artifact number for unlabeled artifacts are written on acid-free tags which are placed in the secondary containers. All artifacts are sorted by provenience and then by material class.

Human Skeletal Remains

Goodwin does not curate any human skeletal remains recovered from military installations.

Records Storage

Goodwin maintains a total of 0.4 linear foot (5 linear inches) of records from Aberdeen and Fort Detrick (Table 17). Records are stored in the same storage area and primary containers as are the artifacts, with the records generally laid on top; this is not an archival procedure. Original copies of the documentation are filed in an off-site storage facility.

Paper Records

There are approximately 4.75 linear inches of paper records from Aberdeen and Fort Detrick. Most records are bound, but some are stored loose. There are multiple copies of the records, and they have been photocopied onto archival-quality acid-free paper. Records are organized by project. Bound material is stored in plastic three-ring binders, and label information includes project name and copy number. The paper records were in very good condition.

Photographic Records

Approximately 0.25 linear inch of photographic records from Fort Detrick is stored at Goodwin. Photographs are stored in archival-quality polyethylene sleeves, and are accompanied by photo logs photocopied onto acid-free paper. The black-and-white prints are labeled directly with pencil. Recorded information consists of project name, provenience, roll number, and exposure number. Slides are labeled directly with marker, and recorded information consists of project name, roll number, and exposure number.

Figure 59. Zip-lock plastic bags labeled directly with black marker are used as secondary containers for the artifact collections at Goodwin. The box label is inside a zip-lock bag that is stuck to the front of the box.

Collections-Management Standards

Registration Procedures

Accession Files

There is no formal accessioning of materials upon receipt. The firm does keep a field specimen list, by lot number.

Location Identification

A list identifies the lab and storage facility in which materials from a project may be stored.

Table 17. Summary of Documentation (in Linear Inches), by Installation, at Goodwin

Installation	Type of Documentation		
	Paper	Photographs	Total
Aberdeen	3.50	—	3.50
Fort Detrick	1.25	0.25	1.50
Total	4.75	0.25	5.00

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

Except for the project reports, a published guide to the collections has not been produced.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is used. Sites are also organized within projects by name and location.

Computerized Database Management

Goodwin uses dBase III & IV to manage its files. Backup copies are kept on disk, and are updated each time the files are edited. They are stored in-house; no copies are stored off-site.

Written Policies and Procedures

Minimum Standards for Acceptance

Written minimum standards for acceptance are provided by every state in which Goodwin works.

Curation Policy

There is a comprehensive plan for curation, but it is a very old document. This policy addresses the receipt, processing, and use of materials, but not the future preservation of those materials, since this is not a function of the organization.

Records-Management Policy

Guidelines and standards for the curation of associated documentation are addressed according to the policies of the archaeology offices of the states in question.

Field-Curation Procedures

There are no field-curation guidelines; however, a field specimen list is created from a lot-number list assigned in the laboratory.

Loan Policy

There are no written loan procedures. If a researcher requests a loan of materials, Goodwin contacts the owner of the material and its final repository, and an agreement is reached.

Deaccessioning Policy

Goodwin does not deaccession material.

Inventory Policy

There is no inventory policy in place, but there is an initial inventory of field specimens that is kept and checked until the artifacts and documentation are deposited at the final repository.

Latest Collection Inventory

Goodwin is not a long-term curation facility but transfers collections to state repositories for long-term care. Collections are constantly being inventoried.

Curation Personnel

Terry Reimer is a part-time curator for the archaeological collections. Although Ms. Reimer is the person responsible for curation, at least 12 field crew archaeologists in the Frederick office have some shared curatorial duties. Christopher Goodwin is the president and CEO of the firm.

Curation Financing

Curation is included as a line item in budgets for archaeological projects undertaken by Goodwin.

Access to Collections

Collections are readily accessible, and access is controlled by Ms. Reimer. She is the staff member most familiar with the holdings and their locations.

Future Plans

As a consulting firm, Goodwin gives higher priority to the recovery of artifacts than to curation, but there are tentative plans to add more storage space, especially as the firm expands to work in new states.

Comments

1. Artifacts are stored in acid-free Hollinger boxes. Multiple copies of associated documentation photocopied onto acid-free paper are stored in these same boxes. Documentation is bound in plastic three-ring binders.

2. Photographic materials are stored in archival-quality polyethylene sleeves.

3. Though the facility does not have a sprinkler system, it does have an integrated fire-detection system that is continually monitored by the fire department and operates by detecting fires within zones.

4. The facility has an integrated intrusion alarm system, anchored by entry and motion sensors.

5. Many windows on the ground floor pose a security risk, including two in the collections storage area.

6. Two glass exterior doors across and down the hall from the collections storage area represent a security risk.

7. The two doors leading into the collections storage area are hollow core wood and lack locks.

8. Humidity is not monitored or controlled within the collections storage area.

Recommendations

1. Remove associated documentation from the artifact primary containers and place it in separate archival-quality containers. Remove documents from plastic three-ring binders and store them loose in acid-free folders.

2. Install multiple fire extinguishers throughout the repository as soon as possible. Funds permitting, install a sprinkler system. While the fire-detection system linked to the fire department is important, collections can be lost in the time it takes firefighters to arrive.

3. Replace the two doors leading to the collections storage area with either metal or solid-core wood doors, and add a series of locks.

4. Replace the glass door leading to the exterior with a metal or solid-core wood door with multiple locks.

5. Install an HVAC system. If not feasible, monitor humidity with a sling psychrometer or hygrothermograph and install a commercial dehumidifier.

6. If it is not feasible to completely close off the windows in the collections storage area, install stronger locks to them for added security. Add blinds to the windows for security and environmental purposes.

22

Gray & Pape

Richmond, Virginia

Repository Summary

Volume of Artifact Collections: 18.8 ft^3

Compliance Status: Collections require partial rehabilitation to comply with existing federal guidelines and standards for archaeological curation.

Linear Feet of Records: 3 linear feet (35.75 linear inches)

Compliance Status: Associated documentation requires partial rehabilitation to comply with existing federal guidelines and standards for archaeological curation.

Human Skeletal Remains: None

Status of Curation Funding: Curation of collections is accomplished through line-item budget allocation. The staff feels that funding is adequate for the firm's goal of temporary curation of artifacts and associated documentation.

Date of Visit: May 4, 1995

Points of Contact: Len Winter and Betsy Cassebeer

G&P is a private consulting firm with offices in Cincinnati, Ohio; Richmond, Virginia; and Tehachapi, California. The Richmond office is currently housing 18.8 ft^3 of artifacts (Table 18), and 3 linear feet of documentation (35.75 linear inches) from Fort A. P. Hill and Fort Lee. The firm is not viewed as a permanent curation facility, but merely a temporary one while artifacts await acceptance to the state repository. Table 19 illustrates the types and percentages of material classes present in the military collections.

Table 18. Summary of Military Collections, by Installation, at G&P

Installation	Volume of Artifacts (ft^3)
Fort A. P. Hill	3.2
Fort Lee	15.6
Total	18.8

Assessment

The G&P Richmond office occupies rental space in the Shockoe Bottom section of Richmond, east of downtown (Figure 60). The building was originally constructed in the 1880s as a storefront pawn shop. Sometime in the mid-1900s, a group of architects renovated and occupied the building. It is sometimes referred to as the SWA building, in reference to the architect group. The latest renovations occurred in 1994–1995, when interior walls and other improvements were added.

Table 19. Summary, by Volume, of Material Classes Present In Military Collections at G&P

Material Class	%
Prehistoric	
Lithics	41
Soil	9
Ceramics	4
Faunal remains	4
Shell	3
Botanical	< 1
Historical-period	
Ceramics	12
Metal	12
Brick	8
Glass	5
Miscellaneous (synthetic)	1
Total	100

Structural Adequacy

The G&P facility measures approximately 4,000 ft^2 of floor space, and includes work areas for all the firm's functions. The foundation and exterior walls of the repository are composed of brick. The roof is a single-ply rubber membrane covering metal, and is approximately two years old. The entire structure is solid, with no cracks or leaks. There are four floors, three above grade and one below. G&P occupies one floor above grade and the one below. The top two floors are devoted to residential apartment space.

The repository has five windows and a transom on the south end, all facing an alley breezeway. The entire north side of the building, aside from the entrance, is composed of opaque glass blocks. Window frames are made of wood, and the entrance doors are primarily glass.

The collections storage area measures approximately 200 ft^2 and is separated from the remainder of the main floor repository only by a set of book-shelves. The floor is oak, and the interior walls are wallboard/Sheetrock. The ceiling is molded tin. Two windows are located in the collections storage area. The collections storage area is filled to approximately 50 percent capacity with archaeological collections. The area can be used as an artifact holding, washing and processing room, temporary storage, and a study room.

Environmental Controls

The repository has central air-conditioning and forced-air heating, each divided into two zones.

Figure 60. Entrance to the G&P offices.

Floor fans are also used for cooling. The downstairs collections storage area, which does not hold military collections currently, is not equipped with environmental controls. Humidity is not monitored or controlled in the main offices or in the collections storage area. There is, however, a commercial dehumidifier located in the downstairs area. There are no dust filters on the controls. General maintenance and cleaning are provided by the landlord and a contracted private cleaning service which visits biweekly. Incandescent bulbs are used for lighting.

Pest Management

There is no integrated pest-management system. Pests have not yet posed a problem, but if the need arises, precautions will be taken on an as-needed basis.

Security

G&P uses multiple security measures, including motion detectors, key locks, dead bolt locks, and simple window locks. There is also an intrusion alarm on doors and windows that is wired into a private security company. The windows on the south side of the repository are equipped with metal bars. There are no security measures unique to the collections storage area.

Fire Detection and Suppression

The repository is equipped with a sprinkler system for fire suppression on both floors, and four chemical fire extinguishers. There is no fire-detection system.

Artifact Storage

Storage Units

Primary containers for artifacts are stored on two baked-enamel metal uprights with particleboard shelves (Figure 61). The shelves measure 36 × 18 × 71 inches (w × d × h) and are located in the collections storage area.

Figure 61. Temporary storage of materials awaiting processing at G&P.

Primary Containers

Artifacts from Fort A. P. Hill and Fort Lee are stored in 14 primary containers. Nine of these (all Fort Lee), consist of acid-free Hollinger boxes each measuring 1.4 ft^3, and equipped with telescoping lids. The remaining five primary containers are acidic-cardboard boxes—three measure 1.2 ft^3, one measures 1.3 ft^3, and one measures 1.7 ft^3. Two have telescoping lids; three have folded flaps. Labels on most of the boxes consist of preprinted tags on acid-free paper taped to the box. Label information consists of project, project number, contents, and bags in catalog number order. A single box has an acidic-paper tag stapled to the end. Label information for this box consists of firm, project number, and site numbers.

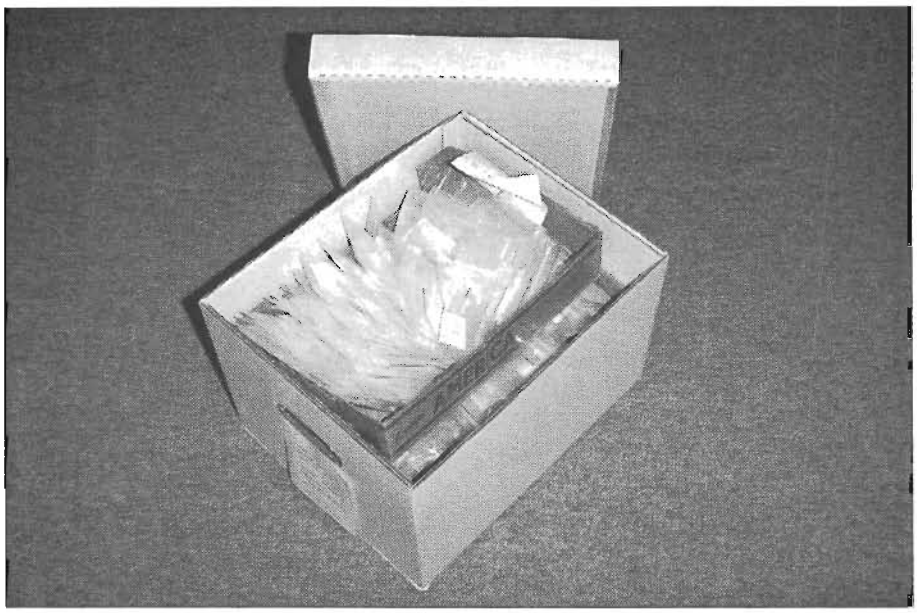

Figure 62. Flats of zip-lock plastic bags are stored within cardboard boxes at G&P.

Secondary Containers

Secondary containers consist almost entirely (> 99%) of zip-lock, 4- and 6-mil polyethylene bags (Figure 62). Less than 1 percent are paper bags. Most secondary container labels consist of acid-free-paper tags inserted into zip-lock bags, although there are a few direct labels in marker. Information is usually laser printed, and consists of project, field site number, provenience, catalog number, and contents. There are multiple tertiary containers within the secondary containers, all consisting of the same zip-lock polyethylene bags with the same type of labels and label information. Most primary containers contain two layers of secondary containers stacked vertically on cardboard trays.

Three of the primary containers housed collections not fully processed at the time of the St. Louis District personnel visit. These collections also were contained in zip-lock polyethylene bags, but bagged with them were the original field-collection paper bags. Provenience information from the paper bags is then transferred to the artifacts and to the laser-printed tags stored in the zip-lock bags.

Laboratory Processing and Labeling

All of the artifacts have been cleaned and sorted by material class. Approximately 60 percent of the artifacts have been labeled, with site number and catalog number inked directly on the artifact or on archivally stable acrylic.

Human Skeletal Remains

G&P is not currently curating any human skeletal remains recovered from military installations.

Records Storage

There are approximately 3 linear feet (35.75 linear inches) of documentation associated with archaeological projects conducted on military installations. Of this total, 2 linear feet (23.75 linear inches) are documents on work conducted on Fort Lee, and 1 linear foot is documentation on work conducted on Fort A. P. Hill.

The storage unit for the documentation is a metal, four-drawer lateral file cabinet measuring 42 × 18 × 65 inches (w × d × h). File cabinet drawers are labeled with a paper insert, with project numbers written in pen or marker. Of the total 3 linear feet, only 0.25 linear inch of paper records is stored separately from this file cabinet. These records are located in one of the acidic-cardboard boxes housing the associated artifacts.

Paper Records

Paper records consist of administrative, background, survey, excavation, and analysis records. All of these specific records are stored in the lateral file cabinets, some in manila folders and some in accordion files. Labels, though not present on all documentation folders, consist of project number and type of records, usually written in pen or marker. Computer files serve as the primary preservation and security copies of the documents. Records are arranged by internal project number (e.g., 93-65 for Fort A. P. Hill; 93-73 for Fort Lee). Some records contain contaminants (e.g., paper clips and staples).

The 0.25 linear inch of paper records stored with the box of artifacts is an inventory contained in a manila folder. The inventory is printed on acid-free paper.

Photographic Records

Photographic records consist of color prints, black-and-white prints, negatives, and contact sheets. Most of these materials, except for negatives, are labeled on the back with the project name and number, and the roll number. Photographic records are stored with the paper records.

Maps and Oversized Documents

These documents consist of large and small maps and drawings. They are stored folded with the paper records.

Project Reports

Reports are stored with the paper records.

Collections-Management Standards

G&P is not a permanent curation facility; therefore, collections management standards do not apply.

Registration Procedures

Accession Files

Collections are not accessioned.

Location Identification

The location of collections is not identified in any document.

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is used for site identification.

Computerized Database Management

G&P uses Paradox, dBase III, III+, or IV, depending on the requirements of the project. Backups of files are created monthly, and are stored on disk locally and in the Cincinnati office. Tape storage will soon be acquired. There is no network currently, but computers will soon have password-access setups. Up to four staff members have access to the files, but in order to edit the records they must go through the lab manager.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no written minimum standards for acceptance.

Curation Policy

There is no written curation policy.

Records-Management Policy

There is no written records-management policy.

Field-Curation Procedures

There are no written field-curation guidelines.

Loan Policy

There are no written loan procedures.

Deaccessioning Policy

There is no written deaccessioning policy.

Inventory Policy

There is no written inventory policy.

Latest Collection Inventory

Collections are inventoried as they are processed, before being sent to a permanent repository.

Curation Personnel

The lab manager, Ms. Betsy Cassebeer, has full-time responsibility for the collections, but the regional manager, Dr. Len Winter, is ultimately responsible for all office functions.

Curation Financing

Curation is financed through line-item budget allocations. For the short-term curation goals of the firm, financing is adequate.

Access to Collections

All staff members have access to the collections, but must first go through the lab manager. Outside researchers are allowed access to the collections, but must first contact both the regional and lab managers.

Future Plans

There are no future plans for upgrading the curation program.

Comments

1. Humidity is not monitored or controlled in the offices or the upstairs collections storage area. The downstairs collections storage area has a commercial dehumidifier, but no air-conditioning or heat.

2. There is no integrated pest-management system. Problems are addressed on an as-needed basis.

3. There is no fire-detection system.

4. Five of 14 primary containers are acidic-cardboard boxes.

5. Secondary containers for most associated documentation consist of acidic manila folders and accordion files. No duplicate copies of records have been produced.

Recommendations

1. Install an HVAC system for both levels of the repository. If not feasible, purchase a commercial dehumidifier for the upstairs, and monitor humidity levels on both floors with a hygrothermograph or a sling psychrometer. If possible, also add central air-conditioning and forced-air heating to the bottom floor.

2. Begin an integrated pest-management system that includes monitoring and control.

3. Add a fire-detection system which includes heat sensors, smoke alarms, and a fire-alarm system that is wired into the local fire department.

4. Rebox artifacts currently in acidic-cardboard primary containers into acid-free-cardboard boxes. Remove cardboard trays currently used to store additional levels of artifacts in primary containers, and distribute those artifacts to additional acid-free primary containers.

5. Remove documentation from acidic manila folders and accordion files, and file in acid-free folders. Produce copies of documentation on acid-free paper and store in a separate, secure location.

23

Harford County Archaeological Society

Harford County, Maryland

Repository Summary

Volume of Artifact Collections: 26 ft^3 (including 1 ft^3 human skeletal remains)

Compliance Status: Collections require partial rehabilitation to comply with existing federal guidelines and standards for archaeological curation.

Linear Feet of Records: 0.25 linear foot (3.0 linear inches)

Compliance Status: All associated documentation requires complete rehabilitation to comply with existing federal guidelines and standards for curation for archaeological documentation.

Human Skeletal Remains: Approximately 1 ft^3 of human skeletal remains recovered from Aberdeen are located at this facility. A minimum number of individuals was not ascertained as most of the remains were mixed with remains not associated with Aberdeen.

Status of Curation Funding: A $500.00 fund has been set aside specifically for the curation of the Cresthull collection.

Date of Visit: January 24, 1996

Points of Contact: Bill Mcintyre and Norma Wagner

HCAS does not have a designated repository for their exclusive use. The society is made up entirely of volunteers who were given permission to store archaeological collections in the attic of the Harford Glen Mansion, within the Harford Glen Environmental Education Center complex. This storage space is filled with the Paul Cresthull collection. Acquired from the Cresthull family, this collection was recovered from many sites in Harford County, including Aberdeen, over the last 25 years. Upon Paul Cresthull's death, his family donated most of the archaeological collection to HCAS. The collection is incomplete, however, as a collection of faunal remains was sold to a foundation in Philadelphia, Pennsylvania, and Cresthull's family retained an undetermined amount of the collection. A complete artifact catalog has never been found, and the entire contents of the collection are unknown.

The evaluation team assessed approximately 25 ft^3 of archaeological collections that were labeled with site numbers known to have been assigned to Aberdeen. Evaluation of the collection was difficult, as the artifacts were not organized by site number, but rather by the collector's interest, current project, or artifact type. Several enclosed mounts, for example, contained projectile points labeled with site numbers from

Figure 63. View of the Harford Glen Mansion. HCAS uses the attic as a collections storage area.

Aberdeen. Associated documentation is also organized in a numbered system developed by Paul Cresthull; however, the pattern of numbers has not yet been deciphered by HCAS. The team assessed a small portion of records relating to sites on Aberdeen. Missing records may still be in two file cabinets of documentation located in the basement of one of HCAS's members.

Assessment

The Harford Glen Mansion was originally a stone farm house dating to approximately 1827 with a wing added in the 1930s (Figure 63). There have been extensive internal renovations converting the farm house into classrooms, offices, and meeting rooms. The house, land, and out buildings are now used by the county school system as an environmental education center.

Structural Adequacy

The house's foundation and exterior walls are constructed entirely of stone and mortar. The roof has oak rafters and beams covered with slate tile. The age of the roof and the date of any recent repairs are unknown. There are three floors above grade, including the attic (Figure 64), and one floor partially below grade where the furnace is located. Numerous windows on all side of the building have wood frames that are known to be drafty and leak water. The 400-ft^2 attic has a wood floor, where several boards are missing because of repairs on the plumbing and electrical systems (Figure 65). The lack of storage space has made the area cluttered with artifacts and containers.

Environmental Controls

The building's environmental controls are maintained by the county school system. A custodian for the buildings lives on the property. Harford Glen Mansion is equipped with an oil and hot-water radiator heating system; however, the attic where the collections are stored is not heated. There are no humidity monitors or controls for the facility. Lighting in the collections storage area is provided by natural light through the attic window, an overhead light fixture with an incandescent bulb, and a free-standing mount with two halogen bulbs. UV filters are not used. The collections storage area is cleaned as-needed by members of HCAS.

Figure 64. View of the mansion's attic where collections recovered from Aberdeen are stored. Note the borrowed, free-standing halogen lights used to help illuminate the room.

Figure 65. Missing floor boards are a safety hazard and the result of current repair work on the electrical system.

Pest Management

An integrated pest-management program has not been established at this facility. A professional exterminator sprays for insects every spring. The evaluation team noted significant problems with pest infestation. Wasps and wasp nests and various other crawling and flying bugs are in the collections storage area. It was also noted that snake skins are occasionally found in the collections.

Security

The Harford Glen Mansion has an intrusion alarm that is wired to the county sheriff. All exterior doors have both key and dead bolt locks. All windows are kept locked. A custodian lives on the property and watches for any unauthorized access. Motion-sensor lights illuminate the property when triggered. The compound gate is locked at the entrance road after hours.

Fire Detection and Suppression

Fire-detection and -suppression systems the building consist of smoke alarms and fire extinguishers. The attic—where the collections are stored—does not have either of these measures.

Artifact Storage

The artifact collections located in this facility have been collected by Paul Cresthull over a period of 25 years. Refer to Table 20 for the percentage of material classes present in the collections recovered from Aberdeen. Human skeletal remains have been included in this table. It is undetermined whether the remains are prehistoric, historical-period, or a combination of both.

Table 20. Summary, by Volume, of Material Classes Present in Aberdeen Collections at HCAS

Material Class	%
Prehistoric	
Lithics	39
Shell	5
Human remains	4
Ceramics	3
Historical-period	
Ceramics	35
Glass	6
Metal	4
Faunal remains	2
Other[a]	2
Total	100

[a] "Other" includes faunal remains, pipe stems, and a firearm flint.

Storage Units

Archaeological collections are stored on adjustable metal shelving units measuring 3 × 1.5 × 5 feet (w × d × h) (Figure 66). Shelves are not labeled.

Primary Containers

Approximately 26 ft^3 of archaeological artifacts and human skeletal remains recovered from Aberdeen are stored in a variety of containers including acidic-cardboard boxes without lids, glass mason jars, plastic pencil boxes, wood cases, plastic vials with lids, and glass Riker boxes. The containers are arranged haphazardly on the shelves, making the identification of

Figure 66. Metal shelving units are used to hold the variety of primary containers storing the Aberdeen collection.

Table 21. Summary, by Volume, of Secondary Containers Used for Aberdeen Collections at HCAS

Container Type	%
Plastic cases	26
Acidic-cardboard boxes	23
Glass mason jars	20
Wooden cases	20
Loose	9
Paper bags	2
Total	100

collections somewhat difficult. If the primary containers have labels, they are written in pen and marker on adhesive labels or directly on the containers.

Secondary Containers

Secondary containers for all the artifact collections are similar to those used as primary containers. Refer to Table 21 for the approximate percentages of secondary containers used to package these collections.

Laboratory Processing and Labeling

The majority (95%) of the artifacts have been cleaned, labeled (86%), and sorted by material class (80%). The processing and labeling of the collections were performed by the collector. Site numbers have been are carefully labeled with ink directly on the surface of each artifact. A portion of the broken projectile points in the Cresthull collection have been filled in with plaster casts to show the original shape of the tool. Some of the human skeletal remains have been treated with a glossy substance.

Human Skeletal Remains

Human skeletal remains (~1 ft^3) recovered from Aberdeen are located on different shelves in the attic based on the type of bone. For example, a large plastic box with a fitted lid contains human long bones all labeled with a site number, some of which are from Aberdeen. All of the burials are thought to possibly date to the colonial period. Further investigation into the provenience of the skeletal material is needed.

Records Storage

Paul Cresthull developed a numbered coding system to manage his records (Figure 67). Records pertaining to a single site have all been separated out by record categories. Two file cabinets of associated documentation which may or may not have records pertaining to his work on Aberdeen are located in the basement of a house belonging to one of the society's members. Bad weather and lack of space have prevented the transfer of these records to the Harford Glen Mansion.

Paper Records

Approximately 3 linear inches of background records, survey records, analysis records, and folded topographic maps associated with the sites and collections from Aberdeen were found and assessed. Records are kept in a metal, four-drawer file cabinet. Documents are filed in letter-sized, acidic-paper envelopes that are labeled directly with black marker. The site number, name, and record number are written on the envelopes. Duplicate copies of the paper records have not been produced.

Photographic Records

The photographic and slide collections were not made available to the assessment team. These collections are currently being kept at the president of HCAS's house in an effort to better preserve the records.

Collections-Management Standards

Registration Procedures

Accession Files

Accession files are not used.

Location Identification

The location of the collection is not identified in any document.

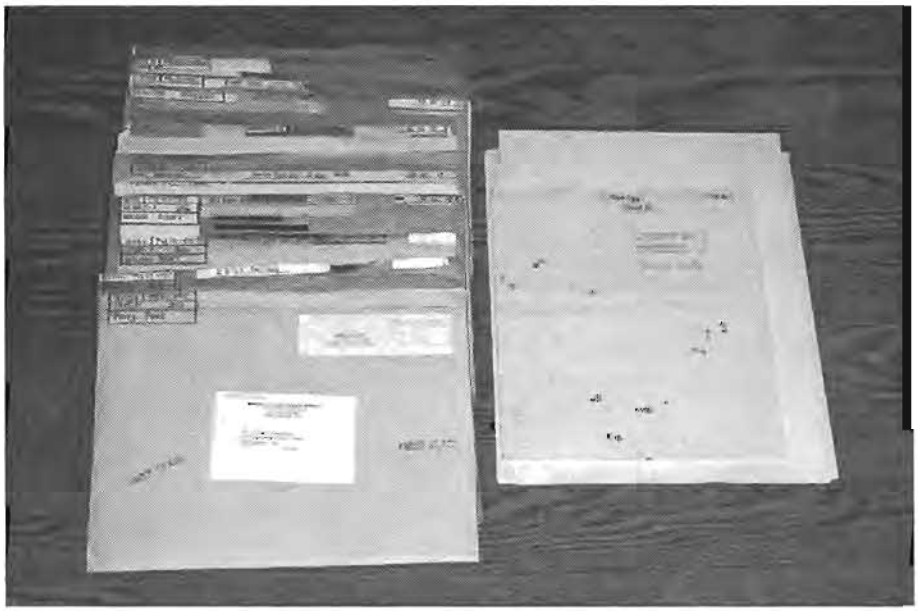

Figure 67. Original paper records associated with Aberdeen sites are filed in acidic envelopes and labeled with Cresthull's unique numbering system.

Cross-Indexed Files

Files are cross-indexed by Cresthulls' own numbering system that no one else has been able to decipher.

Published Guide to Collections

A published guide of the collections has never been produced.

Site-Record Administration

The Smithsonian River Basin Survey trinomial site-numbering system is used. Numbers are assigned by MHT.

Computerized Database Management

Computerized database-management programs have not been implemented.

Written Policies and Procedures

Minimum Standards for Acceptance

Minimum standards for the acceptance of collections have not been established.

Curation Policy

A written curation policy has not been developed.

Records-Management Policy

A written records-management policy has not been developed.

Field-Curation Procedures

No formal field-curation guidelines have been written. When possible, state guidelines are followed.

Loan Policy

A written loan policy has not been developed.

Deaccessioning Policy

A written deaccessioning policy has not been developed.

Inventory Policy

A written inventory policy has not been developed.

Latest Collection Inventory

When the Cresthull estate was settled, a brief inventory of the collection was performed. HCAS is currently attempting to inventory the Cresthull collection and to determine its extent.

Curation Personnel

HCAS is a volunteer organization. They do not have any personnel devoted to the full-time curation of the archaeological collections.

Curation Financing

Curation activities are funded with a $500.00 fund that was specifically set up to care for the Cresthull collection. Additional financing is obtained through membership dues and small fundraising sales of merchandise such as t-shirts and coffee mugs.

Access to Collections

Access to collections is controlled by HCAS's President, Bill McIntyre. Occasionally, artifacts are used in educational outreach programs. None of the artifacts recovered from Aberdeen has been used.

Future Plans

Future plans for the curation program include obtaining help from interns and thesis students from university anthropology departments, and implementing a computerized database system to manage artifact and records collections.

Comments

1. The repository has heat, but not in the collections storage area. Window air-conditioning units are present in the main building.

2. Lighting is not UV filtered.

3. There is no integrated pest-management system, which is evident in insect and snake infestations.

4. There is no fire-detection or -suppression system in the collections storage area.

5. There are no collections-management policies.

6. Collections are not archivally stored.

7. Human skeletal remains are not inventoried for NAGPRA.

8. There is no staff devoted to the curation of collections.

9. Funding for curation is inadequate.

Recommendations

1. Collections should be stored in an environmentally controlled storage room.

2. Begin an integrated pest-management system that includes both monitoring and control on a regular basis.

3. Fire-detection and -protection devices need to be installed in the collections storage area.

4. Rebox and rebag artifacts into acid-free cardboard boxes and archival-quality polyethylene bags. Insert acid-free-paper labels into each plastic bag.

5. Inventory human skeletal remains to begin compliance with NAGPRA.

6. A professional staff of museum and curation specialists should be employed, or made available, to manage the collections.

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