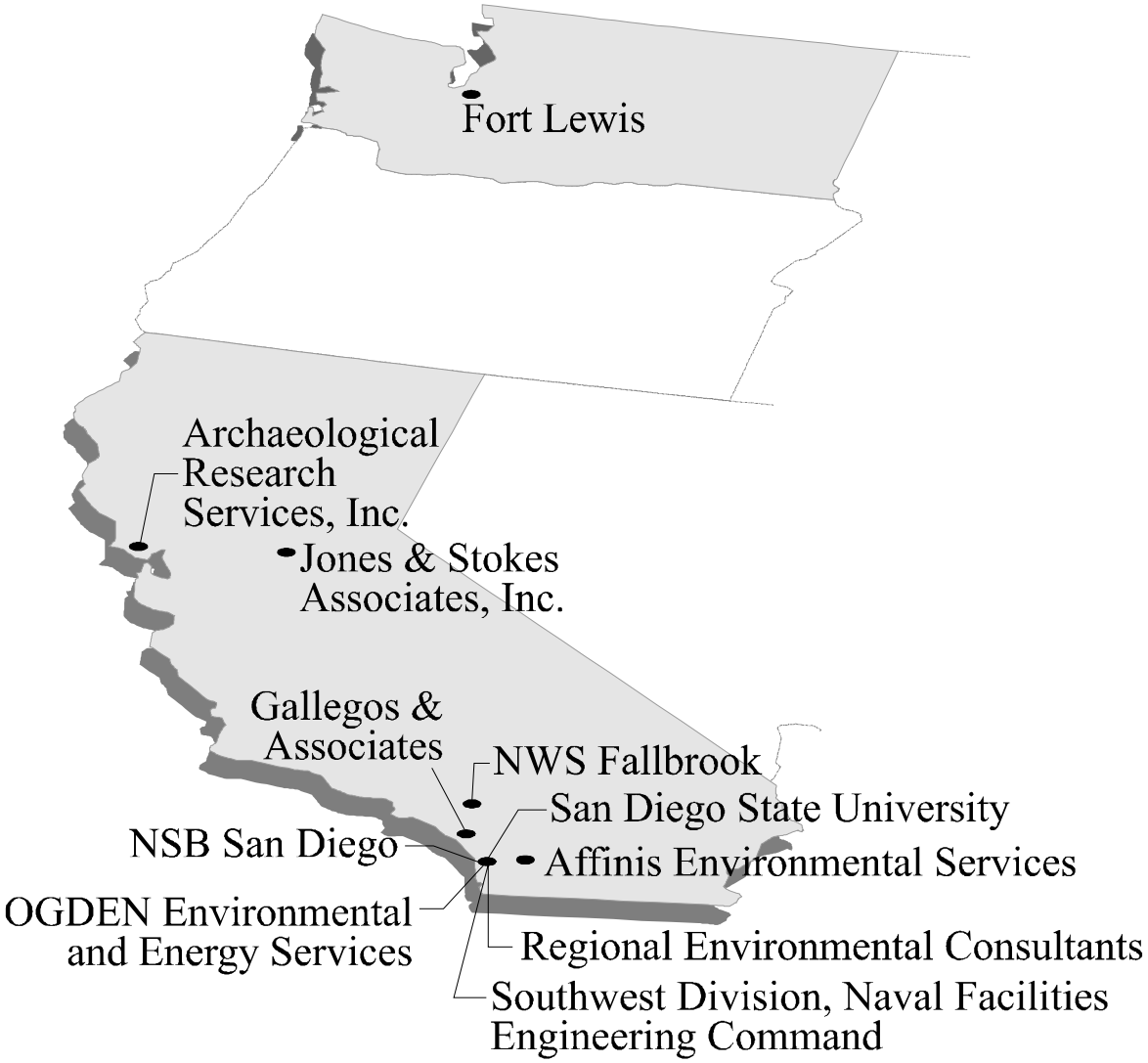
LEGACY RESOURCE MANAGEMENT PROGRAM

Archaeological Curation-Needs Assessment
Technical Report No. 8



US Army Corps of Engineers
St. Louis District

Mandatory Center of Expertise for the Curation and Management of Archaeological Collections

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	1998	Final Report

4. TITLE AND SUBTITLE	5. FUNDING NUMBERS
6. AUTHORS	

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
U.S. Army Corps of Engineers, St. Louis District 1222 Spruce Street (CEMVS-PD-C) St. Louis, Missouri 63103-2833	Archaeological Curation-Needs Assessment Technical Report No. 8

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
United States Department of Defense Office of the Deputy Under Secretary of Defense (Environmental Security) Legacy Resource Management Program	

11. SUPPLEMENTARY NOTES

Report Available from the U.S. Army Corps of Engineers, St. Louis District (CEMVS-PD-C)

12a. DISTRIBUTION/AVAILABILITY STATEMENT	12b. DISTRIBUTION CODE
Approved for public release; distribution unlimited	

13. ABSTRACT *(Maximum 200 words)*

Between July and October 1993 the St. Louis District has identified 493.4 cubic feet of archaeological materials and 67.8 linear feet of assiciated records from four military installations in the western United States. Collections were located at a total of eleven facilities and at least 50% of all the collections require complete rehabilitation on order to comply with 36 CFR Part 79.

14. SUBJECT TERMS	15. NUMBER OF PAGES
Archaeology, curation, collections management, 36 CFR Part 79, NAGPRA (P.L. 101-601)	
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL

AN ARCHAEOLOGICAL CURATION-NEEDS ASSESSMENT FOR THE LEGACY RESOURCE MANAGEMENT PROGRAM

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and
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Prepared for
Legacy Resource Management Program
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Environmental Security

U.S. Army Corps of Engineers
St. Louis District
Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections
Archaeological Curation-Needs Assessments
Technical Report No. 8

1995

Contents

List of Figures iv

List of Tables vi

List of Acronyms vii

Executive Summary ix

1. Introduction 1

2. Fort Lewis 5

3. Naval Submarine Base San Diego 23

4. Southwest Division, Navy Facilities Engineering Command 35

5. Naval Weapons Station Fallbrook 47

6. San Diego State University 57

7. Affinis Environmental Services 69

8. OGDEN Environmental and Energy Services 77

9. Gallegos and Associates 91

10. Archaeological Resource Services 99

11. Regional Environmental Consultants 107

12. Jones and Stokes Associates 115

13. Findings Summary 121

14. Recommendations 127

List of Figures

Figure 1. Exterior view of the Fort Lewis Military Museum 11

Figure 2. Front view of Forestry Supply Repository (Building T1214) at Fort Lewis 11

Figure 3. View of Veterinary Building (T2494) at Fort Lewis 11

Figure 4. Fort Lewis Military Museum security system 13

Figure 5. Security noted on Building T1214 15

Figure 6. Fort Lewis collections stored on floor in Building T4294 15

Figure 7. Severely compressed secondary containers for Fort Lewis collections 15

Figure 8. Several types of secondary containers contain archaeological materials 15

Figure 9. The majority of the paper records for Fort Lewis archaeological collections are stored in an office in Building 4301 17

Figure 10. Condition of Fort Lewis photographic documents (note curling edges) 17

Figure 11. Building 127 at NSB San Diego 27

Figure 12. Storage units for collections in Building 127 at NSB San Diego 29

Figure 13. Type of box label used for NSB San Diego collections 29

Figure 14. View of storage locker under Building 5 at NSB San Diego 49

Figure 15. Evidence of lack of pest management in locker under Building 5 51

Figure 16. Type of primary containers used for collections in the storage locker 51

Figure 17. Types of secondary containers for collections in the storage locker 53

Figure 18. Exterior view of San Diego State University library 59

Figure 19. View of Montezuma School shipping container holding archaeological collections from NAS Miramar 59

Figure 21. Admiral Baker Field collections in the library repository 61

Figure 20. San Diego University library collections storage area 61

Figure 22. Example of water-damaged box in library collections area 63

Figure 23. Example of water-damaged box in the shipping container 63

Figure 24. Types of secondary containers used for collections 63

Figure 25. Exterior view of Affinis Environmental Services repository 71

Figure 26. Type of secondary container holding NAS Miramar artifacts 71

Figure 27. Exterior view of OGDEN building housing repository and laboratory 79

Figure 28. Ceiling beams and insulation in collections area 79
Figure 29. Duct work touching primary containers in the OGDEN repository 79
Figure 31. Chemcials stored on floor in OGDEN repository 80
Figure 30. Clutter noted in OGDEN repository 81
Figure 32. Key card security system at OGDEN repository 81
Figure 33. Storage containers for collections at OGDEN 83
Figure 34. Other collections at OGDEN stored on wooden shelves 83
Figure 35. Type of primary containers used for associated records stored at OGDEN 85
Figure 36. Storage of photographic documents at OGDEN 85
Figure 37. Exterior of Gallegos and Associates 93
Figure 38. Interior view of the Gallegos and Associates collections area 93
Figure 39. Storage units for documents stored at Gallegos and Associates 95
Figure 40. Photographic records at Gallegos and Associates and their secondary container systems 95
Figure 41. Collections area at Archaeological Resource Services 101
Figure 42. Handmade ‘rain catcher’ is evidence of leaking roof at the Archaeological Resource Services repository 101
Figure 43. Exterior view of the RECON building 109
Figure 44. Storage units for project records at RECON 111
Figure 45. Archives room at RECON (note records stored on floor) 111
Figure 46. Exterior view of the Jones and Stokes repository 117
Figure 47. Documentation storage units at Jones and Stokes 117

List of Tables

Table 1. Summary of Collections Associated with Installations xiii
Table 2. Approximate Amount of Artifacts and Records at Fort Lewis 8
Table 3. Material Class Percentages in Collections from Fort Lewis 9
Table 4. Material Class Percentages in Collections from Vancouver Barracks 9
Table 5. Material Class Percentages in the Collections from Yakima Training Center 10
Table 6. Major Classes of Documentation by Installation in Linear Feet 16
Table 7. Material by Project or Site in Sample 26
Table 8. Material Class Percentages in the Sample 26
Table 9. Percentage of Secondary Containers in the Collections at NSB San Diego 29
Table 10. Major Classes of Documentation in Linear Feet 30
Table 11. Approximate Size, in Cubic Feet by Project, of Archaeological Materials at SWDIVNAVFACENGCOM 36
Table 12. Percentages of Types of Material Classes Present in the Collections at SWDIVNAVFACENGCOM 37
Table 13. Linear Feet Different Classes of Documentation at SWDIVNAVFACENGCOM 39
Table 14. Material Class Percentages of Archaeological Materials at NWS Fallbrook 48
Table 15. Percentages of Secondary Container Types included in Fallbrook Archaeological Collections 52
Table 16. Material Class Percentages of Collections at SDSU Location 58
Table 17. Archaeological Materials Stored at each SDSU Facility 58
Table 18. Percentages of Secondary Container Types at each Repository 63
Table 19. Major Classes of Documentation 64
Table 20. Collection Size by Project 78
Table 21. Location of Archaeological Materials and Associated Records 92
Table 22. Major Classes of Documentation in Linear Feet 94
Table 23. Major Classes of Records by Installation 110
Table 24. Facilities with DoD Collections in California and Washington, and Number of Collections Storage Areas per Facility 121
Table 25. Summary of Collections by Location 122
Table 26. Presence/Absence of Repository Infrastructure Controls Necessary to Curate Archaeological Collections 123
Table 27. Percentages of Material Classes 124
Table 28. Summary of the Major Classes of Documentation 125

List of Acronyms

AFB	air force base
ARS	Archaeological Resource Services
DOD	Department of Defense
JSA	Jones and Stokes Associates
MCX	Mandatory Center of Expertise
NAVSHIPYD	navy shipyard
NAB	naval amphibious base
NAF	naval air facility
NAS	naval air station
NSB	naval submarine base
NRTF	naval radio transmitter facility
NRR	naval radio receiver
NWS	naval weapons station
RECON	Regional Environmental Consultants
SDSU	San Diego State University
SWDIVNAVFACENGCOM	Southwest Division, Navy Facilities Engineering Command

Executive Summary

Problem

Federal archaeological collections are a significant and nonrenewable national cultural resource. Unfortunately, curation of these materials, for the most part, has not played an integral part in the planning of archaeological projects in the last fifty years. Instead, numerous collections representing our nation's heritage were placed in the attics, basements, and closets of countless storage facilities across the United States where many have undergone steady deterioration. Additionally, many collections were illegally transported to Europe where they still remain. Inappropriate care and subsequent deterioration of these collections are not only transgressions of the laws under which they were recovered, but also prevents them being used for educational and research purposes, which were the very public benefits Congress intended when they passed Historic Preservation laws. Valuable portions of the North American prehistory and history are being lost, and the considerable financial investment by the American public in archaeological recovery is quickly being squandered.

Background

As mandated by federal law, agencies are required to ensure that all recovered archaeological materials and associated records are professionally cared for. Unfortunately, funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented compliance. A federally sponsored mitigation program usually provides for the recovery of materials from archaeological sites, the analysis of recovered items, the publication and circulation of a final report, and the placement of collections in storage facilities for preservation, display, or future study. In the past, federal agencies gave little attention to the maintenance of collections once fieldwork was completed. Through the years, most collections have been stored free of charge by universities, museums, and even contracting offices. Inadequate funding and failing facilities now seriously hinder these institutions' abilities to adequately care for collections.

In April 1993, the U.S. Army Corps of Engineers, St. Louis District applied to the Legacy Resource Management Program for funds to conduct a regional curation study to determine the present condition of Department of Defense (DOD archaeological collections and to evaluate the facilities that currently house these collections. Stemming from conversations with Mr. Andrew Yatzko of the Naval Air Station, North

Island in San Diego, California, it became clear that a significant amount of archaeological work had been done in California on Army, Air Force, Navy, and Marine Corps property.

In an attempt to maximize resources, it was decided to initiate the curation study in the southern part of California and progress north through Oregon and Washington. This marked the beginning of a national approach to an analysis of the DOD's archaeological curation problem.

This volume reports on the analysis of 11 facilities; four military installations, 1 university facility, and 6 contractor offices housing military collections. Approximately 493.4 ft^3 and 67.8 linear feet of associated records were examined during the period July through October 1993. These inspections produced evidence documenting widespread deterioration and neglect of many federal archaeological collections currently housed on the west coast.

Findings

Physical Status of Facilities

1. Repository Adequacy: Eleven facilities encompassing 18 collection storage areas were visited by the assessment team. The 11 facilities include:

a. Fort Lewis, Tacoma, Washington

b. NSB San Diego, California

c. SWDIVNAVFACENGCOM San Diego, California

d. NWS Fallbrook, Fallbrook California

e. San Diego State University, San Diego, California

f. Affinis Environmental Services, El Cajon, California

g. OGDEN Environmental and Energy Services, San Diego, California

i. Gallegos & Associates, Carlsbad, California

j. Archaeological Resource Services, Inc., Petaluma, California

m. Regional Environmental Consultants, San Diego, California

n. Jones & Stokes Associates, Inc., Sacramento, California

None of the 11 facilities fulfill all of the standards mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections), a new 1991 federal regulation that establishes professional standards for the management and care of all federal collections. Unfortunately, only two of the 18 collections storage areas meet the minimum requirements.

2. Maintenance of Repositories: Four of the collections storage areas visited do not receive any type of regular maintenance. Most of these facilities contained dust-coated collections, and some personnel were unable to locate their collections altogether due to clutter in the collections storage area. Additionally, only 11 receive some measure of service, although on an irregular basis. Most of this consists of emptying garbage cans daily and sweeping floors on an as-needed basis. Information regarding maintenance was unable to be determined for three facilities.

3. Environmental Controls: Environmental monitoring and adequate environmental control, which consist of stable temperature and humidity readings, are critical for the long-term preservation of collections. Only two of the collections storage areas examined contain these types of controls. Most of the facilities are heated and air conditioned, but temperature fluctuations and lack of humidity controlling devices provide for unstable storage environments.

4. Security: Only half of the 18 collections storage areas meet the federal standards for the security of archaeological collections. Included in these standards are such measures as intrusion alarms, motion detectors, limited access to collections storage area, absence of windows in collections storage area, and locks on doors. Although all facilities were locked, there was one documented case of loss from unauthorized entry. Additionally, the isolated location of several facilities creates further security risks.

5. Fire Detection and Suppression: Only five of the 18 collections storage areas examined contain adequate fire detection and suppression systems, including smoke alarms, fire alarms, fire extinguishers, and a sprinkler system. Although not adequate protection, all facilities contain at least one fire extinguisher in the collections storage area. Because fire is a major hazard to any museum collection, strict prevention measures must be adhered to.

6. Pest Management: Pests play a major factor in the deterioration of archaeological collections. It is therefore imperative that repositories holding collections for long-term storage also maintain adequate pest management programs that incorporate both monitoring and control. Only four of the collections storage areas have rudimentary pest management programs, which usually consists of controlling rodents with traps, and chemical spraying for insects on a regular basis. The remainder of the collections storage areas deal with pest infestations on an as-needed basis.

Status of Artifacts

Approximately 493.4 ft^3 of artifacts were examined by the assessment team. None of the facilities have properly prepared federal artifact collections for long-term curation, although two are making advances in that direction. Over half (80%) of the artifacts have been cleaned, and 91% have been sorted. However, only 30% have been

labeled. Additionally, only two of the facilities employ full-time curators for the archaeological collections.

The majority of the primary containers (boxes that house a group of artifacts) consist of various-sized acidic cardboard boxes, although wood and metal containers were observed. Many are overstacked, compressed, and torn. Label information is inconsistent and may only include rudimentary information such as site number or date. Practices such as these lead to the loss of collection provenience, which in turn makes collection information irretrevable, and research almost impossible.

Forty five percent of the secondary containers (the receptacle closest to the artifact) consist of various types of plastic bags. Other types of containers observed include acidic paper bags, small acidic cardboard and plastic boxes, and plastic and/or metal film vials. The majority of the secondary containers are labeled directly in marker or pen, although some adhesive labels exist. The diversity of nonarchival secondary containers is contributing to the deterioration of many valuable collections.

The principal prehistoric material classes observed include lithics (37%), fauna (14%), and soil samples (6%), while major historic material classes consisted of fauna/shell (12%), metal (10%), brick (9%), other (7%), and glass (5%).

Status of Human Skeletal Remains

Human skeletal remains were encountered only at Fort Lewis. Remains consist of one individual, represented by a humerus. The bone itself is unlabeled and is housed in an acidic paper bag within an unlabeled acidic cardboard box. Partial rehabilitation (e.g., reboxing, rebagging) needs to be done in order to stabalize the remains, and a complete inventory of human remains, unassociated and associated grave goods, sacred objects, and items of cultural patrimony should be generated in order to comply with the Native American Graves Protection and Repatriation Act (NAGPRA, P.L. 101-601).

Status of Documentation

Approximately 67.8 linear feet of records were examined during the period July through October, 1993. Forty six percent of the records examined consist of paper records, followed by reports (28%), photographic records (16%), maps and/or oversized documents (7%), and machine readable records (3%). The full range of each type of expected archaeological record is represented at only 2 of the facilities visited. One explanation for this focuses on the fact that archaeologists and collections managers did not consider associated documentation a part of their curatorial responsibilities until relatively recently. The result is that portions of the recorded data for many of the collections cannot be located.

Attempts at minimal conservation practices have been made at most facilities, but archival-quality protocols were observed at none. Original

Table 1.
Summary of Collections Associated with Installations

Installation	Volume of Artifacts (ft^3)	Documentation (Linear Feet)
Admiral Baker Field	92.1	5.6
Camp Parks	0.3	0.3
Camp Roberts	—	0.2
Fort Hunter-Liggett	—	0.2
Fort Lewis	15.0	8.4
Vancouver Barracks	1.5	—
Yakima Training Center	51.0	3.4
Fort McArthur (Nike site)	—	0.3
George Air Force Base	—	1.5
NAF El Centro	—	0.1
NAS Pendleton	4.3	0.8
NAS Miramar	13.2	1.2
NAB Coronado	—	1.2
NAB San Diego	—	0.1
NRR Silver Strand (Coronado)	—	0.3
NRTF Chollas Heights	—	0.9
NAVSHIPYD Long Beach	—	0.1
Naval Space Surveillance	—	0.3
SUBASE San Diego	310.6	7.9
NWS Fallbrook	5.0	0.1
NWS Seal Beach (Fallbrook Annex)	0.4	0.6
SWDIVNAVFACENGCOM	—	34.3
Total	**493.4**	**67.8**

paper records at 10 of the facilities have not been duplicated. In most cases, photographic materials have not been isolated or stored in chemically inert sleeves. None of the records are housed in fire-proof cabinets. Most primary container labels consist of acidic paper tags or adhesive labels. Secondary container labels are more often directly labeled in pen or contain typed adhesive labels, neither of which are recommended procedures. It is evident that the records, which are an integral part of these collections, are receiving the worst treatment and are in the greatest danger of deterioration. Measures to correct this problem should be taken immediately before this written information is lost forever.

Status of Repository Management Controls

Three of the 11 facilities maintain accession records for the collections for which they are responsible. Also, only three of the facilities possess written records stating the location of collections within the storage areas. However, seven have never inventoried the collections in their care. Fundamental written policy and procedure statements for artifact curation, records management, inventories, loans, and deaccessioning are present at only one of the facilities. Only one of the facilities maintain written minimum standards for the acceptance of collections, while none of the places visited have field guidelines for the curation of archaeological collections, or published guides to the collections. It is notable that seven of the facilities enlist some form of computer database management for the collections in their care. Under these circumstances, it is evident that the collections are at considerable risk, and are not being cared for under the provisions in 36 CFR Part 79.

Corrective Actions

It is imperative that a number of corrective measures take place in order to bring these collections, and the facilities housing them, into compliance with 36 CFR Part 79. Several general recommendations include the following:

1. Coalesce collections into one federally owned repository, or distribute them into existing facilities in their state of origin and spend necessary funds to upgrade them.
2. Develop cooperative agreements with other agencies to share costs of capital improvements and collections rehabilitation.
3. Use archival-quality containers to rebox and rebag existing collections.
4. Design and implement formal archives-management programs.
5. Develop and enact consistent artifact-inventory procedures.

6. Consider employing full-time curators to care for the archaeological collections and associated records.

Conclusions

Each recommendation may not be readily attainable. However, some action is necessary immediately as the collections are deteriorating in their current storage environments, and there are no long-term plans for curation of archaeological collections and associated records at any of the facilities. If not properly cared for, these federal collections will lose their educational and research value. Any improvements will more sufficiently preserve the collections and help insure that they will be useful to future generations.

Acknowledgements

The entire staff of the St. Louis District should be commended for their parts in the fieldwork and report editing that led to the completion of these curation-needs assessments. We are grateful to the following individuals for the time, effort, and contributions they made to the completion of the curation-needs assessments at the institutions/agencies listed below.

FORT LEWIS, TACOMA, WASHINGTON

Cathy Jerbic, Environmental Office, Building 4301

NSB SAN DIEGO,
SAN DIEGO, CALIFORNIA

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1

Introduction

The St. Louis District performed curation needs assessments for Fort Lewis, NSB San Diego, SWDIVNAVFACENGCOM, and NWS Fallbrook. Assessments were conducted at 11 facilities in California and Washington during the period of July through October 1993 as part of a national study of the curation problems plaguing Department of Defense archaeological collections (archaeological materials and associated documentation). This responsibility is mandated by the Antiquities Act (16 U.S.C. 431 et seq.), the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.), the Archaeological Resources Protection Act, as amended (16 U.S.C. 470aa et seq.), and 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections.

In 1990 the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.)(NAGPRA) was enacted to identify Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony in archaeological collections, and to foster communication between federal agencies and Indian Tribes, Alaskan Natives, and Native Hawaiian organizations on the disposition of these remains and objects. All federal agencies are required to meet mandated deadlines for compliance with NAGPRA. A summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed by November 16, 1993. An inventory of human remains and associated funerary objects was to be completed by November 16, 1995.

In April 1993, the St. Louis District submitted a proposal to the Legacy Resource Management Program for funds to conduct a regional curation study to determine the present condition of Department of Defense (DoD) archaeological collections and to evaluate the facilities with these collections. The curation study began in southern California and progressed north to Washington. These examinations produced evidence documenting widespread deterioration and neglect of many federal archaeological collections currently housed in facilities on the west coast.

A report that provides a general inventory of federal archaeological collections stored in California and Washington and furnishes a reliable estimate of the magnitude of the curation needs surrounding these collections is the result of this curation study. A final report detailing the results of the evaluation includes the following.

1. Physical description of all repository facilities.
2. Physical description of all archaeological materials.
3. Physical description of all associated documentation.
4. Recommendations for compliance with the requirements of 36 CFR Part 79.

A master bibliography of reports associated with the archaeological collections is provided.

As part of a curation-needs assessment the St. Louis District visits each installation to examine any reports, records, or inventory data associated with the archaeological collections, and develops an annotated bibliography of reports that includes a list of the associated collections and their present location.

Methods

Eleven facilities, encompassing 18 separate collections storage areas, were evaluated during the curation needs assessments. Each repository was visited as follows.

July 19-23, 1993—Fort Lewis

July 26-29, 1993—NSB San Diego

August 16, 1993—SWDIVNAVFACENGCOM

August 17, 1993—NWS Fallbrook

August 18, 1993—SDSU

August 19, 1993—Affinis Environmental Services

August 20, 23-26, 1993—OGDEN Environmental and Energy Services

September 13, 1993—Gallegos and Associates

September 14, 1993—ARS

September 19, 1993—RECON

September 23, 1993—JSA

Pre-Fieldwork Investigation

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

1. A National Archeological Database search and a general literature review at the records centers in each specific state were performed for each project.
2. Initial contacts were made with all personnel and agencies likely to be knowledgeable about the location of DoD collections.
3. From these initial contacts, a list was developed of all contracting agencies and facilities associated with the recovery or curation of federal archaeological collections on the west coast.

Field Inspection and Assessments of Facilities and Collections

A survey questionnaire, soliciting information on repositories, archaeological materials, and associated documentation, was completed for every facility visited. A building evaluation form was completed for every facility and satellite repository involved with the curation of archaeological collections associated with these four installations. Information was collected on structural adequacy, space use, environmental controls, security, fire detection and suppression, pest management, and utilities. These data permitted the determination of whether or not the facility was in compliance with the physical requirements for repositories as specified in 36 CFR Part 79.

A physical examination was performed of all project and site reports, administrative files, field records, curation records, electronic media, and photographic records to determine their presence or absence, the total length of each type of record, the physical condition of the containers and the records, and the overall condition of the storage environment. The status of the facility compliance with 36 CFR Part 79 is based on this research.

A physical examination was conducted of all archaeological collections. The assessment included the examination of (1) primary and secondary containers, (2) the degree of container labeling, (3) the extent of laboratory processing, (4) the material classes included in each collection, and (5) the condition of any human skeletal remains. Primary containers hold an individual artifact or a group of artifacts. These include acidic and acid-free cardboard boxes, cardboard, metal, or wooden trays, and wooden and metal drawers. Secondary containers are the closest receptacle to the artifact and can include acidic paper bags, plastic sandwich bags, plastic zip-lock bags, glass jars, film vials, aluminum foil, and small acidic and acid-free cardboard boxes.

NAGPRA-Compliance Assessment

To satisfy the requirements of NAGPRA, the following tasks need to be performed at each repository with military collections.

1. Conduct a records search to identify the location of human remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.
2. Perform a search of the archaeological materials to document human skeletal remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.
3. Conduct an analysis of human skeletal remains that includes (a) a detailed skeletal inventory listing elements present, their completeness, and condition, (b) measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature, and morphology of the skeletal remains, (c) estimates of age and sex, and (d) observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide information to determine the cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each installation.

Report Preparation

The report includes descriptions of the facilities, estimates of the size of each collection, and an assessment of their condition. Also included are recommendations for the rehabilitation of the facilities and/or the collections, according to 36 CFR Part 79.

Chapter Synopsis

Chapters 2 through 12 discuss the general state of DoD archaeological collections located in California and Washington. Each chapter contains a summary of each repository, a detailed examination of the facility and the collections, and recommendations for the rehabilitation of the facilities and/or collections. Chapter 13 is the Findings Summary and Chapter 14 includes general recommendations.

2

Fort Lewis

Tacoma, Washington

Installation Summary

Volume of Archaeological Materials: 67.5 ft^3
On Base: 67.5 ft^3
Off Base: None

Compliance Status: Archaeological materials at Fort Lewis also contain material from Yakima Training Center and Vancouver Barracks, subinstallations of Fort Lewis. The archaeological materials require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 11.8 linear feet
On Base: 11.8 linear feet
Off Base: None

Compliance Status: Associated records require complete rehabilitation to comply with existing federal guidelines and standards for modern archival preservation.

Human Skeletal Remains: Partial remains of one individual are present in the collections at Fort Lewis.

Status of Curation Funding: There is no funding available for curation.

Introduction

DATE OF VISIT: July 19–23, 1993

PERSON CONTACTED: Cathy Jerbic, Environmental Office, Directorate of Engineering and Housing, Building 4301

Fort Lewis is located near Tacoma, Washington, and was designated a permanent military post in 1927. Three subinstallations in Washington are currently under its command—Vancouver Barracks, Camp Bonneville, and Yakima Training Center. Approximately 67.5 ft^3 of archaeological materials and 11.8 linear feet of associated documentation from projects conducted at Fort Lewis, Vancouver Barracks, and Yakima Training Center are stored in several temporary locations at Fort Lewis (Table 2).

Table 2.
Approximate Amount of Artifacts and Records at Fort Lewis

Installation	Artifacts (ft^3)	Records (Linear feet)
Fort Lewis	15	8.4
Yakima Training Center	51	3.4
Vancouver Barracks	1.5	–
Total	**67.5**	**11.8**

Material classes in these collections include prehistoric chipped stone, ceramics, faunal remains, botanical remains, soil, ^{14}C samples, human skeletal remains, and historic ceramics, glass, metal, worked bone, and faunal remains. Human skeletal remains from one individual are present in the collections from Fort Lewis. All the collections stored at Fort Lewis were examined (Tables 3, 4 and 5) by the assessment team.

Table 3.
Material Class Percentages Collections from Fort Lewis

Material Class	%
Prehistoric	
Chipped Stone	23
Soil Samples	15
Faunal Remains	2
Ceramics	1
Botanical Remains	1
^{14}C Samples	1
Human Skeletal	1
Historical-Period	
Metal	30
Glass	11
Ceramics	7
Brick	3
Faunal Remains	2
Worked Bone	1
Mixed	1
Other	1
Total	**100**

Table 4.
Material Class Percentages in Collections from Vancouver Barracks

Material Class	%
Prehistoric	
Chipped Stone	85
Botanical Remains	5
Historical-Period	
Metal	9
Other	1
Total	**100**

Table 5.
Material Class Percentages in the Collections from Yakima Training Center

Material Class	%
Prehistoric	
Chipped Stone	67
Soil Samples	11
Faunal Remains	7
Other	7
Botanical Remains	3
^{14}C	1
Mixed	1
Historical-Period	
Metal	1
Glass	1
Ceramics	1
Worked Bone	1
Mixed	1
Other	1
Total	**100**

Repository

Collections from Fort Lewis, Vancouver Barracks, and Yakima Training Center are stored in several locations on Fort Lewis. Artifacts were moved from a forestry warehouse storage building (T1214) into the Fort Lewis Military Museum prior to the visit. The rest of the archaeological materials are stored in an old veterinary building (T4294) and were moved into the Fort Lewis Military Museum during this visit. The archaeological materials will be kept at the Fort Lewis Military Museum until a permanent storage facility is designated and will not be returned to the forestry warehouse or the old veterinary building. However, the forestry warehouse and the old veterinary building are still discussed here because no permanent storage facility is designated and there is a possibility that these building might once again be used to store collections.

Figure 1. Exterior view of the Fort Lewis Military Museum.

Repository 1—Fort Lewis Military Museum

The Fort Lewis Military Museum is a four-story building, three above grade and one below grade, located on Fort Lewis (Figure 1). The 70,000 ft^2 building contains exhibit areas, temporary archaeological material storage areas, materials/supplies storage areas, a records

and photographic storage room, offices, mechanical rooms, and restrooms. At the time of visit, the collections were temporarily stored in a 500 ft^2 room on the first floor that was recently renovated.

Repository 2—Forestry Warehouse Building T1214

Building T1214 is a single-story facility on Fort Lewis that is used to store forestry supplies and equipment, along with miscellaneous materials (Figure 2). The building contains loading docks, hazardous material storage areas, materials/supplies storage areas, and workshop areas. Prior to the visit, archaeological collections were stored in a small, 75 ft^2 storage room on the west side of the building.

Figure 2. Front view of Forestry Supply Repository (Building T1214) at Fort Lewis.

Repository 3—Veterinary Building T4294

Building T4294 is a single-story, 600 ft^2 brick facility on Fort Lewis that currently is used for the storage of miscellaneous items (Figure 3). At the time of evaluation, archaeological collections were being stored in this single-room structure.

Figure 3. View of Veterinary Building (T2494) at Fort Lewis.

Structural Adequacy

Repository 1—Fort Lewis Military Museum

Built in 1917, the building was originally constructed by the Salvation Army as an inn for World War I soldiers. It was later purchased by the Army for one dollar and in 1979 was placed on the National Register of Historic Places. Many internal renovations have since taken place, and the building now serves as a military museum. It has a concrete foundation, asphalt and shingled roof, and wooden exterior walls covered with asbestos siding. A new roof was added in 1989, and the plumbing, electrical, and heating systems date from the early 1970s.

The collections storage area has a wood floor covered with linoleum, plasterboard walls, and a suspended acoustical tile ceiling. Five wooden-framed windows are located in the collections storage area—four facing the north and one facing west. However, all are completely covered on the inside with wire fencing and particle board in a metal frame that is bolted to the interior wall. One double, wood-panel door on the east wall of the collections storage area leads to the interior of the building. Two other doors in the collections storage area—one double, wood-panel door on the east side of the room and one single, wood-panel door on the north side of the room—lead to the exterior of the building. Each of these exterior doors has inset windows secured with wire mesh.

Repository 2—Forestry Warehouse Building T1214

Built in 1917, Building T1214 was constructed as a temporary wood structure. It served as a storage facility for material received from rail cars delivering shipments to the rear of the building. The building is used as a workshop and storage area for everything from macaroni, lumber, signs, and fencing to fire-fighting chemicals, propane tanks, and hazardous waste barrels. The building has a concrete foundation, exterior wood walls, and a shingled roof. The roof was replaced within the last fifteen years. However, several water stains were noted on the ceiling. The repository has one single, wood-panel door and one double wood-panel door that leads to the exterior of the building. Eight sliding, wooden loading-dock doors are on the north and south walls. All existing exterior windows are covered with wire mesh.

The archaeological collections storage area is a small room constructed on the north wall of the building. It has a wooden floor and particle-board walls and ceiling. Storage of heavy equipment and supplies above the room has caused partial collapse of the ceiling resulting in a large hole. One boarded, exterior window with a wooden frame, approximately three feet square, is located on the east wall of the room. One hollow wood-panel door on the west wall leads to the interior of the building. During the visit, fire-fighting equipment, herbicides, and fertilizer were stored in the room.

Repository 3—Veterinary Building T4294

The single-room, single-story building has a concrete foundation and was constructed in the 1930s. Exterior walls are made of wood, brick, and concrete blocks, whereas interior walls are constructed only of brick. The ceiling is made of fiberboard, and the roof is covered with clay tile. Many of the tiles are broken from vandalism. The vandalized tiles have created several leaks in the roof. Much of the ceiling has experienced water damage and is covered with mold. The building was originally built to serve as a veterinary clinic, but is now used for storage. Urinals, refrigerators, glass, and a pot-bellied stove are stored with the archaeological collections.

Six windows in wooden frames measuring approximately 4 feet wide by 5 feet high are located within the repository, two on the north wall and four on the west wall. All windows are covered with plywood and wire mesh, and have no glass. The repository has one exterior door—a single wood door on the east wall.

Environment

Repository 1—Fort Lewis Military Museum

Heat and humidity are controlled in certain sections of the museum, most notably in the exhibit areas and the existing collections storage area. However, environmental controls are absent above the second floor because these floors have not been renovated.

Repository 2—Forestry Warehouse Building T1214

No environmental controls exist for the repository. Incandescent bulbs provide the only light in the collections storage area. The collections storage area is not maintained (cleaned) regularly.

Repository 3-Veterinary Building T4294

No environmental controls exist for this repository. Two incandescent bulbs provide the only light for the repository/collections storage area. The building is not maintained.

Pest Management

Repository 1—Fort Lewis Military Museum

The building is sprayed for insects on an as-needed basis by the pest management office. However, no monitoring for insects or rodents takes place. No signs of infestation by rodents or insects were noted.

Repository 2—Forestry Warehouse Building T1214

The building is sprayed for insects by request to the pest management office. No monitoring for rodents or insects takes place and spiders were noticed in the collections storage area.

Repository 3—Veterinary Building T4294

No program for pest management exists for the repository. Spiders also are in the building.

Security

Fort Lewis is a closed military installation. All visitors must register at the front gate and must also display a government sticker or visitor pass on their cars.

Repository 1—Fort Lewis Military Museum

Security for the building and the collections storage area consists of an intrusion alarm (Figure 4) on exterior doors wired into the military police station, motion detectors, and controlled access. All doors have dead-bolt locks and key locks. All windows are equipped with window locks or are secured with galvanized heavy-duty metal fencing and particle board.

Figure 4. Fort Lewis Military Museum security system.

Repository 2—Forestry Warehouse Building T1214

The front door to the building is secured by a key lock and controlled access. Additionally, some of the loading dock doors are secured by padlocks. However, several of these doors are safeguarded only by a metal pin inserted into the metal latch (Figure 5). Windows are covered by wire mesh or metal fencing and are secured by window locks. Several of the windows are covered by boards. Access to the collections storage area is controlled and the door is also secured with a padlock.

Figure 5. Security noted on Building T1214.

Repository 3—Veterinary Building T4294

Security consists of a padlock on the east door and controlled access. All windows on the building are covered with wire mesh and plywood.

Fire Detection and Suppression

Repository 1—Fort Lewis Military Museum

One fire extinguisher is located next to the east interior door in the collections storage area. It was inspected in 1990. The room is equipped with a sprinkler system. Manual fire alarms, fire extinguishers, sprinkler systems, smoke detectors, and fire alarms are wired into the fire department. They are present throughout the building. The building also is equipped with fire walls and fire-rated doors in strategic locations.

Repository 2—Forestry Warehouse Building T1214

The building is equipped with a manual fire alarm wired into the fire department. A fire extinguisher, last inspected in 1984, also is located in the building. No fire detection or suppression device is present in the collections storage area.

Repository 3—Veterinary Building T4294

No fire detection and suppression devices are present in the repository.

Archaeological Material Storage

Storage Units

Repository 1—Fort Lewis Military Museum

The final location for the collections in Repository 1 was not determined. At the time of the visit, boxes with archaeological materials were stored on the floor.

Repository 2—Forestry Warehouse Building T1214

Prior to the visit, boxes of archaeological materials were stacked on the floor in the middle of the collections storage room.

Repository 3—Veterinary Building T4294

At the beginning of the visit, boxes with archaeological materials were stacked on the cement floor and/or on a piece of plywood on the floor (Figure 6).

Figure 6. Fort Lewis collections stored on floor in Building T4294.

Primary Containers

Primary containers consist of various-sized acidic cardboard boxes with telescoping or flap lids. Boxes are labeled, either directly or on an adhesive label, with marker. Labels contain the project name, site numbers, and/or provenience information. Several of the boxes are unlabeled. Most of the boxes are compressed, dirty, and/or torn (Figure 7). Insect remains were noted in several of the boxes.

Figure 7. Severely compressed secondary containers for Fort Lewis collections.

Secondary Containers

Several types of secondary containers contain archaeological materials (Figure 8). Plastic bags (42%) are secured with zip-lock closures. Paper bags (46%) are folded. A variety of nested containers store artifacts within many of the secondary containers. These include plastic vials, paper envelopes, plastic bags, and aluminum foil. Secondary containers are labeled, either directly or on an adhesive label, with marker, pen, and/or pencil. Some of the secondary containers are torn or dirty and have inconsistent label information.

Figure 8. Several types of secondary containers contain archaeological materials.

Laboratory Processing and Labeling

Approximately one half (55%) of the artifacts are clean. The majority (67%) of the artifacts are sorted by material class. Only 12% of the artifacts are labeled. Labeling consists of direct ink on correction fluid, sometimes covered with nail polish.

Human Skeletal Remains

The skeletal remains of one individual, consisting of one humerus, are housed with the archaeological materials at Fort Lewis. The humerus, which is in fair condition, is unlabeled and stored in a paper bag housed in an unlabeled box.

Records Storage

Approximately 11.8 linear feet of associated documentation from Fort Lewis and Yakima Training Center are stored in two locations within the Directorate of Engineering and Housing (Table 6). Bound reports, administrative records, catalogs, and contracts are stored in Cathy Jerbic's office; oversized maps are stored in Room 24.

Table 6.
Major Classes of Documentation by Installation in Linear Feet

Installation	Paper Records	Photographic Records	Maps and/or Oversized Records	Reports	Total
Fort Lewis	3.5	0.8	0.8	3.3	8.4
Yakima Training Center	2.1	–	0.3	1	3.4
Total	**5.6**	**0.8**	**1.1**	**4.3**	**11.8**

Paper Records

Paper records consisted of 5.6 linear feet of associated documentation stored at Fort Lewis. Records include contracts, correspondence, analysis records, field notes, and other miscellaneous administrative records.

The majority of the paper records are stored in an office in Building 4301 (Figure 9). One acidic, flap-lid box is used to store contracts and administrative records under a desk. This box has a paper label taped to the box that describes the contents. Records in this box are in acidic manila file folders. Each folder is labeled in marker, typed, and/or in pencil with the contents. Contaminants, such as metal clasps and staples, are found in many of the contracts. The rest of the paper records are stored on two wooden, adjustable, 6.5-feet-high shelves against the wall of the office. These are in plastic, three-ring binders labeled with a marking pen on an adhesive paper label.

Figure 9. The majority of the paper records for Fort Lewis archaeological collections are stored in an office in Building 4301.

Additionally, some records are stored in two artifact boxes. These include field notebooks, analysis records, and background records. Secondary containers consisted of one manila folder; the remaining records are stored loose in the box. The folder is labeled directly in pencil with the contents.

Photographic Records

Approximately 0.8 linear foot of photographic records are stored in three locations. A manila envelope and folder contain negatives, aerial photographs, and photographs (Figure 10). Slides are stored in small plastic-and-cardboard boxes in an office.

Figure 10. Condition of Fort Lewis photographic documents (note curling edges).

Several aerial and building photographs are stored in three drawers of two map cases in Room 24 of Building 4301. Some of the photographs are labeled in marker with the subject. Photographs are stored either in acidic manila folders or loose in the drawer.

Several black-and-white, 4x6 inch and 8x10 inch photographs were found in a manila folder in an artifact box. The folder is labeled in pencil with the contents. The photographs, which are curling at the edges, are labeled with a stamp containing the date, the subject, and the photographer.

Maps and/or Oversized Documents

Approximately one linear foot of maps and oversized documents are stored Room 24 in Building 4301 in two metal map cases. Each case contains five drawers and is located along the wall of the room. Each case measures 3x2x1.5 feet. Drawers are unlabeled and are approximately 2.5 inches high. Archaeological documents from Fort Lewis and Yakima Training Center are stored in five of the 10 drawers. Most documents are original. General post maps, site maps, stratigraphic profile maps, vegetation maps, quadrangle maps, blueline maps, architectural maps, topographic maps, title documents, road maps, and homestead claim maps are stored in these map drawers. Most maps are stored flat in the drawers, although some maps are rolled and secured with rubber bands. Maps are not organized and are in fair to good condition. Several records exhibited tears, discoloration, and/or embrittlement.

Reports

Approximately 4.3 linear feet of bound reports are stored on two shelves of an adjustable shelving unit (6.5 feet high) made from wood in an office in Building 4301. The reports are organized by installation and appear to be in good condition. Reports are bound in plastic three-ring binders, with paper covers and metal clasps. Some of the reports have tears and contaminants such as paper clips and staples.

Collections Management Standards

Fort Lewis is not a permanent curation facility and therefore has no registration procedures or written policies and procedures. Movement of these materials to a permanent curation facility with these standards is be a high priority for Fort Lewis.

Latest Collection Inventory

An inventory of the collections at Fort Lewis has never been completed. However, all collections received from contractors are inventoried by the contractor before they are sent to Fort Lewis.

Curation Personnel

Fort Lewis does not have a full-time curator for archaeological collections.

Curation Financing

No financing is available for curation.

Access to Collections

Museum personnel have access to the collections. No policy exists on access to the collections since no requests have ever been made.

Future Plans

An unrenovated wing of the Fort Lewis Military Museum set up to American Association of Museum standards may be used as a storage facility.

Comments

1. Buildings T1214 and T4294 are not adequate for the storage of archaeological collections. A suitable, permanent storage facility needs to be designated. The following contribute to the inadequacy of these buildings.

   a. A lack of environmental controls and regular maintenance programs.
   b. A lack of proper security systems.
   c. A lack of proper fire detection and suppression systems.
   d. A lack of proper pest management systems.

2. Archaeological collections should not be stored with food, chemicals, hazardous waste, and lumber. These materials contribute to the deterioration of collections by attracting insects or directly harming the collections.

3. No permanent repository for the collections has been designated.

4. Primary and secondary containers for the collections are unstable and are not suited for storing archaeological collections.

5. Not all the artifacts are cleaned, sorted, and labeled.

6. Not all records are stored archivally.

7. No registration policies or procedures exist for the collections.

8. There is no full-time curator and no financing is available for the curation of collections.

Recommendations

1. Designate a permanent archaeological curation facility with proper fire detection and suppression, pest management programs, environmental controls, and security.

2. If the collections cannot be moved, implement the following minimal procedures in Buildings T1214 and T4294 to prevent further deterioration of the collections.

   a. Install a system that controls and monitors temperature and humidity.

   b. Install security measures that include intrusion alarms wired into the military police station and motion detectors.

   c. Implement a proper pest-management program that includes monitoring and control.

   d. Install a fire-detection-and-suppression system that includes smoke alarms wired into the fire department, sprinkler systems, and fire extinguishers.

   e. Remove all hazardous chemicals, food, and other items detrimental to archaeological collections from the archaeological storage areas.

3. Rehabilitate and prepare all artifacts should be rehabilitated and prepared for long-term storage according to federal guidelines and standards and modern curation procedures.

   a. Legibly label all artifacts in indelible ink.

   b. Repackage artifacts in 4 mil, polyethylene, zip-lock bags.

   c. Place archaeological materials into acid-free boxes.

   d. Place tags made from spun-bonded paper (e.g., Nalgene polypaper) and labeled in indelible ink into the polyethylene zip-lock bags.

4. Create a comprehensive archives program. Prepare all associated records for long-term storage according to federal guidelines and standards and modern archival procedures. Minimally, implement the following procedures to protect and preserve the records.

   a. Duplicate all paper records onto acid-free paper, store the records in acid-free folders, and place the duplicate copies in a separate, fire-safe, secure location.

   b. Place all photographic materials in archival polypropylene sleeves or other approved archival storage containers.

   c. Remove all contaminants (e.g., staples, paper clips, rubber bands) from records.

5. Hire a full-time curator for the archaeological collections or place the care of the collections under the responsibility of an experienced curator.

6. Formulate and implement policies and procedures for the care and storage of archaeological collections.

Report Related to Archaeological Investigations at Fort Lewis and Yakima Training Center

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3

Naval Submarine Base, San Diego

San Diego, California

Installation Summary

Volume of Archaeological Materials: 310.6 ft^3
On Base: 225ft^3
Off Base: 85.6 ft^3 (SWDIVNAVFACENGCOM [Chapter 4]
Ogden Environmental [Chapter 8])

Compliance Status: Time constraints permitted the examination of only 161 ft^3 (71%) of the on-base-total (225 ft^3). Archaeological materials require partial rehabilitation to comply with existing federal guidelines and standards for curation. All artifacts should be cleaned and stored in acid-free containers and 4 mil, zip-lock polyethylene bags.

Linear Feet of Records: 7.8 linear feet
On Base: 5.2 linear feet
Off Base: 2.6 linear feet (Ogden Environmental [Chapter 8] and
Gallegos and Associates [Chapter 9])

Compliance Status: All of the associated records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Paper records should be stored in acid-free folders, photographic records should be stored in archival-quality polypropylene plastic sleeves, and maps and/or oversized records should be stored flat between acid-free paper/board in map flats.

Human Skeletal Remains: No human skeletal remains are included in the collections from NSB San Diego.

Status of Curation Funding: Curation activities are financed through nonprofit and grant fund-raising activities by the Fort Guijarros Museum Foundation, a nonprofit organization. The collections and storage facility are owned by the Navy. A volunteer provides basic curation services.

Introduction

DATE OF VISIT: July 26–29, 1993

PERSON CONTACTED: Jeannette Buhler and Ron May

Of the total 225 ft^3 of archaeological materials associated with NSB San Diego, 161 ft^3 (Table 7) and 5.2 linear feet of associated records were examined. Although this sample did not include prehistoric materials (Table 8), there are prehistoric sites at NSB San Diego. Most (84%) of the NSB San Diego archaeological materials are stored in Building 127 on NSB San Diego, whereas some artifacts and all associated records are kept at the home of a volunteer.

Table 7.
Material by Project or Site in Sample

Repository	Project/Site Name	Artifacts (ft^3)
NSB San Diego, Building 127	Fort Guijarros	86
	SDi-48	1
	Ballast Point Lighthouse	22
	BP-SAR (Beach Collection)	17
Volunteer's Home	Ballast Point Lighthouse	35
Total		**161**

Table 8.
Material Class Percentages in the Sample

Material Class	Building 127	Volunteer's Home
Historical-Period		
Chipped Stone	3	–
Ceramic	2	–
Glass	8	3
Metal	13	35
Worked Bone	7	–
Faunal Remains/Shell[1]	25	35
Brick	21	10
Leather	4	–
Botanical Remains	1	–
Soil Samples	1	–
Other	15	17

[1] Most of the historical-period faunal remains/shell stored in Building 127 is faunal remains. All of the historical-period faunal remains/shell stored at the home of the curation volunteer consists of shell.

Repository

Figure 11. Building 127 at NSB San Diego.

Collections recovered from NSB San Diego are stored in two facilities—the majority (84%) are stored in Building 127, whereas the rest are stored in a volunteer's home in San Diego, California. No building evaluation was performed at the volunteer's because it is a private residence; however, artifacts and records were examined. The home lacks environmental controls and is inadequate to store archaeological collections.

Building 127 is a single-story 684 ft^2 building (Figure 11). Half is used for artifact processing and as a storage area. The other half is used as storage space for the Navy Construction Battalion.

Structural Adequacy

Building 127 was originally constructed in 1939, and prior to its current use, it was renovated for use as a racquetball court. Since then, additional renovations have divided the building in half. The roof, which was replaced in 1983, is constructed of asphalt shingles. The building has a concrete slab foundation and exterior wood siding walls. The interior wall separating the two storage areas is covered with plasterboard, whereas the remaining three walls are covered with painted plywood. The floor is constructed of an unsealed concrete slab that has cracked. There are no windows in the artifact processing/storage area. One exterior wood panel door exists on the southwest wall. The electrical system was upgraded in the late 1980s. There is no running water. The artifact processing/storage area is filled to capacity. There are full artifact boxes stacked on the floor and under tables.

Environment

Temperature and humidity controls are not present in Building 127. Lighting is fluorescent with non-ultraviolet shields covering the tubes. The windowless construction of the building protects the collections from outside sources of ultraviolet radiation. Building 127 is maintained monthly by staff from NSB San Diego.

Pest Management

No integrated pest-management program exists for Building 127. If pests become a problem, a professional pest-management company is contacted. As a partial preventive measure, silverfish pesticide packs are placed randomly on the shelves and floor. However, several silverfish were seen during the visit. Spider webs are located near the door of the storage area and in corners of the room and a spider crawled under a box on the floor.

Security

The only type of security at Building 127 is a key lock on the door. Ms. Buehler, Mr. May, and Base security are the only people with keys. NSB San Diego is a closed base. All visitors must register at the front gate and receive a pass to enter. Military police patrol after normal work hours.

Fire Detection and Suppression

No fire-detection or -suppression systems exist within the artifact processing/storage area. However, a manual fire alarm is located outside on a pole approximately 15 feet from the north side of Building 127.

Archaeological Material Storage

Repository 1—Building 127

Several types of storage units are used to store the archaeological collections. Collections in boxes are stored on various-sized homemade wooden shelving units constructed of ¾" plywood that line the north and south walls, a wooden table located against the east wall, and boxes stacked on the concrete floor (Figure 12). The shelving units are four different sizes (length x width x height): 4x1.3x4 feet; 3.3x1x4.1 feet; 4x2x3.5 feet; and 4x2x4.1 feet.

The shelving units that are one foot wide are stacked on top of units that are two feet wide. Collections being processed are stored on top of two wooden tables in the center of the room.

Figure 12. Storage units for collections in Building 127 at NSB San Diego.

Repository 2—Volunteer's Home

Boxes are stacked on the floor against the walls of the dining room.

Primary Containers

Repository 1—Building 127

Primary containers for collections stored in Building 127 include 1 ft^3 acidic cardboard boxes with telescoping lids and built-in handles and 1 ft^3 wooden boxes with nailed-on lids. Cardboard boxes, which are on the upper shelves, contain miscellaneous artifacts. Wooden boxes are stored on the lower shelves and contain architectural elements. Some of the primary containers were not examined

because they were either inaccessible on the uppermost shelves or too heavy to remove from the shelves.

Box labels for material stored in the acidic cardboard boxes consist of acid-free tags inserted into polyethylene plastic zip-lock bags (Figure 13). The plastic label holders are affixed to the boxes by string looped through a hole in the lip of the bag and around the box handle. Label information, which is computer generated, consists of the site name, the general box contents, and the provenience. The wood boxes with architectural materials have computer generated labels affixed to the front of each box with cellophane tape. Label information consists of the site name, the contents, and a statement mentioning that these materials are in need of processing.

Figure 13. Type of box label used for NSB San Diego collections.

Repository 2—Volunteer's Home

Materials are stored in various-sized acidic cardboard boxes, some with telescoping lids and some without lids. Although none of the primary containers were labeled, staff at NSB San Diego noted that the material belonged to the Ballast Point Lighthouse collection.

Secondary Containers

Repository 1—Building 127

Archaeological materials are stored in four types of secondary containers (Table 9). Most of the secondary containers (78%) are stored in the acidic cardboard boxes that are directly labeled with marker or pen and contain interior paper labels. Label information consists of some combination of the site name/number, the provenience, the catalog number, and the container contents. Most of the artifacts in the wood boxes are wrapped in bubble wrap and secured with cellophane tape, newspaper, and/or paper towels. Almost all of the artifacts are unlabeled.

Table 9.
Percentage of Secondary Containers in the Collections at NSB San Diego

Secondary Container	Building 127	Volunteer's Home
Zip-Lock Plastic Bags	75	92
Paper Bags	2	–
Loose in Box	3	8
Wrapped in bubble wrap, newspaper, and paper towels	20	–
Total	**100**	**100**

Repository 2—Volunteer's Home

Secondary containers consist of zip-lock plastic bags (92%) and artifacts loose in boxes (8%). Some secondary containers are overpacked, and most are directly labeled with marker.

Laboratory Processing and Labeling

Most of the artifacts are cleaned (85%) and sorted (90%) by material class and by provenience within material class. However, only a minority of the artifacts are labeled (13%). Artifacts are labeled directly, with labels placed on correction fluid covered with clear nail polish.

Human Skeletal Remains

No human skeletal remains were encountered.

Records Storage

All of the associated documentation (Table 10) examined is stored in the volunteer's home. Records were available for three of the five collections—Ballast Point Lighthouse, BP-SAR, and Fort Guijarros. The documentation included seven videotapes with scenes of archaeological fieldwork from NSB San Diego. No contract reports exist because all archaeological work performed on NSB San Diego is by volunteers. Published information includes progress reports and articles on the history of Ballast Point and NSB San Diego, published by the Fort Guijarros Museum Foundation in *The Fort Guijarros Quarterly*.

Table 10.
Major Classes of Documentation in Linear Feet

Project Name	Paper Records	Photographic Records	Maps/Other Documents	Audiovisual Records	Total
Ballast Point Lighthouse	0.6	–	–	0.3	0.9
BP-SAR	0.8	0.2	–	–	1.0
Fort Guijarros	2.5	0.5	0.3	–	3.3
Total	**3.9**	**0.7**	**0.3**	**0.3**	**5.2**

Paper Records

All paper records are stored on an open metal shelving unit in the dining room of the curation volunteer. The shelving unit is 3x1x5 feet (length x width x height). Records are arranged by project and include field notes and excavation records. Paper records are contained in acidic ledger notebooks, spiral notebooks, and/or plastic three-ring binders. Notebooks are directly labeled and include the project name, the year, and content information. For security reasons, the volunteer does not allow the records to be taken out of the house. None of the paper records are duplicated, although there are plans to create acid-free photocopies for storage at NSB San Diego. Paper records are in good condition.

Photographic Records

Less than one linear foot (0.7) of photographic records from the BP-SAR and Fort Guijarros projects is stored on the open metal shelving unit in the volunteer's dining room. The photographs, which include black-and-white prints, negatives, and slides, are stored in non-archival sleeves in three-ring binders arranged by project. Negatives and slides are contained in acidic envelopes and slide boxes within hard, plastic, shoe-box-sized containers with telescoping lids.

Maps and/or Oversized Documents

Cartographic records (0.3 linear feet) exist for the Fort Guijarros project. These materials, which include historic maps of NSB San Diego and site maps of Fort Guijarros, were originally rolled and secured with rubber bands and stored in boxes on the floor. They were unrolled for examination. The maps are in fairly good condition, although several are brittle and slightly torn.

Audiovisual Records

Seven videotapes (0.3 linear feet) documenting fieldwork at Ballast Point Lighthouse and Fort Guijarros are also present in the volunteer's home. The videotapes are stored in acidic cardboard sleeves with the other documentation on the open metal shelving unit.

Collections Management Standards

Registration Procedures

Accession Files

Material is cataloged during artifact analysis.

Location Identification

NSB San Diego is in the process of compiling a box list that will include shelf storage number.

Cross-indexed files

The master catalog is cross-indexed to specific artifact bags.

Published Guide to Collections

NSB San Diego has not published a guide to the collections.

Site-Record Administration

The Smithsonian Institution trinomial system is used.

Computerized DataBase Management

The MINARK V5 microcomputer database program is currently used. However, it is not a collections management software program. NSB San Diego plans to hire a contractor to design a suitable collections management database system.

Written Policies and Procedures

Minimum Standards for Acceptance

NSB San Diego does not have written policies on standards for acceptance of collections.

Curation Policy

An artifact code book is in preparation and plans for a computer database program and long-term archaeological material storage are being made.

Records-Management Policy

NSB San Diego does not have a written policy for records management.

Field-Curation Guidelines

The Fort Guijarros Museum Foundation will not accept material from outside NSB San Diego.

Loan Procedures

There is no written loan policy. Material is not loaned for exhibit purposes, but considerations are made for research purposes. If collections are needed for student research, it is by appointment only, and the volunteer stays with the individual examining the material. A letter of agreement is required if the collection is removed from NSB San Diego.

Deaccessioning Policy

No written policy for deaccessioning exists, but forms are used when material is discarded. Samples of the bulk materials (e.g., clam shells, spanish tiles) are saved for analysis, the rest is discarded.

Inventory Policy

Currently, there is no written inventory policy. The policy will be addressed in the artifact code book.

Latest Collection Inventory

The collections were last inventoried in 1989.

Curation Personnel

NSB San Diego does not have a full-time curator for the archaeological collections. A volunteer is used to supervise the curation activities of other volunteers.

Curation Financing

Curatorial activities are funded through grants and fundraising by the nonprofit Fort Guijarros Museum Foundation. Because all curatorial work is performed by volunteers, there are no salaries.

Access to Collections

Two volunteers and base security have keys to the collections storage area. One of these individuals must be contacted before access to the collections is made. Collections research is allowed by appointment only. A volunteer needs to be present at the time of the visit. If a collection is to leave NSB San Diego, a letter of agreement between the base and the researcher is required.

Future Plans

The volunteers believe that the primary purpose of each collection is research. Plans are being developed to compile a written collections management plan, as well as to renovate an earthen bunker for use as a temporary collections storage space until a permanent solution for long-term collections storage can be found. The bunker will contain a sealed concrete slab floor and walls, an environmental control system, and enameled metal shelving units.

Since the visit, it was learned that the portion of Building 127 used by the construction battalion is now being used to store associated documentation. San Diego State University will repackage all the documentation. Photographic records have been cataloged and are now stored in lignin-free archival boxes, and all paper records have been duplicated on acid-free paper.

Comments

1. All of the primary containers in Building 127 could not be examined because they were either inaccessible on the uppermost shelves or they were too heavy to remove from the shelves.

2. Security for the laboratory/collections storage area is minimal. The entrance is behind the building and surrounded by shrubs and trees.

3. Environmental controls are absent in Building 127.

4. Private residences are not acceptable as storage facilities for archaeological collections.

5. Fire-detection and -suppression systems are not present in Building 127.

6. Full artifact boxes and miscellaneous field equipment are located on the floor of Building 127.

7. Labels on the cardboard boxes are inserted in plastic zip-lock bags and attached to the box with a string. The labels are then easier to read and easier to update if the contents of a box changes.

8. Volunteers should supplement, but not replace, paid staff in performing curatorial services.

Recommendations

1. Remove all collections from the volunteer's home and store in a suitable repository.

2. Repack the artifact boxes that are too heavy.

3. Install environmental controls in Building 127 if the collections remain, even temporarily, in that facility. Air conditioners and commercial dehumidifiers would provide a temporary method to control temperature and humidity.

4. Upgrade the fire-detection and -suppression systems, minimally including installation of smoke detectors, fire extinguishers, and if possible, a sprinkler system.

5. Upgrade the security system to include bolt locks on the door. The entrance to the collections storage area is partially concealed by low shrubs and trees. With this cover and the minimal security of the entrance, an intruder could enter the facility.

6. Construct more shelves to store the collections stacked on the floor.

7. Repack the artifacts into archival-quality, 4 mil, zip-lock, polypropylene bags.

8. The exteriors of the secondary containers should be directly label in indelible ink. The interior bag labels should be directly labeled. The labels should be made from spun-bonded paper (e.g., Nalgene polypaper) and inserted into the zip-lock bags.

9. Self-adhesive polyethylene plastic envelopes should be affixed to the primary containers to replace the labels that are tied to the boxes with string.

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4

Southwest Division, Naval Facilities Engineering Command

San Diego, California

Installation Summary

Volume of Archaeological Materials: 7.3 ft^3

Collection Origin: NSB San Diego, NAS Pendleton, and NWS Seal Beach

Compliance Status: Archaeological materials will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 34.3 linear feet
On Base: 34.3 linear feet
Off Base: None

Compliance Status: All associated records will require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: No human skeletal remains are present at SWDIVNAVFACENGCOM.

Status of Curation Funding: At present, there is no funding for curation. A curator is required in order to carry out curatorial work.

Introduction

DATE OF VISIT: August 16, 1993

PERSON CONTACTED: Lowell Martin

Approximately 7.3 ft^3 of prehistoric and historic archaeological material and 34.3 linear feet of associated documentation are currently at the SWDIVNAVFACENGCOM. These collections are from archaeological projects performed on military installations under SWDIVNAVFACENGCOM's command. All of the archaeological materials were recently transferred to SWDIVNAVFACENGCOM from Gallegos and Associates, the contractor who did the work (Table 11). All the archaeological collections at SWDIVNAVFACENGCOM (Table 12) were examined. Many installations, other than those for which archaeological materials are present, only have documentation. These installations are discussed in the records section. No human skeletal remains were encountered.

Table 11.
Approximate Size, in Cubic Feet by Project, of Archaeological Materials at SWDIVNAVFACENGCOM

Project	Site Number	Artifact (ft^3)
NSB San Diego	P-18	2.6
Camp Pendleton Housing Extended Test	SDi-12100	4.3
	SDi-12101	
	SDi-12102	
	SDi-12103	
NWS Seal Beach	SDi-12204	0.4
NWS Seal Beach, Fallbrook Annex	SDi-12205	
Total		**7.3**

Table 12.
Percentages of Types of Material Classes Present in the Collections at SWDIVNAVFACENGCOM

Material Class	%
Prehistoric	
Chipped Stone	76.0
Faunal Remains	11.0
Soil Samples	9.0
^{14}C Samples	0.7
Other	0.3
Historical-Period	
Glass	0.3
Metal	0.9
Brick	0.3
Other	1.5
Total	**100**

Repository

Archaeological materials are stored in Building 131. Approximately 15 ft^3 of space in the upper floor of Building 131 is devoted to the storage of archaeological collections. The lower floor of the building is used by the Environmental Division.

Structural Adequacy

Originally constructed in 1942 as a garage, Building 131 is a one and one-half story wood-frame structure with a concrete slab foundation, a composite roof, and wood exterior siding. The interior walls on the first floor are covered with plasterboard, whereas the interior walls of the collections storage area on the upper level are unfinished; the studs are exposed. The first floor is concrete covered with tile, whereas the upper level floor is wood. Two wood-framed hinged windows are present in the collections storage area; both are located on the west wall of the room. One single-panel wood door exists on the south wall of the collections storage area. The plumbing and electrical wiring are original to the building. In addition to storing archaeological materials and associated records, the room is also used to store empty boxes, office supplies, and extra office furniture belonging to other departments.

Environment

Temperature and humidity controls and dust filters do not exist in Building 131. Light is provided by uncovered fluorescent tubes, one incandescent bulb, and natural light from the unshaded windows. The building is regularly maintained by a contracted janitorial firm.

Pest Management

No integrated pest management program exists. However, if the staff notice signs of an infestation, traps are set.

Security

No security system exists other than key locks on the doors and a 24-hour guard at the gate. Both exterior and interior doors are secured by key locks. The windows in the collections storage area contain simple window locks.

Fire Detection and Suppression

The only form of fire protection consists of several fire extinguishers. No smoke or fire alarms are present.

Archaeological Material Storage

Storage Units

The archaeological materials are stacked three boxes high on top of a wooden table located against the west wall of the collections storage area. The table measures approximately 5x3x5 feet.

Primary Containers

Primary containers consist of acidic cardboard boxes with a volume of 0.4 ft^3. The box sides are glued and taped and the top is secured by folded flap lids. Boxes contain typed adhesive labels that include site name, site number, project number, date, box number, and box content information. Two of the seventeen boxes are bulging and are torn from overpacking.

Secondary Containers

Three types of secondary containers are used to store archaeological materials. The majority (65%) of the secondary containers are not labeled and consist of plastic (72%) or paper (22%) bags. Twenty-nine percent (29%) are directly labeled with marker, whereas labeling of secondary containers is not applicable for material stored loose in boxes (6%).

Laboratory Processing and Labeling

All of the artifacts are cleaned and sorted and the majority (87%) have been directly labeled with India ink on correction fluid.

Human Skeletal Remains

No human skeletal remains were located.

Records Storage

Approximately 34.3 linear feet of associated records are stored at the SWDIVNAVFACENGCOM (Table 13). About 23.8 linear feet are in the collections storage area of Building 131 and 10.5 linear feet are stored in an office in the main building of the compound. Records from NAS Pendleton, NRTF Chollas Heights, Yuma and Chocolate Mountain Gunnery Ranges, NWS Seal Beach, NSB San Diego, NAF El Centro, NAS North Island, San Nicholas Island, NAS Miramar, NAB Coronado, and NRR Imperial Beach are present. Because of time constraints the linear footage of each type of record from each of these installations was not determined. The only records with duplicates are the large-scale maps from Building 131. The duplicate copies are stored in the same building as the originals.

Table 13.
Linear Feet Different Classes of Documentation at SWDIVNAVFACENGCOM

Documentation Class	Building 131	Office	Total
Paper Records	11.0	4.0	15.0
Photographic Records	4.0	0.3	4.3
Maps/Oversized Documents	1.3	0.2	1.5
Reports	6.0	6.0	12.0
Machine Readable Records	1.5	–	1.5
Total	**23.8**	**10.5**	**34.3**

Storage Area 1–Building 131

Paper Records

Approximately 11 linear feet of paper records are stored in several enameled metal file cabinets located next to the table with the archaeological materials. None of the file drawers are labeled. Paper records are arranged by project number and contained within acidic manila file folders, most of which have adhesive labels with the project/installation name. Types of paper records include administrative records, survey records, cultural resource inventories, land use studies, natural resources management plans, master plans, and encroachment studies.

Photographic Records

Photographic records consist of aerial photographs and 8x10-inch black-and-white prints of various SWDIVNAVFACENGCOM installations. The aerial photographs are stored rolled in an enameled metal file cabinet. They date to the 1970s and depict San Clemente Island, NAS North Island, NSB San Diego, Santa Barbara, San Nicholas Island, and Morro Bay. The black-and-white prints are unlabeled, and are stored in acidic manila file folders.

Maps and/or Oversized Documents

Large-scale maps and oversized documents are located in eight drawers of standard sized four-drawer metal map flats. There are plastic dust covers in the interior of the drawers. Only two of the drawers have labels. The drawer labels are made from acidic paper and are inserted into metal tag holders. Oversized maps and documents exist for NAS North Island, NWS Point Mugu, and NAB Coronado. Contents of these drawers include topographic maps, blue-line maps of bases, photocopies of old photographs, photocopies of station maps on mylar, and sounding maps. Most are in good condition, although some of the blue-line maps have started to yellow and are torn around the edges.

Reports

Multiple copies of project reports are stored in the metal file cabinets along with the paper records. Most reports are bound with plastic spiral binding.

Machine Readable Records

Approximately 1.5 linear feet of microfilm are present. The microfilm is stored in two metal hinged lid boxes within the enameled metal file cabinets. It is filed by installation and depicts various air stations/air bases and ground installations.

Storage Area 2-Lowell Martin’s Office

Paper Records

Paper records are curated in two drawers of a three-drawer metal file unit located under a work station desktop. The file unit measures approximately 4x 2 x3 feet (length x width x height). None of the drawers are labeled. Secondary containers consist of acidic manila file folders. The folders contain typed adhesive labels including project/installation name. Administrative records make up the bulk of the paper records.

Photographic Records

Photographs are stored with the paper records and in plastic sleeves in three-ring binders. The binders are stored on an enameled metal bookcase measuring approximately 4 x1.5x4.5 feet (length x width x height). Binders are labeled with installation/project name and date.

Maps and/or Oversized Documents

Large-scale maps are folded and stored with the paper records.

Reports

Project reports are stored on the same metal bookcase as the photographs. Most reports are bound with plastic spiral binding.

Collections Management Standards

SWDIVNAVFACEGCOM is not a permanent curation facility and therefore has no registration procedures or written policies and procedures. Movement of these materials to a permanent curation facility with these standards is be a high priority for SWDIVNAVFACEGCOM.

Latest Collection Inventory

The collections were inventoried by a contractor in 1993.

Curation Personnel

There is no full-time curator for the archaeological collections.

Curation Financing

No funding is available for the curation.

Access to Collections

Access to collections is controlled. SWDIVNAVFACENGCOM does permit access to its collections by researchers on a project by project basis. However, the researcher is required to submit a formal letter stating the purpose of the visit. A staff member is present during the visit as an extra security precaution.

Future Plans

The storage of collections is a high priority at SWDIVNAVFACENGCOM until a repository can be found. SWDIVNAVFACENGCOM is only a temporary storage facility because the collections are the responsibility of the bases from which they were recovered.

Comments

1. SWDIVNAVFACENGCOM is not a long-term curation facility.
2. No environmental controls are present in Building 131.
3. Building 131 lacks a fire detection system.
4. No integrated pest management program is present in Building 131.
5. Security measures for Building 131 are minimal.

Recommendations

1. Identify a long-term curation facility and transfer collections at SWDIVNAVFACENGCOM there.

2. Take appropriate measures to control temperature and humidity in the collections storage area. If this room only serves as a temporary holding area for collections and records, it may not be prudent to install a new HVAC system. Instead, commercial window air conditioners and dehumidifiers should be purchased.

3. If collections are to remain in Building 131, upgrade the fire-detection and -suppression system to include smoke and fire alarms as well as a sprinkler system.

4. Create a pest-management program that includes both monitoring and control.

5. Increase security measures for Building 131 to include dead-bolt locks on both interior and exterior doors if the collections are to remain there.

6. Rebag and rebox all archaeological materials into 4 mil, polypropylene, zip-lock bags and acid-free boxes. Label zip-lock bags directly with indelible ink. Tags made from spun-bonded paper (e.g., Nalgene polypaper) should be labeled directly with indelible ink and inserted directly into the zip-lock bags.

7. Store all paper records in acid-free folders. Store photographic material in archival polypropylene sleeves. Store large-scale maps and oversized documents flat between sheets of acid-free paper or matte board in metal map flats. Remove microfilm from its present containers and transfer it to archival-quality spools or in archival-quality polypropylene sleeves. Duplicate all associated documentation onto acid-free paper or microfilm and store a copy at a separate and secure location.

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5

Naval Weapons Station Fallbrook

Fallbrook, California

Repository Summary

Volume of Archaeological Materials: 5 ft^3
On Base: 5 ft^3
Off Base: None

Compliance Status: Archaeological materials require complete rehabilitation to comply with existing federal guidelines and standards for curation. One cubic foot of artifacts currently stored at SWDIVNAVFACENGCOM, San Diego, should be integrated with the archaeological materials at NWS Fallbrook.

Linear Feet of Records: 0.1 linear feet
On Base: 0.1 linear feet
Off Base: None

Compliance Status: Records associated with the 5 ft^3 of artifacts should be located and returned to NWS Fallbrook. The records already at NWS Fallbrook require complete rehabilitation.

Human Skeletal Remains: No human skeletal remains associated with collections recovered from NWS Fallbrook were located during the visit.

Status of Curation Funding: Curation is financed through funds from NWS Fallbrook and the Legacy Resource Management Program. The staff feel that funding is adequate.

Introduction

DATE OF VISIT: August 17, 1993

PERSON CONTACTED: Lisa Barnett

NWS Fallbrook has approximately 5 ft^3 of prehistoric artifacts stored in two facilities (Table 14). In addition, there is less than one linear inch of associated records. All the collections were examined. No human skeletal remains were identified.

Table 14.
Material Class Percentages of Archaeological Materials at NWS Fallbrook

Repository	Material Class	%
Shed under Building 5	Prehistoric	
	Chipped Stone	79.0
	Ceramics	18.0
	Faunal Remains	2.0
	Shell	0.5
	^{14}C Samples	0.5
Total		**100**
Display Case, Building 326		
	Chipped Stone	92.0
	Ceramics	6.0
	Faunal Remains	1.0
	Shell	1.0
Total		**100**

Repository

Archaeological collections recovered from NWS Fallbrook are stored in two facilities on base—a storage locker located under Building 5 and a display case in Building 326.

Repository 1—Storage Locker under Building 5

A 64 ft^2 storage locker is located under Building 5 (Figure 14).

Figure 14. View of storage locker under Building 5 at NSB San Diego.

Repository 2—Sidewinder Building, Building 326

The multistory building contains a store, a gymnasium, a bar and grill, and the offices of the Morale, Welfare, and Recreation Division.

Structural Adequacy

Repository 1—Storage Locker under Building 5

The storage locker was constructed under the raised pilings of Building 5 and measures 8x 8x 6 feet (length x width x height). It has a dirt foundation and is constructed of ½-inch plywood. Exterior walls are coated with white paint; interior walls are unpainted natural wood. The floor is raised approximately one inch off the dirt foundation. The ceiling/roof of the locker is the bottom of the wooden floor of Building 5. The east and west walls do not meet the ceiling, leaving a gap of approximately three inches, which poses a security and pest risk. There is a double door constructed of ½-inch plywood on the front. There are no windows. Electrical conduits exist in the ceiling/roof, but there are no overhead pipes. The locker is not structurally adequate for use as a collections storage area.

Repository 2—Sidewinder Building, Building 326

The building has a concrete slab foundation that is covered with linoleum tiles (wood in the gymnasium). The roof is covered with sheet asphalt. Interior walls are of plasterboard, and the ceiling is suspended acoustical ceiling tiles. The locked display case with the artifacts is located on the east wall in the hallway directly outside the store and the gymnasium. Entrance to the building is through a double glass door on the front (north) of the building. The building functions well as a gymnasium, store, and offices. If the display case remains locked, there is no reason that it should be removed.

Environment

Repository 1—Storage Locker under Building 5

Temperature and/or humidity cannot be controlled. The only lighting is provided by natural light.

Repository 2—Sidewinder Building, Building 326

Temperature is regulated by a central heating and air conditioning system, but humidity is neither monitored nor controlled. Light is provided by fluorescent tubes covered with non-ultraviolet plastic sheeting.

Pest Management

Repository 1—Storage Locker under Building 5

No integrated pest management program is in place. Spider webs and dead insects were observed during the visit (Figure 15).

Repository 2—Sidewinder Building, Building 326

No integrated program is in place. However, periodic chemical spraying is conducted by in-house staff on an as-needed basis.

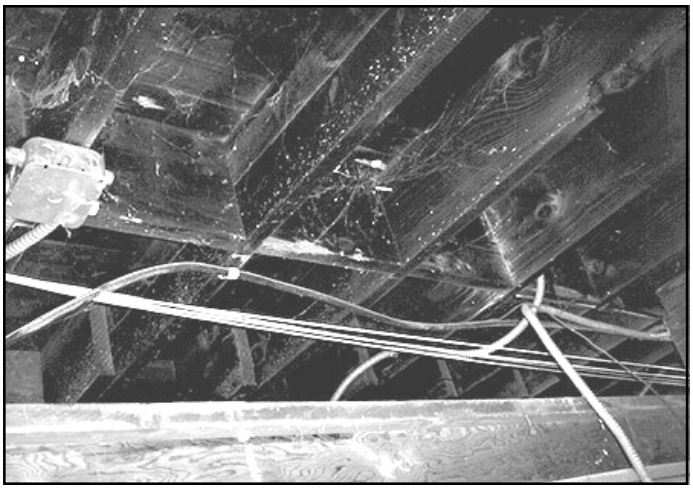

Figure 15. Evidence of lack of pest management in locker under Building 5.

Security

Repository 1—Storage Locker under Building 5

No security system exists other than the padlock on the double doors. The east and west walls do not completely meet the ceiling, therefore, causing an additional security risk.

Repository 2—Sidewinder Building, Building 326

Security consists of key locks on the doors and simple window locks on the windows.

Fire Detection and Suppression

Repository 1—Storage Locker under Building 5

A fire-detection and -suppression system does not exist.

Repository 2—Sidewinder Building, Building 326

Several fire extinguishers are located throughout the building and are the only means of fire suppression.

Archaeological Material Storage

Storage Units

Repository 1—Storage Locker under Building 5

There are no storage units other than the floor. There are 64 ft^2 of floor space available. The locker should not be used as a collections storage area until some form of environmental control can be installed and the security can be improved.

Repository 2—Sidewinder Building, Building 326

A sealed wood on display case with sliding glass doors represents the storage unit in Building 326. The display case has been mounted on the wall in the hallway and measures 4x3x1 feet wide. Artifacts are displayed on three shelves. Originally located in Building 1, this storage unit was moved to Building 326 approximately one year ago. This display case had not been locked prior to Ms. Barnett's tenure three years ago.

Primary Containers

Repository 1—Storage Locker under Building 5

Primary containers consist of five molded-metal ammunition containers with telelscoping lids and fixed latches (Figure 16). Four of the containers have a volume of 0.6 ft^3, whereas one has a volume of 1.4 ft^3. Labels are stamped and contain information on the type of ammunition previously stored in them. One container is also labeled in marker with the word "artifacts" written on it. The primary containers are very dirty, a result of being placed in a storage locker with walls that do not meet the ceiling.

Figure 16. Type of primary containers used for collections in the storage locker.

Repository 2—Sidewinder Building, Building 326

There are no primary containers in the display case. Instead, artifacts are exhibited loose on the shelves. Preprinted labels with the type of material of the artifact are included next to the artifacts.

Secondary Containers

Repository 1—Storage Locker under Building 5

Five types of secondary containers (Figure 17) are present (Table 15). The majority (60%) of the containers include adhesive labels written in marker and/or pen stating content information. All are either directly labeled or contain adhesive labels. The plastic bags with twist ties are punctured, allowing artifacts to spill out into the primary container, losing any provenience information.

Figure 17. Types of secondary containers for collections in the storage locker.

Table 15.
Percentages of Secondary Container Types included in Fallbrook Archaeological Collections

Container Type	% Present
Small Cardboard boxes with flap and telescoping lids	50
Plastic Containers	21
Acidic Paper Bags	8
Plastic Bags with Twist Ties	10
No Secondary Container (artifacts loose in box)	11
Total	**100**

Repository 2—Sidewinder Building, Building 326

All but two of the artifacts are loose on the display case shelves. A shell fragment is in a glass baby food jar with metal lid. A small plastic box with an attached lid serves as the secondary container for several quartz and obsidian beads.

Laboratory Processing and Labeling

The majority of the artifacts are clean. However, only one third of the artifacts stored under Building 5 are directly labeled with a catalog number in india ink, compared to 95% of those in the display case in Building 326. All of the artifacts are sorted by material class.

Human Skeletal Remains

No human skeletal remains from NWS Fallbrook are present.

Records Storage

Less than one linear inch of associated records is present. The records consist of catalog cards stored with the artifacts in one of the five ammunition containers. The catalog cards are preprinted and contain site and provenience information written in pen/marker.

Collection Management Standards

NWS Fallbrook is not a permanent curation facility and therefore has no registration procedures or written policies and procedures. Movement of these materials to a permanent curation facility with these standards is be a high priority for NWS Fallbrook.

Latest Collection Inventory

There is no collection inventory.

Curation Personnel

There is no full-time curator for the archaeological collections.

Curation Financing

Curation activities are financed through NWS Fallbrook funds, as well as Legacy funds. The staff consider the funding adequate for now.

Access to Collections

Access to collections is controlled by the staff and another unnamed individual. Only these two individuals have keys to the storage locker under Building 5 and the display case in Building 326. There is no written policy regarding collections access by researchers.

Future Plans

Until adequate storage can be found, the staff view maintenance of collections as their primary responsibility. However, they do not always meet this responsibility. The recovery of archaeological collections has a higher priority than adequate curation of existing collections. Future plans include transporting these collections to a regional curation center.

Comments

1. Security and fire protection are inadequate in the storage locker under Building 5.
2. The temperature in Building 326 is controlled. Humidity is not monitored or controlled.
3. Neither storage area is covered by an integrated pest management program.
4. The only associated records are catalog cards stored with the artifacts.

Recommendations

1. The storage locker under Building 5 should not be used for the curation of archaeological materials. Until the archaeological materials are moved, the walls should be extended to the ceiling, a bolt lock should be added to the door, and a fire extinguisher should be located nearby.

2. Install a system to control both temperature and humidity in the storage locker under Building 5. Install a system to monitor and control humidity in Building 326. If improvements to the existing HVAC system are not possible, purchase commercial dehumidifiers.

3. Implement an integrated pest-management program that covers both storage areas. The program should include pest monitoring by sticky traps and regular spraying. Spider webs and dead insects were noted, but there have been problems with lizards as well.

4. Locate associated records and return them to NWS Fallbrook so that they can be integrated with the collections.

5. Construct archival shelving units in the storage locker under Building 5 until the archaeological materials are moved.

6. Rebag and rebox all materials into acid-free containers, and 4 mil, polypropylene zip-lock bags labeled in indelible ink. A label made from spun-bonded polypropylene paper (e.g., Nalgene polypaper) labeled with indelible ink should be inserted into each zip-lock bag.

6

San Diego State University

San Diego, California

Repository Summary

Volume of Archaeological Materials: 104.09 ft^3

Collection Origin: Admiral Baker Field and NAS Miramar

Compliance Status: Collections require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 5.6 linear feet

Collection Origin: Admiral Baker Field

Compliance Status: Records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Original records should be duplicated onto acid-free paper or microfilm and stored in acid-free folders. Original photographs should be stored in polyethylene photographic, slide, and negative sleeves. A copy of the records should be stored at a separate and secure location.

Human Skeletal Remains: There are no human skeletal remains present in the collections.

Status of Curation Funding: Curatorial activities are financed by the University administration. The staff feel funding is inadequate and should be doubled.

Introduction

DATE OF VISIT: August 18, 1993

PERSON CONTACTED: Lynn Christensen

Approximately 104.1 ft^3 of prehistoric and historic archaeological materials and 5.61 linear feet of records associated with projects carried out at Admiral Baker Field and NAS Miramar are stored at San Diego State University (SDSU) (Table 15).

The collections are stored in two separate SDSU facilities (Table 16). The collections from work at Admiral Baker Field (the Mabel Harding collection) are stored in the basement of the SDSU library. The collections excavated by Caltrans from their archaeological work on NAS Miramar are stored in a shipping container located approximately one mile off-campus on the property of the vacant Montezuma Elementary School. No human skeletal remains are present in either collection.

Table 15. Material Class Percentages of Collections at SDSU Location

Material Class	Library	Shipping Container
Prehistoric		
Chipped Stone	94.0	72.0
Ceramics	–	1.0
Shell	1.0	–
Soil Samples	2.0	24.0
Botanical Samples	1.0	–
Historical-Period		
Glass	–	1.0
Metal	–	1.0
Mixed	1.0	1.0
Other	1.0	–
Total	**100**	**100**

Table 16. Archaeological Materials Stored at each SDSU Facility

Installation	Storage Facility	Cubic Feet
Admiral Baker Field (Mabel Harding Collection)	SDSU Library	92.1
NAS Miramar (Site Numbers: SDi-5655, 5658, 8646, 8719, 9240, 9246, 9247, 9913)	Shipping Container	12.0
Total		**104.1**

Repository

The collections from Admiral Baker Field and NAS Miramar are stored at two separate facilities the basement of the SDSU library and a shipping container located approximately one mile off-campus at the vacant Montezuma Elementary School.

Repository 1—Basement of Campus Library

The library is located on the campus of SDSU (Figure 18). There are four floors above grade that include the library stacks, offices, restrooms, material/supplies storage area, and study areas. The basement area contains a 900 ft^2 archaeological materials storage area, a mechanical room, and restrooms.

Figure 18. Exterior view of San Diego State University library

Repository 2—Shipping Container

Located approximately one mile off-campus is the vacant Montezuma Elementary School (Figure 19). There are a several shipping containers, a few of which contain archaeological collections. The material from NAS Miramar is stored in one shipping container that is 25 feet by 6 feet by 8 feet (length, width, height).

Figure 19. View of Montezuma School shipping container holding archaeological collections from NAS Miramar

Structural Adequacy

Repository 1—Basement of Campus Library

The concrete and steel building was built in the 1970s. The basement has a concrete foundation, floor, and ceiling. The north, south, and east interior walls are covered with sheetrock, whereas the west wall consists of chain link mesh that is approximately 8 feet tall, but does not reach to the ceiling. There are no windows. A single chain link metal mesh door on the west side of the collections storage area leads to the rest of the basement. In addition, a single metal panel door exists outside the collections storage area along the south wall of the basement area. This door is self-locking and can be exited from the inside, but not entered from the outside without a key. The plumbing and electrical systems are original to the building. There are exposed pipes from the sprinkler system in the collections storage area. The collections storage area is filled to approximately 20% capacity, but collections currently stored in the shipping containers are to be transferred here. There are plans to remodel the library storage facility within the next year to include permanent walls, lights with ultraviolet protectors, an HVAC system, and compacting shelving units.

Repository 2—Shipping Container

The metal shipping container is constructed from corrugated metal with a plywood floor. Rust has formed along the seam of the ceiling and walls where paint has chipped off and water has leaked through cracks and vents in the ceiling. The storage container is filled to 100% capacity. Full artifact boxes clutter the floor, making access to collections difficult. These archaeological materials are to be eventually transferred to the library facility.

Environment

Repository 1—Basement of Campus Library

The temperature in the library is controlled by an HVAC system. A central air conditioning and heating system regulates the environment in the basement storage area. Lighting in the basement storage area is provided by multiple incandescent bulbs with shades. Fluorescent tubes with ultraviolet covers will replace the incandescent lights when the basement is renovated.

Repository 2—Shipping Container

Temperature and humidity levels are not monitored or controlled in the shipping container. The metal exterior of the container and the warm, local climate have caused interior temperatures to reach extremely high levels that could be detrimental to the archaeological materials. The only source of light is natural light that enters through the door of the shipping container when it is unlocked and opened.

Pest Management

Repository 1—Basement of Campus Library

A partial pest management program including pest control is in place for the basement of the library. If pests of any kind are observed, the building manager is informed. The building manager is responsible for contacting a pest management company. The staff mentioned there is a problem with silverfish. Several live silverfish as well as a few carapaces mixed in with the records were noted by the assessment team.

Repository 2—Shipping Container

There is no integrated pest management program for the storage facility. Evidence of rodent infestation was noted. However, the archaeological materials are to be transferred to the library basement storage area.

Security

Repository 1—Basement of Campus Library

The library is protected by dead-bolt and key locks on all exterior doors and patrols by campus police several times per night. The collections storage area in the basement is protected by a dead-

bolt lock on the mesh door as well as controlled access (Figure 20). Dr. Christenson stated that it takes three keys to access the collections storage area: one to access the elevator, one to access the floor, and one to open the mesh door. Several people have keys to access the basement area. These include Dr. Christenson, the library maintenance crew, and individuals in a separate department of the university that also have storage space in the basement. Access to the collections storage area is controlled by Dr. Christenson.

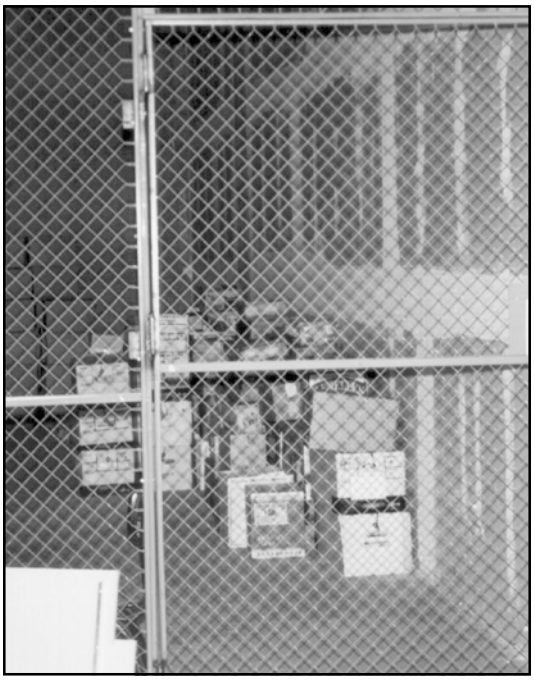

Figure 20. San Diego University library collections storage area

Repository 2—Shipping Container

The only security is a padlock on the shipping container and a chain-link fence surrounding the property. In addition, the isolation of the containers compromises their security.

Fire Detection and Suppression

Repository 1—Basement of Campus Library

The fire detection and suppression consist of manual fire alarms, fire extinguishers, and fire hoses. The basement storage area is protected by a sprinkler system. Fire extinguishers are located approximately 50 feet outside the collections storage area.

Repository 2—Shipping Container

There is no fire detection and suppression system at this storage facility.

Archaeological Material Storage

Storage Units

Repository 1—Basement of Campus Library

The concrete slab floor serves as the storage unit. The archaeological materials from Admiral Baker Field are stored in boxes stacked three to seven high on the floor along the south wall of the collections storage area (Figure 21).

Figure 21. Admiral Baker Field collections in the library repository

Repository 2—Shipping Container

The storage unit in the shipping container consists of adjustable metal shelving units measuring approximately 3.5 feet by 2 feet by 6 feet (length, width, height) that line each side of the container. The boxes are stacked one to two high on the shelves.

Figure 22. Example of water-damaged box in library collections area

Primary Containers

Repository 1—Basement of Campus Library

The primary containers for archaeological materials from Admiral Baker Field consist of 152 various sized acidic cardboard boxes with either telescoping or flap lids. Box labels vary from paper tags stapled to the boxes, to adhesive labels, to boxes that are directly labeled. Label information included provenience and box contents, and was written in grease pencil or marker. Some boxes have been damaged by water and mold (Figure 22).

Repository 2—Shipping Container

The primary containers with archaeological materials from NAS Miramar consist of six acidic cardboard boxes with flap lids each 2 ft^3 in size. Boxes are directly labeled in marker with site number, provenience, date, box number, and content information. As in repository 1, some of these boxes have also been damaged by water and mold (Figure 23).

Figure 23. Example of water-damaged box in the shipping container

Secondary Containers

Repository 1—Basement of Campus Library

A variety of secondary containers (Figure 24) are used to store the archaeological materials from Admiral Baker Field (Table 17). The majority (77.9%) of the secondary containers are not labeled. However, 21.8% are directly labeled with marker with the site number, provenience, and date information.

Figure 24. Types of secondary containers used for collections

Table 17. Percentages of Secondary Container Types at each Repository

Repository	Plastic Bags	Paper Bags	Loose in Boxes	Other
Library Basement	3.0	20.0	40.0	37.0[1]
Shipping Container	23.0	22.0	37.0	18.0

[1]Other refers to artifacts wrapped in paper napkins and paper towels.

Repository 2—Shipping Container

The majority of the secondary containers are either directly labeled with marker, or contain adhesive labels with the information written in pencil. Label information includes site number and provenience information.

Additionally, 0.75 ft^3 of prehistoric archaeological material, including shell and faunal remains, are stored with the associated records. Small, acidic-cardboard-match boxes serve as secondary containers for these materials. The match boxes are either directly labeled in marker or contained a tag with typed label information listing the contents. All of the artifacts are cleaned. Labels with typewritten information are included in the match boxes with the shell material, but the faunal remains are not labeled.

Laboratory Processing and Labeling

Almost all of the artifacts are cleaned and labeled with site number and/or lot number in India ink. All the artifacts are sorted by provenience and site number.

Human Skeletal Remains

There are no human skeletal remains present.

Records Storage

There are approximately 5.6 linear feet of records associated with the archaeological materials from Admiral Baker Field stored in Repository 1 (Table 18). The inclusive dates for these records span the years 1952-1975.

All records are stored in two 1.8 ft^3 acidic cardboard bankers boxes with flap lids, and one1.06 ft^3 acidic cardboard box with a telescoping lid.

Table 18.
Major Classes of Documentation

Documentation Class	Linear Feet
Paper Records	1.9
Photographic Records	2.8
Maps/Documents	0.1
Reports	0.8
Total	**5.6**

Paper Records

The 1.9 linear feet of paper records consist of field notes, survey records, analysis records, photo logs, and correspondence. The letters are alphabetized and are contained in acidic manila or accordion file folders. The folder labels consist of stamped alphabet letters. The few photograph logs are also stored in acidic manila folders. Field notes, survey and analysis records are contained in spiral bound notebooks. The covers of the notebooks are labeled in marker with site numbers. Field note information is written in pen, whereas information recorded on analysis records is written in pencil. Field records exist for the Mabel Harding collection (Admiral Baker Field) site numbers 27, 31, 33, 35, and 37. There are photo logs for site numbers 26, 27, 29, and 30-33. The paper records are in relatively good condition, although surface dirt and dust are present. Additionally, several small live silverfish as well as carapaces in the boxes with the records were noted.

Photographic Records

The majority of the photographic records (2.0 linear feet) consist of color slides. They are stored in metal slide boxes with hinged lids. The slide boxes are not labeled, but the individual slides are directly labeled in pen with the Mabel Harding collection site numbers and slide contents. Additionally, there are 0.8 linear feet of both 3 by 5 inch and 8 by 10 inch black and white contact prints. These photographs are stored both loose in the boxes and in the folders with the paper records. None are labeled.

Maps and/or Oversized Documents

Site and topographic maps consist of 0.1 linear feet of maps and/or oversized documents. The site maps are drafted in pencil on graph paper and are stored loose in the boxes. All are discolored and contain surface dirt and dust.

Reports

The 0.8 linear feet of reports consists of rough drafts of site reports bound by rubberbands and stored loose in boxes, in acidic manila folders, or in plastic three-ring binders.

Collection Management Standards

Registration Procedures

Accession Files

All collections are accessioned upon receipt.

Location Identification

The location of the collections within the repository is not identified in the accession file yet as the permanent storage location (the basement of the library) has only recently been identified.

Cross-indexed files

The files are cross-indexed using Quattro-Pro. Files are cross-indexed according to site number and box/container number.

Published Guide to Collections

There is no published guide to collections.

Site Record Administration

The Smithsonian Institution trinomial system is used.

Computerized DataBase Management

Quattro-Profile and Lab Assistant IV are used. Both are DBASE compatible programs. Back-ups of these files are made weekly.

Written Policies and Procedures

Minimum Standards for Acceptance

San Diego State University is no longer accepting collections.

Curation Policy

The repository has a comprehensive plan for curation that follows National Park Service standards.

Records Management Policy

The guidelines address the paper records. The repository states that they have not come across any photographic records. They have not yet addressed the curation of large-scale maps.

Field Curation Guidelines

There are no field curation guidelines.

Loan Procedures

Loans are granted to recognized institutions and cultural resource management companies.

Deaccessioning Policy

The repository does not have a written deaccessioning policy, but deaccession of certain materials (e.g., soil samples where the bags have broken) is made.

Inventory Policy

An inventory policy exists.

Latest Collection Inventory

Dr. Christenson stated that the collections had last been inventoried in 1993.

Curation Personnel

There is no full-time curator for the archaeological collections. The curatorial staff consists of four paid personnel and four interns. Dr. Christenson devotes half of her time to rehabilitating the archaeological collections. Additionally, she is the coordinator of the South Coastal Information Center of the California Archaeological Inventory, as well as being a part-time instructor in the Department of Anthropology. The rest of the staff is trained on-site.

Curation Financing

Funding to begin a program to inventory and rehabilitate the archaeological collections has recently been received from the university administration. Previously, no resources were available for the curation of archaeological collections. The staff feel that curation financing is still inadequate and that the budget needed to meet curatorial responsibilities should be doubled.

Access to Collections

Access to the collections is controlled by Dr. Christenson. It is possible for other staff members to access to the collections, but only by first contacting Dr. Christenson. Access to the collections requires a letter stating the reason for using the collections and the dates for a visit.

Future Plans

Future plans include the renovation of the library basement to serve as the collections repository, transferring all collections from shipping containers to the library basement for rehabilitation, and support for a regional repository to be constructed in the San Diego area.

Comments

1. The use of shipping containers for the storage of archaeological collections is inadequate for long-term curation. Evidence of a leaking roof was observed.

2. The west wall of the library basement collections storage area is constructed of an 8 foot high chain link mesh, but the collections are still at risk because the “wall” does not meet the ceiling.

3. The shipping container is cluttered with full boxes making it difficult to locate material.

4. Most of the artifacts are either stored loose in boxes or wrapped in acidic napkins or paper towels.

5. There is no fire detection and suppression system in the shipping container.

6. The photographic records make up the majority (2.87 linear feet) of the associated records.

7. There is no full-time curator for the archaeological collections.

Recommendations

1. The collections from NAS Miramar should be removed immediately from the shipping container and transferred to a facility that can provide a stable environment, security, pest management, and an operable fire detection and suppression system.

2. The temporary chain link mesh wall in the library basement storage area should be replaced with a permanent wall to prevent unauthorized entry. The staff stated that this would take place during renovation.

3. Archaeological collections should be stored in a facility with proper environmental controls, security precautions, pest management, and fire protection.

4. Silverfish were observed by the assessment team An integrated program for pest management should be implemented immediately in the library basement storage facility. The program should include both pest monitoring and pest control.

5. All artifacts should be rehabilitated and prepared for long-term storage according to federal guidelines and standards, and modern curation procedures. All artifacts should be: (1) labeled legibly with indelible ink, (2) repackaged in four mil polyethylene plastic zip-lock bags, (3) stored in acid-free boxes, and (4) a tag made from spun bonded paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into each plastic bag.

6. An archives program should be instituted immediately. All associated records should be prepared for long-term storage according to federal guidelines and standards, and modern archival procedures. Minimally, (1) all paper records should be duplicated on acid-free paper, stored in acid-free folders, and the duplicate copy stored in a separate and secure location and (2) all photographic records should be filed in inert plastic sleeves or other approved archival storage containers.

7. A full-time curator for the archaeological collections should be hired.

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7

Affinis Environmental Services

El Cajon, California

Repository Summary

Volume of Archaeological Materials: 0.2 ft^3

Collection Origin: NAS Miramar

Compliance Status: Archaeological materials require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 0.1 linear feet

Collection Origin: NAS Miramar

Compliance Status: Records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Records should be placed in acid-free folders, duplicated, and a copy stored at a separate and secure location.

Human Skeletal Remains: No human skeletal remains are present.

Status of Curation Funding: Curation is financed through overhead written into cultural resource management contracts.

Introduction

DATE OF VISIT: August 19, 1993

PERSON CONTACTED: Mary Robbins-Wade

0.2 ft^3 of prehistoric chipped stone artifacts and less then 0.2 linear foot of associated records are from site number SDI-12,254 are stored at Affinis Environmental Services (AES). The site that is located on NAS Miramar.

Repository

The AES office is located on the second floor of the Shadow Valley strip-mall in El Cajon, California. The 420 ft^2 collections storage area is situated across the parking lot in the rear of a single-story building (Figure 25).

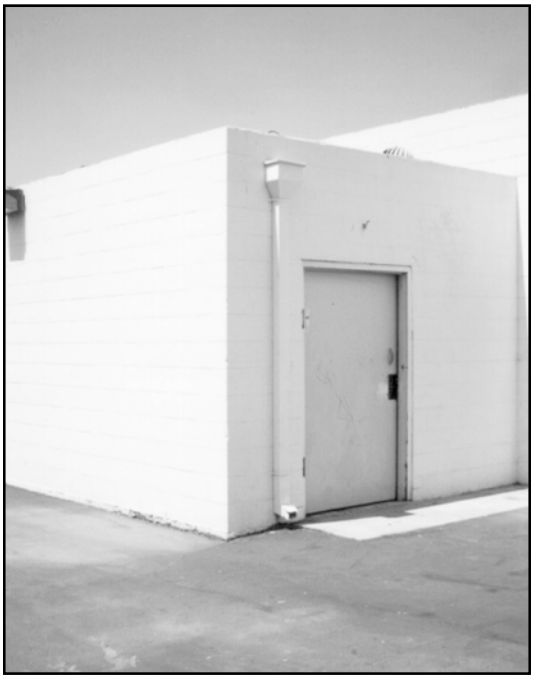

Figure 25. Exterior view of Affinis Environmental Services repository

Structural Adequacy

Originally constructed as a strip-mall in 1973, the storage facility has a concrete slab foundation and floor, concrete block exterior walls, and a shingled roof on the front of the building and a built-up asphalt roof at the rear. The roof was replaced in 1992. The interior walls are of concrete block. The ceiling is covered with sheetrock. A single panel hollow-core exterior door on the north side is the only entrance and exit. The plumbing and electrical systems are original to the facility. The building is currently filled to capacity. The collections storage area is cluttered with field equipment. Full artifact boxes are stacked on the floor. The building was not designed for long-term curation.

Environment

No temperature or humidity controls exist. There is no dust filtration system. Lighting is provided by uncovered fluorescent tubes. The building's management keeps the structure itself in good repair, but the curatorial staff is responsible for general cleaning on an as-needed basis.

Pest Management

A partial program for pest management is in place and includes controlling for infestation by means of chemical spraying. A professional pest management company is used three times a year to spray for pests. The staff stated that rodents are not a problem, but they have seen cockroaches. No signs of pest infestation were observed during the visit.

Security

No security system exists other than a key lock on the exterior door.

Fire Detection and Suppression

No type of fire detection and suppression system exists.

Archaeological Materials Storage

Storage Units

The concrete floor serves as a storage unit with the NAS Miramar collection.

Primary Container

The NAS Miramar collection is stored in a 0.25 ft^3 acidic cardboard box with a telescoping lid. The box is directly labeled in marker with the project number and site name information.

Secondary Container

The NAS Miramar artifacts are stored in a single two mil. polyethylene zip-lock bag (Figure 26). The bag is directly labeled in black marker with the contents, date, and job number information.

Figure 26. Type of secondary container holding NAS Miramar artifacts

Laboratory Processing and Labeling

All of the artifacts are cleaned, directly labeled with India ink, and sorted by material class.

Human Skeletal Remains

No human skeletal remains are present.

Records Storage

There are approximately 0.1 linear feet of records associated with work conducted on NAS Miramar currently stored at this facility.

Paper Records

The associated paper records consist of administrative, analysis, and catalog records and are curated in a four drawer enameled metal file cabinet located in an office. The file drawer contains an acidic paper label with typed information regarding contents placed in a metal tag holder. Paper records are stored in acidic manila file folders with adhesive labels containing the job number and contents. The information is typed. Records are arranged by job number.

After processing, records are moved to the collections storage area located across the parking lot where they are curated in acidic cardboard boxes with telescoping lids. The boxes are directly labeled in black marker with content information. Boxes are stored in a homemade wooden cabinet measuring approximately 4 feet by 3 feet by 6 feet (length, width, height) located on the south wall. The cabinet has a latch for a padlock, but was not locked during the visit.

Only the catalog sheets are duplicated. The original copies are curated in the AES laboratory area, whereas the duplicates remain in the project files.

Maps and/or Oversized Documents

Several small site maps were included in a folder containing paper records.

Reports

The project report is stored in an acidic manila folder located in the same file cabinet as the paper records. Copies of all reports are on file at the information center at San Diego State University and the San Diego Museum of Man.

Collections Management Standards

Registration Procedures

Accession Files

All materials are given catalog numbers, but not immediately upon receipt.

Location Identification

The location of the collection in the collections storage area is not identified.

Cross-indexed files

There are no cross-indexed files.

Published Guide to Collections

There is no published guide to collections.

Site-Record Administration

The Smithsonian Institution trinomial system is used.

Computerized DataBase Management

A DBASE database is used for analysis and to manage the artifact catalog.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards for the acceptance of collections as AES does not accept collections from others.

Curation Policy

AES is not a long-term curation facility.

Records-Management Policy

No records management policy exists.

Field-Curation Guidelines

There are no written guidelines for researchers depositing collections, as AES does not accept collections from others.

Loan Procedures

There is no written loan policy.

Deaccessioning Policy

There is no deaccessioning policy.

Inventory Policy

There is no inventory policy.

Latest Collection Inventory

The collections were last inventoried in 1992.

Curation Personnel

There is no full-time curator for the archaeological collections. Instead, there are three full-time archaeologists and three laboratory personnel who work on an as-needed basis.

Curation Financing

Temporary storage of archaeological collections is funded from contract overhead. The staff feel that funding is adequate.

Access to Collections

Access to the collections is controlled by Ms. Robbins-Wade. Although the AES staff know where the collections are located, they request access from Ms. Robbins-Wade. The facility does not have a policy on accessing the collections by researchers. However, if developed it would include maintaining a written receipt of the materials borrowed, and that all research be done in the AES laboratory so the material would stay on-site.

Future Plans

The staff view research as the primary responsibility associated with each collection. They feel that their facility is adequate for temporary collections storage, but they would move the collections to a regional repository if one becomes available.

Comments

1. The facility is a temporary repository for archaeological collections.

2. There are no temperature or humidity controls in the archaeological collections storage area.

3. The security for the collections storage area is minimal. There is no fire detection and suppression system.

4. The collections storage area is at 100% capacity, with boxes stacked on the floor.

Recommendations

1. Even though the facility is a temporary repository for archaeological collections, material should be removed immediately because of the lack of environmental controls, fire protection, and security.

2. Until the collections are moved, temperature and humidity controls must be installed immediately. Central air conditioners and a commercial humidifier can be used.

3. The security and fire protection systems need to be upgraded in the collections storage area. Electronic motion detectors and dead-bolt locks should be added, as well as smoke alarms, manual fire alarms, fire extinguishers, and if possible, a sprinkler system.

4. Additional shelving units should be constructed so that the boxes that are on the floor can be moved.

5. All material should be rebagged and reboxed into acid-free boxes and four mil polyethylene zip-lock bags. Tags made from spun bonded polyethylene paper (e.g., Nalgene) should be labeled in indelible ink and inserted into the zip-lock bags.

6. Box labels should no longer be written directly on the boxes. Adhesive polyethylene label holders, with acid-free paper inserts, should be applied to the front of each box.

7. An archives program needs to be created. Paper records are in acidic folders that are contributing to their destruction. All paper records need to be duplicated on acid-free paper or microfilm and a copy stored in a separate location.

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8

OGDEN Environmental and Energy Services

San Diego, California

Repository Summary

Volume of Archaeological Materials: 84 ft^3

Collection Origin: Fort McArthur, NAVSHIPYD Long Beach, NAS San Diego, NAB San Diego, NSB San Diego, Naval Space Surveillance, NAF El Centro, and George AFB

Compliance Status: Archaeological materials require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 4.7 linear feet

Collection Origin: NAS Miramar and NSB San Diego

Compliance Status: Documentation requires complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Records should be stored in acid-free folders, polyethylene plastic photograph, negative, and slide sleeves, duplicated on acid-free paper, and a copy stored in a separate and secure location.

Human Skeletal Remains: No human skeletal remains are present.

Status of Curation Funding: Curation is financed through cultural resource management contracts.

Introduction

DATE OF VISIT: August 20, 23–26, 1993

PERSON CONTACTED: Joyce Clevenger, Trish Mitchell

Approximately 84 ft^3 of prehistoric and historic archaeological materials and 4.7 linear feet of records associated with Department of Defense collections are stored at OGDEN Environmental and Energy Services (OGDEN).

Table 19. Collection Size by Project

Project Name	Ft^3	Linear Feet
NAS Miramar	1	–
Fort McArthur Nike Missile Study	–	0.3
NAVSHIPYD Long Beach	–	0.1
NAB San Diego	–	0.1
NSB San Diego	83	2.3
Naval Space Surveillance	–	0.3
NAF El Centro	–	0.1
George AFB/Superior Valley	–	1.5
Total	**84**	**4.7**

Repository

The OGDEN offices are located in Building 5510 in Sorrento Valley Science Park. OGDEN rents laboratory/records storage and archaeological materials storage space in the Analytical Technologies Inc. Building 5550 located across the parking lot. Building 5550 is a two story concrete and glass structure (Figure 27). The archaeological materials and records are stored in two separate areas on different floors. Building 5550 has a receiving/loading dock, artifact holding, washing, and processing areas, material/supplies storage space, hazardous material storage area, mechanical/utility area that is an open area within the archaeological material storage area, restrooms, and offices.

Figure 27. Exterior view of OGDEN building housing repository and laboratory

Archaeological Material Storage Area

The collections storage area includes two rooms separated by a door on the second floor. The larger room is approximately 2,000 ft^2. The smaller room is approximately 800 ft^2.

Records Storage Area

The records storage area is located in the 2,500 ft^2 laboratory on the first floor of the building.

Structural Adequacy

Building 5550 is six to 10 years old, has a concrete foundation, and a built-up asphalt roof. The exterior walls are constructed of cement block and glass. The structural adequacy of the archaeological storage area and the records storage is described separately.

Archaeological Materials Storage Area

The storage area is composed of two rooms separated by a single panel wood door on the second floor of Building 5550. The interior walls are covered with sheetrock, but are unfinished. There are exposed steel and wood support beams in the ceiling overlaid with uncovered insulation (Figure 28). The floor is constructed of unsealed poured concrete. Tar, possibly from the roof, has permeated the ceiling around the joints in the support beams and hangs on the rafters. There are several places where large cracks exist in the concrete floor. The plumbing and electrical systems are original to the building. Overhead pipes that are connected with an exterior storm sewer system are in close proximity to archaeological materials. Additionally, ductwork for the heating and cooling system is clearly visible (Figure 29). There are numerous uncovered telephone panels and transformers on the south and east walls of the larger of the two rooms. Four doors are present in the two rooms: one in the “center” which separates the two rooms, two west-facing single wood panel doors each leading to Analytical Technologies, Inc. offices (one from each archaeological material storage room), and one north-facing single wood panel door that leads to a hallway and to the outside.

Figure 28. Ceiling beams and insulation in collections area

Figure 29. Ductwork touching primary containers in the OGDEN repository

Figure 30. Clutter noted in OGDEN repository

There are no windows. The archaeological material storage area is filled to capacity. The room is cluttered with full artifact boxes stacked on the floor, field equipment, and miscellaneous manila folders containing files from the previous tenant that have spilled onto the floor (Figure 30).

Records Storage Area

The laboratory/collections storage area is located on the first floor of Building 5550. The interior walls are covered with sheetrock and painted. There is a suspended acoustical ceiling. The floor is tiled. There are no windows, but five windows are present in the adjoining offices. These windows have steel frames, face west, and are covered with blinds. Aside from office doors, only a single wood panel door exists on the north wall of the laboratory/records storage area that leads to the outer hallway. The plumbing and electrical systems are original to the building. The area functions well as office and archaeological laboratory space.

Environment

Archaeological Materials Storage Area

Temperature in the archaeological materials storage area is controlled by a central heating and air conditioning system. Humidity is not monitored or controlled. Staff indicated that dust filters exist for the heating/air conditioning system, but dust was abundant on all artifact boxes, especially those located directly under the air ducts. Light is provided by uncovered fluorescent tubes. The area is maintained on an as-needed basis by the curatorial staff. Adjacent to the north end of the storage area in the larger of the two rooms, and not separated by a wall, is a non-ventilated area that Analytical Technologies, Inc. uses to store hazardous chemicals. Multiple bottles stored in boxes are stacked on the floor (Figure 31).

Figure 31. Chemcials stored on floor in OGDEN repository

Records Storage Area

Temperature in the laboratory/records storage area is controlled by the central air conditioning and heating system. There is no means to monitor or control humidity. Light is provided by fluorescent tubes covered with non-ultraviolet plastic shields in addition

to incandescent desk lamps. The laboratory/records storage area is maintained daily by the building's janitorial staff.

Pest Management

Archaeological Material Storage Area

A partial pest management program including pest control is in place for the storage area. Mouse and rat traps are used, as well as monthly visits by a professional pest management company. However, live spiders and dead insects were present.

Records Storage Area

The same partial pest management program that is employed in archaeological material storage area 1 is also employed in the Records Storage Area. No form of pest infestation was observed by the assessment team during their inspection.

Security

Archaeological Materials Storage Area

Building 5550 is protected by motion detectors, key locks on exterior doors, controlled access, and a private security company (San Diego Alarm Company). The doors in the storage area remained unlocked during the visit. It is open to anyone who has access to the building during working hours. After 5:30 p.m., access is only possible through a key card (Figure 32). Employees of Analytical Technologies, Inc. work 24 hour shifts and have access to the room at all times.

Figure 32. Key card security system at OGDEN repository

Records Storage Area

Security for entire building is the same as that described for archaeological material storage area. Additionally, the laboratory/records storage area is protected by a key lock on the door, motion detectors inside the room, and controlled access by use of an electronic key card system. The laboratory/records storage area was broken into in 1988 and computers were stolen. The perpetrators cut a hole in the wall from an adjoining unoccupied office.

Fire Detection and Suppression

Archaeological Material Storage Area

Manual fire alarms and smoke detectors are located in the hallway outside the west door of the larger of the two rooms. The alarms and detectors are the fire detection system for the storage area. The three fire extinguishers in the two rooms are the only means of fire suppression.

Records Storage Area

Manual fire alarms and smoke detectors located in the hallway outside the door in the north wall of the laboratory/records storage area are the only means of fire detection. Several fire extinguishers are the only means of fire suppression.

Archaeological Material Storage

Storage Units

Archaeological Materials Storage Area

Two types of storage units are used to store the archaeological materials. The majority (59%) of the storage units are boxes that are stacked four or five high on the concrete floor in the smaller of the two storage rooms (Figure 33). The remainder (41%) are stored on homemade wooden shelves in the larger storage area (Figure 34). The shelves are constructed of unsealed 2 by 4 foot wood uprights

Figure 33. Storage containers for collections at OGDEN

Figure 34. Other collections at OGDEN stored on wooden shelves

and ½ inch plywood shelves. There are a total of eight rows of shelves, each measuring 12 feet by 2 feet by 6 feet 6 inches (length, width, height). Each row contains three shelves, and boxes are stacked two high on the shelves. Many boxes in the smaller of the two collections storage areas are compressed from being stacked on the floor. All of the boxes are very dirty and dusty.

Primary Containers

Archaeological Material Storage Area

The primary containers consist of 1ft^3 acidic cardboard boxes with flap top lids. Boxes are labeled both directly and with pre-printed adhesive labels. Label information consists of site name and number, provenience, box number, and contents.

Secondary Containers

Archaeological Material Storage Area

Most collections (73%) are stored in non-archival plastic bags. The remainder are stored in paper bags. Plastic bags include direct labels that list site number, provenience, and contents. Additionally, some bags have an internal acidic tag.

Laboratory Processing and Labeling

More than half of the artifacts (68%) are cleaned and 98% are sorted by material class. However, only 10% are directly labeled with India ink.

Human Skeletal Remains

No human skeletal remains are present.

Records Storage

There are approximately 4.7 linear feet of records associated and stored with the archaeological materials that were examined. The majority is stored in acidic cardboard boxes in the archaeological material storage area on the second floor of Building 5550. The remainder is located in filing cabinets in the laboratory/records storage area on the first floor.

Archaeological Material Storage Area

Paper Records

The paper records stored in the storage area are not archivally processed. The records are stored in various sized acidic cardboard boxes with telescoping lids (Figure 35). When arranged, the records are sorted by project name and number. The majority of the boxes are directly labeled in marker with a mixture of box number, site number, site name, and contents. The remaining box labels are pre-

Figure 35. Type of primarycontainers used for associates records stored at OGDEN

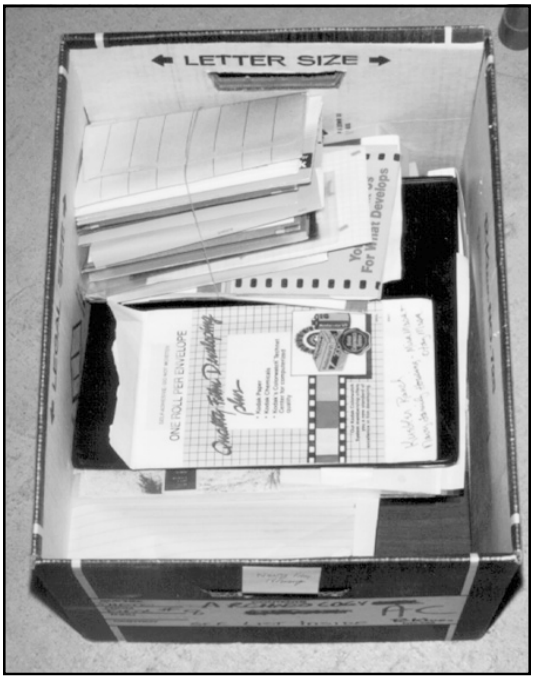

Figure 36. Storage of photographic documents at OGDEN

printed adhesive and contain box number, date, site number, site name(s), and content information written in pen. Secondary containers consist of acidic manila folders. Folder labels are directly written in pen and/or typed. Label information consists of the project name. Types of paper records include administrative records, analysis records, and survey and excavation records. None of these records are duplicated on acid-free paper. However, the analysis and inventory data are stored on computer disks and copies of these disks are stored in a locked cabinet in the laboratory as well as in the OGDEN offices in Building 5510. The original paper records are kept with the project files in the laboratory/records storage area of Building 5550.

Photographic Records

Photographic records are stored in acidic cardboard boxes in the archaeological materials storage room. All primary containers are directly labeled with marker and contain box number, project name, and content information. Photographic records are stored in acidic manila folders, photograph envelopes, loose in boxes, wrapped in paper and secured with a rubber band, and stored in non-archival plastic sleeves within plastic three-ring binders (Figure 36). Photographic documentation is arranged either by project or by site number and year of project. Included in the photographic records are color and black and white prints, negatives, slides, and contact print sheets. Most photographs are directly labeled in marker with site number, provenience, date, and roll number. The contact print sheets and individual slides are not labeled. Many of the color photographs are beginning to fade. Photographs loose in boxes are curled and some are torn.

Maps and/or Oversized Documents

Maps and/or oversized documents are stored in the archaeological materials storage room. These documents are also contained in the acidic cardboard boxes with the paper and photographic record material.

Large-scale site, topographic, and installation maps, blue-line maps, vegetation maps, and report-ready figures were examined. Most are in fair condition, although the majority are folded so they fit into the project folders.

Reports

Project reports are stored in the archaeological materials storage area and consist of draft reports. All are stored in the acidic cardboard boxes with the other records. Most are contained in acidic manila folders, although some are loose in boxes. Many are torn and/or held together by metal binder clips. Surface dirt and dust are present.

Records Storage Area

Paper Records

Paper records are stored in the project files located in the records storage area. All paper records are stored in four-drawer metal file cabinets. The drawers of the cabinets contain metal label holders with typed acidic paper tags. Drawer label information consists of drawer number and project numbers. Paper records are arranged by project number. Secondary containers are acidic manila folders. There are typed adhesive labels on the folders with the project name and number. Types of paper records include proposals, budgets, scopes of work, correspondence, and survey and excavation records. None of these records are duplicated on acid-free paper.

Photographic Records

Photographic records consisting of color prints and negatives are stored in the Laboratory/Records Storage Area. All are stored with the paper records in the project files. The majority of prints and negatives are stored in archival polyethylene plastic sleeves within plastic three-ring binders. The rest consist of unprocessed photographs and negatives that are still stored in acidic paper photograph packets. The plastic three-ring binders contain typed labels secured in a plastic pocket on the spine of the binder. The majority of the color prints are directly labeled in marker and contain date, content, and roll number. Additionally, photograph logs written in pencil are with the color prints that are stored in the three-ring binders.

Maps and/or Oversized Documents

Very few maps and/or oversized documents are stored in the Laboratory/Records Storage Area. These documents are folded and stored with the rest of the documentation in the project files. Types of maps and/or oversized documents observed include report-ready site maps, small-scale site maps, large-scale topographic, project area, and site maps, blue-line maps, and report-ready drawings of artifacts. All are in fair condition, despite being folded.

Reports

The majority of records in the Laboratory/Records Storage Area consist of both original and final copies of project reports. Original reports are stored in miscellaneous drawers of two five-drawer metal file cabinets, whereas the remaining copies are on a series of painted wooden shelving units each measuring approximately 3 feet by 1 foot by 7 feet (length, width, height). File drawers contain typed acidic paper tags held in metal tag holders with the drawer contents. Original reports are contained in acidic manila folders. Folders contain typed adhesive labels including author, title, and project number. Original reports are arranged within drawers alphabetically according to the author’s last name. Final copies of reports are bound with professional plastic spiral binding and are arranged alphabetically by author’s last name on the wooden shelves. The shelves themselves contain adhesive alphabet labels.

Machine Readable Records

Machine readable records are present. They include 3½ inch computer disks that are stored with the rest of the records in the project files.

Collections Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt.

Location Identification

The location of material from specific projects is identified in the accession file if the box number they are located in is identified. However, the location of the box within the repository is not presented.

Cross-indexed files

The files are cross-indexed according to state, county, and site number.

Published Guide to Collections

There is no published guide to collections.

Site-Record Administration

The Smithsonian Institution trinomial system is used.

Computerized DataBase Management

EXCEL 4.0 is used for catalogs, summaries, and inventories. Back-ups are made each time the program is used. Copies of the back-up disks are stored in a locked cabinet in the laboratory and in the OGDEN offices.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards of acceptance.

Curation Policy

There is no curation policy.

Records-Management Policy

There is no records management policy.

Field-Curation Guidelines

There are no field curation guidelines.

Loan Procedures

There is no written loan policy, but exceptions are made for loaning material on a project specific basis.

Deaccessioning Policy

There is no deaccessioning policy.

Inventory Policy

There is no written inventory policy. However, the collections are inventoried on an as-needed basis.

Latest Collection Inventory

The collections were inventoried in 1993 to obtain the box number for boxes with federal collections. It is unknown when the last detailed artifact inventory occurred.

Curation Personnel

Ms. Trish Mitchell is the full-time curator for archaeological collections. She is assisted by one full-time assistant and additional assistance is hired as-needed. Their primary responsibilities include inventorying collections, directing analyses, performing background searches on collections, cataloging artifacts and records, and curating archaeological materials and records.

Curation Financing

Curation is financed through cultural resource management contracts. The staff feel that funding is not adequate and that a budget of $1,000,000 is required to sufficiently and efficiently perform curation tasks.

Access to Collections

Ideally, access to collections is controlled by curatorial personnel. Other staff members have access through one of these individuals. OGDEN will allow researchers to examine collections either on the premises or by taking the material with them if the researchers submit a letter of intent.

However, the archaeological materials storage area is open to anyone with access to the building during working hours, as the doors to the storage area are unlocked. Additionally, Analytical Technologies, Inc. personnel have key cards to the storage area since they store chemicals used in their work.

Future Plans

The curatorial personnel view preservation of archaeological collections as their primary responsibility. The staff feel that they adequately perform their curatorial duties. Future plans include constructing wooden shelving in the smaller of the two storage areas in order to move the boxes off the floor.

Comments

1. The doors to the archaeological materials storage area were open and unlocked during the visit.

2. Boxes are stacked too high in the smaller of the two storage areas.

3. Three fire extinguishers are the only means of fire suppression in the archaeological materials storage area. Smoke detectors and fire alarms are only present outside the archaeological materials storage area.

4. The artifact boxes and wooden shelves are covered in dust.

5. A wall does not separate the archaeological materials storage area from the area where Analytical Technologies, Inc. stores its hazardous chemicals.

6. Proper ventilation is absent in the room used by Analytical Technologies, Inc. to store hazardous chemicals.

7. Most box labels are written directly on the front of the boxes.

8. There is no system for monitoring or controlling humidity in either collections storage area.

Recommendations

1. OGDEN should not be used as a long-term collections storage area unless major renovations are made.

2. The security system should be upgraded in the archaeological materials storage areas if these materials are to remain there. Doors to the archaeological materials storage area should remain locked at all times and it would be beneficial to install a motion detection system in the collections storage area.

3. Although future plans include constructing additional wooden shelving in the smaller of the two storage areas, this is an immediate need. Boxes are currently stacked too high, causing box compression and damage to the contents.

4. The fire detection and suppression system should be upgraded in the archaeological materials storage area to include smoke detectors, fire alarms, and a sprinkler system.

5. A permanent wall should be constructed between the archaeological materials storage area and the space where Analytical Technologies, Inc. stores hazardous chemicals. The wall would eliminate access to the collections by Analytical Technologies, Inc. employees.

6. A ventilation system should be installed in the area used by Analytical Technologies, Inc. to store hazardous chemicals. At present, the absence of proper ventilation is an extreme fire risk as there is no wall separating this area from the archaeological storage area.

7. A dust filtration system should be installed in the archaeological materials storage area. All of the boxes we examined were coated in dust.

8. Devices to monitor and control humidity should be installed. If a new HVAC system cannot be installed, commercial dehumidifers should be purchased.

9. Rebag and rebox all archaeological materials into four mil polyethylene plastic zip-lock bags and acid-free boxes. Additionally, bag labels made from poly-spun paper (e.g., Nalgene polypaper) and labeled with indelible ink should be inserted into each bag.

10. Apply adhesive plastic label holders, with acid-free paper label inserts, to the boxes with archaeological materials. Labels should not be applied directly to the front of boxes. When label information or box contents changes, old labels are replaced, thus reducing the chance for conflicting and confusing information.

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9

Gallegos and Associates

Carlsbad, California

Repository Summary

Volume of Archaeological Materials: None. All the archaeological materials from NAS Miramar, NSB San Diego, NAB Coronado, and NWS Fallbrook were submitted to SWDIVNAVFACENGCOM and/or NAS Miramar when the projects were completed. No archaeological materials associated with these projects are now at Gallegos and Associates.

Linear Feet of Records: 3.2 linear foot

Collection Origin: NAS Miramar, NAS Pendleton, NSB San Diego, NRR Coronado, and NWS Seal Beach (Fallbrook Annex)

Compliance Status: The photographic materials are properly curated in polyethylene photograph, negative, and sleeves. The paper records and maps require partial rehabilitation to comply with existing federal guidelines and standards for archival preservation. Paper records should be placed in acid-free folders, duplicated on acid free paper or microfilm, and a copy stored at a separate and secure location.

Human Skeletal Remains: No human skeletal remains are present.

Status of Curation Funding: Curation is financed through cultural resource management contracts. The staff felt that funding is adequate as Gallegos and Associates is only a temporary repository for archaeological collections.

Introduction

DATE OF VISIT: September 13, 1993

PERSON CONTACTED: Dennis Gallegos and Peter McHenry

Approximately 3.2 linear feet of records associated with Navy projects are stored at Gallegos and Associates (Table 20). All of the archaeological materials associated with these records were submitted to SWDIVNAVFACENGCOM and NAS Miramar.

Table 20.
Location of Archaeological Materials and Associated Records

Installation	Project Number	Archaeological Materials[1]	Photographs	Paper Records
NAS Miramar	3-91	L. Martin	G and A[2]	G and A
NSB San Diego	6-91	L. Martin	G and A	G and A
NRR, Silver Strand (Coronado)	10-91	L. Martin	G and A	G and A
NWS, Seal Beach Fallbrook Annex, Pendleton	11-91	L. Martin	Navy/G and A	G and A
NAS Miramar	14-92	M. Scott	Navy	G and A
NAS Miramar-Eastgate Mall Hanger 4 Parking Lot Vernal Pools	56-92	None	M. Scott/Navy	G and A

[1]Information from list provided by Gallegos and Associates

[2]G and A = Gallegos and Associates

Repository

Gallegos and Associates is located in a single-story office complex (Figure 37) and occupies approximately 639 ft^2. The suite includes a reception area, office, and a laboratory. The reception area and office occupy approximately 117 ft^2. The laboratory is 522 ft^2. In the laboratory is a receiving/loading dock, an artifact washing and holding area, artifact processing laboratory, temporary archaeological material storage area, a photographic and records storage area, and offices.

Figure 37. Exterior of Gallegos and Associates

Structural Adequacy

This office complex was constructed in 1990. It has a concrete slab foundation, a steel frame, and exterior walls of concrete block. The flat roof is overlayed with composition paper (tar paper covered with gravel). The interior walls are covered with sheetrock. There is a suspended acoustical ceiling in the front office area and a natural wood beam ceiling in the laboratory area. The floor in the office area is carpeted, whereas the floor in the lab is the concrete slab foundation. Two windows extend across the front (north) of the building where the office/reception areas are. A skylight exists in the laboratory area (Figure 38). Three exterior doors are present—a single panel glass door on the front (north) side of the building, and a single panel metal door and a metal overhead garage door on the back (south) side. An interior single panel wood door separates the front office from the laboratory area. A single panel wood door separates Mr. Gallegos' office from the reception area. The suite is structurally adequate and functions well as office, laboratory, and temporary archaeological material storage space. However, it should not be used for long-term curation.

Figure 38. Interior view of the Gallegos and Associates collections area

Environment

Temperature is controlled in the front office\reception area by a central air conditioning system. However, temperature and humidity are not monitored or controlled in the laboratory area. Air is circulated by a floor fan, but there is no dust filtration system. Light is provided by a central skylight, desk lamps, and uncovered fluorescent tubes. The laboratory area is maintained on an as-needed basis by the curatorial staff.

Pest Management

No integrated program for pest management exists. If insect or rodent infestation exists, the staff notify building maintenance who then correct the problem. No infestations were observed.

Security

Intrusion alarms and dead-bolt locks are installed on all exterior doors. Key locks exist on the interior doors. All permanent employees have keys to the office and laboratory areas.

Fire Detection and Suppression

The only fire suppression device is a fire extinguisher located on the north wall of the laboratory area. It was last checked in 1991.

Archaeological Material Storage

No archaeological materials are stored at Gallegos and Associates.

Human Skeletal Remains

No human skeletal remains are stored at Gallegos and Associates.

Records Storage

Approximately 3.7 linear feet of associated documentation are stored at Gallegos and Associates (Table 21).

Table 21. Major Classes of Documentation in Linear Feet

Documentation Class	NAS Miramar	NAS Pendleton	NSB San Diego	NRR Coronado	NWS Fallbrook
Paper Records	0.8	0.6	0.2	0.1	0.4
Photographic Records	0.1	0.1	0.1	0.1	0.1
Reports	0.2	0.1	0.1	0.1	0.1
Total	**1.1**	**0.8**	**0.4**	**0.3**	**0.6**

Paper Records

All original paper records are stored in four-drawer enameled metal file cabinets (Figure 39). These cabinets serve as the south wall of an office in the laboratory area. Records are arranged by project number and are stored in acidic manila folders, hanging file folders, and several three-ring binders within the file cabinets. File drawers contain acidic paper labels in metal tag holders. The drawer labels include project number information written in marker. Folder labels are both adhesive and direct, are written in marker and/or pen, and contain project number information. A duplicate copy of these records does not exist. Types of paper records include administrative records, field notes, site forms, analysis records, report drafts, artifact catalogs, and newspaper articles. Many contain contaminants such as metal binder clips, staples, and paper clips.

Figure 39. Storage units for documents stored at Gallegos and Associates

Photographic Records

The 0.5 linear feet of photographic records are stored in plastic three-ring binders on a homemade painted

wooden shelving unit measuring approximately 7 feet by 7 feet by 1.5 feet (length, height, depth). The shelving unit is located on the north wall of the laboratory area. The color prints, negatives, and slides are contained in archival quality polyethylene sleeves within plastic three-ring binders. Plastic label holders with adhesive backs affixed to the spines of the binders contain typed labels which include project number and project name information. Photographic documentation is arranged by project number. All prints, slides, and negatives from a specific project are stored together. The polyethylene sleeves with the color prints contain a paper tag with project number and name written in pen (Figure 40). Color prints are directly labeled with marker and include project number, date, roll, and negative number information. Negative sleeves are directly labeled with marker and contain the date, project number, and project name. Slide sleeves have adhesive labels with the project name, project number, date, and photo file number written in marker or pen. Individual slides are directly labeled in pen with project name, project number, and state trinomial site number. The three-ring binders also contain photo logs that are written in pencil.

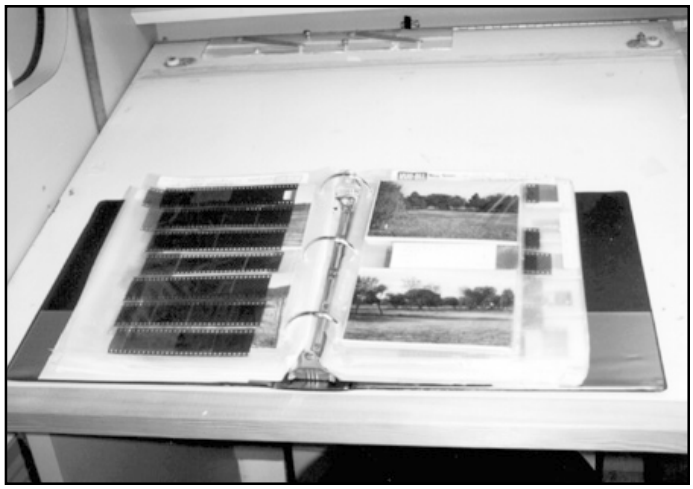

Figure 40. Photographic records at Gallegos and Associates and their secondary container systems

Project Reports

The 0.6 linear feet of project reports are stored in the laboratory area on painted, homemade wooden shelving units that make up the west wall of an office. These shelving units are approximately 6 feet by 6 feet by1.5 feet (length, height, depth). Copies of reports are sent to San Diego State University and the San Diego Museum of Man.

Collections Management Standards

Registration Procedures

Accession Files

All material is accessioned by project number.

Location Identification

The location of the collection (archaeological materials and records) is identified in the accession file.

Cross-indexed files

The files are cross-indexed by project number, project name, and site numbers.

Published Guide to Collections

Not applicable since Gallegos and Associates is a temporary repository for collections.

Site-Record Administration

The Smithsonian Institution trinomial system is employed.

Computerized DataBase Management

A computerized database is being used.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards for acceptance.

Curation Policy

Gallegos and Associates is only a temporary repository for collections. However, there are written procedures for cataloging archaeological materials.

Records-Management Policy

A records-management policy is being designed.

Field-Curation Guidelines

Field curation guidelines do not exist. Only Gallegos and Associates uses its facility for curating archaeological materials.

Loan Procedures

Gallegos and Associates rarely loans materials. However, if a loan request was received, appropriate documentation would be completed.

Deaccessioning Policy

There is no deaccessioning policy.

Inventory Policy

There is no inventory policy.

Latest Collection Inventory

The collections and records were last inventoried in 1990 prior to the move into the existing facility.

Curation Personnel

The curation staff consists of four permanent employees including a project manager and three archaeologists. Additionally, temporary staff are hired on an as-needed basis.

Curation Financing

Curation activities are financed through cultural resource management contracts.

Access to Collections

The permanent staff are the only individuals with keys to the facility.

Future Plans

Curatorial personnel place a higher priority on the recovery of archaeological material than on the adequate curation of existing collections. Short-term plans include using acid-free paper and archival boxes. Long-term plans are dependent on whether a regional repository is constructed in the San Diego area.

Comments

1. Gallegos and Associates is not a long-term curation repository. The facility functions well as office with laboratory space.

2. Only associated records were examined. The artifacts previously were sent to Lowell Martin at SWDIVNAVFACENGCOM and Mike Scott at NAS Miramar.

3. There are no temperature or humidity controls in the laboratory area.

4. Although slightly cramped, the laboratory/work area is partitioned off and well organized.

Recommendations

1. All archaeological materials and original records should be removed from the facility and stored at another location with proper environmental controls.

2. Even though collections are only temporarily stored at the facility, temperature and humidity controls should be installed. If it is not feasible to install a new HVAC system, central air conditioning and commercial humidifiers should be purchased.

3. Original records associated with projects conducted at NAS Miramar, NAS Pendleton, NSB San Diego, NRR Silver Strand (Coronado), and NWS Fallbrook should accompany the archaeological materials. Copies of these records should remain at Gallegos and Associates.

4. Records should be duplicated onto acid-free paper, stored in acid-free folders, and copies stored at a separate and secure location. Contaminants such as metal paper clips and staples should not be used.

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10

Archaeological Resource Services

Petaluma, California

Repository Summary

Volume of Artifact Collections: approximately 0.3 ft^3

Collection Origin: Camp Parks

Compliance Status: All artifact collections will require complete rehabilitation to comply with existing Federal guidelines and standards for curation.

Linear Feet of Records: 0.3 linear feet

Compliance Status: All collections of associated documentation and reports will require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: There are no human skeletal remains curated at Archaeological Resource Services, Inc., from Camp Parks.

Status of Curation Funding: Temporary curation is funded through the initial contract.

Introduction

DATE OF VISIT: September 14, 1993

PERSON CONTACTED: Bill Roop and Kathy Flynn

Approximately 0.3 ft^3 of artifacts and 0.3 linear feet of associated documentation from Camp Parks is being temporarily curated at Archaeological Resource Services (ARS). Material classes included in these collections are prehistoric lithics, fauna/shell, soil, and historic metal, glass, and brick. The assessment team examined all artifacts and documentation.

Repository

Archaeological Resource Services conducts business out of an office building located within an industrial park area in Petaluma, California. The ARS office, which consists of a ground floor and a mezzanine level built for additional storage space, totals approximately 2,000 ft^2. Offices and records storage occupy the first floor of the building while most artifact collections are stored in the mezzanine level (Figure 41). Additionally, an artifact holding, washing and processing area, along with a receiving dock, a library, an equipment storage room, and a restroom, occupy areas within the ARS office.

Figure 41. Collections area at Archaeological Resource Services

Structural Adequacy

The ARS office is located within a single story building, constructed in the early 1980s, which is divided into office space for several other companies. The building is constructed of concrete and steel, and has exterior concrete walls, an original tar paper roof, and a ceiling made of 2x8 joists covered with plywood decking. Offices are divided into separate rooms or areas using wooden framed, wallboard and plaster walls.

The mezzanine level, which occupies the south and west half of the office, has a floor constructed of plywood supported by 2x6s surrounded by a railing made of 2x4s. Approximately 700 ft^2 of additional storage space is provided by this mezzanine and at the time of visit, it was filled to 80 percent capacity. A leaking roof was evidenced by a homemade, plastic garbage bag “catcher” built on the mezzanine level (Figure 42).

Three unshaded, plate glass windows surrounding the exterior door are located on the north side of the office on ground level. In addition, four doors exist in the ARS office: two hollow wooden

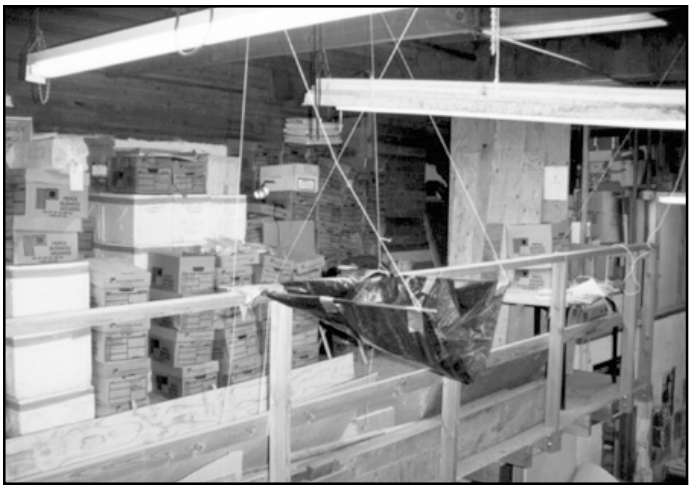

Figure 42. Handmade 'rain catcher' is evidence of leaking roof at the Archaeological Resource Services repository

panel interior doors, one leading to the restroom and the other leading to an office area, and two exterior doors, a single, unshaded glass entrance door on the north side of the building and a metal overhead loading door, also on the north side of the building.

Environment

Temperature is partially controlled by one forced-air draft heating unit, located in the southwest corner of the mezzanine. Additionally, box fans are used to circulate air during the warmer months. No humidity control or monitors are present within the repository. Similarly, there is no temperature monitoring device or dust filtration system. Lighting in the repository is provided by unprotected, fluorescent lighting. The office is maintained by curatorial staff on an as-needed basis.

Pest Management

The entire exterior of the building is sprayed on a monthly basis by a professional pest management company. Additionally, the curatorial staff uses mouse bait as a monitoring device on an as-needed basis. However, no regular pest monitoring takes place nor is there any pest control measures taken for the interior of the building. No signs of insects or rodents were noted by the assessment team at the time of inspection.

Security

Security consists of an intrusion alarm wired on the exterior of the entire building and directly linked to the police department. Additionally, key locks are located on the front entrance door and the loading dock door of the ARS office. All staff members have key access to the office and archaeological collections. Windows cannot be opened.

Fire Detection and Suppression

No fire detection system exists within the ARS office. Four Halon fire extinguishers located throughout the office constitute the only method of fire suppression. Additionally, a fire inspection is conducted every six months.

Archaeological Material Storage

Storage Units

Collections from Camp Parks are stacked on the floor on the mezzanine level.

Primary Containers

The primary containers are two acidic cardboard boxes. Box frames are folded and glued with telescoping or folded lid of similar construction. Boxes are labeled in marker directly on the exterior of the box. Label information consists of project name, site number, and box number. One of the boxes is covered with dust and dirt.

Secondary Containers

Artifacts from Camp Parks are stored in an unlabeled, plastic tray divided into small compartments; however, several have no labels at all.

Laboratory Processing and Labeling

Approximately 25% of the artifacts have been cleaned, none have been labeled and all have been sorted to material class.

Human Skeletal Remains

No known human skeletal remains from Camp Parks were found to exist at ARS.

Records Storage

Associated documentation from the Camp Parks collections housed at ARS comprises approximately 0.3 linear feet. Draft reports, administrative files, background material, drawings and maps, and original field records and catalogs are stored in several locations throughout the office.

Paper Records

Paper records (0.1 linear feet) include correspondence, progress reports, maps and drawings, draft reports, background material, administrative files, and original field records and catalogs. These are stored in a variety of containers throughout the office. Primary containers include acidic business archives boxes, legal sized metal filing cabinet drawers, and a metal map flat drawer. The box is stored on the floor in one of the offices at ARS. Label information is written directly on the box in marker and consists of the installation name and a general description of the contents. Filing cabinet drawers are labeled on acidic paper labels in metal holders. Drawers are labeled in marker with the contents. Metal map flat drawers are labeled similarly. Most of the documentation is kept in

nonarchival manila folders and acidic accordion folders, although some material is loose in the primary container. The collections are arranged by installation. Folders are labeled directly in pen, but label information is inconsistent. Neither the folders nor the paper documents are on acid-free stock.

Maps and/or Oversized Documentation

Maps and drawings (0.1 linear feet) associated with these collections are stored folded in manila folders in the boxes with the rest of the paper records and also in a metal map flat drawer. Map flat drawers are labeled on acidic paper labels in metal holders. Drawers are labeled in marker with the contents.

Reports

Draft reports (0.1 linear feet) from Camp Parks are stored with other paper records from their respective installations.

Collection Management Standards

Registration Procedures

Accession Files

A catalog and an inventory are made for each collection as it is brought into the office.

Location Identification

A listing of collections is available and the material is stored by county and project number.

Cross-indexed Files

No cross-indexed file system exists at this time, but one is currently being developed.

Published Guide to Collections

No published guide to the collection exists.

Site-Record Administration

When available, the state trinomial system is followed.

Computerized DataBase Management

An in-house system on Microsoft Access and D-base IV is used by the staff.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards for acceptance of archaeological collections at this facility. ARS does not accept outside collections for curation.

Curation Policy

No written curation policy exists.

Records-Management Policy

No written records management policy is in effect.

Field-Curation Guidelines

No written field-curation guidelines exist. ARS does not accept outside collections for curation.

Loan Procedures

There is no written policy regarding loaned material. Material may be loaned after each individual case is considered by staff.

Deaccessioning Policy

No deaccessioning policy is in effect. To date, none of the material has been deaccessioned.

Inventory Policy

Each collection is inventoried when it is brought from the field, but no written inventory policy exists at this facility.

Latest Collection Inventory

The collection has never been inventoried.

Curation Personnel

There is no full-time curator for ARS. If curation is to be provided, it is written into each individual contract. Staff members working on each contract are responsible for curation at whatever level dictated in the contract.

Curation Financing

Financing for the curation of artifacts is written into each individual contract.

Accessibility of Collections

Access to the collections is open to staff members on an as-needed basis. There is no formal policy established; researchers may request access in writing and each individual case is considered

Future Plans

Future plans include installing additional shelving for archaeological material storage in the mezzanine and implementing a bar code system for artifact boxes.

Comments

1. The leaking roof above the mezzanine level invariably threatens the collections.
2. Proper environmental and humidity control and monitoring is lacking.
3. An integrated pest management system is not in effect.
4. Since all staff members have access to the collection storage areas, security is effectively compromised.
5. No fire detection system exists and the fire suppression system is minimal.
6. Artifacts are not in acid-free containers.
7. Documentation is not in archival containers.

Recommendations

1. It is recommended that these collections be removed and curated in a facility with proper fire suppression/detection, environmental control, security, and pest management.
2. If collections cannot be removed at this time, the following are recommended:
    a. An integrated pest management system, including control and monitoring on a regular basis, should be implemented.
    b. Archaeological collections should be stored under a proper security system, with limited access. This should include an intrusion alarm within the collections storage area.
    c. A proper fire detection and suppressionsystem, including smoke detectors wired into the fire department and a sprinkler system, should be installed.
    d. A humidity control device should be installed. Additionally, temperature and humidity should be monitored.
3. All artifacts should be rehabilitated and prepared for long-term storage according to Federal guidelines and standards and modern curation procedures. Specifically, all artifacts should be: (a) labeled legibly with indelible ink; (b) repackaged in 4-mil. polyethylene plastic zip-lock bags; (c) stored in acid-free boxes; and (d) a tag made from spun bounded paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the plastic bags.

4. An archives program should be instituted immediately. All associated records should be identified and prepared for long-term storage according to federal guidelines and standards and modern archival procedures. Minimally, the following procedures should be implemented to protect and preserve these records: (a) all paper records should be stored in acid-free folders; (b) all photographic records should be identified and filed in inert plastic sleeves or other approved archival storage container; and (c) maps and oversized documents should be stored flat in an archival manner.

5. A duplicate copy of all associated documentation, either on acid-free paper or on microfilm, should be prepared and store in a separate, fire-safe, secure location.

6. A full-time curator for the archaeological collections should be hired.

11

Regional Environmental Consultants

San Diego, California

Repository Summary

Volume of Archaeological Materials: None

Linear Feet of Records: 2.1 linear feet

Collection Origin: NAB Coronado and NRTF Chollas Heights

Compliance Status: All records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Paper records should be stored in acid-free folders. Photographic records should be stored in archival polyethylene plastic sleeves. Maps and/or oversized documentation should be stored flat between sheets of acid-free paper/mat board in map flats.

Human Skeletal Remains: No human skeletal remains are present.

Status of Curation Funding: Curation is financed through cultural resource management contracts. The staff feel that financing is not adequate and, depending on the size of the collection, an additional 1% sliding fee is required.

Introduction

DATE OF VISIT: September 19, 1993

PERSON CONTACTED: Ms. Dayle Cheevers

Approximately 2.1 linear feet of records at Regional Environmental Consultants (RECON) are from archaeological work performed at NAB Coronado (1.2), and the NRTF Chollas Heights (0.8). No archaeological materials from these projects are stored at RECON. No human skeletal remains are present.

Repository

Records are stored in two separate collections storage areas. Reports are stored in the office/laboratory area, whereas associated records are kept in a separate records-only storage room. The building in which the RECON offices are located is a single story concrete and glass structure with a steel frame. The RECON offices occupy approximately 10,000 ft^2 of floor space including areas for artifact washing and processing, temporary archaeological material storage, records storage, graphics and production, offices, and restrooms.

Archaeological Materials Storage Area 1—Office/Laboratory Area

The office/laboratory area where the reports are stored occupies approximately 510 ft^2.

Archaeological Material Storage Area 2—Records Storage Area

The records storage area is approximately 475 ft^2.

Structural Adequacy

Archaeological Material Storage Area 1—Office/Laboratory Area

The office building was constructed in 1991. The building is a single story steel, concrete, and glass structure with a concrete foundation with a built-up asphalt roof (Figure 43). The concrete slab floor of the office/laboratory area is carped. The interior walls are covered

Figure 43. Exterior view of the RECON building

with sheetrock, and there is a suspended acoustical ceiling. There are three windows in this room, all with blinds, one facing east, and two facing south. Windows measure approximately 3 feet by 5 feet and have aluminum frames. Aside from various office doors, there are two interior doors and one exterior door. The interior doors are single wood panel, one on the northwest wall leading to the lobby, and one northeast door leading to an interior hallway. There is a glass exterior door on the southwest wall of this room. The plumbing and electrical systems are original to the building.

Archaeological Material Storage Area 2—Records Storage Area

The 475 ft^2 records storage area has a concrete floor overlaid by carpet. Interior walls are covered with sheetrock. There is a suspended acoustical ceiling. On the northwest and southwest walls are two windows covered with blinds. Two single wood panel doors are on the north and southeast walls. The records storage area is filled to approximately 80% capacity. Several of the rows of shelving units are cluttered with maps and presentation material mounted on matte board.

Environment

Archaeological Material Storage Area 1—Office/Laboratory Area

Temperature in the room with the reports is controlled by a central heating and air conditioning system. There is no targeted temperature range. The temperature is set by the staff for their comfort. Humidity is not monitored or controlled. Dust filters exist for the air conditioning system. Light is provided by fluorescent bulbs covered by non-ultraviolet plastic shields. This area is maintained daily by a professional cleaning company.

Archaeological Material Storage Area 2—Records Storage Area

See the information archaeological material storage area 1.

Pest Management

Archaeological Material Storage Area 1—Office/Laboratory Area

There is a partial pest management program in place that includes pest control. A professional pest management company visits the facility every six months to a year to eliminate any pest problems. No evidence of pest infestation was evident during the visit.

Archaeological Material Storage Area 2—Records Storage Area

See the information on pest management for archaeological material storage area 1.

Security

Archaeological Material Storage Area 1—Office/Laboratory Area

The building is protected by intrusion alarms, controlled access, and key locks on the doors. Security for the office/laboratory area consists of key locks on the doors and controlled access. All permanent employees have access to the report records.

Archaeological Material Storage Area 2—Records Storage Area

Security for Collections Storage Area 2 is the same as archaeological material storage area 1.

Fire Detection and Suppression

Archaeological Material Storage Area 1—Office/Laboratory Area

The only fire suppression equipment consists of fire extinguishers. No sprinkler system or fire detection devices such as smoke alarms are present.

Archaeological Material Storage Area 2—Records Storage Area

There are no fire detection devices present in the records storage area. Fire extinguishers and a sprinkler system comprise the fire suppression system.

Archaeological Material Storage

No archaeological materials associated with NAB Coronado Naval Amphibious Base, or NRTF, Chollas Heights are stored at RECON.

Human Skeletal Remains

No human skeletal remains are present.

Records Storage

There are approximately 2.1 linear feet of records associated with work carried out at NAB Coronado and NRTF Chollas Heights stored in the two collections storage areas (Table 22). Records associated with work done at NAB Coronado span the years 1984-1986. Those associated with work done at NRTF Chollas Heights all date to 1991. No records are systematically excluded from curation. However, records for jobs that exceed 10 years are reviewed.

Table 22. Major Classes of Records by Installation

Installation	Paper Records	Photographs	Maps/Oversized Documents	Reports
NAB Coronado	0.5	–	0.1	0.6
NRTF Chollas	0.3	0.2	0.1	0.3
Total	**0.8**	**0.2**	**0.2**	**0.9**

Archaeological Material Storage Area 1—Office/Laboratory Area

Project Reports

Reports consist of approximately 0.9 linear feet and are from NAB Coronado and NRTF Chollas Heights. The reports are arranged by job number and are stored in a series of four four-drawer metal file cabinets (Figure 44). Adhesive labels on the file drawers list the range of job numbers inside each drawer. Secondary containers consist of acidic manila file folders labeled with job number.

Figure 44. Storage units for project records at RECON

Paper Records

Paper records are the second largest group of documents stored in this collections storage area. The majority of paper records are associated with archaeological work at NAB Coronado. All paper records are stored on four rows of double sided, open, painted wood shelving units (Figure 45). Each row of shelves in a shelving unit contains an acidic paper label taped to the end of the row. These shelf labels are written in marker and contains the job numbers included on each shelf of each row. Papers records are contained in acidic manila file folders stored in acidic expanding file folders. Expandable file folders include adhesive "punched" labels with the job number, as well as a typed tag inserted into a plastic tab that is attached to the side of the folder. Most of the acidic manila folders are directly labeled in marker and/or pen with job number and occasionally, folder contents. Types of paper records include correspondence, analysis records, background records, and survey records. All are in good condition, although many contain contaminants such as paper clips, staples, and folding metal clips. None of the paper records are duplicated.

Figure 45. Archives room at RECON (note records stored on floor)

Photographic Records

The 0.2 linear feet of photographic records consist of color prints, negatives, slides, contact print sheets, and camera-ready photographs associated with work carried out at NRTF Chollas Heights. Storage units and primary containers are the same as those described for paper records. All of these records are contained within a two mil plastic zip-lock bag stored in an expandable file folder. The color prints, contact print sheets, and camera-ready photographs are loose in the bag, negatives are stored in non-archival sleeves, and slides are stored in plastic slide boxes.

Maps and/or Oversized Documents

A total of 0.2 linear feet of maps and/or oversized documents exist for NRTF Chollas Heights and NAB Coronado and include blue-lines and reports figures. Storage units are the same as those described for paper records. All blue-lines are folded and are contained in the acidic expandable folders.

Reports

Approximately 0.4 linear feet of project reports (draft and/or final copy) are stored in the records storage area. The majority are related to work carried out at NAB Coronado. Most of the reports are bound or contained within metal clasps.

Collections Management Standards

Registration Procedures

Accession Files

All materials are given a catalog number and job number upon receipt.

Location Identification

The location of the collections is identified in the job files.

Cross-indexed files

The files are cross-indexed according to catalog number and job number.

Published Guide to Collections

There is no collections guide, RECON is not a long-term curation facility.

Site-Records Administration

The Smithsonian Institution trinomial system is used.

Computerized DataBase Management

A computerized database management system is used to maintain the master catalog of collections.

Written Policies and Procedures

Minimum Standards for Acceptance

There are several corporate standards that are followed, including what information should be written on boxes and the types of information that should be included with each collection.

Curation Policy

RECON is not a long-term curation facility, they have no curation policy. However, they do rent a storage unit for the storage of archaeological collections. RECON is trying determine the which repository these collections will be sent to for long-term curation.

Records-Management Policy

No written policy exists, but curation of associated documentation follows the general methods of record-keeping for the company.

Field-Curation Guidelines

None exists, but RECON never accepts collections other than those related to work carried out by its own staff.

Loan Procedures

RECON does not loan out material.

Deaccessioning Policy

There is no deaccessioning policy.

Inventory Policy

There is no inventory policy.

Latest Collections Inventory

The staff suggested that the collections were last inventoried in 1988.

Curation Personnel

There is no full-time curator for the archaeological collections. However, collections care is one of Ms. Cheevers responsibilities. Ms. Cheevers feels that the recovery of archaeological collections has a higher priority that the curation of existing collections. She views research and education as the primary responsibilities associated with archaeological collections.

Curation Financing

Curation activities are financed through cultural resource management contracts. The staff feel that financing is inadequate, and that depending on the size of the collection, an additional 1% “sliding fee” is needed.

Access to Collections

Ms. Cheevers is responsible for records maintenance and security, but all permanent employees have access to them. A check-out system exists whereby a card is left in the file indicating that a folder is

checked out. Access to collections by researchers is informal, but supervised. To borrow any records, a letter is requested that should contain why the records are being borrowed.

Future Plans

There are no future plans for curation.

Comments

1. None of the associated records are duplicated or archivally curated.
2. Several fire extinguishers provide the only fire suppression in the office/laboratory area.
3. Humidity is not monitored in either collections storage area.

Recommendations

1. All paper records should be stored in acid-free folders. Photographic records should be stored in archival-quality sleeves. Maps and/or oversized documents should be stored flat in map flats. All records should be duplicated on acid-free paper and stored at a separate and secure location.

2. The fire detection and suppression system should be upgraded in archaeological material storage area 1 to include a sprinkler system and smoke detectors.

3. Humidity-monitoring devices should be installed. If a new HVAC system cannot be installed, commercial dehumidifiers and hygrothermographs should be purchased to control and monitor humidity.

12

Jones and Stokes Associates

Sacramento, California

Repository Summary

Volume of Archaeological Materials: None

Compliance Status: Jones and Stokes Associates is contracting a firm in Sacramento, California. It is their policy to record, but not collect archaeological materials during survey projects. Therefore, no archaeological materials are stored at their facility.

Linear Feet of Records: 0.40 linear feet

Collections Origin: Fort Hunter-Liggett and Camp Parks

Compliance Status: All records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Paper records should be stored in acid-free folders. Photographic records should be stored in archival polyethylene plastic sleeves. Maps/ oversized documents should be stored flat between sheets of acid-free paper in map flats.

Human Skeletal Remains: No human skeletal remains are present.

Status of Curation Funding: Curation activities are financed through cultural resource management contracts. The staff feel that funding is adequate.

Introduction

DATE OF VISIT: September 23, 1993

PERSON CONTACTED: Dana McGowan

Approximately 0.40 linear feet of records associated with military contracts performed by Jones and Stokes Associates (JSA) are stored at their office in Sacramento, California. Records associated with work done at Camp Roberts, and Fort Hunter-Liggett are present.

It is a policy of JSA to record archaeological materials during a survey rather that collect these materials. Therefore, no collections were examined and human skeletal remains are present.

Repository

The two-story building includes offices, a mechanical/utility room, and restrooms. Associated records are stored in a second-floor office on the east side of the building. The office measures 120 ft^2.

Structural Adequacy

The building was originally constructed as a school in 1929 and remodeled into an office building in the 1980s. It has a concrete slab foundation, brick exterior walls, and a clay tile roof (Figure 46). The interior walls are covered with sheetrock. There is a suspended, acoustical ceiling. The floor is carpeted. There are numerous windows throughout the building. Two windows are in the second-floor office with the records. The windows measure approximately 3 feet by 10 feet (width, height), are located on the east wall and have wooden frames that were replaced during the 1980s renovation. One interior single wood panel door is present in the west wall of the office with the records. The facility functions well as office space. However, if long term storage of archaeological materials ever occurs, additional renovations are needed.

Figure 46. Exterior view of the Jones and Stokes repository

Environment

Temperature is controlled by a forced-air heating and air conditioning system. There are no dust filters. Humidity is not monitored or controlled. Overhead lights consist of fluorescent tubes covered by non-ultraviolet plastic shields. The building is regularly maintained by a professional janitorial service.

Pest Management

The staff are aware that a pest management program exists, but are unsure what type it is and whether it includes both monitoring and control of pests.

Security

A security system designed by SONITROL is installed. It includes seal alarms wired directly into SONITROL on all exterior windows and doors, as well as a sound alarm installed in the lobby for after hours use.

Fire Detection and Suppression

The fire detection system consists of smoke and heat detectors. The fire suppression system consists of several fire extinguishers.

Archaeological Material Storage

JSA does not have any archaeological materials in their offices.

Human Skeletal Remains

No human skeletal remains are present.

Records Storage

Approximately 0.40 linear feet of records associated with archaeological projects carried out at Camp Roberts (0.20) and Fort Hunter-Liggett (0.20) are stored at JSA. The majority of the records are stored in two four-drawer enameled metal file cabinets in the office of Ms. Dana McGowan (Figure 47). However, it should also be noted that a few are located on the floor of Ms. Jane Russell's office.

Figure 47. Documentation storage units at Jones and Stokes

Different kinds of records are combined in individual folders making it difficult to calculate the linear feet of each type of record for an individual installation (e.g., paper records, photographic records). Any permanent employee of JSA has access to the records. There is a basic check-out system that includes inserting a signed and dated slip of paper into the file that contains the record. A duplicate copy of the records may exist, but we were unable to obtain information on where the copy is stored or the medium on which it was reproduced.

Paper Records

All original paper records associated with archaeological work carried out on Fort Hunter-Liggett are stored in the top drawer of a four-drawer letter sized filing cabinet in an office. The file drawers have metal tag holders with acidic paper labels. Label information is written in marker with “Past and Inactive” files written on the label. Secondary containers consist of acidic hanging file folders. Folder labels are directly labeled acidic tags in plastic tabs. Paper records include proposals, correspondence, and background records. All are arranged by installation. Most are in fair condition, although they contain contaminants such as staples, paper clips, and metal clasps.

Paper records from Camp Roberts are currently stored loose on an office floor and consist of background records. They are also arranged by installation. All appear to be in good condition, although they contain staples and paper clips.

Maps and/or Oversized Documents

Small-scale topographic maps and site maps from Fort Hunter-Liggett are present. Storage is the same as the paper records. One large-scale map of Camp Roberts is included with the paper records stored on the floor.

Reports

Draft reports from Fort Hunter-Liggett are present. They are stored in the file cabinet with the paper records. A letter report for work at Camp Roberts is also present.

Collections Management Standards

Registration Procedures

Accession File

There is no accession file. However, records are arranged by project.

Location Identification

No collection identification exists.

Cross-indexed files

Undetermined.

Published Guide to Collections

JSA does not have any archaeological materials.

Site-Record Administration

Undetermined.

Computerized DataBase Management

Undetermined.

Written Policies and Procedures

Minimum Standards for Acceptance

JSA does not have any archaeological materials.

Curation Policy

JSA does not have any archaeological materials.

Records-Management Policy

There is no records-management policy.

Field-Curation Guidelines

JSA does not accept archaeological collections and documents rather than collects archaeological materials.

Loan Procedures

There is no archaeological material loan policy, but JSA will make records available to subcontractors.

Deaccessioning Policy

No deaccessioning policy exits.

Inventory Policy

No inventory policy exists.

Latest Collection Inventory

Not applicable as JSA is not a curation facility.

Curation Personnel

There are 150 employees at JSA. Of these, four are archaeologists.

Curation Financing

Curatorial services are financed through cultural resource management contracts. The staff felt that funding is adequate.

Access to Collections

Any permanent employee of JSA has access to the records. There is a check-out system that includes inserting a signed and dated piece of paper stating what was borrowed.

Future Plans

The staff were unaware of any future plans for upgrading the curation program.

Comments

1. JSA is not a long-term curation repository, but the facility functions well as office space.
2. Only records were examined because JSA does not collect archaeological materials.

Recommendations

1. Because JSA sub-contracts their archaeological work, the sub-contractor who did the work at Camp Roberts and Fort Hunter-Liggett should be located to determine if any archaeological materials were collected and additional documentation generated.

2. The fire detection system is adequate. However, the fire suppression system should be upgraded to include a sprinkler system because of the presence of large quantities of potentially flammable paper.

3. Records should be duplicated on acid-free paper and stored in acid-free folders. Maps should be stored flat in map cabinets. Both the records and maps should be stored at a separate and secure location. Contaminants such as metal paper clips and staples should not be used.

13

Findings Summary

Eleven facilities in California and Washington that have archaeological collections from Department of Defense facilities. (Table 23 and 24). Associated records are located at all 11 facilities, whereas archaeological materials are at only 8. A building evaluation, survey questionnaire, and archaeological materials and documentation assessment were completed at each facility. None of the facilities in California and Washington meet 36 CFR Part 79 for the long-term curation of federal archaeological collections. All collections require some type of rehabilitation. Although 80% of the archaeological materials are cleaned and 91% are sorted, only 30% are labeled. The majority of primary and secondary containers are not archival quality and need to be replaced.

Records at 90% of the facilities are not duplicated and most are not stored in archival quality containers. All the records need complete rehabilitation. Management controls and, a master collection inventory and database do not exist for these collections and should be created immediately.

Table 23. Facilities with DoD Collections in California and Washington, and Number of Collections Storage Areas per Facility

Facility	Number of Collections Storage Areas
Fort Lewis	3
NSB San Diego	1[A]
SWDIVNAVFACENGCOM	1
NWS Fallbrook	2
SDSU	2
Affinis Environmental Services	1
OGDEN Environmental and Energy Services	1
Gallegos and Associates	1
Archaeological Resource Services	1
RECON Regional Environmental Consultants	1
Jones and Stokes Associates	1
Total	**15**

[A] Collections are really stored in two locations: on base, and in a private residence . However, a building evaluation of the residence was not performed.

Table 24. Summary of Collections by Location

Installation	Volume of Artifacts (ft^3)	Documentation (Linear Feet)	Chapter
Admiral Baker Field			
SDSU	92.1	5.6	6
Camp Parks			
ARS	0.3	0.3	10
Camp Roberts			
Jones and Stokes	—	0.2	12
Fort Hunter-Liggett			
Jones and Stokes	—	0.2	12
Fort Lewis	15.0[a]	8.4	2
Vancouver Barracks	1.5	—	2
Yakima Training Center	51.0	3.4	2
Fort McArthur (Nike site)			
Ogden Environmental	—	0.3	8
George Air Force Base			
Ogden Environmental	—	1.5	8
NAF El Centro			
Ogden Environmental	—	0.1	8
NAS Pendleton			
SWDIVNAVFACENGCOM	4.3	—	4
Gallegos and Associates	—	0.8	9
NAS Miramar			
SDSU	12.0	—	6
Affinis	0.2	0.1	7
Ogden Environmental	1.0	—	8
Gallegos and Associates	—	1.1	9
NAB Coronado			
RECON	—	1.2	11
NAB San Diego			
Ogden Environmental	—	0.1	8
NRR Silver Strand (Coronado)			
Gallegos and Associates	—	0.3	9
NRTF Chollas Heights			
RECON	—	0.9	11
NAVSHIPYD Long Beach			
Ogden Environmental	—	0.1	8
Naval Space Surveillance			
Ogden Environmental	—	0.3	8
SUBASE San Diego	225.0	5.2	3
SWDIVNAVFACENGCOM	2.6	—	4
Ogden Environmental	83.0	2.3	8
Gallegos and Associates	—	0.4	9
NWS Fallbrook	5.0	0.1	5
NWS Seal Beach (Fallbrook Annex)			
Gallegos and Associates	—	0.6	9
SWDIVNAVFACENGCOM	0.4	—	4
SWDIVNAVFACENGCOM	—	34.3	4
Total	**493.4**	**67.8**	

[a] Archaeological materials at Fort Lewis include 1 MNI.

Repositories

The 11 facilities visited can be divided into three general classes: archaeological contractors (n=4), military installations (n=6), and universities/colleges (n=1). None are designed for curation and only two are adapted for curation. Institutions do not have the financial capability to obtain additional space suitable for collections management needs. They use whatever space can be acquired.

Twenty percent of the collections storage areas are not regularly maintained and dust covered shelves and boxes. Cluttered collections storage areas are typical.

The majority of the repositories do not consider themselves as permanent collections storage areas for archaeological collections. Only two partially comply with 36 CFR Part 79.

Environmental Controls

Environmental monitoring and adequate environmental controls only exist in two repositories (Table 25). Seven of the repositories are heated and air conditioned and none monitor or control humidity. These uncontrolled conditions are causing the deterioration of both archaeological materials and associated records.

Table 25. Presence/Absence of Repository Infrastructure Controls Necessary to Curate Archaeological Collections

Location	Environmental Controls	Pest Management	Security	Fire Control	Full Time Curator
Fort Lewis					
Museum	Yes	Yes	Yes	Yes	Yes
Building T1214	No	No	No	No	Yes
Building T4294	No	No	No	No	Yes
NSB San Diego	No	No	No	No	No
SWDIVNAVFACENGCOM					
Office	No	No	Yes	Yes	No
Building 131	No	No	No	No	No
NWS Fallbrook					
Locker	No	No	No	No	No
Building 326	No	No	No	No	No
SDSU					
Library	Yes	No	Yes	Yes	No
Shipping Container	No	No	No	No	No
Affinis	No	Yes	No	No	No
OGDEN	No	Yes	Yes	No	No
Gallegos and Associates	No	No	Yes	No	Yes
ARS	No	Yes	Yes	No	No
RECON					
Office	No	No	Yes	No	No
Records Storage	No	No	Yes	Yes	No
Jones and Stokes	No	No	Yes	No	No

Pest Management

Four repositories have formal pest management programs (Table 25) that monitor and control insects and small mammals. These formal programs consist of bait and/or traps and regular chemical spraying. The types of chemicals used, their frequency of use and their hazard to personnel and collections are beyond the scope of this report to assess.

Security

Only 8 repositories meet the minimum security requirements. These standards include intrusion alarms, motion detectors, limited access, absence of windows, and dead-bolt locks on doors. Access to most collections storage areas is usually limited to a select number of individuals.

Fire Detection and Suppression

Five of the repositories contain adequate fire detection and fire suppression devices, consisting of smoke detectors, fire alarms, and sprinkler systems (Table 25). All facilities contain at least one fire extinguisher in the collection storage area.

Artifact Curation

None of the facilities have properly prepared DoD archaeological materials for long-term curation, although two are making progressing in this direction. Most of the primary containers are variable-sized acidic cardboard boxes that were frequently overpacked, overstacked, compressed, dirty, and torn. Label information is inconsistent and sometimes unavailable.

Forty-five percent (Table 25) of the secondary containers consist of various types of plastic bags, most of which are not of archival quality. Other types of containers include acidic paper bags, small acidic cardboard and plastic boxes, plastic and/or metal film vials, acidic newspaper, and plastic bubble-wrap. A number of collections have no secondary containers. Artifacts are also stored loose in boxes. The wide assortment of secondary containers has resulted in an inventory-control problem. If these practices continue the collections will further deteriorate.

Chipped stone, faunal remains, and soil samples are the most abundant of the prehistoric material classes (Table 26). Common historic material classes include faunal remains, metal, and brick.

Table 26. Percentages of Material Classes

Material Class	**%**
Prehistoric	
Chipped Stone	33
Faunal Remains	14
Soil Samples	5
Other	2
Historical-Period	
Faunal Remains/Shell Mix	15
Metal	10
Brick	8
Other	7
Glass	6
Total	**100**

Human Skeletal Remains

Human skeletal remains consist of one individual from Fort Lewis.

Records Management

Approximately 67.8 linear feet of associated records (Table 27) were examined. Most facilities attempt minimal conservation, but no facility has archival-quality protocols in place. Original paper records at 12 facilities have not been duplicated. Paper records are not stored in acid-free folders. Maps are not always stored flat in metal map cases. Photographic materials are not isolated or stored in chemically inert sleeves. None of the records are stored in fire-proof cabinets.

Table 27. Summary of the Major Classes of Documentation

Documentation Class	Linear Feet	%
Paper Records	31	46
Photographic Records	11	16
Maps/Documents	4.8	7
Reports	19	28
Machine Readable	2	3
Total	**67.8**	**100**

Environmental controls that meet 36 CFR Part 79 exist at only two collections storage areas. It is likely that severe temperature and humidity fluctuations are present at the remaining 16 collections storage areas. These fluctuations accelerate deterioration and promotes visible changes such as cockling paper, flaking ink, warped covers on books, cracked emulsion on photographs, and the growth of molds.

Management Controls

Written policies and procedures for artifact curation, records management, inventories, loans, and deaccessioning are present at three facilities. Most repositories do not have long-term management plans for DoD collections. Failure to meet basic curation needs and responsibilities has led to substandard care for many DoD collections.

A plan of action for the long-term management of these collections should be implemented that minimally includes the following:

1. Inventory all human skeletal remains to comply with NAGPRA.
2. Prioritize, inventory, and rehabilitate the collections.
3. Develop an archives management plan.

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14

Recommendations

The following recommendations are suggested to bring all Department of Defense collections into compliance with the mandates of 36 CFR Part 79 and NAGPRA. Maximum cost savings would be achieved if NAGPRA and 36 CFR Part 79 work is done simultaneously. A comprehensive plan for curation compliance includes the following nine areas.

I. Develop a Plan of Action

A plan of action minimally must address four points—(1) long-term housing of the collections and records, (2) rehabilitation of the archaeological materials, (3) rehabilitation of the associated records, and (4) management of these data.

II. Compliance with NAGPRA

The DoD collections must be examined for human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. It is not possible to provide a cost estimate at this time. However, when other MCX-CMAC NAGPRA inventories are completed, a cost estimate can be provided, if requested. According to the results of the curation-needs assessment, one human bone was located at Fort Lewis. To satisfy NAGPRA requirements, the following tasks should be performed at each repository with DoD collections.

1. Conduct a records search to identify accession and catalog numbers and the locations of human remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects within collections.
2. Perform a box search to identify the human skeletal remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.
3. Produce summary and inventory reports that present the results of the summary and inventory for each repository that includes the following.
    a. Information on unassociated funerary objects, sacred objects, and objects of cultural patrimony.
    b. An estimate of the number of objects in the collection.
    c. A description of the kinds of objects included in the collection, when readily available, with reference to the means and dates of acquisition and locations from which the collections came.
    d. If available, information relevant to identifying lineal descendants and cultural affiliation.

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

III. Develop a Formal Archives Management Program

A formal archives management program must be developed immediately to establish priorities for the documentation in the DoD collections. All records must be coalesced and rehabilitated to comply with existing federal guidelines and standards for modern archival practices. Because so many records no longer accompany the collections they were derived from, and because of the fragile nature of the documents and the unstable environment in which they are stored, this task must precede the rehabilitation of the archaeological materials before the information contained in the records is lost forever. Archives rehabilitation includes eight steps.

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

Proper management of the DoD archaeological archives will provide opportunities for scholars, students, and the public to benefit from the information contained in these records, a major public benefit that currently is not being realized.

IV. Inventory and Rehabilitation of Existing Archaeological Materials

The DoD collections must be rehabilitated to professional museum standards. Rehabilitation must include the following:

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

These steps for stabilizing and preserving existing archaeological materials will ensure management of the collections in a cost-effective manner. Proper management of these collections will ensure that scholars, students, and the public have access to, and benefit from, the DoD collections, which are not being used.

V. Coalesce Collections

A plan of action for the long-term care of collections and associated records must be implemented to insure their protection, and prevent further deterioration. Collection coalescing is recommended for long-term management.

VI. Develop Cooperative Agreements

To offset the costs, the DoD is encouraged to develop cooperative agreements with other agencies to share costs of collections management for all their collections in the same regional repository. Cooperative agreements provide opportunities for joint ventures between and among federal agencies with similar curation requirements. If needed, the MCX-CMAC is available for assistance.

VII. Dedicate Temporary Space for Storage of Collections

Following the adoption of a curation strategy, all DoD facilities must create a plan of action that identifies how their temporary curation space will function. The space must be dedicated strictly for curating archaeological materials and associated records. Office, research, and work areas must be separated from this area. Space that is used both as storage and work areas is not acceptable. Minimal curation standards must include the following:

1. Storage space should be environmentally adequate to maintain stable temperature and humidity levels, in addition to maintaining environmental requirements for the types of objects being curated.
2. Storage space should minimize the number of exterior walls, windows, and doors in order to (1) decrease the chance of condensation on walls and windows during seasonal temperature changes, (2) enhance security, and (3) increase energy efficiency.

3. Water lines associated with fire suppression systems are the only kind of overhead pipes to be allowed in the collections storage area. Water and sewer pipes should be removed.
4. Electric junction boxes and gas and electric meters should be outside the collections storage area in order to limit access by non-curatorial staff.
5. Storage areas should be large enough to accommodate existing collections from on-going projects prior to their transfer to the permanent off-installation repository.

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

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

Security

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

Fire Protection

Fire detection and suppression systems must be installed to protect collections and personnel. Smoke detectors must be placed in all parts of the collections storage area. In addition, the appropriate types and number of fire extinguishers, with respect to the types of collections and overall size of collections storage area, must be properly maintained and placed in clearly marked positions. Ultimately, sprinkler systems should be installed in the collections storage area.

Maintenance of the Collections Storage Area

A scheduled plan for maintenance—including routine sweeping, mopping, and dusting by curatorial staff or bonded janitorial service—must be established. In addition, an integrated pest management program must be implemented—including regular monitoring for signs of pest infestation. Smoking, eating, and drinking should be forbidden in the collections storage area.

IX. Full-Time Manager for Archaeological Collections

A collections manager should be hired as soon as possible to care for the archaeological collections. This person should have professional qualifications and prior experience in collections management. Collections managers are minimally responsible for the following:

1. Ensuring that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.
2. Ensuring that management records are kept up-to-date, are complete, are properly monitored, and are readily available to researchers.
3. Managing a computerized database.
4. Ensuring that archaeological materials can be easily located.
5. Ensuring that objects are properly labeled.
6. Ensuring that the archaeological materials and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.
7. Performing periodic inventories and inspections of archaeological materials and records to ensure their long-term survival.

The MCX-CMAC suggests that these recommendations are the minimum that must be addressed in order to bring DoD archaeological collections into compliance with federal archaeological curation standards. Knowledge of the prehistory and history of the west coast will be increased tremendously by the proper curation of the archaeological materials under the care of the Department of Defense.

U.S. Army
Corps of Engineers

St. Louis District